

CHAPTER

31

**INDICATING/
RECORDING SYSTEMS**



737-600/700/800/900

FAULT ISOLATION MANUAL

CHAPTER 31 INDICATING/RECORDING SYSTEMS

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235	Oct 10/2006		274	Oct 10/2006				
236	Oct 10/2006		275	Feb 15/2009				
237	Oct 15/2008		276	Oct 10/2006				
238	Feb 15/2009		277	Oct 10/2006				
239	Feb 15/2009		278	Feb 15/2009				
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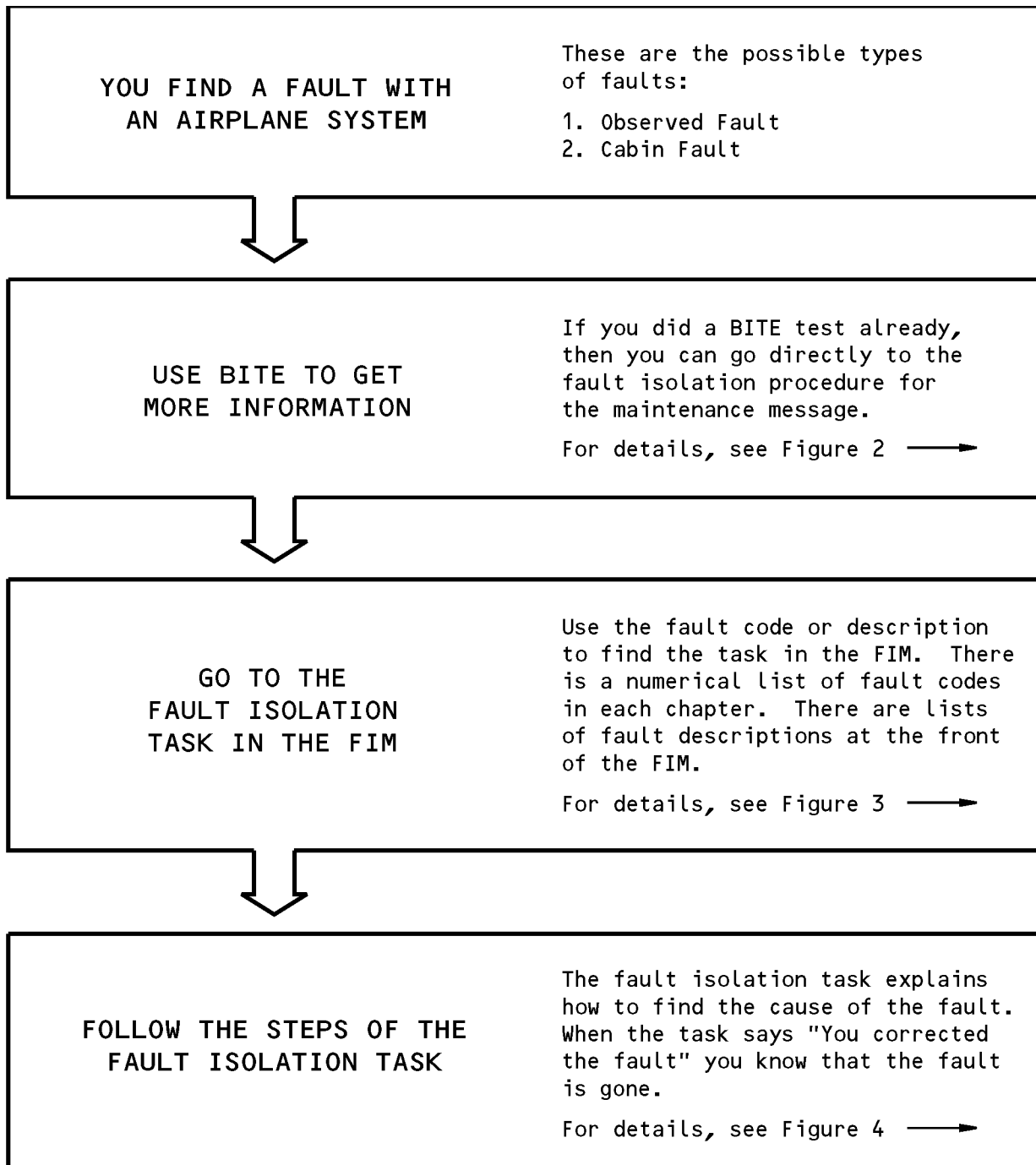
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Basic Fault Isolation Process
Figure 1

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Some airplane systems have built-in test equipment (BITE). IF the system finds a fault when you do a BITE test, it will give you a maintenance message.

A maintenance message can be any of these:

- a code
- a text message
- a light
- an indication.

To find the fault isolation task for a maintenance message, go to the Maintenance Message Index in the chapter for the applicable system.

If you do not know which chapter is the correct one, look at the list at the front of any Maintenance Message Index. For each system or component (LRU) that has BITE, this list gives the chapter number where you can find the Index that you need.

Find the maintenance message for the applicable LRU or system in the Index. Then find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps of the task (see Figure 4).

Getting Fault Information from BITE
Figure 2

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IF YOU HAVE:

THEN DO THIS TO FIND THE TASK IN THE FIM:

FAULT CODE

1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM.
2. Find the task number on the same line as the fault code. Go to the task in the FIM and do the steps in the task (see Figure 4).

OBSERVED FAULT
DESCRIPTION

1. Go to the Observed Fault List at the front of the FIM and find the best description for the fault.
2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

CABIN FAULT
DESCRIPTION

1. Go to the Cabin Fault List at the front of the FIM and find the best description for the fault.
2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).

MAINTENANCE
MESSAGE
(FROM BITE)

1. Go to the Maintenance Message Index in the chapter for the LRU (the front of each Index gives you the chapter number for all LRUs). Find the maintenance message in the Index.
2. Find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps in the task (see Figure 4).

Finding the Fault Isolation Task in the FIM
Figure 3

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ASSUMED CONDITIONS AT START OF TASK

- External electrical power is ON
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- No equipment in the system is deactivated

POSSIBLE CAUSES

- The list of possible causes has the most likely cause first and the least likely cause last.
- You can use the maintenance records of your airline to determine if the fault occurred before. Compare the list of possible causes to the past maintenance actions. This will help prevent repetition of the same maintenance actions.

INITIAL EVALUATION PARAGRAPH

- The primary purpose of the Initial Evaluation paragraph at the start of the task is to help you find out if you can detect the fault right now:
 - If you cannot detect the fault right now, then the task cannot isolate the fault and the Initial Evaluation paragraph will say that there was an intermittent fault.
 - If you have an intermittent fault, you must use your judgement (and follow your airline's policy) to decide which maintenance action to take. Then monitor the airplane to see if the fault happens again on subsequent flights.
- The Initial Evaluation paragraph can also help you find out which Fault Isolation Procedure to use to isolate and correct the fault.

FAULT ISOLATION STEPS

- Do the steps of the task in the specified order. The "If ... then" statements that you see will guide you along the correct path.
- When you are at the endpoint of the path, the step says "...you corrected the fault." Complete the step and exit the procedure.

Doing the Fault Isolation Task
Figure 4

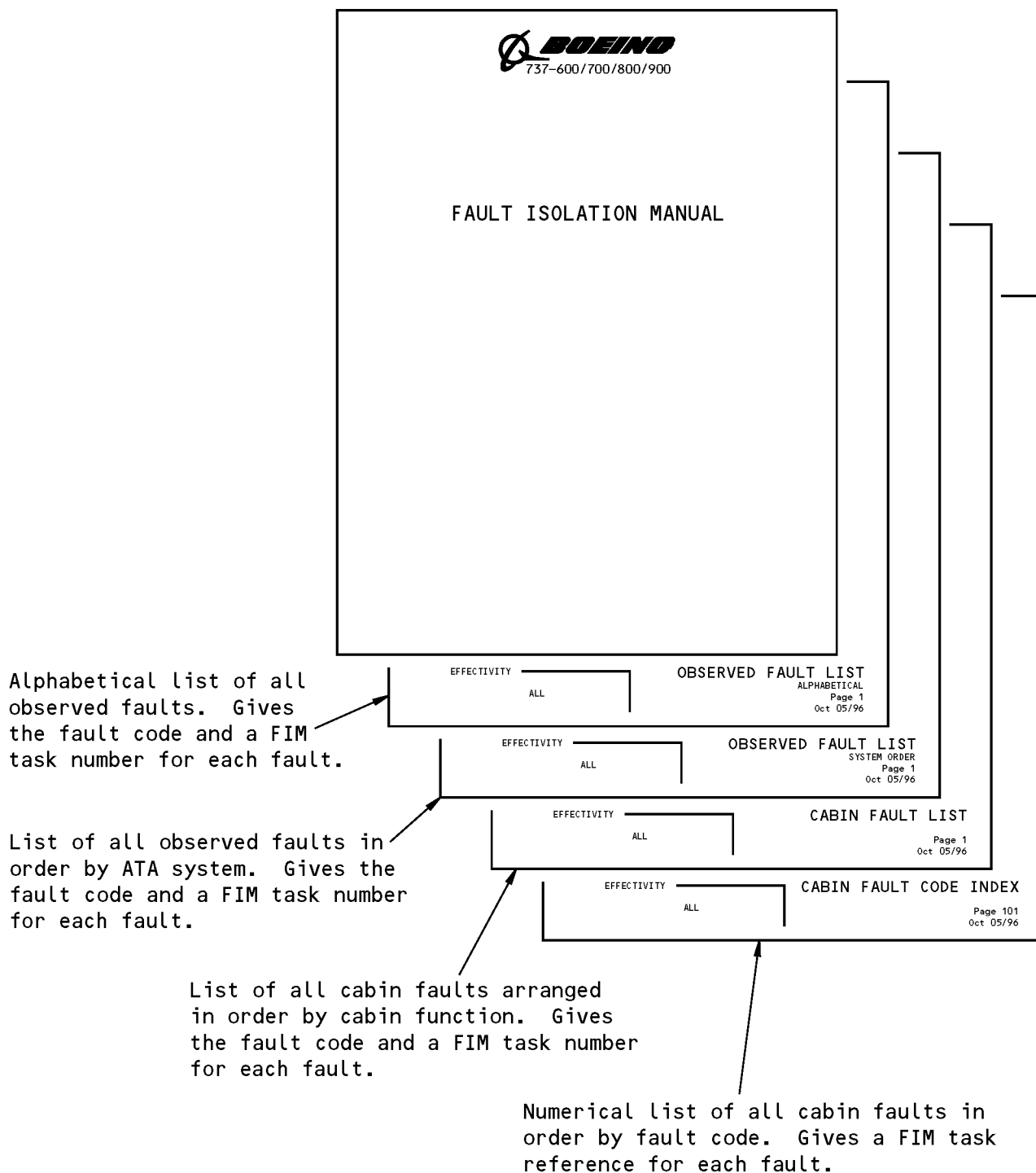
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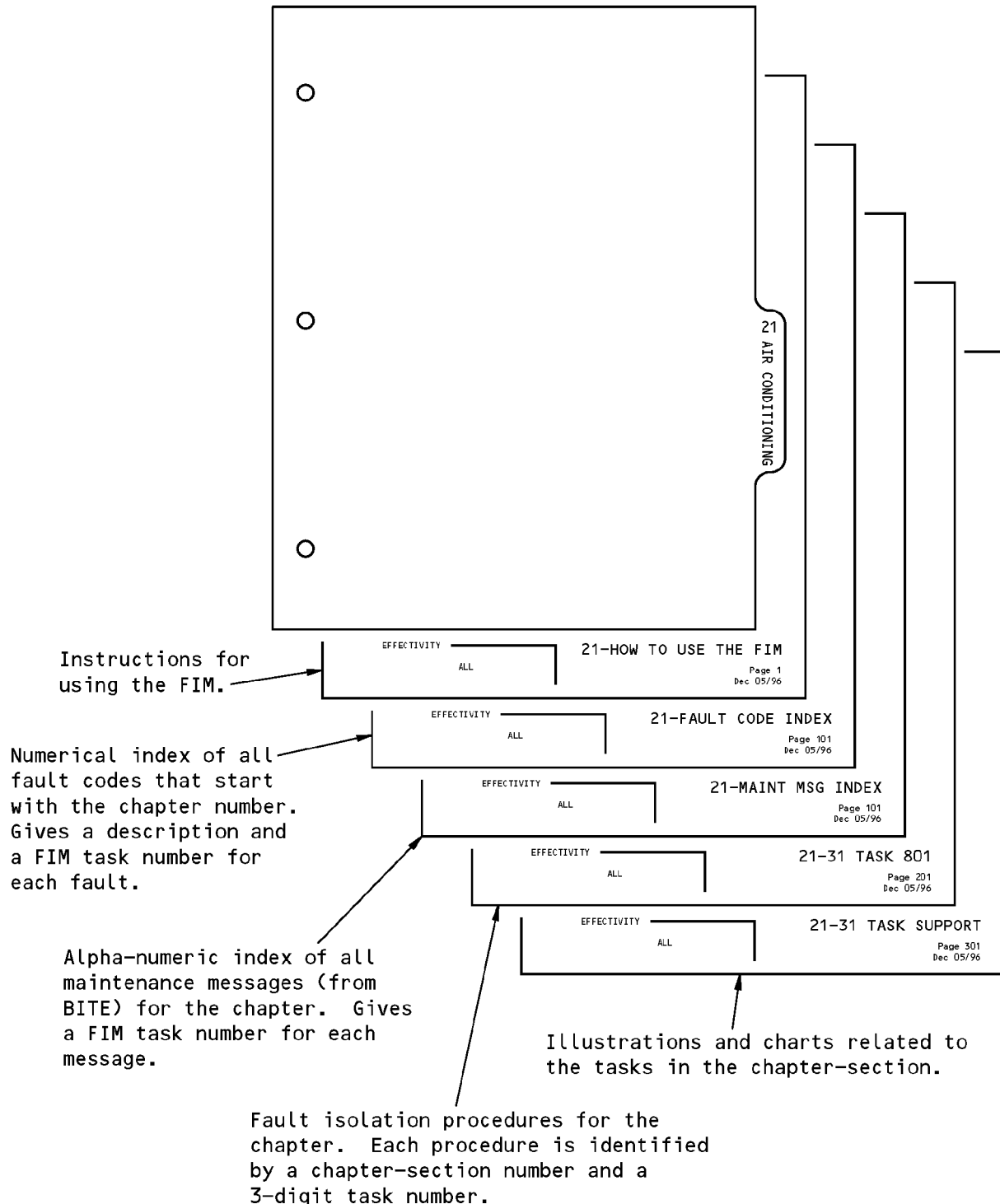
Subjects at Front of FIM
 Figure 5

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Subjects in Each FIM Chapter
 Figure 6

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
312 010 00	Takeoff warning horn: does not sound.	31-51 TASK 803
312 015 00	Takeoff warning horn: sounds (false warning).	31-51 TASK 803
312 020 31	Clock: does not operate - captain's.	31-25 TASK 801
312 020 32	Clock: does not operate - first officer's.	31-25 TASK 802
312 030 00	Landing warning horn: does not sound.	31-51 TASK 815
312 035 00	Landing warning horn: sounds (false warning).	31-51 TASK 815
313 010 00	FLIGHT RECORDER OFF light: light on.	31-31 TASK 805
313 202 00	Printer (flight deck): FAIL light is on.	31-33 TASK 802
315 101 00	MASTER CAUTION light: light does not come on during test.	31-52 TASK 801
316 020 31	EFIS control panel problem - captain's.	31-63 TASK 819
316 020 32	EFIS control panel problem - first officer's.	31-63 TASK 821
316 025 31	EFIS CP annunciation shows on pilot's display - captain's.	31-62 TASK 801
316 025 32	EFIS CP annunciation shows on pilot's display - first officer's.	31-62 TASK 801
316 026 31	DISPLAYS CONTROL PANEL annunciation shows on pilot's display - captain's.	31-62 TASK 801
316 026 32	DISPLAYS CONTROL PANEL annunciation shows on pilot's display - first officer's.	31-62 TASK 801
316 030 41	CDS display unit problem - left inboard.	31-63 TASK 824
316 030 42	CDS display unit problem - right inboard.	31-63 TASK 824
316 040 41	CDS display unit problem - left outboard.	31-63 TASK 824
316 040 42	CDS display unit problem - right outboard.	31-63 TASK 824
316 050 46	CDS display unit problem - center upper.	31-63 TASK 824
316 050 47	CDS display unit problem - center lower.	31-63 TASK 824
316 060 31	CDS MAINT annunciation shows on pilot's display - captain's.	31-62 TASK 801
316 060 32	CDS MAINT annunciation shows on pilot's display - first officer's.	31-62 TASK 801
316 070 31	CDS FAULT annunciation shows on pilot's display - captain's.	31-62 TASK 801
316 070 32	CDS FAULT annunciation shows on pilot's display - first officer's.	31-62 TASK 801
316 080 31	DSPLY SOURCE annunciation shows on pilot's display - captain's.	31-63 TASK 820
316 080 32	DSPLY SOURCE annunciation shows on pilot's display - first officer's.	31-63 TASK 820

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<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
Air Data Inertial Reference System	ADIRS	34
Air Traffic Controller Transponder - 1 (Left)	ATC XPDR - 1 (L)	34
Air Traffic Controller Transponder - 2 (Right)	ATC XPDR - 2 (R)	34
Airborne Vibration Monitor System Signal Conditioner	AVM SIG COND	77
Antiskid Control Unit	ANTISKID	32
Automatic Direction Finder Receiver - 1	ADF RECVR - 1	34
Autothrottle System	A/T	22
Auxiliary Power Unit	APU	49
Auxiliary Power Unit Generator Control Unit	APU GCU	24
Bus Power Control Unit	BPCU	24
Cabin Pressure Controller	CAB PRESS CON	21
Cabin Temperature Controller	CAB TEMP CONT	21
Cargo Electronic Unit - Forward	CEU - FWD	26
Cargo Electronic Unit - Lower	CEU - LOWER	26
Cargo Electronic Unit - Main Aft	CEU - MAIN AFT	26
Cargo Electronic Unit - Main Forward	CEU - MAIN FWD	26
Common Display System	CDS	31
Compartment Overheat Detection Control Module	WING/BODY OHT	26
Digital Flight Control System	DFCS	22
Distance Measurement Equipment Interrogator	DME INTRROGTR	34
Electrical Meters, Battery, and Galley Power Module	P5-13	24
Electronic Engine Controller - 1	ENGINE - 1	73
Electronic Engine Controller - 2	ENGINE - 2	73
Emergency Locator Transmitter	ELT	23
Engine Accessory Unit	ENG ACCY UNIT	78
Engine and Auxiliary Power Unit Fire Detection Control Module	ENG/APU FIRE	26
Flap/Slat Electronics Unit	FSEU	27
Flight Data Acquisition Unit	FDAU	31
Flight Management Computer System	FMCS	34
Fuel Quantity Indicating System	FQIS	28
Generator Control Unit - 1	GCU - 1	24
Generator Control Unit - 2	GCU - 2	24
Ground Proximity Computer	GROUND PROX	34
Head Up Display	HUD	34

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<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
High Frequency Transceiver	HF XCVR	23
Low Limit (35 Degree F) Controller - Left	35 DEG CONT L	21
Low Limit (35 Degree F) Controller - Right	35 DEG CONT R	21
Multi-Mode Receiver	MMR	34
Pack/Zone Temperature Controller - Left	PACK/ZN CON - L	21
Pack/Zone Temperature Controller - Right	PACK/ZN CON - R	21
Proximity Switch Electronics Unit	PSEU	32
Radio Altimeter Receiver/Transmitter	RADIO ALTIMTR	34
Stall Management Yaw Damper Computer - 1	SMYD - 1	27
Stall Management Yaw Damper Computer - 2	SMYD - 2	27
Traffic Alert and Collision Avoidance System Computer	TCAS COMPUTER	34
VHF Omnidirectional Ranging Marker Beacon Receiver	VOR/MKR RCVR	34
Very High Frequency Transceiver	VHF XCVR	23
Waste Tank Logic Control Module	WASTE TANK	38
Weather Radar Receiver/Transmitter	WEATHER RADAR	34
Window Heat Control Unit - Left Forward	WHCU - L FWD	30
Window Heat Control Unit - Left Side	WHCU - L SIDE	30
Window Heat Control Unit - Right Forward	WHCU - R FWD	30
Window Heat Control Unit - Right Side	WHCU - R SIDE	30

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CDS	31-60011 DEU-1 FAULT	31-62 TASK 805
CDS	31-60012 DEU-2 FAULT	31-62 TASK 806
CDS	31-60031 DEU-1 RESET	31-62 TASK 807
CDS	31-60032 DEU-2 RESET	31-62 TASK 808
CDS	31-60041 DEU-1 SOFTWARE RESET	31-62 TASK 809
CDS	31-60042 DEU-2 SOFTWARE RESET	31-62 TASK 810
CDS	31-60051 DEU-1 COAX FAULT	31-62 TASK 811
CDS	31-60052 DEU-2 COAX FAULT	31-62 TASK 812
CDS	31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT	31-62 TASK 813
CDS	31-60061 DEU-1 PROGRAM PIN FAULT	31-62 TASK 814
CDS	31-60062 DEU-2 PROGRAM PIN FAULT	31-62 TASK 815
CDS	31-60070 DEU1 AND DEU2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 816
CDS	31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 817
CDS	31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 818
CDS	31-60101 NO HOT BATTERY POWER	31-62 TASK 819
CDS	31-60102 NO HOT BATTERY POWER	31-62 TASK 820
CDS	31-60221 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 871
CDS	31-60222 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 872
CDS	31-60231 DEU-1 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 871
CDS	31-60232 DEU-2 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 872
CDS	31-60241 DEU-1 A429 XMITTER FAULT -FMC/ MAINTENANCE BUS	31-62 TASK 871
CDS	31-60242 DEU-2 A429 XMITTER FAULT -FMC/ MAINTENANCE BUS	31-62 TASK 872
CDS	31-60251 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 871

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CDS	31-60261 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 871
CDS	31-60262 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 872
CDS	31-60271 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 871
CDS	31-60272 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 872
CDS	31-60281 DEU-1 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 871
CDS	31-60282 DEU-2 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 872
CDS	31-60311 DEU-1 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 871
CDS	31-60312 DEU-2 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 872
CDS	31-60321 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 871
CDS	31-60322 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 872
CDS	31-60331 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 871
CDS	31-60332 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 872
CDS	31-60351 DEU-1 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 871
CDS	31-60352 DEU-2 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 872
CDS	31-60361 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 871
CDS	31-60362 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 872
CDS	31-60371 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 871
CDS	31-60372 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 872
CDS	31-60411 DEU-1 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60412 DEU-2 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 874

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CDS	31-60421 DEU-1 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60422 DEU-2 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60431 DEU-1 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60432 DEU-2 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60441 DEU-1 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60442 DEU-2 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60451 DEU-1 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60452 DEU-2 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60461 DEU-1 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60462 DEU-2 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-61011 DU-LOB FAIL	31-62 TASK 821
CDS	31-61012 DU-LIB FAIL	31-62 TASK 822
CDS	31-61013 DU-CU FAIL	31-62 TASK 823
CDS	31-61014 DU-RIB FAIL	31-62 TASK 824
CDS	31-61015 DU-ROB FAIL	31-62 TASK 825
CDS	31-61016 DU-CL FAIL	31-62 TASK 826
CDS	31-61017 RLS-L FAIL	31-62 TASK 827
CDS	31-61018 RLS-R FAIL	31-62 TASK 828
CDS	31-61021 DU-LOB COAX FAULT	31-62 TASK 829
CDS	31-61022 DU-LIB COAX FAULT	31-62 TASK 830
CDS	31-61023 DU-CU COAX FAULT	31-62 TASK 831
CDS	31-61024 DU-RIB COAX FAULT	31-62 TASK 832
CDS	31-61025 DU-ROB COAX FAULT	31-62 TASK 833
CDS	31-61026 DU-CL COAX FAULT	31-62 TASK 834
CDS	31-61031 DU-LOB LOW BRIGHTNESS	31-62 TASK 835
CDS	31-61032 DU-LIB LOW BRIGHTNESS	31-62 TASK 836
CDS	31-61033 DU-CU LOW BRIGHTNESS	31-62 TASK 837
CDS	31-61034 DU-RIB LOW BRIGHTNESS	31-62 TASK 838

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CDS	31-61035 DU-ROB LOW BRIGHTNESS	31-62 TASK 839
CDS	31-61036 DU-CL LOW BRIGHTNESS	31-62 TASK 840
CDS	31-63110 ENGINE 1 OIL QUANTITY INVALID	31-62 TASK 841
CDS	31-63120 ENGINE 2 OIL QUANTITY INVALID	31-62 TASK 842
CDS	31-63130 ENGINE 1 N1 RPM INVALID	31-62 TASK 843
CDS	31-63140 ENGINE 2 N1 RPM INVALID	31-62 TASK 844
CDS	31-63150 ENGINE 1 N2 RPM INVALID	31-62 TASK 845
CDS	31-63160 ENGINE 2 N2 RPM INVALID	31-62 TASK 846
CDS	31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID	31-62 TASK 847
CDS	31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID	31-62 TASK 848
CDS	31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 849
CDS	31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 850
CDS	31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 851
CDS	31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 852
CDS	31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1	31-62 TASK 853
CDS	31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2	31-62 TASK 854
CDS	31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1	31-62 TASK 855
CDS	31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2	31-62 TASK 856
CDS	31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1	31-62 TASK 857
CDS	31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2	31-62 TASK 858
CDS	31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1	31-62 TASK 859
CDS	31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2	31-62 TASK 860
CDS	31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID	31-62 TASK 861
CDS	31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID	31-62 TASK 862
CDS	31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1	31-62 TASK 863
CDS	31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2	31-62 TASK 864

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CDS	31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1	31-62 TASK 865
CDS	31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2	31-62 TASK 866
CDS	31-65010 PITCH DISAGREE	31-62 TASK 867
CDS	31-65020 ROLL DISAGREE	31-62 TASK 868
CDS	31-65030 EEC DISAGREE	31-62 TASK 869
CDS	31-65040 FMC DATA DISAGREE	31-62 TASK 870
CDS	31-65050 ALTITUDE DISAGREE	31-62 TASK 875
CDS	31-65060 AIRSPEED DISAGREE	31-62 TASK 876
CDS	31-65070 AOA DISAGREE	Reference Not Currently Available
CDS	31-67020 NO ADF-1 DATA	31-63 TASK 809
CDS	31-67051 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67052 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67061 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67062 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67070 NO AUTO-THROTTLE DATA	31-63 TASK 809
CDS	31-67081 NO DEU-2 DATA	31-63 TASK 807
CDS	31-67082 NO DEU-1 DATA	31-63 TASK 808
CDS	31-67100 NO DFDAU DATA	31-63 TASK 809
CDS	31-67110 NO DU-LOB DATA	31-63 TASK 801
CDS	31-67120 NO DU-LIB DATA	31-63 TASK 802
CDS	31-67130 NO DU-CU DATA	31-63 TASK 803
CDS	31-67140 NO DU-RIB DATA	31-63 TASK 805
CDS	31-67150 NO DU-ROB DATA	31-63 TASK 806
CDS	31-67160 NO DU-CL DATA	31-63 TASK 804
CDS	31-67170 NO DME-1 DATA	31-63 TASK 809
CDS	31-67180 NO DME-2 DATA	31-63 TASK 809
CDS	31-67200 NO EEC-1 DATA	31-63 TASK 809

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CDS	31-67230 NO EEC-2 DATA	31-63 TASK 809
CDS	31-67300 NO CAPT EFIS CP DATA	31-63 TASK 809
CDS	31-67310 NO F/O EFIS CP DATA	31-63 TASK 809
CDS	31-67320 NO AVM DATA	31-63 TASK 809
CDS	31-67330 NO FCC-A DATA	31-63 TASK 809
CDS	31-67340 NO FCC-B DATA	31-63 TASK 809
CDS	31-67400 NO FMC-1 DATA	31-63 TASK 809
CDS	31-67440 NO FMC-2 DATA	31-63 TASK 809
CDS	31-67470 NO FSEU DATA	31-63 TASK 809
CDS	31-67500 NO FQPU DATA	31-63 TASK 809
CDS	31-67550 NO GPWC DATA	31-63 TASK 809
CDS	31-67560 NO ILS-1 DATA	31-63 TASK 809
CDS	31-67570 NO ILS-2 DATA	31-63 TASK 809
CDS	31-67600 NO MCP DATA	31-63 TASK 809
CDS	31-67700 NO RA-1 DATA	31-63 TASK 809
CDS	31-67710 NO RA-2 DATA	31-63 TASK 809
CDS	31-67730 NO STALL MANAGEMENT-1 DATA	31-63 TASK 809
CDS	31-67740 NO STALL MANAGEMENT-2 DATA	31-63 TASK 809
CDS	31-67800 NO TCAS DATA	31-63 TASK 809
CDS	31-67830 NO VOR-1 DATA	31-63 TASK 809
CDS	31-67840 NO VOR-2 DATA	31-63 TASK 809
CDS	31-68051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68055 NO ADIRU-1 DATA ON IR-L-1 BUS	31-63 TASK 812
CDS	31-68056 NO ADIRU-1 DATA ON IR-L-3 BUS	31-63 TASK 812
CDS	31-68061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68065 NO ADIRU-2 DATA ON IR-R-3 BUS	31-63 TASK 812

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CDS	31-68066 NO ADIRU-2 DATA ON IR-R-1 BUS	31-63 TASK 812
CDS	31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 810
CDS	31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 811
CDS	31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 810
CDS	31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 811
CDS	31-68210 NO EEC-1 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68220 NO EEC-1 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68240 NO EEC-2 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68250 NO EEC-2 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68410 NO FMC-1 DATA ON FMC-L-08 BUS	31-63 TASK 812
CDS	31-68420 NO FMC-1 DATA ON FMC-L-09 BUS	31-63 TASK 812
CDS	31-68431 NO FMC-1 DATA ON FMC-01 BUS	31-63 TASK 813
CDS	31-68432 NO FMC-1 DATA ON FMC-02 BUS	31-63 TASK 814
CDS	31-68450 NO FMC-2 DATA ON FMC-R-08 BUS	31-63 TASK 812
CDS	31-68460 NO FMC-2 DATA ON FMC-R-09 BUS	31-63 TASK 812
CDS	31-68471 NO FMC-2 DATA ON FMC-01 BUS	31-63 TASK 815
CDS	31-68472 NO FMC-2 DATA ON FMC-02 BUS	31-63 TASK 816
CDS	31-68510 NO FQPU DATA ON DATA BUS-1	31-63 TASK 812
CDS	31-68520 NO FQPU DATA ON DATA BUS-2	31-63 TASK 812
CDS	31-68530 NO FQPU DATA ON DATA BUS-3	31-63 TASK 812
CDS	31-68561 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68562 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68571 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68572 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68610 NO MCP DATA ON MCP-1 BUS	31-63 TASK 812
CDS	31-68620 NO MCP DATA ON MCP-2 BUS	31-63 TASK 812

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CDS	31-68810 NO TCAS DATA ON TCAS-1 BUS	31-63 TASK 812
CDS	31-68820 NO TCAS DATA ON TCAS-2 BUS	31-63 TASK 812
CDS	31-68861 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68862 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68871 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-68872 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-69021 NO ADF-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69022 NO ADF-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69053 NO ADIRU-1 DATA ON ADR-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69054 NO ADIRU-1 DATA ON ADR-L-4 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69063 NO ADIRU-2 DATA ON ADR-R-4 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69064 NO ADIRU-2 DATA ON ADR-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69071 NO AUTO-THROTTLE DATA TO DEU-1	31-63 TASK 817
CDS	31-69072 NO AUTO-THROTTLE DATA TO DEU-2	31-63 TASK 818
CDS	31-69101 NO DFDAU DATA TO DEU-1	31-63 TASK 817
CDS	31-69102 NO DFDAU DATA TO DEU-2	31-63 TASK 818
CDS	31-69111 NO DU-LOB DATA TO DEU-1	31-63 TASK 817
CDS	31-69112 NO DU-LOB DATA TO DEU-2	31-63 TASK 818
CDS	31-69121 NO DU-LIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69122 NO DU-LIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69131 NO DU-CU DATA TO DEU-1	31-63 TASK 817
CDS	31-69132 NO DU-CU DATA TO DEU-2	31-63 TASK 818
CDS	31-69141 NO DU-RIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69142 NO DU-RIB DATA TO DEU-2	31-63 TASK 818

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CDS	31-69151 NO DU-ROB DATA TO DEU-1	31-63 TASK 817
CDS	31-69152 NO DU-ROB DATA TO DEU-2	31-63 TASK 818
CDS	31-69161 NO DU-CL DATA TO DEU-1	31-63 TASK 817
CDS	31-69162 NO DU-CL DATA TO DEU-2	31-63 TASK 818
CDS	31-69171 NO DME-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69172 NO DME-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69181 NO DME-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69182 NO DME-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69211 NO EEC-1 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69212 NO EEC-1 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69221 NO EEC-1 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69222 NO EEC-1 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69241 NO EEC-2 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69242 NO EEC-2 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69251 NO EEC-2 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69252 NO EEC-2 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69301 NO CAPT EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69302 NO CAPT EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69311 NO F/O EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69312 NO F/O EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69321 NO AVM DATA TO DEU-1	31-63 TASK 817
CDS	31-69322 NO AVM DATA TO DEU-2	31-63 TASK 818
CDS	31-69331 NO FCC-A DATA TO DEU-1	31-63 TASK 817
CDS	31-69332 NO FCC-A DATA TO DEU-2	31-63 TASK 818
CDS	31-69341 NO FCC-B DATA TO DEU-1	31-63 TASK 817
CDS	31-69342 NO FCC-B DATA TO DEU-2	31-63 TASK 818
CDS	31-69411 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69412 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-2	31-63 TASK 818

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CDS	31-69421 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69422 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69451 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69452 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69461 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69462 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69471 NO FSEU DATA TO DEU-1	31-63 TASK 817
CDS	31-69472 NO FSEU DATA TO DEU-2	31-63 TASK 818
CDS	31-69511 NO FQPU DATA ON DATA BUS-1 TO DEU-1	31-63 TASK 817
CDS	31-69512 NO FQPU DATA ON DATA BUS-1 TO DEU-2	31-63 TASK 818
CDS	31-69521 NO FQPU DATA ON DATA BUS-2 TO DEU-1	31-63 TASK 817
CDS	31-69522 NO FQPU DATA ON DATA BUS-2 TO DEU-2	31-63 TASK 818
CDS	31-69531 NO FQPU DATA ON DATA BUS-3 TO DEU-1	31-63 TASK 817
CDS	31-69532 NO FQPU DATA ON DATA BUS-3 TO DEU-2	31-63 TASK 818
CDS	31-69551 NO GPWC DATA TO DEU-1	31-63 TASK 817
CDS	31-69552 NO GPWC DATA TO DEU-2	31-63 TASK 818
CDS	31-69561 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69562 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69563 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69564 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69571 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69572 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69573 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69574 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69611 NO MCP DATA ON MCP-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69612 NO MCP DATA ON MCP-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69621 NO MCP DATA ON MCP-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69622 NO MCP DATA ON MCP-2 BUS TO DEU-2	31-63 TASK 818

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CDS	31-69701 NO RA-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69702 NO RA-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69711 NO RA-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69712 NO RA-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69731 NO STALL MANAGEMENT-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69732 NO STALL MANAGEMENT-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69741 NO STALL MANAGEMENT-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69742 NO STALL MANAGEMENT-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69811 NO TCAS DATA ON TCAS-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69812 NO TCAS DATA ON TCAS-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69821 NO TCAS DATA ON TCAS-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69822 NO TCAS DATA ON TCAS-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69831 NO VOR-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69832 NO VOR-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69841 NO VOR-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69842 NO VOR-2 DATA TO DEU-2	31-63 TASK 818
FDAU	ACMS	31-31 TASK 802
FDAU	DFDAU	31-31 TASK 802
FDAU	DFDR	31-31 TASK 803
PSEU	31-51001 GSBV CL FAULT	32-61 TASK 825
PSEU	31-51101 GSBV CL FAULT	32-61 TASK 825
PSEU	31-52001 TOW INHB FAULT	32-09 TASK 810
PSEU	31-52002 TRA L LT 53 FAULT	32-09 TASK 815
PSEU	31-52003 TRA R LT 53 FAULT	32-09 TASK 815
PSEU	31-52004 STAB TRIM DISAGREE	32-09 TASK 817
PSEU	31-52005 LE FLAPS EXT FLT	32-09 TASK 812
PSEU	31-52006 T/O FLPS A FAULT	32-09 TASK 814
PSEU	31-52007 T/O FLPS B FAULT	32-09 TASK 814

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	31-52008 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52009 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52010 SPDBRK UP FAULT	27-62 TASK 808
PSEU	31-52011 LE FP EX BITE FLT	32-09 TASK 812
PSEU	31-52012 LE EXT IN FAULT	32-09 TASK 812
PSEU	31-52102 TRA L LT 53 FAULT	32-09 TASK 815
PSEU	31-52103 TRA R LT 53 FAULT	32-09 TASK 815
PSEU	31-52105 LE FLAPS EXT FLT	32-09 TASK 812
PSEU	31-52106 T/O FLPS A FAULT	32-09 TASK 814
PSEU	31-52107 T/O FLPS B FAULT	32-09 TASK 814
PSEU	31-52108 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52109 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52111 LE FP EX BITE FLT	32-09 TASK 812
PSEU	31-52208 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52209 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-53001 GS PRESS A GT 750	31-51 TASK 804
PSEU	31-53002 GS PRESS B GT 750	31-51 TASK 804
PSEU	31-53003 NOT STAB TRM GRN	31-51 TASK 821
PSEU	31-53007 SPDBRK HDL UP or NOT SBRK HDL DOWN	27-62 TASK 808
PSEU	31-53008 NOT T/O FLAPS A	32-09 TASK 814
PSEU	31-53009 NOT T/O FLAPS B	32-09 TASK 814
PSEU	31-53010 LE FLAPS NOT EXT	32-09 TASK 812
PSEU	31-55001 GS PRESS A	31-51 TASK 804
PSEU	31-55002 GS PRESS B	31-51 TASK 804
PSEU	31-55003 GSBV CLOSED	31-51 TASK 805
PSEU	31-55004 LE FLAPS EXTEND	32-09 TASK 812
PSEU	31-55005 SPDBRK UP	31-51 TASK 806
PSEU	31-55006 STAB TRM GREEN	31-51 TASK 820

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	31-55007 STAB TRM NOT GRN	31-51 TASK 821
PSEU	31-55008 T/O WARN INHIBIT	31-51 TASK 809
PSEU	31-55009 TAKEOFF FLAPS A	31-51 TASK 810
PSEU	31-55010 TAKEOFF FLAPS B	31-51 TASK 811
PSEU	31-55011 TRA LT 53 LEFT	32-09 TASK 815
PSEU	31-55012 TRA LT 53 RIGHT	32-09 TASK 815
PSEU	31-56001 GSBV CL OUT FLT	32-09 TASK 813
PSEU	31-56002 T/O WARN 1 FAULT	31-51 TASK 801
PSEU	31-56003 T/O WARN 2 FAULT	31-51 TASK 801

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801. Captain's Clock Problem - Fault Isolation

A. Description

- (1) The captain's clock does not operate correctly.

B. Possible Causes

- (1) The captain's clock, N145
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C00736	MISC CLOCK DISPLAY
A	2	C00737	MISC CLOCK

D. Related Data

- (1) (SSM 31-22-11)
- (2) (WDM 31-22-11)

E. Initial Evaluation

- (1) If the captain's clock operates correctly, then there was an intermittent fault.
- (2) If the captain's clock does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the captain's clock, N145.

These are the tasks:

Clock Removal, AMM TASK 31-25-11-000-801,

Clock Installation, AMM TASK 31-25-11-400-801.

- (a) If the captain's clock operates correctly, then you corrected the fault.
- (b) If the captain's clock does not operate correctly, then continue.

- (2) Do this check of the wiring:

- (a) Remove the captain's clock, N145. To remove it, do this task: Clock Removal, AMM TASK 31-25-11-000-801.

- (b) Do a wiring check between these pins of the clock connector D714 and connector D46052P at the circuit breaker panel, P6-3.

D714		D46052P
pin 3	-----	pin 1
pin 8	-----	pin 2

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the captain's clock, N145. To install it, do this task: Clock Installation, AMM TASK 31-25-11-400-801.
- 3) If the captain's clock operates correctly, then you corrected the fault.

————— **END OF TASK** —————

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802. First Officer's Clock Problem - Fault Isolation

A. Description

- (1) The first officer's clock does not operate correctly.

B. Possible Causes

- (1) The first officer's clock, N146
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C00736	MISC CLOCK DISPLAY
A	2	C00737	MISC CLOCK

D. Related Data

- (1) (SSM 31-22-11)
- (2) (WDM 31-22-11)

E. Initial Evaluation

- (1) If the first officer's clock operates correctly, then there was an intermittent fault.
- (2) If the first officer's clock does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the first officer's clock, N146.

These are the tasks:

Clock Removal, AMM TASK 31-25-11-000-801,

Clock Installation, AMM TASK 31-25-11-400-801.

- (a) If the first officer's clock operates correctly, then you corrected the fault.
- (b) If the first officer's clock does not operate correctly, then continue.

- (2) Do this check of the wiring:

- (a) Remove the first officer's clock, N146. To remove it, do this task: Clock Removal, AMM TASK 31-25-11-000-801.
- (b) Do a wiring check between these pins of the clock connector D716 and connector D46052P at the circuit breaker panel, P6-3.

CONNECTOR D716

pin 3 -----
pin 8 -----

CONNECTOR D46052P

pin 1
pin 2

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the first officer's clock, N146. To install it, do this task: Clock Installation, AMM TASK 31-25-11-400-801.

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- 3) If the first officer's clock operates correctly, then you corrected the fault.

END OF TASK

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801. Flight Data Acquisition Unit (FDAU) BITE Procedure

A. General

- (1) You do the flight data acquisition unit (FDAU) BITE test from the front panel of the FDAU. The FDAU is installed on the E3-2 shelf in the electronic equipment bay.
- (2) The FDAU BITE test does an operational check of the flight data recorder system. An LED light on the FDAU front panel will come on when the FDAU detects a failure in the FDR or the FDAU.
- (3) The OFF light on the flight data recorder/mach airspeed warning panel will also come on when one of these conditions occur:
 - (a) FDR is off
 - (b) FDR fails
 - (c) FDAU fails

B. Procedure

- (1) Do the BITE procedure for the flight data recorder system (Figure 201).
 - (a) Put the NORMAL/TEST switch on the flight data recorder/mach airspeed warning panel, P5, in the TEST position.
 - (b) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- 1) If one of the fault lights on the FDAU are on, then refer to the table at the end of this task to find the fault isolation task for the applicable maintenance messages.
- 2) If the fault lights on the FDAU are off, then the FDAU does not find a fault.

————— **END OF TASK** —————

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
FDAU	ACMS	31-31 TASK 802
FDAU	DFDAU	31-31 TASK 802
FDAU	DFDR	31-31 TASK 803

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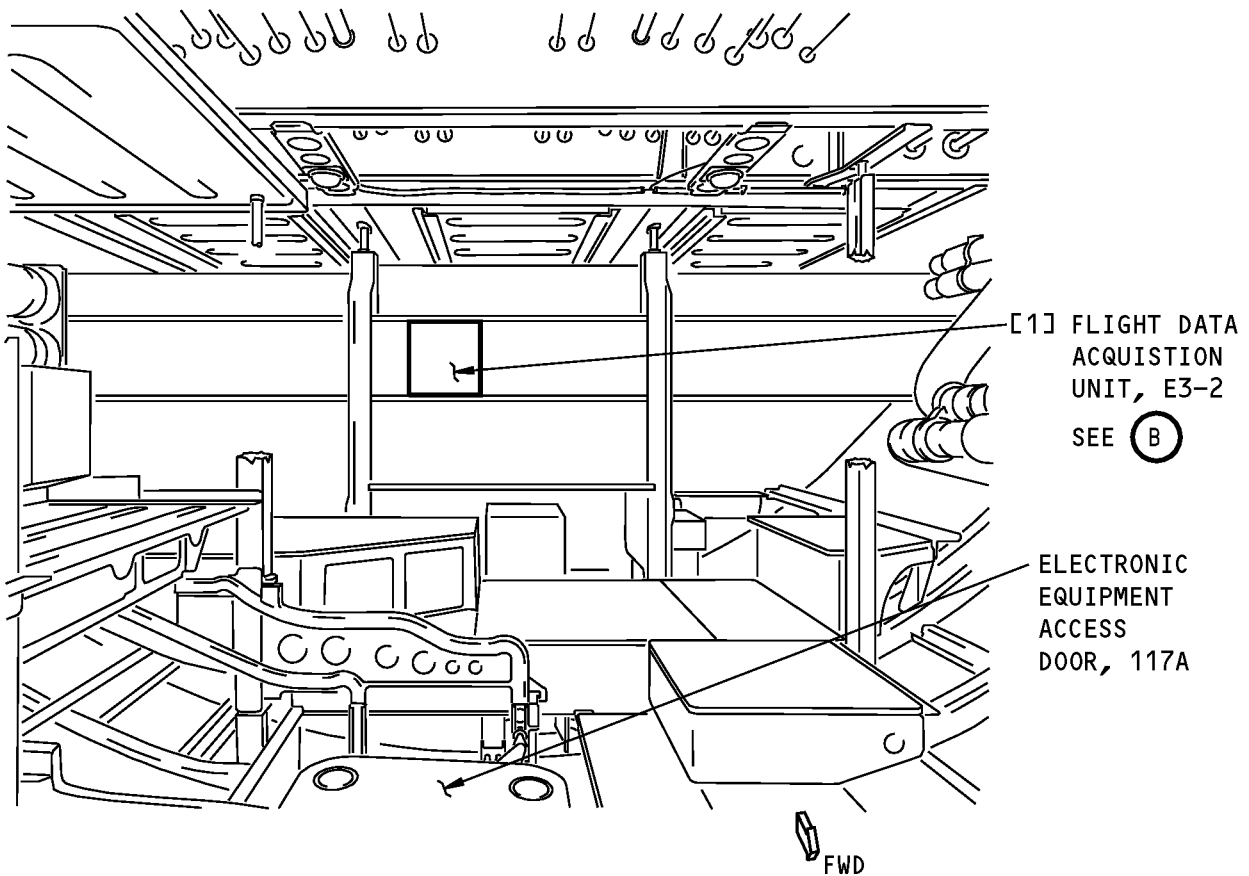
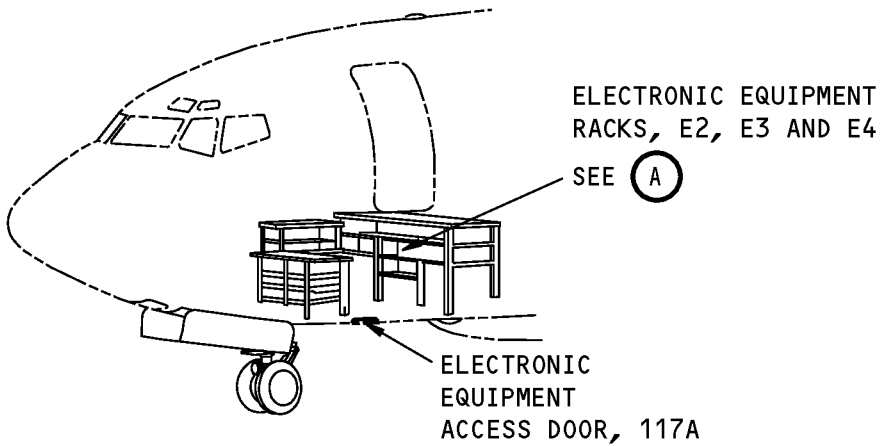
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ELECTRONIC EQUIPMENT RACKS, E2, E3 AND E4

Flight Data Recorder System - Fault Isolation
Figure 201 (Sheet 1 of 2)/ 31-31-00-990-802

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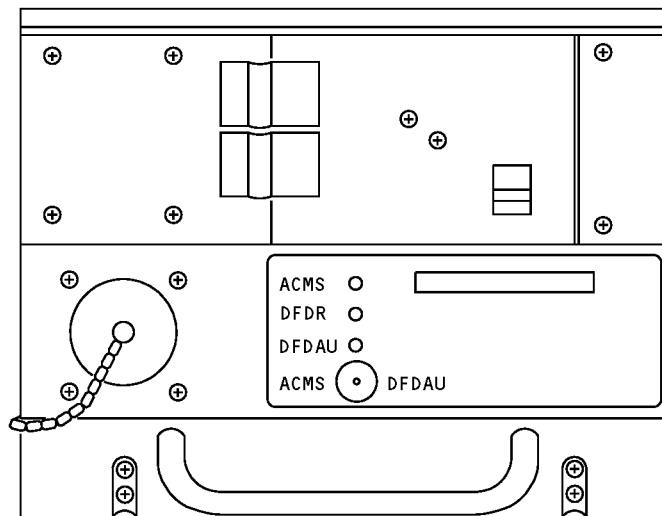
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FLIGHT DATA ACQUISITION UNIT

(B)

Flight Data Recorder System - Fault Isolation
Figure 201 (Sheet 2 of 2)/ 31-31-00-990-802

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802. DFDAU Internal Failure - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

- (a) ACMS
- (b) DFDAU

- (2) The FDAU detects an internal fault.

B. Possible Causes

- (1) Flight data acquisition unit (FDAU), M00675

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) (SSM 31-31-11)
- (2) (WDM 31-31-11)

E. Initial Evaluation

- (1) Make sure the TEST/NORMAL switch on the flight data recorder and mach airspeed warning panel is in the TEST position.
- (2) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (4) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the FDAU, M00675.

These are the tasks:

Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801,

Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.

- (a) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - (b) If the maintenance message does not show, then you corrected the fault.
 - (c) If the maintenance message shows, then continue.
- (2) To display the mandatory DFDAU BITE fault codes do these steps:
- (a) Move the toggle switch on the DFDAU front panel to the right and then release the switch.

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- 1) The lamp test will last approximately 5 seconds.
- 2) The umbrella and active database part numbers will be displayed.

NOTE: The display will return to the blank state if no toggles are made within 5 seconds.

- (b) Move the toggle switch on the DFDAU front panel to the left and then release the switch.
 - 1) The mandatory DFDAU BITE fault codes will be displayed.
 - 2) The codes will be displayed in the following format:
 - a) BM00XXXX, where XXXX is the current BITE code
 - 3) If no BITE errors are found, the following will be displayed:
 - a) NO FAULT
 - 4) The display will return to the blank state after 5 seconds.
- (3) To display the mandatory ACMS BITE fault codes do these steps:
 - (a) Move the toggle switch on the DFDAU front panel to the left and then release the switch.
 - 1) The lamp test will last approximately 5 seconds.
 - 2) The umbrella and active database part numbers will be displayed.

NOTE: The display will return to the blank state if no toggles are made within 5 seconds.
 - (b) Move the toggle switch on the DFDAU front panel to the right and then release the switch.
 - 1) The mandatory ACMS BITE fault codes will be displayed.
 - 2) The codes will be displayed in the following format:
 - a) BA00XXXX, where XXXX is the current BITE code
 - 3) If no BITE errors are found, the following will be displayed:
 - a) NO FAULT
 - 4) The display will return to the blank state after 5 seconds.
- (4) Refer to the table at the end of this task to find the description of the FDAMS DFDAU BITE fault code.

Table 201 FDAMS DFDAU BITE FAULT CODES

FAULT NO.	DESCRIPTION	ACTION
0	DFMC found no faults in the DFDAU	None
1	AIC A/D initialization fault	Replace
2	AIC BITE test fault 1 (A leg, ch 3, gain 2)	Replace
3	AIC BITE test fault 2 (A leg, ch 5, gain 4)	Replace
4	AIC BITE test fault 3 (A leg, ch 5, gain 8)	Replace
5	AIC BITE test fault 4 (A leg, ch 9, gain 1)	Note 1
6	AIC BITE test fault 5 (C leg, ch 3, gain 1)	Replace
7	AIC BITE test fault 6 (C leg, ch 3, gain 2)	Replace
8	AIC BITE test fault 7 (C leg, ch 5, gain 8)	Replace
9	AIC BITE test fault 8 (C leg, ch 9, gain 4)	Note 2

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FAULT NO.	DESCRIPTION	ACTION
10	AIC BITE test fault 9 (C leg, ch 5, gain 1)	Replace
11	AIC BITE test fault 10 (C leg, ch 6, gain 1)	Replace
12	AIC BITE test fault 11 (C leg, ch 7, gain 1)	Replace
13	AIC BITE test fault 12 (spare)	Replace
14	AIC BITE test fault 13 (spare)	Replace
15	AIC BITE test fault 14 (55H pattern)	Replace
16	AIC BITE test fault 15 (AAH pattern)	Replace
17	AIC BITE test fault 16 (spare)	Replace
18	AIC BITE test fault 17 (RAM test)	Replace
19	AIC BITE test fault 18 (Code checksum)	Replace
20	AIC BITE test fault 19 (spare)	Replace
21	AIC BITE test fault 20 (spare)	Replace
22	AIC BITE test fault 21 (spare)	Replace
23	AIC BITE test fault 22 (spare)	Replace
24	AIC BITE test fault 23 (spare)	Replace
25	AIC BITE test fault 24 (spare)	Replace
26-89	AIC conversion channel n fault	Note 3
90-153	AIC conversion channel n hardware fault	Replace
154	AIC powerup byte, bit 2 (spare)	Replace
155	AIC powerup byte, bit 6 (spare)	Replace
156	AIC powerup byte has bad parity	Replace
157	AIC powerup RAM test fault (LSB)	Replace
158	AIC powerup RAM test fault (MSB)	Replace
159	AIC ref. comparator/edge interrupt fault	Replace
160	AIC won't recover from reset	Replace
161	AIC RS232 UART fault	Replace
162	AIC inactive AIC WR-RDY	Replace
163	AIC spare #1 fault	Replace
164	AIC spare #2 fault	Replace
165	AIC spare #3 fault	Replace
166	DIC bus test 1 fault	Replace
167	DIC bus test 2 fault	Replace
168	DIC bus test 3 fault	Replace

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FAULT NO.	DESCRIPTION	ACTION
169	DIC bus test 4 fault	Replace
170-233	DIC channel n not active	Note 9
234	DIC illegal A429 configuration	Replace
235	DIC memory test fault	Replace
236	DIC inactive DIC RD-RDY	Replace
237	DIC ASIC overrun fault	Replace
238-301	DIC channel n parity error	Note 9
302-365	DIC receiver test n fault	Note 9
366	DIC won't recover from reset	Replace
367	DIC watchdog has had multiple resets	Replace
368	DIC spare #1 fault	Replace
369	DIC spare #2 fault	Replace
370	DIC spare #3 fault	Replace
371	DFMC has no dataloader A429 activity	Replace
372	DFMC has no DMU A429 activity	Replace
373	DFMC DB channels > # in DIC	Note 4
374	DFMC DL/DMU buffer overflow	Replace
375	ER_DFMC_A429_VLSI "DFMC ARINC 429 VLSI" fault	Replace
376	ER_DFMC_A573 "DFMC ARINC 573 EPLD" fault	Replace
377	DFMC has no ARINC 573 activity	Note 5
378	DFMC AIC interface checksum fault	Replace
379	DFMC AIC interface timeout fault	Replace
380	DFMC BITE history buffer write fault	Replace
381	DFMC code checksum fault	Replace
382	DFMC dataload attempt into wrong DB	Note 4
383	DFMC DFDR DB download checksum error (LSB)	Replace
384	DFMC DFDR DB download checksum error (MSB)	Replace
385	DFMC DMU DB download checksum error (LSB)	Replace
386	DFMC DMU DB download checksum error (MSB)	Replace
387	DFMC dataload attempt when not on ground	Note 6
388	DFMC dataload version mismatch	Note 4
389	DFMC DFDAU aircraft config has changed	Note 7
390	DFMC BITE fault from DFDR	Note 8

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FAULT NO.	DESCRIPTION	ACTION
391	DFMC DFDR database checksum fault (LSB)	Note 4
392	DFMC DFDR database checksum fault (MSB)	Note 4
393	DFMC DFDR DB erase fault (LSB)	Replace
394	DFMC DFDR DB erase fault (MSB)	Replace
395	DFMC out of time for DFDR database	Note 4
396	DFMC DFDR database write fault (LSB)	Replace
397	DFMC DFDR database write fault (MSB)	Replace
398	DFMC DMU DB rate wrong with this DFDR DB	Note 4
399	DFMC received bad hex record in DFDR download	Note 4
400	DFMC illegal discrete port in DFDR DB	Note 4
401	DFMC illegal register access in DFDR DB	Note 4
402	DFMC DMU aircraft config has changed	Note 7
403	DFMC DMU DB erase fault (LSB)	Replace
404	DFMC DMU DB erase fault (MSB)	Replace
405	DFMC DMU database checksum fault (LSB)	Note 4
406	DFMC DMU database checksum fault (MSB)	Note 4
407	DFMC out of time for DMU database	Note 4
408	DFMC DMU database write fault (LSB)	Note 4
409	DFMC DMU database write fault (MSB)	Note 4
410	DFMC DMU & DFDR database AIC conflict	Note 4
411	DFMC received bad hex record in DMU download	Note 4
412	DFMC illegal command in DMU DB	Note 4
413	DFMC illegal discrete port in DMU DB	Note 4
414	DFMC illegal register access in DMU DB	Note 4
415	DFMC illegal DMU DB SFC access	Note 4
416	DFMC fault buffer overflow	Replace
417	DFMC fault table vs. definition mismatch	Replace
418	DFMC has internal software error	Replace
419	DFMC no DFDR databases are loaded	Note 4
420	DFMC no DMU databases are loaded	Note 4
421	DFMC no valid DFDR database found	Note 4
422	DFMC no valid DMU database found	Note 4
423	DFMC PIC fault	Replace

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FAULT NO.	DESCRIPTION	ACTION
424	DFMC proc. disabled by Monitor/Dataload tasks	Note 5
425	DFMC Power supply validity fault	Note1 Note 2
426	DFMC RAM failure (LSB)	Replace
427	DFMC RAM failure (MSB)	Replace
428	DFMC discrete mux U42 fault	Replace
429	DFMC discrete mux U44 fault	Replace
430	DFMC discrete mux U46 fault	Replace
431	DFMC discrete mux U48 fault	Replace
432	DFMC discrete mux U51 fault	Replace
433	DFMC discrete mux U53 fault	Replace
434	DFMC discrete mux U56 fault	Replace
435	DFMC discrete mux U58 fault	Replace
436	DFMC discrete mux U59 fault	Replace
437	DFMC discrete mux U43 fault	Replace
438	DFMC discrete mux U47 fault	Replace
439	DFMC discrete mux U49 fault	Replace
440	DFMC discrete mux U52 fault	Replace
441	DFMC discrete mux U54 fault	Replace
442	DFMC discrete mux U57 fault	Replace
443	DFMC RS232/422 UART fault	Replace
444	DFMC unknown DFDR database command	Note 4
445	DFMC unknown DMU database command	Note 4
446	DFMC USX executive fault	Replace
447	DFMC ISR vector installation failed	Replace
448	DFMC watchdog timeout fault	Replace
449	DFMC spare #1 fault	Replace
450	DFMC spare #2 fault	Replace
451	DFMC spare #3 fault	Replace
452	SFC analog discrete n fault	Replace
460	SFC AC test monitor fault	Replace
461	SFC shunt/series discrete mux U40 fault	Replace
462	SFC shunt/series discrete mux U42 fault	Replace
463	SFC shunt/series discrete mux U4 fault	Replace

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FAULT NO.	DESCRIPTION	ACTION
464	SFC shunt/series discrete mux U1 fault	Replace
465	SFC shunt/series discrete mux U22 fault	Replace
466	SFC shunt/series discrete mux U5 fault	Replace
467	SFC shunt/series discrete mux U2 fault	Replace
468	DFMC spare #1 fault	Replace
469	DFMC spare #2 fault	Replace
470	DFMC spare #3 fault	Replace
(a) NOTE 1: This fault can occur if the +28VDC accel excite (LMP14F) is grounded. Check accelerometers before returning the FDAMS unit. (b) NOTE 2: This fault can occur if the +5VDC pot excite (RMP14F) is grounded. Check if the Analog pot excite is grounded outside the unit before returning the FDAMS unit. (c) NOTE 3: This fault can occur if any of the analog inputs to the FDAMS unit are out of range or a leg on a three or four leg analog input is missing. The unit should not be returned until the analog input port is checked. (d) NOTE 4: The FDAMS unit requires a database for each airframe. These databases are pre-loaded by Honeywell before the unit is shipped. If the airline can load databases and this fault appears: First, check your global VDD to verify you are loading the correct DFDR or BC429 database. Secondly, try reloading the databases before returning the unit. If the airline cannot load databases return the unit. (e) NOTE 5: If a Debug monitor is connected to the FDAMS unit, "PROC OFF" is selected. Type "PROC ON" using the debug monitor and the fault should go away. If a debug monitor is not connected or "PROC ON" was typed and the fault is still present, verify the ARINC 573 output pins LTP9A and LTP9B from the DFDAU are not grounded or shorted outside the unit. If both conditions listed above pass return the unit. (f) NOTE 6: The ground pins required to load the FMC databases are not correct. This is not a hardware problem with the FDAMS unit. (g) NOTE 7: This fault is detected by the FDAMS unit when any AC discrete or database select discrete changes after the unit is running. Check the aircraft wiring for broken wires or a faulty connector around the aircraft discretes. (h) NOTE 8: This fault is from the DFDR not the FDAMS DFDAU. Check the DFDR or the wiring between the DFDAU and the DFDR before returning the unit. (i) NOTE 9: The FDAMS unit has detected an error in data from a ARINC 429 port. The LRU sending the data to the FDAMS unit should be checked. When the aircraft LRU's are powering up, and the FDAMS unit is powered up first, the FDAMS unit will show the other LRU databuses as inactive. This fault is not an error and should go away when the inputs become active to the FDAMS unit.		

————— **END OF TASK** —————

803. DFDR Fail Light ON - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) DFDR

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- (2) The FDAU receives a fault flag from the flight data recorder (FDR).

B. Possible Causes

- (1) Flight data recorder (FDR), M00096
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) (SSM 31-31-11)
(2) (WDM 31-31-11)

E. Initial Evaluation

- (1) Make sure the TEST/NORMAL switch on the flight data recorder and mach airspeed warning panel is in the TEST position.
(2) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
(4) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the flight data recorder (FDR), M00096.

These are the tasks:

Flight Data Recorder Removal, AMM TASK 31-31-11-000-802,

Flight Data Recorder Installation, AMM TASK 31-31-11-400-802.

- (a) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
(b) If the maintenance message does not show, then you corrected the fault.
(c) If the maintenance messages shows, then continue.
(2) Do this check of the wiring:
(a) Remove the FDAU, M00675. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
(b) Remove the FDR, M00096. To remove it, do this task: Flight Data Recorder Removal, AMM TASK 31-31-11-000-802.
(c) Do a continuity check between these pins of connector D2295A for the FDAU and connector D183A for the FDR:

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D2295A

pin A9 -----

D183A

pin 7

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the FDAU, M00675. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
 - 3) Re-install the FDR, M00096. To install it, do this task: Flight Data Recorder Installation, AMM TASK 31-31-11-400-802.
 - 4) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - 5) If the maintenance message does not show, then you corrected the fault.

END OF TASK

805. Flight Data Recorder OFF Light On - Fault Isolation

A. Description

- (1) The flight data recorder/mach airspeed warning panel, P5, receives fault flag from the flight data acquisition unit (FDAU) and/or the flight data recorder (FDR). These faults will cause the OFF light on the flight data recorder/mach airspeed warning panel to come on.
- (2) The OFF light will also come on when the FDR is not on or the FDAU status relay is not activated.

B. Possible Causes

- (1) Flight data recorder, M00096
- (2) Flight Data Acquisition Unit, M00675
- (3) FDAU status relay, R263
- (4) Flight data recorder/mach airspeed warning panel, P5
- (5) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI

D. Related Data

- (1) (WDM 31-31-11)
- (2) (SSM 31-31-11)

E. Initial Evaluation

- (1) Put the NORMAL/TEST switch on the flight data recorder and mach airspeed warning panel in the TEST position.

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- (2) If the OFF light on the flight data recorder and mach airspeed warning panel comes on, and the DFDR or DFDAU fault lights on the FDAU come on, then go to the fault isolation task for the applicable maintenance message.
 - (a) For the DFDAU maintenance message, do this task: DFDAU Internal Failure - Fault Isolation, 31-31 TASK 802.
 - (b) For the DFDR maintenance message, do this task: DFDR Fail Light ON - Fault Isolation, 31-31 TASK 803.
- (3) If the OFF light on the flight data recorder and mach airspeed warning panel comes on, and the DFDAU or DFDR fault light on the FDAU does not come on, then do the steps below:
 - (a) Put the NORMAL/TEST switch in the NORMAL position.

WARNING: MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES AND LANDING DOOR AREAS. CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT

- (b) Do the air mode simulation with the PSEU BITE. To do the air mode simulation, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.
 - (c) If the OFF light comes on then do the Fault Isolation Procedure - OFF Light On.
 - (d) If the OFF does not come on, then do the Fault Isolation Procedure - OFF Light Off.
 - (e) Return the airplane to the ground mode with the PSEU BITE. To return the airplane to the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.
 - (4) If the OFF light did not come on, then there was an intermittent fault.
- F. Fault Isolation Procedure - OFF light On

- (1) Replace the FDAU M00675.
 - (a) Remove the FDAU, M00675. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
 - (b) Install the FDAU, M00675. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
 - (c) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - (d) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is off, then you corrected the fault.
 - (e) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is on, then continue.

G. Fault Isolation Procedure - OFF light On

- (1) Replace the FDAU status relay, R263.
 - (a) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - (b) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is off, then you corrected the fault.
 - (c) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is on, then continue.
- (2) Do this check of the wiring:
 - (a) Disconnect connector D1805.

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- (b) Remove the FDAU, M00675. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
- (c) Do a continuity check between these pins of connector D2295A for the FDAU and connector D1805 for the FDAU status relay:

D2295A	D1805
pin A11	pin X2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-Install the FDAU, M00675. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
 - 3) Re-connect connector D1805.
 - 4) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - 5) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is off, then you corrected the fault.

H. Fault Isolation Procedure - OFF Light Off

- (1) Replace the flight data recorder/mach airspeed warning panel, P5.

These are the tasks:

Flight Recorder/Mach Airspeed Warning Test Module Removal, AMM TASK 31-31-12-000-801,

Flight Recorder/Mach Airspeed Warning Test Module Installation, AMM TASK 31-31-12-400-801.

- (a) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the OFF light on the flight data recorder/mach airspeed warning panel, P5, is off, then you corrected the fault.

————— **END OF TASK** —————

806. Wheel Sensor Fault - Fault Isolation

A. Description

- (1) This task is for this SMYD 2 maintenance message:
 - (a) 27-22001 whl sig error
- (2) The stall management yaw damper computer No. 2 did not receive input data from the left control wheel position sensor, M00520.

B. Possible Causes

- (1) Control wheel position sensor, M00520
- (2) Stall management yaw damper (SMYD) computer 2, M1748
- (3) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

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D. Related Data

- (1) (WDM 31-31-14)

E. Initial Evaluation

- (1) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
- (2) If the maintenance message shows on the SMYD BITE display, then do the Fault Isolation Procedure below.
- (3) If the maintenance message does not show on the SMYD BITE display, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the control wheel position sensor, M00520.

These are the tasks:

Control Wheel Position Sensor Removal, AMM TASK 31-31-32-000-801,
Control Wheel Position Sensor Installation, AMM TASK 31-31-32-400-801.

- (a) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
- (b) If the maintenance message does not show on the SMYD BITE display, then you corrected the fault.
- (c) If the maintenance message shows on the SMYD BITE display, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD computer No. 2, M1748. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D815.
 - (c) Do a continuity check of these pins of connector D815 for the control wheel position sensor and connector for the SYMD computer No. 2:

CONNECTOR		CONNECTOR	
D815		D3685B	
pin 2	-----	pin 82	
pin 3	-----	pin 81	
pin 4	-----	pin 95	
pin 5	-----	pin 13	

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the stall management yaw damper computer 2, M1748. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - c) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - d) If the maintenance message does not show on the SMYD BITE display, then you corrected the fault.

————— **END OF TASK** —————

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802. Printer FAIL light is ON - Fault Isolation

A. Description

- (1) This task is for a FAIL light display on the printer

B. Possible Causes

- (1) The printer is out of paper.
- (2) The printer front cover is open.
- (3) There is a fault after a self-test.

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRTR

D. Related Data

- (1) BOEING COMPANY 737-678 WDM 31-33-01.

E. Initial Evaluation

- (1) Make sure electrical power is on AMM TASK 24-22-00-860-811.
- (2) If the FAIL light shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Make sure the printer has power.
- (2) Make sure the printer has enough paper to do the test.
- (3) Push the SLEW switch for 2 or 3 seconds.
 - (a) Make sure the paper moves out of the exit slot.
 - 1) If the paper does not move, replace the printer, M2196, AMM TASK 31-33-01-000-801.
 - (b) If the paper moves out of the exit slot, then continue.
- (4) Push the TEST switch on the front panel.
 - (a) Make sure the printer prints out a test pattern.
 - 1) If the printer does not print out a test pattern, then replace the printer, M2196, AMM TASK 31-33-01-000-801.
 - (b) If the printer prints out a test pattern, then continue.
- (5) If the FAIL light is not on, then you corrected the fault
- (6) If the FAIL light is on, then replace the printer, M02196, AMM TASK 31-33-01-000-801.

————— **END OF TASK** —————

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801. Takeoff Warning (TOW) BITE Test

A. General

- (1) You do the Takeoff Warning System BITE Test from the PSEU BITE control panel, M2061. The PSEU is located in the forward electronic bay.
- (2) The takeoff warning (TOW) BITE test check the functionality of a specific set of the airplane inputs that are used to generate a takeoff aural warning.

B. BITE Procedure

- (1) Do these steps to do the TOW BITE test:
 - (a) Push the ON/OFF switch on the PSEU BITE control panel.
 - (b) Use the up and down arrow until GROUND TESTS? shows.
 - (c) Push the YES switch.
 - (d) Use the up and down arrow until T/O WARN TEST? shows.
 - (e) Push the YES switch.
 - (f) Make sure the PSEU BITE display shows TEST PASS.
 - (g) If a maintenance message shows, then go to the maintenance message index to find the fault isolation procedure for the applicable message.

————— **END OF TASK** —————

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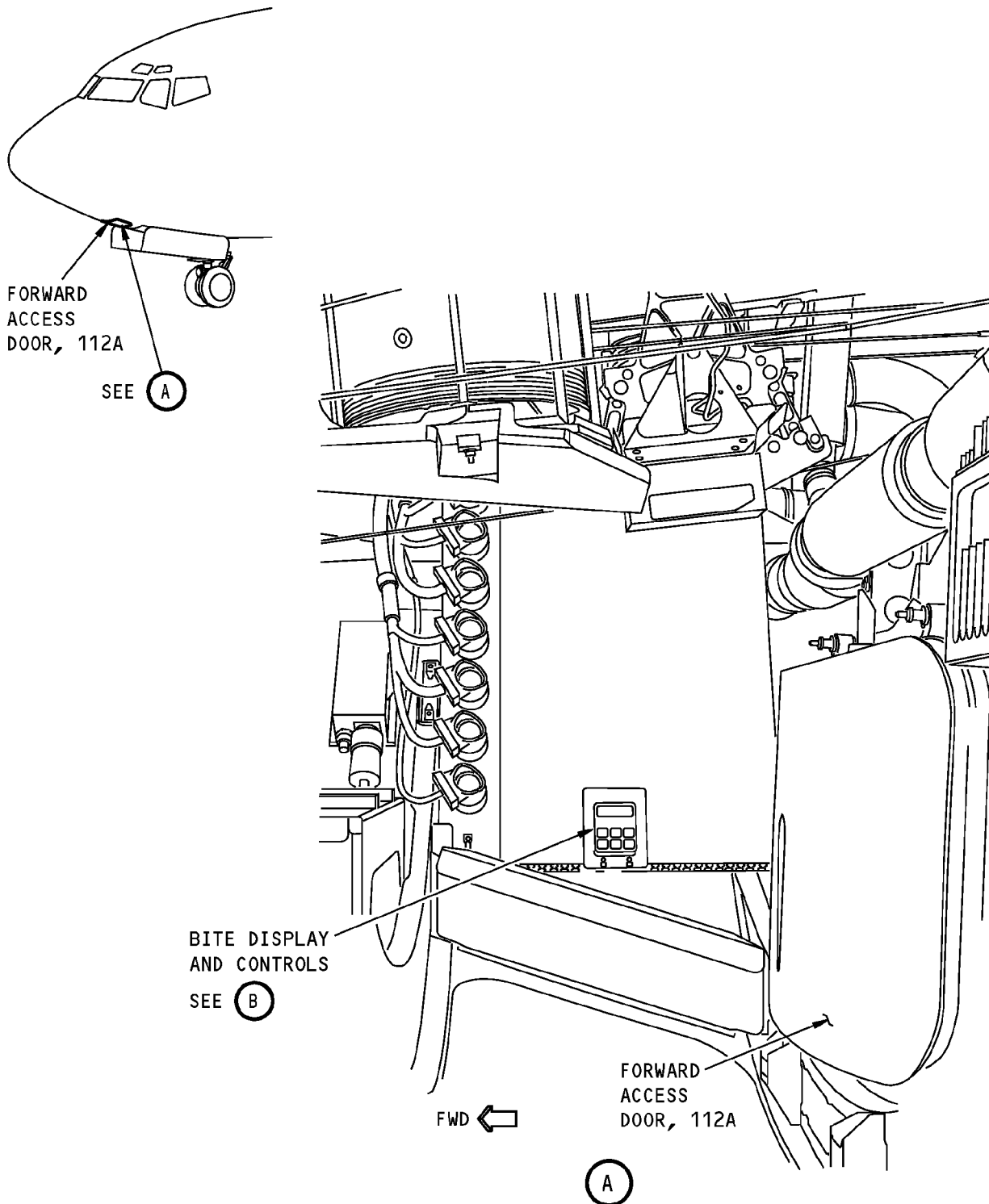
31-51 TASK 801

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Proximity Switch Electronics Unit BITE Display
 Figure 201 (Sheet 1 of 2)/ 31-51-00-990-803

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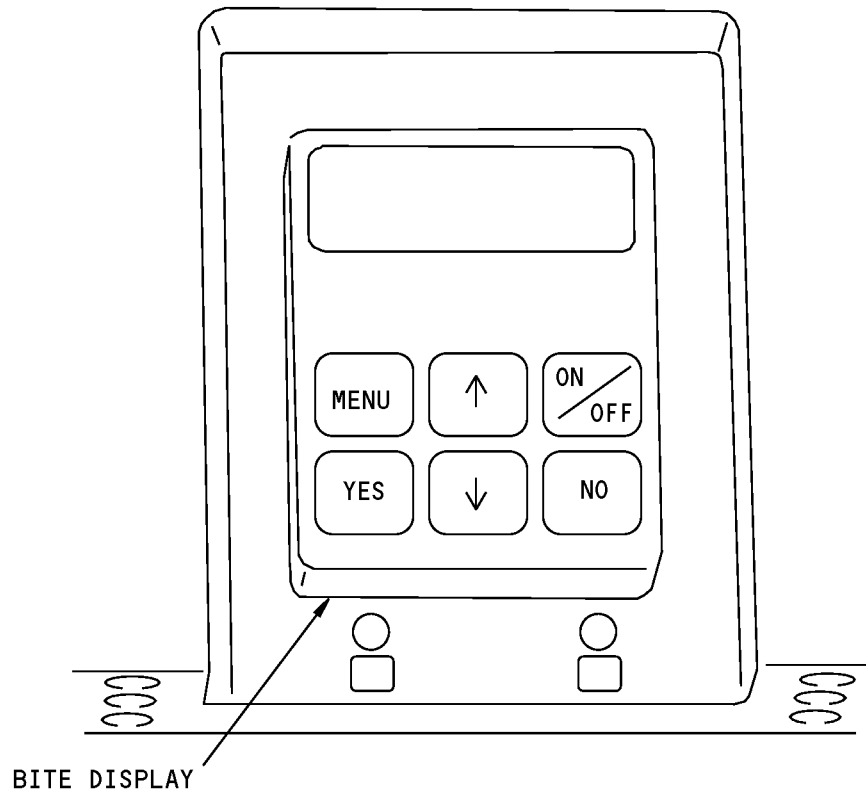
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BITE DISPLAY AND CONTROLS

B

Proximity Switch Electronics Unit BITE Display
Figure 201 (Sheet 2 of 2)/ 31-51-00-990-803

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803. Takeoff Warning System Fault (No Warning or False warning) - Fault Isolation

A. Description

- (1) The aural warning module will give an intermittent horn when the airplane is on the ground with one of the thrust levers TRA angle is greater than 53 degree and at least one of the following conditions exist:
 - (a) Stab trim is not in the green band.
 - (b) Speedbrake lever is not down.
 - (c) The trailing edge flaps are less than 1 units or greater than 25 units.
 - (d) The parking brake is set.
 - (e) The spoilers are extended.
 - (f) The leading edge flaps are not extended.
- (2) The aural warning module will also give an intermittent horn when the airplane is in the air, and all the conditions below exist:
 - (a) The landing gear cutoff circuit breaker closed.
 - (b) The leading edge flaps are not extended.
 - (c) The ground spoiler interlock valve opens.

B. Possible Causes

- (1) Stabilizer takeoff warning switches, S132, S546
- (2) Speedbrake takeoff warn switch, S651
- (3) Ground spoiler up pressure switch, S1049
- (4) Parking brake switch, S100
- (5) Stall management yaw damper (SMYD) 1, M1747
- (6) Stall management yaw damper (SMYD) 2, M1748
- (7) Autothrottle switch S8 of pack #1 Eng, M1766
- (8) Autothrottle switch S8 of pack #2 Eng, M1767
- (9) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	3	C00170	MACH WARN SYS-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00549	MACH WARN SYS-2

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

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F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Do this task: Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822.

NOTE: PSEU NVM will only show last takeoff warning cause. A second takeoff warning will override the initial cause.

- (2) If the Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822 is not satisfactory, then do the Fault Isolation Procedure - Input Monitoring below.
- (3) If either the Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822 or the Fault Isolation Procedure - Input Monitoring is satisfactory, then there was an intermittent fault.

F. Fault Isolation Procedure - Input Monitoring

- (1) Do these steps from the PSEU BITE display to check the takeoff warning inputs to the PSEU:

- (a) Push the ON button.
 - 1) Make sure EXISTING FAULT? shows.
- (b) Push the NO button until OTHER FUNCTNS? shows.
- (c) Push the YES button.
 - 1) Make sure T/O WRN REPORTS? shows.
- (d) Push the NO button until I/O MONITOR? shows.
- (e) Push the YES button until SENSORS? shows.
- (f) Push the NO button until INPUTS? shows.

NOTE: Use the arrow down button if INPUT INACTIVE shows.

- (g) Push the YES button.
- (h) Select a connector.

NOTE: Use the arrow buttons to move to the desired connector, then push the YES button to select a connector.

- (i) Select a pin.

NOTE: Use the arrow buttons to move to the desired pin, then push the YES button to select the pin.

- (j) Do a check of the PSEU takeoff warning inputs.

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Table 201

Connector	Pin	Test Condition	PSEU BITE Display
D10984	51	stab trim in green band	GND
D10982	51	stab trim in green band	NO GND
D10984	51	stab trim not in green (nose dwn)	NO GND
D10982	51	stab trim not in green (nose dwn)	GND
D10984	51	stab trim not in green (nose up)	NO GND
D10982	51	stab trim not in green (nose up)	GND
D10986	27	leading edge flap not extended	GND
D10986	27	leading edge flap extended	NO GND
D10982	61	parking brake set	GND
D10984	28	parking brake set	NO GND
D10982	61	parking brake not set	NO GND
D10984	28	parking brake not set	GND
D10982	29	speedbrake lever UP	GND
D10982	29	speedbrake lever DOWN	NO GND
D10986	29	ground spoiler deployed	NO GND
D10986	14	ground spoiler deployed	GND
D10986	14	ground spoiler not deployed	NO GND
D10986	29	ground spoiler not deployed	GND
D10982	15	flap = 10	NO GND
D10982	31	flap = 10	NO GND
D10982	15	flap > 25	GND
D10982	31	flap > 25	GND
D10982	42	autothrottle left TRA < 53 deg	NO GND
D10984	42	autothrottle right TRA < 53 deg	NO GND
D10982	42	autothrottle left TRA > 53 deg	GND
D10984	42	autothrottle right TRA > 53 deg	GND

- (k) If you do not find a problem with any of the inputs in the table, then do the Fault Isolation Procedure - Aural Warning Module Input Fault below.
- (l) If you find a problem with the stabilizer trim inputs, then do the Fault Isolation Procedure - Stab Trim Input Fault below.
- (m) If you find a problem with the leading edge flap inputs, then do the Fault Isolation Procedure - Leading Edge Flap Input Fault below.
- (n) If you find a problem with the parking brake inputs, then do the Fault Isolation Procedure - Parking Brake Input Fault below.

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- (o) If you find a problem with the speedbrake inputs, then do the Fault Isolation Procedure - Speedbrake Takeoff Warn Switch Input Fault below.
- (p) If you find a problem with the ground spoiler pressure inputs, then do the Fault Isolation Procedure - Ground Spoiler Up Pressure Input Fault below.
- (q) If you find a problem with the flaps inputs, then do the Fault Isolation Procedure - Takeoff Flap Warn Input Fault below.
- (r) If you find a problem with the autothrottle inputs, then do the Fault Isolation Procedure - Autothrottle Microswitch Pack Input Fault below.

G. Fault Isolation Procedure - Aural Warning Module Input Fault

- (1) Do this task: Aural Warning Module BITE Test, AMM TASK 31-51-00-740-801.
 - (a) If the Aural Warning Module BITE test is not satisfactory then do these steps:
 - 1) Replace the aural warning module, M315.
These are the tasks:
Aural Warning Module Removal, AMM TASK 31-51-04-000-801,
Aural Warning Module Installation, AMM TASK 31-51-04-400-801.
 - 2) Do this task: Takeoff Warning System Test, AMM TASK 31-51-00-730-803.
 - a) If the takeoff warning system test is satisfactory, then you corrected the fault.
 - b) If the takeoff warning system test is not satisfactory, then continue.
 - (b) If the Aural Warning Module BITE test is satisfactory then continue.
- (2) Do this check of the wiring:
 - (a) Remove the aural warning module, M315. To remove it, do this task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801.
 - (b) Disconnect connector D10982.
 - (c) Do a continuity check of these pins of connector D10982 for the PSEU and connector D940 for the aural warning module:

D10982	D940
pin 53	pin 3
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10982.
 - 3) Re-install the aural warning module, M315. To install it, do this task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.
 - 4) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure - Stab Trim Input Fault

- (1) Replace the stabilizer takeoff warn switch, S546.
These are the tasks:
Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,
Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
- (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.

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- (2) Replace the stabilizer takeoff warn switch, S132.

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,

Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

- (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).

- 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.

- (3) Do this check of the wiring:

- (a) Disconnect connector D10982.
(b) Disconnect connector D10984.
(c) Remove stabilizer takeoff warning switch, S132. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
(d) Remove stabilizer takeoff warning switch, S546. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
(e) Do a check of the wiring between these pins:

D10984		S546
pin 51	-----	pin AC

D10982		S546
pin 51	-----	pin AB

D10982		S132
pin 51	-----	pin BB

- (f) If you find a problem with the wiring, then do the steps:

- 1) Repair the wiring.
2) Re-connect connector D10982.
3) Re-connect connector D10984.
4) Re-install the stabilizer takeoff warning switch, S132. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
5) Re-install the stabilizer takeoff warning switch, S546. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
6) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
a) If the test of the stabilizer input to the takeoff warning system is satisfactory, then you corrected the fault.

I. Fault Isolation Procedure - Leading Edge Flap Input Fault

- (1) Do this task: Flap/Slat Electronics Unit (FSEU) BITE Procedure, 27-51 TASK 801.
(a) Look for maintenance message 27-81421 on the FSEU BITE display, then go to the fault isolation task to do the corrective action.
(b) Use the PSEU BITE display to do a check of the leading edge flap inputs to the takeoff warning system:

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Table 202

Connector	Pin	Test Condition	PSEU BITE Display
D10986	27	leading edge flap not extended	GND
D10986	27	leading edge flap extended	NO GND

1) If the PSEU BITE display agrees with the value in the table, then you corrected the fault.

J. Fault Isolation Procedure - Autothrottle Microswitch Pack Input Fault

(1) For the left autothrottle input problem, replace the autothrottle microswitch S8 of pack #1, M1766.

These are the tasks:

Switch Removal, AMM TASK 76-11-07-020-801-F00,

Switch Installation, AMM TASK 76-11-07-400-801-F00.

(a) Do the steps in the Takeoff Warning System Test that test the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).

1) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.

2) If the test of the autothrottle input to the takeoff warning system is not satisfactory, then you continue.

(2) For the right autothrottle input problem, replace the right autothrottle microswitch S8 of pack #2, M1767.

These are the tasks:

Switch Removal, AMM TASK 76-11-07-020-801-F00,

Switch Installation, AMM TASK 76-11-07-400-801-F00.

(a) Do the steps in the Takeoff Warning System Test that test the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).

1) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.

2) If the test of the autothrottle input to the takeoff warning system is not satisfactory, then you continue.

(3) Do this check of the wiring:

(a) Remove the switch S8 of the left autothrottle microswitch pack assembly, M1766. To remove it, do this task: Switch Removal, AMM TASK 76-11-07-020-801-F00.

(b) Remove the switch S8 of the right autothrottle microswitch S8 pack assembly, M1767. To remove it, do this task: Switch Removal, AMM TASK 76-11-07-020-801-F00.

(c) Disconnect connector D11128.

(d) Disconnect connector D10982.

(e) Disconnect connector D11132.

(f) Disconnect connector D10984.

(g) Do a continuity check between these pins of the connectors listed below:

D10982	D11128
pin 42 -----	pin 16

D10984	D11132
pin 42 -----	pin 16

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- (h) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install switch S8 of the left autothrottle microswitch pack, M1767. To install it, do this task: Switch Installation, AMM TASK 76-11-07-400-801-F00.
 - 3) Re-install switch S8 of the right autothrottle microswitch pack, M1766. To install it, do this task: Switch Installation, AMM TASK 76-11-07-400-801-F00.
 - 4) Re-connect connector D10982.
 - 5) Re-connect connector D10984.
 - 6) Do the steps in the Takeoff Warning System Test that test the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).
 - a) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.

————— END OF TASK —————

804. Ground Spoilers Up Pressure Switch Fault - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-55001 GS PRESS A
 - (b) 31-55002 GS PRESS B
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when input from the ground spoiler up press switch, S1049, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Ground spoiler up pressure switch, S1049, of the ground spoiler interlock valve.
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

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E. Initial Evaluation

WARNING: MAKE SURE PERSON AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING DOOR CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSON OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Put the speed brake handle in the UP position.
- (3) Move the speed brake handle to the DOWN position.
- (4) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (5) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (6) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the ground spoiler interlock valve.

These are the tasks:

Ground Spoiler Interlock Valve Removal, AMM TASK 27-62-61-000-801,
Ground Spoiler Interlock Valve Installation, AMM TASK 27-62-61-400-801.

- (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.

- (2) Do this check of the wiring:

- (a) Disconnect connector D11730.
- (b) Disconnect connector D10986.
- (c) Do a continuity check between these pins of connector D10986 for the PSEU and the connector D11730 for the ground spoiler up pressure switch:

D10986		D11730
pin 14	-----	pin 1
pin 29	-----	pin 3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D11730.
 - 3) Re-connect connector D10986.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do these steps to check the ground spoiler up pressure switch input to the PSEU:
 - (a) Push the ON button.
 - 1) Make sure EXISTING FAULT? shows.
 - (b) Push the NO button until OTHER FUNCTNS? shows.
 - (c) Push the YES button until T/O WRN shows on the display.
 - (d) Push the NO button until I/O MONITOR shows.
 - (e) Push the YES button until SENSORS shows.

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- (f) Push the NO button until INPUTS shows.
- (g) Do a check of the pins listed below:

Table 203

PSEU Connector	Pin	Speedbrake Lever Pos	PSEU BITE Display
D10986	14	UP	GND
D10986	14	DOWN	NO GND
D10986	29	UP	NO GND
D10986	29	DOWN	GND

- (h) If the PSEU BITE display agrees with the value in the table, then you corrected the fault.
- (2) Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

END OF TASK

805. Ground Spoiler Interlock Valve Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55003 GSBV CLOSED
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when the input from the ground spoiler up interlock valve sensor, S1050, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Ground spoiler interlock valve
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Disconnect the push-pull cable is disconnected from the right hand main landing gear upper link.
- (2) Push the push-pull cable upward until it stops.

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- (3) Pull the push-pull cable upward until it stops.
- (4) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (5) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (6) If the maintenance message does not show, then there was an intermittent fault.
- (7) If you do not hear an intermittent horn, then do the Fault Isolation Procedure below.
- (8) If you hear an intermittent horn, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the ground spoiler interlock valve.

These are the tasks:

Ground Spoiler Interlock Valve Removal, AMM TASK 27-62-61-000-801,

Ground Spoiler Interlock Valve Installation, AMM TASK 27-62-61-400-801.

- (a) Do the Repair Confirmation at the end of this task.

- 1) If the Repair Confirmation is not satisfactory, then continue.

- (2) Do this check of the wiring:

- (a) Disconnect connector D11142.

- (b) Disconnect connector D11728.

- (c) Do a continuity check between these pins of connector D11142 for the PSEU and the connector D11728:

D11142		D11728
pin 20	-----	pin 1
pin 8	-----	pin 4

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector D11142.
- 3) Re-connect connector D11728.
- 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Pull the push-pull cable upward until it stops.
- (2) Push the push-pull cable upward until it stops.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.
- (5) Connect the push-pull cable to the right hand main landing gear upper link.

————— **END OF TASK** —————

806. Speedbrake Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55005 SPDBRK UP

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- (2) This maintenance message will show on the proximity switch electronic units, M2061, when the speedbrake input has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Speedbrake takeoff warning switch, S651
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Set the speedbrake handle to the UP position.
- (2) Set the speedbrake handle to the DOWN position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the speedbrake takeoff warn switch, S651.

These are the tasks:

Speedbrake Takeoff Warning Switch Removal, AMM TASK 31-51-03-000-801,
Speedbrake Takeoff Warning Switch Installation, AMM TASK 31-51-03-400-801.

- (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.

- (2) Do this check of the wiring:

- (a) Remove the speedbrake takeoff warn switch, S651. To remove it, do this task: Speedbrake Takeoff Warning Switch Removal, AMM TASK 31-51-03-000-801.
- (b) Disconnect connector D10982.
- (c) Do a continuity check between these pins of connector D10982 for the PSEU and the connector D5148P for the speedbrake takeoff warn switch:

D10982	D5148P
pin 29 -----	pin 10

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- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the speedbrake takeoff warn switch, S651. To install it, do this task: Speedbrake Takeoff Warning Switch Installation, AMM TASK 31-51-03-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the speedbrake handle in the UP position.
- (2) Set the speedbrake handle in the DOWN position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

END OF TASK

809. Takeoff Warning Inhibit Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55008 T/O WARN INHIBIT
- (2) This message will show on the proximity switch electronic units, M2061, when the input from the landing gear takeoff warning cutoff circuit breaker, C1398, is opened.

B. Possible Causes

- (1) Landing gear takeoff warning cutoff circuit breaker, C1398
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Open this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

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- (2) Close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

- (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

- (b) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- 1) If the maintenance message does not show, then you corrected the fault.
 - 2) If the maintenance message shows, then continue.

- (2) Do this check of the wiring:

- (a) Disconnect connector D10982 from the PSEU, M2061.
- (b) Do a continuity between these pins of connector D10982 for the PSEU and the terminals for circuit breaker C1398:

D10982	C/B C1398
pin 52 -----	term B

Gnd GD624-DC	C/B C1398
GD624-DC -----	term L

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D10982.

- (d) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

- (e) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- 1) If the maintenance message does not show, then you corrected the fault.

————— **END OF TASK** —————

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810. Takeoff Flap A Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55009 TAKEOFF FLAP A
- (2) This maintenance message will show on the proximity switch electronic unit (PSEU), M2061, when the trailing edge takeoff flaps input from stall management yaw damper 2 has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 2, M1748
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) For SMYD 2, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - (a) If a SMYD maintenance message shows, then go to the applicable fault isolation task for the maintenance message to correct the fault.
 - (b) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD 2, M1748. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D10982.

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- (c) Do a continuity check between these pins of the connectors listed below:

D10982

pin 15 -----

D3685A

pin 63

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the SMYD 2, M1748. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- 3) Re-connect connector D10982.
- 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

————— **END OF TASK** —————

811. Takeoff Flap B Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55010 TAKEOFF FLAP B
- (2) This maintenance message will show on the proximity switch electronic unit (PSEU), M2061, when the leading edge flaps input from the yaw damper management computer 2, M1748 has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 1, M1747
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

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E. Initial Evaluation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) For SMYD 1, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - (a) If a SMYD maintenance message shows, then go to the applicable fault isolation task for the maintenance message to correct the fault.
 - (b) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD 1, M1747. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D10982.
 - (c) Do a continuity check between these pins of connector D10982 for the PSEU and D8683A for the stall management yaw damper 1:

D10982	D8683A
pin 31	pin 63
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the SMYD 1, M1747. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

————— **END OF TASK** —————

815. Landing Warning System Fault (False Warning or No Warning) - Fault Isolation

A. Description

- (1) The continuous landing warning horn will sound when a gear is not down and locked and one of these conditions exist:

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- (a) The flaps between 0 and 10 units with one of the thrust lever angle (TLA) is less than 20 degrees of thrust, the other TLA is less than 34 degree and the radio altitude is less than 800 feet.

NOTE: The horn can be silenced with the horn cutout switch only when the radio altitude is between 200 and 800 feet.

- (b) The flaps between 15 to 25 with one of the TLA is at less than 20 degrees of thrust and the other TLA is at less than 34 degrees of thrust. The horn cannot be stopped.

NOTE: The thrust lever settings are different during a single engine landing.

- (c) The flaps are at more than 25 units. The TLA does not matter. The horn cannot be stopped.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 1, M1747
- (2) Stall management yaw damper (SMYD) 2, M1748
- (3) Flap landing warning switch, S138
- (4) Autothrottle microswitch pack left, M1766
- (5) Autothrottle microswitch pack right, M1767
- (6) Aural warning module, M315
- (7) Proximity switch electronics unit, M2061
- (8) LRRRA receivers/transmitters, M1735 or M1736
- (9) LRRRA transmit/receive antennas, M1737 or M1738 or M1739 or M1740
- (10) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (SSM 31-62-21)
- (4) (WDM 31-51-11)
- (5) (WDM 31-53-11)
- (6) (WDM 32-64-21)

E. Initial Evaluation

- (1) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.
- (2) If the landing warning system test is not satisfactory, then do the Fault Isolation Procedure below.

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(3) If the landing warning system test is satisfactory, then there was an intermittent fault.

F. Fault Isolation Procedure

I

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(1) Do these steps to check the for EXISTING FAULTS messages:

- (a) Push the ON button on the PSEU
- (b) Push YES to select EXISTING FAULTS?
- (c) Look for these maintenance messages, then go to the applicable fault isolation task for the message to correct the fault:

NOTE: Push the down arrow button to scroll through the list of fault messages.

- 1) 27-62003 ALT LT 800 L
- 2) 27-62004 ALT LT 800 R
- 3) 31-52002 TRA LT53 L
- 4) 31-52003 TRA LT53 R
- 5) 32-02001 PARK A/PARK B
- 6) 32-02002 PARK A
- 7) 32-02003 PARK B
- 8) 32-61001 LEFT DWN LKD A
- 9) 32-61002 LEFT UP LKD A
- 10) 32-61003 NOSE LKD A
- 11) 32-61004 NOSE DWN A
- 12) 32-61005 RIGHT DWN LKD A
- 13) 32-61006 RIGHT UP LKD A
- 14) 32-61007 LEFT DWN LKD B
- 15) 32-61008 LEFT UP LKD B
- 16) 32-61009 NOSE DWN B
- 17) 32-61010 NOSE LKD B
- 18) 32-61011 RIGHT DWN LKD B
- 19) 32-61012 RIGHT UP LKD B
- 20) 32-62001 TRA LT44 L
- 21) 32-62002 TRA LT44 R
- 22) 32-62003 TRA LT64 L
- 23) 32-62004 TRA LT64 R
- 24) 32-62005 ALT LT 200 L
- 25) 32-62006 ALT LT 200 R
- 26) 32-62009 LANDING FLAPS A
- 27) 32-62010 LANDING FLAPS B
- 28) 32-62011 LW INHIBIT
- 29) 32-62014 LANDING FLAPS DISAGREE

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- (2) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.
- (3) If the landing warning system test is satisfactory, then you corrected the fault.
- (4) If the landing warning system test is not satisfactory, then continue.
- (5) Do this task: Aural Warning Module BITE Test, AMM TASK 31-51-00-740-801.
 - (a) If the aural warning module BITE test is satisfactory, then continue.
 - (b) If the aural warning module BITE test is not satisfactory, then do these steps:
 - 1) Replace the aural warning module, M315.
These are the tasks:
Aural Warning Module Removal, AMM TASK 31-51-04-000-801,
Aural Warning Module Installation, AMM TASK 31-51-04-400-801.
 - 2) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - 3) If the landing warning system test is satisfactory, then you corrected the fault.
 - 4) If the landing warning system test is not satisfactory, then continue.

- (6) Do this check of the wiring:
 - (a) Disconnect connector D10982 from the PSEU, M2061.
 - (b) Remove the aural warning module, M315. To remove it, do this task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801
 - (c) Do a continuity check between these pins of connector D10982 for the PSEU and connector D940 for the aural warning module:

D10984	D940
pin 53	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the aural warning module, M315. To install it, do this task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - a) If the landing warning system test is satisfactory, then you corrected the fault.
 - b) If the landing warning system test is not satisfactory, then continue.

- (7) Replace the PSEU, M2061.
These are the tasks:
Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801,
Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801.
 - (a) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - 1) If the landing warning system test is satisfactory, then you corrected the fault.
 - 2) If the landing warning system test is not satisfactory, then continue.

- (8) Do this task: Low Range Radio Altimeter (LRRRA) BITE Procedure, 34-33 TASK 801.
 - (a) Do this task: Landing Warning System Test, AMM TASK 31-51-00-730-802.

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- 1) If the landing warning system test is satisfactory, then you corrected the fault.

————— **END OF TASK** —————

820. Stab Trim Green Input Fault - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-55006 STAB TRIM GRN
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when input from the stabilizer takeoff warning switches, S546 or S132, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stabilizer takeoff warning switch, S546
- (2) Stabilizer takeoff warning switch, S132
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

WARNING: MAKE SURE PERSON AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING DOOR CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSON OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (4) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the stabilizer takeoff warning switch, S546.

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,

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Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

- (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the stabilizer takeoff warning switch, S546. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (b) Disconnect connector D10984.
 - (c) Do a continuity check between these pins of connector D10984 for the PSEU and S546 for the stabilizer takeoff warning switch:

D10984	S546
pin 51 -----	pin AC

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Install the stabilizer takeoff warning switch, S546. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
 - 3) Re-connect connector D10984.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then continue.
- (3) Replace the stabilizer take of warning switch, S132.
These are the tasks:
Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,
Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the stabilizer trim outside the green band toward nose down.
- (2) Set the stabilizer trim inside the green band.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message do not show then you corrected the fault.

END OF TASK

821. Stab Trim Not Green Input Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55007 STAB TRIM NOT GRN
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when input from the stabilizer takeoff warning switch, S132, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stabilizer takeoff warning switch, S132
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

WARNING: MAKE SURE PERSON AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING DOOR CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSON OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Set the stabilizer trim outside the green band toward nose up.
- (3) Set the stabilizer trim inside the green band.
- (4) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (5) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (6) If the maintenance messages do not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the stabilizer takeoff warning switch, S132.

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,
 Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

- (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the stabilizer takeoff warning switch, S132. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
 - (b) Disconnect connector D10982.
 - (c) Do a continuity check between these pins of connector D10982 for the PSEU and S132 for the stabilizer takeoff warning switch:

D10982	S132
pin 51 - - - - -	pin BC

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Install the stabilizer takeoff warning switch, S132. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
- 3) Re-connect connector D10982.
- 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the stabilizer trim outside the green band toward nose up.
- (2) Set the stabilizer trim inside the green band.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message do not show then you corrected the fault.

————— **END OF TASK** —————

822. Takeoff Warning Report Faults - Fault Isolation

A. General

- (1) You do the Takeoff Warning Report from the PSEU BITE control panel, M2061. The PSEU is located in the forward electronic bay.

B. Procedure

- (1) Do these steps from the PSEU BITE display to check the Takeoff Warning Report for messages:
 - (a) Push the ON button
 - 1) Make sure EXISTING FAULT? shows.
 - (b) Push the NO button until OTHER FUNCTNS? shows.
 - (c) Push the YES button.
 - 1) Make sure T/O WRN REPORTS? shows.
 - (d) Push the YES button.
 - 1) Look for these maintenance messages, then go to the applicable fault isolation task for the message to correct the fault.

NOTE: Push the down arrow button to scroll through the list of fault messages. One or more of these maintenance messages may be found:

- a) 31-53001 GS PRESS A GT 750
- b) 31-53002 GS PRESS B GT 750
- c) 31-53003 NOT STAB TRM GRN
- d) 31-53007 SPDBRK HDL UP
- e) 31-53008 NOT T/O FLAPS A
- f) 31-53009 NOT T/O FLAPS B
- g) 31-53010 LE FLAPS NOT EXT
- h) 32-03001 PARK BRK A SET
- i) 32-03002 PARK BRK B SET

- (2) The PSEU does not reset these messages when the faults are corrected.

————— **END OF TASK** —————

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801. Master Caution Problem - Fault Isolation

A. Description

- (1) During the pre-flight Master Caution Test, not all the System Annunciator lights (six pack, L342/L343) come on.

B. Possible Causes

- (1) The pre-flight power-on sequence to the master caution circuit.
- (2) A failed master caution light switch.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT
F	16	C00023	DC BUS INDICATION BUS 1

D. Related Data

- (1) This fault can occur when the pre-flight power-up sequence of the System Annunciator indication lights are energized before the master caution circuit.

E. Initial Evaluation

- (1) If a System Annunciator light does not operate correctly while performing the pre-flight Master Caution Test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Open these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT

- (2) Cycle the circuit breaker for the applicable System Annunciator light that is inoperative.

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- (a) FUEL, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1

- (b) FLT CONT, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1

- (c) APU, open and close this circuit breaker:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT

- (d) ELEC, open and close these circuit breakers:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT
F	16	C00023	DC BUS INDICATION BUS 1

- (e) HYD, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1

- (f) ANTI-ICE, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2

- (g) AIR COND, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

- (h) OVERHEAD, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

- (i) DOOR, open and close this circuit breaker

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2



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- (j) ENG, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

- (k) IRS, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

- (l) OVHT/DET, open and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROTECTION DETECTION MASTER WARN & CONT

- (3) Close these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT

- (4) If the System Annunciator lights display correctly, then you have corrected the fault.

————— **END OF TASK** —————

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801. CDS BITE Procedure

A. General

- (1) The Common Display System (CDS) BITE data is displayed from the Control Display Unit (CDU). These are the items on the CDS DEU main menu that you will use in this task:

- (a) CURRENT STATUS
- (b) INFLIGHT FAULTS

(2) CURRENT STATUS

- (a) The CURRENT STATUS display will show any maintenance messages that are currently active. A maintenance message identifies a specific failure which is found by the CDS. The maintenance messages are in English text and have a seven digit number.

NOTE: Any faults that become active are added to the list, and the faults that become not active are shown as NOT ACTIVE.

(3) INFLIGHT FAULTS

- (a) The INFLIGHT FAULTS display shows the flight legs during which faults occurred. The CDS can show data for LEG 01 through LEG 64. The flight legs are shown with the flight leg that had the most recent fault at the top of the first page. Only the flight legs during which faults occurred will show. You can use the PREV PAGE and NEXT PAGE keys to see all the legs. The takeoff time, the takeoff date, and the number of faults in the leg will show under each leg.
- (b) When you press the line select key next to the prompt for one of the flight legs, you will see more data. You will see this data for each fault in the flight leg:
- 1) A maintenance message number and the message text.
 - 2) The date that the fault occurred.
 - 3) The time that the fault occurred.
 - 4) The altitude when the fault occurred.
 - 5) The flight number.
- (c) If there are more than one maintenance message for that flight leg, they will show on subsequent pages. You can use the PREV PAGE to see all the pages.

HAP 001-013, 015-026, 028-030 POST SB 737-31-1246 AND PRE SB 737-31-1295

(4) Recommended Action

- (a) Daily (if practical, prior to the first flight of the day), or for any displayed Failure Flag, missing data, CDS MAINT, or CDS FAULT, check the CDU Maintenance page CURRENT STATUS (FIM 31-62 TASK 801 paragraphs A through B (3) (e) 3) a)) for any detected DEU FAULTS before checking the interfacing systems. Should any of the following fault codes appear, remove and replace the respective DEU (AMM TASK 31-62-21-000-801):
- 1) 31-60011 DEU-1 FAULT
 - 2) 31-69101 NO DFDAU DATA TO DEU-1
 - 3) 31-69731 NO STALL MANAGEMENT-1 DATA TO DEU-1
 - 4) 31-60012 DEU-2 FAULT
 - 5) 31-69102 NO DFDAU DATA TO DEU-2
 - 6) 31-69732 NO STALL MANAGEMENT-1 DATA TO DEU-2
- (b) Should none of the above faults exist in CURRENT STATUS, the DEUs are functional for dispatch or dispatch with relief as applicable.

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B. BITE Procedure

- (1) It is normal to see the "CDS FAULT" message shows for up to 3 minutes during the CDS stanby power testing and power-up operations.

NOTE: It is important that the flight crews wait for up to 3 minutes after the "CDS FAULT" message is observed for the message to clear before proceeding with the fault isolation procedure.

- (2) If the "CDS FAULT" message still shows, do this step:

- (a) For the applicable display electronic unit (DEU), open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

NOTE: It is important that you wait for up to 3 minutes after the "CDS FAULT" message is observed for the message to clear before proceeding with the fault isolation procedure.

- (3) Do the BITE procedure for the CDS (Figure 201).

- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:

- 1) Push the INIT REF function key.
- 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.

NOTE: This makes the INIT/REF INDEX show.

- 3) Push the line select key next to the MAINT prompt.

- (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.

- (c) For DEU-1 CDS BITE, push the line select key next to the DEU-1 prompt.

- (d) For DEU-2 CDS BITE, push the line select key next to the DEU-2 prompt.

- (e) Do these steps to look for maintenance messages in CURRENT STATUS:

- 1) Push the line select key next to the CURRENT STATUS prompt.

NOTE: If there are active faults detected by the applicable DEU, you will see a maintenance message number and the maintenance message text.

- 2) If there are any maintenance messages, then refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

NOTE: The number of maintenance messages that are in Current Status are shown in the upper right corner of the display. You can use the PREV PAGE and NEXT PAGE buttons to move from one maintenance message to another.

- 3) If NO FAULTS shows for DEU 1 and 2, then do these steps:

NOTE: There are no faults that are currently active.

- a) Push the line select key next to the INDEX prompt.

NOTE: This will bring you back to the CDS DEU BITE main menu.

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- b) Do the steps that follow to look for maintenance messages in the INFLIGHT FAULTS menu selection.
- (f) If there are no maintenance messages in CURRENT STATUS for both DEU 1 and 2, then do these steps to look for maintenance messages in INFLIGHT FAULTS for both DEU 1 and 2:
- 1) Push the line select key next to the INFLIGHT FAULTS prompt.
 - 2) Push the line select key next to the prompt for the flight leg (LEG) during which the fault occurred.
- NOTE:** The most recent flight leg is LEG 01.
- 3) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.
- NOTE:** The number of maintenance messages that are in Current Status are shown in the upper right corner of the display. You can use the PREV PAGE and NEXT PAGE buttons to move from one maintenance message to another.
- (g) Push the line select key next to the INDEX prompt twice to return to the CDS DEU BITE Main Menu.

————— **END OF TASK** —————

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-60011 DEU-1 FAULT	31-62 TASK 805
CDS	31-60012 DEU-2 FAULT	31-62 TASK 806
CDS	31-60031 DEU-1 RESET	31-62 TASK 807
CDS	31-60032 DEU-2 RESET	31-62 TASK 808
CDS	31-60041 DEU-1 SOFTWARE RESET	31-62 TASK 809
CDS	31-60042 DEU-2 SOFTWARE RESET	31-62 TASK 810
CDS	31-60051 DEU-1 COAX FAULT	31-62 TASK 811
CDS	31-60052 DEU-2 COAX FAULT	31-62 TASK 812
CDS	31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT	31-62 TASK 813
CDS	31-60061 DEU-1 PROGRAM PIN FAULT	31-62 TASK 814
CDS	31-60062 DEU-2 PROGRAM PIN FAULT	31-62 TASK 815
CDS	31-60070 DEU1 AND DEU2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 816
CDS	31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 817
CDS	31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 818
CDS	31-60101 NO HOT BATTERY POWER	31-62 TASK 819
CDS	31-60102 NO HOT BATTERY POWER	31-62 TASK 820

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CDS	31-60221 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 871
CDS	31-60222 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 872
CDS	31-60231 DEU-1 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 871
CDS	31-60232 DEU-2 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 872
CDS	31-60241 DEU-1 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 871
CDS	31-60242 DEU-2 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 872
CDS	31-60251 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 871
CDS	31-60252 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 872
CDS	31-60261 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 871
CDS	31-60262 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 872
CDS	31-60271 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 871
CDS	31-60272 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 872
CDS	31-60281 DEU-1 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 871
CDS	31-60282 DEU-2 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 872
CDS	31-60311 DEU-1 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 871
CDS	31-60312 DEU-2 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 872
CDS	31-60321 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 871
CDS	31-60322 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 872
CDS	31-60331 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 871
CDS	31-60332 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 872

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CDS	31-60351 DEU-1 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 871
CDS	31-60352 DEU-2 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 872
CDS	31-60361 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 871
CDS	31-60362 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 872
CDS	31-60371 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 871
CDS	31-60372 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 872
CDS	31-60411 DEU-1 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60412 DEU-2 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60421 DEU-1 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60422 DEU-2 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60431 DEU-1 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60432 DEU-2 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60441 DEU-1 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60442 DEU-2 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60451 DEU-1 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60452 DEU-2 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60461 DEU-1 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60462 DEU-2 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-61011 DU-LOB FAIL	31-62 TASK 821
CDS	31-61012 DU-LIB FAIL	31-62 TASK 822
CDS	31-61013 DU-CU FAIL	31-62 TASK 823
CDS	31-61014 DU-RIB FAIL	31-62 TASK 824
CDS	31-61015 DU-ROB FAIL	31-62 TASK 825
CDS	31-61016 DU-CL FAIL	31-62 TASK 826
CDS	31-61017 RLS-L FAIL	31-62 TASK 827

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CDS	31-61018 RLS-R FAIL	31-62 TASK 828
CDS	31-61021 DU-LOB COAX FAULT	31-62 TASK 829
CDS	31-61022 DU-LIB COAX FAULT	31-62 TASK 830
CDS	31-61023 DU-CU COAX FAULT	31-62 TASK 831
CDS	31-61024 DU-RIB COAX FAULT	31-62 TASK 832
CDS	31-61025 DU-ROB COAX FAULT	31-62 TASK 833
CDS	31-61026 DU-CL COAX FAULT	31-62 TASK 834
CDS	31-61031 DU-LOB LOW BRIGHTNESS	31-62 TASK 835
CDS	31-61032 DU-LIB LOW BRIGHTNESS	31-62 TASK 836
CDS	31-61033 DU-CU LOW BRIGHTNESS	31-62 TASK 837
CDS	31-61034 DU-RIB LOW BRIGHTNESS	31-62 TASK 838
CDS	31-61035 DU-ROB LOW BRIGHTNESS	31-62 TASK 839
CDS	31-61036 DU-CL LOW BRIGHTNESS	31-62 TASK 840
CDS	31-63110 ENGINE 1 OIL QUANTITY INVALID	31-62 TASK 841
CDS	31-63120 ENGINE 2 OIL QUANTITY INVALID	31-62 TASK 842
CDS	31-63130 ENGINE 1 N1 RPM INVALID	31-62 TASK 843
CDS	31-63140 ENGINE 2 N1 RPM INVALID	31-62 TASK 844
CDS	31-63150 ENGINE 1 N2 RPM INVALID	31-62 TASK 845
CDS	31-63160 ENGINE 2 N2 RPM INVALID	31-62 TASK 846
CDS	31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID	31-62 TASK 847
CDS	31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID	31-62 TASK 848
CDS	31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 849
CDS	31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 850
CDS	31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 851
CDS	31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 852
CDS	31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1	31-62 TASK 853
CDS	31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2	31-62 TASK 854

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1	31-62 TASK 855
CDS	31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2	31-62 TASK 856
CDS	31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1	31-62 TASK 857
CDS	31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2	31-62 TASK 858
CDS	31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1	31-62 TASK 859
CDS	31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2	31-62 TASK 860
CDS	31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID	31-62 TASK 861
CDS	31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID	31-62 TASK 862
CDS	31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1	31-62 TASK 863
CDS	31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2	31-62 TASK 864
CDS	31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1	31-62 TASK 865
CDS	31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2	31-62 TASK 866
CDS	31-65010 PITCH DISAGREE	31-62 TASK 867
CDS	31-65020 ROLL DISAGREE	31-62 TASK 868
CDS	31-65030 EEC DISAGREE	31-62 TASK 869
CDS	31-65040 FMC DATA DISAGREE	31-62 TASK 870
CDS	31-65050 ALTITUDE DISAGREE	31-62 TASK 875
CDS	31-65060 AIRSPEED DISAGREE	31-62 TASK 876
CDS	31-65070 AOA DISAGREE	Reference Not Currently Available
CDS	31-67020 NO ADF-1 DATA	31-63 TASK 809
CDS	31-67051 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67052 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67061 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67062 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67070 NO AUTO-THROTTLE DATA	31-63 TASK 809

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CDS	31-67081 NO DEU-2 DATA	31-63 TASK 807
CDS	31-67082 NO DEU-1 DATA	31-63 TASK 808
CDS	31-67100 NO DFDAU DATA	31-63 TASK 809
CDS	31-67110 NO DU-LOB DATA	31-63 TASK 801
CDS	31-67120 NO DU-LIB DATA	31-63 TASK 802
CDS	31-67130 NO DU-CU DATA	31-63 TASK 803
CDS	31-67140 NO DU-RIB DATA	31-63 TASK 805
CDS	31-67150 NO DU-ROB DATA	31-63 TASK 806
CDS	31-67160 NO DU-CL DATA	31-63 TASK 804
CDS	31-67170 NO DME-1 DATA	31-63 TASK 809
CDS	31-67180 NO DME-2 DATA	31-63 TASK 809
CDS	31-67200 NO EEC-1 DATA	31-63 TASK 809
CDS	31-67230 NO EEC-2 DATA	31-63 TASK 809
CDS	31-67300 NO CAPT EFIS CP DATA	31-63 TASK 809
CDS	31-67310 NO F/O EFIS CP DATA	31-63 TASK 809
CDS	31-67320 NO AVM DATA	31-63 TASK 809
CDS	31-67330 NO FCC-A DATA	31-63 TASK 809
CDS	31-67340 NO FCC-B DATA	31-63 TASK 809
CDS	31-67400 NO FMC-1 DATA	31-63 TASK 809
CDS	31-67440 NO FMC-2 DATA	31-63 TASK 809
CDS	31-67470 NO FSEU DATA	31-63 TASK 809
CDS	31-67500 NO FQPU DATA	31-63 TASK 809
CDS	31-67550 NO GPWC DATA	31-63 TASK 809
CDS	31-67560 NO ILS-1 DATA	31-63 TASK 809
CDS	31-67570 NO ILS-2 DATA	31-63 TASK 809
CDS	31-67600 NO MCP DATA	31-63 TASK 809
CDS	31-67700 NO RA-1 DATA	31-63 TASK 809

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-67710 NO RA-2 DATA	31-63 TASK 809
CDS	31-67730 NO STALL MANAGEMENT-1 DATA	31-63 TASK 809
CDS	31-67740 NO STALL MANAGEMENT-2 DATA	31-63 TASK 809
CDS	31-67800 NO TCAS DATA	31-63 TASK 809
CDS	31-67830 NO VOR-1 DATA	31-63 TASK 809
CDS	31-67840 NO VOR-2 DATA	31-63 TASK 809
CDS	31-68051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68055 NO ADIRU-1 DATA ON IR-L-1 BUS	31-63 TASK 812
CDS	31-68056 NO ADIRU-1 DATA ON IR-L-3 BUS	31-63 TASK 812
CDS	31-68061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68065 NO ADIRU-2 DATA ON IR-R-3 BUS	31-63 TASK 812
CDS	31-68066 NO ADIRU-2 DATA ON IR-R-1 BUS	31-63 TASK 812
CDS	31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 810
CDS	31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 811
CDS	31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 810
CDS	31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 811
CDS	31-68210 NO EEC-1 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68220 NO EEC-1 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68240 NO EEC-2 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68250 NO EEC-2 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68410 NO FMC-1 DATA ON FMC-L-08 BUS	31-63 TASK 812
CDS	31-68420 NO FMC-1 DATA ON FMC-L-09 BUS	31-63 TASK 812
CDS	31-68431 NO FMC-1 DATA ON FMC-01 BUS	31-63 TASK 813
CDS	31-68432 NO FMC-1 DATA ON FMC-02 BUS	31-63 TASK 814
CDS	31-68450 NO FMC-2 DATA ON FMC-R-08 BUS	31-63 TASK 812

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CDS	31-68460 NO FMC-2 DATA ON FMC-R-09 BUS	31-63 TASK 812
CDS	31-68471 NO FMC-2 DATA ON FMC-01 BUS	31-63 TASK 815
CDS	31-68472 NO FMC-2 DATA ON FMC-02 BUS	31-63 TASK 816
CDS	31-68510 NO FQPU DATA ON DATA BUS-1	31-63 TASK 812
CDS	31-68520 NO FQPU DATA ON DATA BUS-2	31-63 TASK 812
CDS	31-68530 NO FQPU DATA ON DATA BUS-3	31-63 TASK 812
CDS	31-68561 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68562 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68571 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68572 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68610 NO MCP DATA ON MCP-1 BUS	31-63 TASK 812
CDS	31-68620 NO MCP DATA ON MCP-2 BUS	31-63 TASK 812
CDS	31-68810 NO TCAS DATA ON TCAS-1 BUS	31-63 TASK 812
CDS	31-68820 NO TCAS DATA ON TCAS-2 BUS	31-63 TASK 812
CDS	31-68861 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68862 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68871 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-68872 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-69021 NO ADF-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69022 NO ADF-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69053 NO ADIRU-1 DATA ON ADR-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69054 NO ADIRU-1 DATA ON ADR-L-4 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69063 NO ADIRU-2 DATA ON ADR-R-4 BUS 2 TO DEU-1	31-63 TASK 817

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-69064 NO ADIRU-2 DATA ON ADR-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69071 NO AUTO-THROTTLE DATA TO DEU-1	31-63 TASK 817
CDS	31-69072 NO AUTO-THROTTLE DATA TO DEU-2	31-63 TASK 818
CDS	31-69101 NO DFDAU DATA TO DEU-1	31-63 TASK 817
CDS	31-69102 NO DFDAU DATA TO DEU-2	31-63 TASK 818
CDS	31-69111 NO DU-LOB DATA TO DEU-1	31-63 TASK 817
CDS	31-69112 NO DU-LOB DATA TO DEU-2	31-63 TASK 818
CDS	31-69121 NO DU-LIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69122 NO DU-LIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69131 NO DU-CU DATA TO DEU-1	31-63 TASK 817
CDS	31-69132 NO DU-CU DATA TO DEU-2	31-63 TASK 818
CDS	31-69141 NO DU-RIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69142 NO DU-RIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69151 NO DU-ROB DATA TO DEU-1	31-63 TASK 817
CDS	31-69152 NO DU-ROB DATA TO DEU-2	31-63 TASK 818
CDS	31-69161 NO DU-CL DATA TO DEU-1	31-63 TASK 817
CDS	31-69162 NO DU-CL DATA TO DEU-2	31-63 TASK 818
CDS	31-69171 NO DME-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69172 NO DME-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69181 NO DME-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69182 NO DME-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69211 NO EEC-1 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69212 NO EEC-1 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69221 NO EEC-1 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69222 NO EEC-1 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69241 NO EEC-2 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69242 NO EEC-2 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-69251 NO EEC-2 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69252 NO EEC-2 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69301 NO CAPT EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69302 NO CAPT EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69311 NO F/O EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69312 NO F/O EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69321 NO AVM DATA TO DEU-1	31-63 TASK 817
CDS	31-69322 NO AVM DATA TO DEU-2	31-63 TASK 818
CDS	31-69331 NO FCC-A DATA TO DEU-1	31-63 TASK 817
CDS	31-69332 NO FCC-A DATA TO DEU-2	31-63 TASK 818
CDS	31-69341 NO FCC-B DATA TO DEU-1	31-63 TASK 817
CDS	31-69342 NO FCC-B DATA TO DEU-2	31-63 TASK 818
CDS	31-69411 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69412 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69421 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69422 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69451 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69452 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69461 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69462 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69471 NO FSEU DATA TO DEU-1	31-63 TASK 817
CDS	31-69472 NO FSEU DATA TO DEU-2	31-63 TASK 818
CDS	31-69511 NO FQPU DATA ON DATA BUS-1 TO DEU-1	31-63 TASK 817
CDS	31-69512 NO FQPU DATA ON DATA BUS-1 TO DEU-2	31-63 TASK 818
CDS	31-69521 NO FQPU DATA ON DATA BUS-2 TO DEU-1	31-63 TASK 817
CDS	31-69522 NO FQPU DATA ON DATA BUS-2 TO DEU-2	31-63 TASK 818
CDS	31-69531 NO FQPU DATA ON DATA BUS-3 TO DEU-1	31-63 TASK 817

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-69532 NO FQPU DATA ON DATA BUS-3 TO DEU-2	31-63 TASK 818
CDS	31-69551 NO GPWC DATA TO DEU-1	31-63 TASK 817
CDS	31-69552 NO GPWC DATA TO DEU-2	31-63 TASK 818
CDS	31-69561 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69562 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69563 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69564 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69571 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69572 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69573 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69574 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69611 NO MCP DATA ON MCP-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69612 NO MCP DATA ON MCP-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69621 NO MCP DATA ON MCP-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69622 NO MCP DATA ON MCP-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69701 NO RA-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69702 NO RA-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69711 NO RA-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69712 NO RA-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69731 NO STALL MANAGEMENT-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69732 NO STALL MANAGEMENT-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69741 NO STALL MANAGEMENT-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69742 NO STALL MANAGEMENT-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69811 NO TCAS DATA ON TCAS-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69812 NO TCAS DATA ON TCAS-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69821 NO TCAS DATA ON TCAS-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69822 NO TCAS DATA ON TCAS-2 BUS TO DEU-2	31-63 TASK 818

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-69831 NO VOR-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69832 NO VOR-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69841 NO VOR-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69842 NO VOR-2 DATA TO DEU-2	31-63 TASK 818

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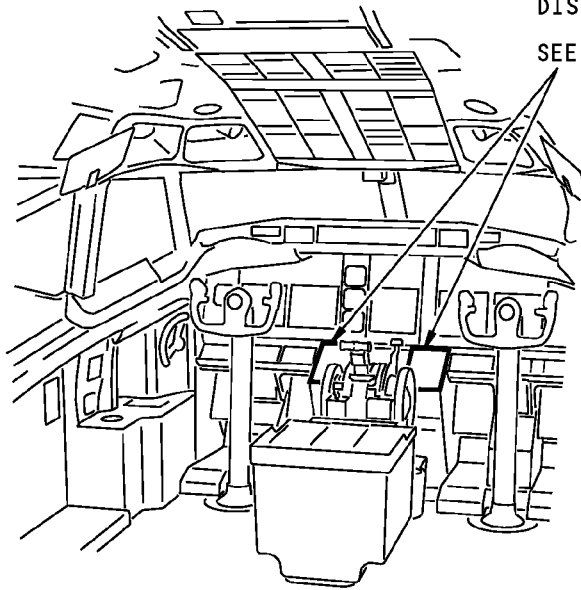


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FMCS CONTROL
DISPLAY UNIT (CDU)

SEE (A)



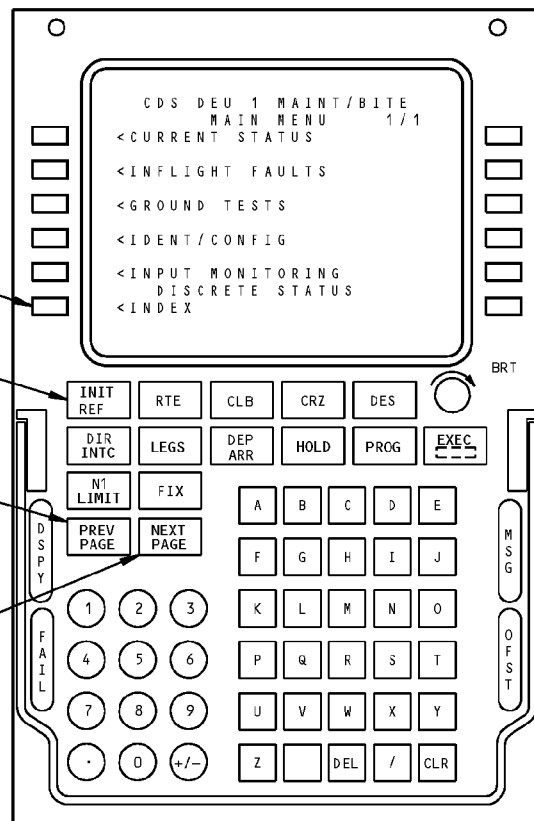
FLIGHT COMPARTMENT

LINE SELECT KEY (LSK)
(12 LOCATIONS)

INIT REF
FUNCTION KEY

PREVIOUS
PAGE KEY

NEXT PAGE KEY



FMCS CONTROL DISPLAY UNIT (CDU)

(A)

CDS DEU BITE Main Menu
Figure 201 / 31-62-00-990-804

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802. DEU Self-Test Procedure

A. General

- (1) You do the display electronic unit (DEU) self test from the Control Display Unit (CDU). Self test of the DEU performs the following check:

- (a) Make sure that the hardware is fully operational.

B. Procedure

- (1) Do these steps to start the DEU self test:

NOTE: While this test may take up to 3 minutes to finish, the normal test duration is 1.5 minutes. If there is a fault, the power-up test will automatically retry, then the full 3 minutes is required.

- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:

- 1) Push the INIT REF function key.
- 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.

NOTE: This makes the INIT/REF INDEX show.

- 3) Push the line select key next to the MAINT prompt.

NOTE: This brings you to the MAINT BITE INDEX.

- (b) For DEU-1 self test, do these steps:

- 1) Push the line select key next to the CDS prompt.
- 2) Push the line select key next to the DEU 1 prompt.
- 3) Push the line select key next to the GROUND TESTS prompt.
- 4) Push the line select key next to the DEU 1 SELF-TEST prompt.
- 5) Push the line select key next to the RUN SELF-TEST prompt.
- 6) After the self test is completed, the CDU display will show the results as below:
 - a) DEU 1 SELF-TEST PASSED.

NOTE: If the DEU 1 is fully operational.

- b) DEU 1 SELF-TEST FAILED.

NOTE: If the DEU 1 is not fully operational.

- (c) For DEU-2 self test, do these steps:

- 1) Push the line select key next to the CDS prompt.
- 2) Push the line select key next to the DEU 2 prompt.
- 3) Push the line select key next to the GROUND TESTS prompt.
- 4) Push the line select key next to the DEU 2 SELF-TEST prompt.
- 5) Push the line select key next to the RUN SELF-TEST prompt.
- 6) After the self test is completed, the CDU display will show the results as below:
 - a) DEU 2 SELF-TEST PASSED.

NOTE: If the DEU 2 is fully operational.

- b) DEU 2 SELF-TEST FAILED.

NOTE: If the DEU 2 is not fully operational.

————— **END OF TASK** —————

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803. IDENT/CONFIG Test Procedure

A. General

- (1) You do the display electronic unit (DEU) IDENT/CONFIG TEST from the Control Display Unit (CDU). This test checks the DEU hardware part number, configurations of the Operational Program Software (OPS), Operational Program Configuration (OPC), display unit database (DUDB), and the wired states of the program pins.

B. Procedure

- (1) Do these steps to start the IDENT/CONFIG TEST:

- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:

- 1) Push the INIT REF function key.

- 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.

NOTE: This makes the INIT/REF INDEX show.

- 3) Push the line select key next to the MAINT prompt.

- (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.

- (c) For DEU-1 IDENT/CONFIG TEST, push the line select key next to the DEU 1 prompt.

- (d) For DEU-2 IDENT/CONFIG TEST, push the line select key next to the DEU 2 prompt.

- (e) Push the line select key next to the IDENT/CONFIG prompt.

- 1) After the self test is completed, the CDU display will show the OPS P/N, OPC P/N, DUDB P/N, DEU HW P/N, and the PROGRAM PINS.

NOTE: The PROGRAM PINS shall be displayed as four hex digits, which are defined from the right most hex character as: parity, DEU installed position, airframe type, and spares.

HAP 031-054, 101-999; HAP 001-013, 015-026, 028-030 (POST SB 737-31-1246 AND PRE SB 737-31-1295) OR POST SB 737-31-1295

- 2) The OPS CNN also shows in the CDU display at the end of the self test.

HAP ALL

————— **END OF TASK** —————

804. DU Loop Test Procedure

A. General

- (1) You do the DU Loop Test from the Control Display Unit (CDU). This test checks all coax interfaces between the selected display electronic unit (DEU) and the six display units (DU).

B. Procedure

- (1) Do these steps to start the DU Loop Test:

- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:

- 1) Push the INIT REF function key.

- 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.

NOTE: This makes the INIT/REF INDEX show.

- 3) Push the line select key next to the MAINT prompt.

- (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.

- (c) For DEU-1 test, push the line select key next to the DEU 1 prompt.

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- (d) For DEU-2 test, push the line select key next to the DEU 2 prompt.
- (e) Push the line select key next to the GROUND TESTS prompt.
- (f) Push the line select key next to the DU LOOP TEST prompt.
- (g) Press the line select key next to the COAX 1 TO LT DISPLAYS & COAX 2 TO RT DISPLAYS.

NOTE: The applicable DEU sends a test pattern to the display units. Coaxial output 1 goes to the left display units

(LOB, LIB, CU), and Coaxial output 2 goes to the right display units (ROB, RIB, CL).

————— **END OF TASK** —————

805. DEU-1 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60011 DEU-1 FAULT
- (2) All display units receive partial data or no data from the display electronic unit 1 (DEU-1).

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows maintenance messages 31-60011 and 31-60012 on the CURRENT STATUS page, then do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - (b) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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(a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

806. DEU-2 Fault - Fault Isolation

A. Description

(1) This task is for this maintenance message:

- (a) 31-60012 DEU-2 FAULT

(2) All display units receive partial data or no data from the display electronic unit 2 (DEU-2).

B. Possible Causes

(1) Display electronic unit 2 (DEU-2), M1809.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

(1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows maintenance messages 31-60011 and 31-60012 on the CURRENT STATUS page, then do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

(1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

(a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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807. DEU-1 Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60031 DEU-1 RESET
- (2) The display electronic unit 1 (DEU-1) begins all normal cold-start hardware tests.

NOTE: This message can occur when there is no failure of the DEU-1.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the DEU-1.

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 1 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST FAILED, then continue.

- (2) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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808. DEU-2 Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60032 DEU-2 RESET
- (2) The display electronic unit 2 (DEU-2) begins all normal cold-start hardware tests.

NOTE: This message can occur when there is no failure of the DEU-2.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the DEU-2.

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 2 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 2 SELF-TEST FAILED, then continue.

- (2) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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809. DEU-1 Software Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60041 DEU-1 SOFTWARE RESET
- (2) The display electronic unit 1 (DEU-1) software begins the test to check the software configuration.

NOTE: This message can occur when there is no failure of the DEU-1 software.

B. Possible Causes

- (1) Operational program software (OPS)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the operational program software (OPS).

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 1 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST FAILED, then continue.

- (2) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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810. DEU-2 Software Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60042 DEU-2 SOFTWARE RESET
- (2) The display electronic unit 2 (DEU-2) software begins the test to check the software configuration.

NOTE: This message can occur when there is no failure of the DEU-2 software.

B. Possible Causes

- (1) Operational program software (OPS)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the operational program software (OPS).

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802
 - (a) If the CDU display shows DEU 2 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 2 SELF-TEST FAILED, then continue.
- (2) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

811. DEU-1 Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60051 DEU-1 COAX FAULT

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- (2) All display units receive no video data from one of the coaxial outputs of display electronic unit 1 (DEU-1).

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Coaxial coupler 1 or 2, M1810 or M1811
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) Simplified Schematic (Figure 301)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-12)
- (5) (WDM 31-62-22)

E. Initial Evaluation

- (1) Do this visual check of the CDS MAINT message:
 - (a) If the display shows the message CDS MAINT, then do the Fault Isolation Procedure below.
 - (b) If the display does not show the message CDS MAINT, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of display electronic unit 1 (DEU-1):

NOTE: This check has you exchange DEU-1 and DEU-2 and look at the maintenance messages in CURRENT STATUS

- (a) Exchange the DEU-1, M1808 with the DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (b) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: The CDU shows CDS DEU 2 MAINT/BITE, CURRENT STATUS. The data comes from the DEU in position 2 which was originally DEU-1.

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NOTE: If there are no active faults, then the CURRENT STATUS page shows NO FAULTS. If there are active faults, then the CURRENT STATUS page shows the maintenance message number and the maintenance message text. Use the NEXT and the PREV keys on the CDU to see all of the active maintenance messages.

- (c) If the CURRENT STATUS page shows the maintenance message 31-60052 DEU-2 COAX FAULT, then do these steps:

NOTE: The fault is in the display electronic unit which is now in position 2 (originally DEU-1).

- 1) Remove the DEU which is in position 2. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - 2) Move the DEU which is in position 1 to position 2. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Install a new DEU in position 1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) If the CDS MAINT message does not show on the display, then you corrected the fault.
- (d) If the CURRENT STATUS page for CDS DEU 2 MAINT/BITE shows no FAULTS or you do not see the maintenance message 31-60052, DEU-2 COAX FAULT, then continue.

NOTE: The maintenance message does not follow the DEU, thus the DEU is good.

- 1) Exchange the DEU-1, M1808 with the DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (2) Do this check of the coaxial couplers 1 and 2:

NOTE: This check uses the DU LOOP TEST to test the interface between DEU-1 and the display units. The DU LOOP TEST is part of the DEU BITE. You use the CDU to control this test.

- (a) For DEU-1, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) If the left display(s) (left outboard, left inboard, and center upper displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the left display(s) are blank, then the data on coaxial output 1 from DEU-1 does not get to the display units. There is wiring problem or the coaxial coupler 1 is unserviceable.

- 1) Remove the control display unit 1 (CDU-1). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.
- 2) Locate the coaxial coupler 1 (top) and coaxial 3 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure.

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- 3) Exchange the coaxial cables which come from DEU-2 (bottom) and DEU-1 (top), at the input ports of coaxial coupler 3 (bottom) and coaxial coupler 1 (top).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the left display units.
- 5) If the left display unit(s) show the test pattern and you see N Y Y Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 1 is unserviceable.

- a) Replace the coaxial coupler 1.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-2 into coaxial coupler 3.
 - c) Install the coaxial cable from DEU-1 into coaxial coupler 1.
 - d) Re-install the CDU-1. To install the CDU, do this task: FMCS Control Display Unit (CDU) Installation, AMM TASK 34-61-01-400-802.
 - e) If the CDS MAINT message does not show on the display, then you corrected the fault.
- 6) If the left display units are blank, then do these steps:
- NOTE:** If the left display units are blank, then the coaxial cable from DEU-1, coaxial output 1, is unserviceable.
- a) Install the coaxial cable from DEU-2 into the coaxial coupler 3.
 - b) Repair or replace coaxial cable from DEU-1, coaxial output 1, to coaxial coupler 1.
 - c) If the CDS MAINT message does not show on the display, then you corrected the fault.
- (c) If the right display(s) (right outboard, right inboard, and center lower displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the right display(s) are blank, then the data on coaxial output 2 from DEU-1 does not get to the display units. There is wiring problem or the coaxial coupler 2 is unserviceable.

- 1) Remove the control display unit 2 (CDU-2). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.
- 2) Locate the coaxial coupler 2 (top) and coaxial coupler 4 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure

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- 3) Exchange the coaxial cables which come from DEU-2 (bottom) and DEU-1 (top), at the input ports of coaxial coupler 4 (bottom) and coaxial coupler 2 (top).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the right display units.
- 5) If the right display units show the test pattern and you see Y N Y Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 2 is unserviceable.

- a) Replace the coaxial coupler 2. To replace it,

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-2 into coaxial coupler 4.
 - c) Install the coaxial cable from DEU-1 into coaxial coupler 2.
 - d) Re-install the CDU-2. To install the CDU, do this task: FMCS Control Display Unit (CDU) Installation, AMM TASK 34-61-01-400-802.
 - e) If the CDS MAINT message does not show on the display, then you corrected the fault.
- 6) If the right display unit(s) are blank, then do these steps:

NOTE: If the right display unit(s) are blank, then the coaxial cable from DEU-1, coaxial output 2, is unserviceable.

- a) Install the coaxial cable from DEU-2 into the coaxial coupler 4.
- b) Repair or replace coaxial cable from DEU-1, coaxial output 2, to coaxial coupler 2.
- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

————— **END OF TASK** —————

812. DEU-2 Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60052 DEU-2 COAX FAULT
- (2) All display units receive no video data from one of the coaxial outputs of display electronic unit 2 (DEU-2).

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Coaxial coupler 3 or 4, M1812 or M1813
- (3) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) Simplified Schematic (Figure 301)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-12)
- (5) (WDM 31-62-22)

E. Initial Evaluation

- (1) Do this visual check of the CDS MAINT message:
 - (a) If the display shows the message CDS MAINT, then do the Fault Isolation Procedure below.
 - (b) If the display does not show the message CDS MAINT, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of display electronic unit 2 (DEU-2):

NOTE: This check has you exchange DEU-2 and DEU-1 and look at the maintenance messages in CURRENT STATUS

- (a) Exchange the DEU-2, M1809 with the DEU-1, M1808.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

NOTE: The CDU shows CDS DEU 1 MAINT/BITE, CURRENT STATUS. The data comes from the DEU in position 1 which was originally DEU-2.

NOTE: If there are no active faults, then the CURRENT STATUS page shows NO FAULTS. If there are active faults, then the CURRENT STATUS page shows the maintenance message number and the maintenance message text. Use the NEXT and the PREV keys on the CDU to see all of the active maintenance messages.

- (c) If the CURRENT STATUS page shows the maintenance message 31-60051 DEU-1 COAX FAULT, then do these steps:

NOTE: The fault is in the display electronic unit which is now in position 1 (originally DEU-2).

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- 1) Remove the DEU which is in position 1. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - 2) Move the DEU which is in position 2 to position 1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 3) Install a new DEU in position 2. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 4) If the CDS MAINT message does not show on the display, then you corrected the fault.
- (d) If the CURRENT STATUS page for CDS DEU 1 MAINT/BITE shows no FAULTS or you do not see the maintenance message 31-60051, DEU-1 COAX FAULT, then continue:

NOTE: The maintenance message does not follow the DEU, thus the DEU is good.

- 1) Exchange the DEU-2, M1809 with the DEU-1, M1808.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (2) Do this check of the coaxial couplers 3 and 4:

NOTE: This check uses the DU LOOP TEST to test the interface between DEU-2 and the display units. The DU LOOP TEST is part of the DEU BITE. You use the CDU to control this test.

- (a) For DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) If the left display(s) (left outboard, left inboard, and center upper displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the left display(s) are blank, then the data on coaxial output 1 from DEU-2 does not get to the display units. There is wiring problem or the coaxial coupler 4 is unserviceable.

- 1) Remove the control display unit 2 (CDU-2). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.
- 2) Locate the coaxial coupler 2 (top) and coaxial 4 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure.

- 3) Exchange the coaxial cables which come from DEU-1 (top) and DEU-2 (bottom), at the input ports of coaxial coupler 2 (top) and coaxial coupler 4 (bottom).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the left display units.
- 5) If the left display units show the test pattern and you see Y Y N Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 4 is unserviceable.

- a) Replace the coaxial coupler 4.

These are the tasks:

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Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-1 into coaxial coupler 2.
 - c) Install the coaxial cable from DEU-2 into coaxial coupler 4.
 - d) Re-install the CDU-2. To install the CDU, do this task: FMCS Control Display Unit (CDU) Installation, AMM TASK 34-61-01-400-802.
 - e) If the CDS MAINT message does not show on the display, then you corrected the fault.
- 6) If the left display unit(s) are blank, then do these steps:
- NOTE:** If the left display unit(s) are blank, then the coaxial cable from DEU-2, coaxial output 1, is unserviceable.
- a) Install the coaxial cable from DEU-1 into the coaxial coupler 2.
 - b) Repair or replace coaxial cable from DEU-2, coaxial output 1, to coaxial coupler 4.
 - c) If the CDS MAINT message does not show on the display, then you corrected the fault.
- (c) If the right display(s) (right outboard, right inboard, and center lower displays) are blank, then do these steps:
- NOTE:** It is possible to have one, two or three display units blank due to a single coax coupler fault.
- NOTE:** If the right display(s) are blank, then the data on coaxial output 2 from DEU-2 does not get to the display units. There is wiring problem or the coaxial coupler 3 is unserviceable.
- 1) Remove the control display unit 1 (CDU-1). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.
 - 2) Locate the coaxial coupler 1 (top) and coaxial coupler 3 (bottom) inside the P9 electronic panel.
- NOTE:** Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure
- 3) Exchange the coaxial cables which come from DEU-1 (top) and DEU-2 (bottom), at the input ports of coaxial coupler 1 (top) and coaxial coupler 3 (bottom).
- NOTE:** To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.
- 4) Look at the test pattern on the right display units.
 - 5) If the right display unit(s) show the test pattern and you see Y Y Y N below INPUT ACTIVITY, then do these steps:
- NOTE:** The N means there is no input activity on that input port. In this case the coaxial coupler 3 is unserviceable.
- a) Replace the coaxial coupler 3. To replace it,
These are the tasks:
Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

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- b) Install the coaxial cable from DEU-1 into coaxial coupler 1.
- c) Install the coaxial cable from DEU-2 into coaxial coupler 3.
- d) Re-install the CDU-1. To install the CDU, do this task: FMCS Control Display Unit (CDU) Installation, AMM TASK 34-61-01-400-802.
- e) If the CDS MAINT message does not show on the display, then you corrected the fault.
- 6) If the right display unit(s) are blank, then do these steps:

NOTE: If the right display units are blank, then the coaxial cable from DEU-2, coaxial output 2, is unserviceable.

- a) Install the coaxial cable from DEU-1 into the coaxial coupler 1.
- b) Repair or replace coaxial cable from DEU-2, coaxial output 2, to coaxial coupler 3.
- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

————— **END OF TASK** —————

813. DEU-1 and DEU-2 Program Pin Position Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT
- (2) The CDU display will show incorrect locations of DEU-1 and DEU-2.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1) position program pins, M1808
- (2) Display electronic unit 2 (DEU-2) position program pins, M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (WDM 31-62-41)
- (2) (SSM 31-62-41)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-1 position program pins: do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

NOTE: The second hex character (from the right most character) of the PROGRAM PINS is assigned for DEU installed position.

- (a) Make sure the program pins are XX1X.

NOTE: X means not important for this check.

- (b) If the DEU-1 installed position is incorrect, then do these steps:

- 1) Install the correct position program pins in DEU-1.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (c) If the DEU-1 installed position is correct, then continue.

- (2) Do a check of the DEU-2 position program pins: do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

NOTE: The second hex character (from the right most character) of the PROGRAM PINS is assigned for DEU installed position.

- (a) Make sure the program pins are XX2X.

NOTE: X means not important for this check.

- (b) If the DEU-2 installed position is incorrect, then do these steps:

- 1) Install the correct position program pins in DEU-2.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

814. DEU-1 Program Pin Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

- (a) 31-60061 DEU-1 PROGRAM PIN FAULT

- (2) The CDU display will show incorrect location of DEU-1.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1) program pins, M1808

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-41)
(2) (WDM 31-62-41)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-1 program pins. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
- (a) Make sure the PROGRAM PINS are correct:
- 1) The odd parity must be "0" or "1".
 - 2) DEU positions must be 1 for DEU-1.
 - 3) Airframe must be "1" for 737.
- (b) If PROGRAM PINS of the DEU-1 are incorrect, then do these steps:
- 1) Use the wiring diagram to install the correct program pins for DEU-1.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

815. DEU-2 Program Pin Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-60062 DEU-2 PROGRAM PIN FAULT
- (2) The CDU display will show incorrect location of DEU-2.

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B. Possible Causes

- (1) Display electronic unit 2 (DEU-2) program pins, M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-41)
- (2) (WDM 31-62-41)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-2 program pins. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803
 - (a) Make sure the PROGRAM PINS are correct:
 - 1) The odd parity must be "0" or "1".
 - 2) DEU position must be 2 for DEU-2.
 - 3) Airframe must be "1" for 737.
 - (b) If PROGRAM PINS of the DEU-2 are incorrect, then do these steps:
 - 1) Use the wiring diagram to install the correct program pins for DEU-2.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

816. DEU-1 and DEU-2 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60070 DEU-1 AND DEU-2 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-1 and DEU-2.

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B. Possible Causes

(1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

(2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

(1) Do a check of the DEU-1 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

HAP 001-013, 015-026, 028-030 PRE SB 737-31-1246 AND PRE SB 737-31-1295

NOTE: Look for OPS P/N and OPC P/N.

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HAP 001-013, 015-026, 028-030 PRE SB 737-31-1246 AND PRE SB 737-31-1295 (Continued)

HAP 031-054, 101-999; HAP 001-013, 015-026, 028-030 (POST SB 737-31-1246 AND PRE SB 737-31-1295) OR POST SB 737-31-1295

NOTE: Look for OPS P/N, CCN, and OPC P/N.

HAP ALL

- (a) If the software is incorrect, then do these steps:
 - 1) Install the correct software in DEU-1.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the software is correct, then continue.
- (2) Do a check of the DEU-2 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

HAP 001-013, 015-026, 028-030 PRE SB 737-31-1246 AND PRE SB 737-31-1295

NOTE: Look for OPS P/N and OPC P/N.

HAP 031-054, 101-999; HAP 001-013, 015-026, 028-030 (POST SB 737-31-1246 AND PRE SB 737-31-1295) OR POST SB 737-31-1295

NOTE: Look for OPS P/N, CCN, and OPC P/N.

HAP ALL

- (a) If the software is incorrect, then do these steps:
 - 1) Install the correct software in DEU-2.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- HAP 031-054, 101-999; HAP 001-013, 015-026, 028-030 (POST SB 737-31-1246 AND PRE SB 737-31-1295) OR POST SB 737-31-1295**
 - c) If the CDU still shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Compare the Configuration Class Number (CCN) for DEU-1 with the CNN for DEU-2.
 - (a) If the CCNs are not the same, the software in DEU-1 is not compatible with the software in DEU-2. Do these steps:
 - 1) Install software in DEU-2 with the same CCN as the software in DEU-1.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

HAP ALL

————— **END OF TASK** —————

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817. DEU-1 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-1.

B. Possible Causes

- (1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

- (2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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E. Fault Isolation Procedure

- (1) Do a check of the DEU-1 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.

NOTE: Look for OPS P/N and OPC P/N.

- (a) If the software is incorrect, then do these steps:

- 1) Install the correct software in DEU-1.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

818. DEU-2 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-2.

B. Possible Causes

- (1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers

- (2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do a check of the DEU-2 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.

NOTE: Look for OPS P/N and OPC P/N.

- (a) If the software is incorrect, then do these steps:
 - 1) Install the correct software in DEU-2.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

819. No Hot Battery Power - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60101 NO HOT BATTERY POWER
- (2) There is not 28V DC at DEU-1.

B. Possible Causes

- (1) Circuit breaker, C1361
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-11)
- (2) (WDM 31-62-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check for 28V DC at the DEU-1.
- (a) Remove DEU-1. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a check for 28V DC between pin 10 and pin 8 (ground) of connector D3973C.
- (c) If there is 28V DC, then do these steps:
- 1) Install a new DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (d) If there is not 28V DC, then continue.
- 1) Re-install DEU-1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (2) Do this check for 28V DC at the circuit breaker.
- (a) Make sure that this circuit breaker is closed:
- F/O Electrical System Panel, P6-1
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|----------------------|
| D | 10 | C01361 | DISPLAY DEU 1 HOLDUP |
- (b) Do a check for 28V DC at terminal 2 of circuit breaker C1361.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1361, then do these steps:
- 1) Replace this circuit breaker:
- F/O Electrical System Panel, P6-1
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|----------------------|
| D | 10 | C01361 | DISPLAY DEU 1 HOLDUP |
- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (d) If there is 28V DC at terminal 2 for circuit breaker C1361, then continue.
- (3) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.



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- (b) Do a wiring check between these pins of the DEU-1 connector D3973C and the circuit breaker C1361:

D3973C	C1361
pin 10 -----	TERM 2

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

820. No Hot Battery Power - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60102 NO HOT BATTERY POWER
- (2) There is not 28V DC at DEU-2.

B. Possible Causes

- (1) Circuit breaker, C1362
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP

D. Related Data

- (1) (SSM 31-62-21)
- (2) (WDM 31-62-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

(1) Do this check for 28V DC at the DEU-2:

(a) Do a check for 28V DC between pin 10 and pin 8 (ground) of connector D3975C.

(b) If there is 28V DC, then do these steps:

1) Replace DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If there is not 28V DC, then continue.

(2) Do this check for 28V DC at the circuit breaker.

(a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

(b) Do a check for 28V DC at terminal 2 of circuit breaker C1362.

(c) If there is not 28V DC at terminal 2 of circuit breaker C1362, then do these steps:

1) Replace this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP

2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(d) If there is 28V DC at terminal 2 for circuit breaker C1362, then continue.

(3) Do this check of the wiring:

(a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801

(b) Do a wiring check between these pins of the DEU-2 connector D3975C and the circuit breaker C1362:

D3975C	C1362
pin 10	----- TERM 2

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

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- 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

821. DU-LOB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61011 DU-LOB FAIL
- (2) The left outboard display unit (LOB-DU) is blank.

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the LOB-DU, N187.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

822. DU-LIB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61012 DU-LIB FAIL
- (2) The left inboard display unit (LIB-DU) is blank.

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188

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C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
(2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the LIB-DU, N188.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

823. DU-CU Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61013 DU-CU FAIL
(2) The center upper display unit (CU-DU) is blank.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189.

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
(2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the CU-DU, N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

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- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

824. DU-RIB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61014 DU-RIB FAIL
- (2) The right inboard display unit (RIB-DU) is blank.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the RIB-DU, N192.
- These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

825. DU-ROB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61015 DU-ROB FAIL
- (2) The right outboard display unit (ROB-DU) is blank.

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

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D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the ROB-DU, N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

END OF TASK

826. DU-CL Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61016 DU-CL FAIL
- (2) The center lower display unit (CL-DU) is blank.

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

D. Initial Evaluation

- (1) Turn the knob on the LOWER DU switch on the captain's (or first officer's) display switching module to ENG PRI.
 - (a) If the display is not blank, then there was an intermittent fault.
 - (b) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

NOTE: Refer to Maintenance Tip 737 MT 31-011 for additional information.

- (1) If the display has a non-active indication of surface position information do the steps that follow:
 - (1) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

- (a) If the display is not blank, then you corrected the fault.
- (b) If the display is blank, then continue.

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- (2) Replace the CL-DU, N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

827. **RLS-L Fail - Fault Isolation**

A. Description

- (1) This task is for this maintenance message:

- (a) 31-61017 RLS-L FAIL

- (2) The left outboard display unit (LOB-DU) receives no data from the remote light sensor (RLS-L).

B. Possible Causes

- (1) Left remote light sensor (RLS-L), T507

- (2) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Related Data

- (1) (SSM 31-62-11)

- (2) (SSM 31-62-12)

- (3) (WDM 31-62-11)

- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the steps that follow:

- 1) If the remote light sensor is functioning correctly, then this is a nuisance message and you can ignore it.
- 2) If the remote light sensor is not functioning correctly, then do the Fault Isolation Procedure below.

- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) Replace the RLS-L, T507.

These are the tasks:

Remote Light Sensor Removal, AMM TASK 31-62-41-000-801,

Remote Light Sensor Installation, AMM TASK 31-62-41-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the left outboard display unit (LOB DU), N187. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Disconnect connector D40738J from the lightshield panel, P7.
 - (c) Do a wiring check between these pins of connector D40738J at the lightshield panel, P7, and connector D3977B at the P1 panel:

D40738J		D3977B
pin 22	-----	pin C3
pin 23	-----	pin D3
pin 24	-----	pin C4
pin 25	-----	pin E3
pin 26	-----	pin E4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D40738J.
 - 3) Re-install the left outboard display unit, N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

828. RLS-R Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

- (a) 31-61018 RLS-R FAIL

- (2) The right outboard display unit (ROB-DU) receives no data from the remote light sensor (RLS-R).

B. Possible Causes

- (1) Right remote light sensor (RLS-R), T508
- (2) Wiring problem

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C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

- (1) (SSM 31-62-21)
- (2) (SSM 31-62-22)
- (3) (WDM 31-62-21)
- (4) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the steps that follow:
 - 1) If the remote light sensor is functioning correctly, then this is a nuisance message and you can ignore it.
 - 2) If the remote light sensor is not functioning correctly, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the RLS-R, T508.

These are the tasks:

Remote Light Sensor Removal, AMM TASK 31-62-41-000-801,

Remote Light Sensor Installation, AMM TASK 31-62-41-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
- (a) Remove the right outboard display unit (ROB-DU), N191. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Disconnect connector D40740J from the lightshield panel, P7 (WDM 31-62-21).
 - (c) Do a wiring check between these pins of connector D40740J at the lightshield panel, P7, and connector D3985B at the P3 panel:

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D40740J

pin 22 -----
pin 23 -----
pin 24 -----
pin 25 -----
pin 26 -----

D3985B

pin C3
pin D3
pin C4
pin E3
pin E4

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector D40740J.
- 3) Re-install the right outboard display unit, N191. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

829. DU-LOB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61021 DU-LOB COAX FAULT
- (2) The left outboard display unit (LOB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)

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- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the LOB-DU, N187:
 - (a) Exchange the LOB-DU, N187 with the left inboard display unit (LIB- DU), N188.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the LOB-DU, N187 with the left inboard display unit (LIB-DU), N188.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the left inboard position (originally left outboard).

- 1) Remove the DU which is in the left inboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the left outboard position to the left inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the left outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

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- 6) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue.
- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.
- NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 201

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.
- These are the tasks:
- Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
- Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- (f) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the LOB-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

INPUT	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
ACTIVITY: YYYY	D3977A	D10041 (#1)
	PIN 1T -----	PIN A1
	PIN = 1T -----	PIN C1

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INPUT **D3977A** **D10055 (#2)**
ACTIVITY: YNYY

PIN 2T ----- PIN A1
PIN = 2T ----- PIN C1

INPUT **D3977A** **D10083 (#4)**
ACTIVITY: YYNY

PIN 3T ----- PIN A1
PIN = 3T ----- PIN C1

INPUT **D3977A** **D10069 (#3)**
ACTIVITY: YYYN

PIN 4T ----- PIN A1
PIN = 4T ----- PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

830. DU-LIB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61022 DU-LIB COAX FAULT
- (2) The left inboard display unit (LIB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the LIB-DU, N188:
 - (a) Exchange the LIB-DU, N188 with the left outboard display unit (LOB- DU), N187.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the LIB-DU, N188 with the left outboard display unit (LOB-DU), N187.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the left outboard position (originally left inboard).

- 1) Remove the DU which is in the left outboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the left inboard position to the left outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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- 3) Install a new DU in the left inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - 6) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue.
- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
 - (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.
- NOTE:** The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 202

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNNY	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.
These are the tasks:
Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.
 - (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (e) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - (f) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the LIB-DU and the coaxial couplers:
- NOTE:** Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
 - (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE:** The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

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31-62 TASK 830

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INPUT ACTIVITY: NYYY	DU COAX CONNECTOR D3979A	COUPLER COAX CONNECTOR D10039 (#1)
	PIN 1T -----	PIN A1
	PIN = 1T -----	PIN C1
INPUT ACTIVITY: YNYY	D3979A	D10053 (#2)
	PIN 2T -----	PIN A1
	PIN = 2T -----	PIN C1
INPUT ACTIVITY: YYNY	D3979A	D10081 (#4)
	PIN 3T -----	PIN A1
	PIN = 3T -----	PIN C1
INPUT ACTIVITY: YYYN	D3979A	D10067 (#3)
	PIN 4T -----	PIN A1
	PIN = 4T -----	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

831. DU-CU Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61023 DU-CU COAX FAULT
- (2) The center upper display unit (CU-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	2	C01372	DISPLAY CTR UPR
D	5	C01359	DISPLAY DEU 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the CU-DU, N189:
 - (a) Exchange the CU-DU, N189 with the center lower display unit (CL- DU), N190.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the CU-DU, N189 with the center lower display unit (CL-DU), N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

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- (d) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the center lower position (originally center upper).

- 1) Remove the DU which is in the center lower position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the center upper position to the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the center upper position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 203

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- (f) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue.

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- (3) Do this check of the coaxial cables between the CU-DU and the coaxial couplers:

NOTE: Make sure the coaxial cable connection is satisfactory.

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

INPUT ACTIVITY: NYYY	DU COAX CONNECTOR D3981A	COUPLER COAX CONNECTOR D10037 (#1)
	PIN 1T -----	PIN A1
	PIN = 1T -----	PIN C1
INPUT ACTIVITY: YNYY	D3981A	D10051 (#2)
	PIN 2T -----	PIN A1
	PIN = 2T -----	PIN C1
INPUT ACTIVITY: YYNY	D3981A	D10079 (#4)
	PIN 3T -----	PIN A1
	PIN = 3T -----	PIN C1
INPUT ACTIVITY: YYYN	D3981A	D10065 (#3)
	PIN 4T -----	PIN A1
	PIN = 4T -----	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

832. DU-RIB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-61024 DU-RIB COAX FAULT
- (2) The right inboard display unit (RIB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	11	C01366	DISPLAY F/O INBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the RIB-DU, N192:
 - (a) Exchange the RIB-DU, N192 with the right outboard display unit (ROB-DU), N191.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the RIB-DU, N192 with the right outboard display unit (ROB-DU), N191.

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These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the right outboard position (originally right inboard).

- 1) Remove the DU which is in the right outboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the right inboard position to the right outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the right inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 204

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

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- (f) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue.

- (3) Do this check of the coaxial cables between the RIB-DU and the coaxial couplers:

NOTE: Make sure the coaxial cable connection is satisfactory.

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
(b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

INPUT ACTIVITY: NYYY	DU COAX CONNECTOR D3987A	COUPLER COAX CONNECTOR D10033 (#1)
	PIN 1T -----	PIN A1
	PIN = 1T -----	PIN C1
INPUT ACTIVITY: YNYY	D3987A	D10047 (#2)
	PIN 2T -----	PIN A1
	PIN = 2T -----	PIN C1
INPUT ACTIVITY: YYNY	D3987A	D10075 (#4)
	PIN 3T -----	PIN A1
	PIN = 3T -----	PIN C1
INPUT ACTIVITY: YYYN	D3987A	D10061 (#3)
	PIN 4T -----	PIN A1
	PIN = 4T -----	PIN C1

- (c) Repair the applicable coaxial cable.
(d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
(e) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

833. DU-ROB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61025 DU-ROB COAX FAULT
(2) The right outboard display unit (ROB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191
(2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813

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(3) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

(1) (SSM 31-62-11)

(2) (SSM 31-62-12)

(3) (SSM 31-62-22)

(4) (WDM 31-62-11)

(5) (WDM 31-62-12)

(6) (WDM 31-62-22)

E. Initial Evaluation

(1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

(1) Do this check of the ROB-DU, N191:

(a) Exchange the ROB-DU, N191 with the right inboard display unit (RIB-DU), N192.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

(b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

(c) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

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- 1) Exchange the ROB-DU, N191 with the right inboard display unit (RIB-DU), N192.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the right inboard position (originally right outboard).

- 1) Remove the DU which is in the right inboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the right outboard position to the right inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the right outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 205

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (e) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - (f) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the ROB-DU and the coaxial couplers:

NOTE: Make sure the coaxial cable connection is satisfactory.

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

INPUT ACTIVITY: NYYY	DU COAX CONNECTOR D3985A	COUPLER COAX CONNECTOR D10031 (#1)
	PIN 1T -----	PIN A1
	PIN=1T -----	PIN C1
INPUT ACTIVITY: YNYY	D3985A	D10045 (#2)
	PIN 2T -----	PIN A1
	PIN=2T -----	PIN C1
INPUT ACTIVITY: YYNY	D3985A	D10073 (#4)
	PIN 3T -----	PIN A1
	PIN=3T -----	PIN C1
INPUT ACTIVITY: YYYN	D3985A	D10059 (#3)
	PIN 4T -----	PIN A1
	PIN=4T -----	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

834. DU-CL Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61026 DU-CL COAX FAULT
- (2) The center lower display unit (CL-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190

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(2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813

(3) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	12	C01373	DISPLAY CTR LWR

D. Related Data

(1) (SSM 31-62-11)

(2) (SSM 31-62-12)

(3) (SSM 31-62-22)

(4) (WDM 31-62-11)

(5) (WDM 31-62-12)

(6) (WDM 31-62-22)

E. Initial Evaluation

(1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

(1) Do this check of the CL-DU, N190:

(a) Exchange the CL-DU, N190 with the center upper display unit (CU- DU), N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

(b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (c) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the CL-DU, N190 with the center upper display unit (CU- DU), N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the center upper position (originally center lower).

- 1) Remove the DU which is in the center upper position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the center upper position to the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 206

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

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Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- (f) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue.

- (3) Do this check of the coaxial cables between the CL-DU and the coaxial couplers:

NOTE: Make sure the coaxial cable connection is satisfactory.

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

INPUT ACTIVITY: NYYY	DU COAX CONNECTOR D3983A	COUPLER COAX CONNECTOR D10035 (#1)
	PIN 1T -----	PIN A1
	PIN = 1T -----	PIN C1
INPUT ACTIVITY: YNNY	D3983A	D10049 (#2)
	PIN 2T -----	PIN A1
	PIN = 2T -----	PIN C1
INPUT ACTIVITY: YYNY	D3983A	D10077 (#4)
	PIN 3T -----	PIN A1
	PIN = 3T -----	PIN C1
INPUT ACTIVITY: YYYN	D3983A	D10063 (#3)
	PIN 4T -----	PIN A1
	PIN = 4T -----	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

835. DU-LOB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61031 DU-LOB LOW BRIGHTNESS
- (2) The left outboard display unit (LOB-DU) brightness is low.

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B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the LOB-DU, N187.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

836. DU-LIB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61032 DU-LIB LOW BRIGHTNESS
- (2) The left inboard display unit (LIB-DU) brightness is low.

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the LIB-DU, N188.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

837. DU-CU Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61033 DU-CU LOW BRIGHTNESS
- (2) The center upper display unit (CU-DU) brightness is low.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the CU-DU, N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

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Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

838. DU-RIB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61034 DU-RIB LOW BRIGHTNESS
- (2) The right inboard display unit (RIB-DU) brightness is low.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the FAULT HISTORY or MAINTENANCE HISTORY page.

E. Fault Isolation Procedure

- (1) Replace the RIB-DU, N192.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

839. DU-ROB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61035 DU-ROB LOW BRIGHTNESS

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- (2) The right outboard display unit (ROB-DU) brightness is low.

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the ROB-DU, N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

840. DU-CL Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-61036 DU-CL LOW BRIGHTNESS
- (2) The center lower display unit (CL-DU) brightness is low.

B. Possible Causes

- (1) Center lower display unit (CU-DU), N190

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

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D. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

(1) Replace the CL-DU, N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

841. Engine 1 Oil Quantity Invalid - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-63110 ENGINE 1 OIL QUANTITY INVALID.

(2) Display electronic units (DEU-1, DEU-2) receive no data from engine 1 oil quantity transmitter.

B. Possible Causes

(1) Engine 1 oil quantity transmitter, M213

(2) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

(1) (SSM 31-62-14)

(2) (SSM 31-62-24)

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(3) (WDM 79-31-11)

E. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

(1) Replace engine 1 oil quantity transmitter, M213.

These are the tasks:

Oil Quantity Transmitter Removal, AMM TASK 79-31-01-000-801-F00,

Oil Quantity Transmitter Installation, AMM TASK 79-31-01-400-801-F00.

(a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP1301 from the engine 1 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.

- (d) Do a wiring check between these pins of the DEU-1 connectors and the engine 1 oil quantity transmitter connector:

D3973B	DP1301
pin J4 - - - - -	pin 3
pin A6 - - - - -	pin 1
pin B6 - - - - -	pin 2
pin K4 - - - - -	pin 2

D3973A	DP1301
pin E14 - - - - -	pin 1
pin F14 - - - - -	pin 2

- (e) Do a wiring check between these pins of the DEU-2 connectors and the engine 1 oil quantity transmitter connector:

D3973B	DP1301
pin J4 - - - - -	pin 3
pin A6 - - - - -	pin 1
pin B6 - - - - -	pin 2
pin K4 - - - - -	pin 2

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D3973A

pin E14 -----
pin F14 -----

DP1301

pin 1
pin 2

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP1301 connector to the engine 1 oil quantity transmitter, M213.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

842. Engine 2 Oil Quantity Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63120 ENGINE 2 OIL QUANTITY INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Engine 2 oil quantity transmitter, M213
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace engine 2 oil quantity transmitter, M213.

These are the tasks:

Oil Quantity Transmitter Removal, AMM TASK 79-31-01-000-801-F00,

Oil Quantity Transmitter Installation, AMM TASK 79-31-01-400-801-F00.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.

- (d) Do a wiring check between these pins of the DEU-1 connectors and the engine 2 oil quantity transmitter connector:

D3973E		Dp1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin K4	-----	pin 2

D3973D		DP1301
pin E14	-----	pin 1
pin F14	-----	pin 2

- (e) Do a wiring check between these pins of the DEU-2 connectors and the engine 2 oil quantity transmitter connector:

D3975E		DP1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin K4	-----	pin 2

D3975D		DP1301
pin E14	-----	pin 1
pin F14	-----	pin 2

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- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP1301 connector to the engine 2 oil quantity transmitter, M213.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

843. Engine 1 N1 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-63130 ENGINE 1 N1 RPM INVALID
 - (2) Display electronic units (DEU-1, DEU-2) receive no data from the engine 1 N1 speed sensor.

B. Possible Causes

- (1) N1 speed sensor, T421
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 77-12-11)
- (4) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace N1 speed sensor, T421.

These are the tasks:

N1 Speed Sensor Removal, AMM TASK 77-11-01-000-801-F00,

N1 Speed Sensor Installation, AMM TASK 77-11-01-400-801-F00.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP0103 from the engine 1 N1 speed transmitter, T421.

NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.

- (d) Do a wiring check between these pins of the DEU-1 connector and the engine 1 N1 speed transmitter connector:

D3973A		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the engine 1 N1 speed transmitter connector:

D3975A		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (f) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Re-connect the DP0103 connector to the engine 1 N1 speed transmitter, T421.
- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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844. Engine 2 N1 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63140 ENGINE 2 N1 RPM INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the engine 2 N1 speed sensor.

B. Possible Causes

- (1) N1 speed sensor, T421
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 77-12-11)
- (4) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N1 speed sensor, T421.

These are the tasks:

N1 Speed Sensor Removal, AMM TASK 77-11-01-000-801-F00,
N1 Speed Sensor Installation, AMM TASK 77-11-01-400-801-F00.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP0103 from the engine 2 N1 speed sensor, T421.

NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.

- (d) Do a wiring check between these pins of the DEU-1 connector and the engine 2 N1 speed sensor connector:

D3973D		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the engine 2 N1 speed sensor connector:

D3975D		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (f) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
- 4) Re-connect the DP0103 connector to the engine 2 N1 speed sensor, T421 .
- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

845. Engine 1 N2 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63150 ENGINE 1 N2 RPM INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the engine 1 N2 speed sensor.

B. Possible Causes

- (1) N2 speed sensor, T422
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 77-12-11)
- (4) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N2 speed sensor, T422.

These are the tasks:

N2 Speed Sensor Removal, AMM TASK 77-11-02-000-801-F00,

N2 Speed Sensor Installation, AMM TASK 77-11-02-400-801-F00.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

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- (c) Disconnect the connector DP1201 from the engine 1 N2 speed sensor, T422.

NOTE: The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.

- (d) Do a wiring check between these pins of the DEU-1 connector and the engine 1 N2 speed sensor connector:

D3973B		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the engine 1 N2 speed sensor connector:

D3975B		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (f) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Re-connect the DP1201 connector to the engine 1 N2 speed sensor, T422.
- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

846. Engine 2 N2 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63160 ENGINE 2 N2 RPM INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the engine 2 N2 speed sensor.

B. Possible Causes

- (1) N2 speed sensor, T422
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP

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Row	Col	Number	Name
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 77-12-11)
- (4) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N2 speed sensor, T422.

These are the tasks:

N2 Speed Sensor Removal, AMM TASK 77-11-02-000-801-F00,

N2 Speed Sensor Installation, AMM TASK 77-11-02-400-801-F00.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (c) Disconnect the connector DP1201 from the engine 2 N2 speed transmitter, T422.

NOTE: The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.

- (d) Do a wiring check between these pins of the DEU-1 connector and the engine 2 N2 speed sensor connector:

D3973E		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the engine 2 N2 speed sensor connector:

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D3975E

pin A10 -----
pin B10 -----

DP1201

pin 2
pin 1

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP1201 connector to the engine 2 N2 speed sensor, T422.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

847. Hydraulic Oil Quantity Sys A Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Hydraulic oil quantity system A transmitter, T436
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 29-31-11)

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E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil quantity system A transmitter, T436.

These are the tasks:

Hydraulic Fluid Quantity Transmitter/Indicator Removal, AMM TASK 29-33-12-000-801,
Hydraulic Fluid Quantity Transmitter/Indicator Installation, AMM TASK 29-33-12-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.

NOTE: The sensor T436 is located on the right main wheel well forward left.

- (d) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system A transmitter connector:

D3973B		D674
pin F14	-----	pin 1
pin E14	-----	pin 3

D3973A		D674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the hydraulic oil quantity system A transmitter connector:

D3975B		D674
pin F14	-----	pin 1
pin E14	-----	pin 3

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D3975A		D674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

(f) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

848. Hydraulic Oil Quantity Sys B Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Hydraulic oil quantity system B transmitter, T184
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 29-31-11)

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E. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

(1) Replace the hydraulic oil quantity system B transmitter, T184.

These are the tasks:

Hydraulic Fluid Quantity Transmitter/Indicator Removal, AMM TASK 29-33-12-000-801,

Hydraulic Fluid Quantity Transmitter/Indicator Installation, AMM TASK 29-33-12-400-801.

(a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.

NOTE: The sensor T184 is located on the right main wheel well forward right.

- (d) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system B transmitter connector:

D3973E		D2674
pin F14	-----	pin 1
pin E14	-----	pin 3

D3973D		D2674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the hydraulic oil quantity system B transmitter connector:

D3975E		D2674
pin F14	-----	pin 1
pin E14	-----	pin 3

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D3975D

pin J4 -----
pin K4 -----
pin A6 -----
pin B6 -----

D2674

pin 2
pin 1
pin 3
pin 1

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

849. Engine 1 Oil Quantity Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the engine 1 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1, M1808.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.

- (2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

- (b) Disconnect the connector DP1301 from the engine 1 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.

- (c) Do a wiring check between these pins of the DEU-1 connectors and the engine 1 oil quantity transmitter connector:

D3973B		DP1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin K4	-----	pin 2

D3973A		DP1301
pin E14	-----	pin 1
pin F14	-----	pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 1 oil quantity transmitter, M213.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

850. Engine 1 Oil Quantity Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2
(2) Display electronic unit 2 (DEU-2) receives no data from the engine 1 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
(a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-2, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1301 from the engine 1 oil quantity transmitter, M213.
- NOTE:** The transmitter, M213 is located on top of the oil tank cover.
- (c) Do a wiring check between these pins of the DEU-2 connectors and the engine 1 oil quantity transmitter connector:

D3975B		DP1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin K4	-----	pin 2

D3975A		DP1301
pin E14	-----	pin 1
pin F14	-----	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 1 oil quantity transmitter, M213.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

851. Engine 2 Oil Quantity Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.
 - These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.

- (c) Do a wiring check between these pins of the DEU-1 connectors and the engine 2 oil quantity transmitter connector:

D3973E		DP1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin K4	-----	pin 2

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D3973D

pin E14 -----

pin F14 -----

DP1301

pin 1

pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 2 oil quantity transmitter, M213.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

852. Engine 2 Oil Quantity Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Replace DEU-2, M1809.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the DEU-2, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.
 - (c) Do a wiring check between these pins of the DEU-2 connectors and the engine 2 oil quantity transmitter connector:

D3975E		DP1301
pin J4	-----	pin 3
pin A6	-----	pin 1
pin B6	-----	pin 2
pin F14	-----	pin 2

D3975D		DP1301
pin E14	-----	pin 1
pin F14	-----	pin 2

 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 2 oil quantity transmitter, M213.

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- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

853. Engine 1 N1 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the engine 1 N1 speed sensor.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 77-12-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
- Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP0103 from the engine 1 N1 speed sensor, T421.

NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.

- (c) Do a wiring check between these pins of the DEU-1 connector and the engine 1 N1 speed sensor connector:

D3973A		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-connect the connector DP0103 to the engine 1 N1 speed sensor, T421.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

854. Engine 1 N1 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 1 N1 speed sensor.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
 - (2) Do this check of the wiring:
 - (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the engine 1 N1 speed sensor, T421.
NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.
 - (c) Do a wiring check between these pins of the DEU-2 connector and the engine 1 N1 speed sensor connector:

D3975A	-----	DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the N1 speed sensor, T421.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

855. Engine 2 N1 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1
(2) Display electronic unit 1 (DEU-1) receives no data from the engine 2 N1 speed sensor.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 77-12-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
(a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
1) Replace DEU-1, M1808.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the engine 2 N1 speed sensor, T421.
NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.
 - (c) Do a wiring check between these pins of the DEU-1 connector and the engine 2 N1 speed sensor connector:

D3973D		DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the engine 2 N1 speed sensor, T421.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

856. Engine 2 N1 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 2 N1 speed sensor.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the engine 2 N1 speed sensor, T421.
NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.
 - (c) Do a wiring check between these pins of the DEU-2 connector and the engine 2 N1 speed sensor connector:

D3975D	-----	DP0103
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the engine 2 N1 speed sensor, T421.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

857. Engine 1 N2 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1
(2) Display electronic unit 1 (DEU-1) receives no data from the engine 1 N2 speed sensor.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
(a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
1) Replace DEU-1, M1808.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the engine 1 N2 speed sensor, T422.
- NOTE:** The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.
- (c) Do a wiring check between these pins of the DEU-1 connector and the engine 1 N2 speed sensor connector:

D3973B		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the engine 1 N2 speed sensor, T422.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

858. Engine 1 N2 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 1 N2 speed sensor.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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HAP ALL

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D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1201 from the engine 1 N2 speed sensor, T422.

NOTE: The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.

- (c) Do a wiring check between these pins of the DEU-2 connector and the engine 1 N2 speed sensor connector:

D3975B		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the engine 1 N2 speed sensor, T422.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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31-62 TASK 858

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

859. Engine 2 N2 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1
(2) Display electronic unit 1 (DEU-1) receives no data from the engine 2 N2 speed sensor.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 77-12-21)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
(a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
1) Replace DEU-1, M1808.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1201 from the engine 2 N2 speed sensor, T422.
- NOTE:** The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.
- (c) Do a wiring check between these pins of the DEU-1 connector and the engine 2 N2 speed sensor connector:

D3973E		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the engine 2 N2 speed sensor, T422.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

860. Engine 2 N2 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 2 N2 speed sensor.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) (SSM 31-62-24)
- (2) (SSM 77-12-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1201 from the engine 2 N2 speed sensor, T422.

NOTE: The sensor T422 is located on the forward side of the accessory gearbox (AGB), between the EEC alternator and the engine air starter.

- (c) Do a wiring check between these pins of the DEU-2 connector and the engine 2 N2 speed sensor connector:

D3975E		DP1201
pin A10	-----	pin 2
pin B10	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the engine 2 N2 speed sensor, T422.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

861. Hydraulic Oil Pressure Sys A Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 (a) 31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID
- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil pressure transmitter (system A).

B. Possible Causes

- (1) Hydraulic oil pressure transmitter (system A), T424
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil pressure transmitter (system A), T424.
- These are the tasks:
 AMM TASK 29-31-12-000-801,
 AMM TASK 29-31-12-400-801.
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Replace DEU-1, M1808.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D662 from the hydraulic oil pressure transmitter, T424 (system A).
- NOTE: The transmitter T424 is located on the left main wheel well forward.
- (c) Do a wiring check between these pins of the DEU-1 connector and the hydraulic oil pressure transmitter connector (system A):

D3973A		D662
pin A9	-----	pin 3
pin B9	-----	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D662 to the hydraulic oil pressure transmitter, T424 (system A).
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

862. Hydraulic Oil Pressure Sys B Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil pressure transmitter (system B).

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B. Possible Causes

- (1) Hydraulic oil pressure transmitter (system B), T423
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil pressure transmitter (system B), T423.

These are the tasks:

Hydraulic Fluid Quantity Transmitter/Indicator Removal, AMM TASK 29-33-12-000-801,
Hydraulic Fluid Quantity Transmitter/Indicator Installation, AMM TASK 29-33-12-400-801.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (2) Replace DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

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(3) Do this check of the wiring:

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D660 from the hydraulic oil pressure transmitter, T423 (system B).

NOTE: The transmitter T423 is located on the right main wheel well forward.

- (c) Do a wiring check between these pins of the DEU-1 connector and the hydraulic oil pressure transmitter connector (system A):

D3975A		D660
pin A9	-----	pin 3
pin B9	-----	pin 2

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-connect the connector D660 to the hydraulic oil pressure transmitter, T423 (system B).
- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

863. Hydraulic Oil Quantity Sys A Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

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D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.
NOTE: The sensor T436 is located on the right main wheel well forward left.
 - (c) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system A transmitter connector:

D3973B		D674
pin F14	-----	pin 1
pin E14	-----	pin 3

D3973A		D674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

864. Hydraulic Oil Quantity Sys A Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

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Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.

NOTE: The sensor T436 is located on the right main wheel well forward left.

- (c) Do a wiring check between these pins of the DEU-2 connectors and the hydraulic oil quantity system A transmitter connector:

D3975B		D674
pin F14	-----	pin 1
pin E14	-----	pin 3
D3975A		D674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

865. Hydraulic Oil Quantity Sys B Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

(a) 31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1

- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.
- NOTE: The sensor T184 is located on the right main wheel well forward right.
- (c) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system B transmitter connector:

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D3973E

pin F14 -----
pin E14 -----

D2674

pin 1
pin 3

D3973D

pin J4 -----
pin K4 -----
pin A6 -----
pin B6 -----

D2674

pin 2
pin 1
pin 3
pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

866. Hydraulic Oil Quantity Sys B Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.

- (2) Do this check of the wiring:

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

- (b) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.

NOTE: The sensor T184 is located on the right main wheel well forward right.

- (c) Do a wiring check between these pins of the DEU-2 connectors and the hydraulic oil quantity system B transmitter connector:

D3975E		D2674
pin F14	-----	pin 1
pin E14	-----	pin 3

D3975D		D2674
pin J4	-----	pin 2
pin K4	-----	pin 1
pin A6	-----	pin 3
pin B6	-----	pin 1

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the DEU-2, M1809. To install it, do this task: Rudder Aft Quadrant Removal, AMM TASK 27-21-61-000-801.
- 3) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

867. Pitch Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-65010 PITCH DISAGREE
- (2) The pitch disagree annunciation will be displayed when the difference between the captain's displayed pitch value and the first officer's displayed pitch value is greater than or equal to 5 degrees for 1.5 seconds.

B. Possible Causes

- (1) Left air data inertial reference unit (ADIRU-1), M1749
- (2) Right air data inertial reference unit (ADIRU-2), M1752
- (3) Display electronic unit 1 (DEU-1), M1808
- (4) Display electronic unit 2 (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

HAP 001-013, 015-026, 028-030

D	10	C00357	STBY ALTM/ASI VIB
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HAP ALL

E	8	C00425	ADIRU LEFT EXC
---	---	--------	----------------

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there are no failures of the ADIRUs or the DEUs.

(1) Do this check of the ADIRU-1:

- (a) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

- (b) If there is a fault message, then go to the FIM task for that message.

- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the pitch disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (c) If there is no maintenance message, then continue.

(2) Do this check of the ADIRU-2:

- (a) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

- (b) If there is a fault message, then go to the FIM task for that message.

- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the pitch disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (c) If there is no maintenance message, then continue.

(3) Do this check of the DEU-1:

- (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

(4) Do this check of the DEU-2:

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- (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

868. Roll Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65020 ROLL DISAGREE
- (2) The roll disagree annunciation will be displayed when the difference between the captain's displayed roll value and the first officer's displayed roll value is greater than or equal to 5 degrees for 1.5 seconds.

B. Possible Causes

- (1) Left air data inertial reference unit (ADIRU-1), M1749
- (2) Right air data inertial reference unit (ADIRU-2), M1752
- (3) Display electronic unit 1 (DEU-1), M1808
- (4) Display electronic unit 2 (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

HAP 001-013, 015-026, 028-030

D	10	C00357	STBY ALTM/ASI VIB
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HAP ALL

E	8	C00425	ADIRU LEFT EXC
---	---	--------	----------------

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

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Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there are no failures of the ADIRUs or the DEUs.

(1) Do this check of the ADIRU-1:

- (a) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
- (b) If there is a fault message, then go to the FIM task for that message.

1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the roll disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If there is no fault message, then continue.

(2) Do this check of the ADIRU-2:

- (a) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
- (b) If there is a fault message, then go to the FIM task for that message.

1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the roll disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If there is no fault message, then continue.

(3) Do this check of the DEU-1:

- (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
 - (4) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

869. EEC Data Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65030 EEC DISAGREE
- (2) The EEC data received by the display electronic units (DEU-1 and DEU-2) from the electronic engine controls (EEC-1 and EEC-2) and the engine sensors do not agree.

B. Possible Causes

- (1) Display electronic unit (DEU-1), M1808 or (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there are no failures of the EECs or the DEUs.

— END OF TASK —

870. FMC Data Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-65040 FMC DATA DISAGREE
- (2) This message will show when the data on the FMC output busses, FMC-08 and FMC-09, received by the display electronic units do not agree.

B. Possible Causes

- (1) Display electronic unit (DEU-1), M1808 or (DEU-2), M1809
- (2) Wiring Problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 34-61-15)
- (2) (WDM 34-61-15)

E. Initial Evaluation

- (1) Make sure the ADIRUs are aligned. If the ADIRUs are not aligned, do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page and a MAP flag shows on the display unit, then do the Fault Isolation Procedure below.
- (b) DEU OPS S/W -03;

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If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page and a MAP flag does not show on the display unit, then this is a nuisance message.

NOTE: This message can show when there are no failures of the DEU.

- (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 2) Do this check of the wiring:
- a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- b) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- c) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

HAP ALL

- d) Do a wiring check between these pins of FMC-1 connector D2179A and DEU-1 connector D3973A:

D2179A		D3973A
pin A11	-----	pin C9
pin B11	-----	pin D9

- e) Do a wiring check between these pins of FMC-1 connector D2179B and DEU-1 connector D3973E:

D2179B		D3973E
pin G9	-----	pin C1
pin H9	-----	pin D1

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- f) Do a wiring check between these pins of FMC-2 connector D3261A and DEU-1 connector D3973B:

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D3261A

pin A11 -----
pin B11 -----

D3973B

pin E1
pin F1

- g) Do a wiring check between these pins of FMC-2 connector D3261B and DEU-1 connector D3973D:

D3261B

pin G9 -----
pin H9 -----

D3973D

pin C9
pin D9

HAP ALL

- 3) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- d) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (2) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- If the CDU shows DEU 2 SELF-TEST PASSED, then there is no failure of DEU-2.
NOTE: The fault was intermittent.
 - If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - Replace DEU-2.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - Do this check of the wiring:
 - Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- c) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

HAP ALL

- d) Do a wiring check between these pins of FMC-1 connector D2179A and DEU-2 connector D3975A:

D2179A		D3975A
pin A11	-----	pin C9
pin B11	-----	pin D9

- e) Do a wiring check between these pins of FMC-1 connector D2179B and DEU-2 connector D3975E:

D2179B		D3975E
pin G9	-----	pin C1
pin H9	-----	pin D1

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- f) Do a wiring check between these pins of FMC-2 connector D3261A and DEU-2 connector D3975B:

D3261A		D3975B
pin A11	-----	pin E1
pin B11	-----	pin F1

- g) Do a wiring check between these pins of FMC-2 connector D3261B and DEU-2 connector D3975D:

D3261B		D3975D
pin G9	-----	pin C9
pin H9	-----	pin D9

HAP ALL

- 3) If you find a problem with the wiring, then do these steps:
- a) Repair the wiring.
 - b) Re-install the DEU-2, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - c) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- d) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- e) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- f) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- END OF TASK -----

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871. DEU-1 ARINC 429 Transmitter Problem - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-60221, 31-60231, 31-60241, 31-60251, 31-60261, 31-60271, 31-60281, 31-60311, 31-60321, 31-60331, 31-60351, 31-60361, 31-60371
- (2) Display electronic unit (DEU-1) has an ARINC 429 transmitter problem.

B. Possible Causes

- (1) Display electronic unit (DEU-1), M1808

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

872. DEU-2 ARINC 429 Transmitter Problem - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

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- (a) 31-60222, 31-60232, 31-60242, 31-60252, 31-60262, 31-60272, 31-60282, 31-60312, 31-60322, 31-60332, 31-60352, 31-60362, 31-60372

- (2) Display electronic unit (DEU-2) has an ARINC 429 transmitter problem.

B. Possible Causes

- (1) Display electronic unit (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

873. Display Unit Database in DEU-1 and Display Unit are Not Compatible - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

- (a) 31-60411, 31-60421, 31-60431, 31-60441, 31-60451, 31-60461

- (2) The display unit database in DEU-1 is not compatible with the applicable display unit.

B. Possible Causes

- (1) Display unit database (DUDB) is not correct

- (2) Display unit

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C. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

D. Fault Isolation Procedure

- (1) Make sure that the software part number for the display unit database (DUDB) in DEU-1 is correct. To do a check of the DUDB P/N in DEU-1, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
 - (a) If the part number is incorrect, then install the correct DUDB. To install it, do this task: Display Electronic Unit Software Installation with a Portable Data Loader, AMM TASK 31-62-21-470-802 or Display Electronic Unit Software Installation with an Airborne Data Loader, AMM TASK 31-62-21-470-801
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (b) If the part number is correct, then replace the applicable display unit with one that is compatible with DUDB. To replace it,
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

874. Display Unit Database in DEU-2 and Display Unit are Not Compatible - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-60412, 31-60422, 31-60432, 31-60442, 31-60452, 31-60462
- (2) The display unit database in DEU-2 is not compatible with the applicable display unit.

B. Possible Causes

- (1) Display unit database (DUDB) is not correct
- (2) Display unit

C. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

D. Fault Isolation Procedure

- (1) Make sure that the software part number for the display unit database (DUDB) in DEU-2 is correct. To do a check of the DUDB P/N in DEU-2, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
- (a) If the part number is incorrect, then install the correct DUDB. To install it, do this task: Display Electronic Unit Software Installation with a Portable Data Loader, AMM TASK 31-62-21-470-802 or Display Electronic Unit Software Installation with an Airborne Data Loader, AMM TASK 31-62-21-470-801
- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (b) If the part number is correct, then replace the applicable display unit with one that is compatible with DUDB. To replace it,
- These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

875. Altitude Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-65050 ALTITUDE DISAGREE
- (2) The air data reference (ADR) function in the air data inertial reference unit (ADIRU) receives digital inputs of pitot and static pressure from the air data modules (ADMs) and temperature inputs from the total air temperature probe. It use these inputs to calculate the air data parameters. It also receives analog inputs from the angle of attach (AOA) vane for error correction.
- (3) The display electronic units (DEUs) receive the ADR data from the ADIRU to display and to send it on to other systems such as the electronic engine control (EEC).
- (4) This message shows when the ADR data received by the DEUs (DEU-1 and DEU-2) from the ADIRUs (ADIRU-L and ADIRU-R) do not agree. The "ALT DISAGREE" annunciation will be displayed when the difference between the captain's displayed altitude value and the first officer's displayed altitude value is 200 feet or greater for 5 consecutive seconds.

B. Possible Causes

- (1) AOA sensors
- (2) Blockage and leakage:

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- (a) Blockage of the static ports
- (b) Leak in the static tubing
- (c) Blockage of the pitot probes
- (d) Leak in the pitot tubing
- (e) Water in static or pitot systems
- (f) Partial shorting of the pitot probe heating element

(3) Static ADMs

(4) Pitot ADMs

(5) ADIRUs

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

D. Related Data

- (1) (SSM 34-21-14)
- (2) (SSM 34-21-24)
- (3) (WDM 34-21-14)
- (4) (WDM 34-21-24)

E. Initial Evaluation

- (1) Make sure the barometric setting on the captain's and first officer's EFIS control panels is the same.
- (2) For ADIRU-L, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to the following systems:
 - 1) ADIRS
 - 2) AOA
 - 3) ADM
 - (b) If the ADIRS BITE procedure shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

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- (c) If the ADIRS BITE procedure does not show a fault, then do the fault isolation procedure below.
- (3) For ADIRU-R, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to the following systems:
 - 1) ADIRS
 - 2) AOA
 - 3) ADM
 - (b) If the ADIRS BITE procedure shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.
 - (c) If the ADIRS BITE procedure does not show a fault, then do the fault isolation procedure below.
- (4) For DEUs, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows a maintenance message on the CURRENT STATUS page, then do the applicable fault isolation procedure for the maintenance message.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then continue.

NOTE: You can find other occurrences of this maintenance message on the IN-FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do the test of the AOA Sensor in this task: Pitot Probe, AOA Sensor, and TAT Probe Heater Test, AMM TASK 30-31-00-730-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory, then you corrected the fault.
 - (b) If the test is satisfactory, then continue.
- (2) Do a check for blockage and leakage:
 - (a) Examine the static ports for blockage or damage. To examine them, do this task: Static Port - Detailed Inspection, AMM TASK 34-11-02-200-803.
 - 1) If the static ports have blockage or damage, then remove the blockage or repair the damage.
 - (b) Examine the pitot probes for blockage or damage. To examine them, do this task: Pitot Probe - Detailed Inspection, AMM TASK 34-11-01-200-804.
 - 1) If the pitot probes have blockage or damage, then remove the blockage or repair the damage.
 - (c) Perform a flush of the pitot and static systems. Do this task: AMM TASK 34-11-00-170-801.
 - 1) If the pitot and static systems have blockage, then remove the blockage.
 - (d) Make sure that the static systems have no leaks. Do these tasks:
 - Left Static System Low-range Leak Test, AMM TASK 34-11-00-790-804
 - Right Static System Low-range Leak Test, AMM TASK 34-11-00-790-806
 - 1) If the static systems have leaks, replace the static system components that have leaks.
 - (e) Make sure that the pitot systems have no leaks. Do these tasks:
 - Left Pitot System Leak Test, AMM TASK 34-11-00-790-810
 - Right Pitot System Leak Test, AMM TASK 34-11-00-790-811

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- 1) If the pitot systems have leaks, replace the pitot system components that have leaks, then re-run the test.
 - a) If the test is satisfactory, then you corrected the fault.
 - b) If the test is unsatisfactory, then continue.
- (f) If you did not find blockage or leakage, then continue.
- (3) Replace the static air data module (ADM). These are the tasks:
Static Air Data Module Removal, AMM TASK 34-21-04-000-802,
Static Air Data Module Installation, AMM TASK 34-21-04-400-802
 - (a) If static ADM test is satisfactory, then you corrected the fault.
 - (b) If the test is unsatisfactory, then continue.
- (4) Replace the pitot ADM. These are the tasks:
Pitot Air Data Module Removal, AMM TASK 34-21-04-000-801,
Pitot Air Data Module Installation, AMM TASK 34-21-04-400-801
 - (a) If pitot ADM test is satisfactory, then you corrected the fault.
 - (b) If the test is unsatisfactory, then continue.
- (5) Do the test of the angle of attack (AOA) sensor in this task: Angle of Attack Sensor - Inspection, AMM TASK 34-21-05-200-801.
 - (a) If the test is satisfactory, then continue.
 - (b) If the test is unsatisfactory, then replace AOA sensor. These are the tasks: Angle of Attack Sensor Removal, AMM TASK 34-21-05-000-801,
Angle of Attack Sensor Installation, AMM TASK 34-21-05-400-801.
 - 1) If AOA sensor test is satisfactory, then you corrected the fault.
 - 2) If the test is unsatisfactory, then continue.
- (6) Replace the ADIRU. These are the tasks:
Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801,
Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory, then you corrected the fault.

————— **END OF TASK** —————

876. Airspeed Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65060 AIRSPEED DISAGREE
- (2) The air data reference (ADR) function in the air data inertial reference unit (ADIRU) receives digital inputs of pitot and static pressure from the air data modules (ADMs) and temperature inputs from the total air temperature probe. It use these inputs to calculate the air data parameters. It also receives analog inputs from the angle of attack (AOA) vane for error correction.
- (3) The display electronic units (DEUs) receive the ADR data from the ADIRU to display and to send it on to other systems such as the electronic engine control (EEC).

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- (4) This message shows when the ADR data received by the DEUs (DEU-1 and DEU-2) from the ADIRUs (ADIRU-L and ADIRU-R) do not agree. The IAS DISAGREE annunciation will be displayed when the difference between the captain's displayed airspeed value and the first officer's displayed airspeed value is 5 knots or greater for 5 consecutive seconds.

B. Possible Causes

- (1) AOA sensors
- (2) Blockage and leakage:
 - (a) Blockage of the pitot probes
 - (b) Leak in the pitot tubing
 - (c) Blockage of the static ports
 - (d) Leak in the static tubing
 - (e) Water in pitot or static systems
 - (f) Partial shorting of the pitot probe heating element
- (3) Pitot ADMs
- (4) Static ADMs
- (5) ADIRU, M1749 (left) or M1752 (right)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

D. Related Data

- (1) (SSM 34-21-14)
- (2) (SSM 34-21-24)
- (3) (WDM 34-21-14)
- (4) (WDM 34-21-24)

E. Initial Evaluation

- (1) Make sure the barometric setting on the captain's and first officer's EFIS control panels is the same.

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- (2) For left ADIRU, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to these systems:
 - 1) ADIRS
 - 2) AOA
 - 3) ADM
 - (b) If the ADIRS BITE procedure shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.
 - (c) If the ADIRS BITE procedure does not show a fault, then do the fault isolation procedure below.
- (3) For the right ADIRU, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to these systems:
 - 1) ADIRS
 - 2) AOA
 - 3) ADM
 - (b) If the ADIRS BITE procedure shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.
 - (c) If the ADIRS BITE procedure does not show a fault, then do the fault isolation procedure below.
- (4) For DEUs, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows a maintenance message on the CURRENT STATUS page, then do the applicable fault isolation procedure for the maintenance message.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then continue.

NOTE: You can find other occurrences of this maintenance message on the IN-FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do the test of the AOA sensor in this task: Pitot Probe, AOA Sensor, and TAT Probe Heater Test, AMM TASK 30-31-00-730-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory, then you corrected the fault.
 - (b) If the test is satisfactory, then continue.
- (2) Do a check for blockage and leakage:
 - (a) Examine the pitot probes for blockage or damage. To examine them, do this task: Pitot Probe - Detailed Inspection, AMM TASK 34-11-01-200-804.
 - 1) If the pitot probes have blockage or damage, then remove the blockage or repair the damage.
 - (b) Examine the static ports for blockage or damage. To examine them, do this task: Static Port - Detailed Inspection, AMM TASK 34-11-02-200-803.
 - 1) If the static ports have blockage or damage, then remove the blockage or repair the damage.
 - (c) Perform a flush of the pitot and static systems. To perform it, do this task: Static and Total Air Pressure System - Servicing, AMM TASK 34-11-00-170-801.

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- 1) If the pitot and static systems have blockage, then remove the blockage.
- (d) Make sure that the pitot systems have no leaks. Do these tasks:
 - Left Pitot System Leak Test, AMM TASK 34-11-00-790-810
 - Right Pitot System Leak Test, AMM TASK 34-11-00-790-8111) If the pitot systems have leaks, replace the pitot system components that have leaks.
- (e) Make sure that the static systems have no leaks. Do these tasks:
 - Left Static System Low-range Leak Test, AMM TASK 34-11-00-790-804
 - Right Static System Low-range Leak Test, AMM TASK 34-11-00-790-8061) If the static systems have leaks, replace the static system components that have leaks.
- (f) If you do not find leakage or blockage, then continue.
- (3) Replace the pitot air data module (ADM). These are the tasks:
Pitot Air Data Module Removal, AMM TASK 34-21-04-000-801,
Pitot Air Data Module Installation, AMM TASK 34-21-04-400-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - (b) If the test is unsatisfactory, then continue.
- (4) Replace the static air data module (ADM). These are the tasks:
Static Air Data Module Removal, AMM TASK 34-21-04-000-802,
Static Air Data Module Installation, AMM TASK 34-21-04-400-802.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - (b) If the test is unsatisfactory, then continue.
- (5) Do the test of the angle of attack (AOA) sensor in this task: Angle of Attack Sensor - Inspection, AMM TASK 34-21-05-200-801.
 - (a) If the test is satisfactory, then continue.
 - (b) If the test is unsatisfactory, then replace AOA sensor. These are the tasks:
Angle of Attack Sensor Removal, AMM TASK 34-21-05-000-801,
Angle of Attack Sensor Installation, AMM TASK 34-21-05-400-801.
 - 1) If AOA sensor test is satisfactory, then you corrected the fault.
 - 2) If the test is unsatisfactory, then continue.
- (6) Replace the applicable ADIRU. These are the tasks:
Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801,
Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory, then you corrected the fault.

END OF TASK

HAP HAP 001-013, 015-026, 028-030

HAP 877. No ACARS/CMU Data - Fault Isolation

HAP A. Description

HAP (1) This task is for this maintenance message:

HAP (a) 31-67090 NO ACARS/CMU DATA

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HAP 001-013, 015-026, 028-030 (Continued)

- HAP B. Possible Causes
- HAP (1) The ACARS/CMU.
- HAP (2) Wiring problem.
- HAP C. Related Data
- HAP (1) (SSM 31-62-15)
- HAP (2) (SSM 31-62-25)
- HAP (3) (WDM 31-62-15)
- HAP (4) (WDM 31-62-25)
- HAP D. Initial Evaluation
- HAP (1) The suspect LRU is ACARS/CMU .
- HAP NOTE: This message will only be active for customers that selected the ACARS system
- HAP generated .ATC or .ACARS message option.
- HAP (2) If the ACARS/CMU does not operate normally, then do the Fault Isolation Procedure below.
- HAP E. Fault Isolation Procedure
- HAP (1) Check that the ACARS/CMU is working. To do the check, do this task: Reference Not Currently Available
- HAP (a) If the ACARS/CMU failed, then do these tasks:
- HAP Reference Not Currently Available
- HAP Reference Not Currently Available
- HAP (2) Check the wiring between the CMU and the DEUs.
- HAP NOTE: Pay special attention to the BURNDY blocks.

————— **END OF TASK** —————

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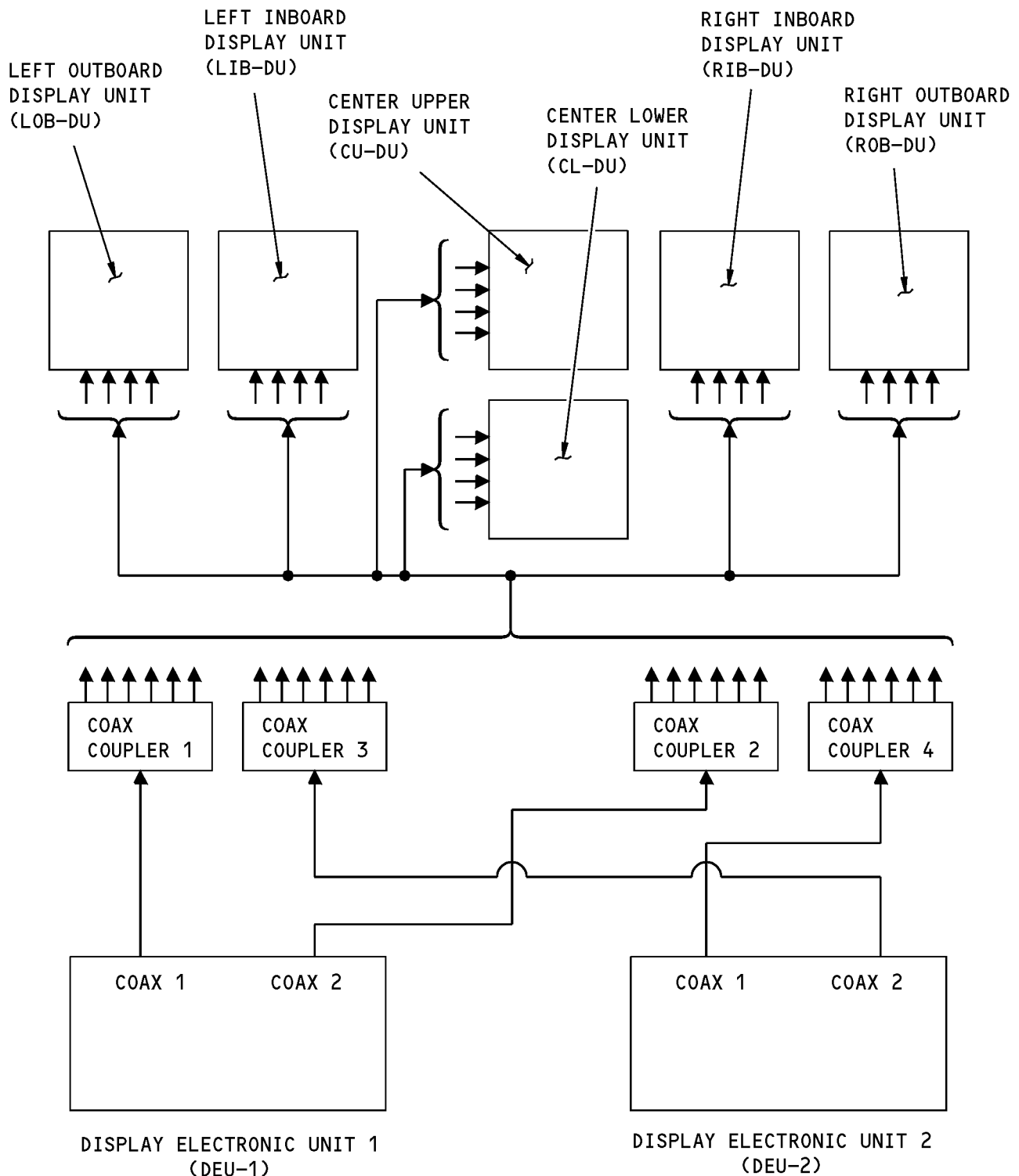
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CDS - Video Coax Block Diagram
Figure 301 / 31-62-00-990-802

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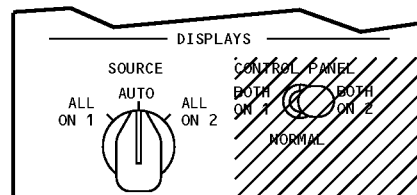


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SELECTOR POSITION \ DU		LOB	LIB	UPPER C	LOWER C	RIB	ROB
AUTO	FAILURES	DEU 1	DEU 1	DEU 1	DEU 2	DEU 2	DEU 2
	NONE	GG A	GG A	GG B	GG A	GG B	GG B
	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG B	DEU 1 GG A	DEU 1 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A
	DEU 1 GG A & B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG A & B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B
	DEU 1 GG A DEU 2 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG A DEU 2 GG B	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A
	DEU 1 GG B DEU 2 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG B DEU 2 GG B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A
	ALL ON 1	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B
	ALL ON 2	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B

COAX OUTPUT 1 = GG A
COAX OUTPUT 2 = GG B



CDS - Display Source Selector
Figure 302 / 31-62-00-990-803

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FAULT ISOLATION MANUAL

801. No DU-LOB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67110 NO DU-LOB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the captain's outboard display unit (LOB-DU).

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187
- (2) No power to the LOB-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the LOB-DU N187 operation:
 - (a) Exchange the LOB-DU N187 with the captain's inboard display unit (LIB-DU) N188.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the LIB-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the LIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LOB-DU slot to the LIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the LOB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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31-63 TASK 801

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- 4) If the display is not blank, then you corrected the fault.
- (c) If the display unit that is in the LIB-DU slot is not blank, then do these steps:
- 1) Remove the display unit that is in the LIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LOB-DU slot to the LIB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the LOB-DU:
- (a) Remove the LOB-DU N187. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:
- CAPT Electrical System Panel, P18-2
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|--------------------|
| D | 4 | C01363 | DISPLAY CAPT OUTBD |
- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the LOB-DU connector D3977B.
- (d) If there is not 28 VDC at pin 59 of D3977B, then do these steps:
- 1) Repair the wiring between pin 59 of D3977B and the terminal 2 of the circuit breaker C1363.
 - 2) Re-install the LOB-DU N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3977B, then continue.
- (3) Do this check of the wiring between the LOB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- NOTE:** The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
- (b) Do a wiring check between these pins of the LOB-DU connector D3977B and the DEU-1 connector D3973A:

D3977B		D3973A
pin A3	-----	pin A1
pin A4	-----	pin B1

- (c) Do a wiring check between these pins of the LOB-DU connector D3977B and the DEU-2 connector D3975A:

D3977B		D3975A
pin A3	-----	pin A1
pin A4	-----	pin B1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- 3) Re-install the LOB-DU, N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
 - (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Capt Outbrd Display Unit, N187.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Capt Outbrd Display Unit, N187.
 - 2) Re-install the LOB-DU, N187. To install it, do this task: AMM TASK 31-62-11-400-801.

————— END OF TASK —————

802. No DU-LIB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67120 NO DU-LIB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the captain's inboard display unit (LIB-DU).

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188
- (2) No power to the LIB-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the LIB-DU N188 operation:

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- (a) Exchange the LIB-DU N188 with the captain's outboard display unit (LOB-DU) N187.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
- (b) If the display unit that is now in the LOB-DU slot is blank, then do these steps:
- 1) Remove the display unit that is in the LOB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LIB-DU slot to the LOB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the LIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the fault.
- (c) If the display unit that is in the LOB-DU slot is not blank, then do these steps:
- 1) Remove the display unit that is in the LOB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LIB DU slot to the LOB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the LIB-DU:
- (a) Remove the LIB-DU N188. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- (b) Remove the safety tag and close this circuit breaker:
- CAPT Electrical System Panel, P18-2
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|-------------------|
| D | 3 | C01365 | DISPLAY CAPT INBD |
- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the LIB-DU connector D3979B.
- (d) If there is not 28 VDC at pin 59 of D3979B, then do these steps:
- 1) Repair the wiring between pin 59 of D3979B and the terminal 2 of the circuit breaker C1365.
 - 2) Re-install the LIB-DU N188. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3979B, then continue.
- (3) Do this check of the wiring between the LIB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- NOTE:** The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
- (b) Do a wiring check between these pins of the LIB-DU connector D3979B and the DEU-1 connector D3973A:

D3979B

pin A3 -----
pin A4 -----

D3973B

pin J15
pin K15

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- (c) Do a wiring check between these pins of the LIB-DU connector D3979B and the DEU-2 connector D3975A:

D3979B		D3975B
pin A3	-----	pin J15
pin A4	-----	pin K15

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the LIB-DU, N188. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Capt Inbrd Display Unit, N188.
- (b) If you find a problem with the program pins, then do these steps:
- 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Capt Inbrd Display Unit, N188.
 - 2) Re-install the LIB-DU, N188. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

803. No DU-CU Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-67130 NO DU-CU DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center upper display unit (CU-DU).

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189
- (2) No power to the CU-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

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D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

NOTE: The CL-DU is normally blank. You need to set the LOWER DU switch on the captain's or first officer's display select module to the ENG PRI position to do a check of the CL-DU, and to the NORMAL position to do a check of the CU-DU.

(1) Do this check of the CU-DU N189 operation:

- (a) Exchange the CU-DU N189 with the center lower display unit (CL-DU) N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (b) If the display unit that is now in the CL-DU slot is blank, then do these steps:

- 1) Remove the display unit that is in the CL-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the display unit that is in the CU-DU slot to the CL-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new display unit in the CU-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) If the display is not blank, then you corrected the fault.

- (c) If the display unit that is in the CL-DU slot is not blank, then do these steps:

- 1) Remove the display unit that is in the CL-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the display unit that is in the CU-DU slot to the CL-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

(2) Do this check for electrical power to the CU-DU:

- (a) Remove the CU-DU N189. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- (b) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the CU-DU connector D3981B.
- (d) If there is not 28 VDC at pin 59 of D3981B, then do these steps:

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- 1) Repair the wiring between pin 59 of D3981B and the terminal 2 of the circuit breaker C1372.
- 2) Re-install the CU-DU N189. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3981B, then continue.
- (3) Do this check of the wiring between the CU-DU and the display electronic units (DEU-1 and DEU-2):
 - (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.

- (b) Do a wiring check between these pins of the CU-DU connector D3981B and the DEU-1 connector D3973B:

D3981B	D3973B
pin A3 -----	pin A1
pin A4 -----	pin B1

- (c) Do a wiring check between these pins of the CU-DU connector D3981B and the DEU-2 connector D3975B:

D3981B	D3975B
pin A3 -----	pin A1
pin A4 -----	pin B1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the CU-DU, N189. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
 - (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Center Display Unit - Upper, N189.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Center Display Unit - Upper, N189.
 - 2) Re-install the CU-DU, N189. To install it, do this task: AMM TASK 31-62-11-400-801.

END OF TASK

804. No DU-CL Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

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(a) 31-67160 NO DU-CL DATA

- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center lower display unit (CL-DU).

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190
- (2) No power to the CL-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) Turn the knob on the LOWER DU switch on the captain's or first officer's display switching module to the ENG PRI position.
- (2) If the display is not blank, then there was an intermittent fault.
- (3) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

NOTE: The CL-DU is normally blank. You need to set the LOWER DU switch on the captain's or first officer's display switching module to the ENG PRI position to do a check of the CL-DU, and to the NORMAL position to do a check of the CU-DU.

- (1) Do this check of the CL-DU N190 operation:
 - (a) Exchange the CL-DU N190 with the center upper display unit (CU-DU) N189.

These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the CU-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the CU-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CL-DU slot to the CU-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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- 3) Install a new display unit in the CL-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) If the display is not blank, then you corrected the fault.
- (c) If the display unit that is in the CU-DU slot is not blank, then do these steps:
 - 1) Remove the display unit that is in the CU-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CL-DU slot to the CU-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the CL-DU:
 - (a) Remove the CL-DU N190. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
E	12	C01373	DISPLAY CTR LWR
 - (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the CL-DU connector D3983B.
 - (d) If there is not 28 VDC at pin 59 of D3983B, then do these steps:
 - 1) Repair the wiring between pin 59 of D3983B and the terminal 2 of the circuit breaker C1373.
 - 2) Re-install the CL-DU N190. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
 - (e) If there is 28 VDC at pin 59 of D3983B, then continue.
- (3) Do this check of the wiring between the CL-DU and the display electronic units (DEU-1 and DEU-2):
 - (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
 - (b) Do a wiring check between these pins of the CL-DU connector D3983B and the DEU-1 connector D3973E:

D3983B		D3973E
pin A3	-----	pin J15
pin A4	-----	pin K15

- (c) Do a wiring check between these pins of the CL-DU connector D3983B and the DEU-2 connector D3975E:

D3983B		D3975E
pin A3	-----	pin J15
pin A4	-----	pin K15

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:

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Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

3) Re-install the CL-DU, N190. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

4) If the display is not blank, then you corrected the problem.

(4) Do this check of the DU Position Pins.

(a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Center Display Unit - Lower, N190.

(b) If you find a problem with the program pins, then do these steps:

1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the Center Display Unit - Lower, N190.

2) Re-install the CL-DU, N190. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

805. No DU-RIB Data - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) 31-67140 NO DU-RIB DATA

(2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center lower display unit (RIB-DU).

B. Possible Causes

(1) Right inboard display unit (RIB-DU), N192

(2) No power to the RIB-DU

(3) Wiring problem

(4) DU Program Pins

C. Circuit Breakers

(1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Related Data

(1) (SSM 31-62-11)

(2) (SSM 31-62-12)

(3) (WDM 31-62-11)

(4) (WDM 31-62-12)

E. Initial Evaluation

(1) If the display is not blank, then there was an intermittent fault.

(2) If the display is blank, then do the Fault Isolation Procedure below.

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F. Fault Isolation Procedure

(1) Do this check of the RIB-DU N192 operation:

- (a) Exchange the RIB-DU N192 with the right outboard display unit (ROB-DU) N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (b) If the display unit that is now in the ROB-DU slot is blank, then do these steps:

1) Remove the display unit that is in the ROB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

2) Move the display unit that is in the RIB-DU slot to the ROB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

3) Install a new display unit in the RIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

4) If the display is not blank, then you corrected the fault.

- (c) If the display unit that is in the ROB-DU slot is not blank, then do these steps:

1) Remove the display unit that is in the ROB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

2) Move the display unit that is in the RIB-DU slot to the ROB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

(2) Do this check for electrical power to the RIB-DU:

- (a) Remove the RIB-DU N192. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

- (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the RIB-DU connector D3987B.

- (d) If there is not 28 VDC at pin 59 of D3987B, then do these steps:

1) Repair the wiring between pin 59 of D3987B and the terminal 2 of the circuit breaker C1366.

2) Re-install the RIB-DU N192. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

3) If the display is not blank, then you corrected the fault.

- (e) If there is 28 VDC at pin 59 of D3987B, then continue.

(3) Do this check of the wiring between the RIB-DU and the display electronic units (DEU-1 and DEU-2):

- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.

- (b) Do a wiring check between these pins of the RIB-DU connector D3987B and the DEU-1 connector D3973E:

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D3983B

pin A3 -----
pin A4 -----

D3973E

pin A1
pin B1

- (c) Do a wiring check between these pins of the RIB-DU connector D3987B and the DEU-2 connector D3975E:

D3983B

pin A3 -----
pin A4 -----

D3975E

pin A1
pin B1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the RIB-DU, N192. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-22 for the F/O Inbrd Display Unit, N192.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the F/O Inbrd Display Unit, N192.
 - 2) Re-install the RIB-DU, N192. To install it, do this task: AMM TASK 31-62-11-400-801.

END OF TASK

806. No DU-ROB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67150 NO DU-ROB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the right outboard display unit (ROB-DU).

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191
- (2) No power to the ROB-DU
- (3) Wiring problem
- (4) DU Program Pins

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C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the ROB-DU N191 operation:

- (a) Exchange the ROB-DU N191 with the right inboard display unit (RIB-DU) N192.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (b) If the display unit that is now in the RIB-DU slot is blank, then do these steps:

- 1) Remove the display unit that is in the RIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the display unit that is in the ROB-DU slot to the RIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new display unit in the ROB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) If the display is not blank, then you corrected the fault.

- (c) If the display unit that is in the RIB-DU slot is not blank, then do these steps:

- 1) Remove the display unit that is in the RIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the display unit that is in the ROB-DU slot to the RIB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

- (2) Do this check for electrical power to the ROB-DU:

- (a) Remove the ROB-DU N191. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

- (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

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- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the ROB-DU connector D3985B.
 - (d) If there is not 28 VDC at pin 59 of D3985B, then do these steps:
 - 1) Repair the wiring between pin 59 of D3985B and the terminal 2 of the circuit breaker C1364.
 - 2) Re-install the ROB-DU, N1921. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
 - (e) If there is 28 VDC at pin 59 of D3985B, then continue.
- (3) Do this check of the wiring between the ROB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
- (b) Do a wiring check between these pins of the ROB-DU connector D3985B and the DEU-1 connector D3973D:

D3985B		D3973D
pin A3	-----	pin A1
pin A4	-----	pin B1

- (c) Do a wiring check between these pins of the ROB-DU connector D3985B and the DEU-2 connector D3975D:
- | D3985B | | D3975D |
|---------------|-------|---------------|
| pin A3 | ----- | pin A1 |
| pin A4 | ----- | pin B1 |
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the ROB-DU, N191. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-22 for the F/O Outbrd Display Unit, N191.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the F/O Outbrd Display Unit, N191.
 - 2) Re-install the ROB-DU, N191. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

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807. No DEU-2 Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67081 NO DEU-2 DATA
- (2) The display electronic unit 1 (DEU-1) receives no data from the DEU-2 on both cross talk buses.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: If DEU-2 is completely failed, then the CDU will show DEU SELF-TEST (3 min) or DEU-2 BITE INOP.

- (a) If the CDU display shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.

These are the tasks:

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Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU display shows DEU 2 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of DEU-1 connector D3973E and DEU-2 (source) connector D3975A:

D3973E	D3975A
pin J13 -----	pin C7
pin K13 -----	pin D7

- (c) Do a wiring check between these pins of DEU-1 connector D3973B and DEU-2 (source) connector D3975D:

D3973B	D3975D
pin J13 -----	pin C7
pin K13 -----	pin D7

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

808. No DEU-1 Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67082 NO DEU-1 DATA
- (2) The display electronic unit 2 (DEU-2) receives no data from the DEU-1 on both cross talk buses.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: If DEU-1 is completely failed, then the CDU will show DEU SELF-TEST (3 min) or DEU-1 BITE INOP.

- (a) If the CDU display shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:

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- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of DEU-1 (source) connector D3973A and DEU-2 connector D3975E:

D3973A		D3975E
pin C7	-----	pin J13
pin D7	-----	pin K13

- (c) Do a wiring check between these pins of DEU-1 (source) connector D3973D and DEU-2 connector D3975B:

D3973D		D3975B
pin C7	-----	pin J13
pin D7	-----	pin K13

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

----- **END OF TASK** -----

809. CDS No Input from LRU on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-67010, 31-67020, 31-67030, 31-67051, 31-67052, 31-67061, 31-67062, 31-67070, 31-67100, 31-67170, 31-67180, 31-67200, 31-67230, 31-67300, 31-67310, 31-67320, 31-67330, 31-67340, 31-67400, 31-67440, 31-67470, 31-67500, 31-67550, 31-67560, 31-67570, 31-67600, 31-67700, 31-67710, 31-67730, 31-67740, 31-67800, 31-67830, 31-67840
- (2) Display electronic units (DEU-1 and DEU-2) receive no ARINC 429 data from an LRU.

B. Possible Causes

- (1) The applicable LRU.
- (2) Wiring Problem.

C. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-15)
- (3) (SSM 31-62-24)
- (4) (SSM 31-62-25)
- (5) (WDM 31-62-14)
- (6) (WDM 31-62-15)
- (7) (WDM 31-62-24)

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(8) (WDM 31-62-25)

D. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

(1) Do this check of the applicable source LRU:

(a) ADF-1

- 1) For ADF-1, do this task: ADF BITE Procedure, 34-57 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

(b) ADIRU-1

- 1) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

(c) ADIRU-2

- 1) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

(d) AUTO THROTTLE

- 1) Do this task: Autothrottle BITE Procedure, 22-31 TASK 801.
- 2) If the maintenance message A/T shows on the CURRENT STATUS page, then do these steps:

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- a) Replace the FCC-A, M1875.

These are the tasks:

Flight Control Computer Removal, AMM TASK 22-11-33-000-801,
Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

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- b) Replace the A/T, M917.

These are the tasks:

Autothrottle Computer Removal, AMM TASK 22-31-10-000-801,
Autothrottle Computer Installation, AMM TASK 22-31-10-400-801.

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- c) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- d) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- e) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If the maintenance message A/T does not show on the CURRENT STATUS page, then continue.
- (e) DFDAU
 - 1) Do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - 2) If any of the LEDs come on, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If none of the LEDs come on, then continue.
- (f) DME-1
 - 1) For DME-1, do this task: DME Interrogator BITE Procedure, 34-55 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (g) DME-2
 - 1) For DME-2, do this task: DME Interrogator BITE Procedure, 34-55 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.
- (h) EEC-1
 - 1) For EEC-1, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If none of the above EEC maintenance messages show, then continue.
- (i) EEC-2
 - 1) For EEC-2, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter..
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

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3) If none of the above EEC maintenance messages show, then continue.

(j) CAPT EFIS CP

1) If the captain's EFIS display is not normal, then do these steps:

a) Replace the captain's EFIS control panel P7-1.

These are the tasks:

EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,

EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.

b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

c) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

2) If the captain's EFIS display is normal, then continue.

(k) F/O EFIS CP

1) If the first officer's EFIS display is not normal, then do these steps:

a) Replace the first officer's EFIS control panel P7-2.

These are the tasks:

EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,

EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.

b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

c) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

2) If the captain's EFIS display is normal, then continue.

(l) AVM

1) Replace the AVM, M1240.

These are the tasks:

Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00,

Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.

2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

3) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

4) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(m) FCC-A and FCC-B

1) For FCC-A and FCC-B, do this task: LRU Replacement Test, 22-11 TASK 802.

2) Make the selection for the channels A and B.

3) Make the selection for the FCC Test.

4) If the FCC message shows, then go to the FIM task for that message.

a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 5) If the FCC message does not show, then continue.
- (n) FMC-1
 - 1) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.

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- (o) FMC-2
 - 1) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.

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- (p) FSEU
 - 1) Do this task: Flap/Slat Electronics Unit (FSEU) BITE Procedure, 27-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (q) FQPU
 - 1) Do this task: FQIS BITE Procedure, 28-41 TASK 801.
 - 2) If the maintenance message PROCESSOR FAILED shows on the CURRENT STATUS page, then do these steps:
 - a) Replace the FQPU, M1827.
These are the tasks:
Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801,
Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801.

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- b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - c) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - d) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If the maintenance message PROCESSOR FAILED does not show on the CURRENT STATUS page, then continue.
- (r) GPWC
- 1) If the GPWS FAIL MONITOR light on the P3-7 panel comes on, then do these steps:
 - a) These are the tasks:
Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801,
Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
 - b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - c) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - d) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 2) If the GPWS FAIL MONITOR light on the P3-7 panel does not come on, then continue.
- (s) ILS-1/MMR-1
- 1) For ILS-1/MMR-1, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (t) ILS-2/MMR-2
- 1) For ILS-2/MMR-2, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then do the fault isolation procedure.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (u) MCP
- 1) For MCP, do this task: LRU Replacement Test, 22-11 TASK 802.
 - 2) Make the selection for the channels A and B.
 - 3) Make the selection for the MCP Test.
 - 4) If the MCP message shows, then go to the FIM task for that message.

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- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 5) If the MCP message does not show, then continue.
- (v) RA-1
- 1) For RA-1, do this task: Low Range Radio Altimeter (LRRRA) BITE Procedure, 34-33 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (w) RA-2
- 1) For RA-2, do this task: Low Range Radio Altimeter (LRRRA) BITE Procedure, 34-33 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (x) STALL MANAGEMENT COMPUTER-1
- 1) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (y) STALL MANAGEMENT COMPUTER-2
- 1) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

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- 3) If there is no fault message, then continue.
- (z) TCAS
 - 1) Do this task: Traffic Alert and Collision Avoidance System (TCAS) BITE Procedure, 34-45 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (aa) VOR-1
 - 1) For VOR-1, do this task: VOR/Marker Beacon Receiver BITE Procedure, 34-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (ab) VOR-2
 - 1) For VOR-2, do this task: VOR/Marker Beacon Receiver BITE Procedure, 34-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
- (2) Do this check of the wiring for the applicable LRU:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

 - (a) In the lists below, find the wiring diagram reference, source LRU, DEU(s), connectors and pin numbers for the applicable maintenance message.

NOTE: These data will be used in the steps that follow.

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MAINTENANCE MESSAGE	WDM REFERENCE
31-67020	34-57-11
31-67051	34-21-13, 34-21-14
31-67052	34-21-13, 34-21-14
31-67061	34-21-23, 34-21-24
31-67062	34-21-23, 34-21-24
31-67070	22-31-52
31-67100	31-35-02
31-67170	34-55-11
31-67180	34-55-21
31-67200	73-24-11
31-67230	73-24-11
31-67300	31-62-13
31-67310	31-62-23
31-67320	77-31-11
31-67330	22-11-51
31-67340	22-11-51
31-67400	34-61-15
HAP 037-054, 101-999	
31-67440	34-61-15
HAP ALL	
31-67470	27-81-41
31-67500	28-41-11
31-67550	34-49-11
31-67560	34-31-11
31-67570	34-31-21
31-67600	22-11-51
31-67700	34-33-11
31-67710	34-33-21
31-67730	27-32-12
31-67740	27-32-22
31-67800	34-45-11
31-67830	34-51-11
31-67840	34-51-21

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67020	ADF-1 M1731	DEU-1 M1808	D3651B	D3973A
			pin B13	pin C3
			pin B14	pin D3
		DEU-2 M1809	D3651B	D3975A
			pin B13	pin C3
			pin B14	pin D3
31-67051	ADIRU-1 M1749	DEU-1 M1808	D3687A	D3973B
	(ADR-L-2 BUS 1)		pin A5	pin C5
			pin B5	pin D5
	(ADR-L-2 BUS 2)		D3687A	D3973D
			pin A5	pin E5
			pin B5	pin F5
	(IR-L-1)		D3687B	D3973A
			pin G7	pin C2
			pin G8	pin D2
31-67052	ADIRU-1 M1749	DEU-2 M1809	D3687A	D3975B
	(ADR-L-4 BUS 1)		pin A9	pin C5
			pin B9	pin D5
	(ADR-L-4 BUS 2)		D3687A	D3975D
			pin A9	pin E5
			pin B9	pin F5
	(IR-L-3)		D3687B	D3975A
			pin C10	pin C2
			pin C11	pin D2
31-67061	ADIRU-2 M1752	DEU-1 M1808	D3693A	D3973E
	(ADR-R-4 BUS 1)		pin A9	pin C5

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
			pin B9	pin D5
	(ADR-R-4 BUS 2)		D3693A	D3973A
			pin A9	pin J15
	(IR-R-3)		pin B9	pin K15
			D3693B	D3973D
			pin A5	pin C5
			pin B5	pin D5
31-67062	ADIRU-2 M1752	DEU-2 M1809	D3693A	D3975E
	(ADR-R-2 BUS 1)		pin A5	pin C5
	(ADR-R-2 BUS 2)		pin B5	pin D5
			D3693A	D3975A
			pin A5	pin J15
	(IR-R-1)		pin B5	pin K15
			D3693B	D3975D
			pin G7	pin C2
			pin G8	pin D2
HAP 031-054, 101-999				
31-67070	AUTO THROTTLE (FCC-A) M1875	DEU-1 M1808	D10135B	D3973A
			pin F9	pin E1
			pin F8	pin F1
		DEU-2 M1809	D10135B	D3975A
			pin F9	pin E1
			pin F8	pin F1
HAP 001-013, 015-026, 028-030				
31-67070	AUTO THROTTLE M917	DEU-1 M1808	D10009A	D3973A
			pin C10	pin E1
			pin D10	pin F1

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
		DEU-2 M1809	D10009A	D3975A
			pin C10	pin E1
			pin D10	pin F1
HAP ALL				
31-67100	DFDAU M675	DEU-1 M1808	D2295E	D3973D
			pin H5	pin C5
			pin H6	pin D5
		DEU-2 M1809	D2295E	D3975D
			pin H5	pin C5
			pin H6	pin D5
31-67170	DME-1 M164	DEU-1 M1808	D161B	D3973B
			pin G1	pin C9
			pin H1	pin D9
		DEU-2 M1809	D161B	D3975B
			pin G1	pin C9
			pin H1	pin D9
31-67180	DME-2 M165	DEU-1 M1808	D169B	D3973E
			pin G1	pin C9
			pin H1	pin D9
		DEU-2 M1809	D169B	D3975E
			pin G1	pin C9
			pin H1	pin D9
31-67200	EEC-1 M1818 CH-A	DEU-1 M1808	DP0303	D3973A
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0303	D3975A

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
			pin N	pin A5
			pin M	pin B5
	EEC-1 M1818 CH-B	DEU-1 M1808	DP0404	D3973A
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0404	D3975A
			pin N	pin A5
			pin M	pin B5
31-67230	EEC-2 M1818 CH-A	DEU-1 M1808	DP0303	D3973D
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0303	D3975D
			pin N	pin A5
			pin M	pin B5
	EEC-2 M1818 CH-B	DEU-1 M1808	DP0404	D3973E
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0404	D3975E
			pin N	pin A5
			pin M	pin B5
31-67300	CAPT EFIS CP P7-1	DEU-1 M1808	D3993	D3973A
			pin 35	pin J1
			pin 36	pin K1
		DEU-2 M1809	D3993	D3975A
			pin 35	pin J1
			pin 36	pin K1
31-67310	F/O EFIS CP P7-2	DEU-1 M1808	D3995	D3973D

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67320	AVM M1240	DEU-2 M1809	pin 35	pin J1
			pin 36	pin K1
			D3995	D3975D
		DEU-1 M1808	pin 35	pin J1
			pin 36	pin K1
			D3228A	D3973B
31-67330	FCC-A M1875	DEU-2 M1809	pin C6	pin C12
			pin D6	pin D12
			D3228A	D3975B
		DEU-1 M1808	pin C6	pin C12
			pin D6	pin D12
			D10135A	D3973A
31-67340	FCC-B M1876	DEU-2 M1809	pin B6	pin C12
			pin A6	pin D12
			D10135A	D3975A
		DEU-1 M1808	pin B6	pin C12
			pin A6	pin D12
			D10137A	D3973D
31-67400	FMC-1 (FMC-L-08) M1175 FMC-1	DEU-2 M1809	pin B6	pin C12
			pin A6	pin D12
			D10137A	D3975D
		DEU-1 M1808	pin B6	pin C12
			pin A6	pin D12
			D2179A	D3973A
			pin A11	pin C9
			pin B11	pin D9
			D2179B	D3973E

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
	(FMC-L-09) M1175		pin G9	pin C1
			pin H9	pin D1
	FMC-1	DEU-2 M1809	D2179A	D3975A
	(FMC-L-08) M1175		pin A11	pin C9
			pin B11	pin D9
	FMC-1		D2179B	D3975E
	(FMC-L-09) M1175		pin G9	pin C1
			pin H9	pin D1
HAP 037-054, 101-999				
31-67440	FMC-2	DEU-1 M1808	D3261A	D3973B
	(FMC-R-08) M1632		pin A11	pin E1
			pin B11	pin F1
	FMC-2		D3261B	D3973D
	(FMC-R-09) M1632		pin G9	pin C9
			pin H9	pin D9
	FMC-2	DEU-2 M1809	D3261A	D3975B
	(FMC-R-08) M1632		pin A11	pin E1
			pin B11	pin F1
	FMC-2		D3261B	D3975D
	(FMC-R-09) M1632		pin G9	pin C9
			pin H9	pin D9
HAP ALL				
31-67470	FSEU M1746	DEU-1 M1808	D728B	D3973E
			pin D4	pin E1
			pin D5	pin F1

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67500	FQPU M1827 BUS-1	DEU-2 M1809	D728B	D3975E
			pin D4	pin E1
		DEU-1 M1808	pin D5	pin F1
			D11306	D3973D
			pin 25	pin J5
			pin 24	pin K5
			BUS-2	D3973A
			pin 25	pin J5
			pin 24	pin K5
			BUS-3	D3973B
			pin 25	pin J5
			pin 24	pin K5
	GPWC M652	DEU-2 M1809	BUS-1	D3975D
			pin 25	pin J5
		DEU-1 M1808	pin 24	pin K5
			BUS-2	D3975A
			pin 25	pin J5
			pin 24	pin K5
			BUS-3	D3975B
			pin 25	pin J5
			pin 24	pin K5
			D1153B	D3973D
31-67550	MMR-1 M2104	DEU-1 M1808	pin C1	pin A9
			pin D1	pin B9
		DEU-2 M1809	D1153B	D3975D
			pin C1	pin A9
			pin D1	pin B9
			D10719B	D3973A

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
	(ILS-L-2 BUS 1)		pin G1 ———	pin C15
			pin H1 ———	pin D15
	(ILS-L-2 BUS 2)		D10719B	D3973E
			pin G1 ———	pin G3
			pin H1 ———	pin H3
	(ILS-L-2 BUS 1)	DEU-2 M1809	D10719B	D3975A
			pin G1 ———	pin C15
			pin H1 ———	pin D15
	(ILS-L-2 BUS 2)		D10719B	D3975E
			pin G1 ———	pin G3
			pin H1 ———	pin H3
31-67570	MMR-2 M2105	DEU-1 M1808	D10721B	D3973D
	(ILS-R-2 BUS 1)		pin G1 ———	pin C15
			pin H1 ———	pin D15
	(ILS-R-2 BUS 2)		D10721B	D3973B
			pin G1 ———	pin G3
			pin H1 ———	pin H3
	(ILS-R-2 BUS 1)	DEU-2 M1809	D10721B	D3975D
			pin G1 ———	pin C15
			pin H1 ———	pin D15
	(ILS-R-2 BUS 2)		D10721B	D3975B
			pin G1 ———	pin G3
			pin H1 ———	pin H3
31-67600	MCP M198	DEU-1 M1808	D299	D3973A
	(MCP-1 BUS)		pin 18 ———	pin E5
			pin 17 ———	pin F5
	(MCP-2 BUS)		D1815	D3973E
			pin 18 ———	pin E5

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67700	(MCP-1 BUS)	DEU-2 M1809	pin 17	pin F5
			D299	D3975A
			pin 18	pin E5
			pin 17	pin F5
	(MCP-2 BUS)		D1815	D3975E
			pin 18	pin E5
			pin 17	pin F5
	RA-1 M1735	DEU-1 M1808	D3667B	D3973A
			pin G2	pin G15
			pin G3	pin H15
			D3667B	D3975A
31-67710		DEU-2 M1809	pin G2	pin G15
			pin G3	pin H15
			D3669B	D3975D
	RA-2 M1736	DEU-1 M1808	pin G2	pin G15
			pin G3	pin H15
			D3669B	D3975D
		DEU-2 M1809	pin G2	pin G15
			pin G3	pin H15
			D3669B	D3975D
31-67730	STALL MANAGEMENT COMPUTER-1 M1747	DEU-1 M1808	D3683A	D3973A
			pin G2	pin G15
			pin G3	pin H15
		DEU-2 M1809	pin G2	pin G15
			pin G3	pin H15
			D3683A	D3973A
		DEU-2 M1809	pin 95	pin G1
			pin 94	pin H1
			D3683A	D3973A
31-67740	STALL MANAGEMENT COMPUTER-2 M1748	DEU-1 M1808	pin 95	pin G1
			pin 94	pin H1
			D3685A	D3973D

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67800	TCAS M1485 (TCAS-1 BUS)	DEU-2 M1809	pin 95	pin G1
			pin 94	pin H1
			D3685A	D3975D
		DEU-1 M1808	pin 95	pin G1
			pin 94	pin H1
			D2743E	D3973A
	(TCAS-2 BUS)	DEU-2 M1809	pin C7	pin J2
			pin D7	pin K2
			D2743E	D3973D
			pin G7	pin E1
			pin H7	pin F1
			D2743E	D3975A
31-67830	(TCAS-1 BUS)	DEU-2 M1809	pin C7	pin J2
			pin D7	pin K2
			D2743E	D3975D
			pin G7	pin E1
			pin H7	pin F1
			D3623B	D3973B
	(TCAS-2 BUS)	DEU-1 M1808	pin B13	pin C3
			pin C13	pin D3
			D3623B	D3975B
			pin B13	pin C3
			pin C13	pin D3
			D3625B	D3973E
VOR-1 M1724	DEU-1 M1808	pin B13	pin C3	
		pin C13	pin D3	
		D3625B	D3975E	
		pin B13	pin C3	
		pin C13	pin D3	
		D3625B	D3975E	
VOR-2 M1725	DEU-2 M1809	pin B13	pin C3	
		pin C13	pin D3	
		D3625B	D3975E	
		pin B13	pin C3	
		pin C13	pin D3	
		D3625B	D3975E	

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
			pin C13	pin D3

(b) Remove the applicable source LRU:

- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 2) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 3) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

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- 4) AUTO THROTTLE (Flight Control Computer A). To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.

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- 5) AUTO THROTTLE. To remove it, do this task: Autothrottle Computer Removal, AMM TASK 22-31-10-000-801.

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- 6) DFDAU. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
- 7) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 8) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 9) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 10) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 11) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 12) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 13) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 14) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 15) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 16) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 17) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 18) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.
- 19) FQPU. To remove it, do this task: Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801.
- 20) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
- 21) ILS-1/MMR-1. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
- 22) ILS-2/MMR-2. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
- 23) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
- 24) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 25) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 26) STALL MANAGEMENT COMPUTER-1. To remove it, do this task: Stall Warning Test Module Removal, AMM TASK 27-32-21-000-801.
- 27) STALL MANAGEMENT COMPUTER-2. To remove it, do this task: Stall Warning Test Module Removal, AMM TASK 27-32-21-000-801.
- 28) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
- 29) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- 30) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- (c) Remove the applicable DEU (DEU-1, M1808 or DEU-2, M1809). To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (d) Do a wiring check between the specified pins of the applicable LRU connector and the applicable DEU connector.
- (e) If you find a problem with the wiring, then do the steps that follow:
 - 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - c) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

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- d) AUTO THROTTLE (Flight Control Computer A). To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.

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- e) AUTO THROTTLE. To install it, do this task: Autothrottle Computer Installation, AMM TASK 22-31-10-400-801.

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- f) DFDAU. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
- g) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- h) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- i) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- j) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- k) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- l) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- m) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
- n) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- o) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- p) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- q) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- r) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- s) FQPU. To install it, do this task: Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801.
- t) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
- u) ILS-1/MMR-1. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- v) ILS-2/MMR-2. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- w) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- x) RA-1. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- y) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.

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- z) STALL MANAGEMENT COMPUTER-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- aa) STALL MANAGEMENT COMPUTER-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ab) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- ac) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- ad) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the applicable DEU (DEU-1, M1808 or DEU-2, M1809). To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

810. No DEU-2 Data On Crosstalk Bus - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS
 - (b) 31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS
- (2) Display electronic unit 1 (DEU-1) receives no ARINC 429 data from the crosstalk bus.

B. Possible Causes

- (1) Display Electronic Unit 2 (DEU-2), M1809
- (2) Display Electronic Unit 1 (DEU-1), M1808
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)

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(3) (WDM 31-62-15)

(4) (WDM 31-62-25)

E. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

(1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.

(2) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

(3) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

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- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between the specified pins of DEU-1 connector and DEU-2 (source) connector for the applicable maintenance message.

MAINT MESSAGE 31-68081

DEU-2 CONNECTOR D3975A	DEU-1 CONNECTOR D3973E
pin C7 -----	pin J13
pin D7 -----	pin K13

MAINT MESSAGE 31-68083

DEU-2 CONNECTOR D3975D	DEU-1 CONNECTOR D3973B
pin C7 -----	pin J13
pin D7 -----	pin K13

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

811. No DEU-1 Data On Crosstalk Bus - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS
 - (b) 31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS
- (2) Display electronic unit 2 (DEU-2) receives no ARINC 429 data from the crosstalk bus.

B. Possible Causes

- (1) Display Electronic Unit 1 (DEU-1), M1808
- (2) Display Electronic Unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
D	5	C01359	DISPLAY DEU 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (2) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (3) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between the specified pins of DEU-1 (source) connector and DEU-2 connector for the applicable maintenance message.

MAINT MESSAGE 31-68082

DEU-1 CONNECTOR D3973A	DEU-2 CONNECTOR D3975E
pin C7 -----	pin J13
pin D7 -----	pin K13

MAINT MESSAGE 31-68084

DEU-1 CONNECTOR D3973D	DEU-2 CONNECTOR D3975B
pin C7 -----	pin J13
pin D7 -----	pin K13

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

812. NO LRU Data on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68051, 31-68052, 31-68055, 31-68056, 31-68061, 31-68062, 31-68065, 31-68066, 31-68210, 31-68220, 31-68240, 31-68250, 31-68410, 31-68420, 31-68450, 31-68460, 31-68510, 31-68520, 31-68530, 31-68561, 31-68562, 31-68571, 31-68572 31-68610, 31-68620, 31-68810, 31-68820
- (2) Display electronic units (DEU-1 and DEU-2) receive no ARINC 429 data from an LRU.

B. Possible Causes

- (1) The applicable DEU
- (2) The applicable LRU

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(3) Wiring problem

C. Related Data

(1) (SSM 31-62-14)

(2) (SSM 31-62-15)

(3) (WDM 31-62-14)

(4) (WDM 31-62-15)

D. Initial Evaluation

- (1) Make sure the ADIRUs are aligned. If the ADIRUs are not aligned, do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.

NOTE: If the ADIRUs are not aligned, then the maintenance messages related to the ADIRU'S will show.

- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For the applicable DEU (DEU-1 or DEU-2, or both), do this task: DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: Depending on the applicable maintenance message in Table 204, you have to run the self-test for either DEU-1, DEU-2, or both.

- (a) For DEU-1, if the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) For DEU-1, if the CDU shows DEU 1 SELF-TEST PASSED, then continue.

- (c) For DEU-2, if the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (d) For DEU-2, if the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (2) In Table 204, find the applicable maintenance message. Do this check of the applicable source LRU:
- (a) ADIRU-1
 - 1) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
 - (b) ADIRU-2
 - 1) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.
 - (c) EEC-1
 - 1) For EEC-1, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If none of the above EEC maintenance messages show, then continue.
- (d) EEC-2
 - 1) For EEC-2, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message at the beginning of this chapter.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If none of the above EEC maintenance messages show, then continue.
- (e) FMC-1
 - 1) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - 3) If there is no fault message, then continue.

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- (f) FMC-2
 - 1) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

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(g) FQPU

- 1) Do this task: FQIS BITE Procedure, 28-41 TASK 801.
- 2) If the maintenance message PROCESSOR FAILED shows on the CURRENT STATUS page, then do these steps:
 - a) Replace the FQPU, M1827.
These are the tasks:
Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801,
Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801.
 - b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - c) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - d) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If the maintenance message PROCESSOR FAILED does not show on the CURRENT STATUS page, then continue.

(h) ILS-1/MMR-1

- 1) For ILS-1/MMR-1, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

(i) ILS-2/MMR-2

- 1) For ILS-2/MMR-2, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
- 2) If there is a fault message, then do the fault isolation procedure.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

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(j) MCP

- 1) For MCP, do this task: LRU Replacement Test, 22-11 TASK 802.
- 2) Make the selection for the channels A and B.
- 3) Make the selection for the MCP Test.
- 4) If the MCP message shows, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 5) If the MCP message does not show, then continue.

(k) TCAS

- 1) Do this task: Traffic Alert and Collision Avoidance System (TCAS) BITE Procedure, 34-45 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- 3) If there is no fault message, then continue.

(3) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) In the tables that follow, find the wiring diagram reference, source LRU, DEU(s), connectors and pin numbers for the applicable maintenance message.

NOTE: These data will be used in the steps that follow

Table 203

MAINT MESSAGE	WDM REFERENCE
31-68051	34-21-14
31-68052	34-21-14
31-68055	34-21-13
31-68056	34-21-13
31-68061	34-21-24
31-68062	34-21-24
31-68065	34-21-23
31-68066	34-21-23
31-68210	73-24-11

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MAINT MESSAGE	WDM REFERENCE
31-68220	73-24-11
31-68240	73-24-21
31-68250	73-24-21
31-68410	34-61-15
31-68420	34-61-15
HAP 037-054, 101-999	
31-68450	34-61-15
31-68460	34-61-15
HAP ALL	
31-68510	28-41-11
31-68520	28-41-11
31-68530	28-41-11
31-68561	34-31-11
31-68562	34-31-11
31-68571	34-31-21
31-68572	34-21-21
31-68610	22-11-51
31-68620	22-11-51
31-68810	34-45-11
31-68220	34-45-11

Table 204

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-68051	ADIRU-1 M1749 (ADR-L-2 BUS 1)	DEU-1 M1808	D3687A	D3973B
			pin A5	pin C5
			pin B5	pin D5
			D3687A	D3973D
			pin A5	pin E5
			pin B5	pin F5
31-68052	ADIRU-1 M1749 (ADR-L-4 BUS 1)	DEU-2 M1809	D3687A	D3975B
			pin A9	pin C5
			pin B9	pin D5
			D3687A	D3975D
			pin A9	pin E5

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
31-68055	ADIRU-1 M1749 (IR-L-1)	DEU-1 M1808	pin B9	———	pin F5
			D3687B		D3973A
31-68056	ADIRU-1 M1749 (IR-L-3)	DEU-2 M1809	pin G7	———	pin C2
			pin G8	———	pin D2
			D3687B		D3975A
			pin C10	———	pin C2
31-68061	ADIRU-2 M1752 (ADR-R-4 BUS 1)	DEU-1 M1808	pin C11	———	pin D2
			D3693A		D3973E
			pin A9	———	pin C5
			pin B9	———	pin D5
			D3693A		D3973A
			pin A9	———	pin J15
31-68062	ADIRU-2 M1752 (ADR-R-2 BUS 1)	DEU-2 M1809	pin B9	———	pin K15
			D3693A		D3975E
			pin A5	———	pin C5
			pin B5	———	pin D5
			D3693A		D3975A
			pin A5	———	pin J15
31-68065	ADIRU-2 M1752 (IR-R-3)	DEU-1 M1808	pin B5	———	pin K15
			D3693B		D3973D
			pin A5	———	pin C5
			pin B5	———	pin D5
31-68066	ADIRU-2 M1752 (IR-R-1)	DEU-2 M1809	D3693B		D3975D
			pin G7	———	pin C2
			pin G8	———	pin D2
			D3693B		D3975D
31-68210	EEC-1 M1818 CH-A	DEU-1 M1808	DP0303		D3973A
			pin N	———	pin A5
			pin M	———	pin B5
			D3693B		D3975D
			pin G7	———	pin C2
			pin G8	———	pin D2
31-68210	EEC-1 M1818 CH-A	DEU-2 M1809	DP0303		D3973A
			pin N	———	pin A5
			pin M	———	pin B5
			D3693B		D3975D
			pin G7	———	pin C2
			pin G8	———	pin D2

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-68220	EEC-1 M1818 CH-B	DEU-1 M1808	DP0404	D3973A
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0404	D3975A
			pin N	pin A5
			pin M	pin B5
31-68240	EEC-2 M1818 CH-A	DEU-1 M1808	DP0303	D3973D
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0303	D3975D
			pin N	pin A5
			pin M	pin B5
31-68250	EEC-2 M1818 CH-B	DEU-1 M1808	DP0404	D3973E
			pin N	pin A5
			pin M	pin B5
		DEU-2 M1809	DP0404	D3975E
			pin N	pin A5
			pin M	pin B5
31-68410	FMC-1 (FMC-L-08) M1175	DEU-1 M1808	D2179A	D3973A
			pin A11	pin C9
			pin B11	pin D9
	FMC-1 (FMC-L-08) M1175	DEU-2 M1809	D2179A	D3975A
			pin A11	pin C9
			pin B11	pin D9
31-68420	FMC-1 (FMC-L-09) M1175	DEU-1 M1808	D2179B	D3973E
			pin G9	pin C1
			pin H9	pin D1
	FMC-1 (FMC-L-09) M1175	DEU-2 M1809	D2179B	D3975E
			pin G9	pin C1
			pin H9	pin D1

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
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31-68450	FMC-2 (FMC-R-08) M1632	DEU-1 M1808	D3261A		D3973B
			pin A11	————	pin E1
			pin B11	————	pin F1
	FMC-2 (FMC-R-08) M1632	DEU-2 M1809	D3261A		D3975B
			pin A11	————	pin E1
			pin B11	————	pin F1
31-68460	FMC-2 (FMC-R-09) M1632	DEU-1 M1808	D3261B		D3973D
			pin G9	————	pin C9
			pin H9	————	pin D9
	FMC-2 (FMC-R-09) M1632	DEU-2 M1809	D3261B		D3975D
			pin G9	————	pin C9
			pin H9	————	pin D9
HAP ALL					
31-68510	FQPU M1827 BUS-1	DEU-1 M1808	D11306		D3973D
			pin 25	————	pin J5
			pin 24	————	pin K5
	BUS-1	DEU-2 M1809	D11306		D3975D
			pin 25	————	pin J5
			pin 24	————	pin K5
31-68520	FQPU M1827 BUS-2	DEU-1 M1808	D11304		D3973A
			pin 25	————	pin J5
			pin 24	————	pin K5
	BUS-2	DEU-2 M1809	D11304		D3975A
			pin 25	————	pin J5
			pin 24	————	pin K5
31-68530	FQPU M1827 BUS-3	DEU-1 M1808	D11308		D3973B
			pin 25	————	pin J5
			pin 24	————	pin K5
	BUS-3	DEU-2 M1809	D11308		D3975B
			pin 25	————	pin J5

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
			pin 24	————	pin K5
31-68561	MMR-1 M2104	DEU-1 M1808	D10719B		D3973A
	(ILS-L-2 BUS 1)		pin G1	————	pin C15
			pin H1	————	pin D15
	(ILS-L-2 BUS 1)	DEU-2 M1809	D10719B		D3975A
			pin G1	————	pin C15
			pin H1	————	pin D15
31-68562	MMR-1 M2104	DEU-1 M1808	D10719B		D3973E
	(ILS-L-2 BUS 2)		pin G1	————	pin G3
			pin H1	————	pin H3
	(ILS-L-2 BUS 2)	DEU-2 M1809	D10719B		D3975E
			pin G1	————	pin G3
			pin H1	————	pin H3
31-68571	MMR-2 M2105	DEU-1 M1808	D10721B		D3973D
	(ILS-R-2 BUS 1)		pin G1	————	pin C15
			pin H1	————	pin D15
	(ILS-R-2 BUS 1)	DEU-2 M1809	D10721B		D3975D
			pin G1	————	pin C15
			pin H1	————	pin D15
31-68572	MMR-2 M2105	DEU-1 M1808	D10721B		D3973B
	(ILS-R-2 BUS 2)		pin G1	————	pin G3
			pin H1	————	pin H3
	(ILS-R-2 BUS 2)	DEU-2 M1809	B10721B		D3975B
			pin G1	————	pin G3
			pin H1	————	pin H3
31-68610	MCP M198	DEU-1 M1808	D299		D3973A
	(MCP-1 BUS)		pin 18	————	pin E5
			pin 17	————	pin F5
	(MCP-1 BUS)	DEU-2 M1809	D299		D3975A
			pin 18	————	pin E5

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MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-68620	MCP M198 (MCP-2 BUS)	DEU-1 M1808	pin 17	pin F5
			D1815	D3973E
			pin 18	pin E5
	(MCP-2 BUS)	DEU-2 M1809	pin 17	pin F5
			D1815	D3975E
			pin 18	pin E5
31-68810	TCAS M1485 (TCAS-1 BUS)	DEU-1 M1808	pin 17	pin F5
			D2743E	D3973A
			pin C7	pin J2
	(TCAS-1 BUS)	DEU-2 M1809	pin D7	pin K2
			D2743E	D3975A
			pin C7	pin J2
31-68820	TCAS M1485 (TCAS-2 BUS)	DEU-1 M1808	pin D7	pin K2
			D2743E	D3973D
			pin G7	pin E1
	(TCAS-2 BUS)	DEU-2 M1809	pin H7	pin F1
			D2743E	D3975D
			pin G7	pin E1
			pin H7	pin F1

(b) Remove the applicable source LRU:

- 1) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 2) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 3) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 4) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 5) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

HAP 037-054, 101-999

- 6) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 7) FQPU. To remove it, do this task: Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801.
- 8) ILS-1/MMR-1. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.

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- 9) ILS-2/MMR-2. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
- 10) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
- 11) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
- (c) Remove the applicable DEU (DEU-1, M1808 or DEU-2, M1809). To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (d) Do a wiring check between the specified pins of the applicable LRU connector and the applicable DEU connector.
- (e) If you find a problem with the wiring, then do the applicable steps below:
 - 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - b) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - c) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - d) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - e) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- f) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- g) FQPU. To install it, do this task: Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801.
- h) ILS-1/MMR-1. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- i) ILS-2/MMR-2. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- j) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- k) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- 3) Re-install the applicable DEU. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

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813. No FMC-1 Data On FMC-01 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
 - (a) 31-68431 NO FMC-1 DATA ON FMC-01 BUS
- (2) Display electronic unit 1 (DEU-1) receives no data output on FMC-01 bus from the flight management computer 1 (FMC-1).

B. Possible Causes

- (1) Flight management computer 1 (FMC-1), M1175.
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) Wiring Problem
- (4) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 34-61-14)
- (2) (SSM 31-62-14)
- (3) (WDM 34-61-14)
- (4) (WDM 31-62-14)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-1:
 - (a) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.

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- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (c) If there is no fault message, then continue.
- (2) Do this check of the DEU-1:
- (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (3) Do this check of the wiring between the FMC-1 and the FMCS transfer relay No. 1:
- NOTE:** If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.
- (a) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
 - (b) Remove the FMCS transfer relay No. 1, R475.
 - (c) Do a wiring check between these pins of the FMC-1 connector, D2179A and the relay No. 1 connector, D3267:

D2179A		D3267	
pin H9	-----	pin F	
pin G9	-----	pin E	

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- (4) Do this check of the wiring between the DEU-1 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of the DEU-1 connector, D3973B and the relay No. 1 connector, D3263:

D3973B		D3263
pin D2	-----	pin F
pin C2	-----	pin E

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (5) Replace the FMCS transfer relay No. 1, R475.
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

814. No FMC-1 Data On FMC-02 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
 - (a) 31-68432 NO FMC-1 DATA ON FMC-02 BUS
- (2) Display electronic unit 2 (DEU-2) receives no data output on FMC-02 bus from the flight management computer 1 (FMC-1).

B. Possible Causes

- (1) Flight management computer 1 (FMC-1), M1175
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring Problem
- (4) FMCS transfer relay No. 1, R475

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 34-61-24)
- (2) (SSM 31-62-24)
- (3) (WDM 34-61-24)
- (4) (WDM 31-62-24)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the FAULT HISTORY or MAINTENANCE HISTORY page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-1:
 - (a) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.
 - 1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no fault message, then continue.
 - (2) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

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Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.

(3) Do this check of the wiring between the FMC-1 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- (b) Remove the FMCS transfer relay No. 1, R475.
- (c) Do a wiring check between these pins of the FMC-1 connector, D2179B and the relay No. 1 connector, D3267:

D2179B		D3267
pin E7	-----	pin U
pin D7	-----	pin T

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- 3) Re-install the FMCS transfer relay No. 1, R475.
- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

- 1) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

(4) Do this check of the wiring between the DEU-2 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of the DEU-2 connector, D3975B and the relay No. 1 connector, D3263:

D3975B		D3263
pin D2	-----	pin U
pin C2	-----	pin T



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- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you did not find a problem with the wiring, then continue.
 - 1) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (5) Replace the FMCS transfer relay No. 1, R475.
 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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815. No FMC-2 Data On FMC-01 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
 - (a) 31-68471 NO FMC-2 DATA ON FMC-01 BUS
- (2) Display electronic unit 1 (DEU-1) receives no data output on FMC-01 bus from the flight management computer 2 (FMC-2).

B. Possible Causes

- (1) Flight management computer 2 (FMC-2), M1632
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) FMCS TRANSFER circuit breaker, C1263
- (4) Wiring problem
- (5) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	16	C01262	FMCS CMPTR 2

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

D. Related Data

- (1) (SSM 34-61-12)
- (2) (SSM 34-61-14)
- (3) (SSM 31-62-14)
- (4) (WDM 34-61-12)
- (5) (WDM 34-61-14)
- (6) (WDM 31-62-14)

E. Initial Evaluation

- (1) Set the FMC switch on the P5-28 instrument switching module to BOTH ON R.
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-2:
 - (a) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a maintenance message, then go to the FIM task for that message.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no maintenance message, then continue.
- (2) Do this check of the DEU-1:
 - (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (3) Do this check for 28V DC at the circuit breaker.
- (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Do a check for 28V DC between terminal 2 for circuit breaker C1263 and structure ground.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1263, then do these steps:
 - 1) Replace this circuit breaker

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If there is 28V DC at terminal 2 for circuit breaker C1263, then continue.
- (4) Do this check of the FMC-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- (b) Remove the FMCS transfer relay No. 1, R475.
- (c) Do a wiring check between these pins of the FMC-2 connector, D3261A and the relay No. 1 connector, D3265:

D3261A		D3265
pin H9	-----	pin F
pin G9	-----	pin E

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- (5) Do this check of the DEU-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of the DEU-1 connector, D3973B and the relay No. 1 connector, D3263:

D3973B		D3263
pin D2	-----	pin F
pin C2	-----	pin E

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (6) Do this check of the wiring to the FMC transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Disconnect the connector D1817 from the instrument switching module, P5-28.
- (b) Do a wiring check between these pins of the instrument switching module connector and the relay No. 1 connectors:

D1817		D3265
pin 10	-----	pin P

D1817		D3267
pin 8	-----	pin T

- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-install the FMCS transfer relay No. 1, R475.
- 3) Re-connect connector D1817 to the instrument switching module, P5-28.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMCS transfer relay No. 1, R475.

(7) Do this check of the wiring to the instrument switching module:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(a) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Disconnect the connector D40536P from the electronic load circuit breaker panel, P6-1.
- (c) Do a wiring check between these pins of the instrument switching module connector and the electronic load circuit breaker panel connector:

D1817		D40536P
pin 7	-----	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector D1817 to the instrument switching module, P5-28.
 - 3) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
 - 4) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the connector D1817 to the instrument switching module, P5-28.
 - 2) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.

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- 3) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (8) Replace FMCS transfer relay No. 1, R475.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (b) Set the FMC switch on the P5-28 instrument switching module to NORMAL.

————— **END OF TASK** —————

816. No FMC-2 Data On FMC-02 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:

- (a) 31-68472 NO FMC-2 DATA ON FMC-02 BUS

- (2) Display electronic unit 2 (DEU-2) receives no data output on FMC-02 bus from the flight management computer 2 (FMC-2).

B. Possible Causes

- (1) Flight management computer 2 (FMC-2), M1632
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) FMCS TRANSFER circuit breaker, C1263
- (4) Wiring problem
- (5) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	15	C01263	FMCS XFR

D. Related Data

- (1) (SSM 34-61-12)
- (2) (SSM 34-61-24)
- (3) (SSM 31-62-24)
- (4) (WDM 34-61-12)
- (5) (WDM 34-61-24)

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(6) (WDM 31-62-24)

E. Initial Evaluation

- (1) Set the FMC switch on the P5-28 instrument switching module to BOTH ON R.
- (2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-2:
 - (a) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a maintenance message, then go to the FIM task for that message.
 - 1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no maintenance message, then continue.
- (2) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (3) Do this check for 28V DC at the circuit breaker.
 - (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

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- (b) Do a check for 28V DC between terminal 2 for circuit breaker C1263 and structure ground.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1263, then do these steps:
 - 1) Replace this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If there is 28V DC at terminal 2 for circuit breaker C1263, then continue.

- (4) Do this check of the FMC-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- (b) Remove the FMCS transfer relay No. 1, R475.
- (c) Do a wiring check between these pins of the FMC-2 connector, D3261B and the relay No. 1 connector, D3265:

D3261B		D3265
pin D7	-----	pin T
pin E7	-----	pin U

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

- (5) Do this check of the DEU-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

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- (b) Do a wiring check between these pins of the DEU-2 connector, D3975B and the relay No. 1 connector, D3263:

D3975B		D3263
pin D2	-----	pin U
pin C2	-----	pin T

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (6) Do this check of the wiring to the FMC transfer relay No. 1:

- (a) Disconnect the connector D1817 from the instrument switching module, P5-28.
- (b) Do a wiring check between these pins of the instrument switching module connector and the relay No. 1 connectors:

D1817		D3265
pin 10	-----	pin P

D1817		D3267
pin 8	-----	pin T

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the FMCS transfer relay No. 1, R475.
 - 3) Re-connect connector D1817 to the instrument switching module, P5-28.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you did not find a problem with the wiring, then continue.
- 1) Re-install the FMCS transfer relay No. 1, R475.

- (7) Do this check of the wiring to the instrument switching module:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

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- (a) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Disconnect the connector D40536P from the electronic load circuit breaker panel, P6-1.
 (c) Do a wiring check between these pins of the instrument switching module connector and the electronic load circuit breaker panel connector:

D1817	D40536P
pin 7	pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect the connector D1817 to the instrument switching module, P5-28.
- 3) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
- 4) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 5) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (e) If you did not find a problem with the wiring, then continue.

- 1) Re-connect the connector D1817 to the instrument switching module, P5-28.
- 2) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
- 3) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (8) Replace FMCS transfer relay No. 1, R475.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (b) Set the FMC switch on the P5-28 instrument switching module to NORMAL.

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————— END OF TASK —————

817. DEU-1 No Input from LRU on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

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- (a) 31-69011, 31-69021, 31-69031, 31-69051, 31-69053, 31-69061, 31-69063, 31-69071, 31-69101, 31-69111, 31-69121, 31-69131, 31-69141, 31-69151, 31-69161, 31-69171, 31-69181, 31-69211, 31-69221, 31-69241, 31-69251, 31-69301, 31-69311, 31-69321, 31-69331, 31-69341, 31-69411, 31-69421, 31-69451, 31-69461, 31-69471, 31-69511, 31-69521, 31-69531, 31-69551, 31-69561, 31-69563, 31-69571, 31-69573, 31-69611, 31-69621, 31-69701, 31-69711, 31-69721, 31-69731, 31-69741, 31-69811, 31-69821, 31-69831, 31-69841

- (2) Display electronic unit 1 (DEU-1) receives no ARINC 429 data from an LRU.

NOTE: The occurrence of any of these faults indicates that only DEU-1 can not receive this ARINC 429 bus, but DEU-2 can receive this bus.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-12)
(2) (SSM 31-62-14)
(3) (SSM 31-62-15)
(4) (SSM 31-62-22)
(5) (WDM 31-62-12)
(6) (WDM 31-62-14)
(7) (WDM 31-62-15)
(8) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

(1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(a) In the tables below, find the WDM reference, source LRU, connector numbers, and pin numbers for the applicable maintenance message.

Table 205

MAINT MESSAGE	WDM REFERENCE
31-69021	34-57-11
31-69051	34-21-14
31-69053	34-21-14
31-69061	31-21-24
31-69063	31-21-24
31-69071	22-31-52
31-69101	31-31-12
31-69111	31-62-12
31-69121	31-62-12
31-69131	31-62-12
31-69141	31-62-22
31-69151	31-62-22
31-69161	31-62-22
31-69171	34-55-11
31-69181	34-55-21
31-69211	73-24-11

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MAINT MESSAGE	WDM REFERENCE
31-69221	73-24-11
31-69241	73-24-21
31-69251	34-24-21
31-69301	31-62-13
31-69311	31-62-23
31-69321	77-31-11
31-69331	22-11-51
31-69341	22-11-51
31-69411	34-61-15
31-69421	31-61-15
HAP 037-054, 101-999	
31-69451	34-61-15
31-69461	34-61-15
HAP ALL	
31-69471	27-81-41
31-69511	28-41-11
31-69521	28-41-11
31-69531	28-41-11
31-69551	34-49-11
31-69561	34-31-11
31-69563	34-31-11
31-69571	34-31-21
31-69573	34-31-21
31-69611	22-11-51
31-69621	22-11-51
31-69701	34-33-11
31-69711	34-33-11
31-69731	27-32-12
31-69741	27-32-22
31-69811	34-45-11
31-69821	34-45-11
31-69831	34-51-11
31-69841	34-51-21

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Table 206

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69011	ACARS M1109 (If installed)	D3973D	D1967X
		pin J15	pin OA
		pin K15	pin OB
31-69021	ADF-1 M1731	D3973A	D3651B
		pin C3	pin B13
		pin D3	pin B14
31-69051	ADIRU-1 (ADR-L-2 BUS 1)	D3973B	D3687A
	M1749	pin C5	pin A5
		pin D5	pin B5
31-69053	ADIRU-1 (ADR-L-2 BUS 2)	D3973D	D3687A
	M1749	pin E5	pin A5
		pin F5	pin B5
31-69061	ADIRU-2 (ADR-R-4 BUS 1)	D3973E	D3693A
	M1752	pin C5	pin A9
		pin D5	pin B9
31-69063	ADIRU-2 (ADR-R-4 BUS 2)	D3973A	D3693A
	M1752	pin J15	pin A9
		pin K15	pin B9
31-69071	AUTO THROTTLE M917	D3973A	D10009A
		pin E1	pin C10
		pin F1	pin D10
31-69101	DFDAU M675	D3973D	D2295E
		pin C5	pin H5
		pin D5	pin H6
31-69111	DU-LOB N187	D3973A	D3977B
		pin A1	pin A3
		pin B1	pin A4
31-69121	DU-LIB N188	D3973B	D3979B
		pin J15	pin A3

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69131	DU-CU N189	pin K15	pin A4
		D3973B	D3981B
		pin A1	pin A3
31-69141	DU-RIB N192	pin B1	pin A4
		D3973E	D3987B
		pin A1	pin A3
31-69151	DU-ROB N191	pin B1	pin A4
		D3973D	D3985B
		pin A1	pin A3
31-69161	DU-CL N190	pin B1	pin A4
		D3973E	D3983B
		pin J15	pin A3
31-69171	DME-1 M164	pin K15	pin A4
		D3973B	D161B
		pin C9	pin G1
31-69181	DME-2 M165	pin D9	pin H1
		D3973E	D169B
		pin C9	pin G1
31-69211	EEC-1 (CH-A) M1818	pin D9	pin H1
		D3973A	DP0303
		pin A5	pin N
31-69221	EEC-1 (CH-B) M1818	pin B5	pin M
		D3973B	DP0404
		pin A5	pin N
31-69241	EEC-2 (CH-A) M1818	pin B5	pin M
		D3973D	DP0303
		pin A5	pin N
31-69251	EEC-2 (CH-B) M1818	pin B5	pin M
		D3973E	DP0404
		pin A5	pin N
31-69301	CAPT EFIS CP P7-1	pin B5	pin M
		D3973A	D3993
		pin J1	pin 35

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR		SOURCE LRU CONNECTOR
31-69311	F/O EFIS CP P7-2	pin K1	_____	pin 36
		D3973D		D3995
		pin 35	_____	pin J1
31-69321	AVM M1240	pin 36	_____	pin K1
		D3973B		D3228A
		pin C12	_____	pin C6
31-69331	FCC-A M1875	pin D12	_____	pin D6
		D3973A		D10135A
		pin C12	_____	pin B6
31-69341	FCC-B M1876	pin D12	_____	pin A6
		D3973D		D10137A
		pin C12	_____	pin B6
31-69411	FMC-1 (FMC-L-08) M1175	pin D12	_____	pin A6
		D3973A		D2179A
		pin C9	_____	pin A11
31-69421	FMC-1 (FMC-L-09) M1175	pin D9	_____	pin B11
		D3973E		D2179B
		pin C1	_____	pin G9
		pin D1	_____	pin H9
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31-69451	FMC-2 (FMC-R-08) M1632	D3973B		D3261A
		pin E1	_____	pin A11
		pin F1	_____	pin B11
31-69461	FMC-2 (FMC-R-09) M1632	D3973D		D3261B
		pin C9	_____	pin G9
		pin D9	_____	pin H9
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31-69471	FSEU M1746	D3973E		D728B
		pin E1	_____	pin D4
		pin F1	_____	pin D5
31-69511	FQPU (BUS-1) M1827	DD3973D		D11306
		pin J5	_____	pin 25
		pin K5	_____	pin 24

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69521	FQPU (BUS-2) M1827	D3973A	D11304
		pin J5	pin 25
		pin K5	pin 24
31-69531	FQPU (BUS-3) M1827	D3973B	D11308
		pin J5	pin 25
		pin K5	pin 24
31-69551	GPWC M652	D3973D	D1153B
		pin A9	pin C1
		pin B9	pin D1
31-69561	MMR-1 (ILS-L-2 BUS 1) M2104	D3973A	D10719B
		pin C15	pin G1
		pin D15	pin H1
31-69563	MMR-1 (ILS-L-2 BUS 2) M2104	D3973E	D10719B
		pin G3	pin G1
		pin H3	pin H1
31-69571	MMR-2 (ILS-R-2 BUS 1) M2105	D3973D	D10721B
		pin C15	pin G1
		pin D15	pin H1
31-69573	MMR-2 (ILS-R-2 BUS 2) M2105	D3973B	D10721B
		pin G3	pin G1
		pin H3	pin H1
31-69611	MCP (MCP-1 BUS) M198	D3973A	D299
		pin E5	pin 18
		pin F5	pin 17
31-69621	MCP (MCP-L-2 BUS) M198	D3973E	D1815
		pin E5	pin 18
		pin F5	pin 17
31-69701	RA-1 M1735	D3973A	D3667B
		pin G15	pin G2

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69711	RA-2 M1736	pin H15	pin G3
		D3973D	D3669B
		pin G15	pin G2
31-69731	STALL MANAGEMENT COMPUTER-1 M1747	pin H15	pin G3
		D3973A	D3683A
		pin G1	pin 95
31-69741	STALL MANAGEMENT COMPUTER-2 M1748	pin H1	pin 94
		D3973D	D3685A
		pin G1	pin 95
31-69811	TCAS (TCAS-1 BUS) M1485	pin H1	pin 94
		D3973A	D2743E
		pin J2	pin C7
31-69821	TCAS (TCAS-2 BUS) M1485	pin K2	pin D7
		D3973D	D2743E
		pin E1	pin G7
31-69831	VOR-1 M1724	pin F1	pin H7
		D3973B	D3623B
		pin C3	pin B13
31-69841	VOR-2 M1725	pin D3	pin C13
		D3973E	D3625B
		pin C3	pin B13
		pin D3	pin C13

- (b) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Remove the applicable source LRU:
- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
 - 2) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
 - 3) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

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- 4) AUTO THROTTLE. To remove it, do this task: Autothrottle Servo Motor and Gearbox Removal, AMM TASK 22-31-91-020-801.
- 5) DFDAU. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
- 6) DU-LOB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 7) DU-LIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 8) DU-CU. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 9) DU-RIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 10) DU-ROB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 11) DU-CL. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 12) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 13) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 14) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 15) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 16) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 17) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 18) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 19) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 20) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 21) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 22) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 23) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.
- 24) FQPU. To remove it, do this task: Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801.
- 25) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.

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- 26) ILS-1/MMR-1. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
 - 27) ILS-2/MMR-2. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
 - 28) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
 - 29) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 30) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 31) STALL MANAGEMENT-1. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801
 - 32) STALL MANAGEMENT-2. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801
 - 33) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801
 - 34) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801
 - 35) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801
- (d) Do a wiring check between the specified pins of the applicable connectors.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - c) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - d) AUTO THROTTLE. To install it, do this task: Autothrottle Servo Motor and Gearbox Installation, AMM TASK 22-31-91-400-801.
 - e) DFDAU. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
 - f) DU-LOB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - g) DU-LIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - h) DU-CU. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - i) DU-RIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - j) DU-ROB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.



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- k) DU-CL. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- l) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- m) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- n) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- o) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- p) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- q) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- r) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
- s) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- t) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- u) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- v) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- w) FSEU. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- x) FQPU. To install it, do this task: Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801
- y) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801
- z) ILS-1/MMR-1. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- aa) ILS-2/MMR-2. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- ab) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- ac) RA-1. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- ad) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- ae) STALL MANAGEMENT-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- af) STALL MANAGEMENT-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.

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- ag) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- ah) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- ai) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

818. DEU-2 No Input from LRU on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-69012, 31-69022, 31-69032, 31-69052, 31-69054, 31-69062, 31-69064, 31-69072, 31-69102, 31-69112, 31-69122, 31-69132, 31-69142, 31-69152, 31-69162, 31-69172, 31-69182, 31-69212, 31-69222, 31-69242, 31-69252, 31-69302, 31-69312, 31-69322, 31-69332, 31-69342, 31-69412, 31-69422, 31-69452, 31-69462, 31-69472, 31-69512, 31-69522, 31-69532, 31-69552, 31-69562, 31-69564, 31-69572, 31-69574, 31-69612, 31-69622, 31-69702, 31-69712, 31-69722, 31-69732, 31-69742, 31-69812, 31-69822, 31-69832, 31-69842
- (2) Display electronic unit 2 (DEU-2) receives no ARINC 429 data from an LRU.

NOTE: The occurrence of any of these faults indicates that only DEU-2 can not receive this ARINC 429 bus, but DEU-1 can receive this bus.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-12)
- (2) (SSM 31-62-22)
- (3) (SSM 31-62-24)
- (4) (SSM 31-62-25)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

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(7) (WDM 31-62-24)

(8) (WDM 31-62-25)

E. Initial Evaluation

(1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

(1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(a) In the lists below, find the WDM Reference, source LRU, connector numbers, and pin numbers for the applicable maintenance message.

MAINT MESSAGE

WDM REFERENCE

31-69022

34-57-11

31-69052

34-21-14

31-69052

34-21-14

31-69062

34-21-24

31-69064

34-21-24

31-69072

22-31-52

31-69102

31-35-02

31-69112

31-62-12

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MAINT MESSAGE	WDM REFERENCE
31-69122	31-62-12
31-69132	31-62-12
31-69142	31-62-22
31-69152	31-62-22
31-69162	31-62-22
31-69172	34-55-11
31-69182	34-55-21
31-69212	73-24-11
31-69222	73-24-11
31-69242	73-24-21
31-69252	73-24-21
31-69302	31-62-13
31-69312	31-62-23
31-69322	77-31-11
31-69332	22-11-51
31-69342	22-11-51
31-69412	34-61-15
31-69422	31-61-15
HAP 037-054, 101-999	
31-69452	34-61-15
31-69462	34-61-15
HAP ALL	
31-69472	27-81-41
31-69512	28-41-11
31-69522	28-41-11
31-69532	28-41-11
31-69552	34-49-11
31-69562	34-31-11
31-69564	34-31-11
31-69572	34-31-21
31-69574	34-31-21
31-69612	22-11-51
31-69622	22-11-51

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MAINT MESSAGE	WDM REFERENCE
31-69702	34-33-11
31-69712	34-33-21
31-69732	27-32-12
31-69742	27-32-22
31-69812	34-45-11
31-69822	34-45-11
31-69832	34-51-11
31-69842	34-51-21

Table 207

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69022	ADF-1 M1731	D3975A pin C3 pin D3	D3651B pin B13 pin B14
31-69052	ADIRU-1 (ADR-L-4 BUS 1) M1749	D3973B pin C5 pin D5	D3687A pin A9 pin B9
31-69054	ADIRU-1 (ADR-L-4 BUS 2) M1749	D3975D pin E5 pin F5	D3687A pin A9 pin B9
31-69062	ADIRU-2 (ADR-R-2 BUS 1) M1752	D3975E pin C5 pin D5	D3693A pin A5 pin B5
31-69064	ADIRU-2 (ADR-R-2 BUS 2) M1752	D3975A pin J15 pin K15	D3693A pin A5 pin B5
31-69072	AUTO THROTTLE M917	D3975A pin E1 pin F1	D10009A pin C10 pin D10
31-69102	DFDAU M675	D3975D pin C5	D2295E pin H5

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69112	DU-LOB N187	pin D5	pin H6
		D3975A	D3977B
		pin A1	pin A3
31-69122	DU-LIB N188	pin B1	pin A4
		D3975B	D3979B
		pin J15	pin A3
31-69132	DU-CU N189	pin K15	pin A4
		D3975B	D3981B
		pin A1	pin A3
31-69142	DU-RIB N192	pin B1	pin A4
		D3973E	D3987B
		pin A1	pin A3
31-69152	DU-ROB N191	pin B1	pin A4
		D3975D	D3987B
		pin A1	pin A3
31-69162	DU-CL N190	pin B1	pin A4
		D3975E	D3983B
		pin J15	pin A3
31-69172	DME-1 M164	pin K15	pin A4
		D3975B	D161B
		pin C9	pin G1
31-69182	DME-2 M165	pin D9	pin H1
		D3975E	D169B
		pin C9	pin G1
31-69212	EEC-1 (CH-A) M1818	pin D9	pin H1
		D3975A	DP0303
		pin A5	pin N
31-69222	EEC-1 (CH-B) M1818	pin B5	pin M
		D3975B	DP0404
		pin A5	pin N
31-69242	EEC-2 (CH-A) M1818	pin B5	pin M
		D3975D	DP0303
		pin A5	pin N

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
		pin B5	pin M
31-69252	EEC-2 (CH-B) M1818	D3975E	DP0404
		pin A5	pin N
		pin B5	pin M
31-69302	CAPT EFIS CP P7-1	D3975A	D3993
		pin J1	pin 35
		pin K1	pin 36
31-69312	F/O EFIS CP P7-2	D3975D	D3995
		pin J1	pin 35
		pin K1	pin 36
31-69322	AVM M1240	D3975B	D3228A
		pin C12	pin C6
		pin D12	pin D6
31-69332	FCC-A M1875	D3975A	D10135A
		pin C12	pin B6
		pin D12	pin A6
31-69342	FCC-B M1876	D3975D	D10137A
		pin C12	pin B6
		pin D12	pin A6
31-69412	FMC-1 (FMC-L-08) M1175	D3975A	D2179A
		pin C9	pin A11
		pin D9	pin B11
31-69422	FMC-1 (FMC-L-09) M1175	D3975E	D2179B
		pin C1	pin G9
		pin D1	pin H9
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31-69452	FMC-2 (FMC-R-08)	D3975B	D3261A
	M1632	pin E1	pin A11
		pin F1	pin B11
31-69462	FMC-2 (FMC-R-09)	D3975D	D3261B
	M1632	pin C9	pin G9
		pin D9	pin H9
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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69472	FSEU M1746	D3973E	D728B
		pin E1	pin D4
		pin F1	pin D5
31-69512	FQPU (BUS-1) M1827	D3975D	D11306
		pin J5	pin 25
		pin K5	pin 24
31-69522	FQPU (BUS-2) M1827	D3975A	D11304
		pin J5	pin 25
		pin K5	pin 24
31-69532	FQPU (BUS-3) M1827	D3973B	D11308
		pin J5	pin 25
		pin K5	pin 24
31-69552	GPWC M652	D3975D	D1153B
		pin A9	pin C1
		pin B9	pin D1
31-69562	MMR-1 (ILS-L-2 BUS 1) M2104	D3975A	D10719B
		pin C15	pin G1
		pin D15	pin H1
31-69564	MMR-1 (ILS-L-2 BUS 2) M2104	D3975E	D10719B
		pin G3	pin G1
		pin H3	pin H1
31-69572	MMR-2 (ILS-R-2 BUS 1) M2105	D3975D	D10721B
		pin C15	pin G1
		pin D15	pin H1
31-69574	MMR-2 (ILS-R-2 BUS 2) M2105	D3975B	D10721B
		pin G3	pin G1
		pin H3	pin H1
31-69612	MCP (MCP-1 BUS) M198	D3975A	D299
		pin E5	pin 18
		pin F5	pin 17

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69622	MCP (MCP-L-2 BUS) M198	D3975E	D1815
		pin E5	pin 18
		pin F5	pin 17
31-69702	RA-1 M1735	D3975A	D3667B
		pin G15	pin G2
		pin H15	pin G3
31-69712	RA-2 M1736	D3975D	D3669B
		pin G15	pin G2
		pin H15	pin G3
31-69732	STALL MANAGEMENT COMPUTER-1 M1747	D3975A	D3683A
		pin G1	pin 95
		pin H1	pin 94
31-69742	STALL MANAGEMENT COMPUTER-2 M1748	D3975D	D3685A
		pin G1	pin 95
		pin H1	pin 94
31-69812	TCAS (TCAS-1 BUS) M1485	D3975A	D2743E
		pin J2	pin C7
		pin K2	pin D7
31-69822	TCAS (TCAS-2 BUS) M1485	D3975D	D2743E
		pin E1	pin G7
		pin F1	pin H7
31-69832	VOR-1 M1724	D3975B	D3623B
		pin C3	pin B13
		pin D3	pin C13
31-69842	VOR-2 M1725	D3975E	D3625B
		pin C3	pin B13
		pin D3	pin C13

(b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

(c) Remove the applicable source LRU:

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- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 2) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 3) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 4) AUTO THROTTLE. To remove it, do this task: Autothrottle Servo Motor and Gearbox Removal, AMM TASK 22-31-91-020-801.
- 5) DFDAU. To remove it, do this task: Flight Data Acquisition Unit (FDAU) Removal, AMM TASK 31-31-22-000-801.
- 6) DU-LOB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 7) DU-LIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 8) DU-CU. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 9) DU-RIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 10) DU-ROB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 11) DU-CL. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 12) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 13) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 14) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 15) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 16) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 17) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 18) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 19) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 20) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 21) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 22) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

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- 23) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
 - 24) FQPU. To remove it, do this task: Remove the Fuel Quantity Processor Unit, AMM TASK 28-41-81-000-801.
 - 25) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
 - 26) ILS-1/MMR-1. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
 - 27) ILS-2/MMR-2. To remove it, do this task: Receiver for ILS - Removal, AMM TASK 34-31-42-000-801.
 - 28) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
 - 29) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 30) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 31) STALL MANAGEMENT-1. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - 32) STALL MANAGEMENT-2. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - 33) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
 - 34) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
 - 35) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- (d) Do a wiring check between the specified pins of the applicable connectors.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - c) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.
 - d) AUTO THROTTLE. To install it, do this task: Autothrottle Servo Motor and Gearbox Installation, AMM TASK 22-31-91-400-801.
 - e) DFDAU. To install it, do this task: Flight Data Acquisition Unit (FDAU) Installation, AMM TASK 31-31-22-400-801.
 - f) DU-LOB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - g) DU-LIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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- h) DU-CU. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- i) DU-RIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- j) DU-ROB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- k) DU-CL. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- l) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- m) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- n) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- o) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- p) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- q) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- r) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
- s) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- t) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- u) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- v) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- w) FSEU. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- x) FQPU. To install it, do this task: Install the Fuel Quantity Processor Unit, AMM TASK 28-41-81-400-801.
- y) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
- z) ILS-1/MMR-1. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- aa) ILS-2/MMR-2. To install it, do this task: Receiver for ILS - Installation, AMM TASK 34-31-42-400-801.
- ab) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- ac) RA-1. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.

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- ad) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- ae) STALL MANAGEMENT-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- af) STALL MANAGEMENT-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ag) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- ah) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- ai) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

819. Captain's EFIS Control Panel problems - Fault Isolation

A. Description

- (1) The captain's display units (LOB-DU, LIB-DU) do not show desired information when the selection is made on the captain's EFIS control panel.

B. Possible Causes

- (1) Captain's EFIS control panel, P7-1

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01369	DISPLAY CAPT EFIS CONT PANEL

D. Initial Evaluation

- (1) Set the CONTROL PANEL switch on the instrument switching module to the BOTH ON 1 or NORMAL position.
- (2) Do the captain's EFIS control panel test. To do it, do this task: Common Display System - System Test, AMM TASK 31-62-00-730-801.
- (3) If the captain's EFIS control panel operates normally, then there was an intermittent fault.
- (4) If the captain's EFIS control panel does not operate normally, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the captain's EFIS control panel P7-1.
These are the tasks:

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EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,

EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.

- (a) If the captain's EFIS control panel operates normally, then you corrected the fault.

END OF TASK

820. DSPLY SOURCE Message Shows On The Display - Fault Isolation

A. Description

- (1) The message DSPLY SOURCE shows when all the display units get data from one DEU. This occurs when the DISPLAY SOURCE switch on the instrument switching module is set to ALL ON 1 or ALL ON 2.
- (2) When the airplane is in the air, the message DSPLY SOURCE also shows when a DEU fails. On the ground with all the engines off, DSPLY SOURCE does not show. During that condition, CDS FAULT shows in that location.

B. Possible Causes

- (1) Instrument Switching Module, P5-28

C. Initial Evaluation

- (1) Set the DSPLY SOURCE switch on the instrument switching module to the AUTO position.
 - (a) If the DSPLY SOURCE message does not show, then message is erased correctly.
 - (b) If the CDS FAULT message shows, then, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the control display unit (CDU) shows a maintenance message on the CURRENT STATUS page, then do the applicable fault isolation task.
 - 2) If the control display unit (CDU) does not show a maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the DSPLY SOURCE message still shows, then do the Fault Isolation Procedure below.

D. Fault Isolation Procedure

- (1) Replace the instrument switching module, P5-28.

These are the tasks:

Instrument Switching Module Removal, AMM TASK 31-62-14-000-801,

Instrument Switching Module Installation, AMM TASK 31-62-14-400-801.

 - (a) If the DSPLY SOURCE message does not show, then you corrected the fault.
 - (b) If the DSPLY SOURCE message still shows, push and hold up the DEU circuit breaker for two seconds then reset.
 - (c) If the DSPLY SOURCE message does not show, then there was an intermittent fault.
 - (d) If the DSPLY SOURCE message still shows then continue with the following steps.
- (2) Safestoring the DEU ground faults.
 - (a) If this is a CURRENT FAILURE do this task: AMM TASK 31-62-21-470-803 or AMM TASK 31-62-21-470-804

END OF TASK

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821. First Officer's EFIS Control Panel problems - Fault Isolation

A. Description

- (1) The first officer's display units (ROB-DU, RIB-DU) do not show desired information when the selection is made on the first officer's EFIS control panel.

B. Possible Causes

- (1) First officer's EFIS control panel, P7-2

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	13	C01370	DISPLAY F/O EFIS CONT PANEL

D. Initial Evaluation

- (1) Set the CONTROL PANEL switch on the instrument switching module to the BOTH ON 2 or NORMAL position.
- (2) Do the first officer's EFIS control panel test. To do it, do this task: Common Display System - System Test, AMM TASK 31-62-00-730-801.
- (3) If the first officer's EFIS control panel operates normally, then there was an intermittent fault.
- (4) If the first officer's EFIS control panel does not operate normally, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the first officer's EFIS control panel P7-2.

These are the tasks:

EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,

EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.

- (a) If the first officer's EFIS control panel operates normally, then you corrected the fault.

————— **END OF TASK** —————

822. No LRU Data on 708 Bus - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68861 NO ARINC-708 CAPT DATA
 - (b) 31-68862 NO ARINC-708 CAPT DATA
 - (c) 31-68871 NO ARINC-708 F/O DATA
 - (d) 31-68872 NO ARINC-708 F/O DATA
- (2) Display electronic units (DEU-1 and DEU-2) receive no ARINC 408 data from the weather radar (WXR) receiver/transmitter.

B. Possible Causes

- (1) Weather radar receiver/transmitter, M101
- (2) Wiring problem

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- (3) Display electronic unit (DEU), M1808 (DEU-1) or M1809 (DEU-2)

C. Related Data

- (1) (SSM 34-41-11)
- (2) (WDM 34-41-11)
- (3) (WDM 31-62-14)
- (4) (WDM 31-62-15)

D. Initial Evaluation

- (1) If you have an enhanced ground proximity warning computer (EGPWC) installed, do this task: No LRU Data on 708 BUS - Fault Isolation, 31-63 TASK 823.
- (2) If you do not have an EGPWC installed, then do these steps:
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - 2) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do this check of the weather radar receiver/transmitter:
 - (a) Do this task: Weather Radar System Problem - Fault Isolation, 34-43 TASK 814.
 - 1) If you find a problem, then go to the FIM task for the applicable message to correct the fault.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue.
 - 2) If you do not find a problem, then continue.

- (2) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 408 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the weather radar receiver/transmitter, M101. To remove it, do this task: Weather Radar Receiver/Transmitter Removal, AMM TASK 34-43-41-000-801.
- (b) Remove the applicable DEU, M1808 (DEU-1) or M1809 (DEU-2). To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Do a check of the wiring between these pins of connector D189B for the weather radar receiver/transmitter and the connector for the DEU:

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MAINTENANCE MESSAGE NUMBER 31-68861, 31-68871

WXR CONNECTOR D189B	DEU CONNECTOR D3973 (DEU-1)
pin D2 -----	pin J1
pin D3 -----	pin K1
pin G2 -----	pin A1
pin G3 -----	pin B1

MAINTENANCE MESSAGE NUMBER 31-68862, 31-68872

WXR CONNECTOR D189B	DEU CONNECTOR D3975F (DEU-2)
pin D2 -----	pin J1
pin D3 -----	pin K1
pin G2 -----	pin A1
pin G3 -----	pin B1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the weather radar receiver/transmitter, M101. To install it, do this task: Weather Radar Receiver/Transmitter Installation, AMM TASK 34-43-41-400-801.
 - 3) Re-install the DEU. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then do these steps and continue:
- 1) Re-install the weather radar receiver/transmitter, M101. To install it, do this task: Weather Radar Receiver/Transmitter Installation, AMM TASK 34-43-41-400-801.
 - 2) Re-install the DEU. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (3) Do this check of the DEU:
- (a) For applicable DEU, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU SELF-TEST FAILED, then do these steps:
 - 1) Replace applicable DEU, M1808 (DEU-1) or M1809 (DEU-2).

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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823. No LRU Data on 708 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68861 NO ARINC-708 CAPT DATA
 - (b) 31-68862 NO ARINC-708 CAPT DATA
 - (c) 31-68871 NO ARINC-708 F/O DATA
 - (d) 31-68872 NO ARINC-708 F/O DATA
- (2) Display electronic units (DEU-1 and DEU-2) receive no ARINC 708 data from the weather radar (WXR) receiver/transmitter or the enhanced ground proximity warning computer (EGPWC).

B. Possible Causes

- (1) Weather radar receiver/transmitter, M101
- (2) Enhanced ground proximity warning computer, M652
- (3) Terrain/weather relay, R745 (BUS 1) or R746 (BUS 2)
- (4) Display electronic unit, M1808 (DEU-1) or M1809 (DEU-2)
- (5) Wiring

C. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (SSM 34-49-11)
- (4) (WDM 31-62-15)
- (5) (WDM 31-62-25)
- (6) (WDM 34-49-11)

D. Initial Evaluation

- (1) If you do not have an EGPWC installed, then, do this task: No LRU Data on 708 Bus - Fault Isolation, 31-63 TASK 822.
- (2) If you have an EGPWC installed, then continue.
- (3) Push the WXR button on EFIS control panels.
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
Look for the maintenance message on the CURRENT STATUS page.
- (4) Push the TERR button on EFIS control panels.
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
Look for the maintenance message on the CURRENT STATUS page.
- (5) If the control display unit (CDU) shows the maintenance message on the CURRENT STATUS page only when you push WXR button on EFIS control panels, then do the Fault Isolation Procedure - Weather Radar below.

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- (6) If the control display unit (CDU) shows the maintenance message on the CURRENT STATUS page only when you push TERR button on EFIS control panels, then do the Fault Isolation Procedure - Enhanced Ground Proximity Warning System below.
- (7) If the control display unit (CDU) shows the maintenance message on the CURRENT STATUS page for both the WXR button and the TERR button on EFIS control panels, then do the Fault Isolation Procedure - DEU below.
- (8) If the control display unit (CDU) does not show the maintenance message on the CURRENT STATUS page for either the WXR button or the TERR button on EFIS control panels, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure - Weather Radar

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do this check of the weather radar receiver/transmitter:
 - (a) Do this task: Weather Radar System Problem - Fault Isolation, 34-43 TASK 814.
 - 1) If you find a problem, then go to the FIM task for the applicable message to correct the fault.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue.
 - 2) If you do not find a problem, then continue.

- (2) Replace the applicable terrain/weather relay, R745 (BUS 1) or R746 (BUS 2)

NOTE: R745 is for maintenance message numbers 31-68861 and 31-68871. R746 is for maintenance message numbers 31-68862 and 31-68872.

NOTE: R745 is in the J24 junction box. R746 is in the J22 junction box.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring between the weather radar receiver/transmitter and the terrain/weather relay:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 708 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the weather radar receiver/transmitter, M101. To remove it, do this task: Weather Radar Receiver/Transmitter Removal, AMM TASK 34-43-41-000-801.
- (b) Remove the applicable terrain/weather relay, R745 (BUS 1) or R746 (BUS 2).
- (c) Do a check of the wiring between these pins of connector D189B for the weather radar receiver/transmitter and the connector for the relay:

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MAINTENANCE MESSAGE NUMBER 31-68861, 31-68871

WXR	RELAY
CONNECTOR	CONNECTOR
D189B	D10847 (R745)
pin D2 - - - - -	pin 13
pin D3 - - - - -	pin 3

MAINTENANCE MESSAGE NUMBER 31-68862, 31-68872

WXR	RELAY
CONNECTOR	CONNECTOR
D189B	D10849 (R746)
pin G2 - - - - -	pin 13
pin G3 - - - - -	pin 3

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the weather radar receiver/transmitter. To install it, do this task: Weather Radar Receiver/Transmitter Installation, AMM TASK 34-43-41-400-801.
 - c) Re-install the terrain/weather relay.
 - d) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - e) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.

F. Fault Isolation Procedure - Enhanced Ground Proximity Warning System

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do this check of the enhanced ground proximity warning system:
 - (a) Do this task: GPWS BITE Procedure, 34-46 TASK 801.
 - 1) If the GPWS BITE test shows a fault, then go to the FIM task for the applicable maintenance message to correct the fault.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue.
 - 2) If the GPWS BITE test does not show a fault, then continue.
- (2) Replace the applicable terrain/weather relay, R745 (BUS 1) or R746 (BUS 2)

NOTE: R745 is for maintenance message numbers 31-68861 and 31-68871. R746 is for maintenance message numbers 31-68862 and 31-68872.

NOTE: R745 is in the J24 junction box. R746 is in the J22 junction box.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue.

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- (3) Do this check of the wiring between the ground proximity warning computer and the terrain/weather relay:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 708 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the ground proximity warning computer, M652. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
- (b) Remove the applicable terrain/weather relay, R745 (BUS 1) or R746 (BUS 2).
- (c) Do a check of the wiring between these pins of connector D1153A for the ground proximity warning computer and the connector for the relay:

MAINTENANCE MESSAGE NUMBER 31-68861, 31-68871

GPWC CONNECTOR D1153A	RELAY CONNECTOR D10847 (R745)
pin A3 - - - - -	pin 2
pin B3 - - - - -	pin 4

MAINTENANCE MESSAGE NUMBER 31-68862, 31-68872

GPWC CONNECTOR D1153A	RELAY CONNECTOR D10849 (R746)
pin C3 - - - - -	pin 2
pin D3 - - - - -	pin 4

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the ground proximity warning computer. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
 - c) Re-install the terrain/weather relay.
 - d) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - e) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.

G. Fault Isolation Procedure - DEU

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do this check of the DEU:
 - (a) For applicable DEU, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU SELF-TEST FAILED, then do these steps:
 - 1) Replace the applicable DEU, M1808 (DEU-1) or M1809 (DEU-2).
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- (c) If the CDU shows DEU SELF-TEST PASSED, then continue:
- (2) Do this check of the wiring between the DEU and the terrain/weather relay:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 708 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the applicable DEU, M1808 (DEU-1) or M1809 (DEU-2). To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the applicable terrain/weather relay, R745 (BUS 1) or R746 (BUS 2).
- (c) Do a check of the wiring between these pins of the connector for the DEU and the connector for the relay:

MAINTENANCE MESSAGE NUMBER 31-68861

DEU CONNECTOR D3973F (DEU-1)	RELAY CONNECTOR D10847 (R745)
pin j1 -----	pin 1
pin k1 -----	pin 5

MAINTENANCE MESSAGE NUMBER 31-68862

DEU CONNECTOR D3973F (DEU-1)	RELAY CONNECTOR D10847 (R745)
pin A1 -----	pin 1
pin B1 -----	pin 5

MAINTENANCE MESSAGE NUMBER 31-68871

DEU CONNECTOR D3973F (DEU-2)	RELAY CONNECTOR D10849 (R746)
pin j1 -----	pin 1
pin k1 -----	pin 5

MAINTENANCE MESSAGE NUMBER 31-68872

DEU CONNECTOR D3973F (DEU-2)	RELAY CONNECTOR D10849 (R746)
pin A1 -----	pin 1
pin B1 -----	pin 5

- 1) If you find a problem with the wiring, then do these steps:
- a) Repair the wiring.
- b) Re-install the DEU. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- c) Re-install the terrain/weather relay.
- d) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- e) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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824. CDS Display Unit Problems - Fault Isolation

A. Description

- (1) The display units are not normal.
- (2) The display units intermittently show no annunciations (blank).

B. Possible Causes

- (1) Overheating of Display Unit because air vents are blocked
- (2) Overheating of Display Units because cooling air flow is not sufficient
- (3) Coaxial Cable Connection Problems
- (4) Display Unit faults

C. Fault Isolation Procedure

- (1) Clean the air vents of the DU reported as intermittently blank. To do this, do this task: How to Clean the Holes on the Rear of the Display Unit, AMM TASK 31-62-11-100-803.
 - (a) If you cleaned the air vents holes of all the DUs because of blockage, then you corrected the fault.
 - (b) If there was blockage of less than 25 percent of the holes for the DU, then continue.
- (2) Make sure that the display units have sufficient cooling air flow. To do this, do this task: Flight Compartment Display Unit Air Flow Test, AMM TASK 21-27-00-700-806.
 - (a) If the display unit operates normal, you corrected the fault.
 - (b) If the display unit problem continues, then continue.
- (3) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) Go to the fault isolation task for the applicable maintenance message related to the display unit to correct the fault.

————— END OF TASK —————

HAP 001-013, 015-026, 028-037, 039-041, 047-050, 053, 054, 101-999

825. No Flight Control Position Indication Data on Display Unit

A. Description

- (1) Flight Control Position Indication on Center Lower Display Unit, Left Inboard Display Unit, and/or Right Inboard Display Unit missing data.

B. Possible Causes

- (1) Sensor Failure
- (2) DFDAU internal failure
- (3) Display Unit internal failure
- (4) Flight Data Recorder OFF Light On
- (5) Wiring problem

C. Related Data

- (1) SSM 31-31-14

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(2) WDM 27-18-11

D. Fault Isolation Procedure

(1) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

- (a) If the Display Unit has Flight Control Surface Position Indication data, then you corrected the fault.
- (b) If there is no Flight Control Surface Position Indication data, then continue.
- (2) Do the FDAU BITE procedure. To do the BITE procedure, do this task: Flight Data Acquisition Unit (FDAU) BITE Procedure, 31-31 TASK 801.
 - (a) If one of the fault lights on the FDAU are on, then refer to the table at the end of the BITE procedure to find the fault isolation task.
 - (b) If the fault lights on the FDAU are off, then continue.
- (3) For the Display Unit do this task: CDS Display Unit Problems - Fault Isolation, 31-63 TASK 824.
 - (a) If there is a maintenance message, then go to the maintenance message index at the beginning of the FIM.
 - (b) If there is no maintenance message(s), then continue.
- (4) For the Flight Data Recorder OFF Light On, do this task: Flight Data Recorder OFF Light On - Fault Isolation, 31-31 TASK 805.
 - (a) If the Display Unit has Flight Control Surface Position Indication data, then you corrected the fault.
 - (b) If there is no Flight Control Surface Position Indication data, then continue.
- (5) Do this check of the wiring between the DFDAU and the L and R Aileron Position Transmitters:
 - (a) Remove the DFDAU, M675. To remove it, do this task: AMM TASK 31-31-22-000-801.
 - (b) Disconnect connector D3574 and D3572 from the Aileron Position Transmitters.
 - (c) Do a continuity check between the pins on the connector of the DFDAU and the connectors of the L Aileron Position Transmitter and the R Aileron Position Transmitter.

D2295B		D3574
pin B2	-----	pin 3
pin B3	-----	pin 5
pin B1	-----	pin 4

D2295E		D3572
pin A14	-----	pin 3
pin A15	-----	pin 5
pin A13	-----	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair or replace the wiring.
 - 2) Re-install the DFDAU, M675. To install it, do this task: AMM TASK 31-31-22-400-801.

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- 3) If the Display Unit has Flight Control Surface Position Indicating data, then you corrected the fault.

HAP ALL

————— END OF TASK —————

826. CDS FAULT Message Loss of Fault Data - Fault Isolation

A. Description

- (1) CDS FAULT Message loss of fault data due to cycling of the DEU circuit breakers.
- (2) Current Faults on the ground are not automatically stored in EEPROM until a 'Safe-store' procedure is run on the affected DEU.

B. Possible Causes

- (1) Cycling the primary DEU circuit breakers can restore the unit to an operating condition for some failure modes. The current faults on the ground will not be stored in EEPROM for BITE analysis.

C. Initial Evaluation

- (1) When the airplane is in the air, the message DSPLY SOURCE also shows when a DEU fails. On the ground with all the engines off, DSPLY SOURCE does not show. During that condition, CDS FAULT shows in that location.

NOTE: Note pilot's report

- (2) Set the DSPLY SOURCE switch on the instrument switching module from AUTO position to ALL ON 1 or ALL ON 2 or view blank HYDRAULIC PRESS.

- (a) If the CDS BITE pages can be accessed, then do the Fault Isolation Procedure below.

D. Fault Isolation Procedure

- (1) If this is a CURRENT FAILURE, perform the following SafeStore Procedure.
 - (a) Perform this procedure, via the MCDU pages, whenever a DEU failure occurs on the ground to capture the fault data before downloading the DEU Bite.
 - 1) On the MAINT BITE INDEX page select CDS.
 - 2) On the CDS BITE page select DEU 1 or DEU 2 if applicable.
 - 3) On the CDS DEU X BITE page select GROUND TEST.
 - 4) On the CDS DEU X MAINT/BITE page select the DEU X SELF-TEST.
 - 5) Select RUN SELF-TEST.

NOTE: The self-test can take up to 3 minutes. At this time the MCDU page will show :
DEU SELF-TEST (3 MIN) OR DEU-X BITE INOP CHECK DEU OR INTERFACE.
Do not be concerned with this message the test page will read: SELF-TEST IN PROGRESS.
 - 6) At the end of the SELF-TEST the test page will show PASSED or FAILED.
 - 7) To exit the test select INDEX.
 - (b) If the CDS Fault message cleared, do not replace the DEU for the intermittent DEU fault.

NOTE: Perform BITE Download only if investigation is required.

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- (c) If the CDS FAULT message did not clear pull the faulted DEU Primary C/B for 2 seconds then RESET.

NOTE: Do not pull hold-up C/Bs.

- (2) If CDS BITE pages can not be accessed, pull the faulted DEU Primary C/B for 2 seconds then RESET.

NOTE: Note: Do not pull hold-up C/Bs.

- (3) If the CDS FAULT message on the ground is related to APU start, pull the faulted DEU Primary C/B for 2 seconds then RESET.

NOTE: Do not pull hold-up C/Bs.

- (4) If the CDS Fault message did not clear perform the following:

- (a) Perform BITE download for DEU #1 & 2 if possible

NOTE: Perform I.A.W. Honeywell TNL C23-6621-002

- (b) Record related fault data from MCDU CURRENT STATUS and INFLIGHT FAULTS.

NOTE: Record fault description, date, time altitude & airspeed. Record the Pilot's reports also.

- (c) Replace the faulted DEU I.A.W. FIM.

- (5) If the CDS FAULT message cleared do not replace the DEU for the intermittent DEU fault.

- (a) Perform BITE download only if investigation is required.

————— **END OF TASK** —————

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801. No Faults During Flight Leg - Fault Isolation

A. Initial Evaluation

- (1) No maintenance action is necessary for this fault.

_____ **END OF TASK** _____

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