Scandinavian Airlines System

R = REVISED, A = ADDED OR D = DELETED
F = FOLDOUT PAGE

33
AUG 22/09

D633T633

CHAPTER   34
EFFECTIVE PAGES
PAGE   1
CONTINUED

Scandinavian Airlines System

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
34-FAULT CODE INDEX		CONT.	34-12-00		CONT.	34-22-00		
47	DEC 22/03	28	115	NOV 10/95	12	101	FEB 10/97	21
48	APR 22/09	14	116	AUG 22/04	12	102	MAY 10/93	10
49	APR 22/02	28	117	AUG 10/98	11	103	MAY 10/93	12
50	AUG 22/01	29	118	AUG 10/98	21	104	FEB 10/97	22
51	DEC 22/00	43	119	AUG 22/04	19	105	AUG 10/90	03
52	DEC 22/02	29	120	AUG 10/98	16	106	APR 22/02	01
53	AUG 22/02	28	121	AUG 10/98	16	107	DEC 22/02	04
54	DEC 22/02	24	122	AUG 10/98	14	108	DEC 22/02	05
55	AUG 22/02	25	123	AUG 10/98	14	109	NOV 10/96	04
56	AUG 22/02	26	124	BLANK		110	DEC 22/03	04
57	AUG 22/02	27				111	DEC 22/03	05
58	AUG 22/02	26	34-13-00			112	NOV 10/96	04
59	AUG 22/08	24	101	NOV 10/91	07	113	DEC 22/06	10
60	APR 22/01	22	102	NOV 10/91	10	114	DEC 22/06	05
61	APR 22/01	23	103	FEB 10/96	02	115	DEC 22/06	06
62	AUG 22/00	20	104	BLANK		116	DEC 22/06	04
63	APR 22/01	23				117	DEC 22/06	02
64	APR 22/01	20	34-16-00			118	DEC 22/06	01
65	APR 22/01	22	101	AUG 10/98	13	119	DEC 22/06	14
66	DEC 22/03	21	102	MAY 10/91	03	120	DEC 22/06	14
67	APR 22/02	19	103	AUG 10/98	13	121	DEC 22/06	14
68	DEC 22/02	22	104	MAY 10/91	04	122	APR 22/08	16
69	APR 22/02	18	105	AUG 22/99	03	123	DEC 22/06	03
70	AUG 22/01	16	106	BLANK		124	DEC 22/06	03
71	AUG 22/00	25				125	DEC 22/06	03
72	MAY 10/96	10	34-21-00			126	DEC 22/06	03
			101	MAY 10/92	02	127	DEC 22/06	03
34-BITE INDEX			102	MAY 10/97	02	128	DEC 22/06	02
1	AUG 22/99	01	103	AUG 10/90	01	129	DEC 22/06	02
2	AUG 22/99	01	104	MAY 10/97	08	130	APR 22/05	03
3	AUG 22/99	01	105	MAY 10/94	02	131	APR 22/05	03
4	BLANK		106	MAY 10/94	02	132	APR 22/05	02
			107	NOV 10/95	04	133	APR 22/05	02
34-11-00			108	MAY 10/94	02	134	APR 22/05	01
101	FEB 10/91	02	109	MAY 10/94	02	135	APR 22/05	01
102	FEB 10/91	02	110	MAY 10/94	02	136	BLANK	
103	DEC 22/01	01	111	AUG 10/98	02			
104	APR 22/05	02	112	MAY 10/94	02	34-23-00		
105	FEB 10/91	02	113	MAY 10/97	11	101	NOV 10/94	01
106	FEB 10/91	01	114	MAY 10/96	06	102	AUG 22/03	01
107	FEB 10/91	02	115	MAY 10/96	05	103	AUG 22/03	01
108	BLANK		116	MAY 10/94	04	104	BLANK	
			117	AUG 22/00	05			
34-12-00			118	MAY 10/94	04	34-24-00		
101	FEB 10/95	10	119	APR 22/06	02	101	APR 22/03	01
102	FEB 10/91	02	120	APR 22/06	02	102	FEB 10/97	SAS
103	FEB 10/97	09	121	APR 22/06	02	103	APR 22/03	01
104	AUG 10/95	01	122	APR 22/06	02	104	BLANK	
105	DEC 22/00	01	123	APR 22/06	02			
106	AUG 22/07	03	124	APR 22/06	07	34-31-00		
107	FEB 10/95	16	125	APR 22/09	10	101	NOV 10/96	01
108	NOV 10/95	06	126	APR 22/09	03	102	AUG 10/90	11
109	NOV 10/95	08	127	APR 22/09	10	103	NOV 10/96	01
110	NOV 10/95	12	128	APR 22/09	08	104	MAY 10/92	01
111	NOV 10/95	17	129	APR 22/06	06	105	MAY 10/92	02
112	NOV 10/95	13	130	APR 22/06	05	106	AUG 10/90	01
113	APR 22/09	08	131	APR 22/06	05	107	AUG 10/90	01
114	NOV 10/95	16	132	BLANK		108	MAY 10/92	01

R = REVISED, A = ADDED OR D = DELETED
F = FOLDOUT PAGE
33
AUG 22/09

D633T633

CHAPTER 34
EFFECTIVE PAGES
PAGE 2
CONTINUED

Scandinavian Airlines System

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
34-31-00		CONT.	34-45-00		CONT.	34-51-00		
109	MAY 10/92	01	105	FEB 10/94	04H	101	NOV 10/95	02
110	MAY 10/92	01	106	FEB 10/94	04H	102	NOV 10/95	01
111	NOV 10/95	01	107	MAY 10/96	05H	103	NOV 10/95	11
112	NOV 10/95	01	108	FEB 10/94	04H	104	NOV 10/95	03
113	NOV 10/96	04	109	MAY 10/96	05H	105	NOV 10/95	03
114	AUG 22/99	01	110	NOV 10/96	04H	106	NOV 10/95	03
115	AUG 22/99	01	111	NOV 10/96	04H	107	NOV 10/95	10
116	NOV 10/96	01	112	BLANK		108	NOV 10/95	02
117	NOV 10/96	01				109	NOV 10/95	02
118	BLANK		34-46-00	CONFIG 1		110	AUG 22/03	02
			101	APR 22/02	01B	111	FEB 10/96	02
34-32-00			102	APR 22/02	01B	112	FEB 10/97	01
101	MAY 10/96	01	103	APR 22/02	01B	113	NOV 10/96	01
102	APR 22/02	04	104	DEC 22/02	01B	114	NOV 10/96	04
103	APR 22/02	06	105	DEC 22/02	01B			
104	BLANK		106	DEC 22/02	01B	34-53-00		
			107	DEC 22/02	01B	101	MAY 10/96	02
34-33-00			108	DEC 22/02	01B	102	FEB 10/94	01
101	AUG 10/97	01	109	DEC 22/02	01B	103	DEC 22/06	17
102	NOV 10/90	07	110	DEC 22/02	01B	104	NOV 10/93	05
103	MAY 10/93	01	111	APR 22/02	01B	105	FEB 10/94	03
104	DEC 22/00	10	112	DEC 22/02	01B	106	FEB 10/94	04
105	DEC 22/00	07	113	APR 22/02	01B	107	FEB 10/94	04
106	AUG 10/91	01	114	APR 22/02	01B	108	FEB 10/94	03
107	NOV 10/96	01	115	APR 22/02	01B	109	FEB 10/94	03
108	NOV 10/96	05	116	APR 22/02	01B	110	FEB 10/94	03
			117	APR 22/02	01B	111	DEC 22/03	03
34-43-00			118	DEC 22/02	01B	112	FEB 10/94	04
101	NOV 10/90	22	119	APR 22/02	01B	113	NOV 10/96	01
102	APR 22/02	06	120	APR 22/02	01B	114	BLANK	
103	APR 22/02	08	121	APR 22/02	01B			
104	APR 22/02	04	122	APR 22/02	01B	34-55-00		
105	DEC 22/99	09	123	APR 22/02	01B	101	AUG 10/90	03
106	DEC 22/99	07	124	APR 22/02	SAS B	102	AUG 10/90	01
107	DEC 22/99	08	125	APR 22/02	01B	103	FEB 10/91	02
108	APR 22/03	11	126	BLANK		104	AUG 10/90	01
109	APR 22/03	22				105	AUG 10/98	04
110	APR 22/03	20	34-46-00	CONFIG 2		106	AUG 22/99	02
111	APR 22/03	18	101	DEC 22/01	SAS B	107	AUG 10/90	02
112	APR 22/03	18	102	DEC 22/01	SAS B	108	AUG 10/95	01
113	APR 22/03	18	103	DEC 22/01	SAS B	109	NOV 10/95	02
114	APR 22/03	15	104	DEC 22/01	SAS B	110	NOV 10/95	02
115	APR 22/03	14	105	DEC 22/01	SAS B	111	NOV 10/95	04
116	APR 22/03	12	106	DEC 22/01	SAS B	112	NOV 10/95	03
117	APR 22/03	11	107	DEC 22/03	SAS B	113	NOV 10/96	02
118	APR 22/03	10	108	DEC 22/01	SAS B	114	NOV 10/96	07
119	APR 22/09	13	109	DEC 22/01	SAS B			
120	APR 22/09	13	110	DEC 22/01	SAS B	34-57-00		
121	APR 22/09	10	111	DEC 22/01	SAS B	101	FEB 10/94	10
122	APR 22/09	09	112	DEC 22/01	SAS B	102	FEB 10/94	03
123	APR 22/09	09	113	DEC 22/01	SAS B	103	FEB 10/94	15
124	BLANK		114	DEC 22/01	SAS B	104	FEB 10/94	11
			115	DEC 22/01	SAS B	105	FEB 10/94	13
34-45-00			116	DEC 22/01	SAS B	106	NOV 10/95	06
101	MAY 10/95	05H	117	DEC 22/01	SAS B	107	NOV 10/96	02
102	FEB 10/94	04H	118	AUG 22/05	SAS B	108	NOV 10/96	05
103	APR 22/02	06H	119	DEC 22/01	SAS B	109	NOV 10/96	02
104	FEB 10/94	04H	120	AUG 22/08	01B	110	NOV 10/96	08

R = REVISED, A = ADDED OR D = DELETED
F = FOLDOUT PAGE
33
AUG 22/09

D633T633

Scandinavian Airlines System

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
34-61-00								
101	MAY 10/96	12						
102	AUG 10/90	06						
103	MAY 10/97	23						
104	AUG 10/90	05						
105	FEB 10/94	05						
106	AUG 10/90	01						
107	AUG 10/98	01						
108	AUG 10/98	05						
109	AUG 10/90	01						
110	AUG 10/90	01						
111	AUG 22/00	06						
112	AUG 22/00	02						
113	AUG 10/93	06						
114	AUG 10/95	17						
115	AUG 10/95	15						
116	NOV 10/95	02						
117	DEC 22/08	01						
118	AUG 22/03	01						
119	AUG 22/03	01						
120	AUG 22/03	01						
121	APR 22/08	06						
122	AUG 22/06	12						
123	AUG 22/06	02						
124	AUG 22/06	02						
125	APR 22/07	16						
126	AUG 22/06	01						
127	AUG 22/06	02						
128	APR 22/07	21						
129	APR 22/07	22						
130	APR 22/07	05						
131	APR 22/07	05						
132	APR 22/07	24						
133	APR 22/07	24						
134	APR 22/07	21						
135	APR 22/07	22						
136	APR 22/07	18						

R = REVISED, A = ADDED OR D = DELETED
F = FOLDOUT PAGE
33
AUG 22/09

D633T633

CHAPTER   34
EFFECTIVE PAGES
PAGE   4
LAST PAGE

BOEING

767

FAULT ISOLATION/MAINT MANUAL

CHAPTER 34 — NAVIGATION

TABLE OF CONTENTS

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER 34 — NAVIGATION

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER 34 – NAVIGATION

TABLE OF CONTENTS

TABLE OF CONTENTS

YOU FIND A FAULT WITH AN AIRPLANE SYSTEM	These are the possible types of faults: 1. EICAS Message 2. Observed Fault

DO THE CORRECTIVE ACTION OR GO TO THE FAULT ISOLATION PROCEDURE IN THE FIM	Use the EICAS message, fault code, or fault description to find the corrective action or fault isolation procedure in the FIM. For details, see Figure 3 ⟶

If you do not have a fault code or an EICAS message and if the system has BITE, then you can use the system BITE to get more information:

Use the BITE Index to find if the system has BITE and to find the BITE procedures in the FIM.

For details, see Figure 2 ⟶

FOLLOW THE STEPS IN THE FAULT ISOLATION PROCEDURE	The fault isolation procedure explains how to find and repair the the cause of the fault. For details, see Figure 4 ⟶

Basic Fault Isolation Process
Figure 1

EFFECTIVITY

ALL

34-HOW TO USE THE FIM

01   Page 1
Aug 22/99

K37694

Start with an observed fault that you saw or a log book report (fault description).

From the fault description, find which system can have the fault.

Go to any BITE Index in the FIM and look for the system or a system LRU.
Do you find the system or a system LRU?

NO → Use the fault description to find the corrective action or fault isolation procedure in the FIM (see Figure 3).

YES

Find the FIM chapter/section for the BITE procedure on the same line as the LRU/System.

Go to the BITE procedure in the FIM and do the procedure.
Do you find a BITE message?

NO → Use the fault description to find the corrective action or fault isolation procedure in the FIM (see Figure 3).

YES

Do the steps to repair the cause of the BITE message.

How to Get Fault Information from BITE
Figure 2

K37695
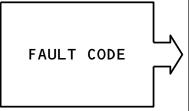
IF YOU HAVE:	THEN DO THIS TO FIND THE CORRECTIVE ACTION OR FAULT ISOLATION PROCEDURE IN THE FIM:

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. 2. Find the Fault Isolation Reference for the fault code and do the corrective action. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).

EICAS MESSAGE TEXT (with no fault code)	1. If you know the chapter of the EICAS message, then go to the EICAS Messages section in that chapter and find the EICAS message. If you do not know the chapter of the EICAS message, then do these steps: A. Go to FIM EICAS MESSAGE LIST and find the EICAS message in the table. NOTE: The list follows the INTRODUCTION to the FIM. B. Find the chapter number on the same line as the EICAS message. Go to the EICAS Messages section in that chapter and find the EICAS message. 2. Do the corrective action in the "Procedure" column for the EICAS message. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).

OBSERVED FAULT DESCRIPTION	1. Go to the Fault Code Diagram for the problem in the applicable chapter. 2. Do the fault analysis on the diagram and find the fault code. 3. 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. 4. Find the Fault Isolation Reference for the fault code and do the corrective action. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).

How to Find the Corrective Action or Fault Isolation
Procedure in the FIM
Figure 3

K37696

ASSUMED CONDITIONS AT START OF TASK

- External electrical power is OFF
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- Circuit breakers for the system are closed
- No equipment in the system is deactivated

PREREQUISITES

- This box gives the steps to get the airplane from the normal shutdown condition to the configuration necessary to do the fault isolation procedure.
- The Prerequisites give procedure references, circuit breakers, and special tools and equipment requirements.

FAULT ISOLATION BLOCKS

- Start the fault isolation procedure at block 1 unless specified differently.
- Do the check to get an answer to the question in the box. Follow the arrow that applies to your answer. This will go to the next check.
- When you get to a box in the column at the right of the page, you have isolated that fault. Do the steps in that box to repair the cause of the fault.
- Make sure that fault is corrected to complete the procedure.

Do the Fault Isolation Procedure
Figure 4

Chapter Tab

Numerical list of
subjects. Gives
the procedure titles

Instructions for
using the FIM

Alphabetical list and illustrations
of panel indications and controls.
Gives the chapter/section for each
item.

EFFECTIVITY

ALL

21-CONTENTS

Page 1
Apr 22/99

EFFECTIVITY

ALL

21-HOW TO USE THE FIM

Page 1
Apr 22/99

EFFECTIVITY

ALL

21-INDEX

Page 1
Apr 22/99

(More subjects continued on next sheet)

Subjects in Each FIM Chapter
Figure 5 (Sheet 1)

K37698

(Continued from Sheet 1)

EFFECTIVITY —— ALL   21—EICAS MESSAGES
Page 1
Apr 22/99

EFFECTIVITY —— ALL   21—FAULT CODE DIAGRAMS
Page 1
Apr 22/99

EFFECTIVITY —— ALL   21—FAULT CODE INDEX
Page 1
Apr 22/99

EFFECTIVITY —— ALL   21—BITE INDEX
Page 1
Apr 22/99

EFFECTIVITY —— ALL   21—11—00
Page 101
Apr 22/99

Alphabetical list of the EICAS messages. Gives the procedure to repair the cause of the message or a reference to a fault isolation procedure.

Failure analysis diagrams for the airplane systems to find the correct fault code for the fault.

Numerical list of fault codes. Gives the procedure to repair the cause of the fault or a reference to a fault isolation procedure.

Alphabetical list of all the LRUs/systems that have BITE. Gives the chapter/ section for the BITE procedure.

Component index, component location, and fault isolation procedures for the systems in the chapter.

Subjects in Each FIM Chapter
Figure 5 (Sheet 2)

EFFECTIVITY——

ALL

34—HOW TO USE THE FIM

01   Page 6
Aug 22/99

K37699

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

NAVIGATION

NAVIGATION — INDEX

K42395

3451

3423

GLARESHIELD

FREQ 116.80   120 CRS

AUTO
MAN

VOR/DME

GLARESHIELD

3422

HDG REF
NORM

TRUE

INNER/
AIRWAYS

MIDDLE

OUTER

3432

AIR DATA
CMPTR TEST —— 3412

ALTIMETER —— 3412

NAV
FMC-L
CDU-L   FMC-R

3462

ALTN   EFI —— 3422

ALTN   IRS —— 3421

ALTN   AIR
DATA —— 3412

STBY ATTITUDE
INDICATOR —— 3424

ILS —— 3431

DME-L   DME-R

3457

HEADING —— 3421

VOR —— 3451

DME —— 3455

ADF —— 3457

ADF ANT —— 3457

PILOTS' PANEL

▷ 1   AS INSTALLED

3421 → 0

1

3413

IAS
KNOTS

3421 → 0
VERTICAL
SPEED
OFF
1000 FPM

ALT
MB   IN. HG
1013 2992
BARO

PILOTS PANEL

NAVIGATION — INDEX

615219

ADI DISPLAY — 3422

CHAPTER 22

3412

3421

SG FAIL 3422

3431 — 3433

3431

3422

ADI

ADI FLAGS

ATT	....	3421
DH	....	3433
FD	....	CHAPTER 22
GS	....	3431
LOC	....	3431
RA	....	3433
SPD	....	3412

3422

3421 — 3421

3457 — 3457

3461 — 3461

3457 — HSI DISPLAY

3457 — 3422

3451 — SG FAIL 3422

3443

3461 — MAP 3461

3461

3421

3461

HSI (MAP MODE)
PILOTS PNL

ILS MODE 3431
VOR MODE 3451

HSI (PLAN MODE, MAP MODE, AND WXR) FLAGS, MSGS

ADF L	....	3457
ADF R	....	3457
HDG	....	3421
MAP	....	3461
MAP RANGE DISAGREE	....	3461
TRK	....	3421
VTK	....	3461
WXR ATT	....	3443
WXR DSPY	....	3443
WXR FAIL	....	3443
WXR FAIL ANT	....	3443
WXR FAIL ATT	....	3443
WXR FAIL CONT	....	3443
WXR FAIL RT	....	3443
WXR FAIL STAB	....	3443
WXR FAIL WEAK	....	3443
WXR RANGE DISAGREE	......	3443
WXR/MAP RANGE DISAGREE	...	3443

3433

3422

3422

3422

3422

3443

3422

CONTROL STAND

HSI (VOR MODE) FLAGS

| VOR | .... | 3451 |

HSI (ILS MODE) FLAGS

| GS | .... | 3431 |
| LOC | .... | 3431 |

NAVIGATION — INDEX
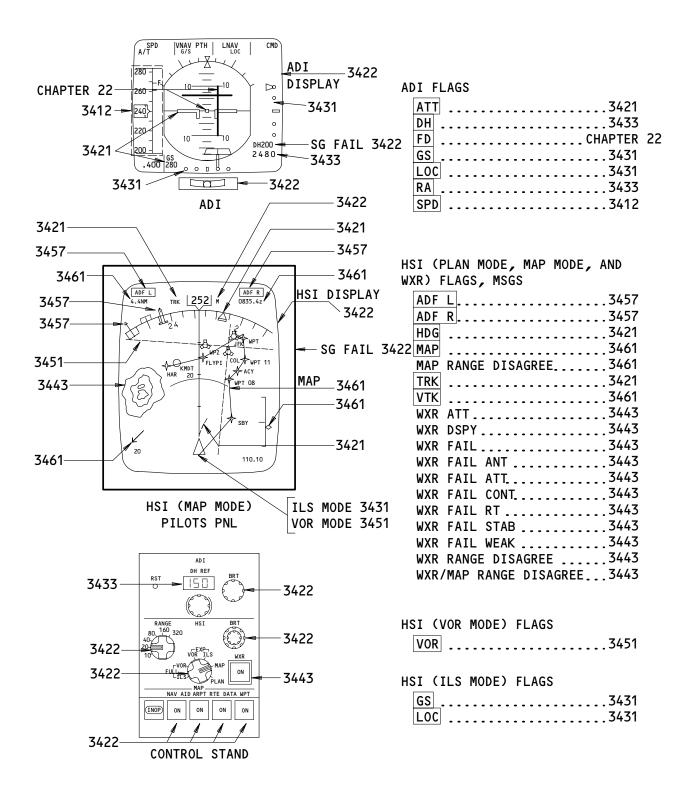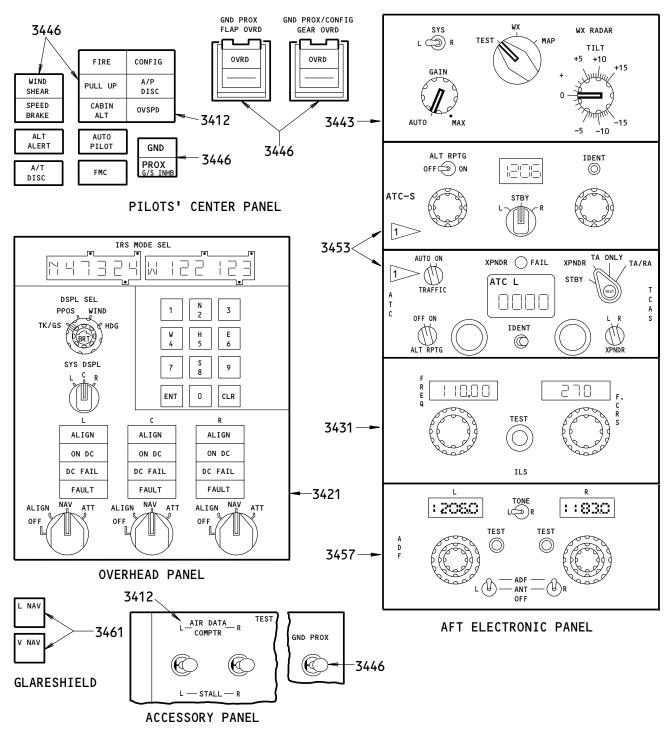
EFFECTIVITY

ALL

256508

34-INDEX

18   Page 3
Feb 10/91

PILOTS' CENTER PANEL

FIRE	CONFIG
PULL UP	A/P DISC
CABIN ALT	OVSPD

WIND SHEAR
SPEED BRAKE

ALT ALERT

A/T DISC

AUTO PILOT

FMC

GND PROX G/S INHB

3446

3412

3446

GND PROX FLAP OVRD — OVRD

GND PROX/CONFIG GEAR OVRD — OVRD

3443

3446

OVERHEAD PANEL

IRS MODE SEL

N 47324   W 122 123

DSPL SEL
PPOS   WIND
TK/GS   HDG
BRT

SYS DSPL
L   C   R

1	N 2	3
W 4	H 5	E 6
7	S 8	9
ENT	0	CLR

L	C	R
ALIGN	ALIGN	ALIGN
ON DC	ON DC	ON DC
DC FAIL	DC FAIL	DC FAIL
FAULT	FAULT	FAULT

ALIGN   NAV   ATT
OFF

ALIGN   NAV   ATT
OFF

ALIGN   NAV   ATT
OFF

3421

GLARESHIELD

L NAV

V NAV

3461

ACCESSORY PANEL

3412

AIR DATA COMPTR   L   R   TEST

L — STALL — R

GND PROX

3446

AFT ELECTRONIC PANEL

SYS   L   R   TEST   WX   MAP   WX RADAR
GAIN   TILT
AUTO   MAX   +5 +10 +15
                                   0
                                   −5 −10 −15

3443

ALT RPTG   OFF   ON   1206   IDENT

ATC-S

STBY   L   R

1

3453

1

AUTO ON   XPNDR ○ FAIL   XPNDR   TA ONLY   TA/RA
TRAFFIC   STBY
A T C   ATC L   TEST   T C A S
           0000
OFF ON   IDENT   L   R
ALT RPTG   XPNDR

F R E Q   110.00   270   F. C R S

TEST

ILS

3431

A D F   L : 2080   TONE L   R   R : 1830

TEST   TEST

L   ADF   R
    ANT
    OFF

3457

1 ▷ AS INSTALLED

615222

3490

LIGHTNING STRIKE

3461 IDENT PAGE

3461 POS INIT/REF PAGE

3461 PERF INIT PAGE

3461 CDU DISPLAY

BRIGHTNESS 3461

| INIT REF | RTE | CLB | CRZ | DES |
| DIR INTC | LEGS | DEP ARR | HOLD | PROG | EXEC [___] |

3461 FIX PAGE

| MENU | FIX | A | B | C | D | E |

PROGRESS PAGE 3461

| PREV PAGE | NEXT PAGE | F | G | H | I | J |
| 1 | 2 | 3 | K | L | M | N | O |

3461 CDU FAIL, FMC FAIL AND RESYNC

| 4 | 5 | 6 | P | Q | R | S | T |
| 7 | 8 | 9 | U | V | W | X | Y |

CDU KEYS 3461

| . | 0 | +/_ | Z | | DEL | / | CLR |

D S P Y · F A I L · M S G · O F S T

NAVIGATION — INDEX

EFFECTIVITY

ALL

615237

34-INDEX

09   Page 5
Apr 10/98

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

NAVIGATION — INDEX

EFFECTIVITY

ALL

63889

34-INDEX

03   Page 6
Aug 22/02

NAVIGATION - INDEX

EFFECTIVITY

ALL

267702

34-INDEX

03   Page 7
Dec 10/98

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

NAVIGATION — EICAS MESSAGE LIST

1. General
   A. This procedure shows the EICAS message locations and gives a list of
      procedures to find the solution for each message.
      (1) EICAS Message Locations (Fig. 1)
          (a) Figure 1 shows the location of the EICAS display units and the
              area where the messages show on the display units.
          (b) Each message level has a different location. The location and
              color of each message level is also shown.
      (2) The EICAS MESSAGE LIST gives the message, level, and procedure for
          each message.
          (a) The EICAS MESSAGE column lists the messages alphabetically.
              Messages which start with L, R, or C are put together and
              alphabetized at L.
          (b) The LEVEL column gives all levels for each message as follows:
                  A — Warning messages
                  B — Caution messages
                  C — Advisory messages
                  E — Communication messages medium
                  F — Communication messages low
                  S — Status messages
                  M — Maintenance messages
          (c) The PROCEDURE column gives the steps that are necessary to
              remove the message and includes one or more of the procedures
              that follow:
              1) A Fault Isolation Manual procedure reference
              2) A Maintenance Manual procedure and reference
              3) Wiring checks and a Wiring Diagram Manual reference
              4) A reference to an EICAS message list in a different
                 chapter.
              5) A reference to a FAULT CODE INDEX and specified fault codes
              6) A step to change the airplane configuration

EICAS
DISPLAY
UNITS

P2 PANEL

FLIGHT COMPARTMENT

```
| WARNING
| WARNING
| WARNING
| CAUTION
| CAUTION
| CAUTION
|  ADVISORY
|  ADVISORY
|  ADVISORY
| •COMMUNICATION MEDIUM |
|  •COMMUNICATION LOW   |
```
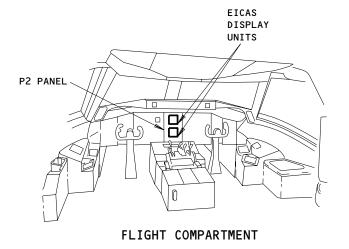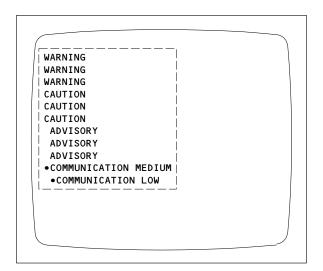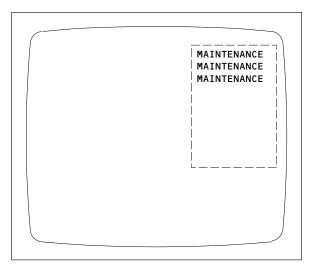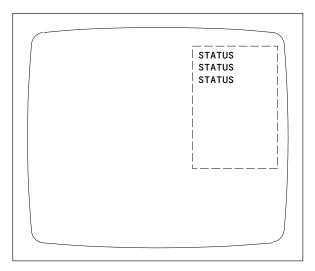
ENGINE PRIMARY PAGE OR COMPACTED PAGE
(TOP DISPLAY UNIT)

```
| MAINTENANCE |
| MAINTENANCE |
| MAINTENANCE |
```

ECS/MSG PAGE
(BOTTOM DISPLAY UNIT)

```
| STATUS |
| STATUS |
| STATUS |
```

STATUS PAGE
(BOTTOM DISPLAY UNIT)

LEVEL	COLOR
A—WARNING	RED
B—CAUTION	YELLOW
C—ADVISORY	YELLOW
E—COMMUNICATION MEDIUM	WHITE
F—COMMUNICATION LOW	WHITE
S—STATUS	WHITE
M—MAINTENANCE	WHITE

EICAS Message Locations
Figure 1

EFFECTIVITY

ALL

01   Page 2
Aug 22/99

822455

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
ALT DISAGREE	B	FIM 34-12-00/101, Fig. 104
ALTITUDE ALERT	B	Replace the altitude alert module, M617 (AMM 34-16-01/401).
ATC FAULT	C	FIM 34-53-00/101, Fig. 103
ATT DISAGREE	B	FIM 34-21-00/101, Fig. 107
ATT FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
COMPARATOR BITE	S,M NVM	FIM 34-22-00/101, Fig. 109
F/O PVD	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
FAST/SLOW FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
FMC MESSAGE	C	FIM 34-61-00/101, Fig. 111
GND PROX BITE	S,M	FIM 34-46-00/101, Fig. 103
GND PROX SYS	C	FIM 34-46-00/101, Fig. 103
GND PROX SYS	S,M	FIM 34-46-00/101, Fig. 103
G/S DISAGREE	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
G/S FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message. If this message is not a nuisance message, see FIM 34-31-00/101, Fig. 104.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
HDG DISAGREE	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
HDG FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
IAS DISAGREE	B	FIM 34-12-00/101, Fig. 104
INSTR SWITCH	B	If "INSTR SWITCH" shows when only one of the two EFI switches are in the ALTN position, replace the L (R) EFI source select switch, S3 (S11) (AMM 33-13-00/201). If the problem continues, examine and repair the applicable circuits (WDM 34-22-17, WDM 34-22-27).
L(R) FMC FAIL	C	FIM 34-61-00/101, Fig. 108A

EFFECTIVITY

ALL

34-EICAS MESSAGES

04   Page 5
Aug 22/03

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
L(R,C) IRS DC FAIL	C	Restore AC and DC power (AMM 24-22-00/201). If the problem continues, refer to FIM 34-21-00/101, Fig. 105.
L(R,C) IRS FAULT	C	FIM 34-21-00/101, Fig. 107
L(R,C) IRS ON DC	C	Restore AC power (AMM 24-22-00/201). If the problem continues, refer to FIM 34-21-00/101, Fig. 106.
LOC DISAGREE	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
LOC FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message. If the message is not a nuisance message, see FIM 34-31-00/101, Fig. 104.
OVERSPEED	A	- Visually examine the airplane structure (AMM 05-51-04/201). - Do the Air Data System - Operational/Test (AMM 34-12-00/501). - If an Air Data Computer fails, replace the applicable Air Data Computer (AMM 34-12-01/401).

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
PILOT RESPONSE	A,B,C	No activity has been detected on the MCP, EFIS/EICAS, Radio Control Panel, MCDU, or HF/VHF radios. Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
RA DISAGREE	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.
SNGL SOURCE ILS	C	767-400 Airplanes with Rockwell Collins MultiMode Receiver (MMR); If this EICAS Message with no correlated maintenance message, then no maintenance action is necessary.
TCAS	C	FIM 34-45-00/101, Fig. 103
TCAS FAIL	C	FIM 34-45-00/101, Fig. 103
TCAS OFF	C	TCAS is in TA or TA/RA mode. No maintenance action is necessary.
TRACK FAIL	C	EICAS OPS S/W -01 THRU -03; Do a check for a nuisance EICAS message: Put the EICAS computer select switch to an alternative position. If the message does not show, open and then close the circuit breaker for the EICAS computer that shows the nuisance message. If the problem continues, replace the EICAS computer that shows the nuisance message.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE

PILOTS' PANEL AND CENTER PANEL

FAULT CODE/
LOCATION

CAPT   01
F/O   02

AIR DATA

ALTN
_____

| 1 | DETERMINE WHICH IND FAULTY WITH STANDBY ALT | WAS BARO SET OK? | SELECT ALTN AIR DATA. IS FAULT CORRECTED? |

WERE ALTIMETERS NORMAL?

NOT APPLY   00

YES — NORMAL

CAPT AND F/O DIFFER

CAPT FAULTY — NO → 34 12 01 01
           YES — YES → 34 12 02 01
                  NO → 34 12 03 01

F/O FAULTY — NO → 34 12 04 02
         YES — YES → 34 12 05 02
               NO → 34 12 06 02

OFF FLAG IN VIEW
       YES → 34 12 08 _ _
       NO → 34 12 09 _ _

STICKING → 34 12 07 _ _

FLUCTUATES
       YES → 34 12 70 _ _
       NO → 34 12 71 _ _

BARO INDICATOR HAS UNCOMMANDED MOVEMENT — YES → 34 12 72 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 12 XA _ _
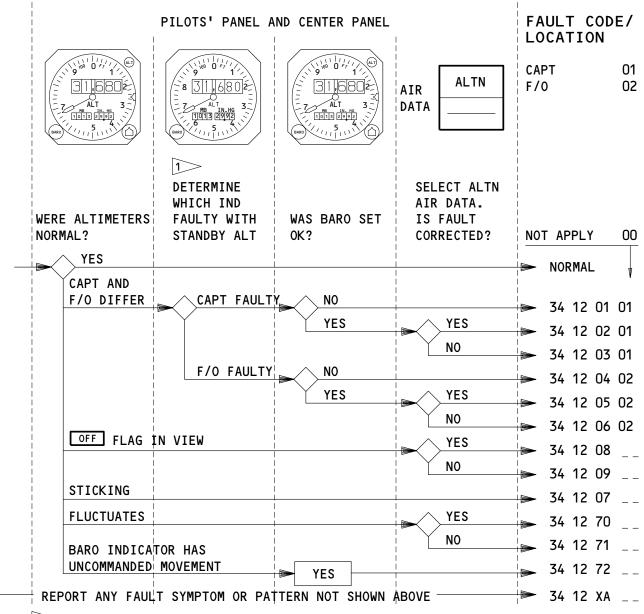
1 ▷ SEE "ALTIMETER TOLERANCES" CHART TO CORRECT STANDBY ALTIMETER READING
BEFORE COMPARING TO CAPT AND F/O ALTIMETER.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L	11E23	ALTM (R)
11A11	AIR DATA AOA SENSOR L	11E23	RIGHT ALTM
11A12	AIR DATA BARO CORRECT L	11F30	(RIGHT) AIR DATA CMPTR (R)
11E2	LEFT ALTM	11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11E2	ALTM (L)	11F32	(RIGHT) AIR DATA BARO CORRECT (R)

ELECTRIC ALTIMETER — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

03   Page 1
Aug 22/02

174572

CDU		EICAS	F/O PANEL	FAULT CODE/ LOCATION

```
PROGRESS  1/2              PROGRESS  2/2         TAT +21C
              TAS                      SAT
           475 KT                    -14C
```

F/O PANEL:
```
240
220
200
.400  GS 280
         10
```

WAS
TAS NORMAL?

WAS
SAT NORMAL?

WAS
TAT NORMAL?

WAS
MACH NORMAL?

NOT APPLY   00

YES → YES → YES → NORMAL

BLANK → 34 12 10 00

BLANK → 34 12 73 00

IN ERROR → YES → 34 12 14 00

IN ERROR → YES → YES → 34 12 15 00

IN ERROR → 34 12 16 00

IN ERROR → 34 12 64 00

BLANK → YES → YES → 34 12 74 00

BLANK → BLANK → 34 12 63 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 12 XB 00

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L	11F30	(RIGHT) AIR DATA CMPTR (R)
11E22	(RIGHT) IAS MACH (R)	11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11F14	TMC AC	11F32	(RIGHT) AIR DATA BARO CORRECT (R)
11F15	TMC DC		

TAS, SAT AND TAT - FAULT CODES

EFFECTIVITY

ALL
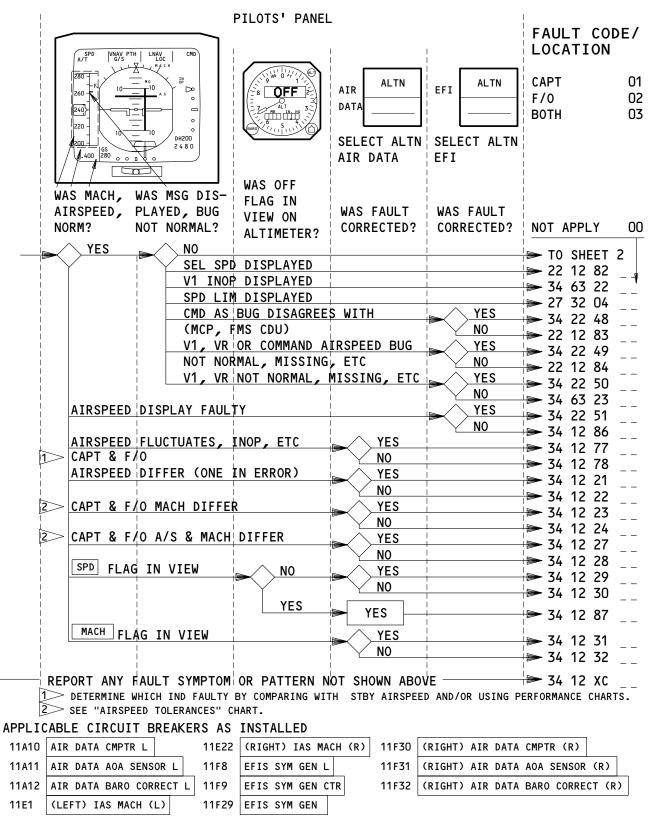
34-FAULT CODE DIAGRAM

03   Page 2
Nov 10/96

256601

PILOTS' PANEL

AIR DATA — ALTN — SELECT ALTN AIR DATA

EFI — ALTN — SELECT ALTN EFI

FAULT CODE/ LOCATION

CAPT	01
F/O	02
BOTH	03

WAS MACH, AIRSPEED, NORM?

WAS MSG DIS-PLAYED, BUG NOT NORMAL?

WAS OFF FLAG IN VIEW ON ALTIMETER?

WAS FAULT CORRECTED?

WAS FAULT CORRECTED?

NOT APPLY   00

Symptom		Code	
YES NO		TO SHEET 2	
SEL SPD DISPLAYED		22 12 82	_ _
V1 INOP DISPLAYED		34 63 22	_ _
SPD LIM DISPLAYED		27 32 04	_ _
CMD AS BUG DISAGREES WITH	YES	34 22 48	_ _
(MCP, FMS CDU)	NO	22 12 83	_ _
V1, VR OR COMMAND AIRSPEED BUG	YES	34 22 49	_ _
NOT NORMAL, MISSING, ETC	NO	22 12 84	_ _
V1, VR NOT NORMAL, MISSING, ETC	YES	34 22 50	_ _
	NO	34 63 23	_ _
AIRSPEED DISPLAY FAULTY	YES	34 22 51	_ _
	NO	34 12 86	_ _
AIRSPEED FLUCTUATES, INOP, ETC	YES	34 12 77	_ _
⟨1⟩ CAPT & F/O	NO	34 12 78	_ _
AIRSPEED DIFFER (ONE IN ERROR)	YES	34 12 21	_ _
	NO	34 12 22	_ _
⟨2⟩ CAPT & F/O MACH DIFFER	YES	34 12 23	_ _
	NO	34 12 24	_ _
⟨2⟩ CAPT & F/O A/S & MACH DIFFER	YES	34 12 27	_ _
	NO	34 12 28	_ _
SPD FLAG IN VIEW NO	YES	34 12 29	_ _
	NO	34 12 30	_ _
YES YES		34 12 87	_ _
MACH FLAG IN VIEW	YES	34 12 31	_ _
	NO	34 12 32	_ _
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE		34 12 XC	_ _

⟨1⟩ DETERMINE WHICH IND FAULTY BY COMPARING WITH STBY AIRSPEED AND/OR USING PERFORMANCE CHARTS.
⟨2⟩ SEE "AIRSPEED TOLERANCES" CHART.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L	11E22	(RIGHT) IAS MACH (R)	11F30	(RIGHT) AIR DATA CMPTR (R)
11A11	AIR DATA AOA SENSOR L	11F8	EFIS SYM GEN L	11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11A12	AIR DATA BARO CORRECT L	11F9	EFIS SYM GEN CTR	11F32	(RIGHT) AIR DATA BARO CORRECT (R)
11E1	(LEFT) IAS MACH (L)	11F29	EFIS SYM GEN		

MACH, AIRSPEED & ALTN AIR DATA (SHEET 1) – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

06   Page 3
Nov 10/96

256606

EICAS

OVERSPEED

PILOTS' PANEL   FLT DECK

OVSPD   SIREN

PILOTS' PANEL

AIR
DATA

ALTN

SELECT ALTN AIR DATA

FAULT CODE/
LOCATION

CAPT   01
F/O   02

FROM
SHEET 1

IS MSG DISPLAYED?   IS ALTN AIR DATA NORM?   NOT APPLY   00

NO   YES   NORMAL

NO   34 12 76 _ _

YES (SPEED BELOW LIMIT)   34 12 75 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 12 XF _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L		11E22	(RIGHT) IAS MACH (R)
11A11	AIR DATA AOA SENSOR L		11E23	ALTM (R)
11A12	AIR DATA BARO CORRECT L		11F30	(RIGHT) AIR DATA CMPTR (R)
11E1	(LEFT) IAS MACH (L)		11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11E2	ALTM (L)		11F32	(RIGHT) AIR DATA BARO CORRECT (R)

ELECTRIC MACH, AIRSPEED & ALTN AIR DATA (SHEET 2) — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

133531

ACCESSORY PANEL

L AIR DATA R TEST
COMPTR

L — STALL — R

OVSPD

GLARESHLD

WARNING

EICAS

OVERSPEED

FLT DECK

BUZZER

PILOTS' & CENTER PANEL

S P D

160
140
137 R 1
120
100

SPD LIM

MACH

9 100 F 1
8   2
7   ALT   3
MB IN. HG
1013 2992
6   4
5

OFF

FLAG

ALTN

FAULT CODE/ LOCATION

CAPT	01
F/O	02

SELECT ALTN AIR DATA CMPTR. WAS TEST OK?

TEST SW POS WAS?	WAS TEST NORMAL?	WAS TEST NORMAL?	WAS TEST NORMAL?		NOT APPLY	00

AIR DATA CMPTR → ◇ —YES→ ◇ —YES→ .... → TO SHEET 2

FAILS TO READ 137 KIAS ◇ —YES→ 34 12 44 _ _

—NO→ 34 12 45 _ _

SPD , MACH FAIL

TO APPEAR ◇ —YES→ ◇ —YES→ 34 12 83 _ _

—NO→ 34 12 84 _ _

—NO→ 34 12 85 _ _

◇ —NO→ NO → NO → NO → 34 12 62 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 12 XD _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L	11E22	(RIGHT) IAS MACH (R)
11A11	AIR DATA AOA SENSOR L	11E23	(RIGHT) ALTM (R)
11A12	AIR DATA BARO CORRECT L	11F30	(RIGHT) AIR DATA CMPTR (R)
11E1	(LEFT) IAS MACH (L)	11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11E2	(LEFT) ALTM (L)	11F32	(RIGHT) AIR DATA BARO CORRECT (R)

AIR DATA COMPUTER TEST (SHEET 1) — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 5
Nov 10/96

256610

PILOTS' PANEL   EICAS   PLTS' PANEL   FAULT CODE/
                                                       LOCATION

AILERON LOCKOUT   AIR DATA   CAPT   01
                                       F/O   02
TAT+ 35 C   CAPT & F/O 03

OFF
FLAG

OVHD PNL

AIL LOCK

SELECT ALTN
AIR DATA
CMPTR. WAS
TEST OK?   NOT APPLY   00

	WAS TEST NORMAL?	WAS TEST NORMAL?	WAS TEST INDICATION NORMAL?	WAS TEST NORMAL?	

FROM SHEET 1   YES   YES   YES   YES   NORMAL

                                                   NO   34 12 80 00

                              TAT DID NOT DISPLAY
                              +35°, BLANK

                                                               34 12 68 00

            DID NOT SLEW TO 10,000'   YES   34 12 38 _ _

                                                 NO   34 12 39 _ _

            OFF   FAILS TO APPEAR   YES   34 12 40 _ _

                                                 NO   34 12 41 _ _

            NO   OFF   FLAG OR
            SLEW TO 10,000'   YES   34 12 42 _ _

                                                 NO   34 12 43 _ _

NO FLAG   YES   34 12 81 _ _

                                                 NO   34 12 82 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 12 XE _ _

1 ▷ TMC MUST BE OFF AND EICAS COMPUTER SELECTED MUST CORRESPOND TO
     ADC BEING TESTED FOR TAT DISPLAY.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A10	AIR DATA CMPTR L	11E22	(RIGHT) IAS MACH (R)
11A11	AIR DATA AOA SENSOR L	11E23	(RIGHT) ALTM (R)
11A12	AIR DATA BARO CORRECT L	11F30	(RIGHT) AIR DATA CMPTR (R)
11E1	(LEFT) IAS MACH (L)	11F31	(RIGHT) AIR DATA AOA SENSOR (R)
11E2	(LEFT) ALTM (L)	11F32	(RIGHT) AIR DATA BARO CORRECT (R)

AIR DATA COMPUTER TEST (SHEET 2) – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

G15962

04   Page 6
            Nov 10/96

AIRPLANE

DID LIGHTNING STRIKE OCCUR?   NOT APPLY   00

◇ NO ───▷ NORMAL

NOSE RADOME ──────────────────────────────────────▷ 34 90 01 00

NACELLE ──▷ 34 90 02 00

WING TIP ───▷ 34 90 03 00

L.E. FLAP ──▷ 34 90 04 00

UNKNOWN AREA ─────────────────────────────────────▷ 34 90 05 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ─▷ 34 90 XA 00

APPLICABLE CIRCUIT BREAKERS

NONE

LIGHTNING STRIKE – FAULT CODES

EFFECTIVITY

ALL

223131

34-FAULT CODE DIAGRAM

02   Page 7
Aug 01/86

PILOTS' CENTER PANEL

FAULT CODE/
LOCATION

WAS STANDBY AIRSPEED IND
NORMAL? 1▷

WAS STANDBY ALTIMETER
NORMAL? 1▷

NOT APPLY   00

YES ─────────────────────── YES ──────────────▶ NORMAL

NO ──────────────────▶ 34 13 01 00

NO ────────────── YES ──────────────▶ 34 13 02 00

NO ──────────────▶ 34 11 04 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ─────────▶ 34 13 XA 00

1▷ FOR ADDITIONAL AIRSPEED/ALTIMETER INFORMATION, REFER TO AIRSPEED/ALTIMETER TOLERANCE CHART.

APPLICABLE CIRCUIT BREAKERS

11A8 | STBY ALTM VIB

STANDBY AIRSPEED AND ALTIMETER — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

03   Page 8
Apr 10/98

311136

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

CHART 1 ALTIMETER TOLERANCES – GROUND

ALTITUDE FEET	MAX DIFFERENCE	
	CAPT & F/O	CAPT OR F/O STANDBY
SEA LEVEL	40	35
5,000'	40	50
10,000'	45	60

ALTIMETER TOLERANCES – FLIGHT

ALTITUDE FEET	IAS/MACH	MAX. DIFFERENCE		
		CAPT & F/O	CAPT OR F/O & STANDBY	
			-200	-300
SEA LEVEL	V_{REF}	---	20–80	10–90
3,000'	M.32	---	3,010–3,150	3,020–3,160
10,000'	250 KTS	60	9,975–10,195	10,005–10,225
20,000'	300 KTS	115	19,995–20,295	20,105–20,405
25,000'	M.80	130	24,950–25,470	25,155–25,675
30,000'	M.80	135	29,935–30,435	30,115–30,615
35,000'	M.80	145	34,975–35,465	35,155–35,645
40,000'	M.80	160	40,040–40,540	40,215–40,715

CHART 2 AIRSPEED TOLERANCES

AIRSPEED KNOTS	MAX. DIFFERENCE		
	CAPT & F/O	CAPT OR F/O & STANDBY	
		-200	-300
140	± 3	138–146	138.5–146.5
200	± 3	198.5–206.5	199–207
250	± 3	(35,000 & BELOW)	
		248–258	249–259
300	± 3	(35,000')	
		297–307	300–310
		(30,000 & BELOW)	
		298.5–308.5	300.5–310.5
MACH			
.40 – .60	± .010M	---	
.60 – .80	± .009M	---	
.80 & ABOVE	± .008M	---	

1 ▷ LANDING FLAPS

CHARTS

34-FAULT CODE DIAGRAM

PILOTS' PANEL		EICAS	PILOTS' PANEL	FAULT CODE/ LOCATION	

L,C,R, IRS FAULT

OVERHEAD

ALIGN
ON DC
DC FAIL
FAULT

ALTN   IRS

| | | | | CAPT | 01 |
| | | | | F/O | 02 |

WAS FLAG RETRACTED?	WAS RDMI HEADING NORMAL?	DID FAULT ILLUM?	DOES CHANGE TO ALTN IRS CORRECT THE FAULT?	NOT APPLY	00

YES	YES	NO		NORMAL	
	STICKS	NO		34 21 01	__
	HEADING IN ERROR	NO	YES	34 21 02	__
			NO	34 21 03	__
HDG FLAG IN VIEW		YES		34 21 67	__
		NO		34 21 04	__
HDG FLAG IN VIEW. DME NORMAL		YES	YES	34 21 05	__
		NO	YES	34 21 06	__
			NO	34 21 62	__
HDG FLAG IN VIEW. DME BLANK		NO		34 21 07	__

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 21 XA __

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11F1	(LEFT) IRS (L)
6D4	C IRS	11F21	(CENTER) IRS (C)
6D5	R IRS	11F22	(RIGHT) IRS (R)
11A6	RDMI L	11F25	(RIGHT) RDMI (R)

RDMI HEADING — FAULT CODES

EFFECTIVITY

ALL
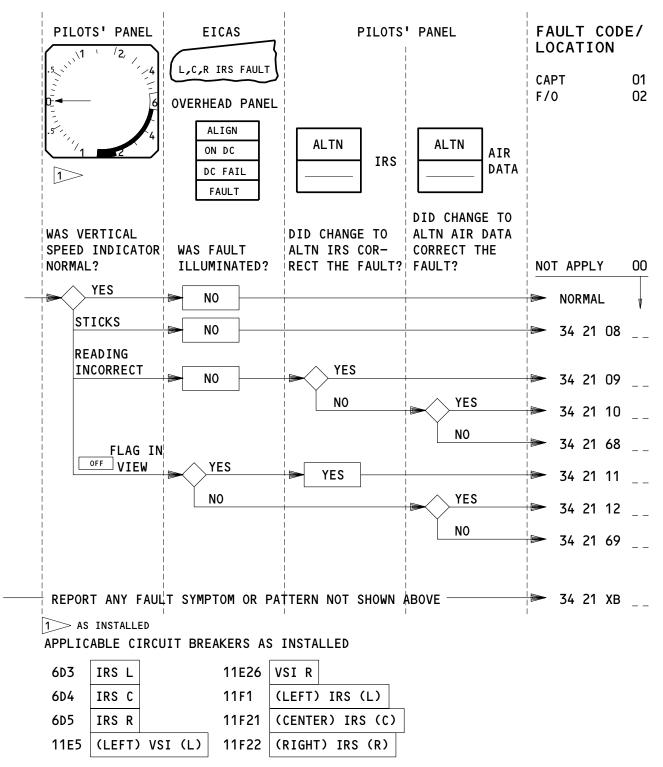
34-FAULT CODE DIAGRAM

02   Page 10
Nov 10/96

174583

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

PILOTS' PANEL	EICAS	PILOTS' PANEL	FAULT CODE/ LOCATION

L,C,R IRS FAULT

OVERHEAD PANEL

ALIGN
ON DC
DC FAIL
FAULT

ALTN ___ IRS

ALTN ___ AIR DATA

CAPT 01
F/O 02

WAS VERTICAL SPEED INDICATOR NORMAL?

WAS FAULT ILLUMINATED?

DID CHANGE TO ALTN IRS CORRECT THE FAULT?

DID CHANGE TO ALTN AIR DATA CORRECT THE FAULT?

NOT APPLY 00

- YES → NO → NORMAL
- STICKS → NO → 34 21 08 _ _
- READING INCORRECT → NO → YES → 34 21 09 _ _
  - NO → YES → 34 21 10 _ _
    - NO → 34 21 68 _ _
- FLAG IN VIEW [OFF] → YES → YES → 34 21 11 _ _
  - NO → YES → 34 21 12 _ _
    - NO → 34 21 69 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 21 XB _ _

⊳1 AS INSTALLED

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	IRS L	11E26	VSI R
6D4	IRS C	11F1	(LEFT) IRS (L)
6D5	IRS R	11F21	(CENTER) IRS (C)
11E5	(LEFT) VSI (L)	11F22	(RIGHT) IRS (R)

VERTICAL SPEED INDICATOR — FAULT CODES
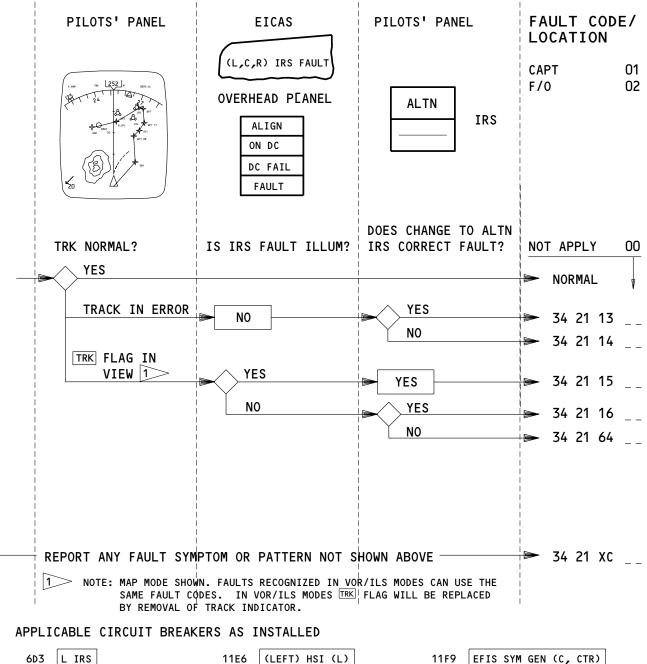
E21018

PILOTS' PANEL	EICAS	PILOTS' PANEL	FAULT CODE/ LOCATION

(L,C,R) IRS FAULT

OVERHEAD PANEL

| ALIGN |
| ON DC |
| DC FAIL |
| FAULT |

| ALTN |
| ____ |

IRS

CAPT 01
F/O 02

TRK NORMAL?	IS IRS FAULT ILLUM?	DOES CHANGE TO ALTN IRS CORRECT FAULT?	NOT APPLY 00

YES ──→ NORMAL

TRACK IN ERROR → NO ────── YES ──→ 34 21 13 _ _
                            NO ──→ 34 21 14 _ _

TRK FLAG IN VIEW ▷1 ── YES ── YES ──→ 34 21 15 _ _
                       NO ── YES ──→ 34 21 16 _ _
                              NO ──→ 34 21 64 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ──────→ 34 21 XC _ _

▷1 NOTE: MAP MODE SHOWN. FAULTS RECOGNIZED IN VOR/ILS MODES CAN USE THE
     SAME FAULT CODES. IN VOR/ILS MODES TRK FLAG WILL BE REPLACED
     BY REMOVAL OF TRACK INDICATOR.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11E6	(LEFT) HSI (L)	11F9	EFIS SYM GEN (C, CTR)
6D4	C IRS	11E25	(RIGHT) EFIS CONT PNL (R)	11F21	(CENTER) IRS (C)
6D5	R IRS	11E27	(RIGHT) HSI (R)	11F22	(RIGHT) IRS (R)
11A6	RDMI L	11F1	(LEFT) IRS (L)	11F24	(RIGHT) EFIS DSPL SW (R)
11A7	EFIS DSPL SW L	11F3	EFIS DSPL SW L	11F25	(RIGHT) RDMI (R)
11E4	(LEFT) EFIS CONT PNL (L)	11F8	EFIS SYM GEN L	11F29	(RIGHT) EFIS SYM GEN (R)

HSI TRACK — FAULT CODES

EFFECTIVITY

ALL

161390
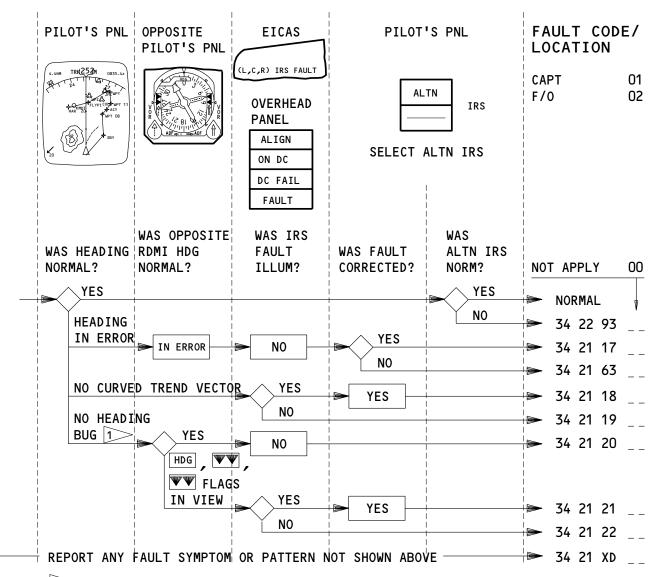
34-FAULT CODE DIAGRAM

02   Page 12
            Nov 10/96

PILOT'S PNL	OPPOSITE PILOT'S PNL	EICAS	PILOT'S PNL	FAULT CODE/ LOCATION	

(L,C,R) IRS FAULT

OVERHEAD PANEL

ALIGN
ON DC
DC FAIL
FAULT

ALTN | IRS

SELECT ALTN IRS

CAPT   01
F/O   02

WAS HEADING NORMAL?	WAS OPPOSITE RDMI HDG NORMAL?	WAS IRS FAULT ILLUM?	WAS FAULT CORRECTED?	WAS ALTN IRS NORM?	NOT APPLY 00
YES				YES	NORMAL
				NO	34 22 93 __
HEADING IN ERROR	IN ERROR	NO	YES		34 21 17 __
			NO		34 21 63 __
NO CURVED TREND VECTOR		YES	YES		34 21 18 __
		NO			34 21 19 __
NO HEADING BUG [1]	YES	NO			34 21 20 __
HDG , ▼▼ , ▼▼ FLAGS IN VIEW		YES	YES		34 21 21 __
		NO			34 21 22 __

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE .... 34 21 XD __

[1] MAP MODE SHOWN. FAULTS RECOGNIZED IN VOR/ILS MODES CAN USE
THE SAME FAULT CODES. IN VOR/ILS MODES "NO HEADING BUG" WILL
BE REPLACED BY HDG FLAG.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11E6	(LEFT) HSI (L)	11F9	EFIS SYM GEN (C, CTR)
6D4	C IRS	11E25	(RIGHT) EFIS CONT PNL (R)	11F21	(CENTER) IRS (C)
6D5	R IRS	11E27	(RIGHT) HSI (R)	11F22	(RIGHT) IRS (R)
11A6	RDMI L	11F1	(LEFT) IRS (L)	11F24	(RIGHT) EFIS DSPL SW (R)
11A7	EFIS DSPL SW L	11F3	EFIS DSPL SW L	11F25	(RIGHT) RDMI (R)
11E4	(LEFT) EFIS CONT PNL (L)	11F8	EFIS SYM GEN L	11F29	(RIGHT) EFIS SYM GEN (R)

HSI HEADING, TREND VECTOR, & ALTN IRS — FAULT CODES

EFFECTIVITY

ALL
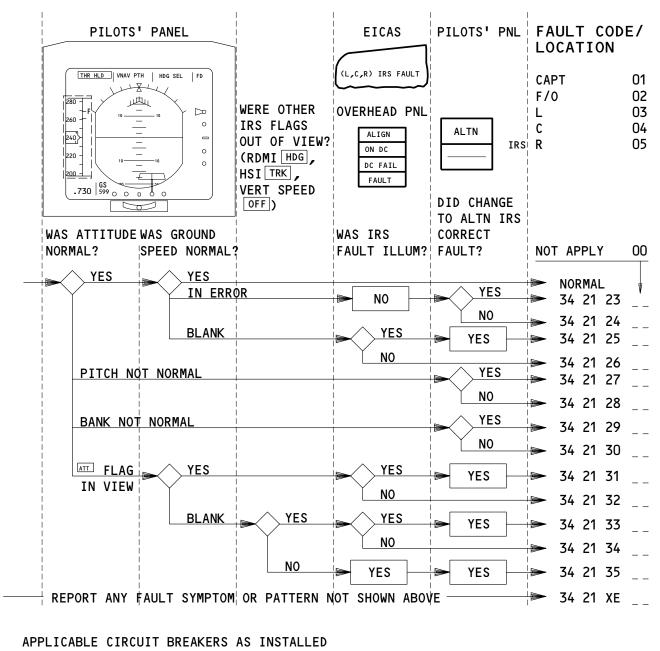
34-FAULT CODE DIAGRAM

02   Page 13
Nov 10/96

161392

PILOTS' PANEL   EICAS   PILOTS' PNL   FAULT CODE/
                                                         LOCATION

(L,C,R) IRS FAULT

THR HLD	VNAV PTH	HDG SEL	FD

WERE OTHER
IRS FLAGS
OUT OF VIEW?   OVERHEAD PNL   CAPT   01
(RDMI HDG,   F/O   02
HSI TRK,   ALIGN   ALTN   L   03
VERT SPEED   ON DC   C   04
OFF)   DC FAIL   IRS   R   05
                  FAULT

WAS ATTITUDE WAS GROUND   WAS IRS   DID CHANGE
NORMAL?   SPEED NORMAL?   FAULT   TO ALTN IRS
                                  ILLUM?   CORRECT
                                             FAULT?   NOT APPLY   00

            YES   YES   NORMAL
                        IN ERROR   NO   YES
                                                 NO   34 21 23 _ _
                                                          34 21 24 _ _
                        BLANK   YES   YES   34 21 25 _ _
                                         NO   34 21 26 _ _
       PITCH NOT NORMAL   YES   34 21 27 _ _
                                                 NO   34 21 28 _ _
       BANK NOT NORMAL   YES   34 21 29 _ _
                                                 NO   34 21 30 _ _
   ATT FLAG   YES   YES   YES   34 21 31 _ _
        IN VIEW   NO   34 21 32 _ _
                  BLANK   YES   YES   YES   34 21 33 _ _
                                         NO   34 21 34 _ _
                            NO   YES   YES   34 21 35 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 21 XE _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11E6	(LEFT) HSI (L)	11F9	EFIS SYM GEN (C, CTR)		
6D4	C IRS	11E25	(RIGHT) EFIS CONT PNL (R)	11F21	(CENTER) IRS (C)		
6D5	R IRS	11E27	(RIGHT) HSI (R)	11F22	(RIGHT) IRS (R)		
11A6	RDMI L	11F1	(LEFT) IRS (L)	11F24	(RIGHT) EFIS DSPL SW (R)		
11A7	EFIS DSPL SW L	11F3	EFIS DSPL SW L	11F25	(RIGHT) RDMI (R)		
11E4	(LEFT) EFIS CONT PNL (L)	11F8	EFIS SYM GEN L	11F29	(RIGHT) EFIS SYM GEN (R)		

ADI ATTITUDE AND GROUND SPEED — FAULT CODES

EFFECTIVITY

ALL
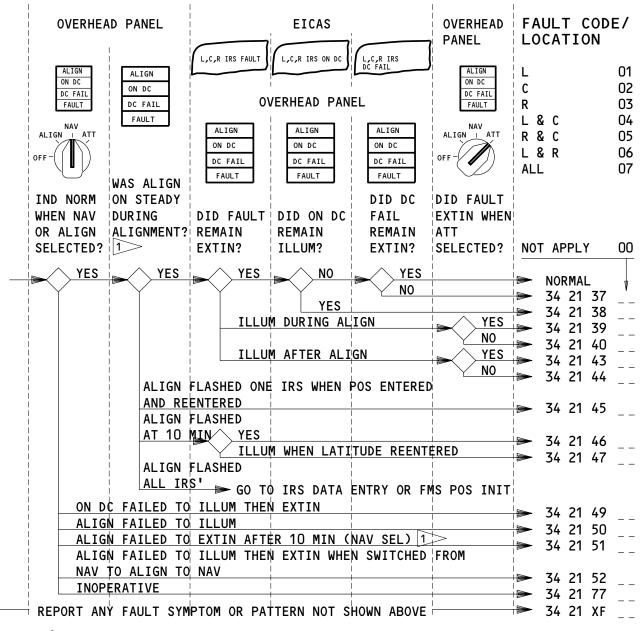
34-FAULT CODE DIAGRAM

05   Page 14
            Nov 10/96

E22022

OVERHEAD PANEL		EICAS			OVERHEAD PANEL	FAULT CODE/ LOCATION	
		L,C,R IRS FAULT	L,C,R IRS ON DC	L,C,R IRS DC FAIL		L	01
ALIGN / ON DC / DC FAIL / FAULT	ALIGN / ON DC / DC FAIL / FAULT		OVERHEAD PANEL		ALIGN / ON DC / DC FAIL / FAULT	C	02
						R	03
NAV / ALIGN / ATT / OFF		ALIGN / ON DC / DC FAIL / FAULT	ALIGN / ON DC / DC FAIL / FAULT	ALIGN / ON DC / DC FAIL / FAULT	NAV / ALIGN / ATT / OFF	L & C	04
						R & C	05
						L & R	06
						ALL	07

| IND NORM WHEN NAV OR ALIGN SELECTED? | WAS ALIGN ON STEADY DURING ALIGNMENT? [1] | DID FAULT REMAIN EXTIN? | DID ON DC REMAIN ILLUM? | DID DC FAIL REMAIN EXTIN? | DID FAULT EXTIN WHEN ATT SELECTED? | NOT APPLY | 00 |

YES — YES — YES — NO — YES → NORMAL

NO → 34 21 37 _ _

YES → 34 21 38 _ _

ILLUM DURING ALIGN — YES → 34 21 39 _ _

NO → 34 21 40 _ _

ILLUM AFTER ALIGN — YES → 34 21 43 _ _

NO → 34 21 44 _ _

ALIGN FLASHED ONE IRS WHEN POS ENTERED AND REENTERED → 34 21 45 _ _

ALIGN FLASHED AT 10 MIN — YES → 34 21 46 _ _

ILLUM WHEN LATITUDE REENTERED → 34 21 47 _ _

ALIGN FLASHED ALL IRS' → GO TO IRS DATA ENTRY OR FMS POS INIT

ON DC FAILED TO ILLUM THEN EXTIN → 34 21 49 _ _

ALIGN FAILED TO ILLUM → 34 21 50 _ _

ALIGN FAILED TO EXTIN AFTER 10 MIN (NAV SEL) [1] → 34 21 51 _ _

ALIGN FAILED TO ILLUM THEN EXTIN WHEN SWITCHED FROM NAV TO ALIGN TO NAV → 34 21 52 _ _

INOPERATIVE → 34 21 77 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 21 XF _ _

[1] ▷ NOTE: THE FOLLOWING WILL CAUSE ALIGN TO FLASH:
1. ENTERED LONG FAILS TO MATCH LAST POS OF IRS.
2. ENTERED LAT FAILS TO MATCH IRS CALCULATED LAT.
3. FAILS TO INITIALIZE AFTER INITIALIZATION PROCEDURE COMPLETE.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	6D5	R IRS	11F21	(CENTER) IRS (C)
6D4	C IRS	11F1	(LEFT) IRS (L)	11F22	(RIGHT) IRS (R)
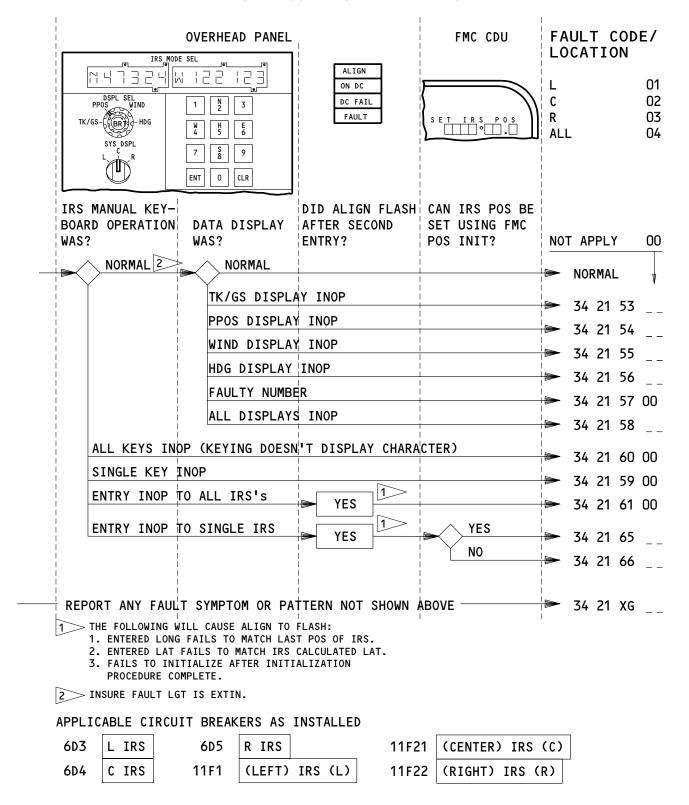
IRS ALIGN FAULTS – FAULT CODES

EFFECTIVITY

ALL

295187

34-FAULT CODE DIAGRAM

02   Page 15
Nov 10/96

OVERHEAD PANEL

FMC CDU

FAULT CODE/ LOCATION

IRS MODE SEL

N 47324   W 122 123

DSPL SEL
PPOS   WIND
TK/GS —(BRT)— HDG
SYS DSPL
L   C   R

1	N 2	3
W 4	H 5	E 6
7	S 8	9
ENT	0	CLR

ALIGN
ON DC
DC FAIL
FAULT

SET IRS POS

L	01
C	02
R	03
ALL	04

IRS MANUAL KEY-BOARD OPERATION WAS?	DATA DISPLAY WAS?	DID ALIGN FLASH AFTER SECOND ENTRY?	CAN IRS POS BE SET USING FMC POS INIT?	NOT APPLY	00

NORMAL ⟨2⟩   NORMAL   NORMAL

TK/GS DISPLAY INOP   34 21 53 _ _

PPOS DISPLAY INOP   34 21 54 _ _

WIND DISPLAY INOP   34 21 55 _ _

HDG DISPLAY INOP   34 21 56 _ _

FAULTY NUMBER   34 21 57 00

ALL DISPLAYS INOP   34 21 58 _ _

ALL KEYS INOP (KEYING DOESN'T DISPLAY CHARACTER)   34 21 60 00

SINGLE KEY INOP   34 21 59 00

ENTRY INOP TO ALL IRS's   YES ⟨1⟩   34 21 61 00

ENTRY INOP TO SINGLE IRS   YES ⟨1⟩   YES   34 21 65 _ _
                                             NO   34 21 66 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 21 XG _ _

⟨1⟩ THE FOLLOWING WILL CAUSE ALIGN TO FLASH:
  1. ENTERED LONG FAILS TO MATCH LAST POS OF IRS.
  2. ENTERED LAT FAILS TO MATCH IRS CALCULATED LAT.
  3. FAILS TO INITIALIZE AFTER INITIALIZATION
     PROCEDURE COMPLETE.

⟨2⟩ INSURE FAULT LGT IS EXTIN.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	6D5	R IRS	11F21	(CENTER) IRS (C)
6D4	C IRS	11F1	(LEFT) IRS (L)	11F22	(RIGHT) IRS (R)

IRS DATA ENTRY AND DISPLAY — FAULT CODES

295188

RESIDUAL GROUNDSPEED ERROR CHECK

THE FMC-CDU POS REF PAGE 2/2 (4/4 PEGASUS EQUIPPED AIRPLANES) DISPLAYS RESIDUAL GROUNDSPEED FOR FMC AND EACH IRS AT THE END OF THE FLIGHT. USE THE FOLLOWING PROCEDURE TO DETERMINE EXCESSIVE RESIDUAL GROUNDSPEED ERROR.

NOTE: THE IRS'S AND FMC'S MUST NOT BE SHUTOFF PRIOR TO COMPLETING THIS PROCEDURE.

    1 - SELECT POS REF PAGE 2/2 (4/4 PEGASUS EQUIPPED AIRPLANES) AND CHECK EACH IRS RESIDUAL GROUNDSPEED ERROR.

    2 - IF THE IRS RESIDUAL GROUNDSPEED ERROR IS 21 KNOTS OR GREATER AFTER COMPLETION OF ANY ONE CHECK (FLIGHT) OR 15 KNOTS OR GREATER AFTER EACH OF TWO CONSECUTIVE CHECKS (FLIGHTS), MAINTENANCE ACTION IS REQUIRED.

RADIAL POSITION ERROR CHECK

THE FMC-CDU POS REF PAGE 2/2 (4/4 PEGASUS EQUIPPED AIRPLANES) DISPLAYS CURRENT POSITION FOR EACH IRS AND AN ACTUAL POSITION ERROR CHECK IS PERFORMED USING THE RTE 1 OR RTE 2 LEGS PAGE. THIS IS DONE BY ENTERING THE ACTUAL (PARKING) AND IRS POSITIONS AS WAYPOINTS AND COMPARING THEIR DIFFERENCE IN NAUTICAL MILES TO A DEVIATION CRITERIA. USE THE FOLLOWING PROCEDURE TO DETERMINE EXCESSIVE RADIAL POSITION ERROR.

NOTE: THE IRS'S AND FMC'S MUST NOT BE SHUTOFF PRIOR TO COMPLETING THIS PROCEDURE. IF IRSs HAVE BEEN SHUTOFF, USE "INERTIAL NAVIGATION SYSTEMS" DATA RECORDED BY FLIGHT CREW IN AIRCRAFT LOGBOOK.

    1 - SELECT THE POS REF 2/2 (4/4 PEGASUS EQUIPPED AIRPLANES) PAGE AND RECORD THE DISPLAYED LATITUDE AND LONGITUDE FOR EACH IRS.

    2 - SELECT THE RTE 1 OR RTE 2 LEGS PAGE AND ENTER ACTUAL LATITUDE AND LONGITUDE (GATE, RAMP, ETC) AS A WAYPOINT. (SEE AVERAGE GATE LATITUDE/LONGITUDE COORDINATES PAGE).

    3 - ENTER DISPLAYED LATITUDE AND LONGITUDE OF IRS AS NEXT WAYPOINT ON RTE 1 OR RTE 2 LEGS PAGE. ENTER MANUALLY RECORDED DATA FROM (1) OR LINE SELECT FROM POS REF PAGE.

    4 - RADIAL POSITION ERROR IS THE DISTANCE BETWEEN THE TWO ENTERED WAYPOINTS OR THE COMPUTED LEG LENGTH.

    5 - COMPARE THE DISTANCE ALONG WITH THE TIME IN NAV MODE TO THE ACCEPT/REJECT LIMITS ON THE FOLLOWING IRS PERFORMANCE CRITERIA CHART. USE "USE AFTER RNP-10 EFFECTIVE DATE" CHART AFTER RNP-10 EFFECTIVE DATE.

    6 - IF THE IRS RADIAL POSITION ERROR FALLS UPON THE SHADED AREA FOR TWO CONSECUTIVE FLIGHTS OR ABOVE THE SHADED AREA FOR ONE FLIGHT, MAINTENANCE ACTION IS REQUIRED.
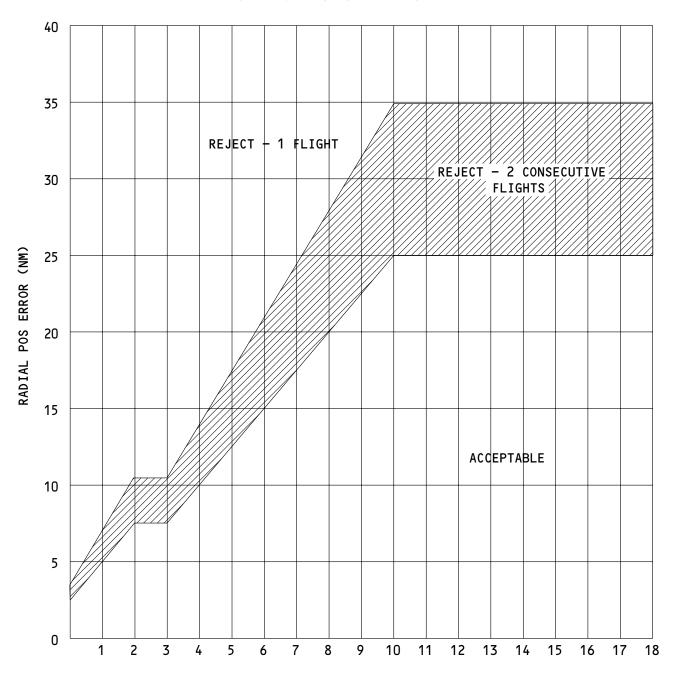
IRS ACCURACY CHECKS

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

02   Page 17
Apr 22/03

H91471

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

IRS PERFORMANCE CRITERIA CHART

RADIAL POS ERROR (NM)

REJECT — 1 FLIGHT

REJECT — 2 CONSECUTIVE
FLIGHTS

ACCEPTABLE

TIME IN NAV POS (HOURS)

IRS ACCURACY CHARTS

EFFECTIVITY
AIRPLANES WITHOUT FANS

34-FAULT CODE DIAGRAM

M12981
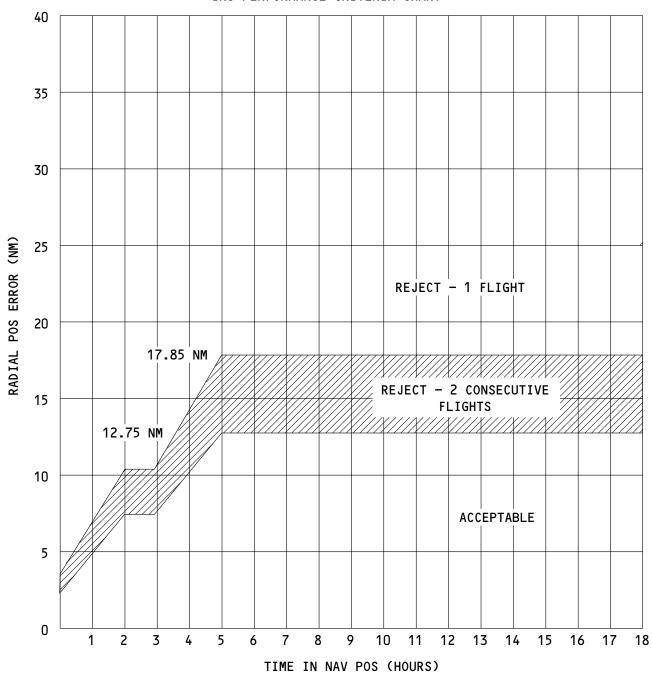
03   Page 18
Aug 22/01

IRS PERFORMANCE CRITERIA CHART

RADIAL POS ERROR (NM)

40

35

30

25

20

REJECT – 1 FLIGHT

17.85 NM

15

REJECT – 2 CONSECUTIVE
FLIGHTS

12.75 NM

10

ACCEPTABLE

5

0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

TIME IN NAV POS (HOURS)

IRS ACCURACY CHECKS
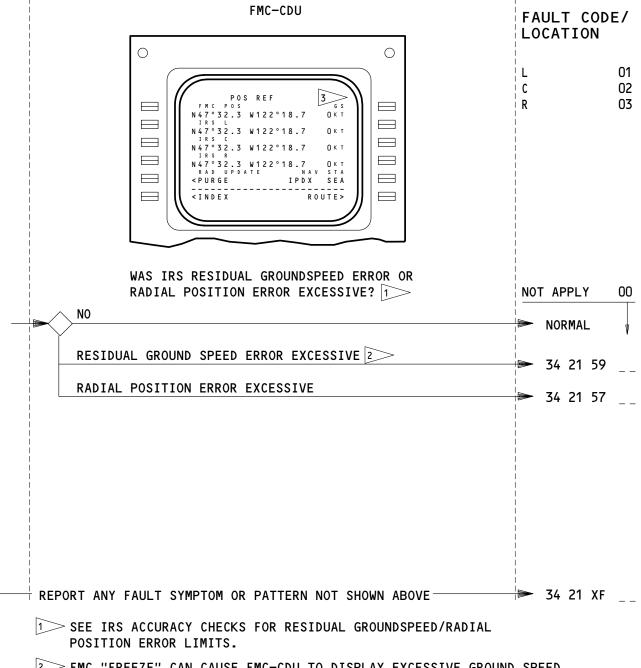
EFFECTIVITY
AIRPLANES WITH FANS

34-FAULT CODE DIAGRAM

06   Page 19
Aug 22/01

M12986

FMC-CDU

```
                POS REF              [3]
       F M C   P O S                    G S
       N 47° 32.3  W 122° 18.7       0 K T
         I R S   L
       N 47° 32.3  W 122° 18.7       0 K T
         I R S   C
       N 47° 32.3  W 122° 18.7       0 K T
         I R S   R
       N 47° 32.3  W 122° 18.7       0 K T
         R A D   U P D A T E       N A V   S T A
       < P U R G E            I P D X   S E A
       ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
       < I N D E X               R O U T E >
```

WAS IRS RESIDUAL GROUNDSPEED ERROR OR
RADIAL POSITION ERROR EXCESSIVE? [1]

NOT APPLY   00

NO   NORMAL

RESIDUAL GROUND SPEED ERROR EXCESSIVE [2]   34 21 59 _ _

RADIAL POSITION ERROR EXCESSIVE   34 21 57 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 21 XF _ _

[1] SEE IRS ACCURACY CHECKS FOR RESIDUAL GROUNDSPEED/RADIAL
    POSITION ERROR LIMITS.

[2] FMC "FREEZE" CAN CAUSE FMC-CDU TO DISPLAY EXCESSIVE GROUND SPEED.
    VERIFY RESIDUAL GROUND SPEED USING IRMP.

[3] AS INSTALLED

APPLICABLE CIRCUIT BREAKERS

NONE

IRS ACCURACY — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

M12989

GLARESHIELD   PILOTS' PANEL   FAULT CODE/ LOCATION

ALTN
___

EFI

CAPT	01
F/O	02

CONTROL STAND

WERE AUTO AND MANUAL INTENSITY CONTROL NORMAL?

DID SELECTION OF ALTN EFI CORRECT THE FAULT?

NOT APPLY   00

YES

ADI DISPLAY WAS?

Symptom		Fault Code
NORMAL		NORMAL
BLANK, INTERMITTENT	YES	34 22 01
	NO	34 22 02
OUT OF FOCUS		34 22 03
SKY GRD BOUNDARY INCORRECT	YES	34 22 05
WHITE HORIZON OFF SKY GRD LINE	NO	34 22 70
	YES	34 22 06
	NO	34 22 71
DISTORTED	YES	34 22 07
SKY AND GRD COLOR OFFSET	NO	34 22 08
	YES	34 22 09
WIDTH OR HEIGHT INCORRECT	NO	34 22 72
	YES	34 22 10
SIZE, LINEARITY OR BRIGHTNESS CHANGED	NO	34 22 11
	YES	34 22 12
	NO	34 22 13
ONLY ONE COLOR	YES	34 22 14
WRONG COLOR OR INTENSITY	NO	34 22 15
	YES	34 22 16
	NO	34 22 17
DISPLAY HAS COLORED FRINGE		34 22 18
COLOR SHADE IS OFF		34 22 19
SKY-GROUND CIRCLE BLACK INTERMITTENTLY		34 22 04
SLIP INDICATOR NOT CENTERED		34 22 86
AUTO BRIGHTNESS INOP		34 22 74
MANUAL BRIGHTNESS ADJUST IS INOP, UNABLE TO DIM, ETC		34 22 20
MANUAL AND AUTO BRIGHTNESS INOP		34 22 21
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE		34 22 XA

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A7	EFIS DSPL SW L	11E24	(RIGHT) ADI (R)	11F9	(RIGHT) EFIS SYM GEN (C, CTR)
11E3	(LEFT) ADI (L)	11F3	EFIS DSPL SW (L)	11F24	(RIGHT) EFIS DSPL SW (R)
		11F8	EFIS SYM GEN L	11F29	(RIGHT) EFIS SYM GEN (R)

ADI DISPLAY — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

08   Page 21
Dec 22/02

295189

PILOTS' PANEL

FAULT CODE/
LOCATION

CAPT   01
F/O   02

```
┌──────────┐
│   ALTN   │
├──────────┤     EFI
│ ───────  │
└──────────┘
```

DID SELECTION OF ALTN EFI
CORRECT THE FAULT?

WAS HSI DISPLAY NORMAL?

NOT APPLY   00

Symptom	ALTN EFI	Fault Code	
YES		NORMAL	
BLANK, INTERMITTENT	YES	34 22 22	_ _
	NO	34 22 23	_ _
OUT OF FOCUS		34 22 24	_ _
DISTORTED	YES	34 22 26	_ _
	NO	34 22 27	_ _
WIDTH OR HEIGHT INCORRECT	YES	34 22 28	_ _
SIZE CHANGED, LINEARITY	NO	34 22 29	_ _
OR BRIGHTNESS ALSO CHANGED	YES	34 22 30	_ _
	NO	34 22 31	_ _
DISPLAY IS ONLY ONE COLOR	YES	34 22 32	_ _
DISPLAY IS WRONG COLOR OR	NO	34 22 33	_ _
INTENSITY	YES	34 22 34	_ _
	NO	34 22 35	_ _
DISPLAY HAS COLORED FRINGE		34 22 36	_ _
COLOR SHADE IS OFF		34 22 37	_ _
AUTO BRIGHTNESS INOP.		34 22 77	_ _
MANUAL BRIGHTNESS ADJUST IS INOP.		34 22 38	_ _
MANUAL AND AUTO BRIGHTNESS INOP.		34 22 39	_ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 22 XB _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A7	EFIS DSPL SW L	11F8	EFIS SYM GEN (L)
11E6	(LEFT) HSI (L)	11F9	EFIS SYM GEN (CTR, C)
11E27	(RIGHT) HSI (R)	11F24	(RIGHT) EFIS DSPL SW (R)
11F3	EFIS DSPL SW (L)	11F29	(RIGHT) EFIS SYM GEN (R)

HSI DISPLAY — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

03   Page 22
            Aug 22/01

161396

PILOTS' PANEL

FAULT CODE/
LOCATION

CAPT   01
F/O   02

SG FAIL

SG FAIL

ALTN
_____   EFI

SELECT ALTN EFI

EICAS

INSTR SWITCH

▷2

				NOT APPLY 00
WAS ADI AND HSI NORMAL?	WAS SG FAIL MSG DISPLAYED?	WAS FAULT CORRECTED?	WAS ALTN EFI NORMAL?	

WAS ALTN EFI NORMAL? — YES → NORMAL

NORMAL ◇ ▷3 — NO → 34 22 89 _ _

DISPLAYS INTERMITTENT — YES → 34 22 94 _ _
                        NO → 34 22 95 _ _

BOTH BLANK — YES ◇ — YES → 34 22 92 _ _
               NO — YES ◇ → 34 22 40 _ _
                        NO → 34 22 73 _ _

BOTH DISPLAYS UNINTELLIGIBLE → 34 22 41 _ _

NO LINES ON EITHER DISPLAY → 34 22 42 _ _

LINES ARE OFFSET ON BOTH → 34 22 43 _ _

SKY-GROUND CIRCLE ON ADI AND WXR RADAR ON HSI GO BLACK → 34 22 47 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 22 XC _ _

▷1 LOSS OF ADI & HSI DISPLAYS MAY BE CAUSED BY MOVING AIRPLANE DURING IRS ALIGNMENT.

▷2 EICAS MSG DISPLAYS IF BOTH CAPT & F/O EFI SELECTED TO ALTN.

▷3 IF GEN OFF LGT IS INTERMITTENT, SEE ELECTRICAL CHAPTER "GENERATOR AND BUS TIE CONTROL" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

			11F9	EFIS SYM GEN (C, CTR)
11E3	(LEFT) ADI (L)	11E27	(RIGHT) HSI (R)	11F10	EFIS INSTR CMPTR
11E6	(LEFT) HSI (L)	11F3	(LEFT) EFIS DISP SW	11F24	(RIGHT) EFIS DISP SW (R)
11E24	(RIGHT) ADI (R)	11F8	EFIS SYM GEN L	11F29	(RIGHT) EFIS SYM GEN (R)

ALTN EFI, ADI AND HSI — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

02   Page 23
Nov 10/96

E21032

FORWARD ELECTRONIC PANEL

CAPT	01
F/O	02

RANGE   HSI   BRT

160 320
80
40
20
10

EXP
VOR   ILS
VOR   MAP
FULL
ILS   PLAN

WXR
ON

MAP

NAV AID	ARPT	RTE DATA	WPT
—	ON	ON	ON
ON			

DID HSI MODE SLCTR POSITION CORRESPOND TO HSI DISPLAY?

WERE HSI MAP SWITCHES OK?

WAS HSI RANGE SLCTR OK?

NOT APPLY   00

YES   YES   YES   NORMAL

NO   34 22 46 _ _

NO   34 22 45 _ _

NO-ILS DISPLAYED ▷1   34 22 44 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ➤ 34 22 XD _ _

▷1 DH AND WX RADAR FAIL FLAGS DISPLAYED.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E4	(LEFT) EFIS CONT PNL (L)	11E25	(RIGHT) EFIS CONT PNL (R)
11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)

FMC-HSI RANGE, MAP AND MODE SELECT — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

174587

PILOTS' PANEL

FAULT CODE/
LOCATION

CAPT   01
F/O   02
CAPT & F/O   03

HDG REF
NORM

2

TRUE

1

1

WITH SW PLACED IN TRUE, WERE
INSTR CHANGES NORM?

WITH AIRPLANE ABOVE 73°N OR
BELOW 60°S WERE INSTR CHANGES
NORM?

NOT APPLY   00

YES   YES   NORMAL

                                 NO   34 22 87 _ _

NO   34 22 88 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 22 XG _ _

1 > WITH SW IN TRUE: 2 > AS INSTALLED
    – HSI & RDMI TRUE HEADING DISPLAYED.
    – IF AFDS IS IN HDG SEL, WILL CHANGE TO HDG HOLD.

    WITH SW IN NORM AND ABOVE 73°N OR BELOW 60°S:
    – SAME AS ABOVE EXCEPT RDMI HDG FLAG IN VIEW.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11E6	(LEFT) HSI (L)	11F21	(CENTER) IRS (C)
6D4	C IRS	11E25	(RIGHT) EFIS CONT PNL (R)	11F22	(RIGHT) IRS (R)
6D5	R IRS	11E27	(RIGHT) HSI (R)	11F24	(RIGHT) EFIS DSPL SW (R)
11A1	VOR/MKR L	11E33	(RIGHT) VOR (R)	11F25	(RIGHT) RDMI (R)
11A6	RDMI L	11F1	(LEFT) IRS (L)	11F29	(RIGHT) EFIS SYM GEN (R)
11A7	EFIS DSPL SW L	11F8	EFIS SYM GEN L		
11E4	(LEFT) EFIS CONT PNL (L)	11F9	EFIS SYM GEN (C, CTR)		

HEADING REFERENCE – FAULT CODES

EFFECTIVITY

161404

ALL

34-FAULT CODE DIAGRAM

02   Page 25
            Aug 10/97

N14533
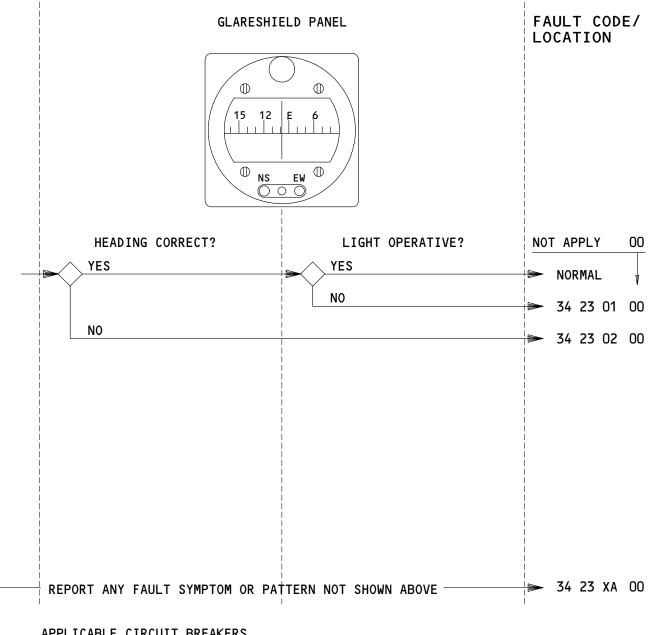
NOT USED
Figure 19

GLARESHIELD PANEL

FAULT CODE/
LOCATION

```
        15  12  E  6
           NS   EW
```

HEADING CORRECT?   LIGHT OPERATIVE?   NOT APPLY   00

◇ YES   ◇ YES   NORMAL

                            NO   34 23 01 00

NO   34 23 02 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ───▷ 34 23 XA 00

APPLICABLE CIRCUIT BREAKERS

11B7 | LIGHTS STBY INSTR |

STANDBY COMPASS — FAULT CODES

EFFECTIVITY

ALL
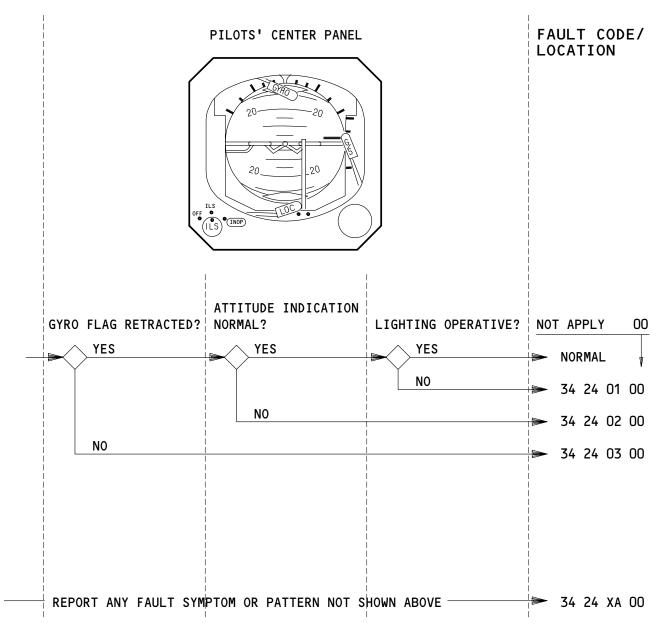
34-FAULT CODE DIAGRAM

03   Page 27
        Aug 22/02

34623

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

PILOTS' CENTER PANEL

FAULT CODE/
LOCATION

GYRO FLAG RETRACTED?   ATTITUDE INDICATION NORMAL?   LIGHTING OPERATIVE?   NOT APPLY   00

YES   YES   YES   NORMAL

NO   34 24 01 00

NO   34 24 02 00

NO   34 24 03 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 24 XA 00

APPLICABLE CIRCUIT BREAKERS

11A5   STBY ATT IND

11B7   LIGHTS STBY INSTR

STANDBY ATTITUDE INDICATOR — FAULT CODES

EFFECTIVITY

ALL

174589
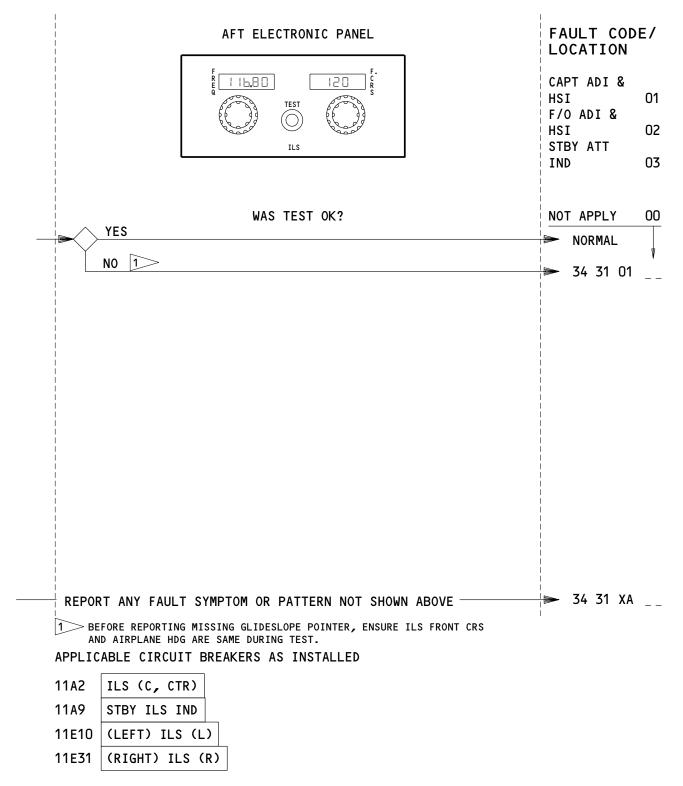
34-FAULT CODE DIAGRAM

05   Page 28
Aug 22/02

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

AFT ELECTRONIC PANEL

```
F
R   | 116.80 |        | 120 |   F.
E                             C
Q                             R
                              S

        TEST

        ILS
```

	FAULT CODE/ LOCATION
	CAPT ADI &
	HSI 01
	F/O ADI &
	HSI 02
	STBY ATT
	IND 03

WAS TEST OK?

NOT APPLY   00

◇ ——— YES ————————————————————→ NORMAL

└— NO ▷1 ————————————————————→ 34 31 01   _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ————→ 34 31 XA _ _

▷1 BEFORE REPORTING MISSING GLIDESLOPE POINTER, ENSURE ILS FRONT CRS
   AND AIRPLANE HDG ARE SAME DURING TEST.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A2	ILS (C, CTR)
11A9	STBY ILS IND
11E10	(LEFT) ILS (L)
11E31	(RIGHT) ILS (R)

ILS TEST – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

174590

PILOTS' PANELS	COCKPIT	AUDIO SEL PANEL	PILOTS' PANEL	FAULT CODE/ LOCATION

ALTN EFI

L	01
R	02
C	03
CAPT	04
F/O	05
1st OBS	06
CAPT & F/O	07

WAS ILS [1] DISPLAY ON ADI AND HSI (ILS MODE) NORMAL?

WAS ILS IDENT RECEIVED?

WAS ILS IDENT RECEIVED AT OTHER CREW STATION?

DID SELECTION OF ALTN EFI CORRECT THE FAULT?

NOT APPLY   00

Symptom	Fault Code
YES → YES	NORMAL
WEAK → WEAK	34 31 44 _ _
NO → YES	34 31 32 _ _
NO	34 31 33 _ _
G/S FLAGS IN VIEW	34 31 34 _ _
LOC FLAGS IN VIEW	34 31 35 _ _
G/S AND LOC FLAGS IN VIEW	34 31 36 _ _
NO LOC POINTER OR COURSE IND → NO	34 31 37 _ _
G/S-FALSE LATE CAPTURE → YES → YES	34 31 45 _ _
NO G/S POINTERS	34 31 60 00
NO G/S, LOC OR COURSE IND → NO	34 31 38 _ _ / 34 31 39 _ _
NO POINTERS EITHER SIDE	34 31 40 07
NO ADI DEV SCALE OR HSI COURSE BAR → YES	34 31 41 _ _
LOC POINTER/COURSE IND ABNORMAL → NO	34 31 42 _ _
→ YES	34 31 43 _ _
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE	34 31 XB _ _

[1] IF 2 DOT LOC SCALE IS DISPLAYED WHEN IN 4 DOT RANGE, SYSTEM MAY HAVE BEEN SHUTDOWN IN 2 DOT RANGE. SYSTEM WILL RESET WHEN WITHIN RADIO ALT RANGE. ALTN EFI WILL DISPLAY C ILS.

[2] ABNORMAL LOC DEVIATION MAY BE CAUSED BY FREQ/BEARING INCONSISTANCY OF 3 ILS'S, OR WX RADAR INTERFERENCE IF ILS IS TUNED TO FREQ NOT IN USE OR ILS SIGNAL GOES OFF THE AIR. IF FREQ ABNORMAL SEE SEE "HSI FAULTS IN ILS MODE" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A2	ILS (C, CTR)	11E10	(LEFT) ILS (L)	11E31	(RIGHT) ILS (R)

ILS ADI/HSI DISPLAYS AND IDENT – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

E21034

PILOTS' PANELS

ILS MODE HSI DISPLAY NORMAL?   NOT APPLY   00

◇ YES ──▷ NORMAL

DISPLAYED ILS
FREQ DISAGREES
WITH FREQ IND ──────────────────────────────────▷ 34 31 47 _ _

SELECTED CRS
POINTER
DISAGREES WITH
CRS IND ──▷ 34 31 48 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ──▷ 34 31 XC _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E10 | (LEFT) ILS (L) |

11E31 | (RIGHT) ILS (R) |

HSI FAULTS IN ILS MODE – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

174753

PILOTS' CENTER PANEL   AFT ELECTRONIC PANEL   FAULT CODE/
                                                            LOCATION

```
 F                              F.
 R   1 10.00                    C   270.
 E                              R
 Q                              S

           TEST

           ILS
```

ILS INDICATIONS ON   FREQ INDICATOR   CRS INDICATOR
STBY ATT IND NORMAL?   RESPONSE NORM?   RESPONSE NORM?   NOT APPLY   00

      YES   YES   YES   NORMAL
                                              NO   34 31 49 00
                                              MISSING SEGMENT 34 31 58 00
                          NO   34 31 50 00
                          MISSING SEGMENT   34 31 59 00
   G/S FLAG IN VIEW   34 31 51 00
   LOC FLAG IN VIEW   34 31 52 00
   G/S & LOC FLAGS IN VIEW   34 31 53 00
   LOC DEV POINTER NOT DISPLAYED   34 31 54 00
   G/S DEV POINTER NOT DISPLAYED   34 31 55 00
   BOTH DEV POINTERS NEVER DISPLAYED   34 31 56 00
   DEV POINTER MOVEMENT ABNORMAL   34 31 57 00
   OFF DOES NOT RETRACT DEV POINTERS   34 24 05 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 31 XD 00

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A2   ILS (C, CTR)
11A9   STBY ILS (IND)

ILS STANDBY ATTITUDE DISPLAY AND ILS CONTROLS - FAULT CODES

EFFECTIVITY

        ALL

                              34-FAULT CODE DIAGRAM

                                   07   Page 32
                                             Aug 22/02
727402
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

PILOTS' PANELS	COCKPIT	AUDIO SEL PANEL	FAULT CODE/ LOCATION

INNER/ AIRWAYS

MIDDLE

OUTER

CAPT   01
F/O   02
1st OBS   03

WERE LIGHTS NORMAL?   IDENT RECEIVED?   IDENT RECEIVED AT OTHER CREW STATION?   NOT APPLY   00

YES   YES   → NORMAL

NO   YES   → 34 32 08 _ _

NO   → 34 32 09 00

BOTH INNER/AIRWAYS FAIL TO ILLUM → 34 32 10 00

BOTH MIDDLE FAIL TO ILLUM → 34 32 04 00

BOTH OUTER FAIL TO ILLUM → 34 32 05 00

ALL FAIL TO ILLUM   YES → 34 32 06 00

NO → 34 32 07 00

ALL LGTS ILLUM INTERMITTENTLY   NO → 34 32 11 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 32 XA _ _

APPLICABLE CIRCUIT BREAKERS

11A1 | VOR/MKR L |

MARKER BEACON — FAULT CODES

EFFECTIVITY

615241

ALL

34-FAULT CODE DIAGRAM

10   Page 33
Aug 22/02

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

	PILOTS' PANELS		CONT STAND	PLTS' PNLS	FAULT CODE/ LOCATION	

DH

RA

700

DH100
1750

ADI

RST DH REF
1 0 0

ALTN

EFI

CAPT   01
F/O   02

WAS DH DISPLAYED?	WAS RA DISPLAYED?	WERE INDICA- TIONS NORMAL?	WAS CONTROL OPERATION NORMAL?	WERE INDICATIONS NORMAL WITH ALTN SLCTD?	NOT APPLY 00

NO   NO   YES   YES

NORMAL

DH REF IND INOP   34 33 01 _ _

DH RESET
INOP   YES   34 33 02 _ _

NO   34 33 03 _ _

ALT
INTERMITTENT   YES   34 33 26 _ _

NO   34 33 27 _ _

DH ALERT ALT
DISAGREES WITH REF IND   YES   34 33 06 _ _

NO   34 33 07 _ _

RA BLANK BELOW 2500   34 33 08 _ _

RA DISPLAY INCORRECT FOR
RA ABOVE 999'.   34 33 22 _ _

DH DISPLAY INCORRECT FOR
RA BETWEEN DH AND 999'.   34 33 09 _ _

RA DISPLAY DID NOT CHANGE
AT 999'.   34 33 23 _ _

ALERT TONE, 1 BLEEP AT DH + 50   34 33 24 00

DH DISPLAY DID NOT CHANGE AT DH   34 33 10 _ _

RA DISPLAY INCORRECT FOR
RA BELOW 999'.   34 33 25 _ _

RA HEIGHT INACCURATE   34 33 11 _ _

DH DID NOT RESET AUTOMATICALLY   34 33 12 _ _

YES (STEADY, IMTERMITTENT)   34 33 13 _ _

34 22 90 _ _

YES

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 33 XA _ _

1 ⊳ AN INOP L RADIO ALTIMETER WILL CAUSE THE CONFIG LGT TO ILLUM AND GEAR
NOT DOWN MSG TO APPEAR ABOVE 800' RA WITH A THRUST LEVER RETARDED.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E4	(LEFT) EFIS CONT PNL (L)	11F20	(CENTER) RAD ALTM (C)
11E25	(RIGHT) EFIS CONT PNL (R)	11F26	(RIGHT) RAD ALTM (R)
11F5	(LEFT) RAD ALTM (L)		

RADIO ALTIMETER & DH (ADI) — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

A01550

NOT USED
Figure 28

EFFECTIVITY

ALL

N14537

34-FAULT CODE DIAGRAM

03   Page 35
Aug 22/02

CONTROL STAND

WXR

ON

ACTIVATES/
DEACTIVATES WX RADAR
ON HSI?

PILOTS' PANELS

WXR MESSAGE DISPLAYED
ON HSI WAS?

TEST

WAS
WXR TEST MESSAGE
DISPLAYED ON HSI
DURING TEST?

FAULT CODE/ LOCATION

L	01
R	02
CAPT	03
F/O	04
BOTH	05

NOT APPLY   00

Control Stand	WXR Message	Test Message	Fault Code	Location
YES	NONE	YES	NORMAL	
		NO	34 43 65	_ _
	WXR FAIL	TEST NOT ATTEMPTED	34 43 03	_ _
		TEST INOP	34 43 39	_ _
		WXR FAIL RT	34 43 05	_ _
		WXR FAIL ANT	34 43 06	_ _
		WXR FAIL CONT	34 43 07	_ _
		WXR FAIL WEAK	34 43 01	_ _
		WXR FAIL STAB	34 43 02	_ _
		WXR FAIL ATT	34 43 66	_ _
	WXR WEAK		34 43 67	_ _
	WXR STAB		34 43 71	_ _
	WXR ATT		34 43 74	_ _
	WXR DSPY		34 43 10	_ _
	WXR RANGE DISAGREE		34 43 08	_ _
	WXR/MAP RANGE DISAGREE		34 43 09	_ _
NO	NONE		34 43 11	_ _
	WXR DSPY		34 43 76	_ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ————▷ 34 43 XA _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E12	WX RADAR IND
11F2	WX RADAR (L)
11F23	WX RADAR (R)

WEATHER RADAR FAULTS (HSI) — FAULT CODES

191656

AFT ELECTRONIC PANEL

FAULT CODE/
LOCATION

L	01
R	02
BOTH	03

WAS CONTROL PANEL SELECTION NORMAL?

NOT APPLY 00

FROM
SHEET 1 ◇ YES ─────────────────────────────▷ NORMAL

MODE (TEST, WX, MAP) ABNORMAL ──────────────▷ 34 43 17 _ _

GAIN ABNORMAL ──────────────────────────────▷ 34 43 19 _ _

TILT ABNORMAL ──────────────────────────────▷ 34 43 13 _ _

SYSTEM SELECT INOP ─────────────────────────▷ 34 43 36 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ──────▷ 34 43 XB 00

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E12	WX RADAR IND
11F2	WX RADAR (L)
11F23	WX RADAR (R)

WEATHER RADAR CONTROLS - FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

07   Page 37
          Aug 22/02

F02232

PILOTS' PANELS

L   01
R   02
BOTH   03

4.4NM   TRK   252   0835.4z

24   27

JFK   WPT
WPZ
FLYPI   COL   WPT 11
KMDT   ACY
HAR   WPT 08

SBY

110.10

HSI WXR DISPLAY QUALITY?

NOT APPLY   00

OK	NORMAL
SPOKING PRESENT	34 43 47 _ _
SWEEP ABNORMAL	34 43 49 _ _
RETURN ABNORMAL	34 43 51 _ _
PRECIP INTENSITY TOO STRONG OR TOO WEAK	34 43 53 _ _
MISSING	34 43 55 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 43 XC _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E12	WX RADAR IND
11F2	WX RADAR (L)
11F23	WX RADAR (R)

WEATHER RADAR DISPLAY QUALITY – FAULT CODES

E21376

NOT USED
Figure 31

EFFECTIVITY

ALL
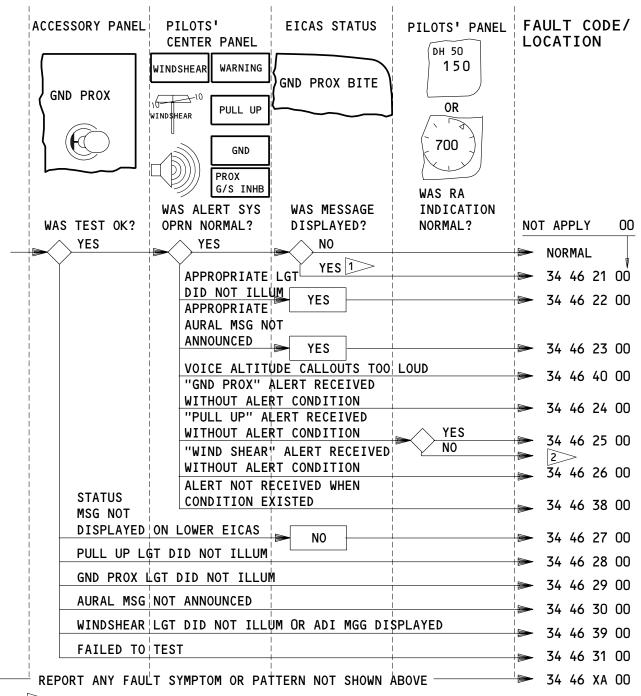
34-FAULT CODE DIAGRAM

02   Page 39
Aug 22/02

N14539

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

| ACCESSORY PANEL | PILOTS' CENTER PANEL | EICAS STATUS | PILOTS' PANEL | FAULT CODE/ LOCATION |

GND PROX

WINDSHEAR | WARNING

WINDSHEAR

PULL UP

GND

PROX G/S INHB

GND PROX BITE

DH 50
150

OR

700

WAS TEST OK? YES	WAS ALERT SYS OPRN NORMAL? YES	WAS MESSAGE DISPLAYED? NO	WAS RA INDICATION NORMAL?	NOT APPLY 00
				NORMAL
		YES [1]		34 46 21 00
	APPROPRIATE LGT DID NOT ILLUM	YES		34 46 22 00
	APPROPRIATE AURAL MSG NOT ANNOUNCED	YES		34 46 23 00
	VOICE ALTITUDE CALLOUTS TOO LOUD			34 46 40 00
	"GND PROX" ALERT RECEIVED WITHOUT ALERT CONDITION			34 46 24 00
	"PULL UP" ALERT RECEIVED WITHOUT ALERT CONDITION		YES	34 46 25 00
	"WIND SHEAR" ALERT RECEIVED WITHOUT ALERT CONDITION		NO [2]	34 46 26 00
	ALERT NOT RECEIVED WHEN CONDITION EXISTED			34 46 38 00
STATUS MSG NOT DISPLAYED	ON LOWER EICAS	NO		34 46 27 00
	PULL UP LGT DID NOT ILLUM			34 46 28 00
	GND PROX LGT DID NOT ILLUM			34 46 29 00
	AURAL MSG NOT ANNOUNCED			34 46 30 00
	WINDSHEAR LGT DID NOT ILLUM OR ADI MGG DISPLAYED			34 46 39 00
	FAILED TO TEST			34 46 31 00
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE				34 46 XA 00

[1] GND PROX BITE WILL BE DISPLAYED IF L-IRU IS NOT ALIGNED, OR EITHER L-ADC, L-RA OR L-ILS ARE NOT ON. VERIFY THESE ARE OK BEFORE REPORTING THIS CODE.

[2] SEE "RADIO ALTIMETER & DH (ADI)" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS

11F4   GND PROX

**GROUND PROXIMITY & WINDSHEAR WARNING
TEST AND OPERATION – FAULT CODES**
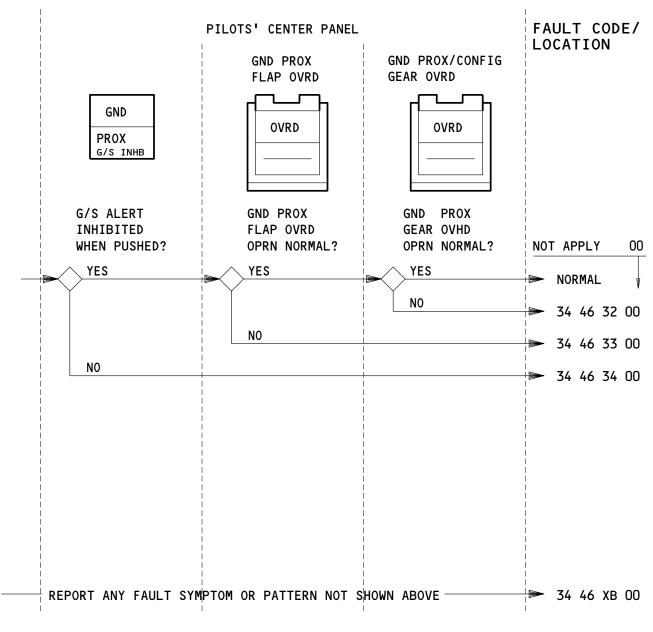
295342

PILOTS' CENTER PANEL

FAULT CODE/
LOCATION

GND PROX
FLAP OVRD

GND PROX/CONFIG
GEAR OVRD

```
 ┌─────────┐
 │  GND    │
 ├─────────┤
 │  PROX   │
 │ G/S INHB│
 └─────────┘
```

OVRD

OVRD

G/S ALERT
INHIBITED
WHEN PUSHED?

GND PROX
FLAP OVRD
OPRN NORMAL?

GND   PROX
GEAR OVHD
OPRN NORMAL?

NOT APPLY   00

YES   YES   YES   NORMAL

NO   34 46 32 00

NO   34 46 33 00

NO   34 46 34 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 46 XB 00

APPLICABLE CIRCUIT BREAKERS

11F4   │ GND PROX │

GROUND PROXIMITY WARNING, INHIBIT AND OVERRIDE — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

08   Page 41
Aug 22/02

F57435

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

PILOTS' PANEL	GLARESHIELD	FAULT CODE/LOCATION

```
                                                        CAPT      01
                                                        F/O       02
                                                        L         03
                                                        R         04
```

FREQ 116.80   120 CRS

	WERE HSI	WAS FREQ	WAS CRS IND		
WAS RDMI VOR	INDICATIONS	RESPONSE	RESPONSE		
BEARING NORMAL?	NORMAL?	NORMAL?	NORMAL?	NOT APPLY	00

YES — YES — YES — YES → NORMAL

NO → 34 51 21 _ _

MISSING SEGMENT → 34 51 41 _ _

NO → 34 51 22 _ _

MISSING   SEGMENT → 34 51 42 _ _

VOR IN VIEW → 34 51 23 _ _

COURSE POINTER, LINE AND LATERAL DEVIATION BAR MISSING → 34 51 24 _ _

VOR BEARING POINTER MOVEMENT ABNORMAL ON ONE RDMI → 34 51 36 _ _

UNABLE TO SELECT VOR WITH VOR/ADF SELECTOR → 34 51 25 _ _

BRG FLAG IN VIEW ON ONE RDMI → 34 51 26 _ _

SAME FLAG BOTH RDMI'S   VOR IN VIEW → 34 51 27 _ _

LATERAL DEV BAR MISSING   YES   1 → 34 51 28 _ _

NO → 34 51 29 _ _

COURSE POINTER, LINE AND LATERAL DEVIATION BAR MISSING → 34 51 30 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 51 XA _ _

1 ▷ VOR FLAG ON THE RDMI AND MISSING LATERAL DEVIATION BAR
     ARE NORMAL WHEN NO VOR SIGNAL IS AVAILABLE. USE THIS
     CODE ONLY WHEN YOU KNOW VOR SIGNAL IS AVAILABLE.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A1	VOR MKR L	11E33	(RIGHT) VOR (R)
11A6	RDMI L	11F25	(RIGHT) RDMI (R)

VOR — CONTROL AND DISPLAY — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

PILOTS' PANEL   GLARESHIELD

FAULT CODE/
LOCATION

CAPT	01
F/O	02
L	03
R	04
BOTH	05

AUTO / MAN

SEA

WAS SAME BRG
FLAG IN VIEW ON
BOTH RDMIS WITH
HSI IN MAP?

WAS SWITCH
MECHANICAL,
LIGHT(S)
OPERATION
NORMAL?

WAS AUTO TUNE
NORM?

WAS VOR RADIAL
DISPLAYED ON
HSI IN MAP MODE
AND MANUAL
TUNING?

NOT APPLY   00

NO   YES   YES   YES   NORMAL

(MECHANICAL)
STUCK IN
AUTO OR MAN,
WILL NOT
STAY IN, ETC

NO   NO

LIGHT(S) INOP

▷1

YES

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE

34 51 31	_ _
34 51 40	_ _
34 51 32	_ _
34 51 37	_ _
34 51 33	_ _
34 51 XB	_ _

▷1   VERIFY VOR IS OK WITH HSI IN VOR MODE BEFORE
SELECTING THIS CODE. IF NOT SELECT CODE
FROM "VOR – CONTROL AND DISPLAY" PAGE.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A1	VOR MKR L	11E33	(RIGHT) VOR (R)
11A6	RDMI L	11F25	(RIGHT) RDMI (R)

VOR – HSI IN MAP MODE – FAULT CODES
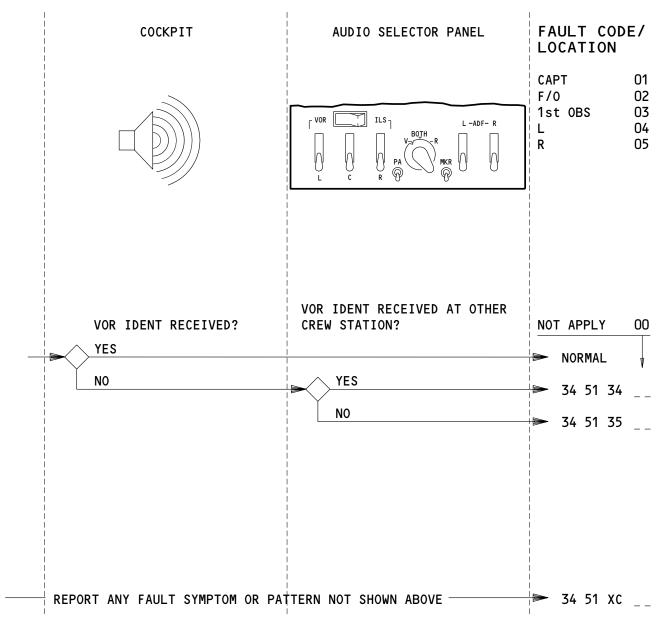
EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

02   Page 43
Aug 22/02

174769

COCKPIT	AUDIO SELECTOR PANEL	FAULT CODE/ LOCATION

FAULT CODE/
LOCATION

CAPT   01
F/O   02
1st OBS   03
L   04
R   05

VOR IDENT RECEIVED AT OTHER
CREW STATION?

VOR IDENT RECEIVED?   NOT APPLY   00

YES   NORMAL

NO   YES   34 51 34 _ _

NO   34 51 35 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 51 XC _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A1 | VOR/MKR L |

11E33 | (RIGHT) VOR (R) |

VOR IDENT — FAULT CODES

EFFECTIVITY

34-FAULT CODE DIAGRAM

ALL

615244

EICAS

ATC FAULT

AFT ELECTRONIC PANEL

AFT ELECTRONIC PANEL

AUTO ON / TRAFFIC

A T C

OFF ON / ALT RPTG

1

XPNDR ◯ FAIL

ATC L ▢▢▢▢

IDENT

XPNDR   TA ONLY   TA/RA

STBY   TEST

L R / XPNDR

T C A S

FAULT CODE/ LOCATION

L	01
R	02
BOTH	
L & R	03

XPNDR ◯ FAIL

1

WAS MSG DISPLAYED AND/OR FAIL LIGHT ILLUMINATED?

WAS SYSTEM OPERATION NORMAL?

WAS ATC CODE IND OPERATION NORMAL?

NOT APPLY   00

Condition	Fault Code
NO → YES → YES	NORMAL
NO	34 53 01 00
MISSING SEGMENT	34 53 10 00
IDENT INOP	34 53 08 _ _
ALT REPORTING INOP → YES	34 53 02 _ _
BLANK	34 53 11 _ _
WEAK OR INTERMITTENT XMISSION	34 53 03 _ _
NO XMISSION 1 TRANSPONDER	34 53 04 _ _
NO XMISSION EITHER TRANSPONDER	34 53 05 00
INCORRECT CODE BOTH TRANSPONDERS	34 53 06 00
YES → YES	34 53 09 _ _
NO	34 53 07 _ _
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE	34 53 XA _ _

1 ▷ AS INSTALLED

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11F7	(LEFT) ATC (L)
11F28	(RIGHT) ATC (R)

ATC TRANSPONDER – FAULT CODES

EFFECTIVITY

ALL
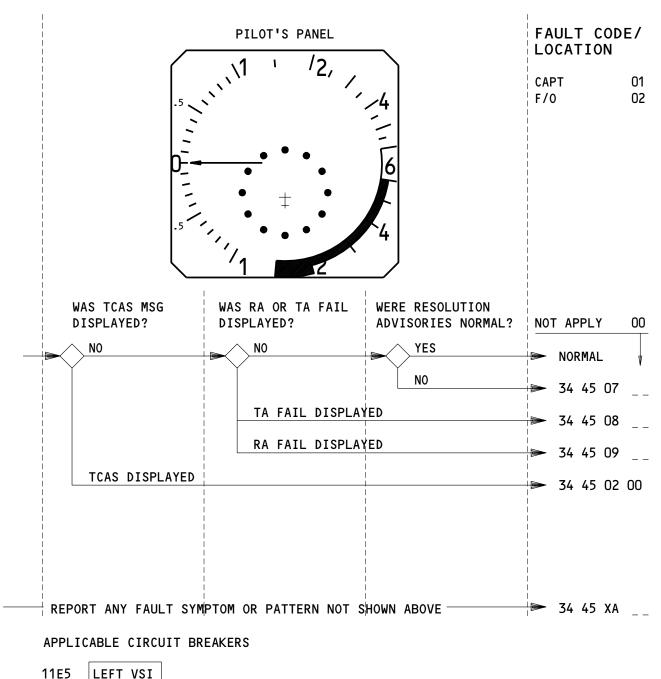
34-FAULT CODE DIAGRAM

16   Page 45
Aug 22/02

C62195

PILOT'S PANEL

WAS TCAS MSG DISPLAYED?	WAS RA OR TA FAIL DISPLAYED?	WERE RESOLUTION ADVISORIES NORMAL?	
			NOT APPLY 00
NO	NO	YES → NORMAL	
		NO → 34 45 07 _ _	
	TA FAIL DISPLAYED → 34 45 08 _ _		
	RA FAIL DISPLAYED → 34 45 09 _ _		
TCAS DISPLAYED → 34 45 02 00			

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ⟹ 34 45 XA _ _

APPLICABLE CIRCUIT BREAKERS

11E5 | LEFT VSI |

11E26 | RIGHT VSI |

VERTICAL SPEED INDICATOR TCAS – FAULT CODES

E21440

ELECTRONIC PANEL	PILOTS' PANEL	COCKPIT	FAULT CODE/ LOCATION

HSI

RDMI

			CAPT 01
			F/O 02
			L 03
			R 04

		WAS DME IDENT RECEIVED?	WAS APPROPRIATE IDENT (ILS OR VOR) RECEIVED?	

HSI MODE WAS?	DME DISPLAY WAS?			NOT APPLY 00

VOR OR ILS	NORMAL	YES		NORMAL
		NO	YES	34 55 11 __
	RDMI MISSING NUMBER, SEGMENT			34 55 20 __
	RDMI DME BLANK			34 55 12 __
	HSI DME BLANK			34 55 13 __
	RDMI AND HSI DME BLANK			34 55 14 __
	1 RDMI AND HSI DME DASHES		YES (VOR)	34 55 15 __
			YES (ILS)	34 55 16 __
			NO	34 55 17 __
	DISTANCE INCORRECT WITH HSI IN ILS MODE			34 55 19 __
2 MAP OR PLAN	RDMI DME DASHES			34 55 18 __

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 55 XA __

1 ▷ DASHES ON THE RDMI AND HSI DME ARE NORMAL WHEN NO DME SIGNAL IS AVAILABLE. USE THESE CODES ONLY WHEN YOU KNOW DME SIGNAL IS AVAILABLE.

2 ▷ VERIFY DME IS OK WITH HSI IN VOR OR ILS MODE BEFORE SELECTING THESE CODES. IF NOT OK SELECT CODE FROM VOR OR ILS BRANCH.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A1	VOR/MKR L	11E32	(RIGHT) DME (R)
11E11	(LEFT) DME (L)	11E33	(RIGHT) VOR (R)

DME — FAULT CODES

174774

AFT ELECTRONIC PANEL

PILOTS' PANELS

FAULT CODE/ LOCATION

CAPT	01
F/O	02
L	03
R	04

1 ▷ WAS TEST NORMAL? YES

WAS FREQ IND RESPONSE NORMAL? YES

WAS TONE OPERATIVE? YES

WAS ADF/VOR SLCTR OPRN NORMAL? YES

NOT APPLY   00

NORMAL

NO, ADF INOP ➤ 34 57 01 _ _

POINTER INOP, ETC, IN ADF AND VOR POSITION ➤ 34 57 21 _ _

NO ➤ 34 57 03 _ _

NO ➤ 34 57 05 _ _

SEGMENT MISSING ➤ 34 57 16 _ _

NO (DESCRIBE) ➤ 34 57 17 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ➤ 34 57 XA _ _

1 ▷ TEST MOMENTARILY DISPLAYS RDMI BRG POINTER FLAGS, POINTERS THEN MOVE 135° FROM AIRPLANE HDG. FLAGS REMAIN IF TEST FAILS.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A3	ADF (L, R)	11F25	(RIGHT) RDMI (R)
11A6	RDMI L	11F27	ADF R
11F6	(LEFT) ADF (L)		

ADF CONTROL PANEL/RDMI — FAULT CODES

EFFECTIVITY

ALL
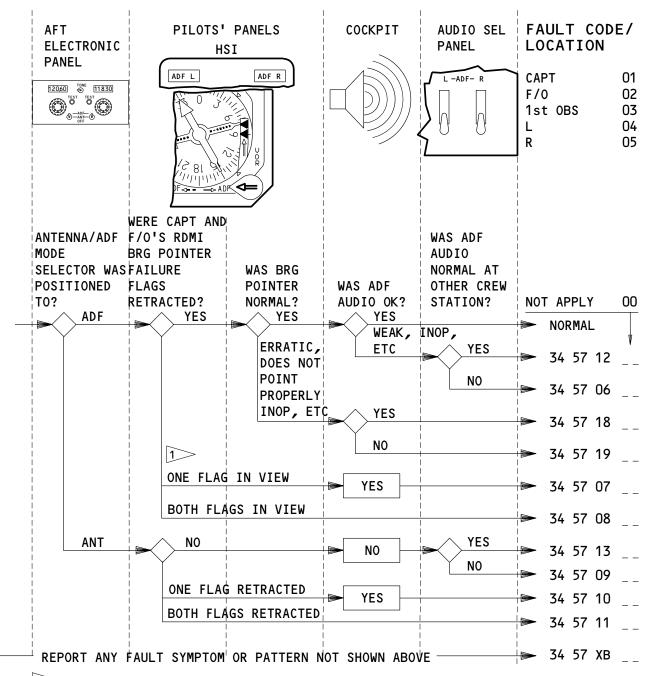
34-FAULT CODE DIAGRAM

15   Page 48
           Aug 22/02

174776

AFT ELECTRONIC PANEL

12060 TONE 11830
TEST TEST
ADF ANT OFF

PILOTS' PANELS
HSI

ADF L   ADF R

COCKPIT

AUDIO SEL PANEL

L —ADF— R

FAULT CODE/ LOCATION

CAPT   01
F/O   02
1st OBS   03
L   04
R   05

ANTENNA/ADF MODE SELECTOR WAS POSITIONED TO?

WERE CAPT AND F/O'S RDMI BRG POINTER FAILURE FLAGS RETRACTED?

WAS BRG POINTER NORMAL?

WAS ADF AUDIO OK?

WAS ADF AUDIO NORMAL AT OTHER CREW STATION?

NOT APPLY   00

ADF	YES	YES	YES		NORMAL
			WEAK, INOP, ETC	YES	34 57 12 __
		ERRATIC, DOES NOT POINT PROPERLY INOP, ETC		NO	34 57 06 __
			YES		34 57 18 __
			NO		34 57 19 __
	[1]				
	ONE FLAG IN VIEW		YES		34 57 07 __
	BOTH FLAGS IN VIEW				34 57 08 __
ANT	NO		NO	YES	34 57 13 __
				NO	34 57 09 __
	ONE FLAG RETRACTED		YES		34 57 10 __
	BOTH FLAGS RETRACTED				34 57 11 __

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ⟶ 34 57 XB __

[1] ADF RECEIVER MAY LOCK UP DURING ELEC POWER TRANSFER. BRG POINTER FLAG WILL DISPLAY ON RDMI. ADF MAY BE RESTORED BY CYCLING ADF CIRCUIT BREAKER.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

| 11A3 | ADF (L, R) | 11F6 | (LEFT) ADF (L) | 11F27 | ADF R |
| 11A6 | RDMI L | 11F25 | (RIGHT) RDMI (R) | | |

ADF (ADF, ANT MODE) — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

17   Page 49
          Aug 22/02

672855

EICAS

FAULT CODE/
LOCATION

WAS MSG DISPLAYED?

NOT APPLY   00

NO	NORMAL	
GPS	34 58 01 00	
UNABLE RNP	34 63 36 00	
ALT DISAGREE	34 12 91 00	
IAS DISAGREE	34 12 92 00	
L GPS	34 58 02 00	
R GPS	34 58 03 00	

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ──▷ 34 21 XA 00

EICAS MESSAGE — FAULT CODES

EFFECTIVITY

34-FAULT CODE DIAGRAM

ALL

06   Page 50
Aug 22/02

L01294

FWD ELECTRONICS PANEL

PILOTS' PANEL

FAULT CODE/
LOCATION

CAPT	01
F/O	02
BOTH	03

NAV
FMC-L
CDU-L   FMC-R

OR

ALTN

FMC

ALTN/OTHER FMC SELECTED

WAS KEY RESPONSE NORMAL? — YES
WAS KEY FEEL NORMAL? — YES
DID KEY GIVE MULTIPLE RESPONSE? — NO
WAS FAULT CORRECTED?
WAS OPERATION NORMAL? — YES

NOT APPLY   00

NORMAL

WAS OPERATION NORMAL? — NO → 34 22 91 _ _

YES → 34 62 75 _ _

NO → 34 62 76 _ _

RESPONSE INCORRECT — YES → 34 62 89 _ _
                     NO → 34 62 90 _ _

ALL KEYS INOP — YES → 34 62 77 _ _
                NO → 34 62 78 _ _

ONE KEY INOP, ALL PAGES — YES → 34 62 91 _ _
                          NO → 34 62 92 _ _

EXEC KEY FAILS TO ILLUM → 34 62 93 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 61 XA _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)

FMC-CDU KEYS & ALTN FMC — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

E42678

EICAS

FMC MESSAGE

CDU

PILOT'S
PANEL

FAULT CODE/ LOCATION

CAPT	01
F/O	02
L	03
R	04

NAV
FMC-L
CDU-L   FMC-R

CDU MESSAGES

RESYNC FAIL – SINGLE
FMC
RESYNCING OTHER FMC
SINGLE FMC OPERATION

OR

ALTN

FMC

ALTN/OTHER
FMC SELECTED

EICAS

(L,R) FMC FAIL

WAS CDU FAIL
LGT ILLUM &
EICAS MSG
DISPLAYED?

WAS CDU MSG
LGT ILLUM &
MESSAGE(S)
DISPLAYED?

WAS CDU
DISPLAY
NORMAL?

WAS FAULT
CORRECTED?

NOT APPLY   00

NO   NO   YES   NORMAL

FOCUS, SIZE, SHAPE
OR UNIFORMITY OFF   34 61 15 _ _

PARTIALLY COMPLETE
CONTAINING GARBAGE
CHARACTERS   34 62 86 _ _

BLANK   YES   34 62 88 _ _

NO   34 61 16 _ _

MULTIPLE RESYNCING
(RESYNCING OTHER FMC/SINGLE FMC OPERATION)   34 62 87 _ _

RESYNCING OTHER FMC
(EXCEEDS 30 SEC)   34 62 94 _ _

YES   NONE   34 61 17 _ _

SINGLE FMC OPERATION   34 62 83 _ _

RESYNC FAIL – SINGLE FMC   34 61 18 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 61 XB _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

| 11E8 | (LEFT) FMCS CDU (L) | 11E29 | (RIGHT) FMCS CDU (R) |
| 11E9 | (LEFT) FMCS CMPTR (L) | 11E30 | (RIGHT) FMCS CMPTR (R) |

CDU FAIL, FMC FAIL AND RESYNC – FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

803901

CDU	CDU	FAULT CODE/ LOCATION

CAPT   01
F/O   02

ECON CRZ

— — — —   — — — —
— — — —   — — — —
— — — —   — — — —

| INIT REF | RTE | CLB | CRZ | DES | BRT |

BRT

IS AUTO BRIGHT OK?   **IS BRIGHT CONTROL OK?**   NOT APPLY   00

YES   YES   NORMAL

NO   34 61 21 _ _

NO   YES   34 61 22 _ _

NO   34 61 23 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 61 XC _ _

APPLICABLE CIRCUIT BREAKERS

11E8	LEFT FMCS CDU
11E9	LEFT FMCS CMPTR
11E29	RIGHT FMCS CDU
11E30	RIGHT FMCS CMPTR

FMC-CDU BRIGHTNESS - FAULT CODES

EFFECTIVITY

ALL
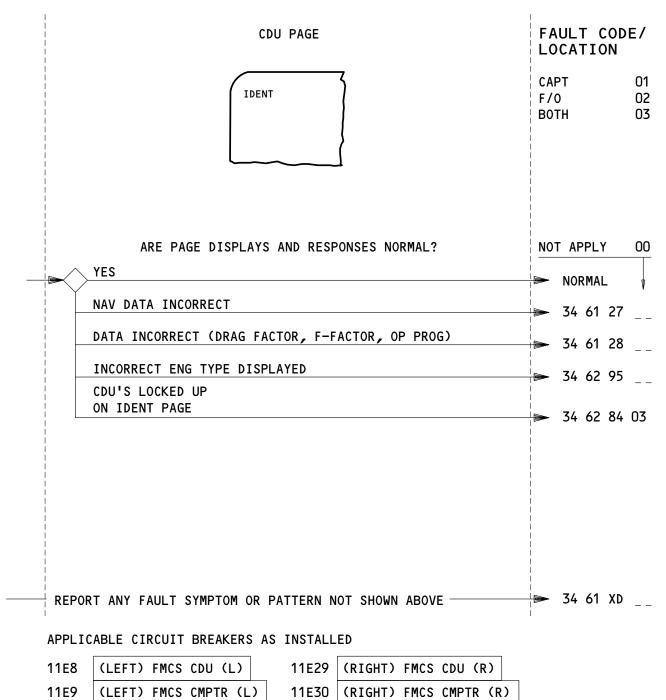
174781

34-FAULT CODE DIAGRAM

05   Page 53
Aug 22/02

CDU PAGE

FAULT CODE/
LOCATION

CAPT   01
F/O   02
BOTH   03

IDENT

ARE PAGE DISPLAYS AND RESPONSES NORMAL?   NOT APPLY   00

YES   NORMAL

NAV DATA INCORRECT   34 61 27 _ _

DATA INCORRECT (DRAG FACTOR, F-FACTOR, OP PROG)   34 61 28 _ _

INCORRECT ENG TYPE DISPLAYED   34 62 95 _ _

CDU'S LOCKED UP
ON IDENT PAGE   34 62 84 03

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 61 XD _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8 | (LEFT) FMCS CDU (L)   11E29 | (RIGHT) FMCS CDU (R)
11E9 | (LEFT) FMCS CMPTR (L)   11E30 | (RIGHT) FMCS CMPTR (R)

FMC-CDU IDENT PAGE — FAULT CODES

EFFECTIVITY

ALL

174782
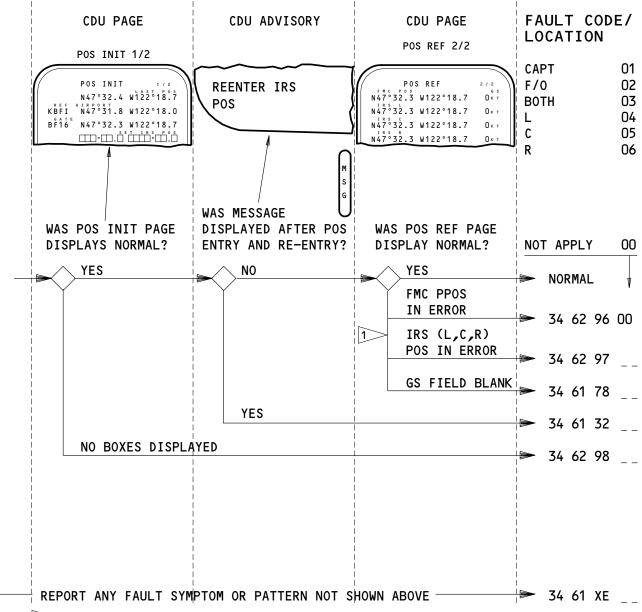
34-FAULT CODE DIAGRAM

05   Page 54
            Aug 22/02

CDU PAGE	CDU ADVISORY	CDU PAGE	FAULT CODE/ LOCATION

POS INIT 1/2

POS REF 2/2

```
    POS INIT        1/2
        N47°32.4  W122°18.7
  REF AIRPORT      LAST POS
KBFI   N47°31.8  W122°18.0
 GATE
BF16   N47°32.3  W122°18.7
          SET IRS POS
```

REENTER IRS
POS

```
    POS REF          2/2
 FMC POS                   GS
N47°32.3  W122°18.7    0 KT
 IRS L
N47°32.3  W122°18.7    0 KT
 IRS C
N47°32.3  W122°18.7    0 KT
 IRS R
N47°32.3  W122°18.7    0 KT
```

	Code
CAPT	01
F/O	02
BOTH	03
L	04
C	05
R	06

M S G

WAS POS INIT PAGE
DISPLAYS NORMAL?

WAS MESSAGE
DISPLAYED AFTER POS
ENTRY AND RE-ENTRY?

WAS POS REF PAGE
DISPLAY NORMAL?

NOT APPLY   00

YES   NO   YES   NORMAL

FMC PPOS
IN ERROR   34 62 96 00

1   IRS (L,C,R)
POS IN ERROR   34 62 97 _ _

GS FIELD BLANK   34 61 78 _ _

YES   34 61 32 _ _

NO BOXES DISPLAYED   34 62 98 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 61 XE _ _

1 ▷ RECORD TIME IRS WAS IN OPERATION, ACTUAL AND INDICATED LATITUDE AND LONGITUDE.
ADD ADDITIONAL NOTE TO LOG BOOK REPORT IF ERROR IS EXCESSIVE FOR 2 CONSECUTIVE FLIGHTS.
(SEE RADIAL POSITION ERROR CHECK)

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D3	L IRS	11E8	(LEFT) FMCS CDU (L)	11F1	(LEFT) IRS (L)
6D4	C IRS	11E9	(LEFT) FMCS CMPTR (L)	11F21	(CENTER) IRS (C)
6D5	R IRS	11E29	(RIGHT) FMCS CDU (R)	11F22	(RIGHT) IRS (R)
		11E30	(RIGHT) FMCS CMPTR (R)		

FMC-CDU POS INIT/REF PAGE - FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

174783

CDU PAGE	EICAS	CDU PAGE	FAULT CODE/ LOCATION

FMC MESSAGE

INIT
REF

INIT
REF

CAPT   01
F/O   02
BOTH   03

```
    PERF INIT      1/1
GROSS WT       CRZ ALT
 □.□
 FUEL          CRZ WIND
52.3           ---°/---
 ZFW           ISA DEV
 □.□           ---°C
RESERVES       T/C OAT
 □.□           ---°C
COST INDEX     TRANS ALT
               18000
-----------------------
<INDEX          TAKEOFF>
```

PILOTS' CENTER PANEL

FMC

CDU ALERT

PERF/VNAV
UNAVAILABLE

M
S
G

GLARESHIELD

V NAV

```
    PERF INIT      1/1
GROSS WT       CRZ ALT
 □.□
 FUEL          CRZ WIND
52.3           ---°/---
 ZFW           ISA DEV
 □.□           ---°C
RESERVES       T/C OAT
 □.□           ---°C
COST INDEX     TRANS ALT
               18000
-----------------------
<INDEX          TAKEOFF>
```

◁3◁

▷1▷
WERE PERF INIT PAGE
DISPLAYS NORMAL?

WAS MESSAGE DISPLAYED
ON CDU WHEN VNAV IS
PRESSED?

WAS DATA ENTERED IN
ALL BOXES ON PERF
INIT PAGE?

NOT APPLY   00

YES   NO   NORMAL

▷2▷   YES   YES   34 61 37 _ _

NO, FUEL WEIGHT INCORRECT OR MISSING   34 62 99 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE   34 61 XF _ _

▷1▷ ALL FUEL INFORMATION, EXCEPT TOTAL FUEL, WILL BE BLANK IF ENG SHUTDOWN OR
    EICAS TEST BUTTON IS PRESSED.

▷2▷ TO CORRECT DIFFERENCE BETWEEN FMC FUEL & TOTALIZER FUEL, MANUALLY ENTER ANY AMOUNT
    OF FUEL, THEN DELETE FUEL WITH DELETE KEY. FMC SHOULD THEN DISPLAY TOTALIZER FUEL.

▷3▷ ZFW ENTRY OF 108.5 WILL BE DISPLAYED AS 108.4. THIS IS A KNOWN ANOMALY. DO NOT REPORT.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)

FMC-CDU PERFORMANCE INITIALIZATION PAGE - FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

256843

NOT USED
Figure 48

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 57
Aug 22/02

N14565

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

N14567

NOT USED
Figure 49

NOT USED
Figure 50

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 59
Aug 22/02

N14568

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

NOT USED
Figure 51

CDU PAGE

FAULT CODE/
LOCATION

CAPT   01
F/O   02
BOTH   03

```
   ┌─────────┐
   │ FIX INFO │
   └─────────┘
```

WERE PAGE DISPLAYS AND RESPONSES NORMAL?

NOT APPLY   00

◇ YES   ▷ NORMAL

BRG/DIS FR INCORRECT   ▷ 34 61 72 _ _

PL/BRG/DIS INCORRECT   ▷ 34 61 73 _ _

ABEAM INCORRECT   ▷ 34 61 74 _ _

DTG INCORRECT   ▷ 34 61 75 _ _

ETA INCORRECT   ▷ 34 61 76 _ _

ETA AND DTG INCORRECT   ▷ 34 61 77 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ▷ 34 61 XK _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8 │ (LEFT) FMCS CDU (L) │   11E29 │ (RIGHT) FMCS CDU (R) │

11E9 │ (LEFT) FMCS CMPTR (L) │   11E30 │ (RIGHT) FMCS CMPTR (R) │

FMC - CDU FIX INFO PAGE - FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 61
            Aug 22/02

174786

NOT USED
Figure 53

NOT USED
Figure 54

N14575

NOT USED
Figure 55

NOT USED
Figure 56

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 65
Aug 22/02

N14578

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

N14579

NOT USED
Figure 57

CDU PAGE

```
        PROGRESS      1/2
 TO      DTG    ETA    FUEL
ENO      61    1355z   43.0
 NEXT
GVE      192   1411z   40.0
KATL     606   1510z   12.7
 CMD SPD          XTK ERROR
.780             L 0.1 NM
 TO T/C          TAS
1402z/ 82 NM     470 KT
 DME    IRS(3)    DME
ENOM M 116.85  MLC A 114.60
```

```
          PROGRESS        2/2
 HEADWIND         CROSSWIND
32 KT             L 23 KT
 WIND             VTK ERROR
030°/ 57          +12 FT
 LAST WPT                SAT
CYN     1332z  FL204  −25°C
          FUEL USED
L24.7    TOT  47.6   R22.9
<USE    FUEL QTY    USE>
 TOTALIZER       CALCULATED
75.6              72.3
```

WERE PAGE 1/2
DISPLAYS AND
RESPONSES NORMAL?

WERE PAGE 2/2
DISPLAYS NORMAL?

EICAS

FMC MESSAGE

PILOTS' CENTER PNL

FMC

CDU ALERT

IRS NAV ONLY
FUEL (QTY ERROR,
DISAGREE)−PROG 2/2 M S G

WHICH MESSAGE
WAS DISPLAYED?

FAULT CODE/ LOCATION

CAPT	01
F/O	02
BOTH	03

NOT APPLY   00

CDU PAGE	EICAS	FAULT CODE
YES →→ YES	→ NORMAL	
	WIND COMPONENTS IN ERROR	34 62 12 _ _
	FUEL USED IN ERROR, BLANK	34 62 13 _ _
	TOTALIZER DIFFERS FROM CALCULATED. → FUEL (QTY ERROR, DISAGREE)−PROG 2/2	34 62 14 _ _
	FUEL USED, CALCULATED FUEL BLANK	34 63 16 _ _
1 DOES NOT DROP WAY POINTS		34 63 21 00
1 LEG SEQUENCING INCORRECT		34 63 18 _ _
DTG IN ERROR		34 62 16 _ _
ETA IN ERROR		34 62 17 _ _
WAYPOINT FUEL IN ERROR		34 62 18 _ _
WIND IN ERROR		34 62 19 _ _
WON'T ENTER IRS (3) DME DME → NONE		34 62 15 _ _
IRS NAV ONLY		34 62 85 _ _
TUNED NAV AID BLANK		34 63 01 _ _
TUNED NAV AID CONSTANTLY CHANGING		34 63 02 _ _
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE		34 61 XQ _ _

1 ▷ SEQUENCE PROBLEMS MAY BE RESTORED AFTER LANDING
BY CYCLING NAV DATA BASE DATES ON IDENT PAGE.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A1	VOR/MKR L	11E11	(LEFT) DME (L)	11E32	(RIGHT) DME (R)
11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)	11E33	(RIGHT) VOR (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)		

FMC−CDU PROGRESS PAGE − FAULT CODES

EFFECTIVITY

ALL

174788

34-FAULT CODE DIAGRAM

05   Page 67
Aug 22/02

EICAS   CDU   FAULT CODE/
                LOCATION

FMC MESSAGE

CAPT   01
F/O   02
BOTH   03

(ADVISORY MESSAGE)

PILOTS' CENTER PANEL

FMC

M
S
G

CDU

(ALERT MESSAGE)

M
S
G

ARE CDU ALERTS NORMAL? ARE CDU ADVISORIES NORMAL? NOT APPLY 00

YES   YES   NORMAL

	FAULT CODE/LOCATION
MSG LIGHT FAILED TO ILLUM	34 62 21 _ _
ADVISORIES DISPLAYED BUT NO ADVISORY COND EXISTS	34 62 22 00
ADVISORY COND EXISTS BUT NO ADVISORY DISPLAYED	34 62 23 00
FMC LIGHT FAILED TO ILLUM.	34 62 24 _ _
FMC AND MSG LIGHTS FAILED TO ILLUM.	34 62 25 _ _
ALERT DISPLAYED BUT NO ALERT COND EXISTS	34 62 26 00
ALERT CONDITION EXISTS BUT NO ALERT DISPLAYED	34 62 27 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE 34 61 XR _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8 (LEFT) FMCS CDU (L)   11E29 (RIGHT) FMCS CDU (R)

11E9 (LEFT) FMCS CMPTR (L) 11E30 (RIGHT) FMCS CMPTR (R)

FMC-CDU ALERT AND ADVISORY MESSAGES - FAULT CODES
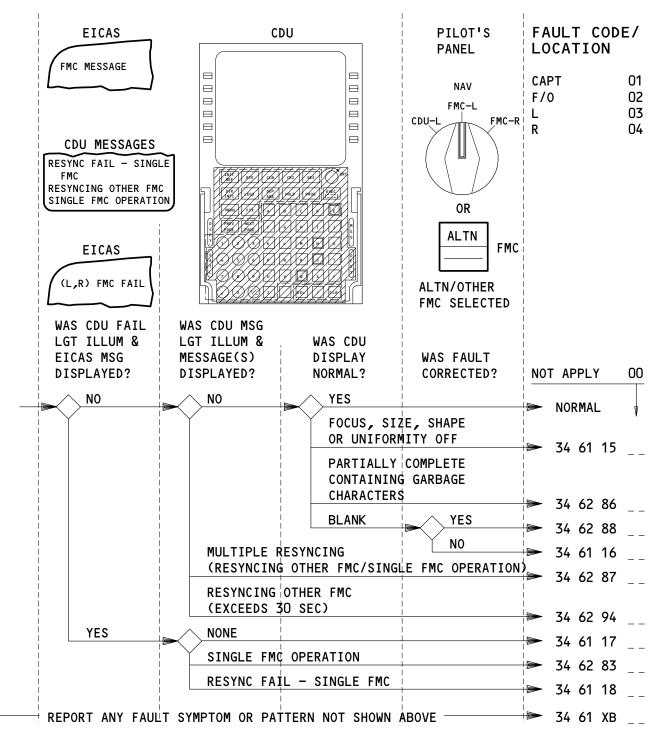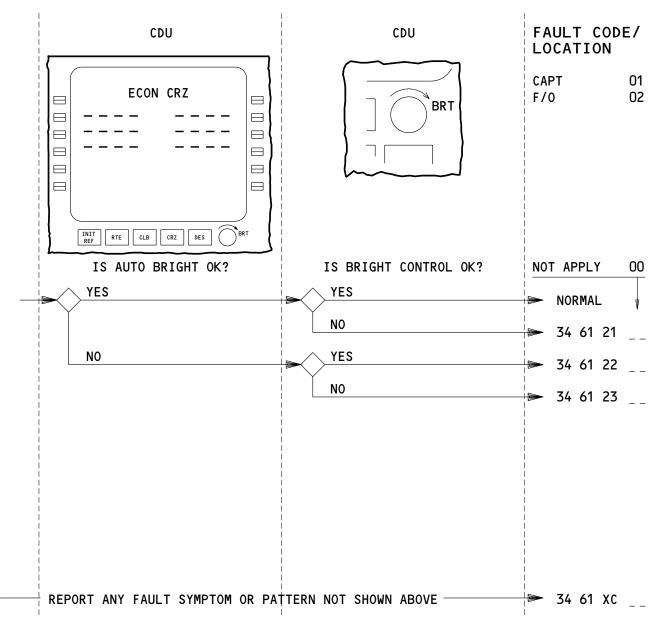
EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

05   Page 68
Aug 22/02

174789

PILOTS' PANEL

FAULT CODE/
LOCATION

HSI

CAPT	01
F/O	02
BOTH	03

MAP

MAP RANGE
DISAGREE

1 WAS MAP
RANGE
DISAGREE
DISPLAYED
ON HSI?

WAS MAP DIS-
PLAY OFFSET,
INCORRECT
LEG SEQUENC-
ING OR
MISSING?

WAS FAULT
CORRECTED
WHEN OTHER
FMC
SELECTED?

NOT APPLY   00

1
WAS MAP,
DISPLAYED
ON HSI?

V
T
K
WAS   IN
VIEW?

NO	NO	NO	NO	NORMAL
			YES — YES	34 62 28 __
			NO	34 62 60 __
		MAP DISPLAY OFFSET — YES	34 62 30 __
		NO	34 62 62 __
		MAP MISSING — YES	34 62 31 __
		WAYPOINT MOVES, WAVERS — NO	34 62 63 __
		NO	34 63 17 __
		LEG SEQUENCING INCORRECT	34 63 19 __
	YES — YES	34 62 32 __
	NO	34 62 64 __
YES — YES	34 62 33 __
NO	34 62 65 __

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ————▷ 34 61 XS __

1 ▷ DISPLAY FOR SHORT PERIODS NORMAL FOR SOME FMC OPERATIONS.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E4	(LEFT) EFIS CONT PNL (L)	11E25	(RIGHT) EFIS CONT PNL (R)	11F8	EFIS SYM GEN L
11E6	(LEFT) HSI (L)	11E27	(RIGHT) HSI (R)	11F9	EFIS SYM GEN (C, CTR)
11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)	11F29	(RIGHT) EFIS SYM GEN (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)		

FMC-HSI MAP GENERAL - FAULT CODES

34-FAULT CODE DIAGRAM

A36484

09   Page 69
Aug 22/02

PILOTS' PANEL   PILOTS' PANEL

FAULT CODE/ LOCATION	
CAPT	01
F/O	02
BOTH	03

WERE DISTANCE TO GO AND ETA NORMAL? | WAS WIND DIFFERENT BETWEEN HSIs? | WAS FAULT CORRECTED WHEN OTHER FMC SELECTED? | NOT APPLY 00

YES — NO ————————————————————→ NORMAL

YES — YES → 34 63 03 00

NO → 34 63 04 00

BOTH MISSING — YES → 34 62 38 _ _

NO → 34 62 70 _ _

BOTH DISPLAY DASHES — YES → 34 63 05 _ _

NO → 34 63 06 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE ————→ 34 61 XT _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E4	(LEFT) EFIS CONT PNL (L)	11E25	(RIGHT) EFIS CONT PNL (R)	11F8	EFIS SYM GEN L
11E6	(LEFT) HSI (L)	11E27	(RIGHT) HSI (R)	11F9	EFIS SYM GEN (C, CTR)
11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)	11F29	(RIGHT) EFIS SYM GEN (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)		

FMC-HSI MAP DATA — FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

11   Page 70
Aug 22/02

753458

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

NOT USED
Figure 62

N14580

PILOTS' PANEL　　　　　　　　　　EICAS　　　FAULT CODE/
　　　　　　　　　　　　　　　　　　　　　　　LOCATION

SEL SPD

200
180
160
140
120
100

1.63
1.28

EPR

CAPT　　　01
F/O　　　 02
L　　　　 03
R　　　　 04
BOTH　　　05

WAS SEL SPD MSG
DISPLAYED, WHEN IN
VNAV SEL SPEED MODE?

DID COMMAND AIRSPEED
READ 100 KTS WHEN IN
VNAV SEL SPEED
MODE? 1 ▷

WHEN IN VNAV THRUST
COMMAND MODES,
COMMAND BUG WAS?

NOT APPLY　　00

NO　　　　　　　　　　NO　　　　　　　　　MAGENTA　　　　　　NORMAL

　　　　　　　　　　　　　　　　　　　　　GREEN　　　　　　　22 32 57 _ _

　　　　　　　　　　　　YES　　　　　　　　　　　　　　　　　 34 63 24 _ _

YES　　　　　　　　　　　　　　　　　　　　　　　　　　　　　22 11 07 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE　　　34 61 XW _ _

1 ▷ THIS IS A NORMAL INDICATION WHEN RESYNCING FMC.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E1	(LEFT) IAS MACH (L)	11E22	(RIGHT) IAS MACH (R)
11E8	(LEFT) FMCS CDU (L)	11E29	(RIGHT) FMCS CDU (R)
11E9	(LEFT) FMCS CMPTR (L)	11E30	(RIGHT) FMCS CMPTR (R)

FMC-VNAV MODE EPR AND AIRSPEED BUGS - FAULT CODES

EFFECTIVITY

ALL

34-FAULT CODE DIAGRAM

727424

	GLARESHIELD		CLIMB	CRUISE	DESCENT	FAULT CODE/LOCATION

L NAV — WAS LNAV GUIDANCE NORMAL?

V NAV — WERE VNAV TRANSITION AND CAPTURE NORMAL?

WAS VNAV CLIMB MODE NORMAL?

WAS VNAV CRUISE MODE NORMAL?

WAS VNAV DESCENT MODE NORMAL?

FAULT CODE/LOCATION:
- L — 01
- C — 02
- R — 03
- ANY — 04
- NOT APPLY — 00

YES → YES → YES → YES → YES → NORMAL

NO → 34 62 43 _ _

NO → 34 62 46 _ _

NO → 34 62 49 _ _

VNAV FAILS TO REMAIN ILLUMINATED → 22 11 21 _ _

VNAV WILL NOT ENGAGE → 34 63 10 _ _

LINE THROUGH VNAV ON ADI → 34 63 11 _ _

LNAV FAILS TO REMAIN ILLUMINATED → 22 11 22 _ _

LNAV REMAINS WHITE ON ADI (ARMED) → 34 63 07 _ _

LINE THROUGH LNAV ON ADI → 34 63 08 _ _

AIRCRAFT PATH INCORRECT → 34 63 09 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 34 61 XY _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11E8	(LEFT) FMCS CDU (L)	11E21	(CENTER) FLT CONT CMPTR SERVO (C)
11E9	(LEFT) FMCS CMPTR (L)	11E29	(RIGHT) FMCS CDU (R)
11E16	MODE CONT PNL L	11E30	(RIGHT) FMCS CMPTR (R)
11E17	FLT CONT CMPTR PWR L	11E34	MODE CONT PNL R
11E18	FLT CONT CMPTR SERVO L	11E35	(RIGHT) FLT CONT CMPTR PWR (R)
11E20	(CENTER) FLT CONT CMPTR PWR (C)	11E36	(RIGHT) FLT CONT CMPTR SERVO (R)

FMC-LNAV AND VNAV GUIDANCE - FAULT CODES

EFFECTIVITY

ALL

E21962

34-FAULT CODE DIAGRAM

06   Page 73
Aug 22/02

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 12 XA --   1. (01=Capt, 02=F/O) An electric altimeter problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams. (Ref fault code diagram for flight crew
                 actions.)
              2. SSM 34-12-01, SSM 34-12-02

34 12 XB 00   1. A TAS, SAT, Or TAT problem was encountered by the flight crew
                 which is not covered in the fault code diagrams. (Ref fault
                 code diagram for flight crew actions.)
              2. SSM 34-12-01, SSM 34-12-02

34 12 XC --   1. (01=Capt, 02=F/O) A mach, airspeed problem was encountered by
                 the flight crew which is not covered in the fault code
                 diagrams. (Ref fault code diagram for flight crew actions.)
              2. SSM 34-12-01, SSM 34-12-02

34 12 XD --   1. (01=Capt, 02=F/O) An air data computer test problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams (Ref fault code diagram for flight crew
                 actions.)
              2. SSM 34-12-01, SSM 34-12-02

34 12 XE --   1. (01=Capt, 02=F/O) An air data computer test problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams (Ref fault code diagram for flight crew
                 actions.)
              2. SSM 34-12-01, SSM 34-12-02

34 12 XF --   1. (01=Capt, 02=F/O) A mach, airspeed, ALTN AIR DATA problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams (Ref fault code diagram for flight crew
                 actions).
              2. SSM 34-12-01, SSM 34-12-02

34 13 XA 00   1. A standby airspeed and altimeter problem was encountered by
                 the flight crew which is not covered in the fault code
                 diagrams. (Ref fault code diagram for flight crew actions.)
              2. SSM 34-13-01

34 16 XA --   1. (01=Capt, 02=F/O, 03=Both) An altitude alert problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams. (Ref Chapter 22 fault code diagram for
                 flight crew actions.)
              2. SSM 34-16-01

```
-------------------------------------------------------------------
   FAULT         1. LOG BOOK REPORT
   CODE          2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------
```

34 21 XA --   1. (01=Capt, 02=F/0) An RDMI heading problem was encountered by
                  the flight crew which is not covered in the fault code
                  diagrams. (Ref fault code diagram for flight crew actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 21 XA 00   1. An EICAS message was encountered by the flight crew which is
                  not covered in the fault code diagrams. (Ref fault code
                  diagram for flight crew actions.)
               2. Refer to 34-EICAS MESSAGES list.

34 21 XB --   1. (01=Capt, 02=F/0) A vertical speed indicator problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams. (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 21 XC --   1. (01=Capt, 02=F/0) An EHSI track and wind problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams. (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 21 XD --   1. (01=Capt, 02=F/0) An EHSI heading, trend vector, and Altn IRS
                  problem was encountered by the flight crew which is not
                  covered in the fault code diagrams. (Ref fault code diagram
                  for flight crew actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 21 XE --   1. (01=Capt, 02=F/0, 03=L, 04=C, 05=R) An EADI attitude and
                  ground speed problem was encountered by the flight crew which
                  is not covered in the fault code diagrams. (Ref fault code
                  diagram for flight crew actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 21 XF 00   1. An IRS accuracy problem was encountered by the flight crew
                  that was not covered in the fault code diagram. (Ref fault
                  code diagram for flight crew actions.)
               2. AMM 34-21-00/501.

34 21 XF --   1. (01=L, 02=C, 03=R, 07=ALL) An IRS ALIGN FAULT panel problem
                  was encountered by the flight crew which is not covered in the
                  fault code diagrams. (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

EFFECTIVITY

                    ALL

                                        34-FAULT CODE INDEX

                                           03   Page 2
                                                     Apr 22/02
       BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------
   FAULT      1. LOG BOOK REPORT
   CODE       2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 21 XG --   1. (O1=L, O2=C, O3=R, O4=ALL) An IRS data entry and display
                  problem was encountered by the flight crew which is not
                  covered in the fault code diagrams. (Ref fault code diagram
                  for flight crew actions.)
               2. SSM 34-21-01, SSM 34-21-02, SSM 34-21-03

34 22 XA --   1. (O1=Capt, O2=F/O) An EADI problem was encountered by the
                  flight crew which is not covered in the fault code diagrams.
                  (Ref fault code diagram for flight crew actions.)
               2. SSM 34-22-08

34 22 XB --   1. (O1=Capt, O2=F/O) An EHSI problem was encountered by the
                  flight crew which is not covered in the fault code diagrams.
                  (Ref fault code diagram for flight crew actions.)
               2. SSM 34-22-07

34 22 XC --   1. (O1=Capt, O2=F/O) An EHSI and EADI problem was encountered by
                  the flight crew which is not covered in the fault code
                  diagrams. (Ref fault code diagram for flight crew actions.)
               2. SSM 34-22-07, SSM 34-22-08

34 22 XD --   1. (O1=Capt, O2=F/O) An EHSI traffic, range, map and mode select
                  problem encountered by the flight crew which is not covered in
                  the fault code diagrams. (Ref fault code diagram for flight
                  crew actions.)
               2. SSM 34-22-07

34 22 XE --   Not used.

34 22 XF --   Not used.

34 22 XG --   1. A heading reference problem was encountered by the flight crew
                  which was not covered in the fault code diagrams. (Ref fault
                  code diagram for flight crew actions.)
               2. SSM 34-22-07

```
--------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------


34 23 XA 00     1. A standby magnetic compass problem was encountered by the
                   flight crew which is not covered in the fault code diagrams.
                   (Ref fault code diagram for flight crew actions.)
                2. Perform standby compass swing operation (AMM 34-23-00/201)


34 24 XA 00     1. A standby attitude reference system problem was encountered
                   by the flight crew which is not covered in the fault code
                   diagrams.  (Ref fault code diagram for flight crew actions.)
                2. SSM 34-24-01


34 31 XA --     1. (01=Capt EHSI and EADI, 02=F/O EADI and EHSI, 03=STBY ATT IND)
                   An ILS TEST problem was encountered by the flight crew which
                   is not covered in the fault code diagrams.  (Ref fault code
                   diagram for flight crew actions.)
                2. SSM 34-31-01, SSM 34-31-02, SSM 34-31-03


34 31 XB --     1. (01=L, 02=R, 03=C, 04=Capt, 05=F/O) An ILS ADI/HSI problem was
                   encountered by the flight crew which is not covered in the
                   fault code diagrams.  (Ref fault code diagram for flight crew
                   actions.)
                2. SSM 34-31-01, SSM 34-31-02, SSM 34-31-03


34 31 XC --     1. (01=Capt, 02=F/O) An ILS/EHSI problem was encountered by the
                   flight crew which is not covered in the fault code diagrams.
                   (Ref fault code diagram for flight crew actions.)
                2. SSM 34-31-01, SSM 34-31-02, SSM 34-31-03


34 31 XD 00     1. An ILS controls and STBY ATT IND problem was encountered by
                   the flight crew which is not covered in the fault code
                   diagrams.  (Ref fault code diagram for flight crew actions.)
                2. SSM 34-31-01, SSM 34-41-02, SSM 34-41-03
```

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |

----

34 32 XA --   1. A marker beacon problem was encountered by the flight crew
              which is not covered in the fault code diagrams. (Ref fault
              code diagram for flight crew actions.)
           2. SSM 34-32-01

34 33 XA --   1. (O1=Capt, O2=F/O) A radio altitude and DH (EADI) problem was
              encountered by the flight crew which is not covered in the
              fault code diagrams. (Ref fault code diagram for flight crew
              actions.)
           2. SSM 34-33-01, SSM 34-33-02, SSM 34-33-03

34 43 XA --   1. (O1=SYS L, O2=SYS R, O3=Capt, O4=F/O, O5=Both) A WXR display
              (HSI) problem was encountered by the flight crew which is not
              covered in the fault code diagrams. (Ref fault code diagram
              for flight crew actions.)
           2. SSM 34-33-01 thru SSM 34-33-03

EFFECTIVITY

ALL

34-FAULT CODE INDEX

```
---------------------------------------------------------------
    FAULT        1. LOG BOOK REPORT
    CODE         2. FAULT ISOLATION REFERENCE
---------------------------------------------------------------


34 43 XB --     1. (O1=SYS L, O2=SYS R) A WXR control problem was
                   encountered by the flight crew which is not covered in the
                   fault code diagrams.  (Ref fault code diagram for flight crew
                   actions.)
                2. SSM 34-43-01
```

```
--------------------------------------------------------------------
   FAULT       1. LOG BOOK REPORT
   CODE        2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------


34 43 XC --    1. A (01=L, 02=R) system WXR display quality problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams.  (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-43-01


34 46 XA 00    1. A ground proximity and windshear warning problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams.  (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-46-01


34 46 XB 00    1. A ground proximity warning, inhibit and override problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams.  (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-46-01


34 51 XA --    1. (01=Capt, 02=F/O) A VOR frequency select problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams.  (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-51-01, SSM 34-51-02


34 51 XB --    1. (01=Capt, 02=F/O, 03=L, 04=R) A VOR display problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams.  (Ref fault code diagram for flight crew
                  actions.)
               2. SSM 34-51-01, SSM 34-51-02


34 51 XC --    1. (01=Capt, 02=F/O) A VOR course problem was encountered by the
                  flight crew which is not covered in the fault code diagrams.
                  (Ref fault code diagram for flight crew actions.)
               2. SSM 34-51-01, SSM 34-51-02
```

FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE

---

34 53 XA --   1. (01=L, 02=R, 03=L & R) An ATC transponder problem was
               encountered by the flight crew which is not covered in the
               fault code diagrams. (Ref fault code diagram for flight crew
               actions.)
               2. SSM 34-53-01, SSM 34-53-02

34 55 XA --   1. (01=Capt, 02=F/O, 03=L, 04=R) A DME problem was encountered by
               the flight crew which is not covered in the fault code
               diagrams. (Ref fault code diagram for flight crew actions.)
               2. SSM 34-55-01, SSM 34-55-02

34 57 XA --   1. (01=Capt, 02=F/O, 03=L, 04=R) An ADF control panel/RDMI
               problem was encountered by the flight crew which is not
               covered in the fault code diagrams. (Ref fault code diagram
               for flight crew actions.)
               2. SSM 34-57-01, SSM 34-57-02

34 57 XB --   1. An ADF (ADF, ANT mode) problem was encountered by the flight
               crew which is not covered in the fault code diagrams. (Ref
               fault code diagram for flight crew actions.)
               2. SSM 34-57-01, SSM 34-57-02

34 61 XA --   1. (01=Capt, 02=F/O, 03=Both) An FMC CDU keys problem was
               encountered by the flight crew which is not covered in the
               fault code diagrams. (Ref fault code diagram for flight crew
               actions).
               2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XB --   1. (01=Capt, 02=F/O) A CDU fail, FMC fail, or resync problem was
               encountered by the flight crew which is not covered in the
               fault code diagrams. (Ref fault code diagram for flight crew
               actions).
               2. SSM 34-60-01, SSM 34-61-02, SSM 34-61-01 thru SSM 34-61-04

---

	1. LOG BOOK REPORT
FAULT CODE	2. FAULT ISOLATION REFERENCE

---

34 61 XC --
1. (01=Capt, 02=F/O) A CDU brightness problem was encountered by the flight crew which is not covered in the fault code diagrams. (Ref fault code diagram for flight crew actions).
2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XD --
1. (01=Capt, 02=F/O, 03=Both) A CDU IDENT page problem was encountered by the flight crew which is not covered in the fault code diagrams. (Ref fault code diagram for flight crew actions).
2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XE --
1. (01=Capt, 02=F/O, 03=Both) A CDU POS INIT/REF page problem was encountered by the flight crew which is not covered in the fault code diagrams. (Ref fault code diagram for flight crew actions).
2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XF --
1. (01=Capt, 02=F/O, 03=Both) A CDU performance initialization page problem was encountered by the flight crew which is not covered in the fault code diagrams. (Ref fault code diagram for flight crew actions).
2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

   NOTE: RESERVES and TRANS ALT not applicable to FMCs with LNAV/VNAV configuration.

34 61 XG --
34 61 XG -- thru 34 61 XJ --
Not used.

34 61 XK --
1. (01=Capt, 02=F/O, 03=Both) A CDU FIX INFO page problem was encountered by the flight crew which is not covered in the fault code diagrams. (Ref fault code diagram for flight crew actions).
2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

   NOTE: ETA and ALT not applicable to FMCs with LNAV/VNAV configuration.

EFFECTIVITY

ALL

34-FAULT CODE INDEX

02   Page 9
Apr 22/02

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 61 XL --   34 61 XL -- thru 34 61 XP --
              Not used.

34 61 XQ --   1. (01=Capt, 02=F/O, 03=Both) A CDU PROGRESS page problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams. (Ref fault code diagram for flight crew
                 actions)
              2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

                 NOTE: Forecast FUEL, forecast ETAs for intermediate
                        waypoints, TO T/C predictions not applicable to FMCs
                        with LNAV/VNAV configuration.

34 61 XR --   1. (01=Capt, 02=F/O, 03=Both) A CDU alert and advisory message
                 problem was encountered by the flight crew which is not
                 covered in the fault code diagrams. (Ref fault code diagram
                 for flight crew actions).
              2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XS --   1. (01=Capt, 02=F/O, 03=Both) An EHSI map general problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams. (Ref fault code diagram for flight crew
                 actions).
              2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XT --   1. (01=Capt, 02=F/O, 03=Both) An EHSI map data problem was
                 encountered by the flight crew which is not covered in the
                 fault code diagrams. (Ref fault code diagram for flight crew
                 actions).
              2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XU --   Not used.

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |
----

34 61 XV --   1. (01=Capt, 02=F/O, 03=No. 1, 04=No. 2, 05=Both) A VNAV mode EPR
                  and airspeed bug problem was encountered by the flight crew
                  which is not covered in the fault code diagrams. (Ref fault
                  code diagram for flight crew actions).
               2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 61 XW --   1. (01=Capt, 02=F/O, 03=No. 1, 04=No. 2, 05=Both) An FMC-V NAV
                  Mode N1/EPR and airspeed bug problem was encountered by the
                  flight crew which is not covered in the fault code diagrams.
                  (Ref fault code diagram for flight crew actions.)
               2. SSM 34-60-01,SSM 34-60 -02, SSM 34-61-01 thru SSM 34-61-04

34 61 XX --   Not used.

34 61 XY --   1. (01=Capt, 02=F/O, 03=Both) An FMC LNAV and VNAV problem was
                  encountered by the flight crew which is not covered in the
                  fault code diagrams. (Ref fault code diagram for flight crew
                  actions).
               2. SSM 34-60-01, SSM 34-60-02, SSM 34-61-01 thru SSM 34-61-04

34 90 XA 00   1. A lightning strike occurred which was not covered in the fault
                  code diagrams (Ref fault code diagrams for flight crew
                  action).
               2. Make an inspection of the airplane for lightning strike or
                  severe static discharge (AMM 05-51-19/201).

34 11 04 00   1. Standby altimeter and standby airspeed (report the problem,
                  low, high, fluctuates, etc.).
               2. FIM 34-11-00/101, Fig. 105, Block 1

34 12 01 01   1. BARO SET INOP on captain's altimeter.
               2. Replace the captain's altimeter, N8 (AMM 34-13-01/401).

34 12 02 01   1. Capt altimeter in error. It reads _____. F/O altimeter
                  reads _____. Stby altimeter reads _____. Selecting
                  ALTN AIR DATA corrects the fault.
               2. FIM 34-12-00/101, Fig. 104, Block 1

34 12 03 01   1. Capt altimeter in error with both normal and ALTN AIR DATA
                  selected. It reads _____. F/O altimeter reads _____.
                  Stby altimeter reads _____.
               2. Replace the captain's altimeter, N8 (AMM 34-13-01/401).

EFFECTIVITY

         ALL

                                            34-FAULT CODE INDEX
                                              19   Page 11
                                                      May 10/96
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

BOEING 767

FAULT ISOLATION/MAINT MANUAL

FAULT CODE	1. LOG BOOK REPORT / 2. FAULT ISOLATION REFERENCE

---

34 12 04 02
1. BARO SET INOP on F/O's altimeter.
2. Replace the F/O's altimeter, N48 (AMM 34-13-01/401)

34 12 05 02
1. F/O altimeter in error. It reads _____. Capt altimeter reads _____. Stby altimeter reads _____. Selecting ALTN AIR DATA corrects the fault.
2. FIM 34-12-00/101, Fig. 104, Block 1

34 12 06 02
1. F/O altimeter in error with both normal and ALTN AIR DATA selected. It reads _____. Capt altimeter reads _____. Stby altimeter reads _____.
2. Replace the F/O's altimeter, N48 (AMM 34-13-01/401).

34 12 07 --
1. (01=Capt, 02=F/O) Altimeter sticking.
2. Replace the applicable altimeter, N8 (captain) or N48 (F/O) (AMM 34-13-01/401).

34 12 08 --
1. OFF flag in view on (01=Capt, 02=F/O) altimeter. Selecting ALTN air data corrects the fault.
2. FIM 34-12-00/101, Fig. 105, Block 1

34 12 09 --
1. Off flag in view on (01=Capt, 02=F/O) altimeter with both NORMAL and ALTN AIR DATA selected.
2. Replace the applicable altimeter, N8 (captain) or N48 (F/O) (AMM 34-13-01/401).

34 12 10 00
1. TAT indicator blank. TAS and SAT normal.
2. Replace the TAT probe (AMM 34-12-02/401).

34 12 11 00
34 12 11 00 thru 34 12 13 00
Not used.

34 12 14 00
1. TAS in error. Reads _____, should be _____. SAT normal.
2. FIM 34-12-00/101, Fig. 109, Block 1

34 12 15 00
1. TAS and SAT in error. TAS reads _____, should be _____. SAT reads _____, should be _____. Mach and TAT norm.
2. Replace the applicable air data computer, M100 (left) or M101 (right) (AMM 34-12-01/401).

34 12 16 00
1. TAS, SAT and Mach in error. TAS reads _____, SAT reads _____. Mach reads _____. TAT is normal.
2. FIM 34-12-00/101, Fig. 107, Block 1

EFFECTIVITY

ALL

34-FAULT CODE INDEX

17   Page 12
Apr 22/01

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------
```

34 12 17 --   34 12 17 -- thru 34 12 20 --
               Not used.

34 12 21 --   1. (01=Capt, 02=F/O) AS in error. Capt's AS reads _____. F/O
                  AS reads _____. Stby AS reads _____. ALTN AIR DATA
                  selection corrects the fault.
               2. FIM 34-12-00/101, Fig. 110, Block 1

34 12 22 --   1. (01=Capt, 02=F/O) AS in error. Capt's AS reads _____.
                  F/O's AS reads _____. Stby AS reads _____. ALTN AIR
                  DATA selection fails to correct fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 23 --   1. (01=Capt, 02=F/O) Mach indication in error. Capt's Mach reads
                  _____. F/O Mach reads _____. ALTN AIR DATA selection
                  corrects the fault.
               2. FIM 34-12-00/101, Fig. 110, Block 1

34 12 24 --   1. (01=Capt, 02=F/O) Mach indication in error. Capt's Mach reads
                  _____. F/O Mach reads _____. ALTN AIR DATA selection
                  fails to correct fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 25 --   34 12 25 -- thru 34 12 26 --
               Not used.

34 12 27 --   1. (01=Capt, 02=F/O) AS and Mach in error. Readings are: Capt
                  AS _____, F/O AS _____, Stby AS _____, Capt Mach _____, F/O
                  Mach _____. ALTN AIR DATA corrects the fault.
               2. FIM 34-12-00/101, Fig. 110, Block 1

34 12 28 --   1. (01=Capt, 02=F/O) AS and Mach in error. Readings are: Capt
                  AS _____, F/O AS _____, Stby AS _____, Capt Mach
                  _____, F/O Mach _____. ALTN AIR DATA fails to correct the
                  fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 29 --   1. (01=Capt, 02=F/O) SPD flag in view. ALTN AIR DATA selection
                  corrects the fault.
               2. FIM 34-12-00/101, Fig. 108, Block 1

```
----------------------------------------------------------------------
   FAULT         1. LOG BOOK REPORT
   CODE          2. FAULT ISOLATION REFERENCE
----------------------------------------------------------------------


34 12 30 --    1. (01=Capt, 02=F/O) SPD flag in view.  ALTN AIR DATA selection
                  fails to correct fault.
               2. FIM 34-22-00/101, Fig. 108, Block 1

34 12 31 --    1. (01=Capt, 02=F/O) MACH flag in view.  ALTN AIR DATA selection
                  corrects the fault.
               2. Replace the applicable air data computer, M100 (left) or M101
                  (right) (AMM 34-12-01/401).

34 12 32 --    1. (01=Capt, 02=F/O) MACH flag in view.  ALTN AIR DATA selection
                  fails to correct fault.
               2. FIM 34-12-00/101, Fig. 109, Block 1

34 12 33 --    Not used.
   thru
34 12 37 --

34 12 38 --    1. (01=Capt, 02=F/O) Altm fails to read 10,000 ft during ADC
                  test.  Test OK with ALTN AIR DATA selected.
               2. Replace the applicable air data computer, M100 (left) or M101
                  (right) (AMM 34-12-01/401).

34 12 39 --    1. (01=Capt, 02=F/O) Altn fails to read 10,000 ft during ADC test
                  with normal or ALTN AIR DATA selected.
               2. Replace the applicable altimeter, N8 (captain) or N48 (F/O)
                  (AMM 34-13-01/401).

34 12 40 --    1. (01=Capt, 02=F/O) Altn OFF flag fails to appear during ADC
                  test.  Test OK with ALTN AIR DATA selected.
               2. Replace the applicable air data computer, M100 (left) or M101
                  (right) (AMM 34-12-01/401).

34 12 41 --    1. (01=Capt, 02=F/O) Altn OFF flag fails to appear during ADC
                  computer test with normal or ALTN AIR DATA selected.
               2. Replace the applicable altimeter, N8 (captain) or N48 (F/O)
                  (AMM 34-13-01/401).

34 12 42 --    1. (01=Capt, 02=F/O) Altn OFF flag fails to appear and altn fails
                  to read 10,000 ft during test.  Test OK with ALTN AIR DATA
                  selected.
               2. Replace the applicable air data computer, M100 (left) or M101
                  (right) (AMM 34-12-01/401).
```

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 12 43 --
1. (01=Capt, 02=F/O) Altn OFF flag fails to appear and altn fails to read 10,000 ft during test with normal or ALTN AIR DATA selected.
2. Replace the applicable altimeter, N8 (captain) or N48 (F/O) (AMM 34-13-01/401).

34 12 44 --
1. (01=Capt, 02=F/O) Airspeed fails to read 137 KIAS during ADC test. Test OK with ALTN AIR DATA selected.
2. Replace the applicable air data computer, M100 (left) or M101 (right) (AMM 34-12-01/401).

34 12 45 --
1. (01=Capt, 02=F/O) Airspeed fails to read 137 KIAS during ADC test with normal or ALTN AIR DATA selected.
2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 46 --
34 12 46 -- thru 34 12 61 --
Not used.

34 12 62 00
1. No response received to ADC test.
2. Replace the applicable air data computer, M100 (left) or M101 (right) (AMM 34-12-01/401).

34 12 63 00
1. TAS, SAT and TAT indications are blank.
2. FIM 34-12-00/101, Fig. 109, Block 1

34 12 64 00
1. TAS, SAT, and TAT in error. TAS reads _____, SAT reads _____, TAT reads _____.
2. FIM 34-12-00/101, Fig. 109, Block 1

34 12 65 --
34 12 65 -- thru 34 12 67 --
Not used.

```
-------------------------------------------------------------------------
   FAULT           1. LOG BOOK REPORT
   CODE            2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------------


34 12 68 00      1. ADC Test of TAT +35C on EICAS (did not display, was blank,
                    etc).
                 2. FIM 34-12-00/101, Fig. 109, Block 1

34 12 69 00      Not used.

34 12 70 --      1. (01=Capt, 02=F/O) altimeter fluctuates.  Altimeter normal with
                    ALTN AIR DATA selected.
                 2. FIM 34-12-00/101, Fig. 104, Block 1

34 12 71 --      1. (01=Capt, 02=F/O) altimeter fluctuates with normal or ALTN AIR
                    DATA selected.
                 2. Replace the applicable altimeter, N8 (captain) or N48 (F/O)
                    (AMM 34-13-01/401).

34 12 72 --      1. (01=Capt, 02=F/O) Altimeter baro indicator has uncommanded
                    movement.
                 2. Replace the applicable altimeter, N8 (captain) or N48 (F/O)
                    (AMM 34-13-01/401).

34 12 73 00      1. SAT indication blank.  TAS and TAT normal.
                 2. Replace the applicable air data computer, M100 (left) or M101
                    (right) (AMM 34-12-01/401).

34 12 74 00      1. TAS indication blank.  SAT and TAT normal.
                 2. Replace the applicable air data computer, M100 (left) or M101
                    (right) (AMM 34-12-01/401).

34 12 75 00      1. EICAS msg OVERSPEED displayed and OVSP lgt illum.  Air-speed
                    below limit.
                 2. Replace the applicable air data computer, M100 (left) or M101
                    (right) (AMM 34-12-01/401).

34 12 76 --      1. Selecting (01=Capt, 02=F/O) ALTN AIR DATA not norm.
                    (Describe)
                 2. Replace the applicable air data computer, M100 (left) or M101
                    (right) (AMM 34-12-01/401).
```

```
----------------------------------------------------------------------
    FAULT          1. LOG BOOK REPORT
    CODE           2. FAULT ISOLATION REFERENCE
----------------------------------------------------------------------
```

34 12 77 --   1. (01=Capt, 02=F/O) EADI speed tape (fluctuates, inop, etc.)
               ALTN AIR DATA selection corrects the fault.
               2. Replace the applicable air data computer, M100 (left) or M101
               (right) (AMM 34-12-01/401).

34 12 78 --   1. (01=Capt, 02=F/O) EADI speed tape (fluctuates, inop, etc.)
               ALTN AIR DATA selection fails to correct the fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 79 --   Not used.

34 12 80 00   1. EICAS message AILERON LOCKOUT did not display and AIL LOCK
               light did not illum during ADC test.
               2. FIM 27-09-00/101, Fig. 106, Block 1.

34 12 81 --   1. (01=Capt, 02=F/O, 03=Capt & F/O) VSI did not display flag(s)
               during ADC test. Test OK with ALTN AIR DATA selected.
               2. Replace the applicable air data computer, M100 (left) or M101
               (right) (AMM 34-12-01/401).

34 12 82 --   1. (01=Capt, 02=F/O, 03=Capt & F/O) VSI did not display flag(s)
               during ADC test with norm or ALTN AIR DATA selected.
               2. Replace the applicable vertical speed indicator, N9 (captain)
               or N49 (F/O) (AMM 34-22-06/401).

34 12 82 --   1. (01=Capt, 02=F/O, 03=Capt & F/O) VSI did not display flag(s)
               during ADC test with norm or ALTN AIR DATA selected.
               2. Replace the applicable vertical speed indicator, N9 (captain)
               or N49 (F/O) (AMM 34-22-09/401).

34 12 83 --   1. (01=Capt, 02=F/O) SPD and MACH flags fail to appear during ADC
               test. Test ok with ALTN AIR DATA selected.
               2. Replace the applicable air data computer, M100 (left) or M101
               (right) (AMM 34-12-01/401).

34 12 84 --   1. (01=Capt, 02=F/O) SPD and MACH flags fail to appear during ADC
               test with normal or ALTN AIR DATA selected.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 12 85 --   1. (01=Capt, 02=F/O) SPD, MACH and ALTM off flags fail to appear
               during ADC test.
               2. Replace the applicable air data computer, M100 (left) or M101
               (right) (AMM 34-12-01/401).

```
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
```
----

34 12 86 --   1. (O1=Capt, O2=F/O) EADI speed tape faulty (describe) with
                    normal or ALTN EFI selected.
                 2. FIM 34-12-00/101, Fig. 109, Block 1, if the problem continues,
                    perform FIM 34-22-00/101, Fig. 108, Block 1

34 12 87 --   1. (O1=Capt, O2=F/O) SPD flag and Altm OFF flag in view. ALTN
                    AIR DATA selection corrects fault.
                 2. FIM 34-12-00/101, Fig. 108, Block 1

34 12 91 00   1. The EICAS message ALT DISAGREE (caution) is displayed.
                 2. FIM 34-12-00/101, Fig. 104

34 12 92 00   1. The EICAS message IAS DISAGREE (caution) is displayed.
                 2. FIM 34-12-00/101, Fig. 104

34 13 01 00   1. Standby Altimeter (Report the problem, low, high, sticks,
                    fluctuates, vibrates, INOP, etc.).
                 2. Replace the standby altimeter, N23 (AMM 34-13-06/401).

34 13 02 00   1. Standby airspeed (Report the problem, low, high, sticks,
                    fluctuates, etc.).
                 2. FIM 34-13-00/101, Fig. 103, Block 1

34 16 01 00   34 16 01 00 thru 34 16 06 00
                 Not used.

34 16 07 04   1. No master CAUTION Lgt on Capt's side when ALT ALERT lgt illum.
                    Other alt alert indications norm (Ref Chapter 22 fault code
                    diagrams).
                 2. Examine and repair the circuit from burndy terminal TB241, pin
                    YC3 to the captain's master CAUTION switch, pin 16
                    (WDM 34-16-11).

34 16 07 05   1. No master CAUTION Lgt on F/O's side when ALT ALERT lgt illum.
                    Other alt alert indications norm (Ref Chapter 22 fault code
                    diagrams).
                 2. Examine and repair the circuit from burndy terminal TB241, pin
                    YC3 to the F/O's master CAUTION switch, pin 16 (WDM 34-16-11).

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 16 07 06   1. No master CAUTION Lgt on Capt's or F/O's side when ALT ALERT lgt illum. Other alt alert indications norm (Ref Chapter 22 fault code diagrams).
     2. FIM 31-51-00/101, Fig. 104, Block 1

34 16 08 --   1. No caution aural warning from (04=Capt, 05=F/O, 06=both Capt & F/O) speakers when ALT ALERT lgt illum. Other alt alert indication norm (Ref Chapter 22 fault code diagrams).
     2. Replace the left siren/owl aural warning module, M999 (AMM 31-51-04/401).

34 16 09 00   1. No master CAUTION lgts or aural warning when ALT ALERT lgt illum. Other alt alert indications norm (Ref Chapter 22 fault code diagrams).
     2. Replace the altitude alert module, M617 (AMM 34-16-01/401).

34 16 10 00   1. No ALT ALERT lgt or ALTITUDE ALERT EICAS msg when apl deviates more than 300' from alt selected on MCP (Ref Chapter 22 fault code diagrams).
     2. FIM 34-16-00/101, Fig. 103, Block 1

34 16 11 00   1. No ALTITUDE ALERT EICAS msg when airplane deviates more than 300' from selected alt on MCP. Other alt alert indications norm (Ref Chapter 22 fault code diagrams).
     2. FIM 34-16-00/101, Fig. 103, Block 1

34 16 12 00   1. No ALT ALERT lgt when apl deviates more than 300' from selected alt on MCP. ALTITUDE ALERT EICAS msg displayed (Ref Chapter 22 fault code diagrams).
     2. FIM 34-16-00/101, Fig. 103, Block 1

| FAULT
CODE | 1. LOG BOOK REPORT
2. FAULT ISOLATION REFERENCE |

----

34 16 13 00 1. Capt & F/O altimeters ALT alert lgt (illum, extin) at wrong
      alt (note alt) (Ref Chapter 22 fault code diagrams).
      2. FIM 34-16-00/101, Fig. 103, Block 1

34 16 14 -- 1. (O4=Capt, O5=F/O, O6=Both Capt and F/O) altimeter ALT lgt
      failed to illum in alert range (Ref Chapter 22 fault code
      diagrams).
      2. FIM 34-16-00/101, Fig. 103, Block 1

34 21 01 -- 1. (O1=Capt, O2=F/O) RDMI heading card sticks.
      2. Replace the applicable RDMI, N3 (captain) or N43 (F/O)
      (AMM 34-22-05/401).

34 21 02 -- 1. (O1=Capt, O2=F/O) RDMI and opposite EHSI heading in error.
      Capt's RDMI reads _____, F/O's RDMI reads _____, standby
      compass reads _____. OK on ALTN IRS.
      2. Replace the applicable IRU, M159 (left) or M161 (right)
      (AMM 34-21-01/401).

34 21 03 -- 1. (O1=Capt, O2=F/O) RDMI heading in error. Capt reads _____,
      F/O reads _____, standby compass reads _____. ALTN IRS
      doesn't correct.
      2. Replace the applicable RDMI, N3 (captain) or N43 (F/O)
      (AMM 34-22-05/401).

34 21 04 -- 1. (O1=Capt, O2=F/O) RDMI heading flag in view. No IRS fault
      indication.
      2. Replace the applicable RDMI, N3 (captain) or N43 (F/O)
      (AMM 34-22-05/401).

34 21 05 -- 1. (O1=Capt, O2=F/O) RDMI VOR and HDG flags in view. DIST (DME)
      normal. (L, R) IRS fault is indicated. Ok on ALTN IRS.
      2. Replace the applicable IRU, M159 (left) or M161 (right)
      (AMM 34-21-01/401).

```
-----------------------------------------------------------------------
    FAULT       1. LOG BOOK REPORT
    CODE        2. FAULT ISOLATION REFERENCE
-----------------------------------------------------------------------


34 21 06 --    1. (01=Capt, 02=F/O) RDMI VOR and HDG flags in view.  DIST (DME)
                  normal.  Ok on ALTN IRS.
               2. FIM 34-21-00/101, Fig. 103, Block 1


34 21 07 --    1. (01=Capt, 02=F/O) RDMI VOR and HDG flags in view.  DIST (DME)
                  is blank.
               2. Replace the applicable RDMI, N3 (captain) or N43 (F/O)
                  (AMM 34-22-05/401).


34 21 08 --    1. (01=Capt, 02=F/O) Vertical speed sticks.
               2. Replace the applicable vertical speed indicator, N9 (left) or
                  N49 (right) (AMM 34-22-06/401).


34 21 08 --    1. (01=Capt, 02=F/O) Vertical speed sticks.
               2. Replace the applicable vertical speed indicator, N9 (left) or
                  N49 (right) (AMM 34-22-09/401).


34 21 09 --    1. (01=Capt, 02=F/O) Vertical speed incorrect.  Ok on ALTN
                  IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).


34 21 10 --    1. (01=Capt, 02=F/O) Vertical speed incorrect.  ALTN IRS doesn't
                  correct.  ALTN AIR DATA corrects.
               2. FIM 34-21-00/101, Fig. 104A, Block 1


34 21 11 --    1. (01=Capt, 02=F/O) Vertical speed OFF flag (VSI FAIL) in view.
                  (L, R) IRS fault indicated.  Ok on ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).


34 21 11 --    1. (01=Capt, 02=F/O) Vertical speed OFF flag (VSI FAIL)
                  displayed.  (L, R) IRS fault indicated.  Ok on ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).


34 21 12 --    1. (01=Capt, 02=F/O) Vertical speed OFF flag (VSI FAIL)
                  displayed.  ALTN AIR DATA corrects.
               2. FIM 34-21-00/101, Fig. 104A, Block 1
```

```
  FAULT          1. LOG BOOK REPORT
  CODE           2. FAULT ISOLATION REFERENCE
```

---

34 21 13 --
1. (O1=Capt, O2=F/O) EHSI track in error. Capt track _____,
   F/O track _____. Ok on ALTN IRS.
2. Replace the applicable IRU M159 (left) or M161 (right)
   (AMM 34-21-01/401).

   NOTE: Track error can be cause by marginal performance of the
          DME, FMC, or IRU systems.

34 21 14 --
1. (O1=Capt, O2=F/O) EHSI track in error. Capt track _____,
   F/O track _____. ALTN IRS doesn't correct.
2. Replace the applicable EFIS symbol generator, M148 (left) or
   M150 (right) (AMM 34-22-01/401).

   NOTE: Track error can be cause by marginal performance of the
          DME, FMC, or IRU systems.

34 21 15 --
1. (O1=Capt, O2=F/O) EHSI track flag in view. IRS fault
   indicated. Ok on ALTN IRS.
2. Replace applicable IRU, M159 (left) or M161 (right)
   (AMM 34-21-01/401).

34 21 16 --
1. (O1=Capt, O2=F/O) EHSI track flag in view. Ok on ALTN IRS.
2. Replace applicable IRU, M159 (left) or M161 (right)
   (AMM 34-21-01/401).

34 21 17 --
1. (O1=Capt, O2=F/O) EHSI heading bug in error. Capt EHSI
   heading _____, F/O RDMI heading _____, standby compass heading
   _____. OK on ALTN IRS.
2. Replace the applicable IRU, M159 (left) or M161 (right)
   (AMM 34-21-01/401).

34 21 18 --
1. (O1=Capt, O2=F/O) EHSI curved trend vector missing. IRS fault
   illum. OK on ALTN IRS.
2. Replace the applicable IRU, M159 (left) or M161 (right)
   (AMM 34-21-01/401).

34 21 19 --
1. (O1=Capt, O2=F/O) EHSI curved trend vector missing.
2. Replace the applicable EFIS symbol generator, M148 (left) or
   M150 (right) (AMM 34-22-01/401).

EFFECTIVITY

ALL

34-FAULT CODE INDEX

16   Page 22
Aug 10/96
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
----------------------------------------------------------------------
     FAULT       1. LOG BOOK REPORT
     CODE        2. FAULT ISOLATION REFERENCE
----------------------------------------------------------------------
```

34 21 20 --   1. (01=Capt, 02=F/O) EHSI heading bug missing. Opposite RDMI HDG
                  normal.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 21 --   1. (01=Capt, 02=F/O) EHSI heading bug missing. HDG and VOR flags
                  in view on opposite RDMI. IRS fault illum. Ok on ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 22 --   1. (01=Capt, 02=F/O) EHSI heading bug missing. HDG and VOR flags
                  in view on opposite RDMI.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 23 --   1. (01=Capt, 02=F/O) EADI ground speed in error. Capt ground
                  speed reads _____, F/O ground speed reads _____. Ok on
                  ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 24 --   1. (01=Capt, 02=F/O) EADI ground speed in error. ALTN IRS
                  doesn't correct.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 25 --   1. (01=Capt, 02=F/O) EADI ground speed blank. (L,R) IRS fault
                  indicated. Ok on ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 26 --   1. (01=Capt, 02=F/O) EADI ground speed blank.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 27 --   1. (01=Capt, 02=F/O) EADI pitch (describe problem:
                  indicates excessive pitch, oscillates, drifts, etc). Ok on
                  ALTN IRS.
               2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

EFFECTIVITY

                    ALL

                                          34-FAULT CODE INDEX

                                             03   Page 23
                                                     May 10/96
          BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------------
  FAULT          1. LOG BOOK REPORT
  CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------
```

34 21 28 --   1. (01=Capt, 02=F/O) EADI pitch (describe problem: indicates
                  excessive pitch, oscillates, drifts, etc). ALTN IRS doesn't
                  correct.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 29 --   1. (01=Capt, 02=F/O) EADI bank (describe problem:
                  indicates excessive bank, oscillates, drifts, etc). Ok on
                  ALTN IRS.
              2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 30 --   1. (01=Capt, 02=F/O) EADI bank (describe problem: indicates
                  excessive bank, oscillates, drifts, etc). ALTN IRS doesn't
                  correct.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 31 --   1. (01=Capt, 02=F/O) EADI ATT flag in view. (L, R) IRS fault
                  indicated. Ok on ALTN IRS.
              2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 32 --   1. (01=Capt, 02=F/O) EADI ATT flag in view.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 33 --   1. (01=Capt, 02=F/O) EADI ATT flag in view and ground speed
                  blank. (L, R) IRS fault indicated. Ok on ALTN IRS.
              2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 34 --   1. (01=Capt, 02=F/O) EADI ATT flag in view and ground speed
                  blank.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

34 21 35 --   1. (01=Capt, 02=F/O) EADI ATT flag in view and ground
                  speed blank. RDMI HDG flag, HSI TRK flag, and vert speed OFF
                  flag also in view. (L, R) IRS fault indicated. Ok on ALTN
                  IRS.
              2. Replace the applicable IRU, M159 (left) or M161 (right)
                  (AMM 34-21-01/401).

34 21 36 --   Not Used.

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |
----

34 21 37 --   1. (O1=L, O2=C, O3=R, O7=ALL) IRS indicate(s) IRS DC FAIL.
               2. FIM 34-21-00/101, Fig. 105, Block 1.

34 21 38 --   1. (O1=L, O2=C, O3=R, O7=ALL) IRS indicate(s) IRS ON DC.
               2. FIM 34-21-00/101, Fig. 106, Block 1

34 21 39 --   1. During alignment (O1=L, O2=C, O3=R) IRS indicated IRS FAULT.
                  Selecting ATT extinguished FAULT.
               2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                  (right) (AMM 34-21-01/401).

34 21 40 --   1. During alignment (O1=L, O2=C, O3=R) IRS indicated IRS FAULT.
                  FAULT remained illum with ATT selected.
               2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                  (right) (AMM 34-21-01/401).

34 21 41 --   34 21 41 -- thru 34 21 42 --
               Not used.
34 21 43 --   1. After alignment (O1=L, O2=C, O3=R) IRS indicated IRS FAULT.
                  Selecting ATT extinguished FAULT.
               2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                  (right) (AMM 34-21-01/401).

34 21 44 --   1. After alignment (O1=L, O2=C, O3=R) IRS indicated IRS FAULT.
                  FAULT remained illum with ATT selected.
               2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                  (right) (AMM 34-21-01/401).

34 21 45 --   1. (O1=L, O2=C, O3=R, O4=L&C, O5=R&C, O6=L&R, O7=ALL) ALIGN
                  flashed when pos entered and re-entered.
               2. FIM 34-21-00/101, Fig. 105A, Block 1.

```
--------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 21 46 --   1. (01=L, 02=C, 03=R, 04=L&C, 05=R&C, 06=L&R, 07=ALL) ALIGN
                   flashed approx 10 min after align mode entered. IRS FAULT
                   remained extin.
                2. FIM 34-21-00/101, Fig. 105D, Block 1.

34 21 47 --   1. (01=L, 02=C, 03=R, 04=L&C, 05=R&C, 06=L&R, 07=ALL) ALIGN
                   flashed approx 10 min after align entered. IRS FAULT
                   illuminated when latitude was re-entered.
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).

34 21 48 --   Not used.

34 21 49 --   1. ON DC failed to illum then extin on (01=L, 02=C, 03=R) IRS(s)
                   when align initiated.
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).

34 21 50 --   1. ALIGN failed to illum on (01=L, 02=R, 03=R) IRS(s) when align
                   initiated.
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).

34 21 51 --   1. ALIGN failed to extin on (01=L, 02=C, 03=R) IRS when NAV
                   entered. NAV selected when turned on.
                2. FIM 34-21-00/101, Fig. 105D, Block 1

34 21 52 --   1. ALIGN failed to illum then extin on (01=L, 02=C, 03=R) IRS
                   when switched from NAV to ALIGN to NAV.
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 21 53 --   1. TK/GS display on IRS panel is inop from (01=L, 02=C, 03=R, 04=ALL) IRS system(s).
              2. Replace the IRS panel, M59 (AMM 34-21-02/201).

34 21 54 --   1. PPOS display on IRS panel is inop from (01=L, 02=C, 03=R, 04=ALL) IRS system(s).
              2. Replace the IRS panel, M59 (AMM 34-21-02/201).

34 21 55 --   1. WIND display on IRS panel is inop from (01=L, 02=C, 03=R, 04=ALL) IRS system(s).
              2. Replace the IRS panel, M59 (AMM 34-21-02/201).
              3. If Wind display(s) is blank on ground, then there is no fault.

34 21 56 --   1. HDG display on IRS panel is inop from (01=L, 02=C, 03=R, 04=ALL) IRS system(s).
              2. Replace the IRS panel, M59 (AMM 34-21-02/201).

34 21 57 00   1. The number in (describe position) is (describe problem: segment missing, blank, cycling, etc) on IRS panel.
              2. Replace the applicable incandescent display lamp(s) (AMM 34-21-02/201). If the problem continues, replace the IRS panel, M59 (AMM 34-21-02/201). If the problem is a floating decimal point, replace the applicable IRU, M159 (left), M160 (center) or M161 (right) (AMM 34-21-01/401).

34 21 57 --   1. (01=L, 02=R, 03=C) IRS residual position error excessive, (indicate NM error, time in nav & No. of flights).
              2. Replace the L (C, R) IRU, M159 (M160, M161) (AMM 34-21-01/401).

34 21 58 --   1. All displays on IRS panel are inop from (01=L, 02=C, 03=R) IRS system(s).
              2. Replace the applicable IRU, M159 (left), M160 (center) or M161 (right) (AMM 34-21-01/401).

```
------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
------------------------------------------------------------------------


34 21 58 04     1. All displays on IRS panel are inop from (04=ALL) IRS
                   system(s).
                2. Replace the IRS panel, M59 (AMM 34-21-02/201).
                3. If the problem continues, examine and repair the interface
                   circuit from the IRU (left:  connector D367B, pins C10 and
                   C11.  center:  connector D369B, pins C10 and C11.  or right:
                   connector D371B, pins C10 and C11) and the IRMP (left:
                   connector D739, pins 24 and 25.  center:  connector D743, pins
                   24 and 25.  or right:  connector D741, pins 24 and 25) (WDM
                   34-21-11, (WDM 34-21-21, WDM 34-21-31).


34 21 59 00     1. (Describe key:  1, 2, 3, etc) key is inop on IRS panel.
                2. Replace the IRS panel, M59 (AMM 34-21-02/201).


34 21 59 --     1. (01=L, 02=R, 03=C) IRS residual groundspeed error excessive,
                   (indicate G.S. error, No. of flights).
                2. Do the residual groundspeed error check (FIM 34-21-00/101).
                3. Replace the L (C, R) IRU, M159 (M160, M161)
                   (AMM 34-21-01/401).
34 21 60 00     1. All keys are inop on IRS panel.
                2. Replace the IRS panel, M59 (AMM 34-21-02/201).


34 21 61 00     1. Align light flashes on all IRU annunciators, after second
                   position was entered on IRS panel.
                2. FIM 34-21-00/101, Fig. 105C, Block 1


34 21 62 --     1. (01=Capt, 02=F/O) RDMI, VOR and HDG flags in view.  DIST
                   normal.  ALTN IRS doesn't correct.
                2. Replace the applicable RDMI, N3 (captain) or N43 (F/O)
                   (AMM 34-22-05/401).
```

```
-----------------------------------------------------------------------------
      FAULT         1. LOG BOOK REPORT
      CODE          2. FAULT ISOLATION REFERENCE
-----------------------------------------------------------------------------
```

34 21 63 --   1. (01=Capt, 02=F/O) EHSI heading bug in error. Capt EHSI
                   heading _____, F/O RDMI heading _____. Standby compass
                   heading _____. ALTN IRS doesn't correct.
                2. Replace the applicable EFIS symbol generator, M148 (left) or
                   M150 (right) (AMM 34-22-01/401).

34 21 64 --   1. (01=Capt, 02=F/O) EHSI track flag in view. ALTN IRS doesn't
                   correct.
                2. Replace the applicable EFIS symbol generator, M148 (left) or
                   M150 (right) (AMM 34-22-01/401).

34 21 65 --   1. Align light flashes on (01=L, 02=C, 03=R) IRS panel after
                   second position entry from IRS panel. IRS pos entry from
                   FMC-CDU ok.
                2. FIM 34-21-00/101, Fig. 105B, Block 1

34 21 66 --   1. Align light flashes on (01=L, 02=C, 03=R) IRS panel after
                   second position entry from IRS panel. IRS pos. entry from
                   FMC-CDU unsuccessful.
                2. FIM 34-21-00/101, Fig. 105A, Block 1

34 21 67 --   1. (01=Capt, 02=F/O) RDMI HDG flag in view. (L, R) IRS FAULT is
                   indicated.
                2. Replace the applicable IRU, M159 (left) or M161 (right)
                     (AMM 34-21-01/401).

34 21 68 --   1. (01=Capt, 02=F/O) vertical speed incorrect. ALTN IRS doesn't
                   correct. ALTN AIR DATA doesn't correct.
                2. Replace the applicable vertical speed indicator, N9 (left) or
                   N49 (right) (AMM 34-22-06/401).

```
------------------------------------------------------------------------
    FAULT        1. LOG BOOK REPORT
    CODE         2. FAULT ISOLATION REFERENCE
------------------------------------------------------------------------


34 21 68 --     1. (01=Capt, 02=F/O) vertical speed incorrect.  ALTN IRS doesn't
                   correct.  ALTN AIR DATA doesn't correct.
                2. Replace the applicable vertical speed indicator, N9 (left) or
                   N49 (right) (AMM 34-22-09/401).


34 21 69 --     1. (01=Capt, 02=F/O) Vertical speed OFF flag (VSI FAIL)
                   displayed.  ALTN AIR DATA doesn't correct.
                2. FIM 34-21-00/101, Fig. 104, Block 1


34 21 70 --     1. After flight residual GS on (01=L, 02=C, 03=R) IRU is too high
                   for two consecutive flights (record GS error per flight).
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).


34 21 71 --     1. After flight PPOS on (01=L, 02=C, 03=R) IRU is in error,
                   (record time IRS was in nav mode, actual and indicated
                   latitude and longitude).  Add note if IRS error was excessive
                   for two consecutive flights.
                2. FIM 34-21-00/101, Fig. 107A, Block 1


34 21 72 --     1. Selecting (01=Capt, 02=F/O) ALTN IRS not norm.  (Describe).
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).


34 21 73 --     34 21 73 -- thru 34 21 76 --
                Not used.
34 21 77 --     1. (01=L, 02=C, 03=R) IRS inoperative.
                2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                   (right) (AMM 34-21-01/401).


34 21 78 00     1. ATT DISAGREE message displayed on EICAS.
                2. FIM 34-21-00/101, Fig. 107, Block 1


34 21 79 --     1.  RA off flag in view.
                2.  Replace the applicable vertical speed indicator, N9 (left) or
                    N49 (right) (AMM 34-22-09/401).


34 22 01 --     1. (01=Capt, 02=F/O) EADI is blank.  Selecting ALTN EFI corrects
                   the fault.
                2. FIM 34-22-00/101, Fig. 108, Block 1
```

EFFECTIVITY

ALL

34-FAULT CODE INDEX

19   Page 30
            Aug 22/03
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------------
    FAULT       1. LOG BOOK REPORT
    CODE        2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------
```

34 22 02 --   1. (01=Capt, 02=F/O) EADI is (blank, intermittent). Selecting
               ALTN EFI does not correct fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 03 --   1. (01=Capt, 02=F/O) EADI is out of focus.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 04 --   1. (01=Capt, 02=F/O) EADI sky/ground circle goes black
               intermittently.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 05 --   1. (01=Capt, 02=F/O) EADI sky/ground boundary is incorrect.
               Selecting ALTN EFI corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401).

34 22 06 --   1. (01=Capt, 02=F/O) EADI white horizon line is not aligned with
               the sky/ground line. Selecting ALTN EFI corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401).

34 22 07 --   1. (01=Capt, 02=F/O) EADI is distorted. Selecting ALTN EFI
               corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401).

34 22 08 --   1. (01=Capt, 02=F/O) EADI is distorted. Selecting ALTN EFI does
               not correct the fault.
               2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 09 --   1. (01=Capt, 02=F/O) EADI sky and ground colors are
               offset. Selecting ALTN EFI corrects the faults.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401).

34 22 10 --   1. (01=Capt, 02=F/O) EADI (width, height) is incorrect.
               Selecting ALTN EFI corrects fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401).

EFFECTIVITY

          ALL

34-FAULT CODE INDEX

                                              06   Page 31
                                                    Aug 22/01
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE

---

34 22 11 --   1. (01=Capt, 02=F/O) EADI (width, height) is incorrect.
              Selecting ALTN EFI does not correct fault.
           2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 12 --   1. (01=Capt, 02=F/O) EADI size and (linearity, brightness)
              changed. Selecting ALTN EFI corrects the fault.
           2. Replace the applicable EFIS symbol generator, M148 (left) or
              M150 (right) (AMM 34-22-01/401).

34 22 13 --   1. (01=Capt, 02=F/O) EADI size and (linearity, brightness)
              changed. Selecting ALTN EFI does not correct the fault.
           2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 14 --   1. (01=Capt, 02=F/O) EADI is only one color. Selecting ALTN EFI
              corrects fault.
           2. Replace the applicable EFIS symbol generator, M148 (left) or
              M150 (right) (AMM 34-22-01/401).

34 22 15 --   1. (01=Capt, 02=F/O) EADI is only one color. Selecting ALTN EFI
              does not correct fault.
           2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 16 --   1. (01=Capt, 02=F/O) EADI is wrong (color, intensity). Selecting
              ALTN EFI corrects the fault.
           2. Replace the applicable EFIS symbol generator, M148 (left) or
              M150 (right) (AMM 34-22-01/401).

34 22 17 --   1. (01=Capt, 02=F/O) EADI is wrong (color, intensity). Selecting
              ALTN EFI does not correct fault.
           2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 18 --   1. (01=Capt, 02=F/O) EADI has a colored fringe on the display.
           2. Replace the applicable EADI, N4 (captain) or N44 (F/O)
              (AMM 34-22-03/401).

34 22 19 --   1. (01=Capt, 02=F/O) EADI color shade is off.
           2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 20 --   1. (01=Capt, 02=F/O) EADI manual brightness adjust is
              inop.
           2. FIM 34-22-00/101, Fig. 105, Block 1

34 22 21 --   1. (01=Capt, 02=F/O) EADI manual and auto brightness adjust are
              inop.
           2. FIM 34-22-00/101, Fig. 105, Block 1

```
--------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------


34 22 22 --    1. (01=Capt, 02=F/O) EHSI is (blank, intermittent).  Selecting
                  ALTN EFI corrects the fault.
               2. FIM 34-22-00/101, Fig. 108, Block 1


34 22 23 --    1. (01=Capt, 02=F/O) EHSI is (blank, intermittent).  Selecting
                  ALTN EFI does not correct fault.
               2. FIM 34-22-00/101, Fig. 106, Block 1


34 22 24 --    1. (01=Capt, 02=F/O) EHSI is out of focus.
               2. FIM 34-22-00/101, Fig. 106, Block 1


34 22 25 --    Not used.


34 22 26 --    1. (01=Capt, 02=F/O) EHSI is distorted.  Selecting ALTN EFI
                  corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).


34 22 27 --    1. (01=Capt, 02=F/O) EHSI is distorted.  Selecting ALTN EFI does
                  not correct the fault.
               2. FIM 34-22-00/101, Fig. 106, Block 1


34 22 28 --    1. (01=Capt, 02=F/O) EHSI (width, height) is incorrect.
                  Selecting ALTN EFI corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).


34 22 29 --    1. (01=Capt, 02=F/O) EHSI (width, height) is incorrect.
                  Selecting ALTN EFI does not correct fault.
               2. FIM 34-22-00/101, Fig. 106, Block 1


34 22 30 --    1. (01=Capt, 02=F/O) EHSI size and (linearity, brightness)
                  changed.  Selecting ALTN EFI corrects the fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).


34 22 31 --    1. (01=Capt, 02=F/O) EHSI size and (linearity, brightness)
                  changed.  Selecting ALTN EFI does not correct the fault.
               2. FIM 34-22-00/101, Fig. 106, Block 1


34 22 32 --    1. (01=Capt, 02=F/O) EHSI is only one color.  Selecting ALTN EFI
                  corrects fault.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).
```

```
--------------------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------------
```

34 22 33 --   1. (O1=Capt, O2=F/O) EHSI is only one color. Selecting ALTN EFI
                 does not correct fault.
              2. FIM 34-22-00/101, Fig. 106, Block 1

34 22 34 --   1. (O1=Capt, O2=F/O) EHSI is wrong (color, intensity). Selecting
                 ALTN EFI corrects the faults.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                 M150 (right) (AMM 34-22-01/401).

34 22 35 --   1. (O1=Capt, O2=F/O) EHSI is wrong (color, intensity). Selecting
                 ALTN EFI does not correct the fault.
              2. FIM 34-22-00/101, Fig. 106, Block 1

34 22 36 --   1. (O1=Capt, O2=F/O) EHSI has a colored fringe on the
                 display.
              2. Replace the applicable EHSI, N5 (captain) or N45 (F/O)
                 (AMM 34-22-04/401).

34 22 37 --   1. (O1=Capt, O2=F/O) EHSI color shade is off.
              2. FIM 34-22-00/101, Fig. 106, Block 1

34 22 38 --   1. (O1=Capt, O2=F/O) EHSI manual brightness adjust is
                 inop.
              2. FIM 34-22-00/101, Fig. 107, Block 1

34 22 39 --   1. (O1=Capt, O2=F/O) EHSI manual and auto brightness adjust are
                 inop.
              2. FIM 34-22-00/101, Fig. 107, Block 1

34 22 40 --   1. (O1=Capt, O2=F/O) EADI and EHSI are blank. Selecting ALTN EFI
                 corrects fault.
              2. FIM 34-22-00/101, Fig. 108, Block 1

34 22 41 --   1. (O1=Capt, O2=F/O) EADI and EHSI displays are
                 unintelligable.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                 M150 (right) (AMM 34-22-01/401).

34 22 42 --   1. (O1=Capt, O2=F/O) EADI and EHSI have no lines on the displays.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                 M150 (right) (AMM 34-22-01/401).

34 22 43 --   1. (O1=Capt, O2=F/O) EADI and EHSI lines are offset.
              2. Replace the applicable EFIS symbol generator, M148 (left) or
                 M150 (right) (AMM 34-22-01/401).

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 22 44 --
1. (O1=Capt, O2=F/O) EHSI mode selector position doesn't correspond to HSI display. ILS mode displayed. DH and WX RADAR FAIL displayed.
2. Replace the applicable EFIS control panel, M94 (left) or M93 (right) (AMM 34-22-02/201).

34 22 45 --
1. (O1=Capt, O2=F/O) EHSI (NAV AID, APRT, RTE DATA, WPT) MAP feature switch(es) (describe fault).
2. Replace the applicable EFIS control panel, M94 (left) or M93 (right) (AMM 34-22-02/201).

34 22 46 --
1. (O1=Capt, O2=F/O) HSI RANGE selector (describe fault).
2. Replace the applicable EFIS control panel, M94 (left) or M93 (right) (AMM 34-22-02/201).

34 22 47 --
1. (O1=Capt, O2=F/O) sky/ground circle on EADI and WXR on EHSI go black.
2. FIM 34-22-00/101, Fig. 108, Block 1

34 22 48 --
1. Command bug(s) on (O1=Capt, O2=F/O, O3=both) EADI speed tape(s) disagree(s) with (MCP, FMS CDU). Bugs normal using ALTN EFI.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 22 49 --
1. Command Airspeed bug(s) (not normal, missing, etc) on (O1=Capt, O2=F/O) EADI speed tape(s). ALTN EFI selection corrects fault.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 22 50 --
1. V1, VR bug(s) (not normal, missing, etc) on (O1=Capt, O2=F/O, O3=both) EADI speed tape(s). ALTN EFI selection corrects fault.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 22 51 --
1. (O1=Capt, O2=F/O) EADI speed tape faulty (describe) ALTN EFI selection corrects fault.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 22 52 --
34 22 52 -- thru 34 22 69 --
Not used.

```
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
```

----

34 22 70 --   1. (O1=Capt, O2=F/O) EADI sky/ground boundry is incorrect.
                    Selecting ALTN EFI doesn't correct fault.
                 2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 71 --   1. (O1=Capt, O2=F/O) EADI white horizon is off the sky ground
                    line. Selecting ALTN EFI does not correct fault.
                 2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 72 --   1. (O1=Capt, O2=F/O) EADI sky and ground colors are offset.
                    Selecting ALTN EFI does not correct fault.
                 2. FIM 34-22-00/101, Fig. 104, Block 1

34 22 73 --   1. (O1=Capt, O2=F/O) EADI and EHSI are blank. Selecting ALTN EFI
                    does not correct fault.
                 2. FIM 34-22-00/101, Fig. 108, Block 1

34 22 74 --   1. (O1=Capt, O2=F/O) EADI auto brightness inop
                 2. FIM 34-22-00/101, Fig. 105, Block 1

34 22 75 00   1. No F/D initialization indicators displayed on captain's EADI
                    with F/D source selector positioned to L. Condition remains
                    same with selector at C; however, operation normal with
                    alternate EFI selected.
                 2. Replace the left EFIS symbol generator, N148
                    (AMM 34-22-01/401).

34 22 76 00   1. No F/D initialization indications displayed on first officer's
                    EADI with F/D source selector positioned to R. Condition
                    remains same with selector at C; however, operation normal
                    with alternate EFI selected.
                 2. Replace the right EFIS symbol generator, N150
                    (AMM 34-22-01/401).

34 22 77 --   1. (O1=Capt, O2=F/O) EHSI auto brightness inop.
                 2. FIM 34-22-00/101, Fig. 107, Block 1

34 22 78 --   34 22 78 -- thru 34 22 79 --
                 Not used.

```
--------------------------------------------------------------------
    FAULT       1. LOG BOOK REPORT
    CODE        2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 22 86 --   1. (01=Capt, 02=F/O) slip indicator not centered.
               2. Adjust the EADI inclinometer (AMM 34-22-00/201).

34 22 87 --   1. (01=Capt, 02=F/O, 3=Capt & F/O) HSI and (opposite side, both)
                  RDMI failed to indicate change to true heading when (above
                  73°N, below 60°S). System normal with HDG REF SW in TRUE.
               2. Replace the applicable IRU, M159 (left), M160 (center) or M161
                  (right) (AMM 34-21-01/401).

34 22 88 --   1. (01=Capt, 02=F/O, 03=Capt and F/O) HSI and (opposite side,
                  both) RDMI failed to indicate change to true heading with HDG
                  REF SW in TRUE.
               2. Examine and repair or replace the HDG REF SW and related
                  circuits (WDM 34-61-24).

34 22 89 --   1. Selecting (01=Capt., 02=F/O) ALTN EFI not norm. (Describe).
               2. Examine and repair the applicable ALTN EFI switch and related
                  circuits (WDM 34-22-17, WDM 34-22-27).

               NOTE: If there is an intermittent delay when you push the
                      ALTN EFI switch, replace the applicable EFIS symbol
                      generator, M148 (left) or M150 (right)
                      (AMM 34-22-01/401).

34 22 90 --   1. DH flag displayed on the (01=Capt, 02=F/O) EADI.
               2. FIM 34-22-00/101, Fig. 108, Block 1

34 22 91 --   1. Selecting (01=Capt., 02=F/O) ALTN FMC not norm. (Describe).
               2. Examine and repair the applicable ALTN FMC switch and related
                  circuits (WDM 34-22-17, WDM 34-22-27).

   FAULT   1. LOG BOOK REPORT
   CODE   2. FAULT ISOLATION REFERENCE
----

34 22 92 --   1. (O1=Capt., O2=F/O) EADI and EHSI are blank with SG FAIL
               message displayed in both indicators. Selecting ALTN EFI
               corrects fault.
           2. FIM 34-22-00/101, Fig. 108, Block 1. If the problem
               continues, replace the applicable EFIS symbol generator, M148
               (left) or M150 (right) (AMM 34-22-01/401).

34 22 93 --   1. Selecting (O1=Capt, O2=F/O) ALTN IRS not norm.
           2. Examine and repair the applicable ALTN IRS switch and related
               circuits (WDM 34-22-17, WDM 34-22-27)

34 22 94 --   1. (O1=Capt, O2=F/O) EADI and EHSI displays intermittent.
               Displays normal on ALTN EFI.
           2. Replace the applicable EFIS symbol generator, M148 (left) or
               M150 (right) (AMM 34-22-01/401). If the problem continues,
               examine and repair the circuit between the integrated drive
               generator G19, terminal N and ground (WDM 24-21-11,
               WDM 24-21-21).

34 22 95 --   1. (O1=Capt, O2=F/O) EADI and EHSI displays intermittent.
               Condition same on ALTN EFI.
           2. FIM 34-22-00/101, Fig. 108, Block 1

34 23 01 00   1. Standby compass light inoperative.
           2. Replace the bulb.

34 23 02 00   1. Standby compass heading incorrect. Reads _____, should
               read _____.
           2. Do the standby compass calibration procedure
               (AMM 34-23-00/201).

FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE

---

34 24 01 00
1. Standby attitude indicator lights inoperative.
2. Replace the standby attitude indicator, M20(AMM 34-24-01/201).

34 24 02 00
1. Standby attitude indicator attitude display abnormal (pitch, roll, etc.) and GYRO flag is out of view.
2. FIM 34-24-00/101, Fig. 103, Block 1

34 24 03 00
1. Standby attitude indicator GYRO flag is in view.
2. FIM 34-24-00/101, Fig. 103, Block 1

34 24 04 00
Not used.

34 24 05 00
1. Selection of ILS OFF does not retract ILS pointers.
2. FIM 34-31-00/101, Fig. 103, Block 1

34 25 01 00
1. COMPARATOR BITE message is displayed on EICAS.
2. FIM 34-22-00/101, Fig. 109, Block 1

34 31 01 --
1. ILS test response abnormal on (01=Capt EADI & EHSI, 02=F/O EADI & EHSI, 03=STBY ATT IND). Identify those test indications which were abnormal.
2. FIM 34-31-00/101, Fig. 104, Block 1

34 31 02 --
34 31 02 -- thru 34 31 31 --
Not used.

34 31 32 --
1. (L, R, C) ILS ident not received at (04=Capt, 05=F/O, 06=1st Obs) crew position. Deviation pointer display normal.
2. Replace the applicable audio selector panel, M70 (captain), M71 (F/O) or M98 (1st obs) (AMM 23-51-01/401).

34 31 33 --
1. (01=L, 02=R, 03=C) ILS ident not received at any crew position. Deviation pointer normal.
2. Replace the applicable ILS receiver, M156 (left), M157 (center) or M158 (right) (AMM 34-31-01/401).

```
-------------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------------------
```

34 31 34 --   1. G/S flag in view on the (O4=Capt, O5=F/O) EADI & EHSI.
               2. Replace the applicable ILS receiver, M156 (left) or M158
                  (right) (AMM 34-31-01/401).

34 31 35 --   1. LOC flag in view on the (O4=Capt, O5=F/O) EADI and EHSI.
               2. Replace the applicable ILS receiver, M156 (left) or M158
                  (right) (AMM 34-31-01/401).

34 31 36 --   1. G/S and LOC flags in view on the (O4=Capt, O5=F/O) EADI and
                  EHSI.
               2. FIM 34-31-00/101, Fig. 105, Block 1

34 31 37 --   1. Loc pointer or COURSE indicator not displayed on the (O4=Capt,
                  O5=F/O) EADI & EHSI. ILS ident not received.
               2. FIM 34-31-00/101, Fig. 110, Block 1

34 31 38 --   1. G/S pointer not displayed on the (O4=Capt, O5=F/O) EADI &
                  EHSI.
               2. FIM 34-31-00/101, Fig. 111, Block 1

34 31 39 --   1. G/S & Loc pointers or COURSE indicator not displayed on the
                  (O4=Capt, O5=F/O) EADI and EHSI. ILS ident not received.
               2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 40 07   1. G/S and LOC pointers not displayed on Capt or F/O's EADI and
                  EHSI.
               2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 41 --   1. The deviation scales and COURSE bar(s) are missing on
                  (O4=Capt's, O5=F/O's, O7=Capt & F/O) EADI's. The pointers are
                  not displayed on the corresponding EHSI. ILS ident received.
               2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 42 --   1. The deviation scales and COURSE bar(s) are missing on
                  (O4=Capt, O5=F/O, O7=Capt & F/O) EADI. The pointers are not
                  displayed on the corresponding HSI. ILS ident not received.
               2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 43 --   1. (O4=CAPT, O5=F/O) EADI and EHSI LOC pointer and COURSE
                  indicator (Intermittent has reverse HDG, etc).
               2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 44 --   1. (O1=L, O2=R, O3=C) ILS reception is weak.
               2. Replace the applicable ILS receiver, M156 (left), M158
                  (center) or M157 (right) (AMM 34-31-01/401).

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |

----

34 31 45 --   1. LOC pointer or COURSE ind not displayed on the
                 (O4=Capt, O5=F/O) EADI and EHSI. Displays were norm with ALTN
                 EFI selected.
              2. FIM 34-31-00/101, Fig. 103, Block 1

34 31 46 --   Not used.

34 31 47 --   1. ILS frequency displayed on the (O1=Capt, O2=F/O) EHSI
                 disagrees with the frequency indicator. HSI reads _____.
                 Control reads _____.
              2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 48 --   1. Selected course pointer display on the (O1=Capt, O2=F/O) EHSI
                 disagrees with the course indicator.
              2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 49 00   1. F. CRS indicator does not respond to selector movement.
              2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 50 00   1. ILS FREQ indicator does not respond to selector movement.
              2. Replace the ILS control panel, M87 (AMM 34-31-02/401).

34 31 51 00   1. G/S flag in view in the standby attitude indicator.
              2. FIM 34-31-00/101, Fig. 107, Block 1

34 31 52 00   1. LOC flag in view in the standby attitude indicator.
              2. FIM 34-31-00/101, Fig. 107, Block 1

34 31 53 00   1. G/S & LOC flags in view in the standby attitude indicator.
              2. FIM 34-31-00/101, Fig. 107, Block 1

34 31 54 00   1. Localizer deviation pointer not displayed in the standby
                 attitude indicator. ILS ident not received on center
                 receiver.
              2. Replace the right/center dual localizer antenna, M249
                 (AMM 34-31-04/401).

34 31 55 00   1. Glideslope deviation pointer never displayed in the standby
                 attitude indicator.
              2. FIM 34-31-00/101, Fig. 109, Block 1

34 31 56 00   1. Neither G/S nor LOC pointers displayed in the standby attitude
                 indicator.
              2. FIM 34-31-00/101, Fig. 108, Block 1

```
------------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
------------------------------------------------------------------------


34 31 57 00      1. The (glideslope, localizer) deviation pointer of the standby
                    attitude indicator (fluctuates, sticks, etc).
                 2. Replace the standby attitude indicator, M20
                    (AMM 34-24-01/201).


34 31 58 00      1. ILS front CRS indicator has missing segment.
                 2. Replace the ILS control panel, M87 (AMM 34-31-02/401).


34 31 59 00      1. ILS FREQ. indicator has missing segment.
                 2. Replace the ILS control panel, M87 (AMM 34-31-02/401).


34 31 60 00      1. G/S has (false, late) capture.
                 2. FIM 34-31-00/101, FIG. 111A, Block 1.


34 32 01 00      34 32 01 00 thru 34 32 03 00
                 Not used.


34 32 04 00      1. Both MIDDLE marker lights fail to illuminate.
                 2. FIM 34-32-00/101, Fig. 103, Block 1


34 32 05 00      1. Both OUTER marker lights fail to illuminate.
                 2. FIM 34-32-00/101, Fig. 103, Block 1


34 32 06 00      1. All marker beacon lights fail to illuminate.   Ident received.
                 2. FIM 34-32-00/101, Fig. 103, Block 1


34 32 07 00      1. All marker beacon lights fail to illuminate.   Ident not
                    received.
                 2. FIM 34-32-00/101, Fig. 103, Block 1


34 32 08 --      1. Marker beacon ident not received at (01=Capt, 02=F/0, 03=1st
                    Obs) station.  All other crew stations OK.  Marker lgts OK.
                 2. Replace the applicable audio selector panel, M70 (captain),
                    M71 (F/0) or M98 (1st observer) (AMM 23-51-01/401).


34 32 09 00      1. Marker beacon ident not received at any crew station.  Marker
                    lights are OK.
                 2. FIM 34-32-00/101, Fig. 103, Block 1


34 32 10 00      1. Both INNER/AIRWAYS marker lights fail to illuminate.
                 2. FIM 34-32-00/101, Fig. 103, Block 1
```

```
-------------------------------------------------------------------------
    FAULT        1. LOG BOOK REPORT
    CODE         2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------------
```

34 32 11 00   1. All marker beacon lgts illum intermittently. Ident not
                  received.
               2. FIM 34-32-00/101, Fig. 103, Block 1

34 33 01 --   1. (01=Capt, 02=F/O) Decision height reference indicator does not
                  respond to selector movement.
               2. Replace the applicable EFIS control panel, M94 (left), or M93
                  (right) (AMM 34-22-02/201).

34 33 02 --   1. (01=Capt, 02=F/O) DH reset SW does not reset decision
                  height on the display. Operation normal with ALTN EFI
                  selected.
               2. Replace the applicable EFIS control panel, M94 (left), or M93
                  (right) (AMM 34-22-02/201).

34 33 03 --   1. (01=Capt, 02=F/O) DH reset SW does not reset decision height
                  on the display. Condition remains the same with ALTN EFI
                  selected.
               2. Replace the applicable EFIS control panel, M94 (left), or M93
                  (right) (AMM 34-22-02/201).

34 33 04 --   Not used.

34 33 05 --   Not used.

34 33 06 --   1. Decision height alert altitude on (01=Capt, 02=F/O) EADI
                  disagrees with decision height reference indicator. Operation
                  normal with alternate EFI selected.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401, EFIS).

34 33 07 --   1. Decision height alert altitude on (01=Capt, 02=F/O) EADI
                  disagrees with decision height reference indicator. Condition
                  remains the same with alternate EFI selected.
               2. Replace the applicable EFIS control panel, M94 (left) or M93
                  (right) (AMM 34-22-02/201).

34 33 08 --   1. Rad alt on the (01=Capt, 02=F/O) EADI is blank below 2500 feet
                  AGL.
               2. Replace the applicable EFIS symbol generator, M148 (left) or
                  M150 (right) (AMM 34-22-01/401).

EFFECTIVITY

                   ALL

                                          34-FAULT CODE INDEX
                                             16   Page 43
                                                   Apr 22/02
         BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 33 09 --
1. (Selected decision height not displayed, "DH" not displayed, display color incorrect, etc) on (01=Capt, 02=F/0) EADI for radio alt between DH and 999 ft.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 10 --
1. Display did not (flash/change color, etc) on (01=Capt, 02=F/0) EADI at decision height.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 11 --
1. Radio altitude height on the (01=Capt, 02=F/0) EADI is inaccurate. (State amount of inaccuracy, if known.)
2. FIM 34-33-00/101, Fig. 103, Block 1

34 33 12 --
1. Decision height display on the (01=Capt, 02=F/0) ADI did not reset (automatically, etc).
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 13 --
1. RA flag displayed (steady, intermittent) on the (01=Capt, 02=F/0) EADI.
2. FIM 34-33-00/101, Fig. 104, Block 1

34 33 14 --
34 33 14 -- thru 34 33 25 --
Not used.

34 33 22 --
1. Radio alt display incorrect on (01=Capt, 02=F/0) EADI for rad alt above 999 ft. (Describe problem).
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 23 --
1. Radio alt display on (01=Capt, 02=F/0) EADI did not change at 999 ft.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 24 00
1. DH alert tone sounded 1 beep at DH +50.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

----

34 33 25 --
1. Radio alt display on (01=Capt, 02=F/O) EADI incorrect for rad alt below 999 ft. (Describe problem).
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 26 --
1. (01=Capt, 02=F/O) radio alt intermittent on the EADI. Cond normal with ALTN EFI selected.
2. Replace the applicable EFIS symbol generator, M148 (left) or M150 (right) (AMM 34-22-01/401).

34 33 27 --
1. (01=Capt, 02=F/O) radio alt intermittent on the EADI. Cond same with ALTN EFI selected.
2. FIM 34-33-00/101, Fig. 103, Block

34 43 01 --
1. WXR FAIL displayed on HSI with (01= L, 02= R, 05= BOTH) system(s) selected. WXR test displays WXR FAIL WEAK on HSI.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 02 --
1. WXR FAIL displayed on HSI with (01= L, 02= R, 05=BOTH) system(s) selected. WXR test displays WXR FAIL STAB on HSI.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 03 --
1. WXR FAIL displayed on HSI with (01= L, 02= R) system selected. WXR test not attempted.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 04 00
Not used.

34 43 05 --
1. WXR FAIL displayed on HSIs with (01=L, 02=R) system selected. WXR test displays WXR FAIL RT on HSI.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 06 --
1. WXR FAIL displayed on HSI with (01=L, 02=R, 05=Both) system(s) selected. WXR test displays WXR FAIL ANT on HSI.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 07 --
1. WXR FAIL displayed on HSI with (01= L, 02= R, 05=BOTH) system(s) selected. WXR test displays WXR FAIL CONT on HSI.
2. FIM 34-43-00/101, Fig. 103, Block 1

```
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
```

---

34 43 08 --   1. WXR RANGE DISAGREE displayed on (O3=CAPT, O4=F/O, O5=BOTH)
                   HSI(s).
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 09 --   1. WXR/MAP RANGE DISAGREE displayed on (O3=CAPT, O4=F/O, O5=BOTH)
                   HSI(s).
                2. Replace the applicable EFIS control panel, M94 (captain) or
                   M93 (F/O) (AMM 34-22-02/201).

34 43 10 --   1. WXR DSPY displayed on (O3=CAPT, O4=F/O, O5=BOTH) HSI(s).
                2. FIM 34-22-00/101, Fig. 106, Block 1 (EFIS).

34 43 11 --   1. (O3=CAPT, O4=F/O, O5=BOTH) weather radar switch does not
                   (activate, deactivate) radar.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 12 00   1. WXR ON switch does not (activate, deactivate) radar with
                   either system selected.
                2. Examine and repair the circuit from the captain's EFIS control
                   panel M94, connector D469, pins 14 and 16; F/O's EFIS control
                   panel M93, connector D471, pins 14 and 16; to the WXR control
                   panel M75, connectors D395, pin G and D495, pin G
                   (WDM 34-43-11, WDM 34-43-12, WDM 34-43-21, WDM 34-43-22).

34 43 13 --   1. Antenna tilt (describe Fault: inoperative, etc) with (O1=L,
                   O2=R, O3=Both) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 14 00   1. Antenna tilt operation is (Describe fault; inop, etc.) with
                   either system selected.
                2. Replace the weather radar control panel, M75
                   (AMM 34-43-02/401).

34 43 15 00   Not used.

34 43 16 00   Not used.

34 43 17 --   1. WX radar mode switch (describe fault: inoperative, etc.) with
                   (O1=L, O2=R, O3=Both) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE

---

34 43 18 00
1. WXR mode switch (describe fault: INOP, etc) with either system selected.
2. Replace the weather radar control panel, M75 (AMM 34-43-02/401).

34 43 19 --
1. WXR gain control inoperative in _____ mode with (01=L, 02=R, 03=Both) system(s) selected.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 20 00
1. GAIN control (describe fault: INOP, etc) with either system selected.
2. Replace the weather radar control panel, M75 (AMM 34-43-02/401).

34 43 21 --
1. WXR ATT displayed on EHSI with (01=SYS L, 02=SYS R) selected. WXR test displays WXR FAIL ATT.
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 22 --
34 43 22 -- thru 34 43 35 --
Not used.

34 43 25 00
1. WXR indicator range control (Describe fault: inop, etc).
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 26 00
1. WXR indicator brightness control (describe fault: inop, etc).
2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 36 00
1. Weather radar system select switch (describe fault: INOP, etc).
2. Replace the weather radar control panel, M75 (AMM 34-43-02/401). If the problem continues, replace the RF relay (switch) assembly, S36 (WDM 34-43-22).

34 43 37 00
Not used.

34 43 38 00
1. Fault msg COOL displayed on WXR indicator.
2. FIM 34-43-00/101, Fig. 103, Block 5

```
  FAULT           1. LOG BOOK REPORT
  CODE            2. FAULT ISOLATION REFERENCE
```

----

34 43 39 --   1. WXR FAIL displayed on HSI with (01= L, 02= R) system selected.
                   WXR test inoperative.
                2. Replace the weather radar control panel, M75
                   (AMM 34-43-02/401).

34 43 40 00   34 43 40 00 thru 34 43 44 00
                Not used.

34 43 46 00   1. WXR FAIL displayed on EHSI with either system selected. WXR
                   test INOP on both systems.
                2. Replace the weather radar control panel, M75
                   (AMM 34-43-02/401).

34 43 47 --   1. Spoking present on HSI WXR display with (01= L, 02= R,
                   03=BOTH) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 48 00   1. Spoking present on EHSI WXR display with either system
                   selected.
                2. FIM 34-22-00/101, Fig. 106, Block 1

34 43 49 --   1. Sweep (describe fault: missing, sticks, etc) on HSI WXR
                   display with (01= L, 02= R, 03=BOTH) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 50 00   1. Sweep (describe fault: missing, sticks, etc) on EHSI WXR
                   display with either system selected.
                2. FIM 34-22-00/101, Fig. 106, Block 1

34 43 51 --   1. Returns (describe fault: fixed, noisy, false, etc) on HSI WXR
                   display with (01= L, 02= R, 03=BOTH) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 52 00   1. Returns (describe fault: fixed, noisy, false, etc) on EHSI
                   WXR display with either system selected.
                2. FIM 34-22-00/101, Fig. 106, Block 1

34 43 53 --   1. Precip intensity too (strong, weak) on HSI WXR display with
                   (01= L, 02= R, 03=BOTH) system(s) selected.
                2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 54 00   1. Precip intensity too (strong, weak) on EHSI WXR display with
                   either system selected.
                2. FIM 34-22-00/101, Fig. 106, Block 1
```

---------------------------------------------------------------------------

```
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
```

----

34 43 55 --   1. WXR display on HSI is missing with (01= L, 02= R,03=BOTH)
                  system(s) selected.
               2. FIM 34-22-00/101, Fig. 106, Block 1

34 43 56 00   1. WXR display on EHSI is missing with either system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 57 00   34 43 57 00 thru 34 43 64 00
               Not used.
34 43 65 --   1. (01=L, 02=R) WXR system failed to test. WXR TEST did not
                  display on HSI.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 66 --   1. WXR FAIL displayed on HSI with (01=L, 02=R, 05=both) system(s)
                  selected. WXR test displays WXR FAIL ATT on HSI.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 67 --   1. WXR WEAK displayed on HSI with (01=L, 02=R) system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 71 --   1. WXR STAB displayed on HSI with (01=L, 02=R) system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 74 --   1. WXR ATT displayed on HSI with (01=L, 02=R) system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 76 --   1. (03=Capt, 04=F/O, 05=Both) weather radar switch
                  doesn't activate radar. WXR DSPY message is on HSI.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 77 00   1. L or R WXR system failed to test. WXR TEST did not display
                  on HSI.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 78 00   1. WXR WEAK displayed on EHSI with either system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 79 00   1. WXR STAB displayed on EHSI with either system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 80 00   1. WXR ATT displayed on EHSI with either system selected.
               2. FIM 34-43-00/101, Fig. 103, Block 1

34 43 87 00   1. R/T FAULT displayed on wxr indicator during test.
               2. Replace the applicable weather radar transceiver, M213 (left)
                  or M214 (right) (AMM 34-43-01/401).

EFFECTIVITY   34-FAULT CODE INDEX

            ALL
                                            28   Page 49
                                                     Apr 22/02
```

```
 FAULT        1. LOG BOOK REPORT
 CODE         2. FAULT ISOLATION REFERENCE
```
---

34 43 88 00   1. ANT FAULT displayed on wxr indicator during test.
             2. Replace the applicable weather radar transceiver, M213 (left)
               or M214 (right) (AMM 34-43-01/401).
34 43 89 00   1. CON FAULT displayed on wxr indicator during test.
             2. Replace the WXR control panel, M75 (AMM 34-43-02/401).
34 43 90 00   1. ATT FAULT displayed on wxr indicator during test.
             2. Replace the applicable weather radar transceiver, M213 (left)
               or M214 (right) (AMM 34-43-01/401).
34 43 91 00   1. IND FAULT displayed on wxr indicator during test.
             2. Replace the weather radar indicator, N110 (AMM 34-43-06/201).
34 43 92 00   1. COOL FAULT displayed on wxr indicator during test.
             2. FIM 34-22-00/101.

34 45 07 --   1. (01=Capt, 02=F/O) resolution advisories abnormal.
             2. FIM 34-45-00/101, Fig. 103, Block 1

34 45 08 --   1. (01=Capt, 02=F/O) TA FAIL displayed.
             2. FIM 34-45-00/101, Fig. 103, Block 1

34 45 09 --   1. (01=Capt, 02=F/O) RA FAIL displayed.
             2. FIM 34-45-00/101, Fig. 103, Block 1

34 46 01 00   34 46 01 00 thru 34 46 20 00
             Not used.
34 46 21 00   1. GND PROX BITE status message displayed on EICAS.
             2. FIM 34-46-00/101, Fig. 103, Block 1

34 46 22 00   1. The (PULL UP, GND PROX, WINDSHEAR) light did not illuminate
               when (specify alert condition) existed.
             2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 23 00   1. The aural message for (specify alert condition) was not
               announced.
             2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 24 00   1. A GND PROX alert was received with no alert condition (state
               sink rate, radio altitude, landing or ascending, gear and flap
               state if known).
             2. FIM 34-46-00/101, Fig. 103, Block 1

34 46 25 00   1. A PULL UP alert was received with no alert condition (state
               sink rate, radio altitude, landing or ascending, gear and flap
               state, if known). Radio Altimeter indication was normal.
             2. FIM 34-46-00/101, Fig. 103, Block 1

```
------------------------------------------------------------------------
    FAULT        1. LOG BOOK REPORT
    CODE         2. FAULT ISOLATION REFERENCE
------------------------------------------------------------------------
```

34 46 26 00   1. A WINDSHEAR alert was received with no alert condition.
               2. If the windshear light stays on, examine and repair the
                  circuit from the GPWC M147, connector D4358, pin A12 to the
                  windshear light L890, pin 2. If the light does not stay on,
                  the alert was a nuisance indication.

34 46 27 00   1. GND PROX BITE was not displayed on EICAS status page during
                  GND PROX test.
               2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 28 00   1. PULL UP light did not illuminate during GND PROX test.
               2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 29 00   1. GND PROX light did not illuminate during GND PROX test.
               2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 30 00   1. The (sink rate, whoop-whoop pull up, terrain, don't sink, too
                  low gear, too low flaps, too low terrain, glideslope, minimum,
                  windshear) aural message(s) was not announced during test.
                  (State whether test switch was momentarily positioned to GND
                  PROX or held there for more than 5 seconds.)
               2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 31 00   1. The ground proximity warning system failed to test.
               2. FIM 34-46-00/101, Fig. 103, Block 1

34 46 32 00   1. The GND PROX/CONFIG GEAR OVRD SW didn't inhibit (TOO LOW
                  TERRAIN, TOO LOW GEAR) ground prox alert.
               2. FIM 34-46-00/101, Fig. 103, Block 1.
                  If the problem continues, examine the circuit from the
                  terminal block TB119, pin G17, through the GND PROX/CONFIG
                  GEAR OVRD switch, S604, to ground (WDM 34-46-12).

34 46 33 00   1. The GND PROX FLAP OVRD SW did not inhibit (TOO LOW TERRAIN,
                  TOO LOW FLAP) ground prox alert.
               2. FIM 34-46-00/101, Fig. 103, Block 1
                  If the problem continues, examine the circuit from the
                  terminal block TB119, pin G19, through the GND PROX/CONFIG
                  GEAR OVRD switch, S604, to ground (WDM 34-46-12).

34 46 34 00   1. The G/S INHB sw did not inhibit G/S alert.
               2. FIM 34-46-00/101, Fig. 103, Block 1

EFFECTIVITY

            ALL

                                    34-FAULT CODE INDEX
                                       43   Page 51
                                               Dec 22/00
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------------
   FAULT         1. LOG BOOK REPORT
   CODE          2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------
```

34 46 35 00   34 46 35 00 thru 34 46 36 00
                Not used.
34 46 37 00   1. EICAS msg GND PROX BITE displayed (Ref Chapter 31 for Fault
                   Code Diagram).
                2. FIM 34-46-00/101, Fig. 103, Block 1

34 46 38 00   1. A (GND PROX, PULL UP) alert was not received when (specify
                   alert condition) existed.
                2. FIM 34-46-00/101, Fig. 103, Block 1

34 46 39 00   1. WINDSHEAR lgt did not illum or ADI msg display during gnd prox
                   test.
                2. FIM 34-46-00/101, Fig. 104, Block 1

34 46 40 00   1. Voice altitude callouts too loud.
                2. FIM 34-46-00/101, Fig. 104, Block 1

34 51 01 --   34 51 01 -- thru 34 51 20 --
                Not used.
34 51 21 --   1. (03=L, 04=R) VOR course indicator on glareshield does not
                   respond properly to selector operation.
                2. Replace the applicable VOR control panel, M91 (left) or M92
                   (right) (AMM 34-51-02/201).

34 51 22 --   1. (03=L, 04=R) VOR FREQ display does not respond properly to
                   selector operation.
                2. FIM 34-51-00/101, Fig. 108, Block 1

34 51 23 --   1. (01=Capt, 02=F/O) EHSI has VOR flag in view. RDMI VOR bearing
                   needles are normal.
                2. FIM 34-51-00/101, Fig. 106, Block 1

34 51 24 --   1. (01=Capt, 02=F/O) EHSI has course pointer, line and dev bar
                   missing. RDMI VOR bearing needles are normal.
                2. Replace the applicable VOR control panel, M91 (left) or M92
                   (right) (AMM 34-51-02/201).
```

```
--------------------------------------------------------------------------
    FAULT        1. LOG BOOK REPORT
    CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------
```

34 51 25 --   1. Unable to select (L, R) VOR with VOR/ADF selector on (01=Capt,
                   02=F/O) RDMI.
                2. Replace the applicable RDMI, N3 (left) or N43 (right)
                   (AMM 34-22-05/401).

34 51 26 --   1. (L, R) Brg flag in view on (01=Capt, 02=F/O) RDMI. The
                   associated HSI VOR indications are normal. HSI is in VOR
                   mode.
                2. Replace the applicable RDMI, N3 (left) or N43 (right)
                   (AMM 34-22-05/401).

34 51 27 --   1. (03=L, 04=R) Brg flag in view on both RDMI's. The associated
                   EHSI has VOR flag in view when the EHSI is in VOR mode.
                2. FIM 34-51-00/101, Fig. 107, Block 1

34 51 28 --   1. (03=L, 04=R) Brg flag in view on both RDMI's. The associated
                   EHSI has the lateral dev bar missing when the EHSI is in VOR
                   mode. The freq display on the VOR is normal.
                2. FIM 34-51-00/101, Fig. 109, Block 1

34 51 29 --   1. (03=L, 04=R) Brg flag in view on both RDMI's. The associated
                   EHSI has the lateral dev bar missing when the EHSI is in VOR
                   mode. The freq display on the VOR is inop.
                2. FIM 34-51-00/101, Fig. 104, Block 1

34 51 30 --   1. (03=L, 04=R) Brg flag in view on both RDMI's. The associated
                   EHSI has course pointer, line and dev bar missing.
                2. Replace the applicable VOR control panel, M91 (left) or M92
                   (right) (AMM 34-51-02/201).

34 51 31 --   1. VOR radial not displayed on (01=Capt, 02=F/O, 05=Both) EHSI's
                   with EHSI in map and manual turning selected.
                2. Replace the applicable VOR control panel, M91 (left) or M92
                   (right) (AMM 34-51-02/201).

34 51 32 --   1. (01=Capt, 02=F/O) VOR AUTO/MAN select sw (stuck in (Auto,Man)
                   position, will not stay in, etc).
                2. Replace the applicable VOR control panel, M91 (left) or M92
                   (right) (AMM 34-51-02/201).

34 51 33 --   1. (03=L, 04=R, 05=Both) Brg flags in view on both RDMI's
                   with EHSI's in MAP. VOR's are normal with HSI's in VOR mode.
                2. FIM 34-51-00/101, Fig. 105, Block 1

EFFECTIVITY

                    ALL
```

34-FAULT CODE INDEX

                                28   Page 53
                                        Aug 22/02

     FAULT   1. LOG BOOK REPORT
     CODE   2. FAULT ISOLATION REFERENCE
----

34 51 34 --   1. (L, R) VOR ident not received at (01=Capt, 02=F/O, 03=1st Obs)
                    station. Other crew stations OK.
                 2. Replace the applicable audio selector panel, M70 (captain),
                    M71 (F/O) or M98 (1st observer) (AMM 23-51-01/401).

34 51 35 --   1. (04=L, 05=R) VOR ident not received at any crew station.
                 2. Replace the applicable VOR receiver, M186 (left) or M187
                    (right) (AMM 34-51-01/401).

34 51 36 --   1. (L, R) VOR bearing points on (01=Capt, 02=F/O) RDMI (describe
                    fault, sticks, inop, etc.)
                 2. Replace the applicable RDMI, N3 (left) or N43 (right)
                    (AMM 34-22-05/401).

34 51 37 --   1. (01=Capt, 02=F/O) VOR Auto/Man select sw light (inop, always
                    dim, etc).
                 2. Replace the applicable VOR Auto/Man select switch lamps
                    (AMM 34-51-02/201). If the problem continues, replace the
                    applicable VOR control panel, M91 (left) or M92 (right)
                    (AMM 34-51-02/201).

34 51 38 --   34 51 38 -- thru 34 51 39 --
                 Not used.
34 51 40 --   1. (03=L, 04=R, 05=Both) VOR(S) will not autotune.
                 2. Replace the applicable VOR control panel, M91 (left) or M92
                    (right) (AMM 34-51-02/201).

34 51 41 --   1. (03=L, 04=R) VOR CRS indicator on glareshield has missing
                    segment.
                 2. Replace the applicable VOR control panel, M91 (left) or M92
                    (right) (AMM 34-51-02/201).

34 51 42 --   1. (03=L, 04=R) VOR FREQ indicator on glareshield has missing
                    segment.
                 2. Replace the applicable VOR control panel, M91 (left) or M92
                    (right) (AMM 34-51-02/201).

34 53 01 00   1. ATC code indicator does not respond to selector movement.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).

34 53 02 --   1. ATC altitude reporting inop with the (01=L, 02=R, 03=either L
                    or R) transponder selected.
                 2. FIM 34-53-00/101, Fig. 104, Block 1.

```
--------------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------


34 53 03 --      1. ATC transmission (weak, intermittent, etc) with the (01=L,
                    02=R, 03=either L or R) transponder selected.
                 2. FIM 34-53-00/101, Fig. 105, Block 1.


34 53 04 --      1. Reported no ATC transmission with the (01=L, 02=R, 03=either L
                    or R) transponder selected.
                 2. FIM 34-53-00/101, Fig. 105, Block 1.


34 53 05 00      1. Reported no ATC transmission with either transponder selected.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).


34 53 06 00      1. Reported transmitted code disagrees with the ATC code
                    indicator with either transponder selected.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).


34 53 07 --      1. EICAS msg ATC FAULT displayed and ATC FAIL light illuminated
                    (steady, intermittent) with the (01=L, 02=R, 03=either L or R)
                    transponder selected.  Transponder reported inop.
                 2. FIM 34-53-00/101, Fig. 103, Block 1


34 53 07 --      1. EICAS msg ATC FAULT displayed and (ATC FAIL, XPDR FAULT light
                    illuminated) with the (01=L or 1, 02=R or 2, 03=both L and R)
                    transponder selected.  Transponder reported inop.
                 2. FIM 34-53-00/101, Fig. 103, Block 1


34 53 08 --      1. ATC identification inop with (01=L, 02=R, 03=either L or R)
                    transponder selected.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).


34 53 09 --      1. EICAS msg ATC FAULT displayed and ATC FAULT lgt illuminated
                    with (01=L, 02=R, 03=either L or R) transponder selected.
                    Transponder reported normal.
                 2. FIM 34-53-00/101, Fig. 103


34 53 10 00      1. ATC code indicator has missing segment.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).


34 53 11 --      1. (01=L, 02=R) ATC code indicator is blank and was reported as
                    inop.
                 2. Replace the dual ATC control panel, M81 (AMM 34-53-02/401).


34 55 01 --      34 55 01 -- thru 34 55 10 --
                 Not used.
```

EFFECTIVITY

ALL

34-FAULT CODE INDEX

25   Page 55
            Aug 22/02

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

----

34 55 11 --   1. DME ident not received on the (O3=L, O4=R) receiver. The
                  corresponding DME displays are normal. (VOR, ILS) ident is
                  also normal.
               2. FIM 34-55-00/101, Fig. 109, Block 1

34 55 12 --   1. (O1=Capt, O2=F/O) (L, R) RDMI DME display is blank. The EHSI
                  DME display is OK.
               2. Replace the applicable RDMI, N3 (left) or N43 (right)
                  (AMM 34-22-05/401).

34 55 13 --   1. (O1=Capt, O2=F/O) (L, R) EHSI DME display is blank. The RDMI
                  DME display is OK.
               2. FIM 34-55-00/101, Fig. 106, Block 1.

34 55 14 --   1. The RDMI and EHSI DME displays are blank for the (O3=L, O4=R)
                  DME.
               2. FIM 34-55-00/101, Fig. 107, Block 1

34 55 15 --   1. The RDMI and EHSI DME displays are dashes for the (O3=L, O4=R)
                  DME. VOR ident is OK.
               2. FIM 34-55-00/101, Fig. 104, Block 1

34 55 16 --   1. The RDMI and EHSI DME displays are dashes for the (O3=L, O4=R)
                  DME. ILS ident received. A usable DME signal is present.
               2. FIM 34-55-00/101, Fig. 105, Block 1

34 55 17 --   1. The RDMI and EHSI DME displays are dashes for the (O3=L, O4=R)
                  DME. (ILS, VOR) ident not received. A usable DME signal is
                  present.
               2. FIM 34-55-00/101, Fig. 103, Block 1

34 55 18 --   1. The RDMI DME display for the (O3=L, O4=R, O5=Both) DME(s) is
                  dashes with the EHSI in MAP or PLAN mode.
               2. FIM 34-55-00/101, Fig. 108, Block 1

34 55 19 --   1. The RDMI and EHSI DME distance is incorrect on the (O1=Capt,
                  O2=F/O) side with the HSI in the ILS mode.
               2. FIM 34-55-00/101, Fig. 103, Block 1

34 55 20 --   1. (O1=Capt, O2=F/O) (L,R) RDMI DME has missing (number segment).
               2. Replace the applicable RDMI, N3 (left) or N43 (right)
                  (AMM 34-22-05/401).

```
--------------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------------------
```

34 57 01 --   1. Unable to select ADF with the (L, R) RDMI ADF/VOR selector on
                 the (01=Capt, 02=F/O) RMDI. Warning flags are retracted. VOR
                 operation normal.
              2. Replace the applicable RDMI, N3 (left) or N43 (right)
                 (AMM 34-22-05/401).

34 57 02 00   Not used.

34 57 03 --   1. ADF tone SW inoperative in (03=L, 04=R) position.
              2. FIM 34-57-00/101, Fig. 103, Block 1

34 57 04 --   Not used.

34 57 05 --   1. (03=L, 04=R) ADF frequency indicator does not respond properly
                 to selector operation. (Identify digits)
              2. Replace the ADF control panel, M1046 (AMM 34-57-02/401).

34 57 06 --   1. ADF audio (describe fault) at either station using (04=L,
                 05=R) receiver with mode selector positioned to ADF. RDMI
                 bearing pointer operation normal.
              2. FIM 34-57-00/101, Fig. 103, Block 1

34 57 07 --   1. During ADF operation, (L, R) bearing pointer failure flag in
                 view in the (01=Capt, 02=F/O) RDMI with mode selector
                 positioned to ADF. Operation of the other RDMI is normal.
                 Identification signal reception also normal.
              2. Replace the applicable RDMI, N3 (left) or N43 (right)
                 (AMM 34-22-05/401).

34 57 08 --   1. During ADF operation both (04=L, 05=R) bearing pointer failure
                 flags continuously in view with mode selector positioned to
                 ADF.
              2. FIM 34-57-00/101, Fig. 104, Block 1

34 57 09 --   1. ADF audio (describe fault) at either crew station using (04=L,
                 05=R) receiver with mode selector positioned to ANT. RDMI
                 bearing pointer operation normal.
              2. FIM 34-57-00/101, Fig. 103, Block 1

34 57 10 --   1. During ADF operation, (L, R) bearing pointer failure flag
                 retracted in the (01=Capt, 02=F/O) RDMI with mode selector
                 positioned to ANT. Operation of the other RDMI is normal.
                 Identification signal reception also normal.
              2. Replace the applicable RDMI, N3 (left) or N43 (right)
                 (AMM 34-22-05/401).

EFFECTIVITY

                 ALL

                                              34-FAULT CODE INDEX

                                                 27   Page 57
                                                           Aug 22/02
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
-------------------------------------------------------------------
   FAULT           1. LOG BOOK REPORT
   CODE            2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------


34 57 11 --      1. During ADF operation both (04=L, 05=R) bearing pointer failure
                    flags retracted with mode selector positioned to ANT.
                    Identification signal reception normal.
                 2. Replace the ADF control panel, M85 (AMM 34-57-02/401).

34 57 12 --      1. (L, R) ADF audio (describe fault) at (01=Capt, 02=F/0, 03-1st
                    Obs) crew station with mode selector positioned to ADF.
                 2. FIM 34-57-00/101, Fig. 103, Block 1

34 57 13 --      1. (L, R) ADF audio (describe fault) at (01=Capt, 02=F/0, 03-1st
                    Obs) crew station with mode selector positioned to ANT.
                 2. FIM 34-57-00/101, Fig. 103, Block 1

34 57 14 00      34 57 14 00 thru 34 57 15 00
                 Not Used.
34 57 16 --      1. (03=L, 04=R) ADF frequency indicator has segment missing.
                 2. Replace the ADF control panel, M1046 (AMM 34-57-02/401).

34 57 17 --      1. (03=L, 04=R) ADF fails test.  (Describe)
                 2. Replace the ADF control panel, M1046 (AMM 34-57-02/401).

34 57 18 --      1. (04=L, 05=R) ADF pointer (erratic, does not point properly,
                    inop, etc).  Audio is normal.
                 2. Replace the applicable RDMI, N3 (left) or N43 (right)
                    (AMM 34-22-05/401).

34 57 19 --      1. (04=L, 05=R) ADF pointer (erratic, does not point properly,
                    inop, etc).  Audio is (describe fault).
                 2. FIM 34-57-00/101, Fig. 103, Block 1 for an audio problem.
                    FIM 34-57-00/101, Fig. 104, Block 1 for an ADF pointer
                    problem.

34 57 20 00      Not used.

34 57 21 --      1. (01=Capt, 02=F/0) (wide, narrow) RDMI pointer is (inop, stuck,
                    etc) in ADF and VOR position.
                 2. Replace the applicable RDMI, N3 (left) or N43 (right)
                    (AMM 34-22-05/401).

34 58 01 00      1. The EICAS message GPS (advisory) is displayed.
                 2. Replace the L MMR, M11249, and R MMR, M11250,
                    (AMM 34-31-01/401).
34 58 02 00      1. The EICAS message L GPS (advisory) is displayed.
                 2. Replace the L MMR, M11249, (AMM 34-31-01/401).
34 58 03 00      1. The EICAS message R GPS (advisory) is displayed.
                 2. Replace the R MMR, M11250, (AMM 34-31-01/401).
```

```
---------------------------------------------------------------
   FAULT         1. LOG BOOK REPORT
   CODE          2. FAULT ISOLATION REFERENCE
---------------------------------------------------------------


34 61 01 --     34 61 01 -- thru 34 61 14 --
                Not used.

34 61 15 --     1. (01=Capt, 02=F/O) CDU display is (describe fault, e.g., out of
                   focus, blinking, small, etc).
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 61 16 --     1. (01=Capt, 02=F/O) CDU display blank.  Selecting alternate FMC
                   source did not correct the fault.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 61 17 --     1. EICAS msg (03=L, 04=R) FMC FAIL displayed.
                2. FIM 34-61-00/101, Fig. 108A

34 61 18 --     1. EICAS msg (03=L 04=R) FMC FAIL displayed.  Other CDU displays
                   RESYNCING SINGLE FMC msg.
                2. FIM 34-61-00/101, Fig. 108A

34 61 19 --     34 61 19 -- thru 34 61 20
                Not used.

34 61 21 --     1. Manual brightness control is INOP on (01=Capt, 02=F/O) CDU.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 61 22 --     1. Automatic brightness control is INOP on (01=Capt, 02=F/O) CDU.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 61 23 --     1. Manual and automatic brightness control are INOP on (01=Capt,
                   02=F/O) CDU.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 61 24 --     34 61 24 -- thru 34 61 26 --
                Not used.
34 61 27 --     1. Nav data incorrect on (01=Capt, 02=F/O, 03=both) CDU IDENT
                   page(s).
                2. FIM 34-61-00/101, Fig. 107, Block 1
```

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |

---

34 61 28 --   1. (State data, e.g., drag factor, F-F factor, op program, etc)
                  is incorrect on (01=Capt, 02=F/O, 03=both) CDU IDENT page(s).
               2. FIM 34-61-00/101, Fig. 107, Block 1

34 61 29 --   34 61 29 -- thru 34 61 31 --
               Not used.
34 61 32 --   1. IRS position entry from (01=Capt, 02=F/O) CDU results in
                  REENTER IRS POS on scratch pad. Message would not clear after
                  POS re-entered.
               2. FIM 34-61-00/101, Fig. 105, Block 1

34 61 33 --   34 61 33 -- thru 34 61 36 --
               Not used.
34 61 37 --   1. FMC MESSAGE on EICAS and PERF/VNAV UNAVAILABLE displayed on
                  (01=Capt, 02=F/O, 03=Both) CDU(s) when VNAV button pressed.
                  Data was entered in all boxes on perf init page.
               2. FIM 34-61-00/101, Fig. 104, Block 1

34 61 38 --   34 61 38 -- thru 34 61 71 --
               Not used.

34 61 72 --   1. BRG/DIS FR incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO
                  page(s).
               2. FIM 34-61-00/101, Fig. 105, Block 1

34 61 73 --   1. PL/BRG/DIS incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO
                  page(s).
               2. FIM 34-61-00/101, Fig. 105, Block 1

34 61 74 --   1. ABEAM incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO
                  page(s).
               2. FIM 34-61-00/101, Fig. 105, Block 1

34 61 75 --   1. DTG incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO page(s).
               2. FIM 34-61-00/101, Fig. 105, Block 1

| FAULT | 1. LOG BOOK REPORT |
| CODE | 2. FAULT ISOLATION REFERENCE |
---

34 61 76 --   1. ETA incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO page(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

                   NOTE: Code not applicable to FMCs with LNAV/VNAV
                           configuration.

34 61 77 --   1. ETA and DTG incorrect on (01=Capt, 02=F/O, 03=both) FIX INFO
                  page(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1 (*[1] go to the last page
                  of the index)

34 61 78 --   1. GS field blank on (01=Capt, 02=F/O, 03=Both) CDU POS REF page.
                2. Close the applicable IRU circuit breaker. Open and then close
                  the FMC circuit breaker. If the problem continues,
                  FIM 34-21-00/101, Fig. 107, Block 1

34 61 79 --   34 61 79 -- thru 34 61 99 --
                Not used.
34 62 01 --   34 62 01 -- thru 34 62 11 --
                Not used.
34 62 12 --   1. Wind components in error on PROGRESS page 2 on (01=Capt,
                02=F/O, 03=both) CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

34 62 13 --   1. FUEL USED (in error, blank) on PROGRESS page 2 on (01=Capt,
                02=F/O, 03=both) CDU(s).
                2. FIM 34-61-00/101, Fig. 106, Block 1

34 62 14 --   1. FUEL (QTY ERROR, DISAGREE)-PROG 2/2 alert message is displayed
                on CDU. TOTALIZER differs from CALCULATED on progress page 2
                of (01=Capt, 02=F/O, 03=both) CDU(s).
                2. FIM 34-61-00/101, Fig. 106, Block 1

34 62 15 --   1. FMC will not enter the IRS (3) DME DME mode. PROGRESS page 2
                indicates (IRS (2) DME DME, IRS (3) DME VOR, etc) on the
                (01=Capt, 02=F/O, 03=both) CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

34 62 16 --   1. DTG in error on PROGRESS page 1 of (01=Capt, 02=F/O, 03=both)
                CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

```
--------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 62 17 --   1. ETA in error on PROGRESS page 1 of (01=Capt, 02=F/O, 03=both)
                CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

34 62 18 --   1. Waypoint FUEL in error on PROGRESS page 1 of (01=Capt, 02=F/O,
                03=Both) CDU(s).
                2. FIM 34-61-00/101, Fig. 106, Block 1

                    NOTE: Code not applicable to FMCs with LNAV/VNAV
                            configuration.

34 62 19 --   1. Wind in error on PROGRESS page 1 of (01=Capt, 02=F/O, 03=both)
                CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1

34 62 20 --   Not used.

34 62 21 --   1. MSG light fails to illuminate with CDU advisory on (01=Capt,
                02=F/O, 03=both) CDU(s).
                 2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                    (AMM 34-61-02/201).

34 62 22 00   1. (NOT IN DATA BASE, REENTER IRS POSITION, MAX ALT FLXXX, etc)
                advisory message displayed when the advisory condition does
                not exist.
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                  (AMM 34-61-01/401).

34 62 23 00   1. The following advisory condition exists and no advisory
                message was received (describe advisory condition).
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                  (AMM 34-61-01/401).

34 62 24 --   1. The FMC light fails to illuminate with CDU alert on (01=Capt,
                02=F/O, 03=both) CDU.
                2. FIM 34-61-00/101, Fig. 108, Block 1

34 62 25 --   1. The FMC light and MSG light fail to illuminate with CDU alerts
                on (01=Capt, 02=F/O, 03=both) CDU(s).
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                (AMM 34-61-01/401).

FAULT	1. LOG BOOK REPORT
CODE	2. FAULT ISOLATION REFERENCE

---

34 62 26 00   1. (END OF ROUTE, DISCONTINUITY, NO ACTIVE ROUTE, etc) alert
messages displayed when the alert condition does not exist.
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401).

34 62 27 00   1. The following alert condition exists and no alert message was
received: (describe alert condition).
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401).

34 62 28 --   1. VTK flag is in view on (01=Capt, 02=F/0) HSI. Selecting ALTN
FMC corrects the fault.
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
(right) (AMM 34-61-02/201).

34 62 29 --   Not used.

34 62 30 --   1. Map display is offset on (01=Capt, 02=F/0) HSI. Selecting
ALTN FMC corrects the fault.
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
(right) (AMM 34-61-02/201).

34 62 31 --   1. Map is missing on (01=Capt, 02=F/0) HSI. Selecting ALTN FMC
corrects the fault.
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
(right) (AMM 34-61-02/201).

34 62 32 --   1. (01=Capt, 02=F/0) HSI displays MAP RANGE DISAGREE. Selecting
ALTN FMC corrects the fault.
2. FIM 34-61-00/101, Fig. 109, Block 1.

34 62 33 --   1. (01=Capt, 02=F/0) HSI(s) display (MAP, MAP FAIL). Selecting
ALTN FMC corrects the fault.
2. Replace the applicable FMC, M134 (left) or M135 (right)
(AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
(right) (AMM 34-61-02/201).

34 62 34 --   34 62 34 -- thru 34 62 37 --
Not used.

```
--------------------------------------------------------------------
  FAULT        1. LOG BOOK REPORT
  CODE         2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 62 38 --   1. Distance to go and ETA are missing from (01=Capt, 02=F/O) HSI.
                  Selecting ALTN FMC corrects the fault.
               2. Replace the applicable FMC, M134 (left) or M135 (right)
                  (AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
                  (right) (AMM 34-61-02/201).

34 62 39 --   34 62 39 -- thru 34 62 42 --
               Not used.
34 62 43 --   1. The airplane (describe problem: EPR, speed or path in error,
                  loses fuel weight) in VNAV DESCENT mode. Fault occurs with
                  (01=L, 02=C, 03=R, 04=any) A/P engaged.
               2. For EPR, speed or path in error; FIM 34-61-00/101, Fig. 109A
                  Block A.
               3. For loses fuel weight; FIM 34-61-00/101, Fig. 106, Block 1.
34 62 44 --   Not Used.

34 62 45 --   Not used.

34 62 46 --   1. The airplane (describe problem: EPR, speed or path in error,
                  loses fuel weight) in VNAV CRUISE mode. Fault occurs with
                  (01=Left, 02=Center, 03=Right, 04=Any) A/P engaged.
               2. For EPR, speed or path in error; FIM 34-61-00/101, Fig. 109A
                  Block A.
               3. For loses fuel weight; FIM 34-61-00/101, Fig. 106, Block 1.

34 62 47 --   Not used.

34 62 48 --   Not Used.

34 62 49 --   1. The airplane (describe problem: EPR, speed or path in error,
                  loses fuel weight) in VNAV CLIMB mode. Fault occurs with
                  (01=Left, 02=Center, 03=Right, 04=Any) A/P engaged.
               2. For EPR, speed or path in error; FIM 34-61-00/101, Fig. 109A
                  Block A.
               3. For loses fuel weight; FIM 34-61-00/101, Fig. 106, Block 1.

34 62 50 --   34 62 50 -- thru 34 62 59 --
               Not used.

```
------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
------------------------------------------------------------------------


34 62 60 --     1. VTK flag is in view on (01=Capt, 02=F/0, 03=Both) HSI(s).
                   Selecting ALTN FMC does not correct the fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 61 --     Not used.

34 62 62 --     1. Map display is offset on (01=Capt, 02=F/0, 03=Both) HSI(s).
                   Selecting ALTN FMC does not correct the fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 63 --     1. Map is missing on (01=Capt, 02=F/0, 03=Both) HSI(s).
                   Selecting ALTN FMC does not correct the fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 64 --     1. (01=Capt, 02=F/0, 03=Both) HSI(s) display MAP RANGE DISAGREE.
                   Selecting ALTN FMC does not correct the fault.
                2. FIM 34-61-00/101, Fig. 109, Block 1

34 62 65 --     1. (01=Capt, 02=F/0, 03=Both) HSI(s) display (MAP, MAP FAIL).
                   Selecting ALTN FMC does not correct the fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 66 --     34 62 66 -- thru 34 62 68 --
                Not used.
34 62 69 --     1. Wind vector and speed are missing from (01=Capt, 02=F/0,
                   03=Both) HSI(s).  Selecting ALTN FMC does not correct the
                   fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 70 --     1. Distance to go and ETA are missing from (01=Capt, 02=F/0,
                   03=Both) HSI(s).  Selecting ALTN FMC does not correct the
                   fault.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 62 71 --     34 62 71 -- thru 34 62 74 --
                Not used.
```

```
     FAULT          1. LOG BOOK REPORT
     CODE           2. FAULT ISOLATION REFERENCE
```

---

34 62 75 --   1. (Specify key) Key on (01=Capt, 02=F/O) CDU gives multiple
               response.
            2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
               (AMM 34-61-02/201).

34 62 76 --   1. (Specify key) Key on (01=Capt, 02=F/O) CDU feel is abnormal.
            2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
               (AMM 34-61-02/201).

34 62 77 --   1. All keys on (01=Capt, 02=F/O) CDU inop. Switching FMC source
               corrects the fault.
            2. Replace the applicable FMC, M134 (left) or M135 (right)
               (AMM 34-61-01/401).

34 62 78 --   1. All keys on (01=Capt, 02=F/O) CDU inop on with normal and ALTN
               FMC selected.
            2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
               (AMM 34-61-01/401).

34 62 79 --   34 62 79 -- thru 34 62 82 --
               Not used.

34 62 83 --   1. EICAS msg (03=L, 04=R) FMC FAIL displayed. Other CDU displays
               SINGLE FMC OPERATION msg.
            2. FIM 34-61-00/101, Fig. 108A

34 62 84 03   1. Both CDUs are locked up on IDENT page.
            2. Open the L and R FMCS CMPTR circuit breakers. Stop for
               15 seconds. Close the L and R FMC CMPTR circuit breakers. If
               the problem continues, replace the applicable FMC, M134 (left)
               or M135 (right) (AMM 34-61-01/401).

34 62 85 --   1. IRS NAV ONLY alert message is displayed on (01=Capt, 02=F/O,
               03=both) CDU(s).
            2. FIM 34-61-00/101, Fig. 105, Block 1

34 62 86 --   1. (01=Capt, 02=F/O) CDU display is (describe fault, e.g.,
               partially complete or containing garbage characters).
            2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
               (AMM 34-61-02/201).

EFFECTIVITY

            ALL

34-FAULT CODE INDEX

                                21   Page 66
                                        Dec 22/03
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
--------------------------------------------------------------------
   FAULT          1. LOG BOOK REPORT
   CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------
```

34 62 87 --   1. (Record number of resyncs) resyncs experienced in (record time
                   period) in (01=Capt, 02=F/O) CDU.
                2. Open the applicable FMCS CMPTR circuit breaker. Stop for
                   15 seconds. Close the applicable FMCS CMPTR circuit breaker.
                   If the problem continues, replace the applicable FMC, M134
                   (left) or M135 (right) (AMM 34-61-01/401).

34 62 88 --   1. (01=Capt, 02=F/O) CDU display blank. Selecting alternate FMC
                   source corrects the fault.
                2. FIM 34-61-00/101, Fig. 111, Block 1

34 62 89 --   1. (Specify key) key on (01=Capt, 02=F/O) CDU gives incorrect
                   response. Switching FMC source corrects the fault.
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                   (AMM 34-61-01/401).

34 62 90 --   1. (Specify key) key on (01=Capt, 02=F/O) CDU gives incorrect
                   response with normal and alternate FMC selected.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 62 91 --   1. (Specify key) on (01=Capt, 02=F/O) CDU inop on all pages.
                   Switching FMC source corrects the fault.
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                   (AMM 34-61-01/401).

34 62 92 --   1. (Specify key) on (01=Capt, 02=F/O) CDU inop on all pages with
                   normal and alternate FMC selected.
                2. Replace the applicable FMC CDU, M76 (left) or M77 (right)
                   (AMM 34-61-02/201).

34 62 93 --   1. EXEC key on (01=Capt, 02=F/O, 03=Both) CDU(s) fails to illum.
                2. FIM 34-61-00/101, Fig. 104, Block 1

34 62 94 --   1. FMC resync takes longer than 30 seconds in (01=Capt, 02=F/O)
                   CDU.
                2. Open the applicable FMCS CMPTR circuit breaker. Stop for
                   15 seconds. Close the applicable FMCS CMPTR circuit breaker.
                   If the problem continues, replace the applicable FMC, M134
                   (left) or M135 (right) (AMM 34-61-01/401).

34 62 95 --   1. Incorrect engine type displayed on (01=Capt, 02=F/O, 03=Both)
                   CDU IDENT page(s).
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                   (AMM 34-61-01/401).

```
--------------------------------------------------------------------
  FAULT          1. LOG BOOK REPORT
  CODE           2. FAULT ISOLATION REFERENCE
--------------------------------------------------------------------


34 62 96 00     1. FMC POS on CDU POS REF page 2/2 is in error (record error).
                2. FIM 34-21-00/101, Fig. 107, Block 1


34 62 97 --     1. (04=L, 05=C, 06=R) IRS position on CDU POS REF page 2/2 is in
                   error.  (Record time IRS was in operation, actual and
                   indicated latitude and longitude).  Add note if IRS error was
                   excessive for two consecutive flights.
                2. FIM 34-21-00/101, Fig. 107A, Block 1


34 62 98 --     1. No boxes are displayed for position initialization on
                   (01=Capt, 02=F/O, 03-Both) CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1


34 62 99 --     1. The fuel weight is (incorrect, missing) from the performance
                   initialization page on the (01=Capt, 02=F/O, 03=Both) CDU(s).
                2. FIM 34-61-00/101, Fig. 106, Block 1


34 63 01 --     1. Tuned navaid data blank on PROGRESS page of (01=Capt, 02=F/O,
                   03=Both) CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1


34 63 02 --     1. Tuned nav aid data constantly changing on PROGRESS page of
                   (01=Capt, 02=F/O, 03=Both) CDU(s).
                2. FIM 34-61-00/101, Fig. 105, Block 1


34 63 03 00     1. Wind vector on Capt HSI differs from F/O HSI.  Selecting ALTN
                   FMC corrects the fault.
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                   (AMM 34-61-01/401).


34 63 04 00     1. Wind vector on Capt HSI differs from F/O HSI with both normal
                   and ALTN FMC selected.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).


34 63 05 --     1. Distance to go and ETA display dashes on (01=Capt, 02=F/O,
                   03=Both) HSI(s).  Selecting ALTN FMC corrects the fault.
                2. Replace the applicable FMC, M134 (left) or M135 (right)
                   (AMM 34-61-01/401) or the applicable CDU, M76 (left) or M77
                   (right) (AMM 34-61-02/201).


34 63 06 --     1. Distance to go and ETA display dashes on (01=Capt, 02=F/O,
                   03=Both) HSI(s) with normal and ALTN FMC.
                2. Replace the applicable EFIS symbol generator, M148 (left),
                   M149 (center) or M150 (right) (AMM 34-22-01/401).
```

```
   FAULT           1. LOG BOOK REPORT
   CODE            2. FAULT ISOLATION REFERENCE
```

```
34 63 07 --       1. LNAV remains white (armed) on ADI with (01=L, 02=C, 03=R,
                     04=Any) A/P engaged.
                  2. FIM 34-61-00/101, Fig. 110, Block 1

34 63 08 --       1. LNAV annunciation on ADI has a line through it with (01=L,
                     02=C, 03=R, 04=Any) A/P engaged.
                  2. FIM 34-61-00/101, Fig. 110, Block 1

34 63 09 --       1. Airplane (describe error in path:  track, heading, transition,
                     etc) with (01=L, 02=C, 03=R, 04-Any) A/P engaged.
                  2. FIM 34-61-00/101, Fig. 110, Block 1

34 63 10 --       1. VNAV will not engage with (01=L, 02=C, 03=R, 04=Any) A/P
                     engaged.
                  2. FIM 34-61-00/101, Fig. 110, Block 1

34 63 11 --       1. VNAV annunciation on ADI has a line through it with (01=L,
                     02=C, 03=R, 04=Any) A/P engaged.
                  2. FIM 34-61-00/101, Fig. 110, Block 1

34 63 12 --       1. FAIL is illum and screen displays FMC on (01=CAPT, 02=F/O)
                     CDU.  No FMC FAIL message is displayed on EICAS.
                  2. FIM 34-61-00/101, Fig. 111, Block 1

34 63 14 --       1. FAIL is illum and screen displays FMC on (01=Capt, 02=F/O)
                     CDU.  Selecting ALTN FMC corrects the fault.
                  2. FIM 34-61-00/101, Fig. 111, Block 1

34 63 15 --       1. FAIL is illum and screen displays FMC on (01=Capt, 02=F/O)
                     CDU.  Selecting ALTN FMC doesn't correct the fault.
                  2. FIM 34-61-00/101, Fig. 111, Block 1

34 63 16 --       1. FUEL USED and CALCULATED FUEL display blank on (01=Capt,
                     02=F/O, 03=Both) CDU(S).
                  2. FIM 34-61-00/101, Fig. 106, Block 1

34 63 17 --       1. Waypoint display (moves, wavers, etc.) on (01=Capt, 02=F/O,
                     03=Both) HSI(s).  Selecting ALTN FMC does not correct fault.
                  2. FIM 34-61-00/101, Fig. 111, Block 5
```

```
    FAULT          1. LOG BOOK REPORT
    CODE           2. FAULT ISOLATION REFERENCE
```
---

34 63 18 --   1. (O1=Capt, O2=F/O) Leg sequencing is incorrect in CDU.
                2. Do these steps with the CDU IDENT page shown on the CDU
                   (AMM 34-61-00/201):
                   1) Push the third line select key on the right side.
                   2) Push the second line select key on the right side.
                   3) Push the third line select key on the right side again.
                   4) Push the second line select key on the right side again.

                   NOTE: These steps will make the data base with the current
                          date active.

34 63 19 --   1. (O1=Capt, O2=F/O) HSI displays leg sequencing incorrectly.
                2. Do these steps with the CDU IDENT page shown on the CDU
                   (AMM 34-61-00/201):
                   1) Push the third line select key on the right side.
                   2) Push the second line select key on the right side.
                   3) Push the third line select key on the right side again.
                   4) Push the second line select key on the right side again.

                   NOTE: These steps will make the data base with the current
                          date active.

34 63 20 --   1. Total fuel differs from (12=CAPT, 13=F/O, 14=CAPT & F/O) FMCS
                   calculated fuel qty. Fuel qty ERROR-PROG 2/2 alert message
                   displayed on CDU and EICAS message FMC MESSAGE displayed.
                   Fuel flow was normal. Total fuel_____, FMC calculated fuel
                   _____. No Evidence of fuel leak. (Ref Chapter 28 fault code
                   diagram).
                2. Do these steps with the CDU IDENT page shown on the CDU
                   (AMM 34-61-00/201):

                   NOTE: These steps will make the data base with the current
                          date active.

                   A. Push the third line select key on the right side.
                   B. Push the second line select key on the right side.
                   C. Push the third line select key on the right side again.
                   D. Push the second line select key on the right side again.
```

EFFECTIVITY

                    ALL

                                        34-FAULT CODE INDEX

                                             16        Page 70
                                                     Aug 22/01
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

--------------------------------------------------------------------------------
```
   FAULT   1. LOG BOOK REPORT
   CODE   2. FAULT ISOLATION REFERENCE
```
--------------------------------------------------------------------------------

34 63 21 00      1. CDU's do not drop waypoints.
                 2. Do these steps with the CDU IDENT page shown on the CDU
                    (AMM 34-61-00/201):
                    1)  Push the third line select key on the right side.
                    2)  Push the second line select key on the right side.
                    3)  Push the third line select key on the right side again.
                    4)  Push the second line select key on the right side again.

                    NOTE:  These steps will make the data base with the current
                           date active.

34 63 22 --      1. V1 INOP displayed on (01=Capt, 02=F/O) ADI.
                 2. Make sure the V1 speed was put in at the TAKEOFF REF page on
                    the CDU before the airplane left the gate.  If the problem
                    continues, FIM 34-61-00/101, Fig. 111, Block 1.

34 63 23 --      1. V1, VR bug(s) (not normal, missing etc) on (01=Capt, 02=F/O,
                    03=both) ADI speed tape(s) with normal or ALTN EFI selected.
                 2. FIM 34-61-00/101, Fig. 111, Block 1

34 63 24 --      1. Command airspeed on (01=Capt, 02=F/O, 03=both) ADI speed
                    tape(s) read(s) 100 Kts with VNAV selected, speed mode active.
                 2. FIM 34-61-00/101, Fig. 111, Block 1

34 63 36 00      1. The EICAS message UNABLE RNP displayed.
                 2. This message is not a failure.  This is a response to
                    navigation processing when actual nav performance (ANP) does
                    not meet required nav performance (RNP).

34 90 01 00      1. Lightning strike occurred on the nose radome.
                 2. Inspect the airplane for a lightning strike or static
                    discharge (AMM 05-51-19/201).

34 90 02 00      1. Lightning strike occurred on the nacelle(s).
                 2. Inspect the airplane for a lightning strike or static
                    discharge (AMM 05-51-19/201).

34 90 03 00      1. Lightning strike occurred on the wingtip(s).
                 2. Inspect the airplane for a lightning strike or static
                    discharge (AMM 05-51-19/201).

34 90 04 00      1. Lightning strike occurred on leading edge flaps.
                 2. Inspect the airplane for a lightning strike or static
                    discharge (AMM 05-51-19/201).

```
-------------------------------------------------------------------------
   FAULT        1. LOG BOOK REPORT
   CODE         2. FAULT ISOLATION REFERENCE
-------------------------------------------------------------------------
```

34 90 05 00   1. Lightning strike occurred on an unknown area.
                2. Inspect the airplane for a lightning strike or static
                   discharge (AMM 05-51-19/201).

EFFECTIVITY

                    ALL

34-FAULT CODE INDEX

                              10   Page 72
                                        May 10/96

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

BITE Index

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

LRU/System Name	Acronym	FIM Reference
ACARS Management Unit		23-22
Air Data Computer	ADC	34-12
Air Data Inertial Reference Unit	ADIRU	34-26
Air Supply Control and Test Unit	ASCTU	36-20
Air Traffic Control Transponder	ATC	34-53
Airborne Vibration Monitor Signal Conditioner	AVM	77-31
Antiskid/Autobrake Control Unit	AACU	32-42
APU Fire Detection System		26-15
Automatic Direction Finder Receiver	ADF	34-57
APU Control Unit (or Electronic Control Unit)	ECU	49-11
Autopilot/Flight Director	AFDS	22-00
Auxiliary Zone Temperature Controller	AZTC	2160/21-61
Brake Temperature Monitor Unit	BTMU	32-46
Bus Power Control Unit	BPCU	24-20
Cabin Pressure Controller	CPC	21-30/21-31
Cabin Temperature Controller	CTC	21-61
Digital Flight Data Acquisition Unit	DFDAU	31-31
Distance Measuring Equipment Interrogator	DME	34-55
Duct Leak (Wing and Body)		26-18
E/E Cooling Control Card (If cards installed)		21-58
ECS Bleed Configuration Card		36-10
Electronic Control Unit	ECU	49-11
Electronic Engine Control Monitor Unit (Non-FADEC Engines)	EECM	71-EECM Message Index
Electronic Flight Instrument System	EFIS	34-22

Bite Index
Figure 1 (Sheet 1)

K42782

LRU/System Name	Acronym	FIM Reference
Engine Fire/Overheat Detection System		26-11
Engine Indication and Crew Alerting System Computer	EICAS	31-41
Enhanced Ground Proximity Warning Computer	EGPWC	34-46
Equipment Cooling Systen Controller		21-58
Equipment Cooling Temperature Controller		21-58
Flap/Slat Electronic Unit	FSEU	27-51
Flap/Stabilizer Position Module	FSPM	27-58
Flight Management Computer	FMC	34-61
Fuel Quantity Indicating System Processor	FQIS	28-41
Ground Proximity Warning Computer	GPWC	34-46
HF (High Frequency) Communication		23-11
In-Flight Entertainment Equipment Cooling Card		21-58
Inertial Reference Unit	IRU	34-21
Instrument Comparator Unit	ICU	34-25
Instrument Landing System Receiver	ILS	34-31
Large Format Display System	LFDS	31-63
Lower Cargo Compartment Smoke Detection System		26-16
Maintenance Control Display Panel	MCDP	22-00
Multi-Mode Receiver	MMR	34-31
PA (Passenger Address) Amplifier		23-31
Pack Standby Temperature Controller	PSTC	21-51
Pack Temperature Controller	PTC	21-51
Passenger Entertainment System	PES	23-34
Power Supply Module (Control System Electronics Units)	PSM	27-09
Propulsion Interface and Monitor Unit (FADEC Engines)	PIMU	71-PIMU Message Index
Proximity Switch Electronics Unit	PSEU	32-09

Bite Index
Figure 1 (Sheet 2)

EFFECTIVITY

ALL

34-BITE INDEX

01   Page 2
Aug 22/99

K42808

LRU/System Name	Acronym	FIM Reference
Radio Altimeter Transmitter/Receiver	RA	34-33
Rudder Ratio Changer Module	RRCM	27-09
Satellite Data Unit	SDU	23-25
Spoiler Control Module	SCM	27-09
Stabilizer Trim/Elevator Asymmetry Limit Module	SAM	27-09
Stall Warning Computer/Module (in Warning Electronic Unit)	SWC	27-32
Strut Overheat Detection System (RR Engines)		26-12
Thrust Management Computer/Autothrottle	TMC	22-00
Traffic Alert and Collision Avoidance Computer	TCAS	34-45
VHF (Very High Frequency) Communication		23-12
VOR/Marker Beacon Receiver	VOR/MKR	34-51
Warning Electronic Unit BITE Module (Stall Warning)	WEU	27-32
Weather Radar Transceiver	WXR	34-43
Wheel Well Fire Detection		26-17
Window Heat Control Unit	WHCU	30-41
Yaw Damper Module	YDM	22-21
Yaw Damper/Stabilizer Trim Module	YSM	27-09
Zone Temperature Controller	ZTC	21-60/21-61

Bite Index
Figure 1 (Sheet 3)

EFFECTIVITY

ALL

34-BITE INDEX

01   Page 3
Aug 22/99

K42840

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

PITOT-STATIC SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ALTIMETER – (FIM 34-13-00/101) STANDBY, N23				
INDICATOR – (FIM 34-13-00/101) STANDBY AIRSPEED, N22				
PORT – ALTERNATE STATIC	--	2	FORWARD FUSELAGE	34-11-03
PROBE – CAPTAIN'S PITOT STATIC, B26	--	1	NOSE SECT, LEFT UPPER PROBE	34-11-01
PROBE – FIRST OFFICER'S PITOT STATIC, B28	--	1	NOSE SECT, RIGHT UPPER PROBE	34-11-01
PROBE – LEFT AUXILIARY PITOT STATIC, B29	--	1	NOSE SECT, LEFT LOWER PROBE	34-11-01
PROBE – RIGHT AUXILIARY PITOT STATIC, B27	--	1	NOSE SECT, RIGHT LOWER PROBE	34-11-01
SENSOR – (FIM 21-30-00/101) DIFFERENTIAL PRESSURE, TS5072				
SWITCH – (FIM 29-21-00/101) RAT AIRSPEED, S614				

Pitot-Static System – Component Index
Figure 101

EFFECTIVITY

ALL

48267

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

PITOT STATIC
PROBE (BOTH SIDES)

SEE A

ALTERNATE STATIC
PORT (BOTH SIDES)

SEE B

PITOT STATIC PROBE, B26, B27, B28, B29
(EXAMPLE)

A

FWD

ALTERNATE STATIC PORT
(EXAMPLE)

B

STATIC PORT
DO NOT PLUG OR DEFORM HOLES
INDICATED AREAS MUST BE
SMOOTH AND CLEAN

ALTERNATE

FWD

Pitot-Static System — Component Location
Figure 102

EFFECTIVITY

ALL

34-11-00

02   Page 102
Feb 10/91

44889

Not Used
Figure 103

182662

CAPT (F/O) STATIC
SYSTEM PROBLEM

PREREQUISITES
NONE

1	EXAMINE THE CAPT (F/O) STATIC SYSTEM COMPONENTS FOR PHYSICAL DAMAGE. IS THERE DAMAGE?

YES →

20	REPAIR OR REPLACE THE STATIC TUBE (AMM 20-10-09/ 401), HOSE (AMM 20-10-10/401), PITOT-STATIC PROBE (AMM 34-11-01/401), OR DRAINS, AS NECESSARY.

NO

2	EXAMINE THE CAPT (F/O) STATIC SYSTEM FOR LEAKS. IS THERE A LEAK?

YES →

11	IS THERE A LEAK IN THE TUBE?

YES →

21	REPAIR OR REPLACE THE TUBE (AMM 20-10-09/401).

NO

NO

12	IS THERE A LEAK IN THE HOSE?

YES →

22	REPAIR OR REPLACE THE HOSE (AMM 20-10-10/401).

NO

13	IS THERE A LEAK AND A DECREASE IN PRESSURE AT THE DRAINS?

YES →

23	IF THE FITTING AT THE TOP OF THE SIGHT GAGE IS LOOSE, TIGHTEN IT TO 170 POUND-INCHES ±5%.

NO

24	REPLACE THE UPPER LEFT OR LOWER RIGHT (UPPER RIGHT OR LOWER LEFT) PITOT-STATIC PROBE AS APPLICABLE (AMM 34-11-01/ 401).

25	DO A TEST FOR AIRFLOW BLOCKAGE. FLUSH THE CAPT (F/O) STATIC SYSTEM (AMM 34-11-00/301). BEFORE DOING THIS TEST, MAKE SURE THAT THE AOA VANES ARE POSITIONED TO APPROXI-MATELY O DEGREES.
	NOTE: YOU MAY GET ALTITUDE OR MACH AIR SPEED ERRORS IF YOU DO NOT ALIGN THE AOA VANES.

Capt (F/O) Static System Problem
Figure 104

EFFECTIVITY

ALL

48268

34-11-00

02   Page 104
Apr 22/05

ALTERNATE STATIC
SYSTEM PROBLEM

PREREQUISITES
NONE

1 EXAMINE THE ALTERNATE STATIC COMPONENTS FOR PHYSICAL DAMAGE.
       IS THERE DAMAGE?

— YES →

20 REPAIR OR REPLACE THE STATIC TUBE (MM 20-10-09/401), HOSE (MM 20-10-10/401), ALTERNATE STATIC PORT (MM 34-11-03/401), OR DRAINS.

NO

2 EXAMINE THE ALTERNATE STATIC SYSTEM FOR LEAKS (MM 34-11-00/501).
       IS THERE A LEAK?

— YES →

11 IS THERE A LEAK IN THE TUBE?

— YES →

21 REPAIR OR REPLACE THE TUBE (MM 20-10-09/401).

NO

NO

12 IS THERE A LEAK IN THE HOSE?

— YES →

22 REPAIR OR REPLACE THE HOSE (MM 20-10-10/401).

NO

13 IS THERE A LEAK AND A DECREASE IN PRESSURE AT THE DRAINS?

— YES →

23 IF THE FITTING AT THE TOP OF THE SIGHT GAGE IS LOOSE, TIGHTEN IT TO 170 POUND-INCHES ±5%.

NO

24 REPLACE THE LEFT (RIGHT) ALTERNATE STATIC PORT (MM 34-11-03/401).

25 DO A TEST FOR AIRFLOW BLOCKAGE. FLUSH THE ALTERNATE STATIC SYSTEM (MM 34-11-00/401).

Alternate Static System Problem
Figure 105

48270

CAPT (F/O, AUX-1, AUX-2) PITOT SYSTEM PROBLEM

PREREQUISITES
NONE

```
1   EXAMINE THE CAPT (F/O,          YES                    20  REPAIR OR REPLACE THE
AUX-1, AUX-2) PITOT SYSTEM ───────────────────────────────►   PITOT TUBE (MM 20-10-09/401),
COMPONENTS FOR PHYSICAL                                        PITOT HOSE (MM 20-10-10/401),
DAMAGE.                                                        PITOT-STATIC PROBE
    IS THERE DAMAGE?                                           (MM 34-11-01/401), OR DRAINS.

         │ NO

2   EXAMINE THE CAPT (F/O,    YES    11  IS THERE A LEAK IN THE   YES   21  REPAIR OR REPLACE THE TUBE
AUX-1, AUX-2) PITOT SYSTEM FOR ────► TUBE?                    ───────►   (MM 20-10-09/401).
LEAKS (MM 34-11-00/501).
    IS THERE A LEAK?                       │ NO

         │ NO                        12  IS THERE A LEAK IN THE   YES   22  REPAIR OR REPLACE THE HOSE
                                     HOSE?                      ───────►   (MM 20-10-10/401).

                                           │ NO

                                     13  IS THERE LEAK AND A      YES   23  IF THE FITTING AT THE TOP
                                     DECREASE IN PRESSURE AT THE ──────►   OF THE SIGHT GAGE IS LOOSE,
                                     DRAINS?                               TIGHTEN IT TO 170 POUND-INCHES
                                                                          ±5%.
                                           │ NO

                                                               24  REPLACE THE CAPT-UPPER
                                                               LEFT (F/O-UPPER RIGHT,
                                                               AUX-1-LOWER LEFT, AUX-2-LOWER
                                                               RIGHT) PITOT-STATIC PROBE
                                                               (MM 34-11-01/401).

                                                               25  DO A TEST FOR AIRFLOW
                                                               BLOCKAGE.  FLUSH THE CAPT
                                                               (F/O, AUX-1, AUX-2) PITOT
                                                               SYSTEM (MM 34-11-00/401).
```

Capt (F/O, Aux-1, Aux-2) Pitot System Problem
Figure 106

EFFECTIVITY

ALL

34-11-00

01   Page 106
Feb 10/91

30948

AUX-1 (AUX-2) STATIC
SYSTEM PROBLEM

PREREQUISITES
NONE

1 | EXAMINE THE AUX-1 (AUX-2) STATIC SYSTEM COMPONENTS FOR PHYSICAL DAMAGE.
    IS THERE DAMAGE?

— YES → 20 | REPAIR OR REPLACE THE STATIC TUBE (MM 20-10-09/401), STATIC HOSE (MM 20-10-10/401), PITOT-STATIC PROBE (MM 34-11-01/401), OR DRAINS.

NO

2 | EXAMINE THE AUX-1 (AUX-2) STATIC SYSTEM FOR LEAKAGE (MM 34-11-00).
    IS THERE A LEAK?

— YES → 11 | IS THERE A LEAK IN THE TUBE?

— YES → 21 | REPAIR OR REPLACE THE TUBE (MM 20-10-09/401).

NO

12 | IS THERE A LEAK IN THE HOSE?

— YES → 22 | REPAIR OR REPLACE THE HOSE (MM 20-10-10/401).

NO

13 | IS THERE A LEAK AND A DECREASE IN PRESSURE AT THE DRAINS?

— YES → 23 | IF THE FITTING AT THE TOP OF THE SIGHT GAGE IS LOOSE, TIGHTEN IT TO 170 POUND-INCHES ±5%.

NO

24 | REPLACE THE TOP RIGHT (TOP LEFT) PITOT-STATIC PROBE (MM 34-11-01/401).
    IF THE PROBLEM CONTINUES, REPLACE THE BOTTOM LEFT (BOTTOM RIGHT) PITOT-STATIC PROBE (MM 34-11-01/401).

NO

25 | DO A TEST FOR AIRFLOW BLOCKAGE. FLUSH THE AUX-1 (AUX-2) STATIC SYSTEM (MM 34-11-00/401).

Aux-1 (Aux-2) Static System Problem
Figure 107

EFFECTIVITY

ALL

773834

34-11-00

02   Page 107
Feb 10/91

AIR DATA COMPUTING (ADC) SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ALTIMETER – (REF 34-13-00, FIG. 101)				
CAPT, N8				
F/O, N48				
CIRCUIT BREAKERS	1		FLIGHT COMPARTMENT, P11	
AIR DATA AOA SENSOR LEFT, C1		1	11A11	*
AIR DATA AOA SENSOR RIGHT, C3		1	11F31	*
AIR DATA BARO CORRECT LEFT, C2		1	11A12	*
AIR DATA BARO CORRECT RIGHT, C4		1	11F32	*
AIR DATA COMPTR LEFT, C625		1	11A10	*
AIR DATA COMPTR RIGHT, C626		1	11F30	*
COMPUTER – AIR DATA LEFT, M100	2	1	119AL, MAIN EQUIP CENTER, E1-3	34-12-01
COMPUTER – AIR DATA RIGHT, M101	2	1	119AL, MAIN EQUIP CENTER, E2-3	34-12-01
COMPUTER – (REF 31-41-00, FIG. 101)				
EICAS LEFT, M10181				
EICAS RIGHT, M10182				
INDICATOR – (REF 34-22-00, FIG. 101)				
ELEX ATTITUDE DIRECTION LEFT, N4				
ELEX ATTITUDE DIRECTION RIGHT, N44				
MODULE – DISCRETE WARNING DISPLAY, M779	1	1	FLIGHT COMPARTMENT, P1-3	*
PANEL – (REF 28-43-00, FIG. 101)				
MISC TEST, M10398				
PROBE – TOTAL AIR TEMPERATURE, TS161	2	1	LEFT SIDE FORWARD FUSELAGE	34-12-02
RELAY – (REF 31-01-33, FIG. 101)				
AOA PROBE CURRENT SENSING LEFT, K400				
AOA PROBE CURRENT SENSING RIGHT, K401				
AUX PITOT STATIC CURRENT SENSING LEFT, K312				
AUX PITOT STATIC CURRENT SENSING RIGHT, K243				
PITOT STATIC CURRENT SENSING CAPT, K241				
PITOT STATIC CURRENT SENSING F/O, K310				
TAT PROBE CURRENT SENSING LEFT, K411				
RELAY – (REF 31-01-36, FIG. 101)				
SYS 1 AIR/GND, K149				
RELAY – (REF 31-01-37, FIG. 101)				
SYS 2 AIR/GND, K207				
SENSOR – ANGLE OF ATTACK LEFT, TS12	2	1	LEFT SIDE FUSELAGE NOSE	34-12-03
SENSOR – ANGLE OF ATTACK RIGHT, TS13	2	1	RIGHT SIDE FUSELAGE NOSE	34-12-03
SWITCH – ALTERNATE VMO/MMO SELECT, S591 ▷1▷	2	1	119AL, MAIN EQUIP CENTER	*
SWITCH – CAPT ADC INSTR SOURCE SELECT, S482	1	1	FLIGHT COMPARTMENT, P1-1	*
SWITCH – F/O ADC INSTR SOURCE SELECT, S483	1	1	FLIGHT COMPARTMENT, P3-3	*
TRANSFORMER – (REF 31-01-36, FIG. 101)				
AIR DATA COMPUTER LEFT, T139				
TRANSFORMER – (REF 31-01-37, FIG. 101)				
AIR DATA COMPUTER RIGHT, T140				

* SEE THE WDM EQUIPMENT LIST

▷1▷ ALL MTH AIRPLANES

Air Data Computing (ADC) System – Component Index
Figure 101

EFFECTIVITY

ALL

672045

34-12-00

10   Page 101
Feb 10/95

DISCRETE WARNING
DISPLAY MODULE, M779
SEE (A)

P11 PANEL

P3 PANEL

P1 PANEL

FIRST OFFICERS ADC
INSTRUMENT SOURCE
SELECT SWITCH, S483
SEE (B)

CAPTAIN'S ADC
INSTRUMENT
SOURCE SELECT
SWITCH, S482
SEE (B)

P61 PANEL

MISCELLANEOUS TEST
PANEL, M10398 (REF)
SEE (C)

FLIGHT COMPARTMENT

FIRE	CONFIG
PULLUP	A/P DISC
CABIN ALT	OVSPD

OVERSPEED
WARNING
LIGHT

DISCRETE WARNING
DISPLAY MODULE, M779
(A)

EFI   ALTN W / W

IRS   ALTN W / W

AIR DATA   ALTN W / W

ADC ALTERNATE
SELECT SWITCH

CAPTAIN'S OR FIRST OFFICERS
INSTRUMENT SOURCE SELECT
SWITCH, S482 OR S483
(B)

AIR DATA
COMPUTER
TEST SWITCHES

L — AIR DATA — R   TEST
    COMPTR

MISCELLANEOUS TEST PANEL, M10398 (REF)
(C)

Air Data Computing (ADC) System — Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

613172

34-12-00

02   Page 102
Feb 10/91

TOTAL AIR TEMPERATURE
PROBE, TS161

SEE (G)

LEFT OR RIGHT ANGLE
OF ATTACK SENSORS
(ONE PER SIDE)
TS12 OR TS13

SEE (F)

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

SEE (D)

SPERRY | AIR DATA
COMPUTER

PITOT   STATIC

ADC FAIL

EXTERNAL
SENSOR
FAULT

FUNCTIONAL
TEST

RIGHT AIR DATA
COMPUTER, M101

SEE (E)

E2-3

E1-3

119AL

LEFT AIR DATA
COMPUTER, M100

SEE (E)

LEFT OR RIGHT AIR DATA
COMPUTER, M100 OR M101

(E)

ALTERNATE
Vmo/Mmo
SWITCH, S591

SEE (H) |1>

MAIN EQUIPMENT CENTER

(D)

SEE (J)

SEE (I)

LEFT OR RIGHT ANGLE OF ATTACK
SENSOR, TS12 OR TS13

(F)

TOTAL AIR TEMPERATURE
PROBE, TS161

(G)

ALTERNATE Vmo/Mmo
SELECT SWITCH, S591

(H) |1>

|1> MTH 275-999

ALTN

NORM

(I)

S591
ALTERNATE
Vmo/Mmo

(J)

Air Data Computing (ADC) System - Component Location
Figure 102 (Sheet 2)

670441

Not Used
Figure 103

EFFECTIVITY

ALL

233924

34-12-00

01   Page 104
Aug 10/95

CAPT (F/O) ALTIMETER
ERROR IS CORRECTED
WITH ALTN AIR DATA
SELECTED, OR EICAS
MSG "ALT DISAGREE"
OR "IAS DISAGREE"

```
PREREQUISITES
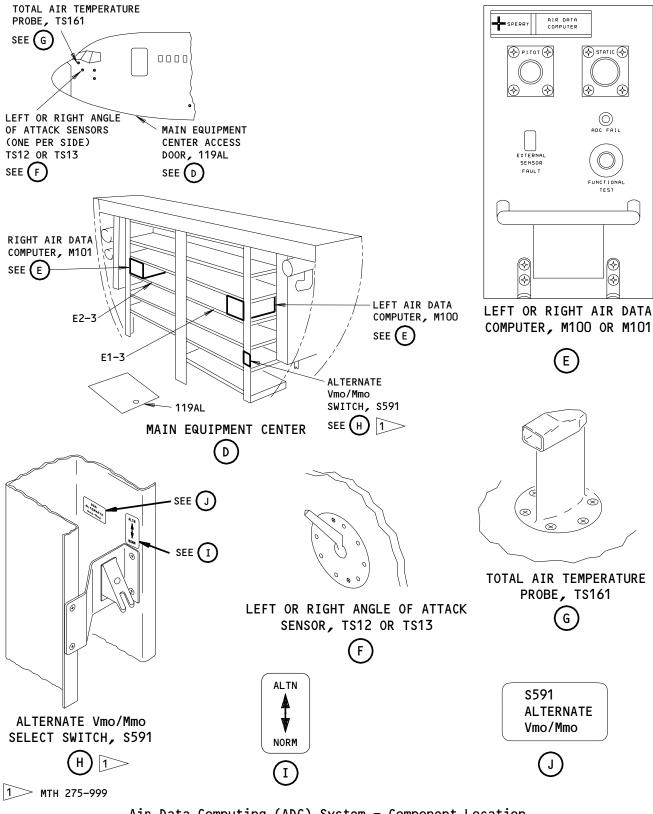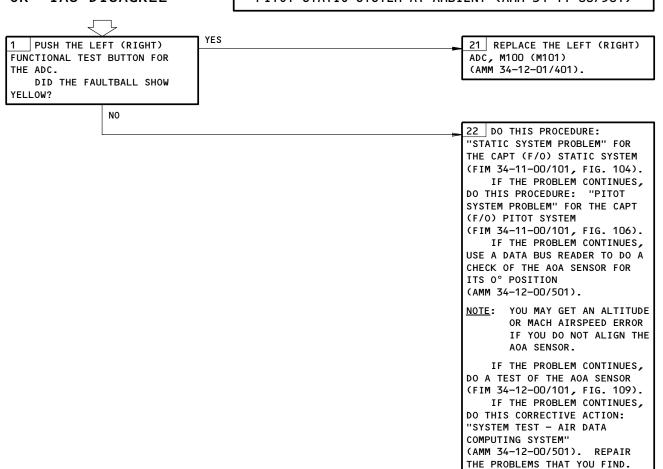
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A10, 11A11, 11A12, 11E2, 11E25, 11F30,
  11F31, 11F32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  PITOT-STATIC SYSTEM AT AMBIENT (AMM 34-11-00/501)
```

| 1 | PUSH THE LEFT (RIGHT) FUNCTIONAL TEST BUTTON FOR THE ADC. DID THE FAULTBALL SHOW YELLOW? |

YES →

| 21 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). |

NO →

| 22 | DO THIS PROCEDURE: "STATIC SYSTEM PROBLEM" FOR THE CAPT (F/O) STATIC SYSTEM (FIM 34-11-00/101, FIG. 104).
    IF THE PROBLEM CONTINUES, DO THIS PROCEDURE: "PITOT SYSTEM PROBLEM" FOR THE CAPT (F/O) PITOT SYSTEM (FIM 34-11-00/101, FIG. 106).
    IF THE PROBLEM CONTINUES, USE A DATA BUS READER TO DO A CHECK OF THE AOA SENSOR FOR ITS 0° POSITION (AMM 34-12-00/501).

NOTE: YOU MAY GET AN ALTITUDE OR MACH AIRSPEED ERROR IF YOU DO NOT ALIGN THE AOA SENSOR.

    IF THE PROBLEM CONTINUES, DO A TEST OF THE AOA SENSOR (FIM 34-12-00/101, FIG. 109).
    IF THE PROBLEM CONTINUES, DO THIS CORRECTIVE ACTION: "SYSTEM TEST - AIR DATA COMPUTING SYSTEM" (AMM 34-12-00/501). REPAIR THE PROBLEMS THAT YOU FIND. |

Capt (F/O) Altimeter is Corrected with ALTN Air Data Selected, or
EICAS Msg "ALT DISAGREE" Or "IAS DISAGREE"
Figure 104

EFFECTIVITY

ALL

34-12-00

01   Page 105
Dec 22/00

48259

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7, 11A10, 11A11, 11A12, 11E2, 11E3, 11E4, 11E23,
  11E24, 11E25, 11F8, 11F9, 11F24, 11F29, 11F30,
  11F31, 11F32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  PITOT - STATIC SYSTEM AT AMBIENT (AMM 34-11-00/501)

OFF FLAG IN VIEW
ON CAPT'S (F/O'S)
ALTIMETER

| 1 | IS LEFT (RIGHT) EADI SPD FLAG SHOWN? | NO → | 11 | SET THE SOURCE SELECT SWITCH FOR THE ADC IN THE ALTN POSITION.   IS THE CAPT (F/O) ALTIMETER OFF FLAG SHOWN? | YES → | 21 | REPLACE THE CAPT (F/O) ALTIMETER, N8 (N48) (AMM 34-13-01/401).   IF THE PROBLEM CONTINUES, AND WIRING CHECKS BETWEEN THE LEFT ADC AND CAPT (F/O) PRIMARY ALTIMETERS SHOW NO DIFFERENCES, REPLACE THE M217 STATIC INVERTER (AMM 34-24-02/401). |

YES ↓   NO ↓

| 22 | REMOVE THE CAPT (F/O) ALTIMETER, N8 (N48) (AMM 34-13-01/401).   EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE CAPT (F/O) ALTIMETER CONNECTOR, D111 (D715), PINS 30 AND 31 AND ON CONNECTOR D4167J (D4965J) PINS 21 AND 22 (9 AND 10) (WDM 34-13-11,-21).   INSTALL THE ALTIMETER. |

| 2 | DOES THE CAPT (F/O) ADC FAULT BALL SHOW YELLOW? | YES → | 23 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). |

NO ↓

| 24 | REMOVE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401).   EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT (RIGHT) ADC, CONNECTOR D423B (D351B), PINS A4 AND B4 AND TERMINAL BLOCK TB105 (TB145), PINS G112 AND G113 (H86 AND H88)(WDM 34-12-12,-22).   INSTALL THE ADC. |

Off Flag in View on Capt's (F/O's) Altimeter
Figure 105

EFFECTIVITY

ALL

256282

34-12-00

03   Page 106
          Aug 22/07

Not Used
Figure 106

EFFECTIVITY

E79620

ALL

34-12-00

16   Page 107
Feb 10/95

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11A10,11A11,11A12,11E2,11E3,11E4,11E8,11E9,
  11E23,11E24,11E25,11E29,11E30,11F8,11F9,11F24,
  11F29,11F30,11F31,11F32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  PITOT-STATIC SYSTEM AT AMBIENT (AMM 34-11-00/501)

CAPT (F/O) TAS/SAT
AND MACH ARE IN
ERROR

| 1 | SET THE LEFT (RIGHT) ADC TEST SWITCH, ON THE P61 TEST PANEL, TO THE "AIR DATA COMPT" POSITION.
    DOES THE LEFT (RIGHT) EADI AIRSPEED TAPE SHOW 137 KTS AFTER 7 SECONDS? |

NO →

| 11 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101)(AMM 34-12-01/401). |

YES

| 13 | DO THIS PROCEDURE: CAPT (F/O) STATIC SYSTEM (FIM 34-11-00/101, FIG. 104).
    IF THE PROBLEM CONTINUES, DO THIS PROCEDURE: CAPT (F/O), AUX-1, AUX-2) PITOT SYSTEM PROBLEM (FIM 34-11-00/101, FIG. 106). |

TAS/SAT and Mach Are In Error
Figure 107

EFFECTIVITY

256285

ALL

34-12-00

06   Page 108
            Nov 10/95

PREREQUISITES
MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (MM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11A10,11A11,11A12,11E2,11E3,11E4,11E23,
  11E24,11E25,11F8,11F9,11F24,11F29,11F30,11F31,
  11F32

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  PITOT-STATIC SYSTEM AT AMBIENT (MM 34-11-00/501)
  ALL INSTRUMENT SOURCE SELECT SWITCHES IN THE NORM
    POSITION.

SPD FLAG IN VIEW
ON L (R) EADI

1 │ DOES THE CAPT'S (F/O)
ALTIMETER OFF FLAG SHOW?
— NO →

YES

11 │ SET THE SOURCE SELECT
SWITCH FOR THE ADC IN THE ALTN
POSITION.
    DOES THE LEFT (RIGHT) EADI
SPD FLAG STAY SHOWN?
— NO →

YES

21 │ REMOVE THE LEFT (RIGHT)
EFIS SYMBOL GENERATOR M148
(M150)(MM 34-22-01/401).
    EXAMINE AND REPAIR THE
CIRCUIT BETWEEN THE LEFT
(RIGHT) EFIS SYMBOL GENERATOR
CONNECTOR D425A (D373D), PINS
J1 AND K1 AND TERMINAL BLOCK
TB105 (TB145) PINS H146 AND
H148 (H86 AND H88)
(WDM 34-22-19,-29).
    INSTALL THE EFIS SYMBOL
GENERATOR.

12 │ SET THE SOURCE SELECT
SWITCH FOR THE EFIS TO THE
ALTN POSITION.
    DOES THE LEFT (RIGHT)
EADI SPD FLAG STAY SHOWN?
— NO →

YES

22 │ REPLACE THE LEFT (RIGHT)
EFIS SYMBOL GENERATOR M148
(M150)(MM 34-22-01/401).

23 │ DO THE EFIS BITE PROCEDURE
(34-22-00, FIG. 108).

2 │ GO TO THE MAIN EQUIPMENT
CENTER.
    DOES THE CAPT (F/O) ADC
FAULT BALL SHOW YELLOW?
— YES →

NO

24 │ REPLACE THE LEFT (RIGHT)
ADC M100 (M101)(MM 34-12-01/
401).

25 │ REMOVE THE LEFT (RIGHT)
ADC M100 (M101)(MM 34-12-01/
401).
    EXAMINE AND REPAIR THE
CIRCUIT BETWEEN THE LEFT
(RIGHT) ADC CONNECTOR D423B
(D351B) PINS A4 AND B4 AND
TERMINAL BLOCK TB105 (TB145),
PINS H146 AND H148 (H86 AND
H88)(WDM 34-12-12,-22).
    INSTALL THE ADC.

SPD Flag in View on L (R) EADI
Figure 108

EFFECTIVITY

256288

ALL

34-12-00

08   Page 109
            Nov 10/95

BOEING PROPRIETARY — Copyright (C) — Unpublished Work — See title page for details.

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  EICAS (MM 31-41-00/501)
  WARNING SYSTEM (MM 31-51-00/501)
  INERTIAL REFERENCE SYSTEM (34-21-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11A10,11A11,11A12,11E2,11E3,11E4,11E23,11E24
  11E25,11F8,11F9,11F24,11F29,11F30,11F31,11F32

MAKE SURE THESE CIRCUIT BREAKERS ARE OPEN AND ATTACH
DO-NOT-CLOSE TAGS:
  11A17,11F14,11F15,11F16

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)
  PITOT-STATIC SYSTEM AT AMBIENT (MM 34-11-00/501)

L (R) ADC BITE
PROCEDURE

1 SET THE EICAS SELECT
SWITCH, ON THE DISPLAY SELECT
PANEL, TO THE LEFT OR RIGHT
POSITION.
    PUSH THE ADC FUNCTIONAL
TEST SWITCH ON THE LEFT
(RIGHT) ADC.
    DOES THE ADC FAULT BALL
SHOW YELLOW?

— YES →

41 REPLACE THE LEFT (RIGHT)
ADC, M100 (M101)
(MM 34-12-01/401).

— NO →

2 DOES THE EXTERNAL SENSOR
FAULT DISPLAY SHOW A "1" OR
"2" ON ONE OF THE TWO ADC?

— YES →

42 FOR A "1" OR "2" ON THE
LEFT ADC, REPLACE THE LEFT AOA
SENSOR, TS12
(MM 34-12-03/401). FOR A "1"
OR "2" ON THE RIGHT ADC,
REPLACE THE RIGHT AOA SENSOR,
TS13 (MM 34-12-03/401)

— NO →

3 DOES THE EXTERNAL SENSOR
FAULT DISPLAY SHOW A "3"?

— YES →

43 REMOVE THE LEFT (RIGHT)
ADC, M100 (M101)
(MM 34-12-01/401).
    EXAMINE AND REPAIR THE
CIRCUIT BETWEEN THE LEFT
(RIGHT) ADC, CONNECTOR D423B
(D351B), PIN F15 AND PIN H15
(G15) (WDM 34-12-12,-22).
    INSTALL THE ADC
(MM 34-12-01/401).

— NO →

SEE SHEET 2
(BLOCK 4)

L (R) ADC BITE Procedure
Figure 109 (Sheet 1)

EFFECTIVITY————

256292

ALL

34-12-00

12   Page 110
        Nov 10/95

FROM SHEET 1
(BLOCK 3)

| NO

| 4 | DOES THE EXTERNAL SENSOR FAULT DISPLAY SHOW A "5"? | —YES→ | 44 | REPLACE THE TAT PROBE, TS161 (AMM 34-12-02/401). |

| NO

| 5 | DOES THE EXTERNAL SENSOR FAULT DISPLAY SHOW A "6" OR "7"? | —YES→ | 45 | FOR A "6" ON ONE OF THE TWO ADC, REPLACE THE CAPT ALTIMETER, N8 (AMM 34-13-01/401). FOR A "7" ON ONE OF THE TWO ADC, REPLACE THE F/O ALTIMETER, N48 (AMM 34-13-01/401). |

| NO

| 6 | DOES THE EXTERNAL SENSOR FAULT DISPLAY SHOW AN "8"? | —YES→ | 46 | REPLACE THE CAPT (F/O) ALTIMETER, N8 (N48) (AMM 34-13-01/401). |

| NO

| 7 | DOES THE EXTERNAL SENSOR FAULT DISPLAY SHOW A "9"? | —YES→ | 47 | REMOVE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT (RIGHT) ADC, CONNECTOR D423B (D351B), PIN G14 AND PIN D14 (WDM 34-12-12, -22). INSTALL THE ADC (AMM 34-12-01/401). |

| NO

| 8 | FOR THE FIRST 2 SECONDS OF THE ADC TEST, ARE THE MASTER WARNING LIGHTS ON? | —NO→ | 21 | IS THE SIREN WARNING ON? | —YES→ | 48 | REPLACE THE MASTER WARNING CARD, M618 (AMM 31-51-04/401). |

| YES (from block 8)

SEE SHEET 3
(BLOCK 9)

| NO (from block 21)

| 22 | IS THE LEFT (RIGHT) HALF OF THE OVERSPEED LIGHT ON? | —NO→ | 49 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). |

| YES (from block 22)

| 50 | REMOVE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). REMOVE THE MASTER WARN MODULE, M618 (AMM 31-51-04/401). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT (RIGHT) ADC, CONNECTOR D423B (351B), PIN E3 TO THE MASTER WARNING MODULE M618, CONNECTOR D815, PIN 45 (41) (WDM 34-12-12, -22). INSTALL THE ADC (AMM 34-12-01/401). INSTALL THE MASTER WARNING MODULE (AMM 31-51-04/401). |

L (R) ADC BITE Procedure
Figure 109 (Sheet 2)

313777

FROM SHEET 2
(BLOCK 8)

YES

| 9 | IS THE SIREN WARNING ON? |

NO → | 51 | REPLACE THE LEFT (RIGHT) SIREN/OWL MODULE, M999 (M619) (AMM 31-51-04/401). |

YES

| 10 | IS THE LEFT (RIGHT) HALF OF THE OVERSPEED LIGHT ON? |

NO → | 52 | REPLACE THE DISCRETE WARNING DISPLAY MODULE, M779 (AMM 33-16-02/401). |

YES

| 11 | IF THE IRS IS ON, DOES THE VSI FAULT FLAG SHOW AFTER 3 SECONDS? |

NO → | 53 | DO THIS PROCEDURE: IRS BITE TEST (FIM 34-21-00/101, FIG. 107). |

YES

| 12 | AFTER 4 SECONDS, DOES THE LEFT (RIGHT) EADI SPD FLAG SHOW? |

NO → | 23 | IS THE CAPT (F/O) ALTIMETER FLAG SHOWN? |

YES → | 54 | DO THIS PROCEDURE: EFIS BITE PROCEDURE (FIM 34-22-00/101, FIG. 108). |

NO →

| 55 | REMOVE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401).
  EXAMINE THE CIRCUIT FROM THE LEFT (RIGHT) ADC, CONNECTOR D423B (D351B), PINS A4 AND B4, TO TERMINAL BLOCK TB105 (TB145), PINS H146 AND H148 (H86 AND H88)(WDM 34-12-12,-22).
  REPAIR THE PROBLEMS THAT YOU FIND.
  INSTALL THE ADC. |

YES

| 13 | IS THE CAPT (F/O) ALTIMETER FLAG SHOWN? |

NO → | 56 | REPLACE THE CAPT (F/O) ALTIMETER, N8 (N48) (AMM 34-13-01/401). |

YES

| 14 | AFTER 7 SECONDS DOES THE TAT SHOW 35°C ON THE EICAS? |

NO → | 57 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101) (AMM 34-12-01/401). |

YES

SEE SHEET 5
(BLOCK 15)

L (R) ADC BITE Procedure
Figure 109 (Sheet 3)

EFFECTIVITY

ALL

256295

34-12-00

13   Page 112
Nov 10/95

THIS PAGE INTENTIONALLY LEFT BLANK

L (R) ADC BITE Procedure
Figure 109 (Sheet 4)

1416074

FROM SHEET 3
(BLOCK 14)

YES

```
┌─────────────────────────────┐        ┌─────────────────────────────┐        ┌─────────────────────────────┐
│ 15 │ AFTER 15 TO 30 SECONDS  │  NO    │ 25 │ ON THE EICAS MAINTENANCE│  NO    │ 58 │ REPLACE THE LEFT (RIGHT)│
│ DOES THE CAPT (F/O) ALTIMETER│───────▶│ PANEL, P61, PUSH THE PERF/APU│───────▶│ ADC, M100 (M101)        │
│ SHOW 10,000 FT?             │        │ SWITCH.                     │        │ (AMM 34-12-01/401).     │
└─────────────────────────────┘        │    DOES THE "ALT" ON EICAS  │        └─────────────────────────────┘
              │                        │ DISPLAY SHOW 10,000 FT?     │
             YES                       └─────────────────────────────┘
                                                     │
                                                    YES
                                                                                ┌─────────────────────────────┐
                                                                                │ 59 │ REPLACE THE CAPT (F/O)  │
                                                                                │ ALTIMETER, N8 (N48)         │
                                                                                │ (AMM 34-13-01/401).         │
                                                                                └─────────────────────────────┘
```

```
┌─────────────────────────────┐        ┌─────────────────────────────┐        ┌─────────────────────────────┐
│ 16 │ DOES THE LEFT (RIGHT) EADI│ NO   │ 26 │ ON THE EICAS MAINTENANCE│  NO    │ 60 │ REPLACE THE LEFT (RIGHT)│
│ AIRSPEED TAPE SHOW 137 KNOTS?│───────▶│ PANEL, P61, PUSH THE PERF/APU│───────▶│ ADC, M100 (M101)        │
└─────────────────────────────┘        │ SWITCH.                     │        │ (AMM 34-12-01/401).     │
              │                        │    DOES THE "CAS" ON EICAS  │        └─────────────────────────────┘
             YES                       │ DISPLAY SHOW 137 KNOTS?     │
                                       └─────────────────────────────┘
                                                     │
                                                    YES
                                                                                ┌─────────────────────────────┐
                                                                                │ 61 │ DO THIS PROCEDURE:  EFIS│
                                                                                │ BITE PROCEDURE (FIM 34-22-00/│
                                                                                │ 101, FIG. 108).             │
                                                                                └─────────────────────────────┘
```

```
┌─────────────────────────────┐  NO                                            ┌─────────────────────────────┐
│ 17 │ IS THE LEFT (RIGHT) EADI│────────────────────────────────────────────▶│ 62 │ DO THIS PROCEDURE:  EFIS│
│ MACH DISPLAY BLANK?         │                                              │ BITE PROCEDURE (FIM 34-22-00/│
└─────────────────────────────┘                                              │ 101, FIG. 108).             │
              │                                                              └─────────────────────────────┘
             YES

┌─────────────────────────────┐
│ 18 │ CLOSE CB'S 11A17,11F14, │
│ 11F15,11F16.  THE ADC SYSTEM│
│ IS OK.                      │
└─────────────────────────────┘
```

L (R) ADC BITE Procedure
Figure 109 (Sheet 5)

EFFECTIVITY

ALL

256301

34-12-00

16   Page 114
Nov 10/95

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

L (R) EADI AIRSPEED
AND/OR MACH INDICA-
TIONS IN ERROR.
SELECTING ALTN AIR
DATA CORRECTS FAULT

```
PREREQUISITES
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11A10,11A11,11A12,11E3,11E4,11E24,11E25,11F8,
  11F9,11F24,11F29,11F30,11F31,11F32

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)
  PITOT-STATIC SYSTEM AT AMBIENT (MM 34-11-00/501)
```

| 1 | SET THE LEFT (RIGHT) ADC TEST SWITCH, ON THE P61 TEST PANEL, TO THE "AIR DATA COMPTR" POSITION. DOES THE LEFT (RIGHT) EADI AIRSPEED TAPE DISPLAY SHOW 137 KTS AFTER 7 SECONDS? |

YES →

| 13 | DO THE CAPT (F/O) STATIC SYSTEM PROCEDURE (34-11-00, FIG. 104, BLOCK 1). IF THE PROBLEM CONTINUES, DO THE CAPT (F/O) PITOT SYSTEM PROCEDURE (34-11-00, FIG. 106, BLOCK 1). |

NO

| 2 | DO THE MCDP GROUND TEST 30-CURRENT FAULT REPORT (22-00-03, FIG. 117, BLOCK 1). IS THE MCDP MESSAGE "ADC L" ("ADC R") SHOWN? |

YES →

| 14 | REPLACE THE LEFT (RIGHT) ADC, M100 (M101) (MM 34-12-01/401). |

NO

| 15 | DO THE EFIS BITE PROCEDURE (34-22-00, FIG. 108). |

L (R) EADI Airspeed and/or Mach Indications in Error.
Selecting Altn Air Data Corrects Fault.
Figure 110

EFFECTIVITY

ALL

256303

34-12-00

12   Page 115
            Nov 10/95

1. ARINC Data Bus Charts
    A. General

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
             YOU CAN CAUSE DAMAGE TO THE CONNECTOR.

    (1) ARINC 429 data bus gives data necessary to make analysis of ARINC
         429 transmitters, receivers, and data buses. For the test, use a
         breakout box at the available terminals or at the LRU unit.

    B. Equipment
    (1) Standard multi-meter
    (2) 429EBP Data Bus Analyzer (recommended)
         JcAIR Instrumentation
         400 Industrial Parkway
         Industrial Airport, KS 66031

         429-2 Data Bus Analyzer (alternative)
         Interface Technology
         150 E. Arrow Highway
         San Dimas, CA 91773
    (3) A34011-1 Breakout Box (recommended)
         A34011-112 Breakout Box (alternative)

    NOTE: Octal labels 034, 035, 246, 251, and 252 are multiple
           function labels and will not display correctly in engineering
           units on the data bus analyzer unless the hex equipment ID =
           06 is selected. For analyzers not capable of having ID
           selected, display the label in hexadecimal format and record
           the value. Set the data bus analyzer to transmit a label in
           hex format as listed below.

RECEIVED LABEL	TRANSMIT LABEL
034	234 or 236
035	235 or 237
251	204 or 220
252	204 or 220
–	246

    NOTE: Insert the hexadecimal value recorded for the received label.
           Then select engineering format to display the correct
           engineering value.

ADC							
DIGITAL OUTPUT BUS CHART							
BUS NAME	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
SOURCE							
ADC (L C R)	A	1	B	A02 B02	429	LO	ADC APFDS BUS
ADC (L C R)	A	2	B	A04 B04	429	LO	ADC INSTR BUS
ADC (L C R)	A	3	B	A06 B06	429	LO	ADC ENG CONT BUS
ADC (L C R)	A	4	B	A08 B08	429	LO	ADC GEN PRPS BUS

ADC ID = O6

OCTAL LABELS CHART

SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI SDI	BINARY RANGE	POSITIVE SENSE	UNITS
BARO COR NO.3(MB)	A	034	BCD	8	XX	± 9999.9	ALWAYS POS	MB
BARO COR NO.3(IN)	A	035	BCD	8	XX	± 99.999	ALWAYS POS	IN HG
ALTITUDE (29.92)	A	203	BNR	16	XX	± 131,072	ABOVE SEA LEV	FEET
ALTITUDE (BARO #1)	A	204	BNR	16	XX	± 131,072	ABOVE SEA LEV	FEET
MACH	A	205	BNR	8	XX	± 4.096	ALWAYS POS	MACH
COMPUTED AIRSPEED	A	206	BNR	8	XX	± 1024	ALWAYS POS	KNOTS
MAX OPRTG SCHEDULE	A	207	BNR	8	XX	± 1024	ALWAYS POS	KNOTS
TRUE AIRSPEED	A	210	BNR	8	XX	± 2048	ALWAYS POS	KNOTS
TOTAL AIR TEMP	A	211	BNR	2	XX	± 512	ABOVE FREEZ	DEG C
ALTITUDE RATE	A	212	BNR	16	XX	± 32,768	CLIMB UP	FT/MIN
STATIC AIR TEMP	A	213	BNR	2	XX	± 512	ABOVE FREEZ	DEG C
IMPACT PRESSURE	A	215	BNR	8	XX	± 512	ALWAYS POS	MB
ALTITUDE (BARO #2)	A	220	BNR	16	XX	± 131,072	ABOVE SEA LEV	FEET
INDICATED AOA	A	221	BNR	16	XX	± 180	NOSE UP	DEG
ANGLE OF ATTACK-L	A	222	BNR	16	XX	± 180	NOSE UP	DEG
ANGLE OF ATTACK-R	A	223	BNR	16	XX	± 180	NOSE UP	DEG
TRUE AIRSPEED-D	A	230	BCD	2	XX	± 799	ALWAYS POS	KNOTS
TOTAL AIR TEMP-D	A	231	BCD	2	XX	± 99	ABOVE FREEZ	DEG C
STATIC AIR TEMP-D	A	233	BCD	2	XX	± 99	ABOVE FREEZ	DEG C
BARO COR NO.1(MB)	A	234	BCD	8	XX	± 9999.9	ALWAYS POS	MB

EFFECTIVITY

ALL

ADC ID = 06

OCTAL LABELS CHART

SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI SDI	BINARY RANGE	POSITIVE SENSE	UNITS
BARO COR NO.1(IN)	A	235	BCD	8	XX	± 99.999	ALWAYS POS	INS HG
BARO COR NO.2(MB)	A	236	BCD	8	XX	± 9999.9	ALWAYS POS	MB
BARO COR NO.2(IN)	A	237	BCD	8	XX	± 99.999	ALWAYS POS	INS HG
CORRECTED AOA	A	241	BNR	16	XX	± 180	NOSE UP	DEG
TOTAL PRESSURE	A	242	BNR	8	XX	± 2048	ALWAYS POS	MB
STATIC PRESSURE	A	246	BNR	8	XX	± 2048	ALWAYS POS	MB
ALTITUDE (BARO #3)	A	251	BNR	16	XX	± 131,072	ABOVE SEA LEV	FEET
ALTITUDE (BARO #4)	A	252	BNR	16	XX	± 131,072	ABOVE SEA LEV	FEET
ADC DISCRETES #1	A	270	DIS	2	XX	N/A	N/A	N/A
ADC DISCRETES #2	A	271	DIS	2	XX	N/A	N/A	N/A
MAINTENANCE WD 1	A	350	DIS	2	XX	N/A	N/A	N/A
MAINTENANCE WD 2	A	351	DIS	2	XX	N/A	N/A	N/A
MAINTENANCE WD 3	A	352	DIS	2	XX	N/A	N/A	N/A
MAINTENANCE WD 4	A	353	BCD	2	XX	N/A	N/A	N/A
MAINTENANCE WD 5	A	354	BNR	2	XX	± 63.999	ALWAYS POS	INS HG

EFFECTIVITY

ALL

ADC				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SENSOR #1 HEAT ON	270	11	#1 HTR ON	#1 HTR OFF
SENSOR #2 HEAT ON	270	12	#2 HTR ON	#2 HTR OFF
ADC INVALID	270	13	ADC FAIL	ADC OK
PIT/STAT HEAT ON L	270	14	L P/S ON	L P/S OFF
PIT/STAT HEAT ON R	270	15	R P/S ON	R P/S OFF
TAT PROBE HEAT ON	270	16	TAT HTR ON	HTR OFF
L AOA HEAT ON	270	17	L AOA ON	L AOA OFF
R AOA HEAT ON	270	18	R AOA ON	R AOA OFF
OVERSPEED	270	19	OVERSPEED	NOT OVRSPD
ONSIDE AOA FAIL	270	20	ONSIDE FL	ONSIDE OK
AOA UNIQUE	270	21	UNIQUE	AVERAGE
VMO ALTERNATE #1	270	22	VMO=ALT #1	VMO NOT #1
VMO ALTERNATE #2	270	23	VMO=ALT #2	VMO NOT #2
VMO ALTERNATE #3	270	24	VMO=ALT #3	VMO NOT #3
VMO ALTERNATE #4	270	25	VMO=ALT #4	VMO NOT #4
SSEC ALTERNATE	270	26	ALTERNATE	NORMAL
AOAC ALTERNATE	270	27	ALTERNATE	NORMAL
BARO PORT "A"	270	28	BARO "A"	BARO "B"
ZERO SSEC (MACH)	270	29	NO MACH	MACH
ZERO SSEC (AOA)	271	11	NO AOA	AOA
EXT AOA MON (FAIL)	271	12	PRI AOA FL	PRI AOA OK

ADC				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
#4 BARO ALT=#1	271	16	#4 ALT=#1	#4 NOT #1
#4 BARO ALT=#2	271	17	#4 ALT=#2	#4 NOT #2
#4 BARO ALT=#3	271	18	#4 ALT=#3	#4 NOT #3
AOA ROT REF	271	19	#1=#2	#1=-#2
SDI PAR SET	271	20	SET	NOT SET
L AOA VANE TEST	350	11	L AOA FAIL	L AOA OK
R AOA VANE TEST	350	12	R AOA FAIL	R AOA OK
TAT INPUT TEST	350	15	TAT FAIL	TAT OK
BARO #1 TEST	350	16	BARO #1 FL	BARO #1 OK
BARO #2 TEST	350	17	BARO #2 FL	BARO #2 OK
BARO #3 TEST	350	18	BARO #3 FL	BARO #3 OK
A/C TYPE PROG TEST	350	19	PROG FAIL	PROG OK
A/C TYPE CONST TST	350	20	CONST FAIL	CONST OK
OSPD HDWR TEST	350	21	OSPD FAIL	OSPD OK
A TO D TEST	350	22	A TO D FL	A TO D OK
PROCESSOR TEST	350	23	PROC FAIL	PROC OK
RAM TEST	350	24	RAM FAIL	RAM OK
PROG MEM TEST	350	25	PROM FAIL	PROM OK
PS SENS PER TEST	350	26	SENSOR FL	SENSOR OK
PS SENS TEMP TEST	350	27	SENSOR FL	SENSOR OK
PS CALIB TEST	350	28	CALIB FAIL	CALIB OK
F/D CONVERSION TST	350	29	CONV FAIL	CONV OK

ADC				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
PT SENS PER TEST	351	11	SENSOR FL	SENSOR OK
PT SENS TEMP TEST	351	12	SENSOR FL	SENSOR OK
PT CALIB TEST	351	13	CALIB FAIL	CALIB OK
ARINC XMTR TEST	351	14	XMTR FAIL	XMTR OK
ARINC XMTR TEST	351	15	XMTR FAIL	XMTR OK
ARINC XMTR TEST	351	16	XMTR FAIL	XMTR OK
POWER SUPPLY TEST	351	17	PWR SUP FL	PWR SUP OK
AOA COMPARE TEST	351	18	COMP FAIL	COMP OK
PS=PT	351	19	PS NOT PT	PS=PT
AVERAGE AOA TEST	351	20	INVALID	AOA OK
TEMP PS=TEMP PT	351	21	PS NOT PT	PS=PT
PROG SEQ TEST	351	22	SEQ FAIL	SEQ OK
PS PLL	351	23	PS PLL FL	PS PLL OK
PT PLL	351	24	PT PLL FL	PT PLL OK
EAROM TEST	351	25	EAROM FL	EAROM OK
BARO #4 TEST	351	26	#4=NCD	#4=PRG PIN
VMO TEST	351	27	>1 VMO	<2 VMO
SDI PARITY	351	28	PAR FAIL	PAR OK
CKSUM CHIP1	352	11	#1 FAIL	#1 OK
CKSUM CHIP2	352	12	#2 FAIL	#2 OK
CKSUM CHIP3	352	13	#3 FAIL	#3 OK
CKSUM CHIP4	352	14	#4 FAIL	#4 OK

ADC				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
PS MEM CHECK	352	15	PS MEM FL	PS MEM OK
PT MEM CHECK	352	16	PT MEM FL	PT MEM OK
A/C TYPE MEM CHECK	352	17	MEM FAIL	MEM OK
A/C TYPE LSB	352	24	LSB=0	LSB=1
A/C TYPE LSB+1	352	25	LSB+1=0	LSB+1=1
A/C TYPE LSB+2	352	26	LSB+2=0	LSB+2=1
A/C TYPE LSB+3	352	27	LSB+3=0	LSB+3=1
A/C TYPE MSB	352	28	MSB=0	MSB=1
A/C TYPE PARITY	352	29	PRTY ODD	PRTY EVEN

AIR DATA INSTRUMENTS

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ALTIMETER – CAPTAIN, N8	--	1	FLT COMPT, P1	34-13-01
ALTIMETER – FIRST OFFICER, N48	--	1	FLT COMPT, P3	34-13-01
ALTIMETER – STANDBY, N23	--	1	FLT COMPT, P1	34-13-06
CIRCUIT BREAKERS –	--		FLT COMPT, P11	*
ALTM LEFT, C584		1	11E2	*
ALTM RIGHT, C585		1	11E23	*
STBY ALTM VIB, C591		1	11A8	*
COMPUTERS – (34-12-00/101)				
AIR DATA LEFT, M100				
AIR DATA RIGHT, M101				
INDICATOR – STANDBY AIRSPEED, N22	--	1		34-13-05
MODULE – (34-16-00/101)				
ALTITUDE ALERT, M617			FLT COMPT, P1	
PANEL – (22-11-00/101)				
AFCS MODE CONTROL, M90				
SWITCHES – (34-12-00/101)				
CAPTAIN ADC INSTRUMENT SOURCE SELECT, S482				
FIRST OFFICER ADC INSTRUMENT SOURCE SELECT, S483				

* SEE THE WDM EQUIPMENT LIST

Air Data Instruments – Component Index
Figure 101

EFFECTIVITY

ALL

255882

34-13-00

07   Page 101
Nov 10/91

STANDBY AIRSPEED
INDICATOR, N22
SEE B

P11 PANEL

CAPTAINS'
ALTIMETER, N8
SEE A

FIRST OFFICERS'
ALTIMETER, N48
SEE A

P1 PANEL

STANDBY
ALTIMETER, N23
SEE C

P3 PANEL

FLIGHT COMPARTMENT

ALTIMETER (WITH OFF FLAG)

A

STANDBY AIRSPEED INDICATOR

B

STANDBY ALTIMETER

C

Air Data Instruments – Component Location
Figure 102

EFFECTIVITY

ALL

254881

34-13-00

10   Page 102
Nov 10/91

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EICAS (AMM 31-41-00/201)

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
  11A8

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

STANDBY AIRSPEED
INDICATOR ERROR

| 1 | PUSH THE STATUS SWITCH ON THE EICAS DISPLAY SELECT PANEL. DOES THE EICAS MESSAGE "ELEVATOR FEEL" SHOW ON THE BOTTOM DISPLAY UNIT? |

NO

| 20 | REPLACE THE STANDBY AIR-SPEED INDICATOR, N22 (AMM 34-13-05/401). |

YES

| 21 | DO THIS PROCEDURE: FOR (FIM 34-11-00/101, FIG. 106) FOR AUX PITOT SYSTEM. |

Standby Airspeed Indicator Error
Figure 103

EFFECTIVITY

ALL

F55832

34-13-00

02   Page 103
Feb 10/96

ALTITUDE ALERT SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ALTIMETER − (FIM 34−13−00/101)				
CAPTAIN, N8				
FIRST OFFICER, N48			FLT COMPT, P11	
CIRCUIT BREAKER −				
AURAL WARN SPKR LEFT, C567	−−	1	11B16	*
AURAL WARN SPKR RIGHT, C568	−−	1	11H35	*
WARN ELEX A, C565	−−	1	11J34	*
WARN ELEX B, C566	−−	1	11B18	*
LIGHT − ALTITUDE ADVISORY	−−	2	FLT COMPT, P1, P3, ALTIMETER N8, N48	*
LIGHT − ALTITUDE ALERT, L136	−−	1	FLT COMPT, P1	*
MODULE − ALTITUDE ALERT, M617	−−	1	119AL, MAIN EQUIP CTR, P51	34−16−01
MODULE − (FIM 32−09−03/101)				
PSEU, M162				
SWITCH − (FIM 34−12−00/101)				
ALTERNATE VMO/MMO SELECT, S591 ⬦1				
CAPTAIN ADC SOURCE SELECT, S482				
SWITCH − (FIM 32−44−00/101)				
PARKING BRAKE, S459				
UNIT (FIM 31−31−00/101)				
DIGITAL FLIGHT DATA ACQUISITION, M138				

* SEE THE WDM EQUIPMENT LIST

▷1▷   SAS 275−999

Altitude Alert System − Component Index
Figure 101

EFFECTIVITY

ALL

34−16−00

13   Page 101
Aug 10/98

673768

MODE CONTROL PANEL (REF)

P1 PANEL

P11 PANEL

ALTIMETER,
N8 (REF)

SEE (C)

P3 PANEL

ALTITUDE ALERT
LIGHT, L136

SEE (B)

ALTIMETER, N48
(REF)

SEE (C)

FLIGHT COMPARTMENT

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

SEE (A)

ALT
ALERT
a

ALTITUDE ALERT LIGHT, L136

(B)

WARNING
ELECTRONICS
UNIT, P51

SEE (D)

119AL

MAIN EQUIPMENT CENTER

(A)

P51

ALTITUDE ALERT
MODULE, M617

ALTITUDE
ADVISORY
LIGHT

ALT
w

9 100 0 FT 1

8   3 1 680   2

7   3

MB ALT IN.HG

1013   29.92

6   5   4

BARO

ALTIMETER, N8 OR N48 (REF)

(C)

WARNING ELECTRONICS UNIT, P51

(D)

Altitude Alert System – Component Location
Figure 102

EFFECTIVITY

ALL

34-16-00

296442

03   Page 102
May 10/91

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
   AUTOPILOT SYSTEM (AMM 22-10-00/501)
   ADC SYSTEM (AMM 34-12-00/501)
   EICAS (AMM 34-41-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
   11B16,11B18,11H35,11J34

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

EQUIPMENT: PROXIMITY SENSOR ACTUATOR/DEACTUATOR SET
            A27092-61 (TWO DEACTUATORS)

ALTITUDE ALERT
SYSTEM FAULT
ISOLATION

1 SET THE LEFT AND RIGHT ADC SOURCE SELECT SWITCHES TO THE "NORM" POSITION. SET THE PARKING BRAKE.
   SAS 275-999;
SET THE VMO/MMO SELECT SWITCH TO THE "NORM" POSITION.
   SET THE ALTITUDE ON THE MODE CONTROL PANEL (MCP) TO 10,000 FEET ABOVE THE AIRPORT ALTITUDE. ADJUST THE BARO SET SWITCH ON THE LEFT AND RIGHT ALTIMETER TO THE NEAREST THOUSAND ±40 FEET.
   DECREASE THE ALTITUDE ON THE MCP TO 600 ±100 FEET ABOVE THE ALTIMETER ALTITUDE.
   DO THE ALTITUDE LIGHTS ON THE LEFT AND RIGHT ALTIMETERS COME ON?

NO → 21 SET THE LEFT ADC SOURCE SELECT SWITCH TO THE "ALTN" POSITION.
   DOES THE ALTITUDE ALERT LIGHT ON THE LEFT AND RIGHT ALTIMETERS COME ON?

YES ↓

22 DO THIS PROCEDURE: AUTO-FLIGHT FLIGHT FAULTS BITE PROCEDURE (FIM 22-00-02/101, FIG. 101).
   DO SOME OF THESE INDICATIONS SHOW?

MCP
MCP/FCC-L
MCP/FCC-C

NO → 51 REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401).
   IF THE PROBLEM CONTINUES, REMOVE THE ALTITUDE ALERT MODULE.
   EXAMINE THE CIRCUIT FROM CONNECTOR D821, PIN 34, TO THE LEFT ALTIMETER N8, CONNECTOR D111, PIN 12 (WDM 34-16-11).
   REPAIR THE PROBLEMS THAT YOU FIND.
   INSTALL THE ALTITUDE ALERT MODULE.

YES → 52 REPLACE THE AFCS MODE CONTROL PANEL, M90 (AMM 22-11-02/401).

NO → 53 DO THIS PROCEDURE: L (R) ADC BITE PROCEDURE (FIM 34-12-00/101, FIG. 109).

YES ↓

2 SET THE ALTITUDE ON THE MCP TO THE ALTIMETER ALTITUDE.
   DO THE ALTITUDE LIGHTS ON THE LEFT AND RIGHT ALTIMETERS GO OFF?

NO → 54 REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401).

YES ↓

SEE SHEET 2
(BLOCK 3)

Altitude Alert System Fault Isolation
Figure 103 (Sheet 1)

EFFECTIVITY
ALL

34-16-00

13   Page 103
Aug 10/98

673771

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 1
(BLOCK 2)

YES

```
┌─────────────────────────────┐       NO    ┌─────────────────────────────┐      NO    ┌─────────────────────────────┐
│ 3 │ SET THE ALTITUDE ON THE │ ─────────►  │ 23 │ DOES THE YELLOW EICAS  │ ────────►  │ 55 │ REPLACE THE PARKING    │
│ MCP TO 600 ±100 FEET ABOVE  │             │ MESSAGE "PARKING BRAKE" SHOW │            │ BRAKE SWITCH, S591 (AMM     │
│ THE ALTIMETER ALTITUDE.     │             │ ON THE TOP DISPLAY?         │            │ 32-44-08/401).              │
│     DO THESE TEST           │             └─────────────────────────────┘            └─────────────────────────────┘
│ INDICATIONS OCCUR?          │                          │
│ • THE ALTITUDE ALERT LIGHTS │                         YES
│   COME ON                   │
│ • THE EICAS MESSAGE         │
│   "ALTITUDE ALERT" SHOWS ON │
│   THE TOP DISPLAY           │
│ • THE AURAL (OWL) SOUND IS  │
│   HEARD FROM THE LEFT AND   │
│   RIGHT AURAL WARNING       │
│   SPEAKERS                  │
└─────────────────────────────┘
```

24 | DOES THE ALTITUDE ALERT LIGHT COME ON?

NO → 56 | REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401).
    IF THE PROBLEM CONTINUES, REMOVE THE ALTITUDE ALERT MODULE.
    EXAMINE THE CIRCUIT FROM CONNECTOR D821, PIN 66, TO THE ALTITUDE ALERT LIGHT, L136, PIN 32 (WDM 34-16-11).
    REPAIR THE PROBLEMS THAT YOU FIND.
    INSTALL THE ALTITUDE ALERT MODULE.

YES

SEE SHEET 3
(BLOCK 4)

25 | DOES THE EICAS MESSAGE "ALTITUDE ALERT" SHOW ON THE TOP DISPLAY?

NO → 57 | REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401).
    IF THE PROBLEM CONTINUES, REMOVE THE ALTITUDE ALERT MODULE AND THE LEFT EICAS COMPUTER, M10181 (AMM 31-41-02/401).
    EXAMINE THE CIRCUIT FROM THE ALTITUDE ALERT MODULE, CONNECTOR D821, PIN 65, TO THE LEFT EICAS COMPUTER, CONNECTOR D881B, PIN E14 (WDM 34-16-11).
    REPAIR THE PROBLEMS THAT YOU FIND.
    INSTALL THE ALTITUDE ALERT MODULE AND LEFT EICAS COMPUTER.

YES

SEE SHEET 3
(BLOCK 26)

Altitude Alert System Fault Isolation
Figure 103 (Sheet 2)

EFFECTIVITY

ALL

244043

34-16-00

04   Page 104
May 10/91

FROM SHEET 2
(BLOCK 3)

FROM SHEET 2
(BLOCK 25)

YES

YES

| 26 | IS THE AURAL (OWL) SOUND HEARD FROM THE LEFT OR RIGHT AURAL WARNING SPEAKER? |

NO →

| 58 | REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401). |

YES

| 59 | REPLACE THE LEFT (RIGHT) SIREN/OWL AURAL WARNING MODULE, M999 (M619) (AMM 31-51-04/401).
    IF THE PROBLEM CONTINUES, REMOVE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401) AND THE LEFT (RIGHT) SIREN/OWL AURAL WARNING MODULE. EXAMINE THE CIRCUIT FROM CONNECTOR D821, PIN 31, TO THE LEFT (RIGHT) SIREN/OWL AURAL WARNING MODULE, CONNECTOR D1487 (D817), PIN 51 (WDM 34-16-11). REPAIR THE PROBLEMS THAT YOU FIND.
    INSTALL THE ALTITUDE ALERT MODULE, AND THE LEFT (RIGHT) SIREN/OWL AURAL WARNING MODULE. |

| 4 | DO THESE STEPS:

1. RELEASE THE PARKING BRAKE
2. PUT DEACTUATOR ON THE DOWN LOCKED SENSORS, S232 AND S254, ON THE NOSE LANDING GEAR.

   DOES THE EICAS MESSAGE "ALTITUDE ALERT" SHOW ON THE TOP EICAS DISPLAY? |

NO →

| 60 | DO THESE STEPS:

1. SET THE PARKING BRAKE
2. REMOVE THE DEACTUATOR FROM THE DOWN AND LOCKED SENSORS, S232 AND S254, ON THE NOSE LANDING GEAR
3. DO THE PSEU BITE PROCEDURE (FIM 32-09-03/101, FIG. 103, BLOCK 1). |

YES

| 5 | DO THESE STEPS:

1. SET THE PARKING BRAKE
2. REMOVE THE DEACTUATORS FROM THE DOWN AND LOCKED SENSORS, S232 AND S254, ON THE NOSE LANDING GEAR
3. SET THE ALTITUDE ON THE MCP TO 900 FEET GREATER THAN THE ALTIMETER ALTITUDE.

   DOES THE ALTITUDE ALERT LIGHT GO OFF? |

NO →

| 61 | REPLACE THE ALTITUDE ALERT MODULE, M617 (AMM 34-16-01/401). |

YES

| 6 | THE SYSTEM IS OK. |

Altitude Alert System Fault Isolation
Figure 103 (Sheet 3)

850766

<u>INERTIAL REFERENCE SYSTEM</u>

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
CIRCUIT BREAKERS	--		FLIGHT COMPARTMENT, P11	*
IRS CENTER, C613			11F21	*
IRS LEFT, C611			11F1	*
IRS RIGHT, C612			11F22	*
CIRCUIT BREAKERS	--		FLIGHT COMPARTMENT, P6	*
IRS C, C621			6D4	*
IRS L, C614			6D3	*
IRS R, C620			6D5	*
COMPUTER – (REF 34-12-00, FIG. 101)				
AIR DATA L, M100				
AIR DATA R, M101				
PANEL – INERTIAL REFERENCE MODE, M59	--	1	FLIGHT COMPARTMENT, P5	34-21-02
RELAY – (REF 31-01-06, FIG. 101)				
CENTER BUS ISOLATION, K123				
IRS DC POWER DISCONNECT, K137				
SWITCH – (REF 34-12-00, FIG. 101)				
CAPT ADC INSTR SOURCE SELECT, S482				
F/O ADC INSTR SOURCE SELECT, S483				
SWITCH – (REF 34-22-00, FIG. 101)				
R IRS INSTR SOURCE SELECT, S12				
UNIT – CENTER INERTIAL REFERENCE, M160	--	1	119AL, MAIN EQUIP CTR, E1-6	34-21-01
UNIT – LEFT INERTIAL REFERENCE, M159	--	1	119AL, MAIN EQUIP CTR, E1-6	34-21-01
UNIT – RIGHT INERTIAL REFERENCE, M161	--	1	119AL, MAIN EQUIP CTR, E1-6	34-21-01

* SEE THE WDM EQUIPMENT LIST

Inertial Reference System – Component Index
Figure 101

169858

INERTIAL REFERENCE
MODE PANEL, M59

SEE (A)

P5 PANEL

P11 PANEL

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

P6 PANEL

FLIGHT COMPARTMENT

IRS MODE SEL

N47 32.4   W122 12.3

DSPL SEL
PPOS   WIND
TK/GS—(BR)—HDG

1	N 2	3
W 4	H 5	E 6
7	S 8	9
ENT	0	CLR

SYS DSPL
L   C   R

L	C	R
ALIGN w	ALIGN w	ALIGN w
ON DC a	ON DC a	ON DC a
DC FAIL a	DC FAIL a	DC FAIL a
FAULT a	FAULT a	FAULT a

ALIGN NAV ATT   ALIGN NAV ATT   ALIGN NAV ATT
OFF   OFF   OFF

INERTIAL REFERENCE MODE PANEL, M59

(A)

E1-6

119AL

E1-6

RIGHT INERTIAL
REFERENCE UNIT, M161
SEE (B)

CENTER INERTIAL
REFERENCE UNIT, M160
SEE (B)

LEFT INERTIAL
REFERENCE UNIT,
M159
SEE (B)

MAIN EQUIPMENT CENTER

▷1▷ AIRPLANES WITH –110 IRU'S AND SUBSEQUENT;
NO FAULTBALL INTICATOR IS INSTALLED.
THE CHASSIS INDICATOR HOLE CONTAINS A PLUG.

FAULT BALL
YELLOW–FAULT
BLACK–OK
▷1▷

TEST
SWITCH

TOTAL TIME
INDICATOR

LEFT, RIGHT, OR CENTER INERTIAL
REFERENCE UNIT, M159, M161, M160

(B)

Inertial Reference System – Component Location
Figure 102

47775

CAPT (F/O) RDMI
HDG FLAG IN VIEW.
ALTN IRS CORRECTS.

PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
F/O (CAPT) IRS INSTR SOURCE SELECT SW IN THE USUAL
 POSITION

CB'S: 11A6,11F25,11F1,11F21,11F22,6D3,6D4,6D5

1 | REMOVE THE R (L) IRU M161 (M159) (MM 34-21-01/401). REMOVE THE L (R) RDMI N3 (N43)(MM 34-22-05/
401). EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE R (L) IRU, M161 (M159), TO THE L (R) RDMI,
N3 (N43); CONNECTOR D371B (D367B), PINS C10,C11, TO CONNECTOR D645 (D647), PINS 41,42
(WDM 34-21-21,-11; 34-22-81,-91).
    INSTALL THE IRU AND THE RDMI.

Capt (F/O) RDMI HDG Flag In View. Altn IRS Corrects.
Figure 103

EFFECTIVITY

ALL

123394

34-21-00

01   Page 103
Aug 10/90

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D3,6D4,6D5,11A10,11A11,11A12,11E5,11E26,11F1,
11F21,11F22,11F30,11F31,11F32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
F/O (CAPT) IRS INSTR SOURCE SELECT SW IN THE USUAL
POSITION

CAPT (F/O) VSI OFF
FLAG IN VIEW. ALTN
AIR DATA DOESN'T
CORRECT

1 | AIRPLANES WITH -110 IRUs
AND SUBSEQUENT;
EXAMINE THE L (R) IRU FAULT
LIGHT ON THE IRMP.
IS THE FAULT LIGHT ON?
AIRPLANES WITH -109 IRUs
AND PREVIOUS;
EXAMINE THE L (R) IRU FAULT-
BALL.
IS THE FAULTBALL YELLOW?

YES →

20 | REPLACE THE L (R) IRU,
M159 (M161)(AMM 34-21-01/401).

NO ↓

4 | EXAMINE THE L (R) YAW
DAMPER MODULE, M522 (M523),
FAULT DISPLAY.
IS THE L IRU (R IRU) FAULT
MESSAGE SHOWN?

NO →

24 | REPLACE THE CAPT (F/O)
VSI OR RA/VSI, N9 (N49)
(AMM 34-22-06/401 |1▷ OR
AMM 34-22-09/401 |2▷).

YES

25 | REMOVE THE L (R) IRU, M159
(M161)(AMM 34-21-01/401).
REMOVE THE CAPT (F/O) VSI, N9
(N49)(AMM 34-22-06/401).
EXAMINE THE CIRCUIT FROM
THE L (R) IRU, M159 (M161), TO
THE CAPT (F/O) VSI, N9 (N49);
CONNECTOR D367B (D371B),
PINS G7,G8, TO CONNECTOR D113
(D717), PINS 30,31
(WDM 34-21-11,-21).
REPAIR THE PROBLEMS THAT
YOU FIND.
INSTALL THE IRU AND THE
VSI.

1▷ AIRPLANES WITH VSI
2▷ AIRPLANES WITH RA/VSI

Capt (F/O) VSI Off Flag in View. Altn Air Data Doesn't Correct
Figure 104

G54062

PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
CAPT (F/O) IRS AND ADC INSTR SOURCE SELECT SWITCHES
 IN THE USUAL POSITIONS

CB'S: 11E5,11E26,11F1,11F21,11F22,6D3,6D4,6D5,11A10,
       11A11,11A12,11F30,11F31,11F32

CAPT (F/O) VSI OFF
FLAG IN VIEW. ALTN
AIR DATA CORRECTS

| 1 | EXAMINE THE L (R) ADC FAULT BALL.
    IS THE FAULT BALL YELLOW? | YES → | 31 | REPLACE THE L (R) ADC M100 (M101) (MM 34-12-01/401). |

NO

| 2 | DO THE MCDP GROUND TEST -30 CURRENT FAULT REPORT (22-00-03, FIG. 117).
    SHOW AND MAKE A RECORD OF ALL CURRENT OP FAULTS.
    IS THE MCDP MESSAGE "ADC/IRU L", "ADC/IRU C", OR "ADC/IRU R" SHOWN? | YES → | 21 | ARE THE TWO MCDP MESSAGES, "ADC/IRU R" AND "ADC/IRU C" BOTH SHOWN WITH THE CAPT AND F/O IRS AND ADC SOURCE SELECT SWITCHES IN THE USUAL POSITION ("ALTN" LEGEND NOT SHOWN)? | YES → | 32 | REPLACE THE R AIR DATA COMPUTER M100 (MM 34-12-01/401). |

NO

SEE SHEET 2
(BLOCK 39)

NO

| 22 | IS THE MCDP MESSAGE "ADC/IRU" SHOWN WITH THE F/O IRS SOURCE SELECT SWITCH IN THE USUAL POSITION? | YES → |

SEE SHEET 2
(BLOCK 25)

NO

YES

| 23 | IS THE MCDP MESSAGE "ADC/IRU C" SHOWN WITH THE F/O ADC SOURCE SELECT SWITCH IN THE USUAL POSITION? |

SEE SHEET 2
(BLOCK 26)

NO

| 24 | SET THE CAPT IRS SOURCE SELECT SWITCH TO THE ALTN POSITION.
    MAKE SURE THAT THE SYSTEMS THAT FOLLOW ARE ENERGIZED:
    AIR DATA COMPUTING SYSTEM (MM 34-12-00/501)
    INERTIAL REFERENCE SYSTEM (MM 34-21-00/501)
    ALIGN THE INERTIAL REFERENCE UNITS IN THE NAV MODE.
    DO THE MCDP GROUND TEST 30 - CURRENT FAULT REPORT (22-00-03, FIG. 117).
    SHOW AND MAKE A REOCRD OF ALL CURRENT OP FAULTS.
    IS THE MCDP MESSAGE "ADC/IRU L" SHOWN? | YES → | 33 | REPLACE THE L INERTIAL REFERENCE UNIT M159 (MM 34-21-01/401). |

NO → | 34 | REPLACE THE L AIR DATA COMPUTER M100 (MM 34-12-01/401). |

Capt (F/O) VSI Off Flag In View. Altn Air Data Corrects
Figure 104A (Sheet 1)

EFFECTIVITY

ALL

34-21-00

123402

02   Page 105
          May 10/94

FROM SHEET 1
(BLOCK 2)

FROM SHEET 1
(BLOCK 23)

FROM SHEET 1
(BLOCK 22)

```
25  SET THE F/O IRS INSTR
SOURCE SELECT SWITCH TO THE
ALTN POSITION.
    MAKE SURE THAT THE SYSTEMS
THAT FOLLOW ARE ENERGIZED:
  AIR DATA COMPUTING SYSTEM
    (MM 34-12-00/501)
  INERTIAL REFERENCE SYSTEM
    (MM 34-21-00/501)
    ALIGN THE INERTIAL REFER-
ENCE UNITS IN THE NAV MODE.
    DO THE MCDP GROUND TEST
30 - CURRENT FAULT REPORT
(22-00-03, FIG. 117).
    SHOW AND MAKE A RECORD OF
ALL CURRENT OP FAULTS.
    IS THE MCDP MESSAGE
"ADC/IRU R" SHOWN?
```

YES →
```
35  REPLACE THE R INERTIAL
REFERENCE UNIT M161
(MM 34-21-01/401).
```

NO →
```
36  REPLACE THE R AIR DATA
COMPUTER M101 (MM 34-12-01/
401).
```

YES ↓

```
26  SET THE F/O IRS INSTR
SOURCE SELECT SWITCH TO THE
ALTN POSITION.
    MAKE SURE THAT THE SYSTEMS
THAT FOLLOW ARE ENERGIZED:
  AIR DATA COMPUTING SYSTEM
    (MM 34-12-00/501)
  INERTIAL REFERENCE SYSTEM
    (MM 34-21-00/501)
    ALIGN THE INERTIAL REFER-
ENCE UNITS IN THE NAV MODE.
    DO THE MCDP GROUND TEST
30 - CURRENT FAULT REPORT
(22-00-03, FIG. 117).
    SHOW AND MAKE A RECORD OF
ALL CURRENT OP FAULTS.
    IS THE MCDP MESSAGE
"ADC/IRU C" SHOWN?
```

YES →
```
37  REPLACE THE C INERTIAL
REFERENCE UNIT M160
(MM 34-21-01/401).
```

NO →
```
38  REPLACE THE R AIR DATA
COMPUTER M101 (MM 34-12-01/
401).
```

NO →
```
39  REPLACE THE L (C,R) IRU
M159 (M161,M160) (MM 34-21-01/
401).
```

Capt (F/O) VSI OFF Flag In View. Altn Air Data Corrects
Figure 104A (Sheet 2)

EFFECTIVITY

ALL

224328

34-21-00

02   Page 106
            May 10/94

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
    11F1,11F21,11F22,6D3,6D4,6D5

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

IRS INDICATES IRS
DC FAIL

1   REMOVE THE L, R, OR C IRU,
M159,M161 OR M160
(AMM 34-21-01/401).
    DO A CONTINUITY CHECK
BETWEEN THE IRS L, R, OR C
CIRCUIT BREAKERS (6D3,6D4,
6D5), AS APPLICABLE, AND THE
L, R, OR C IRU CONNECTOR
D367C,D371C, OR D369C, PIN 7.
    IS THERE CONTINUITY?

NO

10   WAS THE CONTINUITY CHECK
BETWEEN THE IRS R CIRCUIT
BREAKER (6D5) AND THE R IRU
CONNECTOR D371C, PIN 7, DONE?

YES

NO

20   REPAIR THE CIRCUIT FROM
THE IRS R CIRCUIT BREAKER
(6D4) TO THE R IRU CONNECTOR
D371C, PIN 7 (WDM 34-21-21).
    INSTALL THE IRU
(AMM 34-21-01/401).

21   REPLACE THE IRS DC POWER
DISCONNECT RELAY, K137
(WDM 34-21-11,-31).
    IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT BETWEEN
THE IRS L OR C CIRCUIT
BREAKERS (6D3,6D5), AS
APPLICABLE, AND THE L OR C
IRU CONNECTOR D367C OR D369C,
PIN 7 (WDM 34-21-11,-31).
    INSTALL THE IRU
(AMM 34-21-01/401).

YES

22   DO A TEST ON THE IRU CON-
NECTOR D367C (LEFT), D371C
(RIGHT), OR D369C (CENTER),
PIN 8, FOR A GROUND. REPAIR
THE CIRCUIT IF IT IS NECESSARY
(WDM 34-21-11,-21,-31).
    INSTALL THE IRU
(AMM 34-21-01/401).

IRS Indicates IRS DC Fail
Figure 105

EFFECTIVITY

ALL

182018

34-21-00

04   Page 107
          Nov 10/95

ENTRY INOP TO SINGLE
IRS (ALIGN FLASHES
AFTER SECOND ENTRY).
POSITION ENTRY FROM
FMC—CDU UNSUCCESSFUL.

```
PREREQUISITES
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  6D3,6D4,6D5,11F1,11F21,11F22

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

| 1 | SET THE APPLICABLE L, R, OR C IRMP MODE SELECT SWITCH TO OFF. AFTER 30 SECONDS, SET THE MODE SELECT SWITCH TO NAV. PUT IN THE ALIGNMENT DATA AGAIN. DOES THE L, R, OR C ALIGN LIGHT FLASH? |

YES →

| 20 | REPLACE THE L (R, C) IRU, M159 (M161,M160)(AMM 34-21-01/401). |

NO ↓

| 2 | THE IRS SYSTEM IS OK. |

Entry INOP to Single IRS (Align Flashes After Second Entry).
Position Entry from FMC—CDU Unsuccessful.
Figure 105A

E20343

ENTRY INOP TO SINGLE
IRS (ALIGN FLASHES
AFTER SECOND ENTRY).
POSITION ENTRY FROM
FMC—CDU SUCCESSFUL.

PREREQUISITES
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
 6D3,6D4,6D5,11F1,11F21,11F22

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

| 1 | SET THE APPLICABLE L, R, OR C IRMP MODE SELECT SWITCH TO OFF. AFTER 30 SECONDS, SET THE IRMP MODE SELECT SWITCH TO NAV. PUT IN THE ALIGNMENT DATA AGAIN. DOES THE L, R, OR C ALIGN LIGHT FLASH? |

YES

NO

| 2 | THE IRS SYSTEM IS OK. |

| 20 | REPLACE THE IRMP, M59 (AMM 34-21-02/401). IF THE PROBLEM CONTINUES, REMOVE THE IRMP AND THE L (R,C) IRU, M159 (M161,M160) (AMM 34-21-01/401). EXAMINE THE CIRCUIT FROM THE L IRMP, CONNECTOR D739, PINS 26,27, TO THE L IRU, CON-NECTOR D367C, PINS C5,C6 (R IRMP, CONNECTOR D741, PINS 26,27, TO THE R IRU, CON-NECTOR D371C, PINS C5,C6) (C IRMP, CONNECTOR D743, PINS 26,27, TO THE C IRU, CONNECTOR D369C, PINS C5,C6). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE IRMP AND THE IRU. |

Entry INOP to Single IRS (Align Flashes After Second Entry).
Position Entry from FMC-CDU Successful.
Figure 105B

ENTRY INOP TO ALL
IRS'S ALIGN FLASHES
AFTER SECOND ENTRY

```
PREREQUISITES
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  6D3,6D4,6D5,11F1,11F21,11F22
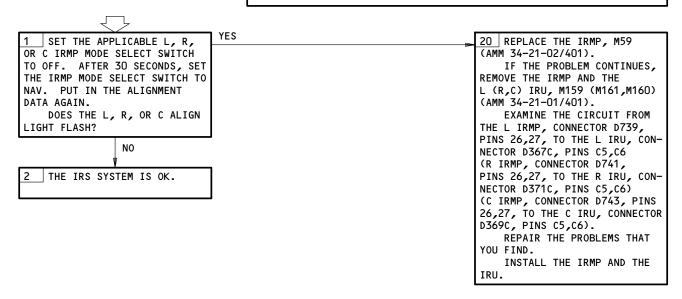
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
```

```
1   SET ALL THE MODE SELECT
SWITCHES TO OFF.  AFTER
30 SECONDS, SET ALL THE
SWITCHES TO NAV.  PUT IN THE
ALIGNMENT DATA AGAIN.
    DO ALL THE ALIGN LIGHTS
FLASH?
```
YES ─────────────────────────►
```
20   REPLACE THE IRMP, M59
(AMM 34-21-02/401).
```

NO

```
2   THE IRS SYSTEM IS OK.
```

Entry INOP to All IRS's (Align Flashes After Second Entry).
Figure 105C

E20359

PREREQUISITES
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  6D3,6D4,6D5,11E8,11E9,11E29,11E30,11F1,11F21,11F22

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

ALIGN FAILED TO
EXTIN AFTER 10 MIN
(NAV SEL)

| 1 | EXAMINE THE APPLICABLE L, R, OR C IRU FAULT LIGHT. IS THE L, R, OR C IRU FAULT LIGHT ON? |

YES →

| 20 | REPLACE THE L (R,C) IRU, M159 (M161,M160)(AMM 34-21-01/401). |

NO ↓

| 2 | PUT IN THE ALIGNMENT DATA AGAIN. IS THE ALIGN LIGHT ON? |

YES →

| 11 | ALIGN THE IRU FROM THE FMC-CDU. IS THE DATA ACCEPTED BY THE IRU? |

YES →

| 21 | REPLACE THE IRMP, (M59) (AMM 34-21-02/401). IF THE PROBLEM CONTINUES, REMOVE THE IRMP AND THE L (R,C) IRU, M159 (M161,M160) (AMM 34-21-01/401). EXAMINE THE CIRCUIT FROM THE L IRMP, CONNECTOR D739, PINS 26,27, TO THE L IRU, CONNECTOR D367C, PINS C5,C6 (R IRMP, CONNECTOR D741, PINS 26,27, TO THE R IRU, CONNECTOR D371C, PINS C5,C6)(C IRMP, CONNECTOR D743, PINS 26,27, TO THE C IRU, CONNECTOR D369C, PINS C5,C6). REPAIR THE PROBLIMS THAT YOU FIND. INSTALL THE IRMP AND THE IRU. |

NO ↓

| 3 | THE IRS SYSTEM IS OK. |

NO ↓

| 12 | SET THE IRU TO OFF. AFTER 30 SECONDS, SET THE MODE SELECT SWITCH TO NAV. PUT IN THE ALIGNMENT DATA AGAIN. IS THE ALIGN LIGHT ON? |

YES →

| 22 | REPLACE THE L (R,C) IRU, M159 (M161,M160)(AMM 34-21-01/401). |

NO ↓

| 23 | THE IRS SYSTEM IS OK. |

Align Failed to Extin after 10 Min (Nav Sel)
Figure 105D

EFFECTIVITY

ALL

34-21-00

02   Page 111
          Aug 10/98

116521

IRS INDICATES IRS
ON DC

```
PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
CB'S:  11F1,11F21,11F22,6D3,6D4,6D5
```

⬇

```
1   REMOVE THE L, R, OR C IRU, M159,M161, OR M160 (MM 34-21-01/401).  EXAMINE AND REPAIR THE APPLICABLE
CIRCUIT FROM THE IRS L, R, OR C CIRCUIT BREAKERS (11F1,11F21,11F22) ON PANEL P11, TO THE L, R, OR C
IRU CONNECTOR D367C,D371C, OR D369C.
    IF THE PROBLEM CONTINUES, DO A TEST ON THE APPLICABLE IRU CONNECTOR D367C (L), D371C (R), OR D369C
(C), PIN 5, FOR A GROUND.  REPAIR THE CIRCUIT IF IT IS NECESSARY (WDM 34-21-11,-21,-31).
    INSTALL THE IRU.
```

IRS Indicates IRS on DC
Figure 106

EFFECTIVITY

ALL

93480

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
   6D3,6D4,6D5,11A6,11A7,11E4,11E5,11E6,11E8,11E9,
   11E25,11E26,11E27,11E29,11E30,11F1,11F8,11F9,
   11F21,11F22,11F24,11F25,11F29

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

IRS BITE TEST

1   PUT THE IRUs IN THE "ALIGN" OR "NAV" MODE (AMM 34-21-00/501).
   SET THE IRS INSTR SOURCE SEL SWITCH TO THE USUAL (L OR R) OR "ALTN" (C) POSITION. |1>
   SET THE EFIS MODE SELECT SWITCH TO THE MAP POSITION.
   SET THE SYS DSPL SWITCH ON THE IRMP TO THE APPLICABLE IRU.
   AIRPLANES WITH -110 IRUs AND SUBSEQUENT;
IS THE APPLICABLE (LEFT, CENTER, RIGHT) IRU FAULT LIGHT ON THE IRMP OFF?
   AIRPLANES WITH -109 IRUs AND PREVIOUS;
DOES THE APPLICABLE (LEFT, CENTER, RIGHT) IRU FAULTBALL SHOW BLACK?

— NO → 21   REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU, M159,M160, OR M161 (AMM 34-21-01/401).

|1> FOR THE CENTER IRU TEST, SET THE IRS SWITCHES ON THE CAPT AND F/O INSTRUMENT SOURCE SELECT PANELS TO THE "ALTN" POSITION. MAKE SURE THE RESULTS OCCUR ON THE CAPT AND F/O DISPLAYS.

|2> YOU CAN ALSO USE THE LEFT OR RIGHT YAW DAMPER TEST SWITCH TO START THE SELF-TEST FOR ALL IRU'S SIMULTANEOUSLY. THE DATA WILL STAY ON THE DISPLAYS FOR ONLY 10 SECONDS. MAKE SURE THAT HYDRAULIC POWER IS OFF (OR OBEY THE APPLICABLE SAFETY PRECAUTIONS (AMM 29-11-00/501)).

YES

2   PUSH AND HOLD THE APPLICABLE IRU TEST SWITCH. |2>
   DID LIGHTS ON THE IRMP COME ON?

— NO → 22   REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU, M159,M160, OR M161 (AMM 34-21-01/401).

YES

3   DID ALL THE IRMP DISPLAY LIGHTS COME ON FOR 2 SECONDS?

— NO → 23   REPLACE THE APPLICABLE INCANDESCENT DISPLAY LIGHTS (AMM 34-21-02/401).

YES

4   AFTER 2 SECONDS, DID ALL THE IRMP DISPLAY LIGHTS GO OFF?

— NO → 24   REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU, M159,M160, OR M161 (AMM 34-21-01/401).

YES

SEE SHEET 2
(BLOCK 5)

IRS BITE Test
Figure 107 (Sheet 1)

EFFECTIVITY

ALL

F77674

34-21-00

11   Page 113
May 10/97

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 1
(BLOCK 4)

YES

5 | DID THE CAPT (F/O) VSI FAULT FLAG SHOW FROM 2 THRU 10 SECONDS? — NO → 25 | REPLACE THE CAPT (F/O) VSI, N9 (N49)(AMM 34-22-06/401 |3▷) OR (AMM 34-22-09/401 |4▷).
IF THE PROBLEM CONTINUES, REPLACE THE APPLICABLE LEFT CENTER, OR RIGHT IRU, M159,M160, OR M161 (AMM 34-21-01/401).

YES

6 | DID ALL THE ATTITUDE AND HEADING FLAGS SHOW ON THE EHSI AND EADI FROM 2 THRU 10 SECONDS? — NO → 15 | DID ONE OR MORE FLAGS SHOW? — YES → 26 | REPLACE THE LEFT (RIGHT) SYMBOL GENERATOR, M148 (M150) (AMM 34-22-01/401).

NO

27 | REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU, M159,M160, OR M161 (AMM 34-21-01/401).

YES

7 | DID THE FAILURE FLAG ON THE OPPOSITE RDMI SHOW FROM 2 THRU 10 SECONDS? — NO → 28 | REPLACE THE RIGHT (LEFT) RDMI, N43 (N3) (AMM 34-22-05/401).

YES

8 | AT 10 SECONDS, DID A 5° PITCH ANGLE, A 45° RIGHT ROLL ANGLE, AND A 200 KT GROUND SPEED SHOW ON THE CAPT (F/O) EADI? — NO → 16 | WAS ONE OF THE THREE DISPLAYS CORRECT? — YES → 29 | REPLACE THE LEFT (RIGHT) SYMBOL GENERATOR, M148 (M150) (AMM 34-22-01/401).

NO

SEE SHEET 3
(BLOCK 17)

YES

SEE SHEET 3
(BLOCK 9)

3▷ AIRPLANES WITH VSI
4▷ AIRPLANES WITH RA/VSI

IRS BITE Test
Figure 107 (Sheet 2)

EFFECTIVITY

ALL

34-21-00

06   Page 114
May 10/96

F77689

FROM SHEET 2
(BLOCK 8)

FROM SHEET 2
(BLOCK 16)

YES

NO

9 │ AT 10 SECONDS, DID THE
DISPLAYS THAT FOLLOW SHOW ON
THE CAPT (F/O) EHSI?
1. 15° MAGNETIC HEADING
2. 5° TRACK ANGLE
3. 100 KT WIND SPEED
4. WIND DIRECTION AS FOLLOWS:
   A. 30° IF "TRU" IS SHOWN
      ABOVE THE EHSI COMPASS
      CARD
   B. 35° IF "M" IS SHOWN
      ABOVE THE EHSI COMPASS
      CARD.

NO → 17 │ WAS ONE OF THE FOUR EHSI
DISPLAYS CORRECT?

YES → 30 │ REPLACE THE LEFT (RIGHT)
SYMBOL GENERATOR, M148 (M150)
(AMM 34-22-01/401).

NO → 31 │ REPLACE THE APPLICABLE
LEFT, CENTER, OR RIGHT IRU,
M159,M160, OR M161
(AMM 34-21-01/401).

YES

10 │ AT 10 SECONDS, DID THE
CAPT (F/O) VSI FAILURE FLAGS
NOT SHOW AND THE VSI THEN SHOW
−600 FT/MIN?

NO → 32 │ REPLACE THE CAPT (F/O)
VSI, N9 (N49)(AMM 34-22-06/
401 ▷3▷ OR AMM 34-22-09/
401 ▷4▷).

YES

11 │ AT 10 SECONDS, DID THE
FAILURE FLAGS ON THE OPPOSITE
RDMI NOT SHOW AND THE RDMI
THEN SHOW A 15° MAGNETIC
HEADING?

NO → 33 │ REPLACE THE RIGHT (LEFT)
RDMI, N43 (N3)
(AMM 34-22-05/401).

YES

12 │ AT 10 SECONDS, DID THE
IRMP SHOW N22 DEG 30.0 MIN
AND E22 DEG 30.0 MIN?

NO → 34 │ REPLACE THE IRMP, M59
(AMM 34-21-02/401).

YES

13 │ THE IRS SYSTEM IS OK.

IRS BITE Test
Figure 107 (Sheet 3)

EFFECTIVITY

ALL

F77692

34-21-00

05   Page 115
May 10/96

```
┌────────────────────────────┐
│ PREREQUISITES              │
│                            │
│ NONE                       │
└────────────────────────────┘
```

NOTE: MAKE SURE THAT THE IRUs AND THE FMCs STAY ON
      UNTIL YOU DO THIS CHECK.

IRS REMOVAL CHECKS

┌─────────────────────────────┐   ┌─────────────────────────────┐
│ 1 FOR THE FIRST FLIGHT, DO │ YES   │ 20 REPLACE THE APPLICABLE │
│ A CHECK OF THE IRU RADIAL   │─────────────────────────────▶│ LEFT,CENTER, OR RIGHT IRU   │
│ POSITION ERROR. (REFER TO │   │ (M159,M160, OR M161)   │
│ THE IRU RADIAL POSITION   │   │ (AMM 34-21-01/401).   │
│ ERROR CHART, FIG. 107B). 1▷ │   └─────────────────────────────┘
│   IS THE RADIAL POSITION   │
│ ERROR IN THE "REPLACE - 1   │
│ FLIGHT" AREA ON THE RADIAL │
│ POSITION ERROR CHART?   │
└─────────────────────────────┘
              │ NO

┌─────────────────────────────┐ YES ┌─────────────────────────────┐ YES ┌─────────────────────────────┐
│ 2 IS THE RADIAL POSITION   │────▶│ 10 ON THE NEXT FLIGHT, DO A│────▶│ 21 REPLACE THE APPLICABLE │
│ ERROR IN THE "REPLACE - 2   │   │ CHECK OF THE IRU RADIAL   │   │ LEFT,CENTER, OR RIGHT IRU   │
│ CONSECUTIVE FLIGHTS" AREA ON│   │ POSITION ERROR.   │   │ (M159,M160, OR M161)   │
│ THE RADIAL POSITION ERROR   │   │   IS THE RADIAL POSITION   │   │ (AMM 34-21-01/401).   │
│ CHART?   │   │ ERROR IN THE "REPLACE - 1   │   └─────────────────────────────┘
└─────────────────────────────┘   │ FLIGHT" AREA ON THE RADIAL │
              │ NO   │ POSITION ERROR CHART?   │
                                     └─────────────────────────────┘
                                                   │ NO

                          ┌─────────────────────────────┐ YES
                          │ 11 IS THE RADIAL POSITION │────────────┘
                          │ ERROR IN THE "REPLACE - 2   │
                          │ CONSECUTIVE FLIGHTS" AREA ON│
                          │ THE RADIAL POSITION ERROR   │
                          │ CHART?   │
                          └─────────────────────────────┘
                                        │ NO

                          ┌─────────────────────────────┐
                          │ 22 THE IRS PRECISION CHECK │
                          │ IS IN THE USUAL LIMITS.   │
                          │   PUT THE IRU BACK INTO   │
                          │ SERVICE.   │
                          └─────────────────────────────┘

1▷ TO CALCULATE THIS VALUE, DO THE IRU REMOVAL CHECKS.

IRS Removal Checks
Figure 107A (Sheet 1)

EFFECTIVITY

ALL

224324

34-21-00

04   Page 116
            May 10/94

```
┌─────────────────────────────┐
│ PREREQUISITES               │
│                             │
│ NONE                        │
│                             │
└─────────────────────────────┘
```

NOTE: MAKE SURE THAT THE IRUs AND THE FMCs STAY ON
       UNTIL YOU DO THIS CHECK.

IRS REMOVAL CHECKS

| 1 FOR THE FIRST FLIGHT, DO A CHECK OF THE RESIDUAL GROUNDSPEED ERROR.   IS THE RESIDUAL GROUND-SPEED 21 KNOTS OR MORE? | → YES → | 10 VERIFY RESIDUAL GROUNDSPEED BY USING IRMP (FIM 34-21-00/101) | → YES → | 20 REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU (M159, M160, OR M161) (AMM 34-21-01/401). |

NO ↓ (from box 1)

NO ↓ (from box 10)

| 21 THE IRS PRECISION CHECK IS IN THE USUAL LIMITS.   PUT THE IRU BACK INTO SERVICE. |

| 2 IS THE RESIDUAL GROUND-SPEED ERROR 15 KNOTS OR MORE? | → YES → | 11 ON THE NEXT FLIGHT, DO A CHECK OF THE RESIDUAL GROUND-SPEED ERROR.   IS THE RESIDUAL GROUND-SPEED ERROR 21 KNOTS OR MORE? | → YES → | 22 REPLACE THE APPLICABLE LEFT, CENTER, OR RIGHT IRU (M159, M160, OR M161) (AMM 34-21-01/401). |

NO (from box 2)

NO ↓ (from box 11)

| 12 IS THE RESIDUAL GROUND-SPEED ERROR 15 KNOTS OR MORE? | → YES → (to box 22) |

NO ↓ (from box 12)

| 23 THE IRS PRECISION CHECK IS IN THE USUAL LIMITS.   PUT THE IRU BACK INTO SERVICE. |

IRS Removal Checks
Figure 107A (Sheet 2)

A58767

IRU Radial Position Error
Figure 107B

EFFECTIVITY

ALL

224325

34-21-00

04   Page 118
May 10/94

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D3,6D4,6D5,11A10,11A11,11A12,11E5,11E26,11F1,
11F21,11F22,11F30,11F31,11F32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
F/O (CAPT) IRS INSTR SOURCE SELECT SW IN THE USUAL
POSITION

IRU "FAULT"
ILLUMINATED ON THE
INERTIAL REFERENCE
MODE PANEL (IRMP)

| 1 | ON THE IRMP, TURN THE FAULTED IRU OFF. WAIT 30 SECONDS UNTIL THE IRMP "ALIGN" ENUNCIATOR EXTINGUISHES; PLACE EACH IRMP MODE SELECT SWITCH TO THE "NAV" POSITION.
   PUSH THE "INIT REF" PUSH BUTTON ON THE LEFT FMC-CDU. USE THE "PREV PAGE" OR "NEXT PAGE" SWITCH TO FIND THE "POS INIT" PAGE. PUT IN THE LOCAL LATITUDE AND LONGITUDE DATA INTO THE SCRATCH PATCH.
   PUSH THE LINE 4R SWITCH TO MOVE THE DATA TO LINE 4. MAKE SURE THE DATA SHOWS ON LINE 4.
   WAIT 10 MINUTES UNTIL THE IRMP "ALIGN" ENUNCIATOR EXTINGUISHES AND THE IRU IS FULLY IN THE "NAV" MODE.
   DOES THE IRMP "FAULT" ENUNCIATOR EXTINGUISH AFTER TRANSITION TO THE "NAV" MODE?

YES ———→ | 21 | THEN THE IRU IS OK.

NO

| 2 | REPLACE THE LEFT (RIGHT) IRU, M519 (M161) (AMM 34-21-01 /401).

IRU "FAULT" Illuminated on the Inertial Reference Mode Panel (IRMP)
Figure 108 (Sheet 1)

U48026

IRU "FAULT"
ILLUMINATED ON THE
INERTIAL REFERENCE
MODE PANEL (IRMP)

```
PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
CAPT (F/O) IRS AND ADC INSTR SOURCE SELECT SWITCHES
 IN THE USUAL POSITIONS

CB'S:   11E5,11E26,11F1,11F21,11F22,6D3,6D4,6D5,11A10,
        11A11,11A12,11F30,11F31,11F32
```

| 1 | ON THE IRMP, PLACE THE "SYS DSPL" KNOB TO THE "L" OR "C" OR "R" CORRESPONDING TO THE IRU THAT HAS THE FAULT.   ON THE IRMP, PLACE THE "DSPL SYS" KNOB TO THE "HDG" POSITION. PRESS "0" THEN "1" ON THE KEYBOARD WITHIN 5 SECONDS.   IS THE FAULT CODE 15 DISPLAYED? |

NO → | 21 | REPLACE THE APPLICABLE IRU (AMM 34-21-01/401). |

YES ↓

| 2 | ON THE IRMP, TURN THE FAULTED IRU OFF. WAIT 30 SECONDS UNTIL THE IRMP "ALIGN" ENUNCIATOR EXTINGUISHES; PLACE EACH IRMP MODE SELECT SWITCH TO THE "NAV" POSITION.   PUSH THE "INIT REF" PUSH BUTTON ON THE LEFT FMC-CDU. USE THE "PREV PAGE" OR "NEXT PAGE" SWITCH TO FIND THE "POS INIT" PAGE. PUT IN THE LOCAL LATITUDE AND LONGITUDE DATA INTO THE SCRATCH PATCH.   PUSH THE LINE 4R SWITCH TO MOVE THE DATA TO LINE 4. MAKE SURE THE DATA SHOWS ON LINE 4.   WAIT 10 MINUTES UNTIL THE IRMP "ALIGN" ENUNCIATOR EXTINGUISHES AND THE IRU IS FULLY IN THE "NAV" MODE.   DOES THE IRMP "FAULT" ENUNCIATOR EXTINGUISH AFTER TRANSITION TO THE "NAV" MODE? |

YES → | 22 | THEN THE IRU IS OK. |

NO ↓

| 3 | REPLACE THE LEFT (RIGHT) IRU, M519 (M161) (AMM 34-21-01 /401). |

IRU "FAULT" Illuminated on the Inertial Reference Mode Panel (IRMP)
Figure 108 (Sheet 2)

EFFECTIVITY
AIRPLANE WITH IRMP S242T101-203, -204,
-206;

U48326

34-21-00

                                                02   Page 120
                                                            Apr 22/06

1. <u>ARINC Data Bus Charts</u>
    A. General

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
              YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

    (1) The ARINC 429 data bus charts give data necessary to make an
         analysis of ARINC 429 transmitters, receivers, and data buses. For
         the test, use a breakout box at the available terminal or at the LRU
         connector.
    B. Equipment
    (1) Standard multi-meter
    (2) 429 EBP Data Bus Analyzer (recommended)
         JcAIR Instrumentation
         400 Industrial Parkway
         Industrial Airport, KS 66031

         429-2 Data Bus Analyzer (alternative)
         Interface Technology
         150 E. Arrow Highway
         San Dimas, CA 91773
    (3) A34011-1 Breakout Box (recommended)
         A34011-112 Breakout Box (alternative)

         NOTE: Octal label 315 is a multiple function label. It does not
                show correctly in engineering units on the data bus analyzer
                unless you set the hexadecimal equipment ID = 04. For
                analyzers that cannot have the ID set, show the label in
                hexadecimal format and make a record of the value. Set the
                data bus analyzer to send label 015 in hex format and use the
                value you made a record of for label 315. Change the label
                015 format to engineering to show the correct engineering
                units.

IRMP DIGITAL OUTPUT BUS CHART							
BUS NAME			CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
IRMP	A	1	C	26 27	429	LO	IRMP BUS OUT IRU-C
IRMP	A	1	L	26 27	429	LO	IRMP BUS OUT IRU-L
IRMP	A	1	R	26 27	429	LO	IRMP BUS OUT IRU-R

IRMP(ID=0A4) OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
SET LATITUDE	A	041	BCD	2		90S-90N	NORTH	DEG:MIN
SET LONGITUDE	A	042	BCD	2		180E-180W	EAST	DEG:MIN
SET MAGNETIC HDG	A	043	BCD	2		0-359	CW FRM NORTH	DEG

IRU DIGITAL OUTPUT BUS CHART							
BUS NAME							
SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
IRU (L C R)	A	1	B	G07 G08	429	HI	IRU #1
IRU (L C R)	A	2	B	E05 E06	429	HI	IRU #2
IRU (L C R)	A	3	B	C10 C11	429	HI	IRU #3

IRU(ID=004) OCTAL LABELS CHART							
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
PRESENT POS LAT-D	A	010	BCD	2	00	90S-90N	NORTH FROM 0	DEG:MIN
PRESENT POS LONG-D	A	011	BCD	2	00	180E-180W	EAST FROM 0	DEG:MIN
GROUND SPEED-D	A	012	BCD	2	00	0-2000	ALWAYS POS	KNOTS
TRACK ANGLE TRUE-D	A	013	BCD	2	00	0-359.9	CW FROM NORTH	DEG
MAGNETIC HEADING-D	A	014	BCD	2	00	0-359.9	CW FROM NORTH	DEG
WIND SPEED-D	A	015	BCD	2	00	0-256	ALWAYS POS	KNOTS
WIND DIRECT TRUE-D	A	016	BCD	2	00	0-359	CW FROM NORTH	DEG
TRUE HEADING-D	A	044	BCD	2	00	0-359.9	CW FROM NORTH	DEG
IRS DISCRETES	A	270	DIS	2	00	N/A	N/A	N/A
IRS TEST	A	277	DIS	2	00	N/A	N/A	N/A
PRESENT POS-LAT	A	310	BNR	5	N/A	± 180	NORTH FROM 0	DEG
PRESENT POS-LONG	A	311	BNR	5	N/A	± 180	EAST FROM 0	DEG
GROUND SPEED	A	312	BNR	10	00	0-4096	ALWAYS POS	KNOTS
TRACK ANGLE TRUE	A	313	BNR	20	00	± 180	CW FROM NORTH	DEG
TRUE HEADING	A	314	BNR	20	00	± 180	CW FROM NORTH	DEG
WIND SPEED	A	315	BNR	10	00	0-256	ALWAYS POS	KNOTS
WIND DIRECT TRUE	A	316	BNR	10	00	± 180	CW FROM NORTH	DEG
TRACK ANGLE-MAG	A	317	BNR	20	00	± 180	CW FROM NORTH	DEG
MAGNETIC HEADING	A	320	BNR	20	00	± 180	CW FROM NORTH	DEG
DRIFT ANGLE	A	321	BNR	20	00	± 180	RIGHT	DEG

SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
FLIGHT PATH ANGLE	A	322	BNR	20	00	± 180	UP	DEG
FLIGHT PATH ACCEL	A	323	BNR	50	00	± 4	FORWARD	G'S
PITCH ANGLE	A	324	BNR	50	00	± 180	UP	DEG
ROLL ANGLE	A	325	BNR	50	00	± 180	RIGHT WING DO	DEG
BODY PITCH RATE	A	326	BNR	50	00	± 128	UP	DEG/SEC
BODY ROLL RATE	A	327	BNR	50	00	± 128	RIGHT WING DO	DEG/SEC
BODY YAW RATE	A	330	BNR	50	00	± 128	NOSE RIGHT	DEG/SEC
BODY LONGIT ACCEL	A	331	BNR	50	00	± 4	FORWARD	G'S
BODY LATERAL ACCEL	A	332	BNR	50	00	± 4	RIGHT	G'S
BODY NORMAL ACCEL	A	333	BNR	50	00	± 4	UP	G'S
PLATFORM HEADING	A	334	BNR	10	00	± 180	CW FROM ZERO	DEG
TRACK ANGLE RATE	A	335	BNR	50	00	± 32	CW	DEG/SEC
PITCH ATT RATE	A	336	BNR	50	00	± 128	UP	DEG/SEC
ROLL ATT RATE	A	337	BNR	50	00	± 128	RIGHT WING DO	DEG/SEC
IRS MAINT DISCRETE	A	350	DIS	2	00	N/A	N/A	N/A
IRMP BITE DSPL*[1]	A	351	DIS	2		N/A	N/A	N/A
GPS MAINT DIS *[2]	A	353	DIS	1	00	N/A	N/A	N/A
POTENTIAL VERT SPD	A	360	BNR	50	00	± 32,768	UP	FT/MIN

Table title: IRU(ID=004) OCTAL LABELS CHART

IRU(ID=004) OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
INERTIAL ALTITUDE	A	361	BNR	25	N/A	± 131,072	UP	FEET
ALONG TK HRZ ACCEL	A	362	BNR	50	00	± 4	FORWARD	G'S
CROSS TK HRZ ACCEL	A	363	BNR	50	00	± 4	RIGHT	G'S
VERTICAL ACCEL	A	364	BNR	50	00	± 4	UP	G'S
INERTIAL VERT SPD	A	365	BNR	50	00	± 32,768	UP	FT/MIN
N-S VELOCITY	A	366	BNR	10	00	± 4096	NORTH	KNOTS
E-W VELOCITY	A	367	BNR	10	00	± 4096	EAST	KNOTS

*[1] -103 IRUs AND ON
*[2] -107 IRUs AND ON

IRU DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
ALIGN MODE/NR	270	11	ALIGN MODE	NOT ALIGN
REV ATTITUDE MODE	270	12	REV ATT	NO REV ATT
NAV MODE	270	13	NAV	NO NAV
SET HEADING	270	14	SET HDG	NO SET HDG
ATTITUDE INVALID	270	15	ATT INVAL	ATT VALID
DC FAIL	270	16	DC FAIL	DC OK
ON DC	270	17	ON DC	OFF DC
ADC FAULT	270	18	ADC FAULT	NO FAULT
IRU FAULT	270	19	IRU FAULT	NO FAULT
DC FAIL ON DC	270	20	DC FAIL	NO FAULT
ALIGN FAULT	270	21	ALIGN FLT	NO FAULT
NO IRS INITIAL	270	22	NO INITIAL	INITAL
EXCESS MOTION ERR	270	23	EXC MOTION	NO ERROR
ADC/IRU FAULT	270	24	FAULT	NO FAULT
REENTER POS *[2]	270	25	ENTER POS	NO ACTION
ALIGN STATUS *[1]	270	26	1 MIN	0
ALIGN STATUS *[1]	270	27	2 MIN	0
ALIGN STATUS *[1]	270	28	4 MIN	0
CYCLE IRS *[2]	270	29	CYCLE IRS	NO ACTION
POWER SUPPLY	350	11	FAULT	NO FAULT

			IRU DISCRETE OCTAL LABELS/BIT CHART	
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
DIGITAL INPUT	350	12	FAULT	NO FAULT
SENSOR LSIC	350	13	FAULT	NO FAULT
MEMORY (RAM)	350	14	FAULT	NO FAULT
MEMORY (PROM)	350	15	FAULT	NO FAULT
PITCH RATE	350	16	FAULT	NO FAULT
GYRO	350	17	FAULT	NO FAULT
TEMP SENSOR	350	19	FAULT	NO FAULT
SYSTEM TESTS	350	20	FAULT	NO FAULT
DISCRETE I/O	350	21	FAULT	NO FAULT
WDT	350	22	FAULT	NO FAULT
CPU	350	23	FAULT	NO FAULT
A/D OR MUX	350	24	FAULT	NO FAULT
GPS RESERVED *[3]	350	25	TBD	TBD
GPS RESERVED *[3]	350	26	TBD	TBD
GPS RESERVED *[3]	350	27	TBD	TBD
GPS RESERVED *[3]	350	28	TBD	TBD
PWR SUPP CRITICAL *[1]	351	11	FAULT	NO FAULT
DIG I/O WRAPROUND *[1]	351	12	FAULT	NO FAULT
RAM/NVM/PROM MMRY *[1]	351	13	FAULT	NO FAULT
LSIC *[1]	351	14	FAULT	NO FAULT
DISCRETE INPUT *[1]	351	15	FAULT	NO FAULT

IRU DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
PROCESSOR *[1]	351	16	FAULT	NO FAULT
GYRO *[1]	351	17	FAULT	NO FAULT
ALIGN/SYSTEM *[1]	351	18	FAULT	NO FAULT
A/D MUX DATA TRAN *[1]	351	19	FAULT	NO FAULT
POWER SUPPLY *[1]	351	20	FAULT	NO FAULT
ADC/DSCRTOUT WRAP *[1]	351	21	FAULT	NO FAULT
SPARE *[1]	351	22	NOT USED	NOT USED
CALIBRATION PROM *[1]	351	23	FAULT	NO FAULT
INA/OTA *[1]	351	24	FAULT	NO FAULT
ANALOG PITCH RATE *[1]	351	25	FAULT	NO FAULT
GYRO *[1]	351	26	FAULT	NO FAULT
GYRO CONFIG *[1]	351	27	FAULT	NO FAULT
TEMP SENSOR *[1]	351	28	FAULT	NO FAULT
SPARE *[1]	351	29	NOT USED	NOT USED
GPS FAULT *[3]	351	29	FAULT	NO FAULT
NO GPS FNCTN INSTL *[4]	353	27	NOT INSTALLED	INSTALLED

*[1] -103 IRUs AND ON
*[2] -105 IRUs AND ON
*[3] -107 IRUs AND ON (ALWAYS ZERO STATE)
*[4] -107 IRUs AND ON (ALWAYS ONE STATE)

2. <u>IRU Removal Checks</u> (Fig. 107A and 107B)
    A. Two checks are used to make a decision if an IRU is recommended to be replaced. The checks are the residual groundspeed error and the radial position error measurements.
        (1) Residual groundspeed is the groundspeed of the airplane when the airplane is parked. The POS REF (position reference) page 2/2 on the FMC CDU shows the residual groundspeed for the FMC and the IRUs at the end of the flight.
        (2) Radial position error is the distance between present position and computed IRU position. The POS REF page 2/2 on the FMC CDU shows the present position for the IRUs. The radial position error check uses the FMC CDU RTE (route) 1 or RTE 2 legs page to calculate the IRS radial position error. The actual and calculated IRS positions are input as waypoints. Their difference, in nautical miles, is compared to the deviation criteria to make a decision if the IRU is recommended to be replaced.
    B. Residual Groundspeed Error Check

    <u>NOTE</u>: The IRUs and FMCs must not be shut down before the groundspeed error check is complete.

        (1) Push the INIT REF key on the CDU.
        (2) Push the line select key (LSK) adjacent to <INDEX.
            (a) Make sure the INIT REF INDEX page is shown.
        (3) Push the LSK adjacent to <POS.
            (a) Make sure the POS INIT page 1/2 is shown.
        (4) Push the NEXT PAGE or PREV PAGE key to show the POS REF page.
            (a) Make sure the POS REF page is shown.
        (5) Record the residual groundspeed error shown on the POS REF page for each IRU.

            <u>NOTE</u>: FMC freeze can cause FMC–CDU to display excessive groundspeed. Verify IRU residue using IRMP.

            (a) Open the applicable circuit breakers:
                L FMC, OR
                R FMC
            (b) Wait 15 seconds then close the applicable circuit breakers:
                L FMC, OR
                R FMC
            (c) Observe the IRU groundspeed for 20 minutes to confirm the maximum error.

(6) AIRPLANES WITH IRMP P/N S242T101-202 THRU -999;
     Do these steps:

     NOTE: The groundspeed will not change on the FMC when an IRU is
            replaced. This procedure must be performed after completion
            of a flight before IRU is switched out of the NAV mode. This
            value should be recorded before power shutdown.

     (a) Rotate IRMP "SYS DSPL" switch to L, C, or R position, as
          appropriate.
     (b) Rotate IRMP "DSPL SEL" switch to TK/GS position.
     (c) Read residual speed on the IRMP upper right display window.
     (d) Repeat for each IRU position.
(7) Replace the IRU (AMM 34-21-01/401) if one of these conditions occur:
     (a) The residual groundspeed error is 15 knots or larger after each
          of two consecutive checks.
     (b) The residual groundspeed error is 21 knots or larger at the end
          of one check.
C. Radial Position Error Check

    NOTE: The IRUs and FMCs must not be shut down before the radial
           position error check is complete.

(1) Push the INIT REF key on the CDU.
(2) Push the line select key (LSK) adjacent to <INDEX.
     (a) Make sure the INIT REF INDEX page is shown.
(3) Push the LSK key adjacent to <POS.
     (a) Make sure the POS INIT page 1/2 is shown.
(4) Push the NEXT PAGE or PREV PAGE key to show the POS REF page.
     (a) Make sure the POS REF page is shown.
(5) Record the latitude and longitude shown for each IRU.
(6) Push the LEGS mode key.
     (a) Make sure the RTE 1 LEGS or RTE 2 LEGS page is shown.
(7) Input the present position latitude and longitude (gate, ramp, etc.)
     as a waypoint.
(8) Input the latitude and longitude of the left IRU as the next
     waypoint on the RTE 1 or RTE 2 LEGS page.

     NOTE: This can be done manually or by line selection from the POS
            REF page.

(9) Record the computed leg length between the present position waypoint
     and the left IRU waypoint.

     NOTE: This is the radial position error of the left IRU.

(10) Input the latitude and longitude of the center IRU after the present
     position waypoint, either manually or by line selection from the POS
     REF page.

(11) Record the computed leg length between the present position waypoint and the center IRU waypoint.

NOTE: This is the radial position error of the center IRU.

(12) Input the latitude and longitude of the right IRU after the present position waypoint, either manually or by line selection from the POS REF page.
(13) Record the computed leg length between the present position waypoint and the right IRU waypoint.

NOTE: This is the radial position error of the right IRU.

(14) Compare these radial position errors for a given navigation time to the accept/reject limits on Fig. 107B.

NOTE: Navigation time is the time since an IRU last entered NAV mode after a full 10 minute alignment was completed. Flight time is permitted if navigation time is not available.

(15) Replace the IRU (AMM 34-21-01/401) if one of these conditions occur:
   (a) The radial position error of the IRU for a given navigation time falls in the "REPLACE AFTER 1 FLIGHT" area of Fig. 107B.
   (b) The radial position error of the IRU for a given navigation time falls in the "REPLACE AFTER 2 CONSECUTIVE FLIGHTS" area of Fig. 107B for two consecutive flights.

ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		FLT COMPT, P11	
ADI LEFT, C593		1	11E3	*
ADI RIGHT, C594		1	11E24	*
EFIS CONT PNL LEFT, C633		1	11E4	*
EFIS CONT PNL RIGHT, C634		1	11E25	*
EFIS DSPL SW L, C622		1	11A7	
EFIS DSPL SW RIGHT, C623		1	11F24	*
EFIS SYM GEN L, C637		1	11F8	*
EFIS SYM GEN RIGHT, C638		1	11F29	*
EFIS SYM GEN C, C639		1	11F9	*
HSI LEFT, C588		1	11E6	*
HSI RIGHT, C589		1	11E27	*
RDMI L, C635		1	11A6	*
RDMI RIGHT, C636		1	11F25	*
VSI LEFT, C586		1	11E5	*
VSI RIGHT, C587		1	11E26	*
GENERATOR – CENTER EFIS SYMBOL, M149	1	1	119AL, MAIN EQUIP CTR, E1-4	34-22-01
GENERATOR – LEFT EFIS SYMBOL, M148	1	1	119AL, MAIN EQUIP CTR, E1-2	34-22-01
GENERATOR – RIGHT EFIS SYMBOL, M150	1	1	119AL, MAIN EQUIP CTR, E1-5	34-22-01
INDICATOR – LEFT ELECTRONIC ATTITUDE DIRECTOR, N4	2	1	FLT COMPT, P1-1	34-22-03
INDICATOR – LEFT ELECTRONIC HORIZONTAL SITUATION, N5	2	1	FLT COMPT, P1-1	34-22-04
INDICATOR – LEFT RADIO DISTANCE MAGNETIC, N3	2	1	FLT COMPT, P1-1	34-22-05
INDICATOR – LEFT RESOLUTION ADVISORY/ VERTICAL SPEED, N9 ▷2	2	1	FLT COMPT, P1-3	34-22-09
INDICATOR – LEFT VERTICAL SPEED, N9 ▷1	2	1	FLT COMPT, P1-3	34-22-06
INDICATOR – RIGHT ELECTRONIC ATTITUDE DIRECTOR, N44	2	1	FLT COMPT, P3-3	34-22-03
INDICATOR – RIGHT ELECTRONIC HORIZONTAL SITUATION, N45	2	1	FLT COMPT, P3-3	34-22-04
INDICATOR – RIGHT RADIO DISTANCE MAGNETIC, N43	2	1	FLT COMPT, P3-3	34-22-05
INDICATOR – RIGHT RESOLUTION ADVISORY/ VERTICAL SPEED, N49 ▷2	2	1	FLT COMPT, P3-3	34-22-09
INDICATOR – RIGHT VERTICAL SPEED, N49 ▷1	2	1	FLT COMPT, P3-3	34-22-06
PANEL – (FIM 34-51-00/101)				
LEFT VOR/DME CONTROL, M91				
RIGHT VOR/DME CONTROL, M92				
PANEL – LEFT EFIS CONTROL, M94	2	1	FLT COMPT, P10	34-22-02
PANEL – RIGHT EFIS CONTROL, M93	2	1	FLT COMPT, P10	34-22-02
RELAY – (FIM 31-01-37/101)				
EFIS/EICAS ATT COMP, K1297 ▷2				
FLIGHT RECORDER I/P SWITCHING, K15				

* SEE THE WDM EQUIPMENT LIST

▷1 SAS 050-280

▷2 SAS 281-999

Electronic Flight Instrument System (EFIS) – Component Index
Figure 101 (Sheet 1)

EFFECTIVITY

ALL

F21357

34-22-00

21   Page 101
Feb 10/97

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
SENSOR – LEFT EFIS REMOTE LIGHT, TS187	--	1	FLT COMPT, P7	34-22-07
SENSOR – RIGHT EFIS REMOTE LIGHT, TS188	--	1	FLT COMPT, P7	34-22-07
SWITCH – HEADING REFERENCE, S616	2	1	FLT COMPT, P3-1	*
SWITCH – LEFT EFI, S3	1	1	FLT COMPT, P1-1	33-13-00
SWITCH – LEFT F/D, S1	1	1	FLT COMPT, P1-1	33-13-00
SWITCH – LEFT IRS, S4	1	1	FLT COMPT, P1-1	33-13-00
SWITCH – LEFT NAV, S2	1	1	FLT COMPT, P1-1	33-13-00
SWITCH – RIGHT EFI, S11	1	1	FLT COMPT, P3-3	33-13-00
SWITCH – RIGHT F/D, S9	1	1	FLT COMPT, P3-3	33-13-00
SWITCH – RIGHT IRS, S12	1	1	FLT COMPT, P3-3	33-13-00
SWITCH – RIGHT NAV, S10	1	1	FLT COMPT, P3-3	33-13-00

* SEE THE WDM EQUIPMENT LIST

Electronic Flight Instrument System (EFIS) – Component Index
Figure 101 (Sheet 2)

EFFECTIVITY

ALL

C08560

34-22-00

10   Page 102
May 10/93

HEADING REFERENCE
SWITCH, S616
SEE (B)

LEFT EADI, N4
SEE (D) SHT 2

REMOTE LIGHT
SENSORS,
TS187, TS188

RIGHT RDMI, N43
SEE (C)

P55 PANEL

P11 PANEL

P7 PANEL

LEFT RDMI, N3
SEE (C)

RIGHT EADI, N44
SEE (D) SHT 2

P1 PANEL

P3 PANEL

LEFT INSTRUMENT SOURCE
SELECT PANEL
SEE (A)

RIGHT INSTRUMENT SOURCE
SELECT PANEL
SEE (A)

RIGHT VSI, N49
SEE (F) SHT 2

LEFT EHSI, N5
SEE (E) SHT 2

LEFT VSI, N9
SEE (F) SHT 2

P10 PANEL

LEFT EFIS CONTROL
PANEL, M94
SEE (G) SHT 2

RIGHT EFIS CONTROL
PANEL, M93
SEE (G) SHT 2

RIGHT EHSI, N45
SEE (E) SHT 2

FLIGHT COMPARTMENT

INSTR SOURCE SEL
FLT DIR

L
C
R

NAV
FMC-L
CDU-L   FMC-R

ALTN W   EFI

ALTN W   IRS

ALTN W   AIR
DATA

LEFT OR RIGHT
F/D SWITCH,
S1 OR S9

LEFT OR RIGHT
NAV SWITCH,
S2 OR S10

LEFT OR RIGHT
EFI SWITCH,
S3 OR S11

LEFT OR RIGHT
IRS SWITCH,
S4 OR S12

LEFT OR RIGHT INSTRUMENT
SOURCE SELECT PANEL

(A)

HDG REF

NORM

TRUE

HEADING REFERENCE
SWITCH, S616

(B)

245.6   L39.0
DME-L   DME-R

VOR

ADF ◄--- --► ADF

LEFT OR RIGHT RDMI,
N3 OR N43

(C)

EFIS — Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

613527

34-22-00

12   Page 103
May 10/93

LEFT OR RIGHT EADI, N4 OR N44

(D)

DME 200 HDG 263 M
24   27

LEFT OR RIGHT EHSI, N5 OR N45

(E)

VERTICAL
SPEED

OFF

1000 FPM

LEFT OR RIGHT
VERTICAL SPEED
INDICATOR,
N9 OR N49

(F) 1

VSI
FAIL

LEFT OR RIGHT
RESOLUTION ADVISORY/
VERTICAL SPEED
INDICATOR,
N9 OR N49

(F) 2

ADI

RST   DH REF   BRT

| 0 0

HSI

RANGE   BRT
80 160 320
40   EXP
20   VOR ILS
10   MAP
   VOR
FULL   PLAN
   ILS

WXR
ON

MAP

NAV AID   ARPT   RTE DATA   WPT
INOP   ON   ON   ON

LEFT OR RIGHT EFIS
CONTROL PANEL, M94 OR M93

(G)

1 ▷ SAS 050–280
2 ▷ SAS 281–999

EFIS – Component Location (Details from Sht 1)
Figure 102 (Sheet 2)

F19547

LEFT EFIS
SYMBOL
GENERATOR, M148

SEE (H)

CENTER EFIS
SYMBOL
GENERATOR, M149

SEE (H)

RIGHT EFIS
SYMBOL
GENERATOR, M150

SEE (H)

MAIN EQUIPMENT CENTER
ACCESS, 119AL

E1-2

119AL

E1-4

E1-5

MAIN EQUIPMENT CENTER

EFIP-701

HOURS

TEST

RESET

EFIS SYMBOL
GENERATOR

EFIS SYMBOL GENERATOR

(H)

EFIS – Component Location
Figure 102 (Sheet 3)

73384

Not Used
Figure 103

EFFECTIVITY

ALL

34-22-00

35412

01   Page 106
Apr 22/02

```
┌─────────────────────────────────────────────────────┐
│ PREREQUISITES                                         │
│                                                       │
│ MAKE SURE THIS SYSTEM WILL OPERATE:                   │
│   EFIS (AMM 34-22-00/501)                             │
│                                                       │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:          │
│   11A7, 11E3, 11E4, 11E6, 11E24, 11E25, 11E27, 11F8,  │
│   11F9, 11F24, 11F29                                  │
│                                                       │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:      │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)           │
└─────────────────────────────────────────────────────┘
```

DISPLAY PROBLEMS
ON CAPT (F/O)
EADI

1 ON THE LEFT (RIGHT) EFIS CONTROL PANEL, SET THE WXR AND MAP DATA SWITCHES TO THE OFF (OUT) POSITION.
ON THE LEFT (RIGHT) INSTRUMENT SOURCE SELECT PANEL, SET THE EFI SWITCH TO THE ALTN POSITION FOR 10 SECONDS AND THEN BACK TO THE NORM POSITION.
DOES THE PROBLEM CLEAR FOR THE ALTN POSITION?

— YES →

21 WITH THE EFI SWITCH IN THE NORM POSITION, DOES THE DISPLAY PROBLEM ON CAPT (F/O) EADI CONTINUE?

— YES →

30 REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401).

NO →

31 INTERMITTENT FAILURE. NO PROCEDURE IS NECESSARY.

NO ↓

2 CYCLE THE LEFT (RIGHT) ADI, 11E3 (11E24) AND HSI, 11E6 (11E27), CIRCUIT BREAKERS.
DOES THE PROBLEM CLEAR?

— YES →

32 INTERMITTENT FAILURE. NO PROCEDURE IS NECESSARY.

NO ↓

SEE SHEET 2
(BLOCK 3)

Display Problems on Capt (F/O) EADI
Figure 104 (Sheet 1)

257021

FROM SHEET 1
(BLOCK 2)

|NO

3 PUSH AND HOLD THE TEST
SWITCH ON THE OVERHEAD
LIGHTING CONTROL PANEL.
   DOES "TEST FAIL DU" SHOW
ON THE LEFT (RIGHT) EADI?

YES →

22 RELEASE THE TEST SWITCH ON
THE OVERHEAD LIGHTING CONTROL
PANEL. REMOVE THE LEFT
(RIGHT) EADI, N4 (N44)
(AMM 34-22-03/401), AND LOOK
AT THE COOLING AIR INLET
SCREEN ON THE REAR OF THE
UNIT. ▷1
   DOES THE INLET SCREEN
SHOW BLOCKAGE?

NO →

33 REPLACE THE LEFT (RIGHT)
EADI, N4 (N44)
(AMM 34-22-03/401).
   PUSH THE RESET SWITCH ON
THE LEFT (RIGHT) AND CENTER
EFIS SYMBOL GENERATORS, M148
(M150) AND M149.

NO (from block 3)

YES →

34 CLEAN THE INLET SCREEN.
▷2
   INSTALL THE SAME LEFT
(RIGHT) EADI, N4 (N44)
(AMM 34-22-03/401).
   PUSH THE RESET SWITCH ON
THE LEFT (RIGHT) AND CENTER
EFIS SYMBOL GENERATORS, M148
(M150) AND M149.
   DO THE PROCEDURE IN STEP 2
AGAIN.

35 RELEASE THE TEST SWITCH
ON THE OVERHEAD LIGHTING
CONTROL PANEL. REPLACE THE
LEFT (RIGHT) EADI, N4 (N44)
(AMM 34-22-03/401).
   IF THE PROBLEM CONTINUES,
EXAMINE ALL THE EADI
CONNECTIONS AND REPAIR THEM
AS NECESSARY (WDM 34-22-14,
WDM 34-22-16, WDM 34-22-24,
WDM 34-22-26, WDM 34-22-34,
WDM 34-22-35).
   IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUITS FOR THE
EFI SWITCH ON THE INSTRUMENT
SOURCE SELECT PANEL
(WDM 34-22-17, WDM 34-22-27,
WDM 34-22-37). REPAIR THE
PROBLEMS THAT YOU FIND.

▷1 ON THE AVIONICS COOLING MONITOR ON THE P61 PANEL;
   MAKE SURE THE INDICATING BALL SHOWS IN THE WINDOW BEFORE YOU
   REMOVE THE UNIT. IF THE BALL DOES NOT SHOW AND THE PROBLEM
   CONTINUES AFTER YOU EXAMINE AND CLEAN THE INLET SCREEN,
   EXAMINE AND REPAIR DAMAGE OR DISCONNECTIONS OF THE COOLING
   AIR DUCTS.

▷2 EXAMINE THE INLET SCREEN ON THE BACK OF THE OTHER EADI, THE
   TWO EHSIs (AMM 34-22-04/401), AND THE TWO EICAS DISPLAY UNITS
   (AMM 31-41-01/401). REPAIR THE PROBLEMS THAT YOU FIND.

Display Problems on Capt (F/O) EADI
Figure 104 (Sheet 2)

EFFECTIVITY

ALL

772058

34-22-00

05   Page 108
            Dec 22/02

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

```
┌─────────────────────────────────────────────────────────┐
│ PREREQUISITES                                           │
│ MAKE SURE THIS SYSTEM WILL OPERATE:                     │
│   EFIS (AMM 34-22-00/501)                               │
│                                                         │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:            │
│   11A7,11E3,11E4,11E6,11E24,11E25,11E27,11F8,11F9       │
│   11F24,11F29                                           │
│                                                         │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:        │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)             │
└─────────────────────────────────────────────────────────┘
```

BRIGHTNESS CONTROL
PROBLEM ON CAPT
(F/O) EADI

1 SET THE EADI "BRT" CONTROL ON THE LEFT (RIGHT) EFIS CONTROL PANEL TO A MAXIMUM AND THEN A MINIMUM INTENSITY.
DID THE INTENSITY ON THE LEFT (RIGHT) EADI INCREASE AND DECREASE AS APPLICABLE?

— NO → **31** REPLACE THE LEFT (RIGHT) EADI, N4 (N44)(AMM 34-22-03/401).
IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) EFIS CONTROL PANEL, N94 (N93) (AMM 34-22-02/201).

YES

2 CHANGE THE LIGHT CONDITIONS ON THE LEFT (RIGHT) REMOTE LIGHT SENSOR FOR 30 SECONDS ▷1▷.
DID THE INTENSITY ON THE LEFT (RIGHT) EADI CHANGE?

— NO → **21** DID THE INTENSITY ON THE LEFT (RIGHT) EHSI CHANGE?

— NO → **32** EXAMINE THE CIRCUIT FOR THE LEFT (RIGHT) REMOTE LIGHT SENSOR, TS187 (TS188) (WDM 34-22-14,-15,-24,-25).
REPAIR THE PROBLEMS THAT YOU FIND.

YES

33 REPLACE THE LEFT (RIGHT) EADI, N4 (N44)(AMM 34-22-03/401).

YES

34 INTERMITTENT FAILURE.
NO PROCEDURE IS NECESSARY.

▷1▷ FOR LIGHT CONDITIONS, PUT A COVER ON THE SENSOR.
FOR NO LIGHT CONDITIONS, POINT A LIGHT SOURCE AT THE SENSOR.

Brightness Control Problems on Capt (F/O) EADI
Figure 105

EFFECTIVITY

ALL

162444

34-22-00

04   Page 109
Nov 10/96

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
   EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
   11A7,11E3,11E4,11E6,11E24,11E25,11E27,11F8,
   11F9,11F24,11F29

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

DISPLAY PROBLEMS
ON CAPT (F/O)
EHSI

| 1 | ON THE LEFT (RIGHT) EFIS CONTROL PANEL, SET THE WXR AND MAP DATA SWITCHES TO THE OFF (OUT) POSITION.
   ON THE LEFT (RIGHT) INSTRUMENT SOURCE SELECT PANEL, SET THE EFI SWITCH TO THE ALTN POSITION FOR 10 SECONDS AND THEN BACK TO THE NORM POSITION.
   DOES THE PROBLEM CLEAR FOR THE ALTN POSITION? |

YES →

| 21 | WITH THE EFI SWITCH IN THE NORM POSITION, DOES THE DISPLAY PROBLEM ON CAPT (F/O) EHSI CONTINUE ? |

YES →

| 30 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401). |

NO

| 31 | INTERMITTENT FAILURE. NO PROCEDURE IS NECESSARY. |

NO

| 2 | CYCLE THE LEFT (RIGHT) ADI 11E3 (11E24) AND HSI 11E6 (11E27) CIRCUIT BREAKERS.
   DOES THE PROBLEM CLEAR? |

YES →

| 32 | INTERMITTENT FAILURE. NO PROCEDURE IS NECESSARY. |

NO

SEE SHEET 2
(BLOCK 3)

Display Problems on Capt (F/O) EHSI
Figure 106 (Sheet 1)

EFFECTIVITY

ALL

257035

34-22-00

04   Page 110
         Dec 22/03

FROM SHEET 1
(BLOCK 2)

NO

| 3 | PUSH AND HOLD THE TEST SWITCH ON THE OVERHEAD LIGHTING CONTROL PANEL.
DOES "TEST FAIL DU" SHOW ON THE LEFT (RIGHT) EHSI? |

YES →

| 22 | RELEASE THE TEST SWITCH ON THE OVERHEAD LIGHTING CONTROL PANEL. REMOVE THE LEFT (RIGHT) EHSI, N5 (N45) (AMM 34-22-04/401), AND LOOK AT THE COOLING AIR INLET SCREEN ON THE REAR OF THE UNIT. ▷1▷
DOES THE INLET SCREEN SHOW BLOCKAGE? |

NO →

| 33 | REPLACE THE LEFT (RIGHT) EHSI, N5 (N45)(AMM 34-22-04/401).
PUSH THE RESET SWITCH ON THE LEFT (RIGHT) AND CENTER EFIS SYMBOL GENERATORS, M148 (M150) AND M149. |

NO

YES

| 34 | CLEAN THE INLET SCREEN. ▷2▷
INSTALL THE SAME LEFT (RIGHT) EHSI, N5 (N45) (AMM 34-22-04/401).
PUSH THE RESET SWITCH ON THE LEFT (RIGHT) AND CENTER EFIS SYMBOL GENERATORS, M148 (M150) AND M149.
GO TO BLOCK 2. |

| 35 | RELEASE THE TEST SWITCH ON THE OVERHEAD LIGHTING CONTROL PANEL. REPLACE THE LEFT (RIGHT) EHSI, N5 (N45) (AMM 34-22-04/401).
IF THE PROBLEM CONTINUES, EXAMINE ALL THE EHSI CONNECTIONS AND REPAIR THEM AS NECESSARY (WDM 34-22-15,-16, -25,-26,-34,-35).
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUITS FOR THE EFI SWITCH ON THE ISTRUMENT SOURCE SELECT PANEL (WDM 34-22-17,-27,-37). |

▷1▷ ON THE AVIONICS COOLING MONITOR ON THE P61 PANEL, MAKE SURE THE INDICATING BALL SHOWS IN THE WINDOW BEFORE YOU REMOVE THE UNIT. IF THE BALL DOES NOT SHOW AND THE PROBLEM CONTINUES AFTER YOU EXAMINE AND CLEAN THE INLET SCREEN, EXAMINE AND REPAIR DAMAGE OR DISCONNECTIONS OF THE COOLING AIR DUCTS.

▷2▷ EXAMINE THE INLET SCREEN ON THE BACK OF THE OTHER EHSI, THE TWO EADIs (AMM 34-22-03/401), AND THE TWO EICAS DISPLAY UNITS (AMM 31-41-01/401).

Display Problems on Capt (F/O) EHSI
Figure 106 (Sheet 2)

772059

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11E3,11E4,11E6,11E24,11E25,11E27,11F8,11F9,
  11F24,11F29

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

BRIGHTNESS CONTROL
PROBLEM ON CAPT
(F/O) EHSI

1 | SET THE EHSI "BRT" CONTROL ON THE LEFT (RIGHT) EFIS CONTROL PANEL TO A MAXIMUM AND THEN A MINIMUM INTENSITY.
  DID THE INTENSITY ON THE LEFT (RIGHT) EHSI INCREASE AND DECREASE AS APPLICABLE?

— NO →

31 | REPLACE THE LEFT (RIGHT) EHSI, N5 (N45)(AMM 34-22-04/401).
  IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) EFIS CONTROL PANEL, N94 (N93) (AMM 34-22-02/201).

YES

2 | CHANGE THE LIGHT CONDI-TIONS ON THE LEFT (RIGHT) REMOTE LIGHT SENSOR FOR 30 SECONDS 1▷.
  DID THE INTENSITY ON THE LEFT (RIGHT) EHSI CHANGE?

— NO →

21 | DID THE INTENSITY ON THE LEFT (RIGHT) EADI CHANGE?

— NO →

32 | EXAMINE THE CIRCUIT FOR THE LEFT (RIGHT) REMOTE LIGHT SENSOR, TS187 (TS188) (WDM 34-22-14,-15,-24,-25).
  REPAIR THE PROBLEMS THAT YOU FIND.

YES

33 | REPLACE THE LEFT (RIGHT) EHSI, N5 (N45)(AMM 34-22-04/401).

YES

34 | INTERMITTENT FAILURE.
  NO PROCEDURE IS NECESSARY.

1▷ FOR LIGHT CONDITIONS, PUT A COVER ON THE SENSOR.
    FOR NO LIGHT CONDITIONS, POINT A LIGHT SOURCE AT THE SENSOR.

Brightness Control Problems on Capt (F/O) EHSI
Figure 107

162449

```
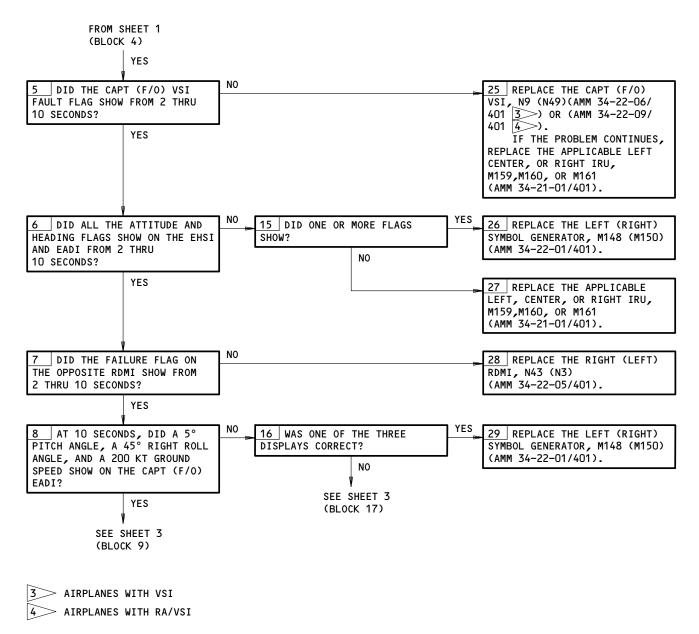PREREQUISITES
MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)
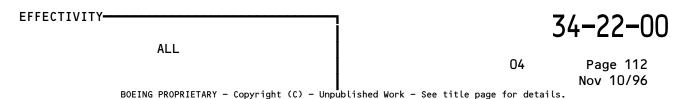
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7, 11E3, 11E4, 11E6, 11E24, 11E25, 11E27, 11F8,
  11F9, 11F24, 11F29

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

EFIS BITE PROCEDURE

```
1   ON THE LEFT AND RIGHT EFIS      NO           41   THE MESSAGE IS AN
CONTROL PANELS, SET THE WXR          ────────────────> INTERMITTENT MESSAGE.
SWITCH TO THE ON POSITION,                           NO ACTION IS REQUIRED.
ALL THE MAP DATA SWITCHES TO
THE ON POSITION 2 , THE
MODE SWITCH TO THE PLAN
POSITION, THE DH REF TO 50,
AND ALL THE BRT CONTROLS FULLY
CLOCKWISE.
    ON THE LEFT AND RIGHT
INSTRUMENT SOURCE SELECT
PANELS, SET THE EFI SWITCH TO
THE ALT POSITION AND BACK TO
THE NORMAL POSITION.
    ON THE LEFT AND RIGHT EFIS
SYMBOL GENERATORS, PUSH THE
RESET SWITCH.
    ON THE OVERHEAD LIGHTING
CONTROL PANEL, PUSH AND HOLD
THE TEST SWITCH.
    SET THE MODE SWITCHES ON
THE EFIS CONTROL PANELS TO
EACH MODE FOR 15 SECONDS.
    IS THE MESSAGE, "SG FAIL",
SHOWN ON THE LEFT (RIGHT)
EADI OR EHSI?
```

YES

SEE SHEET 2
(BLOCK 2)

1 > DISENGAGE THE TEST SWITCH ON THE OVERHEAD LIGHTING CONTROL PANEL.

2 > DO NOT PUSH THE INOP SWITCH ON THE EFIS CONTROL PANEL. IF YOU DO, INCORRECT DISPLAY WILL OCCUR.

3 > ON THE AVIONICS COOLING MONITOR ON THE P61 PANEL, MAKE SURE THE INDICATING BALL SHOWS IN THE
    WINDOW BEFORE YOU REMOVE THE UNIT. IF THE BALL DOES NOT SHOW AND THE PROBLEM CONTINUES AFTER YOU
    EXAMINE AND CLEAN THE INLET SCREEN, EXAMINE AND REPAIR DAMAGE OR DISCONNECTIONS OF THE COOLING AIR
    DUCTS.

EFIS BITE Procedure
Figure 108 (Sheet 1)

EFFECTIVITY

ALL

34-22-00

10   Page 113
            Dec 22/06

257052

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 1
(BLOCK 1)

YES

| 2 | IS THE MESSAGE, "TEST FAIL DU", SHOWN ON THE LEFT (RIGHT) EADI OR EHSI? |

YES

NO

SEE SHEET 3
(BLOCK 3)

| 42 | REMOVE THE LEFT (RIGHT) EADI, N4 (N44) (AMM 34-22-03/401), OR THE LEFT (RIGHT) EHSI, N5 (N45) (AMM 34-22-04/401), AS APPLICABLE. |1> |3> |

LOOK AT THE COOLING AIR INLET SCREEN ON THE REAR OF THE UNIT. IF THE SCREEN SHOWS BLOCKAGE, CLEAN IT AND INSTALL THE SAME UNIT.

DO THE PROCEDURE IN STEP 1 AGAIN. IF THERE IS NO BLOCKAGE, REPLACE THE LEFT (RIGHT) EADI, N4 (N44) (AMM 34-22-03/401), OR THE LEFT (RIGHT) EHSI, N5 (N45) (AMM 34-22-04/401).

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CENTER EFIS SG, M149, CONNECTOR D413D, PINS A9, B9, F9 AND G9, TO THE RIGHT EADI, N44, AND THE RIGHT EHSI, N45, CONNECTORS D807 AND D809, PINS 22 AND 23 (WDM 34-22-34).

REPAIR THE PROBLEMS THAT YOU FIND.

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CENTER EFIS SG, M149, CONNECTOR D413A, PINS A9, B9, F9 AND G9, TO THE LEFT EADI, N4, AND THE LEFT EHSI, N5, CONNECTORS D107 AND D109, PINS 22 AND 23 (WDM 34-22-35).

REPAIR THE PROBLEMS THAT YOU FIND.

EFIS BITE Procedure
Figure 108 (Sheet 2)

EFFECTIVITY

ALL

1331153

34-22-00

05   Page 114
Dec 22/06

FROM SHEET 2
(BLOCK 2)

| NO

3 | IS THE MESSAGE, "TEST FAIL SG", SHOWN ON THE LEFT (RIGHT) EADI OR EHSI? → YES → 43 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401). 1▷

| NO

4 | IS THE MESSAGE, "TEST FAIL CP", SHOWN ON THE LEFT (RIGHT) EADI OR EHSI? → YES → 44 | REPLACE THE LEFT (RIGHT) EFIS CONTROL PANEL, M94 (M93) (AMM 34-22-02/401). 1▷

| NO

5 | DOES THE LEFT (RIGHT) EADI LOOK OUT OF FOCUS, DISTORTED, OR BLANK? → YES → 45 | DO THIS PROCEDURE: DISPLAY PROBLEMS ON THE LEFT (RIGHT) EADI PROCEDURE (FIM 34-22-00/101, FIG. 104). 1▷

| NO

6 | COMPARE THE LEFT AND RIGHT EADIS. IS THERE AN INTENSITY DIFFERENCE? → YES → 46 | DO THIS PROCEDURE: INTENSITY CONTROL PROBLEM ON THE LEFT (RIGHT) EADI PROCEDURE (FIM 34-22-00/101, FIG. 105). 1▷

| NO

7 | DOES THE LEFT (RIGHT) EHSI LOOK OUT OF FOCUS, DISTORTED, OR BLANK? → YES → 47 | DO THIS PROCEDURE: DISPLAY PROBLEMS ON THE LEFT (RIGHT) EHSI PROCEDURE (FIM 34-22-00/101, FIG. 106). 1▷

| NO

8 | COMPARE THE LEFT AND RIGHT EHSIS. IS THERE AN INTENSITY DIFFERENCE? → YES → 48 | DO THIS PROCEDURE: INTENSITY CONTROL PROBLEM ON THE LEFT (RIGHT) EHSI PROCEDURE (FIM 34-22-00/101, FIG. 107). 1▷

| NO

SEE SHEET 4
(BLOCK 9)

EFIS BITE Procedure
Figure 108 (Sheet 3)

297721

FROM SHEET 3
(BLOCK 8)

↓ YES

| 9 | DO THE LEFT (RIGHT) EADI AND EHSI SHOW THE CORRECT TEST PATTERNS? |

NO →

| 49 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401). |1▷ |

↓ YES

| 10 | ON THE LEFT AND RIGHT EFIS CONTROL PANELS, SET THE DH REF TO 200.   DO THE RA DIAL, INDICIES, READOUT, AND DH BUG CHANGE TO YELLOW AND BLINK FOR 3 SECONDS? |

NO →

↓ YES

| 11 | ON THE LEFT AND RIGHT EFIS CONTROL PANELS, PUSH THE RST SWITCH.   DO THE RA DIAL, INDICIES, AND READOUT CHANGE TO WHITE AND THE DH BUG CHANGE TO PURPLE? |

NO →

| 21 | IS THE PROBLEM CORRECTED WHEN YOU SET THE EFI SWITCH ON THE LEFT (RIGHT) INSTRUMENT SOURCE SELECT PANEL TO THE ALTN POSITION? |

NO →

| 50 | REPLACE THE LEFT (RIGHT) EFIS CONTROL PANEL, M94 (M93) (AMM 34-22-02/401). |1▷ |

↓ YES

| 51 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401). |1▷ |

↓ YES

| 12 | DID YOU DO THE EFIS BITE TEST BECAUSE OF A PROBLEM IN THE LEFT (RIGHT) EFIS? |

YES →

| 22 | IS THE PROBLEM CORRECTED WHEN YOU SET THE EFI SWITCH ON THE LEFT (RIGHT) INSTRUMENT SOURCE SELECT PANEL TO THE ALTN POSITION? |

NO →

| 52 | REPLACE THE LEFT (RIGHT) EADI, N4 (N44) (AMM 34-22-03/401), OR THE LEFT (RIGHT)EHSI, N5 (N45) (AMM 34-22-04/401). |1▷   IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) EFIS CONTROL PANEL, M94 (M93) (AMM 34-22-02/401). |

↓ NO

SEE SHEET 5
(BLOCK 13)

↓ YES

| 53 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR, M148 (M150)(AMM 34-22-01/401). |1▷ |

EFIS BITE Procedure
Figure 108 (Sheet 4)

297732

FROM SHEET 4
(BLOCK 12)

| NO

```
┌─────────────────────────────┐           NO        ┌─────────────────────────────┐
│ 13 │ IF THE MESSAGE, "TEST OK",│─────────────────────│ 54 │ REPLACE THE LEFT (RIGHT) │
│ IS SHOWN ON THE LEFT (RIGHT)│                     │ EFI SWITCH, S3 (S11)        │
│ EADI AND EHSI, THE LEFT     │                     │ (AMM 33-13-00/201).         │
│ (RIGHT) EFIS IS OK. │1│▷     │                     │    IF THE PROBLEM CONTINUES,│
│    ON THE LEFT AND RIGHT     │                     │ EXAMINE THE DATA BUS CIRCUIT│
│ INSTRUMENT SOURCE SELECT     │                     │ FROM THE LEFT EFI SWITCH, S3,│
│ PANELS, SET THE EFI SWITCHES │                     │ PIN 2, TO THE LEFT (RIGHT)  │
│ TO THE ALTN POSITION.        │                     │ EICAS COMPUTER, CONNECTOR   │
│    DOES THE EICAS MESSAGE,    │                     │ D881F (D883F), PIN A9       │
│ "INSTR SWITCH", SHOW ON THE  │                     │ (WDM 34-22-17).             │
│ TOP DISPLAY?                 │                     │    REPAIR THE PROBLEMS THAT │
└─────────────────────────────┘                     │ YOU FIND.                   │
              │                                      └─────────────────────────────┘
             YES
```

```
┌─────────────────────────────┐           NO        ┌─────────────────────────────┐
│ 14 │ PUSH THE RESET SWITCH ON │─────────────────────│ 55 │ THE CENTER EFIS IS OK. │1│▷│
│ THE CENTER SYMBOL GENERATOR.  │                     └─────────────────────────────┘
│    PUSH AND HOLD THE TEST    │
│ SWITCH ON THE OVERHEAD       │
│ LIGHTING CONTROL PANEL.      │
│    DOES THE MESSAGE, "TEST   │
│ OK", SHOW ON THE LEFT AND    │
│ RIGHT EADIS AND EHSIS?       │
└─────────────────────────────┘
              │
             YES
```

SEE SHEET 6
(BLOCK 15)

EFIS BITE Procedure
Figure 108 (Sheet 5)

771282

FROM SHEET 5
(BLOCK 14)

| NO

```
15  DOES THE MESSAGE "TEST        YES              56  REPLACE THE CENTER EFIS
    FAIL SG" SHOW ON THE LEFT  ───────────────────►    SYMBOL GENERATOR, M149
    (RIGHT) EADI OR EHSI?                              (AMM 34-22-01/401).  |1>
```

| NO

```
16  DOES THE MESSAGE "TEST     YES   23  ON THE CENTER EFIS SYMBOL  YES   57  REPLACE THE LEFT EFIS
    FAIL CP" SHOW ON THE LEFT ──────►    GENERATOR, PUSH THE "RESET"  ────►    CONTROL PANEL, M94
    (RIGHT) EADI OR EHSI?                SWITCH.                               (AMM 34-22-02/401).
                                              DOES THE MESSAGE SHOW
                                         AFTER THE SWITCH IS RELEASED?
```

| NO | NO

```
17  DOES THE MESSAGE "TEST         YES              58  EXAMINE THE CIRCUIT FROM
    FAIL DU" SHOW ON THE LEFT  ───────────────────►    THE CENTER EFIS SG, M149,
    (RIGHT) EADI OR EHSI?                              CONNECTOR D413D, PINS A9,B9,
                                                       F9 AND G9, TO THE RIGHT EADI,
                                                       N44, AND THE RIGHT EHSI, N45,
```
                                                       CONNECTORS D807 AND D809,
| NO   PINS 22 AND 23 (WDM 34-22-34).
                                                          REPAIR THE PROBLEMS THAT
```                                                    YOU FIND.
18  THE CENTER EFIS IS OK.                                 IF THE PROBLEM CONTINUES,
    |1>                                                EXAMINE THE CIRCUIT FROM THE
```                                                    CENTER EFIS SG, M149,
                                                       CONNECTOR D413A, PINS A9,B9,
                                                       F9 AND G9, TO THE LEFT EADI,
                                                       N4, AND THE LEFT EHSI, N5,
                                                       CONNECTORS D107 AND D109,
                                                       PINS 22 AND 23 (WDM 34-22-35).
                                                          REPAIR THE PROBLEMS THAT
                                                       YOU FIND.

EFIS BITE Procedure
Figure 108 (Sheet 6)

F00261

┌─────────────────────────────────────────────────┐
│ PREREQUISITES                                     │
│                                                   │
│ MAKE SURE THESE SYSTEMS WILL OPERATE:             │
│   EICAS (AMM 31-41-00/201)                        │
│   IRS (AMM 34-21-00/501)                          │
│   EFIS (AMM 34-22-00/501)                         │
│                                                   │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:      │
│   11A7, 11E3, 11E4, 11E6, 11E24, 11E25, 11E27, 11F8, │
│   11F9, 11F24, 11F29                              │
│                                                   │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:  │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)       │
└─────────────────────────────────────────────────┘

ATTITUDE COMPARATOR
PROBLEMS

┌─────────────────────────┐          ┌─────────────────────────┐          ┌─────────────────────────┐
│ 1  MAKE SURE THE IRUs   │   YES    │ 21  DOES THE "COMP" FLAG │   YES    │ 31  REPLACE THE RIGHT   │
│ ARE ENERGIZED AND       │ ───────→ │ SHOW ON THE CAPT        │ ───────→ │ EFIS SG, M150 (AMM      │
│ ALIGNED                 │          │ EHSI/EADI?              │          │ 34-22-01/401).          │
│ (AMM 34-21-00/501).     │          └─────────────────────────┘          │    IF THE FAULT         │
│    MAKE SURE THE EFI    │                      │                        │ CONTINUES, EXAMINE THE  │
│ SOURCE SELECT SWITCHES  │                      │ NO                     │ CIRCUIT FROM THE RIGHT  │
│ ARE IN THE "NORM        │                      │                        │ EFIS SG, M150,          │
│ POSITION".              │                      │                        │ CONNECTOR D373E, PINS   │
│    PUSH THE STATUS      │                      │                        │ A13 AND B13, TO THE     │
│ SWITCH ON THE EICAS     │                      │                        │ LEFT EFIS SG, M148,     │
│ DISPLAY SELECT PANEL,   │                      │                        │ CONNECTOR D425A, PINS   │
│ M10195.                 │                      │                        │ C2 AND D2.              │
│    DOES THE EICAS       │                      │                        │    MAKE SURE THAT THE   │
│ MESSAGE, "COMPARATOR    │                      │                        │ LEFT EFIS SG, M148,     │
│ BITE", SHOW ON THE      │                      │                        │ CONNECTOR D425D, PIN    │
│ BOTTOM DISPLAY?         │                      │                        │ F13 IS NOT GROUNDED     │
└─────────────────────────┘                      │                        │ (WDM 34-22-13; WDM      │
              │                                   │                        │ 34-22-23). REPAIR THE   │
              │ NO                                │                        │ PROBLEMS THAT YOU FIND. │
              ↓                                   │                        └─────────────────────────┘
      SEE SHEET 2                                 │
      (BLOCK 2)                                   │                        ┌─────────────────────────┐
                                                  │                        │ 32  REPLACE THE LEFT    │
                                                  └──────────────────────→ │ EFIS SG, M148 (AMM      │
                                                                           │ 34-22-01/401).          │
                                                                           │    IF THE FAULT         │
                                                                           │ CONTINUES, EXAMINE THE  │
                                                                           │ CIRCUIT FROM THE LEFT   │
                                                                           │ EFIS SG, M148,          │
                                                                           │ CONNECTOR D425E, PINS   │
                                                                           │ A13 AND B13, TO THE     │
                                                                           │ RIGHT EFIS SG, M150,    │
                                                                           │ CONNECTOR D373A, PINS   │
                                                                           │ C2 AND D2.              │
                                                                           │    MAKE SURE THAT THE   │
                                                                           │ RIGHT EFIS SG, M150,    │
                                                                           │ CONNECTOR D373D, PIN    │
                                                                           │ F13 IS NOT GROUNDED     │
                                                                           │ (WDM 34-22-13; WDM      │
                                                                           │ 34-22-33). REPAIR THE   │
                                                                           │ PROBLEMS THAT YOU FIND. │
                                                                           └─────────────────────────┘

Attitude Comparator Problems
Figure 109 (Sheet 1)

EFFECTIVITY
SAS 281-999

34-22-00

854466

14          Page 119
            Dec 22/06

FROM SHEET 1
(BLOCK 1)

| NO

```
┌─────────────────────────────┐           ┌─────────────────────────────┐
│ 2   SET THE EFI SWITCH ON THE│   YES     │ 22  DOES THE "COMP" FLAG SHOW│
│ LEFT INSTRUMENT SOURCE SELECT├──────────▶│ ON THE CAPT EHSI/EADI?      │
│ PANEL TO THE "ALTN" POSITION.│           └─────────────────────────────┘
│    DOES THE EICAS MESSAGE,   │                         │
│ "COMPARATOR BITE", SHOW ON   │                        NO
│ THE BOTTOM DISPLAY?          │
└─────────────────────────────┘
```

YES →

| NO

SEE SHEET 3
(BLOCK 3)

```
┌─────────────────────────────┐
│ 33  REPLACE THE RIGHT EFIS SG,│
│ M150 (AMM 34-22-01/401).     │
│    IF THE FAULT CONTINUES,   │
│ EXAMINE THE CIRCUIT FROM THE │
│ RIGHT EFIS SG, M150, CONNECTOR│
│ D373E, PINS A13 AND B13, TO  │
│ THE CENTER EFIS SG, M149,    │
│ CONNECTOR D413A, PINS C2 AND │
│ D2.                          │
│    MAKE SURE THAT THE RIGHT  │
│ EFIS SG, M150, CONNECTOR     │
│ D373D, PIN F13 IS GROUNDED   │
│ (WDM 34-22-23; WDM 34-22-33).│
│ REPAIR THE PROBLEMS THAT YOU │
│ FIND.                        │
│    SET THE EFI SWITCH ON THE │
│ LEFT INSTRUMENT SOURCE SELECT│
│ PANEL TO THE "NORM" POSITION.│
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ 34  REPLACE THE CENTER EFIS  │
│ SG, M149 (AMM 34-22-01/401). │
│    IF THE FAULT CONTINUES,   │
│ EXAMINE THE CIRCUIT FROM THE │
│ CENTER EFIS SG, M149,        │
│ CONNECTOR D413E, PINS A13 AND│
│ B13, TO THE RIGHT EFIS SG,   │
│ M150, CONNECTOR D373D, PINS C2│
│ AND D2.                      │
│    MAKE SURE THAT THE RIGHT  │
│ EFIS SG, M150, CONNECTOR     │
│ D373D, PIN F13 IS GROUNDED   │
│ (WDM 31-31-12; WDM 34-22-23).│
│ REPAIR THE PROBLEMS THAT YOU │
│ FIND.                        │
│    SET THE EFI SWITCH ON THE │
│ LEFT INSTRUMENT SOURCE SELECT│
│ PANEL TO THE "NORM" POSITION.│
└─────────────────────────────┘
```

Attitude Comparator Problems
Figure 109 (Sheet 2)

854478

FROM SHEET 2
(BLOCK 2)

↓ NO

```
┌─────────────────────────────────┐        ┌─────────────────────────────────┐
│ 3 │ SET THE EFI SWITCH ON THE   │  YES   │ 23 │ DOES THE "COMP" FLAG SHOW  │
│ LEFT INSTRUMENT SOURCE SELECT   │───────▶│ ON THE CAPT EHSI/EADI?         │
│ PANEL TO THE "NORM" POSITION.   │        └─────────────────────────────────┘
│   SET THE EFI SWITCH ON THE     │
│ RIGHT INSTRUMENT SOURCE SELECT  │
│ PANEL TO THE "ALTN" POSITION.   │
│   DOES THE EICAS MESSAGE,        │
│ "COMPARATOR BITE", SHOW ON      │
│ THE BOTTOM DISPLAY?             │
└─────────────────────────────────┘
```

↓ NO (from block 3)   ↓ NO (from block 23)

SEE SHEET 4
(BLOCK 4)

YES →

```
┌─────────────────────────────────────┐
│ 35 │ REPLACE THE CENTER EFIS        │
│ SG, M149 (AMM 34-22-01/401).        │
│   IF THE FAULT CONTINUES,           │
│ EXAMINE THE CIRCUIT FROM THE        │
│ CENTER EFIS SG, M149,               │
│ CONNECTOR D413E, PINS A13 AND       │
│ B13, TO THE LEFT EFIS SG,           │
│ M148, CONNECTOR D425D, PINS C2      │
│ AND D2.                             │
│   MAKE SURE THAT THE LEFT           │
│ EFIS SG, M148, CONNECTOR            │
│ D425D, PIN F13 IS GROUNDED          │
│ (WDM 31-31-12; WDM 34-22-13).       │
│ REPAIR THE PROBLEMS THAT YOU        │
│ FIND.                               │
│   SET THE EFI SWITCH ON THE         │
│ RIGHT INSTRUMENT SOURCE SELECT      │
│ PANEL TO THE "NORM" POSITION.       │
└─────────────────────────────────────┘
```

```
┌─────────────────────────────────────┐
│ 36 │ REPLACE THE LEFT EFIS SG,      │
│ M148 (AMM 34-22-01/401).            │
│   IF THE FAULT CONTINUES,           │
│ EXAMINE THE CIRCUIT FROM THE        │
│ LEFT EFIS SG, M148, CONNECTOR       │
│ D425E, PINS A13 AND B13, TO         │
│ THE CENTER EFIS SG, M149,           │
│ CONNECTOR D413D, PINS C2 AND        │
│ D2.                                 │
│   MAKE SURE THAT THE LEFT           │
│ EFIS SG, M148, CONNECTOR            │
│ D425D, PIN F13 IS GROUNDED          │
│ (WDM 34-22-13; WDM 34-22-33).       │
│ REPAIR THE PROBLEMS THAT YOU        │
│ FIND.                               │
│   SET THE EFI SWITCH ON THE         │
│ RIGHT INSTRUMENT SOURCE SELECT      │
│ PANEL TO THE "NORM" POSITION.       │
└─────────────────────────────────────┘
```

Attitude Comparator Problems
Figure 109 (Sheet 3)

D57253

FROM SHEET 3
(BLOCK 3)

NO

4 | SET THE EFI SWITCHES ON THE INSTRUMENT SOURCE SELECT PANELS TO THE "ALT" POSITION.
PUSH THE TEST SWITCH ON THE LEFT EFIS SG, M148.
DOES THE EICAS MESSAGE, "ATT DISAGREE", SHOW ON THE TOP DISPLAY?

NO →

24 | RELEASE THE TEST SWITCH ON THE LEFT EFIS SG.
PUSH AND HOLD THE TEST SWITCH ON THE RIGHT EFIS SG.
DOES THE EICAS MESSAGE "ATT DISAGREE" SHOW ON THE TOP DISPLAY?

NO →

37 | RELEASE THE TEST SWITCH ON THE RIGHT EFIS SG.
EXAMINE THE CIRCUIT FROM THE EFIS/EICAS ATT COMPARISON RELAY, K1297, CONNECTOR D2777, PINS C2 AND D2, TO THE LEFT AND RIGHT EICAS COMPUTERS, M10181 AND M10182, CONNECTORS D881E AND D883E, PINS F11 AND F12 (WDM 34-22-33). REPAIR THE PROBLEMS THAT YOU FIND.

YES

YES

38 | RELEASE THE TEST SWITCH ON THE RIGHT EFIS SG.
REPLACE THE LEFT EFIS SG, M148 (AMM 34-22-01/401).
IF THE FAULT CONTINUES, EXAMINE THE CIRCUIT FROM THE LEFT EFIS SG, M148, CONNECTOR D425E, PINS A13 AND B13, TO THE EFIS/EICAS ATT COMPARATOR RELAY, K1297, CONNECTOR D2777, PINS C3 AND D3 (WDM 31-31-12; WDM 34-22-13; WDM 34-22-33). REPAIR THE PROBLEMS THAT YOU FIND.

5 | RELEASE THE TEST SWITCH ON THE LEFT EFIS SG.
PUSH AND HOLD THE TEST SWITCH ON THE RIGHT EFIS SG, M150.
DOES THE EICAS MESSAGE "ATT DISAGREE" SHOW ON THE TOP DISPLAY?

NO →

39 | RELEASE THE TEST SWITCH ON THE RIGHT EFIS SG.
REPLACE THE RIGHT EFIS SG, M150 (AMM 34-22-01/401).
IF THE FAULT CONTINUES, EXAMINE THE CIRCUIT FROM THE RIGHT EFIS SG, M150, CONNECTOR D373E, PINS A13 AND B13, TO THE EFIS/EICAS ATT COMPARATOR RELAY, K1297, CONNECTOR D2777, PINS C1 AND D1 (WDM 34-22-23; WDM 34-22-33). REPAIR THE PROBLEMS THAT YOU FIND.

YES

40 | SET THE EFI SWITCHES ON THE INSTRUMENT SOURCE SELECT PANELS TO THE "NORM" POSITION.
THE ATTITUDE COMPARISON SYSTEM IS CORRECT.

Attitude Comparator Problems
Figure 109 (Sheet 4)

EFFECTIVITY
SAS 281-999

34-22-00

16   Page 122
Apr 22/08

D57371

1. <u>ARINC Data Bus Charts</u>
    A. General

        <u>CAUTION</u>: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
                 YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

        (1) The ARINC 429 data bus charts give data necessary to make an
             analysis of ARINC 429 transmitters, receivers, and data buses. For
             the test, use a breakout box at the available terminal or at the LRU
             connectors.
    B. Equipment
        (1) Standard multi-meter
        (2) 429EBP Data Bus Analyzer (recommended)
             JcAIR Instrumentation
             400 Industrial Parkway
             Industrial Airport, KS 66031

             429-2 Data Bus Analyzer (alternative)
             Interface Technology
             150 E. Arrow Highway
             San Dimas, CA 91773
        (3) A34011-1 Breakout Box (recommended)
             A34011-112 Breakout Box (alternative)

EFIS CP							
DIGITAL OUTPUT BUS CHART							
BUS NAME	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
SOURCE							
EFISCP (L R)	A	1		36 35	429	LO	OUTPUT BUS

				MIN UPDATE		BINARY	POSITIVE	
SIGNAL	TYPE	LABEL	FORMAT	RATE	SDI	RANGE	SENSE	UNITS
WXR RANGE	A	271	DIS	10	00	N/A	ALWAYS POSITIVE	N/A
EFIS DISCRETES #1	A	272	DIS	5	00	N/A	N/A	N/A
EFIS DISCRETES #2	A	273	DIS	5	00	N/A	N/A	N/A
DH SELECTED-D	A	170	BCD	5	00	-20,+2500	ABOVE GRND	FEET
DH SELECTED	A	370	BNR	5	00	± 16,384	ABOVE GRND	FEET

EFIS CP ID=C5

OCTAL LABELS CHART

EFIS CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SPARE	271	11	TBD	
SPARE	271	12	TBD	
SPARE	271	13	TBD	
SPARE	271	14	TBD	
SPARE	271	15	TBD	
SPARE	271	16	TBD	
SPARE	271	17	TBD	
SPARE	271	18	TBD	
SPARE	271	19	TBD	
SPARE	271	20	TBD	
SPARE	271	21	TBD	
SPARE	271	22	TBD	
SPARE	271	23	TBD	
10 MI RANGE SEL	271	29-24	000010	
160 MI RANGE SEL	271	29-24	100000	
20 MI RANGE SEL	271	29-24	000100	
320 MI RANGE SEL	271	29-24	000000	
40 MI RANGE SEL	271	29-24	001000	
5 MI RANGE SEL	271	29-24	000001	
80 MI RANGE SEL	271	29-24	010000	

EFIS CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
INVALID DATA	271	31-30	01	
SLAVE	271	31-30	11	
TEST	271	31-30	10	
VALID DATA	271	31-30	00	
ILS (MOD) MODE SEL	272	16-11	000100	
MAP MODE SELECTED	272	16-11	000001	
PLAN MODE SELECTED	272	16-11	001000	
ILS (STD) MODE SEL	272	16-11	100000	
VOR (STD) MODE SEL	272	16-11	010000	
VOR (MOD) MODE SEL	272	16-11	000010	
SUM CHECK	272	17	NOT OK	OK
SPARE	272	18	1	0
AIRPORTS	272	23-19	10000	
NAV AIDS	272	23-19	00010	
RTE DATA	272	23-19	01000	
SPARE	272	23-19	00001	
WPT	272	23-19	00100	
MAP ORIENT	272	24	TRACK	HDG

EFIS CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
VOR/ILS ORIENT	272	25	TRACK	HDG
APPROACH MODE	272	9-27	001	
FULL COMPASS ROSE	272	29-27	010	
RSV TEST	272	29-27	100	
DEG PITCHREF S/B	273	19-11	NEG	POS 0.100
DEG PITCHREF	273	19-11	000000001	
0.200 DEG PITCHREF	273	19-11	000000010	
0.400 DEG PITCHREF	273	19-11	000000100	
0.800 DEG PITCHREF	273	19-11	000001000	
RA ALERT RESET	272	26	RESET	NOT RESET
1.600 DEG PITCHREF	273	19-11	000010000	
12.80 DEG PITCHREF	273	19-11	010000000	
3.200 DEG PITCHREF	273	19-11	000100000	
6.400 DEG PITCHREF	273	19-11	001000000	
FLT PATH DATA	273	20	ON	OFF
SPARE	273	21	1	0
SPARE	273	22	1	0
WXR DATA	273	23	WXR SEL	NOT SEL
10 MI RANGE SEL	273	29-24	000010	
160 MI RANGE SEL	273	29-24	100000	

EFIS CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
20 MI RANGE SEL	273	29-24	000100	
320 MI RANGE SEL	273	29-24	000000	
40 MI RANGE SEL	273	29-24	001000	
5 MI RANGE SEL	273	29-24	000001	
80 MI RANGE SEL	273	29-24	010000	

EFIS SG							
DIGITAL OUTPUT BUS CHART							
BUS NAME	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
SOURCE							
EFISSG (L C R)	A	1	E	A13 B13	429	LO	OUTPUT BUS

EFIS SG ID=25								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
GROUND SPEED	A	012	BCD	4	00	0-2000	ALWAYS POS	KNOTS
FLT DIR-ROLL	A	140	BNR	4	00	± 180	RIGHT	DEG
FLT DIR-PITCH	A	141	BNR	4	00	± 180	UP	DEG
A/T FAST SLOW CMD	A	142	BNR	4	00	± 32	OVERSPEED	KNOTS
RADIO HEIGHT	A	164	BNR	4	00	± 8192	ABOVE TOUCDN	FEET
LOCALIZER DEV	A	173	BNR	4	00	± .4	FLY RIGHT	DDM
GLIDESLOPE DEV	A	174	BNR	4	00	± .8	ABOVE BEAM	DDM
MODE DISCRETES #2	A	270	DIS	4	00	N/A	N/A	N/A
AFDS MODE STATUS-3	A	274	BNR	4	00	N/A	N/A	N/A
AFDS MODE STATUS-4	A	275	BNR	4	00	N/A	N/A	N/A
TRACK ANGLE TRUE	A	313	BNR	4	00	± 180	CW FROM NOR	DEG
TRUE HEADING	A	314	BNR	4	00	± 180	CW FROM NOR	DEG
TRACK ANGLE-MAG	A	317	BNR	4	00	± 180	CW FROM NOR	DEG
MAGNETIC HEADING	A	320	BNR	4	00	± 180	CW FROM NOR	DEG
PITCH ANGLE	A	324	BNR	4	00	± 180	UP	DEG
ROLL ANGLE	A	325	BNR	4	00	± 180	RT WING DN	DEG
EFISSG MAINT WORD	A	350	DIS	4	00	N/A	N/A	N/A
CP & DU MAINT WORD	A	351	DIS	4	00	N/A	N/A	N/A
SENS STAT MAINT WD	A	352	DIS	4	00	N/A	N/A	N/A
MODE DISCRETES #1	A	353	DIS	4	00	N/A	N/A	N/A

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SPARE	270	11	1	0
SPARE	270	12	1	0
SPARE	270	13	1	0
DH ALERT	270	14	ALERT	OK
DH+DELTA (H) ALERT	270	15	ALERT	OK
H ALERT	270	16	ALERT	OK
FMC/IRS GROUND SPD	270	17	FMC	IRS
FMC/IRS TRACK DATA	270	18	FMC	IRS
MAG/TRUE DATA	270	19	TRUE	MAG
SPARE	270	20	1	0
SPARE	270	21	1	0
SPARE	270	22	1	0
SPARE	270	23	1	0
SPARE	270	24	1	0

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SPARE	270	25	1	0
SPARE	270	26	1	0
SPARE	270	27	1	0
SPARE	270	28	1	0
SPARE	270	29	1	0
SG OVERTEMP	350	11	FAULT	OK
SG MAIN PROCESSOR	350	12	FAULT	OK
SG MAIN MEMORY	350	13	FAULT	OK
SG DISPLAY DRIVE	350	14	FAULT	OK
SG DSPLY SEQUENCER	350	15	FAULT	OK
SG CONTROLLER	350	16	FAULT	OK
SG DIGTAL OUTPUT	350	17	FAULT	OK
SG I/O PROC NO.1	350	18	FAULT	OK
SG I/O PROC NO.2	350	19	FAULT	OK
SG I/O PROC NO.3	350	20	FAULT	OK
SPARE	350	21	1	0

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SPARE	350	22	1	0
SPARE	350	23	1	0
SPARE	350	24	1	0
SPARE	350	25	1	0
SPARE	350	26	1	0
SPARE	350	27	1	0
SPARE	350	28	1	0
SPARE	350	29	1	0
SPARE	351	11	1	0
L-EADI ANOMALIES	351	12	FAULT	OK
L-EADI BEAM FAIL	351	13	FAULT	OK
L-EADI OVERTEMP	351	14	FAULT	OK
R-EADI ANOMALIES	351	15	FAULT	OK
R-EADI BEAM FAIL	351	16	FAULT	OK

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
R-EADI OVERTEMP	351	17	FAULT	OK
L-EHSI ANOMALIES	351	18	FAULT	OK
L-EHSI BEAM FAIL	351	19	FAULT	OK
L-EHSI OVERTEMP	351	20	FAULT	OK
R-EHSI ANOMALIES	351	21	FAULT	OK
R-EHSI BEAM FAIL	351	22	FAULT	OK
R-EHSI OVERTEMP	351	23	FAULT	OK
L-CP FAULT	351	24	FAULT	OK
R-CP FAULT	351	25	FAULT	OK
SPARE	351	26	1	0
SPARE	351	27	1	0
SPARE	351	28	1	0
SPARE	351	29	1	0
L-FCC DATA FAULT	352	11	FAULT	OK
C-FCC DATA FAULT	352	12	FAULT	OK
R-FCC DATA FAULT	352	13	FAULT	OK
L-FMC DATA FAULT	352	14	FAULT	OK
R-FMC DATA FAULT	352	15	FAULT	OK
TMC DATA FAULT	352	16	FAULT	OK
L-IRS DATA FAULT	352	17	FAULT	OK
C-IRS DATA FAULT	352	18	FAULT	OK
R-IRS DATA FAULT	352	19	FAULT	OK

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
L-ADC DATA FAULT	352	20	FAULT	OK
R-ADC DATA FAULT	352	21	FAULT	OK
L-VOR DATA FAULT	352	22	FAULT	OK
R-VOR DATA FAULT	352	23	FAULT	OK
L-DME DATA FAULT	352	24	FAULT	OK
R-DME DATA FAULT	352	25	FAULT	OK
RA DATA FAULT	352	26	FAULT	OK
ILS DATA FAULT	352	27	FAULT	OK
MLS DATA FAULT	352	28	FAULT	OK
WXR DATA FAULT	352	29	FAULT	OK
R EADI FAULT	353	12	FAULT	OK
SPARE	353	13	1	0
R CP FAULT	353	15	FAULT	OK
R EHSI FAULT	353	17	FAULT	OK
SG FAULT	353	18	FAULT	OK
SPARE	353	19	1	0
SPARE	353	20	1	0
SPARE	353	21	1	0
SPARE	353	22	1	0
SPARE	353	23	1	0
SPARE	353	24	1	0

EFIS SG				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SPARE	353	25	1	0
SPARE	353	26	1	0
SPARE	353	27	1	0
SPARE	353	28	1	0
SPARE	353	29	1	0

STANDBY MAGNETIC COMPASS

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
COMPASS – STANDBY MAGNETIC, N99		1	FLT COMPT, P5	34-23-01

Standby Magnetic Compass – Component Index
Figure 101

E58231

STANDBY MAGNETIC
COMPASS, N99

SEE (A)

P5 PANEL

FLIGHT COMPARTMENT

15 12 E 6

NS EW

STANDBY MAGNETIC COMPASS, N99

(A)

Standby Magnetic Compass – Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

33653

34-23-00

01   Page 102
Aug 22/03

STANDBY MAGNETIC
COMPASS, N99

SEE (B)

P5 PANEL

FLIGHT COMPARTMENT

E-W

N-S

5   12   E   6

STANDBY MAGNETIC COMPASS, N99

(B)

Standby Magnetic Compass – Component Location
Figure 102 (Sheet 2)

EFFECTIVITY

ALL

34-23-00

01   Page 103
Aug 22/03

W36759

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CHARGER – ISFD DEDICATED BATTERY, M11331 [1]	--	1	MAIN EQUIPMENT CTR, E1-4	34-24-01
CIRCUIT BREAKER –			FLT COMPT, P11	
ISFD, C2023 [2]	--	1	FLT COMPT, P1-3	*
STBY ATT IND, C619 [1]		1	11A5	*
STBY ILS IND, C604 [1]		1	11A9	*
DISPLAY – INTEGRATD STANDBY FLIGHT DISPLAY, N177 [1]	--	1	FLT COMPT, P1-3	34-24-01
INDICATOR – STANDBY ATTITUDE ILS, N20	--	1	FLT COMPT, P1	34-24-01
UNIT – STATIC INV/ILS PRCS, M917	--	1	119AL, MAIN EQUIP CTR, E1-4	34-24-02

* SEE THE WDM EQUIPMENT LIST

[1]▷   AIRPLANES WITHOUT INTEGRATED STANDBY FLIGHT DISPLAY

[2]▷   AIRPLANES WITH INTEGRATED STANDBY FLIGHT DISPLAY

Standby Attitude Reference System – Component Index
Figure 101

EFFECTIVITY

ALL

E70682

34-24-00

01   Page 101
Apr 22/03

STATIC INV/ILS
PROCESSOR
UNIT, M917
(E1-4)

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

119AL

MAIN EQUIPMENT CENTER

STANDBY ATTITUDE
ILS INDICATOR, N20

SEE (A)

P1 PANEL

P11 PANEL

FLIGHT COMPARTMENT

SAS

GYRO

20   20

G/S

20   20

ILS
OFF
ILS   INOP   LOC

1

STANDBY ATTITUDE ILS INDICATOR, N20

(A)

SAS |1▷ MTH 275-299: B/CRS (INSTEAD OF INOP)

Standby Attitude Reference System – Component Location
Figure 102

EFFECTIVITY

ALL

34-24-00

SAS   Page 102
Feb 10/97

G15782

STANDBY ATTITUDE
INDICATION PROBLEMS

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A2,11A5,11A9,11B7

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 | REPLACE THE STANDBY ATTITUDE INDICATOR, N20 (MM 34-24-01/201).
    IF THE PROBLEM CONTINUES, REPLACE THE STATIC INVERTER/ILS PROCESSOR, M917 (MM 34-24-01/201).

Standby Attitude Indication Problems
Figure 103

EFFECTIVITY
AIRPLANES WITH STANDBY
ATTITUDE INDICATOR

49696

34-24-00

                01   Page 103
                        Apr 22/03

INSTRUMENT LANDING SYSTEM (ILS)

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ANTENNA – L DUAL G/S, M250	1	1	111A1, NOSE RADOME	34–31–03
ANTENNA – L DUAL LOC, M248	1	1	111A1, NOSE RADOME	34–31–04
ANTENNA – R/C DUAL G/S, M251	1	1	111A1, NOSE RADOME	34–31–03
ANTENNA – R/C DUAL LOC, M249		1	111A1, NOSE RADOME	34–31–04
CIRCUIT BREAKER –			FLT COMPT, P11	
ILS CENTER, C606		1	11A2	*
ILS LEFT, C603		1	11E10	*
ILS RIGHT, C605		1	11E31	*
INDICATOR – (FIM 34–22–00/101)				
LEFT ELECTRONIC ATTITUDE DIRECTOR, N4				
LEFT ELECTRONIC HORIZ SITUATION, N5				
RIGHT ELECTRONIC ATTITUDE DIRECTOR, N44				
RIGHT ELECTRONIC HORIZ SITUATION, N45				
INDICATOR – (FIM 34–24–00/101)				
STBY ATTITUDE ILS, N20				
PANEL – (FIM 23–51–00/101)				
CAPTAIN AUDIO SELECTOR, M70				
F/O AUDIO SELECTOR, M71				
FIRST OBSERVER AUDIO SELECTOR, M98				
PANEL – (FIM 34–22–00/101)				
LEFT EFIS CONTROL, M94				
RIGHT EFIS CONTROL, M93				
PANEL – ILS CONTROL, M87	2	1	FLT COMPT, P8	34–31–02
SYMBOL GENERATOR – (FIM 34–22–00/101)				
CENTER ELECTRONIC FLT INST SYS, M149				
LEFT ELECTRONIC FLT INST SYS, M148				
RIGHT ELECTRONIC FLT INST SYS, M150				
RECEIVER – CENTER ILS, M157	1	1	119AL, MAIN EQUIP CTR, E1–4	34–31–01
RECEIVER – LEFT ILS, M156	1	1	119AL, MAIN EQUIP CTR, E1–3	34–31–01
RECEIVER – RIGHT ILS, M158	1	1	119AL, MAIN EQUIP CTR, E1–5	34–31–01
RELAY – (FIM 31–01–36/101)				
SYS NO. 1 AIR/GND, K124				
RELAY – (FIM 31–01–37/101)				
SYS NO. 2 AIR/GND, K214				
SYS NO. 2 AIR/GND, K293				
UNIT – (FIM 34–24–00/101)				
STATIC INV/ILS PROCESS, M917				

* SEE THE WDM EQUIPMENT LIST

Instrument Landing System (ILS) – Component Index
Figure 101

EFFECTIVITY

ALL

34–31–00

01   Page 101
Nov 10/96

224141

P11 PANEL

GLIDE SLOPE/
LOCALIZER ANTENNAS
AND NOSE RADOME,
111AL

SEE (D) (E) SHT 2

ILS CONTROL
PANEL, M87   P8 PANEL

SEE (A)   FLIGHT COMPARTMENT

MAIN EQUIPMENT
CENTER, 119AL
SEE (B)

```
F                    F.
R    116.80          C   120
E                    R
Q          TEST      S
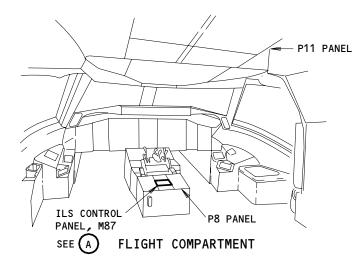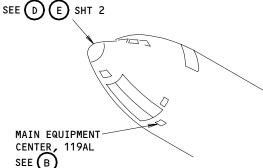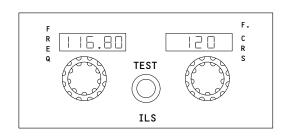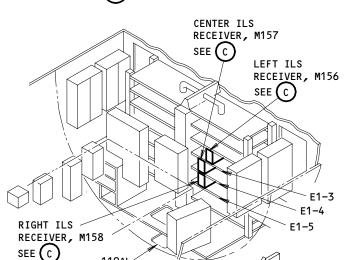
            ( )
            ILS
```

ILS CONTROL PANEL, M87

(A)

CENTER ILS
RECEIVER, M157
SEE (C)

LEFT ILS
RECEIVER, M156
SEE (C)

ILS   BENDIX
             AIR TRANSPORT AVIONICS

         ILS ⌈ ○
              ⌊ ○
         DATA IN ○
         TEST   ⊙

E1-3
E1-4
E1-5

RIGHT ILS
RECEIVER, M158
SEE (C)

119AL
             FWD

MAIN EQUIPMENT CENTER

(B)

LEFT, CENTER OR RIGHT ILS RECEIVER,
M156, M157, OR M158

(C)

ILS — Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

              ALL

190880

34-31-00

11   Page 102
          Aug 10/90

RIGHT/CENTER
DUAL LOCALIZER
ANTENNA, M249

FORWARD
BULKHEAD

LEFT
DUAL LOCALIZER
ANTENNA, M248

RIGHT/CENTER
DUAL GLIDE SLOPE
ANTENNA, M251

LEFT DUAL
GLIDE SLOPE
ANTENNA, M250

NOSE RADOME — OPEN

(D)

GLIDE SLOPE
DIRECTOR
ELEMENT

NOSE RADOME

(E)

ILS — Component Location (Detatils from Sht 1)
Figure 102 (Sheet 2)

EFFECTIVITY

ALL

34-31-00

183318

01   Page 103
Nov 10/96

> **PREREQUISITES**
>
> MAKE SURE THESE SYSTEMS WILL OPERATE:
>   EFIS (MM 34-22-00/501)
>   IRS (MM 34-21-00/501)
>
> MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
>   11A2,11A9,11E4,11E6,11E10,11E25,11E27,11E31,11F8,
>   11F9,11F29
>
> MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
>   ELECTRICAL POWER IS ON (MM 24-22-00/201)

ILS BITE PROCEDURE

```
1   PUSH AND HOLD THE TEST        NO      10   DID THE "DATA IN" LIGHTS    NO      20   REPLACE THE L (C)(R) ILS
SWITCH ON THE L (C)(R) ILS      ────────►  STAY ON?                  ────────►  RECEIVER, M156 (M157)(M158)
RECEIVER.                                                                      (MM 34-31-01/401).
    DO ALL THREE LIGHTS COME                        │
ON, GO OUT, AND THEN DOES THE                      YES
GREEN ILS LIGHT COME ON AND                         │                          21   REPLACE THE ILS CONTROL
STAY ON UNTIL THE SWITCH IS                         └──────────────────────►  PANEL, M87 (MM 34-31-02/401).
RELEASED?
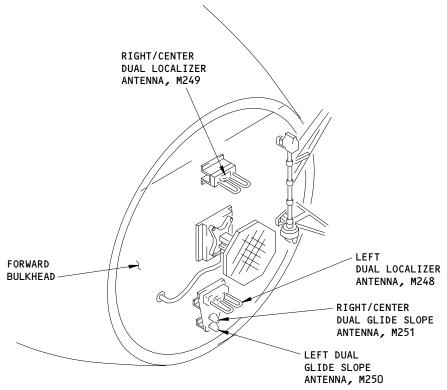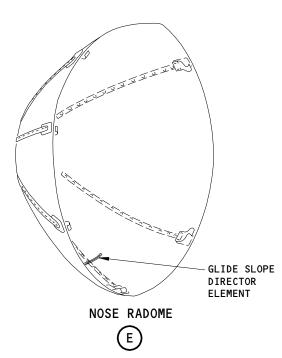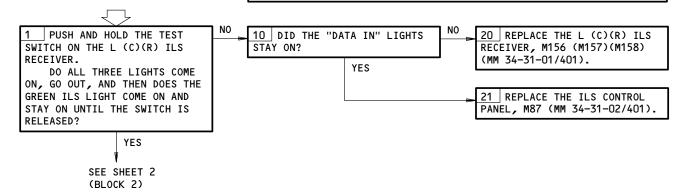
        │
       YES

  SEE SHEET 2
  (BLOCK 2)
```

ILS BITE Procedure
Figure 103 (Sheet 1)

224702

FROM SHEET 1
(BLOCK 1)

YES

2 | INITIALIZE AND ALIGN THE IRS (MM 34-21-00/501). PUT THE EFIS MODE SEL SWITCH ON THE EFIS CONTROL PANEL TO THE "ILS-EXP" POSITION. PUT THE SWITCH ON THE STANDBY ATTITUDE INDICATOR TO THE ILS MODE. PUT THE FRONT CRS ON THE ILS CONTROL PANEL TO THE SAME HEADING SHOWN ON THE EHSI, AND PUT THE FREQ TO ANY FREQ BUT PK. PUSH THE "EFI" SWITCH, ON THE LEFT AND RIGHT INSTRUMENT SOURCE SELECT PANEL, TO THE NORM POSITION.

   PUSH THE TEST SWITCH ON THE ILS CONTROL PANEL. LOOK FOR THE G/S AND LOC POINTERS, FLAGS AND SCALES AS FOLLOWS:

(FOR THE L AND R ILS LOOK AT THE R EHSI AND EADI. FOR THE C ILS LOOK AT THE STBY ATTITUDE INDICATOR).

1) THE FLAGS ARE SHOWN MOMENTARILY . THE SCALES ARE NOT SHOWN. THE POINTERS STAY OUT OF VIEW.
2) THE FLAGS ARE NOT SHOWN. THE SCALES ARE SHOWN. THE POINTERS STAY OUT OF VIEW.
3) THE G/S POINTERS MOVE ONE DOT UP. THE LOC POINTERS MOVE ONE DOT LEFT.
4) THE G/S POINTERS MOVE ONE DOT DOWN. THE LOC POINTERS MOVE ONE DOT RIGHT.
5) THE G/S AND LOC POINTERS GO BACK TO THE NORMAL POSITION AT THE END OF THE TEST.

   DOES THE CORRECT TEST SEQUENCE OCCUR?

YES

3 | THE SYSTEM IS OK.

NO →

11 | WERE ALL THE TEST INDICATIONS SATISFACTORY ON THE L (R) EHSI?

YES → 22 | REPLACE THE STATIC INVERTER/ILS PRCS, M917 (MM 34-24-02/401).
   IF THE PROBLEM CONTINUES, REPLACE THE STANDBY ATTITUDE INDICATOR, M20 (MM 34-24-01/201).

NO

12 | DID THE UNSATISFACTORY CONDITIONS OCCUR DURING THE ILS TEST?

NO → 23 | REPLACE THE L (R) EFIS SYMBOL GENERATOR, M148 (M150) (MM 34-22-01/401).

YES

13 | WERE ALL THE INDICATIONS SATISFACTORY ON THE STANDBY ATTITUDE INDICATOR?

YES → 24 | REPLACE THE CENTER EFIS SYMBOL GENERATOR, M149 (MM 34-22-01/401).

NO → 25 | REPLACE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401).

ILS BITE Procedure
Figure 103 (Sheet 2)

EFFECTIVITY

ALL

777397

34-31-00

02   Page 105
May 10/92

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
IRS INITIALIZED (MM 34-21-00/501)
EFIS (MM 34-22-00/501)

CB'S: 11E10,11E31

ABNORMAL ILS TEST
RESPONSE ON CAPT
(F/O) EADI & EHSI

| 1 | PUSH AND HOLD THE TEST SWITCH ON THE L (R) ILS RECEIVER. DOES THE RED ILS LIGHT COME ON AT THE END OF THE TEST? |

YES →

| 20 | REPLACE THE L (R) ILS RECEIVER, M156 (M158) (MM 34-31-01/401). |

NO ↓

| 2 | DOES THE RED DATA IN LIGHT COME ON AT THE END OF THE TEST? |

YES →

| 21 | REPLACE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401). IF THE PROBLEM CONTINUES, REMOVE THE ILS CONTROL PANEL. REMOVE THE L (R) ILS RECEIVER, M156 (M158)(34-31-01/401). EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE ILS CONTROL PANEL, CONNECTOR D155 (D601), PINS 13 AND 14 TO THE L (R) ILS RECEIVER, CONNECTOR D429B (D377B), PINS B13 AND C13 (WDM 34-31-11,-21). INSTALL THE ILS CONTROL PANEL AND THE ILS RECEIVER. |

NO ↓

| 3 | REMOVE THE L (R) EFIS SYMBOL GENERATOR, M148 (M150) (MM 34-22-01/401). MAKE SURE THE 429 INPUT BUS FROM THE L (R) ILS RECEIVER IS ACTIVE AT THE L (R) EFIS SYMBOL GENERATOR, CONNECTOR D425A (D373A), PINS C4 AND D4 (WDM 34-22-19,-29). IS THE BUS ACTIVE? |

YES →

| 22 | REPLACE THE L (R) EFIS SYMBOL GENERATOR, M148 (M150) (MM 34-22-01/401). |

NO →

| 23 | REMOVE THE L (R) ILS RECEIVER, M156 (M158) (MM 34-31-01/401). EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) ILS RECEIVER, CONNECTOR D429B (D377B), PINS B11 AND C11 TO THE L (R) EFIS SYMBOL GENERATOR, CONNECTOR D425A (D373A), PINS C4 AND D4 (WDM 34-22-19,-29). INSTALL THE ILS RECEIVER. INSTALL THE L (R) EFIS SYMBOL GENERATOR. |

Abnormal ILS Test Response on Capt (F/O) EADI & EHSI
Figure 104

33425

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
IRS INITIALIZED (MM 34-21-00/501)
EFIS (MM 34-22-00/501)

CB'S: 11E10,11E31

G/S AND LOC FLAGS
IN VIEW ON CAPT
(F/O) EHSI & EADI

| 1 | PUSH AND HOLD THE "TEST" SWITCH ON THE L (R) ILS RECEIVER. DOES THE GREEN "ILS" LIGHT COME AT THE END OF THE TEST? |

NO →

| 21 | REPLACE THE L (R) ILS RECEIVER, M156 (M158) (MM 34-31-01/401). |

YES

| 2 | REMOVE THE L (R) EFIS SYMBOL GENERATOR, M148 (M150) (MM 34-22-01/401). MAKE SURE THE 429 INPUT BUS FROM THE L (R) ILS RECEIVER IS ACTIVE AT THE L (R) SYMBOL GENERATOR, CON- NECTOR D425A (D373A), PINS C4 AND D4 (WDM 34-22-19,-29). IS THE BUS ACTIVE? |

YES →

| 22 | REPLACE THE L (R) EFIS SYMBOL GENERATOR, M148 (M150) (MM 34-22-01/401). |

NO

| 23 | REMOVE THE L (R) ILS RECEIVER, M156 (M158) (MM 34-31-01/401). EXAMINE AND REPAIR THE DATA BUS CIR- CUIT FROM THE L (R) ILS RECEIVER, CONNECTOR D429B (D377B), PINS B11 AND C11 TO THE L (R) EFIS SYMBOL GENER- ATOR, CONNECTOR D425A (D373A), PINS C4 AND D4 (WDM 34-22-19,-29). INSTALL THE ILS RECEIVER. INSTALL THE L (R) EFIS SYMBOL GENERATOR. |

G/S and LOC Flags in View on Capt (F/O) EHSI & EADI
Figure 105

EFFECTIVITY

ALL

33429

34-31-00

01   Page 107
Aug 10/90

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (MM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E10,11E31

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)
  IRS IS ALIGNED (34-21-00/501)

EHSI AND EADI —
BOTH G/S AND LOC
DEV POINTERS
MISSING (NCD)

1 | REPLACE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401).
   IF THE PROBLEM CONTINUES, REMOVE THE ILS CONTROL PANEL. REMOVE THE L (R) ILS RECEIVER, M156 (M158)
(MM 34-31-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE ILS CONTROL PANEL, CONNECTOR D155
(D601), PINS 14 AND 13 TO THE L (R) ILS RECEIVER, CONNECTOR D429B (D377B), PINS B13 AND C13
(WDM 34-31-11,-21).
   INSTALL THE ILS CONTROL PANEL AND THE ILS RECEIVER.

EHSI and EADI — Both G/S and LOC Dev Pointers Missing (NCD)
Figure 106

EFFECTIVITY

ALL

998965

34-31-00

01   Page 108
May 10/92

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
    STANDBY ATTITUDE REFERENCE SYSTEM (MM 34-24-00/501)

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
    11A2

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

FAULTY STANDBY
ATTITUDE INDICATOR
OPERATION

1 | PUSH AND HOLD THE TEST SWITCH ON THE CENTER ILS RECEIVER.
    DOES THE GREEN "ILS" LIGHT COME ON AT THE END OF THE TEST?

NO

11 | REPLACE THE C ILS RECEIVER, M157 (MM 34-31-01/401).

YES

2 | REMOVE THE STATIC INVERTER/PRCS, M917 (MM 34-24-02/401).
    MAKE SURE THE DATA BUS CIRCUIT FROM THE CENTER ILS RECEIVER IS ACTIVE AT THE STATIC INVERTER/ILS PRCS CONNECTOR, D137A, PINS A1 AND B1 (WDM 34-24-11).
    IS THE BUS ACTIVE?

YES

12 | REPLACE THE STATIC INVERTER/ILS PRCS, M917 (MM 34-24-02/401).
    IF THE PROBLEM CONTINUES, REPLACE THE STANDBY ATTITUDE INDICATOR, M20 (MM 34-24-01/201).

NO

13 | REMOVE THE C ILS RECEIVER, M157 (MM 34-31-01/401).
    EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE C ILS RECEIVER CONNECTOR, D417B, PINS C11 AND B11, TO THE STATIC INVERTER/ILS PRCS CONNECTOR, D137A, PINS A1 AND B1 (WDM 34-24-11).
    INSTALL THE ILS RECEIVER. INSTALL THE STATIC INVERTER/ILS PRCS.

Faulty Standby Attitude Indicator Operation
Figure 107

EFFECTIVITY

ALL

A35068

34-31-00

01   Page 109
            May 10/92

STBY ATT – BOTH
DEV POINTERS
MISSING (NCD)

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  STANDBY ATTITUDE REFERENCE SYSTEM (MM 34-24-00/501)

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
  11A2

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

1 | REPLACE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401).
    IF THE PROBLEM CONTINUES, REMOVE THE ILS CONTROL PANEL. REMOVE THE ILS RECEIVER, M157
(MM 34-31-01/401). REPAIR THE DATA BUS CIRCUIT AS NECESSARY FROM THE ILS CONTROL PANEL CONNECTOR, D603,
PINS 13 AND 14, TO THE C ILS RECEIVER CONNECTOR, D417B, PINS B13 AND C13 (WDM 34-31-31).
    INSTALL THE ILS CONTROL PANEL. INSTALL THE ILS RECEIVER.

Stby Att – Both Dev Pointers Missing (NCD)
Figure 108

EFFECTIVITY

ALL

A35100

01   Page 110
          May 10/92

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
STANDBY ATTITUDE REFERENCE SYSTEM (AMM 34-24-00/501)

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11A2

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

LOC (G/S) DEV
POINTER MISSING
ON STBY ATT IND

1 REMOVE THE C ILS RECEIVER,
M157 (AMM 34-31-01/201).
DO THE ANTENNA CABLE CHECK
PROCEDURE (AMM 20-10-32/201)
AT THE C ILS RECEIVER CONNEC-
TOR, D417C, PINS 1 AND C1
(PINS 5 AND C5)(WDM 34-31-31).
IS THE ANTENNA CIRCUIT OK?

YES

2 INSTALL THE C ILS
RECEIVER, M157 (AMM 34-31-01/
401).
REPLACE THE R/C DUAL LOC
(G/S) ANTENNA, M249 (M251)
(AMM 34-31-03/401; 34-31-04/
401).

NO

3 REPLACE THE LOC (G/S)
ANTENNA CIRCUIT FROM THE C ILS
RECEIVER CONNECTOR, D417C,
PINS 1 AND C1 (PINS 5 AND C5),
TO THE R/C DUAL LOC (G/S)
ANTENNA CONNECTOR, D15 (D19),
PINS A1 AND C1
(WDM 34-31-31).
INSTALL THE C ILS
RECEIVER, M157 (AMM 34-31-05/
401).

Loc (G/S) Dev Pointer Missing on Stby Att Ind
Figure 109

EFFECTIVITY

33433

ALL

34-31-00

01   Page 111
Nov 10/95

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  IRS (AMM 34-21-00/501)
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E10,11E31

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

LOC DEV POINTER
NOT DISPLAYED

1 | ALIGN THE IRS IN THE NAV MODE (AMM 34-21-00/501).
   PUSH AND HOLD THE TEST SWITCH ON THE L (R) ILS RECEIVER.
   DOES THE RED ILS LIGHT COME ON AT THE END OF THE TEST?

YES

20 | REPLACE THE L (R) ILS RECEIVER, M156 (M158) (AMM 34-31-01/401).

NO

10 | REMOVE THE L (R) ILS RECEIVER, M156 (M158) (AMM 34-31-01/401).
   DO THE ANTENNA CABLE CHECK PROCEDURE (AMM 20-10-32/201) AT L (R) ILS RECEIVER, CONNECTOR D429C (D377C), PINS 1 AND C1.
   IS THE LOC ANTENNA CABLE OK?

YES

21 | REPLACE THE L (R/C) DUAL LOC ANTENNA, M248 (M249) (AMM 34-31-04/401).

NO

22 | REPLACE THE ANTENNA CIR-CUIT FROM THE L (R) ILS RECEIVER, CONNECTOR D429C (D377C), PINS 1 AND C1 TO THE L (R/C) DUAL LOC ANTENNA, CON-NECTOR D11 (D13), PINS A1 AND C1 (WDM 34-31-11,-21).
   IF THE PROBLEM CONTINUES, REPLACE THE L (R) ILS RECEIVER, M156 (M158) (AMM 34-31-01/401).

Loc Dev Pointer Not Displayed
Figure 110

161993

```
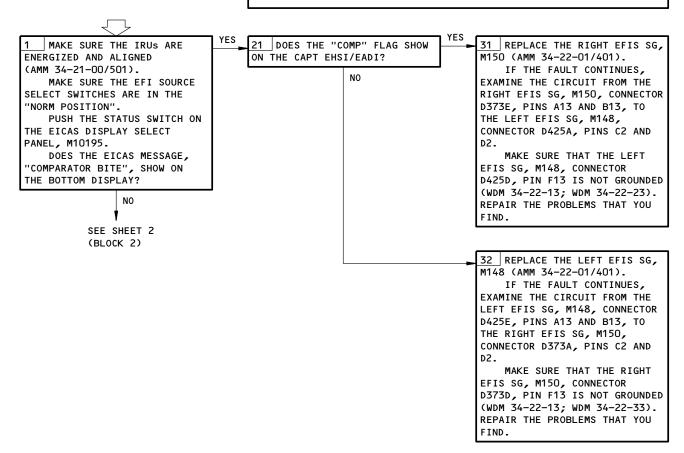PREREQUISITES
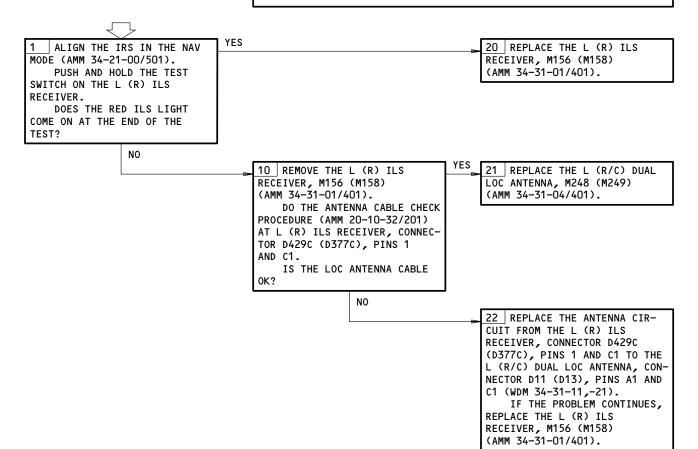
MAKE SURE THESE SYSTEMS WILL OPERATE:
  IRS (AMM 34-21-00/501)
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E10,11E31

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

NOTE: THE GLIDESLOPE DEVIATION POINTER IS REMOVED
        FROM VIEW ON THE EADI AND EHSI (ILS MODE) WHEN
        THE DIFFERENCE BETWEEN THE AIRPLANE TRACK ANGLE
        AND THE SET RUNWAY HEADING IS MORE THAN 90° OR
        WHEN THE BACKCOURSE IS SET.

G/S DEV POINTER NOT DISPLAYED

```
1  ALIGN THE IRS IN THE NAV
MODE (AMM 34-21-00/501).
   SET THE FRONT CRS ON THE
ILS CONTROL PANEL TO THE AIR-
PLANE HEADING SHOWN ON THE
EHSI.
   SET THE SWITCH ON THE
STANDBY ATTITUDE/ILS INDICA-
TOR, TO ILS.
   PUSH AND HOLD THE TEST
SWITCH ON THE L (R) ILS
RECEIVER.
   DOES THE RED ILS LIGHT
COME ON AT THE END OF THE
TEST?
```

YES

```
20  REPLACE THE L (R) ILS
RECEIVER, M156 (M158)
(AMM 34-31-01/401).
```

NO

```
10  REMOVE THE L (R) ILS
RECEIVER, M156 (M158)
(AMM 34-31-01/401).  DO THE
ANTENNA CABLE CHECK PROCEDURE
(AMM 20-10-32/201) AT THE
L (R) ILS RECEIVER, CONNECTOR
D429C (D377C), PINS 5 AND C5.
   IS THE G/S ANTENNA CABLE
OK?
```

YES

```
21  REPLACE THE L (R/C) DUAL
G/S ANTENNA, M250 (M251)
(AMM 34-31-03/401).
```

NO

```
22  REPLACE THE ANTENNA CIR-
CUIT FROM THE L (R) ILS
RECEIVER, CONNECTOR D429C
(D377C), PINS 5 AND C5 TO THE
L (R/C) DUAL LOC ANTENNA, CON-
NECTOR D17 (D21), PINS A1 AND
C1 (WDM 34-31-11,-21).
   IF THE PROBLEM CONTINUES,
REPLACE THE L (R) ILS
RECEIVER, M156 (M158)
(AMM 34-31-01/401).
```

G/S Dev Pointer Not Displayed
Figure 111

160610

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  EFIS (AMM 34-22-00/501)
  ILS (AMM 34-31-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A2,11E10,11E31

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  IRS INITIALIZED (AMM 34-21-00/501)

G/S — FALSE OR LATE
CAPTURE

1 OPEN THE NOSE RADOME
(AMM 53-12-01/201).
    DO A CHECK ON THE G/S
DIRECTOR ELEMENT
(AMM 34-31-03/401).
    IS THE G/S DIRECTOR ELE-
MENT LOOSE OR DAMAGED?

— YES →

30 REPLACE THE G/S DIRECTOR
ELEMENT (AMM 53-12-05/401).

NO

2 DO A CHECK ON THE MCDP
FLIGHT FAULTS
(AMM 22-00-02/101 FIG. 101).
    IS THE MCDP MESSAGE, "ILS
G/S NCD" SHOWN?

— YES →

10 DO THE ANTENNA CABLE CHECK
PROCEDURE (AMM 20-10-32/201)
FOR THE APPLICABLE L (C,R) ILS
RECEIVER, CONNECTOR D429C
(D417C,D377C), PINS 5, AND C5.
    IS THE ANTENNA CABLE OK?

— YES →

31 REPLACE THE INDICATED
L (C,R) DUAL G/S ANTENNA
(M248, LEFT)(M251, RIGHT OR
CENTER)(AMM 34-31-03/401).

NO

NO

32 REMOVE THE L (C,R) ILS
RECEIVER, M156 (M157,M158)
(AMM 34-31-01/401).
    EXAMINE THE CIRCUIT FROM
THE APPLICABLE L (C,R) ILS
RECEIVER, CONNECTOR D429C
(D417C,D377C), PINS 5,C5, TO
DUAL G/S ANTENNA, CONNECTOR
D17 (D19,D21)(WDM 34-31-11,
-21,-31). REPAIR THE PROBLEMS
THAT YOU FIND.
    INSTALL THE ILS RECEIVER.

3 IS ONE OF THESE MCDP
MESSAGES SHOWN?

ILS L
ILS C
ILS R

— YES →

33 REPLACE THE APPLICABLE
L (C,R) ILS RECEIVER, M156
(M157,M158)(AMM 34-31-01/401).

NO

SEE SHEET 2
(BLOCK 4)

G/S — False or Late Capture
Figure 111A (Sheet 1)

EFFECTIVITY

ALL

34-31-00

01   Page 114
          Aug 22/99

182850

FROM SHEET 1
(BLOCK 3)

↓ NO

| 4 | IS ONE OF THESE MCDP MESSAGES SHOWN?
"ILS/FCC L"
"ILS/FCC C"
"ILS/FCC R" |

→ YES

| 11 | PUSH THE TEST SWITCH SHOWN ON THE L (C,R) ILS RECEIVER.
DOES THE RED LIGHT COME ON AT THE END OF THE TEST CYCLE? |

→ YES

| 34 | REPLACE THE APPLICABLE L (C,R) ILS RECEIVER, M156, (M157,M158)(MM 34-31-01/401). |

NO (from block 11)

| 35 | DO THE MCDP GROUND TEST O1-FCC PROCEDURE (FIG. 1O4, BLOCK 1) FOR THE APPLICABLE L (C,R) FCC. |

NO (from block 4)

| 36 | REPLACE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401).
IF THE PROBLEM CONTINUES, REMOVE THE L (C,R) ILS RECEIVER, M156 (M157,M158) (MM 34-31-01/401).
EXAMINE AND REPAIR THE CIRCUIT BEWTEEN THE ILS CON-TROL PANEL, CONNECTOR D155 (D603,D601), PINS 13,14, AND THE ILS RECEIVER, CONNECTOR D429B (417B,D377B), PINS B13, C13, (WDM 34-31-11,-21,-31).
INSTALL THE ILS RECEIVER. |

G/S – False or Late Capture
Figure 111A (Sheet 2)

777354

1. ARINC Data Bus Charts
    A. General

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
             DAMAGE TO THE CONNECTORS CAN OCCUR.

    (1) ARINC 429 data bus charts give the necessary data to analyze ARINC
        429 transmitters, receivers, and data buses. To do the test, use
        terminal blocks, or at the LRU connectors use a breakout box.
    B. Equipment
    (1) Standard multi-meter
    (2) Data Bus Analyzer – 429EBP; JcAIR Instrumentation (preferred)
                            400 Industrial Parkway,
                            Industrial Airport, KS 66031
                          – 429EBP; Interface Technology (optional)
                            150 E. Arrow Highway,
                            San Dimas, CA 91773
    (3) Breakout box A34011-1 (preferred)
                     A34011-112 (optional)

ILS							
DIGITAL OUTPUT BUS CHART							
BUS NAME SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
ILS (L C R)	A	1	B	B07 C07	429	LO	ILS OUTPUT #1
ILS (L C R)	A	2	B	B11 C11	429	LO	ILS OUTPUT #2

ILS ID = 010							
OCTAL LABELS CHART							
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
SEL RUNWAY HDG-D	A	017	BCD	5	00	0-359	ALWAYS POS	DEC
ILS FREQUENCY	A	033	BCD	5	00	108-111.95	ALWAYS POS	MHZ
LOCALIZER DEV	A	173	BNR	16	00	+-.4	FLY RIGHT	DDM
GLIDESLOPE DEV	A	174	BNR	16	00	+-.8	FLY DOWN	DDM

ILS				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
TUNE INHIBIT	173	11	INHIBIT	NORMAL
TUNE INHIBIT	174	11	INHIBIT	NORMAL

ILS CP							
DIGITAL OUTPUT BUS CHART							
BUS NAME SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
ILSCP (C)	A	1		14 13	429	LO	ILS FREQ-L
ILSCP (C)	A	2		14 13	429	LO	ILS FREQ-R
ILSCP (C)	A	3		14 13	429	LO	ILS FREQ-C

ILS CP ID=OBO								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
SEL RUNWAY HDG-D	A	017	BCD	5	00	0-359	CW FROM N	DEC
ILS FREQUENCY	A	033	BCD	5	00	108-111.95	ALWAYS POS	MHZ
DME FREQUENCY	A	035	BCD	5	00	108-135.95	ALWAYS POS	MHZ

MARKER BEACON SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ANTENNA – MARKER BEACON, M243	--	1	BOTTOM FWD FUSELAGE	34-32-01
CIRCUIT BREAKER	--		FLT COMPT, P11	*
VOR/MKR L, C595		1	11A1	*
LIGHT – CAPT INNER MARKER BEACON LIGHT, L585	--	1	FLT COMPT, P1	*
LIGHT – CAPT MIDDLE MARKER BEACON LIGHT, L586	--	1	FLT COMPT, P1	*
LIGHT – CAPT OUTER MARKER BEACON LIGHT, L587	--	1	FLT COMPT, P1	*
LIGHT – F/O INNER MARKER BEACON LIGHT, L588	--	1	FLT COMPT, P3	*
LIGHT – F/O MIDDLE MARKER BEACON LIGHT, L589	--	1	FLT COMPT, P3	*
LIGHT – F/O OUTER MARKER BEACON LIGHT, L590	--	1	FLT COMPT, P3	*
PANEL – (REF 23-51-00, FIG. 101)				
CAPTAIN AUDIO SELECTOR, M70				
F/O AUDIO SELECTOR, M71				
FIRST OBSERVER AUDIO SELECTOR, M98				
RECEIVER – LEFT VOR/MKR, M186	--	1	119AL, MAIN EQUIP CTR, E2-2	34-51-01

* SEE THE WDM EQUIPMENT LIST

Marker Beacon System – Component Index
Figure 101

EFFECTIVITY

ALL

45629

34-32-00

01   Page 101
May 10/96

P11 PANEL

P1 PANEL

P3 PANEL

MAIN EQUIPMENT
CENTER

SEE B

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

MARKER BEACON
ANTENNA, M243

SEE C

CAPTAIN'S
MARKER BEACON
LIGHT L585,
L586, L587

SEE A

FIRST OFFICER'S
MARKER BEACON
LIGHT L588,
L589, L590

SEE A

FLIGHT COMPARTMENT

LEFT VOR/MARKER
RECEIVER, M186
(E2-2)

SEE D

INNER/
AIRWAYS W — L585 OR
L588

MIDDLE A — L586 OR
L589

OUTER B — L587 OR
L590

MARKER BEACON LIGHTS

A

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

FWD

MAIN EQUIPMENT CENTER

B

VOR/MKR

VOR
MKR
DATA IN
TEST

LEFT VOR/MARKER
RECEIVER, M186

D

FWD

MARKER BEACON ANTENNA, M243

C

Component Location
Figure 102

EFFECTIVITY

ALL

183122

34-32-00

04   Page 102
Apr 22/02

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A1, 11C25, 11C26, 11G29, 11G30, 11R3

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

MARKER BEACON
PROBLEM

1 PUSH AND HOLD THE TEST SWITCH ON THE FRONT PANEL OF THE LEFT VOR/MKR RECEIVER.
DOES THE RED "MKR" TEST LIGHT STAY ON AT THE END OF THE TEST?

— YES → **21** REPLACE THE LEFT VOR/MKR RECEIVER, M186 (AMM 34-51-01/401).

— NO →

2 DO ALL THE MARKER BEACON LIGHTS, ON THE CAPT'S AND F/O'S INSTRUMENT PANELS, COME ON WHILE THE TEST SWITCH IS HELD?

— NO → **11** DOES THE FAILURE OCCUR ON THE CAPT'S AND F/O'S MARKER BEACON LIGHTS?

— YES → **22** REPLACE THE LEFT VOR/MKR RECEIVER, M186 (AMM 34-51-01/401).

— NO → **23** REPLACE THE APPLICABLE CAPT (F/O) MARKER BEACON LIGHT ASSY, L585,L586,L587 (L588,L589,L590)(AMM 33-16-02/201).

— YES →

12 REMOVE THE LEFT VOR/MKR RECEIVER, M186 (AMM 34-51-01/401).
DO THE ANTENNA CABLE CHECK PROCEDURE (AMM 20-10-32/201) AT THE LEFT VOR/MKR RECEIVER, CONNECTOR D329C, PINS 5 AND C5 (WDM 34-32-11).
IS THE MARKER BEACON ANTENNA CABLE OK?

— YES → **24** INSTALL THE LEFT VOR/MKR RECEIVER, M186 (AMM 34-51-01/401).
REPLACE THE MARKER BEACON ANTENNA, M243 (AMM 34-32-01/401).

— NO → **25** REPLACE THE MARKER BEACON ANTENNA CABLE CIRCUIT FROM THE LEFT VOR/MKR RECEIVER, CONNECTOR D329C, PINS 5 AND C5, TO THE MARKER BEACON ANTENNA, CONNECTOR D83, PINS A1 AND C1 (WDM 34-32-11).
INSTALL THE LEFT VOR/MKR RECEIVER, M186 (AMM 34-51-01/401).

Marker Beacon Problem
Figure 103

RADIO ALTIMETER SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ANTENNA – RADIO ALTIMETER RECEIVER, M253, M255,M257	--	3	BOTTOM FORWARD FUSELAGE	34-33-02
ANTENNA – RADIO ALTIMETER TRANSMITTER, M252,M254,M256	--	3	BOTTOM FORWARD FUSELAGE	34-33-02
CIRCUIT BREAKERS –	--		FLIGHT COMPARTMENT, P11	
RAD ALTM CENTER, C602		1	11F20	*
RAD ALTM LEFT, C600		1	11F5	*
RAD ALTM RIGHT, C601		1	11F26	*
COMPUTER – (REF 34-41-00, FIG. 101)				
LEFT EICAS, M10181				
RIGHT EICAS, M10182				
INDICATOR – (REF 34-22-00, FIG. 101)				
LEFT ELECTRONIC ATTITUDE DIRECTOR, N4				
RIGHT ELECTRONIC ATTITUDE DIRECTOR, N44				
RELAY – (REF 31-01-36, FIG. 101)				
SYS NO. 1 AIR/GND, K124				
SYS NO. 2 AIR/GND, K214				
SYS NO. 2 AIR/GND, K293				
SYMBOL GENERATOR – (REF 34-22-00, FIG. 101)				
CENTER EFIS, M149				
LEFT EFIS, M148				
RIGHT EFIS, M150				
TRANSMITTER/RECEIVER – CENTER RAD ALTM, M204	--	1	821, FWD CARGO COMPT, E5-1	34-33-02
TRANSMITTER/RECEIVER – LEFT RAD ALTM, M202	--	1	821, FWD CARGO COMPT, E5-1	34-33-02
TRANSMITTER/RECEIVER – RIGHT RAD ALTM, M203	--	1	821, FWD CARGO COMPT, E5-1	34-33-02

* SEE THE WDM EQUIPMENT LIST

Radio Altimeter System – Component Index
Figure 101

EFFECTIVITY

ALL

224763

34-33-00

01   Page 101
Aug 10/97

FORWARD CARGO
DOOR, 821

LEFT, RIGHT, OR CENTER
RA TRANSMITTER ANTENNA,
M252,M254,M256

SEE Ⓐ

LEFT, RIGHT, OR CENTER
RA RECEIVER ANTENNA,
M253,M255,M257

SEE Ⓐ

LEFT, RIGHT OR CENTER RADIO ALTIMETER ANTENNA,
M252,M253,M254,M255,M256,M257
(EXAMPLE)

Ⓐ

RIGHT RADIO ALTIMETER
RECEIVER/TRANSMITTER, M203
SEE Ⓑ

CENTER RADIO ALTIMETER
RECEIVER/TRANSMITTER, M204
SEE Ⓑ

FORWARD CARGO
DOOR, 821

LEFT RADIO ALTIMETER
RECEIVER/TRANSMITTER, M202
SEE Ⓑ

E5-1

MID EQUIPMENT CENTER, E5

○ TEST ─── TEST SWITCH

○ SYSTEM OK
○ UNIT   STATUS
○ ANT   LIGHTS
○ IND

LEFT, RIGHT OR CENTER RADIO
ALTIMETER RECEIVER/TRANSMITTER,
M202,M203 OR M204

Ⓑ

Radio Altimeter System – Component Location
Figure 102

EFFECTIVITY

ALL

61107

34-33-00

07   Page 102
Nov 10/90

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11F5,11F20,11F26

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

RADIO ALTITUDE
HEIGHT ON THE CAPT
(F/O) EADI IS
INACCURATE

1 | PUSH AND HOLD THE "TEST" SWITCH ON THE LEFT (RIGHT) RA R/T.
DOES THE GREEN LIGHT COME ON AND STAY ON?

— NO →

21 | REPLACE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

YES

2 | DOES THE RA DISPLAY SHOW 40 ±2 FEET ON THE LEFT (RIGHT) EADI?

— YES →

11 | REMOVE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).
DO AN ANTENNA CABLE CHECK (AMM 20-10-32/201) BETWEEN THE LEFT (CENTER,RIGHT) RECEIVE AND TRANSMIT ANTENNA AND THE LEFT (CENTER,RIGHT) RA R/T, CONNECTOR D401B AND D401A (D405A AND D405B, D403A AND D403B), PIN 71 (WDM 34-33-11,-21,-31).
ARE THE ANTENNA CABLES OK?

— NO →

22 | REPAIR OR REPLACE THE DEFECTIVE CABLE (WDM 34-33-11, -21,-31).
INSTALL THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

NO

YES

12 | INSTALL THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).
DO AN ANTENNA BONDING CHECK (AMM 34-33-02/401) BETWEEN THE ANTENNA AND AIRPLANE SKIN.
IS THE RESISTANCE 0.025 OHM MAXIMUM?

— NO →

23 | REMOVE AND INSTALL THE LEFT (CENTER,RIGHT) RA TRANSMIT AND RECEIVE ANTENNAS, M252,M253 (M256,M257 AND M254, M255)(AMM 34-33-02/401).

— YES →

24 | REPLACE THE LEFT (CENTER, RIGHT) RA TRANSIT AND RECEIVE ANTENNAS, M252,M253 (M256, M257 AND M254,M255) (AMM 34-33-02/401).

25 | REPLACE THE LEFT (CENTER, RIGHT) EFIS SYMBOL GENERATOR, M148 (M149,M150) (AMM 34-22-01/401).
IF THE PROBLEM CONTINUES, REPLACE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

Radio Altitude Height on the Capt (F/O) EADI Is Inaccurate
Figure 103

35125

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A7,11E3,11E4,11E24,11E25,11F5,11F8,11F9,11F20,
  11F24,11F26,11F29

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

RA FLAG DISPLAYED
ON CAPT (F/O) EADI

| 1 | PUSH AND HOLD THE "TEST" SWITCH ON THE LEFT (RIGHT) RA R/T. DOES A RED LED COME ON AND STAY ON? |

YES →

| 10 | DID THE LEFT (RIGHT) RA R/T ANT LED COME ON? |

NO →

| 20 | REPLACE THE LEFT (RIGHT) RA R/T, M202 (M203) (AMM 34-33-01/401). |

YES ↓

| 11 | REMOVE THE LEFT (RIGHT) RA R/T, M202 (M203) (AMM 34-33-01/401). DO AN ANTENNA CABLE CHECK (AMM 20-10-32/201) BETWEEN THE LEFT (RIGHT) RECEIVE AND TRANSMIT ANTENNA AND THE LEFT (RIGHT) RA R/T, CONNECTOR D401B AND D401A (D403A AND D403B), PIN 71 (WDM 34-33-11, -21). ARE THE ANTENNA CABLES OK? |

YES →

| 21 | INSTALL THE LEFT (RIGHT) RA R/T, M202 (M203) (AMM 34-33-01/401). REPLACE THE LEFT (RIGHT) RA TRANSMIT AND RECEIVE ANTENNAS, M252,M253 (M254, M255)(AMM 34-33-02/401). |

NO →

| 22 | REPAIR OR REPLACE THE DEFECTIVE CABLE (WDM 34-33-11, -21). INSTALL THE LEFT (RIGHT) RA R/T, M202 (M203) (AMM 34-33-01/401). |

NO →

| 12 | DOES THE RA DISPLAY SHOW 40 ±2 FEET ON THE LEFT (RIGHT) EADI? |

YES →

| 23 | THIS IS A SINGLE INTER-MITTENT FAULT AND NO CORREC-TIVE ACTION IS RECOMMENDED. |

NO ↓

| 13 | REMOVE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR M148 (M150)(AMM 34-22-01/401). MAKE SURE THE DATA BUS CIRCUIT FROM THE RA IS ACTIVE AT THE LEFT (RIGHT) EFIS SG, CONNECTOR D425B (D373B), PINS G4 AND H4 (WDM 34-22-19,-29). IS THE DATA BUS ACTIVE? |

YES →

| 24 | REPLACE THE LEFT (RIGHT) EFIS SYMBOL GENERATOR M148 (M150)(AMM 34-22-01/401). |

NO →

| 25 | REMOVE THE LEFT (RIGHT) RA R/T, M202 (M203)(AMM 34-33-01/401). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT (RIGHT) RA R/T CONNECTOR D401B (D403B), PINS G2 AND G3 AND THE LEFT (RIGHT) EFIS SIGNAL GENERATOR, CONNECTOR D425B (D373B), PINS G4 AND H4 (WDM 34-33-11,-21). INSTALL THE LEFT (RIGHT) RA R/T, M202 (M203) (AMM 34-33-01/401). INSTALL THE LEFT (RIGHT) EFIS SYMBOL GENERATOR M148 (M150)(AMM 34-22-01/401). |

RA Flag Displayed on Capt (F/O) EADI
Figure 104

609799

┌───┐
│ PREREQUISITES   │
│   │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED: │
│   11A7, 11E3, 11E4, 11E24, 11E25, 11F5, 11F8, 11F9,   │
│   11F20, 11F24, 11F26, 11F29   │
│   │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION: │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)   │
└───┘

RA BITE PROCEDURE

1 SET THE EFI SWITCH ON THE INSTRUMENT SOURCE SELECT PANELS TO THE NORM POSITION FOR THE LEFT AND RIGHT SYSTEM TEST. SET THE EFI SWITCH ON THE INSTRUMENT SOURCE SELECT PANELS TO THE "ALTN" POSITION FOR THE CENTER SYSTEM TEST.

DO ALL THE LIGHTS COME ON AND THEN GO OFF AND THE GREEN LIGHT STAY ON?

— NO → **10** DID THE RED ANTENNA LIGHT COME ON?

— NO → **20** REPLACE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

YES ↓ (from block 10)

11 REMOVE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

DO AN ANTENNA CABLE CHECK (AMM 20-10-32/201) BETWEEN THE LEFT (CENTER,RIGHT) RECEIVE AND TRANSMIT ANTENNA AND THE LEFT (CENTER,RIGHT) RA R/T, CONNECTOR D401B AND D401A (D405A AND D405B; D403A AND D403B), PIN 71 (WDM 34-33-11, -21,-31).

ARE THE ANTENNA CABLES OK?

— YES → **21** INSTALL THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

REPLACE THE LEFT (CENTER, RIGHT RA TRANSMIT AND RECEIVE ANTENNAS, M252,M253 (M256, M257; M254,M255)(AMM 34-33-02/401).

— NO → **22** REPAIR OR REPLACE THE DEFECTIVE CABLE (WDM 34-33-11, -31,-21).

INSTALL THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(AMM 34-33-01/401).

1 → YES → SEE SHEET 2 (BLOCK 2)

RA BITE Procedure
Figure 104A (Sheet 1)

EFFECTIVITY────────

ALL

609779

34-33-00

07   Page 105
Dec 22/00

FROM SHEET 1
(BLOCK 1)

↓ YES

| 2 | DOES THE RA DISPLAY SHOW 40 ±2 FEET ON THE LEFT (RIGHT) EADI? |

—NO→

| 12 | REMOVE THE LEFT (CENTER, RIGHT) EFIS SYMBOL GENERATOR M148 (M149,M150)(MM 34-22-01/401).
MAKE SURE THE DATA BUS CIRCUIT FROM THE RA IS ACTIVE AT THE LEFT (CENTER,RIGHT) EFIS SG, CONNECTOR D425B (D413B,D373B), PINS G4 AND H4 (WDM 34-22-19,-39,-29).
IS THE DATA BUS ACTIVE? |

—YES→

| 23 | REPLACE THE LEFT (CENTER, RIGHT) EFIS SYMBOL GENERATOR, M148 (M149,M150)(MM 34-22-01/401). |

↓ YES

| 24 | REMOVE THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(MM 34-33-01/401).
EXAMINE AND REPAIR THE CIRCUITS BETWEEN THE LEFT (CENTER,RIGHT) RA R/T ON CON-NECTOR D401B (D405B,D403B), PINS G2 AND G3 AND THE LEFT (CENTER,RIGHT) EFIS SIGNAL GENERATOR, CONNECTOR D425B (D413B,D373B), PINS G4 AND H4 (WDM 34-33-11,-31,-21).
INSTALL THE LEFT (CENTER, RIGHT) RA R/T, M202 (M204, M203)(MM 34-33-01/401).
INSTALL THE LEFT (CENTER, RIGHT) EFIS SYMBOL GENERATOR M148 (M149,M150)(MM 34-22-01/401). |

NO

| 3 | RELEASE THE TEST BUTTON. DOES THE GREEN LIGHT GO OUT? |

—NO→

| 25 | REPLACE THE LEFT (CENTER, RIGHT) RA T/R M202 (M204,M203) (MM 34-33-01/401). |

↓ YES

| 4 | DOES THE RA DISPLAY SHOW -6 ±2 FEET ON THE LEFT (RIGHT) EADI? |

—NO→

| 26 | REPLACE THE LEFT (CENTER, RIGHT) EFIS SYMBOL GENERATOR M148 (M149,M150)(MM 34-22-01/401).
IF THE PROBLEM CONTINUES, REPLACE THE LEFT (CENTER, RIGHT) RA T/R M202 (M204,M203) (MM 34-33-01). |

↓ YES

| 5 | THE SYSTEM IS OK. |

RA BITE Procedure
Figure 104A (Sheet 2)

EFFECTIVITY

ALL

268643

34-33-00

01   Page 106
Aug 10/91

1. <u>ARINC Data Bus Charts</u>
    A. General

    <u>CAUTION</u>: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
              YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

    (1) The ARINC 429 data bus gives data necessary to make analysis of
         ARINC 429 transmitters, receivers, and data buses. For the test,
         use a breakout box at the available terminals or at the LRU
         connector.
    B. Equipment
    (1) Standard multi-meter
    (2) 429EBP Data Bus Analyzer (recommended)
         JcAIR Instrumentation
         400 Industrial Parkway
         Industrial Airport, KS 66031

         429-2 Data Bus Analyzer (alternative)
         Interface Technology
         150 E. Arrow Highway
         San Dimas, CA 91773
    (3) A34011-1 Breakout Box (recommended)
         A34011-112 Breakout Box (alternative)

RA

DIGITAL OUTPUT BUS CHART

BUS NAME SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
RA (L C R)	A	1	B	B02 B03	429	LO	ALTITUDE #1
RA (L C R)	A	2	B	G02 G03	429	LO	ALTITUDE #2

RA ID = 07

OCTAL LABELS CHART

SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
RADIO HEIGHT	A	164	BNR	20	XX	± 8192	ABOVE TOUCHDN	FEET
RADIO HEIGHT-D	A	165	BCD	5	XX	± 7999.9	ABOVE TOUCHDN	FEET

RA				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE–STATE	ZERO–STATE
TEST INHIBITED	164	11	INHIBIT	NOT INHIBIT

WEATHER RADAR SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ANTENNA – WEATHER RADAR, M269	2	1	111AL, NOSE RADOME	34-43-05
ASSEMBLY – WAVEGUIDE	2	1	113AL, FORWARD BULKHEAD	34-43-04
CIRCUIT BREAKERS	1		FLIGHT COMPARTMENT, P11	
WX RADAR L, C615		1	11F2	*
WX RADAR R, C599		1	11F23	*
PANEL – (REF 34-22-00, FIG. 101)				
LEFT EFIS CONTROL, M94				
RIGHT EFIS CONTROL, M93				
PANEL – WEATHER RADAR CONTROL, M75	1	1	FLIGHT COMPARTMENT, P8	34-43-02
SWITCH – WAVEGUIDE, S36	2	1	113AL, FORWARD BULKHEAD	34-43-04
SWITCH – (REF 34-22-00, FIG. 101)				
LEFT IRS, S4				
RIGHT IRS, S12				
TRANSCEIVER – WEATHER RADAR, M213,M214	2	2	113AL, FWD EQUIP CTR	34-43-01

* SEE THE WDM EQUIPMENT LIST

Weather Radar System – Component Index
Figure 101

EFFECTIVITY

ALL

34-43-00

22   Page 101
Nov 10/90

750135

RIGHT WEATHER
RADAR TRANSCEIVER, M214

SEE (C) [1]

WEATHER
RADAR
ANTENNA, M269

SEE (A)

LEFT WEATHER
RADAR TRANSCEIVER, M213

SEE (C)

FORWARD ACCESS
DOOR (REF)

P11 PANEL

P9 PANEL

P8 PANEL

WEATHER RADAR
CONTROL PANEL, M75

SEE (B)

FLIGHT COMPARTMENT

WEATHER RADAR ANTENNA AND WAVEGUIDE, M269

(A)

[1] IF INSTALLED

Weather Radar System – Component Location
Figure 102A (Sheet 1)

EFFECTIVITY

ALL

34-43-00

06   Page 102
Apr 22/02

K82675

MODE
CONTROL

SYS

L ⊙ R

WX

TEST   MAP

WX RADAR

GAIN

AUTO   MAX

TILT
+10
+5   +15

0

−5   −15
    −10

ANTENNA
TILT
CONTROL

GAIN
CONTROL

WEATHER RADAR CONTROL PANEL, M75

Ⓑ

Weather Radar System — Component Location
Figure 102A (Sheet 2)

K83014

R/T
ANT
IND
CON
WG SW
GYRO
AIR
TEST

FAULT
INDICATORS
(RED)

SYSTEM
SELF TEST
SWITCH

RADAR TRANSCEIVER

WEATHER RADAR TRANSCEIVER, M213, M214
(ALLIEDSIGNAL RDR-4A)

Ⓒ

Weather Radar System — Component Location
Figure 102A (Sheet 3)

K83267

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  IRS (MM 34-21-00/501)
  EFIS (MM 34-22-00/501)
  WXR (MM 34-43-00/501)
  FMCS (MM 34-61-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F2,11F23

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)

WARNING: WHEN YOU DO THE BITE TEST, MAKE SURE YOU SET THE WXR CONTROL TO A NON-RADIATING TEST MODE OR OBEY THE PRECAUTIONS FOR WXR OPERATION IN A RADIATION MODE. IF YOU DO NOT DO ONE OF THESE ALTERNATIVES, INJURY TO PERSONS CAN OCCUR.

WXR BITE PROCEDURE

1 ALIGN THE IRS IN THE "NAV" MODE (MM 34-21-00/501).
    SET THE XCVR SWITCH ON THE CONTROL PANEL TO THE "SYS L (R)" POSITION.
    SET THE MODE SWITCH ON THE WXR CONTROL PANEL TO THE "TEST" POSITION.
    SET THE MODE SWITCH ON THE LEFT AND RIGHT EFIS CONTROL PANEL TO THE "MAP" POSITION.
    SET THE WXR SWITCH ON THE LEFT AND RIGHT EFIS CONTROL PANEL TO THE "ON" (IN) POSITION.
    DOES THE WXR TEST PATTERN AND THE MESSAGE, "WXR TEST", SHOW ON THE TWO EHSIs?

— NO →

21 DOES THE MESSAGE "WXR FAIL RT", SHOW ON THE LEFT (RIGHT) EHSI?

— YES →

41 REMOVE THE LEFT (RIGHT) WXR XCVR, M213 (M214) (MM 34-43-01/401). LOOK AT THE AIR FILTER ON THE MOUNTING TRAY.
    IF THE FILTER SHOWS BLOCKAGE, CLEAN OR REPLACE IT AS NECESSARY. INSTALL THE LEFT (RIGHT) XCVR, M213 (M214) (MM 34-43-01/401). DO THE PROCEDURE IN STEP 1 AGAIN.
    IF THE FILTER IS OK, REPLACE THE LEFT (RIGHT) WXR XCVR, M213 (M214) (MM 34-43-01/401).
    IF THE PROBLEM CONTINUES, EXAMINE AND REPAIR THE WXR WAVE GUIDE ASSEMBLY AS NECESSARY (MM 34-43-04/401).

(Block 21) NO ↓

YES ↓ (Block 1)

SEE SHEET 3
(BLOCK 2)

22 DOES THE MESSAGE "WXR FAIL ANT", SHOW ON THE LEFT (RIGHT) EHSI?

— YES →

42 MAKE SURE THE SCAN AND ELEVATION DISABLE SWITCHES ON THE WXR ANTENNA, M269, ARE IN THE ON POSITION.
    IF THE SWITCHES ARE IN THE CORRECT POSITION, REPLACE THE WXR ANTENNA, M269 (MM 34-43-05/401).

NO ↓

SEE SHEET 2
(BLOCK 23)

WXR BITE Procedure
Figure 103 (Sheet 1)

EFFECTIVITY

ALL

34-43-00

09   Page 105
            Dec 22/99

76032

FROM SHEET 1
(BLOCK 22)

│ NO

┌─────────────────────────────┐   YES   ┌─────────────────────────────┐
│ 23 │ DOES THE MESSAGE "WXR   │ ──────────→ │ 43 │ DO THE EFIS BITE PROCEDURE │
│ DSPY" SHOW ON THE LEFT (RIGHT)│   │ (34-22-00, FIG. 108,   │
│ EHSI?   │   │ BLOCK 1).   │
└─────────────────────────────┘   └─────────────────────────────┘

│ NO

┌─────────────────────────────┐   YES   ┌─────────────────────────────┐
│ 24 │ DOES THE MESSAGE, "WXR │ ──────────→ │ 44 │ REPLACE THE WXR CONTROL   │
│ FAIL CONT", SHOW ON THE LEFT │   │ PANEL, M75 (MM 34-43-02/401).│
│ (RIGHT) EHSI?   │   │   IF THE PROBLEM CONTINUES,│
└─────────────────────────────┘   │ REMOVE THE WXR CONTROL PANEL,│
                                             │ M75 (MM 34-43-02/401) AND THE│
│ NO   │ LEFT (RIGHT) WXR XCVR, M213 │
                                             │ (M214)(MM 34-43-01/401).   │
                                             │   EXAMINE AND REPAIR THE   │
                                             │ LEFT DATA BUS CIRCUITS FROM │
                                             │ THE WXR CONTROL PANEL,   │
                                             │ CONNECTOR D395 (D495), PINS H│
                                             │ AND J TO THE LEFT (RIGHT) WXR│
                                             │ XCVR, CONNECTOR D391B, (D393B)│
                                             │ PINS B7 AND B8   │
                                             │ (WDM 34-43-11,-12,-21,-22). │
                                             │   INSTALL THE WXR CONTROL   │
                                             │ PANEL AND THE LEFT (RIGHT)   │
                                             │ WXR XCVR.   │
                                             └─────────────────────────────┘

┌─────────────────────────────┐   YES   ┌─────────────────────────────┐
│ 25 │ DOES THE MESSAGE, 'WXR │ ──────────→ │ 45 │ REPLACE THE LEFT (RIGHT)   │
│ FAIL WEAK", SHOW ON THE LEFT │   │ WXR XCVR, M213 (M214)   │
│ (RIGHT) EHSI?   │   │ (MM 34-43-01/401).   │
└─────────────────────────────┘   └─────────────────────────────┘

│ NO

┌─────────────────────────────┐   YES   ┌─────────────────────────────┐
│ 26 │ DOES THE MESSAGE, "WXR │ ──────────→ │ 46 │ LOOK AT THE YELLOW FAULT   │
│ FAIL ATT", SHOW ON THE LEFT │   │ BALL ON THE LEFT (RIGHT) IRU.│
│ (RIGHT) EHSI?   │   │ IF THE BALL IS SET, REPLACE │
└─────────────────────────────┘   │ THE LEFT (RIGHT) IRU, M159   │
                                             │ (M161)(MM 34-21-01/401). IF │
│ NO   │ THE BALL IS NOT SET, REMOVE │
                                             │ THE LEFT (RIGHT) IRU, M159   │
SEE SHEET 3   │ (M161)(MM 34-21-01/401) AND │
(BLOCK 27)   │ THE LEFT (RIGHT) WXR XCVR,   │
                                             │ M213 (M214)(MM 34-43-01/401).│
                                             │   EXAMINE AND REPAIR THE IRU│
                                             │ DATA BUS CIRCUITS FROM LEFT │
                                             │ (RIGHT) IRU, CONNECTOR D367B │
                                             │ (D371B), PINS C10 AND C11 TO │
                                             │ THE LEFT (RIGHT) WXR XCVR,   │
                                             │ CONNECTOR D391B (D393B),   │
                                             │ PINS J11 AND J12   │
                                             │ (WDM 34-21-11).   │
                                             │   INSTALL THE IRUs AND THE │
                                             │ WXR XCVRs.   │
                                             └─────────────────────────────┘

WXR BITE Procedure
Figure 103 (Sheet 2)

EFFECTIVITY

ALL

76079

34-43-00

07   Page 106
Dec 22/99

FROM SHEET 1
(BLOCK 1)

FROM SHEET 2
(BLOCK 26)

YES

NO

27 DOES THE MESSAGE, "WXR FAIL STAB", SHOW ON THE LEFT (RIGHT) ESHI? → YES → 47 REPLACE THE LEFT (RIGHT) WXR XCVR, M213 (M214) (AMM 34-43-01/401).

NO

48 DO THIS PROCEDURE: EFIS BITE PROCEDURE (FIM 34-22-00/ 101, FIG. 108).

2 PUSH AND HOLD THE TEST SWITCH ON THE FRONT OF THE LEFT (RIGHT) WXR XCVR UNIT.
DO ALL OF THE STATUS LEDS ON THE WXR XCVR COME ON FOR 1 SECOND AND THEN GO OFF? → NO → 28 DOES THE "R/T" LED STAY ON? → YES → 49 REPLACE THE LEFT (RIGHT) WXR XCVR, M213 (M214) (AMM 34-43-01/401).

YES

NO

3 THE SYSTEM IS OK.

29 DOES THE "ANT" LED STAY ON? → YES → 50 MAKE SURE THE SCAN AND ELEVATION DISABLE SWITCHES ON THE WXR ANTENNA, M269, ARE IN THE ON POSITION.
IF THE SWITCHES ARE IN THE CORRECT POSITION, REPLACE THE WXR ANTENNA, M269 (AMM 34-43-05/401).

NO

30 DOES THE "CON" LED STAY ON? → YES → 51 REPLACE THE WXR CONTROL PANEL, M75 (AMM 34-43-02/401).

NO

31 DOES THE "GYRO" LED STAY ON? → YES → 52 DO THIS PROCEDURE: IRS BITE PROCEDURE (FIM 34-21-00/ 101, FIG. 107).

NO

53 MAKE SURE THE "AIR" LED STAYS ON.
REMOVE THE LEFT WXR XCVR, M213 (AMM 34-43-01/401).
EXAMINE AND REPAIR THE AIR FILTER ON THE MOUNTING TRAY.
IF YOU REPAIR THE AIR FILTER, THEN INSTALL THE LEFT WXR XCVR, AND DO THE PROCEDURE IN BLOCK 2.
IF THE AIR FILTER IS OK THEN REPLACE THE LEFT WXR XCVR, M213 (AMM 34-43-01/401).

WXR BITE Procedure
Figure 103 (Sheet 3)

EFFECTIVITY

ALL

34-43-00

200225

08   Page 107
Dec 22/99

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  IRS (AMM 34-21-00/501)
  EFIS (AMM 34-22-00/501)
  WXR (AMM 34-43-00/501)
  FMCS (AMM 34-61-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F2

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

WARNING: DO NOT OPERATE WEATHER RADAR WHILE FUEL IS
          ADDED OR REMOVED FROM THE AIRPLANE. DO NOT
          TRANSMIT RF ENERGY WHILE FUEL IS ADDED OR
          REMOVED IN AN AREA 300 FEET OR LESS OR THE
          ANTENNA. THIS CAN CAUSE AN EXPLOSION.

          MAKE SURE NO PERSONS ARE IN THE AREA 15 FEET
          OR LESS FROM THE ANTENNA WHEN IT TRANSMITS
          RF ENERGY. RF ENERGY CAN CAUSE INJURY TO
          PERSONS.

WXR Range Disagree Problems
Figure 104 (Sheet 1)

EFFECTIVITY

ALL

K28985

34-43-00

11   Page 108
          Apr 22/03

WXR RANGE DISAGREE
PROBLEMS

```
┌─────────────────────────────┐   YES   ┌──────────────────────────┐   NO   ┌──────────────────────────┐
│ 1 │ ALIGN THE IRS IN THE "NAV" ├──────▶ │ 21 │ DOES THE MESSAGE "WXR ├─────▶ │ 41 │ DO THIS PROCEDURE:  EFIS │
│ MODE (AMM 34-21-00/501).     │         │ RANGE DISAGREE" SHOW ON THE │      │ BITE PROCEDURE (FIM 34-22-00/ │
│     SET THE MODE SWITCH ON THE │       │ TWO EHSI?                │       │ 101, FIG. 108).          │
│ WXR CONTROL PANEL TO THE "WX" │        └──────────────────────────┘       └──────────────────────────┘
│ POSITION.                    │                    │ YES
│     SET THE "RANGE" SWITCH ON │                   ▼
│ THE EFIS CONTROL PANEL IN THE │         ┌──────────────────────────┐
│ "40" POSITION.               │         │ 42 │ REPLACE THE LEFT WXR XCVR, │
│     DOES THE MESSAGE "WXR     │         │ M213 (AMM 34-43-01/401). │
│ RANGE DISAGREE" SHOW ON THE   │         └──────────────────────────┘
│ LEFT (RIGHT) EHSI?           │
└─────────────────────────────┘
              │ NO
```

```
┌─────────────────────────────────┐   YES   ┌──────────────────────────┐
│ 22 │ THE WXR/MAP RANGE DISAGREE   ├──────▶ │ 43 │ DO THIS PROCEDURE:  EFIS │
│ MESSAGE IS SHOWN.               │         │ BITE PROCEDURE (FIM 34-22-00/ │
│     FOR THE LEFT WXR SYSTEM,     │         │ 101, FIG. 108).          │
│ SET THE FMC SWITCH ON THE LEFT   │         └──────────────────────────┘
│ INSTRUMENT SOURCE SELECT PANEL   │
│ TO THE RIGHT POSITION.          │
│     FOR THE RIGHT WXR SYSTEM,    │
│ SET THE FMC SWITCH ON THE        │
│ RIGHT INSTRUMENT SOURCE SELECT   │
│ PANEL TO THE LEFT POSITION.      │
│     DOES THE MESSAGE SHOW IN     │
│ THE TWO FMC POSITIONS?          │
└─────────────────────────────────┘
              │ NO
```

```
┌─────────────────────────────┐   YES   ┌──────────────────────────┐
│ 23 │ DOES THE LEFT (RIGHT) FMC ├──────▶ │ 44 │ REPLACE THE LEFT (RIGHT) │
│ SHOW A FAIL INDICATION?      │         │ FMC, M134 (M135)         │
└─────────────────────────────┘         │ (AMM 34-61-01/401).      │
              │ NO                        └──────────────────────────┘
```

```
┌──────────────────────────────────┐
│ 45 │ REMOVE THE LEFT (RIGHT)       │
│ FMC, M134 (M135)                  │
│ (AMM 34-61-00/401) AND THE        │
│ LEFT (RIGHT) EFIS SYMBOL          │
│ GENERATOR, M148 (M150)            │
│ (AMM 34-22-01/401).               │
│     EXAMINE THE DIGITAL DATA      │
│ BUS CIRCUITS FROM LEFT (RIGHT)    │
│ FMC, CONNECTOR D173A (D177A)      │
│ PIN A11 AND PIN B11, TO LEFT      │
│ (RIGHT) EFIS SYMBOL GENERATOR,    │
│ CONNECTOR D81A (D83A) PIN A3      │
│ AND PIN B3,                       │
│ (WDM 34-22-18, -28).  REPAIR      │
│ THE PROBLEMS THAT YOU FIND.       │
│     INSTALL THE FMC AND THE       │
│ EFIS SYMBOL GENERATOR.            │
└──────────────────────────────────┘
```

WXR Range Disagree Problems
Figure 104 (Sheet 2)

EFFECTIVITY

ALL

K28982

34-43-00

22   Page 109
            Apr 22/03

```
PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  ADC (AMM 34-12-00/501) |1|▷
  IRS (AMM 34-21-00/501)
  EFIS (AMM 34-22-00/501)
  RA (AMM 34-33-00/501) |1|▷
  WXR (AMM 34-43-00/501)
  TCAS (AMM 34-45-00/501) |1|▷
  GPWS (AMM 34-46-00/501) |1|▷
  ATC (AMM 34-53-00/501) |1|▷
  FMCS (AMM 34-61-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F2

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

WEATHER RADAR
BITE PROCEDURE FOR
EXTERNAL FAULTS
(WITH "ANTENNA TILT"
FAULT MESSAGES)

```
┌─────────────────────────┐                    ┌─────────────────────────┐
│ 1 │ DO THE WEATHER RADAR │  YES               │ 20 │ CHECK EICAS MESSAGES │
│ SYSTEM SELF-TEST         │───────────────────▶│ WITH FIG. 105 (SHEET 2).│
│ (AMM 34-43-00/501).      │                    └─────────────────────────┘
│   ARE "ANTENNA TILT" CODE│
│ MESSAGE(S), SHOWN ON NDs?│
└─────────────────────────┘
         │ NO
         ▼
┌─────────────────────────┐
│ 2 │ THE SYSTEM IS OK.    │
└─────────────────────────┘
```

|1|▷   AIRPLANES WITH OPERATIONAL PREDICTIVE WINDSHEAR SYSTEM (PWS)

Weather Radar Bite Procedure for External Faults
(With "Antenna Tilt" Fault Messages)
Figure 105 (Sheet 1)

EFFECTIVITY

ALL

K28986

34-43-00

20   Page 110
        Apr 22/03

EXTERNAL FAULTS	WXR ANTENNA TILT CODE MESSAGES 1 ▷
ATTITUDE – LEFT	-1
ATTITUDE – RIGHT	+1
RADIO ALTITUDE – LEFT	-2
RADIO ALTITUDE – RIGHT	+2
DADC – LEFT	-3
DADC – RIGHT	+3
EFIS – LEFT	-4
EFIS – RIGHT	+4
DISCRETE QUALIFIER INPUTS	-5
PITCH/ROLL INPUTS OR AIR GROUND DISCRETE INPUT	-6
AIR GROUND DISCRETE INPUT	-7
WINDSHEAR INHIBIT INPUT	-8

ANTENNA TILT CODES FOR RADAR EXTERNAL FAULTS

1 ▷ WINDSHEAR POP-UP MODE WILL IMMEDIATELY EXIT THE SELF-TEST SEQUENCE.

Weather Radar Bite Procedure for External Faults
(With "Antenna Tilt" Fault Messages)
Figure 105 (Sheet 2)

EFFECTIVITY

ALL

K28987

34-43-00

18   Page 111
Apr 22/03

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

```
PREREQUISITES
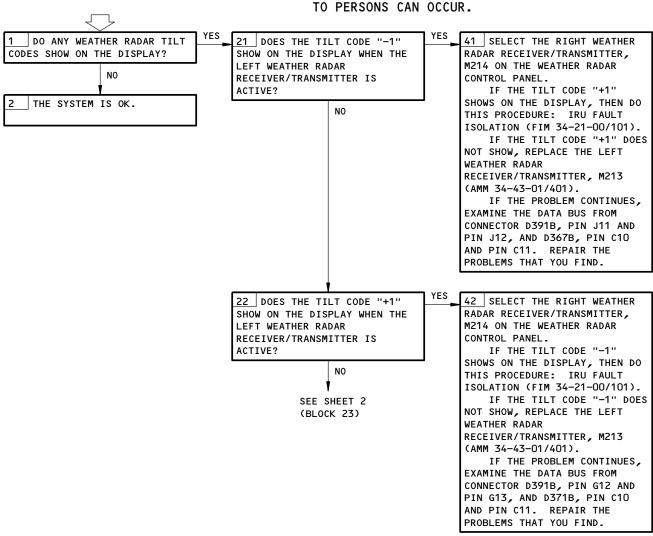
MAKE SURE THESE SYSTEMS ARE OPERATIONAL:
  ADC (AMM 34-12-00/501)
  IRS (AMM 34-21-00/501)
  EFIS (AMM 34-22-00/501)
  RA (AMM 34-33-00/501)
  WXR (AMM 34-43-00/501)
  EGPWS (AMM 34-46-00/501)
```

WARNING: WHEN YOU DO THE BITE TEST, MAKE SURE THAT
         YOU OBEY THE PRECAUTIONS FOR WEATHER RADAR
         OPERATION IN THE RADIATION MODE. INJURY
         TO PERSONS CAN OCCUR.

**WXR TILT CODE FAULT
ISOLATION**

| 1 | DO ANY WEATHER RADAR TILT CODES SHOW ON THE DISPLAY? |

— YES →

| 21 | DOES THE TILT CODE "-1" SHOW ON THE DISPLAY WHEN THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

— YES →

| 41 | SELECT THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 ON THE WEATHER RADAR CONTROL PANEL.
    IF THE TILT CODE "+1" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: IRU FAULT ISOLATION (FIM 34-21-00/101).
    IF THE TILT CODE "+1" DOES NOT SHOW, REPLACE THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 (AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES, EXAMINE THE DATA BUS FROM CONNECTOR D391B, PIN J11 AND PIN J12, AND D367B, PIN C10 AND PIN C11. REPAIR THE PROBLEMS THAT YOU FIND. |

NO ↓

| 2 | THE SYSTEM IS OK. |

NO ↓ (from block 21)

| 22 | DOES THE TILT CODE "+1" SHOW ON THE DISPLAY WHEN THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

— YES →

| 42 | SELECT THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 ON THE WEATHER RADAR CONTROL PANEL.
    IF THE TILT CODE "-1" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: IRU FAULT ISOLATION (FIM 34-21-00/101).
    IF THE TILT CODE "-1" DOES NOT SHOW, REPLACE THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 (AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES, EXAMINE THE DATA BUS FROM CONNECTOR D391B, PIN G12 AND PIN G13, AND D371B, PIN C10 AND PIN C11. REPAIR THE PROBLEMS THAT YOU FIND. |

NO ↓

SEE SHEET 2
(BLOCK 23)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 1)

N70884

FROM SHEET 1
(BLOCK 22)

NO

| 23 | DOES THE TILT CODE "−1" SHOW ON THE DISPLAY WHEN THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

YES →

| 43 | SELECT THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 ON THE WEATHER RADAR CONTROL PANEL.
IF THE TILT CODE "+1" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: IRU FAULT ISOLATION (FIM 34−21−00/101).
IF THE TILT CODE "+1" DOES NOT SHOW, REPLACE THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 (AMM 34−43−01/401).
IF THE PROBLEM CONTINUES, EXAMINE THE DATA BUS FROM CONNECTOR D393B, PIN J11 AND PIN J12, AND D371B, PIN C10 AND PIN C11. REPAIR THE PROBLEMS THAT YOU FIND. |

NO

| 24 | DOES THE TILT CODE "+1" SHOW ON THE DISPLAY WHEN THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

YES →

| 44 | SELECT THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 ON THE WEATHER RADAR CONTROL PANEL.
IF THE TILT CODE "−1" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: IRU FAULT ISOLATION (FIM 34−21−00/101).
IF THE TILT CODE "−1" DOES NOT SHOW, THEN REPLACE THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 (AMM 34−43−01/401).
IF THE PROBLEM CONTINUES, EXAMINE THE DATA BUS FROM CONNECTOR D393B, PIN G12 AND PIN G13, AND D369B, PIN C10 AND PIN C11. REPAIR THE PROBLEMS THAT YOU FIND. |

NO

SEE SHEET 3
(BLOCK 25)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 2)

N70923

FROM SHEET 2
(BLOCK 24)

| NO

25 DOES THE TILT CODE "-2"
SHOW ON THE DISPLAY WHEN THE
LEFT WEATHER RADAR
RECEIVER/TRANSMITTER IS
ACTIVE?

→ YES →

45 SELECT THE RIGHT WEATHER
RADAR RECEIVER/TRANSMITTER,
M214 ON THE WEATHER RADAR
CONTROL PANEL.
    IF THE TILT CODE "+2"
SHOWS ON THE DISPLAY, THEN DO
THIS PROCEDURE: RADIO
ALTIMETER OPERATIONAL TEST
(AMM 34-33-00/501).
    IF THE TILT CODE "+2" DOES
NOT SHOW, REPLACE THE LEFT
WEATHER RADAR
RECEIVER/TRANSMITTER, M213
(AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM
D391B, PIN C1 AND PIN C2, AND
D401B, PIN G2 AND PIN G3.
REPAIR THE PROBLEMS THAT YOU
FIND.

| NO

26 DOES THE TILT CODE "+2"
SHOW ON THE DISPLAY WHEN THE
LEFT WEATHER RADAR
RECEIVER/TRANSMITTER IS
ACTIVE?

→ YES →

46 SELECT THE RIGHT WEATHER
RADAR RECEIVER/TRANSMITTER,
M214 ON THE WEATHER RADAR
CONTROL PANEL.
    IF THE TILT CODE "-2"
SHOWS ON THE DISPLAY, THEN DO
THIS PROCEDURE: RADIO
ALTIMETER OPERATIONAL TEST
(AMM 34-33-00/501).
    IF THE TILT CODE "+2" DOES
NOT SHOW, THAN REPLACE THE
LEFT WEATHER RADAR
RECEIVER/TRANSMITTER, M213
(AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM
D391B, PIN A5 AND PIN A6, AND
D403B, PIN G2 AND PIN G3.
REPAIR THE PROBLEMS THAT YOU
FIND.

| NO

SEE SHEET 4
(BLOCK 27)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 3)

FROM SHEET 3
(BLOCK 24)

NO

27 | DOES THE TILT CODE "-2" SHOW ON THE DISPLAY WHEN THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE?

YES

47 | SELECT THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 ON THE WEATHER RADAR CONTROL PANEL.
    IF THE TILT CODE "+2" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: RADIO ALTIMETER OPERATIONAL TEST (AMM 34-33-00/501).
    IF THE TILT CODE "+2" DOES NOT SHOW, REPLACE THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 (AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM D393B, PIN C1 AND PIN C2, AND D403B, PIN G2 AND PIN G3. REPAIR THE PROBLEMS THAT YOU FIND.

NO

28 | DOES THE TILT CODE "+2" SHOW ON THE DISPLAY WHEN THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE?

YES

48 | SELECT THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 ON THE WEATHER RADAR CONTROL PANEL.
    IF THE TILT CODE "-2" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: RADIO ALTIMETER OPERATIONAL TEST (AMM 34-33-00/501).
    IF THE TILT CODE "-2" DOES NOT SHOW, THAN REPLACE THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 (AMM 34-43-01/401).
    IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM D393B, PIN A5 AND PIN A6, AND D401B, PIN G2 AND PIN G3. REPAIR THE PROBLEMS THAT YOU FIND.

NO

SEE SHEET 5
(BLOCK 29)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 4)

N71050

FROM SHEET 4
(BLOCK 28)

| NO

| 29 | DOES THE TILT CODE "-3" SHOW ON THE DISPLAY WHEN THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

YES → | 49 | SELECT THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 ON THE WEATHER RADAR CONTROL PANEL.

IF THE TILT CODE "+3" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: AIR DATA COMPUTER OPERATIONAL TEST (AMM 34-12-00/501).

IF THE TILT CODE "+3" DOES NOT SHOW, REPLACE THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 (AMM 34-43-01/401).

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM D391B, PIN K11 AND PIN K12, AND D423B, PIN A2 AND PIN B2. REPAIR THE PROBLEMS THAT YOU FIND.

| NO

| 30 | DOES THE TILT CODE "+3" SHOW ON THE DISPLAY WHEN THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER IS ACTIVE? |

YES → | 50 | SELECT THE RIGHT WEATHER RADAR RECEIVER/TRANSMITTER, M214 ON THE WEATHER RADAR CONTROL PANEL.

IF THE TILT CODE "-3" SHOWS ON THE DISPLAY, THEN DO THIS PROCEDURE: AIR DATA COMPUTER OPERATIONAL TEST (AMM 34-12-00/501).

IF THE TILT CODE "-3" DOES NOT SHOW ON THE DISPLAY, THAN REPLACE THE LEFT WEATHER RADAR RECEIVER/TRANSMITTER, M213 (AMM 34-43-01/401).

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM D391B, PIN J9 AND PIN J10, AND D351B, PIN A8 AND PIN B8. REPAIR THE PROBLEMS THAT YOU FIND.

| NO

SEE SHEET 6
(BLOCK 31)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 5)

EFFECTIVITY

ALL

34-43-00

12   Page 116
Apr 22/03

N71072

FROM SHEET 5
(BLOCK 30)

|NO

31 DOES THE TILT CODE "-4"
SHOW ON THE DISPLAY WHEN THE
LEFT WEATHER RADAR
RECEIVER/TRANSMITTER IS
ACTIVE?

YES →

51 SELECT THE RIGHT WEATHER
RADAR RECEIVER/TRANSMITTER ON
THE WEATHER RADAR CONTROL
PANEL.
     IF THE TILT CODE "-4"
SHOWS, DO THIS PROCEDURE:
LFDS OPERATIONAL TEST
(AMM 31-63-00/501).
     IF THE TILT CODE "-4" DOES
NOT SHOW, REPLACE THE LEFT
WEATHER RADAR
RECEIVER/TRANSMITTER, M213
(AMM 34-43-01/401).
     IF THE PROBLEM CONTINUES,
EXAMINE THE DCU LEFT DATA BUS
CIRCUIT, FROM CONNECTOR D391B,
PINS B3 AND B4, TO CONNECTOR
D21694C, PINS C9 AND C10.
REPAIR THE PROBLEMS THAT YOU
FIND.

|NO

32 DOES THE TILT CODE "+4"
SHOW ON THE DISPLAY WHEN THE
LEFT WEATHER RADAR
RECEIVER/TRANSMITTER IS
ACTIVE?

YES →

52 SELECT THE RIGHT WEATHER
RADAR RECEIVER/TRANSMITTER ON
THE WEATHER RADAR CONTROL
PANEL.
     IF THE TILT CODE "+4"
SHOWS, DO THIS PROCEDURE:
LFDS OPERATIONAL TEST
(AMM 31-63-00/501).
     IF THE TILT CODE "+4" DOES
NOT SHOW, REPLACE THE LEFT
WEATHER RADAR
RECEIVER/TRANSMITTER, M213
(AMM 34-43-01/401).
     IF THE PROBLEM CONTINUES,
EXAMINE THE DCU DATA BUS
CIRCUIT, FROM CONNECTOR D391B,
PINS J3 AND J4, TO CONNECTOR
D21696C, PINS C9 AND C10.
REPAIR THE PROBLEMS THAT YOU
FIND.

|NO

SEE SHEET 7
(BLOCK 33)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 6)

N75183

FROM SHEET 6
(BLOCK 32)

| NO

```
33 | DOES THE TILT CODE "-4"     YES     53 | SELECT THE RIGHT WEATHER
SHOW ON THE DISPLAY WHEN THE         RADAR RECEIVER/TRANSMITTER,
LEFT WEATHER RADAR                   M214 ON THE WEATHER RADAR
RECEIVER/TRANSMITTER IS              CONTROL PANEL.
ACTIVE?                                  IF THE TILT CODE "-4"
                                     SHOWS ON THE DISPLAY, THEN DO
                                     THIS PROCEDURE:  ELECTRONIC
                                     FLIGHT INSTRUMENT SYSTEM
                                     OPERATIONAL TEST
                                     (AMM 34-22-00/501).
                                         IF THE TILT CODE "-4" DOES
                                     NOT SHOW ON THE DISPLAY, THAN
                                     REPLACE THE LEFT WEATHER RADAR
                                     RECEIVER/TRANSMITTER, M213
                                     (AMM 34-43-01/401).
                                         IF THE PROBLEM CONTINUES,
                                     EXAMINE THE CIRCUIT FROM
                                     D391B, PIN B3 AND PIN B4,
                                     AND D3827, PIN C2 AND PIN D2.
                                     REPAIR THE PROBLEMS THAT YOU
                                     FIND.
```

| NO

```
34 | DOES THE TILT CODE "+4"     YES     54 | SELECT THE RIGHT WEATHER
SHOW ON THE DISPLAY WHEN THE         RADAR RECEIVER/TRANSMITTER,
LEFT WEATHER RADAR                   M214 ON THE WEATHER RADAR
RECEIVER/TRANSMITTER IS              CONTROL PANEL.
ACTIVE?                                  IF THE TILT CODE "+4"
                                     SHOWS ON THE DISPLAY, THEN DO
                                     THIS PROCEDURE:  ELECTRONIC
                                     FLIGHT INSTRUMENT SYSTEM
                                     OPERATIONAL TEST
                                     (AMM 34-22-00/501).
                                         IF THE TILT CODE "+4" DOES
                                     NOT SHOW ON THE DISPLAY, THAN
                                     REPLACE THE LEFT WEATHER RADAR
                                     RECEIVER/TRANSMITTER, M213
                                     (AMM 34-43-01/401).
                                         IF THE PROBLEM CONTINUES,
                                     EXAMINE THE CIRCUIT FROM
                                     D391B, PIN J3 AND PIN J4,
                                     AND D3829, PIN C2 AND PIN D2.
                                     REPAIR THE PROBLEMS THAT YOU
                                     FIND.
```

| NO

SEE SHEET 8
(BLOCK 35)

WXR Tilt Code Fault Isolation
Figure 106 (Sheet 7)

EFFECTIVITY

ALL

N71169

34-43-00

10   Page 118
Apr 22/03

1. <u>Visual Check</u>
    A. Procedure
        (1) Do a visual check of the weather radar LRUs below and make sure that the LRUs have no damage or missing hardware and that the mount screws are tight.
            (a) R/T mount
            (b) Antenna drive assembly
            (c) Antenna planar array
            (d) Antenna
            (e) Control Panel
        (2) Make sure the R/T hold-down screws are tight.
        (3) Make sure the system electrical connectors are connected correctly.
        (4) Make sure the waveguide connection to the antenna drive assembly is attached correctly.
        (5) Make sure there are no dirt or foreign objects in the waveguide drain hole.

            <u>NOTE</u>: The drain hole may be checked when there is a suspected problem with R/T sensitivity or the weather radar display is blank.

2. ARINC 429 Data Bus
    A. General
        (1) The ARINC 429 data bus gives data necessary to make an analysis of
            ARINC 429 transmitters, receivers, and data buses. For the test,
            use a breakout box at the available terminals ofthe LRU unit.

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX.
              IF YOU TOUCH THE CONNECTORS, DAMAGE TO EQUIPMENT CAN OCCUR.

    B. Equipment
        (1) Standard multi-meter
        (2) Data Bus Analyzer - 429EBP
            (a) JcAIR Instrumentation (recommended)
                400 Industrial Parkway,
                Industrial Airport, KS 66031
            (b) Interface Technology (alternative)
                150 E. Arrow Highway,
                San Dimas, CA 91773
        (3) Breakout box
            (a) A34011-1 (recommended)
            (b) A34011-112 (alternative)

WXR CP							
DIGITAL OUTPUT BUS CHART							
BUS NAME	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
SOURCE							
WXR CP(L)	A	1	D395	UF	429	LO	OUTPUT BUS L
WXR CP(L)	A	2	D395	HJ	429	LO	OUTPUT BUS R
WXR CP(R)	A	1	D495	UF	429	LO	OUTPUT BUS L
WXR CP(R)	A	2	D495	HJ	429	LO	OUTPUT BUS R

EFFECTIVITY

ALL

34-43-00

WXR CP ID = 23								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITVE SENSE	UNITS
GAIN	A	270	BNR	10	00	N/A	N/A	dB
TILT	A	270	BNR	10	00	± 15	UP	DEG

WXR CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
STABILIZATION ON	270	13	CODED 1	
MAP	270	16-14	CODED 010	
TEST	270	16-14	CODED 100	
WEATHER	270	16-14	CODED 001	

TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS)

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ANTENNA – BOTTOM TCAS, M1707	1	1	BOTTOM OF FUSELAGE	34-45-02
ANTENNA – TOP TCAS, M1706	1	1	TOP OF FUSELAGE	34-45-02
CIRCUIT BREAKER –			FLIGHT COMPARTMENT, P11	
TCAS, C628		1	11F12	*
COMPUTER – (FIM 31-41-00/101)				
EICAS LEFT, M10181				
EICAS RIGHT, M10182				
COMPUTER – (FIM 34-46-00/101)				
GROUND PROXIMITY, M147				
COMPUTER – TCAS, M1705	2	1	119BL, MAIN EQUIP CENTER, E1-3	34-45-01
INDICATOR – (FIM 34-22-00/101)				
LEFT ELECTRONIC HORIZONTAL SITUATION, N5				
LEFT VERTICAL SPEED, N9				
RIGHT ELECTRONIC HORIZONTAL SITUATION, N44				
RIGHT VERTICAL SPEED, N49				
INTERROGATOR – (FIM 34-55-00/101)				
LEFT DME, M123				
RIGHT DME, M124				
MODULE – (FIM 31-51-00/101)				
LEFT SIREN/OWL (AURAL WARNING), M999				
RIGHT SIREN/OWL (AURAL WARNING), M619				
MODULE – (FIM 32-30-00/101)				
LANDING GEAR LEVER, M937				
PANEL – ATC CONTROL, M81	2	1	FLIGHT COMPARTMENT, P8	34-53-02
RELAY (FIM 31-01-36/101)				
SYS NO. 1 AIR/GND, K143				
RELAY (FIM 31-01-37/101)				
SYS NO. 2 AIR/GND, K201				
SWITCH – (FIM 34-12-00/101)				
LEFT ADC, S482				
RIGHT ADC, S483				
SWITCH – (FIM 34-21-00/101)				
IRS SOURCE SELECT, S12				
SYMBOL GENERATOR – (FIM 34-22-00/101)				
CENTER EFIS, M149				
LEFT EFIS, M148				
RIGHT EFIS, M150				
TRANSPONDER – (FIM 34-53-00/101)				
LEFT ATC, M112				
RIGHT ATC, M113				
UNIT – (FIM 31-31-00/101)				
FLT DATA ACQUISITION, M138				

* SEE THE WDM EQUIPMENT LIST

Traffic Alert and Collision Avoidance System (TCAS) – Component Index
Figure 101

EFFECTIVITY

ALL

34-45-00

E95567

TOP TCAS DIRECTIONAL
ANTENNA, M1706

SEE (A)

BOTTOM TCAS DIRECTIONAL
ANTENNA, M1707

SEE (A)

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

BOTTOM OR TOP TCAS DIRECTIONAL ANTENNA, M1707 OR M1706

(A)

Traffic Alert and Collision Avoidance System (TCAS) - Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

34-45-00

04H   Page 102
Feb 10/94

B50200

P11 PANEL

TCAS
COMPUTER,
M1705
(E1-3)

SEE (C)

ATC CONTROL
PANEL, M81

SEE (B)

P8 PANEL

FLIGHT COMPARTMENT

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

FWD

MAIN EQUIPMENT CENTER

Honeywell | RT-950
TCAS
COMPUTER UNIT

TCAS PASS / TA DISP
TCAS FAIL / RA DISP
TOP ANT / RAD ALT
BOT ANT / XPDR BUS
HDQ / ATT

DATA LOADER

PUSH TO TEST

AUTO ON

XPNDR ○ FAIL

XPNDR   TA ONLY   TA/RA

STBY

ATC L

TRAFFIC

A T C

T C A S

OFF ON

IDENT

L R

ALT RPTG

XPNDR

TCAS/ATC CONTROL PANEL, M81

(B)

TCAS COMPUTER, M1705

(C)

Traffic Alert and Collision Avoidance System (TCAS) – Component Location
Figure 102 (Sheet 2)

F68341

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  ATC SYSTEM (AMM 34-53-00/501)
  EFIS SYSTEM (AMM 34-22-00/501)
  IRS SYSTEM (AMM 34-21-00/501)
  RA SYSTEM (AMM 34-33-00/501)

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
  11F12, TCAS

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  ALIGN IRS (AMM 34-21-00/201)

TCAS BITE PROCEDURE

| 1 | SET THE TRANSPONDER SELECT SWITCH ON THE TCAS/ATC CONTROL PANEL TO ATC L (R). PUSH THE TEST SWITCH ON THE TCAS COMPUTER. DOES THE "TCAS FAIL" INDICATOR COME ON AT THE END OF THE TEST? |

YES →

| 50 | REPLACE THE TCAS COMPUTER, M1705 (AMM 34-45-01/401). |

NO ↓

| 2 | DOES THE "XPDR BUS" INDICATOR COME ON AT THE END OF THE TEST? |

YES →

| 51 | REPLACE THE LEFT (RIGHT) ATC TRANSPONDER, M112 (M113)(AMM 34-53-01/401). IF THE PROBLEM CONTINUES, REPLACE THE TCAS COMPUTER, M1705 (AMM 34-45-01/401). IF THE PROBLEM CONTINUES, REMOVE THE TCAS COMPUTER AND THE LEFT (RIGHT) ATC TRANSPONDER. EXAMINE THE CIRCUIT FROM THE TCAS COMPUTER, CONNECTOR D2463E, PINS J15,K15,F14 AND G14 (A14,B14,H14 AND J14), TO THE LEFT (RIGHT) ATC TRANSPONDER, CONNECTOR D331A (D359A), PINS E5,F5,G5 AND H5 (WDM 34-45-02). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE TCAS COMPUTER AND THE LEFT (RIGHT) ATC TRANSPONDER. |

NO ↓

SEE SHEET 2
(BLOCK 3)

TCAS BITE Procedure
Figure 103 (Sheet 1)

EFFECTIVITY

ALL

B53051

34-45-00

04H   Page 104
             Feb 10/94

FROM SHEET 1
(BLOCK 2)

│ NO

```
┌──────────────────────────────┐  YES   ┌──────────────────────────────────┐  YES   ┌──────────────────────────────┐
│ 3 │ DOES THE "TOP ANT" INDI- │───────▶│ 10 │ REMOVE THE TCAS COMPUTER,   │───────▶│ 52 │ REPLACE THE UPPER TCAS  │
│ CATOR COME ON AT THE END OF  │        │ M1705 (MM 34-45-01/401).         │        │ ANTENNA, M1706 (MM 34-45-02/ │
│ THE TEST?                    │        │    DO A CHECK OF THE UPPER        │        │ 401).                        │
└──────────────────────────────┘        │ ANTENNA CIRCUIT FROM THE TCAS     │        │    INSTALL THE TCAS COMPUTER,│
         │ NO                            │ COMPUTER, CONNECTOR D2463A,       │        │ M1705 (MM 34-45-01/401).     │
                                         │ PINS C1,C2,C3 AND C4, TO THE      │        └──────────────────────────────┘
                                         │ UPPER ANTENNA, M1706, CONNEC-     │
                                         │ TORS D2465,D2529, D2531 AND       │
                                         │ D2533, PINS A1 AND C1             │
                                         │ (WDM 34-45-11).                   │
                                         │    IS THE ANTENNA CABLE OK?       │
                                         └──────────────────────────────────┘
                                                      │ NO
```

```
                                         ┌──────────────────────────────────┐
                                         │ 53 │ REPLACE THE ANTENNA CIR-    │
                                         │ CUIT FROM THE TCAS COMPUTER,      │
                                         │ M1705, CONNECTOR D2463A,          │
                                         │ PINS C1,C2,C3 AND C4, TO THE      │
                                         │ UPPER TCAS ANTENNA, CONNECTORS    │
                                         │ D2465,D2529,D2531 AND D2533,      │
                                         │ PINS A1 AND C1 (WDM 34-45-11).    │
                                         │    INSTALL THE TCAS COMPUTER,     │
                                         │ M1705 (MM 34-45-01/401).          │
                                         └──────────────────────────────────┘
```

```
┌──────────────────────────────┐  YES   ┌──────────────────────────────────┐  YES   ┌──────────────────────────────┐
│ 4 │ DOES THE "BOT ANT" INDI- │───────▶│ 11 │ REMOVE THE TCAS COMPUTER,   │───────▶│ 54 │ REPLACE THE LOWER TCAS  │
│ CATOR COME ON AT THE END OF  │        │ M1705 (MM 34-45-01/401).         │        │ ANTENNA, M1707 (MM 34-45-02/ │
│ THE TEST?                    │        │    DO A CHECK OF THE LOWER        │        │ 401).                        │
└──────────────────────────────┘        │ ANTENNA CIRCUIT FROM THE TCAS     │        │    INSTALL THE TCAS COMPUTER,│
         │ NO                            │ COMPUTER, CONNECTOR D2463B,       │        │ M1705 (MM 34-45-01/401).     │
                                         │ PINS C1,C2,C3 AND C4, TO THE      │        └──────────────────────────────┘
    SEE SHEET 3                          │ LOWER ANTENNA, M1707, CONNEC-     │
    (BLOCK 5)                            │ TORS D2467,D2613,D2615 AND        │
                                         │ D2617, PINS A1 AND C1             │
                                         │ (WDM 34-45-11).                   │
                                         │    IS THE ANTENNA CABLE OK?       │
                                         └──────────────────────────────────┘
                                                      │ NO
```

```
                                         ┌──────────────────────────────────┐
                                         │ 55 │ REPLACE THE ANTENNA CIR-    │
                                         │ CUIT FROM THE TCAS COMPUTER,      │
                                         │ M1705, CONNECTOR D2463B,          │
                                         │ PINS C1,C2,C3 AND C4, TO THE      │
                                         │ LOWER TCAS ANTENNA, CONNECTORS    │
                                         │ D2467,D2613,D2615 AND D2617,      │
                                         │ PINS A1 AND C1 (WDM 34-45-11).    │
                                         │    INSTALL THE TCAS COMPUTER,     │
                                         │ M1705 (MM 34-45-01/401).          │
                                         └──────────────────────────────────┘
```

TCAS BITE Procedure
Figure 103 (Sheet 2)

EFFECTIVITY

ALL

B53058

34-45-00

04H   Page 105
Feb 10/94

FROM SHEET 2
(BLOCK 4)

│ NO

```
┌──────────────────────────┐         ┌──────────────────────────┐         ┌──────────────────────────┐
│ 5 │ DOES THE "RAD ALT"   │  YES    │ 12 │ DOES THE RADIO      │  YES    │ 56 │ OPEN THE AIR/GND    │
│ INDICATOR COME ON AT THE │────────▶│ ALTIMETER SHOW ALTITUDE  │────────▶│ CIRCUIT BREAKER AND TURN │
│ END OF THE TEST?         │         │ OF MORE THAN 50 FEET     │         │ THE TCAS COMPUTER OFF.   │
│                          │         │ WHILE THE AIR/GND LOGIC  │         │ TURN THE TCAS COMPUTER   │
│                          │         │ IS SET TO GROUND?        │         │ BACK ON.                 │
└──────────────────────────┘         └──────────────────────────┘         └──────────────────────────┘
```

│ NO   │ NO

SEE SHEET 2
(BLOCK 6)

```
┌──────────────────────────────────┐
│ 57 │ REPLACE THE TCAS COMPUTER,   │
│ M1705 (MM 34-45-01/401.          │
│   IF THE PROBLEM CONTINUES,       │
│ RADIO ALTIMETER, M202 (M203)     │
│ (MM 34-33-01/401).                │
│   IF THE PROBLEM CONTINUES,       │
│ REMOVE THE LEFT (RIGHT) RADIO     │
│ ALTIMETER AND THE TCAS COM-       │
│ PUTER, M1705 (MM 34-45-01/        │
│ 401).                             │
│   EXAMINE THE CIRCUIT FROM        │
│ THE TCAS COMPUTER, CONNECTOR      │
│ D2463E (D2463F), PINS H13 AND     │
│ J13 (D3 AND E3), TO THE LEFT      │
│ (RIGHT) RADIO ALTIMETER, CON-     │
│ NECTOR D401B (D403B), PINS G2     │
│ AND G3 (WDM 34-45-14).            │
│   REPAIR THE PROBLEMS THAT        │
│ YOU FIND.                         │
│   INSTALL THE LEFT (RIGHT)        │
│ RADIO ALTIMETER AND THE TCAS      │
│ COMPUTER.                         │
└──────────────────────────────────┘
```

TCAS BITE Procedure
Figure 103 (Sheet 3)

EFFECTIVITY

ALL

34-45-00

04H   Page 106
Feb 10/94

B53062

FROM SHEET 3
(BLOCK 5)

| NO

```
6  DOES THE "RA DISP" INDI-    YES    13  DO THE LEFT AND RIGHT     YES    58  REPLACE THE CAPTAIN'S AND
   CATOR COME ON AT THE END OF ─────►    RA/VSIs SHOW A RED "X"?    ─────►    FIRST OFFICER'S RA/VSI (N9,
   THE TEST?                                                                  N49)(AMM 34-22-09/401).
```

| NO (from 6) | NO (from 13)

```
7  THE SYSTEM IS OK.           14  DO THE LEFT AND RIGHT     YES    59  EXAMINE THE CIRCUITS FROM
                                  RA/VSIs SHOW "RA FAIL"?    ─────►    THE TCAS COMPUTER, M1705,
                                                                      CONNECTOR D2463E, PINS C7 AND
                                                                      D7, TO THE LEFT RA/VSI,
                                                                      CONNECTOR D113, PINS 26
                                                                      AND 11, AND FROM THE TCAS
                                                                      COMPUTER, CONNECTOR D2463E,
                                                                      PINS G7 AND H7, TO THE RIGHT
                                                                      RA/VSI, CONNECTOR D717,
                                                                      PINS 26 AND 11 (WDM 34-45-14).
                                                                         REPAIR THE PROBLEMS THAT
                                                                      YOU FIND.
                                                                         IF THE PROBLEM CONTINUES,
                                                                      REPLACE THE TCAS COMPUTER,
                                                                      M1705 (AMM 34-45-01/401).
```

| NO (from 14)

```
15  DO THE LEFT AND RIGHT     YES    60  DO THIS PROCEDURE:  VSI
    RA/VSIs SHOW "VSI FAIL"?  ─────►    OFF FLAG IN VIEW
                                        (FIM 34-21-00/101, FIG. 104).
```

| NO (from 15)

```
61  REPLACE THE TCAS COMPUTER,
    M1705 (AMM 34-45-01/401).
```

TCAS BITE Procedure
Figure 103 (Sheet 4)

EFFECTIVITY

ALL

34-45-00

05H   Page 107
May 10/96

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 4
(BLOCK 15)

YES

```
16  SET THE RIGHT EFI SWITCH        NO      61  EXAMINE THE CIRCUIT FROM
ON THE INSTRUMENT SOURCE                    THE TCAS COMPUTER, M1705,
SELECT PANEL TO NORM.                       CONNECTOR D2463E, PINS G7 AND
   PUSH AND HOLD THE TEST                   H7, TO THE RIGHT EFIS SG,
SWITCH ON THE TCAS/ATC CONTROL              M150, CONNECTOR D373A, PINS J9
PANEL FOR 1 SECOND.                         AND K9.
   DOES THE TCAS TEST DISPLAY                  REPAIR THE PROBLEMS THAT
SHOW ON THE RIGHT EFIS                      YOU FIND.
DISPLAYS?
```

YES

```
17  SET THE RIGHT EFI SWITCH        NO      62  EXAMINE THE CIRCUIT FROM
ON THE INSTRUMENT SOURCE                    THE TCAS COMPUTER, M1705,
SELECT PANEL TO ALTN.                       CONNECTOR D2463E, PINS C7 AND
   PUSH AND HOLD THE TEST                   D7, TO THE CENTER EFIS SG,
SWITCH ON THE TCAS/ATC CONTROL              M149, CONNECTOR D373A, PINS J9
PANEL FOR 1 SECOND.                         AND K9.
   DOES THE TCAS TEST DISPLAY                  REPAIR THE PROBLEMS THAT
SHOW ON THE RIGHT EFIS                      YOU FIND.
DISPLAYS?
```

YES

```
63  REPLACE THE TCAS COMPUTER,
M1705 (MM 34-45-01/401).
   IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM THE
TCAS COMPUTER, M1705, CONNEC-
TOR D2463E, PIN C14, TO THE
LEFT EFIS SG, M148, CONNECTOR
D425E, PIN E11, AND THE CENTER
EFIS SG, M149, CONNECTOR
D413E, PIN E11.
   REPAIR THE PROBLEMS THAT
YOU FIND.
   IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM THE
TCAS COMPUTER, M1705, CONNEC-
TOR D2463E, PIN E13, TO THE
RIGHT EFIS SG, M150, CONNECTOR
D373E, PIN G11, AND THE CENTER
EFIS SG, M149, CONNECTOR
D413E, PIN G11.
   REPAIR THE PROBLEMS THAT
YOU FIND.
```

TCAS BITE Procedure
Figure 103 (Sheet 5)

EFFECTIVITY

ALL

34-45-00

04H   Page 108
Feb 10/94

B53074

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  ATC SYSTEM (AMM 34-53-00/501)
  WEU SYSTEM (AMM 31-51-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11B16, WARN SPKR L
  11B18, WARN ELEX B
  11E5, VSI LEFT
  11E26, VSI RIGHT
  11F12, TCAS
  11H35, WARN SPKR R
  11J34, WARN ELEX A

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  ALIGN IRS (AMM 34-21-00/201)

TCAS VOICE ADVISORY ALERT PROBLEM

| 1 | HOLD THE MOLD SWITCH ON THE ATC CONTROL PANEL TO THE TEST POSITION FOR ABOUT 2 SECONDS. DOES THE COCKPIT SPEAKERS OR HEADSET SOUND "TCAS TEST PASS"? |

NO

YES

| 2 | THE TCAS VOICE ADVISORY ALERT IS OK. |

| 20 | REPLACE THE TCAS COMPUTER, M1705 (AMM 34-45-01/401).
    IF THE PROBLEM CONTINUES, REPLACE THE LEFT AURAL WARNING SIREN/OWL MODULE, M999.
    EXAMINE THE CIRCUIT FROM THE TCAS COMPUTER, CONNECTOR D2463E, PINS F3 AND G3, TO THE LEFT AURAL WARNING SIREN/OWL MODULE, CONNECTOR D811, PINS 62 AND 63.
    REPAIR THE PROBLEMS THAT YOU FIND. |

TCAS Voice Advisory Alert Problem
Figure 104

EFFECTIVITY

ALL

F68346

34-45-00

05H   Page 109
             May 10/96

1. <u>ARINC Data Bus Charts</u>
    A. General

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
             CAN CAUSE DAMAGE TO THE CONNECTORS.

    (1) The ARINC 429 data bus charts give data necessary to make an
        analysis of ARINC 429 transmitters, receivers, and data buses. For
        the test, use a breakout box at the available terminal or at the LRU
        connectors.
    B. Equipment
    (1) Standard multimeter
    (2) 429EBP Data Bus Analyzer (recommended)
        JcAIR Instrumentation
        400 Industrial Parkway
        Industrial Airport, KS 66031

        429EBP Data Bus Analyzer (alternative)
        Interface Technology
        150 E. Arrow Highway,
        San Dimas, CA 91773
    (3) A34011-1 Breakout Box (recommended)
        A34011-112 Breakout Box (alternative)

TCAS COMPUTER							
DIGITAL OUTPUT BUS CHART							
BUS NAME						BUS FORMAT	BIT RATE	
SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
TCAS	A	1	RMP	15J 15K	429	HI	COORDINATION DATA
TCAS	A	2	RMP	14A 14B	429	HI	COORDINATION DATA
TCAS	A	1	RMP	7C 7D	429	HI	TA/RA DISPLAY #1
TCAS	A	2	RMP	7G 7H	429	HI	TA/RA DISPLAY #2

TCAS COMPUTER ID=035								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
INTRUDER ALTITUDE	A	131	BCD	2	00	± 12,700	N/A	FEET
INTRUDER BEARING	A	132	BCD	2	00	± 180	N/A	DEGREES
INTRUDER RANGE	A	130	BCD	2	00	128	N/A	NM
OWN AIRCRAFT ALT	A	203	BCD	2	00	131,072	N/A	FEET

GROUND PROXIMITY WARNING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	2		FLT COMPT, P11	
GND PROX, C592		1	11F4	*
COMPUTER – GROUND PROXIMITY WARNING, M147	1	1	119AL, MAIN EQUIP CTR, E1–5	34–46–01
LIGHT – PULL UP	2	1	FLT COMPT, P1, DISCRETE WARNING DISPLAY MODULE, M779 (REF)	*
LIGHT – WINDSHEAR, L890	2	1	FLT COMPT, P1–3	
MODULE – (FIM 33–16–00/101)				
DISCRETE WARNING DISPLAY, M779				
MODULE – (FIM 32–30–00/101)				
LANDING GEAR CONTROL LEVER, M937				
MODULE – (FIM 27–58–00/101)				
LEFT FLAP/STAB POSITION, M838				
PANEL – (FIM 28–43–00/101)				
MISCELLANEOUS TEST, M10398				
RELAY – (FIM 31–01–36/101)				
SYSTEM 1 AIR/GROUND, K149				
SWITCH – GND PROX TEST, YEIS4	2	1	FLT COMPT, P61, MISC TEST PANEL, M10398 (REF)	*
SWITCH–LIGHT – GND PROX/CONFIG GEAR OVRD, S604	2	1	FLT COMPT, P3–1	*
SWITCH–LIGHT – GND PROX FLAP OVRD, S603	2	1	FLT COMPT, P3–1	*
SWITCH–LIGHT – GND PROX G/S INHBT, S16	2	1	FLT COMPT, P1–3	*

* SEE THE WDM EQUIPMENT LIST

Ground Proximity Warning System – Component Index
Figure 101

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00

CONFIG 1
01B   Page 101
Apr 22/02

M34432

MAIN EQUIPMENT
CENTER

SEE (A)

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

GROUND PROXIMITY
WARNING COMPUTER,
M147, (E1-5)

SEE (B)

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

MAIN EQUIPMENT CENTER

(A)

GPWC

GPWS OK

STATUS/HISTORY

PRESENT   FLIGHT

STATUS   HISTORY

GROUND PROXIMITY
WARNING COMPUTER, M147

(B)

Ground Proximity Warning System - Component Location
Figure 102 (Sheet 1)

M34089

34-46-00

DISCRETE WARNING
DISPLAY MODULE,
M779 (REF)
SEE D

P3 PANEL   P11 PANEL

WINDSHEAR WARNING
LIGHT, L890
SEE C

TEST PANEL MODULE,
M10398 (REF)
SEE G

P1 PANEL

P61 PANEL

GND PROX-G/S INHB
SWITCH-LIGHT, S16
SEE E

GND PROX FLAP
AND CONFIG GEAR
OVRD SWITCHES,
S603, S604
SEE F

FLIGHT COMPARTMENT

WINDSHEAR
r

WINDSHEAR WARNING
LIGHT, L890

C

FIRE	CONFIG
r	r
PULL UP	A/P DISC
r	r
CABIN ALT	OVSPD
r	r

DISCRETE WARNING DISPLAY
MODULE, M779 (REF)

D

GND
PROX ᵃ
G/S INHB

GND PROX-G/S INHB
SWITCH-LIGHT, S16

E

GND PROX
FLAP OVRD

GND PROX/CONFIG
GEAR OVRD

OVRD
w
w

OVRD
w
w

GND PROX FLAP AND
CONFIG GEAR OVRD SWITCHES,
S603, S604

F

TEST

GND PROX

GND PROX
TEST SWITCH,
YEIS4

TEST PANEL MODULE, M10398 (REF)

G

Ground Proximity Warning System – Component Location
Figure 102 (Sheet 2)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 103
Apr 22/02

M34D94

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  ENGINE INDICATING AND CREW ALERTING SYSTEM
    (AMM 31-41-00/201)
  WARNING SYSTEM (AMM 31-51-00/501)
  AIR DATA COMPUTING SYSTEM (AMM 34-12-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)
  ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)
    (AMM 34-22-00/501)
  ILS (AMM 34-31-00/501)
  RADIO ALTIMETER SYSTEM (AMM 34-33-00/501)
  FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11B16, 11B18, 11F4, 11H35, 11J34

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

GROUND PROXIMITY
WARNING COMPUTER
BITE PROCEDURE

| 1 | ENERGIZE AND ALIGN THE LEFT IRU (AMM 34-21-00/201).
MAKE SURE THE "OVRD" LIGHT IS OFF IN THESE SWITCHES ON THE P3-1 PANEL:
• "GND PROX/CONFIG GEAR OVRD" SWITCH
• "GND PROX/FLAP OVRD" SWITCH.

MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC TO THE "PRESENT STATUS" POSITION.
LOOK FOR THESE INDICATIONS ON THE GPWC BITE DISPLAY:

▨ ▨ ▨ ▨ ▨ ▨ ▨

IN TEST
AIRCRAFT TYPE 767-"XXX"
FMC SELECTED
SYSTEM OK
SOFTWARE VERSION IS "XXX",
 "DD-MMM-YY"
DATABASE VERSION IS "XXX",
 "DD-MMM-YY"
1*XXXXX*
2*XXXXX*
3*XXXXX*
END TEST

DID SOME OF THESE GPWC INDICATIONS OCCUR?

—NO→

| 31 | REMOVE THE GPWC, M147 (AMM 34-46-01/401).
IS THERE 115V AC AT THE GPWC, CONNECTOR D435C, PIN 2, AND A GROUND AT THE GPWC, CONNECTOR D435C, PIN 3 (WDM 34-46-11)?

—YES→

| 71 | REPLACE THE GPWC, M147 (AMM 34-46-01/401).

NO↓

| 72 | EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435C, PIN 2, TO CIRCUIT BREAKER C592, (11F4) AND FROM THE GPWC, CONNECTOR D435C, PIN 3, TO GROUND (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE GPWC, M147 (AMM 34-46-01/401).

YES→ SEE SHEET 2
(BLOCK 2)

⟩1⟩ SOMETIMES THE EICAS MESSAGE, "GND PROX SYS", CAN SHOW AFTER THE FAULT IS CORRECTED. MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC TO THE "HISTORY" POSITION TO ERASE THE EICAS MESSAGE "GND PROX SYS".

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 1)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
                    CONFIG 1
          01B   Page 104
                    Dec 22/02

M34434

FROM SHEET 1
(BLOCK 1)

YES

| 2 | DID ALL OF THE GPWC INDICATIONS OCCUR?

NOTE: IGNORE THE MESSAGE "IN FLIGHT FAILURE XXXX SEE FLIGHT HISTORY XXXX" IF IT SHOWS. |

NO →

| 32 | DO ALL THE SEGMENTS ON THE ALPHANUMERIC DISPLAY SHOW? |

NO →

| 73 | REPLACE THE GPWC, M147 (AMM 34-46-01/401). |

YES

| 33 | DOES THE GPWC INDICATION "IN TEST" SHOW? |

NO →

| 74 | REPLACE THE GPWC, M147 (AMM 34-46-01/401). |

YES

| 34 | DOES THE CORRECT AIRPLANE TYPE SHOW? |

NO →

| 75 | EXAMINE THE CIRCUIT AT THE GPWC, M147, CONNECTOR D435A, FOR GROUND OR OPEN AT THESE PINS (WDM 34-46-12):
• 767-200 AIRPLANES; PIN A10
• 767-300 AIRPLANES; PINS A10 AND C10
• 767-300ER AIRPLANES; PINS A10 AND B10

REPAIR THE PROBLEMS THAT YOU FIND. |1⟩ |

YES

| 35 | DOES THE GPWC INDICATION "FMC SELECTED" SHOW? |

NO →

| 76 | EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN D14, TO GROUND (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. |1⟩ |

YES

| 77 | WRITE DOWN THE GPWC FAILURE INDICATION(S) AND DO THE STEP(S) IN TABLE A ON SHEET 6. |1⟩ |

SEE SHEET 3
(BLOCK 3)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 2)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00

CONFIG 1

01B   Page 105
Dec 22/02

M34437

FROM SHEET 2
(BLOCK 2)

| YES

```
3    DOES THE GPWC INDICATION      YES      36   SET THE STATUS/HISTORY      YES      78   REPLACE THE GPWC, M147
"IN FLIGHT FAILURE *** SEE  ------->    SWITCH ON THE GPWC TO THE    ------>   (AMM 34-46-01/401).
FLIGHT HISTORY ***" SHOW?                "FLIGHT HISTORY" POSITION.
                                            DOES THE GPWC INDICATION
      | NO                                "FLIGHT HISTORY FAILURE" SHOW?

4    THE GPWS IS OK.  [1>                       | NO

                                         37   DOES THE GPWC INDICATION    YES     SEE SHEET 4
                                         "GEAR INVALID" SHOW FOR THE   ----->   (BLOCK 40)
                                         LAST FLIGHT?

                                               | NO

                                         38   DOES THE GPWC INDICATION    YES     SEE SHEET 4
                                         "FLAPS INVALID" SHOW FOR THE  ----->   (BLOCK 5)
                                         LAST FLIGHT?

                                               | NO

                                         39   DID SOME GPWC INDICATION    NO      79   WRITE DOWN THE GPWC
                                         SHOW FOR THE LAST FLIGHT THAT ---->    FAILURE INDICATION(S) AND DO
                                         WAS NOT IN THE PRESENT STATE?           THE STEP(S) IN TABLE A ON
                                                                                 SHEET 6.
                                               | YES

                                                                                 80   THE GPWC FLIGHT HISTORY
                                                                                 INDICATION WAS AN INTERMITTENT
                                                                                 PROBLEM.
                                                                                    IF THE GPWC FLIGHT HISTORY
                                                                                 INDICATIONS SHOWS ON THE
                                                                                 DIFFERENT FLIGHTS, DO THE
                                                                                 STEP(S) IN TABLE A ON
                                                                                 SHEET 6.  [1>
```

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 3)

FROM SHEET 3
(BLOCK 38)

FROM SHEET 3
(BLOCK 37)

YES

YES

| 40 | INSTALL THE LANDING GEAR GROUND LOCK PINS.
MAKE SURE LANDING GEAR HYDRAULICS ARE TURNED OFF.
SET THE LANDING GEAR LEVER TO THE "OFF" POSITION.
MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC TO THE "PRESENT STATUS" POSITION.
DOES "1*1XXXX*" SHOW AFTER THE DATABASE VERSION?

NO →

| 81 | THE GPWC FLIGHT HISTORY INDICATION WAS AN INTERMITTENT PROBLEM.
IF THE SAME GPWC INDICATION SHOWS ON DIFFERENT FLIGHTS, DO THE APPLICABLE STEP IN TABLE A ON SHEET 6. |1>

YES →

| 82 | EXAMINE THE CIRCUIT FROM TERMINAL BLOCK TB119, PIN G17, THRU THE GND PROX/GEAR OVRD SWITCH, S604, TO GROUND (THE CIRCUIT SHOULD BE OPEN WITH THE SWITCH IN THE NORM POSITION)(WDM 34-46-12). |2>
REPAIR THE PROBLEMS THAT YOU FIND. |1>
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM GPWC, CONNECTOR D435B, PIN B9, TO THE LANDING GEAR MODULE, M937, CONNECTOR D232, PIN 9 (THE CIRCUIT SHOULD BE OPEN WITH THE LEVER IN THE "OFF" POSITION)(WDM 34-46-12; WDM 32-42-11; WDM 32-61-14) |2> . REPAIR THE PROBLEMS THAT YOU FIND. |1>

| 5 | MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC TO THE "PRESENT STATUS" POSITION.
DO A CHECK FOR THESE TWO GPWC INDICATIONS AFTER THE DATABASE VERSION:
• WITH THE FLAPS IN THE LANDING POSITION (25 OR 30 DEGREES), "1*X1XXX*" SHOWS
• WITH THE FLAPS AT LESS THAN 25 DEGREES, "1*XOXXX*" SHOWS.
DO EACH OF THE ABOVE GPWC INDICATIONS OCCUR?

YES →

| 83 | THE GPWC FLIGHT HISTORY INDICATION WAS AN INTERMITTENT PROBLEM.
IF THE SAME GPWC INDICATION SHOWS ON DIFFERENT FLIGHTS, DO THE APPLICABLE STEP IN TABLE A ON SHEET 6. |1>

NO

SEE SHEET 5
(BLOCK 6)

2> THE ISOLATION DIODE IS LOCATED BETWEEN CONNECTOR D4525 AND TERMINAL BLOCK, TB119. MAKE SURE THE DIODE POLARITY IS CORRECT.

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 4)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00

CONFIG   1
01B   Page 107
Dec 22/02

M34444

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 4
(BLOCK 5)

| NO

6 WITH THE FLAPS IN THE
LANDING POSITION (25 OR
30 DEGREES), DID "1*X1XXX*"
SHOW AFTER THE DATABASE
VERSION?

NO →

42 SET THE GND PROX/FLAP OVRD
SWITCH, S603, ON THE P3-1
PANEL TO THE "OVRD" POSITION.
MOMENTARILY SET THE
STATUS/HISTORY SWITCH ON THE
GPWC TO THE "PRESENT STATUS"
POSITION.
DOES "1*X1XXX*" SHOW AFTER
THE DATABASE VERSION?

YES →

84 REPLACE THE LEFT FLAP/STAB
POSITION MODULE, M838
(AMM 27-58-01/401). |1▷
IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM
TERMINAL BLOCK, TB119,
PIN G19, THRU THE LEFT
FLAP/STAB POSITION MODULE,
M838, TO GROUND (WDM 34-46-12;
WDM 27-58-21). |3▷ REPAIR
THE PROBLEMS THAT YOU FIND.
|1▷

YES (from 6, going down)

NO (from 42, going down)

85 EXAMINE THE CIRCUIT FROM
THE GPWC, CONNECTOR D435B,
PIN C9, TO TERMINAL BLOCK,
TB119, PIN G19 (WDM 34-46-12).
REPAIR THE PROBLEMS THAT YOU
FIND. |1▷

43 DISCONNECT CONNECTOR
D5305P ON THE P3-1 PANEL
(WDM 34-46-12).
MOMENTARILY SET THE
STATUS/HISTORY SWITCH ON THE
GPWC TO THE "PRESENT STATUS"
POSITION.
DO A CHECK FOR THESE TWO
GPWC INDICATIONS AFTER THE
DATABASE VERSION:
• WITH THE FLAPS IN THE
LANDING POSITION (25 OR
30 DEGREES), "1*X1XXX*"
SHOWS
• WITH THE FLAPS AT LESS THAN
25 DEGREES, "1*XOXXX*"
SHOWS.
DO EACH OF THE ABOVE GPWC
INDICATIONS OCCUR?

YES →

86 CONNECT CONNECTOR D5305P,
ON THE P3-1 PANEL
(WDM 34-46-12).
EXAMINE THE CIRCUIT FROM
TERMINAL BLOCK, TB119, PIN
G19, THRU THE GND PROX/FLAP
OVRD SWITCH, S603, TO GROUND
(WDM 34-46-12). REPAIR THE
PROBLEMS THAT YOU FIND. |1▷

NO →

87 CONNECT CONNECTOR D5305P,
ON THE P3-1 PANEL
(WDM 34-46-12).
REPLACE THE LEFT FLAP/STAB
POSITION MODULE, M838
(AMM 27-58-01/401). |1▷

|3▷ THE ISOLATION DIODES ARE LOCATED BETWEEN CONNECTORS D5277
AND D2672. MAKE SURE THE DIODES' POLARITY IS CORRECT.

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 5)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG 1
01B   Page 108
Dec 22/02

M34445

FAILURE INDICATION	REFER TO SHT–BLOCK
AIRCRAFT TYPE INVALID	13–23
AIR DATA INACTIVE	7–8
AIR/GROUND INVALID	13–21
AUDIO SELECT INVALID	13–22
BARO ALTITUDE INVALID	7–9
BARORATE INVALID	7–9
BODY PITCH RATE INVALID	10–16
CALLOUTS OPTION INVALID	14–24
COMPUTED AIRSPEED INVALID	7–9
CORRECTED BARO ALTITUDE INVALID	7–9
CORRECTED AOA #1 INVALID	11–18
CORRECTED AOA #2 INVALID	11–18
DSW #1 DATA INACTIVE	11–17
DSW #2 DATA INACTIVE	11–17
EFS DATA INACTIVE	7–9A
FLAP ANGLE #1 INVALID	11–18
FLAP ANGLE #2 INVALID	11–18
FLAPS INVALID	3–38
FLIGHT PATH ACCEL INVALID	10–16
FMC DATA INACTIVE	8–10
FMC LATITUDE INVALID	8–11
FMC LONGITUDE INVALID	8–11
FMC MAG TRACK INVALID	8–11
GEAR INVALID	3–37
GLIDESLOPE CANCEL INVALID	9–14
GLIDESLOPE INVALID	9–13
GPWS FAILED	7–7
ILS DATA INACTIVE	9–12
INDICATED AOA #1 INVALID	11–18
INDICATED AOA #2 INVALID	11–18
INERTIAL ALTITUDE INVALID	10–16
INERTIAL VERTICAL SPEED INVALID	10–16
IRS DATA INACTIVE	10–15
IRS LATITUDE INVALID	10–16
IRS LONGITUDE INVALID	10–16
IRS MAG TRACK INVALID	10–16
IRS MODE INVALID	10–16
LOCALIZER INVALID	9–13
PITCH ANGLE INVALID	10–16
QFE SELECTED	14–25
RADIO ALTIMETER DATA INACTIVE	12–19
RADIO ALTITUDE INVALID	13–20
ROLL ANGLE INVALID	10–16
RUNWAY HEADING INVALID	9–13
STICK SHAKER AOA #1 INVALID	11–18
STICK SHAKER AOA #2 INVALID	11–18
TRUE AIRSPEED INVALID	7–9

TABLE A

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 6)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34446

34-46-00
CONFIG   1
01B   Page 109
Dec 22/02

FROM SHEET 6
(TABLE A)

NO

| 7 | DOES THE GPWC INDICATION "GPWS FAILED" SHOW? |

YES → | 88 | REPLACE THE GPWC, M147 (AMM 34-46-01/401). |

NO

| 8 | DOES THE GPWC INDICATION "AIR DATA INACTIVE" SHOW? |

YES →

| 44 | MAKE SURE THESE SYSTEMS ARE ENERGIZED:
• AIR DATA COMPUTING SYSTEM (AMM 34-12-00/501)
• FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501).

PUSH THE "INIT REF" KEY ON THE LEFT FMC CDU.
PUSH THE KET ADJACENT TO THE "MAINT" PROMPT.
PUSH THE KEY ADJACENT TO THE "SENSORS" PROMPT.
DOES THE LRU "ADC" FOR THE LEFT SENSOR STATUS SHOW "FAIL"? |

YES → | 89 | REPLACE THE LEFT AIR DATA COMPUTER, M100 (AMM 34-12-01/401). ▷1
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE LEFT ADC, CONNECTOR D423B, PINS, A8 AND B8, TO TERMINAL BLOCK, TB105, PINS, H6 AND H4 (WDM 34-12-12). REPAIR THE PROBLEMS THAT YOU FIND. ▷1 |

NO → | 90 | EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PINS, A11 AND B11, TO TERMINAL BLOCK, TB105, PINS, H6 AND H4 (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. ▷1 |

NO

| 9 | DO SOME OF THESE GPWC INDICATIONS SHOW?
• BARO ALTITUDE INVALID
• BARORATE INVALID
• COMPUTED AIRSPEED INVALID
• CORRECTED BARO ALTITUDE INVALID
• TRUE AIRSPEED INVALID |

YES → | 91 | DO THIS PROCEDURE: L (R) ADC BITE PROCEDURE (FIM 34-12-00/101, FIG. 109). ▷1 |

NO

| 9A | DOES THE GPWC INDICATION "EFS DATA INACTIVE" SHOW? |

YES → | 91A | REPLACE THE LEFT EFIS CONTROL PANEL, M94 (AMM 34-22-02/201).
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PINS, A10 AND B10, TO THE LEFT EFIS CONTROL PANEL, M94, CONNECTOR D469, PINS, 35 AND 36 (WDM 34-46-12; WDM 34-22-14). REPAIR THE PROBLEMS THAT YOU FIND. ▷1
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT AT THE GPWC, CONNECTOR D435B, PIN C5 (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. ▷1 |

NO

SEE SHEET 8
(BLOCK 10)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 7)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG 1
01B   Page 110
Dec 22/02

M34447

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 7
(BLOCK 9)

NO

| 10 | DOES THE GPWC INDICATION "FMC DATA INACTIVE" SHOW? |

YES →

NO

| 45 | MAKE SURE THESE SYSTEMS ARE ENERGIZED:
- ELECTRONIC FLIGHT INSTRUMENT SYSTEM (AMM 34-22-00/501)
- FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501).

SET THE FMC SWITCH ON THE LEFT INSTRUMENT SOURCE SELECT PANEL TO THE NORM POSITION.
SET THE MODE SWITCH ON THE LEFT EFIS CONTROL PANEL TO THE "MAP" POSITION.
DOES THE TOP LEFT CORNER OF THE EHSI SHOW BLANK? |

YES →

NO

| 92 | REPLACE THE LEFT FLIGHT MANAGEMENT COMPUTER, M134 (AMM 34-61-01/401). |1▷
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE FMC, CONNECTOR D323A, PINS A11 AND B11, TO TERMINAL BLOCK TB130, PINS H111 AND H113 (WDM 34-61-15; 34-22-18).
REPAIR THE PROBLEMS THAT YOU FIND. |1▷

| 93 | EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PINS C10 AND D10, TO TERMINAL BLOCK TB130, PINS H111 AND H113 (WDM 34-46-11).
REPAIR THE PROBLEMS THAT YOU FIND. |1▷
IF THE PROBLEM CONTINUES, REPLACE THE GPWC (AMM 34-46-01/401). |

| 11 | DO SOME OF THESE GPWC INDICATIONS SHOW?

FMC LATITUDE INVALID
FMC LONGITUDE INVALID
FMC MAG TRACK INVALID |

YES →

NO

| 94 | DO THIS PROCEDURE: FLIGHT MANAGEMENT COMPUTER SYSTEM BITE PROCEDURE (FIM 34-61-00/ 101, FIG. 111). |1▷

SEE SHEET 9
(BLOCK 12)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 8)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 111
Apr 22/02

M34448

FROM SHEET 8
(BLOCK 11)

| NO

```
┌──────────────────────────────┐        ┌──────────────────────────────┐        ┌──────────────────────────────┐
│ 12 │ DOES THE GPWC INDICATION │  YES   │ 46 │ MAKE SURE THESE SYSTEMS │  YES   │ 95 │ REPLACE THE LEFT ILS    │
│ "ILS DATA INACTIVE" SHOW?     │───────▶│ ARE ENERGIZED:               │───────▶│ RECEIVER, M156               │
└──────────────────────────────┘        │ • ILS (AMM 34-31-00/501)     │        │ (AMM 34-31-00/401). ▷1      │
                                         │ • FLIGHT MANAGEMENT SYSTEM   │        │    IF THE PROBLEM CONTINUES, │
              │ NO                       │   (AMM 34-61-00/501).        │        │ EXAMINE THE CIRCUIT FROM THE │
```

12 │ DOES THE GPWC INDICATION "ILS DATA INACTIVE" SHOW? — YES →

46 │ MAKE SURE THESE SYSTEMS ARE ENERGIZED:
• ILS (AMM 34-31-00/501)
• FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501).

PUSH THE "INIT REF" KEY ON THE LEFT FMC CDU.
PUSH THE KEY ADJACENT TO THE "MAINT" PROMPT.
PUSH THE KEY ADJACENT TO THE "SENSORS" PROMPT.
DOES THE LRU "ILS" FOR THE LEFT SENSOR STATUS SHOW "FAIL"?

— YES →

95 │ REPLACE THE LEFT ILS RECEIVER, M156 (AMM 34-31-00/401). ▷1
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE LEFT ILS RECEIVER, CONNECTOR D429B, PINS, B11 AND C11, TO TERMINAL BLOCK, TB105, PINS, Z65 AND Z66 (WDM 34-31-11; WDM 34-22-19). REPAIR THE PROBLEMS THAT YOU FIND. ▷1

(block 46) | NO →

96 │ EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PINS, C11 AND D11, TO TERMINAL BLOCK, TB105, PINS, Z65 AND Z66 (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. ▷1
IF THE PROBLEM CONTINUES, REPLACE THE GPWC (AMM 34-46-01/401).

(block 12) | NO →

13 │ DO SOME OF THESE GPWC INDICATIONS SHOW?
• GLIDESLOPE INVALID
• LOCALIZER INVALID
• RUNWAY HEADING INVALID

— YES →

97 │ DO THIS PROCEDURE: ILS BITE PROCEDURE (FIM 34-31-00/101, FIG. 103). ▷1

(block 13) | NO →

14 │ DOES THE GPWC INDICATION "GLIDESLOPE CANCEL INVALID" SHOW?

— YES →

47 │ DO NOT PUSH THE GND PROX-G/S INHIBIT SWITCH, S16 (WDM 34-46-11).
MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC TO THE "PRESENT STATUS" POSITION.
DOES "1*XX1XX*" SHOW AFTER THE DATABASE VERSION?

— YES →

98 │ EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN D9, THRU THE GND PROX-G/S INHIBIT SWITCH, S16, TO GROUND (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. ▷1

(block 14) | NO →

SEE SHEET 10
(BLOCK 15)

(block 47) | NO →

99 │ THE GPWC FLIGHT HISTORY INDICATION WAS AN INTERMITTENT FAULT.
IF THE SAME GPWC INDICATION SHOWS ON DIFFERENT FLIGHTS, DO THE APPLICABLE STEP AS SPECIFIED IN TABLE A ON SHEET 6. ▷1

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 9)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34449

34-46-00
CONFIG 1
01B   Page 112
Dec 22/02

FROM SHEET 9
(BLOCK 14)

| NO

```
┌─────────────────────────────┐          ┌─────────────────────────────┐          ┌─────────────────────────────┐
│ 15 │ DOES THE GPWC INDICATION│  YES     │ 48 │ MAKE SURE THESE SYSTEMS│  YES     │ 100│ REPLACE THE LEFT INERTIAL│
│ "IRS DATA INACTIVE" SHOW?   │─────────▶│ ARE ENERGIZED:              │─────────▶│ REFERENCE UNIT, M159        │
└─────────────────────────────┘          │ • INERTIAL REFERENCE SYSTEM │          │ (AMM 34-21-01/401). ▷1      │
         │ NO                             │   (AMM 34-21-00/501)        │          │    IF THE PROBLEM CONTINUES,│
         │                                │ • FLIGHT MANAGEMENT SYSTEM  │          │ EXAMINE THE CIRCUIT FROM THE│
         │                                │   (AMM 34-61-00/501).       │          │ IRU, CONNECTOR D367B, PINS C10│
         │                                │                             │          │ AND C11, TO TERMINAL BLOCK  │
         │                                │    PUSH THE "INIT REF" KEY ON│         │ TB161, PINS G2 AND G1       │
         │                                │ THE LEFT FMC CDU.           │          │ (WDM 34-61-12).             │
         │                                │    PUSH THE KEY ADJACENT TO │          │    REPAIR THE PROBLEMS THAT │
         │                                │ THE "MAINT" PROMPT.         │          │ YOU FIND. ▷1                │
         │                                │    PUSH THE KEY ADJACENT TO │          └─────────────────────────────┘
         │                                │ THE "SENSORS" PROMPT.       │
         │                                │    DOES THE LRU "ILS" FOR THE│
         │                                │ LEFT SENSOR STATUS SHOW     │
         │                                │ "FAIL"?                     │
         │                                └─────────────────────────────┘
         │                                         │ NO
         │                                         │
```

48 │ MAKE SURE THESE SYSTEMS ARE ENERGIZED:
• INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)
• FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501).

PUSH THE "INIT REF" KEY ON THE LEFT FMC CDU.
PUSH THE KEY ADJACENT TO THE "MAINT" PROMPT.
PUSH THE KEY ADJACENT TO THE "SENSORS" PROMPT.
DOES THE LRU "ILS" FOR THE LEFT SENSOR STATUS SHOW "FAIL"?

101 │ EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PINS A6 AND B6, TO TERMINAL BLOCK TB161, PINS G2 AND G1 (WDM 34-46-12).
REPAIR THE PROBLEMS THAT YOU FIND. ▷1
IF THE PROBLEM CONTINUES, REPLACE THE GPWC (AMM 34-46-01/401).

16 │ DO SOME OF THESE GPWC INDICATIONS SHOW?

BODY PITCH RATE INVALID
FLIGHT PATH ACCEL INVALID
INERTIAL ALTITUDE INVALID
INERTIAL VERTICAL SPEED
 INVALID
IRS LATITUDE INVALID
IRS LONGITUDE INVALID
IRS MAG TRACK INVALID
IRS MODE INVALID
PITCH ANGLE INVALID
ROLL ANGLE INVALID

YES ─────▶ 102 │ DO THIS PROCEDURE: IRS BITE TEST (FIM 34-21-00/101, FIG. 107). ▷1

| NO

SEE SHEET 11
(BLOCK 17)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 10)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 113
Apr 22/02

M34451

FROM SHEET 10
(BLOCK 16)

| NO

```
┌─────────────────────────┐  YES   ┌─────────────────────────┐  NO   ┌─────────────────────────┐
│ 17 │ DOES THE GPWC       │ ─────> │ 49 │ DO THIS PROCEDURE:  │ ────> │ 103 │ DO THE STEPS AS     │
│ INDICATION              │        │ STALL WARNING COMPUTER  │       │ SPECIFIED IN TABLE A. 1>│
│ "DSW #1 DATA INACTIVE"  │        │ (SWC) BITE PROCEDURE    │       └─────────────────────────┘
│ OR DSW #2 DATA          │        │ (FIM 27-32-00/101, FIG. │
│ INACTIVE" SHOW?         │        │ 103).                   │
└─────────────────────────┘        │      IS BITE OK?        │
```

17 | DOES THE GPWC INDICATION "DSW #1 DATA INACTIVE" OR DSW #2 DATA INACTIVE" SHOW?

YES →

49 | DO THIS PROCEDURE: STALL WARNING COMPUTER (SWC) BITE PROCEDURE (FIM 27-32-00/101, FIG. 103). IS BITE OK?

NO →

103 | DO THE STEPS AS SPECIFIED IN TABLE A. 1>

| NO

YES

104 | EXAMINE THE CIRCUIT FROM THE L (R) GPWC, CONNECTOR D435B (D435A), PINS C12 AND D12 (PINS C9 AND D9), TO THE L (R) SWC, CONNECTOR D823 (D1381), PINS 23 AND 54 (WDM 34-46-12).
    REPAIR THE PROBLEMS THAT YOU FIND. 1>
    IF THE PROBLEM CONTINUES, REPLACE THE GPWC (AMM 34-46-01/401).

18 | DO SOME OF THESE GPWC INDICATIONS SHOW?

CORRECTED AOA #1 INVALID
CORRECTED AOA #2 INVALID
FLAP ANGLE #1 INVALID
FLAP ANGLE #2 INVALID
INDICATED AOA #1 INVALID
INDICATED AOA #2 INVALID
STICK SHAKER AOA #1 INVALID
STICK SHAKER AOA #2 INVALID

YES →

105 | DO THIS PROCEDURE: STALL WARNING COMPUTER (SWC) BITE PROCEDURE (FIM 27-32-00/101, FIG. 103). 1>

| NO

SEE SHEET 12
(BLOCK 19)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 11)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 114
Apr 22/02

M34454

FROM SHEET 11
(BLOCK 18)

| NO

```
19 | DOES THE GPWC INDICATION      YES
"RADIO ALTIMETER DATA          ──────►
INACTIVE" SHOW?
```

| NO

SEE SHEET 13
(BLOCK 20)

```
50 | MAKE SURE THESE SYSTEMS       YES
ARE ENERGIZED:                 ──────►
• ELECTRONIC FLIGHT INSTRUMENT
  SYSTEM (EFIS)
  (AMM 34-22-00/501)
• RADIO ALTIMETER SYSTEM
  (AMM 34-33-00/501).

    IS THERE A YELLOW "RA"
FLAG IN PLACE OF A NUMBER
READOUT IN THE CORNER OF THE
CAPTAIN'S EADI?
```

| NO

```
106 AIRPLANES WITH -209 GPWC
AND PREVIOUS;
REPLACE THE LEFT RADIO
ALTIMETER R/T UNIT, M202
(AMM 34-33-01/401). |1▷
    AIRPLANES WITH -210 GPWC;
REPLACE THE LEFT (RIGHT,
CENTER) RADIO ALTIMETER R/T
UNIT, M202 (M203, M204)
(AMM 34-33-01/401). |1▷
    AIRPLANES WITH -209 GPWC
AND PREVIOUS;
IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM THE
RA, CONNECTOR D401B, PIN G2
AND PIN G3, TO TERMINAL BLOCK
TB130, PIN G27 AND PIN G28 OR
PIN H121 AND PIN H123
(WDM 34-33-11).  REPAIR THE
PROBLEMS THAT YOU FIND. |1▷
    AIRPLANES WITH -210 GPWC;
IF THE PROBLEM CONTINUES,
EXAMINE THE CIRCUIT FROM THE
RA, CONNECTOR D401B (D403B,
D405B), PIN G2 AND PIN G3, TO
TERMINAL BLOCK TB130 (TB119,
TB127), PIN Z123 AND PIN Z124
(PIN YA10 AND PIN YC10,
PIN Z15 AND PIN Z16)
(WDM 34-33-11,-21,-31;
WDM 34-22-29; WDM 34-22-39).
REPAIR THE PROBLEMS THAT YOU
FIND. |1▷
```

```
107 AIRPLANES WITH -209 GPWC
AND PREVIOUS;
EXAMINE THE CIRCUIT FROM THE
GPWC, CONNECTOR D435B, PIN A13
AND PIN B13, TO TERMINAL
BLOCK TB130, PIN G27 AND
PIN G28 OR PIN H121 AND
PIN H123 (WDM 34-46-11).
REPAIR THE PROBLEMS THAT YOU
FIND. |1▷
    AIRPLANES WITH -210 GPWC;
EXAMINE THE CIRCUIT FROM THE
GPWC, CONNECTOR D435B (D435A,
D435B), PIN A13 AND PIN B13
(PIN A8 AND PIN B8, PIN A12
AND PIN B12), TO TERMINAL
BLOCK TB130 (TB119, TB127),
PIN Z123 AND PIN Z124
(PIN YA10 AND PIN YC10,
PIN Z15 AND PIN Z16)
(WDM 34-46-11).  REPAIR THE
PROBLEMS THAT YOU FIND. |1▷
    IF THE PROBLEM CONTINUES,
REPLACE THE GPWC
(AMM 34-46-01/401).
```

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 12)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34472

FROM SHEET 12
(BLOCK 19)

NO

| 20 | DOES THE GPWC INDICATION "RADIO ALTITUDE INVALID" SHOW? |

YES ──→ | 108 | DO THIS PROCEDURE: RA BITE PROCEDURE (FIM 34-33-00/101, FIG. 104A). ▷1 |

NO

| 21 | DOES THE GPWC INDICATION "AIR/GROUND INVALID" SHOW? |

YES ──→ | 51 | REMOVE THE GPWC, M147 (AMM 34-46-01/401).
     OPEN THE "LDG GR POS AIR/GND SYS 1" CIRCUIT BREAKER (11C30).
     DO A TEST FOR GROUND AT CONNECTOR D435B, PIN A1 (WDM 32-09-11; WDM 34-46-12).
     IS THERE A GROUND? |

NO ──→ | 109 | REPLACE THE SYS 1 AIR/GND RELAY, K149 (AMM 32-09-02/201).
     IF THE PROBLEM CONTINUES, REPAIR THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN A1, TO THE SYS 1 AIR/GND RELAY, K149, CONNECTOR D3516, PIN 5 (WDM 34-46-12).
     INSTALL THE GPWC, M147 (AMM 34-46-01/401). ▷1 |

NO

YES ──→ | 110 | REPLACE THE GPWC, M147 (AMM 34-46-01/401).
     IF THE PROBLEM CONTINUES, REPLACE THE PROXIMITY SWITCH ELECTRONICS UNIT, M162 (AMM 32-09-04/401). ▷1 |

| 22 | DOES THE GPWC INDICATION "AUDIO SELECT INVALID" SHOW? |

YES ──→ | 111 | EXAMINE THE CIRCUIT AT THE GPWC, M147, CONNECTOR D435B, FOR GROUND OR OPEN AT THESE PINS (WDM 34-46-11):
• PIN A7
• PIN C6
• PIN D5
• PIN D6

REPAIR THE PROBLEMS THAT YOU FIND. ▷1 |

NO

| 23 | DOES THE GPWC INDICATION "AIRCRAFT TYPE INVALID" SHOW? |

YES ──→ | 112 | EXAMINE THE CIRCUIT AT THE GPWC, M147, CONNECTOR D435A, FOR GROUND OR OPEN AT THESE PINS (WDM 34-46-12):
• 767-200 AIRPLANES; PIN A10
• 767-300 AIRPLANES; PINS A10 AND C10
• 767-300ER AIRPLANES; PINS A10 AND B10

REPAIR THE PROBLEMS THAT YOU FIND. ▷1 |

NO

SEE SHEET 14
(BLOCK 24)

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 13)

M34474

FROM SHEET 13
(BLOCK 23)

NO

| 24 | DOES THE GPWC INDICATION "CALLOUTS OPTION INVALID" SHOW? |

YES →

| 113 | EXAMINE THE CIRCUIT AT THE GPWC FOR GROUND OR OPEN AT THESE PINS (WDM 34-46-11):
• CONNECTOR D435A, PIN D10
• CONNECTOR D435A, PIN D11
• CONNECTOR D435B, PIN C2
• CONNECTOR D435B, PIN C14

   AIRPLANES WITH -204 GPWC AND SUBSEQUENT; ALSO EXAMINE:
• CONNECTOR D435B, PIN A4
• CONNECTOR D435B, PIN C4.

   AIRPLANES WITH -207 GPWC AND SUBSEQUENT; ALSO EXAMINE:
• CONNECTOR D435B, PIN A14.

   REPAIR THE PROBLEMS THAT YOU FIND. |1▷ |

NO

| 25 | DOES THE GPWC INDICATION "QFE SELECTED" SHOW? |

NO →

| 114 | EXAMINE THE CIRCUIT AT THE GPWC, CONNECTOR D435B, PIN C15, TO GROUND (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. |1▷ |

YES

| 26 | MOMENTARILY POSITION STATUS/HISTORY SWITCH ON GPWC TO "HISTORY" POSITION TO ERASE THE EICAS MESSAGE "GND PROX SYS".
   THE SYSTEM IS OK. |

Ground Proximity Warning Computer BITE Procedure
Figure 103 (Sheet 14)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34573

34-46-00
CONFIG   1
01B   Page 117
Apr 22/02

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  STALL WARNING COMPUTER (AMM 27-32-00/501)
  ENGINE INDICATING AND CREW ALERTING SYSTEM
   (AMM 31-41-00/501)
  WARNING SYSTEM (AMM 31-51-00/501)
  AIR DATA COMPUTING SYSTEM (AMM 34-12-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)
  ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS)
   (AMM 34-22-00/501)
  ILS (AMM 34-31-00/501
  RADIO ALTIMETER SYSTEM (AMM 34-33-00/501)
  FLIGHT MANAGEMENT SYSTEM (AMM 34-61-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11B16, 11B18, 11F4, 11H35, 11J34

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

GROUND PROXIMITY
WARNING SYSTEM
SELF-TEST

| 1 | PUSH THE "STATUS" SWITCH ON THE EICAS DISPLAY PANEL. DOES THE "GND PROX SYS" SHOW ON THE BOTTOM EICAS DISPLAY UNIT? |

YES →

| 51 | DO THIS PROCEDURE: GROUND PROXIMITY WARNING COMPUTER BITE PROCEDURE (FIM 34-46-00/101, FIG. 103). |

NO ↓

| 2 | SET THE TEST SWITCH ON THE MISC TEST PANEL AT P61 TO "GND PROX" POSITION FOR AT LEAST 6 SECONDS. DOES THE TEST SEQUENCE START? |

NO →

| 31 | MOMENTARILY SET THE STATUS/HISTORY SWITCH ON THE GPWC, M147, TO THE "PRESENT STATUS" POSITION. DOES THE GPWC INDICATION "SYSTEM OK" SHOW? |

YES →

| 52 | REPLACE THE MISC TEST PANEL, M10398 (GND PROX TEST SWITCH FAULTY)(WDM 34-46-12). IF THE PROBLEM CONTINUES, REMOVE THE GPWC, M147 (AMM 34-46-01/401). EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN A9, TO TERMINAL BLOCK, TB66, PIN XB10 (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE GPWC. |

YES ↓

SEE SHEET 2
(BLOCK 3)

NO ↓

| 53 | DO THIS PROCEDURE: GROUND PROXIMITY WARNING COMPUTER BITE PROCEDURE (FIM 34-46-00/101, FIG. 103). |

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 1)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34576

34-46-00
       CONFIG 1
01B   Page 118
        Dec 22/02

FROM SHEET 1
(BLOCK 2)

| | NO

3	DO THESE TEST INDICATIONS OCCUR?
• "GND PROX SYS" SHOWS ON THE STATUS PAGE OF EICAS • "GND PROX" LIGHT AND "GLIDE SLOPE" AURAL ON • "GND PROX" LIGHT AND "GLIDE SLOPE" AURAL OFF • "PULL UP" LIGHT, MASTER "WARNING" LIGHTS, AND "WHOOP WHOOP PULL UP" AURAL ON • "PULL UP" LIGHT AND "WHOOP WHOOP PULL UP" AURAL OFF • SIREN, MASTER "WARNING" LIGHTS, RED "WINDSHEAR" LIGHT, AND RED "WINDSHEAR" INDICATION ON THE CAPTAIN'S AND FIRST OFFICER'S EADI ON • SIREN, MASTER "WARNING" LIGHTS, "WINDSHEAR" INDICATION, AND "WINDSHEAR" LIGHT OFF • AMBER WINDSHEAR INDICATION ON THE CAPTAIN'S AND FIRST OFFICER'S EADI ON AND THEN OFF • TOTAL VOCABULARY LIST IS PRONOUNCED • "GND PROX SYS" EICAS MESSAGE OFF.

NO →

32	DID THE "GND PROX" LIGHT COME ON?

NO →

54	REMOVE THE GPWC, M147 (AMM 34-46-01/401).
EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN D3, TO THE GND PROX LIGHT, G/S INHIBIT SWITCH, S16, PIN 16 (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE GPWC.

YES

33	DID THE "PULL UP" LIGHT COME ON?

NO →

55	REMOVE THE GPWC, M147 (AMM 34-46-01/401).
EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN B7, TO THE DISCRETE WARNING MODULE, M779, PIN C2 (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE GPWC.

YES

SEE SHEET 3
(BLOCK 34)

| YES

4	THE SYSTEM IS OK.

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 2)

M34578

FROM SHEET 2
(BLOCK 33)

| YES

| 34 | DID THE AURAL INDICATION SOUND? | →NO | 56 | REMOVE THE GPWC, M147 (AMM 34-46-01/401). REMOVE LEFT SIREN/OWL MODULE, M999 (AMM 31-51-04/401). EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN C13 TO THE LEFT SIREN/OWL MODULE, CONNECTOR D1487, PIN 20 (WDM 31-51-31, WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE LEFT SIREN/OWL MODULE, AND GPWC. |

| YES

| 35 | DID THE MASTER "WARNING" LIGHTS COME ON DURING THE "WHOOP-WHOOP PULL UP" AURAL INDICATION? | →NO | 57 | REPLACE THE MASTER WARNING MODULE, M618 (AMM 31-51-04/401). IF THE PROBLEM CONTINUES, REMOVE THE MASTER WARNING MODULE. EXAMINE THE CIRCUIT FROM TERMINAL BLOCK, TB119, PIN G116 TO THE MASTER WARNING MODULE, CONNECTOR D815, PIN 46 (WDM 31-51-21, WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE MASTER WARNING MODULE. |

| YES

| 36 | DID THE "GND PROX SYS" INDICATION SHOW ON THE STATUS PAGE OF EICAS AFTER 5 SECONDS? | →NO | 58 | REMOVE THE GPWC, M147 (AMM 34-46-01/401). REMOVE THE LEFT EICAS COMPUTER, M10181 (AMM 31-41-02/401). EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435B, PIN C7 TO THE LEFT EICAS COMPUTER, CONNECTOR D881B, PIN J1 (WDM 34-46-12). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE GPWC. INSTALL THE LEFT EICAS COMPUTER. |

| YES

SEE SHEET 4
(BLOCK 37)

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 3)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

M34581

34-46-00
CONFIG 1
01B   Page 120
Apr 22/02

FROM SHEET 3
(BLOCK 36

YES

---

37 DID ANY OF THESE INDICA-
TIONS OCCUR?
- "WINDSHEAR" LIGHT COME ON
- MASTER "WARNING" LIGHT COME
  ON DURING WINDSHEAR AURAL
  INDICATION
- RED "WINDSHEAR" INDICATION
  ON THE CAPTAIN'S OR FIRST
  OFFICER'S EADI COME ON
- SHORT SIREN AURAL COME ON.

NO →

59 REMOVE THE GPWC, M147
(AMM 34-46-01/401).
    EXAMINE THE CIRCUIT FROM
THE GPWC, CONNECTOR D435A,
PIN A11, TO TERMINAL BLOCK
TB119, PIN H119
(WDM 34-46-12). REPAIR THE
PROBLEMS THAT YOU FIND.
    INSTALL THE GPWC.

YES

---

38 DID THE "WINDSHEAR" LIGHT
COME ON?

NO →

60 REMOVE THE GPWC, M147
(AMM 34-46-01/401).
    EXAMINE THE CIRCUIT FROM
THE GPWC, CONNECTOR D435A,
PIN A12, TO THE WINDSHEAR
LIGHT, L890 (WDM 34-46-11).
REPAIR THE PROBLEMS THAT
YOU FIND.
    INSTALL THE GPWC.

YES

---

39 DID THE MASTER "WARNING"
LIGHT COME ON DURING THE WIND-
SHEAR AURAL INDICATION?

NO →

61 REPLACE THE MASTER WARNING
MODULE, M618 (AMM 31-51-04/
401).
    IF THE PROBLEM CONTINUES,
REMOVE THE MASTER WARNING
MODULE.
    EXAMINE THE CIRCUIT FROM
TERMINAL BLOCK TB119,
PIN H139, TO THE MASTER
WARNING MODULE, CONNECTOR
D815, PIN 6 (WDM 34-46-11).
REPAIR THE PROBLEMS THAT
YOU FIND.
    INSTALL THE MASTER WARNING
MODULE.

YES

SEE SHEET 5
(BLOCK 40)

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 4)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 121
Apr 22/02

M34584

FROM SHEET 4
(BLOCK 39)

YES

| 40 | DID THE RED "WINDSHEAR" INDICATION SHOW ON THE CAPTAIN'S EADI? |

NO →

| 62 | REPLACE THE LEFT EFIS SYMBOL GENERATOR, M148 (AMM 34-22-01/401).
IF THE PROBLEM CONTINUES, REMOVE THE LEFT EFIS SYMBOL GENERATOR.
EXAMINE THE CIRCUIT FROM TERMINAL BLOCK TB119, PIN H139, TO THE LEFT EFIS SYMBOL GENERATOR, CONNECTOR D425A, PIN C14 (WDM 34-46-11; 34-22-16). REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE LEFT EFIS SYMBOL GENERATOR. |

YES

| 41 | DID THE RED "WINDSHEAR" INDICATION SHOW ON THE FIRST OFFICER'S EADI? |

NO →

| 63 | REPLACE THE RIGHT EFIS SYMBOL GENERATOR, M150 (AMM 34-22-01/401).
IF THE PROBLEM CONTINUES, REMOVE THE RIGHT EFIS SYMBOL GENERATOR.
EXAMINE THE CIRCUIT FROM TERMINAL BLOCK TB119, PIN H139, TO THE RIGHT EFIS SYMBOL GENERATOR, CONNECTOR D373A, PIN C14 (WDM 34-46-11; 34-22-26). REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE RIGHT EFIS SYMBOL GENERATOR. |

YES

| 42 | DID THE AMBER "WINDSHEAR" INDICATION SHOW ON THE CAPTAIN'S OR FIRST OFFICER'S EADI? |

NO →

| 64 | REPLACE THE GPWC, M147 (AMM 34-46-01/401).
IF THE PROBLEM CONTINUES, REMOVE THE GPWC.
EXAMINE THE CIRCUIT FROM THE GPWC, CONNECTOR D435A, PIN B12, TO TERMINAL BLOCK TB119, PIN G110 (WDM 34-46-11). REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE GPWC. |

YES

SEE SHEET 6
(BLOCK 43)

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 5)

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00

CONFIG   1
01B   Page 122
Apr 22/02

M34585

FROM SHEET 5
(BLOCK 42)

YES

```
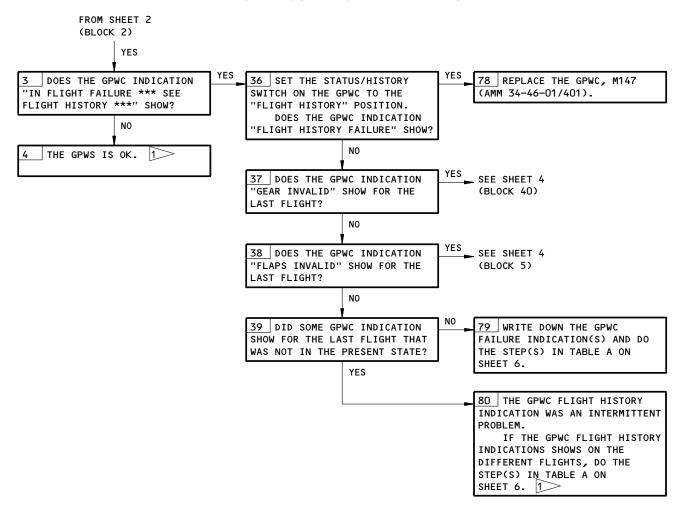┌─────────────────────────────────┐        ┌─────────────────────────────────┐
│ 43 │ DID THE AMBER "WINDSHEAR"   │  NO    │ 65 │ REPLACE THE LEFT EFIS      │
│ INDICATION SHOW ON THE          ├───────▶│ SYMBOL GENERATOR, M148          │
│ CAPTAIN'S EADI?                 │        │ (AMM 34-22-01/401).             │
└──────────────┬──────────────────┘        │     IF THE PROBLEM CONTINUES,   │
               │                           │ REMOVE THE LEFT EFIS SYMBOL     │
              YES                          │ GENERATOR.                      │
               │                           │     EXAMINE THE CIRCUIT FROM    │
               │                           │ TERMINAL BLOCK TB119,           │
               │                           │ PIN G110, TO THE LEFT EFIS      │
               │                           │ SYMBOL GENERATOR, CONNECTOR     │
               │                           │ D425A, PIN D14 (WDM 34-46-11;   │
               │                           │ 34-22-16). REPAIR THE           │
               │                           │ PROBLEMS THAT YOU FIND.         │
               │                           │     INSTALL THE LEFT EFIS       │
               │                           │ SYMBOL GENERATOR.               │
               │                           └─────────────────────────────────┘
               │
               │                           ┌─────────────────────────────────┐
               │                           │ 66 │ REPLACE THE RIGHT EFIS     │
               └──────────────────────────▶│ SYMBOL GENERATOR, M150          │
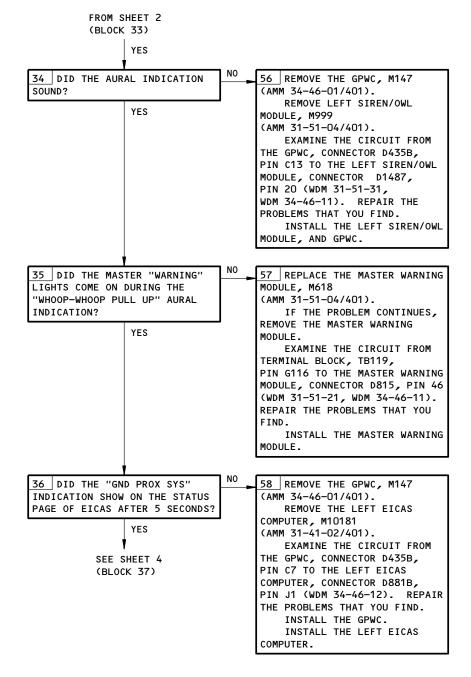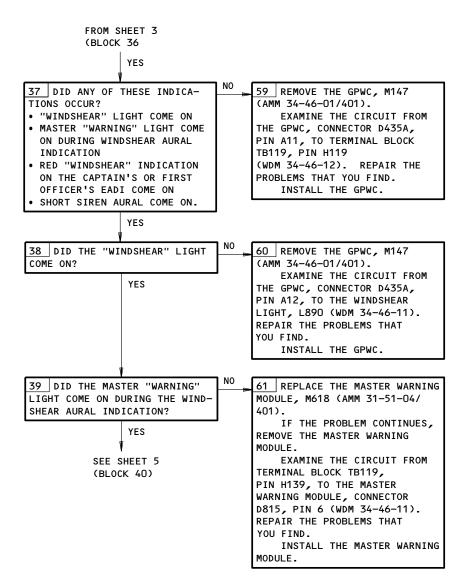                                           │ (AMM 34-22-01/401).             │
                                           │     IS THE PROBLEM CONTINUES,   │
                                           │ REMOVE THE RIGHT EFIS SYMBOL    │
                                           │ GENERATOR.                      │
                                           │     EXAMINE THE CIRCUIT FROM    │
                                           │ TERMINAL BLOCK TB119,           │
                                           │ PIN G110, TO THE RIGHT EFIS     │
                                           │ SYMBOL GENERATOR, CONNECTOR     │
                                           │ D373A, PIN D14 (WDM 34-46-11;   │
                                           │ 34-22-26). REPAIR THE           │
                                           │ PROBLEMS THAT YOU FIND.         │
                                           │     INSTALL THE RIGHT EFIS      │
                                           │ SYMBOL GENERATOR.               │
                                           └─────────────────────────────────┘
```

Ground Proximity Warning System Self-Test
Figure 104 (Sheet 6)

1. ARINC Data Bus Charts
    A. General

        CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
                 YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

        (1) The ARINC 429 data bus charts give data necessary to make an
             analysis of ARINC 429 transmitters, receivers, and data buses. For
             the test, use a breakout box at the available terminal or at the LRU
             connectors.

SAS   (2) The SAS data was changed to show only the −207 GPWC and subsequent
SAS   per SAS COC No. PR 34−01−96, dated September 20, 1996.

    B. Equipment
        (1) Standard multi−meter
        (2) 429EBP Data Bus Analyzer (recommended)
             JcAIR Instrumentation
             400 Industrial Parkway
             Industrial Airport, KS 66031

             429−2 Data Bus Analyzer (alternative)
             Interface Technology
             150 E. Arrow Highway
             San Dimas, CA 91773
        (3) A34011−1 Breakout Box (recommended)
             A34011−112 Breakout Box (alternative)

GPWC DIGITAL OUTPUT BUS CHART							
BUS NAME SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
GPWC	A	1	B	C01 D01	429	LO	WARN MODE & MAINT

GPWC(ID = 23) OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
WARNING MODE+MAINT	A	270	DIS	12.5	00	N/A	N/A	N/A

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
SAS B   Page 124
Apr 22/02

GPWC DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
SINK RATE	270	11	TRUE	NOT TRUE
PULL UP	270	12	TRUE	NOT TRUE
TERRAIN	270	13	TRUE	NOT TRUE
DON'T SINK	270	14	TRUE	NOT TRUE
TOO LOW GEAR	270	15	TRUE	NOT TRUE
TOO LOW FLAP	270	16	TRUE	NOT TRUE
TOO LOW TERRAIN	270	17	TRUE	NOT TRUE
GLIDESLOPE	270	18	TRUE	NOT TRUE
MINIMUMS	270	19	TRUE	NOT TRUE
TERRAIN PULL UP	270	20	TRUE	NOT TRUE
TOO LOW TERRAIN	270	22	TRUE	NOT TRUE
WIND SHEAR	270	23	TRUE	NOT TRUE

EFFECTIVITY
SAS, MARTINAIR WITHOUT EGPWS

34-46-00
CONFIG   1
01B   Page 125
Apr 22/02

SAS   ENHANCED GROUND PROXIMITY WARNING SYSTEM — TROUBLE SHOOTING
SAS
SAS 1.   General
SAS   A.   Overview
SAS   (1)   The EGPWC contains extensive Built In Test or BIT capability. The
SAS   BIT functions provide high confidence that the Warning Computer and
SAS   interface signal sources are operating properly and that the EGPWS
SAS   will perform its intended function. Detected failures are indicated
SAS   via the GND PROX SYS EICAS message and Terrain INOP lights and by
SAS   the ARINC 429 output. Failures detected during flight are saved in
SAS   the flight history and are annunciated during Level 4 of the cockpit
SAS   self test. BIT status is also available through the RS-232 port by
SAS   use of a PC, terminal or during ATP.
SAS   B.   EGPWS BITE
SAS   (1)   The EGPWC BITE is comprised of three types of functions: Operation
SAS   Monitoring, Operational Tests, and Restricted Tests.
SAS   (a)   Operation Monitoring
SAS   1)   Operation Monitoring consists of software checks that are
SAS   performed as part of the normal Warning Computer
SAS   processing. Operational Monitoring includes checks of data
SAS   values and program flow control variables used for the
SAS   warning computations to ensure they are within expected
SAS   ranges. The status of various EGPWC hardware sub-systems
SAS   is continuously verified and includes core processor
SAS   checks, voice generator circuitry checks and ARINC 429
SAS   wrap-around tests. Operational Monitoring also includes
SAS   extensive testing of the input signals to ensure the EGPWC
SAS   is using proper data for its calculations.
SAS   (b)   Operation Tests
SAS   1)   Operation Tests are run during normal operation and do not
SAS   disrupt the EGPWC warning calculations or annunciations.
SAS   Operations Tests include CPU instruction set tests, A/D
SAS   tolerance tests, ROM check-sum verification tests and
SAS   non-destructive RAM tests. Operation Tests are scheduled
SAS   by the operating system to be performed between the
SAS   routines required for normal operation.
SAS   (c)   Restricted Tests
SAS   1)   Restricted Tests destroy data or take an excessive amount
SAS   of time to complete and cannot be used during normal system
SAS   operation. These tests are usually run during system power
SAS   up or during a cockpit initiated self test. These tests
SAS   primarily consist of more thorough hardware checks that
SAS   would disrupt normal operation if continuously run.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 101
Dec 22/01

SAS   (d) EGPWC Front Panel

SAS   1) To aid in troubleshooting the EGPWC, the front panel of the Warning Computer contains EGPWS Status LED's, a Self Test interface, a PCMCIA interface, and a test plug.

SAS   (e) EGPWS Status LED's

SAS   1) The EGPWC front panel Status LED's consist of three LED's – a yellow External Fault LED, a green Computer OK LED and a red Computer Fail LED. The yellow External Fault LED indicates that a fault external to the EGPWC exists. All external faults should be fixed prior to removing and replacing the EGPWC. The green Computer OK LED indicates that the EGPWC is operating correctly with no internal faults. The red Computer Fail LED indicates that the EGPWC has an internal fault.

SAS   (f) Self Test Interface

SAS   1) The EGPWC front panel self test interface consists of a self test switch and a headphone jack which can be used to activate all of the self test features. The front panel audio jack is a standard 600Ω monophonic audio output compatible with standard 2–connector audio plug headphones.

SAS   (g) Front Panel PCMCIA Interface

SAS   1) The EGPWC front panel PCMCIA interface allows data upload and download capabilities. Instructions on the use of the PCMCIA interface will be supplied in the Service Bulletin accompanying the software update.

SAS   (h) Front Panel Test Plug (RS–232 Port)

SAS   1) The EGPWC front panel test plug (RS–232 port) provides various communications support capabilities, discretes used for file downloading and power outputs for a portable data loader. This port serves as access to signal monitoring, flight history, initiating BITE tests, updating databases and other functions. The interface is full duplex and is intended for human interaction, but can also be used for custom interface programs such as the Honeywell WinVIEWS utility.

SAS   (i) The procedures that follow assume that all the wiring is OK.

SAS   1) If the corrective action does not correct the failure, use the appropriate wiring diagram to make sure all wiring and connections are correct.

SAS   C. Prepare for Troubleshooting

SAS   (1) Supply electrical power (AMM 24–22–00/201).

SAS   (2) Make sure these circuit breakers on the P11 Panel are closed:

SAS   (a) 11F4, GND PROX

SAS   (b) 11F3, TERR DSPL

SAS   (c) 11F5, Left RAD ALTM

SAS   (d) 11F20, Center RAD ALTM

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
         CONFIG 2
       SAS B   Page 102
            Dec 22/01

SAS   (e) 11F26, Right RAD ALTM
SAS   (f) 11A10, Left AIR DATA CMPTR
SAS   (g) 11E10, Left ILS
SAS   (h) 11E9, Left FMCS CMPTR
SAS   (i) 11J34, WARN ELEX A
SAS   (j) 11B18, WARN ELEX B
SAS   (k) 11F8, Left EFIS SYM GEN
SAS   (l) 11F9, Center EFIS SYM GEN
SAS   (m) 11F29, Right EFIS SYM GEN
SAS   (n) 11E4, Left EFIS CONT PNL
SAS   (o) 11E25, Right EFIS CONT PNL
SAS   (p) 11E6, Left HSI
SAS   (q) 11E27, Right HSI
SAS   (3) Make sure the Left and Right IRU are in the NAV mode and aligned
SAS   (AMM 34—21—00/201).
SAS   (4) Make sure that the flaps are up, and that the landing gear lever is
SAS   in the OFF or DN position.
SAS   (5) Set a valid ILS frequency on both ILS's and then make sure that the
SAS   GS flag on captain's EADI is out of view.
SAS   D. Self Test Function
SAS   (1) The EGPWC support a cockpit operated self test sequence that
SAS   indicates the operational status of the system. The self test aural
SAS   annunciate the status of the major functions of the system:
SAS   Glideslope, GPWS, Bank Angle, Altitude Callouts, Windshear Detection
SAS   and Terrain Awareness and activates the outputs (lights and
SAS   displays) for visual verification. The EGPWC self test also
SAS   provides maintenance information detailing the cause of detected
SAS   faults, historical information of faults and warnings occurring
SAS   during flight, and EGPWC and installation configuration information.
SAS   The self test aural will be heard in the cockpit and through the
SAS   headphone jack on the EGPWC front panel.
SAS   E. The EGPWC self test is divided into six levels:
SAS   (1) Level 1 — Enunciates the current status of each of the major
SAS   functions of the EGPWS. This is the normal pre—takeoff test
SAS   performed by the flight crew. This level can be initiated both on
SAS   the ground and during flight above 1000 feet of radio altitude.
SAS   There is a short and a long Level 1 test. The short test is
SAS   intended to provide a go/no go confidence test. The long test
SAS   enunciates all configured and activated warning, caution and
SAS   altitude callout voices. The long Level 1 test can be only
SAS   initiated on ground.
SAS   (2) Level 2 — Identifies all failures current within the system. Level
SAS   2 is accessed by maintenance personnel to help resolve INOP
SAS   conditions. Level 2 can only be accessed on the ground.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 103
Dec 22/01

SAS   (3)   Level 3 — Identifies the configuration status of the Warning
SAS   Computer and the installation. Level 3 can only be accessed on the
SAS   ground.
SAS   (4)   Level 4 — Enunciates faults that have occurred during past flights.
SAS   This information can be used to resolve system problems reported by
SAS   the flight crews. Level 4 can only be accessed on the ground.
SAS   (5)   Level 5 — Enunciates warnings that have occurred during past
SAS   flights. This information can be used to resolve system problems
SAS   reported by the flight crews. Level 5 can only be accessed on the
SAS   ground.
SAS   (6)   Level 6 — Enunciates state changes in the input discretes. This
SAS   information can be used to verify the installation and operation of
SAS   the discrete inputs. Level 6 can only be accessed on the ground.
SAS   F.   The following sections detail the operation of each self test level.
SAS

SAS   NOTE: In the following sections, reference is made to a "short
SAS   cancel" and a "long cancel". A "short cancel" is defined as
SAS   depressing the self test switch (either in the cockpit or on the
SAS   EGPWC front panel) for less than 2 seconds. A "long cancel" is
SAS   defined as depressing the self test switch for more than 2
SAS   seconds.
SAS

SAS   (1)   Self Test Level 1
SAS   (a)   Level 1 testing enunciates the current status of each of the
SAS   major functions of the EGPWS: Descent below glideslope, GPWS,
SAS   bank angle protection, altitude callouts, windshear detection,
SAS   and terrain awareness.
SAS   (b)   The Level 1 self test is comprised of three parts: preamble,
SAS   short test and long test.
SAS   (c)   The preamble and short test portion of the Level 1 test is
SAS   initiated by momentarily pressing the GND PROX test switch.
SAS   (d)   The long test portion is initiated by depressing the GND PROX
SAS   test switch for a period between 2 and 5 seconds.
SAS   (e)   The Level 1 test can only be initiated when the aircraft is on
SAS   the ground or if radio altitude is greater than 1000 feet radio
SAS   altitude.
SAS   (f)   All interfacing systems should be powered on and operating
SAS   prior to conducting a Level 1 self test.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
     CONFIG 2
   SAS B   Page 104
     Dec 22/01

SAS (g) The Terrain Display must be placed in a mode, which will allow
SAS   the terrain display to be shown (e.g. Map mode) prior to
SAS   starting the test in order to see the Terrain Display test
SAS   pattern, requiring the selection of "WXR/TERR" prior to
SAS   starting the test. The WXR should be placed in TEST mode.
SAS   1) Preamble — The preamble checks the program pin connections
SAS   and the internal memory prior to starting the self test.
SAS   If any faults are detected, the self test will ennunciate
SAS   the detected fault and terminate the self test process.
SAS   2) Short Test — The short self test is initiated holding the
SAS   GND PROX test switch in Test position for less than 2
SAS   seconds. The normal Level 1 short self test sequence is as
SAS   follows:
SAS   a) GND PROX SYS EICAS message and Terrain INOP light turn
SAS   on
SAS   b) GND PROX light turn on
SAS   c) Voice: "GLIDESLOPE"
SAS   d) GND PROX light turn off
SAS   e) GPWS PULL UP light turns on
SAS   f) Voice: "PULL UP"
SAS   g) GPWS PULL UP light turn off
SAS   h) WINDSHEAR light turns on and red WINDSHEAR annunciation
SAS   is displayed on the Captain's and F/O's EADI's
SAS   i) Voice: (SIREN) "WINDSHEAR, WINDSHEAR, WINDSHEAR"
SAS   j) WINDSHEAR light and EADI WINDSHEAR annunciations turn
SAS   off
SAS   k) Amber WINDSHEAR annunciation is displayed on the EADI's
SAS   l) Amber WINDSHEAR annunciations turn off
SAS   m) GPWS PULL UP light turns on
SAS   n) Voice: "TERRAIN TERRAIN PULL UP"
SAS   o) GPWS PULL UP light turn off
SAS   p) Captain's and F/O's TERR select switch ON legend is
SAS   illuminated
SAS   q) Terrain Displays show terrain test pattern
SAS   r) GND PROX light turn on
SAS   s) GND PROX light turn off
SAS   t) Terrain Displays return to normal
SAS   u) ALL INOP lights and EICAS messages turn off
SAS   3) Long Test
SAS   a) The long self test enunciates all activated alert
SAS   voices, including warning, caution and altitude callout
SAS   voices.
SAS   b) The long self test is initiated by holding the GND PROX
SAS   test switch in Test position for more than 2 seconds.
SAS   1. GND PROX SYS EICAS message and Terrain INOP light
SAS   turn on

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 105
Dec 22/01

SAS	2.	GND PROX light turn on
SAS	3.	Voice: "GLIDESLOPE"
SAS	4.	GND PROX light turn off
SAS	5.	GPWS PULL UP light turns on
SAS	6.	Voice: "PULL UP"
SAS	7.	GPWS PULL UP light turn off
SAS	8.	WINDSHEAR light turns on and red WINDSHEAR annunciation is displayed on the Captain's and F/O's EADI's
SAS	9.	Voice: (SIREN) "WINDSHEAR, WINDSHEAR, WINDSHEAR"
SAS	10.	WINDSHEAR light and EADI WINDSHEAR annunciations turn off
SAS	11.	Amber WINDSHEAR annunciation is displayed on the EADI's
SAS	12.	Amber WINDSHEAR annunciations turn off
SAS	13.	GPWS PULL UP light turns on
SAS	14.	Voice: "TERRAIN TERRAIN PULL UP"
SAS	15.	GPWS PULL UP light turn off
SAS	16.	Captain's and F/O's TERR select switch ON legend is illuminated
SAS	17.	Terrain Displays show terrain test pattern
SAS	18.	GND PROX light turn on
SAS	19.	GND PROX light turn off
SAS	20.	Voice: "SINKRATE"
SAS	21.	Voice: "PULL UP"
SAS	22.	Voice: "TERRAIN"
SAS	23.	Voice: "PULL UP"
SAS	24.	Voice: "DON'T SINK DON'T SINK"
SAS	25.	Voice: "TOO LOW TERRAIN"
SAS	26.	Voice: "TOO LOW GEAR"
SAS	27.	Voice: "TOO LOW FLAPS"
SAS	28.	Voice: "TOO LOW TERRAIN"
SAS	29.	Voice: "GLIDESLOPE"
SAS	30.	Voice: "BANK ANGLE BANK ANGLE"
SAS	31.	Voice: "PLUS HUNDRED"
SAS	32.	Voice: "MINIMUMS"
SAS	33.	Voice: "TWENTY FIVE HUNDRED"
SAS	34.	Voice: "ONE THOUSAND"
SAS	35.	Voice: "FIVE HUNDRED"
SAS	36.	Voice: "FIFTY"
SAS	37.	Voice: "FORTY"
SAS	38.	Voice: "THIRTY"
SAS	39.	Voice: "TWENTY"
SAS	40.	Voice: "TEN"
SAS	41.	Voice: (SIREN) "WINDSHEAR WINDSHEAR WINDSHEAR"
SAS	42.	Voice: "TOO LOW TERRAIN"

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 106
Dec 22/01

SAS	<u>43</u>. Voice: "CAUTION TERRAIN CAUTION TERRAIN"
SAS	<u>44</u>. Voice: "TERRAIN TERRAIN PULL UP"
SAS	<u>45</u>. Voice: "CAUTION OBSTACLE CAUTION OBSTACLE"
SAS	<u>46</u>. Voice: "OBSTACLE OBSTACLE PULL UP"
SAS	<u>47</u>. Terrain Displays return to normal
SAS	<u>48</u>. All INOP lights, switch legends and EICAS messages
SAS	turn off
SAS	4) Voice Messages
SAS	a) The Level 1 Self Test will detect and annunciate any
SAS	current failure conditions, which affect the operation
SAS	of the major EGPWS functions. The following table
SAS	identifies the response for the faults annunciated
SAS	during the test.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG 2
SAS B   Page 107
Dec 22/03

SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS

VOICE MESSAGE	RESPONSE
Program Pin Parity Error	Probable error in writing for the program pins. Verify the program pins are wired correctly and configure the parity pin for ODD parity.
Aircraft Configuration Data Base CRC Failed	Remove and replace EGPWC.
Aircraft Configuration Data Base Failed	Remove and replace EGPWC.
Aircraft Type Invalid	Probable error in aircraft type program pins. Verify the aircraft type program pin connection.
Glideslope INOP	Perform a Level 2 self test to troubleshoot the problem.
GPWS INOP	Perform a Level 2 self test to troubleshoot the problem.
Bank Angle INOP	Perform a Level 2 self test to troubleshoot the problem.
Callouts INOP	Perform a Level 2 self test to troubleshoot the problem.
Windshear INOP	Perform a Level 2 self test to troubleshoot the problem.
Terrain INOP	Perform a Level 2 self test to troubleshoot the problem.
Internal GPS not navigating	Position information not available from GPS. See par. G.(1) for troubleshooting.
Response includes aural "Terrain Inhibited"	Indicates that the "Terrain Awareness and TCF Inhibit" input to the EGPWC is selected.

    (2) Self Test Level 2

        (a) A Level 2 self test tells the maintenance crew if there are any faults currently in the system.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 108
Dec 22/01

SAS   (b)   Level 2 is accessed while the aircraft is on the ground by
SAS   pressing the GND PROX test switch within 3 seconds of the end
SAS   of the Level 1 test or a short cancel during a Level 1 self
SAS   test. The message "CURRENT FAULTS" will be enunciated when
SAS   Level 2 starts. The Level 2 test is not accessible while
SAS   airborne.
SAS   (c)   During the Level 2 self test, a short or a long cancel
SAS   terminates the self test and "PRESS TO CONTINUE" is enunciated
SAS   for proceeding to Level 3 self test.
SAS   (d)   If no faults currently exist, the message "NO FAULTS" will be
SAS   enunciated.
SAS   (e)   If a fault is detected, it will be classified as either an
SAS   internal or external fault. Internal faults are defined as
SAS   those faults that originate within the EGPWC. Internal faults
SAS   will turn on the red COMPUTER FAIL LED on the EGPWC front
SAS   panel. External faults are defined as those faults that
SAS   originate from sources outside the EGPWC. External faults will
SAS   turn on the amber EXTERNAL FAULT LED on the EGPWC front panel.
SAS   1)   Internal Faults
SAS   a)   An internal fault indicates a problem with the Warning
SAS   Computer. The system should be checked and the Warning
SAS   Computer should be removed and replaced if required.
SAS   The following figure lists the internal fault messages
SAS   and the probable maintenance response.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 109
Dec 22/01

LEVEL 2 SELF TEST ANNUNCIATION – INTERNAL FAULTS (EXAMPLES)	
Annunciation	ROM FAILED
	RAM FAILED
	NVM RAM FAILED
	NVM FAILED
	WATCHDOG TIMER FAILED
	EXCESSIVE WATCHDOG TIMEOUTS FAILURE
	ANALOG CONVERTER FAILED
	VOICE GENERATOR FAILED
	ARINC 429 TRANSMITTER FAILED
	ARINC 429 RECEIVER FAILED
	APPLICATION DATABASE FAILED
	APPLICATION DATABASE CRC FAILED
	TERRAIN DATABASE FAILED
	ENVELOPE MODULATION DATABASE FAILED
	CONFIGURATION DATABASE FAILED
	SYSTEM OR MODE TASK FAILED
	SUPPORT TASK FAILED
	INTERNAL GPS FAILED
Probable Cause	EGPWC failure
Action	Remove and replace the EGPWC.

2) External Faults

a) ARINC 429 bus activity, ARINC 429 signal faults, input discrete monitoring, analog input wire monitoring and analog signal faults are categorized as external faults. The following figure lists the types of messages and the probable maintenance response required for an external fault. For example, if the computer airspeed on air data computer 1 is failed (SSM=Fail Warning) the following messages will be annunciated:

"CURRENT FAULTS"
"EGPWC OK"
"EXTERNAL FAULTS"
"AIR DATA BUS 1 COMPUTED AIRSPEED FAULT"
"PRESS TO CONTINUE"

LEVEL 2 SELF TEST ANNUNCIATION – EXTERNAL FAULTS (EXAMPLES)

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 110
Dec 22/01

SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS

Annunciation	<BUS> Inactive
Example	ILS BUS 1 Inactive
Probable Cause	Input source is not powered or a wiring problem exists between the source LRU and the Warning Computer.
Action	Verify input source LRU is powered. Verify wiring from source to LRU.

Annunciation	<BUS> <SIGNAL> FAULT
Example	ILS BUS 1 GLIDESLOPE FAULT
Probable Cause	Input signal SSM = Fail Warning, or Input signal is not being transmitted (incorrect update rate).
Action	Repair input signal.

Annunciation	<BUS> WIRING FAULT
Example	RADIO ALTIMETER 1 WIRING FAULT
Probable Cause	Open wire monitor has detected no connection from the SOURCE LRU.
Action	Verify wiring from the LRU.

Annunciation	FLAP SWITCH FAULT
Probable Cause	Electrical short at the flap discrete input.
Action	Verify wiring from the flap override switch and/or flap input discretes.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 111
Dec 22/01

SAS
SAS
SAS

Annunciation	GEAR SWITCH FAULT
Probable Cause	Electrical short at the gear discrete input.
Action	Verify wiring from the gear override switch and/or gear input discretes.

Annunciation	GLIDESLOPE CANCEL INVALID
Probable Cause	Electrical short at the glideslope cancel input.
Action	Verify wiring from the glideslope cancel input.

Annunciation	FLAP ANGLE UNREASONABLE
Probable Cause	Electrical short at the flap discrete input(s).
Action	Verify wiring from the flap input discrete(s).

Annunciation	SELF TEST INVALID
Probable Cause	Electrical short at the self test input.
Action	Verify wiring from the self test discrete.

Annunciation	MOMENTARY TERRAIN SELECT 1 (OR 2) INVALID
Probable Cause	Electrical short at the Terrain Select input(s).
Action	Verify wiring from the terrain "ON" switches.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 112
Dec 22/01

Annunciation	PROGRAM PIN READ ERROR	
Probable Cause	Wiring error to the program pins.	
Action	Verify wiring to each program pin.	

Annunciation	PROGRAM PIN PARITY ERROR	
Probable Cause	Wiring error to the program pins.	
Action	Verify wiring to each program pin. Verify ODD parity selected.	

Annunciation	AIRCRAFT TYPE INVALID	
Probable Cause	Wiring error to the Aircraft Type program pins.	
Action	Verify wiring to the Aircraft Type program pins.	

Annunciation	CALLOUTS OPTION INVALID	
Probable Cause	Wiring error to the Callouts Options program pins.	
Action	Verify wiring to the Callout Options program pins.	

Annunciation	AUDIO MENU INVAID	
Probable Cause	Wiring error to the Audio Menu program pins.	
Action	Verify wiring to the Audio Menu program pins.	

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 113
Dec 22/01

SAS		
SAS	Annunciation	PROGRAM PIN <XX> INVALID (where XX is a number)
SAS		
SAS	Probable Cause	Invalid option selected.
SAS		
SAS	Action	Verify wiring to all program pins.
SAS		

SAS   (3) Self Test Level 3

SAS   (a) A Level 3 self test enunciates Warning Computer configuration information. This information is determined by the wiring of the program pins, from data stored in the computer ROM and by identification resistors on each of the internal circuit boards.

SAS   (b) Level 3 is accessed while the aircraft is on the ground by pressing the GND PROX test switch within 3 seconds of the "PRESS TO CONTINUE" message at the end of the Level 2 test. The message "SYSTEM CONFIGURATION" will be enunciated when Level 3 starts.

SAS   (c) During a Level 3 self test a short cancel bumps the enunciation to the next Level 3 item (e.g. from terrain database information to envelope modulation database information). A long cancel terminates the self test level and "PRESS TO CONTINUE" is enunciated for proceding to Level 4 self test.

SAS   (d) The following information is given in the Level 3 self test:

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 114
Dec 22/01

INFORMATION	VERIFICATION
EGPWC Part Number	See IPC or other approved source
EGPWC Serial Number	See identification label on unit
Application Software Number	Any number accepted
Configuration Software Version	Any number accepted
Envelope Modulation Database Version	Any number accepted
Aircraft Type	222
Altitude Callout Menu	97
EGPWC Mod Status	Any number accepted
Terrain Database Version	See IPC or other approved source
Boot Code Version	Any number accepted
Audio Menu	0
Internal GPS Selected	–
Triple Radio Altimeter Selected	–
Bank Angle Selected	–
Peaks Enabled	–
Mode 6 Low Volume Selected	–

(4) Self Test Level 4

    (a) A Level 4 self test enunciates the faults recorded over the last 10 flight legs.

    (b) A Level 4 self test can only be accessed on the ground by pressing the GND PROX test switch within 3 seconds of the "PRESS TO CONTINUE" message at the end of Level 3. The message "Fault History" is enunciated when Level 4 starts.

    (c) During a Level 4 self test, a short cancel bumps to the next flight leg with faults (if any). A long cancel will terminate the self test level and "PRESS TO CONTINUE" will be enunciated for proceeding to Level 5 self test.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 115
Dec 22/01

SAS   (d)   If no faults occured within the previous 10 flight legs the
SAS   message "NO FAULTS" will be given. If a fault did occur within
SAS   the previous 10 flight legs, the aural messages enunciated
SAS   would be the same as given in Level 2 with the added
SAS   information of which flight leg the fault occurred. For
SAS   example, if radio altimeter bus 1 failed 4 flights earlier the
SAS   messages would be:
SAS
SAS   "FLIGHT 4"
SAS   "EGPWC OK"
SAS   "EXTERNAL FAULTS"
SAS   "RADIO ALTIMETER BUS 1 INACTIVE"
SAS   "PRESS TO CONTINUE"
SAS
SAS   <u>NOTE</u>: Flight 1 was the most recent flight.

SAS   (5)   Self Test Level 5
SAS   (a)   A Level 5 self test enunciates all the alerts (cautions and
SAS   warnings) recorded over the last 10 flight legs.
SAS   (b)   A Level 5 self test can only be accessed on the ground by
SAS   pressing the GND PROX test switch within 3 seconds of the
SAS   "PRESS TO CONTINUE" message at the end of Level 4. The message
SAS   "WARNING HISTORY" is enunciated when Level 5 starts.
SAS   (c)   During a Level 5 self test performing a short cancel bumps to
SAS   the next flight leg with warnings (if any). A long cancel will
SAS   terminate the self test level and "PRESS TO CONTINUE" will be
SAS   enunciated for proceeding to Level 6 self test.
SAS   (d)   If no alerts were issued within the previous 10 flight legs the
SAS   message "NO WARNINGS" will be enunciated. If an alert was
SAS   given with the last 10 flight legs the flight leg and alert
SAS   message will be enunciated. For example, if a glideslope alert
SAS   was given 7 flight legs earlier the messages would be:
SAS
SAS   "WARNING HISTORY"
SAS   "FLIGHT 7"
SAS   "GLIDESLOPE"
SAS   "PRESS TO CONTINUE"
SAS   (6)   Self Test Level 6
SAS   (a)   A Level 6 self test enunciates any change in status of the
SAS   discrete inputs for the selected aircraft type. This feature
SAS   is provided for production aircraft testing of the discrete
SAS   input wiring and is intended to match the maintenance display
SAS   feature provided on the MK V front panel display.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 116
Dec 22/01

SAS   (b)   A Level 6 self test can only be accessed on the ground by
SAS   pressing the GND PROX test switch within 3 seconds of the
SAS   "PRESS TO CONTINUE" message at the end of Level 5. The message
SAS   "DISCRETE INPUT TEST, PRESS TO CANCEL" is enunciated when Level
SAS   6 starts and will be repeated approximately every 60 seconds
SAS   until the test is terminated.
SAS   (c)   A short or long cancel will terminate the self test level and
SAS   the message "END OF SELF TEST" will be enunciated.
SAS   (d)   The Level 6 self test monitors each input discrete for a state
SAS   change. If a state change occurs, the EGPWC will enunciate the
SAS   functional name of the discrete followed by its new state. For
SAS   example if the Glideslope Cancel discrete input is defined as
SAS   GND = CANCEL, and the discrete transitions from OPEN to GND,
SAS   the message "GLIDESLOPE CANCELLED" will be issued. If the
SAS   input is reset (transitions from GND to OPEN), the message
SAS   "GLIDESLOPE ENABLED" will be issued.
SAS   (e)   The following table defines the audio phrase for each input
SAS   discrete. Note that not all of the discretes are used on all
SAS   aircraft. The self test discrete cannot be tested in a Level 6
SAS   self test.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 117
Dec 22/01

NAME	STATE ==>	AUDIO PHRASE
Capt TERR Switch *)	True => False =>	Display Discrete 1 True Display Discrete 1 False
F/O TERR Switch *)	True => False =>	Display Discrete 2 True Display Discrete 2 False
Capt WXR Switch *)	True => False =>	Weather Discrete 1 True Weather Discrete 1 False
F/O WXR Switch *)	True => False =>	Weather Discrete 1 True Weather Discrete 2 False
Landing Flaps Discrete or Flap Override	Selected => Not Selected =>	Landing Flaps Not Landing Flaps
Landing Gear Discrete or Gear Override **)	Selected => Not Selected =>	Landing Gear Down Landing Gear Up
Air/Ground Discrete	In Air => On Ground =>	Not On Ground On Ground
Glideslope Cancel Discrete	Cancel => Normal =>	Glideslope Cancelled Glideslope Enabled
Terrain Awareness and TCF Inhibit	Disabled => Normal =>	Terrain Off Terrain On

*) One "True" ennunciation and one "False" enunciation is given for each activation of the switch.

**) Landing Gear Handle must be pulled or in OFF position to toggle the discrete with the Gear Override Switch.

G. Recommended Maintenance Response To Status LED's

   (1) In general, if the GND PROX SYS message appears on EICAS, the EGPWC front panel LED's should be checked. The following table shows the recommended maintenance action in response to the front panel LED's.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG 2
SAS B   Page 118
Aug 22/05

SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS

EXTERNAL FAULT	COMPUTER OK	COMPUTER FAIL	CORRECTIVE ACTION
OFF	OFF	OFF	Ensure that the EGPWC is installed in the rack correctly and power to the EGPWC is turned on.
OFF	OFF	RED	Troubleshoot internal faults using the Level 2 self test, if possible. Remove and replace the EGPWC, if required.
OFF	GREEN	OFF	Normal operation.
OFF	GREEN	RED	Remove and replace the EGPWC.
YELLOW	OFF	OFF	Remove and replace the EGPWC.
YELLOW	OFF	RED	Troubleshoot internal faults using the Level 2 self test, if possible. Remove and replace the EGPWC, if required.
YELLOW	GREEN	OFF	Troubleshoot external faults using the Level 2 self test.
YELLOW	GREEN	RED	Remove and replace the EGPWC.

SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS
SAS

H. Recommended Maintenance Response to Terrain INOP Light
    (1) A Terrain INOP light may not always imply an external or internal
         failure of the EGPWC. The Terrain INOP light may turn on if the
         required accuracy of the position information is not being received
         from the GPS (e.g. weak GPS signal in the hangar), IRS or the FMC.
         Therefore, if the Terrain INOP light is reported to be on or was on,
         perform a Level 2 self test and a Level 4 check to consult the fault
         history. If GPS faults are present, use a Time Domain Reflectometer
         (TDR) to check the coax cable and antenna. A normal antenna will
         draw a slow descending line from the antenna position. A relative
         sharp descending/ascending line show a short/open in the antenna or
         antenna coax plug. Replace or repair as necessary.

EFFECTIVITY
SAS, MARTINAIR WITH EGPWS

34-46-00
CONFIG   2
SAS B   Page 119
Dec 22/01

THIS PAGE INTENTIONALLY LEFT BLANK

Not Used
Figure 101

EFFECTIVITY
NOT USED

1580322

34-46-00

CONFIG   2

01B   Page 120
Aug 22/08

<u>VOR SYSTEM</u>

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ANTENNA – DUAL VOR, M262	2	1	326A, VERTICAL STABILIZER	34-51-03
CIRCUIT BREAKER –	2		FLT COMPT, P11	
VOR/MKR LEFT, C595		1	11A1	*
VOR RIGHT, C596		1	11E33	*
INDICATOR – (FIM 34-22-00/101)				
LEFT RADIO DISTANCE MAGNETIC, N3				
RIGHT RADIO DISTANCE MAGNETIC, N43				
PANEL – (FIM 34-22-00/101)				
LEFT EFIS CONTROL, M94				
RIGHT EFIS CONTROL, M93				
PANEL – LEFT VOR CONTROL M91	2	1	FLT COMPT, P55	34-51-02
PANEL – RIGHT VOR CONTROL, M92	2	1	FLT COMPT, P55	34-51-02
RECEIVER – LEFT VOR/MARKER, M186	2	1	119AL, MAIN EQUIP CTR, E2-2	34-51-01
RECEIVER – RIGHT VOR/MARKER, M187	2	1	119AL, MAIN EQUIP CTR, E2-3	34-51-01
RELAY – (FIM 31-01-36/101)				
LEFT FMC TUNING, K757				
SYS NO. 1 AIR/GND, K124				
RELAY – (FIM 31-01-37/101)				
RIGHT FMC TUNING, K758				
SYS NO. 2 AIR/GND, K214				

* SEE THE WDM EQUIPMENT LIST

VOR System – Component Index
Figure 101

EFFECTIVITY

ALL

48101

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

SEE (A) SHT 2

VERTICAL STABILIZER
ACCESS, 326A

SEE (D) SHT 2

VOR System – Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

33794

34-51-00

01   Page 102
            Nov 10/95

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

RIGHT VOR
CONTROL
PANEL, M92

SEE B

P11 PANEL

LEFT VOR
CONTROL
PANEL, M91

SEE B

LEFT VOR/MARKER
RECEIVER, M186
(E2-2)

SEE C

RIGHT VOR/MARKER
RECEIVER, M187
(E2-3)

SEE C

P55 PANEL

119AL

MAIN EQUIPMENT CENTER

A FROM SHT 1

FLIGHT COMPARTMENT

F
R
E
Q   116.80   120   C
R
S

AUTO
MAN W

VOR/DME

LEFT OR RIGHT VOR CONTROL PANEL,
M91 OR M92

B

VOR/MKR

VOR
MKR
DATA IN
TEST

LEFT OR RIGHT
VOR/MARKER RECEIVER,
M186 OR M187

C

VERTICAL STABILIZER
ACCESS, 326A

VERTICAL
FIN TIP

FWD

DUAL VOR ANTENNA, M262

D FROM SHT 1

VOR System - Component Location
Figure 102 (Sheet 2)

EFFECTIVITY

ALL

191123

34-51-00

11   Page 103
Nov 10/95

PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
IRS INITIALIZED (MM 34-21-00/501)
EFIS (MM 34-22-00/501)

CB'S: 11A1,11A6,11E4,11E25,11E33,11F25

VOR BITE PROCEDURE

| 1 | ENERGIZE AND ALIGN THE IRS. SET THE MODE SWITCH ON THE EFIS CONTROL PANEL TO THE VOR-EXP POSITION. TURN THE LEFT AND RIGHT BEARING SOURCE SWITCHES ON EACH RDMI TO THE VOR POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) VOR RECEIVER.
    DOES THIS SEQUENCE OCCUR ON THE RDMIs:

1. THE L (R) BEARING FLAGS SHOW FOR ABOUT 6 SECONDS
2. THE BEARING FLAGS DO NOT SHOW WHILE THE THIN BEARING POINTERS SHOW 180 ±2 DEGREES UNTIL THE END OF THE TEST?

— NO →

| 10 | DO THE TWO RDMIs SHOW INCORRECTLY?

— NO →

| 20 | REPLACE THE L (R) RDMI, N3 (N43)(MM 34-22-05/401).
    IF THE PROBLEM CONTINUES, REMOVE THE L (R) RDMI, N3 (N43). FOR A L VOR PROBLEM, EXAMINE AND REPAIR THE CIRCUIT FROM THE L (R) RDMI, CONNECTOR D645 (D647), PINS 38 AND 39 TO TB130, PINS G12 AND G13. FOR A R VOR PROBLEM, EXAMINE AND REPAIR THE CIRCUIT FROM THE L (R) RDMI, CONNECTOR D645 (D647), PINS 48 AND 49 TO TB243, PINS YA9 AND YA10 (WDM 34-22-81,-91).
    INSTALL THE L (R) RDMI.

YES (from block 10)

| 21 | REPLACE THE L (R) VOR/MKR RECEIVER, M186 (M187) (MM 34-51-01/401).
    IF THE PROBLEM CONTINUES, REMOVE THE L (R) VOR/MKR RECEIVER, M186 (M187). FOR A L VOR PROBLEM, REMOVE THE L (R) RDMI, N3 (N43). EXAMINE AND REPAIR THE CIRCUIT FROM THE L VOR/MKR RECEIVER, CON-NECTOR D329B, PINS B13 AND C13 TO THE L (R) RDMI, CONNECTOR D645 (D647), PINS 38 AND 39. FOR THE R VOR PROBLEM, EXAMINE AND REPAIR THE CIRCUIT FROM THE R VOR/MKR RECEIVER, CON-NECTOR D357B, PINS B13 AND C13 TO TB243, PINS YA9 AND YA10 (WDM 34-51-11,-21).
    INSTALL THE L (R) VOR/MKR RECEIVER.
    INSTALL THE L (R) RDMI.

YES (from block 1)

SEE SHEET 2
(BLOCK 2)

VOR BITE Procedure
Figure 103 (Sheet 1)

224484

FROM SHEET 1
(BLOCK 1)

YES

| 2 | DOES THIS SEQUENCE OCCUR ON THE FRONT PANEL OF THE L (R) VOR/MKR RECEIVER: |

1. THE FRONT PANEL LIGHTS COME ON FOR ABOUT 3 SECONDS
2. THE LIGHTS GO OFF FOR ABOUT 2 SECONDS
3. THE GREEN "VOR" LIGHT COMES ON AND STAYS ON UNTIL YOU RELEASE THE TEST SWITCH?

NO →

| 11 | DOES THE RED "DATA IN" LIGHT COME BACK ON AT THE END OF THE TEST? |

YES →

| 22 | REPLACE THE L (R) VOR CON-TROL PANEL, M91 (M92) (MM 34-51-02/201). |

IF THE PROBLEM CONTINUES, REMOVE THE L (R) VOR CONTROL PANEL, M91 (M92). REMOVE THE L (R) VOR/MKR RECEIVER, M186 (M187)(MM 34-51-01/401). EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) VOR CONTROL PANEL, CONNECTOR D157 (D159), PINS 18 AND 31 TO THE L (R) VOR/MKR RECEIVER, CON-NECTOR D329B (D357B), PINS B11 AND C11 (WDM 34-51-11,-21).

INSTALL THE VOR CONTROL PANEL AND THE VOR/MKR RECEIVER.

NO

YES

| 3 | THE SYSTEM IS AS USUAL. |

| 23 | REPLACE THE L (R) VOR/MKR RECEIVER, M186 (M187) (MM 34-51-01/401). |

VOR BITE Procedure
Figure 103 (Sheet 2)

EFFECTIVITY

ALL

671890

34-51-00

03   Page 105
Nov 10/95

PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
IRS INITIALIZED (MM 34-21-00/501)
EFIS (MM 34-22-00/501)
FMCS (MM 34-61-00/501)

CB'S: 11A1,11A6,11E33,11F25

VOR FLAG ON RDMIS,
NO FLAG ON EHSI
VORCP DISPLAY INOP

1 ON THE L (R) EFIS CONTROL PANEL, PUT THE MODE SELECT SWITCH IN VOR. PUSH AND HOLD THE TEST SWITCH ON THE L (R) VOR/MKR RECEIVER, AS APPLICABLE.
DOES THE RED "VOR" LIGHT COME BACK ON AT THE END OF THE TEST (ABOUT 6 SECONDS)?

— YES → 21 REPLACE THE L (R) VOR/MKR RECEIVER, M186 (M187) (MM 34-51-01/401).

— NO ↓

2 DOES THE RED "DATA IN" LIGHT COME BACK ON AT THE END OF THE TEST (ABOUT 6 SECONDS)?

— YES → 22 REPLACE THE L (R) VOR CONTROL PANEL, M91 (M92) (MM 34-51-02/201).
IF THE PROBLEM CONTINUES, REMOVE THE L (R) VOR CONTROL PANEL, M91 (M92). REMOVE THE L (R) VOR/MKR RECEIVER, M186 (M187)(MM 34-51-01/401). EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) VOR CONTROL PANEL, CONNECTOR D157 (D159), PINS 18 AND 31 TO THE L (R) VOR/MKR RECEIVER, CONNECTOR D329B (D357B), PINS B11 AND C11 (WDM 34-51-11,-21).
INSTALL THE VOR CONTROL PANEL AND THE VOR/MKR RECEIVER.

— NO ↓

3 PUSH THE "INIT REF" KEY ON THE L (R) FMC CDU.
SET "MAINT" ON THE INIT/REF INDEX.
SET "SENSORS" ON THE MAINTENANCE INDEX.
DOES THE LRU "FMC" FOR THE L (R) SENSOR STATUS SHOW "FAIL"?

— YES → 23 REPLACE THE L (R) FMC, M134 (M135)(MM 34-61-01/401).

— NO → 24 REPLACE THE L (R) VOR CONTROL PANEL, M91 (M92) (MM 34-51-02/201).

VOR Flag on RDMIs, No Flag on EHSI, VORCP Display Inop
Figure 104

33436

AUTOTUNE – VOR FLAG
IN VIEW ON RDMIS,
MANUAL OPERATION
NORMAL

PREREQUISITES
ELECTRICAL POWER (MM 24-22-00/201)
IRS INITIALIZED (MM 34-21-00/501)
EFIS (MM 34-22-00/501)
FMCS (MM 34-61-00/501)

CB'S: 11A1,11A6,11E33,11F25

| 1 | SET THE NAV SWITCH OF THE L (R) INSTRUMENT SOURCE SELECT PANEL TO THE FMC-R (FMC-L) POSITION. SET THE L (R) EFIS MODE SELECT SWITCH TO THE MAP OR PLAN POSITION.   DOES THE VOR FLAG SHOW ON THE RDMIs? |

— NO →

| 21 | PUSH THE "INIT REF" KEY ON L (R) FMC CDU.   PUSH THE KEY ADJACENT TO THE "MAINT" PROMPT ON THE INIT/REF INDEX.   PUSH THE KEY ADJACENT TO THE "SENSORS" PROMPT ON THE MAINTENANCE INDEX.   DOES THE LRU "FMC" FOR THE L (R) SENSOR STATUS SHOW "FAIL"? |

— YES →

| 31 | REPLACE THE L (R) FMC, M134 (M135)(MM 34-61-01/401). |

— NO →

| 32 | REMOVE THE L (R) FMC, M134 (M135)(MM 34-61-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM TB133 (TB145), PINS G23 AND G24 (G24 AND G25) TO THE L (R) FMC, CONNECTOR D323A (D353B), PINS G9 AND H9 (H79 AND H81) (WDM 34-51-11,-21).   INSTALL THE FMC RECEIVER. |

YES ↓

| 2 | PUSH AND HOLD THE TEST SWITCH ON THE L (R) VOR RECEIVER.   DOES THE RED "VOR" LIGHT COME BACK ON AT THE END OF THE TEST? |

— YES →

| 33 | REPLACE THE L (R) VOR RECEIVER, M186 (M187) (MM 34-51-01/401). |

NO ↓

| 34 | REMOVE THE L (R) VOR RECEIVER, M186 (M187) (MM 34-51-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) VOR RECEIVER, CONNECTOR D329B (D357B), PINS B9 AND C9 TO THE TB133 (TB145), PINS H33 AND H35 (H79 AND H81) (WDM 34-51-11,-21).   INSTALL THE VOR RECEIVER. |

Autotune – VOR Flag In View On RDMIs, Manual Operation Normal
Figure 105

EFFECTIVITY

ALL

721133

34-51-00

10   Page 107
Nov 10/95

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A1,11A6,11E33,11F25

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  IRS IS ALIGNED (AMM 34-21-00/501)

NOTE: AIRPLANES WITH THE -411 EFIS SYMBOL GENERATOR
       AND ON;
       IF YOU PUSH THE "INOP" SWITCH ON THE EFIS
       CONTROL PANEL WHEN IN THE MAP MODE, A VOR FLAG
       WILL SHOW ON THE EHSI. MAKE SURE THE "INOP"
       SWITCH IS NOT SET.

VOR FLAG ON EHSI,
RDMI DISPLAYS ARE
NORMAL

1 REMOVE THE LEFT (RIGHT)
EFIS SG, M148 (M150)
(AMM 34-22-01/401).
   MAKE SURE THE INPUT BUS
FROM THE LEFT (RIGHT) VOR
RECEIVER, CONNECTOR D329B
(D357B), PINS B13 AND C13, IS
ACTIVE AT THE LEFT (RIGHT)
EFIS SG, CONNECTOR D425A
(D373D), PINS J3 AND K3
(WDM 34-51-11,-21).
   IS THE BUS ACTIVE?

YES →

21 REPLACE THE LEFT (RIGHT)
EFIS SYMBOL GENERATOR, M148
(M150)(AMM 34-22-01/401).

NO →

22 EXAMINE THE DATA BUS
CIRCUIT FROM TB130 (TB119),
PINS G12 AND G13, TO THE LEFT
(RIGHT) EFIS SG, CONNECTOR
D425A (D373D), PINS J3 AND K3
(WDM 34-51-11,-21).
   REPAIR THE PROBLEMS THAT
YOU FIND.
   INSTALL THE EFIS SYMBOL
GENERATOR.

VOR Flag on EHSI, RDMI Displays Are Normal
Figure 106

EFFECTIVITY

ALL

A05395

34-51-00

02   Page 108
Nov 10/95

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A1,11A6,11E33,11F25

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
  ELECTRICAL POWER IS ON (AMM 24-22-00/201)
  IRS INITIALIZED (AMM 34-21-00/501)

VOR DISPLAY
PROBLEMS ON L (R)
RDMI AND EHSI

| 1 | PUSH AND HOLD THE TEST SWITCH ON THE L (R) VOR RECEIVER. DOES THE RED "VOR" LIGHT COME BACK ON AT THE END OF THE TEST? |

YES →

| 21 | REPLACE THE L (R) VOR RECEIVER, M186 (M187) (AMM 34-51-01/401). |

NO →

| 22 | DO THIS PROCEDURE: "VOR FLAG ON THE EHSI, RDMI DISPLAYS ARE NORMAL" (FIM 34-51-00/101, FIG. 106). |

VOR Display Problems on L (R) RDMI and EHSI
Figure 107

EFFECTIVITY

ALL

34-51-00

33443

02   Page 109
Nov 10/95

```
┌─────────────────────────────────────────────────────────┐
│ PREREQUISITES                                           │
│                                                         │
│ MAKE SURE THESE SYSTEMS WILL OPERATE:                   │
│   IRS INITIALIZED (AMM 34-21-00/501)                    │
│   EFIS (AMM 34-22-00/501)                               │
│   FMCS (AMM 34-61-00/501)                               │
│                                                         │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:            │
│   11A1, 11A6, 11E33, 11F25                              │
│                                                         │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:        │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)             │
└─────────────────────────────────────────────────────────┘
```

VOR INDICATIONS NORMAL, FREQ DISPLAY ON VORCP ABNORMAL

| 1 REPLACE THE L (R) VOR CONTROL PANEL, M91 (M92) (AMM 34-51-02/201). IS THE DISPLAY CORRECT? | ──YES──→ | 21 THE VOR SYSTEM IS AS USUAL. |

NO ↓

| 2 PUSH THE "INIT REF" KEY ON L (R) FMC CDU. PUSH THE KEY ADJACENT TO THE "MAINT" PROMPT ON THE INIT/REF INDEX. PUSH THE KEY ADJACENT TO THE "SENSORS" PROMPT ON THE MAINTENANCE INDEX. DOES THE LRU "VOR" FOR THE L (R) SENSOR STATUS SHOW "FAIL"? | ──NO──→ | 22 REMOVE THE L (R) VOR CONTROL PANEL, M91 (M92) (AMM 34-51-02/201). EXAMINE THE DATA BUS CIRCUIT FROM TB133 (TB145), PINS G29 AND G30 TO THE L (R) VOR CONTROL PANEL, CONNECTOR D157 (D159), PINS 8 AND 21 (WDM 34-51-11, WDM 34-51-21). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE VOR CONTROL PANEL. |

YES ↓

| 3 ON THE L (R) FMC CDU, DOES THE LRU FMC FOR THE L (R) SENSOR STATUS SHOW "FAIL"? | ──YES──→ | 23 REPLACE THE L (R) FMC, M134 (M135)(AMM 34-61-01/401). |

NO ↓

| 24 REMOVE THE L (R) VOR/MARKER RECEIVER, M186 (M187)(AMM 34-51-01/401). EXAMINE THE DATA BUS CIRCUIT FROM THE L (R) VOR/MARKER RECEIVER, CONNECTOR D329B (D357B), PINS A4 AND B4 TO TB133 (TB145), PINS G29 AND G30 (WDM 34-51-11, WDM 34-51-21). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE L (R) VOR/MARKER RECEIVER. |

VOR Indications Normal, Freq Display on VORCP Abnormal
Figure 108

EFFECTIVITY

ALL

201086

34-51-00

02   Page 110
Aug 22/03

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A1,11A6,11E33,11F25

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

BRG FLAG ON RDMIs,
LATERAL DEV BAR
MISSING ON EHSI IN
VOR MODE, VORCP
FREQ SELECT OK

NOTE: THE VOR FLAG IS SHOWN ON THE RDMI AND THE
LATERAL DEVIATION BAR IS NOT SHOWN ON THE EHSI
WHEN THE VOR SIGNAL IS NOT AVAILABLE.

1 | REMOVE THE L (R) VOR/
MARKER RECEIVER, M186 (M187)
(AMM 34-51-01/401).
DO THE ANTENNA CABLE CHECK
PROCEDURE (AMM 20-10-32/201)
AT THE L (R) VOR/MARKER
RECEIVER, CONNECTOR D329C
(D357B), PINS 1 AND C1
(WDM 34-51-11,-21).
IS THE VOR ANTENNA CABLE
OK?

YES

20 | INSTALL THE L (R) VOR/
MARKER RECEIVER, M186 (M187)
(AMM 34-51-01/401).
REPLACE THE VOR ANTENNA,
M262 (AMM 34-51-03/401).

NO

21 | REPLACE THE VOR ANTENNA
CABLE CIRCUIT FROM THE L (R)
VOR/MARKER RECEIVER, CONNECTOR
D329C (D357B), PINS 1 AND C1,
TO THE VOR ANTENNA, CONNECTOR
D35 (D37)(WDM 34-51-11,-21).
INSTALL THE L (R) VOR/
MARKER RECEIVER, M186 (M187)
(AMM 34-51-01/401).

Brg Flag on RDMIs, Lateral Dev Bar Missing on EHSI in VOR Mode,
VORCP Freq Select OK
Figure 109

EFFECTIVITY

ALL

34-51-00

02   Page 111
Feb 10/96

201087

1. ARINC Data Bus Charts
    A. General

    CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
             YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

    (1) The ARINC 429 data bus charts give data necessary to make an
        analysis of ARINC 429 transmitters, receivers, and data buses. For
        the test, use a breakout box at the available terminal or at the LRU
        connector.
    B. Equipment
    (1) Standard multi-meter
    (2) 429EBP Data Bus Analyzer (recommended)
        JcAIR Instrumentation
        400 Industrial Parkway,
        Industrial Airport, KS 66031

        429-2 Data Bus Analyzer (alternative)
        Interface Technology
        150 E. Arrow Highway,
        San Dimas, CA 91773
    (3) A34011-1 Breakout Box (recommended)
        A34011-112 Breakout Box (alternative)

VOR							
DIGITAL OUTPUT BUS CHART							
BUS NAME							
SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
VOR (L R)	A	1	B	A04 B04	429	LO	OMNIBEARING #1
VOR (L R)	A	2	B	B13 C13	429	LO	OMNIBEARING #2

VOR ID=11							
OCTAL LABELS CHART							
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
SELECTED COURSE #1	A	024	BCD	5	00	0-359	CW FROM NORTH	DEG
VOR FREQUENCY	A	034	BCD	5	00	108-117.95	ALWAYS POSITI	MHZ
VOR OMNIBEARING	A	222	BNR	16	00	± 180	CW FROM NORTH	DEG

VOR

DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
400 HZ MKR BEACON	222	11	PRESENT	NOT PRES
1300 HZ MKR BEACON	222	12	PRESENT	NOT PRES
4000 HZ MKR BEACON	222	13	PRESENT	NOT PRES

VOR CP

DIGITAL OUTPUT BUS CHART							
BUS NAME							
SOURCE	TYPE	BUS	CON	PINS	BUS FORMAT	BIT RATE	DATA BUS
VORCP (L R)	A	1		18 31	429	LO	VOR FREQUENCY
VORCP (L R)	A	2		16 29	429	LO	DME FREQUENCY

VOR CP ID=B1

OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
SEL RUNWAY HDG-D	A	017	BCD	5	00	0-359	CW FROM NORTH	DEG
SELECTED COURSE #1	A	024	BCD	5	00	0-359	CW FROM NORTH	DEG
ILS FREQUENCY	A	033	BCD	5	00	108-111.95	ALWAYS POSITI	MHZ
VOR FREQUENCY	A	034	BCD	5	00	108-117.95	ALWAYS POSITI	MHZ
DME FREQUENCY	A	035	BCD	5	00	108-135.95	ALWAYS POSITI	MHZ

VOR CP				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
VOR/ILS FREQ	034	14	ILS	VOR
DME MODE 1	035	11	CODED	
DME MODE 2	035	12	CODED	
DME MODE 3	035	13	CODED	
ILS/VOR FREQ	035	14	ILS	VOR

AIR TRAFFIC CONTROL (ATC) SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ANTENNA – BOTTOM ATC, M259	1	1	BOTTOM OF FUSELAGE	34-53-03
ANTENNA – TOP ATC, M261	1	1	TOP OF FUSELAGE	34-53-03
CIRCUIT BREAKER –	2		FLIGHT COMPARTMENT, P11	
ATC ANT SWITCH, C4423		1	11F11	*
ATC LEFT, C616		1	11F7	*
ATC RIGHT, C617		1	11F28	*
COMPUTER – (FIM 31-41-00/101)				
EICAS LEFT, M10181				
EICAS RIGHT, M10182				
COMPUTER – (FIM 34-45-00/101)				
TCAS, M1705 ▷1▷				
PANEL – ATC CONTROL, M81	2	1	FLIGHT COMPARTMENT, P8	34-53-02
RELAY – (FIM 31-01-36/101)				
SYS NO. 1 AIR/GND, K143				
RELAY – (FIM 31-01-37/101)				
SYS NO. 2 AIR/GND, K200				
SWITCH – (FIM 34-12-00/101)				
LEFT ADC, S482				
RIGHT ADC, S483				
SWITCH – BOTTOM ATC ANT, S10564	3	1	119AL, MAIN EQUIP CENTER, E2-2	34-53-04
SWITCH – TOP ATC ANT, S10563	3	1	119AL, MAIN EQUIP CENTER, E2-3	34-53-04
TRANSPONDER – LEFT ATC, M112	2	1	119AL, MAIN EQUIP CENTER, E2-2	34-53-01
TRANSPONDER – RIGHT ATC, M113	2	1	119AL, MAIN EQUIP CENTER, E2-3	34-53-01

* SEE THE WDM EQUIPMENT LIST

▷1▷ AIRPLANES WITH TCAS

Air Traffic Control (ATC) System – Component Index
Figure 101

D18233

TOP ATC
ANTENNA, M261

SEE (A)

BOTTOM ATC
ANTENNA, M259

SEE (A)

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

FWD

BOTTOM OR TOP ATC ANTENNA, M259 OR M261

(A)

Air Traffic Control (ATC) System – Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

34-53-00

01   Page 102
Feb 10/94

D15792

P11 PANEL

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

ATC CONTROL
PANEL, M81

P8 PANEL

SEE B

FLIGHT COMPARTMENT

MAIN EQUIPMENT
CENTER

SEE C

LEFT ATC
TRANSPONDER, M112
(E2-2)

SEE D

RIGHT ATC
TRANSPONDER, M113
(E2-3)

SEE D

ATC TOP ANTENNA
SWITCH, S10563

SEE E SHT 3

ATC BOTTOM ANTENNA
SWITCH, S10564

SEE E SHT 3

AUTO ON

XPNDR ◯ FAIL

TA ONLY

XPNDR   TA/RA
STBY

IDENT

ATC L

TEST

A
T
C

TRAFFIC

OFF ON

L R

T
C
A
S

ALT RPTG

XPNDR

MAIN EQUIPMENT
CENTER ACCESS
DOOR, 119AL

FWD

MAIN EQUIPMENT CENTER

C

ATC/MODE S CONTROL PANEL, M81

B

○ PASS ── TPR
○ FAIL
○ UPPER ANT
○ LOWER ANT
○ ALT
○ CTL

● TEST

TPR 720

XPDR PASS ○
XPDR FAIL ○
CNTL PNL ○
TOP ANT ○
BOT ANT ○
ALT SIG ○
PUSH
TO
TEST
DATA LOADER

**LEFT OR RIGHT ATC TRANSPONDER,
M112 OR M113**

D 1

**LEFT OR RIGHT ATC TRANSPONDER,
M112 OR M113**

D 2

1 AIRPLANES WITH ROCKWELL COLLINS MODE-S TRANSFORMER

2 AIRPLANES WITH ACSS MODE-S TRANSFORMER

Air Traffic Control (ATC) System - Component Location
Figure 102 (Sheet 2)

F29170

TOP OR BOTTOM ATC ANTENNA SWITCH,
S10563 OR S10564

(E)

Air Traffic Control (ATC) System – Component Location (Detail from Sht 2)
Figure 102 (Sheet 3)

C52732

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  ADC SYSTEM (MM 34-12-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F7,11F11,11F28

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)

ATC SYSTEM
"BITE" PROCEDURE

1 SET THE TRANSPONDER SELECT SWITCH ON THE ATC CONTROL PANEL TO THE "L (R)" POSITION. SET THE L (R) ADC SWITCH ON THE INSTRUMENT SOURCE SELECT PANEL TO THE "NORM" POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) ATC TRANSPONDER.
  DOES THE RED "TPR-FAIL" LIGHT COME ON AT THE END OF THE TEST?

— YES →

20 REPLACE THE L (R) ATC TRANSPONDER, M112 (M113) (MM 34-53-01/401).

| NO

2 DOES THE RED "LOWER ANT" LIGHT COME ON AT THE END OF THE TEST?

— YES →

10 SET THE TRANSPONDER SELECT SWITCH ON THE ATC CONTROL PANEL TO THE "R (L)" POSITION. PUSH AND HOLD THE TEST SWITCH ON THE R (L) ATC TRANSPONDER.
  DOES THE RED "LOWER ANT" LIGHT COME ON AT THE END OF THE TEST?

— YES →

21 REPLACE THE BOTTOM ANTENNA, M259 (MM 34-53-03/401).
  IF THE PROBLEM CONTINUES, REPLACE THE BOTTOM ATC ANT SWITCH, S10564 (MM 34-53-04/401).
  IF THE PROBLEM CONTINUES, REPLACE THE ANTENNA CIRCUIT FROM THE BOTTOM ANT SWITCH, CONNECTOR D2199, PINS A1 AND C1, TO THE BOTTOM ATC ANTENNA, CONNECTOR D41, PINS A1 AND C1 (WDM 34-53-13).

| NO

SEE SHEET 2
(BLOCK 3)

| NO

22 REPLACE THE ANTENNA CIRCUIT FROM THE L (R) ATC TRANSPONDER, CONNECTOR D331B (D359B), PINS 71 AND C71, TO THE BOTTOM ATC ANT SWITCH, CONNECTOR D2197 (D1441), PINS A1 AND C1 (WDM 34-53-13).

ATC System BITE Procedure
Figure 103 (Sheet 1)

FROM SHEET 1
(BLOCK 2)

NO

| 3 | DOES THE RED "UPPER ANT" LIGHT COME ON AT THE END OF THE TEST? |

YES →

| 11 | SET THE TRANSPONDER SELECT SWITCH ON THE ATC CONTROL PANEL TO THE "R (L)" POSITION. PUSH AND HOLD THE TEST SWITCH ON THE R (L) ATC TRANSPONDER. DOES THE RED "UPPER ANT" LIGHT COME ON AT THE END OF THE TEST? |

YES →

| 23 | REPLACE THE TOP ANTENNA, M261 (MM 34-53-03/401). IF THE PROBLEM CONTINUES, REPLACE THE TOP ATC ANT SWITCH, S10563 (MM 34-53-04/401). IF THE PROBLEM CONTINUES, REPLACE THE ANTENNA CIRCUIT FROM THE TOP ANT SWITCH, CONNECTOR D2191, PINS A1 AND C1, TO THE TOP ATC ANTENNA, CONNECTOR D45, PINS A1 AND C1 (WDM 34-53-13). |

NO

NO

| 24 | REPLACE THE ANTENNA CIRCUIT FROM THE L (R) ATC TRANSPONDER, CONNECTOR D331A (D359A), PINS 71 AND C71, TO THE TOP ATC ANT SWITCH, CONNECTOR D2189 (D2193), PINS A1 AND C1 (WDM 34-53-13). |

| 4 | DOES THE RED "CTL" LIGHT COME ON AT THE END OF THE TEST? |

YES →

| 25 | REPLACE THE ATC CONTROL PANEL, M81 (MM 34-53-02/401). IF THE PROBLEM CONTINUES, REMOVE THE ATC CONTROL PANEL, M81 (MM 34-53-02/401), AND THE L (R) ATC TRANSPONDER, M112 (M113)(MM 34-53-01/401). EXAMINE AND REPAIR THE 429 DATA BUS CONTROL PANEL, CONNECTOR D303 (D305), PINS 22 AND 23, TO THE L (R) ATC TRANSPONDER, CONNECTOR D331A (D359A), PINS E7 AND F7 (WDM 34-53-11,-21). INSTALL THE ATC CONTROL PANEL AND THE L (R) ATC TRANSPONDER. |

NO

SEE SHEET 3
(BLOCK 5)

ATC System BITE Procedure
Figure 103 (Sheet 2)

797331

FROM SHEET 2
(BLOCK 4)

| NO |

┌─────────────────────────────────────┐   YES   ┌─────────────────────────────────────┐   YES   ┌─────────────────────────────────────┐
│ 5 │ DOES THE RED "ALT" COME   │ ──────────► │ 12 │ DOES THE FAULTBALL SHOW   │ ──────────► │ 26 │ REPLACE THE L (R) AIR DATA   │
│ ON AT THE END OF THE TEST?   │   │ YELLOW ON THE L (R) AIR DATA   │   │ COMPUTER, M100 (M101)   │
└─────────────────────────────────────┘   │ COMPUTER?   │   │ (MM 34-12-01/401).   │
                                                     └─────────────────────────────────────┘   └─────────────────────────────────────┘
| NO | | NO |

SEE SHEET 4
(BLOCK 6)

┌─────────────────────────────────────┐   YES   ┌─────────────────────────────────────┐
│ 13 │ SET THE TRANSPONDER SELECT   │ ──────────► │ 27 │ REMOVE THE L (R) AIR DATA   │
│ SWITCH ON THE ATC CONTROL   │   │ COMPUTER, M100 (M101)   │
│ PANEL TO THE "R (L)" POSITION.   │   │ (MM 34-12-01/401).   │
│   SET THE L (R) ADC SWITCH   │   │   EXAMINE AND REPAIR THE   │
│ ON THE INSTRUMENT SOURCE   │   │ DATA BUS CIRCUIT FROM THE   │
│ SELECT PANEL TO THE "ALTN"   │   │ L (R) ADC, CONNECTOR D423B   │
│ POSITION. PUSH AND HOLD THE   │   │ (D351B), PINS A8 AND B8, TO   │
│ TEST SWITCH ON THE R (L) ATC   │   │ CONNECTOR TB133 (TB145), PINS   │
│ TRANSPONDER.   │   │ H69 AND H71 (WDM 34-12-12,   │
│   DOES THE RED "ALT" LIGHT   │   │ -22).   │
│ COME ON AT THE END OF THE   │   │   INSTALL THE L (R) AIR DATA   │
│ TEST?   │   │ COMPUTER.   │
└─────────────────────────────────────┘   └─────────────────────────────────────┘
        | NO |

                                                     ┌─────────────────────────────────────┐
                                                     │ 28 │ REMOVE THE L (R) ATC   │
                                                     │ TRANSPONDER, M112 (M113)   │
                                                     │ (MM 34-53-01/401).   │
                                                     │   EXAMINE AND REPAIR THE   │
                                                     │ DATA BUS CIRCUIT FROM THE   │
                                                     │ L (R) ATC TRANSPONDER, CONNEC-   │
                                                     │ TOR D331A (D359A), PINS H7 AND   │
                                                     │ J7, TO CONNECTOR TB133   │
                                                     │ (TB145), PINS H69 AND H71   │
                                                     │ (WDM 34-53-11,-21).   │
                                                     │   INSTALL THE L (R) ATC   │
                                                     │ TRANSPONDER.   │
                                                     └─────────────────────────────────────┘

ATC System BITE Procedure
Figure 103 (Sheet 3)

980200

FROM SHEET 3
(BLOCK 5)

| NO

```
6   DOES THE GREEN "TPR-PASS"      NO      29   REPLACE THE L (R) ATC
LIGHT STAY ON?      [1] >          ─────►   TRANSPONDER, M112 (M113)
                                            (MM 34-53-01/401).
```

| YES

```
7   SET THE L (R) ADC SWITCH       YES     14   DOES THE FAULTBALL SHOW      YES     30   REPLACE THE R (L) AIR DATA
ON THE INSTRUMENT SOURCE           ───►    YELLOW ON THE R (L) AIR DATA    ───►    COMPUTER, M101 (M100)
SELECT PANEL TO THE "ALTN"                 COMPUTER?                                (MM 34-12-01/401).
POSITION.  PUSH AND HOLD THE
TEST SWITCH ON THE L (R) ATC
TRANSPONDER.
   DOES THE RED "ALT" LIGHT
COME ON AT THE END OF THE
TEST?
```

| NO (block 14)

```
                                           15   SET THE TRANSPONDER SELECT   YES     31   REMOVE THE R (L) AIR DATA
                                           SWITCH ON THE ATC CONTROL       ───►    COMPUTER, M101 (M100)
                                           PANEL TO THE "R (L)" POSITION.          (MM 34-12-01/401).
                                           PUSH THE TEST SWITCH ON THE R              EXAMINE AND REPAIR THE
                                           (L) ATC TRANSPONDER.                    DATA BUS CIRCUIT FROM THE
                                              DOES THE RED "ALT" LIGHT             R (L) ADC, CONNECTOR D351B
                                           COME ON AT THE END OF THE               (D423B), PINS A8 AND B8, TO
                                           TEST?                                   CONNECTOR TB145 (TB133), PINS
                                                                                   H69 AND H71 (WDM 34-12-12,
                                                                                   -22).
                                                                                      INSTALL THE L (R) AIR DATA
                                                                                   COMPUTER.
```

| NO (block 7)

```
8   THE ATC SYSTEM IS OK. [1] >
```

| NO (block 15)

```
                                                                                   32   REMOVE THE L (R) ATC
                                                                                   TRANSPONDER, M112 (M113)
                                                                                   (MM 34-53-01/401).
                                                                                      EXAMINE AND REPAIR THE
                                                                                   DATA BUS CIRCUIT FROM THE
                                                                                   L (R) ATC TRANSPONDER, CONNEC-
                                                                                   TOR D331B (D359B), PINS A5 AND
                                                                                   B5, TO CONNECTOR TB145
                                                                                   (TB133), PINS H69 AND H71
                                                                                   (WDM 34-53-11,-21).
                                                                                      INSTALL THE L (R) ATC
                                                                                   TRANSPONDER.
```

[1] > THE GREEN "TPR-PASS" LIGHT WILL STAY ON OR FLICKER AT THE
END OF THE TEST IF THE TRANSPONDER IS REPLYING TO A SIGNAL.

ATC System BITE Procedure
Figure 103 (Sheet 4)

797355

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  ADC SYSTEM (MM 34-12-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F7,11F11,11F28

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)

ALT RPTG INOP WITH LEFT (RIGHT) TXPDR SELECTED

1 SET THE TRANSPONDER SELECT SWITCH ON THE ATC CONTROL PANEL TO THE "L (R)" POSITION. SET THE L (R) ADC SWITCH ON THE INSTRUMENT SOURCE SELECT PANEL TO THE "NORM" POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) ATC TRANSPONDER.
  DOES THE RED "TPR-FAIL" LIGHT COME ON AT THE END OF THE TEST?

— YES →

20 REPLACE THE L (R) ATC TRANSPONDER, M112 (M113) (MM 34-53-01/401).

↓ NO

2 DOES THE RED "ALT" LIGHT COME ON AT THE END OF THE TEST?

— YES →

10 DOES THE FAULTBALL SHOW YELLOW ON THE L (R) AIR DATA COMPUTER?

— YES →

22 REPLACE THE L (R) AIR DATA COMPUTER, M100 (M101) (MM 34-12-01/401).

↓ NO

SEE SHEET 2 (BLOCK 3)

↓ NO

11 SET THE TRANSPONDER SELECT SWITCH ON THE ATC CONTROL PANEL TO THE "R (L)" POSITION. SET THE L (R) ADC SWITCH ON THE INSTRUMENT SOURCE SELECT PANEL TO THE "ALTN" POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) ATC TRANSPONDER.
  DOES THE RED "ALT" LIGHT COME ON AT THE END OF THE TEST?

— YES →

23 REMOVE THE L (R) AIR DATA COMPUTER, M100 (M101) (MM 34-12-01/401).
  EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) ADC, CONNECTOR D423B (D351B), PINS A8 AND B8, TO CONNECTOR TB133 (TB145), PINS H69 AND H71 (WDM 34-12-12, -22).
  INSTALL THE L (R) AIR DATA COMPUTER.

↓ NO

24 REMOVE THE L (R) ATC TRANSPONDER, M112 (M113) (MM 34-53-01/401).
  EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) ATC TRANSPONDER, CONNECTOR D331A (D359A), PINS H7 AND J7, TO CONNECTOR TB133 (TB145), PINS H69 AND H71 (WDM 34-53-11,-21).
  INSTALL THE L (R) ATC TRANSPONDER.

Alt Rptg Inop with Left (Right) Txpdr Selected
Figure 104 (Sheet 1)

EFFECTIVITY

ALL

34-53-00

03   Page 109
Feb 10/94

69536

FROM SHEET 1
(BLOCK 2)

| NO

```
┌─────────────────────────┐  YES  ┌─────────────────────────┐  YES  ┌─────────────────────────┐
│ 3 │ SET THE ADC SOURCE  │──────▶│ 12 │ DOES THE FAULT     │──────▶│ 25 │ REPLACE THE R (L)  │
│ SWITCH ON THE INSTRUMENT │       │ BALL SHOW YELLOW ON THE │       │ AIR DATA COMPUTER, M101 │
│ SOURCE SELECT PANEL TO   │       │ R (L) AIR DATA          │       │ (M100)                  │
│ THE "ALTN" POSITION.     │       │ COMPUTER?               │       │ (AMM 34-12-01/401).     │
│ PUSH AND HOLD THE TEST   │       └─────────────────────────┘       └─────────────────────────┘
│ SWITCH ON THE L (R) ATC  │                    │ NO
│ TRANSPONDER.             │                    ▼
│   DOES THE RED "ALT"     │       ┌─────────────────────────┐  YES  ┌─────────────────────────┐
│ LIGHT COME ON AT THE END │       │ 13 │ SET THE TRANSPONDER│──────▶│ 26 │ REMOVE THE R (L)   │
│ OF THE TEST?             │       │ SELECT SWITCH ON THE ATC│       │ AIR DATA COMPUTER, M101 │
└─────────────────────────┘       │ CONTROL PANEL TO THE    │       │ (M100)                  │
            │ NO                   │ "R (L)" POSITION.       │       │ (AMM 34-12-01/401).     │
                                   │ PRESS AND HOLD THE TEST │       │   EXAMINE AND REPAIR    │
                                   │ SWITCH ON THE R (L) ATC │       │ THE DATA BUS CIRCUIT    │
                                   │ TRANSPONDER.            │       │ FROM THE R (L) ADC,     │
                                   │   DOES THE RED "ALT"    │       │ CONNECTOR D351B (D423B),│
                                   │ LIGHT COME ON AT THE END│       │ PINS A8 AND B8, TO      │
                                   │ OF THE TEST?            │       │ CONNECTOR TB145 (TB133),│
                                   └─────────────────────────┘       │ PINS H69 AND H71 (WDM   │
                                                │ NO                 │ 34-12-12, -22).         │
                                                                     │   INSTALL THE R (L) AIR │
                                                                     │ DATA COMPUTER.          │
                                                                     └─────────────────────────┘

                                                                     ┌─────────────────────────┐
                                                                     │ 27 │ REMOVE THE L (R)   │
                                                                     │ ATC TRANSPONDER, M112   │
                                                                     │ (M113)                  │
                                                                     │ (AMM 34-53-01/401).     │
                                                                     │   EXAMINE AND REPAIR    │
                                                                     │ THE DATA BUS CIRCUIT    │
                                                                     │ FROM THE L (R) ATC      │
                                                                     │ TRANSPONDER, CONNECTOR  │
                                                                     │ D331B (D359B), PINS A5  │
                                                                     │ AND B5, TO CONNECTOR    │
                                                                     │ TB145 (TB133), PINS H69 │
                                                                     │ AND H71 (WDM 34-53-11,  │
                                                                     │ -21).                   │
                                                                     │   INSTALL THE L (R) ATC │
                                                                     │ TRANSPONDER.            │
                                                                     └─────────────────────────┘

                                                                     ┌─────────────────────────┐
                                                                     │ 28 │ REPLACE THE ATC    │
                                                                     │ CONTROL PANEL, M81 (AMM │
                                                                     │ 34-53-02/401).          │
                                                                     └─────────────────────────┘
```

Alt Rptg Inop with Left (Right) Txpdr Selected
Figure 104 (Sheet 2)

695374

```
PREREQUISITES
MAKE SURE THIS SYSTEM WILL OPERATE:
  ADC SYSTEM (MM 34-12-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11F7,11F11,11F28

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)
```

ATC TRANSMISSION
PROBLEMS

1 SET THE TRANSPONDER SELECT
SWITCH ON THE ATC CONTROL
PANEL TO THE "L (R)" POSITION.
PUSH AND HOLD THE TEST SWITCH
ON THE L (R) ATC TRANSPONDER.
  DOES THE RED "TPR-FAIL"
LIGHT COME ON AT THE END OF
THE TEST?

— YES → **20** REPLACE THE L (R) ATC
TRANSPONDER, M112 (M113)
(MM 34-53-01/401).

— NO ↓

2 DOES THE RED "LOWER ANT"
LIGHT COME ON AT THE END OF
THE TEST?

— YES → **10** SET THE TRANSPONDER SELECT
SWITCH ON THE ATC CONTROL
PANEL TO THE "R (L)" POSITION.
PUSH AND HOLD THE TEST SWITCH
ON THE R (L) ATC TRANSPONDER.
  DOES THE RED "LOWER ANT"
LIGHT COME ON AT THE END OF
THE TEST?

— NO ↓

SEE SHEET 2
(BLOCK 3)

— YES → **21** REPLACE THE BOTTOM
ANTENNA, M259 (MM 34-53-03/
401).
  IF THE PROBLEM CONTINUES,
REPLACE THE BOTTOM ATC ANT
SWITCH, S10564 (MM 34-53-04/
401).
  IF THE PROBLEM CONTINUES,
REPLACE THE ANTENNA CIRCUIT
FROM THE BOTTOM ANT SWITCH,
CONNECTOR D2199, PINS A1 AND
C1, TO THE BOTTOM ATC ANTENNA,
CONNECTOR D41, PINS A1 AND C1
(WDM 34-53-13).

— NO → **22** REPLACE THE ANTENNA CIR-
CUIT FROM THE L (R) ATC TRANS-
PONDER, CONNECTOR D331B
(D359B), PINS 71 AND C71, TO
THE BOTTOM ATC ANT SWITCH,
CONNECTOR D2197 (D1441), PINS
A1 AND C1 (WDM 34-53-13).

ATC Transmission Problems
Figure 105 (Sheet 1)

EFFECTIVITY

ALL

695377

34-53-00

03   Page 111
Dec 22/03

FROM SHEET 1
(BLOCK 2)
|
NO
|

```
┌─────────────────────────┐  YES  ┌─────────────────────────────┐  YES  ┌─────────────────────────────┐
│ 3 │ DOES THE RED "UPPER │──────▶│ 11 │ SET THE TRANSPONDER    │──────▶│ 23 │ REPLACE THE TOP ANTENNA,│
│ ANT" LIGHT COME ON AT   │       │ SELECT SWITCH ON THE ATC    │       │ M261 (MM 34-53-03/401).     │
│ THE END OF THE TEST?    │       │ CONTROL PANEL TO THE "R (L)"│       │     IF THE PROBLEM          │
└─────────────────────────┘       │ POSITION. PUSH AND HOLD THE │       │ CONTINUES, REPLACE THE TOP  │
            │                     │ TEST SWITCH ON THE R (L) ATC│       │ ATC ANT SWITCH, S10563 (MM  │
           NO                     │ TRANSPONDER.                │       │ 34-53-04/401).              │
            │                     │     DOES THE RED "UPPER ANT"│       │     IF THE PROBLEM          │
            │                     │ LIGHT COME ON AT THE END OF │       │ CONTINUES, REPLACE THE      │
            │                     │ THE TEST?                   │       │ ANTENNA CIRCUIT FROM THE    │
            │                     └─────────────────────────────┘       │ TOP ANT SWITCH, CONNECTOR   │
            │                                   │                       │ D2191, PINS A1 AND C1, TO   │
            │                                  NO                       │ THE TOP ATC ANTENNA, CON-   │
            │                                                           │ NECTOR D45, PINS A1 AND C1  │
            │                                                           │ (WDM 34-53-13).             │
            │                                                           └─────────────────────────────┘
```

```
                                                            ┌─────────────────────────────┐
                                                            │ 24 │ REPLACE THE ANTENNA    │
                                                            │ CIRCUIT FROM THE L (R) ATC  │
                                                            │ TRANSPONDER, CONNECTOR      │
                                                            │ D331A (D359A), PINS 71 AND  │
                                                            │ C71, TO THE TOP ATC ANT     │
                                                            │ SWITCH, CONNECTOR D2189     │
                                                            │ (D2193), PINS A1 AND C1     │
                                                            │ (WDM 34-53-13).             │
                                                            └─────────────────────────────┘
```

```
┌─────────────────────────┐  YES                            ┌─────────────────────────────┐
│ 4 │ DOES THE RED "CONTROL│──────────────────────────────▶ │ 25 │ REPLACE THE ATC        │
│ INPUT FAIL" LIGHT COME ON│                                 │ CONTROL PANEL, M81 (MM      │
│ AT THE END OF THE TEST?  │                                 │ 34-53-02/401).              │
└─────────────────────────┘                                 │     IF THE PROBLEM          │
            │                                                │ CONTINUES, REMOVE THE ATC   │
           NO                                                │ CONTROL PANEL, M81 (MM      │
            │                                                │ 34-53-02/401), AND THE      │
┌─────────────────────────┐                                 │ L (R) ATC TRANSPONDER, M112 │
│ 5 │ AN INTERMITTENT      │                                 │ (M113)(MM 34-53-01/401).    │
│ FAILURE HAS OCCURRED.    │                                 │     EXAMINE AND REPAIR THE  │
│ THE ATC SYSTEM IS OK. 1▷ │                                 │ 429 DATA BUS FROM THE ATC   │
└─────────────────────────┘                                 │ CONTROL PANEL, CONNECTOR    │
                                                            │ D303 (D305), PINS 22 AND    │
                                                            │ 23, TO THE L (R) ATC        │
                                                            │ TRANSPONDER, CONNECTOR      │
                                                            │ D331A (D359A), PINS E7 AND  │
                                                            │ F7 (WDM 34-53-11,-21).      │
                                                            │     INSTALL THE ATC CONTROL │
                                                            │ PANEL AND THE L (R) ATC     │
                                                            │ TRANSPONDER.                │
                                                            └─────────────────────────────┘
```

1▷ THE GREEN "TPR-PASS" LIGHT WILL STAY ON OR FLICKER AT THE END OF THE TEST IF THE TRANSPONDER
IS REPLYING TO A SIGNAL.

ATC Transmission Problems
Figure 105 (Sheet 2)

695381

1. ARINC Data Bus Charts
    A. General

        CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
                  YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

        (1) The ARINC 429 data bus charts give data necessary to make an
             analysis of ARINC 429 transmitters, receivers, and data buses. For
             the test, use a breakout box at the available terminal or at the LRU
             connectors.
    B. Equipment
        (1) Standard multi-meter
        (2) 429EBP Data Bus Analyzer (recommended)
             JcAIR Instrumentation
             400 Industrial Parkway,
             Industrial Airport, KS 66031

             429EBP Data Bus Analyzer (alternative)
             150 E. Arrow Highway,
             San Dimas, CA 91773
        (3) A34011-1 Breakout Box (recommended)
             A34011-112 Breakout Box (alternative)

ATC PNL

DIGITAL OUTPUT BUS CHART							
BUS NAME					BUS	BIT	
SOURCE	TYPE	BUS	CON	PINS	FORMAT	RATE	DATA BUS
TCPNL (L)	A	1	P1	22 23	429	LO	CONTROL DATA OUT L
TCPNL (R)	A	2	P2	22 23	429	LO	CONTROL DATA OUT R

ATC PNL ID = B8

OCTAL LABELS CHART							
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
XPONDER CODE	A	031	BCD	5	00	N/A	N/A	N/A

DISTANCE MEASURING EQUIPMENT (DME) SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ANTENNA – L DME, M263	--	1	BOTTOM FUSELAGE	34-55-02
ANTENNA – R DME, M264	--	1	BOTTOM FUSELAGE	34-55-02
CIRCUIT BREAKERS –			FLT COMPT, P11	
DME LEFT, C582		1	11E11	*
DME RIGHT, C583		1	11E32	*
INDICATOR – (REF 34-22-00, FIG. 101)				
L RADIO DISTANCE MAGNETIC, N3	--	1		
R RADIO DISTANCE MAGNETIC, N43	--	1		
INTERROGATOR – L DME, M123	--	1	119AL, MAIN EQUIP CTR, E2-2	34-55-01
INTERROGATOR – R DME, M124	--	1	119AL, MAIN EQUIP CTR, E2-3	34-55-01
PANEL – (REF 34-22-00, FIG. 101)				
L EFIS CONTROL, M94				
R EFIS CONTROL, M93				
PANEL – (REF 34-51-00, FIG. 101)				
L VOR CONTROL, M91				
R VOR CONTROL, M92				
RELAY – (REF 31-01-36, FIG. 101)				
SYS NO. 1 AIR/GND, K124				
SYS NO. 2 AIR/GND, K214				
UNIT – (REF 31-31-00, FIG. 101)				
DIGITAL FLIGHT DATA ACQUISITION, M138				

* SEE THE WDM EQUIPMENT LIST

Distance Measuring Equipment (DME) System – Component Index
Figure 101

MAIN EQUIPMENT CENTER
ACCESS, 119AL
SEE (B)

LEFT DME ANTENNA, M263
SEE (A)

RIGHT DME ANTENNA,
M264
SEE (A)

LEFT OR RIGHT DME ANTENNA, M263 OR M264
(A)

LEFT DME
INTERROGATOR, M123
SEE (C)

E2-2

RIGHT DME
INTERROGATOR,
M124
SEE (C)

E2-3

119AL

MAIN EQUIPMENT CENTER
(B)

○ CONTROL INPUT
FAIL

○ PASS ⌐
⌐ LRU
○ FAIL └ STATUS

◎ TEST

LEFT OR RIGHT DME INTERROGATOR, M123 OR M124
(C)

Distance Measuring Equipment (DME) System – Component Location
Figure 102

EFFECTIVITY

ALL

33799

34-55-00

01   Page 102
Aug 10/90

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
EFIS (MM 34-22-00/501)
VOR (MM 34-51-00/501)
ILS (MM 34-31-00/501)

CB'S: 11A1,11E11,11E32,11E33

DME SYSTEM BITE
PROCEDURE

1 | ON THE CAPT (F/O) EFIS
CONTROL PANEL, SET THE MODE
SELECT SWITCH TO THE EXP-VOR
POSITION. PUSH AND HOLD THE
TEST SWITCH ON THE L (R) DME
INTERROGATOR.
   DOES THE RED LRU STATUS-
FAIL LIGHT COME BACK ON AT THE
END OF THE TEST (AFTER 6
SECONDS)?

YES →

20 | REPLACE THE L (R) DME
INTERROGATOR, M123 (M124)
(MM 34-55-01/401).

NO ↓

2 | DOES THE RED CONTROL
INPUT-FAIL LIGHT COME BACK ON
AT THE END OF THE TEST?

YES →

21 | REPLACE THE L (R) VOR CON-
TROL PANEL, M91 (M92)
(MM 34-51-02/201).
   IF THE PROBLEM CONTINUES,
REMOVE THE L (R) VOR CONTROL
PANEL, M91 (M92).
   REMOVE THE L (R) DME
INTERROGATOR, M123 (M124)
(MM 34-55-01/401).
   EXAMINE AND REPAIR THE
DATA BUS CIRCUIT FROM THE L
(R) VOR CONTROL PANEL, CONNEC-
TOR D157 (D159), PINS 16 AND
29, TO THE L (R) DME INTERRO-
GATOR, CONNECTOR D333B
(D361B), PINS D3 AND E3
(WDM 34-55-11,-21).
   INSTALL THE VOR CONTROL
PANEL AND THE DME INTERRO-
GATOR.

NO ↓

3 | DOES THE GREEN LRU STATUS-
PASS LIGHT COME ON AT THE END
OF THE TEST?

NO →

22 | REPLACE THE L (R) DME
INTERROGATOR, M123 (M124).
(MM 34-55-01/401).

YES ↓

SEE SHEET 2
(BLOCK 4)

DME System BITE Procedure
Figure 103 (Sheet 1)

EFFECTIVITY

ALL

311685

34-55-00

02   Page 103
Feb 10/91

FROM SHEET 1
(BLOCK 3)

YES

| 4 | PUSH AND HOLD THE TEST SWITCH ON THE L (R) DME INTER-ROGATOR. MAKE SURE OF THE DISTANCE INDICATORS ON THE L (R) RDMI AND THE L (R) EHSI FOR THE SEQUENCE THAT FOLLOWS: |

1) NO DATA SHOWS FOR THE FIRST SECOND

2) ALL DASHES SHOW THE SUBSE-QUENT SECOND

3) 000.0 ±0.5 MM FOR THE REMAINING TEST.

   WAS THE SEQUENCE CORRECT ON THE RDMI AND THE EHSI?

NO →

| 11 | WAS THE SEQUENCE CORRECT ON THE RDMI? |

YES →

| 23 | DO THE EFIS BITE (34-22-00, FIG. 108). IF THE PROBLEM CONTINUES, EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) DME INTERROGA-TOR, CONNECTOR D33B (D361B), PINS G3 AND H3 TO THE L (R) EFIS SG, CONNECTOR D425A (D373D), PINS G2 AND H2 AND TO THE CENTER EFIS SG, CONNECTOR D413A (D413D), PINS G2 AND H2 (WDM 34-22-19,-29,-39). |

NO

| 12 | WAS THE SEQUENCE CORRECT THE EHSI? |

YES →

| 24 | REPLACE THE L (R) RDMI, N3 (N43)(MM 34-22-05/401). IF THE PROBLEM CONTINUES, EXAMINE AND REPAIR THE DATA BUS CIR-CUIT FROM THE L (R) DME INTER-ROGATOR, CONNECTOR D333B (D361B), PINS G3 AND H3 TO THE L (R) RDMI, CONNECTOR D645 (D647), PINS 9 AND 10 (PINS 13 AND 14)(WDM 34-55-11,-21). |

NO

| 25 | REPLACE THE L (R) DME INTERROGATOR M123 (M124) (MM 34-55-01/401). |

YES

SEE SHEET 3
(BLOCK 5)

DME System BITE Procedure
Figure 103 (Sheet 2)

123225

FROM SHEET 2
(BLOCK 4)

YES

5 SET THE MODE SELECT SWITCH
TO THE EXP-ILS POSITION ON THE
CAPT (F/O) EFIS CONTROL PANEL.
SET THE ILS FREQ TO A POSITION
OTHER THAN PK ON THE ILS
CONTROL PANEL. PUSH AND HOLD
THE TEST SWITCH ON THE L (R)
DME INTERROGATOR.
   DOES THE RED CONTROL INPUT
FAIL LIGHT COME BACK ON AT THE
END OF THE TEST?

— YES →

13 PUSH AND HOLD THE TEST
SWITCH ON THE L (R) ILS
RECEIVER.
   DOES THE RED CONTROL
INPUT-FAIL LIGHT ON THE ILS
RECEIVER COME BACK ON AT THE
END OF THE TEST?

— NO →

26 REPLACE THE L (R) VOR
CONTROL PANEL, M91 (M92)
(AMM 34-51-02/201).
   IF THE PROBLEM CONTINUES,
REMOVE THE L (R) VOR CONTROL
PANEL, M91 (M92).
   REMOVE THE ILS CONTROL
PANEL, M87 (AMM 34-31-02/401).
   EXAMINE THE DATA BUS
CIRCUIT AS NECESSARY FROM THE
L (R) VOR CONTROL PANEL,
CONNECTOR D157 (D159),
PINS 10 AND 22, TO THE ILS
CONTROL PANEL, CONNECTOR D155
(D601), PINS 13 AND 14
(WDM 34-31-11,-21;
34-51-11,-21).
   REPAIR THE PROBLEMS THAT
YOU FIND.
   INSTALL THE VOR CONTROL
PANEL AND THE ILS CONTROL
PANEL.

NO

6 THE SYSTEM IS OK.

YES

27 REPLACE THE ILS CONTROL
PANEL, M87 (AMM 34-31-02/401).
   IF THE PROBLEM CONTINUES,
REMOVE THE L (R) VOR CONTROL
PANEL, M91 (M92)(AMM 34-51-02/
201).
   REMOVE THE ILS CONTROL
PANEL, M87.
   EXAMINE THE DATA BUS
CIRCUIT AS NECESSARY FROM THE
L (R) VOR CONTROL PANEL,
CONNECTOR D157 (D159),
PINS 10 AND 22, TO THE ILS
CONTROL PANEL, CONNECTOR D155
(D601), PINS 13 AND 14
(WDM 34-31-11,-21;
34-51-11,-21).
   REPAIR THE PROBLEMS THAT
YOU FIND.
   INSTALL THE VOR CONTROL
PANEL AND THE ILS CONTROL
PANEL.

DME System BITE Procedure
Figure 103 (Sheet 3)

VOR MODE — DME
DISPLAYS DASHES,
VOR IDENT NORMAL

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
EFIS (MM 34-22-00/501)

CB'S: 11A1,11E11,11E32,11E33

| 1 | SET THE L (R) EFIS MODE SELECT SWITCH TO THE EXP-VOR POSITION. PUSH THE TEST SWITCH ON THE L (R) DME INTER-ROGATOR.   DOES THE RED LRU STATUS FAIL LIGHT COME BACK ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES

| 21 | REPLACE THE L (R) DME INTERROGATOR M123 (M124) (MM 34-55-01/401). |

NO

| 2 | DOES THE RED CONTROL INPUT-FAIL LIGHT COME BACK ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES

NO

| 22 | REPLACE THE L (R) VOR CON-TROL PANEL, M91 (M92) (MM 34-51-02/201).   IF THE PROBLEM CONTINUES, REMOVE THE L (R) VOR CONTROL PANEL, M91 (M92).   REMOVE THE L (R) DME INTERROGATOR, M123 (M124) (MM 34-55-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) CONTROL PANEL, CONNECTOR D157 (D159), PINS 16 AND 29 TO THE L (R) DME INTERROGATOR, CONNECTOR D333B (D361B), PINS D3 AND E3 (WDM 34-55-11,-21).   INSTALL THE VOR CONTROL PANEL AND THE DME INTERROGA-TOR. |

| 23 | DO THE ILS MODE PROCEDURE (34-55-00, FIG. 105). |

VOR Mode — DME Displays Dashes, VOR Ident Normal
Figure 104

EFFECTIVITY

ALL

311734

34-55-00

02   Page 106
Aug 22/99

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
EFIS (MM 34-22-00/501)
ILS (MM 34-31-00/501)

CB'S: 11A1,11E11,11E32,11E33

ILS MODE — DME
DISPLAYS DASHES,
ILS IDENT NORMAL

| 1 | SET THE L (R) EFIS MODE SELECT TO THE EXP-ILS POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) DME INTERROGATOR.
DOES THE RED STATUS FAIL LIGHT COME BACK ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES →

| 21 | REPLACE THE L (R) DME INTERROGATOR M123 (M124) (MM 34-55-01/401). |

NO

| 2 | DOES THE RED CONTROL INPUT FAIL LIGHT COME BACK ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES →

| 22 | REPLACE THE L (R) VOR CONTROL PANEL, M91 (M92) (MM 34-51-02/201).
IF THE PROBLEM CONTINUES, REMOVE THE L (R) VOR CONTROL PANEL, M91 (M92).
REMOVE THE ILS CONTROL PANEL, M87 (MM 34-31-02/401).
EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) VOR CONTROL PANEL, CONNECTOR D157 (D159), PINS 10 AND 22 TO THE ILS CONTROL PANEL, CONNECTOR D155 (D601), PINS 13 AND 14 (WDM 34-31-11,-21), (WDM 34-51-11,-21).
INSTALL THE VOR CONTROL PANEL AND THE ILS CONTROL PANEL.
IF THE PROBLEM CONTINUES, REMOVE THE L (R) DME INTERROGATOR, M123 (M124) (MM 34-55-01/401).
REMOVE THE L (R) VOR CONTROL PANEL.
EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) DME INTERROGATOR, CONNECTOR D333B (D361B), PINS D3 AND E3 TO THE L (R) VOR CONTROL PANEL, CONNECTOR D157 (D159), PINS 16 AND 29 (WDM 34-55-11,-21).
INSTALL THE L (R) DME INTERROGATOR AND THE VOR CONTROL PANEL. |

NO

SEE SHEET 2
(BLOCK 3)

ILS Mode — DME Displays Dashes, ILS Ident Normal
Figure 105 (Sheet 1)

EFFECTIVITY

ALL

34-55-00

02   Page 107
Aug 10/90

311759

FROM SHEET 1
(BLOCK 2)

NO

```
┌─────────────────────────────┐
│ 3 │ REMOVE THE L (R) DME    │           YES
│ INTERROGATOR, M123 (M124)   │─────────────────────────────────┐
│ (AMM 34-55-01/401).         │                                  │
│    EXAMINE THE ANTENNA CABLE│                                  │
│ AT THE L (R) DME INTERROGATOR,                                 │
│ CONNECTOR D333B (D361B), PINS                                  │
│ 71 AND C71 (AMM 20-10-32/201).                                │
│    IS THE ANTENNA CABLE OK? │                                  │
└─────────────────────────────┘                                  │
```

```
┌─────────────────────────────┐
│ 23 │ INSTALL THE DME INTERROGA- │
│ TOR, M123 (M124)            │
│ (AMM 34-55-01/401).         │
│    REPLACE THE L (R) DME    │
│ ANTENNA, M263 (M264)        │
│ (AMM 34-55-02/401).         │
└─────────────────────────────┘
```

NO

```
┌─────────────────────────────┐
│ 24 │ REMOVE THE L (R) DME   │
│ ANTENNA, M263 (M264)        │
│ (AMM 34-55-02/401).         │
│    REPLACE THE ANTENNA CIR- │
│ CUIT FROM THE L (R) DME INTER- │
│ ROGATOR, CONNECTOR D333B    │
│ (D361B), PINS 71 AND C71 TO │
│ THE L (R) DME ANTENNA CONNEC- │
│ TOR D47 (D49), PINS A1 AND C1 │
│ (WDM 34-55-11,-21).         │
│    INSTALL THE L (R) DME    │
│ INTERROGATOR, M123 (M124)   │
│ (AMM 34-55-01/401).         │
│    INSTALL THE L (R) DME    │
│ ANTENNA, M263 (M264)        │
│ (AMM 34-55-02/401).         │
└─────────────────────────────┘
```

ILS Mode – DME Displays Dashes, ILS Ident Normal
Figure 105 (Sheet 2)

EFFECTIVITY

ALL

34-55-00

01   Page 108
Aug 10/95

123246

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A1,11E11,11E32,11E33

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

BLANK DME DISPLAY
ON EHSI – OTHERWISE
NORMAL

1 REMOVE THE L (R) DME
INTERROGATOR, M123 (M124)
(AMM 34-55-01/401).
  REMOVE THE L (R) EFIS SG,
M148 (M150)(AMM 34-22-01/401).
  MAKE SURE THERE IS DATA ON
THE 429 INPUT BUS FROM THE
L (R) DME INTERROGATOR AT THE
L (R) EFIS SG, CONNECTOR D425A
(D373D), PINS G2 AND H2
(WDM 34-22-19,29).
  IS THERE DATA ON THE BUS?

YES

20 INSTALL THE L (R) DME
INTERROGATOR, M123 (M124)
(AMM 34-55-01/401) AND REPLACE
THE L (R) EFIS SG, M148 (M150)
(AMM 34-22-01/401).

NO

21 EXAMINE THE DATA BUS
CIRCUIT FROM THE L (R) DME
INTERROGATOR, CONNECTOR D333B
(D361B), PINS G3 AND H3, TO
THE L (R) EFIS SG, CONNECTOR
D425A (D373D), PINS G2 AND H2
(WDM 34-22-19,-29).
  REPAIR THE PROBLEMS THAT
YOU FIND.
  INSTALL THE L (R) DME
INTERROGATOR, M123 (M124)
(AMM 34-55-01/401).
  INSTALL THE L (R) EFIS SG,
M148 (M150)(AMM 34-22-01/401).

Blank DME Display on EHSI – Otherwise Normal
Figure 106

EFFECTIVITY

ALL

848389

34-55-00

02   Page 109
Nov 10/95

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
  EFIS (AMM 34-22-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11A1,11E11,11E32,11E33

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

DME EHSI AND RDMI
DISPLAYS BLANK

1 | PUSH AND HOLD THE TEST SWITCH ON THE L (R) DME INTER-ROGATOR.
   DOES THE RED LRU STATUS-FAIL LIGHT COME ON AT THE END OF THE TEST (AFTER 6 SECONDS)?

YES

21 | REPLACE THE L (R) DME INTERROGATOR, M123 (M124) (AMM 34-55-01/401).

NO

22 | REMOVE THE L (R) DME INTERROGATOR, M123 (M124) (AMM 34-55-01/401).
   REMOVE THE L (R) EFIS SG, M148 (M150)(AMM 34-22-01/401).
   EXAMINE THE DATA BUS CIRCUIT FROM THE L (R) DME INTERROGATOR, CONNECTOR D333B (D361B), PINS G3 AND H3, TO THE L (R) EFIS SG, CONNECTOR D425A (D373D), PINS G2 AND H2 (WDM 34-22-19,-29).
   REPAIR THE PROBLEMS THAT YOU FIND.
   INSTALL THE DME INTERRO-GATOR AND THE EFIS SG.

DME EHSI and RDMI Displays Blank
Figure 107

33706

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
EFIS (MM 34-22-00/501)
FMC (MM 34-61-00/501)

CB'S: 11A1,11E11,11E32,11E33

AUTOTUNE MODE –
DME DISPLAYS SHOW
DASHES

| 1 | SET THE EFIS MODE SELECT TO THE EXP-VOR POSITION. PUSH AND HOLD THE TEST SWITCH ON THE L (R) DME INTERROGATOR.   DOES THE RED LRU STATUS-FAIL LIGHT COME ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES ──────►

| 21 | REPLACE THE L (R) DME INTERROGATOR, M123 (M124) (MM 34-55-01/401). |

NO

| 2 | DOES THE RED CONTROL INPUT FAIL LIGHT COME ON AT THE END OF THE TEST (AFTER 6 SECONDS)? |

YES ──────►

| 22 | REPLACE THE L (R) VOR CONTROL PANEL, M91 (M92) (MM 34-51-02/201). |

NO

| 3 | DOES THE FMC FAIL LIGHT ON THE L (R) FMC/CDU COME ON? |

YES ──────►

| 23 | REPLACE THE L (R) FMC, M134 (M135)(MM 34-61-01/401). |

NO

| 4 | GET THE REFERENCE SENSOR STATUS PAGE ON THE FMC/CDU (MM 34-61-00/501).   IS THE DME INPUT OK? |

NO ──────►

| 24 | REMOVE THE L (R) DME INTERROGATOR CONNECTOR, M123 (M124)(MM 34-55-01/401).   REMOVE THE L (R) FMC, M134 (M135)(MM 34-61-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) DME INTERROGATOR, CONNECTOR D333B (D361B), PINS G1 AND H1 TO THE L (R) FMC, CONNECTOR D323A, PINS D1 AND E1 (D353B, PINS G7 AND H7) (WDM 34-55-11,-21).   INSTALL THE DME INTERROGATOR AND THE FMC. |

YES

| 25 | REMOVE THE L (R) DME INTERROGATOR, M123 (M124) (MM 34-55-01/401).   REMOVE THE L (R) FMC, M134 (M135)(MM 34-61-01/401).   EXAMINE AND REPAIR THE DATA BUS CIRCUIT FROM THE L (R) DME INTERROGATOR, CONNECTOR D333B (D361B), PINS A3 AND B3 TO THE L (R) FMC, CONNECTOR D323A, PINS G9 AND H9 (D353B, PINS D7 AND E7) (WDM 34-55-11,-21).   INSTALL THE DME INTERROGATOR AND THE FMC. |

Autotune Mode – DME Displays Show Dashes
Figure 108

311893

┌───┐
│ PREREQUISITES   │
│   │
│ ELECTRICAL POWER (MM 24-22-00/201)   │
│ VOR (MM 34-22-00/501)   │
│   │
│ CB'S: 11A1,11E11,11E32,11E33   │
└───┘

DME IDENT SIGNAL
MISSING - DISPLAYS
NORMAL

┌──┐
│ 1 │ REPLACE THE L (R) DME INTERROGATOR, M123 (M124)(MM 34-55-01/401). IF THE PROBLEM CONTINUES, REPLACE │
│ THE L (R) VOR CONTROL PANEL, M91 (M92)(MM 34-51-02/201).   │
└──┘

DME Ident Signal Missing - Displays Normal
Figure 109

EFFECTIVITY

ALL

34-55-00

101433

1. <u>ARINC Data Bus Charts</u>
   A. General

   <u>CAUTION</u>: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
               YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

   (1) The ARINC 429 data bus charts give data necessary to make an
        analysis of ARINC 429 transmitters, receivers, and data buses. For
        the test, use a breakout box at the available terminal or at the LRU
        connector.
   B. Equipment
   (1) Standard multi-meter
   (2) 429EBP Data Bus Analyzer (recommended)
        JcAIR Instrumentation
        400 Industrial Parkway
        Industrial Airport, KS 66031

        429EBP Data Bus Analyzer (alternative)
        Interface Technology
        150 E. Arrow Highway
        San Dimas, CA 91773
   (3) A34011-1 Breakout Box (recommended)
        A34011-112 Breakout Box (alternative)

DME							
DIGITAL OUTPUT BUS CHART							
BUS NAME					**BUS**	**BIT**	
SOURCE	TYPE	BUS	CON	PINS	FORMAT	RATE	DATA BUS
DME (L R)	A	1	B	G01 H01	429	LO	DME DATA OUTPT#1
DME (L R)	A	2	B	G03 H03	429	LO	DME DATA OUTPT#2

DME ID=09								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
DME FREQUENCY	A	035	BCD	5	00	108–135.95	ALWAYS POS	MHZ
DME DISTANCE-D	A	201	BCD	6	00	-1TO399.99	ALWAYS POS	NM
DME DISTANCE	A	202	BNR	6	00	0–512	ALWAYS POS	NM

DME				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE–STATE	ZERO–STATE
VEL MEMORY MODE	202	11	MEM MODE	NORM MODE

AUTOMATIC DIRECTION FINDER (ADF) SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ANTENNA – LEFT ADF, M265	1	1	TOP OF FUSELAGE	34-57-03
ANTENNA – RIGHT ADF, M266	1	1	TOP OF FUSELAGE	34-57-03
CIRCUIT BREAKER –	2		FLIGHT COMPARTMENT, P11	
ADF LEFT, C607		1	11F6	*
ADF RIGHT, C632		1	11A3	*
INDICATOR – (FIM 34-22-00/101)				
LEFT RDMI, N3				
RIGHT RDMI, N43				
PANEL – ADF CONTROL, M1046	2	1	FLIGHT COMPARTMENT, P8	34-57-02
RECEIVER – LEFT ADF, M215	2	1	821, MID EQUIPMENT CENTER, E5-1	34-57-01
RECEIVER – RIGHT ADF, M216	2	1	821, MID EQUIPMENT CENTER, E5-1	34-57-01
RELAY – (FIM 31-01-36/101)				
SYS NO. 1 AIR/GND, K124				
SYS NO. 2 AIR/GND, K214				

* SEE THE WDM EQUIPMENT LIST

Automatic Direction Finder (ADF) System – Component Index
Figure 101

EFFECTIVITY

ALL

34-57-00

10   Page 101
Feb 10/94

213149

RIGHT ADF ANTENNA,
M266

SEE (A)

LEFT ADF ANTENNA, M265

SEE (A)

FORWARD CARGO
DOOR, 821

FWD

LEFT OR RIGHT ADF ANTENNA, M265 OR M266

(A)

Automatic Direction Finder (ADF) System – Component Location
Figure 102 (Sheet 1)

D16362

P11 PANEL

ADF
CONTROL
PANEL, M1046

SEE (B)

P8 PANEL

FLIGHT COMPARTMENT

L

TONE
L   R

R

12060   11830

A
D
F

TEST   TEST

ADF
ANT
OFF

L   R

ADF CONTROL PANEL, M1046

(B)

CONTROL   LRU
INPUT   STATUS

FAIL   PASS   FAIL

TEST

RIGHT ADF
RECEIVER, M216

SEE (C)

LEFT ADF
RECEIVER, M215

SEE (C)

E5-1

FORWARD CARGO
DOOR, 821

MID EQUIPMENT CENTER

LEFT OR RIGHT ADF RECEIVER,
M215 OR M216

(C)

Automatic Direction Finder (ADF) System – Component Location
Figure 102 (Sheet 2)

EFFECTIVITY

ALL

173847

34-57-00

15   Page 103
Feb 10/94

```
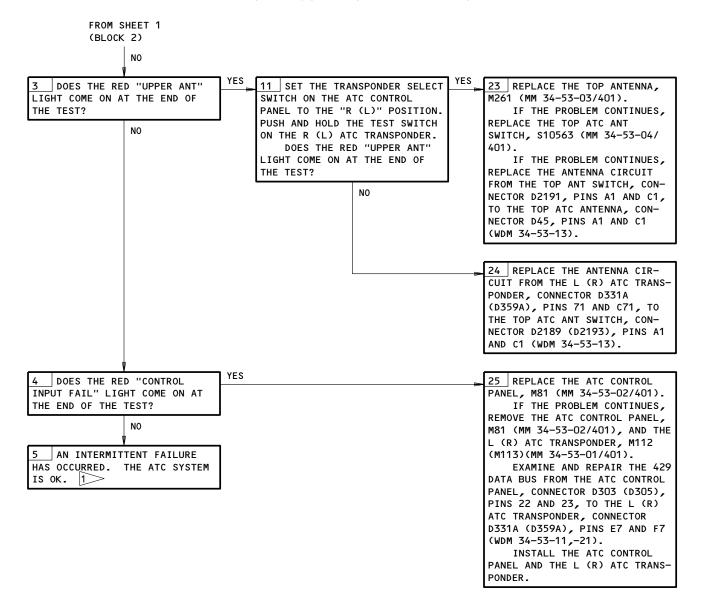┌─────────────────────────────────────────────────────┐
│ PREREQUISITES                                         │
│                                                       │
│ MAKE SURE THIS SYSTEM WILL OPERATE:                   │
│   FLIGHT INTERPHONE SYSTEM (MM 23-51-00/501)          │
│                                                       │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:          │
│   11A3,11A6,11F6,11F25                                │
│                                                       │
│ MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT   │
│ FOLLOWS:                                              │
│   ELECTRICAL POWER IS ON (MM 24-22-00/201)            │
└─────────────────────────────────────────────────────┘
```

ADF AUDIO PROBLEMS

```
┌──────────────────────────────┐ YES    ┌──────────────────────────────┐
│ 1 │ TUNE THE ADF CONTROL PANEL│────────│ 40 │ REPLACE THE LEFT (RIGHT)│
│ TO A KNOWN AM BROADCAST       │        │ ADF RECEIVER, M215 (M216)    │
│ STATION WITH THE LEFT (RIGHT) │        │ (MM 34-57-01/401).           │
│ SYSTEM CONTROLS.              │        └──────────────────────────────┘
│   IS THE PROBLEM HEARD ON     │
│ ALL AUDIO SELECTOR PANELS?    │        ┌──────────────────────────────┐
└──────────────────────────────┘        │ 41 │ REPLACE THE APPLICABLE  │
     │ NO                                │ AUDIO SELECTOR PANEL         │
     └───────────────────────────────── │ (MM 23-51-01/401).           │
                                         └──────────────────────────────┘
```

ADF Audio Problems
Figure 103

EFFECTIVITY

ALL

213152

34-57-00

11   Page 104
Feb 10/94

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A3,11A6,11F6,11F25

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

LEFT (RIGHT) ADF
BEARING PROBLEMS
ON BOTH RDMIs

1 | PUSH THE "TEST" SWITCH ON THE LEFT (RIGHT) ADF RECEIVER, M215 (M216). DOES THE "LRU STATUS FAIL" LIGHT COME ON AND STAY ON AFTER THE TEST SEQUENCE?

YES →

41 | REPLACE THE LEFT (RIGHT) ADF RECEIVER, M215 (M216) (AMM 34-57-01/401).

NO ↓

2 | DOES THE "CONTROL INPUT FAIL" LIGHT COME ON AND STAY ON AFTER THE TEST SEQUENCE?

YES →

42 | REPLACE THE ADF CONTROL PANEL, M1046 (AMM 34-57-02/401).
IF THE PROBLEM CONTINUES, REMOVE THE LEFT ADF CONTROL PANEL, M1046, AND THE LEFT (RIGHT) ADF RECEIVER, M215 (M216)(AMM 34-57-01/401).
EXAMINE THE ARINC 429 DIGITAL DATA BUS CIRCUIT FROM THE LEFT ADF CONTROL PANEL, CONNECTOR D1629 (D1631), PINS 12 AND 13, TO THE LEFT (RIGHT) ADF RECEIVER, CONNECTOR D463B (D1419B), PINS B7 AND B8 (WDM 34-57-11, -21).
REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE LEFT ADF CONTROL PANEL AND THE LEFT (RIGHT) ADF RECEIVER.

NO ↓

SEE SHEET 2
(BLOCK 3)

Left (Right) ADF Bearing Problems on Both RDMIs
Figure 104 (Sheet 1)

EFFECTIVITY

ALL

213136

34-57-00

13   Page 105
Feb 10/94

FROM SHEET 1
(BLOCK 2)

| NO

| 3 | TUNE THE LEFT (RIGHT) ADF SYSTEM TO A KNOWN BROADCAST STATION.
    IS THE IDENTIFICATION SIGNAL RECEIVED? |

YES →

| 10 | REMOVE THE LEFT (RIGHT) ADF RECEIVER, M215 (M216) (AMM 34-57-01/401).
    DO THIS PROCEDURE: ANTENNA CABLE CHECK PROCEDURE (AMM 20-10-32/201) ON THE TWO BEARING ANTENNA CABLE CIRCUITS, CONNECTOR D463B (D1419B), PINS D7,D8 AND D14, D15 (WDM 34-57-11,-12).
    ARE THE ANTENNA BEARING CABLES OK? |

YES →

| 43 | REPLACE THE LEFT (RIGHT) ADF ANTENNA, M265 (M266) (AMM 34-57-03/401).
    INSTALL THE LEFT (RIGHT) ADF RECEIVER, M215 (M216) (AMM 34-57-01/401). |

NO (from block 3)

NO (from block 10)

| 44 | REMOVE THE LEFT (RIGHT) ADF ANTENNA, M265 (M266)(IF NECESSARY)(AMM 34-57-03/401).
    REPLACE THE ANTENNA CIRCUIT AS NECESSARY FROM THE LEFT (RIGHT) ADF RECEIVER M215 (M216), CONNECTOR D463B (D1419B), PINS D7,D8 AND/OR D14,D15, TO THE LEFT (RIGHT) ADF ANTENNA M265 (M266), CONNECTOR D51 (D1415), PINS 4,5 AND/OR 7,8 (WDM 34-57-11,-21).
    INSTALL THE LEFT (RIGHT) ADF RECEIVER.
    INSTALL THE LEFT (RIGHT) ADF ANTENNA (IF REMOVED). |

| 11 | REMOVE THE LEFT (RIGHT) ADF RECEIVER M215 (M216) (AMM 34-57-01/401).
    DO THIS PROCEDURE: ANTENNA CABLE CHECK PROCEDURE (AMM 20-10-32/201) ON THE SENSE ANTENNA CABLE, CONNECTOR D463B (D1419B), PINS D1,D2 (WDM 34-57-11,-12).
    IS THE ANTENNA SENSE CABLE OK? |

YES →

| 45 | REPLACE THE LEFT (RIGHT) ADF ANTENNA, M265 (M266) (AMM 34-57-03/401).
    INSTALL THE LEFT (RIGHT) ADF RECEIVER. |

NO (from block 11)

| 46 | REMOVE THE LEFT (RIGHT) ADF ANTENNA, M265 (M266)(IF NECESSARY)(AMM 34-57-03/401).
    REPLACE THE ANTENNA CIRCUIT AS NECESSARY FROM THE LEFT (RIGHT) ADF RECEIVER M215 (M216), CONNECTOR D463B (D1419B), PINS D1,D2, TO THE LEFT (RIGHT) ADF ANTENNA M265 (M266), CONNECTOR D51 (D1415), PINS 1,2 (WDM 34-57-11,-21).
    INSTALL THE LEFT (RIGHT) ADF RECEIVER.
    INSTALL THE LEFT (RIGHT) ADF ANTENNA (IF REMOVED). |

Left (Right) ADF Bearing Problems on Both RDMIs
Figure 104 (Sheet 2)

EFFECTIVITY

ALL

34-57-00

06   Page 106
Nov 10/95

122470

1. ARINC Data Bus Charts
    A. General

        CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR
                  YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

        (1) The ARINC 429 data bus charts give data necessary to make an
             analysis of ARINC 429 transmitters, receivers, and data buses. For
             the test, use a breakout box at the available terminal or at the LRU
             connector.
    B. Equipment
        (1) Standard multi-meter
        (2) 429EBP Data Bus Analyzer (recommended)
             JcAIR Instrumentation
             400 Industrial Parkway,
             Industrial Airport, KS 66031

             429-2 Data Bus Analyzer (alternative)
             Interface Technology
             150 E. Arrow Highway,
             San Dimas, CA 91773
        (3) A34011-1 Breakout Box (recommended)
             A34011-112 Breakout Box (alternative)

             NOTE: Octal label 222 is a multiple function label and will not
                    display correctly in engineering units on the data bus
                    analyzer unless hexadecimal equipment ID=11 is selected. For
                    analyzers not capable of having ID selected, display the
                    label in hexadecimal format and record the value. Set the
                    data bus analyzer to transmit label 162 in hex format and
                    insert the value recorded for label 222. Change label 162
                    format to engineering to display the correct engineering
                    units.

                ALL

34-57-00

                                                    02   Page 107
                                                              Nov 10/96

ADF							
DIGITAL OUTPUT BUS CHART							
BUS NAME					BUS FORMAT	BIT RATE	DATA BUS
SOURCE	TYPE	BUS	CON	PINS			
ADF (L)	A	1	B	B10 B11	429	LO	BEARING OUTPUT NO. 1

ADF ID = 12								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
DF BEARING	A	162	BNR	16	00	± 180	CW FROM HDG	DEG

EFFECTIVITY

ALL

ADF PNL							
DIGITAL OUTPUT BUS CHART							
BUS NAME					BUS FORMAT	BIT RATE	
SOURCE	TYPE	BUS	CON	PINS			DATA BUS
ADF PNL (L)	A	1	29	12 13	429	LO	FREQ/FUNC - L
ADF PNL (L)	A	2	31	12 13	429	LO	FREQ/FUNC - R

ADF PNL ID = B2							
OCTAL LABELS CHART							
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
ADF FREQUENCY	A	032	BCD	5	00	190 to 1750	ALWAYS POS	KHZ

ADF PNL				
DISCRETE OCTAL LABELS/BIT CHART				
SIGNAL	OCTAL LABEL	BIT	ONE-STATE	ZERO-STATE
BFO ON	032	11	BFO ON	BFO OFF
ANT MODE	032	12	ANT MODE	ADF MODE
0.5 KHZ TUNING	032	14	.5 KHZ	.0 KHZ

FLIGHT MANAGEMENT COMPUTER SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1	1	FLT COMPT, P11	
DATA LOADER, C627		1	11B1	*
FMCS CDU LEFT, C597		1	11E8	*
FMCS CDU RIGHT, C598		1	11E29	*
FMCS CMPTR LEFT, C609		1	11E9	*
FMCS CMPTR RIGHT, C610		1	11E30	*
COMPUTER – (FIM 31–41–00/101)				
EICAS L, M10181				
EICAS R, M10182				
COMPUTER – FLIGHT MANAGEMENT L, M134	2	1	119AL, MAIN EQUIP CTR, E2–2	34–61–01
COMPUTER – FLIGHT MANAGEMENT R, M135	2	1	119AL, MAIN EQUIP CTR, E2–3	34–61–01
INDICATOR – (FIM 34–22–00/101)				
CAPT ELECTRONIC ATTITUDE DIRECTOR, N4				
CAPT ELECTRONIC HORIZONTAL SITUATION, N5				
F/O'S ELECTRONIC ATTITUDE DIRECTOR, N44				
F/O'S ELECTRONIC HORIZONTAL SITUATION, N45				
LIGHT – FMC ANNUNCIATOR, L603	1	1	FLT COMPT, P1–3	*
LOADER – AIRBORNE DATA, M1736	2	1	FLT COMPT, P61	34–61–05
PANEL – (FIM 22–11–00/101)				
AFCS MODE CONTROL, M90				
PANEL – (FIM 34–22–00/101)				
EFIS CONTROL L, M94				
EFIS CONTROL R, M93				
PANEL – DATA LOADER CONTROL, M1737	2	1	FLT COMPT, P61	34–61–06

* SEE THE WDM EQUIPMENT LIST

Flight Management Computer System – Component Index
Figure 101 (Sheet 1)

612256

FLIGHT MANAGEMENT COMPUTER SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
PRINTER – (REF 31-35-00, FIG. 101) MULTI-INPUT, M1631				
RELAY	2		119AL, MAIN EQUIP CTR, E2-2	
CDU NAV ENABLE L, K2065		1		*
FCC SOURCE SELECT L, K2067		1		*
RELAY	2		119AL, MAIN EQUIP CTR, E2-3	
CAPT & F/O SOURCE SELECT R, K2069		1		*
CDU NAV ENABLE R, K2066		1		*
FCC SOURCE SELECT R, K2068		1		*
RELAY – (REF 31-01-36, FIG. 101) FMC TUNING L, K757				
RELAY – (REF 31-01-37, FIG. 101) FMC TUNING R, K758				
SWITCH – LEFT FMC, S2	1	1	FLT COMPT, P1	*
SWITCH – RIGHT FMC, S10	1	1	FLT COMPT, P3	*
SYMBOL GENERATOR – (REF 34-22-00, FIG. 101) EFIS L, M148 EFIS C, M149 EFIS R, M150				
UNIT – FLIGHT MANAGEMENT COMPUTER CONTROL/ DISPLAY L, M76	1	1	FLT COMPT, P9	34-61-02
UNIT – FLIGHT MANAGEMENT COMPUTER CONTROL/ DISPLAY R, M77	1	1	FLT COMPT, P9	34-61-02

* SEE THE WDM EQUIPMENT LIST

Flight Management Computer System – Component Index
Figure 101 (Sheet 2)

727414

P11 PANEL

FMC ANNUNCIATOR
LIGHT, L603

SEE (B)

RIGHT FMC
SWITCH, S10

SEE (A)

LEFT FMC
SWITCH, S2

SEE (A)

DATA LOADER CONTROL
PANEL, M1737

SEE (C)

P1 PANEL

LEFT FLIGHT MANAGEMENT
COMPUTER CONTROL/
DISPLAY UNIT, M76

SEE (E)

AIRBORNE DATA
LOADER, M1736

SEE (D)

P61 PANEL

P3 PANEL

P6 PANEL

RIGHT FLIGHT MANAGEMENT
COMPUTER CONTROL/
DISPLAY UNIT, M77

SEE (E)

FLIGHT COMPARTMENT

NAV
FMC-L
CDU-L   FMC-R

FMC SWITCH
(EXAMPLE),
S2 OR S10

(A)

DATA LOAD SEL   NORM
                              FMC-L
                              FMC-R

DATA LOADER CONTROL PANEL, M1737

(C)

FMC
a

FMC ANNUNCIATOR
LIGHT, L603

(B)

AIRBORNE DATA LOADER

(C)

INIT REF | RTE | CLB | CRZ | DES | BRT
DIR INTO | LEGS | DEP ARR | PROG | EXEC
MENU | FIX | A B C D E
PREV PAGE | NEXT PAGE | F G H I J
1 2 3 K L M N O
4 5 6 P Q R S T
7 8 9 U V W X Y
. 0 +/- Z SP DEL / CLR

LEFT OR RIGHT FLIGHT MANAGEMENT
COMPUTER CONTROL DISPLAY
UNIT, M76 OR M77

(E)

Flight Management Computer System – Component Location
Figure 102 (Sheet 1)

EFFECTIVITY

ALL

A61526

34-61-00

23   Page 103
May 10/97

RIGHT FLIGHT
MANAGEMENT
COMPUTER, M135

SEE (F)

LEFT FLIGHT
MANAGEMENT
COMPUTER, M134

SEE (F)

E2-2 SHELF

E2-3 SHELF

MAIN EQUIPMENT CENTER
ACCESS DOOR, 119AL

SEE (E)

FORWARD MISCELLANEOUS
ELECTRICAL EQUIPMENT
PANEL P33 (FMCs DATA
BASE LOAD CIRCUIT
BREAKER, C630)

119AL

MAIN EQUIPMENT CENTER

(E)

FLIGHT
MANAGEMENT
COMPUTER

FAIL

TEST IN
PROCESS

INITIATE TEST/
LAMP TEST

LEFT OR RIGHT FLIGHT MANAGEMENT COMPUTER, M134 OR M135

(F)

Flight Management Computer System – Component Location
Figure 102 (Sheet 2)

EFFECTIVITY

ALL

230825

34-61-00

05   Page 104
Aug 10/90

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11E8,11E9,11E29,11E30

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

FMC NAV DATA
CROSSLOADING
PROBLEMS

1 SET THE L FMC NAV SWITCH ON THE P1 PANEL TO THE FMC-L POSITION AND THE R FMC NAV SWITCH ON THE P3 PANEL TO THE FMC-R POSITION.
GET THE ANALOG DISCR PAGE ON THE TWO CDUS. PUSH THE NEXT PAGE KEY ON THE TWO CDUs TO GET THE PAGE WITH "SRCE SEL SW X" ON IT.
DO THE TWO CDUs SHOW "SRCE SEL SW L" AND THE "SRCE SEL SW R" AS "NORM"?

→ NO →

20 REMOVE THE LEFT (RIGHT) CONNECTOR D4151 (D4505). DO A CONTINUITY CHECK FROM CONNECTOR D4151 (D4505), PIN 20 (32), TO GROUND (WDM 34-61-11, -21).
IS THE CONTINUITY CORRECT?

→ YES →

30 REPLACE THE LEFT (RIGHT) FMC SW, S2 (S10)(WDM 34-61-11, -16,-21,-26).

NO

31 REMOVE THE LEFT (RIGHT) CDU, M76 (M77)(AMM 34-61-02/201).
EXAMINE THE CIRCUIT FROM THE LEFT (RIGHT) CDU, CONNECTOR D465 (D467), PIN 29, TO THE LEFT (RIGHT) CONNECTOR D1451 (D4505), PIN 20 (32) (WDM 34-61-11,-21).
REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE CDU AND CONNECT CONNECTOR D4151 (D4505) AGAIN.

YES

2 DOES THE LEFT (RIGHT) FMC SHOW FAILURE INDICATIONS?

→ YES →

32 DO THIS PROCEDURE: FLIGHT MANAGEMENT COMPUTER SYSTEM BITE PROCEDURE (FIM 34-61-00/101, FIG. 111).

NO

3 DOES THE LEFT (RIGHT) CDU SHOW FAILURE INDICATIONS?

→ YES →

33 REPLACE THE LEFT (RIGHT) CDU, M76 (M77)(AMM 34-61-02/201).

NO

4 IS THE NAVIGATION DATA BASE IN THE MASTER FMC CORRECT?

→ NO →

34 PUT THE NAV DATA BASE INTO THE MASTER FMC (AMM 34-61-00/201).

YES

5 GET THE SENSOR STATUS PAGE ON THE TWO CDUs. PUSH THE NEXT KEY TO SHOW PAGE 2/2.
ON THE LEFT CDU IS THE CONDITION OF"FMC, RIGHT" SHOWN AS "OK"?

→ NO →

35 REMOVE THE LEFT FMC, M134, AND RIGHT FMC, M135 (AMM 34-61-01/401).
EXAMINE THE CIRCUIT FROM THE LEFT FMC, CONNECTOR D323B, PINS G1,H1, TO THE RIGHT FMC, CONNECTOR D353A, PINS A13,B13 (WDM 34-61-11).
REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE TWO FMCs.

YES

SEE SHEET 2
(BLOCK 6)

FMC NAV Data Crossloading Problems
Figure 103A (Sheet 1)

612261

FROM SHEET 1
(BLOCK 5)

YES

| 6 | ON THE RIGHT CDU IS THE CONDITION OF "FMC, LEFT" SHOWN AS "OK"? |

NO →

| 36 | REMOVE THE LEFT FMC M134 AND THE RIGHT FMC M135 (MM 34-61-01/401). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT FMC CONNECTOR D323A, PINS A13,B13 AND THE RIGHT FMC CONNECTOR D353B, PINS G1,H1 (WDM 34-61-11).
      INSTALL THE TWO FMCS. |

YES

| 7 | ON THE LEFT CDU IS THE CONDITION OF THE "FMC/CDU, LEFT (RIGHT)" SHOWN AS "OK"? |

NO →

| 37 | REMOVE THE LEFT FMC M134 (MM 34-61-01/401) AND THE LEFT (RIGHT) CDU M76 (M77) (MM 34-61-02/201). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE LEFT FMC CONNECTOR D323A, PINS D13,E13,A9,B9 (PINS G13, H13,D11,E11) AND THE LEFT (RIGHT) CDU CONNECTOR D465 (D467), PINS 2,3,8,9 (PINS 5,6, 8,9)(WDM 34-61-11).
      ALSO EXAMINE AND REPAIR THE CIRCUITS BETWEEN THE LEFT FMC CONNECTOR D323B (D323A), PIN F6 (J13) AND THE LEFT (RIGHT) CDU CONNECTOR D465 (D467), PIN 13 (WDM 34-61-11, -21).
      INSTALL THE LEFT FMC AND THE LEFT (RIGHT) CDU. |

YES

| 8 | ON THE RIGHT CDU IS THE CONDITION OF THE "FMC/CDU, LEFT (RIGHT)" SHOWN AS "OK"? |

NO →

| 38 | REMOVE THE RIGHT FMC M135 (MM 34-61-01/401) AND THE LEFT (RIGHT) CDU M76 (M77) (MM 34-61-02/201). EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE RIGHT FMC CONNECTOR D353A, PINS D11,E11,G13,H13 (PINS A9, B9,D13,E13) AND THE LEFT (RIGHT) CDU CONNECTOR D465 (D467), PINS 5,6,8,9 (PINS 2, 3,8,9)(WDM 34-61-11,21).
      ALSO EXAMINE AND REPAIR THE CIRCUITS BETWEEN THE RIGHT (LEFT) CONNECTOR D353A (353B), PIN J13 (F6) AND THE LEFT (RIGHT) CONNECTOR D465 (D467), PIN 13 (WDM 34-61-11, -21).
      INSTALL THE RIGHT FMC AND THE LEFT (RIGHT) CDU. |

YES

| 9 | THE SYSTEM IS OK. |

FMC NAV Data Crossloading Problems
Figure 103A (Sheet 2)

EFFECTIVITY

ALL

181872

34-61-00

01   Page 106
         Aug 10/90

ACTION PERFORMED ON
LEFT (RIGHT) CDU
KEYBOARD IS NOT
EFFECTIVE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
 11E8,11E9,11E29,11E30

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

| 1 | PUSH THE CLR KEY ON THE CDU KEYBOARD. ARE ENTRIES REMOVED FROM THE SCRATCH PAD AND NEW ENTRIES PERMITTED? |

→ YES → | 20 | THE SYSTEM IS OK. |

↓ NO

| 2 | DOES THE CDU SHOW THE CORRECT DATA, BUT DOES NOT OPERATE WHEN A KEY IS PUSHED? |

→ YES → | 10 | WRITE THE NAVIGATION DATA BASE CODE AND ACTIVATION DATE FROM THE "IDENT" PAGE OF THE TWO CDUs. OPEN THE "FMCS CMPTR" CIRCUIT BREAKERS (11E9,11E30) FOR THE TWO FMCS. CLOSE THE "FMCS CMPTR" CIRCUIT BREAKER (11E9 LEFT, 11E30 RIGHT) FOR THE FMC THAT HAD THE PROBLEM AFTER 15 SECONDS. DOES THAT FMC NOW OPERATE? |

→ NO → | 21 | REPLACE THE FAILED LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401). |

↓ NO

SEE SHEET 2
(BLOCK 3)

↓ YES

| 11 | IS THE NAVIGATION DATA BASE CODE AND ACTIVATION DATE THE SAME AS THE ONE WRITTEN ABOVE? |

→ NO → | 22 | PUT IN THE CORRECT NAVIGATION DATA BASE AGAIN OR CROSS-LOAD THE CORRECT NAVIGATION DATA BASE IN THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-00/201). |

↓ YES

| 23 | DO THIS PROCEDURE: FMC BITE PROCEDURE (FIG. 111). |

Action Performed on Left (Right) CDU Keyboard Is Not Effective
Figure 104 (Sheet 1)

EFFECTIVITY

ALL

191331

34-61-00

01   Page 107
Aug 10/98

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 1
(BLOCK 2)

│ NO
▼

```
┌──────────────────────────────┐      ┌──────────────────────────────┐      ┌──────────────────────────────┐
│ 3 │ DO THE KEYBOARD ACTION   │ YES  │ 12 │ TURN THE LEFT (RIGHT) FMC│ YES  │ 24 │ REPLACE THE LEFT (RIGHT) │
│ AGAIN.                       │─────▶│ NAV SWITCH ON THE P1 PANEL TO │─────▶│ CDU, M76 (M77)               │
│     DOES THE PROBLEM CONTINUE?│      │ THE FMC-R (FMC-L) POSITION TO │      │ (AMM 34-61-02/401).          │
└──────────────────────────────┘      │ CHANGE CONTROL OF THE CDU TO  │      └──────────────────────────────┘
            │ NO                       │ THE OTHER FMC.                │
            ▼                          │     DO THE KEYBOARD ACTION    │
┌──────────────────────────────┐      │ AGAIN.                        │
│ 4 │ THE SYSTEM IS OK.        │      │     DOES THE PROBLEM CONTINUE?│
└──────────────────────────────┘      └──────────────────────────────┘
                                                   │ NO
                                                   ▼
                                       ┌──────────────────────────────┐      ┌──────────────────────────────┐
                                       │ 13 │ TURN THE RIGHT (LEFT) FMC│ YES  │ 25 │ REPLACE THE LEFT (RIGHT) │
                                       │ NAV SWITCH ON THE P1 PANEL TO │─────▶│ FMC, M134 (M135)             │
                                       │ THE FMC-L (FMC-R) POSITION TO │      │ (AMM 34-61-01/401).          │
                                       │ CHANGE CONTROL OF THE CDU TO  │      └──────────────────────────────┘
                                       │ THE OTHER FMC.                │
                                       │     DO THE KEYBOARD ACTION    │
                                       │ AGAIN ON THE OTHER CDU.       │ NO
                                       │     DOES THE PROBLEM CONTINUE?│─────▶
                                       └──────────────────────────────┘
```

26 │ REMOVE THE CDU M76 (M77)
(AMM 34-61-02/401) AND THE
LEFT (RIGHT) FMC, M134 (M135)
(AMM 34-61-01/401).
    REPAIR THE CIRCUITS AS
NECESSARY FROM THE LEFT
(RIGHT) CDU CONNECTOR, D465
(D467), PINS 2,3,5,6,8, AND 9
TO THE LEFT (RIGHT) FMC CON-
NECTOR D323A (D353A), PINS A9,
B9,D11,D13,E11,E13,G13 AND H13
(WDM 34-61-11,-21).
    INSTALL THE CDU, M76 (M77)
AND THE LEFT (RIGHT) FMC,
M134 (M135.

Action Performed on Left (Right) CDU Keyboard Is Not Effective
Figure 104 (Sheet 2)

EFFECTIVITY

ALL

612265

34-61-00

05   Page 108
Aug 10/98

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
AIR DATA COMPUTING SYSTEM (MM 34-12-00/501)
VOR SYSTEM (MM 34-51-00/501)
DME SYSTEM (MM 34-55-00/501)
INERTIAL REFERENCE SYSTEM (MM 34-21-00/501)

CB'S: 11E8,11E9,11E29,11E30

DATA INCORRECT ON
LEFT (RIGHT) CDU
DISPLAY

| 1 | PUT THE IRUs INTO THE NAV MODE (MM 34-21-00/501). GET THE LEFT (RIGHT) CDU TO SHOW THE "SENSOR STATUS" PAGE. ARE SENSORS THAT FOLLOW SHOWN AS A "FAIL"? DOES THE LEFT (RIGHT) ADC SHOW "FAIL"? |

YES → | 20 | DO THE ADC BITE PROCEDURE (34-12-00, FIG. 109). |

NO

| 2 | DOES THE LEFT, CENTER, OR RIGHT IRS SHOW "FAIL"? |

YES → | 21 | DO THE IRS BITE PROCEDURE (34-21-00, FIG. 107). |

NO

| 3 | DOES THE LEFT (RIGHT) VOR SHOW "FAIL"? |

YES → | 22 | REPLACE THE LEFT (RIGHT) VOR RECEIVER M186 (M187) (MM 34-51-01/401). |

NO

| 4 | DOES THE LEFT (RIGHT) DME SHOW "FAIL"? |

YES → | 34 | DO THE DME INTERROGATOR BITE PROCEDURE (34-55-00, FIG. 103). |

NO

SEE SHEET 2
(BLOCK 5)

Data Incorrect on Left (Right) CDU Display
Figure 105 (Sheet 1)

86149

FROM SHEET 1
(BLOCK 4)

NO

5	WARNING

DO THE DEACTIVATION PROCEDURE
FOR THE SPOILERS OR MOVE ALL
PERSONS AND EQUIPMENT AWAY
FROM THE SPOILERS. THE
SPOILERS CAN RETRACT QUICKLY
AND CAUSE INJURY TO PERSONS OR
DAMAGE TO EQUIPMENT.

 DO THE DEACTIVATION PROCE-
DURE FOR THE SPOILERS
(MM 27-61-00/201) OR MOVE ALL
PERSONS AND EQUIPMENT AWAY
FROM THE SPOILERS

WARNING

MAKE SURE YOU DO THE FLIGHT
MODE SIMULATION CORRECTLY. IF
THE PROCEDURE IS NOT DONE COR-
RECTLY, INJURY TO PERSONS OR
DAMAGE TO EQUIPMENT CAN OCCUR.

 DO THE FLIGHT MODE SIMULA-
TION PROCEDURE FOR THE NO. 1
(NO. 2) AIR/GROUND SYSTEM
(MM 32-09-02/201).

 DOES THE "LEFT (RIGHT) FMC
ANALOG DISC" PAGE SHOW "OLEO
SWITCH" AS "AIR"?

NO → 35 DO THE AIR/GROUND RELAY
PROBLEM, NO "AIR/GND DISAGREE"
OR "NOSE A/G DISAGREE" EICAS
MESSAGE DISPLAY PROCEDURE
(32-09-00, FIG. 103 BLOCK 1).

YES → 36 REPLACE THE LEFT (RIGHT)
FLIGHT MANAGEMENT COMPUTER
M134 (M135)(MM 34-61-01/401).

Data Incorrect on Left (Right) CDU Display
Figure 105 (Sheet 2)

EFFECTIVITY

ALL

775822

34-61-00

01   Page 110
Aug 10/90

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  EICAS (AMM 31-41-00/501)
  FUEL QUANTITY INDICATING SYSTEM (AMM 28-41-00/501)
  FUEL FLOW INDICATING SYSTEM (AMM 73-31-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8, 11E9, 11E29, 11E30

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

FUEL ERROR ON CDU
DISPLAY

1 | SET THE L FMC SWITCH ON THE P1 PANEL TO THE FMC-L POSITION AND THE R FMC NAV SWITCH ON THE P3 PANEL TO THE FMC-R POSITION.
GET THE PROGRESS PAGE 2/2 ON THE LEFT (RIGHT) CDUs.
DOES THE "FUEL USED" DATA SHOW ON THE LEFT (RIGHT) CDU?

— YES → 20 | THE SYSTEM OPERATION IS OK. NO CORRECTION IS NECESSARY.

↓ NO

2 | OPEN THE LEFT (RIGHT) "FMCs CMPTR" CIRCUIT BREAKER 11E9 (11E30). AFTER 15 SECONDS CLOSE THE CIRCUIT BREAKER.
DOES THE "FUEL USED" DATA SHOW ON THE LEFT (RIGHT) CDU?

— YES → 21 | THE SYSTEM OPERATION IS OK. NO CORRECTION IS NECESSARY.

↓ NO

3 | GET THE PERF INIT PAGE ON THE LEFT (RIGHT) CDUs.
MANUALLY PUT IN AND REMOVE THE TOTALIZER FUEL QUANTITIES ON THE "FUEL" LINE.
GET THE PROGRESS PAGE 2/2 ON THE LEFT (RIGHT) CDUs.
ARE THE TOTALIZER AND CALCULATED FUEL QUANTITIES THE SAME?

— YES → 22 | THE SYSTEM OPERATION IS OK. NO CORRECTION IS NECESSARY.

↓ NO

SEE SHEET 2
(BLOCK 4)

Fuel Error on CDU Display
Figure 106 (Sheet 1)

EFFECTIVITY

ALL

34-61-00

612269

FROM SHEET 1
(BLOCK 3)

NO

| 4 | GET THE SENSOR STATUS PAGE ON THE LEFT (RIGHT) CDUs. IS THE FUEL QTY SHOWN AS "FAIL"? |

YES →

| 10 | PUSH THE PRESS/TEST KEY ON FUEL QUANTITY PROCESSOR. DOES THE PROCESSOR DISPLAY 88? |

NO →

| 23 | REPLACE THE FUEL QUANTITY INDICATING PROCESSOR UNIT, M121 (AMM 28-41-08/401). |

NO

YES

| 24 | REMOVE THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401), AND THE FQPU, M121 (AMM 28-41-08/401). EXAMINE THE CIRCUITS FROM THE FQPU, CONNECTOR D2706A (D2706B), PINS J11, K11 (A6, B6), TO THE LEFT (RIGHT) FMC, CONNECTOR D323A (D353A), PINS D5, E5 (D5, E5) (WDM 34-61-14, -24). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE FMC AND THE FQPU. |

| 5 | IS THE LEFT (RIGHT) FUEL FLOW INDICATING SYSTEM SHOWN AS "FAIL"? |

YES →

| 25 | DO THIS PROCEDURE: EICAS BITE PROCEDURE (FIM 31-41-00/101, FIG. 103). |

NO

| 26 | REPLACE THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401). IF THE PROBLEM CONTINUES, REMOVE THE LEFT (RIGHT) FMC, M134 (M135)(AMM 34-61-01/401), AND THE LEFT (RIGHT) EICAS, M10181 (M10182) (AMM 31-41-02/401). EXAMINE THE CIRCUITS FROM THE LEFT (RIGHT) EICAS COMPUTER, CONNECTOR D881B (D883B), PINS C10, C11 (C10, C11), TO THE LEFT (RIGHT) FMC, CONNECTOR D323A (D353A), PINS G3, H3 (G3, H3) (WDM 34-61-14, -24). REPAIR THE PROBLEMS THAT YOU FIND. INSTALL THE FMC AND THE EICAS COMPUTER. |

Fuel Error on CDU Display
Figure 106 (Sheet 2)

EFFECTIVITY

ALL

195414

34-61-00

02   Page 112
Aug 22/00

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  FUEL QUANITY INDICATING SYSTEM (AMM 28-41-00/501)
  CLOCKS (AMM 31-25-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)
  VOR SYSTEM (AMM 34-51-00/501)
  DME SYSTEM (AMM 34-55-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8,11E9,11E29,11E30

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

FMC CDU MESSAGES

1 IS THE MESSAGE
"RESYNCH FAIL—SINGLE FMC OP"
    OR
"SINGLE FMC OP"
SHOWN? |1>

— YES → **21** DO THIS PROCEDURE: FLIGHT MANAGEMENT SYSTEM BITE PROCEDURE (FIG. 111).

NO

2 DID MORE THAN 5
"RESYNCHING OTHER FMC"
MESSAGES OCCUR IN LESS THAN
5 MINUTES?

— YES → **22** OPEN FOR 15 SECONDS AND THEN CLOSE THE FMCs CMPT CB 11E9,11E30 FOR THE FMC THAT IS RESYNCHING.
    IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) FMC M134 (M135)(AMM 34-61-01/401).

NO

3 IS THE MESSAGE
"IRS NAV ONLY"
    OR
"RE-ENTER IRS POSITION"
SHOWN?

— YES → **23** DO THIS PROCEDURE: DATA INCORRECT ON LEFT (RIGHT) CDU DISPLAY PROCEDURE (FIG. 105).

NO

SEE SHEET 2
(BLOCK 4)

|1> MAKE SURE BEFORE A MAINTENANCE PROCEDURE IS DONE THAT THE CDU MESSAGE IS CAUSED BY A PROBLEM AND NOT THE RESULT OF SYSTEM OPERATION.

FMC CDU Messages
Figure 106A (Sheet 1)

EFFECTIVITY

ALL

C66967

34-61-00

FROM SHEET 1
(BLOCK 3)

| NO

| 4 | IS THE MESSAGE "PERF/VNAV UNAVAILABLE" SHOWN? | ──YES──▶ | 24 | DO THIS PROCEDURE: ACTION PERFORMED ON LEFT (RIGHT) CDU KEYBOARD IS NOT EFFECTIVE (FIG. 104). |

| NO

| 5 | IS THE MESSAGE "FUEL QTY ERROR – PROG 2/2" SHOWN? | ──YES──▶ | 25 | DO THIS PROCEDURE: FUEL ERROR ON CDU DISPLAY (FIG. 106). |

| NO

| 6 | IS THE MESSAGE "NAV DATA OUT OF DATE" SHOWN? |2▷ | ──YES──▶ | 26 | DO THIS PROCEDURE: FMC NAVIGATION DATA BASE OR PRO-GRAM INCORRECT (FIG. 107). |

| NO

| 7 | FOR OTHER CDU MESSAGES IT IS NOT NECESSARY TO DO A MAIN-TENANCE PROCEDURE. THE SYSTEM IS OK. |

2▷ MTH 275–999

FMC CDU Messages
Figure 106A (Sheet 2)

EFFECTIVITY

ALL

C62586

BOEING PROPRIETARY – Copyright (C) – Unpublished Work – See title page for details.

34-61-00

17   Page 114
Aug 10/95

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11E8,11E9,11E29,11E30

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

FMC NAVIGATION
DATA BASE OR
PROGRAM INCORRECT

1 | GET THE IDENT PAGE ON THE TWO CDUs.
   IS NAVIGATION DATA BASE THE SAME ON THE TWO CDUs?

— NO → 20 | PUT IN THE CORRECT NAVIGATION DATA BASE AGAIN OR CROSS LOAD THE CORRECT NAVIGATION DATA BASE IN THE FMC THAT WAS INCORRECT (M134, LEFT OR M135, RIGHT)(AMM 34-61-00/201).

YES

2 | IS TODAY'S DATE IN THE RANGE OF DATES ADJACENT TO THE LINE SELECT KEY 2R?

— NO → 10 | IS TODAY'S DATE IN THE RANGE OF DATES ADJACENT TO THE LINE SELECT KEY 3R?

— NO → 21 | PUT IN THE NAVIGATION DATA BASE IN THE LEFT (RIGHT) FMC, M134 (M135)(AMM 34-61-00/201).

YES → 22 | CHANGE THE DATE RANGES FROM ONE LINE TO THE OTHER (AMM 34-61-00/201).

YES

3 | DOES THE MESSAGE "NAV DATA OUT OF DATE" SHOW ON THE CDU?
1▷

— YES → 11 | IS THE CAPTAINS CLOCK SET TO THE CORRECT DATE AND TIME?

— YES → 23 | PUT IN THE NAVIGATION DATA BASE IN THE LEFT (RIGHT) FMC, M134 (M135)(AMM 34-61-00/201).

NO → 24 | PUT IN THE CORRECT DATE OR TIME IN THE CAPTAIN'S CLOCK, N2 (N42)(AMM 31-25-00/501).

NO

25 | REPLACE THE LEFT (RIGHT) FMC, M134 (M135) THAT HAS THE INCORRECT OPERATIONAL PROGRAM (AMM 34-61-01/401).

1▷ MTH 275-999

FMC Navigation Data Base or Program Incorrect
Figure 107

EFFECTIVITY

ALL

C63150

34-61-00

15   Page 115
Aug 10/95

FMC LIGHT FAILS TO
ILLUMINATE WITH
CDU ALERT

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11E8,11E9,11E29,11E30

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

1   PUSH THE MASTER DIM AND
TEST SWITCH.
    DOES THE FMC LIGHT COME
ON?

NO

YES

20   PUT A NEW LAMP IN THE FMC,
LIGHT L603.
    IF THE PROBLEM CONTINUES,
REPLACE THE DIODE/FUSE CARD
(AMM 33-16-02/201).

21   EXAMINE THE CIRCUIT FROM
THE FMC, LIGHT L603, PIN 2,
TO THE LEFT (RIGHT) FMC,
CONNECTOR D323A (D353A),
PIN K13 (K13)(WDM 34-61-15,
-25).
    REPAIR THE PROBLEMS THAT
YOU FIND.
    IF THE PROBLEM CONTINUES,
REPLACE THE LEFT (RIGHT) FMC,
M134 (M135), THAT HAD THE CDU
MESSAGE ALERT (AMM 34-61-01/
401).

FMC Light Fails to Illuminate with CDU Alert
Figure 108

EFFECTIVITY

ALL

F36681

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  AUTOPILOT (AMM 22-10-00/501)
  THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501) OR
  AIR DATA INERTIAL REFERENCE SYSTEM
    (AMM 34-26-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8, 11E9, 11E29, 11E30

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

"L (R) FMC FAIL"
ON EICAS

1   DOES THE LEFT (RIGHT) FMC SHOW FAILURE INDICATIONS THAT FOLLOWS?
• "L (R) FMC FAIL" MESSAGE ON EICAS
• "TIMEOUT RESELECT" MESSAGE ON CDU
• MAP FAIL INDICATIONS.

— NO → 20 THE SYSTEM IS OK.

YES

2   • SELECT THE L GEN CONT SWITCH TO OFF, WAIT 2 SECONDS, AND TURN THE L GEN CONT SWITCH BACK SWITCH BACK TO ON.
• SELECT THE R GEN CONT SWITCH TO OFF, WAIT 2 SECONDS, AND TURN THE R GEN CONT SWITCH BACK TO ON.
DOES THE PROBLEM CONTINUE?

— NO → 21 THE SYSTEM IS OK.

YES

3   OPEN THESE CIRCUIT BREAKERS ON THE P11 PANEL, WAIT FOR AT LEAST 10 SECONDS:
• 11E9, FMCS CMPTR LEFT
• 11E30, FMCS CMPTR RIGHT

  CLOSE THESE CIRCUIT BREAKERS:
• 11E9, FMCS CMPTR LEFT
• 11E30, FMCS CMPTR RIGHT

  DO THE "FMC" MESSAGES SHOW ON THE EICAS?

— NO → 22 THE SYSTEM IS OK.

YES

23 DO THIS PROCEDURE: FLIGHT MANAGEMENT COMPUTER SYSTEM BITE PROCEDURE (FIG. 111).

"L (R) FMC FAIL" on EICAS
Figure 108A

EFFECTIVITY

ALL

34-61-00

W29452

```
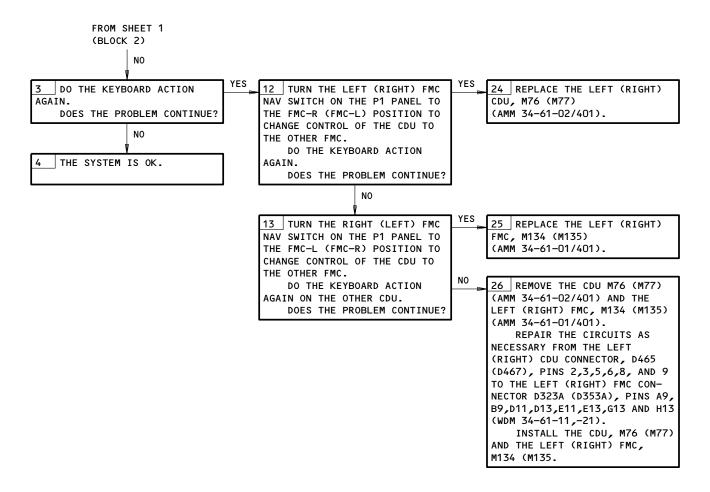┌─────────────────────────────────────────────────────────┐
│ PREREQUISITES                                            │
│                                                          │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:             │
│   11E8,11E9,11E29,11E30                                  │
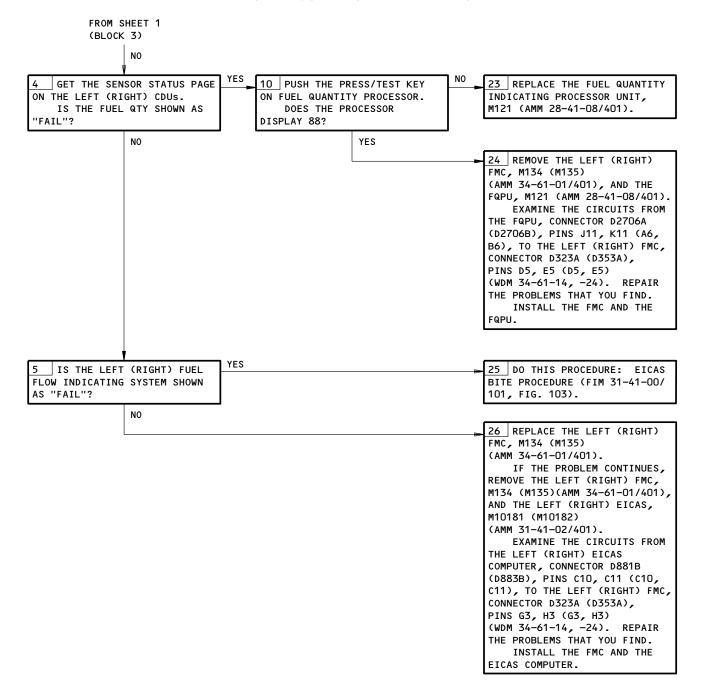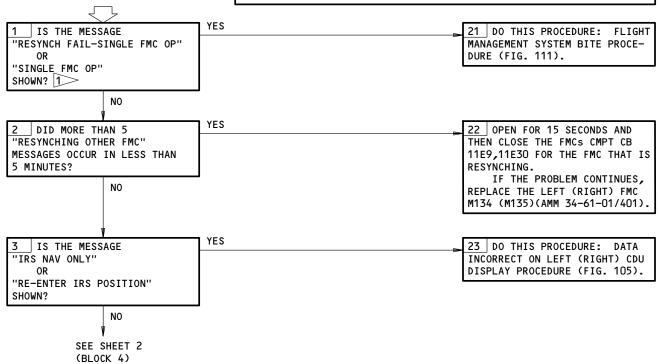│                                                          │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:         │
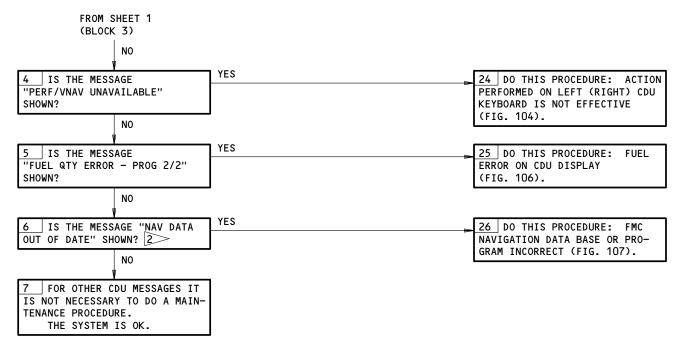│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)              │
└─────────────────────────────────────────────────────────┘
```

"MAP RANGE DISAGREE"
MESSAGE DISPLAYED
ON LEFT (RIGHT) EHSI

```
┌───────────────────────────────┐                           ┌───────────────────────────────┐
│ 1 │ GET THE SENSOR STATUS PAGE │ ──YES──────────────────►  │ 10 │ REPLACE THE LEFT (RIGHT) │
│ ON THE LEFT (RIGHT) CDUs.     │                           │ EFIS CONTROL PANEL, M94 (M93)│
│    IS THE EFIS/CP SHOWN AS    │                           │ (AMM 34-22-02/201).          │
│ "FAIL"?                       │                           └───────────────────────────────┘
└───────────────────────────────┘
         │
         NO                                                 ┌───────────────────────────────┐
         └──────────────────────────────────────────────►  │ 11 │ REPLACE APPLICABLE (L,C,R)│
                                                            │ EFIS SYMBOL GENERATOR (M148,  │
                                                            │ M149,M150)(AMM 34-22-01/401). │
                                                            └───────────────────────────────┘
```

MAP RANGE DISAGREE Message Displayed on Left (Right) EHSI
Figure 109

48574

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  AUTOPILOT (AMM 22-10-00/501)
  THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8,11E9,11E29,11E30

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

VNAV PATH, ALTITUDE,
TRANSITION; LNAV
PATH, HEADING,
TRANSITION ERROR

1 | PUT THE IRUs INTO THE NAV MODE (AMM 34-21-00/501).
  GET THE SENSOR STATUS PAGE ON THE TWO CDUs.
  THE SENSORS THAT FOLLOW WILL SHOW "FAIL" IF THEY HAVE A FAILURE.
  DOES FCC/MCP SHOW "FAIL"?

— YES → 20 | DO THIS PROCEDURE: AUTOFLIGHT BITE PROCEDURE (FIM 22-00-02/101, FIG. 101).

NO

2 | DOES LEFT, CTR, OR RIGHT IRS SHOW "FAIL"?

— YES → 21 | REPLACE THE (L,C,R) IRU (M159,M160,M161)(AMM 34-21-01/401).

NO

3 | DOES TMC SHOW "FAIL"?

— YES → 22 | DO THIS PROCEDURE: AUTOFLIGHT BITE PROCEDURE (FIM 22-00-02/101, FIG. 101).

NO

23 | REPLACE THE LEFT (RIGHT) FMC, M134 (M135)(AMM 34-61-01/401).

VNAV Path, Altitude, Transition, LNAV Path, Heading, Transition Error
Figure 109A

F36685

ERRONEOUS DISPLAY
OF ".ATC" AND
".FMC" MESSAGES
ON EICAS

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  AUTOPILOT (AMM 22-10-00/501)
  THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)
  INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8, 11E9, 11E29, 11E30

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

1 | DO THE ".ATC" AND ".FMC"
MESSAGES SHOW ON THE EICAS
WHEN NO ATC AND/OR AOC
INFORMATION UPLINK TO THE FMC?

NO → 20 | THE SYSTEM IS OK.

YES

2 | OPEN THESE CIRCUIT
BREAKERS ON THE P11 PANEL,
WAIT FOR AT LEAST 10 SECONDS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

  CLOSE THESE CIRCUIT
BREAKERS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

  DO THE ".ATC" AND ".FMC"
MESSAGES SHOW ON THE EICAS?

NO → 21 | THE SYSTEM IS OK.

YES

22 | IF THE PROBLEM CONTINUES,
REPLACE THE LEFT (RIGHT)
FMC, M134 (M135)
(AMM 34-61-01/401).

Erroneous Display Of ".ATC" And ".FMC" Messages On EICAS
Figure 109B

EFFECTIVITY

ALL

L39820

34-61-00

01   Page 120
            Aug 22/03

FMC FAILS TO ERASE
ATS DATALINK
MESSAGE FROM
PREVIOUS FLIGHT
AND
INAPPROPRIATELY
DISPLAY THESE
MESSAGES ON THE
NEXT FLIGHT

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  AUTOPILOT (AMM 22-10-00/501)
  THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)
  AIR DATA INERTIAL REFERENCE SYSTEM
    (AMM 34-26-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8, 11E9, 11E29, 11E30

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

1   ACCESS THE ATC LOG PAGE
AND RECORD MESSAGES THAT
STORED IN THE ATC LOG.
    IS THERE ANY MESSAGES?

— NO →

20   THE SYSTEM IS OK.

↓ YES

2   OPEN THESE CIRCUIT
BREAKERS ON THE P11 PANEL,
WAIT FOR AT LEAST 10 SECONDS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

    CLOSE THESE CIRCUIT
BREAKERS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

    ACCESS THE ATC LOG PAGE
AGAIN.
    IS THERE ANY MESSAGE?

— NO →

21   THE SYSTEM IS OK.

↓ YES

22   IF THE PROBLEM CONTINUES,
REPLACE THE LEFT (RIGHT)
FMC, M134 (M135)
(AMM 34-61-01/401).

FMC Fails To Erase Ats Datalink Message From Previous Flight And
Inappropriately Display These Messages On The Next Flight
Figure 109C

EFFECTIVITY
AIRPLANES WITH PEGASUS FMC;
OPERATION SOFTWARE PRIOR TO 2003.

34-61-00

06   Page 121
          Apr 22/08

D58776

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
   AUTOPILOT (AMM 22-10-00/501)
   THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)
   AIR DATA INERTIAL REFERENCE SYSTEM
     (AMM 34-26-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
   11E8, 11E9, 11E29, 11E30

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

FMC CDU LOCKUP AND
MESSAGE STANDBY
ONE IS DISPLAYED
ON FROZEN CDU

| 1 | IS FMC CDU LOCKUP AND MESSAGE STANDBY ONE IS DISPLAYED ON CDU? |

NO → | 20 | THE SYSTEM IS OK. |

YES

| 2 | OPEN THESE CIRCUIT BREAKERS ON THE P11 PANEL, WAIT FOR AT LEAST 10 SECONDS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

   CLOSE THESE CIRCUIT BREAKERS:

11E9, FMCS CMPTR LEFT
11E30, FMCS CMPTR RIGHT

   DOES THE PROBLEM CONTINUE? |

NO → | 21 | THE SYSTEM IS OK. |

YES

| 22 | REPLACE THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401). |

FMC CDU Lockup and Message Standby One is
Displayed on Frozen CDU
Figure 109D

U76778

UNABLE TO REMOTELY
TUNE VOR FROM LEFT
(RIGHT) CDU

```
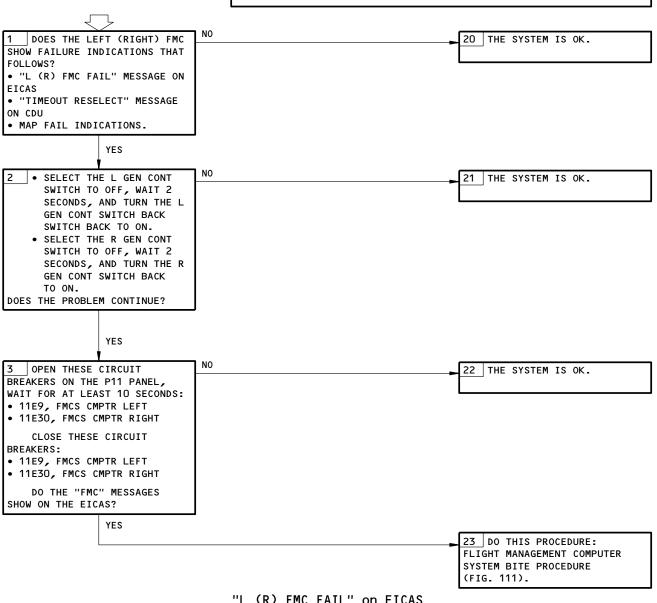┌─────────────────────────────┐
│ PREREQUISITES               │
│ BREAKOUT BOX                │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐                    ┌──────────────────────────────┐
│ 1  REMOVE LEFT (RIGHT) FMC,  │  NO                │ 20  EXAMINE THE CIRCUIT FOR  │
│ M134 (M135)(AMM 34-61-01/401).├───────────────────►│ PIN A13 (A15) ON THE FMC,    │
│   MAKE SURE THAT PIN A13     │                    │ CONNECTOR D323B (D353B)      │
│ (A15) ON LEFT (RIGHT) FMC,   │                    │ (WDM 34-61-13,-23).          │
│ CONNECTOR D323B (D353B) IS   │                    │   REPAIR THE PROBLEMS THAT   │
│ GROUNDED (WDM 34-61-13,-23). │                    │ YOU FIND.                    │
│   IS PIN D13 GROUNDED?       │                    │   INSTALL THE LEFT (RIGHT)   │
└─────────────────────────────┘                    │ FMC, M134 (M135)(AMM 34-61-01/│
              │ YES                                 │ 401).                        │
              │                                     └──────────────────────────────┘
              │
              │                                     ┌──────────────────────────────┐
              │                                     │ 21  REPLACE THE LEFT (RIGHT) │
              └────────────────────────────────────►│ FMC, M134 (M135)(AMM 34-61-01/│
                                                    │ 401).                        │
                                                    └──────────────────────────────┘
```

Unable to Remotely Tune VOR from Left (Right) CDU
Figure 110

EFFECTIVITY

ALL

48587

34-61-00

02   Page 123
Aug 22/06

```
┌─────────────────────────────────────────────────────────┐
│ PREREQUISITES                                           │
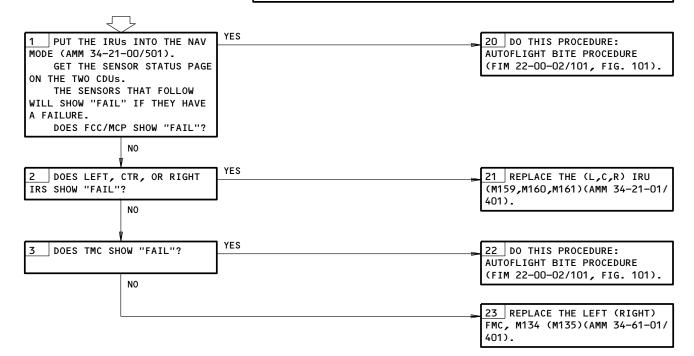│                                                         │
│ MAKE SURE THESE SYSTEMS WILL OPERATE:                   │
│   AUTOPILOT (AMM 22-10-00/501)                          │
│   THRUST MANAGEMENT SYSTEM (AMM 22-32-00/501)           │
│   INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)          │
│                                                         │
│ MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:            │
│   11E8, 11E9, 11E29, 11E30                              │
│                                                         │
│ MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:        │
│   ELECTRICAL POWER IS ON (AMM 24-22-00/201)             │
└─────────────────────────────────────────────────────────┘
```

FMC FAILURE CAUSED BY VOR/DME DATA ERROR

1 ON THE P11 PANEL, OPEN THESE CIRCUIT BREAKERS:
- LEFT AND RIGHT FMC (11E9, 11E30)
- LEFT AND RIGHT VOR (11A2, 11E33)
- LEFT AND RIGHT DME (11E11, 11E32)

AFTER 15 SECONDS, CLOSE THESE CIRCUIT BREAKERS:
- LEFT AND RIGHT FMC (11E9, 11E30)
- LEFT AND RIGHT VOR (11A2, 11E33)
- LEFT AND RIGHT DME (11E11, 11E32)

GET THE SENSOR STATUS PAGE 1/2 ON THE LEFT (RIGHT) CDU.
DOES THE LEFT (RIGHT) VOR SHOW "FAIL"?

— YES → **20** DO THIS PROCEDURE: VOR BITE PROCEDURE (FIM 34-51-00/101).

— NO ↓

2 DOES THE LEFT (RIGHT) DME SHOW "FAIL"?

— YES → **21** DO THIS PROCEDURE: DME BITE PROCEDURE (FIM 34-55-00/101).

— NO ↓

3 GET THE SENSOR STATUS PAGE 2/2 ON THE LEFT (RIGHT) CDU.
DOES THE LEFT (RIGHT) FMC SHOW "OK"?

— NO → **22** DO THIS PROCEDURE: FMC BITE PROCEDURE (FIM 34-61-01/101).

— YES → **23** THE SYSTEM IS OK.

FMC Failure Caused by VOR/DME Data Error
Figure 110A

EFFECTIVITY

ALL

M58877

34-61-00

02   Page 124
Aug 22/06

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
  AUTOFLIGHT (MM 22-10-00/501)
  THRUST MANAGEMENT SYSTEM (MM 22-32-00/501)
  FUEL QUANITY INDICATING SYSTEM (MM 28-41-00/501)
  CLOCKS (MM 31-25-00/501)
  EICAS (MM 31-41-00/501)
  AIR DATA COMPUTING SYSTEM (MM 34-12-00/501)
  INERTIAL REFERENCE SYSTEM (MM 34-21-00/501)
  EFIS (MM 34-22-00/501)
  INSTRUMENT LANDING SYSTEM (MM 34-31-00/501)
  VOR SYSTEM (MM 34-51-00/501)
  DME SYSTEM (MM 34-55-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
  11E8,11E9,11E29,11E30

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00/201)

FLIGHT MANAGEMENT
COMPUTER SYSTEM
BITE PROCEDURE

1 SET THE LEFT FMC NAV SWITCH ON THE P1 PANEL TO THE "FMC-L" POSITION AND THE R FMC NAV SWITCH ON THE P3 PANEL TO THE "FMC-R" POSITION.
    MOMENTARILY PUSH THE "TEST" SWITCH FOUND ON THE FRONT OF THE LEFT (RIGHT) FMC.
    DOES THE RED FAIL INDI-CATOR STAY ON AFTER THE "TEST IN PROGRESS" LIGHT GOES OFF?

NO

SEE SHEET 2
(BLOCK 2)

YES

50 PUSH THE "TEST" BUTTON ONCE TO SET THE FMC FAIL INDI-CATOR TO OFF THEN PUSH THE BUTTON AGAIN.
    DOES THE RED FAIL INDI-CATOR STAY ON AFTER THE "TEST IN PROGRESS" LIGHT GOES OFF?

YES

SEE SHEET 4
(BLOCK 6)

NO

SEE SHEET 2
(BLOCK 2)

Flight Management Computer System BITE Procedure
Figure 111 (Sheet 1)

EFFECTIVITY

ALL

799429

34-61-00

16   Page 125
          Apr 22/07

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

FROM SHEET 1
(BLOCK 1)

FROM SHEET 1
(BLOCK 50)

NO

NO

2 DOES THE LEFT (RIGHT) CDU
SHOW A FAILURE INDICATION THAT
FOLLOWS:

THE CDU DISPLAY IS EMPTY
THE FAIL ANNUNCIATOR ON THE
  P1-3 PANEL IS ON
THE CDU KEYS DO NOT FEEL COR-
  RECT
THERE IS DISTORTION ON THE CDU
  DISPLAY
THE CDU DISPLAY IS NOT COM-
  PLETE
THE CDU DISPLAY CAN NOT BE
  READ
THE CDU TAKES TOO LONG TO
  OPERATE AFTER CDU KEY INPUTS

NO → 101 THE SYSTEM IS OK.

YES

3 IS THE LEFT (RIGHT) DIS-
PLAY EMPTY AND DOES THE FMC
FAIL ANNUNCIATOR ON THE P1-3
PANEL COME ON?

YES →

51 PUSH THE LEFT (RIGHT) FMC
SWITCH ON THE P1 (P3) PANEL TO
MOVE THE LEFT (RIGHT) CDU CON-
TROL TO THE RIGHT (LEFT) FMC.
|1|
    TURN THE LEFT (RIGHT) FMC
SWITCH ON THE P1 (P3) TO MOVE
THE RIGHT (LEFT) CDU CONTROL
TO THE LEFT (RIGHT) FMC. |2|
    PUSH THE "INIT REF" KEY.
    DOES THE PROBLEM CONTINUE?

YES →

102 REPLACE THE LEFT (RIGHT)
CDU, M76 (M77)(MM 34-61-02/
201).

NO

SEE SHEET 3
(BLOCK 4)

NO

52 PUSH THE RIGHT (LEFT) FMC
SWITCH ON THE P3 (P1) PANEL TO
THE RIGHT (LEFT) CDU CONTROL
TO THE LEFT (RIGHT) FMC. |1|
    TURN THE RIGHT (LEFT) FMC
SWITCH ON THE P3 (P1) PANEL
TO MOVE THE RIGHT (LEFT) CDU
CONTROL TO THE LEFT (RIGHT)
FMC. |2|
    DO THE KEYBOARD PROCEDURE
AGAIN ON THE RIGHT (LEFT) CDU.
    DOES THE PROBLEM CONTINUE?

YES →

103 REPLACE THE LEFT (RIGHT)
FMC, M134 (M135)(MM 34-61-01/
401).

NO →

104 REMOVE THE CDU, M76 (M77)
(MM 34-61-02/201) AND THE LEFT
(RIGHT) FMC, M134 (M135)
(MM 34-61-01/401).
    EXAMINE AND REPAIR THE
CIRCUITS BETWEEN THE LEFT
(RIGHT) CDU CONNECTOR, D465
(D467), PINS 2,3,5,6,8,9 AND
THE LEFT (RIGHT) FMC CONNEC-
TOR, D323A (D353A), PINS A9,
B9,D11,E11,E13,G13,H13,
(WDM 34-61-11,-21).
    INSTALL THE CDU, M76 (M77)
AND THE LEFT (RIGHT) FMC M134
(M135).

Flight Management Computer System BITE Procedure
Figure 111 (Sheet 2)

799454

FROM SHEET 2
(BLOCK 3)

NO

| 4 | DID THE KEY ON THE LEFT (RIGHT) CDU NOT FEEL CORRECT? |

YES → | 105 | REPLACE THE LEFT (RIGHT) CDU, M76 (M77))(MM 34-61-02/201). |

NO

| 5 | IS THERE DISTORTION ON THE LEFT (RIGHT) CDU? |

YES → | 106 | REPLACE THE LEFT (RIGHT) CDU, M76 (M77)(MM 34-61-02/201). |

NO

| 53 | IS THE LEFT (RIGHT) CDU DISPLAY NOT COMPLETE OR CAN THE DISPLAY NOT BE READ? |

NO → | 107 | REPLACE THE LEFT (RIGHT) CDU, M76 (M77)(MM 34-61-02/201). |

YES

| 54 | PUSH ANY MODE KEY ON THE LEFT (RIGHT) CDU. DOES THE DISPLAY OPERATE CORRECTLY? |

NO → | 108 | REPLACE THE LEFT (RIGHT) FMC, M134 (M135)(M 34-61-01/401). |

YES

| 109 | THE FMC NOW OPERATES. IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) FMC, M134 (M135)(MM 34-61-01/401). |

Flight Management Computer System BITE Procedure
Figure 111 (Sheet 3)

EFFECTIVITY

ALL

799459

34-61-00

02   Page 127
Aug 22/06

FROM SHEET 1
(BLOCK 50)

YES

| 6 | OPEN THE LEFT AND RIGHT "FMCS CMPTR" CIRCUIT BREAKERS (11E9,11E30) ON THE P11 PANEL. |

AFTER 15 SECONDS, CLOSE THE "FMCS CMPTR" CIRCUIT BREAKER FOR THE FMC THAT SHOWED THE FAIL INDICATION.

PUSH THE "TEST" BUTTON ONCE TO SET THE FMC FAIL INDI-CATOR TO OFF THEN PUSH THE BUTTON AGAIN.

DOES THE RED FAIL INDI-CATOR STAY ON AFTER THE "TEST PROGRESS" LIGHT GOES OFF?

YES →

| 110 | REPLACE THE FAILED LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401). |

IF THE PROBLEM CONTINUES, DO THIS PROCEDURE: AUTO FLIGHT FAULTS BITE PROCEDURE (FIM 22-00-02/101, FIG. 101) FOR THE FMC.

NO

| 7 | WRITE THE NAV DATA BASE CODE SHOWN ON THE LEFT CDU "IDENT" PAGE WITH THE "LEFT FMCS CMPTR" CIRCUIT BREAKER (11E9) CLOSED AND "RIGHT FMCS CMPTR" CIRCUIT BREAKER (11E39) OPEN. |

WRITE THE NAV DATA BASE CODE SHOWN ON THE RIGHT CDU "IDENT" PAGE WITH THE "LEFT FMCS CMPTR" CIRCUIT BREAKER (11E9) OPEN AND "RIGHT FMCS CMPTR" CIRCUT BREAKER (11E30) CLOSED.

ARE THE NAV DATA BASE CODES DIFFERENT?

YES →

| 111 | PUT IN THE NAVIGATION DATA BASE OR CROSSLOAD THE NAVIGA-TION DATA BASE IN THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-00/201). |

NO

| 7A | CLOSE THE "LEFT FMCS CMPTR" CIRCUIT BREAKER (11E9). |

COMPARE THE OP PROGRAM NUMBER ON THE LEFT AND RIGHT CDU "IDENT" PAGES.

ARE THE NUMBERS DIFFERENT?

YES →

| 111A | PUT IN THE CORRECT OP PROGRAM NUMBER (AMM 34-61-00/ 201). |

NO

SEE SHEET 5
(BLOCK 8)

Flight Management Computer System BITE Procedure
Figure 111 (Sheet 4)

EFFECTIVITY

ALL

34-61-00

21   Page 128
Apr 22/07

A61031

FROM SHEET 4
(BLOCK 7A)

NO

| 8 | CLOSE THE LEFT AND RIGHT "FMCS CMPTR" CIRCUIT BREAKERS ON THE P11 PANEL.
  DOES THE FMC THAT SHOWED THE FAIL INDICATIONS NOW OPER-ATE? |

YES

| 112 | THE FMC NOW OPERATES.
  IF THE FMC SHOWS MANY FAIL INDICATIONS, REPLACE THE LEFT (RIGHT) FMC, M134 (M135) (AMM 34-61-01/401). |

NO

| 113 | FOR THE LEFT (RIGHT) FMC THAT SHOWS THE FAIL INDICATION, REMOVE THE LEFT AND RIGHT FMC, M134 (M135) (AMM 34-61-01/401).
  EXAMINE THE INTERSYSTEM BUS CIRCUIT FROM THE LEFT (RIGHT) FMC, CONNECTOR D323A (D353A), PINS A13, B13, TO THE RIGHT (LEFT) FMC, CONNECTOR D353B (D323B), PINS G1, H1 (WDM 34-61-12, WDM 34-61-22). REPAIR THE PROBLEMS THAT YOU FIND.
  IF THE PROBLEM CONTINUES, REPLACE THE LEFT (RIGHT) FMC, M134 (M135)(AMM 34-61-01/401). |

Flight Management Computer System BITE Procedure
Figure 111 (Sheet 5)

EFFECTIVITY

ALL

A61033

34-61-00

22   Page 129
Apr 22/07

1. Data Loader Fault Isolation Procedure
    A. These are indications that can show on the data loader that are not usual
        installation conditions. The figures contain problems and corrective
        actions for the data loading procedure.
        (1) The CONFIG.LDR FILE? shows on the data loader (see Figure 113).
        (2) The CONFIG.LDR ERROR shows on the data loader (see Figure 113).
        (3) The WRONG DISK SEQ # shows on the data loader (see Figure 113).
        (4) The ADL FAIL light comes on after the data loader's power up test
             (see Figure 113).
        (5) The TRANSFER FAIL shows on the data loader (see Figure 114).
        (6) The Vol:<label>, <filename> n% and the INSERT DISK #1 show again and
             again in sequence while the disk is in the data loader (see Figure
             115).
        (7) The R/W FAIL shows on the data loader (see Figure 113).
        (8) The Vol:<label> shows for more than 3 minutes after you put the disk
             into the data loader (see Figure 116).
    B. When it is necessary to replace the LRU, refer to Figure 112 for the
        applicable Removal/Installation procedures.

This table gives references to Maintenance Manual Removal/Installation procedures. The Removal/Installation procedures are for the LRUs which can have software installed through the data loader.

LRU $\boxed{1}\triangleright$	MAINTENANCE MANUAL REFERENCES
FMC-LEFT(RIGHT), M134(M135)	34-61-01/401
ACMS DMU, M1200	31-35-08/401

$\boxed{1}\triangleright$ THE LRU IS THE SAME AS THE NAME ON THE
DATA LOADER SWITCH POSITION.

LRU Removal/Installation Maintenance Manual References
Figure 112

EFFECTIVITY

ALL

955035

34-61-00

05   Page 131
Apr 22/07

This table contains problems and corrective actions for the data loading procedure.

PROBLEM	CORRECTIVE ACTION
"CONFIG.LDR FILE?" SHOWS ON THE DATA LOADER.	REPLACE THE DISK.
"CONFIG.LDR ERROR" SHOWS ON THE DATA LOADER.	REPLACE THE DISK.
"WRONG DISK SEQ #" SHOWS ON THE DATA LOADER.	MAKE SURE YOU PUT THE DISK INTO THE DATA LOADER IN THE CORRECT SEQUENCE. IF THE PROBLEM CONTINUES, REPLACE THE DISKS.
THE "ADL FAIL" LIGHT COMES ON AFTER THE DATA LOADER'S POWER UP TEST.	REPLACE THE DATA LOADER (MM 34-61-05/401). NOTE: THE "ADL FAIL" LIGHT WILL FLASH ON AND OFF ONE TIME DURING THE DATA LOADER'S POWER UP TEST.
"TRANSFER FAIL" SHOWS ON THE DATA LOADER.	SEE FIGURE 114.
THE "Vol:\<label>", "\<filename>n%" AND THE "INSERT DISK #1" SHOW AGAIN AND AGAIN IN SEQUENCE WHILE THE DISK IS IN THE DATA LOADER.	SEE FIGURE 115.
"R/W FAIL" SHOWS ON THE DATA LOADER.	REPLACE THE DISK. IF THE PROBLEM CONTI- NUES, REPLACE THE DATA LOADER (MM 34-61-05/401).
"Vol:\<label>" SHOWS FOR MORE THAN 3 MINUTES AFTER YOU PUT THE DISK INTO THE DATA LOADER.	SEE FIGURE 116.

Data Loading Procedure Problems and Corrective Actions
Figure 113

EFFECTIVITY

ALL

955210

34-61-00

24   Page 132
Apr 22/07

"TRANSFER FAIL"
SHOWS ON THE DATA
LOADER

```
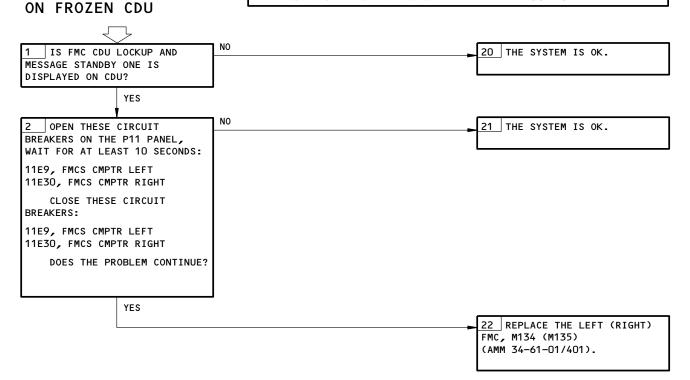┌─────────────────────────────────────────────────────┐
│ PREREQUISITES                                         │
│ MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT   │
│ FOLLOWS:                                              │
│   ELECTRICAL POWER IS ON (MM 24-22-00)                │
└─────────────────────────────────────────────────────┘
```

```
┌───┬──────────────────────────┐        NO     ┌────┬──────────────────────┐
│ 1 │ PUT THE DISK INTO THE DATA│──────────────→│ 21 │ THE SYSTEM IS OK.     │
│   │ LOADER AGAIN AND MAKE SURE│               └────┴──────────────────────┘
│   │ THAT NO POWER INTERRUPTIONS│
│   │ OCCUR DURING THE LOAD.    │
│   │   DOES THE PROBLEM CONTINUE?│
└───┴──────────────────────────┘
        │ YES
        ↓
┌───┬──────────────────────────┐        NO     ┌────┬──────────────────────┐
│11 │ REPLACE THE DISK AND DO   │──────────────→│ 22 │ DISCARD THE INITIAL DISK.│
│   │ THE LOADING PROCEDURE AGAIN.│             └────┴──────────────────────┘
│   │   DOES THE PROBLEM CONTINUE?│
└───┴──────────────────────────┘
        │ YES
        ↓
┌───┬──────────────────────────┐        NO     ┌────┬──────────────────────┐
│12 │ SET THE SWITCH TO A DIF-  │──────────────→│ 23 │ REPLACE THE INITIAL LRU │
│   │ FERENT LRU.               │               │    │ (FIG. 112).            │
│   │   DO THE DATA LOADING PRO-│               └────┴──────────────────────┘
│   │ EDURE FOR THIS LRU.       │
│   │   DOES THE PROBLEM CONTINUE?│
└───┴──────────────────────────┘
        │ YES
        ↓
                                               ┌────┬──────────────────────┐
                                               │ 24 │ REPLACE THE DATA LOADER │
                                               │    │ (MM 34-61-05/401).     │
                                               └────┴──────────────────────┘
```

TRANSFER FAIL Shows on the Data Loader
Figure 114

EFFECTIVITY

ALL

956363

34-61-00

24   Page 133
        Apr 22/07

THE "Vol:<label>",
"filename>n%" AND
THE "INSERT DISK #1
SHOW AGAIN AND AGAIN
IN SEQUENCE WHILE THE
DISK IS IN THE DATA
LOADER

PREREQUISITES
MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT
FOLLOWS:
  ELECTRICAL POWER IS ON (MM 24-22-00)

1	REPLACE THE DISK AND DO THE DATA LOADING PROCEDURE AGAIN.
	DOES THE PROBLEM CONTINUE?

YES →

NO

21	REPLACE THE DATA LOADER (MM 34-61-05/401).

IF THE PROBLEM CONTINUES, REMOVE THE DATA LOADER AND THE LRU (FIG. 112).
    EXAMINE AND REPAIR THE CIRCUIT BETWEEN CONNECTOR D2583, PINS 20 (18,19,8,9,10, 11,12,13,14,15,16,1,2,3,4,5, 53,50,22,51,52,21) ON THE ADL, M1736 AND CONNECTOR D2577, PINS 20 (18,19,8,9,10,11,12, 13,14,15,16,1,2,3,4,5,53,50, 22,51,52,21) ON THE DATA LOADER CONTROL PANEL, M1737 (WDM 34-61-15).
    IF THE PROBLEM CONTINUES WITH THE ADL SWITCH SET TO THE L-FMC, EXAMINE AND REPAIR THE CIRCUIT BETWEEN CONNECTOR D2579, PINS 4,5,9,10, ON THE DATA LOADER CONTROL PANEL, M1737 AND CONNECTOR D323A, PINS H11,G11,E9,D9, ON THE L-FMC, M134 (WDM 34-61-15).
    IF THE PROBLEM CONTINUES WITH THE ADL SWITCH SET TO THE R-FMC, EXAMINE AND REPAIR THE CIRCUIT BETWEEN CONNECTOR D2579, PINS 3,5,9,10, ON THE DATA LOADER CONTROL PANEL, M1737 AND CONNECTOR D353A, PINS G11,H11,D9,E9, ON THE R-FMC, M135 (WDM 34-61-15).

22	DISCARD THE INITIAL DISK.

The VOL:<LABEL>,<FILENAME>N% and the INSERT DISK #1 Show Again
and Again in Sequence While the Disk is in the Data Loader
Figure 115

EFFECTIVITY

ALL

956365

34-61-00

21   Page 134
             Apr 22/07

"Vol:<label>" SHOWS
FOR MORE THAN
3 MINUTES AFTER YOU
PUT THE DISK INTO THE
DATA LOADER

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

```
1  IS THE SELECTOR SWITCH ON        NO
   THE DATA LOADER CONTROL PANEL ────────►
   SET TO THE CORRECT POSITION?
```

YES

```
2  IS IT POSSIBLE TO DO THE     YES
   DATA LOADING PROCEDURE AGAIN ────►
   WITH A DIFFERENT LRU OF THE
   SAME TYPE?  (FOR EXAMPLE, IF
   YOU ARE LOADING THE L-FMC,
   SET THE SWITCH TO THE R-FMC).
```

NO

SEE SHEET 2
(BLOCK 3)

```
11 SET THE SWITCH TO THE              NO
   APPLICABLE LRU.               ────────►
      USE THE SAME DISK AND DO
   THE DATA LOADING PROCEDURE
   AGAIN.
      DOES THE PROBLEM CONTINUE?
```

YES

SEE SHEET 2
(BLOCK 12)

```
21 SET THE SWITCH TO THE
   CORRECT POSITION.
      DO THE DATA LOADING
   PROCEDURE AGAIN.
```

```
22 REPLACE THE INITIAL LRU
   (FIG. 112).
      IF THE PROBLEM CONTINUES,
   REMOVE THE DATA LOADER
   (AMM 34-61-05/401) AND THE
   LRU.
      EXAMINE THE CIRCUIT FROM
   CONNECTOR D2583, PINS 20 (18,
   19,8,9,10,11,12,13,14,15,16,
   1,2,3,4,5,53,50,22,51,52,21)
   ON THE ADL, M1736, TO
   CONNECTOR D2577, PINS 20 (18,
   19,8,9,10,11,12,13,14,15,16,
   1,2,3,4,5,53,50,22,51,52,21)
   ON THE DATA LOADER CONTROL
   PANEL, M1737 (WDM 34-61-15).
   REPAIR THE PROBLEMS THAT YOU
   FIND.
      IF THE PROBLEM CONTINUES,
   WITH THE ADL SWITCH SET TO THE
   L-FMC, EXAMINE THE CIRCUIT
   FROM CONNECTOR D2579, PINS 4,
   5,9,10, ON THE DATA LOADER
   CONTROL PANEL, M1737, TO
   CONNECTOR D323A, PINS H11,G11,
   E9,D9, ON THE L-FMC, M134
   (WDM 34-61-15).  REPAIR THE
   PROBLEMS THAT YOU FIND.
      IF THE PROBLEM CONTINUES,
   WITH THE ADL SWITCH SET TO THE
   R-FMC, EXAMINE THE CIRCUIT
   FROM CONNECTOR D2579, PINS 3,
   5,9,10, ON THE DATA LOADER
   CONTROL PANEL, M1737, TO
   CONNECTOR D353A, PINS G11,H11,
   D9,E9, ON THE R-FMC, M135
   (WDM 34-61-15).  REPAIR THE
   PROBLEMS THAT YOU FIND.
```

VOL:<LABEL> Shows for More Than 3 Minutes after You Put
the Disk into the Data Loader
Figure 116 (Sheet 1)

EFFECTIVITY

ALL

956366

34-61-00

22   Page 135
            Apr 22/07

FROM SHEET 1
(BLOCK 2)

FROM SHEET 1
(BLOCK 11)

NO

YES

```
| 12 | SET THE SWITCH BACK TO THE        NO    | 23 | DISCARD THE INITIAL DISK. |
        INITIAL LRU.
        USE A DIFFERENT DISK AND
     DO THE DATA LOADING PROCEDURE
     AGAIN.                             YES   | 22 | REPLACE THE DATA LOADER
        DOES THE PROBLEM CONTINUE?             (AMM 34-61-05/401).
```

| 22 | REPLACE THE DATA LOADER (AMM 34-61-05/401).

IF THE PROBLEM CONTINUES, REMOVE THE DATA LOADER AND THE LRU (FIG.112).

EXAMINE THE CIRCUIT FROM CONNECTOR D2583, PINS 20 (18, 19,8,9,10,11,12,13,14,15,16, 1,2,3,4,5,53,50,22,51,52,21) ON THE ADL, M1736, TO CONNECTOR D2577, PINS 20 (18, 19,8,9,10,11,12,13,14,15,16, 1,2,3,4,5,53,50,22,51,52,21) ON THE DATA LOADER CONTROL PANEL, M1737 (WDM 34-61-15). REPAIR THE PROBLEMS THAT YOU FIND.

IF THE PROBLEM CONTINUES, WITH THE ADL SWITCH SET TO THE L-FMC, EXAMINE THE CIRCUIT FROM CONNECTOR D2579, PINS 4, 5,9,20, ON THE DATA LOADER CONTROL PANEL, M1737, TO CONNECTOR D323A, PINS H11,G11, E9,D9, ON THE L-FMC, M134 (WDM 34-61-15). REPAIR THE PROBLEMS THAT YOU FIND.

IF THE PROBLEM CONTINUES, WITH THE ADL SWITCH SET TO THE R-FMC, EXAMINE THE CIRCUIT FROM CONNECTOR D2579, PINS 3, 5,9,10, ON THE DATA LOADER CONTROL PANEL, M1737, TO CONNECTOR D353A, PINS G11,H11, D9,E9, ON THE R-FMC, M135 (WDM 34-61-15). REPAIR THE PROBLEMS THAT YOU FIND.

| 13 | REPLACE THE INITIAL DISK.   NO | 25 | DISCARD THE INITIAL DISK. |
       DOES THE PROBLEM CONTINUE?

YES

| 14 | SET THE SWITCH TO A DIF-   NO | 26 | REPLACE THE INITIAL LRU (FIG. 112). |
      FERENT LRU.
        DO THE DATA LOADING PROCE-
      DURE AGAIN.
        DOES THE PROBLEM CONTINUE?

YES

| 27 | GO TO BLOCK 24. |

VOL:<LABEL> Shows for More Than 3 Minutes after You Put
the Disk into the Data Loader
Figure 116 (Sheet 2)

956368