TROUBLE SHOOTING MANUAL

HIGHLIGHTS

REVISION NO. 54 May 01/08

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C REASON FOR CHANGE EFFECTIVITY			
1 AGES	CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY

CHAPTER 22

L.E.P. 1- 5 T. OF C.	REVISED TO REFLECT THIS REVISION INDICATING NEW, REVISED, AND/OR DELETED PAGES REVISED TO REFLECT THIS REVISION	
3, 6- 8, 14 22-ECAM	CORRECTION/ADDITION/AMPLIFICATION NO DEFINITION WORDING UPDATED	251-251, 457-475, 503-549, 551-599,
22-11-00 238- 249	EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, 701-749,
22-31-00 229	EFFECTIVITY UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	201-208, 227-227, 229-244, 247-247, 276-284, 426-430, 476-480, 551-551, 555-555, 702-749,
22-63-00 203- 204, 208- 209	EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	201-225, 227-227, 229-299, 426-499, 503-549, 551-599, 701-749,
230- 231, 233- 234, 256, 258,	EFFECTIVITY UPDATED CIRCUIT BREAKER(S) DATA UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	201-225, 227-227, 229-299, 426-480, 503-549, 551-599, 701-749, 201-225, 227-227, 229-299, 426-480, 503-549, 551-599, 701-749,
22-82-00 221, 223, 225, 227, 230- 231, 234- 235	CIRCUIT BREAKER(S) DATA UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	ALL ALL

22-HIGHLIGHTS Page 1 of 2 REVISION NO. 54 May 01/08

TROUBLE SHOOTING MANUAL

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
214- 215, 217- 218, 253- 254,	EFFECTIVITY UPDATED CIRCUIT BREAKER(S) DATA UPDATED EFFECTIVITY UPDATED (THROUGHOUT THE TEXT)	201-225, 227-227, 229-253, 276-299, 426-450, 476-499, 503-549, 551-599, 701-749, ALL

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С	PAGE	DATE
RECORD				22-ECAM		123	Aug01/06	22-CFDS		117	Feb01/07
OF TEMP.				22-ECAM			Aug01/06	22-CFDS			Feb01/08
REVISION				22-ECAM			Aug01/06	22-CFDS			Feb01/08
				22-ECAM			Feb01/08	22-CFDS			Feb01/08
L.E.P.	R	1- 5	May01/08	22-ECAM			Feb01/08	22-CFDS			Feb01/08
T. of C.		1	·	22-ECAM			Aug01/05				
T. of C.		2	-	22-ECAM			Aug01/05	22-00-00		201	May01/06
T. of C.	R	3	•	22-ECAM			Aug01/06	22-00-00			Feb01/03
T. of C.			May01/03	22-ECAM			Aug01/06				-
T. of C.		5	Aug01/06				J	22-11-00		201	Aug01/96
T. of C.	R		May01/08	22-EFIS		101	Aug01/05	22-11-00			Aug01/96
T. of C.	R	7	*	22-EFIS		102	Aug01/05	22-11-00		203	Aug01/96
T. of C.	R	8	May01/08	22-EFIS		103	Aug01/05	22-11-00		204	Aug01/96
T. of C.		9	Feb01/08					22-11-00		205	Aug01/94
T. of C.		10	Feb01/08	22-LOCAL		101	Nov01/07	22-11-00		206	Aug01/94
T. of C.		11	Feb01/08	22-LOCAL		102	Nov01/04	22-11-00		207	Feb01/96
T. of C.		12	Feb01/08					22-11-00		208	Aug01/96
T. of C.		13	Feb01/08	22-0BSV		101	Nov01/05	22-11-00		209	Aug01/96
T. of C.	R	14	May01/08	22-0BSV		102	Nov01/05	22-11-00		210	Aug01/96
				22-0BSV		103	Feb01/07	22-11-00		211	Aug01/96
22-ECAM	R	101	May01/08	22-0BSV		104	Aug01/05	22-11-00		212	Aug01/96
22-ECAM		102	Aug01/05	22-0BSV		105	Aug01/05	22-11-00		213	May01/03
22-ECAM		103	Nov01/06	22-0BSV		106	Aug01/06	22-11-00		214	May01/03
22-ECAM		104	May01/05	22-0BSV		107	Aug01/05	22-11-00		215	May01/03
22-ECAM			May01/05	22-0BSV		108	Aug01/05	22-11-00		216	May01/03
22-ECAM			May01/05					22-11-00		217	May01/03
22-ECAM		107	•	22-CFDS			May01/06	22-11-00		218	May01/03
22-ECAM			May01/05	22-CFDS			Aug01/06	22-11-00		219	May01/03
22-ECAM			Aug01/05	22-CFDS			Aug01/06	22-11-00		220	•
22-ECAM			Aug01/05	22-CFDS			Aug01/05	22-11-00			Aug01/04
22-ECAM		111	_	22-CFDS			Aug01/05	22-11-00			Aug01/04
22-ECAM			Feb01/07	22-CFDS			Aug01/05	22-11-00			Aug01/04
22-ECAM			Feb01/07	22-CFDS			Aug01/05	22-11-00			Aug01/04
22-ECAM			Aug01/05	22-CFDS			Aug01/05	22-11-00			May01/03
22-ECAM			Aug01/05	22-CFDS			May01/05	22-11-00			May01/03
22-ECAM			Aug01/05	22-CFDS			Aug01/05	22-11-00		227	May01/03
22-ECAM	_		Aug01/05	22-CFDS			Aug01/05	22-11-00		228	May01/03
22-ECAM	R		May01/08	22-CFDS			Nov01/07	22-11-00		229	May01/03
22-ECAM	R		May01/08	22-CFDS			Feb01/07	22-11-00		230	May01/03
22-ECAM	R		May01/08	22-CFDS			Feb01/06	22-11-00		231	May01/03
22-ECAM	R		May01/08	22-CFDS			Feb01/06	22-11-00			May01/03
22-ECAM	R	122	May01/08	22-CFDS		116	Aug01/05	22-11-00		233	May01/03

22-L.E.P. Page 1 May 01/08

TROUBLE SHOOTING MANUAL

CH/SE/SU	С	PAGE	DATE	CH/SE/SU	C PAGE	DATE	CH/SE/SU	С	PAGE	DATE
22-11-00		27/	May01/03	22-61-00	201	Aug01/94	22-62-00		270	Aug01/06
22-11-00			•	22-61-00		Aug01/94	22-62-00			_
22-11-00			May01/03 Feb01/05			_	22-62-00			May01/98
				22-61-00 22-61-00		Aug01/94				May01/98
22-11-00	_		May01/05			Aug01/94	22-62-00			May01/98
22-11-00	R		May01/08	22-61-00		Nov01/06	22-62-00			May01/98
22-11-00	R		May01/08	22-61-00		Nov01/04	22-62-00			Feb01/05
22-11-00	R		May01/08	22-61-00		Nov01/06	22-62-00			Feb01/05
22-11-00	R		May01/08	22-61-00		Nov01/04	22-62-00		237	Feb01/05
22-11-00	R		May01/08	22-61-00		Nov01/06				- 04/04
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00			Aug01/06
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00			Aug01/06
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00	R		May01/08
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00	R		May01/08
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00			Feb01/07
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00			Aug01/06
22-11-00	R		May01/08	22-61-00		Nov01/06	22-63-00			Aug01/06
22-11-00			May01/03	22-61-00		Nov01/06	22-63-00	R		May01/08
22-11-00			May01/03	22-61-00	218	May01/98	22-63-00	R	209	May01/08
22-11-00		252	Feb01/05	22-61-00	219	May01/98	22-63-00		210	Aug01/06
22-11-00		253	May01/03	22-61-00	220	Nov01/06	22-63-00		211	Aug01/06
22-11-00		254	Feb01/05	22-61-00	221	May01/98	22-63-00		212	Aug01/06
							22-63-00		213	Aug01/06
22-31-00		201	Feb01/04	22-62-00	201	Aug01/94	22-63-00		214	Aug01/06
22-31-00		202	Feb01/04	22-62-00	202	Aug01/94	22-63-00		215	Aug01/06
22-31-00		203	Feb01/04	22-62-00	203	Aug01/94	22-63-00		216	Aug01/06
22-31-00		204	Feb01/04	22-62-00	204	Aug01/94	22-63-00			Aug01/06
22-31-00		205	Nov01/94	22-62-00	205	Aug01/94	22-63-00		218	Aug01/06
22-31-00		206	May01/96	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Aug01/95	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Aug01/95	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Aug01/95	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Feb01/05	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Feb01/05	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Feb01/05	22-62-00		Aug01/94	22-63-00			Aug01/06
22-31-00			Aug01/94	22-62-00		Aug01/06	22-63-00			Aug01/06
22-31-00			Aug01/94	22-62-00		Nov01/98	22-63-00			Aug01/06
22-31-00			Nov01/94	22-62-00		Aug01/06	22-63-00			Aug01/06
22-31-00			Aug01/94	22-62-00		Aug01/06	22-63-00			Aug01/06
22-31-00			Aug01/94	22-62-00		Feb01/08	00 00			go :, cc
22-31-00			May01/96	22-62-00		Feb01/08	22-66-00		201	Nov01/05
22-31-00			Aug01/95	22-62-00		Feb01/08	22-66-00			Aug01/06
22-31-00			May01/96	22-62-00		Feb01/08	22-66-00			Nov01/05
22-31-00			Aug01/95	22-62-00		May01/98	22-66-00			Nov01/05
22-31-00			Feb01/05	22-62-00		May01/98	22-66-00			Feb01/05
22-31-00			Feb01/05	22-62-00		May01/98	22-66-00			May01/96
22-31-00			Feb01/06	22-62-00		May01/98	22-66-00			Aug01/94
22-31-00			Aug01/05	22-62-00		Aug01/06	22-66-00			Aug01/94
22-31-00			Aug01/05	22-62-00		Aug01/06	22-66-00			Aug01/94
22-31-00			Aug01/05	22-62-00		Aug01/06	22-66-00			Aug01/94 Aug01/94
22-31-00			Aug01/05	22-62-00		Aug01/06	22-66-00			Aug01/94 Aug01/94
22-31-00	D			22-62-00		Aug01/06	22-66-00			Aug01/94 Aug01/94
22-31-00	R	227	May01/08	22-02-00	229	Augu 1/00	22-00 - 00		Z 1Z	Augu 1/ 74

22-L.E.P. Page 2 May 01/08

TROUBLE SHOOTING MANUAL

CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С	PAGE	DATE
22 // 00		247	A=04/0/	22 // 00		244	Fab01/07	22 44 00		A24E	C-601/07
22-66-00 22-66-00			Aug01/94	22-66-00 22-66-00			Feb01/03 Feb01/03	22-66-00 22-66-00			Feb01/03 Aug01/06
22-66-00			Aug01/94 Aug01/94	22-66-00			Feb01/03	22-66-00			Feb01/05
22-66-00			Aug01/94 Aug01/94	22-66-00			Feb01/03	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00			Feb01/03	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00	R		May01/08	22-66-00			Feb01/03
22-66-00			Aug01/02	22-66-00	K		Nov01/05	22-66-00			Feb01/03
22-66-00			Nov01/99	22-66-00	R		May01/08	22-66-00			Aug01/06
22-66-00			Aug01/02	22-66-00			Nov01/05	22-66-00			Feb01/03
22-66-00			Feb01/08	22-66-00			Feb01/03	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00			Feb01/03	22-66-00			Nov01/05
22-66-00			Aug01/94	22-66-00			Feb01/03	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00			Feb01/03	22-66-00			Nov01/05
22-66-00			Aug01/94	22-66-00	R		May01/08	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00	.,		Feb01/03	22-66-00			Feb01/03
22-66-00			Aug01/94	22-66-00			Feb01/03	22-66-00			Aug01/07
22-66-00			Aug01/94	22-66-00	R		May01/08	22-66-00			Aug01/07
22-66-00	R		May01/08	22-66-00			Feb01/03			_	- 3 - 7 -
22-66-00	R		May01/08	22-66-00			Feb01/05	22-81-00		201	Nov01/05
22-66-00			Feb01/95	22-66-00			Feb01/05	22-81-00			Nov01/05
22-66-00	R		May01/08	22-66-00			Feb01/03	22-81-00			Nov01/05
22-66-00	R		May01/08	22-66-00		285	Nov01/03	22-81-00		204	Nov01/05
22-66-00			Feb01/99	22-66-00		286	Feb01/03	22-81-00		205	Nov01/05
22-66-00		236	Feb01/99	22-66-00		287	Nov01/03	22-81-00		206	Nov01/05
22-66-00		237	Aug01/96	22-66-00		288	Feb01/03	22-81-00		207	Nov01/05
22-66-00		238	May01/96	22-66-00		289	Feb01/03	22-81-00		208	Nov01/05
22-66-00		239	Aug01/95	22-66-00		290	Feb01/03	22-81-00		209	Nov01/05
22-66-00		240	Aug01/95	22-66-00		291	Feb01/03	22-81-00		210	Nov01/05
22-66-00		241	Aug01/95	22-66-00		292	Feb01/03	22-81-00		211	Nov01/05
22-66-00		242	Aug01/95	22-66-00		293	Feb01/0 3	22-81-00			Nov01/05
22-66-00		243	Aug01/95	22-66-00	R	294	May01/08	22-81-00			Nov01/05
22-66-00			Aug01/95	22-66-00	R		May01/08	22-81-00			Nov01/05
22-66-00			Nov01/06	22-66-00	R		May01/08	22-81-00			May01/96
22-66-00			Nov01/06	22-66-00	R		May01/08	22-81-00			May01/96
22-66-00			Nov01/06	22-66-00			Feb01/0 3	22-81-00			May01/96
22-66-00			Nov01/06	22-66-00			Feb01/03	22-81-00		218	Nov01/05
22-66-00			Nov01/06	22-66-00			Feb01/03				
22-66-00			Nov01/06	22-66-00			Feb01/03	22-82-00			May01/96
22-66-00			Nov01/06	22-66-00			Feb01/03	22-82-00			Aug01/94
22-66-00			Nov01/06	22-66-00			Feb01/03	22-82-00			Feb01/96
22-66-00			Nov01/06	22-66-00			Feb01/03	22-82-00			Feb01/96
22-66-00			Nov01/06	22-66-00			Feb01/03	22-82-00			Feb01/96
22-66-00	_		Aug01/97	22-66-00			Feb01/05	22-82-00			May01/96
22-66-00	R		May01/08	22-66-00			Feb01/03	22-82-00			Aug01/95
22-66-00	_		Aug01/97	22-66-00			Feb01/03	22-82-00			Feb01/96
22-66-00	R		May01/08	22-66-00			Feb01/05	22-82-00			Feb01/96
22-66-00			Feb01/03	22-66-00			Feb01/05	22-82-00			Feb01/96
22-66-00			Feb01/03	22-66-00			Feb01/05	22-82-00			Nov01/05
22-66-00			Feb01/03	22-66-00			Feb01/05	22-82-00			Aug01/94
22-66-00			Feb01/03	22-66-00			Feb01/03	22-82-00			Aug01/94
22-66-00		263	Feb01/0 3	22-66-00		AZ 14	Feb01/0 3	22-82-00		214	Aug01/94

22-L.E.P. Page 3 May 01/08

TROUBLE SHOOTING MANUAL

CII / CE / CII	_	DACE	DATE	CU / SE / SU		DACE	DATE	CII / CE / CII	_	DACE	DATE
CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С	PAGE	DATE	CH/SE/SU	С	PAGE	DATE
22-82-00		215	Aug01/94	22-83-00		210	Feb01/99	22-83-00		270	Aug01/05
22-82-00			Aug01/94	22-83-00			May01/96	22-83-00			Aug01/05 Aug01/05
22-82-00			Aug01/94	22-83-00			May01/96	22-83-00			Aug01/05
22-82-00			Aug01/94	22-83-00			May01/96	22-83-00			Aug01/05
22-82-00			Aug01/94	22-83-00			May01/95	22-83-00			Aug01/05 Aug01/05
22-82-00			Aug01/94	22-83-00			Nov01/05	22-83-00			Aug01/05 Aug01/05
22-82-00	R		May01/08	22-83-00			Nov01/05	22-83-00			Aug01/05
22-82-00	IX.		Feb01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00	R		May01/08	22-83-00			Aug01/05	22-83-00			Aug01/05
22-82-00			Feb01/01	22-83-00			Aug01/05	22-83-00			Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00			Nov01/02	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00			Nov01/02	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00			Nov01/05	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00			Nov01/05	22-83-00			Feb01/97	22-83-00			Aug01/05
22-82-00			Nov01/05	22-83-00			Feb01/97	22-83-00			Aug01/05 Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05 Aug01/05
22-82-00	R		May01/08	22-83-00			Feb01/97	22-83-00			Aug01/05 Aug01/05
22-82-00	IX.		Nov01/05	22-83-00			Feb01/97	22-83-00			Aug01/05 Aug01/05
22-82-00			Aug01/05	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00			Feb01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00			Feb01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00			Feb01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00			Feb01/07	22-83-00			Aug01/05	22-83-00			Nov01/07
22-82-00			Feb01/07	22-83-00			Aug01/05	22-83-00			Nov01/07
22-82-00			May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05
22-82-00			May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-82-00			May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05
22-82-00			Nov01/05	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22 02 00		240	110001703	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00		201	Aug01/94	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00	R		May01/08	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00	R		May01/08	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00	R		May01/08	22-83-00			Aug01/05
22-83-00			Feb01/96	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			Feb01/96	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			Aug01/94	22-83-00			Aug01/05	22-83-00			May01/07
22-83-00			Aug01/94	22-83-00			Aug01/05	22-83-00			May01/07
22-83-00			Aug01/94	22-83-00			Aug01/05	22-83-00			Aug01/05
22-83-00			May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-83-00			May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-83-00	R		May01/01	22-83-00			Aug01/05	22-83-00			Aug01/05 Aug01/05
22-83-00	R		May01/08	22-83-00	R		May01/08	22-83-00			Aug01/05 Aug01/05
22-83-00	i,		Feb01/99	22-83-00	1		Feb01/08	22-83-00			Aug01/05 Aug01/05
22-83-00	R		May01/08	22-83-00	R		May01/08	22-83-00			Aug01/05 Aug01/05
22-83-00	R		May01/08	22-83-00			Feb01/08	22-83-00			Aug01/05
05	- 1	_ 10	, 5 1, 50	05		_0/	. 000 17 00	05		ALLU	

22-L.E.P. Page 4 May 01/08

TROUBLE SHOOTING MANUAL

CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE	CH/SE/SU	C	PAGE	DATE
22-83-00		A221	Aug01/05								
22-83-00		A222	Aug01/05								
22-83-00		A223	Aug01/05								
22-83-00		A224	Nov01/07								
22-83-00		A225	Feb01/08								
22-83-00		A226	Aug01/05								
22-83-00		R A227	May01/08								
22-83-00		A228	Nov01/06								
22-83-00		A229	Nov01/06								
22-83-00		A230	Nov01/05								
22-83-00		A231	Nov01/07								

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT FAULT SYMPTOMS	CH/SE/SU 22-ECAM 22-EFIS 22-LOCAL 22-OBSV 22-CFDS	<u>c</u>	101 101 101 101	EFFECTIVITY ALL ALL ALL ALL ALL
AUTO FLIGHT - GENERAL FAULT ISOLATION PROCEDURES Display of an Operational Warning on the Upper ECAM DU Intermittent Failure	22-00-00		201	ALL ALL
AP/FD ENGAGEMENT FAULT ISOLATION PROCEDURES Failure of the FMGC 1 Failure of the FMGC 2 Loss of the FMGC 1 Bus Feedback Loss of the FMGC 2 Bus Feedback FMGC 1 Inoperative FMGC 1 Inoperative FMGC 2 Inoperative FMGC 2 Inoperative FMGC 2 Inoperative Loss of the AP1 OWN Discretes Loss of the AP2 OWN Discretes Disagree between the AP ENGD Discretes (FMGC1 and FMGC2) Disagree between the AP ENGD Discretes (FMGC1 and FMGC2) Loss of the AP1 ENGD Feedback Discretes Loss of the AP2 ENGD Feedback Discretes The AP 1 Pushbutton Switch does not come on when the AP 1 is engaged The AP 2 Pushbutton Switch does not come on when the AP 2 is engaged Loss of the FMGC 1 OWN A Bus Loss of the FMGC 2 OWN A Bus Loss of the Reception of the AP 2	22-11-00		201 203 205 206 207 208 209 210 211 212 213 215 217 219 221 223 225 227	ALL
ENGD Discrete Signal by the FMGC 1 Loss of the Reception of the AP 1 ENGD Discrete Signal by the FMGC 2				ALL

22-CONTENTS Page 1 May 01/03

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT AP 1 Engagement Inoperative after	CH/SE/SU	<u>C</u>		EFFECTIVITY ALL
the Installation of the New FMGC AP 2 Engagement Inoperative after			235	ALL
the Installation of the New FMGC Loss of the AP Pushbutton Switch			236	
Function on the FMGC 1 Loss of the AP Pushbutton Switch			237	
Function on the FMGC 2			231	ALL
Loss of the FMGC 1 EIS COM Bus (Source EIS 1)			238	ALL
Loss of the FMGC 1 EIS COM Bus			240	ALL
(Source EIS 2) Loss of the FMGC 1 EIS COM Bus			242	ALL
(Source EIS 3) Loss of the FMGC 2 EIS COM Bus			244	ALL
(Source EIS 1) Loss of the FMGC 2 EIS COM Bus			246	ALL
(Source EIS 2) Loss of the FMGC 2 EIS COM Bus			248	ALL
(Source EIS 3) Results of the Operational Test of			250	ALL
the Autopilot Engagement and			230	ALL
Locking Devices of the Side Stick Controller and Rudder Pedals not				
Satisfactory			2=4	
Loss of FD Engagement in Crossed Bars at Go Around			251	ALL
Loss of the FCU or FMGC output bus detected by the EIS			252	ALL
AUTO LAND Warning Light Malfunction			254	ALL
AUTOTHRUST ENGAGEMENT	22-31-00		204	ALL
FAULT ISOLATION PROCEDURES			201 201	
Loss of the ATH 2 ENGD Feedback				
Loss of the ATH 2 ENGD Feedback			203	
A/THR Engagement Inoperative after Installation of the New FMGC			205	ALL
A/THR Pushbutton Switch does not Come on at A/THR Engagement			210	ALL
A/THR Engagement Inoperative on the FMGC 1			213	ALL
A/THR Engagement Inoperative on			214	ALL
<pre>the FMGC 2 A/THR Instinctive Disconnect Pushbutton Switch Inoperative</pre>			215	ALL

22-CONTENTS Page 2 May 01/03

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT Loss of the Reception of the FADEC	CH/SE/SU	<u>c</u>	<u>PAGE</u> 218	EFFECTIVITY ALL
<pre>1 Bus by One FMGC Loss of the Reception of the FADEC 2 Bus by One FMGC</pre>			220	ALL
Loss of the A/THR Pushbutton Switch Function on the FMGC 1			222	ALL
Loss of the A/THR Pushbutton Switch Function on the FMGC 2			223	ALL
Unwanted A/THR 1 and 2 Inoperative Warning			224	ALL
Disagree between the A/THR ENGD Discretes (FMGC1 and FMGC2)			225	ALL
Disagree between the A/THR ENGD Discretes (FMGC1 and FMGC2)			227	ALL
FMGC Malfunction			229	201-208, 227-227 229-244, 247-247 276-284, 426-430 476-480, 551-551 555-555, 702-749
ARTIFICIAL FEEL AND RUDDER TRAVEL LIMITING COMPUTATION	22-61-00			
FAULT ISOLATION PROCEDURES			201	ALL
Loss of the Reception of the RTL ENGD Discrete Feedback by the FAC 1			201	ALL
Loss of the Reception of the RTL ENGD Discrete Feedback by the FAC 2			203	ALL
Loss of the Rudder Travel Limiting Function on the FAC 1			205	ALL
Loss of the Rudder Travel Limiting Function on the FAC 2			209	ALL
Loss of the Power Supply 26VAC of the Rudder Travel Limiting Side 1			213	ALL
Loss of the Power Supply 26VAC of the Rudder Travel Limiting Side 2			215	ALL
Loss of Power Supply 26VAC of the Position Feedback Transducers Side			217	ALL
Loss of Power Supply 26VAC of the Position Feedback Transducers Side 2			220	ALL
RUDDER TRIM COMPUTATION	22-62-00			
FAULT ISOLATION PROCEDURES	0_ 00		201	ALL
			22-	CONTENTS Page 3

22-CONTENTS Page 3 May 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	<u>c</u>		EFFECTIVITY
Failure of the Circuit of the Rudder Trim-Control Switch of the			201	ALL
FAC 1 Failure of the Circuit of the			203	ALL
Rudder Trim-Control Switch of the			200	,,
FAC 2 Rudder Trim-Control Switch			205	ALL
<pre>Inoperative in One Direction with the FAC 1</pre>				
Rudder Trim-Control Switch Inoperative in the Two Directions			206	ALL
with the FAC 1				
Rudder Trim-Control Switch Inoperative in One Direction with			207	ALL
the FAC 2 Rudder Trim-Control Switch			208	ALL
Inoperative in the Two Directions			200	ALL
with the FAC 2 Loss of the Reception of the RT			209	ALL
<pre>ENGD Feedback Discrete by the FAC 1</pre>				
Loss of the Reception of the RT			211	ALL
<pre>ENGD Feedback Discrete by the FAC 2</pre>				
Loss of the Rudder Trim Function on the FAC 1			213	ALL
Loss of the Rudder Trim Function on the FAC 2			217	ALL
Loss of the Power Supply 26VAC of			221	ALL
the Rudder Trim Side 1 Loss of the Power Supply 26VAC of			223	ALL
the Rudder Trim Side 2 Failure of the Rudder Trim/Reset			225	ALL
Circuit of the FAC 1			_	
Failure of the Rudder Trim/Reset Circuit of the FAC 2			227	
RUD TRIM/RESET Pushbutton Switch Inoperative on the FAC 1			229	ALL
RUD TRIM/RESET Pushbutton Switch Inoperative on the FAC 2			230	ALL
Failure of the Rudder Trim			231	ALL
Indicator Rudder Trim Indicator Inoperative			233	ALL
Reset of the Rudder Trim . Inoperative			234	ALL
FAC 1 RT Function Inoperative			236	ALL

22-CONTENTS Page 4 May 01/03

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT FAC 2 RT Function Inoperative	CH/SE/SU	<u>c</u>		EFFECTIVITY ALL
YAW DAMPER COMPUTATION FAULT ISOLATION PROCEDURES Loss of the Yaw Damper Function on the FAC 1	22-63-00		201 201	ALL ALL
Loss of the Yaw Damper Function on the FAC 2			206	ALL
Loss of the Reception of the YD ENGD Feedback Discrete by the FAC 1			211	ALL
Loss of the Reception of the YD ENGD Feedback Discrete by the FAC 2			213	ALL
Loss of the Signal from the Yaw-Damper Position			215	ALL
Transducer-Unit (2CC) to the FAC 1 Loss of the Signal from the Yaw-Damper Position Transducer-Unit (2CC) to the FAC 2			218	ALL
Loss of the Power Supply 26VAC of the Yaw Damper Side 1			221	ALL
Loss of the Power Supply 26VAC of the Yaw Damper Side 2			222	ALL
FAC 1 YD Function Inoperative			223	ALL
FAC 2 YD Function Inoperative			224	
Loss of the Reception of the HYD				ALL
CIRC PRESS SW Discrete by the FAC 1			223	ALL
Loss of the Reception of the HYD CIRC PRESS SW Discrete by the FAC 2			227	ALL
Loss of the Yaw Damper Function			229	ALL
FLIGHT AUGMENTATION COMPUTER (FAC)	22-66-00			
FAULT ISOLATION PROCEDURES			201	ALL
Failure of the FAC 1			201	ALL
Failure of the FAC 2			204	
			207	
Loss of the FAC 1 GENERAL Bus				
Loss of the FAC 2 GENERAL Bus			208	
Loss of the FAC 1 Bus Feedback			209	
Loss of the FAC 2 Bus Feedback			210	
Loss of the FAC 1 HLTY MON OWN			211	ALL
Discrete Signal Loss of the FAC 1 HLTY MON OPP			212	ALL
Discrete Signal			_ · _	-

22-CONTENTS Page 5 Aug 01/06

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT Loss of the FAC 2 HLTY MON OPP	CH/SE/SU	<u>c</u>		EFFECTIVITY ALL
Discrete Signal Loss of the FAC 2 HLTY MON OWN Discrete Signal			214	ALL
Loss of the FAC 1 HLTY COM OPP Discrete Signal			215	ALL
Loss of the FAC 2 HLTY COM OPP Discrete Signal			216	ALL
Loss of the Reception of the FAC 1 GENERAL Bus by the FAC 2			217	ALL
Loss of the Reception of the FAC 2 GENERAL Bus by the FAC 1			218	ALL
Loss of the Rudder Trim Change-Over between the FAC 2 and			219	ALL
the FAC 1 Loss of the Rudder Trim Change-Over between the FAC 1 and			220	ALL
the FAC 2 Loss of the Rudder Travel-Limiting Change-Over between the FAC 2 and			221	ALL
the FAC 1 Loss of the Rudder Travel-Limiting Change-Over between the FAC 1 and			222	ALL
the FAC 2 Loss of the Yaw Damper Change-Over			223	ALL
between the FAC 2 and the FAC 1 Loss of the Yaw Damper Change-Over between the FAC 1 and the FAC 2			224	ALL
Loss of the Reception of the AP 1			225	ALL
ENGD Discrete Signal by the FAC 1 Loss of the Reception of the AP2 ENGD Discrete Signal by the FAC 1			226	ALL
Loss of the Reception of the AP1 ENGD Discrete Signal by the FAC 2			227	ALL
Loss of the Reception of the AP2 ENGD Discrete Signal by the FAC 2			228	ALL
Loss of the Reception of the FMGC1 OWN B Bus by the FAC 1			229	ALL
Loss of the Reception of the FMGC1 OWN B Bus by the FAC 2			230	201-225, 227-227 229-275, 426-475 551-599, 701-749
Loss of the Reception of the FMGC2 OWN B Bus by the FAC 1			231	
Loss of the Reception of the FMGC2 OWN B Bus by the FAC 2			232	ALL

22-CONTENTS Page 6 May 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT Loss of the Parity Pin Program on the FAC 1	CH/SE/SU	<u>c</u>	<u>PAGE</u> 233	229-275, 426-475
Loss of the Parity Pin Program on the FAC 2			234	551-599, 701-749 201-225, 227-227 229-275, 426-475 551-599, 701-749
Loss of the Reception of the LGCIU 1 Bus by the FAC 1			235	ALL
Loss of the Reception of the LGCIU 2 Bus by the FAC 2			237	ALL
Loss of the Data from the ADIRUs to the AFS			239	ALL
FAC 1 FAULT Legend Comes on without ECAM Warning			241	ALL
FAC 2 FAULT Legend Comes on without ECAM Warning			243	ALL
FAC 1 FAULT Legend does not Come on with ECAM Warning			245	ALL
FAC 2 FAULT Legend does not Come on with ECAM Warning			248	ALL
FAC 1 OFF Legend does not Come on when the FAC 1 Function Disengages			251	ALL
FAC 2 OFF Legend does not Come on when the FAC 2 Function Disengages			253	ALL
Loss of the Reception of the ELAC OWN Bus by the FAC 1 MON or the FAC 1 COM			255	ALL
Loss of the Reception of the ELAC OPP Bus by the FAC 1 MON or the FAC 1 COM			256	201-225, 227-227 229-275, 426-475 551-599, 701-749
Loss of the Reception of the ELAC OWN Bus by the FAC 2 MON or the FAC 2 COM			257	-
Loss of the Reception of the ELAC OPP Bus by the FAC 2 MON or the FAC 2 COM			258	201-225, 227-227 229-275, 426-475 551-599, 701-749
Loss of the Reception of the ELAC			259	-
OWN Bus by the FAC 1 Loss of the Reception of the ELAC OPP Bus by the FAC 1			260	ALL
Loss of the Reception of the ELAC			261	ALL
OWN Bus by the FAC 2 Loss of the Reception of the ELAC			262	ALL
OPP Bus the FAC 2 Loss of the Reception of the ELAC 1 Discretes by One FAC or One FMGC			263	ALL

22-CONTENTS Page 7 May 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	C PAGE	EFFECTIVITY
Loss of the Reception of the ELAC 2 Discretes by One FAC or One FMGC		265	ALL
Loss of the Reception of the SFCC 1 Bus by the FAC 1		267	ALL
Loss of the Reception of the SFCC		268	ALL
<pre>2 Bus by the FAC 2 Loss of the Reception of the SFCC</pre>		269	ALL
1 SLATS EXTD Discrete by the FAC 1 Loss of the Reception of the SFCC		271	ALL
2 SLATS EXTD Discrete by the FAC 2 Loss of the Reception of the ADIRU		273	ALL
1 Bus by One FAC or One FMGC Loss of the Reception of the ADIRU			ALL
2 Bus by One FAC or One FMGC			
Loss of the Reception of the ADIRU 3 Bus by One FAC or One FMGC			ALL
Loss of the Data between the ADIRUs and the FAC 1		282	ALL
Loss of the Data between the ADIRUs and the FAC 2		283	ALL
Loss of the Reception of the NOSE GEAR PRESSED Discrete by the FAC 1		284	ALL
Loss of the Reception of the NOSE		286	ALL
GEAR PRESSED Discrete by the FAC 2 Loss of the Reception of the ENG		288	ALL
STP Discretes by the FAC 1 Loss of the Reception of the ENG		290	ALL
STP Discretes by the FAC 2 Discrepancy between the Speed		292	ALL
Limits of the PFD 1 and the PFD 2			
Loss of the ELAC Functions by the FAC 1		294	201-225, 227-227 229-275, 426-475
Loss of the ELAC Functions by the		296	551-599, 701-749 201-225, 227-227
FAC 2			229-275, 426-475 551-599, 701-749
FIDS Function Inoperative on the FAC 1		298	ALL
FIDS Function Inoperative on the		A200	ALL
FAC 2 FIDS Function Inoperative on the		A202	ALL
<pre>FMGC 1 FIDS Function Inoperative on the</pre>		A204	ALL
<pre>FMGC 2 Loss of the Speed Limits on the</pre>		A206	ALL
Two PFDs			

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	С	PAGE	EFFECTIVITY
FAC 1 Inoperative		_	A207	
FAC 2 Inoperative			A208	
Loss of the Data between the FAC 1			A209	ALL
and the FMGC 1				
Loss of the Data between the FAC 2			A210	ALL
and the FMGC 1				
Loss of the Data between the FAC 1			A211	ALL
and the FMGC 2				
Loss of the Data between the FAC 2			A212	ALL
and the FMGC 2 Loss of the SFCC 1 Data			A 2 4 7	All
			A213	
Loss of the SFCC 2 Data			A214	
Access to the MODE MENU Page on			A215	ALL
the MCDU Inoperative			A246	All
Loss of WINDSHEAR function seen by FAC1 and FAC2			A216	ALL
			A218	All
Loss of Yaw Damper and Rudder Trim and Rudder Travel Limitation			AZ 10	ALL
Functions on the FAC 1				
Loss of Yaw Damper and Rudder Trim			A220	A.L.I.
and Rudder Travel Limitation			AZZU	ALL
Functions on the FAC 2				
Loss of WINDSHEAR displays (PFD,			A222	Al I
ECAM) and aural warning			ALLL	ALL
Wrong VLS, F, S or Green Dot			A224	ΔΙΙ
displays (PFD)			ALLA	ALL
Loss of FAC 1 after 28VDC FAC 1			A225	Al I
circuit breaker tripping			ALLJ	ALL
Loss of FAC 2 after 28VDC FAC 2			A227	ALL
circuit breaker tripping				
Wrong speed computation			A229	ALL
Loss of YD, RT and RTL functions			A230	ALL
(one of the two sides or the two				
sides)				
Wrong ELACs failure during Ground			A231	ALL
Scanning test without hydraulics				
,				
FLIGHT CONTROL UNIT (FCU)	22-81-00			
FAULT ISOLATION PROCEDURES			201	ALL
Failure of the FCU			201	ALL
FCU 1 Inoperative			202	ALL
FCU 2 Inoperative			205	ALL
Loss of the FCU 1 A Bus			208	ALL
Loss of the FCU 1 B Bus			209	ALL
Loss of the FCU 2 A Bus			210	ALL
Loss of the FCU 2 B Bus			211	ALL

22-CONTENTS Page 9 Feb 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT Loss of the FCU 1 FAIL and FCU 1	CH/SE/SU	<u>c</u>		EFFECTIVITY ALL
HLTY Discretes Loss of the FCU 2 FAIL and FCU 2 HLTY Discretes			215	ALL
FCU Inoperative			218	ALL
MULTIPURPOSE CONTROL AND DISPLAY UNIT (MCDU)	22-82-00			
FAULT ISOLATION PROCEDURES			201	ALL
Loss of the Power Supply of the MCDU 1			201	ALL
Failure of the MCDU 1				ALL
MCDU 1 Inoperative				ALL
Loss of the Reception of the MCDU 1 TRANSMITTER Bus by one FMGC				ALL
Loss of the Power Supply of the MCDU 2			206	ALL
Failure of the MCDU 2				ALL
MCDU 2 Inoperative				ALL
Loss of the Reception of the MCDU 2 TRANSMITTER Bus by one FMGC				ALL
Loss of the MCDU 1 FAIL Discrete				ALL
Loss of the MCDU 2 FAIL Discrete				ALL
Loss of Communication with the FMGC 1 through the MCDU 1			215	ALL
Loss of Communication with the FMGC 2 through the MCDU 2			217	ALL
Automatic Switching of the MCDU 1 Inoperative			219	ALL
Automatic Switching of the MCDU 2 Inoperative			220	ALL
Loss of Communication with the CFDS through the MCDU 1			221	ALL
Loss of Communication with the CFDS through the MCDU 2			223	ALL
Loss of Communication with the AIDS through the MCDU 1			225	ALL
Loss of Communication with the AIDS through the MCDU 2			227	ALL
Loss of Communication with the Data Link through the MCDU 1			229	ALL
Loss of Communication with the Data Link through the MCDU 2			233	ALL
Access to the RAD/NAV Page on the MCDU 1 Inoperative			237	ALL
Access to the RAD/NAV Page on the			239	ALL

22-CONTENTS Page 10 Feb 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	<u>c</u>	<u>PAGE</u>	EFFECTIVITY
MCDU 2 Inoperative CHECK GW Message Systematically Shown on the MCDU			241	ALL
Access to RAD/NAV Page on the MCDU 1&2 Inoperative			242	ALL
Blank screen on the MCDU 1			244	ALL
Blank screen on the MCDU 2			245	ALL
<pre>FM1, FM2 or IND annunciator on top of the MCDU comes on</pre>			246	ALL
FLIGHT MANAGEMENT AND GUIDANCE COMPUTER (FMGC)	22-83-00			
FAULT ISOLATION PROCEDURES				ALL
Loss of the Reception of the FAC 1 HLTY Discretes by the FMGC 1				ALL
Loss of the Reception of the FAC 1 HLTY Discretes by the FMGC 2				ALL
Loss of the Reception of the FAC 2 HLTY Discretes by the FMGC 1			203	ALL
Loss of the Reception of the FAC 2 HLTY Discretes by the FMGC 2			204	ALL
AP 1 Engagement Inoperative			205	ALL
AP 2 Engagement Inoperative				ALL
Loss of the AP INST DISC Discretes on the FMGC 1			208	ALL
Loss of the AP INST DISC Discretes on the FMGC 2			210	ALL
Loss of the Parity Pin Program on the FMGC 1			212	ALL
Loss of the Parity Pin Program on the FMGC 2			213	ALL
Loss of the FMGC 1 OWN CB1 Bus (RMP 1 Source)			214	ALL
Loss of the FMGC 1 OWN CB1 Bus (IR 1 Source)			216	ALL
Loss of the FMGC 2 OWN CB1 Bus (RMP 2 Source)			217	ALL
Loss of the FMGC 2 OWN CB1 Bus (IR 1 Source)			219	ALL
Loss of the Reception of the FMGC 1 OWN A Bus by the FMGC 2			220	ALL
Loss of the Reception of the FMGC 2 OWN A Bus by the FMGC 1			222	ALL
Loss of the Reception of the FMGC 1 OWN A Bus by the FAC 1			224	ALL
Loss of the Reception of the FMGC			225	ALL

22-CONTENTS Page 11 Feb 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU C PAGE EFFECTIVITY
2 OWN A Bus by the FAC 1	22/ 411
Loss of the FMGC 1 OWN CB2 Bus (IR 2 Source)	226 ALL
Loss of the FMGC 1 OWN CB2 Bus (IR	227 ALL
3 Source) Loss of the FMGC 2 OWN CB2 Bus (IR	229 ALL
2 Source)	ZZ7 ALL
Loss of the FMGC 2 OWN CB2 Bus (IR	230 ALL
<pre>3 Source) Loss of the Reception of the FAC 1</pre>	231 ALL
General Bus by the FMGC 1	
Loss of the Reception of the FAC 1 General Bus by the FMGC 2	232 ALL
Loss of the Reception of the FAC 2	233 ALL
General Bus by the FMGC 1	27/ 411
Loss of the Reception of the FAC 2 General Bus by the FMGC 2	234 ALL
Loss of the Reception of the ATH	235 ALL
<pre>INST DISC Discretes by the FMGC 1 Loss of the Reception of the ATH</pre>	237 ALL
INST DISC Discretes by the FMGC 2	231 ALL
Loss of the Reception of the ATH	239 ALL
OPP ENG Discretes by the FMGC 1 Loss of the Reception of the ATH	240 ALL
OPP ENG Discretes by the FMGC 2	244
Automatic Transfer of the FD 2 Indication to the PFD 1	241 ALL
Inoperative	
Automatic Transfer of the FD 1 Indication to the PFD 2	244 ALL
Indication to the PFV 2 Inoperative	
FD 1 Engagement Inoperative	247 ALL
FD 2 Engagement Inoperative	250 ALL
Loss of the Reception of the Data	253 ALL
Link by one FMGC Loss of the Reception of the CLOCK	256 ALL
Bus by one FMGC	
Loss of the Reception of the DME 1 Bus by one FMGC	258 ALL
Loss of the Reception of the DME 2	260 ALL
Bus by one FMGC Loss of the Reception of the VOR 1	262 ALL
Bus by one FMGC	ZUZ ALL
Loss of the Reception of the VOR 2	264 ALL
Bus by one FMGC Loss of the Reception of the ILS 1	266 ALL
·	

22-CONTENTS Page 12 Feb 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU C PAGE	EFFECTIVITY
Bus by one FMGC Loss of the Reception of the ILS 2	268	ALL
Bus by one FMGC		A==
Loss of the Reception of the R/A 1 Bus by one FMGC	270	ALL
Loss of the Reception of the R/A 2	272	ALL
Bus by one FMGC Loss of the Reception of the FWC	274	ALL
VALID Discretes by one FMGC	214	ALL
Loss of the Reception of the BSCU 1 VALID Discretes by one FMGC	276	ALL
Loss of the Reception of the BSCU	278	ALL
<pre>2 VALID Discretes by one FMGC Loss of the Reception of the</pre>	280	ALL
PRINTER Bus by one FMGC		ALL
Loss of the Reception of the FWC 1 VALID Discrete by the FMGC 1	282	ALL
Loss of the Reception of the FWC 1	284	ALL
VALID Discrete by the FMGC 2 Loss of the Reception of the FWC 2	285	ALL
VALID Discrete by the FMGC 2		
Loss of the Reception of the FWC 2 VALID Discrete by the FMGC 1	286	ALL
Loss of the Reception of the DMC 1	288	ALL
VALID Discrete by the FMGC 1 Loss of the Reception of the DMC 1	290	ALL
VALID Discrete by the FMGC 2		
Loss of the Reception of the DMC 2 VALID Discrete by the FMGC 2	291	ALL
Loss of the Reception of the DMC 2	292	ALL
VALID Discrete by the FMGC 1 Loss of the FMGC 1 OWN B Bus	294	ALL
Loss of the FMGC 2 OWN B Bus	295	
The FMGC 1 does not get the	296	
Navigation Data Base from the Data	270	ALL
Loader	207	ALL
The FMGC 2 does not get the Navigation Data Base from the Data	271	ALL
Loader		
Loss of the Reception of the PS	298	ALL
SPLIT Discrete by one FMGC		
Loss of the FCU Information on the FMGC 1	A201	ALL
Loss of the FCU Information on the	A202	ALL
<pre>FMGC 2 Loss of the FWC Functions</pre>	A203	ALL

22-CONTENTS Page 13 Feb 01/08

TROUBLE SHOOTING MANUAL

CHAPTER 22

AUTO FLIGHT

TABLE OF CONTENTS

SUBJECT	CH/SE/SU	С	PAGE	EFFECTIVITY
FMGC 1 Inoperative		_	A204	
FMGC 2 Inoperative			A205	ALL
Loss of the Ground Conditions on			A206	ALL
the FMGC 1				
Loss of the Ground Conditions on			A208	ALL
the FMGC 2				
Loss of the EIS Bus of the FMGCs			A210	ALL
Loss of the Reception of the FQI			A211	ALL
Bus by one FMGC				
Access to the AFS/TEST REPORT Page			A213	ALL
Related to the FMGC 1 Not Possible				
Loss of the ADR or IR Data			A214	ALL
Electrical Transient Effect on the			A216	ALL
FMGC's				
Failure of the FMGC1 for the Cabin			A218	ALL
Pressure Controller				
Failure of the FMGC2 for the Cabin			A219	ALL
Pressure Controller				
CAT 2, CAT 3, CAT 3 DUAL Messages			A220	ALL
(INOP SYS) on ECAM STATUS Page				
FM 1/FM 2 Incoherence (Independant			A222	ALL
Operation)				
FMGC Malfunction			A224	ALL
FMS or Navigation Systems			A226	ALL
Malfunction				
FMGC Unserviceable on the Ground			A227	201-225, 227-227
				229-253, 276-299
				426-450, 476-499
				503-549, 551-599
				701-749,
CAT 2 (INOP SYS) on the SD			A228	-
Unsatisfactory Autoland			A230	
Difference between the Target			A231	
Speeds of the FMS1 and FMS2				
•				

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - FAULT SYMPTOMS

WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES			
WARNINGS/ MALI ONC I TONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE

Upper ECAM DU Warnings

R	AUTO FLT					226600 PA216 T 810 885
	AUTO FLT					226600 PA216 T 810 885
	AUTO FLT A/THR LIMITED					220000 P 201 T 810 801
	AUTO FLT A/THR OFF	AFS	AFS: FADEC1	732160	1	223100 P 218 T 810 808
	AUTO FLT A/THR OFF	AFS	AFS: FADEC1	732160	1	732900 P 220
	associated with ENG 2 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS EIS 2, EIU2FAD	1,		T 810 809
	AUTO FLT A/THR OFF associated with	AFS	AFS: FADEC1	732160		732900 P 240 T 810 821
	ENG 1 FADEC A FAULT		AFS, ECAM 1, ECAM 2, EIS EIS 3, EIU1FAD	1,		1 610 621
	AUTO FLT A/THR OFF associated with	AFS	AFS: FADEC1	732160		732900 P 248 T 810 827
	ENG 1 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS EIS 2, EIU1FAD	1,		1 610 627
	AUTO FLT A/THR OFF associated with	AFS	AFS: FADEC1	732160	1	732900 P 256 T 810 833
	ENG 2 FADEC A FAULT		AFS, ECAM 1, ECAM 2, EIS EIS 3, EIU2FAD	1,		
	AUTO FLT A/THR OFF associated with	_	AFS: FADEC1	732160	1	732900 P 263 T 810 848
	ENG 1 FADEC A FAULT	•	J3 (INSTINCT DISC) ENG1A	715100	1	1 010 040
		!	AFS, ECAM 1, ECAM 2, EIS EIS 2, EIS 3, EIU1FAD	1,		

EFF: ALL

22-ECAM

Page 101 May 01/08

TROUBLE SHOOTING MANUAL

HARNINGS (MALEUNGTIONS		CFDS FAULT MESSAGES	 S		FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!!		
AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	AFS	AFS: FADEC1 associated with J3 (INSTINCT DISC) ENG2A			732900 P 265 T 810 849		
I LNG Z TAVEC A TAGET	IDENT:	AFS, ECAM 1, ECAM 2, EIS EIS 2, EIS 3, EIU2FAD	Ĺj				
AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	AFS EIU1FAD	AFS: FADEC1 associated with J3 (INSTINCT DISC) ENG1B			732900 PB201 T 810 918		
		AFS, ECAM 1, ECAM 2, EIS (EIS 2, EIS 3, EIU1FAD	1,				
AUTO FLT A/THR OFF associated with	AFS	AFS: FADEC1 associated with	732160	1	732900 PB203 T 810 919		
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	1 6 10 9 19		
		AFS, ECAM 1, ECAM 2, EIS EIS 2, EIS 3, EIU2FAD	1,				
AUTO FLT A/THR OFF	AFS	AFS: FADEC2	732160	1	223100 P 220 T 810 809		
AUTO FLT A/THR OFF	AFS	AFS: FADEC2	732160		732900 P 227 T 810 814		
	IDENT:	AFS, EIS 2					
AUTO FLT A/THR OFF	AFS	AFS: FADEC2	732160		732900 P 235 T 810 818		
	IDENT:	AFS, EIS 3					
AUTO FLT A/THR OFF	AFS	AFS: FMGC1	228334		228300 PA224 T 810 893		
		IDENT: ADF 1, EIS 1, EIS 2, EIS 3, ILS 1, ILS 2, RMP123					
AUTO FLT A/THR OFF associated with	AFS	AFS: FMGC1	228334	1	228300 PA224 T 810 893		
AUTO FLT AP OFF and CAB PR LDG ELEV FAULT		IDENT: ADF 1, EIS 1, EIS 2, EIS 3, ILS 1, ILS 2, RMP123					
AUTO FLT A/THR OFF	AFS	AFS: FMGC1/ATHR ENGD FDBK	228334	1	223100 P 201 T 810 801		

EFF: ALL SROS

R

R

22-ECAM

Page 102

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES		FAULT ISOLATION	
	WARNINGS/ MALFORCTIONS	SOURCE	MESSAGE	ATA	С	
	AUTO FLT A/THR OFF	AFS	AFS: FMGC1/ATHR ENGD FDBK	228334	1	223100 P 224 T 810 812
		AFS	associated with AFS: FMGC2/ATHR ENGD FDBK	228334	1	
	AUTO FLT A/THR OFF	AFS	AFS: FMGC2/ATHR ENGD FDBK	228334	1	223100 P 203 T 810 802
R	AUTO FLT A/THR OFF associated with L/G SHOCK ABSORBER FAULT	AFS	AFS: LGCIU1-FAC1 CKT	323171	1	323100 PA223 T 810 851
R	AUTO FLT A/THR OFF associated with L/G SHOCK ABSORBER FAULT	AFS	AFS: LGCIU2-FAC2 CKT	323171	1	323100 PA223 T 810 851
	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 1	FWC1 : NO DATA FROM ECU1A	732160	1 1 	732900 P 246 T 810 825
	ENG 1		AFS, ECAM 1, ECAM 2, EIS	1,		
	AUTO FLT A/THR OFF associated with	ECAM 1	FWC1 : NO DATA FROM ECU1A	732160	1	732900 P 263 T 810 848
	ENG 1 FADEC A FAULT	EIU1FAD	associated with J3 (INSTINCT DISC) ENG1A	715100	1	
			AFS, ECAM 1, ECAM 2, EIS 6 EIS 2, EIS 3, EIU1FAD	1,		
	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 1	FWC1 : NO DATA FROM ECU1A associated with	732160	1	732900 PB201 T 810 918
	ENG_I TAPEC A TACET	EIU1FAD	J3 (INSTINCT DISC) ENG1B	715100	1	
			AFS, ECAM 1, ECAM 2, EIS EIS 2, EIS 3, EIU1FAD	1,		
	AUTO FLT A/THR OFF associated with ENG 1 FADEC B FAULT	ECAM 1	FWC1 : NO DATA FROM ECU1B	732160	1	732900 P 254 T 810 831
			AFS, ECAM 1, ECAM 2, EIS	1,		

EFF: ALL SROS

22-ECAM

Page 103 Nov 01/06

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES				
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE	
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 1	FWC1 : NO DATA FROM ECU2A	732160	1	732900 P 262 T 810 837	
	ENG E TAPES A TAGET		AFS, ECAM 1, ECAM 2, EIS '	1,			
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 1	FWC1 : NO DATA FROM ECU2A associated with	732160	1	732900 P 265 T 810 849	
	ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1		
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,			
R	AUTO FLT A/THR OFF associated with	ECAM 1	FWC1 : NO DATA FROM ECU2A associated with	732160	1	732900 PB203 T 810 919	
	ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1		
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,			
	AUTO FLT A/THR OFF associated with ENG 2 FADEC B FAULT	ECAM 1	FWC1 : NO DATA FROM ECU2B	732160	1	732900 P 226 T 810 813	
	ENG E TAPES B TASET		AFS, ECAM 1, ECAM 2, EIS '	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 1	FWC2 : NO DATA FROM ECU1A	732160	1	732900 P 245 T 810 824	
	ENG I TAPEC A TAGET		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'AFS, EIU1FAD	1,			
R	AUTO FLT A/THR OFF associated with	ECAM 1	FWC2 : NO DATA FROM ECU1A	732160	1	732900 P 263 T 810 848	
	ENG 1 FADEC A FAULT	EIU1FAD	associated with J3 (INSTINCT DISC) ENG1A	715100	1		
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	1,			

EFF: ALL SROS

22-ECAM

Page 104 May 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES		FAULT ISOLATION	
	WARNINGS/MALFORCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT		FWC2 : NO DATA FROM ECU1A associated with J3 (INSTINCT DISC) ENG1B			732900 PB201 T 810 918
		IDENT: A	AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	<u> </u>	L	
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC B FAULT	ECAM 1	FWC2: NO DATA FROM ECU1B	732160	1	732900 P 253 T 810 830
	ENG 1 PADEC B PAGET		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIU1FAD	1,		
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 1	FWC2 : NO DATA FROM ECU2A	732160	1	732900 P 261 T 810 836
	ENG E TAPEC A TAGET		AFS, ECAM 1, ECAM 2, EIS '	1,		
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT		FWC2 : NO DATA FROM ECU2A associated with J3 (INSTINCT DISC) ENG2A			732900 P 265 T 810 849
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,	L	
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 1	FWC2 : NO DATA FROM ECU2A associated with	732160	1	732900 PB203 T 810 919
İ		EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	
			AFS, ECAM 1, ECAM 2, EIS '	1,		
	AUTO FLT A/THR OFF associated with ENG 2 FADEC B FAULT	ECAM 1	FWC2 : NO DATA FROM ECU2B	732160	1	732900 P 225 T 810 812
	THE PARTY DIRECT		AFS, ECAM 1, ECAM 2, EIS '	1,		

EFF :	ALL
SROS	

22-ECAM Page 105

May 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES				
	WARNINGS/MALFORCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE	
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 2	FWC1 : NO DATA FROM ECU1A	732160	1	732900 P 246 T 810 825	
	<u> </u>		AFS, ECAM 1, ECAM 2, EIS	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 2	FWC1 : NO DATA FROM ECU1A	732160	1	732900 P 263 T 810 848	
	ENG I PAVEC A PAULI	EIU1FAD	associated with J3 (INSTINCT DISC) ENG1A	715100	1		
			AFS, ECAM 1, ECAM 2, EIS 6	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 2	FWC1 : NO DATA FROM ECU1A associated with	732160	1	732900 PB201 T 810 918	
	ENG I FAVEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1B	715100	1		
			AFS, ECAM 1, ECAM 2, EIS 6	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC B FAULT	ECAM 2	FWC1 : NO DATA FROM ECU1B	732160	1	732900 P 254 T 810 831	
	ENG 1 TAPEC B TAGET		AFS, ECAM 1, ECAM 2, EIS	1,			
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 2	FWC1 : NO DATA FROM ECU2A	732160	1	732900 P 262 T 810 837	
	ENG E TAPEC A TAGET		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'AFS, EIU2FAD	1,			
R	AUTO FLT A/THR OFF associated with	ECAM 2	FWC1 : NO DATA FROM ECU2A	732160	1	732900 P 265 T 810 849	
	ENG 2 FADEC A FAULT	EIU2FAD	associated with J3 (INSTINCT DISC) ENG2A	715100	1		
			AFS, ECAM 1, ECAM 2, EIS	1,			

EFF :	ALL		
SROS			

22-ECAM Page 106

May 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES				
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE	
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 2	FWC1: NO DATA FROM ECU2A associated with			732900 PB203 T 810 919	
		<u></u> _	J3 (INSTINCT DISC) ENG2B	<u> </u>	' 		
		!	AFS, ECAM 1, ECAM 2, EIS '	1,			
	AUTO FLT A/THR OFF associated with ENG 2 FADEC B FAULT	ECAM 2	FWC1 : NO DATA FROM ECU2B	732160	1	732900 P 226 T 810 813	
	LNG Z TAPEC B TAGET		AFS, ECAM 1, ECAM 2, EIS	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 2	FWC2 : NO DATA FROM ECU1A	732160	1	732900 P 245 T 810 824	
ļ	ENG 1 PADEC A PAGET		AFS, ECAM 1, ECAM 2, EIS	1,			
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC A FAULT	ECAM 2	FWC2 : NO DATA FROM ECU1A associated with	732160	1	732900 P 263 T 810 848	
	LNG I TAVEC A TAVET	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100	1		
		!	AFS, ECAM 1, ECAM 2, EIS 6 EIS 2, EIS 3, EIU1FAD	1,			
R	AUTO FLT A/THR OFF associated with	ECAM 2	FWC2 : NO DATA FROM ECU1A associated with	732160	1	732900 PB201 T 810 918	
	ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1B	715100	1		
			AFS, ECAM 1, ECAM 2, EIS	1,	L		
R	AUTO FLT A/THR OFF associated with ENG 1 FADEC B FAULT	ECAM 2	FWC2 : NO DATA FROM ECU1B	732160	1	732900 P 253 T 810 830	
	LNG I FAVEC B FAULT		AFS, ECAM 1, ECAM 2, EIS	1,			

EFF: ALL

22-ECAM

Page 107 May 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES	 S		FAULT ISOLATION
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	!
	AUTO FLT A/THR OFF associated with ENG 2 FADEC B FAULT	ECAM 2	FWC2 : NO DATA FROM ECU2B	732160	1	732900 P 225 T 810 812
	ENG_E TAPEO D TAGET	!	AFS, ECAM 1, ECAM 2, EIS	1,		
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 2	FWC2: NO DATA FROM ECU2A	732160	1	732900 P 261 T 810 836
	ENG E TAPEO A TAGET		AFS, ECAM 1, ECAM 2, EIS '	1,		
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 2	FWC2: NO DATA FROM ECU2A associated with	732160	1	732900 P 265 T 810 849
	ENG Z PADEC A PAOLI	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1	
		•	AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,		
R	AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	ECAM 2	FWC2: NO DATA FROM ECU2A associated with	732160	1	732900 PB203 T 810 919
	ENG 2 PAVEC A PAULI	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	
		!	AFS, ECAM 1, ECAM 2, EIS 6 EIS 2, EIS 3, EIU2FAD	1,		
R	AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 1 A DATA	732160	1	732900 P 241 T 810 822
	ENG 1 FADEC A FAULT	!	AFS, ECAM 1, ECAM 2, EIS	1,		
R	AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 1 A DATA associated with	732160	1	732900 P 263 T 810 848
	ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100	1	
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	1,		
R	AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 1 A DATA associated with			732900 PB201 T 810 918
	ENG 1 FADEC A FAULT	EIU1FAD 	J3 (INSTINCT DISC) ENG1B	715100 L	1 L	
			AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	1,		

EFF :	ALL		
SROS			

22-ECAM Page 108

May 01/05

TROUBLE SHOOTING MANUAL

HARNINGS (MALIFILMS TIONS		FAULT			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 1 B DATA	732160		732900 P 251 T 810 829
ENG 1 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS	1,		
AUTO FLT A/THR OFF	EIS 1	DMC 1 : NO ECU 2 A DATA	732160		732900 P 257 T 810 834
ENG 2 FADEC A FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS	1,		
AUTO FLT A/THR OFF associated with ENG 2 FADEC A FAULT	EIS 1	DMC 1 : NO ECU 2 A DATA associated with J3 (INSTINCT DISC) ENG2A		1	732900 P 265 T 810 849
	IDENT:	AFS, ECAM 1, ECAM 2, EIS 6 EIS 2, EIS 3, EIU2FAD	<u> </u>		
AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 2 A DATA associated with	732160		732900 PB203 T 810 919
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100		
		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 2, EIS 3, EIU2FAD	1,		
AUTO FLT A/THR OFF associated with	EIS 1	DMC 1 : NO ECU 2 B DATA	732160		732900 P 223 T 810 811
ENG 2 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'EIS 2, EIU2FAD	1,		
AUTO FLT A/THR OFF	EIS 2	DMC2: NO ECU1A DATA	732160		732900 P 229 T 810 815
	IDENT:	AFS, EIS 2		<u> </u>	
AUTO FLT A/THR OFF associated with	EIS 2	DMC2 : NO ECU1A DATA associated with	732160		732900 P 263 T 810 848
ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100		
		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 2, EIS 3, EIU1FAD	1,		
AUTO FLT A/THR OFF associated with	EIS 2	DMC2 : NO ECU1A DATA associated with		1	732900 PB201 T 810 918
ENG 1 FADEC A FAULT	<u> </u>	J3 (INSTINCT DISC) ENG1B	<u> </u>	1	
		AFS, ECAM 1, ECAM 2, EIS ' EIS 2, EIS 3, EIU1FAD	1,		

EFF: ALL

22-ECAM

Page 109 Aug 01/05

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS			FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
AUTO FLT A/THR OFF associated with	EIS 2	DMC2 : NO ECU1B DATA	732160		732900 P 249 T 810 828
ENG 1 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS	1,		
AUTO FLT A/THR OFF	EIS 2	DMC2: NO ECU2A DATA	, ,		732900 P 233 T 810 817
	IDENT:	AFS, EIS 2			
AUTO FLT A/THR OFF associated with	EIS 2	DMC2 : NO ECU2A DATA associated with	732160	1	732900 P 265 T 810 849
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1	!!!
		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,		
AUTO FLT A/THR OFF associated with	EIS 2	DMC2 : NO ECU2A DATA associated with	732160	1	732900 PB203 T 810 919
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	!!!
		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,		
AUTO FLT A/THR OFF	EIS 2	DMC2 : NO ECU2B DATA	732160		732900 P 221 T 810 810
ENG 2 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS 'EIS	1,		
AUTO FLT A/THR OFF	EIS 3	DMC3 : NO ECU1A DATA	732160		732900 P 243 T 810 823
ENG 1 FADEC A FAULT		AFS, ECAM 1, ECAM 2, EIS 'EIS 'EIS 'AFS, EIU1FAD	1,		010 023
AUTO FLT A/THR OFF associated with	EIS 3	DMC3 : NO ECU1A DATA associated with	732160	1	732900 P 263 T 810 848
ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100	1	!!!
		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	1,		
AUTO FLT A/THR OFF	EIS 3	DMC3 : NO ECU1A DATA	732160	1	732900 PB201
associated with ENG 1 FADEC A FAULT	EIU1FAD	associated with J3 (INSTINCT DISC) ENG1B	715100	1	T 810 918
		AFS, ECAM 1, ECAM 2, EIS 6 EIS 2, EIS 3, EIU1FAD	1,		

EFF: ALL

22-ECAM

Page 110 Aug 01/05

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES			FAULT			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE		
AUTO FLT A/THR OFF	EIS 3	DMC3 : NO ECU1B DATA	732160		732900 P 231 T 810 816		
	IDENT:	AFS, EIS 3					
AUTO FLT A/THR OFF associated with	EIS 3	DMC3 : NO ECU2A DATA	732160		732900 P 259 T 810 835		
ENG 2 FADEC A FAULT	IDENT: AFS, ECAM 1, ECAM 2, EIS 1, EIS 3, EIU2FAD				010 039		
AUTO FLT A/THR OFF	EIS 3	DMC3 : NO ECU2A DATA associated with	732160	1	732900 P 265 T 810 849		
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1			
		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,				
AUTO FLT A/THR OFF associated with	EIS 3	DMC3 : NO ECU2A DATA associated with	732160	1	732900 PB203 T 810 919		
ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	1		
		AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU2FAD	1,				
AUTO FLT A/THR OFF	EIS 3	DMC3 : NO ECU2B DATA	732160		732900 P 237 T 810 819		
	IDENT:	AFS, EIS 3					
AUTO FLT A/THR OFF associated with	EIU1FAD	EIU1 : NO FADEC 1 A DATA	732160		732900 P 239 T 810 820		
ENG 1 FADEC A FAULT	IDENT: AFS, ECAM 1, ECAM 2, EIS 1, EIS 3, EIU1FAD						
AUTO FLT A/THR OFF associated with	EIU1FAD	EIU1 : NO FADEC 1 A DATA associated with	732160	1	732900 P 263 T 810 848		
ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100	1	010 040		
	•	AFS, ECAM 1, ECAM 2, EIS 'EIS 2, EIS 3, EIU1FAD	1,				
AUTO FLT A/THR OFF associated with	EIU1FAD	EIU1 : NO FADEC 1 A DATA associated with	732160	1	732900 PB201 T 810 918		
ENG 1 FADEC A FAULT	EIU1FAD	J3 (INSTINCT DISC) ENG1B	715100	1			
		AFS, ECAM 1, ECAM 2, EIS '	1,				

EFF: ALL

22-ECAM

Page 111 Aug 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
	WARNINGS/MALFORCTIONS	SOURCE	MESSAGE	ATA	С		
	AUTO FLT A/THR OFF associated with	EIU1FAD	EIU1 : NO FADEC 1 B DATA	732160	1	732900 P 247 T 810 826	
	ENG 1 FADEC B FAULT	IDENT: /	1 010 020				
	AUTO FLT A/THR OFF	EIU1FAD	FCU, EIU (034), J3 ENG1A	228112	1	732500 P 264 T 810 891	
R	AUTO FLT A/THR OFF	EIU1FAD	FCU, EIU (034), J3 ENG1B	228112	1	732500 PA232 T 810 938	
	AUTO FLT A/THR OFF	EIU1FAD	FCU, EIU(ATN1), J3 ENG1A	228112	1	732500 P 260 T 810 889	
R	AUTO FLT A/THR OFF	EIU1FAD	FCU, EIU(ATN1), J3 ENG1B	228112	1	732500 PA214 T 810 926	
	AUTO FLT A/THR OFF	EIU1FAD	J3 (INSTINCT DISC) ENG1A	715100	1	715000 P 237 T 810 809	
	AUTO FLT A/THR OFF	EIU1FAD	J3 (INSTINCT DISC) ENG1B	715100	1	715000 P 253 T 810 822	
	AUTO FLT A/THR OFF associated with	EIU2FAD	EIU2 : NO FADEC 2 A DATA	732160	1	732900 P 255 T 810 832	
	ENG 2 FADEC A FAULT	IDENT: /	1 010 032				
	AUTO FLT A/THR OFF associated with	EIU2FAD	EIU2 : NO FADEC 2 A DATA associated with	732160	1	732900 P 265 T 810 849	
	ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1		
			IDENT: AFS, ECAM 1, ECAM 2, EIS 1, EIS 2, EIS 3, EIU2FAD				
	AUTO FLT A/THR OFF associated with	EIU2FAD	EIU2 : NO FADEC 2 A DATA associated with	732160	1	732900 PB203 T 810 919	
	ENG 2 FADEC A FAULT	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1		
			AFS, ECAM 1, ECAM 2, EIS '	1,			
	AUTO FLT A/THR OFF associated with	EIU2FAD	EIU2 : NO FADEC 2 B DATA	732160	1	732900 P 219 T 810 808	
	ENG 2 FADEC B FAULT		AFS, ECAM 1, ECAM 2, EIS	1,		. 0.0 000	

EFF: ALL
SROS

22-ECAM

Page 112 Feb 01/07

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С		
R	AUTO FLT A/THR OFF	EIU2FAD	FCU, EIU (034), J3 ENG2B	228112	1	732500 PA234 T 810 939	
	AUTO FLT A/THR OFF	EIU2FAD	FCU, EIU (034),J3 ENG2A	228112	1	732500 P 266 T 810 892	
	AUTO FLT A/THR OFF	EIU2FAD	FCU, EIU(ATN1), J3 ENG2A	228112	1	732500 P 262 T 810 890	
R	AUTO FLT A/THR OFF	EIU2FAD	FCU, EIU(ATN1), J3 ENG2B	228112	1	732500 PA216 T 810 927	
	AUTO FLT A/THR OFF	EIU2FAD	J3 (INSTINCT DISC) ENG2A	715100	1	715000 P 239 T 810 810	
	AUTO FLT A/THR OFF	EIU2FAD	J3 (INSTINCT DISC) ENG2B	715100	1	715000 P 255 T 810 823	
	AUTO FLT AP OFF	AFS	AFS: FAC1/AP1 ENGD WIRING associated with			221100 P 213 T 810 811	
		AFS	AFS: FMGC1/AP ENGD FDBK	228334	1 		
	AUTO FLT AP OFF	AFS	AFS: FAC1/AP2 ENGD WIRING associated with	226634	1	221100 P 217 T 810 813	
		AFS	AFS: FMGC1/AP2 ENGD WIRG	228334	1		
		AFS	AFS: FMGC2/AP ENGD FDBK	228334	1		
	AUTO FLT AP OFF	AFS	AFS: FAC2/AP1 ENGD WIRING	226634	1	221100 P 219 T 810 814	
		AFS	associated with AFS: FMGC2/AP1 ENGD WIRG and	228334	1		
		AFS	AFS: FMGC1/AP ENGD FDBK	228334	1		
	AUTO FLT AP OFF	AFS	AFS: FAC2/AP2 ENGD WIRING	226634	1	221100 P 215 T 810 812	
		AFS	associated with AFS: FMGC2/AP ENGD FDBK	228334	1		
	AUTO FLT AP OFF	AFS	AFS: FMGC1	228334	1	228300 PA224 T 810 893	
		IDENT: ADF 1, EIS 1, EIS 2, EIS 3, ILS 1, ILS 2, RMP123					

EFF: ALL SROS

22-ECAM

Page 113

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES					
	WARNINGS/ MALFONCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE	
R	AUTO FLT AP OFF	AFS	AFS: FMGC1	228334	1	228300 PA224 T 810 893	
	associated with AUTO FLT A/THR OFF and CAB PR LDG ELEV FAULT	IDENT: ADF 1, EIS 1, EIS 2, EIS 3, ILS 1, ILS 2, RMP123					
	AUTO FLT AP OFF	AFS	AFS: FMGC1	228334	1	221100 P 201 T 810 801	
		İ	IDENT: ECAM 1, ECAM 2, EFCS 1, EFCS 2, EIS 1, EIS 2, EIS 3, IR 1, IR 2, IR 3, RMP123				
	AUTO FLT AP OFF	AFS	AFS: FMGC1 (ALPHA FLOOR)	228334	1	221100 P 207 T 810 805	
	AUTO FLT AP OFF	AFS	AFS: FMGC1 (FM1)	228334	1	221100 P 208 T 810 806	
	AUTO FLT AP OFF	AFS	AFS: FMGC1 (ORD COMP)	228334	1	221100 P 209 T 810 807	
	AUTO FLT AP OFF	AFS	AFS: FMGC1/AP ENGD FDBK	228334	1	221100 P 221 T 810 815	
	AUTO FLT AP OFF	AFS	AFS: FMGC1/C-M ARINC LINK	228334	1	221100 P 205 T 810 803	
	AUTO FLT AP OFF	AFS	AFS: FMGC1/C-M ARINC LINK	228334	1	221100 P 229 T 810 821	
		IDENT: I					
R	AUTO FLT AP OFF	AFS	AFS: FMGC2	228334	1	228300 PA224 T 810 893	
		IDENT: ADF 1, EIS 1, EIS 2, EIS 3, ILS 1, ILS 2, RMP123					
	AUTO FLT AP OFF	AFS	AFS: FMGC2	228334	1	221100 P 203 T 810 802	
		IDENT: ECAM 1, ECAM 2, EFCS 1, EFCS 2, EIS 1, EIS 2, EIS 3, IR 1, IR 2, IR 3, RMP123					
	AUTO FLT AP OFF	AFS	AFS: FMGC2 (ALPHA FLOOR)	228334	1	221100 P 210 T 810 808	

EFF :	ALL
SROS	

22-ECAM

Page 114 Aug 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
	WARNINGS/ MALFORCTIONS	SOURCE	MESSAGE	ATA	С	!	
	AUTO FLT AP OFF	AFS	AFS: FMGC2 (FM2)	228334	1	221100 P 211 T 810 809	
	AUTO FLT AP OFF	AFS	AFS: FMGC2 (ORD COMP)	228334	1	221100 P 212 T 810 810	
	AUTO FLT AP OFF	AFS	AFS: FMGC2/AP ENGD FDBK	228334	1	221100 P 223 T 810 816	
	AUTO FLT AP OFF	AFS	AFS: FMGC2/C-M ARINC LINK	228334	1	221100 P 206 T 810 804	
	AUTO FLT AP OFF	AFS	AFS: FMGC2/C-M ARINC LINK	228334	1	221100 P 230 T 810 822	
			ECAM 1, ECAM 2, EIS 1, EIS	5 2,			
R	AUTO FLT AP OFF associated with	EFCS 1	ELAC1	279334	1	279300 PB258 T 810 934	
	F/CTL ELAC 1 FAULT	IDENT: /	1 010 254				
R	AUTO FLT AP OFF associated with	EFCS 1	ELAC2	279334	1	279300 PB263 T 810 935	
	F/CTL ELAC 2 FAULT	IDENT: /					
R	AUTO FLT AP OFF associated with	EFCS 2	ELAC1	279334	1	279300 PB258 T 810 934	
	F/CTL ELAC 1 FAULT	IDENT: /	IDENT: AFS				
R	AUTO FLT AP OFF associated with	EFCS 2	ELAC2	279334	1	279300 PB263 T 810 935	
	F/CTL ELAC 2 FAULT	IDENT: /	1 010 737				
	AUTO FLT FAC 1 FAULT					226600 PA225 T 810 890	
	AUTO FLT FAC 1 FAULT	AFS	AFS: FAC1	226634	1	 226600 P 201 T 810 801	
		IDENT: CFDS, ECAM 1, ECAM 2, EIS 1, EIS 2, EIS 3				. 010 001	
	AUTO FLT FAC 1 FAULT	AFS	AFS: FAC1/C-M ARINC LINK	226634	1	226600 P 209 T 810 805	

EFF: ALL SROS Printed in France **22-ECAM**

Aug 01/05

TROUBLE SHOOTING MANUAL

LIADNINGS /MALEUNGTIONS	FAULT ISOLATION				
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	С	!!!
AUTO FLT FAC 1 FAULT	AFS	AFS: FAC1/C-M ARINC LINK	226634	1	226600 P 207 T 810 803
	:	ECAM 1, ECAM 2, EIS 1, EIS	S 2,		610 603
AUTO FLT FAC 1 FAULT	AFS	AFS: FMGC1/FAC1 (HLTY CKT)	228334	1	226600 P 211 T 810 807
AUTO FLT FAC 1 FAULT	AFS	AFS: FMGC2/FAC1 (HLTY CKT) associated with	228334	1	226600 P 212 T 810 808
	AFS	AFS: FAC1	226634	1	
AUTO FLT FAC 1+2 FAULT associated with	AFS	AFS: FAC1	226634	1	226600 P 201 T 810 801
F/CTL ALTN LAW	IDENT:				
AUTO FLT FAC 1+2 FAULT associated with F/CTL ALTN LAW	AFS	AFS: FAC1/C-M ARINC LINK	226634	1	226600 P 209 T 810 805
AUTO FLT FAC 1+2 FAULT associated with	AFS	AFS: FAC1/C-M ARINC LINK	226634	1	226600 P 207 T 810 803
F/CTL ALTN LAW	IDENT:	610 603			
AUTO FLT FAC 1+2 FAULT	AFS	AFS: FAC2	226634	1	226600 P 204 T 810 802
F/CTL ALTN LAW	associated with F/CTL ALTN LAW IDENT: ECAM 1, ECAM 2, EIS 1, EIS 2, EIS 3				
AUTO FLT FAC 1+2 FAULT associated with F/CTL ALTN LAW	AFS	AFS: FAC2/C-M ARINC LINK	226634	1	226600 P 210 T 810 806
AUTO FLT FAC 1+2 FAULT associated with	AFS	AFS: FAC2/C-M ARINC LINK	226634	1	226600 P 208 T 810 804
F/CTL ALTN LAW	IDENT:	010 004			
AUTO FLT FAC 1+2 FAULT associated with F/CTL ALTN LAW	AFS	AFS: FMGC1/FAC1 (HLTY CKT)	228334	1	226600 P 211 T 810 807

EFF: ALL

22-ECAM

Page 116 Aug 01/05

TROUBLE SHOOTING MANUAL

HADNINGS (MALIFINISTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	С	!!!
AUTO FLT FAC 1+2 FAULT associated with	AFS	AFS: FMGC1/FAC2 (HLTY CKT) associated with	228334	1	226600 P 213 T 810 809
TOTAL ALIN LAW	AFS	AFS: FAC2	226634	1	
AUTO FLT FAC 1+2 FAULT associated with F/CTL ALTN LAW	AFS	AFS: FMGC2/FAC1 (HLTY CKT) associated with	228334	1	226600 P 212 T 810 808
	AFS	AFS: FAC1	226634	1	
AUTO FLT FAC 1+2 FAULT associated with F/CTL ALTN LAW	AFS	AFS: FMGC2/FAC2 (HLTY CKT)	228334	1	226600 P 214 T 810 810
AUTO FLT FAC 2 FAULT					226600 PA227 T 810 891
AUTO FLT FAC 2 FAULT	AFS	AFS: FAC2	226634	1	226600 P 204 T 810 802
	!	ECAM 1, ECAM 2, EIS 1, EIS	\$ 2,		1 810 802
AUTO FLT FAC 2 FAULT	AFS	AFS: FAC2/C-M ARINC LINK	226634	1	226600 P 210 T 810 806
AUTO FLT FAC 2 FAULT	AFS	AFS: FAC2/C-M ARINC LINK	226634	1	226600 P 208 T 810 804
	!	ECAM 1, ECAM 2, EIS 1, EIS	S 2,		010 004
AUTO FLT FAC 2 FAULT	AFS	AFS: FMGC1/FAC2 (HLTY CKT) associated with	228334	1	226600 P 213 T 810 809
	AFS	AFS: FAC2	226634	1	
AUTO FLT FAC 2 FAULT	AFS	AFS: FMGC2/FAC2 (HLTY CKT)	228334	1	226600 P 214 T 810 810
AUTO FLT FCU 1 FAULT	AFS	AFS: FCU	228112	1	228100 P 202 T 810 802
AUTO FLT FCU 1 FAULT	AFS	AFS: FCU	228112	1	228100 P 208 T 810 804
	IDENT: I	EIS 1, EIS 3, EIU1FAD, RAI	DAR 1		. 515 554

EFF: ALL
SROS

22-ECAM

Page 117 Aug 01/05

TROUBLE SHOOTING MANUAL

HADNINGS /MALEUNCTIONS		FAULT ISOLATION			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	C	: :
AUTO FLT FCU 1 FAULT	AFS	AFS: FCU	228112	1	228100 P 209 T 810 805
	!	ADR 1, ADR 3, ECAM 1, EIS EIS 3, RADAR 1	1,		610 603
AUTO FLT FCU 1+2 FAULT	AFS	AFS: FCU	228112	1	228100 P 201 T 810 801
		ADR 1, ADR 2, ADR 3, ECAM ECAM 2, EIS 1, EIS 2, EIS EIU1FAD, EIU2FAD, RADAR 1	-		
AUTO FLT FCU 2 FAULT	AFS	AFS: FCU	228112	1	228100 P 205 T 810 803
AUTO FLT FCU 2 FAULT	AFS	AFS: FCU	228112	1	228100 P 210 T 810 806
	IDENT:	EIS 2, EIS 3, EIU2FAD			
AUTO FLT FCU 2 FAULT	AFS	AFS: FCU	228112	1	 228100 P 211 T 810 807
	IDENT:	ADR 2, ECAM 2, EIS 2, EIS	3		
AUTO FLT RUD TRIM SYS associated with	AFS	AFS: FAC1/P-B SW 12CC1	226634	1	226600 PA230 T 810 894
AUTO FLT YAW DAMPER SYS	AFS	AFS: FAC2/P-B SW 12CC2	226634	1	
AUTO FLT RUD TRV LIM SYS and F/CTL ALTN LAW					
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC1/RT ACTR 10CC	226634	1	226200 P 213 T 810 809
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC1/RT CTRL SW 9CC	226634	1	226200 P 201 T 810 801
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC1/RT ENGD FDBK	226634	1	226200 P 209 T 810 807
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC1/RT RESET SW 8CC	226634	1	226200 P 225 T 810 813
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC2/RT ACTR 10CC	226634	1	226200 P 217 T 810 810

EFF: ALL

22-ECAM

Page 118 May 01/08

TROUBLE SHOOTING MANUAL

LIADNINGS / MALEUNGTIONS			FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC2/RT CTRL SW 9CC	226634	1	226200 P 203 T 810 802
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC2/RT ENGD FDBK	226634	1	226200 P 211 T 810 808
AUTO FLT RUD TRIM SYS	AFS	AFS: FAC2/RT RESET SW 8CC	226634	1	226200 P 227 T 810 814
AUTO FLT RUD TRIM SYS	AFS	AFS: RUD TR RST 8CC	272200	1	226200 P 234 T 810 819
AUTO FLT RUD TRIM SYS	AFS	AFS: 231 XPA BUS BAR	245000	1	226200 P 223 T 810 812
AUTO FLT RUD TRIM SYS	AFS	AFS: 431 XPA BUS BAR	245000	1	226200 P 221 T 810 811
AUTO FLT RUD TRIM1 FAULT associated with AUTO FLT YAW DAMPER 1 and AUTO FLT RUD TRV LIM 1 and F/CTL ALTN LAW	AFS	AFS: FAC1/P-B SW 12CC1	226634	1	226600 PA230 T 810 894
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: FAC1/RT ACTR 10CC	226634	1	226200 P 213 T 810 809
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: FAC1/RT CTRL SW 9CC	226634	1	226200 P 201 T 810 801
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: FAC1/RT ENGD FDBK	226634	1	226200 P 209 T 810 807
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: FAC1/RT RESET SW 8CC	226634	1	226200 P 225 T 810 813
AUTO FLT RUD TRIM1 FAULT associated with AUTO FLT YAW DAMPER 1 and AUTO FLT RUD TRV LIM 1	AFS	AFS: FAC1/YD ACTR1 3CC1	226634	1	226600 PA218 T 810 886
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: RUD TR RST 8CC	272200	1	226200 P 234 T 810 819

EFF: ALL

22-ECAM

Page 119 May 01/08

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS			FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
AUTO FLT RUD TRIM1 FAULT associated with AUTO FLT RUD TRV LIM 1 and AUTO FLT YAW DAMPER 1	AFS	AFS: 431 XPA BUS BAR	245000	1	226100 P 217 T 810 807
AUTO FLT RUD TRIM1 FAULT	AFS	AFS: 431 XPA BUS BAR	245000	1	226200 P 221 T 810 811
AUTO FLT RUD TRIM2 FAULT associated with AUTO FLT YAW DAMPER 2 and AUTO FLT RUD TRV LIM 2 and F/CTL ALTN LAW	AFS	AFS: FAC2/P-B SW 12CC2	226634	1	226600 PA230 T 810 894
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: FAC2/RT ACTR 10CC	226634	1	226200 P 217 T 810 810
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: FAC2/RT CTRL SW 9CC	226634	1	226200 P 203 T 810 802
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: FAC2/RT ENGD FDBK	226634	1	226200 P 211 T 810 808
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: FAC2/RT RESET SW 8CC	226634	1	226200 P 227 T 810 814
AUTO FLT RUD TRIM2 FAULT associated with AUTO FLT YAW DAMPER 2 and AUTO FLT RUD TRV LIM 2	AFS	AFS: FAC2/YD ACTR2 3CC2	226634	1	226600 PA220 T 810 887
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: RUD TR RST 8CC	272200	1	226200 P 234 T 810 819
AUTO FLT RUD TRIM2 FAULT associated with AUTO FLT RUD TRV LIM 2 and AUTO FLT YAW DAMPER 2	AFS	AFS: 231 XPA BUS BAR	245000	1	226100 P 220 T 810 808
AUTO FLT RUD TRIM2 FAULT	AFS	AFS: 231 XPA BUS BAR	245000	1	226200 P 223 T 810 812

EFF: ALL

22-ECAM

Page 120 May 01/08

TROUBLE SHOOTING MANUAL

HADNINGS /MALEUNCTIONS	L	FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	CE MESSAGE ATA		C PROCEDURE
AUTO FLT RUD TRV LIM SYS associated with AUTO FLT YAW DAMPER SYS	AFS AFS	AFS: FAC1/P-B SW 12CC1 associated with AFS: FAC2/P-B SW 12CC2	226634	1 226600 PA230 T 810 894
and AUTO FLT RUD TRIM SYS and F/CTL ALTN LAW				
AUTO FLT RUD TRV LIM SYS	AFS	AFS: FAC1/RTL ACTR 4CC	226634	1 226100 P 205 T 810 803
AUTO FLT RUD TRV LIM SYS	AFS	AFS: FAC1/RTL ENGD FDBK	226634	1 226100 P 201 T 810 801
AUTO FLT RUD TRV LIM SYS	AFS	AFS: FAC2/RTL ACTR 4CC	226634	1 226100 P 209 T 810 804
AUTO FLT RUD TRV LIM SYS	AFS	AFS: FAC2/RTL ENGD FDBK	226634	1 226100 P 203 T 810 802
AUTO FLT RUD TRV LIM SYS	AFS	AFS: 231 XPA BUS BAR	245000	1 226100 P 215 T 810 806
AUTO FLT RUD TRV LIM SYS	AFS	AFS: 431 XPA BUS BAR	245000	1 226100 P 213 T 810 805
AUTO FLT RUD TRV LIM 1				226100 P 205 T 810 803
AUTO FLT RUD TRV LIM 1	ADR 1	TAT SENSOR (11FP1)/ ADIRU1 (1FP1)	341118	1 341100 PA217 T 810 863
AUTO FLT RUD TRV LIM 1 associated with AUTO FLT YAW DAMPER 1 and AUTO FLT RUD TRIM1 FAULT and F/CTL ALTN LAW	AFS	AFS: FAC1/P-B SW 12CC1	226634	1 226600 PA230 T 810 894
AUTO FLT RUD TRV LIM 1	AFS	AFS: FAC1/RTL ACTR 4CC	226634	1 226100 P 205 T 810 803
AUTO FLT RUD TRV LIM 1	AFS	AFS: FAC1/RTL ENGD FDBK	226634	1 226100 P 201 T 810 801

EFF: ALL

22-ECAM

Page 121 May 01/08

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	 		FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
AUTO FLT RUD TRV LIM 1 associated with AUTO FLT YAW DAMPER 1 and AUTO FLT RUD TRIM1 FAULT	AFS	AFS: FAC1/YD ACTR1 3CC1	226634	1	226600 PA218 T 810 886
AUTO FLT RUD TRV LIM 1	AFS	AFS: 431 XPA BUS BAR	245000	1	226100 P 213 T 810 805
AUTO FLT RUD TRV LIM 1 associated with AUTO FLT YAW DAMPER 1 and AUTO FLT RUD TRIM1 FAULT	AFS	AFS: 431 XPA BUS BAR	245000	1	226100 P 217 T 810 807
AUTO FLT RUD TRV LIM 2 associated with AUTO FLT YAW DAMPER 2 and AUTO FLT RUD TRIM2 FAULT and F/CTL ALTN LAW	AFS	AFS: FAC2/P-B SW 12CC2	226634	1	226600 PA230 T 810 894
AUTO FLT RUD TRV LIM 2	AFS	AFS: FAC2/RTL ACTR 4CC	226634	1	226100 P 209 T 810 804
AUTO FLT RUD TRV LIM 2	AFS	AFS: FAC2/RTL ENGD FDBK	226634	1	226100 P 203 T 810 802
AUTO FLT RUD TRV LIM 2 associated with AUTO FLT YAW DAMPER 2 and AUTO FLT RUD TRIM2 FAULT	AFS	AFS: FAC2/YD ACTR2 3CC2	226634	1	226600 PA220 T 810 887
AUTO FLT RUD TRV LIM 2	AFS	AFS: 231 XPA BUS BAR	245000	1	226100 P 215 T 810 806
AUTO FLT RUD TRV LIM 2 associated with AUTO FLT YAW DAMPER 2 and AUTO FLT RUD TRIM2 FAULT	AFS	AFS: 231 XPA BUS BAR	245000	1	226100 P 220 T 810 808

EFF: ALL SROS **22-ECAM**

Page 122 May 01/08

TROUBLE SHOOTING MANUAL

	HADNINGS (MALTHNOTTONS		FAULT ISOLATION			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
R	AUTO FLT YAW DAMPER SYS associated with AFS-Loss of the yaw damper function at or after engine start					226300 P 229 T 810 815
	AUTO FLT YAW DAMPER SYS associated with F/CTL - Yaw and/or roll jerk very hard					272600 P 201 T 810 801
	AUTO FLT YAW DAMPER SYS associated with AUTO FLT RUD TRIM SYS and AUTO FLT RUD TRV LIM SYS and F/CTL ALTN LAW	AFS	AFS: FAC1/P-B SW 12CC1 associated with AFS: FAC2/P-B SW 12CC2	226634 226634		226600 PA230 T 810 894
	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC1/YD ACTR1 3CC1	226634	1	226300 P 201 T 810 801
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC1/YD ENGD FDBK	226634	1	226300 P 211 T 810 803
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC1/YD RVDT BX 2CC	226634	1	226300 P 215 T 810 805
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC2/YD ACTR2 3CC2	226634	1	226300 P 206 T 810 802
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC2/YD ENGD FDBK	226634	1	226300 P 213 T 810 804
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: FAC2/YD RVDT BX 2CC	226634	1	226300 P 218 T 810 806
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: HYD G 1151GN	293212	1	226300 P 225 T 810 811

22-ECAM

Aug 01/06

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS			FAULT - ISOLATION		
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: HYD Y 3151GN	293212	1	226300 P 227 T 810 812
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: 231 XPA BUS BAR	245000	1	226300 P 222 T 810 808
R	AUTO FLT YAW DAMPER SYS associated with F/CTL ALTN LAW	AFS	AFS: 431 XPA BUS BAR	245000	1	226300 P 221 T 810 807
R	AUTO FLT YAW DAMPER 1 associated with AFS-Loss of the yaw damper function at or after engine start					226300 P 229 T 810 815
	AUTO FLT YAW DAMPER 1 associated with F/CTL - Yaw and/or roll jerk very hard					272600 P 201 T 810 801
	AUTO FLT YAW DAMPER 1 associated with AUTO FLT RUD TRIM1 FAULT and AUTO FLT RUD TRV LIM 1 and F/CTL ALTN LAW	AFS	AFS: FAC1/P-B SW 12CC1	226634	1	226600 PA230 T 810 894
	AUTO FLT YAW DAMPER 1	AFS	AFS: FAC1/YD ACTR1 3CC1	226634	1	226300 P 201 T 810 801
	AUTO FLT YAW DAMPER 1 associated with AUTO FLT RUD TRIM1 FAULT and AUTO FLT RUD TRV LIM 1	AFS	AFS: FAC1/YD ACTR1 3CC1	226634	1	226600 PA218 T 810 886
R	AUTO FLT YAW DAMPER 1	AFS	AFS: FAC1/YD ENGD FDBK	226634	1	226300 P 211 T 810 803
R	AUTO FLT YAW DAMPER 1	AFS	AFS: FAC1/YD RVDT BX 2CC	226634	1	226300 P 215 T 810 805

F :	ALL		
SROS			

22-ECAM Page 124

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		FAULT - ISOLATION		
	WARNINGS/MALFORCTIONS	SOURCE	MESSAGE	ATA	PROCEDURE
R	AUTO FLT YAW DAMPER 1	AFS	AFS: HYD G 1151GN	293212	1 226300 P 225 T 810 811
	AUTO FLT YAW DAMPER 1 associated with AUTO FLT RUD TRV LIM 1 and AUTO FLT RUD TRIM1 FAULT	AFS	AFS: 431 XPA BUS BAR	245000	1 226100 P 217 T 810 807
R	AUTO FLT YAW DAMPER 1	AFS	AFS: 431 XPA BUS BAR	245000	1 226300 P 221 T 810 807
R	AUTO FLT YAW DAMPER 2 associated with AFS-Loss of the yaw damper function at or after engine start				226300 P 229 T 810 815
	AUTO FLT YAW DAMPER 2 associated with F/CTL - Yaw and/or roll jerk very hard				272600 P 201 T 810 801
	AUTO FLT YAW DAMPER 2 associated with AUTO FLT RUD TRIM2 FAULT and AUTO FLT RUD TRV LIM 2 and F/CTL ALTN LAW	AFS	AFS: FAC2/P-B SW 12CC2	226634	1 226600 PA230 T 810 894
R	AUTO FLT YAW DAMPER 2	AFS	AFS: FAC2/YD ACTR2 3CC2	226634	1 226300 P 206 T 810 802
	AUTO FLT YAW DAMPER 2 associated with AUTO FLT RUD TRIM2 FAULT and AUTO FLT RUD TRV LIM 2	AFS	AFS: FAC2/YD ACTR2 3CC2	226634	1 226600 PA220 T 810 887
R	AUTO FLT YAW DAMPER 2	AFS	AFS: FAC2/YD ENGD FDBK	226634	1 226300 P 213 T 810 804
R	AUTO FLT YAW DAMPER 2	AFS	AFS: FAC2/YD RVDT BX 2CC	226634	1 226300 P 218 T 810 806

EFF :	ALL		
SROS			

22-ECAM Page 125

Aug 01/06

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS		FAULT ISOLATION			
	SOURCE	MESSAGE	ATA	С	PROCEDURE
AUTO FLT YAW DAMPER 2	AFS	AFS: HYD Y 3151GN	293212	1	226300 P 227 T 810 812
AUTO FLT YAW DAMPER 2 associated with AUTO FLT RUD TRV LIM 2 and AUTO FLT RUD TRIM2 FAULT	AFS	AFS: 231 XPA BUS BAR	245000	1	226100 P 220 T 810 808
AUTO FLT YAW DAMPER 2	AFS	AFS: 231 XPA BUS BAR	245000	1	226300 P 222 T 810 808
WINDSHEAR DET FAULT					226600 PA216 T 810 885

STS-Inop System

A/THR associated with AP 1+2	ADR 1	TAT SENSOR (11FP1)/ ADIRU1 (1FP1) associated with			341100 PA217 T 810 863		
	ADR 3	TAT SENSOR (11FP1)/ ADIRU3 (1FP3)	341118	1 			
AP 1	AFS	AFS: FMGC1/ATHR ENGD FDBK associated with	228334	1	223100 P 225 T 810 813		
	AFS	AFS: FMGC2/ATHR1 ENG	228334	1			
AP 1	EIS 1	DMC1 : NO FMC1 DATA	228334	1	221100 P 238 T 810 829		
	IDENT:	IDENT: EIS 1, EIS 2, EIS 3					
AP 1	EIS 2	DMC2 : NO FMC1 DATA	228334	1	 221100 P 240 T 810 830		
	IDENT:	IDENT: EIS 1, EIS 2, EIS 3					
AP 1	EIS 3	DMC3 : NO FMC1 DATA	228334	1	221100 P 242 T 810 831		
	IDENT:	EIS 1, EIS 2, EIS 3					

FF :	ALL		
SROS			

22-ECAM

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES	 S		FAULT ISOLATION			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!			
AP 1+2 associated with A/THR	ADR 1	TAT SENSOR (11FP1)/ ADIRU1 (1FP1) associated with	341118	1	341100 PA217 T 810 863			
	ADR 3	TAT SENSOR (11FP1)/ ADIRU3 (1FP3)	341118	1				
AP 1+2	EIS 1	DMC1 : NO FMC1 DATA	228334	1	221100 P 238 T 810 829			
	IDENT:	EIS 1, EIS 2, EIS 3						
AP 1+2	EIS 1	DMC1 : NO FMC2 DATA	228334	1	221100 P 244 T 810 832			
 	IDENT:	EIS 1, EIS 2, EIS 3						
AP 1+2	EIS 2	DMC2: NO FMC1 DATA	228334	1	221100 P 240 T 810 830			
	IDENT:	IDENT: EIS 1, EIS 2, EIS 3						
AP 1+2	EIS 2	DMC2: NO FMC2 DATA	228334	1	221100 P 246 T 810 833			
	IDENT:	EIS 1, EIS 2, EIS 3						
AP 1+2	EIS 3	DMC3: NO FMC1 DATA	228334	1	221100 P 242 T 810 831			
<u></u>	IDENT:	EIS 1, EIS 2, EIS 3						
AP 1+2	EIS 3	DMC3: NO FMC2 DATA	228334	1	221100 P 248 T 810 834			
	IDENT:	DENT: EIS 1, EIS 2, EIS 3						
AP 2	AFS	AFS: FMGC2/ATHR ENGD FDBK associated with	228334	1	223100 P 227 T 810 814			
	AFS	AFS: FMGC1/ATHR2 ENG	228334	1				
AP 2	EIS 1	DMC1 : NO FMC2 DATA	228334	1	221100 P 244 T 810 832			
	IDENT:	EIS 1, EIS 2, EIS 3			ן סוט סטב			
AP 2	EIS 2	DMC2 : NO FMC2 DATA	228334	1	221100 P 246 T 810 833			
	IDENT: EIS 1, EIS 2, EIS 3				1 010 033			

EFF :	ALL			
SROS				

22-ECAM Page 127

Feb 01/08

TROUBLE SHOOTING MANUAL

	LIADNINGS / MALEUNGTIONS		CFDS FAULT MESSAGES	 S		FAULT ISOLATION		
	WARNINGS/MALFUNCTIONS 	SOURCE	MESSAGE	ATA	С			
	AP 2	EIS 3	DMC3 : NO FMC2 DATA	228334	1	221100 P 248 T 810 834		
		IDENT: I	IDENT: EIS 1, EIS 2, EIS 3					
R	CAT 2					228300 PA220 T 810 891		
R	CAT 2	AFS	AFS: CHK DMC1-FMGC1 CKT	316334	1	228300 PA228 T 810 896		
		AFS	associated with AFS: CHK DMC1-FMGC2 CKT	316334	1			
R	CAT 2	AFS	AFS: CHK DMC2-FMGC2 CKT associated with	316334	1	228300 PA228 T 810 896		
		AFS	AFS: CHK DMC2-FMGC1 CKT	316334	1			
R	CAT 3					228300 PA220 T 810 891		
R	CAT 3 DUAL					228300 PA220 T 810 891		
	CAT 3 DUAL	AFS	AFS: ADIRU1	341234	1	226600 P 273 T 810 856		
R	CAT 3 DUAL associated with	AFS	AFS: ADIRU1	341234	1	341400 P 213 T 810 809		
	STS-Maintenance F/CTL	IDENT:	AFS, EFCS 1, EFCS 2					
R	CAT 3 DUAL	AFS	AFS: ADIRU1/2/3 DISAGREE	341234	1	228300 PA214 T 810 874		
	CAT 3 DUAL	AFS	AFS: ADIRU2	341234	1	226600 P 276 T 810 857		
R	CAT 3 DUAL associated with	AFS	AFS: ADIRU2	341234	1	341400 P 243 T 810 834		
	STS-Maintenance F/CTL	IDENT:	610 634					
	CAT 3 DUAL	AFS	AFS: ADIRU3	341234	1	226600 P 279 T 810 858		
R	CAT 3 DUAL	AFS	AFS: CHK DMC1-FMGC1 CKT	316334	1	228300 P 288 T 810 855		

EFF :	ALL
SROS	

22-ECAM Page 128

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES		FAULT ISOLATION
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA C	PROCEDURE
R	CAT 3 DUAL	AFS	AFS: CHK DMC1-FMGC2 CKT 3	316334 1	228300 P 290 T 810 856
R	CAT 3 DUAL	AFS	AFS: CHK DMC2-FMGC1 CKT	316334 1	228300 P 292 T 810 858
R	CAT 3 DUAL	AFS	AFS: CHK DMC2-FMGC2 CKT 3	316334 1	228300 P 291 T 810 857
R	CAT 3 DUAL	AFS	AFS: CHK FWC1-FMGC1 CKT 3	315334 1	228300 P 282 T 810 851
R	CAT 3 DUAL	AFS	AFS: CHK FWC1-FMGC2 CKT 3	315334 1	228300 P 284 T 810 852
R	CAT 3 DUAL	AFS	AFS: CHK FWC2-FMGC1 CKT 3	315334 1	228300 P 286 T 810 854
R	CAT 3 DUAL	AFS	AFS: CHK FWC2-FMGC2 CKT 3	315334 1	228300 P 285 T 810 853
	CAT 3 DUAL	AFS	AFS: ELAC1/BUS WIRG/FAC1 2	279334 1	226600 P 259 T 810 846
	CAT 3 DUAL	AFS	AFS: ELAC1/BUS WIRG/FAC2 2	279334 1	226600 P 262 T 810 849
	CAT 3 DUAL	AFS	AFS: ELAC2/BUS WIRG/FAC1 2	279334 1	226600 P 260 T 810 847
	CAT 3 DUAL	AFS	AFS: ELAC2/BUS WIRG/FAC2 2	279334 1	226600 P 261 T 810 848
R	CAT 3 DUAL	AFS	AFS: ILS1	343631 1	228300 P 266 T 810 843
R	CAT 3 DUAL	AFS	AFS: ILS2	343631 1	228300 P 268 T 810 844
R	CAT 3 DUAL	AFS	AFS: MMR1 3	343631 1	228300 P 266 T 810 843
R	CAT 3 DUAL	AFS	AFS: MMR2	343631 1	228300 P 268 T 810 844

EFF :	ALL	 	 	
SROS				

22-ECAM Page 129

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES					
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE		
	CAT 3 DUAL	AFS	AFS: RA1	344233	1	228300 P 270 T 810 845		
	CAT 3 DUAL	AFS	AFS: RA2	344233	1	228300 P 272 T 810 846		
	CAT 3 DUAL	AFS	AFS: 28V PWR 11XU1	242255	1	228300 P 298 T 810 863		
R	CAT 3 DUAL associated with	EFCS 1	ADR1 associated with	341234	2	341381 P 230 T 810 823		
	STS-Maintenance F/CTL	EFCS 1	SEC2 OR BUS 2 FROM ADR2	279434	2	010 023		
	r/CIL	EFCS 1	and SEC1 OR BUS 3 FROM ADR3	279434	2			
		IDENT: /	AFS	-				
R	CAT 3 DUAL	EFCS 1	ADR2	341234	2	341381 P 231		
	associated with STS-Maintenance	EFCS 1	associated with SEC2 OR BUS 2 FROM ADR1	279434	2	Т 810 824		
	F/CTL	EFCS 1	and SEC3 OR BUS 2 FROM ADR3	279434	2			
		IDENT: /	AFS	-				
R	CAT 3 DUAL	EFCS 1	ADR3	341234	2	341381 P 232 T 810 825		
	associated with STS-Maintenance F/CTL	EFCS 1	associated with SEC1 OR BUS 3 FROM ADR1 and	279434	2	1 6 10 62 5		
	F/CIL	EFCS 2	SEC3 OR BUS 2 FROM ADR2	279434	2			
		IDENT: /	AFS					
	CAT 3 DUAL associated with	EFCS 1	IR2 - BUS 2	341234	2	341400 P 244 T 810 835		
	STS-Maintenance F/CTL	IDENT: /	AFS, EFCS 1, EFCS 2, RADAR	₹ 2		010 039		
R	CAT 3 DUAL associated with	EFCS 2	ADR1 associated with	341234	2	341381 P 230 T 810 823		
	STS-Maintenance F/CTL	EFCS 2	SEC1 OR BUS 3 FROM ADR3	279434	2	1 0 10 02 3 		
	r/UIL	EFCS 2	and SEC2 OR BUS 2 FROM ADR2	279434	2			
		IDENT: /	AFS					

EFF: ALL SROS

22-ECAM

Page 130

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS			FAULT ISOLATION		
	WARRINGS, HALL ONG LIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
R	CAT 3 DUAL associated with	EFCS 2	ADR2 associated with	341234	2	341381 P 231 T 810 824
	STS-Maintenance F/CTL	EFCS 2	SEC2 OR BUS 2 FROM ADR1	279434	2	
		EFCS 2	SEC3 OR BUS 2 FROM ADR3	279434	2	
		IDENT: /	AFS			
R	CAT 3 DUAL associated with	EFCS 2	ADR3 associated with	341234	2	341381 P 232 T 810 825
	STS-Maintenance F/CTL	EFCS 2	SEC1 OR BUS 3 FROM ADR1	279434	2	
		EFCS 2	SEC3 OR BUS 2 FROM ADR3	279434	2	
	<u> </u>	IDENT: /	AFS			

<u>Lower ECAM DU Flags-</u> <u>F/CTL</u>

AFS-Rudder Trim Position not available: XX comes into view amber	ECAM 1	SDAC1 : RUDDER POS XDCR 42WV associated with SDAC2 : RUDDER POS XDCR 42WV	273115 273115	315400 PA219 T 810 913
	IDENT: I	ECAM 2		
AFS-Rudder Trim Position not available: XX comes into view amber		SDAC1: RUDDER POS XDCR 42WV associated with SDAC2: RUDDER POS XDCR 42WV	273115 273115	315400 PA219 T 810 913
	IDENT: I		<u> </u>	

EFF: ALL
SROS

22-ECAM

Page 131 Aug 01/06

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - FAULT SYMPTOMS

WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION
WARNINGS/ MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE

PFD Flag(s)

	AFS-Difference between the speed limits of the PFD 1 and the PFD 2	226600 P 292 T 810 865
	AFS-Loss of the speed limits on the two PFDs	226600 PA206 T 810 872
R	AFS-No FD 1 indication on the PFD 1 after the aircraft energization associated with AFS-The FD 1 pushbutton switch does not come on after A/C energization	228300 P 247 T 810 835
R	AFS-No FD 1 indication on the PFD 1 after the aircraft energization	228300 P 247 T 810 835
R	AFS-No FD 2 indication on the PFD 2 after the aircraft energization associated with AFS-The FD 2 pushbutton switch does not come on after A/C energization	228300 P 250 T 810 836
R	AFS-No FD 2 indication on the PFD 2 after the aircraft energization	228300 P 250 T 810 836
	AFS-On the two PFDs, in the ATT zone, FD crossed bars do not engage at GA	221100 P 251 T 810 836
R	AFS-The FD 1 indication does not automatically go to the PFD 2	228300 P 244 T 810 832

EFF :	F :	ALL
ROS	ROS	

22-EFIS

Page 101 Aug 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C	! !	
R	AFS-The FD 1 indication does not automatically go to the PFD 2	AFS	AFS: FMGC2/FMGC1 (FD CKT)	228334	1	228300 P 244 T 810 832	
	AFS-The FD 2 indication does not automatically go to the PFD 1					228300 P 241 T 810 831	
	AFS-The FD 2 indication does not automatically go to the PFD 1	AFS	AFS: FMGC1/FMGC2 (FD CKT)	228334	1	228300 P 241 T 810 831	

ND Flag(s)

R	AFS-MAP NOT AVAIL message is shown on both NDs					228300 PA224 T 810 893
R	AFS-MAP NOT AVAIL message is shown on the ND					228300 PA210 T 810 871
R	AFS-NAV ACCUR DOWNGRAD message is shown on the ND	AFS	AFS: DME1	345133	1	228300 P 258 T 810 839
R	AFS-NAV ACCUR DOWNGRAD message is shown on the ND	AFS	AFS: DME2	345133	1	228300 P 260 T 810 840
R	AFS-NAV ACCUR DOWNGRAD message is shown on the ND	EIS 1	DMC1	316334	1	316381 PA214 T 810 867
R	AFS-NAV ACCUR DOWNGRAD message is shown on the ND	EIS 2	DMC2	316334	1	316381 PA215 T 810 868
R	AFS-NAV ACCUR DOWNGRAD message is shown on the ND	EIS 3	DMC3	316334	1	316381 PA216 T 810 869

EFF :	ALL		
SROS			

22-EFIS

Page 102 Aug 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C	PROCEDURE
R	AFS-SET OFFSIDE RNG/MODE message is shown on both NDs	!				228300 PA224 T 810 893

EFF: ALL

22-EFIS

Page 103 Aug 01/05

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - FAULT SYMPTOMS

HARNINGS (MAL FUNCTIONS	CFDS FAULT MESSAGES			FAULT ISOLATION	
WARNINGS/MALFUNCTIONS 	SOURCE	MESSAGE	ATA	С	!!
GLARESHIELD 130VU/131VU					
AFS - AUTO LAND warning light comes on					221100 P 254 T 810 838
<u>MCDU</u>					
AFS - MCDU - FM1, FM2 or IND annunciator comes on				 	228200 P 246 T 810 831
MCDU (11VU)					
MCDU 1 & 2, INDEPENDENT OPERATION message in the scratchpad					228300 PA222 T 810 892
MCDU 1 or 2, FMS1/FMS2 SPD TGT DIFF message in the scatchpad				 	228300 PA231 T 810 900
MCDU 1 or 2, messages FMGC TIME OUT with OPP FMGC IN PROGRESS					228300 PA224 T 810 893
MCDU 1, the FAIL annunciator comes on	AFS	AFS: MCDU1	228212	1	228200 P 203 T 810 802
	IDENT: CFDS				
MCDU 1, the FAIL annunciator comes on	AFS	AFS: MCDU1 (FW DISC)/FMGC1 associated with	228212	1	228200 P 211 T 810 809
	AFS	AFS: MCDU1 (FW DISC)/FMGC2	228212	1	
MCDU 2, the FAIL annunciator comes on	AFS	AFS: MCDU2	228212	1	228200 P 208 T 810 806
amanciator comes on	IDENT: CFDS				1 0 10 000

EFF: ALL
SROS

R

22-LOCAL Page 101 Nov 01/07

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
WARNINGS/ MALFORCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE	
MCDU 2, the FAIL annunciator comes on	AFS	AFS: MCDU2 (FW DISC)/FMGC2 associated with	228212	1	228200 P 213 T 810 810	
	AFS	AFS: MCDU2 (FW DISC)/FMGC1	228212	1		

EFF: ALL

SROS

22-LOCAL Page 102

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - FAULT SYMPTOMS

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES			FAULT ISOLATION	
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C	!!!
	AFS - ALT SEL red flag shown on the PFD associated with AFS - SPD SEL red flag shown on the PFD					221100 P 252 T 810 837
	AFS - AMM Task 221000710 00200 Results not satisfactory					221100 P 250 T 810 835
?	AFS - Autoland - unsatisfactory autoland				T	228300 PA230 T 810 898
	AFS - Loss of the rudder trim function on the FAC				T	226200 P 213 T 810 809
	AFS - Loss of the rudder trim function on the FAC 2					226200 P 217 T 810 810
	AFS - RTOK indication at the end of maintenance message					220000 P 202 T 810 803
	AFS - SPD SEL red flag shown on the PFD associated with AFS - ALT SEL red flag shown on the PFD				†	221100 P 252 T 810 837
	AFS-A/THR engagement inoperative after installation of new FMGC					223100 P 205 T 810 803
	AFS-A/THR instinctive disconnect CAPT P/BSW inoperative					223100 P 215 T 810 807
	AFS-A/THR instinctive disconnect F/O P/BSW inoperative				†	223100 P 215 T 810 807

EFF :	ALL
SROS	

22-OBSV Page 101

Nov 01/05

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	 	FAULT ISOLATION			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!!!
AFS-A/THR pushbutton switch does not come on at A/THR engagement					223100 P 210 T 810 804
AFS-Access to RAD/NAV page inoperative on the MCDU 1&2					228200 P 242 T 810 827
AFS-Access to RAD/NAV page inoperative on the MCDU1					228200 P 237 T 810 821
AFS-Access to RAD/NAV page inoperative on the MCDU2					228200 P 239 T 810 822
AFS-Access to the MODE MENU page on the MCDU inoperative					226600 PA215 T 810 883
AFS-AFS TEST inoperative in the BITE of the FAC 1					226600 P 288 T 810 863
AFS-AFS TEST inoperative in the BITE of the FAC 2					226600 P 290 T 810 864
AFS-AFS TEST inoperative in the BITE of the FAC 2		AFS: LGCIU2-FAC2 CKT	323171	1	226600 P 286 T 810 862
AFS-AFS TEST inoperative in the BITE of the FMGC 1 associated with AFS-LAND TEST REFUSED message displayed after LAND TEST selection					228300 PA206 T 810 869
AFS-AFS TEST inoperative in the BITE of the FMGC 2 associated with AFS-LAND TEST REFUSED message displayed after LAND TEST selection					228300 PA208 T 810 870

EFF: ALL
SROS

22-OBSV

Page 102 Nov 01/05

TROUBLE SHOOTING MANUAL

HADNINGS (MALEUNGTIONS	CFDS FAULT MESSAGES						FAULT
WARNINGS/MALFUNCTIONS	SOURCE		MESSAGE		ATA	С	ISOLATION PROCEDURE
AFS-AFS TEST inoperative on the two MCDUs associated with AFS-LAND TEST inoperative on the two MCDUs	AFS	AFS:	LGCIU1-FAC1	CKT	323171	1	226600 P 284 T 810 861
AFS-AP 1 engagement inoperative after installation of new FMGC							221100 Р 233 Т 810 825
AFS-AP 1 pushbutton switch does not come on at AP 1 engagement							221100 P 225 T 810 817
AFS-AP 2 engagement inoperative after installation of new FMGC							221100 P 235 T 810 826
AFS-AP 2 pushbutton switch does not come on at AP 2 engagement							221100 P 22 T 810 818
AFS-Asymmetric flight only with AP engaged whatever the side							272000 Р 21 Т 810 804
' ',	AFS	AFS:	MCDU1		228212	1	228200 P 20
MCDU MENU page is not shown on the MCDU 1	IDENT: CFDS						Т 810 801
' ',	AFS	AFS:	MCDU2		228212	1	228200 P 200
MCDU MENU page is not shown on the MCDU 2	IDENT: CFDS						Т 810 805
AFS-Automatic switching of the MCDU 1 inoperative							228200 P 219 T 810 813
AFS-Automatic switching of the MCDU 2 inoperative							228200 P 220 T 810 814
AFS-CHECK GW message systematically shown on the MCDU							228200 P 24° T 810 823

EFF		:		\LL
ROS	S			

22-OBSV

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	Ţ	FAULT ISOLATION			
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	C	!
AFS-Communication with ACARS not possible through the MCDU 1					228200 P 229 T 810 819
AFS-Communication with ACARS not possible through the MCDU 2					228200 P 233 T 810 820
AFS-Communication with AIDS not possible through the MCDU 1					228200 P 225 T 810 817
AFS-Communication with AIDS not possible through the MCDU 2					228200 P 227 T 810 818
AFS-Communication with ATSU not possible through the MCDU 1					228200 P 229 T 810 819
AFS-Communication with ATSU not possible through the MCDU 2					228200 P 233 T 810 820
AFS-Communication with CFDS not possible through the MCDU 1					228200 P 221 T 810 815
AFS-Communication with CFDS not possible through the MCDU 2					228200 P 223 T 810 816
AFS-Communication with FMGS 1 not possible through the MCDU 1					228200 P 215 T 810 811
AFS-Communication with FMGS 2 not possible through the MCDU 2					228200 P 217 T 810 812
AFS-Electrical transient effect on the FMGCs				 	228300 PA216 T 810 875
AFS-FAULT legend of the FLT CTL/FAC1 p/bsw comes on without ECAM warning					226600 P 241 T 810 836

EFF :	ALL
SROS	

R

Aug 01/05

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		FAULT ISOLATION			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
	AFS-FAULT legend of the FLT CTL/FAC1 p/bsw stays off with ECAM warning					226600 P 245 T 810 838
	AFS-FAULT legend of the FLT CTL/FAC2 p/bsw comes on without ECAM warning					226600 P 243 T 810 837
	AFS-FAULT legend of the FLT CTL/FAC2 p/bsw stays off with ECAM warning					226600 Р 248 Т 810 839
R	AFS-FMGC unserviceable on ground after the reset of the related C/B					228300 PA227 T 810 895
	AFS-LAND TEST inoperative on the two MCDUs associated with AFS-AFS TEST inoperative on the two MCDUs	AFS	AFS: LGCIU1-FAC1	CKT 323171	1	226600 P 284 T 810 861
R	AFS-LAND TEST REFUSED message displayed after LAND TEST selection associated with AFS-AFS TEST inoperative in the BITE of the FMGC					228300 PA206 T 810 869
R	AFS-LAND TEST REFUSED message displayed after LAND TEST selection associated with AFS-AFS TEST inoperative in the BITE of the FMGC 2					228300 PA208 T 810 870
R	AFS-Loss of A/THR during Take Off					223100 P 229 T 810 815
R	AFS-Loss of NAV mode (reversion to basic modes)					228300 PA224 T 810 893

22-OBSV

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		FAULT ISOLATION			
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	!!!
	AFS-Loss of the rudder travel limiting function on the FAC 1					226100 P 205 T 810 803
	AFS-Loss of the rudder travel limiting function on the FAC 2					226100 P 209 T 810 804
R	AFS-Loss of the yaw damper function at or after engine start associated with Upper ECAM DU Warnings AUTO FLT YAW DAMPER 1					226300 P 229 T 810 815
R	AFS-Loss of the yaw damper function at or after engine start associated with Upper ECAM DU Warnings AUTO FLT YAW DAMPER 2					226300 P 229 T 810 815
R	AFS-Loss of the yaw damper function at or after engine start associated with Upper ECAM DU Warnings AUTO FLT YAW DAMPER SYS					226300 P 229 T 810 815
	AFS-Loss of the yaw damper function on the FAC 1					226300 P 201 T 810 801
R	AFS-Loss of the yaw damper function on the FAC 2					226300 P 206 T 810 802
	AFS-Map shift on ND DU (FMS or Navigation systems malfunction)					228300 PA226 T 810 894
	AFS-No indication on the rudder trim indicator				† 	226200 P 231 T 810 817

EFF :	ALL
SROS	

22-OBSV Page 106

Aug 01/06

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		FAULT ISOLATION			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!
R	AFS-No response from the FMGC 1 after the BITE test					228300 PA213 T 810 873
	AFS-OFF legend of FLT CTL/FAC1 p/bsw stays off at disengagement of FAC1					226600 P 251 T 810 840
	AFS-OFF legend of FLT CTL/FAC2 p/bsw stays off at disengagement of FAC2					226600 P 253 T 810 841
	AFS-Rudder-trim control- switch inoperative in any direction on FAC 1					226200 P 206 T 810 804
	AFS-Rudder-trim control- switch inoperative in any direction on FAC 2					226200 P 208 T 810 806
	AFS-Rudder-trim control- switch inoperative in one direction on FAC 1					226200 P 205 T 810 803
	AFS-Rudder-trim control- switch inoperative in one direction on FAC 2					226200 P 207 T 810 805
	AFS-Rudder-trim reset pushbutton-switch inoperative on the FAC 1	AFS	AFS: FAC2/RT RESET SW 8CC	226634	1	226200 P 229 T 810 815
	AFS-Rudder-trim reset pushbutton-switch inoperative on the FAC 2	AFS	AFS: FAC2/RT RESET SW 8CC	226634	1	226200 P 230 T 810 816
	AFS-Speed dropping in open climb or climb mode before top of climb				 	226600 PA229 T 810 893
R	AFS-The FD 1 pushbutton switch does not come on after A/C energization					228300 P 247 T 810 835

EFF :	ALL	 	
ROS			

22-OBSV

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		FAULT ISOLATION			
	WARNINGS/ MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!!
R	AFS-The FD 1 pushbutton switch does not come on after A/C energization associated with PFD Flag(s) AFS-No FD 1 indication on the PFD 1 after the aircraft energization					228300 P 247 T 810 835
R	AFS-The FD 2 pushbutton switch does not come on after A/C energization					228300 P 250 T 810 836
R	AFS-The FD 2 pushbutton switch does not come on after A/C energization associated with PFD Flag(s) AFS-No FD 2 indication on the PFD 2 after the aircraft energization					228300 P 250 T 810 836
R	AFS-The FMGC 1 does not get the navigation data base from data loader					228300 P 296 T 810 861
R	AFS-The FMGC 2 does not get the navigation data base from data loader					228300 P 297 T 810 862
	AFS-The rudder trim indicator does not confirm rudder movement					226200 P 233 T 810 818
	AFS-The screen is blank on the MCDU 1					228200 P 244 T 810 828
	AFS-The screen is blank on the MCDU 2					228200 P 245 T 810 829
	AFS-WINDSHEAR TEST not OK					226600 PA222 T 810 888
	AFS-Wrong VLS, F, S or Green Dot indications on PFD					226600 PA224 T 810 889

EFF :	ALL		
SROS			

22-OBSV Page 108

Aug 01/05

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - FAULT SYMPTOMS

LIADNINGS / MALEUNGITONS	CFDS FAULT MESSAGES				FAULT ISOLATION	
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	С	i	
	ACARSMU	FMGC1 (1CA1)/ ACARS MU (1RB)	228334	3	232400 P 204 T 810 804	
	ACARSMU	FMGC1(1CA1) BUS FM ACARS /ATSU1(1TX1)	228334	1	462100 P 210 T 810 807	
	ACARSMU	FMGC1(1CA1) BUS FM ACARS /ATSU1(1TX1)	228334	3	462100 P 210 T 810 807	
	ACARSMU	FMGC2 (1CA2)/ ACARS MU (1RB)	228334	3	232400 P 205 T 810 805	
	ACARSMU	FMGC2(1CA2) BUS FM ACARS /ATSU1(1TX1)	228334	1	462100 P 212 T 810 808	
	ACARSMU	FMGC2(1CA2) BUS FM ACARS /ATSU1(1TX1)	228334	3	462100 P 212 T 810 808	
	ACARSMU	MCDU1 (3CA1)/ ACARS MU (1RB)	228334	3	232400 P 206 T 810 806	
	ACARSMU	MCDU1(3CA1)/ATSU1(1TX1)	228212	1	462100 P 217 T 810 810	
	ACARSMU	MCDU2 (3CA2)/ ACARS MU (1RB)	228334	3	232400 P 207 T 810 807	
	ACARSMU	MCDU2(3CA2)/ATSU1(1TX1)	228212	1	462100 P 219 T 810 811	
	ACARSMU	MCDU3(3CA3)/ATSU1(1TX1)	228212	1	462100 P 221 T 810 812	
	ADF 1	FMGC1 (1CA1)/RMP1 (1RG1) /ADF1 (2RP1)	228334	3	345300 P 222 T 810 811	
	ADF 2	FMGC2 (1CA2)/RMP2 (1RG2) /ADF2 (2RP2)	228334	3	345300 P 225 T 810 812	
	ADR 1	FCU (3CA)	228112	1	341300 PA282 T 810 941	
	ADR 1	FCU (3CA)/ ADIRU1 (1FP1)	228112	1	341300 PA247 T 810 921	

EFF: ALL

R

R

22-CFDS

Page 101 May 01/06

TROUBLE SHOOTING MANUAL

	HARNITHOS (MAL FUNCTIONS	CFDS FAULT MESSAGES				FAULT
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
R		ADR 1	FCU (3CA)/ ADIRU1 (1FP1) associated with	228112	1	341381 P 233 T 810 826
		ADR 3	FCU (3CA)/ ADIRU3 (1FP3)	228112	1	
		ADR 2	FCU (3CA)	228112	1	341300 PA283 T 810 942
		ADR 2	FCU (3CA)/ ADIRU2 (1FP2)	228112	1	341300 PA248 T 810 922
		ADR 3	FCU (3CA)	228112	1	341300 PA284 T 810 943
		ADR 3	FCU (3CA)/ ADIRU3 (1FP3)	228112	1	341300 PA249 T 810 923
R		ADR 3	FCU (3CA)/ ADIRU3 (1FP3) associated with			341381 P 233 T 810 826
		ADR 1	FCU (3CA)/ ADIRU1 (1FP1)	228112	1	
		AFS	AFS: CHECK FAC1 associated with	226634	1	220000 P 202 T 810 803
		AFS	AFS: FAC1 RTOK	226634	1	
		AFS	AFS: CHECK FAC1	226634	1	226600 PA207 T 810 873
		AFS	AFS: CHECK FAC2	226634	1	220000 P 202
		AFS	associated with AFS: FAC2 RTOK	226634	1	Т 810 803
		AFS	AFS: CHECK FAC2	226634	1	226600 PA208 T 810 874
		AFS	AFS: CHECK FMGC1 associated with	228334	1	220000 P 202 T 810 803
		AFS	AFS: FMGC1 RTOK	228334	1	1 010 003
		AFS	AFS: CHECK FMGC1	228334	1	228300 PA204 T 810 867
		AFS	AFS: CHECK FMGC2 associated with	228334	1	220000 P 202 T 810 803
		AFS	AFS: FMGC2 RTOK	228334	1	

EFF:	ALL		
SROS			

22-CFDS

Page 102 Aug 01/06

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES			
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
		AFS	AFS: CHECK FMGC2	228334	1	228300 PA205 T 810 868
		AFS	AFS: CHK FAC1 RT	226634	1	226200 P 236 T 810 820
R		AFS	AFS: CHK FAC1 YD	226634	1	226300 P 223 T 810 809
		AFS	AFS: CHK FAC1-ADIRU	226634	1	226600 P 282 T 810 859
		AFS	AFS: CHK FAC2 RT	226634	1	226200 P 237 T 810 821
R		AFS	AFS: CHK FAC2 YD	226634	1	226300 P 224 T 810 810
		AFS	AFS: CHK FAC2-ADIRU	226634	1	226600 P 283 T 810 860
		AFS	AFS: CHK FG1-ATHR P/B CKT	228334	1	223100 P 222 T 810 810
		AFS	AFS: CHK FG2-ATHR P/B CKT	228334	1	223100 P 223 T 810 811
		AFS	AFS: CHK FIDS-FAC1 CKT	226634	1	226600 P 298 T 810 868
		AFS	AFS: CHK FIDS-FAC2 CKT	226634	1	226600 PA200 T 810 869
		AFS	AFS: CHK FIDS-FMGC1 CKT	226634	1	226600 PA202 T 810 870
		AFS	AFS: CHK FIDS-FMGC2 CKT	226634	1	226600 PA204 T 810 871
		AFS	AFS: CHK FMGC1 (FCU INPUT)	228334	1	228300 PA201 T 810 864
		AFS	AFS: CHK FMGC1-AP P/B CKT	228334	1	221100 P 236 T 810 827

EFF: ALL

22-CFDS

Page 103 Aug 01/06

TROUBLE SHOOTING MANUAL

	LIADNINGS /MALEUNGITONS		FAULT ISOLATION			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	!!
		AFS	AFS: CHK FMGC1-FAC1/2 WRG	228334	1	226600 PA213 T 810 881
R		AFS	AFS: CHK FMGC2 (FCU INPUT)	228334	1	228300 PA202 T 810 865
		AFS	AFS: CHK FMGC2-AP P/B	228334	1	221100 P 237 T 810 828
		AFS	AFS: CHK FMGC2-FAC 1/2 WRG	228334	1	226600 PA214 T 810 882
		AFS	AFS: FAC1 associated with	226634	1	226600 P 215 T 810 811
		AFS	AFS: FMGC2/FAC1 (HLTY	228334	1	!!!
		AFS	AFS: FAC1	226634	1	226600 P 217 T 810 813
		AFS	AFS: FAC1 RTOK associated with	226634	1	220000 P 202 T 810 803
		AFS	AFS: CHECK FAC1	226634	1	!!!
		AFS	AFS: FAC1 RTOK	226634	1	220000 P 202 T 810 803
		AFS	AFS: FAC1/AP1 ENGD WIRING associated with	226634	1	221100 P 213 T 810 811
		AFS	AFS: FMGC1/AP ENGD FDBK	228334	1	
		AFS	AFS: FAC1/AP1 ENGD WIRING	226634	1	226600 P 225 T 810 821
		AFS	AFS: FAC1/AP2 ENGD WIRING associated with	226634	1	221100 P 217 T 810 813
		AFS	AFS: FMGC1/AP2 ENGD WIRG	228334	1	
		AFS		228334	1	
		AFS	AFS: FAC1/AP2 ENGD WIRING	226634	1	226600 P 226 T 810 822

EFF: ALL SROS

22-CFDS

Page 104

TROUBLE SHOOTING MANUAL

	HARNINGS (MAL FUNCTIONS		CFDS FAULT MESSAGES			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	С	ISOLATION PROCEDURE
		AFS	AFS: FAC1/ELAC1 BUS WIRG	226634	1	226600 P 255 T 810 842
		AFS	AFS: FAC1/ELAC2 BUS WIRG	226634	1	226600 P 256 T 810 843
		AFS	AFS: FAC1/FMGC1 ARINC LK	226634	1	226600 PA209 T 810 877
		AFS	AFS: FAC1/FMGC1 BUS WIRG	226634	1	226600 P 229 T 810 825
R		AFS	AFS: FAC1/FMGC1 BUS WIRG	226634	1	228300 P 294 T 810 859
		AFS	AFS: FAC2/FMGC1 BUS WIRG	226634	1	!!!!
		AFS	AFS: FAC1/FMGC2 ARINC LK	226634	1	226600 PA211 T 810 879
		AFS	AFS: FAC1/FMGC2 BUS WIRG	226634	1	226600 P 231 T 810 827
R		AFS	AFS: FAC1/FMGC2 BUS WIRG associated with	226634	1	228300 P 295 T 810 860
		AFS	AFS: FAC2/FMGC2 BUS WIRG	226634	1	!!!!
		AFS	AFS: FAC1/P-B SW 12CC1	226634	1	226600 P 241 T 810 836
		AFS	AFS: FAC1/PARITY PIN PRG	226634	1	226600 P 233 T 810 829
		AFS	AFS: FAC1/RT ENGD CHG-OV	226634	1	226600 P 219 T 810 815
		AFS	AFS: FAC1/RTL ENGD CHG-OV	226634	1	226600 P 221 T 810 817
		AFS	AFS: FAC1/YD ENGD CHG-OV	226634	1	226600 P 223 T 810 819
		AFS	AFS: FAC2 associated with	226634	1	226600 P 216 T 810 812
		AFS	AFS: FMGC1/FAC2 (HLTY	228334	1	. 5.5 512

EFF: ALL

22-CFDS

Page 105 Aug 01/05

TROUBLE SHOOTING MANUAL

LIADNINGS /MALEUNGTIONS	CFDS FAULT MESSAGES				
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
	AFS	AFS: FAC2	226634	1	226600 P 218 T 810 814
	AFS	AFS: FAC2 RTOK associated with	226634	1	220000 P 202 T 810 803
	AFS	AFS: CHECK FAC2	226634	1	
	AFS	AFS: FAC2 RTOK	226634	1	220000 P 202 T 810 803
	AFS	AFS: FAC2/AP1 ENGD WIRING	226634	1	221100 P 219 T 810 814
	AFS	associated with AFS: FMGC2/AP1 ENGD WIRG and	228334	1	
	AFS	AFS: FMGC1/AP ENGD FDBK	228334	1	
	AFS	AFS: FAC2/AP1 ENGD WIRING	226634	1	226600 P 227 T 810 823
	AFS	AFS: FAC2/AP2 ENGD WIRING associated with	226634	1	221100 P 215 T 810 812
	AFS	!	228334	1	
	AFS	AFS: FAC2/AP2 ENGD WIRING	226634	1	226600 P 228 T 810 824
	AFS	AFS: FAC2/ELAC1 BUS WIRG	226634	1	226600 P 258 T 810 845
	AFS	AFS: FAC2/ELAC2 BUS WIRG	226634	1	226600 P 257 T 810 844
	AFS	AFS: FAC2/FMGC1 ARINC LK	226634	1	226600 PA210 T 810 878
	AFS	AFS: FAC2/FMGC1 BUS WIRG	226634	1	226600 P 230 T 810 826
	AFS AFS	AFS: FAC2/FMGC1 BUS WIRG associated with AFS: FAC1/FMGC1 BUS WIRG			228300 P 294 T 810 859
	 	 			
	AFS 	AFS: FAC2/FMGC2 ARINC LK	226634	1	226600 PA212 T 810 880

EFF: ALL

R

22-CFDS

Page 106 Aug 01/05

TROUBLE SHOOTING MANUAL

	HARNINGS (MALIFILMOTTONS		FAULT			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
		AFS	AFS: FAC2/FMGC2 BUS WIRG	226634	1	226600 P 232 T 810 828
R		AFS	AFS: FAC2/FMGC2 BUS WIRG associated with	226634	1	228300 P 295 T 810 860
		AFS	AFS: FAC1/FMGC2 BUS WIRG	226634	1	
		AFS	AFS: FAC2/P-B SW 12CC2	226634	1	226600 P 243 T 810 837
		AFS	AFS: FAC2/PARITY PIN PRG	226634	1	226600 P 234 T 810 830
		AFS	AFS: FAC2/RT ENGD CHG-OV	226634	1	226600 P 220 T 810 816
		AFS	AFS: FAC2/RTL ENGD CHG-OV	226634	1	226600 P 222 T 810 818
		AFS	AFS: FAC2/YD ENGD CHG-OV	226634	1	226600 P 224 T 810 820
		AFS	AFS: FCU (APPR NOT ENGD)	228112	1	228100 P 218 T 810 810
		AFS	AFS: FMGC1	228334	1	228300 P 224 T 810 817
		AFS	AFS: FMGC1 RTOK associated with	228334	1	220000 P 202 T 810 803
		AFS	AFS: CHECK FMGC1	228334	1	
		AFS	AFS: FMGC1 RTOK	228334	1	220000 P 202 T 810 803
		AFS	AFS: FMGC1/AP ENGD FDBK associated with	228334	1	221100 P 213 T 810 811
		AFS	AFS: FAC1/AP1 ENGD WIRING	226634	1	
		AFS	AFS: FMGC1/AP ENGD FDBK associated with	228334	1	221100 P 219 T 810 814
		AFS	AFS: FAC2/AP1 ENGD WIRING	226634	1	010 014
		AFS	and AFS: FMGC2/AP1 ENGD WIRG	228334	1	l

EFF: ALL SROS

22-CFDS

Page 107 Aug 01/05

TROUBLE SHOOTING MANUAL

	HADNINGS /MAL FUNCTIONS	CFDS FAULT MESSAGES				FAULT
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
		AFS	AFS: FMGC1/AP ENGD FDBK	228334	1	221100 P 221 T 810 815
		AFS	AFS: FMGC1/AP2 ENGD WIRG associated with	228334	1	221100 P 217 T 810 813
		AFS	AFS: FAC1/AP2 ENGD WIRING and	226634	1	
		AFS	AFS: FMGC2/AP ENGD FDBK	228334	1	
		AFS	AFS: FMGC1/AP2 ENGD WIRG	228334	1	221100 P 231 T 810 823
		AFS	AFS: FMGC1/ATHR DISC CKT	228334	1	228300 P 235 T 810 827
		AFS	AFS: FMGC1/ATHR ENGD FDBK	228334	1	223100 P 201 T 810 801
R		AFS	AFS: FMGC1/ATHR ENGD FDBK	228334	1	223100 P 225 T 810 813
		AFS	associated with AFS: FMGC2/ATHR1 ENG WIRG	228334	 1 	
R		AFS	AFS: FMGC1/ATHR2 ENG WIRG	228334	1	223100 P 227 T 810 814
R R		AFS	associated with AFS: FMGC2/ATHR ENGD FDBK	228334	 1 	
		AFS	AFS: FMGC1/ATHR2 ENG WIRG	228334	1	228300 P 239 T 810 829
		AFS	AFS: FMGC1/FAC1 (HLTY CKT)	228334	1	228300 P 201 T 810 801
		AFS	AFS: FMGC1/FAC1 BUS WIRG	228334	1	228300 P 231 T 810 823
		AFS	AFS: FMGC1/FAC2 (HLTY CKT) associated with	228334	1	226600 P 216 T 810 812
		AFS	AFS: FAC2	226634	1	

EFF: ALL

22-CFDS

Page 108 Aug 01/05

TROUBLE SHOOTING MANUAL

LIADNINGS (MALFUNCTIONS			FAULT		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	АТА	С	ISOLATION PROCEDURE
	AFS	AFS: FMGC1/FAC2 (HLTY CKT)	228334	1	228300 P 203 T 810 803
	AFS	AFS: FMGC1/FAC2 BUS WIRG	228334	1	228300 P 233 T 810 825
	AFS	AFS: FMGC1/FCU (AP1 SW)	228334	1	228300 P 205 T 810 805
	AFS	AFS: FMGC1/FCU (ATHR SW)	228334	1	223100 P 213 T 810 805
	AFS	AFS: FMGC1/FCU (FW DISC1)	228334	1	228100 P 212 T 810 808
	AFS	AFS: FMGC1/FCU (FW DISC2)	228334	1	228100 P 215 T 810 809
	AFS	AFS: FMGC1/FMGC2 (FD CKT)	228334	1	228300 P 241 T 810 831
	AFS	AFS: FMGC1/FMGC2 BUS A WG	228334	1	228300 P 222 T 810 816
	AFS	AFS: FMGC1/PARITY PIN	228334	1	228300 P 212 T 810 809
	AFS	AFS: FMGC1/TAKE OV CKT	228334	1	228300 P 208 T 810 807
	AFS	AFS: FMGC2	228334	1	228300 P 225 T 810 818
	AFS	AFS: FMGC2 RTOK associated with	228334	1	220000 P 202 T 810 803
	AFS	AFS: CHECK FMGC2	228334	1	
	AFS	AFS: FMGC2 RTOK	228334	1	220000 P 202 T 810 803
	AFS AFS	AFS: FMGC2/AP ENGD FDBK associated with AFS: FAC2/AP2 ENGD WIRING	228334 226634		221100 P 215 T 810 812

EFF: ALL SROS **22-CFDS**

Page 109 May 01/05

TROUBLE SHOOTING MANUAL

WARNINGS/MALFUNCTIONS	T	FAULT ISOLATION			
WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	
	AFS	AFS: FMGC2/AP ENGD FDBK associated with	228334	1	221100 P 217 T 810 813
	AFS	AFS: FAC1/AP2 ENGD WIRING	226634	1	
	AFS	AFS: FMGC1/AP2 ENGD WIRG	228334	1	
	AFS	AFS: FMGC2/AP ENGD FDBK	228334	1	221100 P 223 T 810 816
	AFS	AFS: FMGC2/AP1 ENGD WIRG associated with	228334	1	 221100 P 219 T 810 814
	AFS	AFS: FAC2/AP1 ENGD WIRING	226634	1	
	AFS	AFS: FMGC1/AP ENGD FDBK	228334	1	
	AFS	AFS: FMGC2/AP1 ENGD WIRG	228334	1	221100 P 232 T 810 824
	AFS	AFS: FMGC2/ATHR DISC CKT	228334	1 1 	228300 P 237 T 810 828
	AFS	AFS: FMGC2/ATHR ENGD FDBK	228334	1	223100 P 203 T 810 802
	AFS	AFS: FMGC2/ATHR ENGD FDBK associated with	228334	1	223100 P 227 T 810 814
	AFS	AFS: FMGC1/ATHR2 ENG	228334	1	
	AFS	AFS: FMGC2/ATHR1 ENG WIRG associated with	228334	1	223100 P 225 T 810 813
	AFS	AFS: FMGC1/ATHR ENGD	228334	1	
	AFS	AFS: FMGC2/ATHR1 ENG WIRG	228334	1	228300 P 240 T 810 830
	AFS	AFS: FMGC2/FAC1 (HLTY CKT) associated with	228334	1	226600 P 215 T 810 811
	AFS	AFS: FAC1	226634	1	

EFF: ALL SROS

R

R

R

22-CFDS

Page 110

TROUBLE SHOOTING MANUAL

	HADNINGS /MALEUNGITONS		CFDS FAULT MESSAGES			FAULT ISOLATION
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	
		AFS	AFS: FMGC2/FAC1 (HLTY CKT)	228334	1	228300 P 202 T 810 802
		AFS	AFS: FMGC2/FAC1 BUS WIRG	228334	1	228300 P 232 T 810 824
		AFS	AFS: FMGC2/FAC2 (HLTY CKT)	228334	1	228300 P 204 T 810 804
		AFS	AFS: FMGC2/FAC2 BUS WIRG	228334	1	228300 P 234 T 810 826
		AFS	AFS: FMGC2/FCU (AP2 SW)	228334	1	228300 P 206 T 810 806
		AFS	AFS: FMGC2/FCU (ATHR SW)	228334	1	223100 P 214 T 810 806
		AFS	AFS: FMGC2/FCU (FW DISC1)	228334	1	228100 P 212 T 810 808
		AFS	AFS: FMGC2/FCU (FW DISC2)	228334	1	228100 P 215 T 810 809
R		AFS	AFS: FMGC2/FMGC1 (FD CKT)	228334	1	228300 P 244 T 810 832
		AFS	AFS: FMGC2/FMGC1 BUS A	228334	1	228300 P 220 T 810 815
		AFS	AFS: FMGC2/PARITY PIN	228334	1	228300 P 213 T 810 810
		AFS	AFS: FMGC2/TAKE OV CKT	228334	1	228300 P 210 T 810 808
		AFS	AFS: MCDU1	228212	1	228200 P 205 T 810 804
		AFS	AFS: MCDU1	228212	1	228200 P 204 T 810 803
		IDENT:	CFDS			010 005
		AFS	AFS: MCDU1 (FW DISC)/FMGC1	228212	1	228200 P 211 T 810 809

EFF : ALL

SROS

Printed in France

22-CFDS

Page 111 Aug 01/05

TROUBLE SHOOTING MANUAL

	HADNINGS /MAL FUNCTIONS		CFDS FAULT MESSAGES			
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	ISOLATION PROCEDURE
		AFS	AFS: MCDU1 (FW DISC)/FMGC2	228212	1	228200 P 211 T 810 809
		AFS	AFS: MCDU2	228212	1	228200 P 210 T 810 808
		AFS	AFS: MCDU2	228212	1	228200 P 209 T 810 807
		IDENT:	CFDS			
		AFS	AFS: MCDU2 (FW DISC)/FMGC1	228212	1	228200 P 213 T 810 810
		AFS	AFS: MCDU2 (FW DISC)/FMGC2	228212	1	228200 P 213 T 810 810
R		ATC 1	FMGC(1CA1)/ ATC1(1SH1)	227034	3	345200 P 240 T 810 824
R		ATC 2	FMGC(1CA2)/ ATC2(1SH2)	227034	3	345200 P 241 T 810 825
		ATSU	FMGC1(1CA1) BUS FM ACARS /ATSU1(1TX1)	228334	3	462100 P 210 T 810 807
		ATSU	FMGC2(1CA2) BUS FM ACARS /ATSU1(1TX1)	228334	3	462100 P 212 T 810 808
		ATSU	MCDU1(3CA1)/ATSU1(1TX1)	228212	1	462100 P 217 T 810 810
		ATSU	MCDU2(3CA2)/ATSU1(1TX1)	228212	1	462100 P 219 T 810 811
		ATSU	MCDU3(3CA3)/ATSU1(1TX1)	228212	1	462100 P 221 T 810 812
		CFDS	MCDU3	228212	2	313200 PA272 T 810 922
		CFDS	NO FAC1 DATA	226634	2	313200 PA242 T 810 899
		CFDS	NO MCDU1 DATA	228212	3	313200 PA270 T 810 919

EFF: ALL
SROS

22-CFDS

Page 112 Nov 01/07

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGES	 S		FAULT ISOLATION
	WARNINGS/ MALFONCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
R		CFDS	NO MCDU2 DATA	228212	3	313200 PA271 T 810 920
		CPC 1	FMGS 1 OUT OF RANGE (XX)	228334	3	228300 PA218 T 810 876
		CPC 1	NO DATA FROM FMGS 1 (XX)	228334	3	213100 P 230 T 810 812
		CPC 1	NO DATA FROM FMGS 2 (XX)	228334	3	213100 P 230 T 810 812
		CPC 2	FMGS 1 OUT OF RANGE (XX)	228334	3	228300 PA218 T 810 876
		CPC 2	FMGS 2 OUT OF RANGE (XX)	228334	3	228300 PA219 T 810 877
		CPC 2	NO DATA FROM FMGS 1 (XX)	228334	3	213100 P 233 T 810 813
		CPC 2	NO DATA FROM FMGS 2 (XX)	228334	3	213100 P 233 T 810 813
ļ		DME 1	FMGC1(1CA1)/RMP1(1RG1)/ DME1(2SD1)	228334	3	345100 P 220 T 810 811
		DME 2	FMGC2(1CA2)/RMP2(1RG2)/ DME2(2SD2)	228334	3	345100 P 225 T 810 813
		DMU	FAC1 (1CC1) / DMU (1TV)	226634	3	313600 P 234 T 810 830
		DMU	FAC1 (1CC1) / FDIMU (1OTV)	226634	3	313600 P 290 T 810 911
		DMU	FAC2 (1CC2) / DMU (1TV)	226634	3	313600 P 234 T 810 830
		DMU	FAC2 (1CC2) / FDIMU (1OTV)	226634	3	313600 P 290 T 810 911
		DMU	FCU (2CA) / DMU (1TV)	228112	3	313600 P 224 T 810 825

EFF: ALL SROS

22-CFDS

Page 113

TROUBLE SHOOTING MANUAL

LIADNINGS / MALEUNGTIONS	<u> </u>	FAULT - ISOLATION		
WARNINGS/MALFUNCTIONS 	SOURCE	MESSAGE	АТА	C PROCEDURE
	DMU	FCU (2CA) / DMU (1TV)	228113	3 313600 P 224 T 810 825
	DMU	FCU (2CA) / FDIMU (10TV)	228112	3 313600 P 280 T 810 906
	DMU	FMGC1 (1CA1) / DMU (1TV)	228334	3 313600 P 212 T 810 819
	DMU	FMGC1 (1CA1) / FDIMU (10TV)	228334	3 313600 P 262 T 810 897
	DMU	FMGC2 (1CA2) / DMU (1TV)	228334	3 313600 P 212 T 810 819
	DMU	FMGC2 (1CA2) / FDIMU (10TV)	228334	3 313600 P 262 T 810 897
	DMU	MCDU 1 (3CA1) / FDIMU (10TV)	228212	3 313600 PA204 T 810 918
	DMU	MCDU 2 (3CA2) / FDIMU (10TV)	228212	3 313600 PA204 T 810 918
	DMU	MCDU1 (3CA1) / DMU (1TV)	228212	3 313600 P 249 T 810 865
	DMU	MCDU2 (3CA2) / DMU (1TV)	228212	3 313600 P 249 T 810 865
	ECAM 1	FWC1 : NO DATA FROM FCU1B/2B	228112	315300 P 238 T 810 830
	ECAM 1	FWC1 : NO DATA FROM FMGC1/FGC1	228334	1 315300 P 240 T 810 832
	ECAM 1	FWC1 : NO DATA FROM FMGC2/FGC2	228334	1 315300 P 242 T 810 834
	ECAM 1	FWC1 : NO DATA FROM FAC1	226634	1 315300 P 244 T 810 836
	ECAM 1	FWC1 : NO DATA FROM FAC2	226634	1 315300 P 246 T 810 838

EFF :	ALL	 	

R

R

R

R

R

22-CFDS

Page 114 Feb 01/06

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS		CFDS FAULT MESSAGE	 S	FAULT - ISOLATION
	WARNINGS/ MALFONCTIONS	SOURCE	MESSAGE	ATA C	!
R		ECAM 1	FWC2 : NO DATA FROM FCU1B/2B	228112 1	315300 P 239 T 810 831
R		ECAM 1	FWC2 : NO DATA FROM FMGC1/FGC1	228334 1	315300 P 241 T 810 833
R		ECAM 1	FWC2 : NO DATA FROM FMGC2/FGC2	228334 1	315300 P 243 T 810 835
R		ECAM 1	FWC2 : NO DATA FROM FAC1	226634 1	315300 P 245 T 810 837
R		ECAM 1	FWC2 : NO DATA FROM FAC2	226634 1	315300 P 247 T 810 839
R		ECAM 2	FWC1 : NO DATA FROM FCU1B/2B	228112 2	315300 P 238 T 810 830
R		ECAM 2	FWC1 : NO DATA FROM FMGC1/FGC1	228334 1	315300 P 240 T 810 832
R		ECAM 2	FWC1 : NO DATA FROM FMGC2/FGC2	228334 1	315300 P 242 T 810 834
R		ECAM 2	FWC1 : NO DATA FROM FAC1	226634 1	315300 P 244 T 810 836
R		ECAM 2	FWC1 : NO DATA FROM FAC2	226634 1	315300 P 246 T 810 838
R		ECAM 2	FWC2 : NO DATA FROM FCU1B/2B	228112 1	315300 P 239 T 810 831
R		ECAM 2	FWC2 : NO DATA FROM FMGC1/FGC1	228334 1	315300 P 241 T 810 833
R		ECAM 2	FWC2 : NO DATA FROM FMGC2/FGC2	228334 1	315300 P 243 T 810 835
R		ECAM 2	FWC2 : NO DATA FROM FAC1	226634 1	315300 P 245 T 810 837
R		ECAM 2	FWC2 : NO DATA FROM FAC2	226634 1	315300 P 247 T 810 839

EFF :	ALL	_	 	
S				

22-CFDS

Page 115 Feb 01/06

TROUBLE SHOOTING MANUAL

	LIADNINGS /MALEUNGITONS	CFDS FAULT MESSAGES				FAULT
	WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
R		EIS 1	DMC1 : NO FAC1 DATA	226634	1	316300 PA231 T 810 903
R		EIS 1	DMC1 : NO FAC2 DATA	226634	1	316300 PA233 T 810 904
R		EIS 1	DMC1 : NO FCU 1 A DATA	228134	1	316300 PA235 T 810 905
R		EIS 1	DMC1 : NO FCU 1 B DATA	228134	1	316300 PA236 T 810 906
R		EIS 1	DMC1 : NO FGC1 DATA	228334	2	316300 PA237 T 810 907
R		EIS 1	DMC1 : NO FGC2 DATA	228334	2	316300 PA238 T 810 908
R		EIS 1	DMC1 : NO FMC1 DATA	228334	1	316300 PA239 T 810 909
R		EIS 1	DMC1 : NO FMC2 DATA	228334	1	316300 PA240 T 810 910
R		EIS 2	DMC2 : NO FAC1 DATA	226634	1	316300 PA220 T 810 894
R		EIS 2	DMC2 : NO FAC2 DATA	226634	1	316300 PA222 T 810 895
R		EIS 2	DMC2 : NO FCU 2 A DATA	228134	1	316300 PA224 T 810 896
R		EIS 2	DMC2 : NO FCU 2 B DATA	228134	1	316300 PA225 T 810 897
R		EIS 2	DMC2 : NO FGC1 DATA	228334	2	316300 PA226 T 810 898
R		EIS 2	DMC2 : NO FGC2 DATA	228334	2	316300 PA227 T 810 899
R		EIS 2	DMC2 : NO FMC1 DATA	228334	1	316300 PA229 T 810 901

EFF :	ALL	······································
SROS		Printed in France

22-CFDSPage 116
Aug 01/05

TROUBLE SHOOTING MANUAL

LIADNINGS /MALEUNGITONS	CFDS FAULT MESSAGES		FAULT - ISOLATION	
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	PROCEDURE
	EIS 2	DMC2 : NO FMC2 DATA	228334	1 316300 PA228 T 810 900
	EIS 3	DMC3 : NO FAC1 DATA	226634	1 316300 PA286 T 810 944
	EIS 3	DMC3 : NO FAC2 DATA	226634	1 316300 PA288 T 810 945
	EIS 3	DMC3 : NO FCU 1 A DATA	228134	1 316300 PA290 T 810 946
	EIS 3	DMC3 : NO FCU 1 B DATA	228134	1 316300 PA291 T 810 947
	EIS 3	DMC3 : NO FCU 2 A DATA	228134	1 316300 PA294 T 810 950
	EIS 3	DMC3 : NO FCU 2 B DATA	228134	1 316300 PA295 T 810 951
	EIS 3	DMC3 : NO FGC1 DATA	228334	316300 PA292 T 810 948
	EIS 3	DMC3 : NO FGC2 DATA	228334	316300 PA293 T 810 949
	EIS 3	DMC3 : NO FMC1 DATA	228334	1 316300 PA296 T 810 952
	EIS 3	DMC3 : NO FMC2 DATA	228334	1 316300 PA230 T 810 902
	EIU1FAD	EIU1 : NO FCU DATA	228112	1 732500 P 248 T 810 879
	EIU1FAD	FCU, EIU (034), J3 ENG1A	228112	732500 P 264 T 810 891
	EIU1FAD	FCU, EIU (034), J3 ENG1A	228112	1 732500 P 264 T 810 891
	<u> </u>	r	228442	1 772500 04272
	E1U1FAD 	FCU, EIU (034), J3 ENG1B LEIU1FAD	[220112]	T 810 938

EFF: ALL

R

22-CFDS

Page 117 Feb 01/07

TROUBLE SHOOTING MANUAL

LIADNINGS / MALEUNGTIONS	CFDS FAULT MESSAGES		FAULT ISOLATION		
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	PROCEDURE
	EIU1FAD	FCU, EIU(ATN1), J3 ENG1A	228112	S	732500 P 260 T 810 889
	EIU1FAD	FCU, EIU(ATN1), J3 ENG1B	228112	S	732500 PA214 T 810 926
	EIU1FAD	FCU, EIU, (034), J3 ENG1B	228112	S	732500 PA232 T 810 938
	EIU2FAD	EIU2 : NO FCU DATA	228112	1	732500 P 249 T 810 880
	EIU2FAD	FCU, EIU (034), J3 ENG2A	228112	S	732500 P 266 T 810 892
	EIU2FAD	FCU, EIU (034), J3 ENG2A	228112		732500 P 266 T 810 892
	IDENT: E	EIU2FAD			010 072
	EIU2FAD	FCU, EIU (034), J3 ENG2B	228112		732500 PA234 T 810 939
	IDENT: EIU2FAD				
	EIU2FAD	FCU, EIU(ATN1), J3 ENG2A	228112	S	732500 P 262 T 810 890
	EIU2FAD	FCU, EIU(ATN1), J3 ENG2B	228112	S	732500 PA216 T 810 927
	EIU2FAD	FCU, EIU, (034), J3 ENG2B	228112	S	732500 PA234 T 810 939
	GPWC	FMGC (1CA1)/GPWC (1WZ)	228334	3	344800 P 213 T 810 807
	GPWC	FMGC1(1CA1)/GPWC(100SG)	228434	3	344300 PA222 T 810 856
	GPWC	FMGEC1(1CA1)/GPWC(100SG)	228334	3	344300 PA222 T 810 856
	ILS 1	FMGC1(1CA1)/RMP1(1RG1)/ ILS1(2RT1)	228334	3	343600 P 258 T 810 828
	ILS 2	FMGC2(1CA2)/RMP2(1RG2)/ ILS2(2RT2)	228334	3	343600 P 262 T 810 829

EFF : ALL
SROS

R R

R

R

22-CFDS

Page 118 Feb 01/08

TROUBLE SHOOTING MANUAL

HADNINGS /MALEUNCTIONS	CFDS FAULT MESSAGES			FAULT ISOLATION	
WARNINGS/MALFUNCTIONS	SOURCE	MESSAGE	ATA	С	
	IR 1	FMGC1 (1CA1)/ADIRU1 (1FP1)	228334	1	341400 P 291 T 810 872
	IR 1	FMGC1 (1CA1)/ADIRU1 (1FP1)	228334	1	228300 P 216 T 810 812
	IDENT:	IR 1, RMP123			
	IR 1	FMGC2 (1CA2)/ADIRU1 (1FP1)	228334	1	341400 P 292 T 810 873
	IR 1	FMGC2 (1CA2)/ADIRU1 (1FP1)	228334	1	228300 P 219 T 810 814
	IDENT:	IR 1, RMP123	-		
	IR 2	FMGC1 (1CA1)/ADIRU2 (1FP2)	228334	1	341400 P 293 T 810 874
	IR 2	FMGC1 (1CA1)/ADIRU2 (1FP2)	228334	1	228300 P 226 T 810 819
	IDENT:	IR 2, IR 3			
	IR 2	FMGC2 (1CA2)/ADIRU2 (1FP2)	228334	1	341400 P 294 T 810 875
	IR 2	FMGC2 (1CA2)/ADIRU2 (1FP2)	228334	1	228300 P 229 T 810 821
	IDENT:	IR 2, IR 3			
	IR 3	FMGC1 (1CA1)/ADIRU3 (1FP3)	228334	1	341400 P 295 T 810 876
	IR 3	FMGC1 (1CA1)/ADIRU3 (1FP3)	228334	1	228300 P 227 T 810 820
	IDENT:	IR 2, IR 3		•	
	IR 3	FMGC2 (1CA2)/ADIRU3 (1FP3)	228334	1	341400 P 296 T 810 877

EFF: ALL SROS **22-CFDS**

Page 119 Feb 01/08

TROUBLE SHOOTING MANUAL

	WARNINGS/MALFUNCTIONS	CFDS FAULT MESSAGES			FAULT ISOLATION	
	WARNINGS/MALFONCTIONS	SOURCE	MESSAGE	ATA	С	!!
		IR 3	FMGC2 (1CA2)/ADIRU3 (1FP3)	228334	1	228300 P 230 T 810 822
		IDENT:	IR 2, IR 3			
R		MMR 1	FMGC1(1CA1) BUS GPS/ MMR1(40RT1)	228334	3	343600 PA224 T 810 862
R		MMR 1	FMGC1(1CA1)/RMP1(1RG1)/ MMR1(40RT1)	228334	3	343600 P 258 T 810 828
R		MMR 1	FMGC2(1CA2) BUS GPS/ MMR1(40RT1)	228334	3	343600 PA226 T 810 864
R		MMR 1	FMGC2(1CA2) BUS ILS/ MMR1(40RT1)	228334	3	343600 PA222 T 810 860
R		MMR 1	FMGC2(1CA2) BUS MMR/ MMR1(40RT1)	228334	1	343600 PA232 T 810 870
R		MMR 2	FMGC1(1CA1) BUS GPS/ MMR2(40RT2)	228334	3	343600 PA225 T 810 863
R		MMR 2	FMGC1(1CA1) BUS ILS/ MMR2(40RT2)	228334	3	343600 PA223 T 810 861
R		MMR 2	FMGC1(1CA1) BUS MMR/ MMR2(40RT2)	228334	1	343600 PA233 T 810 871
R		MMR 2	FMGC2(1CA2) BUS GPS/ MMR2(40RT2)	228334	3	343600 PA227 T 810 865
R		MMR 2	FMGC2(1CA2)/RMP2(1RG2)/ MMR2(40RT2)	228334	3	343600 P 262 T 810 829
		RMP 123	FMGC1(1CA1)/RMP1(1RG1)	228334	1	231300 P 283 T 810 850
		RMP 123	FMGC1(1CA1)/RMP1(1RG1)	228334	1	228300 P 214 T 810 811
		IDENT: IR 1, RMP123				
		RMP123	FMGC2(1CA2)/RMP2(1RG2)	228334	1	231300 P 285 T 810 851

EFF: ALL

22-CFDS

Page 120 Feb 01/08

TROUBLE SHOOTING MANUAL

LIADNINGS (MALFUNCTIONS	CFDS FAULT MESSAGES		FAULT		
WARNINGS/MALFUNCTIONS 	SOURCE	MESSAGE	АТА	С	ISOLATION PROCEDURE
	RMP 123	FMGC2(1CA2)/RMP2(1RG2)	228334	1	228300 P 217
	IDENT:	IR 1, RMP123	<u></u>		Т 810 813
	RMP 123	RMP1 : NO DATA FROM FMGC1	228334	2	231300 P 283 T 810 850
	RMP123	RMP1 : NO DATA FROM FMGC1	228334	2	228300 P 214 T 810 811
	IDENT:	IR 1, RMP123			
	RMP 123	RMP2 : NO DATA FROM FMGC2	228334	2	231300 P 285 T 810 851
	RMP 123	RMP2 : NO DATA FROM FMGC2	228334	2	228300 P 217 T 810 813
	IDENT:	IR 1, RMP123			
	SDU	MCDU1(3CA1)+MCDU2(3CA2)+ MCDU3(3CA3)/SDU1(105RV1)	228212	3	232800 P 237 T 810 822
	SDU	MCDU1(3CA1)+MCDU2(3CA2)/ SDU1(105RV1)	228212	3	232800 P 237 T 810 822
	SDU	MCDU1(3CA1)+MCDU3(3CA3)/ SDU1(105RV1)	228212	3	232800 P 237 T 810 822
	SDU	MCDU1(3CA1)/SDU1(105RV1)	228212	3	232800 P 213 T 810 807
	SDU	MCDU2(3CA2)+MCDU3(3CA3)/ SDU1(105RV1)	228212	3	232800 P 237 T 810 822
	SDU	MCDU2(3CA2)/SDU1(105RV1)	228212	3	232800 P 215 T 810 808
	SDU	MCDU3(3CA3)/SDU1(105RV1)	228212	3	232800 P 217 T 810 809
	VOR 1	FMGC1(1CA1)/RMP1(1RG1)/ VOR1(3RS1)	228334	3	345500 P 241 T 810 823
	VOR 2	FMGC2(1CA2)/RMP2(1RG2)/ VOR2(3RS2)	228334	3	345500 P 245 T 810 824

EFF: ALL
SROS

22-CFDS

Page 121 Feb 01/08

TROUBLE SHOOTING MANUAL

AUTO FLIGHT - GENERAL - FAULT ISOLATION PROCEDURES

TASK 22-00-00-810-801

Display of an Operational Warning on the Upper ECAM DU

1. Possible Causes

R

2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Test
 Not applicable, no confirmation test is necessary.
- 4. Fault Isolation
- R A. Do a check for a message on the Post Flight Report (PFR): If there is no message, no action is necessary. If there is a message, do the trouble shooting procedure related to the maintenance message.

NOTE: Some operational Warnings are not printed on the PFR.

EFF: ALL 22-00-00

Page 201 May 01/06

TROUBLE SHOOTING MANUAL

TASK 22-00-00-810-803

Intermittent Failure

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Not applicable.
- 4. Fault Isolation
 - A. No maintenance action is required (RTOK: retest OK).

R NOTE: When the failure is no more present at the last flight phase change, the RTOK information is added at the end of the maintenance message.

EFF: ALL **22-00-00**

Page 202 Feb 01/03

SROS

TROUBLE SHOOTING MANUAL

AP/FD ENGAGEMENT - FAULT ISOLATION PROCEDURES

TASK 22-11-00-810-801

Failure of the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)

- wiring of the 28VDC and 28VDC GND signals

R

- short to ground between the circuit breaker (10CA1) and the A/THR 1 relays (5CA1), (17CA1) and (18CA1)
- C/B-AUTO FLT/FMGC/1 (10CA1) R
 - 2. Job Set-up Information
 - A. Referenced Information

______ DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1, 1CA2) Installation of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-31/01 ASM 22-84/01

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION ______

IDENT. LOCATION

49VU AUTO FLT/FMGC/1

10CA1 B02

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
 - (a) If the circuit breaker (10CA1) is open, refer to Para. 4.B.
- 4. Fault Isolation
 - A. If the circuit breaker (10CA1) is closed and if the test gives the maintenance message AFS : FMGC1:
 - remove the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001)
 - do a check and repair the wiring of the 28VDC and 28VDC GND signals at the FMGC1 connector (Ref. ASM 22-84/01)

EFF: ALL **22-11-00**

Page 201 Aug 01/96

SROS

R

TROUBLE SHOOTING MANUAL

R R R (1) If the check is correct:

- replace the FMGC-1 (1CA1) and (Ref. AMM TASK 22-83-34-400-001).

- B. If the circuit breaker (10CA1) is open:
 - close this circuit breaker.
 - (1) If the circuit breaker (10CA1) trips:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (a) If the fault continues:
 - do a check for a short to ground between the circuit breaker (10CA1) and the FMGC 1 (1CA1) (Ref. ASM 22-84/01)
 - do a check for a short to ground between the circuit breaker (10CA1) and the A/THR 1 relays (5CA1), (17CA1) and (18CA1) (Ref. ASM 22-31/01).
 - 1 If there is a short to ground: - repair the above wirings.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/FMGC/1 (10CA1).
- C. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 202 Aug 01/96

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-802

Failure of the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the 28VDC and 28VDC GND signals

R R

- short to ground between the circuit breaker (10CA2) and the A/THR 2 relays (5CA2), (17CA2) and (18CA2)
- C/B-AUTO FLT/FMGC 2 (10CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-31/01 ASM 22-84/01

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

IDENI. LUCATION

121VU AUTO FLT/FMGC/2

10CA2 M17

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
 - (a) If the circuit breaker (10CA2) is open, refer to Para. 4.B.
- 4. Fault Isolation
 - A. If the circuit breaker (10CA2) is closed and if the test gives the maintenance message AFS: FMGC2:
 - remove the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001)
 - do a check and repair the wiring of the 28VDC and 28VDC GND signals at the FMGC2 connector (Ref. ASM 22-84/01)

EFF: ALL

22-11-00

Page 203 Aug 01/96

SROS

TROUBLE SHOOTING MANUAL

R R R (1) If the check is correct:

- replace the FMGC-2 (1CA2) and (Ref. AMM TASK 22-83-34-400-001).

- B. If the circuit breaker (10CA2) is open:
 - close this circuit breaker.
 - (1) If the circuit breaker (10CA2) trips:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (a) If the fault continues:
 - do a check for a short to ground between the circuit breaker (10CA2) and the FMGC 2 (1CA2) (Ref. ASM 22-84/01)
 - do a check for a short to ground between the circuit breaker (10CA2) and the A/THR 2 relays (5CA2), (17CA2) and (18CA2) (Ref. ASM 22-31/01).
 - 1 If there is a short to ground: - repair the above wirings.
 - 2 If there is no short to ground: - replace the C/B-AUTO FLT/FMGC 2 (10CA2).
- C. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 204 Aug 01/96

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-803

Loss of the FMGC 1 Bus Feedback

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN A (MON) bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the FMGC MON OUT (MON) bus on the FMGC 1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION			
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS			

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/C-M ARINC LINK: replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FMGC OWN A (MON) bus from the FMGC1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC MON OUT (MON) bus on the FMGC 1 (1CA1), pin AE/14A, 14B to pin AB/9J, 9K (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

EFF: ALL **22-11-00**

Page 205 Aug 01/94

SROS

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-804

Loss of the FMGC 2 Bus Feedback

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN A (MON) bus from the FMGC 2 (1CA2) to the first terminal block
 - wiring of the FMGC MON OUT (MON) bus on the FMGC 2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION			
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS			

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/C-M ARINC LINK: - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FMGC OWN A (MON) bus from the FMGC2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC MON OUT (MON) bus on the FMGC 2 (1CA2), pin AE/14A, 14B to pin AB/9J, 9K (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

EFF: ALL **22-11-00**

Page 206 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-805

FMGC 1 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
R AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1 (ALPHA FLOOR): - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

ALL 22-11-00

Page 207 Feb 01/96

SROS

EFF:

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-806

FMGC 1 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)

R

- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation

R

A. If the test gives the maintenance message AFS: FMGC1 (FM1):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref.
 AMM TASK 22-83-34-400-001).

R

ALL 22-11-00

Page 208 Aug 01/96

SROS

EFF:

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-807

FMGC 1 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

DEFENDING

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1 (ORD COMP):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-11-00

Page 209 Aug 01/96

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-808

FMGC 2 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

DEFENDING

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2 (ALPHA FLOOR): - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-11-00

Page 210 Aug 01/96

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-809

FMGC 2 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)

R

- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation

R

A. If the test gives the maintenance message AFS: FMGC2 (FM2):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref.
 AMM TASK 22-83-34-400-001).

R

EFF: ALL **22-11-00**

Page 211 Aug 01/96

SROS

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-810

FMGC 2 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2 (ORD COMP):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-11-00

Page 212 Aug 01/96

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-811

Loss of the AP1 OWN Discretes

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 1 (1CA1) pin AE/12G to the first terminal block)
- wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 1 (1CA1) pin AB/10D to the first terminal block)

2. Job Set-up Information

A. Referenced Information

______ REFERENCE **DESIGNATION**

31-32-00-810-952

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

Operational Test of the AFS 31-32-00-810-932 Failure of the Discrete Links

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the AP1 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FMGC 1 and the FAC 1.

4. Fault Isolation

A. If the test gives the maintenance messages:

AFS: FMGC1/AP ENGD FDBK

AFS: FAC1/AP1 ENGD WIRING:

- replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- (1) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 1 (1CA1) pin AE/12G to the first terminal
 - do a check and repair the wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 1 (1CA1) pin AB/10D to the first terminal block).

(Ref. ASM 22-85/03).

EFF: ALL

22-11-00 Page 213 May 01/03

SROS

TROUBLE SHOOTING MANUAL

R (2) If the fault continues:
R - do the following troubleshooting (Ref. TASK 31-32-00-810-932)
R related to the above discretes (Ref. ASM 22-85/03).

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-11-00

Page 214 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-812

Loss of the AP2 OWN Discretes

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 2 (1CA2) pin AE/12G to the first terminal block)
- wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 2 (1CA2) pin AB/10D to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

R 31-32-00-810-932 Failure of the Discrete Links
AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-85/03

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the AP2 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FMGC 2 and the FAC 2.

4. Fault Isolation

A. If the test gives the maintenance messages:

AFS: FMGC2/AP ENGD FDBK

AFS: FAC2/AP2 ENGD WIRING:

- replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- (1) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 2 (1CA2) pin AE/12G to the first terminal block)
 - do a check and repair the wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 2 (1CA2) pin AB/10D to the first terminal block).

(Ref. ASM 22-85/03).

EFF: ALL **22-11-00**

Page 215 May 01/03

SROS

TROUBLE SHOOTING MANUAL

R (2) If the fault continues:
R - do the following troubleshooting (Ref. TASK 31-32-00-810-932)
R related to the above discretes (Ref. ASM 22-85/03).

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 216 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-813

Disagree between the AP ENGD Discretes (FMGC1 and FMGC2)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - FAC-1 (1CC1)
 - wiring of the AP OWN ENGD (COM and MON) OPP and AP OPP ENGD (COM and MON)
 OPP discretes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the AP2 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance messages:

AFS: FMGC2/AP ENGD FDBK AFS: FMGC1/AP2 ENGD WIRG AFS: FAC1/AP2 ENGD WIRING

- remove the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001)
- do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
- (1) If the test gives the message: AFS TEST OK replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-400-001).
- (2) If the test result of the FMGC2 gives the maintenance message AFS: FMGC2/AP ENGD FDBK:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL 22-11-00

Page 217 May 01/03

TROUBLE SHOOTING MANUAL

- (3) If the fault continues:
 - replace FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) (Ref. AMM TASK 22-66-34-400-002).
- (4) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD (COM and MON)
 OPP and AP OPP ENGD (COM and MON) OPP discretes
 (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

EFF: ALL 22-11-00

Page 218 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-814

Disagree between the AP ENGD Discretes (FMGC1 and FMGC2)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - FMGC-1 (1CA1)
 - FAC-2 (1CC2)
 - wiring of the AP OWN ENGD (COM and MON) OPP and AP OPP ENGD (COM and MON)
 OPP discretes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the AP1 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance messages:

AFS: FMGC1/AP ENGD FDBK
AFS: FMGC2/AP1 ENGD WIRG

AFS: FAC2/AP1 ENGD WIRING:

- remove the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001)
- do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
- (1) If the test gives the message: AFS TEST OK replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-400-001).
- (2) If the test result of the FMGC1 gives the maintenance message AFS: FMGC1/AP ENGD FDBK:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-11-00

Page 219 May 01/03

TROUBLE SHOOTING MANUAL

- (3) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) (Ref. AMM TASK 22-66-34-400-002).
- (4) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD (COM and MON)
 OPP and AP OPP ENGD (COM and MON) OPP discretes
 (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

EFF: ALL 22-11-00

Page 220 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-815

Loss of the AP1 ENGD Feedback Discretes

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 1 (1CA1) pin AE/3E to the first terminal block)
- wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 1 (1CA1) pin AB/3E to the first terminal block)
- wiring of the AP OWN ENGD MON OPP discrete (from the FMGC 1 (1CA1) pin AE/3G to the first terminal block)
- wiring of the AP OWN ENGD COM OPP discrete (from the FMGC 1 (1CA1) pin AB/3G to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE **DESIGNATION**

31-32-00-810-932 Failure of the Discrete Links

AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 Removal of the FMGC (1CA1, 1CA2) Installation of the FMGC (1CA1,1CA2)

Operational Test of the AFS

ASM 22-85/03

3. Fault Confirmation

A. Test

- (1) On the FCU, push the AP1 pushbutton switch.
- (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/AP ENGD FDBK:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 1 (1CA1) pin AE/3E to the first terminal block)
 - do a check and repair the wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 1 (1CA1) pin AB/3E to the first terminal block).

(Ref. ASM 22-85/03).

22-11-00 EFF: ALL

Page 221 Aug 01/04

TROUBLE SHOOTING MANUAL

- (a) If there is no continuity:repair the above wirings.
- (b) If there is continuity:
 - do a check and repair the wiring of the AP OWN ENGD MON OPP discrete (from the FMGC 1 (1CA1) pin AE/3G to the first terminal block).
 - do a check and repair the wiring of the AP OWN ENGD COM OPP discrete (from the FMGC 1 (1CA1) pin AB/3G to the first terminal block). (Ref. ASM 22-85/03).
- (2) If the fault continues:
 - do the following troubleshooting (Ref. TASK 31-32-00-810-932) related to the above discretes (Ref. ASM 22-85/03).
 - B. Do the test given in Para. 3.

EFF: ALL
SROS

22-11-00

Page 222 Aug 01/04

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-816

Loss of the AP2 ENGD Feedback Discretes

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 2 (1CA2) pin AE/3E to the first terminal block)
- wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 2 (1CA2) pin AB/3E to the first terminal block)
- wiring of the AP OWN ENGD MON OPP discrete (from the FMGC 2 (1CA2) pin AE/3G to the first terminal block)
- wiring of the AP OWN ENGD COM OPP discrete (from the FMGC 2 (1CA2) pin AB/3G to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE **DESIGNATION**

31-32-00-810-932

AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001

ASM 22-85/03

Failure of the Discrete Links Removal of the FMGC (1CA1, 1CA2)

Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the AP2 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/AP ENGD FDBK:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP OWN ENGD MON OWN discrete (from the FMGC 2 (1CA2) pin AE/3E to the first terminal block)
 - do a check of the wiring of the AP OWN ENGD COM OWN discrete (from the FMGC 2 (1CA2) pin AB/3E to the first terminal block). (Ref. ASM 22-85/03).

EFF: ALL **22-11-00**

Page 223 Aug 01/04

TROUBLE SHOOTING MANUAL

- (a) If there is no continuity: - repair the above wirings.
- (b) If there is continuity:
 - do a check and repair the wiring of the AP OWN ENGD MON OPP discrete (from the FMGC 2 (1CA2) pin AE/3G to the first terminal block).
 - do a check and repair the wiring of the AP OWN ENGD COM OPP discrete (from the FMGC 2 (1CA2) pin AB/3G to the first terminal block). (Ref. ASM 22-85/03).
- (2) If the fault continues:
 - do the following troubleshooting (Ref. TASK 31-32-00-810-932) related to the above discretes (Ref. ASM 22-85/03).
 - B. Do the test given in Para. 3.

EFF: ALL **SROS**

22-11-00

Page 224

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-817

The AP 1 Pushbutton Switch does not come on when the AP 1 is engaged

1. Possible Causes

- FCU (2CA)
- wiring of AP 1 ENGD MON OWN and AP 1 ENGD COM OWN discretes from the FCU (2CA) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-10-00-710-005	Operational Test of the Indicator Lights and Displays of the FCU	
AMM	22-81-12-000-001	Removal of the FCU (2CA)	
AMM	22-81-12-400-001	Installation of the FCU (2CA)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
ASM	22-85/03		

3. Fault Confirmation

- A. Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	AUTO FLT/FCU/1 AUTO FLT/FMGC/1	9CA1 10CA1	B05 B02

C. Test

ACTION RESULT

1. On the FCU:

This pushbutton switch comes on.

- push the AP 1 pushbutton switch to engage the AP 1.

EFF: ALL **22-11-00**

Page 225 May 01/03

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the AP 1 pushbutton switch does not come on:
 - do the operational test of the indicator lights and displays of the FCU (Ref. AMM TASK 22-10-00-710-005)
 - make sure that the AP 1 pushbutton switch comes on.
 - (1) If this pushbutton switch comes on:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of AP 1 ENGD MON OWN and AP 1 ENGD COM OWN discretes from the FCU (2CA) to the first terminal block (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

5. Close-up

A. De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL

22-11-00

Page 226 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-818

The AP 2 Pushbutton Switch does not come on when the AP 2 is engaged

1. Possible Causes

- FCU (2CA)
- wiring of AP 2 ENGD MON OWN and AP 2 ENGD COM OWN discretes from the FCU (2CA) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
		VESIGNATION
AMM	22-10-00-710-005	Operational Test of the Indicator Lights and Displays of the FCU
AMM	22-81-12-000-001	Removal of the FCU (2CA)
AMM	22-81-12-400-001	Installation of the FCU (2CA)
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the
		External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
ASM	22-85/03	

3. Fault Confirmation

- A. Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
_	AUTO FLT/FCU/2	9CA2	M21
12 1VU	AUTO FLT/FMGC/2	10CA2	M17

C. Test

ACTION RESULT

1. On the FCU:

ALL

This pushbutton switch comes on.

- push the AP 2 pushbutton switch to engage the AP 2.

22-11-00

Page 227 May 01/03

EFF:

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the AP 2 pushbutton switch does not come on:
 - do the operational test of the indicator lights and displays of the FCU (Ref. AMM TASK 22-10-00-710-005)
 - make sure that the AP 2 pushbutton switch comes on.
 - (1) If this pushbutton switch comes on:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of AP 2 ENGD MON OWN and AP 2 ENGD COM OWN discretes from the FCU (2CA) to the first terminal block (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

5. Close-up

A. De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL

22-11-00

Page 228 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-821

Loss of the FMGC 1 OWN A Bus

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN A (COM) bus from the FMGC 1 (1CA1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS	

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/C-M ARINC LINK: - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN A (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-11-00

Page 229 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-822

Loss of the FMGC 2 OWN A Bus

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN A (COM) bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
	AMM	22-96-00-710-001	Operational Test of the AFS
	ASM	22-86/02	

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/C-M ARINC LINK: - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN A (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-11-00

Page 230 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-823

Loss of the Reception of the AP 2 ENGD Discrete Signal by the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the AP OPP ENGD MON OPP and AP OPP ENGD COM OPP discretes from the FMGC 1 (1CA1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001 22-83-34-400-001 22-96-00-710-001	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS	
ASM	22-85/03	·	

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the AP 2 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/AP2 ENGD WIRG:
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OPP ENGD MON OPP and AP OPP ENGD COM OPP discretes from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

22-11-00

Page 231 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-824

Loss of the Reception of the AP 1 ENGD Discrete Signal by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the AP OPP ENGD MON OPP and AP OPP ENGD COM OPP discretes from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS	

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the AP 1 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/AP1 ENGD WIRG:
 replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OPP ENGD MON OPP and AP OPP ENGD COM OPP discretes from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

22-11-00

Page 232 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-825

AP 1 Engagement Inoperative after the Installation of the New FMGC

1. Possible Causes

- FCU (2CA)
- wiring of the AP INST DISC NC and AP INST DISC NO discretes (from the FMGC 1 (1CA1) to the relay (47CE1))
- wiring of the AP OWN ENGD COM OPP discrete from the FMGC 1 (1CA1)
- wiring of the AP OWN ENGD COM OWN discrete from the FMGC 1 (1CA1)
- wiring of the CMD 1 SW COM discrete from the FCU (2CA) to the FMGC 1 (1CA1)
- wiring of the AP OWN ENGD MON OPP discrete from the FMGC 1 (1CA1)
- wiring of the AP OWN ENGD MON OWN discrete from the FMGC 1 (1CA1)
- wiring of the CMD 1 SW MON discrete from the FCU (2CA) to the FMGC 1 (1CA1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION	
	AMM	22-81-12-000-001	Removal of the FCU (2CA)	
	AMM	22-81-12-400-001	Installation of the FCU (2CA)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
	ASM	22-85/03		

3. Fault Confirmation

A. Test

(1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/TAKE OV CKT:
 - do a check and repair the wiring of the AP INST DISC NC and AP INST DISC NO discretes (from the FMGC 1 (1CA1) to the relay (47CE1)) (Ref. ASM 22-85/03).
- B. If the test gives the message LRU TEST NOT COMPLETED:
 - push the line key adjacent to the RETURN indication until the AFS MAIN MENU page comes into view
 - push the line key adjacent to the TROUBLE SHOOTING DATA indication
 - push the line key adjacent to the FG 1 COM indication, then FG 1 MON indication:

EFF: ALL

22-11-00

Page 233 May 01/03

TROUBLE SHOOTING MANUAL

- . make sure that there is a snapshot related to an event 1 at AFS TEST
- on word 5, make sure that the fourth number is equal to:
 - . 8 or 9 or A or B or C or D or E or F (on the command and monitoring channels).
- (1) If the fourth number is not equal to the above values on the command channel:
 - do a check of the wiring of the AP OWN ENGD COM OPP discrete from the FMGC 1 (1CA1) (from pin AA/14B to pin AB/3G)
 - do a check of the wiring of the AP OWN ENGD COM OWN discrete from the FMGC 1 (1CA1) (from pin AB/10D to pin AB/3E) (Ref. ASM 22-85/03).
 - (a) If there is no continuity: - repair the above wiring.
 - (b) If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - 1 If the fault continues:
 - do a check and repair the wiring of the CMD 1 SW COM discrete from the FCU (2CA) to the FMGC 1 (1CA1) (Ref. ASM 22-85/03).
- (2) If the fourth number is not equal to the above values on the monitor
 - do a check of the wiring of the AP OWN ENGD MON OPP discrete from the FMGC 1 (1CA1) (from pin AD/14D to pin AE/3G)
 - do a check of the wiring of the AP OWN ENGD MON OWN discrete from the FMGC 1 (1CA1) (from pin AE/12G to pin AE/3E) (Ref. ASM 22-85/03).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - If the fault continues:
 - do a check and repair the wiring of the CMD 1 SW MON discrete from the FCU (2CA) to the FMGC 1 (1CA1) (Ref. ASM 22-85/03).
- C. Do the test given in Para. 3.

22-11-00 ALL

EFF:

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-826

AP 2 Engagement Inoperative after the Installation of the New FMGC

1. Possible Causes

- wiring of the AP INST DISC NC and AP INST DISC NO discretes (from the FMGC
 2 (1CA2) to the relay (47CE1))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-96-00-710-001 ASM 22-85/03 Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/TAKE OV CKT:
 – do a check and repair the wiring of the AP INST DISC NC and AP INST DISC NO discretes (from the FMGC 2 (1CA2) to the relay (47CE1)) (Ref. ASM 22-85/03).
 - B. Do the test given in Para. 3.

22-11-00

Page 235 May 01/03

ALL

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-827

Loss of the AP Pushbutton Switch Function on the FMGC 1

- 1. Possible Causes
 - FMGC 1
- 2. Job Set-up Information
 - A. Referenced Information

DESCRIPTION DESCRIPTION

REFERENCE DESIGNATION

AMM 22-96-00-710-001 Operational Test of the AFS
AMM 22-97-00-710-001 Operational Test of the LAND CAT III Capability

3. Fault Confirmation

A. Test

(1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

- B. If the test gives the maintenance message AFS: CHK FMGC1-AP P/B CKT:
 - open the circuit breakers 9CA1 and 10CA1
 - after 15 s, close these circuit breakers
 - push the AP 1 pushbutton switch
 - after 1 minute, do the operational test of the AFS (Ref. AMM TASK 22- 96-00-710-001) and read the result for the FMGC 1.

If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

C. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 236 Feb 01/05

SROS

R R

R

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-828

Loss of the AP Pushbutton Switch Function on the FMGC 2

- 1. Possible Causes
 - FMGC 2
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

CEFERENCE PESIGNATION

AMM 22-96-00-710-001 AMM 22-97-00-710-001 Operational Test of the AFS

Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FCU/2 9CA2 M21

121VU AUTO FLT/FCU/2 121VU AUTO FLT/FMGC/2

- B. If the test gives the maintenance message AFS: CHK FMGC2-AP P/B CKT:
 - open the circuit breakers 9CA2 and 10CA2
 - after 15 s, close these circuit breakers
 - push the AP 2 pushbutton switch
 - after 1 minute, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

 If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
- C. Do the test given in Para. 3.

EFF: ALL 22-11-00

Page 237 May 01/05

10CA2

M17

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-829

Loss of the FMGC 1 EIS COM Bus (Source EIS 1)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
	AMM	31-60-00-740-002	EIS Input Test	
	AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC	
	ASM	22-85/04		
	ASM	22-86/02		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FMGC/1 10CA1 B02

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 1) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

B. Test

SROS

(1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL

22-11-00

Page 238 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 1: NO FMC 1 DATA:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC1(1CA1)BUS FM1 TO EIS/DMC1(1WT1)
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 239 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-830

Loss of the FMGC 1 EIS COM Bus (Source EIS 2)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	31-60-00-740-002	EIS Input Test
AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC
ASM	22-85/04	
ASM	22-86/02	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FMGC/1 10CA1 B02

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 2) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

- B. Test
 - (1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL **22-11-00**

Page 240 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 2 : NO FMC 1 DATA:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC1(1CA1)BUS FM1 TO EIS/DMC2(1WT2)
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 241 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-831

Loss of the FMGC 1 EIS COM Bus (Source EIS 3)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
A MM	22 87 7/ 000 004	Democrat of the EMCC (4CA4 4CA2)	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	31-60-00-740-002	EIS Input Test	
AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC	
ASM	22-85/04		
ASM	22-86/02		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FMGC/1 10CA1 B02

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 3) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

- B. Test
 - (1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL

22-11-00

Page 242 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 3 : NO FMC 1 DATA:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC1(1CA1)BUS FM1 TO EIS/DMC3(1WT3)
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 243 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-832

Loss of the FMGC 2 EIS COM Bus (Source EIS 1)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION	
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
	AMM	31-60-00-740-002	EIS Input Test	
	AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC	
	ASM	22-85/04		
	ASM	22-86/02		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FMGC/2 10CA2 M17

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 1) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

B. Test

SROS

(1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL

22-11-00

Page 244 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 1: NO FMC 2 DATA:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC2(1CA2)BUS FM2 TO EIS/DMC1(1WT1)
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 245 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-833

Loss of the FMGC 2 EIS COM Bus (Source EIS 2)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	31-60-00-740-002	EIS Input Test	
AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC	
ASM	22-85/04		
ASM	22-86/02		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FMGC/2 10CA2 M17

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 2) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

- B. Test
 - (1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL

22-11-00

Page 246 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 2: NO FMC 2 DATA:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC2(1CA2)BUS FM2 TO EIS/DMC2(1WT2)
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 247 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-834

Loss of the FMGC 2 EIS COM Bus (Source EIS 3)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block
 - wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
A MM	22 87 7/ 000 004	Damaria af the FMCC (4044 4042)
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	31-60-00-740-002	EIS Input Test
AMM	31-60-00-740-007	GROUND SCANNING Test of the DMC
ASM	22-85/04	
ASM	22-86/02	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FMGC/2 10CA2 M17

R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,

- B. Test
 - (1) Do the BITE test of the EIS (System 3) (Ref. AMM TASK 31-60-00-740-002).

**ON A/C 456-475,

B. Test

SROS

(1) Do the Ground Scanning Test of the DMC (Ref. AMM TASK 31-60-00-740-007).

EFF: ALL

22-11-00

Page 248 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

4. Fault Isolation

- R **ON A/C 201-225, 227-227, 229-299, 426-455, 476-499, 503-549, 551-599, R 701-749,
 - A. If the test gives the maintenance message DMC 3: NO FMC 2 DATA:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C 456-475,

- A. If the test gives the maintenance message FMGC2(1CA2)BUS FM2 TO EIS/DMC3(1WT3)
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the EIS (COM) bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-11-00

Page 249 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-835

Results of the Operational Test of the Autopilot Engagement and Locking Devices of the Side Stick Controller and Rudder Pedals not Satisfactory

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
27-93-00-810-941 27-93-00-810-942 AMM 22-10-00-710-002	Rudder Pedals not Locked in AP Mode Side Stick not Locked in AP Mode Operational Test of Autopilot Disengagement and Locking Devices of the Side Stick Controller and Rudder Pedals

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of autopilot engagement and locking devices of the side stick controller and rudder pedals (Ref. AMM TASK 22-10-00-710-002).
- 4. Fault Isolation
 - A. If the side stick is not locked in AP mode:
 do the trouble shooting procedure (Ref. TASK 27-93-00-810-942).
 - B. If the rudder pedals are not locked in AP mode:do the trouble shooting procedure (Ref. TASK 27-93-00-810-941).
 - C. Do the test given in Para. 3.

22-11-00

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-836

Loss of FD Engagement in Crossed Bars at Go Around

- 1. Possible Causes
 - FCU (2CA)
 - wiring of the FD ENGAGEMENT IN CROSSED BARS AT GO AROUND signal (pin program)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-81-12-000-001 Removal of the FCU (2CA)
AMM 22-81-12-400-001 Installation of the FCU (2CA)
ASM 22-85/06

- 3. Fault Confirmation
 - A. Not applicable
- 4. Fault Isolation
 - A. Do a check and repair of the wiring of the FD ENGAGEMENT IN CROSSED BARS AT GO AROUND signal (pin program) on the FCU:
 - (1) remove the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001):
 - check that Pins S respectively on the connectors A and B are grounded (Ref. ASM 22-85/06)
 - install the FCU (Ref. AMM TASK 22-81-12-400-001).
 - (2) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) (Ref. AMM TASK 22-81-12-400-001).
 - B. Not applicable.

22-11-00

Page 251 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-837

Loss of the FCU or FMGC output bus detected by the EIS

1. Possible Causes

- computers related to the output buses from the FCU (FCU 1A & 1B/2A & 2B) and the FMGC 1 & 2 (FMGC OWN A & CB2)
- wiring of the Arinc Buses from the FCU (FCU 1A & 1B)
- wiring of the Arinc Buses from the FMGC 1 (FMGC OWN A & FMGC OWN CB2)
- wiring of the Arinc Busses from the FCU (FCU 2A & 2B)
- wiring of the Arinc Busses from the FMGC 2 (FMGC OWN A & FMGC OWN CB2)

2. Job Set-up Information

A. Referenced Information

REFERENCE

DESIGNATION ______

31-32-00-810-934 Failure of the Digital Links AMM **31-60-00-860-001** EIS Start Procedure

ASM 22-86/02

ASM 22-86/03

3. Fault Confirmation

A. Do the EIS Start Procedure (Ref. AMM TASK 31-60-00-860-001).

4. Fault Isolation

- A. If one (CAPT or F/O) PFD shows ALT SEL flag and SPD SEL flag: The digital links to be checked are the output buses from the FCU (FCU 1A & 1B/2A & 2B) and the FMGC 1 & 2 (FMGC OWN A & CB2) to the others LRUs.
 - (1) Use the Aircraft Schematic Manual (ASM) to find the computers related to the output buses from the FCU (FCU 1A & 1B/2A & 2B) and the FMGC 1 & 2 (FMGC OWN A & CB2) (Ref. ASM 22-86/03) and (Ref. ASM 22-86/02).
 - (a) Do a check for maintenance message related to the above computers on the Post Flight Report.
 - If there is a message:
 - do the trouble shooting procedure related to the maintenance message.
 - 2 If there is no message:
 - do the trouble shooting procedure (Ref. TASK 31-32-00-810-934).

EFF: ALL **22-11-00**

Page 252 Feb 01/05

SROS

R R

R

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - (a) do a check and repair:
 - for flags on Capt PFD, the wiring of the Arinc Buses from the FCU (FCU 1A & 1B), (Ref. ASM 22-86/03) and wiring of the Arinc Buses from the FMGC 1 (FMGC OWN A & FMGC OWN CB2), (Ref. ASM 22-86/02) to the others LRUs.
 - for flags on F/O PFD, the wiring of the Arinc Busses from the FCU (FCU 2A & 2B), (Ref. ASM 22-86/03) and wiring of the Arinc Busses from the FMGC 2 (FMGC OWN A & FMGC OWN CB2), (Ref. ASM 22-86/02) to the others LRUs.
- B. Do the test given in Para. 3.

EFF: ALL 22-11-00

Page 253 May 01/03

TROUBLE SHOOTING MANUAL

TASK 22-11-00-810-838

AUTO LAND Warning Light Malfunction

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-96-00-710-001 AMM 22-97-00-710-001	Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Not applicable.
- 4. Fault Isolation

R

R

R

R R

- A. If the AUTO LAND operational warning light is mentioned in the log book report:
 - do the system test of the AFS (Ref. AMM TASK 22-96-00-710-001) and the LAND 3 CAPABILITY test (Ref. AMM TASK 22-97-00-710-001).
 - (1) If these tests are incorrect:
 - if there is a message, do the trouble shooting procedure related to the maintenance message.
 - (2) If these tests are correct:
 - do a check if any RA and/or ILS troubles in the PFR or mentioned in the Log Book.
 - (a) If yes, do the trouble shooting procedure related to the maintenance message.
 - (b) If no, no maintenance action is required. But if the fault persist, suspect the AUTOLAND function and notably, troubleshoot consequently the RA and/or ILS systems (antenna, coax, ...) with related bite test and/or operational/functional test if necessary.

EFF: ALL **22-11-00**

Page 254 Feb 01/05

TROUBLE SHOOTING MANUAL

AUTOTHRUST ENGAGEMENT - FAULT ISOLATION PROCEDURES

TASK 22-31-00-810-801

Loss of the ATH 1 ENGD Feedback

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the ATH OWN ENGD MON OWN and ATH OWN ENGD COM OWN discretes (on the FMGC 1 (1CA1))
- wiring of ATH OWN ENGD MON OPP and ATH OWN ENGD COM OPP discretes (on the FMGC 1 (1CA1))

2. Job Set-up Information

A. Referenced Information

DESCRIPTION DESCRIPTION

REFERENCE DESIGNATION

R 22-31-00-810-812

AMM 22-83-34-000-001

AMM 22-83-34-400-001

AMM 22-96-00-710-001

ASM 22-31/01

R

Unwanted A/THR 1 and 2 Inoperative Warning

Removal of the FMGC (1CA1,1CA2)

Installation of the FMGC (1CA1,1CA2)

Operational Test of the AFS

3. Fault Confirmation

A. Test

- (1) On the FCU, push the A/THR pushbutton switch.
- (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/ATHR ENGD FDBK: replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the ATH OWN ENGD MON OWN and ATH OWN ENGD COM OWN discretes (on the FMGC 1 (1CA1)) (from pin AE/12E to pin AE/1F and from pin AB/12D to pin AB/1F) (Ref. ASM 22-31/01).
 - do a check of the wiring of ATH OWN ENGD MON OPP and ATH OWN ENGD COM OPP discretes (on the FMGC 1 (1CA1)) (from pin AD/14F to pin AE/1D and from pin AA/14D to pin AB/1D) (Ref. ASM 22-31/01).

R

22-31-00

Page 201 Feb 01/04

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

R (2) If the fault continues, do the trouble shooting procedure (Ref. TASK 22-31-00-810-812).

B. Do the test given in Para. 3.

EFF: ALL

22-31-00

Page 202 Feb 01/04

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-802

Loss of the ATH 2 ENGD Feedback

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the ATH OWN ENGD MON OWN and ATH OWN ENGD COM OWN discretes (on the FMGC 2 (1CA2))
- wiring of ATH OWN ENGD MON OPP and ATH OWN ENGD COM OPP discretes (on the FMGC 2 (1CA2))

2. Job Set-up Information

A. Referenced Information

	REFERENCE	DESIGNATION		
?	22-31-00-810-812	Unwanted A/THR 1 and 2 Inoperative Warning		
	AMM 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
	AMM 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
	AMM 22-96-00-710-001	Operational Test of the AFS		
	ASM 22-31/01			

3. Fault Confirmation

A. Test

- (1) On the FCU, push the A/THR pushbutton switch.
- (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/ATHR ENGD FDBK: - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the ATH OWN ENGD MON OWN and ATH OWN ENGD COM OWN discretes (on the FMGC 2 (1CA2)) (from pin AE/12E to pin AE/1F and from pin AB/12D to pin AB/1F) (Ref. ASM 22-31/01).
 - do a check and repair the wiring of ATH OWN ENGD MON OPP and ATH OWN ENGD COM OPP discretes (on the FMGC 2 (1CA2)) (from pin AD/14F to pin AE/1D and from pin AA/14D to pin AB/1D) (Ref. ASM 22-31/01).

R

SROS

R

R

EFF: ALL

22-31-00

Page 203

Feb 01/04

TROUBLE SHOOTING MANUAL

R (2) If the fault continues, do the trouble shooting procedure (Ref. TASK 22-31-00-810-812).

B. Do the test given in Para. 3.

EFF: ALL

22-31-00

Page 204 Feb 01/04

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-803

A/THR Engagement Inoperative after Installation of the New FMGC

1. Possible Causes

- FCU (2CA)
- wiring of the ATH INST DISC NO and ATH INST DISC NC discretes (from the FMGC 1 (1CA1) to the two relays (5CA1 and 5CA2))
- wiring of the ATH OWN ENGD COM OPP discrete on the FMGC 1 (1CA1)
- wiring of the ATH OWN ENGD COM OWN discrete on the FMGC 1 (1CA1)
- wiring of the A/THR 1 SW COM discrete from the FCU (2CA) to the FMGC 1 (1CA1)
- wiring of the ATH OWN ENGD MON OPP discrete on the FMGC 1 (1CA1)
- wiring of the ATH OWN ENGD MON OWN discrete on the FMGC 1 (1CA1)
- wiring of the A/THR 1 SW MON discrete from the FCU (2CA) to the FMGC 1 (1CA1)
- wiring of the ATH INST DISC NO and ATH INST DISC NC discretes (from the FMGC 2 (1CA2) to the first terminal block)
- wiring of the ATH OWN ENGD COM OPP discrete on the FMGC 2 (1CA2)
- wiring of the ATH OWN ENGD COM OWN discrete on the FMGC 2 (1CA2)
- wiring of the A/THR 2 SW COM discrete from the FCU (2CA) to the FMGC 2 (1CA2)
- wiring of the ATH OWN ENGD MON OPP discrete on the FMGC 2 (1CA2)
- wiring of the ATH OWN ENGD MON OWN discrete on the FMGC 2 (1CA2)
- wiring of the A/THR 2 SW MON discrete from the FCU (2CA) to the FMGC 2 (1CA2)

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
R	AMM	22-30-00-710-003	Operational Test of the Engine / Autothrust System Isolation (with AIDS)	
	AMM	22-81-12-000-001	Removal of the FCU (2CA)	
	AMM	22-81-12-400-001	Installation of the FCU (2CA)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
	AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
	AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
	ASM	22-31/01		

EFF: ALL
SROS

22-31-00

Page 205 Nov 01/94

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

- A. Job Set-UP
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) On the FCU, make sure that the AP 1 and AP 2 are not engaged (the two pushbutton switches are off).
 - (c) On the FCU, make sure that the FD 1 and FD 2 are engaged (the two pushbutton switches are on).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

	PANEL	DESIGNATION	IDENT.	LOCATION
R				
	49VU	AUTO FLT/FCU/1	9CA1	B05
	49VU	AUTO FLT/FMGC/1	10CA1	B02
	121VU	AUTO FLT/FCU/2	9CA2	M21
	121VU	AUTO FLT/FMGC/2	10CA2	M17

R

C. Test

(1) Do this test:

(1) Do this test:	
ACTION	RESULT
1. On the FCU:push the FD 2 pushbutton switch.	- The FD 2 pushbutton switch goes off.
 Push the A/THR pushbutton switch. 	- The A/THR pushbutton switch comes on.
- Push the A/THR pushbutton	- The A/THR pushbutton switch goes off.

EFF: ALL

switch.

22-31-00

Page 206 May 01/96

TROUBLE SHOOTING MANUAL

ACTION	RESULT

- 2. On the FCU:
 - push the FD 1 and FD 2 pushbutton switches.
- The FD 1 pushbutton switch goes off and the FD 2 comes on.
- switch.
- Push the A/THR pushbutton The A/THR pushbutton switch comes on.
 - (2) If the A/THR does not engage after you try to engage the A/THR two times:
 - do the operational test of the engine/autothrust system isolation (Ref. AMM TASK 22-30-00-710-003).

4. Fault Isolation

- A. If the A/THR does not engage when you open the circuit breaker 10CA2
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
 - (1) If the test gives the maintenance message AFS : FMGC 1/ATHR DISC CKT:
 - do a check and repair the wiring of the ATH INST DISC NO and ATH INST DISC NC discretes (from the FMGC 1 (1CA1) to the two relays (5CA1 and 5CA2)) (Ref. ASM 22-31/01).
 - (2) If the test gives the message LRU TEST NOT COMPLETED:
 - push the line key adjacent to the RETURN indication until the AFS MAIN MENU page comes into view
 - push the line key adjacent to the TROUBLE SHOOTING DATA indication
 - push the line key adjacent to the FG 1 COM indication, then FG 1 MON indication:
 - . make sure that there is a snapshot related to an event 1 at AFS TEST time
 - on word 5, make sure that the third number is equal to:
 - 1 or 3 or 5 or 7 or 9 or B or D or F (on command and monitoring channels).
 - (a) If the third number is not equal to the above values on the command channel:
 - do a check of the wiring of the ATH OWN ENGD COM OPP discrete on the FMGC 1 (1CA1) (from pin AA/14D to pin AB/1D)
 - do a check of the wiring of the ATH OWN ENGD COM OWN discrete on the FMGC 1 (1CA1) (from pin AB/12D to pin AB/1F) (Ref. ASM 22-31/01).
 - 1 If there is no continuity:
 - repair the above wiring.

EFF: ALL **22-31-00**

Page 207 Aug 01/95

TROUBLE SHOOTING MANUAL

- 2 If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - a If the fault continues:
 - do a check and repair the wiring of the A/THR 1 SW COM discrete from the FCU (2CA) to the FMGC 1 (1CA1) (Ref. ASM 22-31/01).
- (b) If the third number is not equal to the above values on the monitor channel:
 - do a check of the wiring of the ATH OWN ENGD MON OPP discrete on the FMGC 1 (1CA1) (from pin AD/14F to pin AE/1D)
 - do a check of the wiring of the ATH OWN ENGD MON OWN discrete on the FMGC 1 (1CA1) (from pin AE/12E to pin AE/1F) (Ref. ASM 22-31/01).
 - 1 If there is no continuity:
 repair the above wiring.
 - 2 If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - a If the fault continues:
 - do a check and repair the wiring of the A/THR 1 SW MON discrete from the FCU (2CA) to the FMGC 1 (1CA1) (Ref. ASM 22-31/01).
- B. If the A/THR does not engage when you open the circuit breaker 10CA1 only:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
 - (1) If the test gives the maintenance message AFS: FMGC 2/ATHR DISC CKT:
 - do a check and repair the wiring of the ATH INST DISC NO and ATH INST DISC NC discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-31/01).
 - (2) If the test gives the message LRU TEST NOT COMPLETED:
 - push the line key adjacent to the RETURN indication until the AFS
 MAIN MENU page comes into view
 - push the line key adjacent to the TROUBLE SHOOTING DATA indication
 - push the line key adjacent to the FG 2 COM indication, then FG 2 MON indication:
 - make sure that there is a snapshot related to an event 1 at AFS TEST time
 - on word 5, make sure that the third number is equal to:
 - . 1 or 3 or 5 or 7 or 9 or B or D or F (on command and monitoring channels).

EFF: ALL

22-31-00

Page 208 Aug 01/95

TROUBLE SHOOTING MANUAL

- (a) If the third number is not equal to the above values on the command channel:
 - do a check of the wiring of the ATH OWN ENGD COM OPP discrete on the FMGC 2 (1CA2) (from pin AA/14D to pin AB/1D)
 - do a check of the wiring of the ATH OWN ENGD COM OWN discrete on the FMGC 2 (1CA2) (from pin AB/12D to pin AB/1F) (Ref. ASM 22-31/01).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - a If the fault continues:
 - do a check and repair the wiring of the A/THR 2 SW COM discrete from the FCU (2CA) to the FMGC 2 (1CA2) (Ref. ASM 22-31/01).
- (b) If the third number is not equal to the above values on the monitor channel:
 - do a check of the wiring of the ATH OWN ENGD MON OPP discrete on the FMGC 2 (1CA2) (from pin AD/14F to pin AE/1D)
 - do a check of the wiring of the ATH OWN ENGD MON OWN discrete on the FMGC 2 (1CA2) (from pin AE/12E to pin AE/1F) (Ref. ASM 22-31/01).
 - 1 If there is no continuity:
 repair the above wiring.
 - 2 If there is continuity:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - a If the fault continues:
 - do a check and repair the wiring of the A/THR 2 SW MON discrete from the FCU (2CA) to the FMGC 2 (1CA2) (Ref. ASM 22-31/01).
- C. Do the test given in Para. 3.C.(2).
- 5. Close-up
 - A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL 22-31-00

Page 209 Aug 01/95

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-804

A/THR Pushbutton Switch does not Come on at A/THR Engagement

1. Possible Causes

- FCU (2CA)
- wiring of the A/THR 2 SW MON and A/THR 2 SW COM discretes (from the FCU (2CA) to the first terminal block)
- wiring of the A/THR 1 SW MON and A/THR 1 SW COM discretes (from the FCU (2CA) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	

R

AMM	22-81-12-000-001	Removal of the FCU (2CA)
AMM	22-81-12-400-001	Installation of the FCU (2CA)
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the
		External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied
		from the External Power
ASM	22-31/01	

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. LOCAT	ION	
49VU	AUTO FLT/FCU/1	9CA1 BO)5	
49VU	AUTO FLT/FMGC/1	10CA1 B0	12	
12 1VU	AUTO FLT/FCU/2	9CA2 M2	1 1	
12 1VU	AUTO FLT/FMGC/2	10CA2 M1	7	

EFF: ALL **22-31-00**

Page 210 Feb 01/05

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT

1. Open the circuit breaker 10CA1.

2. On the FCU:

The A/THR pushbutton switch comes on.

- push the A/THR pushbutton switch

switch.

- Push the A/THR pushbutton The A/THR pushbutton switch goes off.

3. Close the circuit breaker 10CA1.

4. Open the circuit breaker 10CA2.

5. On the FCU:

The A/THR pushbutton switch comes on.

- push the A/THR pushbutton switch

- Push the A/THR pushbutton switch.

The A/THR pushbutton switch goes off.

4. Fault Isolation

- A. If the A/THR pushbutton switch does not come on when you open the circuit breaker 10CA1 only:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the A/THR 2 SW MON and A/THR 2 SW COM discretes (from the FCU (2CA) to the first terminal block) (Ref. ASM 22-31/01).
- B. If the A/THR pushbutton switch does not come on when you open the circuit breaker 10CA2 only:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the A/THR 1 SW MON and A/THR 1 SW COM discretes (from the FCU (2CA) to the first terminal block) (Ref. ASM 22-31/01).

R

R

C. Do the test given in Para. 3.

EFF: ALL **22-31-00**

Page 211 Feb 01/05

TROUBLE SHOOTING MANUAL

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL | | SROS 22-31-00

Page 212 Feb 01/05

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-805

A/THR Engagement Inoperative on the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FCU (2CA)
 - wiring of the A/THR 1 SW COM and A/THR 1 SW MON discretes (from the FCU (2CA) to the FMGC 1 (1CA1))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM AMM	22-81-12-000-001 22-81-12-400-001 22-83-34-000-001 22-83-34-400-001 22-96-00-710-001 22-31/01	Removal of the FCU (2CA) Installation of the FCU (2CA) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the A/THR pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/FCU (ATHR SW): replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the A/THR 1 SW COM and A/THR 1 SW MON discretes (from the FCU (2CA) to the FMGC 1 (1CA1)) (Ref. ASM 22-31/01).
 - B. Do the test given in Para. 3.

EFF: ALL **22-31-00**

Page 213 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-806

A/THR Engagement Inoperative on the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - FCU (2CA)
 - wiring of the A/THR 2 SW COM and A/THR 2 SW MON discretes (from the FCU (2CA) to the FMGC 2 (1CA2))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM	22-81-12-400-001 22-83-34-000-001 22-83-34-400-001	Removal of the FCU (2CA) Installation of the FCU (2CA) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the A/THR pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/FCU (ATHR SW): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the A/THR 2 SW COM and A/THR 2 SW MON discretes (from the FCU (2CA) to the FMGC 2 (1CA2)) (Ref. ASM 22-31/01).

Page 214

Aug 01/94

B. Do the test given in Para. 3.

EFF: ALL 22-31-00

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-807

A/THR Instinctive Disconnect Pushbutton Switch Inoperative

1. Possible Causes

- P/BSW A/THR INST DISC, CAPT (7CA1)
- wiring of the CAPT A/THR instinctive disconnect pushbutton switch (7CA1)
- P/BSW A/THR INST DISC, F/O (7CA2)
- wiring of the F/O A/THR instinctive disconnect pushbutton switch (7CA2)
- RELAY A/THR1 INST DISC (5CA1)
- wiring of the relay (5CA1)
- diode module (1803VD)
- wiring of the diode module (1803VD)
- RELAY A/THR2 INST DISC (5CA2)
- wiring of the relay (5CA2)

2. Job Set-up Information

A. Referenced Information

	REFE	RENCE	DESIGNATION
	22-8	3-00-810-827	Loss of the Reception of the ATH INST DISC Discretes
	22-8	3-00-810-828	by the FMGC 1 Loss of the Reception of the ATH INST DISC Discretes by the FMGC 2
R	AMM	22-30-00-710-003	Operational Test of the Engine / Autothrust System Isolation (with AIDS)
	AMM ASM	22-96-00-710-001 22-31/01	Operational Test of the AFS

3. Fault Confirmation

A. Test

(1) Do the operational test of the engine/autothrust system isolation (Ref. AMM TASK 22-30-00-710-003).

4. Fault Isolation

- A. If the A/THR disengagement does not operate with the circuit breaker 10CA2 open:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) with one A/THR instinctive disconnect pushbutton switch pushed and read the result for the FMGC 1.
 - (1) If the test gives the maintenance message AFS: FMGC1/ATHR DISC CKT: do the procedure (Ref. TASK 22-83-00-810-827).

EFF: ALL

22-31-00

Page 215 Nov 01/94

TROUBLE SHOOTING MANUAL

- (2) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the CAPT A/THR instinctive disconnect pushbutton switch only:
 - replace the P/BSW A/THR INST DISC, CAPT (7CA1).
 - (a) If the fault continues:
 - do a check and repair the wiring of the CAPT A/THR instinctive disconnect pushbutton switch (7CA1) from pin A/4 to the ground and from pin A/5 to the first terminal block (Ref. ASM 22-31/01).
- (3) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the F/O A/THR instinctive disconnect pushbutton switch only:
 - replace the P/BSW A/THR INST DISC, F/O (7CA2).
 - (a) If the fault continues:
 - do a check and repair the wiring of the F/O A/THR instinctive disconnect pushbutton switch (7CA2) from pin A/4 to the ground and from pin A/5 to the first terminal block (Ref. ASM 22-31/01).
- (4) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the two A/THR instinctive disconnect pushbutton switches:
 - replace the RELAY A/THR1 INST DISC (5CA1).
 - (a) If the fault continues:
 - do a check of the wiring of the relay (5CA1) from pin A/X to the first terminal block and from pin A/Z to the diode module (1803VD) pin A/22 (Ref. ASM 22-31/01).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the diode module (1803VD).
 - a If the fault continues:
 - do a check and repair the wiring of the diode module (1803VD) from pin A/7 to the first terminal block (Ref. ASM 22-31/01).
- B. If the A/THR disengagement does not operate with the circuit breaker 10CA1 open:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) with one A/THR instinctive disconnect pushbutton switch pushed and read the result for the FMGC 2.
 - (1) If the test gives the maintenance message AFS: FMGC2/ATHR DISC CKT: - do the procedure (Ref. TASK 22-83-00-810-828).

EFF: ALL 22-3

22-31-00

Page 216 Aug 01/94

TROUBLE SHOOTING MANUAL

- (2) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the CAPT A/THR instinctive disconnect pushbutton switch only:
 - replace the P/BSW A/THR INST DISC, CAPT (7CA1).
 - (a) If the fault continues:
 - do a check and repair the wiring of the CAPT A/THR instinctive disconnect pushbutton switch (7CA1) from pin A/1 to the ground and from pin A/2 to the first terminal block (Ref. ASM 22-31/01).
- (3) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the F/O A/THR instinctive disconnect pushbutton switch only:
 - replace the P/BSW A/THR INST DISC, F/O (7CA2).
 - (a) If the fault continues:
 - do a check and repair the wiring of the F/O A/THR instinctive disconnect pushbutton switch (7CA2) from pin A/1 to the ground and from pin A/2 to the first terminal block (Ref. ASM 22-31/01).
- (4) If the test does not give the message and if the A/THR pushbutton switch remains on on the FCU when you push the two A/THR instinctive disconnect pushbutton switches:
 - replace the RELAY A/THR2 INST DISC (5CA2).
 - (a) If the fault continues:
 - do a check of the wiring of the relay (5CA2) from pin A/X to the first terminal block and from pin A/Z to the diode module (1803VD) pin A/23 (Ref. ASM 22-31/01).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the diode module (1803VD).
 - a If the fault continues:
 - do a check and repair the wiring of the diode module (1803VD) from pin A/8 to the first terminal block (Ref. ASM 22-31/01).
- C. Do the test given in Para. 3.

22-31-00

Page 217 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-808

Loss of the Reception of the FADEC 1 Bus by One FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wirings of the FADEC OWN A and FADEC OWN B bus from the FMGC 1 (1CA1) to the first terminal block
 - wirings of the FADEC OPP A and FADEC OPP B bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

RENCE	DESIGNATION
22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
22-91-00-710-001	Ground Scanning of the AFS
22-86/01	
	22-83-34-000-001 22-83-34-400-001 22-91-00-710-001

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. LOCATION

R

R

49VU	ENGINE/1/FADEC A/AND EIU 1	
121VU	ENGINE/ENG1/FADEC B/AND EIU 1	

2KS1 A04

4KS1 R41

B. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-31-00**

Page 218 May 01/96

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FADEC1 (ISSUED BY: FG1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wirings of the FADEC OWN A and FADEC OWNB bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: FADEC1 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wirings of the FADEC OPP A and FADEC OPPB bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

22-31-00

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-809

Loss of the Reception of the FADEC 2 Bus by One FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wirings of the FADEC OPP A and FADEC OPP B bus from the FMGC 1 (1CA1) to the first terminal block
 - wirings of the FADEC OWN A and FADEC OWN B bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

RENCE	DESIGNATION	
22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
22-91-00-710-001	Ground Scanning of the AFS	
22-86/01		
	22-83-34-000-001 22-83-34-400-001 22-91-00-710-001	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION

R

49VU ENGINE/2/FADEC A/AND EIU 2 2KS2 121VU ENGINE/ENG2/FADEC B 4KS2

R

B. Test

SROS

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL

22-31-00

Page 220 May 01/96

A05

Q40

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FADEC2 (ISSUED BY: FG1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wirings of the FADEC OPP A and FADEC OPPB bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: FADEC2 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wirings of the FADEC OWN A and FADEC OWNB bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

22-31-00

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-810

Loss of the A/THR Pushbutton Switch Function on the FMGC 1

- 1. Possible Causes
 - FMGC 1
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE **DESIGNATION**

AMM 22-96-00-710-001 AMM 22-97-00-710-001

Operational Test of the AFS

Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

______ PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FCU/1 49VU AUTO FLT/FMGC/1

-----9CA1 B05

10CA1 B02

- B. If the test gives the maintenance message AFS: CHK FG1-ATHR P/B CKT:
 - open the circuit breakers 9CA1 and 10CA1
 - after 15 s, close these circuit breakers
 - push the A/THR pushbutton switch
 - after 1 minute, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

(1) If the test gives a different message, do the trouble shooting R procedure related to the maintenance message.

C. Do the test given in Para. 3.

EFF: ALL **22-31-00**

Page 222 Feb 01/05

SROS

R

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-811

Loss of the A/THR Pushbutton Switch Function on the FMGC 2

- 1. Possible Causes
 - FMGC 2
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

AMM 22-96-00-710-001 AMM 22-97-00-710-001 Operational Test of the AFS

Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FCU/2 9CA2 M21

121VU AUTO FLT/FMGC/2 10CA2 M17

- B. If the test gives the maintenance message AFS: CHK FG2-ATHR P/B CKT:
 - open the circuit breakers 9CA2 and 10CA2
 - after 15 s, close these circuit breakers
 - push the A/THR pushbutton switch
 - after 1 minute, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
 - (1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
- C. Do the test given in Para. 3.

EFF: ALL 22-31-00

Page 223 Feb 01/06

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-812

Unwanted A/THR 1 and 2 Inoperative Warning

- 1. Possible Causes
 - relays 17CA1 and 18CA1
 - relays 17CA2 and 18CA2
 - relays 5CA1 and 5CA2
 - wiring of the Engines interface via the relays 5CA1, 5CA2, 17CA1, 17CA2, 18CA1 and 18CA2
- 2. Job Set-up Information
 - A. Referenced Information

______ REFERENCE

DESIGNATION

R ASM 22-31/01 ASM 73-25/12

R

R

- 3. Fault Confirmation
 - A. Not applicable, you cannot confirm this fault on the ground.
- 4. Fault Isolation
- A. Replace the relays 17CA1 and 18CA1 (Ref. ASM 22-31/01). R
- R (1) If the fault continues, replace the relays 17CA2 and 18CA2 (Ref. ASM 22-31/01).
 - (a) If the fault continues, replace the relays 5CA1 and 5CA2 (Ref. ASM 22-31/01).
 - If the fault continues, do a check of the wiring of the Engines interface via the relays 5CA1, 5CA2, 17CA1, 17CA2, 18CA1 and 18CA2, (Ref. ASM 73-25/12).

22-31-00 EFF: ALL

Page 224 Feb 01/06

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-813

Disagree between the A/THR ENGD Discretes (FMGC1 and FMGC2)

1. Possible Causes

- FMGC-2 (1CA2)
- FMGC-1 (1CA1)
- wiring of the ATH OWN ENGD (COM and MON) OPP and ATH OPP ENGD (COM and MON) OPP discretes between the FMGC1 and the FMGC2

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-96-00-710-001	Operational Test of the AFS
ASM	22-31/01	

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the A/THR pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results of the FMGC1 and the FMGC2.

4. Fault Isolation

- A. If the test gives the maintenance messages AFS: FMGC1/ATHR ENGD FDBK for the FMGC1 and AFS: FMGC2/ATHR1 ENG WIRG for the FMGC2:
 - remove the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001)
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).

 - (2) If the the test result of the FMGC1 gives the maintenance message AFS: FMGC1/ATHR ENGD FDBK:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) (Ref. AMM TASK 22-83-34-400-001).
 - (3) If the fault continues:
 - do a check and repair of the wiring of the ATH OWN ENGD (COM and MON) OPP and ATH OPP ENGD (COM and MON) OPP discretes between the FMGC1 and the FMGC2 (Ref. ASM 22-31/01).

EFF: ALL

22-31-00

Page 225 Aug 01/05

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-31-00

Page 226 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-31-00-810-814

Disagree between the A/THR ENGD Discretes (FMGC1 and FMGC2)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the ATH OWN ENGD (COM and MON) OPP and ATH OPP ENGD (COM and MON) OPP discretes between the FMGC1 and the FMGC2
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-96-00-710-001	Operational Test of the AFS
ASM	22-31/01	

3. Fault Confirmation

- A. Test
 - (1) On the FCU, push the A/THR pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FMGC1 and for the FMGC2.

4. Fault Isolation

- A. If the test gives the maintenance messages AFS: FMGC2/ATHR ENGD FDBK for the FMGC2 and AFS: FMGC1/ATHR2 ENG WIRG for the FMGC1:
 - remove the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001)
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the test gives the message: AFS TEST OK replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-400-001)
 - (2) If the test result of the FMGC2 gives the maintenance message AFS: FMGC2/ATHR ENGD FDBK:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) (Ref. AMM TASK 22-83-34-400-001).
 - (3) If the fault continues:
 - do a check and repair of the wiring of the ATH OWN ENGD (COM and MON) OPP and ATH OPP ENGD (COM and MON) OPP discretes between the FMGC1 and the FMGC2 (Ref. ASM 22-31/01).

EFF: ALL

22-31-00

Page 227 Aug 01/05

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-31-00

Page 228 Aug 01/05

TROUBLE SHOOTING MANUAL

R **ON A/C 201-208, 227-227, 229-244, 247-247, 276-284, 426-430, 476-480, R 551-551, 555-555, 702-749,

TASK 22-31-00-810-815

FMGC Malfunction

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM	22-83-34-000-001	Removal of the FMGC	(1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the I	FMGC (1CA1,1CA2)
AMM	22-96-00-710-001	Operational Test of	the AFS

- 3. Fault Confirmation
 - A. Do the Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001)
- 4. Fault Isolation
 - A. If the test does not give maintenance message:
 - get access to the AFS/TROUBLE SHOOTING DATA/BITE SELECTION (TSD) for the failed FG part (1 or 2) and do a check of the result:
 - (1) If the result of analysis C/M is 6012 with snapshot
 W1 W2 W3 W4 W5
 91A1 FFFC FFFF 003E 0000
 - no maintenance action is necessary.
 - (2) If the TSD is different:
 - replace the failed computer, FMGC-1 (1CA1) or FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - B. If the test gives one or several maintenance messages:
 - do the trouble shooting procedure related to the maintenance message.

TROUBLE SHOOTING MANUAL

ARTIFICIAL FEEL AND RUDDER TRAVEL LIMITING COMPUTATION FAULT ISOLATION PROCEDURES

TASK 22-61-00-810-801

Loss of the Reception of the RTL ENGD Discrete Feedback by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the RTL ENGD COM and RTL ENGD MON discretes from the FAC 1 (1CC1) to the first terminal block
- wiring of the RTL OWN ENGD COM and RTL OWN ENGD MON discretes from the FAC 1 (1CC1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		 Rence 	DESIGNATION	
	AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function	
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
	ASM	22-68/02		

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC 1/RTL ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC 2/RTL ENGD CHG-OV:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

EFF: ALL **22-61-00**

Page 201 Aug 01/94

TROUBLE SHOOTING MANUAL

- (a) If the fault continues:
 - do a check and repair the wiring of the RTL ENGD COM and RTL ENGD MON discretes from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-68/02).
- (2) If there is no message after the operational test of the automatic change-over function:
 - replace the FAC 1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RTL OWN ENGD COM and RTL OWN ENGD MON discretes from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-68/02).
- B. Do the operational test given in Para. 3.A.(1).

EFF: ALL **22-61-00**

Page 202 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-802

Loss of the Reception of the RTL ENGD Discrete Feedback by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the RTL ENGD COM and RTL ENGD MON discretes from the FAC 2 (1CC2) to the first terminal block
- wiring of the RTL OWN ENGD COM and RTL OWN ENGD MON discretes from the FAC
 2 (1CC2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION		
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over		
		Function		
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)		
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)		
AMM	22-96-00-710-001	Operational Test of the AFS		
ASM	22-68/02			

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC 2/RTL ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC 1/RTL ENGD CHG-OV:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RTL ENGD COM and RTL ENGD MON discretes from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-68/02).

EFF: ALL **22-61-00**

Page 203 Aug 01/94

TROUBLE SHOOTING MANUAL

- (2) If there is no message after the operational test of the automatic change-over function:
 - replace the FAC 2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RTL OWN ENGD COM and RTL OWN ENGD MON discretes from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-68/02).
- B. Do the operational test given in Para. 3.A.(1).

EFF: ALL SROS

22-61-00

Page 204 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-803

Loss of the Rudder Travel Limiting Function on the FAC 1

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- RELAY-RTL SYS1 (13CC1)
- FAC-1 (1CC1)
- SENSOR-TAT, 1 (11FP1)
- wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (13CC1)
- wiring of the RTL ACT VALID signal from the FAC1 to the RTLU and associated GND signal at the RTLU
- electronic module
- wiring of the RTL ACT PWR ON signal from the FAC1 to the relay 13CC1
- wiring of the 28VDC and GND at the RTLU (PWR SPLY)
- wiring from the FAC 1 (1CC1) to the rudder travel-limitation unit (4CC)
- wiring of the RTL V1 and RTL V2 discretes from the FAC 1 (1CC1) to the rudder travel-limitation unit (4CC)

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-61-00-710-001	Operational Test of the Rudder Travel Limiting Function	
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
	AMM	27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC	
	AMM	27-23-51-000-002	Removal of the Electronic Module of the Rudder Travel Limitation Unit	
R	AMM	27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC	
	AMM	27-23-51-400-002	Installation of the Electronic Module of the Rudder Travel Limitation Unit	
	AMM	34-11-18-000-001	Removal of the TAT Sensor (11FP1, 11FP2)	
	AMM	34-11-18-400-001	Installation of the TAT Sensor (11FP1, 11FP2)	
	ASM	22-67/01	·	
	ASM	22-68/02		

EFF: ALL **22-61-00**

Page 205 Nov 01/06

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

49VU AUTO FLT/FAC1/28VDC

5CC1 B04

- B. Test
 - (1) Open the circuit breaker 5CC1.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC1.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/RTL ACTR 4CC:
 - remove the relay 13CC1 (open the circuit breaker 5CC1 before and close it after)
 - do a check of the correct wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (13CC1), if no repair it (Ref. ASM 22-68/02)
 - open the circuit breaker 5CC1
 - remove the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002)
 - install the above removed relay (13CC1).
 - (1) Do a check of the impedance of the RTL ACT VALID signal between the pin AB/11A and the pin AC/3 (GND signal) of the FAC-1 rack connector, (Ref. ASM 22-68/02) and (Ref. ASM 22-67/01).

NOTE: The impedance must be more than 70 Ohms and not open circuit.

- (a) If the impedance is not correct (< 70 Ohms or open circuit):
 - do a check of the wiring of the RTL ACT VALID signal from the FAC1 to the RTLU and associated GND signal at the RTLU (Ref. ASM 22-68/02).
 - 1 If the wiring is correct:
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002)
 - replace the electronic module of the rudder travel-limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - a If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).

EFF: ALL

22-61-00

Page 206 Nov 01/04

TROUBLE SHOOTING MANUAL

- (b) If the impedance is correct (no short circuit and no open circuit):
 - do a check of the impedance of the RTL ACT PWR ON signal between the pin AE/11A and the pin AC/3 of the FAC-1 rack connector, (Ref. ASM 22-68/02) and (Ref. ASM 22-67/01).

NOTE : The impedance must be more than 70 Ohms and not open circuit.

- 1 If the impedance is not correct (< 70 Ohms or open circuit):
 - remove the relay 13CC1 (open the circuit breaker 5CC1 before and close it after)
 - do a check of the wiring of the RTL ACT PWR ON signal from the FAC1 to the relay 13CC1 (Ref. ASM 22-68/02).
 - a If the wiring is correct:
 - replace the RELAY-RTL SYS1 (13CC1)
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002).
- 2 If the impedance is correct (RTL ACT VALID and RTL ACT PWR ON signals):
 - do a check of the wiring of the 28VDC and GND at the RTLU (PWR SPLY) (Ref. ASM 22-68/02).
 - a If incorrect, repair the wiring.
 - b If correct, replace the RELAY-RTL SYS1 (13CC1).

If the fault continues:

- replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-400-002).
- (2) If the fault continues:
 - do a check and repair the remaining wiring from the FAC 1 (1CC1) to the rudder travel-limitation unit (4CC) (Ref. ASM 22-68/02).
- B. If the test does not give the maintenance message AFS: FAC 1/RTL ACTR 4CC:
 - (1) And, if the test gives the maintenance message TAT SENSOR (11FP1)/ADIRU1 (1FP1):
 - replace the SENSOR-TAT, 1 (11FP1) (Ref. AMM TASK 34-11-18-000-001) and (Ref. AMM TASK 34-11-18-400-001).
 - (2) If the fault continues:
 - do the operational test of the rudder travel limiting function (Ref. AMM TASK 22-61-00-710-001).

EFF: ALL **22-61-00**

Page 207 Nov 01/06

SROS

R

R

TROUBLE SHOOTING MANUAL

- C. If the rudder does not move or stops before the rudder travel limit:
 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM
 TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the electronic module of the rudder travel limitation unit (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - (2) If the fault continues:
 - replace the rudder travel limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - (3) If the fault continues:
 - do a check and repair the wiring of the RTL V1 and RTL V2 discretes from the FAC 1 (1CC1) to the rudder travel-limitation unit (4CC), (Ref. ASM 22-68/02).
- D. Do the test given in Para. 3.B.

22-61-00

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-804

Loss of the Rudder Travel Limiting Function on the FAC 2

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- RELAY-RTL SYS2 (13CC2)
- FAC-2 (1CC2)
- R SENSOR-TAT, 2 (11FP2)
 - wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (13CC2)
 - wiring of the RTL ACT VALID signal from the FAC2 to the RTLU and associated GND signal at the RTLU
 - electronic module
 - wiring of the RTL ACT PWR ON signal from the FAC2 to the relay 13CC2
 - wiring of the 28VDC signal from the relay 13CC2 to the RTLU and associated
 GND at the RTLU
 - wiring from the FAC 2 (1CC2) to the rudder travel-limitation unit (4CC)
 - wiring of the RTL V1 and RTL V2 discretes from the FAC 2 (1CC2) to the rudder travel-limitation unit (4CC)

2. Job Set-up Information

SROS

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-61-00-710-001	Operational Test of the Rudder Travel Limiting Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC
AMM	27-23-51-000-002	Removal of the Electronic Module of the Rudder Travel Limitation Unit
AMM	27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC
AMM	27-23-51-400-002	Installation of the Electronic Module of the Rudder Travel Limitation Unit
AMM	34-11-18-000-001	Removal of the TAT Sensor (11FP1, 11FP2)
AMM	34-11-18-400-001	Installation of the TAT Sensor (11FP1, 11FP2)
ASM	22-67/01	, and the second
ASM	22-68/02	

EFF: ALL **22-61-00**

Page 209 Nov 01/06

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

121VU AUTO FLT/FAC2/28VDC

5CC2 M19

- B. Test
 - (1) Open the circuit breaker 5CC2.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC2.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/RTL ACTR 4CC:
 - remove the relay 13CC2 (open the circuit breaker 5CC2 before and close it after)
 - do a check of the correct wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (13CC2), if no repair it (Ref. ASM 22-68/02)
 - open the circuit breaker 5CC2
 - remove the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002)
 - install the aboved removed relay (13CC2).
 - (1) Do a check of the impedance of the RTL ACT VALID signal between the pin AB/11A and the pin AC/3 (GND signal) of the FAC-2 rack connector.

NOTE: The impedance must be more than 70 Ohms and not open circuit.

- (a) If the impedance is not correct (< 70 0hms or open circuit):
 - do a check of the wiring of the RTL ACT VALID signal from the FAC2 to the RTLU and associated GND signal at the RTLU (Ref. ASM 22-68/02).
 - 1 If the wiring is correct:
 - install the above removed FAC-2 (Ref. AMM TASK 22-66-34-400-002)
 - replace the electronic module of the rudder travel-limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - a If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).

EFF: ALL

22-61-00

Page 210 Nov 01/06

TROUBLE SHOOTING MANUAL

- (b) If the impedance is correct (no short circuit and no open circuit):
 - do a check of the impedance of the RTL ACT PWR ON signal between the pin AE/11A and the pin AC/3 of the FAC-2 rack connector, (Ref. ASM 22-68/02) and (Ref. ASM 22-67/01).

NOTE : The impedance must be more than 70 Ohms and not open circuit.

- 1 If the impedance is not correct (< 70 Ohms or open circuit)
 - remove the relay 13CC2 (open the circuit breaker 5CC2 and close it after)
 - do a check of the wiring of the RTL ACT PWR ON signal from the FAC2 to the relay 13CC2 (Ref. ASM 22-68/02).
 - a If the wiring is correct:
 - replace the RELAY-RTL SYS2 (13CC2)
 - install the above removed FAC-2 (Ref. AMM TASK 22-66-34-400-002).
- 2 If the impedance is correct (RTL ACT VALID and RTL ACT PWR ON signals):
 - do a check of the wiring of the 28VDC signal from the relay 13CC2 to the RTLU and associated GND at the RTLU (Ref. ASM 22-68/02).
 - a If incorrect, repair the wiring.
 - b If correct, replace the RELAY-RTL SYS2 (13CC2).

If the fault continues:

- replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-400-002)
- (2) If the fault continues:
 - do a check and repair the remaining wiring from the FAC 2 (1CC2) to the rudder travel-limitation unit (4CC) (Ref. ASM 22-68/02).
- B. If the test does not give the maintenance message AFS: FAC 2/RTL ACTR 4CC:
 - (1) And if the test gives the maintenance message TAT SENSOR (11FP2)/ADIRU2 (1FP2):
 - replace the SENSOR-TAT, 2 (11FP2), (Ref. AMM TASK 34-11-18-000-001) and (Ref. AMM TASK 34-11-18-400-001).
- R (2) If the fault continues:
 - do the operational test of the rudder travel limiting function (Ref. AMM TASK 22-61-00-710-001).

EFF: ALL **22-61-00**

Page 211 Nov 01/06

R

TROUBLE SHOOTING MANUAL

- C. If the rudder does not move or stops before the rudder travel limit:
 replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM
 TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the electronic module of the rudder travel-limitation unit (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - (2) If the fault continues:
 - replace the rudder travel-limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - (3) If the fault continues:
 - do a check and repair the wiring of the RTL V1 and RTL V2 discretes from the FAC 2 (1CC2) to the rudder travel-limitation unit (4CC) (Ref. ASM 22-68/02).
- D. Do the test given in Para. 4.B.

22-61-00

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-805

Loss of the Power Supply 26VAC of the Rudder Travel Limiting Side 1

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- electronic module
- wiring of the 26VAC signal at the rudder travel-limitation unit (4CC)
- wiring of the ground signal at rudder travel-limitation unit (4CC)

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM AMM	22-91-00-710-001 27-23-51-000-001	Ground Scanning of the AFS Removal of the Rudder Travel Limitation Unit 4CC	
		27-23-51-000-002	Removal of the Electronic Module of the Rudder Travel Limitation Unit	
₹		27-23-51-400-001 27-23-51-400-002	Installation of the Rudder Travel-Limitation Unit 4CC Installation of the Electronic Module of the Rudder Travel Limitation Unit	
	ASM	22-67/01		

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: 431 XPA BUS BAR:
 - replace the electronic module of the rudder travel-limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - (1) If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC), (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - (2) If the fault continues:
 - do a check of the wiring of the 26VAC signal at the rudder travel-limitation unit (4CC) from pin A/K to the first terminal block (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wiring.

EFF: ALL

22-61-00

Page 213 Nov 01/06

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at rudder travel-limitation unit (4CC) pin A/V (Ref. ASM 22-67/01).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-61-00

Page 214 Nov 01/06

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-806

Loss of the Power Supply 26VAC of the Rudder Travel Limiting Side 2

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- electronic module
- wiring of the 26VAC signal at the rudder travel-limitation unit (4CC)
- wiring of the ground signal at the rudder travel-limitation unit (4CC)

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM AMM	22-91-00-710-001 27-23-51-000-001	Ground Scanning of the AFS Removal of the Rudder Travel Limitation Unit 4CC	
		27-23-51-000-002	Removal of the Electronic Module of the Rudder Travel Limitation Unit	
2		27-23-51-400-001 27-23-51-400-002	Installation of the Rudder Travel-Limitation Unit 4CC Installation of the Electronic Module of the Rudder Travel Limitation Unit	
	ASM	22-67/01		

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: 231 XPA BUS BAR:
 - replace the electronic module of the rudder travel-limitation unit (4CC) (Ref. AMM TASK 27-23-51-000-002) and (Ref. AMM TASK 27-23-51-400-002).
 - (1) If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC), (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - (2) If the fault continues:
 - do a check of the wiring of the 26VAC signal at the rudder travel-limitation unit (4CC) from pin B/K to the first terminal block (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wiring.

EFF: ALL

22-61-00

Page 215 Nov 01/06

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at the rudder travel-limitation unit (4CC) pin B/V (Ref. ASM 22-67/01).
- B. Do the test given in Para. 3.

EFF: ALL SROS 22-61-00

Page 216 Nov 01/06

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-807

Loss of Power Supply 26VAC of the Position Feedback Transducers Side 1

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- ACTUATOR-RUDDER TRIM (10CC)
- SERVO ACTR-YAW DAMPER, 1 (3CC1)
- XDCR UNIT-YAW DAMPER POS (2CC)
- wiring of the 26VAC signal from the circuit breaker 14CC1 to the first terminal block
- C/B-AUTO FLT/FAC 1/26VAC (14CC1)
- electronic module
- short to ground between the circuit breaker 14CC1 and the four units

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-400-002	<pre>Installation of the Electronic Assembly of the Rudder Trim Actuator (10CC)</pre>	
	AMM	27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC	
	AMM	27-23-51-000-002	Removal of the Electronic Module of the Rudder Travel Limitation Unit	
R	AMM	27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC	
	AMM	27-23-51-400-002	Installation of the Electronic Module of the Rudder Travel Limitation Unit	
	AMM	27-26-17-000-001	Removal of the Yaw Damper Position Transducer Unit 2CC	
	AMM	27-26-17-400-001	<pre>Installation of the Yaw Damper Position Transducer Unit 2CC</pre>	
	AMM	27-26-51-000-001	Removal of the Yaw Damper Servo Actuator (3CC1) and (3CC2)	
	AMM	27-26-51-400-001	Installation of the Yaw Damper Servo Actuator (3CC1) and (3CC2)	
	ASM	22-67/01		

EFF: ALL **22-61-00**

Page 217 Nov 01/06

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

49VU AUTO FLT/FAC1/26VAC

14CC1 B03

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (a) If the circuit breaker 14CC1 is open, refer to Para. 4.B.

4. Fault Isolation

- A. If the circuit breaker 14CC1 is closed, and if the test gives the maintenance message AFS: 431 XPA BUS BAR:
 - do a check of the wiring of the 26VAC signal from the circuit breaker 14CC1 to the first terminal block, (Ref. ASM 22-67/01).
 - (1) If there is no continuity:
 repair the above wiring.
 - (2) If there is continuity:
 replace the C/B-AUTO FLT/FAC 1/26VAC (14CC1).
- B. If the circuit breaker 14CC1 is open:- close this circuit breaker.
 - (1) If this circuit breaker opens again:
 - disconnect these four units: LIMITATION UNIT-RUDDER TRAVEL (4CC) ACTUATOR-RUDDER TRIM (10CC) SERVO ACTR-YAW DAMPER, 1 (3CC1) XDCR UNIT-YAW DAMPER POS (2CC)
 - close the circuit breaker 14CC1.
 - (a) If this circuit breaker stays closed:
 - connect the units one by one until the circuit breaker 14CC1 opens again

NOTE: For the LRUs 4CC and 10CC, remove the electronic module before the connection. If the circuit breaker (14CC1) remains closed, install the electronic module.

- replace the related unit:
 for LRU 4CC: (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM
 TASK 27-23-51-400-001)
 for electronic module of LRU 4CC: (Ref. AMM TASK 27-23-51-000 002) and (Ref. AMM TASK 27-23-51-400-002)

EFF: ALL

22-61-00

Page 218 May 01/98

SROS

R

R R

R

R

TROUBLE SHOOTING MANUAL

for LRU 10CC: (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001) for electronic module of LRU 10CC: (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002)

for LRU 3CC1: (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26-51-400-001)

for LRU 2CC: (Ref. AMM TASK 27-26-17-000-001) and (Ref. AMM TASK 27-26-17-400-001).

- (b) If this circuit breaker opens again:
 - do a check for a short to ground between the circuit breaker
 14CC1 and the four units, (Ref. ASM 22-67/01).
 - 1 If there is a short to ground: - repair the related wiring.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/FAC 1/26VAC (14CC1).
- (2) Connect all the units.
- C. Do the test given in Para. 3.

EFF: ALL **22-61-00**

Page 219 May 01/98

SROS

R

TROUBLE SHOOTING MANUAL

TASK 22-61-00-810-808

Loss of Power Supply 26VAC of the Position Feedback Transducers Side 2

1. Possible Causes

- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- ACTUATOR-RUDDER TRIM (10CC)
- SERVO ACTR-YAW DAMPER, 2 (3CC2)
- XDCR UNIT-YAW DAMPER POS (2CC)
- wiring of the 26VAC signal from the circuit breaker 14CC2 to the first terminal block

- C/B-AUTO FLT/FAC 2/26VAC (14CC2)
- short to ground between the circuit breaker 14CC2 and the four units

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
	AMM	27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC	
R	AMM	27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC	
	AMM	27-26-17-000-001	Removal of the Yaw Damper Position Transducer Unit 2CC	
	AMM	27-26-17-400-001	Installation of the Yaw Damper Position Transducer Unit 2CC	
	AMM	27-26-51-000-001	Removal of the Yaw Damper Servo Actuator (3CC1) and (3CC2)	
	AMM	27-26-51-400-001	<pre>Installation of the Yaw Damper Servo Actuator (3CC1) and (3CC2)</pre>	
	ASM	22-67/01		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. LOCATION
121VU	AUTO FLT/FAC2/26VAC	14CC2 M18

B. Test

- (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (a) If the circuit breaker 14CC2 is open, refer to Para. 4.B.

EFF: ALL 22-61-00

Page 220 Nov 01/06

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the circuit breaker 14CC2 is closed, and if the test gives the maintenance message AFS: 231 XPA BUS BAR:
 - do a check of the wiring of the 26VAC signal from the circuit breaker 14CC2 to the first terminal block, (Ref. ASM 22-67/01).
 - (1) If there is no continuity:
 repair the above wiring.
 - (2) If there is continuity:
 replace the C/B-AUTO FLT/FAC 2/26VAC (14CC2).
- B. If the circuit breaker 14CC2 is open:- close this circuit breaker.
 - (1) If this circuit breaker opens again:
 - disconnect these four units: LIMITATION UNIT-RUDDER TRAVEL (4CC) ACTUATOR-RUDDER TRIM (10CC) SERVO ACTR-YAW DAMPER, 2 (3CC2) XDCR UNIT-YAW DAMPER POS (2CC)
 - close the circuit breaker 14CC2.
 - (a) If this circuit breaker stays closed:
 - connect the units one by one until the circuit breaker 14CC2 opens again
 - replace the related unit:
 for LRU 4CC: (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM
 TASK 27-23-51-400-001)
 for LRU 10CC: (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM
 TASK 27-22-51-400-001)
 for LRU 3CC2: (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM
 TASK 27-26-51-400-001)
 for LRU 2CC: (Ref. AMM TASK 27-26-17-000-001) and (Ref. AMM)
 - for LRU 2CC: (Ref. AMM TASK 27-26-17-000-001) and (Ref. AMM TASK 27-26-17-400-001).
 - (b) If this circuit breaker opens again:
 - do a check for a short to ground between the circuit breaker
 14CC2 and the four units, (Ref. ASM 22-67/01).
 - If there is a short to ground:repair the related wiring.
 - 2 If there is no short to ground: - replace the C/B-AUTO FLT/FAC 2/26VAC (14CC2).
 - (2) Connect all the units.
- C. Do the test given in Para. 3.

EFF: ALL 22-61-00

Page 221 May 01/98

TROUBLE SHOOTING MANUAL

RUDDER TRIM COMPUTATION - FAULT ISOLATION PROCEDURES

TASK 22-62-00-810-801

Failure of the Circuit of the Rudder Trim-Control Switch of the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- CTL SW-RUDDER TRIM (9CC)
- wiring of the RUD TR R NC SW COM and RUD TR L NC SW COM discretes from the FAC 1 (1CC1) to the rudder trim-control switch (9CC)
- wiring of the RUD TR R NO SW MON or RUD TR L NO SW MON discretes from the FAC 1 (1CC1) to the rudder trim-control switch (9CC)
- wiring of the ground signal at the rudder trim control switch (9CC)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)

AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)

AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-68/03

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS without rudder trim control switch (9CC) operation (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- (2) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) in one direction) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the first test only gives the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the CTL SW-RUDDER TRIM (9CC).

EFF :	ALL	22-62-00	Page 201 Aug 01/94
SROS			

Printed in France

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR R NC SW COM and RUD TR L NC SW COM discretes from the FAC 1 (1CC1) to the rudder trim-control switch (9CC), (Ref. ASM 22-68/03).
- B. If the second test only gives the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the CTL SW-RUDDER TRIM (9CC).
 - (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR R NO SW MON or RUD TR L NO SW MON discretes from the FAC 1 (1CC1) to the rudder trim-control switch (9CC), (Ref. ASM 22-68/03).
- C. If the two tests give the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 do a check and repair the wiring of the ground signal at the rudder trim control switch (9CC) pin 3 (Ref. ASM 22-68/03).
- D. Do the tests given in Para. 3.

22-62-00

Page 202 Aug 01/94

EFF: ALL

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-802

Failure of the Circuit of the Rudder Trim-Control Switch of the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- CTL SW-RUDDER TRIM (9CC)
- wiring of the RUD TR R NC SW COM and RUD TR L NC SW COM discretes from the FAC 2 (1002) to the rudder trim-control switch (900)
- wiring of the RUD TR R NO SW MON or RUD TR L NO SW MON discretes from the FAC 2 (1CC2) to the rudder trim-control switch (9CC)
- wiring of the ground signal at the rudder trim-control switch (9CC)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2)

Operational Test of the AFS

ASM 22-68/03

AMM 22-96-00-710-001

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS without rudder trim-control switch (9CC) operation (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- (2) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) in one direction) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the first test only gives the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the CTL SW-RUDDER TRIM (9CC).

EFF: ALL 22-62-00 Page 203 Aug 01/94 SROS

Printed in France

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR R NC SW COM and RUD TR L NC SW COM discretes from the FAC 2 (1CC2) to the rudder trim-control switch (9CC), (Ref. ASM 22-68/03).
- B. If the second test only gives the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the CTL SW-RUDDER TRIM (9CC).
 - (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR R NO SW MON or RUD TR L NO SW MON discretes from the FAC 2 (1002) to the rudder trim-control switch (900), (Ref. ASM 22-68/03).
- C. If the two tests give the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 do a check and repair the wiring of the ground signal at the rudder trim-control switch (9CC) pin 8 (Ref. ASM 22-68/03).
- D. Do the tests given in Para. 3.

22-62-00

Page 204 Aug 01/94

EFF: ALL

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-803

Rudder Trim-Control Switch Inoperative in One Direction with the FAC 1

- 1. Possible Causes
 - CTL SW-RUDDER TRIM (9CC)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
22-62-00-810-801	Failure of the Circuit of the Rudder Trim-Control Switch of the FAC 1
AMM 22-62-00-710-001 AMM 22-96-00-710-001	Operational Test of the Rudder Trim Function Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) in one direction) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/RT CTRL SW 9CC: do the procedure: (Ref. TASK 22-62-00-810-801).
 - B. If the test does not give the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 - replace the CTL SW-RUDDER TRIM (9CC).
 - C. Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).

EFF: ALL 22-62-00

Page 205 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-804

Rudder Trim-Control Switch Inoperative in the Two Directions with the FAC 1

1. Possible Causes

- CTL SW-RUDDER TRIM (9CC)
- wiring of the ground signal at the rudder trim-control switch (9CC)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-62-00-710-001 AMM 22-96-00-710-001 Operational Test of the Rudder Trim Function

Operational Test of the AFS

ASM 22-68/03

3. Fault Confirmation

A. Test

(1) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) clockwise, then counterclockwise) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the two tests give the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 do a check and repair the wiring of the ground signal at the rudder trim-control switch (9CC) pin 3 (Ref. ASM 22-68/03).
- B. If the two tests do not give the maintenance message AFS: FAC1/RT CTRL SW 9CC:
 - replace the CTL SW-RUDDER TRIM (9CC).
- C. Do the operational test of the rudder trim function (Ref. AMM TASK 22-62- 00-710-001).

EFF: ALL 22-62-00

Page 206 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-805

Rudder Trim-Control Switch Inoperative in One Direction with the FAC 2

- 1. Possible Causes
 - CTL SW-RUDDER TRIM (9CC)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
22-62-00-810-802	Failure of the Circuit of the Rudder Trim-Control Switch of the FAC 2
AMM 22-62-00-710-001 AMM 22-96-00-710-001	Operational Test of the Rudder Trim Function Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) in one direction) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/RT CTRL SW 9CC: do the procedure: (Ref. TASK 22-62-00-810-802).
 - B. If the test does not give the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 - replace the CTL SW-RUDDER TRIM (9CC).
 - C. Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).

22-62-00

Page 207 Aug 01/94

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-806

Rudder Trim-Control Switch Inoperative in the Two Directions with the FAC 2

1. Possible Causes

- CTL SW-RUDDER TRIM (9CC)
- wiring of the ground signal at the rudder trim-control switch (9CC)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-62-00-710-001 AMM 22-96-00-710-001 Operational Test of the Rudder Trim Function

Operational Test of the AFS

ASM 22-68/03

3. Fault Confirmation

A. Test

(1) Do the operational test of the AFS (turn the rudder trim-control switch (9CC) clockwise, then counterclockwise) (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the two tests give the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 do a check and repair the wiring of the ground signal at the rudder trim-control switch (9CC) pin 8 (Ref. ASM 22-68/03).
- B. If the two tests do not give the maintenance message AFS: FAC2/RT CTRL SW 9CC:
 - replace the CTL SW-RUDDER TRIM (9CC).
- C. Do the operational test of the rudder trim function (Ref. AMM TASK 22-62- 00-710-001).

EFF: ALL **22-62-00**

Page 208 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-807

Loss of the Reception of the RT ENGD Feedback Discrete by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the RUD TR ENGD COM and RUD TR ENGD MON discretes (from the FAC
 1 (1CC1) to the first terminal block)
- wiring of the RUD TR OWN ENGD COM and RUD TR OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION			
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over			
		Function			
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)			
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)			
AMM	22-96-00-710-001	Operational Test of the AFS			
ASM	22-68/03				

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC1/RT ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC2/RT ENGD CHG-OV:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RUD TR ENGD COM and RUD TR ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/03).

EFF: ALL **22-62-00**

Page 209 Aug 01/94

TROUBLE SHOOTING MANUAL

- (2) If the operational test of the automatic change-over function does not give the maintenance message AFS: FAC2/RT ENGD CHG-OV: - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RUD TR OWN ENGD COM and RUD TR OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/03).
- B. Do the test given in Para. 3.A.(1).

EFF: ALL SROS

Printed in France

22-62-00

Page 210

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-808

Loss of the Reception of the RT ENGD Feedback Discrete by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the RUD TR ENGD COM and RUD TR ENGD MON discretes (from the FAC 2 (1002) to the first terminal block)
- wiring of the RUD TR OWN ENGD COM and RUD TR OWN ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

RENCE	DESIGNATION			
22-60-00-710-002	Operational Test of the Automatic Change-Over			
	Function			
22-66-34-000-002	Removal of the FAC (1CC1,1CC2)			
22-66-34-400-002	Installation of the FAC (1CC1,1CC2)			
22-96-00-710-001	Operational Test of the AFS			
22-68/03				
	22-60-00-710-002 22-66-34-000-002 22-66-34-400-002 22-96-00-710-001			

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC2/RT ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC1/RT ENGD CHG-OV:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RUD TR ENGD COM and RUD TR ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/03).

EFF: ALL **22-62-00**

Page 211 Aug 01/94

TROUBLE SHOOTING MANUAL

- (2) If the operational test of the automatic change-over function does not give the maintenance message AFS: FAC1/RT ENGD CHG-OV: - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the RUD TR OWN ENGD COM and RUD TR OWN ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/03).
- B. Do the test given in Para. 3.A.(1).

EFF: ALL SROS

Printed in France

22-62-00

Page 212

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-809

Loss of the Rudder Trim Function on the FAC 1

1. Possible Causes

- ACTUATOR-RUDDER TRIM (10CC)
- RELAY-RUD TRIM 1 (7CC1)
- FAC-1 (1CC1)
- P/BSW-RUD TRIM/RESET (8CC) R
 - wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay
 - wiring of the RUD TR ACT VALID signal from the FAC1 to the RT actuator and associated GND at the RT actuator
 - electronic module
 - wiring of the RUD TR ACT PWR ON signal from the FAC1 to the relay 7CC1
 - wiring of the 28VDC signal from the relay 7CC1 to the RT actuator (10CC) and associted GND at RT actuator
 - wiring from the FAC 1 (1CC1) to the rudder trim actuator (10CC)
 - wiring of the RUD TR V1 and RUD TR V2 discretes from the rudder trim actuator (10CC) to the FAC 1 (1CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	

R	IPC	226708	
	AMM	22-62-00-710-001	Operational Test of the Rudder Trim Function
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
	AMM	22-96-00-710-001	Operational Test of the AFS
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)
	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim
			Actuator (10CC)
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)

AMM 27-22-51-400-002 Installation of the Electronic Assembly of the Rudder Trim Actuator (10CC)

ASM 22-68/03

Fault Confirmation

ALL

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04

49VU AUTO FLT/FAC1/28VDC

22-62-00

Page 213 Aug 01/06

SROS

EFF:

TROUBLE SHOOTING MANUAL

B. Test

- R (1) Open the circuit breaker 5CC1.
- R (2) After a minimum of 10 seconds, close the circuit breaker 5CC1.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/RT ACTR 10CC:
 - do a check of the correct wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (7CC1) (Ref. ASM 22-68/03)
 - open the circuit breaker 5CC1
 - remove the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002).
 - (1) Do a check of the impedance of the RUD TR ACT VALID signal between the pin AB/11C and the pin AC/3 (GND signal) of the FAC-1 rack connector.

NOTE: The impedance must be more than 70 Ohms.

- (a) If the impedance is not correct:
 - do a check of the continuity of the wiring of the RUD TR ACT VALID signal from the FAC1 to the RT actuator and associated GND at the RT actuator (Ref. ASM 22-68/03):
 - 1 If there is continuity:
 - replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - a If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002).
 - 2 If there is no continuity:
 - repair the wiring
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002).
- (b) If the impedance is correct:
 - do a check of the impedance of the RUD TR ACT PWR ON signal between the pin AE/11C and the pin AC/3 of the FAC-1 rack connector.

NOTE: The impedance must be more than 70 Ohms.

EFF: ALL

22-62-00

Page 214 Nov 01/98

TROUBLE SHOOTING MANUAL

- 1 If the impedance is not correct:
 - do a check of the correct continuity of the wiring of the RUD TR ACT PWR ON signal from the FAC1 to the relay 7CC1 (Ref. ASM 22-68/03)
 - a If there is continuity:
 - replace the RELAY-RUD TRIM 1 (7CC1)
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002).
 - b If there is no continuity:
 - repair the wiring
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002)
- 2 If the impedance is correct:
 - do a check of the correct continuity of the wiring of the 28VDC signal from the relay 7CC1 to the RT actuator (10CC) and associted GND at RT actuator (Ref. ASM 22-68/03).
 - <u>a</u> If there is continuity:replace the relay 7CC1.
 - b If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-400-002).
- (2) If the fault continues:
 - do a check and repair the remaining wiring from the FAC 1 (1CC1) to the rudder trim actuator (10CC) (Ref. ASM 22-68/03).
 - (a) If the fault continues:
 - replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).
- B. If the test does not give the maintenance message AFS: FAC1/RT ACTR 10CC: do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).
- C. If the rudder does not move or stops before the rudder travel limit:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - (a) If the fault continues:
 - replace the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).

EFF: ALL

22-62-00

Page 215 Aug 01/06

R

R

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR V1 and RUD TR V2 discretes from the rudder trim actuator (10CC) to the FAC 1 (1CC1) (Ref. ASM 22-68/03).
- D. Do the test given in Para. 4.B.

EFF: ALL SROS 22-62-00

Page 216 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-810

Loss of the Rudder Trim Function on the FAC 2

1. Possible Causes

- ACTUATOR-RUDDER TRIM (10CC)
- RELAY-RUD TRIM 2 (7CC2)
- FAC-2 (1CC2)
- P/BSW-RUD TRIM/RESET (8CC)
- wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (7CC2)
- wiring of the RUD TR ACT VALID signal from the FAC2 to the RT actuator and associated GND at the RT actuator
- electronic module
- wiring of the RUD TR ACT PWR ON signal from the FAC2 to the relay 7CC2
- wiring of the 28VDC signal from the relay 7CC2 to the RT actuator (10CC) and associted GND at RT actuator
- wiring from the FAC 2 (1CC2) to the rudder trim actuator (10CC)
- wiring of the RUD TR V1 and RUD TR V2 discretes from the rudder trim actuator (10CC) to the FAC 2 (1CC2)

2. Job Set-up Information

SROS

A. Referenced Information

	REFERENCE			
			DESIGNATION	
R	ESPM	205224		
	IPC	226708		
	AMM	22-62-00-710-001	Operational Test of the Rudder Trim Function	
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
	AMM	27-22-51-400-002	Installation of the Electronic Assembly of the Rudder	
			Trim Actuator (10CC)	
	ASM	22-68/03		
	AWM	22-68-04		
	AWM	22-68-06		

EFF: ALL 22-

22-62-00

Page 217 Feb 01/08

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION	IDENT.	LOCATION
121VU AUTO FLT/FAC2/28VDC	5CC2	M19

- B. Test
 - (1) Open the circuit breaker 5CC2.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC2.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

R

R

R R

R

R

R

R R

R R

R

R

R

R

R

R

R

R

- A. If the test gives the maintenance message AFS: FAC2/RT ACTR 10CC:
 - do a check of the correct wiring for 28VDC signal (pin A2) and GND signal (pin X2) at the relay (7CC2) (Ref. ASM 22-68/03)
 - open the circuit breaker 5CC2
 - remove the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002).
 - (1) do a check of the continuity of the wiring of the RUD TR ACT VALID signal from the FAC2 to the RT actuator and associated GND at the RT actuator (Ref. ASM 22-68/03):
 - (a) If there is continuity:
 - Do a check of the impedance of the RUD TR ACT VALID signal between the pin AB/11C of the FAC-2 rack connector and the ground point DC2 (Ref. AWM 22-68-06).

NOTE: The impedance must be more than 70 Ohms.

- 1 If the impedance is not correct:
 - Do a check for the insulation (Ref. ESPM 205224) and repair if necessary.
 - a If the fault continues:
 - replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - . If the fault continues:
 - * replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).

EFF: ALL 22-62-00

Page 218 Feb 01/08

TROUBLE SHOOTING MANUAL

* install the above removed FAC-2 (Ref. AMM TASK 22-66-R 34-400-002). 2 If the impedance is correct: R - do a check of the impedance of the RUD TR ACT PWR ON signal R between the pin AE/11C of the FAC-2 rack connector and the R ground point DC2 (Ref. AWM 22-68-04). NOTE: The impedance must be more than 70 Ohms. R R If the impedance is not correct: R - do a check of the correct continuity of the wiring of the RUD TR ACT PWR ON signal from the FAC2 to the relay 7CC2 R (Ref. ASM 22-68/03) R R . If there is continuity: R R * replace the RELAY-RUD TRIM 2 (7CC2) * install the above removed FAC-2 (Ref. AMM TASK 22-66-R 34-400-002). R . If there is no continuity: R R * repair the wiring * install the above removed FAC-2 (Ref. AMM TASK 22-66-R 34-400-002) b If the impedance is correct: R - do a check of the correct continuity of the wiring of the R 28VDC signal from the relay 7CC2 to the RT actuator R (10CC) and associted GND at RT actuator (Ref. ASM 22-R 68/03). R R . If there is continuity: R * replace the relay 7CC2. R . If the fault continues: R * replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-400-R 002). R R (b) If there is no continuity: - repair the wiring - install the above removed FAC-2 (Ref. AMM TASK 22-66-34-400-002). R (2) If the fault continues: - do a check and repair the remaining wiring from the FAC 2 (1002) to the rudder trim actuator (10CC) (Ref. ASM 22-68/03). (a) If the fault continues: - replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).

EFF: ALL

SROS

22-62-00

Page 219 Feb 01/08

TROUBLE SHOOTING MANUAL

- B. If the test does not give the maintenance message AFS: FAC2/RT ACTR 10CC: - do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).
- C. If the rudder does not move or stops before the rudder travel limit:
 replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM
 TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - (a) If the fault continues:
 - replace the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR V1 and RUD TR V2 discretes from the rudder trim actuator (10CC) to the FAC 2 (1CC2) (Ref. ASM 22-68/03).
- D. Do the test given in Para. 4.B.

22-62-00

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-811

Loss of the Power Supply 26VAC of the Rudder Trim Side 1

1. Possible Causes

- ACTUATOR-RUDDER TRIM (10CC)
- electronic module
- wirings of the 26VAC signal (from the rudder trim actuator (10CC) pin A/G and pin B/A to the first terminal block)
- wirings of the ground signal at rudder trim actuator (10CC) pin A/H and pin B/B

R R

R

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
R	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim	
R			Actuator (10CC)	
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
R	AMM	27-22-51-400-002	Installation of the Electronic Assembly of the Rudder	
R			Trim Actuator (10CC)	
	ASM	22-67/01		

3. Fault Confirmation

A. Test

R

R

R R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: 431 XPA BUS BAR:
- replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - (1) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC), (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
 - (2) If the fault continues:

 do a check of the wirings of the 26VAC signal (from the rudder trim actuator (10CC) pin A/G and pin B/A to the first terminal block), (Ref. ASM 22-67/01).

EFF: ALL
SROS

22-62-00

Page 221 May 01/98

TROUBLE SHOOTING MANUAL

R (a) If there is no continuity:
R - repair these above wirings.

R

(b) If there is continuity:

 do a check and repair the wirings of the ground signal at rudder trim actuator (10CC) pin A/H and pin B/B, (Ref. ASM 22-67/01).

B. Do the test given in Para. 3.

EFF: ALL SROS 22-62-00

Page 222 May 01/98

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-812

Loss of the Power Supply 26VAC of the Rudder Trim Side 2

1. Possible Causes

R

R

- ACTUATOR-RUDDER TRIM (10CC)
- electronic module
- wirings of the 26VAC signal (from the rudder trim actuator (10CC) pin B/G and pin A/A to the first terminal block)
- wirings of the ground signal at rudder trim actuator (10CC) pin A/B and pin B/H

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
R	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim	
R			Actuator (10CC)	
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
R	AMM	27-22-51-400-002	Installation of the Electronic Assembly of the Rudder	
R			Trim Actuator (10CC)	
	ASM	22-67/01		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: 231 XPA BUS BAR:
- R replace the electronic module of the rudder trim actuator (10CC) (Ref.
 R AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).
 - (1) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC), (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
 - (2) If the fault continues:
 - do a check of the wirings of the 26VAC signal (from the rudder trim actuator (10CC) pin B/G and pin A/A to the first terminal block), (Ref. ASM 22-67/01).

EFF: ALL

22-62-00

Page 223 May 01/98

SROS

R R

TROUBLE SHOOTING MANUAL

R (a) If there is no continuity:
R - repair these above wirings.

R

(b) If there is continuity:

 do a check and repair the wirings of the ground signal at rudder trim actuator (10CC) pin A/B and pin B/H, (Ref. ASM 22-67/01).

B. Do the test given in Para. 3.

EFF : ALL
SROS

22-62-00

Page 224 May 01/98

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-813

Failure of the Rudder Trim/Reset Circuit of the FAC 1

1. Possible Causes

R

- FAC-1 (1CC1)
- P/BSW-RUD TRIM/RESET (8CC)
- P/BSW-RUD TRIM/RESET (8CC)
- wiring of the RUD TR RES NO MON discrete (from the FAC 1 (1CC1) to the RUD TRIM/RESET pushbutton switch (8CC))
- wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC)
- wiring of the RUD TR RES NC COM discrete (from the FAC 1 (1CC1) to the RUD TRIM/RESET pushbutton switch (8CC))
- wiring of the ground signal

2. Job Set-up Information

A. Referenced Information

REFERENCE **DESIGNATION**

IPC 226708

AMM 22-66-34-000-002 AMM 22-66-34-400-002 Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2)

AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-68/03

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1:
 - (a) With the RUD TRIM/RESET pushbutton switch (8CC) pushed.
 - (b) With the RUD TRIM/RESET pushbutton switch (8CC) released.

4. Fault Isolation

R

- A. If only the first test gives the maintenance message AFS : FAC1/RT RESET SW 8CC:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
- replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).

EFF: ALL **SROS**

22-62-00

Page 225

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check of the wiring of the RUD TR RES NO MON discrete (from the FAC 1 (1CC1) to the RUD TRIM/RESET pushbutton switch (8CC)) (Ref. ASM 22-68/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC) (from pin 8 to the first terminal block) (Ref. ASM 22-68/03).
- B. If only the second test gives the maintenance message AFS: FAC1/RT RESET SW 8CC:
 - replace the FAC 1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).
 - (2) If the fault continues:
 - do a check of the wiring of the RUD TR RES NC COM discrete (from the FAC 1 (1CC1) to the RUD TRIM/RESET pushbutton switch (8CC)) (Ref. ASM 22-68/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC) (from pin 2 to the first terminal block) (Ref. ASM 22-68/03).
- C. If the two tests give the maintenance message AFS: FAC1/RT RESET SW 8CC: do a check and repair the wiring of the ground signal from the ground point to the first terminal block (Ref. ASM 22-68/03).
- D. Do the tests given in Para. 3.

22-62-00

EFF: ALL

Page 226 Aug 01/06

SROS

R

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-814

Failure of the Rudder Trim/Reset Circuit of the FAC 2

1. Possible Causes

R

- FAC-2 (1CC2)
- P/BSW-RUD TRIM/RESET (8CC)
- P/BSW-RUD TRIM/RESET (8CC)
- wiring of the RUD TR RES NO MON discrete (from the FAC 2 (1CC2) to the RUD TRIM/RESET pushbutton switch (8CC))
- wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC)
- wiring of the RUD TR RES NC COM discrete (from the FAC 2 (1CC2) to the RUD TRIM/RESET pushbutton switch (8CC))
- wiring of the ground signal

2. Job Set-up Information

A. Referenced Information

REFERENCE **DESIGNATION**

IPC 226708

AMM 22-66-34-000-002 AMM 22-66-34-400-002 Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2)

AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-68/03

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC2:
 - (a) With the RUD TRIM/RESET pushbutton switch (8CC) pushed.
 - (b) With the RUD TRIM/RESET pushbutton switch (8CC) released.

4. Fault Isolation

R

- A. If only the first test gives the maintenance message AFS: FAC2/RT RESET SW 8CC:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
- replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).

EFF: ALL **SROS**

22-62-00

Page 227 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check of the wiring of the RUD TR RES NO MON discrete (from the FAC 2 (1CC2) to the RUD TRIM/RESET pushbutton switch (8CC)) (Ref. ASM 22-68/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC) (from pin 4 to the first terminal block) (Ref. ASM 22-68/03).
- B. If only the second test gives the maintenance message AFS: FAC2/RT RESET SW 8CC:
 - replace the FAC 2 (1002) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

 - (2) If the fault continues:
 - do a check of the wiring of the RUD TR RES NC COM discrete (from the FAC 2 (1CC2) to the RUD TRIM/RESET pushbutton switch (8CC)) (Ref. ASM 22-68/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at RUD TRIM/RESET pushbutton switch (8CC) (from pin 6 to the first terminal block) (Ref. ASM 22-68/03).
- C. If the two tests give the maintenance message AFS: FAC2/RT RESET SW 8CC: do a check and repair the wiring of the ground signal from the ground point to the first terminal block (Ref. ASM 22-68/03).
- D. Do the tests given in Para. 3.

22-62-00

22-6

Page 228 Aug 01/06

EFF:

ALL

R

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-815

RUD TRIM/RESET Pushbutton Switch Inoperative on the FAC 1

- 1. Possible Causes
 - P/BSW-RUD TRIM/RESET (8CC)
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE	DESIGNATION
R	22-62-00-810-813 IPC 226708	Failure of the Rudder Trim/Reset Circuit of the FAC 1
	AMM 22-62-00-710-001	Operational Test of the Rudder Trim Function
	AMM 22-96-00-710-001	Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) with the RUD TRIM/RESET pushbutton switch (8CC) pushed and read the result for the FAC 1.
- 4. Fault Isolation

R

- A. If the reset is inoperative after the operational test of the rudder trim function:
 - (1) If the operational test of the AFS gives the maintenance message AFS: FAC1/RT RESET SW 8CC:
 - do the procedure (Ref. TASK 22-62-00-810-813).
 - (2) If the operational test of the AFS does not give the maintenance message AFS : FAC1/RT RESET SW 8CC:
 - replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).
- B. Do the test given in Para. 3.A.(1).

22-62-00 EFF: Page 229 ALL Aug 01/06 **SROS**

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-816

RUD TRIM/RESET Pushbutton Switch Inoperative on the FAC 2

- 1. Possible Causes
 - P/BSW-RUD TRIM/RESET (8CC)
- 2. Job Set-up Information
 - A. Referenced Information

	REFE	RENCE	DESIGNATION
	22-6	2-00-810-814	Failure of the Rudder Trim/Reset Circuit of the FAC 2
₹	IPC	226708	
	AMM	22-62-00-710-001	Operational Test of the Rudder Trim Function
	AMM	22-96-00-710-001	Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test

R

- (1) Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).
- (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) with the RUD TRIM/RESET pushbutton switch (8CC) pushed and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the reset is inoperative after the operational test of the rudder trim function:
 - (1) If the operational test of the AFS gives the maintenance message AFS : FAC2/RT RESET SW 8CC:
 - do the procedure (Ref. TASK 22-62-00-810-814).
 - (2) If the operational test of the AFS does not give the maintenance message AFS: FAC2/RT RESET SW 8CC:
 - replace the P/BSW-RUD TRIM/RESET (8CC) (Ref. IPC 226708).
 - B. Do the test given in Para. 3.A.(1).

22-62-00 EFF: ALL

Page 230 Aug 01/06

R

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-817

Failure of the Rudder Trim Indicator

- 1. Possible Causes
 - IND-RUDDER TRIM (17CC)
 - wiring of the 28VDC signal from the circuit breaker (15CC) to the rudder trim indicator (17CC)
 - wiring of the ground signal at the rudder trim indicator (17CC)
 - C/B-AUTO FLT/RUDDER/TRIM/IND (15CC)
- 2. Job Set-up Information
 - A. Referenced Information

______ REFERENCE

DESIGNATION

ASM 22-67/01

AMM 22-62-00-710-001 Operational Test of the Rudder Trim Function

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

121VU AUTO FLT/RUDDER/TRIM/IND

15CC M20

B. Test

- (1) Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).
 - (a) If the circuit breaker 15CC is open refer to Para. 4.B.

4. Fault Isolation

- A. If the circuit breaker 15CC is closed, and if no indication shows in the rudder trim indicator:
 - do a check for 28VDC at the rudder trim indicator (17CC).
 - (1) If there is 28VDC:
 - replace the IND-RUDDER TRIM (17CC).

EFF: ALL **22-62-00**

Page 231 May 01/98

TROUBLE SHOOTING MANUAL

- (2) If there is no 28VDC:
 - do a check of the wiring of the 28VDC signal from the circuit breaker (15CC) to the rudder trim indicator (17CC)
 - do a check of the wiring of the ground signal at the rudder trim indicator (17CC) pin A/F.
 (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wirings.
- B. If the circuit breaker 15CC is open:
 - close this circuit breaker.
 - - (a) If the fault continues:
 - do a check for a short to ground between the circuit breaker (15CC) and the rudder trim indicator (17CC) (Ref. ASM 22-67/01).
 - 1 If there is a short to ground: - repair the above wiring.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/RUDDER/TRIM/IND (15CC).
- C. Do the test given in Para. 3.

EFF: ALL 22-62-00

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-818

Rudder Trim Indicator Inoperative

1. Possible Causes

- IND-RUDDER TRIM (17CC)
- wiring of the FAC 1 bus from the rudder-trim indicator (17CC) to the first terminal block
- wiring of the FAC 2 bus from the rudder-trim indicator (17CC) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE

DESIGNATION

AMM 22-62-00-710-001 Operational Test of the Rudder Trim Function ASM 22-69/01

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the rudder trim function (Ref. AMM TASK 22-62-00-710-001).

4. Fault Isolation

- A. If the values shown on the rudder-trim indicator do not agree with the rudder movement indication on the lower ECAM DU (with the FAC 1 engaged): replace the IND-RUDDER TRIM (17CC).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC 1 bus from the rudder-trim indicator (17CC) to the first terminal block, (Ref. ASM 22-69/01).
- B. If the values shown on the rudder-trim indicator do not agree with the rudder movement indication on the lower ECAM DU (with the FAC 2 engaged): replace the IND-RUDDER TRIM (17CC).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC 2 bus from the rudder-trim indicator (17CC) to the first terminal block, (Ref. ASM 22-69/01).
- C. Do the test given in Para. 3.

22-62-00

Page 233 May 01/98

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-819

Reset of the Rudder Trim Inoperative

1. Possible Causes

- FAC-1 (1CC1)
- ACTUATOR-RUDDER TRIM (10CC)
- FAC-2 (1CC2)

R

- electronic module
- wiring of the RUD TR ORDER and the RUD TR ACT VALID discretes from the FAC
 1 (1001) to the rudder trim actuator (1000)
- wiring of the RUD TR ORDER and the RUD TR ACT VALID discretes from the FAC
 2 (1002) to the rudder trim actuator (1000)

2. Job Set-up Information

A. Referenced Information

	REFE	RENCE	DESIGNATION
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
	AMM	22-91-00-710-001	Ground Scanning of the AFS
	AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)
R	AMM	27-22-51-000-002	Removal of the Electronic Assembly of the Rudder Trim
R			Actuator (10CC)
	AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)
R	AMM	27-22-51-400-002	Installation of the Electronic Assembly of the Rudder
R			Trim Actuator (10CC)
	ASM	22-68/03	

3. Fault Confirmation

A. Test

R R

R

R

R

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

A. If the test gives the maintenance message:

AFS: RUD TR RST 8CC (ISSUED BY: FAC1):

 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

(1) If the fault continues:

- replace the electronic module of the rudder trim actuator (10CC) (Ref. AMM TASK 27-22-51-000-002) and (Ref. AMM TASK 27-22-51-400-002).

Printed in France

EFF: ALL
SROS

22-62-00

Page 234 May 01/98

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
- (3) If the fault continues:
 - do a check and repair the wiring of the RUD TR ORDER and the RUD TR ACT VALID discretes from the FAC 1 (1CC1) to the rudder trim actuator (10CC) (Ref. ASM 22-68/03).
- B. If the test gives the maintenance message:

AFS: RUD TR RST 8CC (ISSUED BY: FAC2):

- replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
- (1) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
- (2) If the fault continues:
 - do a check and repair the wiring of the RUD TR ORDER and the RUD TR ACT VALID discretes from the FAC 2 (1CC2) to the rudder trim actuator (10CC) (Ref. ASM 22-68/03).
- C. Do the test given in Para. 3.

22-62-00

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-820

FAC 1 RT Function Inoperative

- 1. Possible Causes
 - FAC 1
 - FMGC 1
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-91-00-710-001 AMM 22-96-00-710-001 AMM 22-97-00-710-001	Ground Scanning of the AFS Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test

R

R

R

- (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHECK FAC1 RT:
 do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

(1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

- (2) If the test does not gives the maintenance message, or if the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FAC 1 and the FMGC 1.
 - (a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
- B. Do the test given in Para. 3.

EFF: ALL **22-62-00**

Page 236 Feb 01/05

SROS

TROUBLE SHOOTING MANUAL

TASK 22-62-00-810-821

FAC 2 RT Function Inoperative

- 1. Possible Causes
 - FAC 2
 - FMGC 2
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-91-00-710-001 AMM 22-96-00-710-001 AMM 22-97-00-710-001	Ground Scanning of the AFS Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test

R

R

R

- (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHECK FAC2 RT:
 do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - (2) If the test does not gives the maintenance message, or if the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2 and the FMGC 2.
 - (a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - B. Do the test given in Para. 3.

EFF: ALL **22-62-00**

Page 237 Feb 01/05

TROUBLE SHOOTING MANUAL

YAW DAMPER COMPUTATION - FAULT ISOLATION PROCEDURES

TASK 22-63-00-810-801

Loss of the Yaw Damper Function on the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- SERVO ACTR-YAW DAMPER, 1 (3CC1)
- ENG-HYD.-PUMP-SW (1151GN)
 - wiring
 - solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, (3CC1)
 - pressure switch of the SERVO ACTR-YAW DAMPER, (3CC1)
 - wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator,1 (3CC1) to the FAC 1 (1CC1))
 - servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
	00 (7 00 740 004		
AMM	22-63-00-710-001	Operational Test of the Yaw Damper Function	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	22-96-00-710-001	Operational Test of the AFS	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	27-26-51-000-001	Removal of the Yaw Damper Servo Actuator (3CC1) and (3CC2)	
AMM	27-26-51-000-002	Removal of the Servovalve	
AMM	27-26-51-000-003	Removal of the Solenoid Valve	
AMM	27-26-51-000-004	Removal of the Pressure Switch	
AMM	27-26-51-400-001	<pre>Installation of the Yaw Damper Servo Actuator (3CC1) and (3CC2)</pre>	
AMM	27-26-51-400-002	Installation of the Servovalve	
AMM	27-26-51-400-003	Installation of the Solenoid Valve	
AMM	27-26-51-400-004	Installation of the Pressure Switch	
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply	
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump	
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump	
AMM	29-32-12-000-001	Removal of the System Pressure Switch (1151GN)	
AMM ASM	29-32-12-400-001 22-68/04	Installation of the System Pressure Switch (1151GN)	

22-63-00

Page 201 Aug 01/06

EFF: ALL

SROS

R

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

WARNING: MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE

YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

WARNING: MAKE SURE THAT THE TRAVEL RANGES OF THE FLIGHT CONTROL SURFACES

ARE CLEAR BEFORE YOU PRESSURIZE/DEPRESSURIZE A HYDRAULIC SYSTEM.

- A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-23-00-863-001), (Ref. AMM TASK 29-24-00-863-001) and (Ref. AMM TASK 29-10-00-863-003).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04
49VU	AUTO FLT/FAC1/26VAC	14CC1	B03

- C. Test
 - (1) Open the circuit breaker 5CC1.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC1.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/YD ACTR1 3CC1:
 - open the circuit breakers 5CC1 and 14CC1,
 - remove the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and disconnect the plug at the YAW DAMPER Servo-Actuator 1,
 - do a check of the wiring between respectively:
 - the pins AF/4 and AF/6 of the FAC1 and the pins A/E and A/D of the solenoid valve of the YAW DAMPER Servo-Actuator 1,
 - . the pins AC/4 and AC/6 of the FAC1 and the pins B/A and B/B of the solenoid valve 2 of the YAW DAMPER Servo-Actuator 1. (Ref. ASM 22-68/04)

EFF: ALL

22-63-00

Page 202 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the wiring is correct:
 - connect the above mentioned plug,
 - do a check of the impedance between respectively:
 - . the pin AC/4 and the pin AC/6,
 - . then the pin AF/4 and the pin AF/6 of the FAC-1 rack connector.

NOTE: The impedance must be more than 40 Ohms.

- (a) If the impedance is correct:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-400-002).
- (b) If the impedance is not correct:
 - replace the faulty solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, (3CC1) (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003),
 - install the above removed FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-400-002),
 - close the circuit breakers 5CC1 and 14CC1.

R **ON A/C 201-225, 227-227, 229-299, 426-453, 476-499, 503-549, 551-599, R 701-749,

- B. If the test does not give the maintenance message AFS: FAC1/YD ACTR1 3CC1:
 - do the operational test of the yaw damper function (Ref. AMM TASK 22-63-00-710-001).
 - (1) If the yaw damper function is not correct:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do a check and repair the wiring of the solenoid valve 1 and 2 of the SERVO ACTR-YAW DAMPER, 1 (3CC1), (Ref. ASM 22-68/04),
 - if the wiring is correct, replace the solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, (3CC1), (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003).
 - (3) If the fault continues:
 - do a check and repair the wiring of the pressure switch of the SERVO ACTR-YAW DAMPER, 1 (3CC1) (Ref. ASM 22-68/04),
 - if the wiring is correct, replace the pressure switch of the SERVO ACTR-YAW DAMPER, (3CC1), (Ref. AMM TASK 27-26-51-000-004) and (Ref. AMM TASK 27-26-51-400-004).
 - (4) If the fault continues:
 - do a check and repair the wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator,1 (3CC1) to the FAC 1 (1CC1)) (Ref. ASM 22-68/04).
 - if the wiring is correct, do a check and repair the wiring of the servovalve SERVO ACTR-YAW DAMPER, 1 (3CC1) (Ref. ASM 22-68/04),

EFF: ALL **22-63-00**

Page 203 May 01/08

SROS

TROUBLE SHOOTING MANUAL

- if the wiring is correct, replace the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC1), (Ref. AMM TASK 27-26-51-000-002) and (Ref. AMM TASK 27-26-51-400-002),

- if the fault persists, replace the SERVO ACTR-YAW DAMPER, 1 (3CC1), (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26-51-400-001).

R **ON A/C 227-227, 229-233, 279-279, 281-281, 454-475, 551-551, 554-554, R 559-560, R Post SB 22-1102 For A/C 227-227,229-233,279-279,281-281,551-551,554-554, R 559-560,

- B. If the test does not give the maintenance message AFS: FAC1/YD ACTR1 3CC1:
 - do the operational test of the yaw damper function (Ref. AMM TASK 22-63-00-710-001).
 - (1) If the yaw damper function is not correct:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do a check and repair the wiring of the solenoid valve 1 and 2 of the SERVO ACTR-YAW DAMPER, 1 (3CC1), (Ref. ASM 22-68/04).
 - if the wiring is correct, replace the solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, (3CC1), (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003).
 - (3) If the fault continues:
 - do a check and repair the wiring of the pressure switch of the SERVO ACTR-YAW DAMPER, 1 (3CC1) (Ref. ASM 22-68/04).
 - if the wiring is correct, replace the pressure switch of the SERVO ACTR-YAW DAMPER, (3CC1), (Ref. AMM TASK 27-26-51-000-004) and (Ref. AMM TASK 27-26-51-400-004).
 - (4) If the fault continues:
 - do a check and repair the wiring between the FAC-1 and the pressure switch 1151GN (Ref. ASM 22-68/04).
 - if the wiring is correct, replace the ENG-HYD.-PUMP-SW (1151GN), (Ref. AMM TASK 29-32-12-000-001) and (Ref. AMM TASK 29-32-12-400-001).
 - (5) If the fault continues:
 - do a check and repair the wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator,1 (3CC1) to the FAC 1 (1CC1)) (Ref. ASM 22-68/04).
 - if the wiring is correct, do a check and repair the wiring of the servovalve SERVO ACTR-YAW DAMPER, 1 (3CC1) (Ref. ASM 22-68/04), - if the wiring is correct, replace the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC1), (Ref. AMM TASK 27-26-51-000-002) and (Ref. AMM TASK 27-26-51-400-002),

EFF: ALL **22-63-00**

Page 204 May 01/08

TROUBLE SHOOTING MANUAL

- if the fault persists, replace the SERVO ACTR-YAW DAMPER, 1 (3CC1), (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26-51-400-001).

**ON A/C ALL

C. Do the test given in Para. 3.C.

EFF: ALL
SROS

22-63-00

Page 205 Feb 01/07

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-802

Loss of the Yaw Damper Function on the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- SERVO ACTR-YAW DAMPER, 2 (3CC2)
- ENG-HYD.-PUMP-SW (3151GN)
 - wiring

R

- solenoid valve 1 or 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2)
- solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2)
- pressure switch of the SERVO ACTR-YAW DAMPER, 2 (3CC2)
- wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator,2 (3CC2) to the FAC 2 (1CC2))
- servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC2)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-63-00-710-001	Operational Test of the Yaw Damper Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the
		External Power
AMM	27-26-51-000-001	Removal of the Yaw Damper Servo Actuator (3CC1) and (3CC2)
AMM	27-26-51-000-002	Removal of the Servovalve
AMM	27-26-51-000-003	Removal of the Solenoid Valve
AMM	27-26-51-000-004	Removal of the Pressure Switch
AMM	27-26-51-400-001	<pre>Installation of the Yaw Damper Servo Actuator (3CC1) and (3CC2)</pre>
AMM	27-26-51-400-002	Installation of the Servovalve
AMM	27-26-51-400-003	Installation of the Solenoid Valve
AMM	27-26-51-400-004	Installation of the Pressure Switch
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump
AMM	29-32-12-000-003	Removal of the System Pressure Switch (3151GN)
AMM	29-32-12-400-003	Installation of the System Pressure Switch (3151GN)
ASM	22-68/04	

EFF: ALL **22-63-00**

Page 206 Aug 01/06

SROS

R

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

WARNING : MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE

YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

WARNING: MAKE SURE THAT THE TRAVEL RANGES OF THE FLIGHT CONTROL SURFACES

ARE CLEAR BEFORE YOU PRESSURIZE/DEPRESSURIZE A HYDRAULIC SYSTEM.

- A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-23-00-863-001), (Ref. AMM TASK 29-24-00-863-001) and (Ref. AMM TASK 29-10-00-863-003).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	AUTO FLT/FAC2/28VDC	5002	M19
121VU	AUTO FLT/FAC2/26VAC	14002	M18

- C. Test
 - (1) Open the circuit breaker 5CC2.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC2.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/YD ACTR2 3CC2:
 - open the circuit breakers 5CC2 and 14CC2,
 - remove the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and disconnect the plug at the YAW DAMPER Servo-Actuator 2,
 - do a check of the wiring between respectively:
 - . The pins AF/4 and AF/6 of the FAC2 and the pins A/E and A/D of the YAW DAMPER Servo-Actuator,2,
 - . The pins AC/4 and AC/6 of the FAC2 and the pins B/A and B/B of the YAW DAMPER Servo-Actuator,2. (Ref. ASM 22-68/04)
 - (1) If the wiring is not correct:
 repair it.

EFF: ALL

22-63-00

Page 207 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the wiring is correct:
 - connect the above mentioned plug,
 - do a check of the impedance between respectively:
 - . the pin AC/4 and the pin AC/6,
 - . then the pin AF/4 and the pin AF/6 of the FAC-2 rack connector.

NOTE: The impedance must be more than 40 Ohms.

- (a) If the impedance is correct:
 - replace the FAC-2 (1002) (Ref. AMM TASK 22-66-34-400-002).
- (b) If the impedance is not correct:
 - replace the solenoid valve 1 or 2 of the SERVO ACTR-YAW DAMPER,
 2 (3CC2) (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003),
 - install the above removed FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-400-002),
 - close the circuit breakers 5CC2 and 14CC2.

R **ON A/C 201-225, 227-227, 229-299, 426-453, 476-499, 503-549, 551-599, R 701-749,

- B. If the test does not give the maintenance message AFS: FAC2/YD ACTR2 3CC2:
 - do the operational test of the yaw damper function (Ref. AMM TASK 22-63-00-710-001).
 - (1) If the yaw damper function is not correct:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do a check and repair the wiring of the solenoid valve 1 and 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),
 - if the wiring is correct, replace the solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003).
 - (3) If the fault continues:
 - do a check and repair the wiring of the pressure switch of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),
 - if the the wiring is correct, replace the pressure switch of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-004) and (Ref. AMM TASK 27-26-51-400-004).
 - (4) If the fault continues:
 - do a check and repair the wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator,2 (3CC2) to the FAC 2 (1CC2)) (Ref. ASM 22-68/04),
 - if the wiring is correct, do a check and repair the wiring of the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),

EFF: ALL

22-63-00

Page 208 May 01/08

TROUBLE SHOOTING MANUAL

- if the wiring is correct, replace the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-002) and (Ref. AMM TASK 27-26-51-400-002),

- if the fault persists, replace the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26-51-400-001).

R **ON A/C 227-227, 229-233, 279-279, 281-281, 454-475, 551-551, 554-554, R 559-560, R Post SB 22-1102 For A/C 227-227,229-233,279-279,281-281,551-551,554-554, R 559-560,

- B. If the test does not give the maintenance message AFS: FAC2/YD ACTR2 3CC2:
 - do the operational test of the yaw damper function (Ref. AMM TASK 22-63-00-710-001).
 - (1) If the yaw damper function is not correct:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do a check and repair the wiring of the solenoid valve 1 and 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),
 - if the wiring is correct, replace the solenoid valve 1 and/or 2 of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-003) and (Ref. AMM TASK 27-26-51-400-003).
 - (3) If the fault continues:
 - do a check and repair the wiring of the pressure switch of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),
 - if the the wiring is correct, replace the pressure switch of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-004) and (Ref. AMM TASK 27-26-51-400-004).
 - (4) If the fault continues:
 - do a check and repair the wiring between the FAC-2 and the pressure switch 3151GN (Ref. ASM 22-68/04).
 - if the the wiring is correct, replace the ENG-HYD.-PUMP-SW (3151GN), (Ref. AMM TASK 29-32-12-000-003) and (Ref. AMM TASK 29-32-12-400-003).
 - (5) If the fault continues:
 - do a check and repair the wiring of the YAW V1 COM and YAW V2 COM discretes (from the yaw damper servo-actuator, 2 (3CC2) to the FAC 2 (1CC2)) (Ref. ASM 22-68/04).
 - if the wiring is correct, do a check and repair the wiring of the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC2) (Ref. ASM 22-68/04),
 - if the wiring is correct, replace the servovalve of the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-26-51-000-002) and (Ref. AMM TASK 27-26-51-400-002),

EFF: ALL **22-63-00**

Page 209 May 01/08

SROS

TROUBLE SHOOTING MANUAL

R - if the fault persists, replace the SERVO ACTR-YAW DAMPER, 2
R (3CC2), (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26R 51-400-001).

R **ON A/C ALL

C. Do the test given in Para. 3.C.

EFF: ALL

22-63-00

Page 210 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-803

Loss of the Reception of the YD ENGD Feedback Discrete by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the YAW ENGD COM and YAW ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)
- wiring of the YAW OWN ENGD COM and YAW OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM ASM	22-96-00-710-001 22-68/04	Operational Test of the AFS

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC1/YD ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC2/YD ENGD CHG-OV:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the YAW ENGD COM and YAW ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/04).

EFF: ALL 22-63-00

Page 211 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the operational test of the automatic change-over function does not give the maintenance message AFS: FAC2/YD ENGD CHG-OV: - replace the FAC 1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the YAW OWN ENGD COM and YAW OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/04).
- B. Do the test given in Para. 3.A.(1).

EFF: ALL SROS 22-63-00

Page 212 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-804

Loss of the Reception of the YD ENGD Feedback Discrete by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the YAW ENGD COM and YAW ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)
- wiring of the YAW OWN ENGD COM and YAW OWN ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM ASM	22-96-00-710-001 22-68/04	Operational Test of the AFS

3. Fault Confirmation

A. Test

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- (2) Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

4. Fault Isolation

- A. If the operational test of the AFS gives the maintenance message AFS: FAC2/YD ENGD FDBK:
 - (1) If the operational test of the automatic change-over function gives the maintenance message AFS: FAC1/YD ENGD CHG-OV:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the YAW ENGD COM and YAW ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/04).

EFF: ALL 22-63-00

Page 213 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the operational test of the automatic change-over function does not give the maintenance message AFS: FAC1/YD ENGD CHG-OV: - replace the FAC 2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the YAW OWN ENGD COM and YAW OWN ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block) (Ref. ASM 22-68/04).
- B. Do the test given in Para. 3.A.(1).

EFF: ALL
SROS

22-63-00

Page 214 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-805

Loss of the Signal from the Yaw-Damper Position Transducer-Unit (2CC) to the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- XDCR UNIT-YAW DAMPER POS (2CC)
- wiring of the 26VAC signal at RVDT box (2CC)
- wiring of the ground signal at RVDT box (2CC)
- wirings of the YAW V1 MON and YAW V2 MON discretes (from the RVDT box (2CC) to the FAC 1 (1CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-63-00-710-001	Operational Test of the Yaw Damper Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	27-26-17-000-001	Removal of the Yaw Damper Position Transducer Unit 2CC
AMM	27-26-17-400-001	Installation of the Yaw Damper Position Transducer Unit 2CC
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump
ASM	22-68/04	·

3. Fault Confirmation

WARNING: MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE

YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

WARNING: MAKE SURE THAT THE TRAVEL RANGES OF THE FLIGHT CONTROL SURFACES

ARE CLEAR BEFORE YOU PRESSURIZE/DEPRESSURIZE A HYDRAULIC SYSTEM.

EFF: ALL

22-63-00

Page 215 Aug 01/06

TROUBLE SHOOTING MANUAL

A. Job Set-Up

- (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems
 (Ref. AMM TASK 29-23-00-863-001) (Ref. AMM TASK 29-24-00-863-001)
 (Ref. AMM TASK 29-10-00-863-003).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FAC1/28VDC

5CC1 B04

- C. Test
 - (1) Open the circuit breaker 5CC1.
 - (2) After a minimum of 10 seconds, close the circuit breaker 5CC1.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/YD RVDT BOX 2CC: replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the 26VAC signal at RVDT box (2CC) from pin A/A to the first terminal block (Ref. ASM 22-68/04).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the ground signal at RVDT box (2CC)
 pin A/B (Ref. ASM 22-68/04).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - replace the XDCR UNIT-YAW DAMPER POS (2CC), (Ref. AMM TASK 27-26-17-000-001) and (Ref. AMM TASK 27-26-17-400-001).

EFF: ALL

22-63-00

Page 216 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wirings of the YAW V1 MON and YAW V2 MON discretes (from the RVDT box (2CC) to the FAC 1 (1CC1) (Ref. ASM 22-68/04).
- B. Do the operational test of the yaw damper function (Ref. AMM TASK 22-63- 00-710-001).

EFF: ALL
SROS

22-63-00

Page 217 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-806

Loss of the Signal from the Yaw-Damper Position Transducer-Unit (2CC) to the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- XDCR UNIT-YAW DAMPER POS (2CC)
- wiring of the 26VAC signal at RVDT box (2CC)
- wiring of the ground signal at RVDT box (2CC)
- wirings of the YAW V1 MON and YAW V2 MON discretes (from the RVDT box (2CC) to the FAC 2 (1CC2)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-63-00-710-001	Operational Test of the Yaw Damper Function	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	22-96-00-710-001	Operational Test of the AFS	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	27-26-17-000-001	Removal of the Yaw Damper Position Transducer Unit 2CC	
AMM	27-26-17-400-001	Installation of the Yaw Damper Position Transducer Unit 2CC	
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply	
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump	
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump	
ASM	22-68/04	·	

3. Fault Confirmation

 ${\underline{\sf WARNING}}$: MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE

YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

WARNING: MAKE SURE THAT THE TRAVEL RANGES OF THE FLIGHT CONTROL SURFACES

ARE CLEAR BEFORE YOU PRESSURIZE/DEPRESSURIZE A HYDRAULIC SYSTEM.

EFF: ALL

22-63-00 Pag

Page 218 Aug 01/06

TROUBLE SHOOTING MANUAL

A. Job Set-Up

- (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems
 (Ref. AMM TASK 29-23-00-863-001) (Ref. AMM TASK 29-24-00-863-001)
 (Ref. AMM TASK 29-10-00-863-003).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FAC2/28VDC

M19

5CC2

C. Test

- (1) Open the circuit breaker 5CC2.
- (2) After a minimum of 10 seconds, close the circuit breaker 5CC2.
- (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/YD RVDT BOX 2CC: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the 26VAC signal at RVDT box (2CC) from pin B/A to the first terminal block (Ref. ASM 22-68/04).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the ground signal at RVDT box (2CC)
 pin B/B (Ref. ASM 22-68/04).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - replace the XDCR UNIT-YAW DAMPER POS (2CC), (Ref. AMM TASK 27-26-17-000-001) and (Ref. AMM TASK 27-26-17-400-001).

EFF: ALL

22-63-00

Page 219 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wirings of the YAW V1 MON and YAW V2 MON discretes (from the RVDT box (2CC) to the FAC 2 (1CC2) (Ref. ASM 22-68/04).
- B. Do the operational test of the yaw damper function (Ref. AMM TASK 22-63- 00-710-001).

EFF: ALL
SROS

22-63-00

Page 220 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-807

Loss of the Power Supply 26VAC of the Yaw Damper Side 1

1. Possible Causes

- SERVO ACTR-YAW DAMPER, 1 (3CC1)
- wiring of the 26VAC signal at yaw-damper servo-actuator (3CC1)
- wiring of the ground signal at yaw-damper servo-actuator (3CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	27-26-51-000-001	Removal of the Yaw Damper Servo Actuator (3CC1) and (3CC2)
AMM	27-26-51-400-001	<pre>Installation of the Yaw Damper Servo Actuator (3CC1) and (3CC2)</pre>
ASM	22-67/01	

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: 431 XPA BUS BAR:
 - replace the SERVO ACTR-YAW DAMPER, 1 (3CC1), (Ref. AMM TASK 27-26-51-000-001) and (Ref. AMM TASK 27-26-51-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the 26VAC signal at yaw-damper servo-actuator (3CC1) from pin A/A to the first terminal block (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wiring.
 - ,
 - (b) If there is continuity:do a check and repair the wiring of the ground signal at yaw-damper servo-actuator (3CC1) pin A/L (Ref. ASM 22-67/01).
- B. Do the test given in Para. 3.

EFF: ALL 22-

22-63-00

Page 221 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-808

Loss of the Power Supply 26VAC of the Yaw Damper Side 2

- 1. Possible Causes
 - SERVO ACTR-YAW DAMPER, 2 (3CC2)
 - wiring of the 26VAC signal at yaw-damper servo-actuator (3CC2)
 - wiring of the ground signal at yaw-damper servo-actuator (3CC2)
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE		DESIGNATION
R	AMM AMM	22-91-00-710-001 27-23-51-000-001 27-23-51-400-001 22-67/01	Ground Scanning of the AFS Removal of the Rudder Travel Limitation Unit 4CC Installation of the Rudder Travel-Limitation Unit 4CC

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: 231 XPA BUS BAR:
 - replace the SERVO ACTR-YAW DAMPER, 2 (3CC2), (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the 26VAC signal at yaw-damper servo-actuator (3CC2) from pin A/A to the first terminal block (Ref. ASM 22-67/01).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the ground signal at yaw-damper servo-actuator (3CC2) pin A/L (Ref. ASM 22-67/01).
 - B. Do the test given in Para. 3.

EFF: ALL **SROS**

22-63-00

Page 222 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-809

FAC 1 YD Function Inoperative

- 1. Possible Causes
 - FAC 1
 - FMGC 1
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-91-00-710-001 AMM 22-96-00-710-001 AMM 22-97-00-710-001	Ground Scanning of the AFS Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHECK FAC1 YD:
 do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - (2) If the test does not gives the maintenance message, or if the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FAC 1 and the FMGC 1.
 - (a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - B. Do the test given in Para. 3.

22-63-00

Page 223 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-810

FAC 2 YD Function Inoperative

- 1. Possible Causes
 - FAC 2
 - FMGC 2
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-91-00-710-001 AMM 22-96-00-710-001 AMM 22-97-00-710-001	Ground Scanning of the AFS Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHECK FAC2 YD:
 do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - (2) If the test does not gives the maintenance message, or if the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FAC 2 and the FMGC 2.
 - (a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.
 - B. Do the test given in Para. 3.

22-63-00

Page 224 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-811

Loss of the Reception of the HYD CIRC PRESS SW Discrete by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the HYD CIRC PRESS SW discrete (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-10-00-864-003	Depressurize the Blue Hydraulic System
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-23-00-864-001	Depressurize the Green and Yellow Hydraulic Systems after Operation of the PTU
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump
AMM ASM	29-24-00-864-001 22-68/04	Depressurize the Yellow Hydraulic System

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-10-00-863-003) (Ref. AMM TASK 29-23-00-863-001) (Ref. AMM TASK 29-24-00-863-001) .
- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-63-00**

Page 225 Aug 01/06

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: HYD G 1151GN:
 - on the MCDU, get the AFS/TEST REPORT TROUBLE SHOOTING DATA page.
 - make sure that the fourth number of the word W3 is equal to one of these values:
 - . 8, 9, A, B, C, D, E or F.
 - (1) If the fourth number is not equal to one of the above values: - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the HYD CIRC PRESS SW discrete (from the FAC 1 (1CC1) to the first terminal block) (Ref. ASM 22-68/04).
- B. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) Depressurize the aircraft hydraulic systems (Ref. AMM TASK 29-10-00-864-003) (Ref. AMM TASK 29-23-00-864-001) (Ref. AMM TASK 29-24-00-864-001).

EFF: ALL 22-63-00

Page 226 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-812

Loss of the Reception of the HYD CIRC PRESS SW Discrete by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the HYD CIRC PRESS SW discrete (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-10-00-864-003	Depressurize the Blue Hydraulic System
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-23-00-864-001	Depressurize the Green and Yellow Hydraulic Systems after Operation of the PTU
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump
AMM ASM	29-24-00-864-001 22-68/04	Depressurize the Yellow Hydraulic System

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-10-00-863-003) (Ref. AMM TASK 29-23-00-863-001) (Ref. AMM TASK 29-24-00-863-001).
- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-63-00**

Page 227 Aug 01/06

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: HYD Y 3151GN:
 - on the MCDU, get the AFS/TEST REPORT TROUBLE SHOOTING DATA page.
 - make sure that the fourth number of the word **W3** is equal to one of these values:
 - . 8, 9, A, B, C, D, E or F.
 - (1) If the fourth number is not equal to one of the above values: - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the HYD CIRC PRESS SW discrete (from the FAC 2 (1CC2) to the first terminal block) (Ref. ASM 22-68/04).
- B. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) Depressurize the aircraft hydraulic systems (Ref. AMM TASK 29-10-00-864-003) (Ref. AMM TASK 29-23-00-864-001) and (Ref. AMM TASK 29-24-00-864-001).

EFF: ALL **22-63-00**

Page 228 Aug 01/06

TROUBLE SHOOTING MANUAL

TASK 22-63-00-810-815

Loss of the Yaw Damper Function

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
22-63-00-810-801 22-63-00-810-802	Loss of the Yaw Damper Function on the FAC 1 Loss of the Yaw Damper Function on the FAC 2

- 3. Fault Confirmation
 - A. Not applicable.
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. L	OCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04
12 1VU	AUTO FLT/FAC2/28VDC	5CC2	M19

4. Fault Isolation

- A. In case of appearance of the ECAM warnings AUTO FLT YAW DAMPER 1, AUTO FLT YAW DAMPER 2 or AUTO FLT YAW DAMPER SYS, at or after engine start:
 - perform a reset of FAC 1 and FAC 2 pushbuttons on the overhead panel
 - if unsuccessful, shut down the engines and perform a reset of both FAC 1 and 2 circuits breakers: 5CC1 and 5CC2 (for more than 5 seconds).
 - if fault persists, do the following procedures (Ref. TASK 22-63-00-810-801) and/or (Ref. TASK 22-63-00-810-802).

EFF: ALL **22-63-00**

Page 229 Aug 01/06

TROUBLE SHOOTING MANUAL

FLIGHT AUGMENTATION COMPUTER (FAC) - FAULT ISOLATION PROCEDURES

TASK 22-66-00-810-801

Failure of the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - LIMITATION UNIT-RUDDER TRAVEL (4CC)
 - ACTUATOR-RUDDER TRIM (10CC)
 - wiring of the 28VDC signal from the circuit breaker (5CC1) to the FAC 1 (1CC1)
 - wiring of the ground signal at the FAC 1 (1CC1)
 - C/B-AUTO FLT/FAC 1/28VDC (5CC1)
 - short to ground between the circuit breaker 5001 and the three units
 - C/B-AUTO FLT /FAC 1/28VDC (5CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)
AMM	27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)
AMM	27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC
AMM	27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC
ASM	22-67/01	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
 - (a) If the circuit breaker 5CC1 is open refer to Para. 4.B.

EFF: ALL SROS

22-66-00

Page 201 Nov 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R

- A. If the circuit breaker 5CC1 is closed, and if the test gives the maintenance message AFS: FAC1:
 - do a check for 28VDC at the FAC 1 (1CC1).
 - (1) If there is 28VDC:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If there is no 28VDC:
 - do a check of the wiring of the 28VDC signal from the circuit breaker (5CC1) to the FAC 1 (1CC1).
 - do a check of the wiring of the ground signal at the FAC 1 (1CC1) pin AC/3.
 (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wirings.
 - (b) If there is continuity:
 replace the C/B-AUTO FLT/FAC 1/28VDC (5CC1).
- B. If the circuit breaker 5CC1 is open:
 - close this circuit breaker.
 - (1) If this circuit breaker opens again:
 - disconnect these three units:
 LIMITATION UNIT-RUDDER TRAVEL (4CC)
 ACTUATOR-RUDDER TRIM (10CC)
 FAC-1 (1CC1)
 - close the circuit breaker 5CC1.
 - (a) If this circuit breaker stays closed:
 - connect the units one by one until the circuit breaker 5CC1 opens again
 - replace the related unit:
 for LRU 4CC: (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001)
 for LRU 10CC: (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001)
 for LRU 1CC1: (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (b) If this circuit breaker opens again:
 - do a check for a short to ground between the circuit breaker
 5CC1 and the three units, (Ref. ASM 22-67/01).
 - 1 If there is a short to ground: - repair the related wiring.

EFF: ALL

22-66-00

Page 202 Aug 01/06

TROUBLE SHOOTING MANUAL

- 2 If there is no short to ground:
 replace the C/B-AUTO FLT /FAC 1/28VDC (5CC1).
- (2) Connect all the units.
- C. Do the test given in Para. 3.

EFF: ALL
SROS

22-66-00

Page 203 Nov 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-802

Failure of the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - LIMITATION UNIT-RUDDER TRAVEL (4CC)
 - ACTUATOR-RUDDER TRIM (10CC)
 - wiring of the 28VDC signal from the circuit breaker (5CC2) to the FAC 2 (1CC2)
 - wiring of the ground signal at the FAC 2 (1CC2)
 - C/B-AUTO FLT/FAC 2/28VDC (5CC2)
 - short to ground between the circuit breaker 5CC2 and the three units
- 2. Job Set-up Information
 - A. Referenced Information

RENCE	DESIGNATION
22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
22-96-00-710-001	Operational Test of the AFS
27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)
27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)
27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC
27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC
22-67/01	
	22-66-34-000-002 22-66-34-400-002 22-96-00-710-001 27-22-51-000-001 27-22-51-400-001 27-23-51-000-001 27-23-51-400-001

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FAC2/28VDC 5CC2 M19

B. Test

R

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
 - (a) If the circuit breaker 5CC2 is open refer to Para. 4.B.

EFF: ALL **22-66-00**

Page 204 Nov 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R

- A. If the circuit breaker 5CC2 is closed, and if the test gives the maintenance message AFS: FAC2:
 - do a check for 28VDC at the FAC 2 (1CC2).
 - (1) If there is 28VDC:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If there is no 28VDC:
 - do a check of the wiring of the 28VDC signal from the circuit breaker (5CC2) to the FAC 2 (1CC2).
 - do a check of the wiring of the ground signal at the FAC 2 (1CC2)
 pin AC/3.
 - (Ref. ASM 22-67/01).
 - (a) If there is no continuity:repair the above wirings.
- ${\bf B.}\ {\bf If}\ {\bf the}\ {\bf circuit}\ {\bf breaker}\ {\bf 5CC2}\ {\bf is}\ {\bf open:}$
 - close this circuit breaker.
 - (1) If this circuit breaker opens again:
 - disconnect these three units: LIMITATION UNIT-RUDDER TRAVEL (4CC) ACTUATOR-RUDDER TRIM (10CC) FAC-2 (1CC2)
 - close the circuit breaker 5CC2.
 - (a) If this circuit breaker stays closed:
 - connect the units one by one until the circuit breaker 5CC2 opens again
 - replace the related unit:
 for LRU 4CC: (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM
 TASK 27-23-51-400-001)
 for LRU 10CC: (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM
 TASK 27-22-51-400-001)
 for LRU 1CC2: (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM
 TASK 22-66-34-400-002).
 - (b) If this circuit breaker opens again:
 - do a check for a short to ground between the circuit breaker
 5CC2 and the three units, (Ref. ASM 22-67/01).
 - If there is a short to ground:repair the related wiring.

EFF: ALL

22-66-00

Page 205 Feb 01/05

TROUBLE SHOOTING MANUAL

- 2 If there is no short to ground: - replace the C/B-AUTO FLT/FAC 2/28VDC (5CC2).
- (2) Connect all the units.
- C. Do the test given in Para. 3.

EFF: ALL SROS 22-66-00

Page 206 May 01/96

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-803

Loss of the FAC 1 GENERAL Bus

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the FAC OWN (GENERAL BUS) from the FAC 1 (1CC1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM AMM	22-66-34-000-002 22-66-34-400-002 22-96-00-710-001 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/C-M ARINC LINK: - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN (GENERAL BUS) from the FAC 1 (1CC1) to the first terminal block, (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 207 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-804

Loss of the FAC 2 GENERAL Bus

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the FAC OWN (GENERAL BUS) from the FAC 2 (1CC2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/C-M ARINC LINK:
 replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN (GENERAL BUS) from the FAC 2 (1002) to the first terminal block, (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 208 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-805

Loss of the FAC 1 Bus Feedback

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the FAC OWN COM bus from the FAC 1 (1CC1) to the first terminal block
 - wiring of the FAC OWN MON bus on the FAC 1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC 1/C-M ARINC LINK:
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check the wiring of the FAC OWN COM bus from the FAC 1 (1CC1) to the first terminal block, (Ref. ASM 22-69/01).
 - (a) If there is no continuity:
 - repair the above mentioned wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FAC OWN MON bus on the FAC 1 (1CC1) (from pin AE/12A, 12B to pin AB/7J, 7K) (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

EFF: ALL Page 209
Aug 01/94
SROS

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-806

Loss of the FAC 2 Bus Feedback

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the FAC OWN COM bus from the FAC 2 (1CC2) to the first terminal
 - wiring of the FAC OWN MON bus on the FAC 2 (1CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC 2/C-M ARINC LINK: - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check the wiring of the FAC OWN COM bus from the FAC 2 (1002) to the first terminal block, (Ref. ASM 22-69/01).
 - (a) If there is no continuity:
 - repair the above mentioned wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FAC OWN MON bus on the FAC 2 (1CC2) (from pin AE/12A, 12B to pin AB/7J, 7K) (Ref. ASM 22-69/01).

Page 210

B. Do the test given in Para. 3.

22-66-00 EFF: ALL Aug 01/94 **SROS**

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-807

Loss of the FAC 1 HLTY MON OWN Discrete Signal

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FAC HLTY MON OWN discrete (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC 1/FAC 1 (HLTY CKT):
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY MON OWN discrete (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 211 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-808

Loss of the FAC 1 HLTY MON OPP Discrete Signal

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FAC HLTY MON OPP discrete (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/FAC1 (HLTY CKT): - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY MON OPP discrete (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-65/01).

Page 212 Aug 01/94

B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-809

Loss of the FAC 2 HLTY MON OPP Discrete Signal

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the FAC HLTY MON OPP discrete (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/FAC2 (HLTY CKT): - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY MON OPP discrete (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 213 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-810

Loss of the FAC 2 HLTY MON OWN Discrete Signal

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the FAC HLTY MON OWN discrete (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC 2/FAC 2 (HLTY CKT):
 replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY MON OWN discrete (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 214 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-811

Loss of the FAC 1 HLTY COM OPP Discrete Signal

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FAC HLTY COM OPP discrete (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/FAC1 (HLTY CKT): - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY COM OPP discrete (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 215 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-812

Loss of the FAC 2 HLTY COM OPP Discrete Signal

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the FAC HLTY COM OPP discrete (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/FAC2 (HLTY CKT): replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC HLTY COM OPP discrete (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 216 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-813

Loss of the Reception of the FAC 1 GENERAL Bus by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the FAC OPP bus from the FAC 2 (1CC2) to the first terminal block
- wiring of the FAC OPP HLTY COM and FAC OPP HLTY MON discretes from the FAC 2 (1002) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
	22 // 7/ 222 222	
	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
ASM	22-69/01	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the FAC OPP bus from the FAC 2 (1CC2) to the first terminal block, (Ref. ASM 22-69/01).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FAC OPP HLTY COM and FAC OPP HLTY MON discretes from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
- B. Do the test given in Para. 3.

EFF: ALL 22-66-00 Page 217 Aug 01/94 SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-814

Loss of the Reception of the FAC 2 GENERAL Bus by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FAC OPP bus from the FAC 1 (1CC1) to the first terminal block
- wiring of the FAC OPP HLTY COM and FAC OPP HLTY MON discretes from the FAC
 1 (1001) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the FAC OPP bus from the FAC 1 (1CC1) to the first terminal block, (Ref. ASM 22-69/01).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FAC OPP HLTY COM and FAC OPP HLTY MON discretes from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00** Page 218 Aug 01/94 SROS

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-815

Loss of the Rudder Trim Change-Over between the FAC 2 and the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the RUD TR OPP ENGD COM and RUD TR OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM ASM	22-96-00-710-001 22-68/03	Operational Test of the AFS	

3. Fault Confirmation

A. Test

R

R

(1) Do the operational test for the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result of the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/RT ENGD CHG-OV:
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RUD TR OPP ENGD COM and RUD TR OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/03).
- B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL **22-66-00**SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-816

Loss of the Rudder Trim Change-Over between the FAC 1 and the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the RUD TR OPP ENGD COM and RUD TR OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

	REFE	RENCE	DESIGNATION
	AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
	AMM	22-96-00-710-001	Operational Test of the AFS
₹	ASM	22-68/03	

3. Fault Confirmation

A. Test

R

R

(1) Do the operational test for the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result of the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/RT ENGD CHG-OV: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RUD TR OPP ENGD COM and RUD TR OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/03).
- B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL Page 220
Nov 01/99
SROS

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-817

Loss of the Rudder Travel-Limiting Change-Over between the FAC 2 and the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the RTL OPP ENGD COM and RTL OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function	
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
₹	ASM	22-68/02		

- 3. Fault Confirmation
 - A. Test

R

R

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/RTL ENGD CHG-OV: replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RTL OPP ENGD COM and RTL
 OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/02).
 - B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL **22-66-00**

Page 221 Aug 01/02

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-818

Loss of the Rudder Travel-Limiting Change-Over between the FAC 1 and the FAC 2

1. Possible Causes

R

- FAC-2 (1CC2)
- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- wiring of the RTL OPP ENGD COM and RTL OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)
- Job Set-up Information
 - A. Referenced Information

REFE	ERENCE	DESIGNATION
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over
AMM R AMM	22-66-34-000-002 22-66-34-400-002 22-96-00-710-001 27-23-51-000-001 27-23-51-400-001 22-68/02	Function Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS Removal of the Rudder Travel Limitation Unit 4CC Installation of the Rudder Travel-Limitation Unit 4CC

- 3. Fault Confirmation
 - A. Test

R

R

R

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC 2/RTL ENGD CHG-OV:
 replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RTL OPP ENGD COM and RTL
 OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/02).
 - (a) If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC), (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
 - B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL

22-66-00 Page 222 Feb 01/08

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-819

Loss of the Yaw Damper Change-Over between the FAC 2 and the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the YAW OPP ENGD COM and YAW OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM ASM	22-96-00-710-001 22-68/04	Operational Test of the AFS	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC 1/YD ENGD CHG-OV:
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the YAW OPP ENGD COM and YAW
 OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-68/04).
- B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL **22-66-00**

Page 223 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-820

Loss of the Yaw Damper Change-Over between the FAC 1 and the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the YAW OPP ENGD COM and YAW OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-60-00-710-002	Operational Test of the Automatic Change-Over Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM ASM	22-96-00-710-001 22-68/04	Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC 2/YD ENGD CHG-OV:
 replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the YAW OPP ENGD COM and YAW
 OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-68/04).
- B. Do the operational test of the automatic change-over function (Ref. AMM TASK 22-60-00-710-002).

EFF: ALL **22-66-00**

Page 224 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-821

Loss of the Reception of the AP 1 ENGD Discrete Signal by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the AP OWN ENGD COM and AP OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/AP1 ENGD WIRING: - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD COM and AP OWN ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 225 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-822

Loss of the Reception of the AP2 ENGD Discrete Signal by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the AP OPP ENGD COM and AP OPP ENGD MON discretes (from the FAC
 1 (1CC1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/AP2 ENGD WIRING: - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OPP ENGD COM and AP OPP ENGD MON discretes (from the FAC 1 (1CC1) to the first terminal block), (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 226 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-823

Loss of the Reception of the AP1 ENGD Discrete Signal by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the AP OPP ENGD COM and AP OPP ENGD MON discretes (from the FAC 2 (1002) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

A. Test

SROS

(1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/AP1 ENGD WIRING: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OPP ENGD COM and AP OPP ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-85/03).

Page 227 Aug 01/94

B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-824

Loss of the Reception of the AP2 ENGD Discrete Signal by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the AP OWN ENGD COM and AP OWN ENGD MON discretes (from the FAC 2 (1002) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-66-34-000-002 22-66-34-400-002 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS
ASM	22-85/03	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/AP2 ENGD WIRING: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AP OWN ENGD COM and AP OWN ENGD MON discretes (from the FAC 2 (1CC2) to the first terminal block), (Ref. ASM 22-85/03).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 228 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-825

Loss of the Reception of the FMGC1 OWN B Bus by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FMGC OWN B bus from the FAC 1 (1CC1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/FMGC1 BUS WIRG: - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN B bus from the FAC
 1 (1CC1) to the first terminal block, (Ref. ASM 22-86/02).
- B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 229 Aug 01/94

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

TASK 22-66-00-810-826

Loss of the Reception of the FMGC1 OWN B Bus by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the FMGC OPP B bus from the FAC 2 (1002) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/FMGC1 BUS WIRG: - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OPP B bus from the FAC 2 (1CC2) to the first terminal block, (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-66-00

Page 230

May 01/08

R

EFF: 201-225, 227-227, 229-275, 426-475,

551-599, 701-749,

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-827

Loss of the Reception of the FMGC2 OWN B Bus by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FMGC OPP B bus from the FAC 1 (1CC1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/FMGC2 BUS WIRG: replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OPP B bus from the FAC
 1 (1CC1) to the first terminal block, (Ref. ASM 22-86/02).
- B. Do the test given in Para. 3.

22-66-00

Page 231

May 01/08

≀ |

EFF: 201-225, 227-227, 229-275, 426-475,

551-599, 701-749,

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

TASK 22-66-00-810-828

Loss of the Reception of the FMGC2 OWN B Bus by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the FMGC OWN B bus from the FAC 2 (1002) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/FMGC2 BUS WIRG: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN B bus from the FAC 2 (1CC2) to the first terminal block, (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

EFF: ALL **22-66-00**

Page 232 Feb 01/95

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

TASK 22-66-00-810-829

Loss of the Parity Pin Program on the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the ground signal at the programming pins of the FAC 1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-67/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/PARITY PIN PRG: replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ground signal at the programming pins of the FAC 1 (1CC1), (Ref. ASM 22-67/01).
 - B. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-830

Loss of the Parity Pin Program on the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the ground signal at the programming pins of the FAC 2 (1CC2)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS		
ASM 22-67/01			

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/PARITY PIN PRG: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ground signal at the programming pins of the FAC 2 (1CC2), (Ref. ASM 22-67/01).
- B. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

**ON A/C ALL

TASK 22-66-00-810-833

Loss of the Reception of the LGCIU 1 Bus by the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the LGCIU OWN bus from the FAC 1 (1001) to the first terminal
- 2. Job Set-up Information
 - A. Referenced Information

______ REFERENCE DESIGNATION ______

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2) AMM 22-91-00-710-001 Ground Scanning of the AFS ASM 22-69/01

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION ______ 49VU L/G/LGCIU/SYS1/NORM 1GA C09 52GA Q34

121VU HYDRAULIC/LGCIU/SYS1/GRND SPLY

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

B. Test

- A. If the test gives the maintenance message AFS: LGCIU1:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the LGCIU OWN bus from the FAC1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).
- B. Do the test given in Para. 3.

22-66-00 EFF: ALL

Page 235 Feb 01/99



TROUBLE SHOOTING MANUAL

INTENTIONALLY BLANK

SROS

22-66-00

Page 236 Feb 01/99

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-834

Loss of the Reception of the LGCIU 2 Bus by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the LGCIU OWN bus from the FAC 2 (1002) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	HYDRAULIC/LGCIU/SYS2	2GA	Q35

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: LGCIU2:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the LGCIU OWN bus from the FAC2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

22-66-00

Page 237 Aug 01/96



TROUBLE SHOOTING MANUAL

INTENTIONALLY BLANK

SROS

22-66-00

Page 238 May 01/96

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-835

Loss of the Data from the ADIRUs to the AFS

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- wiring of the ADC SW and ATT SW discretes (from the FAC 1 (1CC1) to the first terminal block)
- wiring of the ADC SW and ATT SW discretes (from the FAC 2 (1CC2) to the first terminal block)
- wiring of the ADC 3 SW and ATT 3 SW discretes (from the FMGC 1 (1CA1) to the first terminal block)
- wiring of the ADC SW and ATT SW discretes (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2) 22-66-34-400-002 Installation of the FAC (1CC1,1CC2) AMM AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2) AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2) AMM 22-97-00-710-001 Operational Test of the LAND CAT III Capability ASM 22-68/01 ASM 22-85/04

3. Fault Confirmation

A. Test

Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK ADIRU 1/2/3 (ISSUED BY: FAC 1):
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ADC SW and ATT SW discretes (from the FAC 1 (1CC1) to the first terminal block) (Ref. ASM 22-68/01).

EFF: ALL

22-66-00

Page 239 Aug 01/95

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: CHK ADIRU 1/2/3 (ISSUED BY: FAC 2):
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ADC SW and ATT SW discretes (from the FAC 2 (1CC2) to the first terminal block) (Ref. ASM 22-68/01).
- C. If the test gives the maintenance message AFS : CHK ADIRU 1/2/3 (ISSUED
 BY : FMGC 1):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ADC 3 SW and ATT 3 SW discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).
- D. If the test gives the maintenance message AFS : CHK ADIRU 1/2/3 (ISSUED BY : FMGC 2):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ADC SW and ATT SW discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- E. Do the test given in Para. 3.

22-66-00

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-836

FAC 1 FAULT Legend Comes on without ECAM Warning

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 1 (1CC1) to the FLT CTL/FAC 1 pushbutton switch (12CC1))
- wiring of the 28VDC and GND FAC discretes (from the FAC 1 (1CC1) to the FLT CTL/FAC 1 pushbutton switch (12CC1))
- RELAY-FAC1 ENGAGED (11CC1)
- wiring of the FAC ENGD COM and FAC ENGD MON discretes (from the FAC 1 (1CC1) to the FAC 1 ENGAGED relay (11CC1))

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22 // 7/ 000 002	Damaria af the FAC (4004 4003)

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-65/01

3. Fault Confirmation

A. Test

- (1) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1:
 - (a) with the FLT CTL/FAC1 pushbutton switch (12CC1) released.
 - (b) with the FLT CTL/FAC1 pushbutton switch (12CC1) pushed.

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FAC1/P-B SW 12CC1:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 1 (1CC1) to the FLT CTL/FAC 1 pushbutton switch (12CC1)), (Ref. ASM 22-65/01).

EFF: ALL **22-6**

22-66-00 Page 241 Aug 01/95

TROUBLE SHOOTING MANUAL

- B. If only the second test gives the maintenance message AFS: FAC1/P-B SW 12CC1:
 - replace the FAC 1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 1 (1CC1) to the FLT CTL/FAC 1 pushbutton switch (12CC1)) (Ref. ASM 22-65/01).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the 28VDC and GND FAC discretes (from the FAC 1 (1CC1) to the FLT CTL/FAC 1 pushbutton switch (12CC1)), (Ref. ASM 22-65/01).
- C. If the two tests do not give the maintenance message:
 - replace the FAC 1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the RELAY-FAC1 ENGAGED (11CC1).
 - (2) If the fault continues:
 - do a check and repair the wiring of the FAC ENGD COM and FAC ENGD MON discretes (from the FAC 1 (1CC1) to the FAC 1 ENGAGED relay (11CC1)) (Ref. ASM 22-65/01).
- D. Do the test given in Para. 3.A.1.(b).

EFF: ALL 22-66-00

Page 242 Aug 01/95

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-837

FAC 2 FAULT Legend Comes on without ECAM Warning

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 2 (1CC2) to the FLT CTL/FAC 2 pushbutton switch (12CC2))
- wiring of the 28VDC and GND FAC discretes (from the FAC 2 (1CC2) to the FLT CTL/FAC 2 pushbutton switch (12CC2))
- RELAY-FAC2 ENGAGED (11CC2)
- wiring of the FAC ENGD COM and FAC ENGD MON discretes (from the FAC 2 (1CC2) to the FAC 2 ENGAGED relay (11CC2))

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-65/01

3. Fault Confirmation

A. Test

- (1) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2:
 - (a) with the FLT CTL/FAC 2 pushbutton switch (12CC2) released.
 - (b) with the FLT CTL/FAC 2 pushbutton switch (12CC2) pushed.

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FAC2/P-B SW 12CC2:
 - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 2 (1CC2) to the FLT CTL/FAC 2 pushbutton switch (12CC2)), (Ref. ASM 22-65/01).

EFF: ALL 22-66-00

Page 243 Aug 01/95

TROUBLE SHOOTING MANUAL

- B. If only the second test gives the maintenance message AFS: FAC2/P-B SW 12002:
 - replace the FAC 2 (1002) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the FAC ENGD SW COM and FAC ENGD SW MON discretes (from the FAC 2 (1CC2) to the FLT CTL/FAC 2 pushbutton switch (12CC2)) (Ref. ASM 22-65/01).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the 28VDC and GND FAC discretes (from the FAC 2 (1CC2) to the FLT CTL/FAC 2 pushbutton switch (12CC2)), (Ref. ASM 22-65/01).
- C. If the two tests do not give the maintenance message:
 - replace the FAC 2 (1002) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the RELAY-FAC2 ENGAGED (11CC2).
 - (2) If the fault continues:
 - do a check and repair the wiring of the FAC ENGD COM and FAC ENGD MON discretes (from the FAC 2 (1CC2) to the FAC 2 ENGAGED relay (11CC2)) (Ref. ASM 22-65/01).
- D. Do the test given in Para. 3.A.1.(b).

EFF: ALL 22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-838

FAC 1 FAULT Legend does not Come on with ECAM Warning

1. Possible Causes

- wiring of the 5VAC signal at FLT CTL/FAC 1 pushbutton switch (12CC1)
- P/BSW-FLT CTL/FAC1 (12CC1)
- wiring of FLT CTL/FAC 1 pushbutton switch (12CC1)
- RELAY-FAC1 ENGAGED (11CC1)
- wiring of the FAC 1 ENGAGED relay (11CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION

R ESPM 204511

AMM 24-41-00-862-002

De-energize the Aircraft Electrical Circuits Supplied

from the External Power 0-001 EIS Start Procedure

AMM 31-60-00-860-001

R

ASM 22-65/01

3. Fault Confirmation

- A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Do the EIS start procedure (ECAM only) (Ref. AMM TASK 31-60-00-860-001).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04
49VU	AUTO FLT/FMGC/1	10CA1	B02
121VU	AUTO FLT/FAC2/28VDC	5CC2	M19
121VU	AUTO FLT/FMGC/2	10CA2	M17
122VU	LIGHTING/TST/BOARD/SPLY	30LP	x06
122VU	LIGHTING/ANN LT SPLY/XFMR/STAT INV	28LP	X03

EFF: ALL **22-66-00**

Page 245 Nov 01/06

TROUBLE SHOOTING MANUAL

C. Test

NOTE: During the test ignore the aural warning.

ACTION RESULT

1. On the FLT CTL panel 23VU:

- push the FAC 1 pushbutton switch.
- on this pushbutton switch, the OFF legend goes off and the FAULT legend stays off.
- 2. Open the circuit breaker 5CC1.

On the upper ECAM DU:

- the AUTO FLT FAC 1 FAULT message comes into view.

On the FLT CTL panel 23VU:

 on the FAC 1 pushbutton switch, the FAULT legend comes on.

4. Fault Isolation

- A. If the FAULT legend does not come on:
 - push the FLT CTL/FAC 1 pushbutton switch.
 - (1) If the OFF legend of this pushbutton switch does not come on:
 - do a check and repair the wiring of the 5VAC signal at FLT CTL/FAC1 pushbutton switch (12CC1) (from pin A/8 to the first terminal block) (Ref. ASM 22-65/01).
 - (2) If the OFF legend of this pushbutton switch comes on:
 - on the panel 25VU, set the ANN LT switch to TEST.
 - (a) If the FAULT legend of the FLT CTL/FAC 1 pushbutton switch does not come on:
 - replace the P/BSW-FLT CTL/FAC1 (12CC1), (Ref. ESPM 204511).
 - 1 If the fault continues:
 - do a check and repair the wiring of FLT CTL/FAC 1 pushbutton switch (12CC1) from pin A/7 to pin A/B3 (Ref. ASM 22-65/01).
 - (b) If the FAULT legend of the FLT CTL/FAC 1 pushbutton switch comes on:
 - replace the RELAY-FAC1 ENGAGED (11CC1).
 - 1 If the fault continues:
 - do a check and repair the wiring of the FAC 1 ENGAGED relay (11CC1) (from relay 11CC1 pin A/A3 to the ground point and from relay 11CC1 pin A/A2 to the pushbutton switch 12CC1 pin A/B1) (Ref. ASM 22-65/01).

EFF: ALL

22-66-00

Page 246 Nov 01/06

SROS

R

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the panels 301VU and 500VU, set the PFD and ND potentiometers to 0FF.
 - (2) On the panel 25VU, set the ANN LT switch to BRT.
 - (3) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL

22-66-00

Page 247 Nov 01/06

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-839

FAC 2 FAULT Legend does not Come on with ECAM Warning

1. Possible Causes

- wiring of the 5VAC signal at FLT CTL/FAC 2 pushbutton switch (12CC2)
- P/BSW-FLT CTL/FAC2 (12CC2)
- wiring of FLT CTL/FAC 2 pushbutton switch (12CC2)
- RELAY-FAC2 ENGAGED (11CC2)
- wiring of the FAC 2 ENGAGED relay (11CC2)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION

R ESPM 204511

AMM 24-41-00-862-002

De-energize the Aircraft Electrical Circuits Supplied

from the External Power

AMM 31-60-00-860-001

EIS Start Procedure

R

ASM 22-65/01

3. Fault Confirmation

- A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Do the EIS start procedure (ECAM only) (Ref. AMM TASK 31-60-00-860-001).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04
49VU	AUTO FLT/FMGC/1	10CA1	B02
12 1VU	AUTO FLT/FAC2/28VDC	5002	M19
12 1VU	AUTO FLT/FMGC/2	10CA2	M17
122VU	LIGHTING/TST/BOARD/SPLY	30LP	X06
122VU	LIGHTING/ANN LT SPLY/XFMR/BUS 2	27LP	X05

EFF: ALL **22-66-00**

Page 248 Nov 01/06

TROUBLE SHOOTING MANUAL

C. Test

NOTE: During the test ignore the aural warning.

ACTION RESULT

1. On the FLT CTL panel 24VU:

- push the FAC 2 pushbutton switch.
- On this pushbutton switch, the OFF legend goes off and the FAULT legend stays off.
- 2. Open the circuit breaker 5CC2.

On the upper ECAM DU:

 the AUTO FLT FAC 2 FAULT message comes into view.

On the FLT CTL panel 24VU:

- on the FAC 2 pushbutton switch, the FAULT legend comes on.

4. Fault Isolation

- A. If the FAULT legend does not come on:
 - push the FLT CTL/FAC 2 pushbutton switch.
 - (1) If the OFF legend of this pushbutton switch does not come on:
 - do a check and repair the wiring of the 5VAC signal at FLT CTL/FAC2 pushbutton switch (12CC2) (from pin A/8 to the first terminal block) (Ref. ASM 22-65/01).
 - (2) If the OFF legend of this pushbutton switch comes on:
 - on the panel 25VU, set the ANN LT switch to TEST.
 - (a) If the FAULT legend of the FLT CTL/FAC 2 pushbutton switch does not come on:
 - replace the P/BSW-FLT CTL/FAC2 (12CC2), (Ref. ESPM 204511).
 - 1 If the fault continues:
 - do a check and repair the wiring of FLT CTL/FAC 2 pushbutton switch (12CC2) (from pin A/7 to pin A/B3) (Ref. ASM 22-65/01).
 - (b) If the FAULT legend of the FLT CTL/FAC 2 pushbutton switch comes on:
 - replace the RELAY-FAC2 ENGAGED (11CC2).
 - 1 If the fault continues:
 - do a check and repair the wiring of the FAC 2 ENGAGED relay (11CC2) (from relay 11CC2 pin A/A3 to the ground point and

EFF: ALL

22-66-00

Page 249 Nov 01/06

SROS

R

TROUBLE SHOOTING MANUAL

from relay 11CC2 pin A/A2 to the pushbutton switch 12CC2 pin A/B1) (Ref. ASM 22-65/01).

B. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the panels 301VU and 500VU, set the PFD and ND potentiometers to $\tt OFF.$
 - (2) On the panel 25VU, set the ANN LT switch to BRT.
 - (3) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL 22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-840

FAC 1 OFF Legend does not Come on when the FAC 1 Function Disengages

1. Possible Causes

- wiring of the 5VAC signal at the FLT CTL/FAC 1 pushbutton switch (12CC1)
- P/BSW-FLT CTL/FAC1 (12CC1)
- wiring of the FLT CTL/FAC 1 pushbutton switch (12CC1)
- wiring of the ground signal at the FLT CTL/FAC 1 pushbutton switch (12CC1)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

R ESPM 204511

R

ASM 22-65/01

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	LIGHTING/TST/BOARD/SPLY	30LP 28LP	X06

- B. Test
 - (1) Make sure that the FLT CTL/FAC 1 pushbutton switch (12CC1) is released and that the OFF legend is on.

4. Fault Isolation

- A. If the OFF legend is not on:
 - on the panel 25VU, set the ANN LT switch to TEST.
 - (1) If the FAULT legend of the FLT CTL/FAC 1 pushbutton switch does not come on:
 - do a check and repair the wiring of the 5VAC signal at the FLT CTL/FAC 1 pushbutton switch (12CC1) (from pin A/8 to the first terminal block) (Ref. ASM 22-65/01).

EFF: ALL **22-66-00**

Page 251 Nov 01/06

GA319/A320/A321

TROUBLE SHOOTING MANUAL

- (2) If the FAULT legend of the FLT CTL/FAC 1 pushbutton switch comes on:
 push the FLT CTL/FAC 1 pushbutton switch (12CC1).
 - (a) If the OFF legend of the FLT CTL/FAC 1 pushbutton switch does not come on:
 - replace the P/BSW-FLT CTL/FAC1 (12CC1), (Ref. ESPM 204511).
 - 1 If the fault continues:
 - do a check and repair the wiring of the FLT CTL/FAC 1 pushbutton switch (12CC1) (from pin A/9 to pin A/6 and from pin A/4 to pin A/A3) (Ref. ASM 22-65/01).
 - (b) If the OFF legend of the FLT CTL/FAC 1 pushbutton switch comes
 on:
 - do a check and repair the wiring of the ground signal at the FLT CTL/FAC 1 pushbutton switch (12CC1) pin A/A2 (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

5. Close-up

R

- A. Put the aircraft back to its initial configuration.
 - (1) On the panel 25VU, set the ANN LT switch to BRT.

EFF: ALL **22-66-00**

Page 252 Nov 01/06

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-841

FAC 2 OFF Legend does not Come on when the FAC 2 Function Disengages

- 1. Possible Causes
 - wiring of the 5VAC signal at the FLT CTL/FAC 2 pushbutton switch (12CC2)
 - P/BSW-FLT CTL/FAC2 (12CC2)
 - wiring of the FLT CTL/FAC 2 pushbutton switch (12CC2)
 - wiring of the ground signal at the FLT CTL/FAC 2 pushbutton switch (12CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

R ESPM 204511

D

ASM 22-65/01

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL D	DESIGNATION	IDENT.	LOCATION
_	.IGHTING/TST/BOARD/SPLY	30LP	X06
	.TGHTING/ANN T SPLY/XFMR/BUS 2	27LP	x05

- B. Test
 - (1) Make sure that the FLT CTL/FAC 2 pushbutton switch (12CC2) is released and that the OFF legend is on.
- 4. Fault Isolation
 - A. If the OFF legend is not on:
 - on the panel 25VU, set the ANN LT switch to TEST.
 - (1) If the FAULT legend of the FLT CTL/FAC 2 pushbutton switch does not come on:
 - do a check and repair the wiring of the 5VAC signal at the FLT CTL/FAC 2 pushbutton switch (12CC2) (from pin A/8 to the first terminal block) (Ref. ASM 22-65/01).

EFF: ALL **22-66-00**

Page 253 Nov 01/06

TROUBLE SHOOTING MANUAL

- (2) If the FAULT legend of the FLT CTL/FAC 2 pushbutton switch comes on: push the FLT CTL/FAC 2 pushbutton switch (12CC2).
 - (a) If the OFF legend of the FLT CTL/FAC 2 pushbutton switch does not come on:
 - replace the P/BSW-FLT CTL/FAC2 (12CC2), (Ref. ESPM 204511).
 - 1 If the fault continues:
 - do a check and repair the wiring of the FLT CTL/FAC 2 pushbutton switch (12CC2) (from pin A/9 to pin A/6 and from pin A/4 to pin A/A3) (Ref. ASM 22-65/01).
 - (b) If the OFF legend of the FLT CTL/FAC 2 pushbutton switch comes
 on:
 - do a check and repair the wiring of the ground signal at the FLT CTL/FAC 2 pushbutton switch (12CC2) pin A/A2 (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

5. Close-up

R

- A. Put the aircraft back to its initial configuration.
 - (1) On the panel 25VU, set the ANN LT switch to BRT.

EFF: ALL **22-66-00**

Page 254 Nov 01/06

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-842

Loss of the Reception of the ELAC OWN Bus by the FAC 1 MON or the FAC 1 COM

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the ELAC OWN bus from the FAC 1 (1CC1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION		
		22-66-34-000-002 22-66-34-400-002	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2)		
		22-96-00-710-001 22-69/01	Operational Test of the AFS		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU FLIGHT CONTROLS/ELAC1/NORM/SPLY 15CE1 B11

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/ELAC1 BUS WIRG:
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN bus from the FAC 1 (1001) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

22-66-00

Page 255 Aug 01/97

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

TASK 22-66-00-810-843

Loss of the Reception of the ELAC OPP Bus by the FAC 1 MON or the FAC 1 COM

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the ELAC OPP bus from the FAC 1 (1CC1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION
	AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
	AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
	AMM	22-96-00-710-001	Operational Test of the AFS

3. Fault Confirmation

ASM 22-69/01

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU FLIGHT CONTROLS/ELAC2/NORM/SPLY

15CE2 R20

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/ELAC2 BUS WIRG: replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP bus from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

EFF: 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

22-66-00

Page 256 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

TASK 22-66-00-810-844

Loss of the Reception of the ELAC OWN Bus by the FAC 2 MON or the FAC 2 COM

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the ELAC OWN bus from the FAC 2 (1002) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-96-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU FLIGHT CONTROLS/ELAC2/NORM/SPLY

15CE2 R20

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/ELAC2 BUS WIRG: replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN bus from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

22-66-00

Page 257 Aug 01/97

R

EFF: ALL

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

TASK 22-66-00-810-845

Loss of the Reception of the ELAC OPP Bus by the FAC 2 MON or the FAC 2 COM

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the ELAC OPP bus from the FAC 2 (1CC2) to the first terminal
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	

AMM 22-96-00-710-001 Operational Test of the AFS ASM 22-69/01

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

______ 49VU FLIGHT CONTROLS/ELAC1/NORM/SPLY

15CE1 B11

- B. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/ELAC1 BUS WIRG: - replace the FAC-2 (1CC2), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP bus from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

201-225, 227-227, 229-275, 426-475,

22-66-00

Page 258 May 01/08

551-599, 701-749,

TROUBLE SHOOTING MANUAL

R **ON A/C ALL TASK 22-66-00-810-846 R Loss of the Reception of the ELAC OWN Bus by the FAC 1 1. Possible Causes R R - wiring between terminal block 1835VT18 pin V and terminal block 1831VT9 R - wiring between terminal block 1835VT19 pin V and terminal block 1831VT9 pin C R 2. Job Set-up Information R A. Referenced Information DESIGNATION R AMM 22-91-00-710-001 Ground Scanning of the AFS R AWM 27-92-29 3. Fault Confirmation A. Make sure that this(these) circuit breaker(s) is(are) closed: R R PANEL DESIGNATION IDENT. LOCATION R 49VU FLIGHT CONTROLS/ELAC1/NORM/SPLY 15CE1 B11 B. Test R R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001). 4. Fault Isolation R R A. If the test gives the maintenance message AFS: ELAC1/BUS WIRG/FAC1: - do a check and repair the: . wiring between terminal block 1835VT18 pin V and terminal block R 1831VT9 pin K R . wiring between terminal block 1835VT19 pin V and terminal block R

EFF: ALL **SROS**

1831VT9 pin C

(Ref. AWM 27-92-29).

B. Do the test given in Para. 3.

R

R

R

22-66-00

Page 259 Feb 01/03

TROUBLE SHOOTING MANUAL

```
R TASK 22-66-00-810-847
R Loss of the Reception of the ELAC OPP Bus by the FAC 1
  1. Possible Causes
     - wiring between terminal block 1846VT6 pin V and terminal block 1833VT10
R
     - wiring between terminal block 1846VT7 pin V and terminal block 1833VT10
R
       pin K
 2. Job Set-up Information
     A. Referenced Information
R
R
  REFERENCE
                           DESIGNATION
R AMM 22-91-00-710-001 Ground Scanning of the AFS
  AWM 27-92-28
R 3. Fault Confirmation
     A. Make sure that this(these) circuit breaker(s) is(are) closed:
R
R
  PANEL DESIGNATION
                                                              IDENT. LOCATION
  ______
   121VU FLIGHT CONTROLS/ELAC2/NORM/SPLY
                                                               15CE2
                                                                      R20
R
R
    B. Test
        (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
R
  4. Fault Isolation
R
R
     A. If the test gives the maintenance message AFS: ELAC2/BUS WIRG/FAC1:
R
        - do a check and repair the:
          . wiring between terminal block 1846VT6 pin V and terminal block
R
          1833VT10 pin T
R
          . wiring between terminal block 1846VT7 pin V and terminal block
          1833VT10 pin K
R
          (Ref. AWM 27-92-28).
R
R
     B. Do the test given in Para. 3.
```

EFF: ALL

22-66-00

Page 260 Feb 01/03

TROUBLE SHOOTING MANUAL

```
R TASK 22-66-00-810-848
R Loss of the Reception of the ELAC OWN Bus by the FAC 2
  1. Possible Causes
     - wiring between terminal block 1844VT14 pin X and terminal block 1840VT76
R
       pin C
     - wiring between terminal block 1844VT11 pin X and terminal block 1840VT76
R
R
       pin K
 Job Set-up Information
     A. Referenced Information
R
R
  REFERENCE
                           DESIGNATION
R AMM 22-91-00-710-001 Ground Scanning of the AFS
  AWM 27-92-30
R 3. Fault Confirmation
     A. Make sure that this(these) circuit breaker(s) is(are) closed:
R
R
  PANEL DESIGNATION
                                                              IDENT. LOCATION
  ______
   121VU FLIGHT CONTROLS/ELAC2/NORM/SPLY
                                                              15CE2
                                                                      R20
R
R
    B. Test
        (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
R
  4. Fault Isolation
R
R
     A. If the test gives the maintenance message AFS: ELAC2/BUS WIRG/FAC2:
R
        - do a check and repair the:
          . wiring between terminal block 1844VT14 pin X and terminal block
R
          1840VT76 pin C
R
          . wiring between terminal block 1844VT11 pin X and terminal block
          1840VT76 pin K
R
          (Ref. AWM 27-92-30).
R
R
     B. Do the test given in Para. 3.
```

EFF: ALL **SROS**

Printed in France

22-66-00

Page 261 Feb 01/03

TROUBLE SHOOTING MANUAL

```
R TASK 22-66-00-810-849
R Loss of the Reception of the ELAC OPP Bus the FAC 2
  1. Possible Causes
     - wiring between terminal block 1846VT6 pin D and terminal block 1842VT67
R
     - wiring between terminal block 1846VT6 pin U and terminal block 1842VT67
R
R
      pin C
 Job Set-up Information
     A. Referenced Information
R
R
  REFERENCE
                         DESIGNATION
  ______
R AMM 22-91-00-710-001 Ground Scanning of the AFS
 AWM 27-92-31
R 3. Fault Confirmation
     A. Make sure that this(these) circuit breaker(s) is(are) closed:
R
R
  PANEL DESIGNATION
                                                          IDENT. LOCATION
  ______
R
    49VU FLIGHT CONTROLS/ELAC1/NORM/SPLY
                                                          15CE1
                                                                  B11
R
    B. Test
       (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
R
  4. Fault Isolation
R
R
     A. If the test gives the maintenance message AFS: ELAC1/BUS WIRG/FAC2:
R
        - do a check and repair the:
         . wiring between terminal block 1846VT6 pin D and terminal block
R
         1842VT67 pin K
R
         . wiring between terminal block 1846VT6 pin U and terminal block
         1842VT67 pin C
R
         (Ref. AWM 27-92-31).
R
R
     B. Do the test given in Para. 3.
```

EFF: ALL

22-66-00

Page 262 Feb 01/03

GA319/A320/A321

TROUBLE SHOOTING MANUAL

R

TASK 22-66-00-810-850

Loss of the Reception of the ELAC 1 Discretes by One FAC or One FMGC

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- ELAC-1 (2CE1)
- FMGC-2 (1CA2)
- wiring of the ELAC OWN HLTY MON discrete from the FAC 1 (1CC1) to the first terminal block
- wiring of the ELAC OPP HLTY COM discrete from the FAC 2 (1CC2) to the first terminal block
- wiring of the ELAC OWN AP DISC MON and ELAC OWN AP DISC COM discretes from the FMGC 1 (1CA1) to the ELAC 1 (2CE1)
- wiring of the ELAC OPP AP DISC MON and ELAC OPP AP DISC COM discretes from the FMGC 2 (1CA2) to the ELAC 1 (2CE1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION	
	AMM AMM	22-66-34-000-002 22-66-34-400-002 22-83-34-000-001 22-83-34-400-001 22-96-00-710-001 27-93-34-000-001 27-93-34-400-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS Removal of the ELAC (2CE1,2CE2) Installation of the ELAC (2CE1,2CE2)	
	ASM ASM	22-68/01 22-85/04		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	FLIGHT CONTROLS/ELAC1/NORM/SPLY	15CE1	B11
12 1VU	FLIGHT CONTROLS/ELAC2/NORM/SPLY	15CE2	R20

EFF: ALL

22-66-00 Page 263 Feb 01/03

TROUBLE SHOOTING MANUAL

- B. Test
 - (1) Do the test of the AFS (Ref. AMM TASK 22-96-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ELAC1 (ISSUED BY: FAC1):
 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN HLTY MON discrete from the FAC 1 (1001) to the first terminal block (Ref. ASM 22-68/01).
- B. If the test gives the maintenance message AFS: ELAC1 (ISSUED BY: FAC2): - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP HLTY COM discrete from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-68/01).
- - (1) If the fault continues:
 - replace the ELAC-1 (2CE1) (Ref. AMM TASK 27-93-34-000-001) and (Ref. AMM TASK 27-93-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN AP DISC MON and ELAC OWN AP DISC COM discretes from the FMGC 1 (1CA1) to the ELAC 1 (2CE1) (Ref. ASM 22-85/04).
- D. If the test gives the maintenance message AFS: ELAC1 (ISSUED BY: FG2): - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the ELAC-1 (2CE1) (Ref. AMM TASK 27-93-34-000-001) and (Ref. AMM TASK 27-93-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP AP DISC MON and ELAC OPP AP DISC COM discretes from the FMGC 2 (1CA2) to the ELAC 1 (2CE1) (Ref. ASM 22-85/04).
- E. Do the test given in Para. 3.

22-66-00

Page 264 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-851

Loss of the Reception of the ELAC 2 Discretes by One FAC or One FMGC

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- ELAC-2 (2CE2)
- FMGC-2 (1CA2)
- wiring of the ELAC OPP HLTY COM discrete from the FAC 1 (1CC1) to the first terminal block
- wiring of the ELAC OWN HLTY MON discrete from the FAC 2 (1CC2) to the first terminal block
- wiring of the ELAC OPP AP DISC MON and ELAC OPP AP DISC COM discretes from the FMGC 1 (1CA1) to the ELAC 2 (2CE2)
- wiring of the ELAC OWN AP DISC MON and ELAC OWN AP DISC COM discretes from the FMGC 2 (1CA2) to the ELAC 2 (2CE2)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2) AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2) AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2) AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2) AMM 22-96-00-710-001 Operational Test of the AFS AMM 27-93-34-000-001 Removal of the ELAC (2CE1,2CE2) AMM 27-93-34-400-001 Installation of the ELAC (2CE1,2CE2) ASM 22-68/01 ASM 22-85/04

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION		LOCATION
49VU	FLIGHT CONTROLS/ELAC1/NORM/SPLY	15CE1	B11
12 1VU	FLIGHT CONTROLS/ELAC2/NORM/SPLY	15CE2	R20

B. Test

(1) Do the test of the AFS (Ref. AMM TASK 22-96-00-710-001).

EFF: ALL

22-66-00

Page 265 Feb 01/03

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ELAC2 (ISSUED BY: FAC1):
 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP HLTY COM discrete from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-68/01).
- B. If the test gives the maintenance message AFS: ELAC2 (ISSUED BY: FAC2): - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN HLTY MON discrete from the FAC 2 (1002) to the first terminal block (Ref. ASM 22-68/01).
- - (1) If the fault continues:
 - replace the ELAC-2 (2CE2) (Ref. AMM TASK 27-93-34-000-001) and (Ref. AMM TASK 27-93-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ELAC OPP AP DISC MON and ELAC OPP AP DISC COM discretes from the FMGC 1 (1CA1) to the ELAC 2 (2CE2) (Ref. ASM 22-85/04).
- D. If the test gives the maintenance message AFS: ELAC2 (ISSUED BY: FG2): - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the ELAC-2 (2CE2) (Ref. AMM TASK 27-93-34-000-001) and (Ref. AMM TASK 27-93-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ELAC OWN AP DISC MON and ELAC OWN AP DISC COM discretes from the FMGC 2 (1CA2) to the ELAC 2 (2CE2) (Ref. ASM 22-85/04).
- E. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-852

Loss of the Reception of the SFCC 1 Bus by the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the SFCC OWN bus from the FAC 1 (1CC1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION		
AMM AMM	22-66-34-000-002 22-66-34-400-002 22-91-00-710-001 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU FLIGHT CONTROLS/SLT/CTL AND MONG/SYS1

5CV B06

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: SFCC1:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SFCC OWN bus from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

22-66-00

Page 267 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-853

Loss of the Reception of the SFCC 2 Bus by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the SFCC OWN bus from the FAC 2 (1CC2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 ASM 22-69/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
12 1VU	FLIGHT CONTROLS/SLT/CTL/SYS2	7CV	R21

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: SFCC2:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SFCC OWN bus from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
 - B. Do the test given in Para. 3.

22-66-00

Page 268 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-854

Loss of the Reception of the SFCC 1 SLATS EXTD Discrete by the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the SLATS EXTD discrete from the FAC 1 (1CC1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 ASM 22-68/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION 5CV 49VU FLIGHT CONTROLS/SLT/CTL AND MONG/SYS1 B06

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
 - A. If the test gives the maintenance message AFS: SFCC1-FAC1 CKT:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SLATS EXTD discrete from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-68/01).

EFF: ALL **SROS**

22-66-00

Page 269 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C 276-299, 476-499, 503-549,

- A. If the test gives the maintenance message AFS: FAC1-SFCC1 CKT: - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SLATS EXTD discrete from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-68/01).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL SROS Printed in France 22-66-00

Page 270 Nov 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-855

Loss of the Reception of the SFCC 2 SLATS EXTD Discrete by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring of the SLATS EXTD discrete from the FAC 2 (1002) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 ASM 22-68/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION 7CV 121VU FLIGHT CONTROLS/SLT/CTL/SYS2 R21

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,
 - A. If the test gives the maintenance message AFS: SFCC2-FAC2 CKT:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SLATS EXTD discrete from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-68/01).

EFF :	ALL		
SROS			

22-66-00

Page 271 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C 276-299, 476-499, 503-549,

- A. If the test gives the maintenance message AFS: FAC2-SFCC2 CKT: - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SLATS EXTD discrete from the FAC 2 (1002) to the first terminal block (Ref. ASM 22-68/01).

**ON A/C ALL

B. Do the test given in Para. 3

EFF: ALL SROS

22-66-00

Page 272

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-856

Loss of the Reception of the ADIRU 1 Bus by One FAC or One FMGC

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- rejection of ADR parameters due to excessive offset
- wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FAC 1 (1CC1) to the first terminal block
- wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FAC 2 (1CC2) to the first terminal block
- wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
34-11-00-810-861	Different Angle of Attack Value on the three ADIRUs		
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)		
AMM 22-66-34-400-002	Installation of the FAC (1CC1,1CC2)		
AMM 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
AMM 22-91-00-710-001	Ground Scanning of the AFS		
AMM 34-13-00-720-009	Functional Test of the Altitude and Airspeed Data		
ASM 22-69/01			
ASM 22-86/01			

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL [DESIGNATION	IDENT.	LOCATION
49VU N	NAV PROBES/ADIRU 1/AND AOA 1/26VAC	5FP1	F07
49VU N	NAV PROBES/ADIRU1/115VAC	4FP1	F06
105VU A	ADIRS/ADIRU1/28VDC	6FP1	C02

B. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL

22-66-00

Page 273 Feb 01/03

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ADIRU1 (ISSUED BY: FAC1): - do the Functional Check of Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset:
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).
- B. If the test gives the maintenance message AFS: ADIRU1 (ISSUED BY: FAC2): do the Functional Check of Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset:
 - (1) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FAC 2 (1002) to the first terminal block (Ref. ASM 22-69/01).
- C. If the test gives the maintenance message AFS: ADIRU1 (ISSUED BY: FG1): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009).
 - (1) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).

EFF: ALL 22-66-00

Page 274 Feb 01/03

TROUBLE SHOOTING MANUAL

- D. If the test gives the maintenance message AFS: ADIRU1 (ISSUED BY: FG2):
 do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK
 34-13-00-720-009).
 - (1) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- E. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-857

Loss of the Reception of the ADIRU 2 Bus by One FAC or One FMGC

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- rejection of ADR parameters due to excessive offset
- wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FAC 1 (1CC1) to the first terminal block
- wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FAC 2 (1CC2) to the first terminal block
- wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
34-11-00-810-861	Different Angle of Attack Value on the three ADIRUs		
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)		
AMM 22-66-34-400-002	Installation of the FAC (1CC1,1CC2)		
AMM 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
AMM 22-91-00-710-001	Ground Scanning of the AFS		
AMM 34-13-00-720-009	Functional Test of the Altitude and Airspeed Data		
ASM 22-69/01	·		
ASM 22-86/01			

EFF: ALL

22-66-00

Page 276 Feb 01/03

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION ______

R **ON A/C 201-225, 227-227, 229-249, 276-299, 426-430, 476-480, 503-549,

R 551-557, 701-749,

121VU ADIRS/ADIRU/2PWR/SHED	10FP	N 1 1
121VU ADIRS/ADIRU/2/26VAC AND AOA	5FP2	N09
121VU ADIRS/ADIRU/2/115VAC	4FP2	N07
121VU ADIRS/ADIRU/2/28VDC	6FP2	N05

**ON A/C 250-275, 431-475, 481-499, 559-599,

121VU ADIRS/ADIRU/2PWR/SHED	10FP	N10
121VU ADIRS/ADIRU/2/26VAC AND AOA	5FP2	N08
121VU ADIRS/ADIRU/2/115VAC	4FP2	N06
121VU ADIRS/ADIRU/2/28VDC	6FP2	N04

**ON A/C ALL

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ADIRU2 (ISSUED BY: FAC1): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).

22-66-00 EFF: ALL

Page 277 May 01/08

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: ADIRU2 (ISSUED BY: FAC2): do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset.
 - (1) If the fault continues:
 - replace the FAC-2 (1002) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FAC 2 (1002) to the first terminal block (Ref. ASM 22-69/01).
- C. If the test gives the maintenance message AFS: ADIRU2 (ISSUED BY: FG1): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009).
 - (1) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OPP and the IRS ADIRS OPP bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- D. If the test gives the maintenance message AFS: ADIRU2 (ISSUED BY: FG2): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009).
 - (1) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS OWN and the IRS ADIRS OWN bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- E. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-858

Loss of the Reception of the ADIRU 3 Bus by One FAC or One FMGC

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- rejection of ADR parameters due to excessive offset
- wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FAC 1 (1CC1) to the first terminal block
- wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FAC 2 (1CC2) to the first terminal block
- wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
34-11-00-810-861	Different Angle of Attack Value on the three ADIRUs		
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)		
AMM 22-66-34-400-002	Installation of the FAC (1CC1,1CC2)		
AMM 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
AMM 22-91-00-710-001	Ground Scanning of the AFS		
AMM 34-13-00-720-009	Functional Test of the Altitude and Airspeed Data		
ASM 22-69/01			
ASM 22-86/01			

EFF: ALL

22-66-00

Page 279 Feb 01/03

TROUBLE SHOOTING MANUAL

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

49VU NAV PROBES/ADIRU3/PWR/SWTG

8FP F09

R **ON A/C 201-225, 227-227, 229-249, 276-299, 426-430, 476-480, 503-549, R 551-557, 701-749,

121VU ADIRS/ADIRU/3PWR/SWTG	9FP	N10
121VU ADIRS/ADIRU/3/26VAC AND AOA	5FP3	N08
121VU ADIRS/ADIRU/3/115VAC	4FP3	N06
121VU ADIRS/ADIRU/3/28VDC	6FP3	N04

**ON A/C 250-275, 431-475, 481-499, 559-599,

121VU ADIRS/ADIRU/3PWR/SWTG	9FP	N09
121VU ADIRS/ADIRU/3/26VAC AND AOA	5FP3	N07
121VU ADIRS/ADIRU/3/115VAC	4FP3	N05
121VU ADIRS/ADIRU/3/28VDC	6FP3	N03

**ON A/C ALL

B. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ADIRU3 (ISSUED BY: FAC1):
 - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FAC 1 (1CC1) to the first terminal block (Ref. ASM 22-69/01).

EFF: ALL 22-66-00

Page 280 May 01/08

SROS

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: ADIRU3 (ISSUED BY: FAC2): do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009) to check if there is rejection of ADR parameters due to excessive offset.
 - (1) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - do the monitoring of the AOA sensors (Ref. TASK 34-11-00-810-861).
 - (3) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FAC 2 (1CC2) to the first terminal block (Ref. ASM 22-69/01).
- C. If the test gives the maintenance message AFS: ADIRU3 (ISSUED BY: FG1): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009)
 - (1) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- D. If the test gives the maintenance message AFS: ADIRU3 (ISSUED BY: FG2): - do the Functional Check of the Altitude/Airspeed Data (Ref. AMM TASK 34-13-00-720-009)
 - (1) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the ADC ADIRS 3 and the IRS ADIRS 3 bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- E. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-859

Loss of the Data between the ADIRUs and the FAC 1

1. Possible Causes

- ADR system
- IR system

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-97-00-710-001 AMM 34-13-00-740-002 AMM 34-14-00-740-001	Operational Test of the LAND CAT III Capability INTERFACE TEST of the ADR Interface Test of the IR

3. Fault Confirmation

A. Test

Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FAC 1-ADIRU:
 - do the Interface test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
 - do the Interface test of the IR system (Ref. AMM TASK 34-14-00-740-001).

R

R

(1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page 282 Feb 01/05

SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-860

Loss of the Data between the ADIRUs and the FAC 2

1. Possible Causes

- ADR system
- IR system

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-97-00-710-001 AMM 34-13-00-740-002 AMM 34-14-00-740-001	Operational Test of the LAND CAT III Capability INTERFACE TEST of the ADR Interface Test of the IR	

3. Fault Confirmation

A. Test

Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHECK FAC 2-ADIRU:
 - do the Interface test of the ADR system (Ref. AMM TASK 34-13-00-740-002).
 - do the Interface test of the IR system (Ref. AMM TASK 34-14-00-740-001).

R

R

(1) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page 283 Feb 01/05

SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-861

Loss of the Reception of the NOSE GEAR PRESSED Discrete by the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - LGCIU-1 (5GA1)
 - wiring of the NOSE GEAR PRESSED discrete from the FAC 1 (1CC1) to the LGCIU 1 (5GA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 AMM 32-31-71-000-001 AMM 32-31-71-400-001 ASM 22-68/01	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Removal of the LGCIU (5GA1, 5GA2) Installation of the LGCIU (5GA1, 5GA2)	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION		IDENT.	IDENT. LOCATION	
49VU	L/G/LGCIU/SYS1/NORM	1GA	C09	
121111	HYDRAULTC/LGCTU/SYS1/GRND_SPLY	52GA	034	

B. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-66-00**

Page 284 Feb 01/03

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R

R

R

R

R

- A. If the test gives the maintenance message AFS: LGCIU1-FAC1 CKT:

 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - replace the LGCIU-1 (5GA1) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the NOSE GEAR PRESSED discrete from the FAC 1 (1CC1) to the LGCIU 1 (5GA1) (Ref. ASM 22-68/01).

R

B. Do the test given in Para. 3.

EFF: ALL

22-66-00

Page 285 Nov 01/03

SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-862

Loss of the Reception of the NOSE GEAR PRESSED Discrete by the FAC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
 - LGCIU-2 (5GA2)
 - wiring of the NOSE GEAR PRESSED discrete from the FAC 2 (1CC2) to the LGCIU 2 (5GA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM AMM AMM		Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Removal of the LGCIU (5GA1, 5GA2) Installation of the LGCIU (5GA1, 5GA2)	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. LOCATION

121VU HYDRAULIC/LGCIU/SYS2

2GA

Q35

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-66-00**

Page 286 Feb 01/03

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R

- A. If the test gives the maintenance message AFS: LGCIU2-FAC2 CKT:

 replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
- R replace the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the NOSE GEAR PRESSED discrete from the FAC 2 (1CC2) to the LGCIU 2 (5GA2) (Ref. ASM 22-68/01).

R

R

R

B. Do the test given in Para. 3.

EFF: ALL

22-66-00

Page 287 Nov 01/03

SROS

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-863

Loss of the Reception of the ENG STP Discretes by the FAC 1

1. Possible Causes

- FAC-1 (1CC1)
- wiring of the ENG OWN STP and ENG OPP STP discretes (from the FAC 1 (1CC1) to the diode module (1801VD))
- wiring of the diode module (1801VD)
- DIODE MODULE 1801VD

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-68/01

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the message LRU TEST NOT COMPLETED:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the ENG OWN STP and ENG OPP STP discretes (from the FAC 1 (1CC1) to the diode module (1801VD)) (Ref. ASM 22-68/01).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the diode module (1801VD):
 - from pin A/5 to the first terminal block
 - . from pin A/13 to the first terminal block (Ref. ASM 22-68/01).

EFF: ALL

22-66-00

Page 288 Feb 01/03

TROUBLE SHOOTING MANUAL

- 1 If there is no continuity:
 repair the above wiring.
- 2 If there is continuity:
 replace the DIODE MODULE 1801VD.
- B. Do the test given in Para. 3.

EFF: ALL SROS 22-66-00

Page 289 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-864

Loss of the Reception of the ENG STP Discretes by the FAC 2

1. Possible Causes

- FAC-2 (1CC2)
- wiring of the ENG OWN STP and ENG OPP STP discretes (from the FAC 2 (1CC2) to the diode modules (1800VD and 1801VD)
- wiring of the diode module 1800VD
- wiring of the diode module 1801VD
- DIODE MODULE (1800VD)
- DIODE MODULE (1801VD)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-68/01

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the message LRU TEST NOT COMPLETED:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check of the wiring of the ENG OWN STP and ENG OPP STP discretes (from the FAC 2 (1CC2) to the diode modules (1800VD and 1801VD) (Ref. ASM 22-68/01).
 - (a) If there is no continuity:repair the above wiring.

22-66-00

Page 290 Feb 01/03

SROS

ALL

TROUBLE SHOOTING MANUAL

- (b) It there is continuity:
 - do a check of the wiring of the diode module 1800VD from pin
 A/2 to the first terminal block
 - do a check of the wiring of the diode module 1801VD from pin A/7 to the first terminal block (Ref. ASM 22-68/01).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the DIODE MODULE (1800VD).
 - <u>a</u> If the fault continues:replace the DIODE MODULE (1801VD).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-66-00

Page 291 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-865

Discrepancy between the Speed Limits of the PFD 1 and the PFD 2

1. Possible Causes

- ADIRU-1 (1FP1)
- FAC-1 (1CC1)
- SFCC-1 (21CV)
- ADIRU-2 (1FP2)
- FAC-2 (1CC2)
- SFCC-2 (22CV)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	22-96-00-710-001	Operational Test of the AFS	
AMM	27-51-34-000-001	Removal of the SFCC (21CV,22CV)	
AMM	27-51-34-400-001	Installation of the SFCC (21CV,22CV)	
AMM	34-12-34-000-001	Removal of the ADIRU (1FP1, 1FP2, 1FP3)	
AMM	34-12-34-400-001	Installation of the ADIRU (1FP1, 1FP2, 1FP3)	

3. Fault Confirmation

A. Test

After the subsequent flight, make sure that the fault does not continue.

4. Fault Isolation

- A. If the failure is confirmed on the PFD 1:
 - do a check of the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the test gives a maintenance message:
 - refer to the procedure related to this message.
 - (2) If the test gives no maintenance message:
 - replace the ADIRU-1 (1FP1) (Ref. AMM TASK 34-12-34-000-001) and (Ref. AMM TASK 34-12-34-400-001).
 - (a) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

22-66-00

Page 292 Feb 01/03

SROS

TROUBLE SHOOTING MANUAL

- (b) If the fault continues:
 - replace the SFCC-1 (21CV) (Ref. AMM TASK 27-51-34-000-001) and (Ref. AMM TASK 27-51-34-400-001).
- B. If the failure is confirmed on the PFD 2:
 - do a check of the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the test gives a maintenance message:
 - refer to the procedure related to this message.
 - (2) If the test gives no maintenance message:
 - replace the ADIRU-2 (1FP2) (Ref. AMM TASK 34-12-34-000-001) and (Ref. AMM TASK 34-12-34-400-001).
 - (a) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (b) If the fault continues:
 - replace the SFCC-2 (22CV) (Ref. AMM TASK 27-51-34-000-001) and (Ref. AMM TASK 27-51-34-400-001).

22-66-00

EFF:

ALL

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

TASK 22-66-00-810-866

Loss of the ELAC Functions by the FAC 1

1. Possible Causes

- wiring of the ELAC OWN bus from the FAC 1 (1CC1) to the ELAC 1 (2CE1)
- wiring of the ELAC OPP bus from the FAC 1 (1CC1) to the ELAC 2 (2CE2)
- wiring of the ELAC OWN HLTY MON discrete from the FAC 1 (1CC1) to the ELAC
 1 (2CE1)
- wiring of the ELAC OWN HLTY COM discrete from the FAC 1 (1CC1) to the ELAC
 2 (2CE2)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-91-00-710-001 Ground AMM 22-96-00-710-001 Operat ASM 22-68/01

Ground Scanning of the AFS
Operational Test of the AFS

ASM 22-69/01

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FAC1-ELAC 1/2 WRG:
 - do a check of the wiring of the ELAC OWN bus from the FAC 1 (1CC1) to the ELAC 1 (2CE1)
 - do a check of the wiring of the ELAC OPP bus from the FAC 1 (1CC1) to the ELAC 2 (2CE2) (Ref. ASM 22-69/01).
 - (1) If there is no continuity:
 - repair the above wiring.
 - (2) If there is continuity:
 - do a check of the wiring of the ELAC OWN HLTY MON discrete from the FAC 1 (1CC1) to the ELAC 1 (2CE1)
 - do a check of the wiring of the ELAC OWN HLTY COM discrete from the FAC 1 (1CC1) to the ELAC 2 (2CE2)

EFF: 201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

22-66-00

Page 294 May 01/08

SROS

TROUBLE SHOOTING MANUAL

(Ref. ASM 22-68/01).

- (a) If there is no continuity:
 repair the above wiring.
- (b) If there is continuity:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001), and refer to the procedure related to the message that the test gave.
- B. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-867

Loss of the ELAC Functions by the FAC 2

1. Possible Causes

- wiring of the ELAC OWN bus from the FAC 2 (1002) to the ELAC 2 (2002)
- wiring of the ELAC OPP bus from the FAC 2 (1CC2) to the ELAC 1 (2CE1)
- wiring of the ELAC OWN HLTY MON discrete from the FAC 2 (1CC2) to the ELAC 2 (2CE2)
- wiring of the ELAC OWN HLTY COM discrete from the FAC 2 (1CC2) to the ELAC 1 (2CE1)

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

22-91-00-710-001 Ground Scanning of the AFS 22-96-00-710-001 Operational Test of the AFS AMM 22-96-00-710-001

ASM 22-68/01

ASM 22-69/01

3. Fault Confirmation

A. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FAC2-ELAC 1/2 WRG:
 - do a check of the wiring of the ELAC OWN bus from the FAC 2 (1CC2) to the ELAC 2 (2CE2)
 - do a check of the wiring of the ELAC OPP bus from the FAC 2 (1CC2) to the ELAC 1 (2CE1) (Ref. ASM 22-69/01).
 - (1) If there is no continuity:
 - repair the above wiring.
 - (2) If there is continuity:
 - do a check of the wiring of the ELAC OWN HLTY MON discrete from the FAC 2 (1CC2) to the ELAC 2 (2CE2)
 - do a check of the wiring of the ELAC OWN HLTY COM discrete from the FAC 2 (1CC2) to the ELAC 1 (2CE1) (Ref. ASM 22-68/01).

201-225, 227-227, 229-275, 426-475, 551-599, 701-749,

SROS

22-66-00

Page 296 May 01/08

TROUBLE SHOOTING MANUAL

- (a) If there is no continuity:
 repair the above wiring.
- (b) If there is continuity:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001), and refer to the procedure related to the message that the test gave.
- B. Do the test given in Para. 3.

22-66-00

TROUBLE SHOOTING MANUAL

**ON A/C ALL

TASK 22-66-00-810-868

FIDS Function Inoperative on the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
AMM	31-32-00-860-001	Procedure to Get Access to the SYSTEM REPORT/TEST Menu Page	

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5001	B04
49VU	AUTO FLT/MCDU/1	11CA1	B01
121VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL

22-66-00

Page 298 Feb 01/03

319/A320/A321

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

1. On one MCDU:

- get the SYSTEM REPORT/TEST page (Ref. AMM TASK 31-32-00-860-001)
- the AFS indication.
- push the line key adjacent to
 The AFS MAIN MENU page comes into view.
- the GROUND SCAN indication.
- Push the line key adjacent to
 The AFS/GROUND SCAN page comes into view.
- the GROUND REPORT indication.
- Push the line key adjacent to The AFS/GROUND REPORT page comes into view.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FIDS-FAC1 CKT:
 - open the circuit breaker 5CC1
 - after 15 s, close this circuit breaker.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
- B. Do the test given in Para. 3.

Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the MCDU, push the line key adjacent to the RETURN indication until the CFDS menu page comes into view.
 - (2) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-869

FIDS Function Inoperative on the FAC 2

- 1. Possible Causes
 - FAC-1 (1CC1)
 - FAC-2 (1CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
A MM	22 // 7/ 000 002	Demoval of the EAC (ACCA ACCA)	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	<pre>De-energize the Aircraft Electrical Circuits Supplied from the External Power</pre>	
AMM	31-32-00-860-001	Procedure to Get Access to the SYSTEM REPORT/TEST Menu Page	

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	 AUTO FLT/FAC1/28VDC	 5CC1	B04
	AUTO FLT/FACT/28VDC AUTO FLT/MCDU/1	11CA1	B04 B01
	AUTO FLT/FAC2/28VDC	5002	M19
121VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL 22-66-00

Page A200 Feb 01/03

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

1. On one MCDU:

- get the SYSTEM REPORT/TEST page (Ref. AMM TASK 31-32-00-860-001)
- the AFS indication.
- push the line key adjacent to
 The AFS MAIN MENU page comes into view.
- the GROUND SCAN indication.
- Push the line key adjacent to
 The AFS/GROUND SCAN page comes into view.
- the GROUND REPORT indication.
- Push the line key adjacent to The AFS/GROUND REPORT page comes into view.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FIDS-FAC2 CKT:
 - open the circuit breaker 5CC1 and 5CC2
 - after 15 s, close these circuit breakers.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
- B. Do the test given in Para. 3.

Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the MCDU, push the line key adjacent to the RETURN indication until the CFDS menu page comes into view.
 - (2) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL **22-66-00**

Page A201 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-870

FIDS Function Inoperative on the FMGC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - FMGC-1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
AMM	31-32-00-860-001	Procedure to Get Access to the SYSTEM REPORT/TEST Menu Page	

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	AUTO FLT/FAC1/28VDC	5CC1	B04
	AUTO FLT/FMGC/1 AUTO FLT/MCDU/1	10CA1 11CA1	B02 B01
12 1VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL 22-66-00

Page A202 Feb 01/03

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

1. On one MCDU:

- get the SYSTEM REPORT/TEST page (Ref. AMM TASK 31-32-00-860-001)
- the AFS indication.
- push the line key adjacent to
 The AFS MAIN MENU page comes into view.
- the GROUND SCAN indication.
- Push the line key adjacent to
 The AFS/GROUND SCAN page comes into view.
- the GROUND REPORT indication.
- Push the line key adjacent to The AFS/GROUND REPORT page comes into view.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FIDS-FMGC1 CKT:
 - open the circuit breakers 5CC1 and 10CA1
 - after 15 s, close these circuit breakers.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (a) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- B. Do the test given in Para. 3.

Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the MCDU, push the line key adjacent to the RETURN indication until the CFDS menu page comes into view.
 - (2) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL **22-66-00**

Page A203 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-871

FIDS Function Inoperative on the FMGC 2

- 1. Possible Causes
 - FAC-1 (1CC1)
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

	DENOE	DECTORATION
REFERENCE		DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
AMM	31-32-00-860-001	Procedure to Get Access to the SYSTEM REPORT/TEST Menu Page

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FAC1/28VDC	5CC1	B04
49VU	AUTO FLT/MCDU/1	11CA1	B01
12 1VU	AUTO FLT/FMGC/2	10CA2	M17
12 1VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL

22-66-00

Page A204 Feb 01/03

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

1. On one MCDU:

- get the SYSTEM REPORT/TEST page (Ref. AMM TASK 31-32-00-860-001)
- the AFS indication.
- push the line key adjacent to
 The AFS MAIN MENU page comes into view.
- the GROUND SCAN indication.
- Push the line key adjacent to
 The AFS/GROUND SCAN page comes into view.
- the GROUND REPORT indication.
- Push the line key adjacent to The AFS/GROUND REPORT page comes into view.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK FIDS-FMGC2 CKT:
 - open the circuit breakers 5CC1 and 10CA2
 - after 15 s, close these circuit breakers.
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (2) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- B. Do the test given in Para. 3.

Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the MCDU, push the line key adjacent to the RETURN indication until the CFDS menu page comes into view.
 - (2) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-66-00 EFF: ALL

Page A205 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-872

Loss of the Speed Limits on the Two PFDs

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Test
 Not applicable, the fault is evident.
- 4. Fault Isolation

R R

SROS

- A. If the speed limits do not come into view on the two PFDs:
 - do a check for a maintenance message and ECAM warning on the Post Flight Report at the failure GMT time.
 - (1) If the Post Flight Report gives the maintenance message and the ECAM warning:
 - do the trouble shooting procedure related to the maintenance message and the ECAM warning.

EFF: ALL **22-66-00**

Page A206 Feb 01/05

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-873

FAC 1 Inoperative

- 1. Possible Causes
 - FAC-1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM	22-91-00-710-001	Ground Scanning of the AFS	
AMM	22-96-00-710-001	Operational Test of the AFS	

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FAC1/28VDC 5CC1 B04

- B. If the test gives the maintenance message AFS: CHECK FAC 1:
 - open the circuit breaker 5CC1
 - after 15 seconds, close this circuit breaker
 - after 1 minute, do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001) and the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

EFF: ALL 22-66-00

Page A207 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-874

FAC 2 Inoperative

- 1. Possible Causes
 - FAC-2 (1CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2)		

AMM 22-91-00-710-001 AMM 22-96-00-710-001 Installation of the FAC (1CC1,1CC2)
Ground Scanning of the AFS

- Operational Test of the AFS
- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FAC2/28VDC 5CC2 M19

- B. If the test gives the maintenance message AFS: CHECK FAC 2:
 - open the circuit breaker 5CC2
 - after 15 seconds, close this circuit breaker
 - after 1 minute, do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001) and the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).

EFF: ALL

22-66-00

Page A208 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-877

Loss of the Data between the FAC 1 and the FMGC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 AMM 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/FMGC1 ARINC LK:
 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).

R

R

(a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page A209 Feb 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-878

Loss of the Data between the FAC 2 and the FMGC 1

- 1. Possible Causes
 - FAC-2 (1CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 AMM 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/FMGC1 ARINC LK:
 replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).

R

R

(a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page A210 Feb 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-879

Loss of the Data between the FAC 1 and the FMGC 2

- 1. Possible Causes
 - FAC-1 (1CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 AMM 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/FMGC2 ARINC LK:
 replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).

R

R

R

(a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page A211 Feb 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-880

Loss of the Data between the FAC 2 and the FMGC 2

- 1. Possible Causes
 - FAC-2 (1CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-66-34-000-002 AMM 22-66-34-400-002 AMM 22-91-00-710-001 AMM 22-96-00-710-001	Removal of the FAC (1CC1,1CC2) Installation of the FAC (1CC1,1CC2) Ground Scanning of the AFS Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/FMGC2 ARINC LK:
 replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).

R

R

(a) If the test gives a different message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-66-00

Page A212 Feb 01/05

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-881

Loss of the SFCC 1 Data

- 1. Possible Causes
 - SFCC-1 (21CV)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE			DESIGNATION		
	AMM 22-97- AMM 27-51- AMM 27-51- AMM 31-21-	34-000-001 34-400-001	Operational Test of the LAND CAT III Capability Removal of the SFCC (21CV,22CV) Installation of the SFCC (21CV,22CV) Procedure to set the Clock		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	FLIGHT CONTROLS/FLP/CTL AND MONG/SYS1	6CV	B07
49VU	FLIGHT CONTROLS/SLT/CTL AND MONG/SYS1	5CV	B06
105VU	ELEC/HOT BUS/701PP SPLY	5PB1	DO1
105VU	ELEC/HOT BUS/701PP SPLY	12PB1	E01

- B. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FMGC1-FAC 1/2 WRG:
 - open the circuit breakers 5CV, 6CV, 5PB1, 12PB1
 - after 15 s, close these circuit breakers
 - do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
 - adjust the clock if necessary (Ref. AMM TASK 31-21-00-750-002).
 - (1) If the fault continues:
 - replace the SFCC-1 (21CV) (Ref. AMM TASK 27-51-34-000-001) and (Ref. AMM TASK 27-51-34-400-001).
 - B. Do the test given in Para. 3.

22-66-00

Page A213 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-882

Loss of the SFCC 2 Data

- 1. Possible Causes
 - SFCC-2 (22CV)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-97-00-710-001 AMM 27-51-34-000-001 AMM 27-51-34-400-001	Operational Test of the LAND CAT III Capability Removal of the SFCC (21CV,22CV) Installation of the SFCC (21CV,22CV)

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	ELEC/HOT BUS/702PP SPLY ELEC/HOT BUS/702PP SPLY	5PB2 12PB2	DO2 EO2
	FLIGHT CONTROLS/FLP/CTL AND/MONG/SYS2	8CV	Q21
12 1VU	FLIGHT CONTROLS/SLT/CTL/SYS2	7CV	R21

- B. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FMGC2-FAC 1/2 WRG:
 - open the circuit breakers 7CV, 8CV, 5PB2, 12PB2
 - after 15 s, close these circuit breakers
 - do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
 - (1) If the fault continues:
 - replace the SFCC-2 (22CV) (Ref. AMM TASK 27-51-34-000-001) and (Ref. AMM TASK 27-51-34-400-001).

Page A214 Feb 01/03

B. Do the test given in Para. 3.

22-66-00

K

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-883

Access to the MODE MENU Page on the MCDU Inoperative

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the SIDE 1 discretes from the FAC 1 (1CC1) to the ground point
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
ASM 22-65/01

- 3. Fault Confirmation
 - A. Test
 Not applicable, the fault is evident.
- 4. Fault Isolation
 - A. If the access to the MODE MENU page is not possible on the MCDU:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SIDE 1 discretes from the FAC 1 (1CC1) to the ground point (Ref. ASM 22-65/01).
 - B. Make sure that the MODE MENU page comes into view on the MCDU.

EFF: ALL 22-66-00

Page A215 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-885

Loss of WINDSHEAR function seen by FAC1 and FAC2

1. Possible Causes

- FAC-1 (1CC1)
- FAC-2 (1CC2)
- For defective LRU(s), see the Fault Symptoms List.
- wiring of the FAC OWN bus and the FAC HLTY MON (OWN & OPP) discretes

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM AMM	12-12-32-611-004 12-14-32-614-003	Check Fluid Level of Main Landing Gear Shock Absorber Check Charge Pressure of Main Landing Gear Shock
Arin	12 14 32 014 003	Absorber
AMM	12-22-32-640-001	Lubrication of the MLG and Doors
AMM	22-60-00-710-004	Operational Test of the Windshear Function
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	22-97-00-710-001	Operational Test of the LAND CAT III Capability
ASM	22-65/01	
ASM	22-69/01	

3. Fault Confirmation

- A. Test
 - do the windshear procedure (Ref. AMM TASK 22-60-00-710-004).

4. Fault Isolation

- A. If the test gives the result WINDSHEAR TEST OK:
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001)
 - do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001)
 - do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (1) If there is one or several CFDS messages related to the AFS:
 - do the trouble shooting procedure related to the maintenance message.

For defective LRU(s), see the Fault Symptoms List...

EFF: ALL **SROS**

22-66-00

Page A216 Aug 01/06

TROUBLE SHOOTING MANUAL

- (2) If there is no CFDS message:
 - do a check on the Post Flight Report for other CFDS messages related to:
 - Radio Altimeter System (via the FMGC),
 - ADIRS System,
 - Landing Gear Extension/Retractation System,
 - Slats/Flaps System.
 - (a) If there is one or several CFDS messages:
 - do the trouble shooting procedure related to the maintenance message.

For defective LRU(s), see the Fault Symptoms List..

- (b) If there is no CFDS message, no trouble shooting is necessary except if the warning appears at the takeoff phase:
 - do the lubrification of the MLG (torque link and gland housing) (Ref. AMM TASK 12-22-32-640-001).

If fault continues:

- check the hydraulic level (A/C on jacks) and the pressurization of the MLG shock absorber (Ref. AMM TASK 12-14-32-614-003) and (Ref. AMM TASK 12-12-32-611-004).
- B. If the fault continues:
 - replace the FAC-1 (1CC1) or/and FAC-2 (1CC2) and (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN bus and the FAC HLTY MON (OWN & OPP) discretes between the FACs and the FWCs: (Ref. ASM 22-65/01) (Ref. ASM 22-69/01).
- C. Do the test gives in Para 3.

22-66-00

Page A217 Feb 01/05

SROS

EFF:

ALL

R

R

R R

R

R

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-886

Loss of Yaw Damper and Rudder Trim and Rudder Travel Limitation Functions on the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring
 - P/BSW FLT CTL/FAC 1 (12CC1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump

3. Fault Confirmation

WARNING: MAKE SURE THAT ALL THE CIRCUITS IN MAINTENANCE ARE ISOLATED BEFORE YOU SUPPLY ELECTRICAL POWER TO THE AIRCRAFT.

WARNING: MAKE SURE THAT THE TRAVEL RANGES OF THE FLIGHT CONTROL SURFACES ARE CLEAR BEFORE YOU PRESSURIZE/DEPRESSURIZE A HYDRAULIC SYSTEM.

- A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-23-00-863-001), (Ref. AMM TASK 29-24-00-863-001) and (Ref. AMM TASK 29-10-00-863-003).

EFF: ALL **22-66-00**

Page A218 Feb 01/03

TROUBLE SHOOTING MANUAL

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION ______

49VU AUTO FLT/FAC1/28VDC

5CC1 B04

- C. Test
 - (1) Open the circuit breaker 5001 for more than 5 seconds.
 - (2) After 10 seconds, close the circuit breaker 5CC1.
 - (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC1/P-B SW 12CC1:
 - open the circuit breaker 5CC1
 - remove the FAC-1 (Ref. AMM TASK 22-66-34-000-002)
 - do a check of the impedance between the pins AB/13G and AB/2G of the FAC-1 rack connector.

NOTE: The impedance must be lower than 10 Ohms.

- (1) If the impedance is correct:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-400-002)
- (2) If the impedance is not correct:
 - do a check of the wiring between:
 - . the pin AB/13G of the FAC-1 (1CC1) and the pin A/D3 of the FLT CTL/FAC pushbutton switch (12CC1)
 - . the pin A/D1 of the FLT CTL/FAC pushbutton switch (12CC1) and the pin AB/2G of the FAC-1 (1CC1).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - replace the P/BSW FLT CTL/FAC 1 (12CC1).
 - install the above removed FAC-1 (Ref. AMM TASK 22-66-34-400-002).
- B. Do the test given in para. 3.

EFF: ALL **22-66-00**

Page A219 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-887

Loss of Yaw Damper and Rudder Trim and Rudder Travel Limitation Functions on the FAC $\mathbf 2$

- 1. Possible Causes
 - FAC-2 (1CC2)
 - wiring
 - P/BSW FLT CTL/FAC 2 (12CC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
AMM	22-66-34-400-002	Installation of the FAC (1CC1,1CC2)
AMM	22-96-00-710-001	Operational Test of the AFS
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	29-10-00-863-003	Pressurize the Blue Hydraulic System with a Ground Power Supply
AMM	29-23-00-863-001	Pressurize the Green Hydraulic System from the Yellow Hydraulic System through the PTU with the Electric Pump
AMM	29-24-00-863-001	Pressurize the Yellow Hydraulic System with the Electric Pump

- 3. Fault Confirmation
 - A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Pressurize the aircraft hydraulic systems (Ref. AMM TASK 29-23-00-863-001), (Ref. AMM TASK 29-24-00-863-001) and (Ref. AMM TASK 29-10-00-863-003).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
121VU AUTO FLT/FAC2/28VDC 5CC2 M19

EFF: ALL

22-66-00

Page A220 Feb 01/03

TROUBLE SHOOTING MANUAL

C. Test

- (1) Open the circuit breaker 5CC2 for more than 5 seconds.
- (2) After 10 seconds, close the circuit breaker 5CC2.
- (3) After 2 minutes, do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FAC2/P-B SW 12CC2:
 - open the circuit breaker 5CC2
 - remove the FAC-2 (Ref. AMM TASK 22-66-34-000-002)
 - do a check of the impedance between the pins AB/13G and AB/2G of the FAC-2 rack connector.

NOTE: The impedance must be lower than 10 Ohms.

- (1) If the impedance is correct:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-400-002)
- (2) If the impedance is not correct:
 - do a check of the wiring between:
 - the pin AB/13G of the FAC-2 (1CC2) and the pin A/D3 of the FLT CTL/FAC pushbutton switch (12CC2)
 - the pin A/D1 of the FLT CTL/FAC pushbutton switch (12CC2) and the pin AB/2G of the FAC-2 (1CC2).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - replace the P/BSW FLT CTL/FAC 2 (12CC2).
 - install the above removed FAC-2 (Ref. AMM TASK 22-66-34-400-002).
- B. Do the test given in para. 3.

EFF: ALL

22-66-00

Page A221 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-888

Loss of WINDSHEAR displays (PFD, ECAM) and aural warning

- 1. Possible Causes
 - FAC1,2
 - DMC 1,2
 - FWC 1,2
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE		DESIGNATION	
R	AMM AMM	22-60-00-710-004 22-91-00-710-001 31-50-00-710-001 31-60-00-740-004	Operational Test of the Windshear Function Ground Scanning of the AFS Ground Scanning of the Central Warning System EIS System Test	

- 3. Fault Confirmation
 - A. Test
 - Do the windshear test procedure (Ref. AMM TASK 22-60-00-710-004).
- 4. Fault Isolation
 - A. If the test not OK with:
 - . WINDSHEAR not present on PFD and no aural warning
 - or/and WINDSHEAR DET FAULT/WINDSHEAR DET not present on ECAM.
 - do the ground scanning of the AFS (FAC1,2) (Ref. AMM TASK 22-91-00-710-001).
 - (1) If there is one or several CFDS messages
 - do the trouble shooting procedure related to the maintenance message.
 - (2) If there is no message:
 - (a) do the EIS system test (DMC1 for Capt PFD/EWD, DMC2 for the f/O PFD/SD) (DMC 1,2) (Ref. AMM TASK 31-60-00-740-004).
 - (b) do the ground scanning of the Central Warning system (FWC 1,2) (Ref. AMM TASK 31-50-00-710-001).

 Refer to the above Para. 4.A.(1).

EFF: ALL **22-66-00**

Page A222 Aug 01/06

TROUBLE SHOOTING MANUAL

- B. If the test not OK with:
 - . WINDSHEAR not present on PFD but aural warning present:
 - Refer to Para. 4.A.(2)(a) (DMC1 & 2).
 - . WINDSHEAR present on PFD but no aural warning:
 - Refer to Para. 4.A.(2)(b).
- C. Do the test given in Para. 3.

EFF: ALL SROS 22-66-00

Page A223 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-889

Wrong VLS, F, S or Green Dot displays (PFD)

- 1. Possible Causes
 - Angle of attack value is different on the three ADIRUs
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

34-11-00-810-861

Different Angle of Attack Value on the three ADIRUs

- 3. Fault Confirmation
 - A. Test
 - (1) Not applicable.
- 4. Fault Isolation
 - A. If, on the PFD, the indications VLS, F, S or Green Dot are incorrect:
 if the Angle of attack value is different on the three ADIRUs, do the trouble shooting procedure (Ref. TASK 34-11-00-810-861).

EFF: ALL

22-66-00

Page A224 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-890

Loss of FAC 1 after 28VDC FAC 1 circuit breaker tripping

1. Possible Causes

- ACTUATOR-RUDDER TRIM (10CC)
- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- FAC-1 (1CC1)
- SERVO ACTR-YAW DAMPER, 1 (3CC1)
- 28VDC FAC1 Power Supply wiring
- RTL SYS 1 RELAY (13CC1)
- RUD TRIM 1 RELAY (7CC1)

2. Job Set-up Information

A. Referenced Information

DESIGNATION	
Loss of the Yaw Damper Function on the FAC 1	
Removal of the FAC (1CC1,1CC2)	
Installation of the FAC (1CC1,1CC2)	
Operational Test of the AFS	
Removal of the Rudder Trim Actuator (10CC)	
Installation of the Rudder Trim Actuator (10CC)	
Removal of the Rudder Travel Limitation Unit 4CC	
Installation of the Rudder Travel-Limitation Unit 4CC	

3. Fault Confirmation

R

- A. Not applicable.
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FAC1/28VDC

B. If the fault symptom is identified by the trip of the 28VDC FAC1 circuit breaker:

- do a check for short circuit of the 28VDC FAC1 Power Supply wiring between:
 - . the pin 2 of the AUTO FLT/FAC1 circuit breaker (5CC1) and respectively:
 - .. the pin AC/2 of the FAC1 (1CC1)

EFF: ALL **22-66-00**

Page A225 Nov 01/05

B04

5CC1

TROUBLE SHOOTING MANUAL

- .. the pin A/A2 of the RTL SYS 1 relay (13CC1)
- .. the pin A/A2 of the RUD TRIM 1 relay (7CC1)
- the pin A/A1 of the RTL SYS 1 relay (13CC1) and the pin A/A of the RUDDER TRAVEL limitation unit (4CC)
- . the pin A/A1 of the RUD TRIM 1 relay (7CC1) and the pin B/T of the RUDDER TRIM actuator (10CC) (Ref. ASM 22-67/01).
- (1) If the wiring is not correct:
 repair it.
- (2) If the wiring is correct:
 - replace the RTL SYS 1 RELAY (13CC1) and the RUD TRIM 1 RELAY (7CC1)
- (3) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
- (4) If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
- (5) If the fault continues:
 - replace the FAC-1 (1CC1) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
- (6) If the fault continues:
 - do a check of the integrity of the SERVO ACTR-YAW DAMPER, 1 (3CC1) and FAC-1 (1CC1) by the following trouble shooting procedure (Ref. TASK 22-63-00-810-801).

NOTE: Disregard the maintenance message.

C. Do the Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001).

EFF: ALL

22-66-00

Page A226 Feb 01/03

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-891

Loss of FAC 2 after 28VDC FAC 2 circuit breaker tripping

1. Possible Causes

- ACTUATOR-RUDDER TRIM (10CC)
- LIMITATION UNIT-RUDDER TRAVEL (4CC)
- FAC-2 (1CC2)
- SERVO ACTR-YAW DAMPER, 2 (3CC2)
- 28VDC FAC2 Power Supply wiring
- RTL SYS 2 RELAY (13CC2)
- RUD TRIM 2 RELAY (7CC2)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
22-63-00-810-802	Loss of the Yaw Damper Function on the FAC 2	
AMM 22-66-34-000-002	Removal of the FAC (1CC1,1CC2)	
AMM 22-66-34-400-002	Installation of the FAC (1CC1,1CC2)	
AMM 22-96-00-710-001	Operational Test of the AFS	
AMM 27-22-51-000-001	Removal of the Rudder Trim Actuator (10CC)	
AMM 27-22-51-400-001	Installation of the Rudder Trim Actuator (10CC)	
AMM 27-23-51-000-001	Removal of the Rudder Travel Limitation Unit 4CC	
AMM 27-23-51-400-001	Installation of the Rudder Travel-Limitation Unit 4CC	
ASM 22-67/01		

3. Fault Confirmation

R

- A. Not applicable.
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FAC2/28VDC

5CC2

- B. If the fault symptom is identified by the trip of the 28VDC FAC2 circuit breaker:
 - do a check for short circuit of the 28VDC FAC2 Power Supply wiring between:
 - . the pin 2 of the AUTO FLT/FAC2 circuit breaker (5CC2) and respectively:
 - .. the pin AC/2 of the FAC2 (1CC2)

22-66-00 EFF: ALL

Page A227 Nov 01/05

M19

TROUBLE SHOOTING MANUAL

- .. the pin A/A2 of the RTL SYS 2 relay (13CC2)
- .. the pin A/A2 of the RUD TRIM 2 relay (7CC2)
- the pin A/A1 of the RTL SYS 2 relay (13CC2) and the pin B/A of the RUDDER TRAVEL limitation unit (4CC)
- . the pin A/A1 of the RUD TRIM 2 relay (7CC2) and the pin A/T of the RUDDER TRIM actuator (10CC) (Ref. ASM 22-67/01).
- (2) If the wiring is correct:
 - replace the RTL SYS 2 RELAY (13CC2) and the RUD TRIM 2 RELAY (7CC2)
- (3) If the fault continues:
 - replace the ACTUATOR-RUDDER TRIM (10CC) (Ref. AMM TASK 27-22-51-000-001) and (Ref. AMM TASK 27-22-51-400-001).
- (4) If the fault continues:
 - replace the LIMITATION UNIT-RUDDER TRAVEL (4CC) (Ref. AMM TASK 27-23-51-000-001) and (Ref. AMM TASK 27-23-51-400-001).
- (5) If the fault continues:
 - replace the FAC-2 (1CC2) (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
- (6) If the fault continues:
 - do a check of the integrity of the SERVO ACTR-YAW DAMPER, 2 (3CC2) and FAC-2 (1CC2) by the following trouble shooting procedure (Ref. TASK 22-63-00-810-802).

NOTE: Disregard the maintenance message.

C. Do the Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001).

EFF: ALL

22-66-00

TROUBLE SHOOTING MANUAL

TASK 22-66-00-810-893

Wrong speed computation

- 1. Possible Causes
 - Angle of attack value is different on the three ADIRUs
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

34-11-00-810-861

Different Angle of Attack Value on the three ADIRUs

- 3. Fault Confirmation
 - A. Test
 - (1) Not applicable.
- 4. Fault Isolation
 - A. If speed computation is incorrect:
 - if the Angle of attack value is different on the three ADIRUs, do the trouble shooting procedure (Ref. TASK 34-11-00-810-861).

EFF: ALL 22-66-00

Page A229 Feb 01/03

TROUBLE SHOOTING MANUAL

R

TASK 22-66-00-810-894

Loss of YD, RT and RTL functions (one of the two sides or the two sides)

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Test Not applicable.
- 4. Fault Isolation
 - A. OPERATIONAL MESSAGE NO FURTHER ACTION REQUIRED.

EFF: ALL

22-66-00

Page A230 Aug 01/07

TROUBLE SHOOTING MANUAL

R

TASK 22-66-00-810-895

Wrong ELACs failure during Ground Scanning test without hydraulics

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Not applicable.
- 4. Fault Isolation
 - A. No further action required.

EFF: ALL **22-66-00**

Page A231 Aug 01/07

TROUBLE SHOOTING MANUAL

FLIGHT CONTROL UNIT (FCU) - FAULT ISOLATION PROCEDURES

TASK 22-81-00-810-801

Failure of the FCU

- 1. Possible Causes
 - FCU (2CA)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

R 24-00-00-810-818

Computer Reset

AMM 22-81-12-000-001

Removal of the FCU (2CA)

AMM 22-81-12-400-001

Installation of the FCU (2CA)

AMM 22-91-00-710-001

Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU:

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R B. Do the test given in para. 3.

EFF: ALL 22-81-00

Page 201 Nov 01/05

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-802

FCU 1 Inoperative

1. Possible Causes

- FCU (2CA)
- wiring of the FMGC 1 A bus from the FCU (2CA) to the first terminal block
- wiring of the FCU OWN A bus from the FMGC 1 (1CA1) to the first terminal
- wiring of the FCU OWN B bus from the FMGC 1 (1CA1) to the first terminal block
- wirings of the FCU 2 A F/B and FCU 2 B F/B buses from the FCU (2CA) to the first terminal block
- wiring of the 28VDC signal from the circuit breaker (9CA1) to the FCU
- wiring of the ground signal at the FCU (2CA)
- C/B-AUTO FLT/FCU/1 (9CA1)

2. Job Set-up Information

A. Referenced Information

______ REFERENCE DESIGNATION

R 24-00-00-810-818

AMM 22-91-00-710-001

ASM 22-84/01 ASM 22-86/03

Computer Reset

AMM 22-81-12-000-001 Removal of the FCU (2CA)
AMM 22-81-12-400-001 Installation of the FCU (2CA)

Ground Scanning of the AFS

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FCU/1 9CA1 B05

B. Test

- (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (a) If the circuit breaker (9CA1) is open, refer to Para. 4.B. of this trouble shooting procedure.

EFF: ALL

22-81-00

Page 202 Nov 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R	A. If the circuit breaker (9CA1) is closed and if the test gives the maintenance message AFS: FCU:do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
R R R	NOTE: The 7 minute reset is necessary to do a full test sequence of the FCU.
R R R	(1) If the fault continues:do a check for 28VDC at the FCU (2CA) pin A/Z.
R R	(a) If there is 28VDC:replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
R	<pre>1 If the fault continues: - do a check of the: . wiring of the FMGC 1 A bus from the FCU (2CA) to the first terminal block . wiring of the FCU OWN A bus from the FMGC 1 (1CA1) to the first terminal block . wiring of the FCU OWN B bus from the FMGC 1 (1CA1) to the first terminal block. - (Ref. ASM 22-86/03).</pre>
R	<u>2</u> If there is no continuity:repair the above wirings.
R	If there is continuity: do a check and repair the wirings of the FCU 2 A F/B and FCU 2 B F/B buses from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
R	(NO.12 NO.1 = 00/00/1
R	 (b) If there is no 28VDC: do a check of the wiring of the 28VDC signal from the circuit breaker (9CA1) to the FCU (2CA) and the wiring of the ground signal at the FCU (2CA), pin A/A (Ref. ASM 22-84/01).
R	Signat at the 100 (204), pin 4/4 (Ref. 45H 22-64/01).
R	<pre>1 If there is no continuity: - repair the above wirings.</pre>
R	·
R	2 If there is continuity: replace the C/B-AUTO FLT/FCU/1 (9CA1).

EFF: ALL
SROS

Printed in France

22-81-00

Page 203 Nov 01/05

TROUBLE SHOOTING MANUAL

- ${f B.}$ If the circuit breaker (9CA1) is open:
 - close this circuit breaker.
 - (1) If the circuit breaker trips:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check for a short to ground from the circuit breaker (9CA1) to the FCU (2CA) (Ref. ASM 22-84/01).
 - 1 If there is a short to ground: - repair the above wiring.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/FCU/1 (9CA1).
- C. Do the test given in Para. 3.

EFF: ALL 22-81-00

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-803

FCU 2 Inoperative

1. Possible Causes

- FCU (2CA)
- wiring of the FMGC 2 A bus from the FCU (2CA) to the first terminal block
- wiring of the FCU OWN A bus from the FMGC 2 (1CA2) to the first terminal
- wiring of the FCU OWN B bus from the FMGC 2 (1CA2) to the first terminal block
- wirings of the FCU 1 A F/B and FCU 1 B F/B buses from the FCU (2CA) to the first terminal block
- wiring of the 28VDC signal from the circuit breaker (9CA2) to the FCU
- wiring of the ground signal at the FCU (2CA)
- C/B-AUTO FLT/FCU/2 (9CA2)

2. Job Set-up Information

A. Referenced Information

______ REFERENCE DESIGNATION

R 24-00-00-810-818

AMM 22-91-00-710-001

ASM 22-84/01

ASM 22-86/03

Computer Reset

AMM 22-81-12-000-001 Removal of the FCU (2CA)
AMM 22-81-12-400-001 Installation of the FCU (2CA)

Ground Scanning of the AFS

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FCU/2

M21

9CA2

B. Test

- (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - (a) If the circuit breaker (9CA2) is open, refer to Para. 4.B. of this trouble shooting procedure.

EFF: ALL

22-81-00

Page 205 Nov 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

R	Α.	If the circuit breaker (9CA2) is closed and if the test gives the maintenance message AFS: FCU: - do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
R R R		NOTE: The 7 minute reset is necessary to do a full test sequence of the FCU.
R R		(1) If the fault continues:do a check for 28VDC at the FCU (2CA) pin B/I.
R R		(a) if there is 28VDC:replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
R		<pre>1 If the fault continues: - do a check of the: . wiring of the FMGC 2 A bus from the FCU (2CA) to the first terminal block . wiring of the FCU OWN A bus from the FMGC 2 (1CA2) to the first terminal block . wiring of the FCU OWN B bus from the FMGC 2 (1CA2) to the first terminal block - (Ref. ASM 22-86/03).</pre>
R		<pre>2 If there is no continuity: - repair the above wirings.</pre>
R		J If there is continuity: - do a check and repair the wirings of the FCU 1 A F/B and FCU 1 B F/B buses from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
R		(1611 1611 12 66) 65) 1
R		 (b) If there is no 28VDC: do a check of the wiring of the 28VDC signal from the circuit breaker (9CA2) to the FCU (2CA) and the wiring of the ground signal at the FCU (2CA), pin B/A (Ref. ASM 22-84/01).
R		
R		<pre>1 If there is no continuity: - repair the above wirings.</pre>
R		repair the above withings.
R		<pre>2 If there is continuity: - replace the C/B-AUTO FLT/FCU/2 (9CA2).</pre>

EFF: ALL SROS

22-81-00

Page 206

TROUBLE SHOOTING MANUAL

- B. If the circuit breaker (9CA2) is open:
 - close this circuit breaker.
 - (1) If the circuit breaker trips:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check for a short to ground from the circuit breaker (9CA2) to the FCU (2CA) (Ref. ASM 22-84/01).
 - 1 If there is a short to ground: - repair the above wiring.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/FCU/2 (9CA2).
- C. Do the test given in Para. 3.

EFF: ALL 22-81-00

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-804

Loss of the FCU 1 A Bus

- 1. Possible Causes
 - FCU (2CA)
 - wiring of the FCU 1 A bus from the FCU (2CA) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

R 24-00-00-810-818

AMM 22-81-12-000-001

AMM 22-81-12-400-001

AMM 22-91-00-710-001

ASM 22-86/03

Computer Reset

Removal of the FCU (2CA)

Installation of the FCU (2CA)

Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU:

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R (a) If t
 - (a) If the fault continues:
 - do a check and repair the wiring of the FCU 1 A bus from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
 - B. Do the test given in Para. 3.

22-81-00

Page 208 Nov 01/05

EFF: ALL

SROS

R

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-805

Loss of the FCU 1 B Bus

- 1. Possible Causes
 - FCU (2CA)
 - wiring of the FCU 1 B bus from the FCU (2CA) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

R 24-00-00-810-818

AMM 22-81-12-000-001

AMM 22-81-12-400-001 AMM 22-91-00-710-001

ASM 22-86/03

Computer Reset

Removal of the FCU (2CA)
Installation of the FCU (2CA)

Ground Scanning of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU:

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R (a) If the fault continues:
 - do a check and repair the wiring of the FCU 1 B bus from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
 - B. Do the test given in Para. 3.

22-81-00

Page 209 Nov 01/05

EFF: ALL

SROS

R

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-806

Loss of the FCU 2 A Bus

- 1. Possible Causes
 - FCU (2CA)
 - wiring of the FCU 2 A bus from the FCU (2CA) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

Computer Reset

24-00-00-810-818

AMM 22-81-12-000-001 AMM 22-81-12-400-001 Removal of the FCU (2CA)
Installation of the FCU (2CA)

Ground Scanning of the AFS

AMM 22-91-00-710-001

ASM 22-86/03

3. Fault Confirmation

- A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU:

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R R
- (a) If the fault continues:
 - do a check and repair the wiring of the FCU 2 A bus from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
- B. Do the test given in Para. 3.

22-81-00

Page 210

Nov 01/05

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-807

Loss of the FCU 2 B Bus

- 1. Possible Causes
 - FCU (2CA)
 - wiring of the FCU 2 B bus from the FCU (2CA) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	

R 24-00-00-810-818

AMM 22-81-12-000-001

AMM 22-81-12-400-001

AMM 22-91-00-710-001

ASM 22-86/03

Computer Reset

Removal of the FCU (2CA)

Installation of the FCU (2CA)

Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU:

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R (a) If the fault continues:
 - do a check and repair the wiring of the FCU 2 B bus from the FCU (2CA) to the first terminal block (Ref. ASM 22-86/03).
 - B. Do the test given in Para. 3.

EFF: ALL **22-81-00**

Page 211 Nov 01/05

R

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-808

Loss of the FCU 1 FAIL and FCU 1 HLTY Discretes

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- FCU (2CA)
- wiring of the FCU OWN HLTY discrete from the FMGC 1 (1CA1) to the first terminal block
- wiring of the FCU OWN FAIL discrete from the FMGC 1 (1CA1) to the FCU (2CA)
- wiring of the FCU OPP HLTY discrete from the FMGC 2 (1CA2) to the first block terminal
- wiring of the FCU 1 HLTY discrete from the FCU (2CA) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-81-12-000-001 AMM 22-81-12-400-001 AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001	Removal of the FCU (2CA) Installation of the FCU (2CA) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS	
ASM 22-85/04	operational rest of the mo	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FMGC 1 and the FMGC 2.

4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FCU/1	9CA1	в05
49VU	AUTO FLT/FMGC/1	10CA1	B02

EFF: ALL

22-81-00

Page 212 Nov 01/05

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message for the FMGC 1 only: AFS: FMGC1/FCU (FW DISC1):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FCU OWN HLTY discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/04).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FCU OWN FAIL discrete from the FMGC 1 (1CA1) to the FCU (2CA) (Ref. ASM 22-85/04).
- C. If the test gives the maintenance message for the FMGC 2 only: AFS: FMGC2/FCU (FW DISC1):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FCU OPP HLTY discrete from the FMGC 2 (1CA2) to the first block terminal (Ref. ASM 22-85/04).
- D. If the test gives the maintenance messages for the two FMGCs:

AFS: FMGC1/FCU (FW DISC1) and

AFS: FMGC2/FCU (FW DISC1):

- open the circuit breaker (10CA1)
- open the circuit breaker (9CA1)
- after 5 seconds, close the circuit breaker (9CA1)
- do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- (1) If the test gives the maintenance message AFS: FMGC2/FCU (FW DISC1):
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the FCU 1 HLTY discrete from the FCU (2CA) to the first terminal block (Ref. ASM 22-85/04).
- (2) If the test does not give the maintenance message AFS: FMGC2/FCU (FW DISC1):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (a) If the fault continues:
 - do a check of the wiring of the FW OWN HLTY discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/04).

EFF: ALL

22-81-00

Page 213 Nov 01/05

TROUBLE SHOOTING MANUAL

- 1 If there is no continuity: - repair the above wiring.
- 2 If there is continuity:
 - do a check and repair the wiring of the FCU OWN FAIL discrete from the FMGC 1 (1CA1) to the FCU (2CA) (Ref. ASM 22-85/04).
- E. Do the test given in Para. 3.

EFF: ALL | | SROS 22-81-00

Page 214 Nov 01/05

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-809

Loss of the FCU 2 FAIL and FCU 2 HLTY Discretes

1. Possible Causes

- FMGC-2 (1CA2)
- FMGC-1 (1CA1)
- FCU (2CA)
- wiring of the FCU OWN HLTY discrete from the FMGC 2 (1CA2) to the first terminal block
- wiring of the FCU OWN FAIL discrete from the FMGC 2 (1CA2) to the FCU (2CA)
- wiring of the FCU OPP HLTY discrete from the FMGC 1 (1CA1) to the first terminal block
- wiring of the FCU 2 HLTY discrete from the FCU (2CA) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE DESIGNATION

AMM 22-81-12-000-001 Removal of the FCU (2CA)

AMM 22-81-12-400-001 Installation of the FCU (2CA)

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

AMM 22-96-00-710-001 Operational Test of the AFS

ASM 22-85/04

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the results for the FMGC 1 and the FMGC 2.

4. Fault Isolation

A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FCU/2 9CA2 M21

121VU AUTO FLT/FCU/2 121VU AUTO FLT/FMGC/2

ALL

22-81-00

Page 215 May 01/96

M17

10CA2

SROS

EFF:

R

TROUBLE SHOOTING MANUAL

R

- B. If the test gives the maintenance message for the FMGC 2 only: AFS: FMGC2/FCU (FW DISC2):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FCU OWN HLTY discrete from the FMGC
 2 (1CA2) to the first terminal block (Ref. ASM 22-85/04).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FCU OWN FAIL discrete from the FMGC 2 (1CA2) to the FCU (2CA) (Ref. ASM 22-85/04).
- C. If the test gives the maintenance message for the FMGC 1 only: AFS: FMGC1/FCU (FW DISC2):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FCU OPP HLTY discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/04).
- D. If the test gives the maintenance message for the two FMGCs:

AFS: FMGC1/FCU (FW DISC2) and

AFS: FMGC2/FCU (FW DISC2):

- open the circuit breaker (10CA2)
- open the circuit breaker (9CA2)
- after 5 seconds, close the circuit breaker (9CA2)
- do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- (1) If the test gives the maintenance message AFS: FMGC1/FCU (FW DISC2):
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the FCU 2 HLTY discrete from the FCU (2CA) to the first terminal block (Ref. ASM 22-85/04).
- (2) If the test does not give the maintenance message AFS: FMGC1/FCU (FW DISC2):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-81-00

Page 216 May 01/96

TROUBLE SHOOTING MANUAL

- (a) If the fault continues:
 - do a check of the wiring of the FW OWN HLTY discrete from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-85/04).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - do a check and repair the wiring of the FCU OWN FAIL discrete from the FMGC 2 (1CA2) to the FCU (2CA) (Ref. ASM 22-85/04).
- E. Do the test given in Para. 3.

EFF: ALL 22-81-00

TROUBLE SHOOTING MANUAL

TASK 22-81-00-810-810

FCU Inoperative

- 1. Possible Causes
 - FCU (2CA)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

R 24-00-00-810-818

AMM 22-81-12-000-001 AMM 22-81-12-400-001 Computer Reset
Removal of the FCU (2CA)
Installation of the FCU (2CA)

AMM 22-96-00-710-001

Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
- A. If the test gives the maintenance message AFS: FCU (APPR NOT ENGAGED):

 R do a FCU reset procedure (Ref. TASK 24-00-00-810-818).
- R NOTE: The 7 minute reset is necessary to do a full test sequence of the R FCU.
- R (1) If the fault continues:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- R B. Do the test given in para. 3.

EFF: ALL 22-81-00

Page 218 Nov 01/05

TROUBLE SHOOTING MANUAL

MULTIPURPOSE CONTROL AND DISPLAY UNIT (MCDU) - FAULT ISOLATION PROCEDURES

TASK 22-82-00-810-801

Loss of the Power Supply of the MCDU 1

- 1. Possible Causes
 - MCDU-1 (3CA1)
 - wiring of the 115VAC signal from the circuit breaker 11CA1 to the MCDU 1 (3CA1)
 - wiring of the ground signal at MCDU 1 (3CA1)
 - C/B-AUTO FLT/MCDU/1 (11CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-70-00-710-001	Operational Test of the Multipurpose Control and Display Unit (MCDU)	
AMM	22-82-12-000-001 22-82-12-400-002 22-84/02	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

DANEL DESTGNATION TOENT LOCATION

PANEL DESIGNATION IDENT. LOCATION

R

49VU AUTO FLT/MCDU/1

11CA1 B01

R

- B. Test
 - (1) Do the operational test of the multipurpose control and display unit (MCDU) (Ref. AMM TASK 22-70-00-710-001).
 - (a) If the circuit breaker 11CA1 is open, refer to Para. 4.B.

EFF: ALL **22-82-00**

Page 201 May 01/96

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the circuit breaker 11CA1 is closed and if the MCDU MENU page is not in view on the MCDU 1:
 - do a check for 115VAC at MCDU 1 (3CA1).
 - (1) If there is 115VAC:
 - replace the MCDU-1 (3CA1), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (2) If there is no 115VAC:
 - do a check of the wiring of the 115VAC signal from the circuit breaker 11CA1 to the MCDU 1 (3CA1)
 - do a check of the wiring of the ground signal at MCDU 1 (3CA1) pin A/41.

(Ref. ASM 22-84/02).

- (a) If there is no continuity: - repair the above wirings.
- (b) If there is continuity: - replace the C/B-AUTO FLT/MCDU/1 (11CA1).
- B. If the circuit breaker 11CA1 is open:
 - close the circuit breaker.
 - (1) If the circuit breaker is open again:
 - replace the MCDU-1 (3CA1), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (a) If the fault continues:
 - do a check for a short to ground between the circuit breaker (11CA1) to the MCDU 1 (3CA1) (Ref. ASM 22-84/02).
 - 1 If there is a short to ground: - repair the above wiring.
 - 2 If there is no short to ground: - replace the C/B-AUTO FLT/MCDU/1 (11CA1).
- C. Do the test given in Para. 3.

22-82-00

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-802

Failure of the MCDU 1

- 1. Possible Causes
 - MCDU-1 (3CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

AMM 22-82-12-000-001 AMM 22-82-12-400-002 R AMM 22-91-00-710-001 Removal of the MCDU (3CA1,3CA2,3CA3)
Installation of the MCDU (3CA1,3CA2,3CA3)

Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU1:

DESIGNATION

- replace the MCDU-1 (3CA1), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
- B. Do the test given in Para. 3.

EFF: ALL 22-82-00

Page 203 Feb 01/96

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-803

MCDU 1 Inoperative

- 1. Possible Causes
 - MCDU-1 (3CA1)
 - wiring of the MCDU TRANSMITTER bus from the MCDU 1 (3CA1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

	REFE	RENCE	DESIGNATION
R	AMM AMM	22-82-12-000-001 22-82-12-400-002 22-91-00-710-001 22-86/04	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3) Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU1:
 - replace the MCDU-1 (3CA1), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU TRANSMITTER bus from the MCDU 1 (3CA1) to the first terminal block, (Ref. ASM 22-86/04).
 - B. Do the test given in Para. 3.

EFF: ALL **22-82-00**

Page 204 Feb 01/96

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-804

Loss of the Reception of the MCDU 1 TRANSMITTER Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the MCDU OWN IN bus (from the FMGC 1 (1CA1) to the first terminal block)
 - wiring of the MCDU OPP IN bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
ASM	22-86/04	

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU1 (ISSUED BY: FM1): - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OWN IN bus (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-86/04).
 - B. If the test gives the maintenance message AFS: MCDU1 (ISSUED BY: FM2): replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OPP IN bus (from the FMGC 2 (1CA2) to the first terminal block), (Ref. ASM 22-86/04).
 - C. Do the test given in Para. 3.

EFF: ALL

Page 205
Feb 01/96

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-805

Loss of the Power Supply of the MCDU 2

- 1. Possible Causes
 - MCDU-2 (3CA2)
 - wiring of the 115VAC signal from the circuit breaker 11CA2 to the MCDU 2 (3CA2)
 - wiring of the ground signal at MCDU 2 (3CA2)
 - C/B-AUTO FLT/MCDU/2 (11CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION		
AMM	22-70-00-710-001	Operational Test of the Multipurpose Control and Display Unit (MCDU)		
AMM AMM ASM	22-82-12-000-001 22-82-12-400-002 22-84/02	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

R

R

121VU AUTO FLT/MCDU/2

11CA2

N20

B. Test

- (1) Do the operational test of the multipurpose control and display unit (MCDU) (Ref. AMM TASK 22-70-00-710-001).
 - (a) If the circuit breaker 11CA2 is open, refer to Para. 4.B.

EFF: ALL

22-82-00

Page 206 May 01/96

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the circuit breaker 11CA2 is closed and if the MCDU MENU page is not in view on the MCDU 2:
 - do a check for 115VAC at MCDU 2 (3CA2).
 - (1) If there is 115VAC:
 - replace the MCDU-2 (3CA2), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (2) If there is no 115VAC:
 - do a check of the wiring of the 115VAC signal from the circuit breaker 11CA2 to the MCDU 2 (3CA2)
 - do a check of the wiring of the ground signal at MCDU 2 (3CA2) pin A/41.

(Ref. ASM 22-84/02).

- (a) If there is no continuity:repair the above wirings.
- B. If the circuit breaker 11CA2 is open:
 - close the circuit breaker.
 - (1) If the circuit breaker is open again:
 - replace the MCDU-2 (3CA2), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (a) If the fault continues:
 - do a check for a short to ground between the circuit breaker
 (11CA2) to the MCDU 2 (3CA2) (Ref. ASM 22-84/02).
 - 1 If there is a short to ground: - repair the above wiring.
 - 2 If there is no short to ground:
 replace the C/B-AUTO FLT/MCDU/2 (11CA2).
- C. Do the test given in Para. 3.

EFF: ALL

22-82-00

Page 207 Aug 01/95

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-806

Failure of the MCDU 2

- 1. Possible Causes
 - MCDU-2 (3CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 22-82-12-000-001 Removal of the MCDU (3CA1,3CA2,3CA3)
AMM 22-82-12-400-002 Installation of the MCDU (3CA1,3CA2,3CA3)
R AMM 22-91-00-710-001 Ground Scanning of the AFS

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU2:
 replace the MCDU-2 (3CA2), (Ref. AMM TASK 22-82-12-000-001) and (Ref.
 - B. Do the test given in Para. 3.

AMM TASK 22-82-12-400-002).

22-82-00

Page 208 Feb 01/96

EFF: ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-807

MCDU 2 Inoperative

- 1. Possible Causes
 - MCDU-2 (3CA2)
 - wiring of the MCDU TRANSMITTER bus from the MCDU 2 (3CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

	REFERENCE		DESIGNATION	
R	AMM AMM	22-82-12-000-001 22-82-12-400-002 22-91-00-710-001 22-86/04	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3) Ground Scanning of the AFS	

- 3. Fault Confirmation
 - A. Test

SROS

- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU 2:
 - replace the MCDU-2 (3CA2), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU TRANSMITTER bus from the MCDU 2 (3CA2) to the first terminal block, (Ref. ASM 22-86/04).
 - B. Do the test given in Para. 3.

EFF: ALL **22-82-00**

Page 209 Feb 01/96

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-808

Loss of the Reception of the MCDU 2 TRANSMITTER Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the MCDU OWN IN bus (from the FMGC 1 (1CA1) to the first terminal block)
 - wiring of the MCDU IN OUT bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 ASM 22-86/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS	

- 3. Fault Confirmation
 - A. Test
- R (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
 - 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: MCDU2 (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OWN IN bus (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-86/04).
 - B. If the test gives the maintenance message AFS: MCDU2 (ISSUED BY: FM2): replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU IN OUT bus (from the FMGC 2 (1CA2) to the first terminal block), (Ref. ASM 22-86/04).
 - C. Do the test given in Para. 3.

EFF: ALL Page 210 Feb 01/96 SROS

Printed in France

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-809

Loss of the MCDU 1 FAIL Discrete

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- MCDU-1 (3CA1)
- wiring of the MCDU OWN FAIL discrete from the FMGC 1 (1CA1) to the first terminal block
- wiring of the MCDU OPP FAIL discrete from the FMGC 2 (1CA2) to the first terminal block
- wiring of the MCDU FAIL discrete from the MCDU 1 (3CA1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-82-12-000-001 AMM 22-82-12-400-002 AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/04	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS	

3. Fault Confirmation

A. Test

R

R

(1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001), read the result for the FMGC 1 and the FMGC 2 and do one of these three fault isolation steps (A., B. or C.).

4. Fault Isolation

- A. If the test only gives the maintenance message AFS: MCDU1 (FW DISC)/FMGC1:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OWN FAIL discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/04).

EFF: ALL **SROS**

22-82-00

Page 211 Nov 01/05

TROUBLE SHOOTING MANUAL

- B. If the test only gives the maintenance message AFS: MCDU 1 (FW DISC)/FMGC2:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OPP FAIL discrete from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-85/04).
- C. If the test gives the two maintenance messages AFS : MCDU1 (FW DISC)/
 FMGC1 and AFS : MCDU1 (FW DISC)/FMGC2:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU FAIL discrete from the MCDU 1 (3CA1) to the first terminal block (Ref. ASM 22-85/04).
- D. Do the test given in Para. 3.

22-82-00

EFF: ALL

Page 212 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-810

Loss of the MCDU 2 FAIL Discrete

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- MCDU-2 (3CA2)
- wiring of the MCDU OPP FAIL discrete from the FMGC 1 (1CA1) to the first terminal block
- wiring of the MCDU OWN FAIL discrete from the FMGC 2 (1CA2) to the first terminal block
- wiring of the MCDU FAIL discrete from the MCDU 2 (3CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION		
	AMM AMM AMM	22-82-12-000-001 22-82-12-400-002 22-83-34-000-001 22-83-34-400-001 22-96-00-710-001 22-85/04	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

3. Fault Confirmation

A. Test

(1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1 and the FMGC 2.

4. Fault Isolation

- A. If the test only gives the maintenance message AFS: MCDU2 (FW DISC)/FMGC1:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OPP FAIL discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/04).

EFF: ALL **22-82-00**

Page 213 Aug 01/94

TROUBLE SHOOTING MANUAL

- B. If the test only gives the maintenance message AFS : MCDU 2 (FW DISC)/FMGC2:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU OWN FAIL discrete from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-85/04).
- C. If the test gives the two maintenance messages AFS : MCDU2 (FW DISC)/FMGC1 and AFS : MCDU2 (FW DISC)/FMGC2:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MCDU FAIL discrete from the MCDU 2 (3CA2) to the first terminal block (Ref. ASM 22-85/04).
- D. Do the test given in Para. 3.

22-82-00

Page 214 Aug 01/94

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-811

Loss of Communication with the FMGC 1 through the MCDU 1

1. Possible Causes

- FMGC-1 (1CA1)
- MCDU-1 (3CA1)
- wiring of the MCDU OWN OUT bus from the FMGC 1 (1CA1) to the MCDU 1 (3CA1)
- wiring of the FMGC HLTY discrete from the FMGC 1 (1CA1) to the MCDU 1 (3CA1)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-70-00-710-001	Operational Test of the Multipurpose Control and Display Unit (MCDU)	
AMM	22-82-12-000-001	Removal of the MCDU (3CA1,3CA2,3CA3)	
AMM	22-82-12-400-002	Installation of the MCDU (3CA1,3CA2,3CA3)	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
ASM	22-85/04		
ASM	22-86/04		

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the Multipurpose Control and Display Unit (MCDU 1) (Ref. AMM TASK 22-70-00-710-001).

4. Fault Isolation

- A. If the A/C status page does not come into view:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (2) If the fault continues:
 - do a check of the wiring of the MCDU OWN OUT bus from the FMGC 1 (1CA1) to the MCDU 1 (3CA1) (Ref. ASM 22-86/04).
 - (a) If there is no continuity:
 repair the above wiring.

EFF: ALL

22-82-00

Page 215 Aug 01/94

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discrete from the FMGC 1 (1CA1) to the MCDU 1 (3CA1) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-82-00

Page 216 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-812

Loss of Communication with the FMGC 2 through the MCDU 2

1. Possible Causes

- FMGC-2 (1CA2)
- MCDU-2 (3CA2)
- wiring of the MCDU OWN OUT bus from the FMGC 2 (1CA2) to the MCDU 2 (3CA2)
- wiring of the FMGC HLTY discrete from the FMGC 2 (1CA2) to the MCDU 2 (3CA2)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION		
AMM	22-70-00-710-001	Operational Test of the Multipurpose Control and Display Unit (MCDU)		
AMM	22-82-12-000-001	Removal of the MCDU (3CA1,3CA2,3CA3)		
AMM	22-82-12-400-002	Installation of the MCDU (3CA1,3CA2,3CA3)		
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
ASM	22-85/04			
ASM	22-86/04			

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the Multipurpose Control and Display Unit (MCDU 2) (Ref. AMM TASK 22-70-00-710-001).

4. Fault Isolation

- A. If the A/C status page does not come into view:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (2) If the fault continues:
 - do a check of the wiring of the MCDU OWN OUT bus from the FMGC 2
 (1CA2) to the MCDU 2 (3CA2) (Ref. ASM 22-86/04).
 - (a) If there is no continuity:
 repair the above wiring.

EFF: ALL

22-82-00

Page 217 Aug 01/94

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the FMGC HLTY discrete from the FMGC 2 (1CA2) to the MCDU 2 (3CA2) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL

22-82-00

Page 218 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-813

Automatic Switching of the MCDU 1 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - MCDU-1 (3CA1)
 - wiring of the MCDU OPP OUT bus from the FMGC 2 (1CA2) to the MCDU 1 (3CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-70-00-710-003	Operational Test of the Automatic Switching of the MCDUs	
AMM AMM AMM AMM ASM	22-82-12-000-001 22-82-12-400-002 22-83-34-000-001 22-83-34-400-001 22-86/04	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2)	

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the automatic switching of the MCDUs (Ref. AMM TASK 22-70-00-710-003).
- 4. Fault Isolation
 - A. If the INIT page does not come into view on the MCDU 1 when the FMGC 1 is deactivated:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the MCDU OPP OUT bus from the FMGC 2 (1CA2) to the MCDU 1 (3CA1) (Ref. ASM 22-86/04).
 - B. Do the test given in Para. 3.

EFF: ALL 22-82-00 Page 219 Aug 01/94 SROS

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-814

Automatic Switching of the MCDU 2 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - MCDU-2 (3CA2)
 - wiring of the MCDU OPP OUT bus from the FMGC 1 (1CA1) to the MCDU 2 (3CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
АММ	22-70-00-710-003	Operational Test of the Automatic Switching of the	
		MCDUs	
AMM	22-82-12-000-001	Removal of the MCDU (3CA1,3CA2,3CA3)	
AMM	22-82-12-400-002	Installation of the MCDU (3CA1,3CA2,3CA3)	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
ASM	22-86/04	, , , , , , , , , , , , , , , , , , ,	

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the automatic switching of the MCDUs (Ref. AMM TASK 22-70-00-710-003).
- 4. Fault Isolation
 - A. If the INIT page does not come into view on the MCDU 2 when the FMGC 2 is deactivated:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (a) If the fault continues:
 - do a check and repair the wiring of the MCDU OPP OUT bus from the FMGC 1 (1CA1) to the MCDU 2 (3CA2) (Ref. ASM 22-86/04).
 - B. Do the test given in Para. 3.

EFF: ALL Page 220 Aug 01/94 SROS

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-815

Loss of Communication with the CFDS through the MCDU 1

- 1. Possible Causes
 - MCDU-1 (3CA1)
 - wiring of the MAINTENANCE RECEIVER bus from the MCDU 1 (3CA1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)	
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
ASM	22-86/04		

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
_	AUTO FLT/MCDU/1	11CA1	B01
	CFDS/CFDIU/SPLY	2TW	J18

R **ON A/C 201-225, 227-227, 229-299, 426-499, 503-549, 551-560, 701-749,

Post SB 31-1163 For A/C 433-450,

121VU CFDS/CFDIU/BACK/UP

22-82-00

Page 221 May 01/08

J17

8TW

EFF: ALL

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

C. Test

______ ACTION RESULT

MCDU 1:

1. On the center pedestal, on the On the center pedestal, on the MCDU 1:

- push the MCDU MENU mode key. The MCDU MENU page comes into view.

the CFDS indication.

- push the line key adjacent to The CFDS MENU page comes into view.

4. Fault Isolation

- A. If the CFDS MENU page does not come into view:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MAINTENANCE RECEIVER bus from the MCDU 1 (3CA1) to the first terminal block (Ref. ASM 22-86/04).
- B. Do the test given in Para. 3.C.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

EFF: ALL

Page 222 Feb 01/01

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-816

Loss of Communication with the CFDS through the MCDU 2

- 1. Possible Causes
 - MCDU-2 (3CA2)
 - wiring of the MAINTENANCE RECEIVER bus from the MCDU 2 (3CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)	
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
ASM	22-86/04		

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
_	CFDS/CFDIU/SPLY AUTO FLT/MCDU/2	2TW 11CA2	J 18 N20

R **ON A/C 201-225, 227-227, 229-299, 426-499, 503-549, 551-560, 701-749,

Post SB 31-1163 For A/C 433-450,

121VU CFDS/CFDIU/BACK/UP

ALL

22-82-00

8TW

Page 223 May 01/08

J17

SROS

EFF:

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

C. Test

______ ACTION RESULT

MCDU 2:

1. On the center pedestal, on the On the center pedestal, on the MCDU 2:

- push the MCDU MENU mode key. The MCDU MENU page comes into view.

the CFDS indication.

- push the line key adjacent to The CFDS MENU page comes into view.

4. Fault Isolation

- A. If the CFDS MENU page does not come into view:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the MAINTENANCE RECEIVER bus from the MCDU 2 (3CA2) to the first terminal block (Ref. ASM 22-86/04).
- B. Do the test given in Para. 3.C.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

Page 224 Feb 01/01

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-817

Loss of Communication with the AIDS through the MCDU 1

- 1. Possible Causes
 - MCDU-1 (3CA1)
 - wiring of the AIDS DATA IN bus from the MCDU 1 (3CA1) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	<pre>De-energize the Aircraft Electrical Circuits Supplied from the External Power</pre>	
ASM	22-86/04		

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU AUTO FLT/MCDU/1 11CA1 B01

R **ON A/C 201-225, 227-227, 229-253, 276-299, 426-450, 476-499, 503-549,

R 551-599, 701-749,

121VU AIDS/DMU 4TV K15

EFF: ALL
SROS

22-82-00

Page 225 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

C. Test

______ ACTION RESULT

- push the MCDU MENU mode key. The MCDU MENU page comes into view.

1. On the center pedestal, on the On the center pedestal, on the MCDU 1:

MCDU 1:

the AIDS indication.

- push the line key adjacent to The AIDS MENU page comes into view.

4. Fault Isolation

- A. If the AIDS MENU page does not come into view:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AIDS DATA IN bus from the MCDU 1 (3CA1) to the first terminal block (Ref. ASM 22-86/04).
- B. Do the test given in Para. 3.C.
- 5. Close-up
 - A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

Page 226 Nov 01/02

SROS

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-818

Loss of Communication with the AIDS through the MCDU 2

- 1. Possible Causes
 - MCDU-2 (3CA2)
 - wiring of the AIDS DATA IN bus from the MCDU 2 (3CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	24-41-00-862-002	<pre>De-energize the Aircraft Electrical Circuits Supplied from the External Power</pre>
ASM	22-86/04	

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
121VU AUTO FLT/MCDU/2 11CA2 N20

R **ON A/C 201-225, 227-227, 229-253, 276-299, 426-450, 476-499, 503-549, R 551-599, 701-749,

121VU AIDS/DMU 4TV K15

EFF: ALL

22-82-00

Page 227 May 01/08

SROS

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

C. Test

______ ACTION RESULT

MCDU 2:

1. On the center pedestal, on the On the center pedestal, on the MCDU 2:

- push the MCDU MENU mode key. The MCDU MENU page comes into view.

the AIDS indication.

- push the line key adjacent to The AIDS MENU page comes into view.

4. Fault Isolation

- A. If the AIDS MENU page does not come into view:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the AIDS DATA IN bus from the MCDU 2 (3CA2) to the first terminal block (Ref. ASM 22-86/04).
- B. Do the test given in Para. 3.C.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00 ALL

Page 228 Nov 01/02

SROS

EFF:

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-819

Loss of Communication with the Data Link through the MCDU 1

1. Possible Causes

- MCDU-1 (3CA1)
- wiring of the ACARS (BUS 1) bus from the MCDU 1 (3CA1) to the first terminal block
- wiring of the ATSU-1 RECEIVER bus from the MCDU 1 (3CA1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
ASM	22-86/04	

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.

22-82-00

EFF:

TROUBLE SHOOTING MANUAL

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION ______ 49VU AUTO FLT/MCDU/1 11CA1 B01 **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-557, 701-749, 121VU COM NAV/ACARS/MU 2RB L06 **ON A/C 247-275, 429-475, 481-499, 503-549, 551-555, 559-599, Post SB 46-1001 For A/C 503-549, Post SB 46-1005 For A/C 551-555, 121VU ATSU 1 L16 **3TX1** 121VU ATSU 1/SWTG 5TX1 L15 R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-555, 701-749, C. Test ACTION RESULT 1. On the center pedestal, on the On the center pedestal, on the MCDU 1: MCDU 1: - push the MCDU MENU mode key. The MCDU MENU page comes into view. - push the line key adjacent to The ACARS MENU page comes into view.

22-82-00

Page 230 May 01/08

EFF: ALL

the ACARS indication.

TROUBLE SHOOTING MANUAL

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-599,

Post SB 23-1076 For A/C 503-549,551-557,

Post SB 46-1001 For A/C 503-549,

Post SB 46-1005 For A/C 551-557,

C. Test

ACTION

RESULT

MCDU 1:

1. On the center pedestal, on the On the center pedestal, on the MCDU 1:

- push the MCDU MENU mode key.

The MCDU MENU page comes into view.

- push the line key adjacent to the ATSU indication.

The ATSU DATALINK page comes into view.

**ON A/C ALL

- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-555, 701-749,
 - A. If the ACARS MENU page does not come into view:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ACARS (BUS 1) bus from the MCDU 1 (3CA1) to the first terminal block (Ref. ASM 22-86/04).

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-599,

Post SB 23-1076 For A/C 503-549,551-557,

Post SB 46-1001 For A/C 503-549,

Post SB 46-1005 For A/C 551-557,

- A. If the ATSU DATALINK page does not come into view:
 - replace the MCDU-1 (3CA1) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATSU-1 RECEIVER bus from the MCDU 1 (3CA1) to the first terminal block (Ref. ASM 22-86/04).

EFF: ALL **22-82-00**

Page 231 May 01/08

SROS

TROUBLE SHOOTING MANUAL

**ON A/C ALL

B. Do the test given in Para. 3.C.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL SROS 22-82-00

Page 232 Nov 01/05

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-820

Loss of Communication with the Data Link through the MCDU 2

1. Possible Causes

- MCDU-2 (3CA2)
- wiring of the ACARS (BUS 2) bus from the MCDU 2 (3CA2) to the first terminal block
- wiring of the ATSU-1 RECEIVER bus from the MCDU 2 (3CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM	22-82-12-000-001 22-82-12-400-002	Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
ASM	22-86/04	

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - (b) Make sure that the ventilation of the electronics racks is in operation.

22-82-00

EFF:

ALL

TROUBLE SHOOTING MANUAL

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION ______ 121VU AUTO FLT/MCDU/2 11CA2 N20 R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-557, 701-749, 121VU COM NAV/ACARS/MU 2RB L06 **ON A/C 247-275, 429-475, 481-499, 503-549, 551-555, 559-599, Post SB 46-1001 For A/C 503-549, Post SB 46-1005 For A/C 551-555, 121VU ATSU 1 L16 **3TX1** 121VU ATSU 1/SWTG 5TX1 L15 R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-555, 701-749, C. Test ACTION RESULT 1. On the center pedestal, on the On the center pedestal, on the MCDU 2: MCDU 2: - push the MCDU MENU mode key. The MCDU MENU page comes into view. - push the line key adjacent to The ACARS MENU page comes into view.

EFF: ALL 22-82-00

Page 234 May 01/08

SROS

the ACARS indication.

TROUBLE SHOOTING MANUAL

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-599,

Post SB 23-1076 For A/C 503-549,551-557,

Post SB 46-1001 For A/C 503-549,

Post SB 46-1005 For A/C 551-557,

C. Test

ACTION RESULT

1. On the center pedestal, on the On the center pedestal, on the MCDU 2:

MCDU 2:

The MCDU MENU page comes into view.

- push the line key adjacent to the ATSU indication.

- push the MCDU MENU mode key.

The ATSU DATALINK page comes into view.

**ON A/C ALL

- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-555, 701-749,
 - A. If the ACARS MENU page does not come into view:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ACARS (BUS 2) bus from the MCDU 2 (3CA2) to the first terminal block (Ref. ASM 22-86/04).

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-599,

Post SB 23-1076 For A/C 503-549,551-557,

Post SB 46-1001 For A/C 503-549,

Post SB 46-1005 For A/C 551-557,

- A. If the ATSU DATALINK page does not come into view:
 - replace the MCDU-2 (3CA2) (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATSU-1 RECEIVER bus from the MCDU 2 (3CA2) to the first terminal block (Ref. ASM 22-86/04).

EFF: ALL **22-82-00**

Page 235 May 01/08

SROS

TROUBLE SHOOTING MANUAL

**ON A/C ALL

B. Do the test given in Para. 3.C.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL SROS 22-82-00

Page 236 Nov 01/05

TROUBLE SHOOTING MANUAL

R

TASK 22-82-00-810-821

Access to the RAD/NAV Page on the MCDU 1 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the NAV CONTROL OWN and NAV CONTROL OPP discretes (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
ASM	22-85/04		

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FMGC/1	10CA1	B02
49VU	AUTO FLT/MCDU/1	11CA1	B01
49VU	COM/RMP/1	2RG1	G10
12 1VU	COM NAV/RMP/2	2RG2	L02
12 1VU	AUTO FLT/FMGC/2	10CA2	M17
12 1VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL **22-82-00**

Page 237 Aug 01/05

SROS

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

- 1. On the center pedestal, on the MCDU 1:
 - turn the BRT knob to make the light more or less bright

 - push the RAD/NAV mode key.
 the RAD/NAV page comes into view.
- 4. Fault Isolation
 - A. If the RAD/NAV page does not come into view:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the NAV CONTROL OWN and NAV CONTROL OPP discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).
 - B. Do the test given in Para. 3.
- Close-up
 - A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-822

Access to the RAD/NAV Page on the MCDU 2 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the NAV CONTROL OWN and NAV CONTROL OPP discretes (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM AMM	22-83-34-000-001 22-83-34-400-001	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2)	
	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power	
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power	
ASM	22-85/04		

- 3. Fault Confirmation
 - A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
 - B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FMGC/1	10CA1	B02
49VU	AUTO FLT/MCDU/1	11CA1	B01
49VU	COM/RMP/1	2RG1	G10
121VU	COM NAV/RMP/2	2RG2	L02
121VU	AUTO FLT/FMGC/2	10CA2	M17
121VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL 22-82-00

Page 239 Feb 01/01

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT ______

- 1. On the center pedestal, on the MCDU 2:
 - turn the BRT knob to make the light more or less bright

 - push the RAD/NAV mode key.
 the RAD/NAV page comes into view.
- 4. Fault Isolation
 - A. If the RAD/NAV page does not come into view:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the NAV CONTROL OWN and NAV CONTROL OPP discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
 - B. Do the test given in Para. 3.
- Close-up
 - A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

Page 240 Feb 01/01

EFF :

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-823

CHECK GW Message Systematically Shown on the MCDU

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE **DESIGNATION**

34-11-00-810-861

Different Angle of Attack Value on the three ADIRUs

- 3. Fault Confirmation
 - A. Test Not applicable.
- 4. Fault Isolation
 - A. If the CHECK GW message is shown on the MCDU: - Do a check on the Post Flight Report if SFCC failure(s).
 - (1) If there is one or several (ECAM and/or CFDS) messages:
 - do the trouble shooting procedure related to the maintenance message.

For defective LRU(s), see the Fault Symptoms List.

- (2) If no SFCC failure:
 - carefully do a check of the three angle of attack sensors.
 - (a) Apply the Trouble Shooting procedure (Ref. TASK 34-11-00-810-861), from Para. 4. (1) to the end.

EFF: ALL **22-82-00**

Page 241 Feb 01/07

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-827

Access to RAD/NAV Page on the MCDU 1&2 Inoperative

1. Possible Causes

- RMP-COM/NAV FREQ SEL, 1 (1RG1)
- RMP-COM/NAV FREQ SEL, 2 (1RG2)
- wiring of the NAV OPERATION DIS OUTPUT discretes (from the RMP 1 (1RG1) to the first terminal block and from the RMP 2 (1RG2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

	REFE	RENCE	DESIGNATION
R	АММ	23-13-13-000-001	Removal of the Radio Management Panel (RMP) (1RG1,
	AI II I	23 13 13 000 001	1RG2, 1RG3)
R	AMM	23-13-13-400-001	Installation of the Radio Management Panel (RMP) (1RG1, 1RG2, 1RG3)
	AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the External Power
	AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
	ASM	22-85/04	

3. Fault Confirmation

- A. Job Set-up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002).
- B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FMGC/1	10CA1	B02
49VU	AUTO FLT/MCDU/1	11CA1	B01
49VU	COM/RMP/1	2RG1	G10
12 1VU	COM NAV/RMP/2	2RG2	L02
12 1VU	AUTO FLT/FMGC/2	10CA2	M17
121VU	AUTO FLT/MCDU/2	11CA2	N20

EFF: ALL SROS

22-82-00

Page 242 Feb 01/07

TROUBLE SHOOTING MANUAL

C. Test

ACTION RESULT

- 1. On the center pedestal, on the each MCDU (1 and 2):
 - turn the BRT knob to make the light more or less bright

 - push the RAD/NAV mode key.
 the RAD/NAV page comes into view respectively.

4. Fault Isolation

- A. If the RAD/NAV page does not come into view:
 - replace the RMP-COM/NAV FREQ SEL, 1 (1RG1) (Ref. AMM TASK 23-13-13-000-001) and (Ref. AMM TASK 23-13-13-400-001).
 - (1) If the fault continues:
 - replace the RMP-COM/NAV FREQ SEL, 2 (1RG2) (Ref. AMM TASK 23-13-13-000-001) and (Ref. AMM TASK 23-13-13-400-001).
 - (a) If fault continues:
 - do a check and repair the wiring of the NAV OPERATION DIS OUTPUT discretes (from the RMP 1 (1RG1) to the first terminal block and from the RMP 2 (1RG2) to the first terminal block) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

22-82-00

EFF :

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-828

Blank screen on the MCDU 1

- 1. Possible Causes
 - MCDU-1 (3CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 22-82-12-000-001 AMM 22-82-12-400-002 Removal of the MCDU (3CA1,3CA2,3CA3)
Installation of the MCDU (3CA1,3CA2,3CA3)

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

49VU AUTO FLT/MCDU/1

11CA1 BO1

B. Test
On the MCDU 1, make sure that the BRT knob is in the middle position.

- 4. Fault Isolation
 - A. If the screen of the MCDU 1 is blank:
 - do a C/B reset (11CA1) of the MCDU 1
 - if the screen stays blank, replace the MCDU-1 (3CA1), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).

22-82-00

|EFF :

Page 244 May 01/01

ALL

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-829

Blank screen on the MCDU 2

- 1. Possible Causes
 - MCDU-2 (3CA2)
- 2. Job Set-up Information
 - A. Referenced Information

DESIGNATION

__ 02-12-000-001 AMM 22-82-12-400-002

Removal of the MCDU (3CA1,3CA2,3CA3) Installation of the MCDU (3CA1,3CA2,3CA3)

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION ______

IDENT. LOCATION

121VU AUTO FLT/MCDU/2

11CA2 N20

- B. Test On the MCDU 2, make sure that the BRT knob is in the middle position.
- 4. Fault Isolation
 - A. If the screen of the MCDU 2 is blank:
 - do a C/B reset (11CA2) of the MCDU 2
 - if the screen stays blank, replace the MCDU-2 (3CA2), (Ref. AMM TASK 22-82-12-000-001) and (Ref. AMM TASK 22-82-12-400-002).

EFF: ALL **22-82-00**

Page 245 May 01/01

TROUBLE SHOOTING MANUAL

TASK 22-82-00-810-831

FM1, FM2 or IND annunciator on top of the MCDU comes on

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-96-00-710-001 Operational Test of the AFS

- 3. Fault Confirmation
 - A. Do an Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001).
- 4. Fault Isolation

R

R R

- A. Do a check for a maintenance message on the Post Flight Report (PFR):
 - (1) If the AFS test gives one or several maintenance messages:do the trouble shooting procedure related to the maintenance message(s).
 - (2) If there is no message, no maintenance action is necessary.

EFF: ALL

22-82-00

Page 246 Nov 01/05

SROS

TROUBLE SHOOTING MANUAL

FLIGHT MANAGEMENT AND GUIDANCE COMPUTER (FMGC) - FAULT ISOLATION PROCEDURES

TASK 22-83-00-810-801

Loss of the Reception of the FAC 1 HLTY Discretes by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FAC OWN HLTY MON and FAC OWN HLTY COM discretes (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/FAC1 (HLTY CKT): - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN HLTY MON and FAC OWN HLTY COM discretes (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-65/01).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 201 Aug 01/94

SROS

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-802

Loss of the Reception of the FAC 1 HLTY Discretes by the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FAC OPP HLTY MON and FAC OPP HLTY COM discretes (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/FAC1 (HLTY CKT): - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OPP HLTY MON and FAC OPP HLTY COM discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-65/01).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 202 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-803

Loss of the Reception of the FAC 2 HLTY Discretes by the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the FAC OPP HLTY MON and FAC OPP HLTY COM discretes (from the FMGC 1 (1CA1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM AMM	22-83-34-000-001 22-83-34-400-001 22-96-00-710-001 22-65/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/FAC2 (HLTY CKT): replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OPP HLTY MON and FAC OPP HLTY COM discretes (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 203 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-804

Loss of the Reception of the FAC 2 HLTY Discretes by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the FAC OWN HLTY MON and FAC OWN HLTY COM discretes (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-65/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/FAC2 (HLTY CKT): - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN HLTY MON and FAC OWN HLTY COM discretes (from the FMGC 2 (1CA2) to the first terminal block), (Ref. ASM 22-65/01).
- B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 204 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-805

AP 1 Engagement Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FCU (2CA)
 - wiring of the CMD 1 SW COM and CMD 1 SW MON discretes (from the FCU (2CA) to the FMGC 1 (1CA1))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION	
AMM 22-81-12-000-001 AMM 22-81-12-400-001 AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FCU (2CA) Installation of the FCU (2CA) Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the AP 1 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - - (1) If the fault continues:
 - replace the FCU (2CA), (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the CMD 1 SW COM and CMD 1 SW MON discretes (from the FCU (2CA) to the FMGC 1 (1CA1)) (Ref. ASM 22-85/03).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 205 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-806

AP 2 Engagement Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - FCU (2CA)

R

R

- wiring of the CMD 2 SW COM and CMD 2 SW MON discretes (from the FCU (2CA) to the FMGC 2 (1CA2))
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
	22-81-12-000-001 22-81-12-400-001	Removal of the FCU (2CA) Installation of the FCU (2CA)
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-96-00-710-001	Operational Test of the AFS
АСМ	22 95 /07	

ASM 22-85/03

- 3. Fault Confirmation
 - A. Test
 - (1) On the FCU, push the AP 2 pushbutton switch.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/FCU (AP2 SW): - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref.

AMM TASK 22-83-34-400-001).

R R

- (1) If the fault continues:
 - replace the FCU (2CA), (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
- (2) If the fault continues: R
 - do a check and repair the wiring of the CMD 2 SW COM and CMD 2 SW MON discretes (from the FCU (2CA) to the FMGC 2 (1CA2)) (Ref. ASM 22-85/03).

EFF: ALL **SROS**

22-83-00

Page 206 Feb 01/96

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 207 Feb 01/96

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-807

Loss of the AP INST DISC Discretes on the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the AP INST DISC NO discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1)
- wiring of the GND FILTERED discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1))
- RELAY-TAKEOVER & PRIORITY 1 (47CE1)
- wiring of the AP INST DISC NC discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1))
- wiring of the takeover and priority relay (47CE1)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

3. Fault Confirmation

A. Test

- (1) On the FCU, make sure that the two AP pushbutton switches are pushed.
- (2) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1:
 - (a) With one takeover and priority pushbutton switch pushed (on side stick).
 - (b) With the two takeover and priority pushbutton switches released.

EFF: ALL **22-83-00**

Page 208 Aug 01/94

SROS

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FMGC1/TAKE OV CKT:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP INST DISC NO discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1) (Ref. ASM 22-85/03).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the GND FILTERED discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1)) (Ref. ASM 22-85/03).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the RELAY-TAKEOVER & PRIORITY 1 (47CE1).
- B. If only the second test gives the maintenance message AFS: FMGC1/TAKE OV CKT:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP INST DISC NC discrete (from the FMGC 1 (1CA1) to the takeover and priority relay (47CE1)) (Ref. ASM 22-85/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the takeover and priority relay (47CE1) (from 47CE1 pin A/D to the first terminal block) (Ref. ASM 22-85/03).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the RELAY-TAKEOVER & PRIORITY 1 (47CE1).
- C. Do the tests given in Para. 3.

22-83-00

Page 209 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-808

Loss of the AP INST DISC Discretes on the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the AP INST DISC NO discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2))
- wiring of the GND FILTERED discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2))
- RELAY-TAKEOVER & PRIORITY 2 (47CE2)
- wiring of the AP INST DISC NC discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2))
- wiring of the takeover and priority relay (47CE2)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-85/03	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

3. Fault Confirmation

A. Test

- (1) On the FCU, make sure that the two AP pushbutton switches are pushed.
- (2) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2:
 - (a) With one takeover and priority pushbutton switch pushed (on side stick).
 - (b) With the two takeover and priority pushbutton switches released.

EFF: ALL **22-83-00**

Page 210 Aug 01/94

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FMGC2/TAKE OV CKT:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP INST DISC NO discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2)) (Ref. ASM 22-85/03).
 - (a) If there is no continuity:
 repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the GND FILTERED discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2)) (Ref. ASM 22-85/03).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the RELAY-TAKEOVER & PRIORITY 2 (47CE2).
- B. If only the second test gives the maintenance message AFS: FMGC2/TAKE OV CKT:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the AP INST DISC NC discrete (from the FMGC 2 (1CA2) to the takeover and priority relay (47CE2)) (Ref. ASM 22-85/03).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the takeover and priority relay (47CE2) (from 47CE2 pin A/D to the first terminal block) (Ref. ASM 22-85/03).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 replace the RELAY-TAKEOVER & PRIORITY 2 (47CE2).
- C. Do the tests given in Para. 3.

22-83-00

Page 211 Aug 01/94

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-809

Loss of the Parity Pin Program on the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the ground signal at the programming pins of the FMGC 1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-96-00-710-001 Operational Test of the AFS
AND 22-85-30

R AWM 22-85-30 R AWM 22-85-31

- 3. Fault Confirmation
 - A. Test

R

R

SROS

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/PARITY PIN PRG: replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ground signal at the programming pins of the FMGC 1 (1CA1), (Ref. AWM 22-85-30) and (Ref. AWM 22-85-31).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 212 May 01/01

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-810

Loss of the Parity Pin Program on the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the ground signal at the programming pins of the FMGC 2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-96-00-710-001 Operational Test of the AFS
R AWM 22-85-36

R AWM 22-85-36 R AWM 22-85-37

- 3. Fault Confirmation
 - A. Test

R

R

SROS

- (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/PARITY PIN PRG: replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ground signal at the programming pins of the FMGC 2 (1CA2), (Ref. AWM 22-85-36) and (Ref. AWM 22-85-37).

Page 213 May 01/01

B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-811

Loss of the FMGC 1 OWN CB1 Bus (RMP 1 Source)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 23-13-00-740-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) BITE Test of the Radio Management

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT. L	OCATION
49VU	AUTO FLT/FMGC/1	10CA1	B02

- B. Test
 - (1) Do the BITE test of radio management (Ref. AMM TASK 23-13-00-740-001) and read the result for the RMP 1.
- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-250, 276-299, 426-431, 476-480, 701-749,
 - A. If the test gives the maintenance message RMP1 : NO DATA FROM FMGC1: - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).

EFF :	ALL

22-83-00

Page 214 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

R Post SB 23-1188 For A/C 201-225,227-227,229-250,276-299,426-431,476-480, 701-749,

- - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

Printed in France

22-83-00

Page 215 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-812

Loss of the FMGC 1 OWN CB1 Bus (IR 1 Source)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REI	FERENCE	DESIGNATION
AMI	4 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMI	1 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMI	4 34-14-00-740-001	Interface Test of the IR
ASI	1 22-86/02	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU AUTO FLT/FMGC/1 10CA1 B02

- B. Test
 - (1) Do the Interface test of the IR (System 1) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGC1 (1CA1)/ADIRU1 (1FP1):
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

R

Page 216 Feb 01/99

EFF :

ALL

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-813

Loss of the FMGC 2 OWN CB1 Bus (RMP 2 Source)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	23-13-00-740-001	BITE Test of the Radio Management
ASM	22-86/02	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FMGC/2 10CA2 M17

- B. Test
 - (1) Do the BITE test of the radio management (Ref. AMM TASK 23-13-00-740-001) and read the result for the RMP 2.
- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-250, 276-299, 426-431, 476-480, 701-749,

Printed in France

- A. If the test gives the maintenance message RMP2: NO DATA FROM FMGC2:
 replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).

EFF :	ALL		
SROS			

22-83-00

Page 217 May 01/08

TROUBLE SHOOTING MANUAL

**ON A/C ALL

R Post SB 23-1188 For A/C 201-225,227-227,229-250,276-299,426-431,476-480, 701-749,

- A. If the test gives the maintenance message FMGC2(1CA2)/RMP2(1RG2):
 replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref.
 AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).

**ON A/C ALL

B. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 218 May 01/08

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-814

Loss of the FMGC 2 OWN CB1 Bus (IR 1 Source)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	34-14-00-740-001	Interface Test of the IR
ASM	22-86/02	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
121VU AUTO FLT/FMGC/2 10CA2 M17

- B. Test
 - (1) Do the Interface test of the IR (System 1) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGC2 (1CA2)/ADIRU1 (1FP1):
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB 1 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

Page 219 Feb 01/99

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-815

Loss of the Reception of the FMGC 1 OWN A Bus by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the FMGC OPP A (COM) and FMGC OPP A (MON) buses (from the FMGC 2 (1CA2) to the first terminal block)
- wiring of the FMGC OPP HLTY discrete (from the FMGC 2 (1CA2) to the first termi al block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM 22-96-00-710-001	Operational Test of the AFS
ASM 22-85/04	
ASM 22-86/02	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/FMGC1 BUS A WG: replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FMGC OPP A (COM) and FMGC OPP A (MON) buses (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC OPP HLTY discrete (from the FMGC 2 (1CA2) to the first termi al block) (Ref. ASM 22-85/04).

EFF: ALL

22-83-00

Page 220 May 01/96

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 221 May 01/96

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-816

Loss of the Reception of the FMGC 2 OWN A Bus by the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the FMGC OPP A (COM) and FMGC OPP A (MON) buses (from the FMGC 1 (1CA1) to the first terminal block)
- wiring of the FMGC OPP HLTY discrete (from the FMGC 1 (1CA1) to the first termi al block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION		
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
	AMM	22-96-00-710-001	Operational Test of the AFS		
	ASM	22-85/04			
	ASM	22-86/02			

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC 1/FMGC 2 BUS A WG:
 replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FMGC OPP A (COM) and FMGC OPP A (MON) buses (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FMGC OPP HLTY discrete (from the FMGC 1 (1CA1) to the first termi al block) (Ref. ASM 22-85/04).

EFF: ALL 22-83-00

Page 222 May 01/96

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 223 May 01/95

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-817

Loss of the Reception of the FMGC 1 OWN A Bus by the FAC 1

AMM 22-96-00-710-001 Operational Test of the AFS

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the FMGC OWN A bus (from the FAC-1 (1CC1) to the FMGC-1)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
ΔΜΜ	22-66-34-000-002	Removal of the FAC (1CC1,1CC2)
	22-66-34-400-002	Installation of the FAC (1001,1002)

ASM 22-86/02

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC 1:
 replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref.
 - AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN A bus (from the FAC-1 (1CC1) to the FMGC-1) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 224 Nov 01/05

SROS

R

R R

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-818

Loss of the Reception of the FMGC 2 OWN A Bus by the FAC 1

- 1. Possible Causes
 - FAC-1 (1CC1)
 - wiring of the FMGC OPP A bus (from the FAC-1 (1CC1) to the FMGC-2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION

AMM 22-66-34-000-002 Removal of the FAC (1CC1,1CC2)
AMM 22-66-34-400-002 Installation of the FAC (1CC1,1CC2)
AMM 22-96-00-710-001 Operational Test of the AFS
ASM 22-86/02

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC 2:
 - replace the FAC-1 (1CC1), (Ref. AMM TASK 22-66-34-000-002) and (Ref. AMM TASK 22-66-34-400-002).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OPP A bus (from the FAC-1 (1CC1) to the FMGC-2) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 225 Nov 01/05

SROS

R

R R

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-819

Loss of the FMGC 1 OWN CB2 Bus (IR 2 Source)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM AMM	22-83-34-000-001 22-83-34-400-001 34-14-00-740-001 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Interface Test of the IR

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU AUTO FLT/FMGC/1 10CA1 B02

- B. Test
 - (1) Do the Interface test of the IR (System 2) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGC1 (1CA1)/ADIRU2 (1FP2):
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

Page 226 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-820

Loss of the FMGC 1 OWN CB2 Bus (IR 3 Source)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 34-14-00-740-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Interface Test of the IR

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU AUTO FLT/FMGC/1 10CA1 B02

- B. Test
 - (1) Do the Interface test of the IR (System 3) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGC1 (1CA1)/ADIRU3 (1FP3):
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

Page 227 Aug 01/05



TROUBLE SHOOTING MANUAL

INTENTIONALLY BLANK

SROS

22-83-00

Page 228 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-821

Loss of the FMGC 2 OWN CB2 Bus (IR 2 Source)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	34-14-00-740-001	Interface Test of the IR
ASM	22-86/02	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
121VU AUTO FLT/FMGC/2 10CA2 M17

- B. Test
 - (1) Do the Interface test of the IR (System 2) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation

R

- A. If the test gives the maintenance message FMGC2 (1CA2)/ADIRU2 (1FP2): replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).

R

B. Do the test given in Para. 3.

EFF:	ALL		
SROS			

22-83-00

Page 229 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-822

Loss of the FMGC 2 OWN CB2 Bus (IR 3 Source)

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION		
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
AMM	34-14-00-740-001	Interface Test of the IR		

3. Fault Confirmation

ASM 22-86/02

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
121VU AUTO FLT/FMGC/2 10CA2 M17

- B. Test
 - (1) Do the Interface test of the IR (System 3) (Ref. AMM TASK 34-14-00-740-001).
- 4. Fault Isolation

R

- A. If the test gives the maintenance message FMGC2 (1CA2)/ADIRU3 (1FP3): - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN CB2 (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).

R

B. Do the test given in Para. 3.

EFF:	ALL		
SROS			

22-83-00

Page 230 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-823

Loss of the Reception of the FAC 1 General Bus by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FAC OWN bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/FAC1 BUS WIRG:
 replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN bus (from the FMGC1 (1CA1) to the first terminal block) (Ref. ASM 22-86/01).
 - B. Do the test given in Para. 3.

22-83-00

Page 231 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-824

Loss of the Reception of the FAC 1 General Bus by the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FAC OPP bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/FAC1 BUS WIRG:
 replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OPP bus (from the FMGC2 (1CA2) to the first terminal block) (Ref. ASM 22-86/01).
 - B. Do the test given in Para. 3.

22-83-00

Page 232 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-825

Loss of the Reception of the FAC 2 General Bus by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FAC OPP bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC1/FAC2 BUS WIRG:
 replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OPP bus (from the FMGC1 (1CA1) to the first terminal block) (Ref. ASM 22-86/01).
 - B. Do the test given in Para. 3.

22-83-00

Page 233 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-826

Loss of the Reception of the FAC 2 General Bus by the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FAC OWN bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FMGC2/FAC2 BUS WIRG: replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FAC OWN bus (from the FMGC2 (1CA2) to the first terminal block) (Ref. ASM 22-86/01).
 - B. Do the test given in Para. 3.

22-83-00

Page 234 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-827

Loss of the Reception of the ATH INST DISC Discretes by the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the ATH INST DISC NO discrete (from the FMGC 1 (1CA1) to the A/THR instinctive disconnect relays (5CA1 and 5CA2))
- wiring of the ATH INST DISC NC (from the FMGC 1 (1CA1) to the A/THR 2 instinctive disconnect relay (5CE2))
- wiring between the A/THR instinctive disconnect relays (5CA1 and 5CA2)
- wiring of the GND FILTERED discrete (from the FMGC 1 (1CA1) to the A/THR 1 instinctive disconnect relay (5CA1))

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION		
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
	AMM	22-96-00-710-001	Operational Test of the AFS		
	ASM	22-31/01			

3. Fault Confirmation

A. Test

- (1) On the FCU, make sure that the A/THR pushbutton switch is pushed.
- (2) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1:
 - (a) With one A/THR instinctive disconnect pushbutton switch pushed (on the throttle control levers).
 - (b) With the two A/THR instinctive disconnect pushbutton switches released.

| **22-83-00**

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FMGC1/ATHR DISC CKT:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATH INST DISC NO discrete (from the FMGC 1 (1CA1) to the A/THR instinctive disconnect relays (5CA1 and 5CA2)) (Ref. ASM 22-31/01).
- B. If only the second test gives the maintenance message AFS: FMGC1/ATHR DISC CKT:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the ATH INST DISC NC (from the FMGC 1 (1CA1) to the A/THR 2 instinctive disconnect relay (5CE2)) (Ref. ASM 22-31/01).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring between the A/THR instinctive disconnect relays (5CA1 and 5CA2) from 5CE1 pin A/5 to 5CE2 pin A/C (Ref. ASM 22-31/01).
- C. If the two tests give the maintenance message AFS: FMGC1/ATHR DISC CKT: - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the GND FILTERED discrete (from the FMGC 1 (1CA1) to the A/THR 1 instinctive disconnect relay (5CA1)) (Ref. ASM 22-31/01).
- D. Do the tests given in Para. 3.

EFF: ALL

22-83-00

Page 236 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-828

Loss of the Reception of the ATH INST DISC Discretes by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the ATH INST DISC NO discrete (from the FMGC 2 (1CA2) to the A/THR instinctive disconnect relays (5CA1 and 5CA2))
- wiring of the ATH INST DISC NC (from the FMGC 2 (1CA2) to the A/THR 2 instinctive disconnect relay (5CE2))
- wiring between the A/THR instinctive disconnect relays (5CA1 and 5CA2)
- wiring of the GND FILTERED discrete (from the FMGC 2 (1CA2) to the A/THR 1 instinctive disconnect relay (5CA1))

2. Job Set-up Information

A. Referenced Information

REFERENCE		RENCE	DESIGNATION		
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
	AMM	22-96-00-710-001	Operational Test of the AFS		
	ASM	22-31/01			

3. Fault Confirmation

A. Test

- (1) On the FCU, make sure that the A/THR pushbutton switch is pushed.
- (2) Do the operational tests of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2:
 - (a) with one A/THR instinctive disconnect pushbutton switch pushed (on the throttle control levers).
 - (b) with the two A/THR instinctive, disconnect pushbuttons switches released.

22-83-00

Page 237 Feb 01/97

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If only the first test gives the maintenance message AFS: FMGC2/ATHR DISC CKT:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATH INST DISC NO discrete (from the FMGC 2 (1CA2) to the A/THR instinctive disconnect relays (5CA1 and 5CA2)) (Ref. ASM 22-31/01).
- B. If only the second test gives the maintenance message AFS: FMGC2/ATHR DISC CKT:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the ATH INST DISC NC (from the FMGC 2 (1CA2) to the A/THR 2 instinctive disconnect relay (5CE2)) (Ref. ASM 22-31/01).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring between the A/THR instinctive disconnect relays (5CA1 and 5CA2) from 5CE1 pin A/7 to 5CE2 pin A/D (Ref. ASM 22-31/01).
- C. If the two tests give the maintenance message AFS: FMGC2/ATHR DISC CKT: replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the GND FILTERED discrete (from the FMGC 2 (1CA2) to the A/THR 1 instinctive disconnect relay (5CA1)) (Ref. ASM 22-31/01).
- D. Do the tests given in Para. 3.

EFF: ALL

22-83-00

Page 238 Feb 01/97

SROS

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-829

Loss of the Reception of the ATH OPP ENG Discretes by the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- wiring of the ATH OPP ENGD COM OPP and ATH OPP ENGD MON OPP discretes (from the FMGC 1 (1CA1) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-31/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

3. Fault Confirmation

- A. Test
 - (1) On the FCU, make sure that the A/THR pushbutton switch is pushed.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC1/ATHR2 ENG WIRG: - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATH OPP ENGD COM OPP and ATH OPP ENGD MON OPP discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-31/01).
- B. Do the test given in Para. 3.

22-83-00

Page 239 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-830

Loss of the Reception of the ATH OPP ENG Discretes by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the ATH OPP ENGD COM OPP and ATH OPP ENGD MON OPP discretes (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION		
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-31/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS		

3. Fault Confirmation

- A. Test
 - (1) On the FCU, make sure that the A/THR pushbutton switch is pushed.
 - (2) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: FMGC2/ATHR1 ENG WIRG: - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATH OPP ENGD COM OPP and ATH OPP ENGD MON OPP discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-31/01).
- B. Do the test given in Para. 3.

22-83-00

Page 240 Feb 01/97

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-831

Automatic Transfer of the FD 2 Indication to the PFD 1 Inoperative

1. Possible Causes

- FMGC-2 (1CA2)
- DMC-1 (1WT1)
- FMGC-1 (1CA1)
- wiring of the FD OWN ENGD MON OPP discrete (from the FMGC 2 (1CA2) to the first terminal block)
- wiring of the FD 2 ENGD from the DMC 1 (1WT1) to the first terminal block
- wiring of the FD OPP ENGD MON discrete (from the FMGC 1 (1CA1) to the first terminal block)
- wiring of the FD OPP ENGD COM discrete (from the FMGC 1 (1CA1) to the FMGC 2 (1CA2))

2. Job Set-up Information

A. Referenced Information

	REFERENCE		DESIGNATION	
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
	AMM	22-96-00-710-001	Operational Test of the AFS	
R	AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied	
R			from the External Power	
	AMM	31-60-00-860-001	EIS Start Procedure	
	AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)	
	AMM	31-63-34-400-001	Installation of the DMC (1WT1,1WT2,1WT3)	
	ASM	22-85/02		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	AUTO FLT/FCU/1	9CA1	B05
	AUTO FLT/FMGC/1 AUTO FLT/FCU/2	10CA1 9CA2	B02 M21
	AUTO FLT/FMGC/2	10CA2	M17

EFF: ALL **22-83-00**

Page 241 Aug 01/05

SROS

TROUBLE SHOOTING MANUAL

- B. Aircraft Maintenance Configuration
 - (1) Do the EIS start procedure (Ref. AMM TASK 31-60-00-860-001).
 - (2) Make sure that the two FDs are engaged (if they are not engaged, push the FD pushbutton switches on the FCU).

C. Test

- (1) Open the circuit breaker 10CA1 and make sure that the FD 2 indication comes into view on the PFD 1.
- (2) Close the circuit breaker 10CA1.
- (3) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.

4. Fault Isolation

- A. If the FD 2 indication does not come into view on the PFD 1 and if the test gives the maintenance message AFS: FMGC1/FMGC2 (FD CKT):
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD OWN ENGD MON OPP discrete (from the FMGC 2 (1CA2) to the first terminal block), (Ref. ASM 22-85/02).
- B. If the FD 2 indication does not come into view on the PFD 1 and if no messages come into view after the test:
 - replace the DMC-1 (1WT1), (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD 2 ENGD from the DMC 1 (1WT1) to the first terminal block, (Ref. ASM 22-85/02).
- C. If the FD 2 indication comes into view on the PFD 1 and if the test gives the maintenance message AFS: FMGC1/FMGC2 (FD CKT):
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FD OPP ENGD MON discrete (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-85/02).
 - (a) If there is no continuity:
 - repair the above wiring.

EFF: ALL 22-83-00

Page 242 Aug 01/05

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the FD OPP ENGD COM discrete (from the FMGC 1 (1CA1) to the FMGC 2 (1CA2)), (Ref. ASM 22-85/02).
- D. Do the test given in Para. 3.
- R 5. Close-up
- R A. Put the aircraft back to its initial configuration.
- R (1) Close the circuit breaker 10CA1.
- R (2) De-energize the aircraft electrical circuits R (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL

22-83-00

Page 243 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-832

Automatic Transfer of the FD 1 Indication to the PFD 2 Inoperative

1. Possible Causes

- FMGC-1 (1CA1)
- DMC-2 (1WT2)
- FMGC-2 (1CA2)
- wiring of the FD OWN ENGD MON OPP discrete (from the FMGC 1 (1CA1) to the first terminal block)
- wiring of the FD 1 ENGD from the DMC 2 (1WT2) to the first terminal block
- wiring of the FD OPP ENGD MON discrete (from the FMGC 2 (1CA2) to the first terminal block)
- wiring of the FD OPP ENGD COM discrete (from the FMGC 2 (1CA2) to the FMGC 1 (1CA1))

2. Job Set-up Information

A. Referenced Information

	REFE	RENCE	DESIGNATION
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
	AMM	22-96-00-710-001	Operational Test of the AFS
R	AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied
R			from the External Power
	AMM	31-60-00-860-001	EIS Start Procedure
	AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)
	AMM	31-63-34-400-001	Installation of the DMC (1WT1,1WT2,1WT3)
	ASM	22-85/02	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FCU/1	9CA1	B05
49VU	AUTO FLT/FMGC/1	10CA1	B02
12 1VU	AUTO FLT/FCU/2	9CA2	M21
12 1VU	AUTO FLT/FMGC/2	10CA2	M17

EFF: ALL
SROS

22-83-00

Page 244 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. Aircraft Maintenance Configuration
 - (1) Do the EIS start procedure (Ref. AMM TASK 31-60-00-860-001).
 - (2) Make sure that the two FDs are engaged (if they are not engaged, push the FD pushbutton switches on the FCU).

C. Test

- (1) Open the circuit breaker 10CA2 and make sure that the FD 1 indication comes into view on the PFD 2.
- (2) Close the circuit breaker 10CA2.
- (3) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.

4. Fault Isolation

- A. If the FD 1 indication does not come into view on the PFD 2 and if the test gives the maintenance message AFS: FMGC2/FMGC1 (FD CKT):
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD OWN ENGD MON OPP discrete (from the FMGC 1 (1CA1) to the first terminal block), (Ref. ASM 22-85/02).
- B. If the FD 1 indication does not come into view on the PFD 2 and if no messages come into view after the test:
 - replace the DMC-2 (1WT2), (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD 1 ENGD from the DMC 2
 (1WT2) to the first terminal block, (Ref. ASM 22-85/02).
- C. If the FD 1 indication comes into view on the PFD 2 and if the test gives the maintenance message AFS: FMGC2/FMGC1 (FD CKT):
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check of the wiring of the FD OPP ENGD MON discrete (from the FMGC 2 (1CA2) to the first terminal block), (Ref. ASM 22-85/02).
 - (a) If there is no continuity:
 - repair the above wiring.

EFF: ALL

22-83-00

Page 245 Aug 01/05

TROUBLE SHOOTING MANUAL

- (b) If there is continuity:
 - do a check and repair the wiring of the FD OPP ENGD COM discrete (from the FMGC 2 (1CA2) to the FMGC 1 (1CA1)), (Ref. ASM 22-85/02).
- D. Do the test given in Para. 3.
- R 5. Close-up
- A. Put the aircraft back to its initial configuration. R
- (1) Close the circuit breaker 10CA2. R
- (2) De-energize the aircraft electrical circuits R (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL SROS Printed in France 22-83-00

Page 246 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-835

FD 1 Engagement Inoperative

1. Possible Causes

- FCU (2CA)
- DMC-1 (1WT1)
- FMGC-1 (1CA1)
- wiring of the FD 1 ENGD MON OWN discrete from the FCU (2CA) to the first terminal block
- wiring of the FD 1 ENGD COM OWN discrete from the FCU (2CA) to the FMGC 1 (1CA1)
- wiring of the FD 1 ENGD discrete from the DMC 1 (1WT1) to the first terminal block
- wiring of the FD OWN ENGD MON OWN discrete from the FMGC 1 (1CA1) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
A MM	22 84 42 000 004	Personal of the FCU (201)	
AMM	22-81-12-000-001	Removal of the FCU (2CA)	
AMM	22-81-12-400-001	Installation of the FCU (2CA)	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	24-41-00-862-002	<pre>De-energize the Aircraft Electrical Circuits Supplied from the External Power</pre>	
AMM	31-60-00-860-001	EIS Start Procedure	
AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)	
AMM	31-63-34-400-001	Installation of the DMC (1WT1,1WT2,1WT3)	
AMM	34-10-00-860-004	IR Alignment Procedure	
ASM	22-85/02	-	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FCU/1	9CA1	B05
49VU	AUTO FLT/FMGC/1	10CA1	B02
121VU	AUTO FLT/FCU/2	9CA2	M21
12 1VU	AUTO FLT/FMGC/2	10CA2	M17

EFF: ALL

22-83-00

Page 247 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. Aircraft Maintenance Configuration
 - (1) Align the ADIRS (Ref. AMM TASK 34-10-00-860-004).
 - (2) Do the EIS start procedure (PFD and ND only) (Ref. AMM TASK 31-60-00-860-001).
- C. Test

ACTION

RESULT

1. Make sure that the two FDs are engaged.

NOTE: If they are not engaged, push the FD pushbutton switches on the FCU.

On the upper part of the CAPT PFD: - the white FD 1 indication is in view. On the upper part of the F/O PFD:

- the white FD 2 indication is in view.

On the FCU:

- the two FD pushbutton switches come on.

4. Fault Isolation

- A. If the FD 1 indication comes into view on the CAPT PFD and if the FD 1 pushbutton switch does not come on:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (1) If the fault continues:
 - do a check and repair the:
 - . wiring of the FD 1 ENGD MON OWN discrete from the FCU (2CA) to the first terminal block
 - . wiring of the FD 1 ENGD COM OWN discrete from the FCU (2CA) to the FMGC 1 (1CA1) (Ref. ASM 22-85/02).
- B. If the FD 1 pushbutton switch comes on and if the FD 1 indication does not come into view on the CAPT PFD:
 - replace the DMC-1 (1WT1) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD 1 ENGD discrete from the DMC 1 (1WT1) to the first terminal block (Ref. ASM 22-85/02).

EFF: ALL **22-83-00**

Page 248 Aug 01/05

TROUBLE SHOOTING MANUAL

- C. If the FD 1 indication does not come into view on the CAPT PFD and if the FD 1 pushbutton switch does not come on:
 - open the circuit breaker (9CA1)
 - close this circuit breaker and after 2 minutes make sure that the FD 1 is engaged.
 - (1) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the FD OWN ENGD MON OWN discrete from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-85/02).
- D. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the overhead panel, on the ADIRS CDU, set the OFF/NAV/ATT selector switches to OFF.
 - (2) On the panels 301VU and 500VU, set the PFD and ND potentiometers to OFF.
 - (3) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL 22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-836

FD 2 Engagement Inoperative

1. Possible Causes

- FCU (2CA)
- DMC-2 (1WT2)
- FMGC-2 (1CA2)
- wiring of the FD 2 ENGD MON OWN discrete from the FCU (2CA) to the first terminal block
- wiring of the FD 2 ENGD COM OWN discrete from the FCU (2CA) to the FMGC 2 (1CA2)
- wiring of the FD 2 ENGD discrete from the DMC 2 (1WT2) to the first terminal block
- wiring of the FD OWN ENGD MON OWN discrete from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-81-12-000-001	Removal of the FCU (2CA)
AMM	22-81-12-400-001	Installation of the FCU (2CA)
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power
AMM	31-60-00-860-001	EIS Start Procedure
AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)
AMM	31-63-34-400-001	Installation of the DMC (1WT1,1WT2,1WT3)
AMM	34-10-00-860-004	IR Alignment Procedure
ASM	22-85/02	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION	IDENT.	LOCATION
49VU AUTO FLT/FCU/	/1 9CA1	B05
49VU AUTO FLT/FMG(C/1 10CA1	B02
121VU AUTO FLT/FCU/	/2 9CA2	M21
121VU AUTO FLT/FMG(C/2 10CA2	M17

EFF: ALL

22-83-00

Page 250 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. Aircraft Maintenance Configuration
 - (1) Align the ADIRS (Ref. AMM TASK 34-10-00-860-004).
 - (2) Do the EIS start procedure (PFD and ND only) (Ref. AMM TASK 31-60-00-860-001).
- C. Test

ACTION

RESULT

1. Make sure that the two FDs are engaged.

NOTE: If they are not engaged, push the FD pushbutton switches on the FCU.

On the upper part of the CAPT PFD: - the white FD 1 indication is in view. On the upper part of the F/O PFD:

- the white FD 2 indication is in view.

On the FCU:

- the two FD pushbutton switches come on.

4. Fault Isolation

- A. If the FD 2 indication comes into view on the F/O PFD and if the FD 2 pushbutton switch does not come on:
 - replace the FCU (2CA) (Ref. AMM TASK 22-81-12-000-001) and (Ref. AMM TASK 22-81-12-400-001).
 - (1) If the fault continues:
 - do a check and repair the:
 - . wiring of the FD 2 ENGD MON OWN discrete from the FCU (2CA) to the first terminal block
 - . wiring of the FD 2 ENGD COM OWN discrete from the FCU (2CA) to the FMGC 2 (1CA2) (Ref. ASM 22-85/02).
- B. If the FD 2 pushbutton switch comes on and if the FD 2 indication does not come into view on the F/O PFD:
 - replace the DMC-2 (1WT2) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FD 2 ENGD discrete from the DMC 2 (1WT2) to the first terminal block (Ref. ASM 22-85/02).

EFF: ALL 22-83-00

Page 251 Aug 01/05

TROUBLE SHOOTING MANUAL

- C. If the FD 2 indication does not come into view on the F/O PFD and if the FD 2 pushbutton switch does not come on:
 - open the circuit breaker (9CA2)
 - close this circuit breaker and after 2 minutes make sure that the FD 2 is engaged.
 - (1) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the FD OWN ENGD MON OWN discrete from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-85/02).
- D. Do the test given in Para. 3.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the overhead panel, on the ADIRS CDU, set the OFF/NAV/ATT selector switches to OFF.
 - (2) On the panels 301VU and 500VU, set the PFD and ND potentiometers to $_{\mbox{OFF}}$.
 - (3) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002).

EFF: ALL 22-83-00

Page 252 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-837

Loss of the Reception of the Data Link by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- wiring of the ACARS bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the ACARS bus from the FMGC 2 (1CA2) to the first terminal block
- wiring of the ATSU bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the ATSU bus from the FMGC 2 (1CA2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-557, 701-749,

121VU COM NAV/ACARS/MU 2RB LO6

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-555, 559-599,

Post SB 46-1001 For A/C 503-549, Post SB 46-1005 For A/C 551-555,

121VU ATSU 1 3TX1 L16 121VU ATSU 1/SWTG 5TX1 L15

EFF: ALL **22-83-00**

Page 253 May 01/08

SROS

TROUBLE SHOOTING MANUAL

**ON A/C ALL

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
- R **ON A/C 201-225, 227-227, 229-245, 276-299, 426-428, 476-480, 503-549, R 551-557, 701-749,
 - A. If the test gives the maintenance message AFS: ACARS (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ACARS bus from the FMGC 1
 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
 - B. If the test gives the maintenance message AFS: ACARS (ISSUED BY: FM2): - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ACARS bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).

**ON A/C 247-275, 429-475, 481-499, 503-549, 551-599,

Post SB 23-1076 For A/C 503-549,551-557, Post SB 46-1001 For A/C 503-549, Post SB 46-1005 For A/C 551-557,

- A. If the test gives the maintenance message AFS: ATSU (ISSUED BY: FM1): replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATSU bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: ATSU (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ATSU bus from the FMGC 2
 (1CA2) to the first terminal block (Ref. ASM 22-86/01).

EFF: ALL **22-83-00**

Page 254 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

C. Do the test given in Para. 3.

EFF : ALL

22-83-00

Page 255 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-838

Loss of the Reception of the CLOCK Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the CLOCK bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the CLOCK bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
22 87 7/ 808 804	D

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)
AMM 22-91-00-710-001 Ground Scanning of the AFS
ASM 22-86/01

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	CLOCK/NORM/SPLY	6FS	F11

R **ON A/C 201-225, 227-227, 229-249, 276-299, 426-430, 476-480, 503-549,

R 551-557, 701-749,

121VU CLOCK/STBY/SPLY 4FS NO3

**ON A/C 250-275, 431-475, 481-499, 559-599,

121VU CLOCK/STBY/SPLY 4FS NO2

**ON A/C ALL

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF : ALL
SROS
Printed in France

22-83-00

Page 256 May 01/08

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CLOCK (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the CLOCK bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: CLOCK (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the CLOCK bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-839

Loss of the Reception of the DME 1 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - INTRG-DME, 1 (2SD1)
 - FMGC-2 (1CA2)
 - wiring of the DME OWN bus from the FMGC 1 (1CA1) to the DME interrogator 1 (2SD1)
 - wiring of the DME OPP bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	34-51-33-000-001	Removal of the DME Interrogator (2SD1,2SD2)
AMM	34-51-33-400-001	Installation of the DME Interrogator (2SD1,2SD2)
ASM	22-86/01	-

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	NAV/DME/1	1SD1	G14

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

22-83-00

Page 258 Aug 01/05

SROS

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: DME1 (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the INTRG-DME, 1 (2SD1) (Ref. AMM TASK 34-51-33-000-001) and (Ref. AMM TASK 34-51-33-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the DME OWN bus from the FMGC 1 (1CA1) to the DME interrogator 1 (2SD1) (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: DME1 (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the DME OPP bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 259 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-840

Loss of the Reception of the DME 2 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - INTRG-DME, 2 (2SD2)
 - FMGC-2 (1CA2)
 - wiring of the DME OPP bus from the FMGC 1 (1CA1) to the DME interrogator 2 (2SD2)
 - wiring of the DME OWN bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	34-51-33-000-001	Removal of the DME Interrogator (2SD1,2SD2)
AMM	34-51-33-400-001	Installation of the DME Interrogator (2SD1,2SD2)
ASM	22-86/01	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	COM NAV/DME/2	1SD2	K06

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

22-83-00

Page 260 Aug 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: DME2 (ISSUED BY: FM1): replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the INTRG-DME, 2 (2SD2) (Ref. AMM TASK 34-51-33-000-001) and (Ref. AMM TASK 34-51-33-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the DME OPP bus from the FMGC 1 (1CA1) to the DME interrogator 2 (2SD2) (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: DME2 (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the DME OWN bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 261 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-841

Loss of the Reception of the VOR 1 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - RECEIVER-VOR/MKR, 1 (3RS1)
 - FMGC-2 (1CA2)
 - wiring of the VOR OWN bus (from the FMGC 1 (1CA1) to the VOR/MKR receiver 1 (3RS1))
 - wiring of the VOR OPP bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 AMM 34-55-31-000-001 AMM 34-55-31-400-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS Removal of the VOR/MKR Receiver (3RS1, 3RS2) Installation of the VOR/MKR Receiver (3RS1, 3RS2)

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	NAV/VOR/1	2RS1	G13

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

| **22-83-00**

SROS

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: VOR1 (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the RECEIVER-VOR/MKR, 1 (3RS1) (Ref. AMM TASK 34-55-31-000-001) and (Ref. AMM TASK 34-55-31-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the VOR OWN bus (from the FMGC 1 (1CA1) to the VOR/MKR receiver 1 (3RS1)) (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: VOR1 (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the VOR OPP bus (from the FMGC2 (1CA2) to the first terminal block) (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-842

Loss of the Reception of the VOR 2 Bus by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- RECEIVER-VOR/MKR, 2 (3RS2)
- FMGC-2 (1CA2)
- wiring of the VOR OPP bus (from the FMGC 1 (1CA1) to the VOR/MKR receiver 2 (3RS2))
- wiring of the VOR OWN bus (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	34-55-31-000-001	Removal of the VOR/MKR Receiver (3RS1, 3RS2)
AMM	34-55-31-400-001	Installation of the VOR/MKR Receiver (3RS1, 3RS2)
ASM	22-86/01	·

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	COM NAV/VOR/2	2RS2	K08

B. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL **22-83-00**

Page 264 Aug 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives the maintenance message AFS: VOR2 (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the RECEIVER-VOR/MKR, 2 (3RS2) (Ref. AMM TASK 34-55-31-000-001) and (Ref. AMM TASK 34-55-31-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the VOR OPP bus (from the FMGC 1 (1CA1) to the VOR/MKR receiver 2 (3RS2)) (Ref. ASM 22-86/01).
- B. If the test gives the maintenance message AFS: VOR2 (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the VOR OWN bus (from the FMGC2 (1CA2) to the first terminal block) (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 265 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-843

Loss of the Reception of the ILS 1 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - RECEIVER-ILS, 1 (2RT1)
 - FMGC-2 (1CA2)
 - wiring of the ILS OWN bus from the FMGC 1 (1CA1) to the ILS receiver 1
 - wiring of the ILS OPP bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERE	ENCE	DESIGNATION
AMM 2 AMM 3 AMM 3	22-83-34-000-001 22-83-34-400-001 22-91-00-710-001 34-36-31-000-001 34-36-31-400-001	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS Removal of the ILS Receiver (2RT1,2RT2) Installation of the ILS Receiver (2RT1,2RT2)
ASM 2	22-86/01	

- 3. Fault Confirmation
- R **ON A/C 201-225, 227-227, 229-245, 276-286,
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

Printed in France

PANEL DESIGNATION IDENT. LOCATION ______ 49VU NAV/ILS/1 1RT1 G12

EFF: ALL **SROS**

22-83-00

Page 266 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C 247-275, 287-299, 426-499, 503-549, 551-599, 701-749,

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

R **ON A/C 247-275, 426-499, 503-549, 551-599, 701-749,

49VU NAV/MMR/1

42RT1 G12

**ON A/C ALL

- C. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: ILS1 (ISSUED BY: FG1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the RECEIVER-ILS, 1 (2RT1) (Ref. AMM TASK 34-36-31-000-001) and (Ref. AMM TASK 34-36-31-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the ILS OWN bus from the FMGC 1 (1CA1) to the ILS receiver 1 (2RT1) (Ref. ASM 22-86/01).
 - B. If the test gives the maintenance message AFS: ILS1 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ILS OPP bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
 - C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 267 Feb 01/08

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-844

Loss of the Reception of the ILS 2 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - RECEIVER-ILS, 2 (2RT2)
 - FMGC-2 (1CA2)
 - wiring of the ILS OPP bus from the FMGC 1 (1CA1) to the ILS receiver 2 (2RT2)
 - wiring of the ILS OWN bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001 22-83-34-400-001 22-91-00-710-001 34-36-31-000-001 34-36-31-400-001 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS Removal of the ILS Receiver (2RT1,2RT2) Installation of the ILS Receiver (2RT1,2RT2)	
	00,0:		

- 3. Fault Confirmation
- R **ON A/C 201-225, 227-227, 229-245, 276-286,
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU COM NAV/ILS/2 1RT2 K09

EFF: ALL

22-83-00

Page 268 May 01/08

TROUBLE SHOOTING MANUAL

R **ON A/C 247-275, 287-299, 426-499, 503-549, 551-599, 701-749,

B. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION

IDENT. LOCATION

R **ON A/C 247-249, 426-430, 476-480, 503-549, 551-557, 701-749,

121VU COM NAV/MMR/2

42RT2 K09

R **ON A/C 250-275, 431-475, 481-499, 559-599,

121VU COM NAV/MMR/2

42RT2 L07

**ON A/C ALL

- C. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: ILS2 (ISSUED BY: FG1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the RECEIVER-ILS, 2 (2RT2) (Ref. AMM TASK 34-36-31-000-001) and (Ref. AMM TASK 34-36-31-400-001).
 - (a) If the fault continues:
 - do a check and repair the wiring of the ILS OPP bus from the FMGC 1 (1CA1) to the ILS receiver 2 (2RT2) (Ref. ASM 22-86/01).
 - B. If the test gives the maintenance message AFS: ILS2 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the ILS OWN bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
 - C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 269 Feb 01/08

SROS

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-845

Loss of the Reception of the R/A 1 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the RA OWN bus from the FMGC 1 (1CA1) to the first terminal
 - wiring of the RA OPP bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DES	DESIGNATION	
AMM 22-83-34-400-001 Ins	noval of the FMGC (1CA1,1CA2) stallation of the FMGC (1CA1,1CA2) bund Scanning of the AFS	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION ______ 1SA1 K11

121VU COM NAV/RAD ALTM/1

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

B. Test

- A. If the test gives the maintenance message AFS: R/A1 (ISSUED BY: FG1): - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RA OWN bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).

EFF: ALL

22-83-00

Page 270 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: R/A1 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RA OPP bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page 271 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-846

Loss of the Reception of the R/A 2 Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the RA OPP bus from the FMGC 1 (1CA1) to the first terminal
 - wiring of the RA OWN bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 ASM 22-86/01	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

______ PANEL DESIGNATION IDENT. LOCATION ______ 1SA2 K 12

121VU COM NAV/RAD ALTM/2

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

B. Test

- A. If the test gives the maintenance message AFS: R/A2 (ISSUED BY: FG1): - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RA OPP bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).

22-83-00 EFF: ALL

Page 272 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: R/A2 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the RA OWN bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 273 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-847

Loss of the Reception of the FWC VALID Discretes by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- FWC-1 (1WW1)
- FWC-2 (1WW2)
- wiring of the FWC OWN VALID and FWC OPP VALID discretes (from the FMGC 1 (1CA1) to the first terminal block)
- wiring of the FWC OWN VALID and FWC OPP VALID discretes (from the FMGC 2 (1CA2) to the first terminal block)
- wiring of the FWC VALID discrete from the FWC 1 (1WW1) to the first terminal block
- wiring of the FWC VALID discrete (from the FWC 2 (1WW2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION		
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)		
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)		
AMM	22-97-00-710-001	Operational Test of the LAND CAT III Capability		
ASM	22-85/04			

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
_	FWS/FWC1/SPLY EIS/FWC2/SPLY	3WW 2WW	F01

- B. Test
 - (1) Do the operational test of the LAND CAT III Capability (Ref. AMM TASK 22-97-00-710-001).

EFF: ALL **22-83-00**

Page 274 Aug 01/05

TROUBLE SHOOTING MANUAL

4. Fault Isolation

- A. If the test gives only the maintenance message AFS: FWC1 AND FWC 2 (ISSUED BY: FG1):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FWC OWN VALID and FWC OPP VALID discretes (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-85/04).
- B. If the test gives only the maintenance message AFS: FWC1 AND FWC2 (ISSUED BY: FG2):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FWC OWN VALID and FWC OPP VALID discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- C. If the test gives the maintenance messages:

AFS: FWC1 AND FWC2 (ISSUED BY: FG1) and

AFS: FWC1 AND FWC2 (ISSUED BY: FG2):

- replace the FWC-1 (1WW1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- (1) If the fault continues:
 - replace the FWC-2 (1WW2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- (2) If the fault continues:
 - do a check of the wiring of the FWC VALID discrete from the FWC 1 (1WW1) to the first terminal block (Ref. ASM 22-85/04).
 - (a) If there is no continuity:
 - repair the above wiring.
 - (b) If there is continuity:
 - do a check and repair the wiring of the FWC VALID discrete (from the FWC 2 (1WW2) to the first terminal block) (Ref. ASM 22-85/04).
- D. Do the test given in Para. 3.

EFF: ALL 22-83-00

Page 275 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-848

Loss of the Reception of the BSCU 1 VALID Discretes by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- BSCU (10GG)
- FMGC-2 (1CA2)
- wiring of the BSCU OWN VALID COM and BSCU OWN VALID MON discretes (from the FMGC 1 (1CA1) to the BSCU (1OGG))
- wiring of the BSCU OPP VALID COM and BSCU OPP VALID MON discretes (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	22-91-00-710-001	Ground Scanning of the AFS	
AMM	32-42-34-000-001	Removal of the Braking/Steering Control Unit (BSCU) (10GG)	
AMM	32-42-34-400-001	<pre>Installation of the Braking/Steering Control Unit (BSCU) (10GG)</pre>	
ASM	22-85/04		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	HYDRAULIC/BRAKING AND STEERING/SYS2/SPLY	4GG	M36
12 1VU	HYDRAULIC/BRAKING AND STEERING/SYS2/CTL	3GG	M35
12 1VU	HYDRAULIC/BRAKING AND STEERING/SYS1/CTL	1GG	M34
12 1VU	HYDRAULIC/BRAKING AND STEERING/SYS1/IND AND/SPLY	2GG	M33

B. Test

NOTE: If the fault message AFS: BSCU1 is shown on the post flight report after in-flight or on ground reset of the anti skid and nose wheel steering system with the A/SKID & NOSE WHEEL control switch (5 GG):

- no action is necessary.

(1) Open the circuit breakers 3GG and 4GG.

EFF: ALL SROS **22-83-00**

Page 276 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- (3) Close the circuit breakers 3GG and 4GG.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: BSCU1 (ISSUED BY: FG1): - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the BSCU (10GG) (Ref. AMM TASK 32-42-34-000-001) and (Ref. AMM TASK 32-42-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the BSCU OWN VALID COM and BSCU OWN VALID MON discretes (from the FMGC 1 (1CA1) to the BSCU (10GG)) (Ref. ASM 22-85/04).
- B. If the test gives the maintenance message AFS: BSCU1 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the BSCU OPP VALID COM and BSCU OPP VALID MON discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- C. Do the test given in Para. 3.

22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-849

Loss of the Reception of the BSCU 2 VALID Discretes by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- BSCU (10GG)
- FMGC-2 (1CA2)
- wiring of the BSCU OPP VALID COM and BSCU OPP VALID MON discretes (from the FMGC 1 (1CA1) to the BSCU (1OGG))
- wiring of the BSCU OWN VALID COM and BSCU OWN VALID MON discretes (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	32-42-34-000-001	Removal of the Braking/Steering Control Unit (BSCU) (10GG)
AMM	32-42-34-400-001	<pre>Installation of the Braking/Steering Control Unit (BSCU) (10GG)</pre>
ASM	22-85/04	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION		IDENT.	LOCATION
121VU	HYDRAULIC/BRAKING AND	STEERING/SYS2/SPLY	4GG	M36
12 1VU	HYDRAULIC/BRAKING AND	STEERING/SYS2/CTL	3GG	M35
12 1VU	HYDRAULIC/BRAKING AND	STEERING/SYS1/CTL	1GG	M34
12 1VU	HYDRAULIC/BRAKING AND	STEERING/SYS1/IND AND/SPLY	2GG	M33

B. Test

NOTE: If the fault message AFS: BSCU2 is shown on the post flight report after in-flight or on ground reset of the anti-skid and nose wheel steering system with the A/SKID & NOSE WHEEL control switch (5 GG):

- no maintenance action required.
- (1) Open the circuit breakers 1GG and 2GG.

EFF: ALL **22-83-00**

Page 278 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- (3) Close the circuit breakers 1GG and 2GG.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: BSCU2 (ISSUED BY: FG1): replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the BSCU (10GG) (Ref. AMM TASK 32-42-34-000-001) and (Ref. AMM TASK 32-42-34-400-001).
 - (2) If the fault continues:
 - do a check and repair the wiring of the BSCU OPP VALID COM and BSCU OPP VALID MON discretes (from the FMGC 1 (1CA1) to the BSCU (10GG)) (Ref. ASM 22-85/04).
- B. If the test gives the maintenance message AFS: BSCU2 (ISSUED BY: FG2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the BSCU OWN VALID COM and BSCU OWN VALID MON discretes (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- C. Do the test given in Para. 3.

7 22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-850

Loss of the Reception of the PRINTER Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the PRINTER bus from the FMGC 1 (1CA1) to the first terminal block
 - wiring of the PRINTER bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION	
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	ASM	22-86/01		

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

B. Test

- (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: PRINTER (ISSUED BY: FM1):
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the PRINTER bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).

EFF: ALL 22-83-00

Page 280 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. If the test gives the maintenance message AFS: PRINTER (ISSUED BY: FM2): replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the PRINTER bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
- C. Do the test given in Para. 3.

EFF: ALL **22-83-00**

Page 281 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-851

Loss of the Reception of the FWC 1 VALID Discrete by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FWC-1 (1WW1)
 - wiring of the FWC OWN VALID discrete (from the FMGC 1 (1CA1) to the FWC 1 (1WW1))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	22-91-00-710-001	Ground Scanning of the AFS	
AMM	31-53-34-000-001	Removal of the Flight Warning Computer (FWC) (1WW1,1WW2)	
AMM	31-53-34-400-001	<pre>Installation of the Flight Warning Computer (FWC) (1WW1,1WW2)</pre>	
ASM	22-85/04		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION
49VU FWS/FWC1/SPLY 3WW F01

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FWC1-FMGC1 CKT: - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the FWC-1 (1WW1) (Ref. AMM TASK 31-53-34-000-001) and (Ref. AMM TASK 31-53-34-400-001).

EFF: ALL 22-83-00

Page 282 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the FWC OWN VALID discrete (from the FMGC 1 (1CA1) to the FWC 1 (1WW1)) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 283 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-852

Loss of the Reception of the FWC 1 VALID Discrete by the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FWC OPP VALID discrete (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 ASM 22-85/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS	

- 3. Fault Confirmation
 - A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	 FWS/FWC1/SPLY	3WW	F01

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FWC1-FMGC2 CKT: replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref.

AMM TASK 22-83-34-400-001).

- (1) If the fault continues:
 - do a check and repair the wiring of the FWC OPP VALID discrete (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

22-83-00

Page 284 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-853

Loss of the Reception of the FWC 2 VALID Discrete by the FMGC 2

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FWC OWN VALID discrete (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		RENCE	DESIGNATION	
	AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
	AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
	AMM	22-91-00-710-001	Ground Scanning of the AFS	
	ASM	22-85/04		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
121VU	EIS/FWC2/SPLY	2WW	Q07

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FWC2-FMGC2 CKT:
 replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FWC OWN VALID discrete (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
 - B. Do the test given in Para. 3.

22-83-00

Page 285 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-854

Loss of the Reception of the FWC 2 VALID Discrete by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FWC-2 (1WW2)
 - wiring of the FWC OPP VALID discrete (from the FMGC 1 (1CA1) to the FWC 2 (1WW2))
- Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)	
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)	
AMM	22-91-00-710-001	Ground Scanning of the AFS	
AMM	31-53-34-000-001	Removal of the Flight Warning Computer (FWC) (1WW1,1WW2)	
AMM	31-53-34-400-001	<pre>Installation of the Flight Warning Computer (FWC) (1WW1,1WW2)</pre>	
ASM	22-85/04		

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL DESIGNATION IDENT. LOCATION

121VU EIS/FWC2/SPLY 2WW Q07

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK FWC2-FMGC1 CKT: - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the FWC-2 (1WW2) (Ref. AMM TASK 31-53-34-000-001) and (Ref. AMM TASK 31-53-34-400-001).

EFF: ALL 22-83-00

Page 286 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the FWC OPP VALID discrete (from the FMGC 1 (1CA1) to the FWC 2 (1WW2)) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL SROS 22-83-00

Page 287 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-855

Loss of the Reception of the DMC 1 VALID Discrete by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - DMC-1 (1WT1)
 - wiring of the PFD OWN VALID discrete (from the FMGC 1 (1CA1) to the DMC 1 (1WT1))
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 AMM 31-63-34-000-001 AMM 31-63-34-400-001 ASM 22-85/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS Removal of the DMC (1WT1,1WT2,1WT3) Installation of the DMC (1WT1,1WT2,1WT3)

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
_	EIS/DMC1/SPLY EIS/DMC1/SWTG	10WT1 21WT1	E11 E09

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK DMC1-FMGC1 CKT: replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the DMC-1 (1WT1) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).

EFF: ALL 22-83-00

Page 288 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the PFD OWN VALID discrete (from the FMGC 1 (1CA1) to the DMC 1 (1WT1)) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 289 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-856

Loss of the Reception of the DMC 1 VALID Discrete by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the PFD OPP VALID discrete (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 ASM 22-85/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	EIS/DMC1/SPLY	10wt1	E11
49VII	FTS/DMC1/SWTG	21WT1	FN9

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK DMC1-FMGC2 CKT:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the PFD OPP VALID discrete (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

22-83-00

Page 290 Aug 01/05

R

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-857

Loss of the Reception of the DMC 2 VALID Discrete by the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- wiring of the PFD OWN VALID discrete (from the FMGC 2 (1CA2) to the first terminal block)

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION
	22 27 74 222 224	
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
ASM	22-85/04	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	EIS/DMC2/SPLY EIS/DMC2/SWTG	10WT2 21WT2	Q08 R08

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: CHK DMC2-FMGC2 CKT:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the PFD OWN VALID discrete (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

22-83-00

Page 291 Aug 01/05

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-858

Loss of the Reception of the DMC 2 VALID Discrete by the FMGC 1

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - DMC-2 (1WT2)
 - wiring of the PFD OPP VALID discrete (from the FMGC 1 (1CA1) to the DMC 2 (1WT2))
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)
AMM	31-63-34-400-001	Installation of the DMC (1WT1,1WT2,1WT3)
ASM	22-85/04	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
	EIS/DMC2/SPLY EIS/DMC2/SWTG	10WT2 21WT2	Q08 R08

- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: CHK DMC2-FMGC1 CKT: replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the DMC-2 (1WT2) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).

EFF: ALL **22-83-00**

Page 292 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - do a check and repair the wiring of the PFD OPP VALID discrete (from the FMGC 1 (1CA1) to the DMC 2 (1WT2)) (Ref. ASM 22-85/04).
- B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page 293 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-859

Loss of the FMGC 1 OWN B Bus

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the FMGC OWN B (COM) bus (from the FMGC 1 (1CA1) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 1.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC1/FMGC1 BUS WIRG: replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN B (COM) bus (from the FMGC 1 (1CA1) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

Page 294 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-860

Loss of the FMGC 2 OWN B Bus

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring of the FMGC OWN B (COM) bus (from the FMGC 2 (1CA2) to the first terminal block)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-96-00-710-001 ASM 22-86/02	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FAC 2.
- 4. Fault Isolation
 - A. If the test gives the maintenance message AFS: FAC2/FMGC2 BUS WIRG: replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the FMGC OWN B (COM) bus (from the FMGC 2 (1CA2) to the first terminal block) (Ref. ASM 22-86/02).
 - B. Do the test given in Para. 3.

22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-861

The FMGC 1 does not get the Navigation Data Base from the Data Loader

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring from the FMGC 1 (1CA1) to the plug (4CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE **DESIGNATION**

AMM 22-70-00-610-008 Uploading of the FM Data AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

ASM 22-85/04 ASM 22-86/04

- 3. Fault Confirmation
 - A. Test

Not applicable, the fault is evident.

- 4. Fault Isolation
 - A. If, after the data loader operation, the dates and the serial numbers shown on the MCDU 1 are incorrect:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring from the FMGC 1 (1CA1) to the plug (4CA1) (Ref. ASM 22-85/04) and (Ref. ASM 22-86/04).
 - B. Do the procedure of the uploading of the FM Data (Ref. AMM TASK 22-70-00-610-008).

22-83-00 EFF: ALL

SROS

Page 296 Nov 01/07

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-862

The FMGC 2 does not get the Navigation Data Base from the Data Loader

- 1. Possible Causes
 - FMGC-2 (1CA2)
 - wiring from the FMGC 2 (1CA2) to the plug (4CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE **DESIGNATION**

AMM 22-70-00-610-008 Uploading of the FM Data AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)
AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

ASM 22-85/04 ASM 22-86/04

- 3. Fault Confirmation
 - A. Test

Not applicable, the fault is evident.

- 4. Fault Isolation
 - A. If, after the data loader operation, the dates and the serial numbers shown on the MCDU 2 are incorrect:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring from the FMGC 2 (1CA2) to the plug (4CA2) (Ref. ASM 22-85/04) and (Ref. ASM 22-86/04).
 - B. Do the procedure of the uploading of FM Data (Ref. AMM TASK 22-70-00-610-008).

22-83-00 EFF: ALL

Page 297 Nov 01/07

SROS

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-863

Loss of the Reception of the PS SPLIT Discrete by one FMGC

1. Possible Causes

- FMGC-1 (1CA1)
- FMGC-2 (1CA2)
- BTC-1 (11XU1)
- BTC-2 (11XU2)
- wiring of the PS SPLIT discrete of the FMGC 1 (1CA1)
- wiring of the PS SPLIT discrete of the FMGC 2 (1CA2)
- CNTOR-DC NORM BUS 2 SWITCHING (1PC2)

2. Job Set-up Information

A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	24-22-55-000-001	Removal of the Contactors (9XU1, 9XU2, 11XU1, 11XU2)
AMM	24-22-55-400-002	Installation of the Contactors (9XU1, 9XU2, 11XU1,
		11XU2)
ASM	22-85/04	

3. Fault Confirmation

- A. Job set-up
 - (1) Aircraft Maintenance Configuration
 - (a) On the ELEC panel 35VU, make sure that the AVAIL legend of the EXT PWR pushbutton switch is on.
- B. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

4. Fault Isolation

- A. If the test gives the maintenance message AFS: 28V PWR 11XU1:
 - push the line key adjacent to the RETURN indication until the AFS MAIN MENU page comes into view
 - push the line key adjacent to the TROUBLE SHOOTING DATA indication
 - push the line key adjacent to the FG1 COM indication, then FG2 COM indication
 - make sure that there is a snapshot related to an event 7

22-83-00

Page 298 Aug 01/05

TROUBLE SHOOTING MANUAL

- if this snapshot is present:
 - make sure that the second number of the word W2 is equal to one of these values (on the FG1 COM and FG2 COM channels):
 - * 4, 5, 6, 7, C, D, E or F.
- (1) If the second number is not equal to 4, 5, 6, 7, C, D, E or F (on the FG1 COM channel only):
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (a) If the fault continues:
 - do a check for a ground signal at the FMGC 1 (1CA1) pin AB/3B (Ref. ASM 22-85/04).
 - 1 If there is no ground signal:
 - do a check and repair the wiring of the PS SPLIT discrete of the FMGC 1 (1CA1):
 - from FMGC 1 (1CA1) pin AB/3B to BTC 1 (11XU1) pin B/26
 - . from BTC 1 (11XU1) pin B/28 to BTC 2 (11XU2) pin B/26
 - . from BTC 2 (11XU2) pin B/28 to connector (1PC2) pin B/16
 - from the ground point to connector (1PC2) pin B/14 (Ref. ASM 22-85/04).
- (2) If the second number is not equal to 4, 5, 6, 7, C, D, E or F (on the FG2 COM channel only):
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (a) If the fault continues:
 - do a check for a ground signal at FMGC 2 (1CA2) pin AB/3B (Ref. ASM 22-85/04).
 - 1 If there is no ground signal:
 - do a check and repair the wiring of the PS SPLIT discrete of the FMGC 2 (1CA2):
 - from FMGC 2 (1CA2) pin AB/3B to BTC 1 (11XU1) pin B/30
 - from BTC 1 (11XU1) pin B/32 to BTC 2 (11XU2) pin B/30
 - . from BTC 2 (11XU2) pin B/32 to connector (1PC2) pin B/20 $\,$
 - from the ground point to connector (1PC2) pin B/18 (Ref. ASM 22-85/04).
- (3) If the second number is not equal to 4, 5, 6, 7, C, D, E or F (on the FG1 COM and on the FG2 COM channels):
 - replace the BTC-1 (11XU1) (Ref. AMM TASK 24-22-55-000-001) and (Ref. AMM TASK 24-22-55-400-002).
 - (a) If the fault continues:
 - replace the BTC-2 (11XU2) (Ref. AMM TASK 24-22-55-000-001) and (Ref. AMM TASK 24-22-55-400-002).
 - 1 If the fault continues:
 - replace the CNTOR-DC NORM BUS 2 SWITCHING (1PC2).

22-83-00

Page 299 Aug 01/05

TROUBLE SHOOTING MANUAL

B. Do the test given in Para. 3.

EFF: ALL
SROS

22-83-00

Page A200 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-864

Loss of the FCU Information on the FMGC 1

- 1. Possible Causes
 - FMGC 1
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

Operational Test of the AFS

AMM 22-97-00-710-001 Operational Test of the LAND CAT III Capability

3. Fault Confirmation

AMM 22-96-00-710-001

- A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FCU/1 9CA1 B05

49VU AUTO FLT/FMGC/1 10CA1 B02

121VU AUTO FLT/FCU/2 9CA2 M21

- B. If the test gives the maintenance message AFS: CHK FMGC1 (FCU INPUT):
 - open the circuit breakers 9CA1, 9CA2 and 10CA1
 - after 15 s, close these circuit breakers
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 1.
 - (1) If the test gives one maintenance message:
 - refer to the procedure related to this message.
- C. Do the test given in Para. 3.

EFF: ALL 22-83-00

Page A201 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-865

Loss of the FCU Information on the FMGC 2

- 1. Possible Causes
 - FMGC 2
- 2. Job Set-up Information
 - A. Referenced Information

______ REFERENCE **DESIGNATION** ------

AMM 22-96-00-710-001

Operational Test of the AFS

AMM 22-97-00-710-001

Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION ______ 49VU AUTO FLT/FCU/1 9CA1 B05 121VU AUTO FLT/FCU/2 9CA2 M21 121VU AUTO FLT/FMGC/2 10CA2 M17

- B. If the test gives the maintenance message AFS: CHK FMGC2 (FCU INPUT):
 - open the circuit breakers 9CA1, 9CA2 and 10CA2
 - after 15 s, close these circuit breakers
 - do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and read the result for the FMGC 2.
 - (1) If the test gives one maintenance message:
 - refer to the procedure related to this message.
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page A202 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-866

Loss of the FWC Functions

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE

DESIGNATION

AMM 22-97-00-710-001 Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

______ PANEL DESIGNATION IDENT. LOCATION 49VU FWS/FWC1/SPLY **3WW** F01 121VU EIS/FWC2/SPLY **2WW** Q07

- B. If the test gives the maintenance message AFS: CHK FWC 1/2 (INST SYS):
 - open the circuit breakers 2WW and 3WW
 - after 15 s, close these circuit breakers
 - do the test given in Para. 3.

EFF: ALL **22-83-00**

Page A203 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-867

FMGC 1 Inoperative

- 1. Possible Causes
 - FMGC-1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-91-00-710-001 AMM 22-96-00-710-001	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Ground Scanning of the AFS Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

49VU AUTO FLT/FMGC/1 10CA1 B02

- B. If the test gives the maintenance message AFS: CHECK FMGC 1:
 - open the circuit breaker 10CA1
 - after 15 seconds, close this circuit breaker
 - after 1 minute, do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001) and the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the fault continues:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-83-00

Page A204 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-868

FMGC 2 Inoperative

- 1. Possible Causes
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
AMM	22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
AMM	22-91-00-710-001	Ground Scanning of the AFS
AMM	22-96-00-710-001	Operational Test of the AFS

- 3. Fault Confirmation
 - A. Test
 - (1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL DESIGNATION IDENT. LOCATION

121VU AUTO FLT/FMGC/2 10CA2 M17

- B. If the test gives the maintenance message AFS: CHECK FMGC 2:
 - open the circuit breaker 10CA2
 - after 15 seconds, close this circuit breaker
 - after 1 minute, do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001) and the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (1) If the fault continues:
 - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL

22-83-00

Page A205 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-869

Loss of the Ground Conditions on the FMGC 1

1. Possible Causes

- FMGC-1 (1CA1)
- LGCIU-1 (5GA1)
- LGCIU-2 (5GA2)
- wiring of the NOSE GEAR OWN discrete from the FMGC 1 (1CA1) to the LGCIU 1 (5GA1)
- wiring of the NOSE GEAR OPP discrete from the FMGC 1 (1CA1) to the LGCIU 2 (5GA2)
- wiring of the ENG OWN STOP and ENG OPP STOP discretes (from the FMGC 1 (1CA1) to the diode module (1801VD))
- wiring of the diode module 1801VD
- DIODE MODULE (1801VD)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-97-00-710-001 AMM 32-31-71-000-001 AMM 32-31-71-400-001 ASM 22-85/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the LAND CAT III Capability Removal of the LGCIU (5GA1, 5GA2) Installation of the LGCIU (5GA1, 5GA2)	

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

4. Fault Isolation

- A. On the MCDU 1, if the LAND TEST REFUSED message comes into view:
 replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the LGCIU-1 (5GA1) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).

EFF: ALL **22-83-00**

Page A206 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - replace the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).
- (3) If the fault continues:
 - do a check of the wiring of the NOSE GEAR OWN discrete from the FMGC 1 (1CA1) to the LGCIU 1 (5GA1)
 - do a check of the wiring of the NOSE GEAR OPP discrete from the FMGC 1 (1CA1) to the LGCIU 2 (5GA2)
 (Ref. ASM 22-85/04).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the ENG OWN STOP and ENG OPP STOP discretes (from the FMGC 1 (1CA1) to the diode module (1801VD)) (Ref. ASM 22-85/04).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - do a check of the wiring of the diode module 1801VD from pin A/10 and from pin A/11 to the first terminal block (Ref. ASM 22-85/04).
 - <u>a</u> If there is no continuity:repair the above wiring.
 - <u>b</u> If there is continuity:replace the DIODE MODULE (1801VD).
- B. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page A207 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-870

Loss of the Ground Conditions on the FMGC 2

1. Possible Causes

- FMGC-2 (1CA2)
- LGCIU-1 (5GA1)
- LGCIU-2 (5GA2)
- wiring of the NOSE GEAR OWN discrete from the FMGC 2 (1CA2) to the LGCIU 2 (5GA2)
- wiring of the NOSE GEAR OPP discrete from the FMGC 2 (1CA2) to the LGCIU 1 (5GA1)
- wiring of the ENG OWN STOP and ENG OPP STOP discretes (from the FMGC 2 (1CA2) to the diode modules (1800VD and 1801VD))
- wiring of the diode module 1800VD
- wiring of the diode module 1801VD
- DIODE MODULE (1800VD)
- DIODE MODULE (1801VD)

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AMM 22-97-00-710-001 AMM 32-31-71-000-001 AMM 32-31-71-400-001 ASM 22-85/04	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2) Operational Test of the LAND CAT III Capability Removal of the LGCIU (5GA1, 5GA2) Installation of the LGCIU (5GA1, 5GA2)

3. Fault Confirmation

- A. Test
 - (1) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).

4. Fault Isolation

- A. On the MCDU 2, if the LAND TEST REFUSED message comes into view: - replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - replace the LGCIU-1 (5GA1) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).

EFF: ALL **22-83-00**

Page A208 Aug 01/05

TROUBLE SHOOTING MANUAL

- (2) If the fault continues:
 - replace the LGCIU-2 (5GA2) (Ref. AMM TASK 32-31-71-000-001) and (Ref. AMM TASK 32-31-71-400-001).
- (3) If the fault continues:
 - do a check of the wiring of the NOSE GEAR OWN discrete from the FMGC 2 (1CA2) to the LGCIU 2 (5GA2)
 - do a check of the wiring of the NOSE GEAR OPP discrete from the FMGC 2 (1CA2) to the LGCIU 1 (5GA1)
 (Ref. ASM 22-85/04).
 - (a) If there is no continuity:repair the above wiring.
 - (b) If there is continuity:
 - do a check of the wiring of the ENG OWN STOP and ENG OPP STOP discretes (from the FMGC 2 (1CA2) to the diode modules (1800VD and 1801VD)) (Ref. ASM 22-85/04).
 - 1 If there is no continuity: - repair the above wiring.
 - 2 If there is continuity:
 - do a check of the wiring of the diode module 1800VD from pin
 A/8 to the first terminal block
 - do a check of the wiring of the diode module 1801VD from pin A/8 to the first terminal block (Ref. ASM 22-85/04)
 - <u>a</u> If there is no continuity:repair the above wiring.
 - b If there is continuity:
 - replace the DIODE MODULE (1800VD)
 - replace the DIODE MODULE (1801VD).
- B. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page A209 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-871

Loss of the EIS Bus of the FMGCs

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 22-96-00-710-001 AMM 22-97-00-710-001	Operational Test of the AFS Operational Test of the LAND CAT III Capability

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001).
 - (2) Do the operational test of the LAND CAT III capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the tests give one maintenance message:refer to the procedure related to this message.

EFF: ALL **22-83-00**

Page A210 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-872

Loss of the Reception of the FQI Bus by one FMGC

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FQIC (3QT)

R

- FMGC-2 (1CA2)
- wiring of the FQI bus from the FMGC 1 (1CA1) to the first terminal block
- wiring of the FQI bus from the FMGC 2 (1CA2) to the first terminal block
- 2. Job Set-up Information
 - A. Referenced Information

	REFE	RENCE	DESIGNATION
	АММ	22-83-34-000-001	Removal of the FMGC (1CA1,1CA2)
		22-83-34-400-001	Installation of the FMGC (1CA1,1CA2)
	AMM	22-91-00-710-001	Ground Scanning of the AFS
R R		28-42-00-740-007	Interrogation of the (SMITHS INDUSTRIES) FQIS Trouble Shooting Data
R R	AMM	28-42-34-000-001	Removal of the Fuel Quantity-Indicating Computer (FQIC) (3QT)
R R	AMM	28-42-34-400-001	<pre>Installation of the Fuel Quantity-Indicating Computer (FQIC) (3QT)</pre>
	ASM	22-86/01	

3. Fault Confirmation

A. Make sure that this(these) circuit breaker(s) is(are) closed:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	FUEL/FQI/CHAN/1	1QT	A 13
121VU	FUEL/FQI/CHANNEL/1 AND 2	8QT	L26
121VU	FUEL/FQI/CHAN/2	2QT	M27

B. Test

R (1) Do the ground scanning of the AFS (Ref. AMM TASK 22-91-00-710-001).

EFF: ALL

22-83-00

Page A211 May 01/07

TROUBLE SHOOTING MANUAL

4. Fault Isolation

	A. If the test gives the maintenance message AFS : FQIC (ISSUED BY : FM1):
R R	(1) Do the interrogation of the (SMITHS INDUSTRIES) FQIS Trouble Shooting Data (Ref. AMM TASK 28-42-00-740-007).
R R	(a) If there is no fault codes:
R R R	1 Replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
R R R	 If the fault continues: Do a check and repair the wiring of the FQI bus from the FMGC 1 (1CA1) to the first terminal block (Ref. ASM 22-86/01).
R	(b) If there is one of fault codes (4L, 4M, 5L, 5M, 6J, 6K):
R R	1 Replace the FQIC (3QT) (Ref. AMM TASK 28-42-34-000-001) and (Ref. AMM TASK 28-42-34-400-001).
	B. If the test gives the maintenance message AFS : FQIC (ISSUED BY : FM2):
R R	(1) Do the interrogation of the (SMITHS INDUSTRIES) FQIS Trouble Shooting Data (Ref. AMM TASK 28-42-00-740-007).
R R	(a) If there is no fault codes:
R R R	1 Replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
R R R	 If the fault continues: Do a check and repair the wiring of the FQI bus from the FMGC 2 (1CA2) to the first terminal block (Ref. ASM 22-86/01).
R	(b) If there is one of fault codes (4L, 4M, 5L, 5M, 6J, 6K):
R R	<u>1</u> Replace the FQIC (3QT) (Ref. AMM TASK 28-42-34-000-001) and (Ref. AMM TASK 28-42-34-400-001).
	C. Do the test given in Para. 3.

SROS 22-

22-83-00

Page A212 May 01/07

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-873

Access to the AFS/TEST REPORT Page Related to the FMGC 1 Not Possible

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - wiring of the SIDE 1 discretes from the FMGC 1 (1CA1) to the ground points
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE **DESIGNATION**

AMM 22-83-34-000-001 AMM 22-83-34-000-001 AMM 22-83-34-400-001

Removal of the FMGC (1CA1, 1CA2) Installation of the FMGC (1CA1,1CA2)

ASM 22-84/01

3. Fault Confirmation

- A. Test
 - (1) Not applicable, the fault is evident.
- 4. Fault Isolation
 - A. If the AFS/TEST REPORT page related to the FMGC 1 is not shown on the MCDU:
 - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - (1) If the fault continues:
 - do a check and repair the wiring of the SIDE 1 discretes from the FMGC 1 (1CA1) to the ground points (Ref. ASM 22-84/01).

EFF: ALL **22-83-00**

Page A213 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-874

Loss of the ADR or IR Data

1. Possible Causes

- discrepency between ADR/IR parameters

2. Job Set-up Information

A. Referenced Information

REFERENCE	DESIGNATION
34-13-81-810-823	Runaway or Drift of One ADR1 Parameter Identified by the ELACs and the SECs
34-13-81-810-824	Runaway or Drift of One ADR2 Parameter Identified by the ELACs and the SECs
34-13-81-810-825	Runaway or Drift of One ADR3 Parameter Identified by the ELACs and the SECs
34-14-00-810-926	Disagree between the FMS and the IRS Positions/Excessive drift
AMM 22-91-00-710-001	Ground Scanning of the AFS
AMM 34-13-00-720-009	Functional Test of the Altitude and Airspeed Data
AMM 34-13-00-740-002	INTERFACE TEST of the ADR
AMM 34-14-00-740-001	Interface Test of the IR

3. Fault Confirmation

A. Test

(1) Do the Ground Scanning of the AFS (Ref. AMM TASK 22-91-00-710-001) and check of discrepency between ADR/IR parameters.

4. Fault Isolation

- A. If the test gives the maintenance message AFS: ADIRU 1/2/3 DISAGREE:
 do a check of the presence, at the same time, of the message ADIRU RTOK.
 - (1) If there is the above mentioned message: - no maintenance action is necessary.
 - (2) If there is no message:
 - do the INTERFACE test of the ADR system (Ref. AMM TASK 34-13-00-740-002)
 - do the INTERFACE test of the IR system (Ref. AMM TASK 34-14-00-740-001).

EFF: ALL **22-83-00**

Page A214 Aug 01/05

TROUBLE SHOOTING MANUAL

- (a) If the test gives a new maintenance message, do the trouble shooting procedure related to the maintenance message.
- (b) If the fault continues:
 - do the functional test of the altitude and airspeed data (Ref. AMM TASK 34-13-00-720-009).
 - do the trouble shooting related to the monitoring of the IR parameters at the end of the flight (Ref. TASK 34-14-00-810-926).
- B. If the test does not confirm the fault:
 - read the Post Flight Report (PFR) for maintenance messages related to the ADR with the EFCS source.
 - (1) If the PFR gives the maintenance message ADR1 with the EFCS source:
 do this trouble shooting procedure: (Ref. TASK 34-13-81-810-823).
 - (2) If the PFR gives the maintenance message ADR2 with the EFCS source:
 do this trouble shooting procedure: (Ref. TASK 34-13-81-810-824).
 - (3) If the PFR gives the maintenance message ADR3 with the EFCS source:
 do this trouble shooting procedure: (Ref. TASK 34-13-81-810-825).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page A215 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-875

Electrical Transient Effect on the FMGC's

- 1. Possible Causes
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION
AMM	24-41-00-861-002	Energize the Aircraft Electrical Circuits from the
		External Power
AMM	24-41-00-862-002	De-energize the Aircraft Electrical Circuits Supplied from the External Power

- 3. Fault Confirmation
 - A. Job Set-Up
 - (1) Aircraft Maintenance Configuration
 - (a) Energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-861-002)
 - (b) Make sure that the aircraft is in the ground condition with the engines stopped.
 - (c) On the FCU, make sure that the two FD pushbutton switches are released.
 - B. Test
 - (1) Not applicable.
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FMGC/1	10CA1	B02
12 1VU	AUTO FLT/FMGC/2	10CA2	M17

EFF: ALL

22-83-00

Page A216 Aug 01/05

TROUBLE SHOOTING MANUAL

B. Do the procedure:

Note: Do not do a reset of the FMGC circuit breakers until the power-up test is completed (approximately 2 minutes).

- (1) If there is an electrical transient effect on one FMGC:
 - for the FMGC 1 (1CA1), open the circuit breaker (10CA1) and after 5 seconds close it.
 - for the FMGC 2 (1CA2): pull the circuit breaker (10CA2) and after 5 seconds close it.
 - (a) If the fault continues:
 - open the the two circuit breakers (10CA1 and 10CA2) at the same time and after 5 seconds close them at the same time.

5. Close-up

- A. Put the aircraft back to its initial configuration.
 - (1) On the FCU, push the two FD pushbutton switches after 10 seconds.
 - (2) De-energize the aircraft electrical circuits (Ref. AMM TASK 24-41-00-862-002)

EFF: ALL 22-83-00

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-876

Failure of the FMGC1 for the Cabin Pressure Controller

- 1. Possible Causes
 - FMGC-1 (1CA1)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION
AMM 21-31-00-710-002	Operational Test of the Pressure Control and
AMM 22-83-34-000-001 AMM 22-83-34-400-001	Monitoring Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2)

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the pressure control and monitoring (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGS1 OUT OF RANGE: - replace the FMGC-1 (1CA1) (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
 - B. Do the test given in Para. 3.

22-83-00

Page A218

Aug 01/05

ALL

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-877

Failure of the FMGC2 for the Cabin Pressure Controller

- 1. Possible Causes
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFE	RENCE	DESIGNATION
AMM	21-31-00-710-002	Operational Test of the Pressure Control and Monitoring
	22-83-34-000-001 22-83-34-400-001	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2)

- 3. Fault Confirmation
 - A. Test
 - (1) Do the operational test of the pressure control and monitoring (Ref. AMM TASK 21-31-00-710-002).
- 4. Fault Isolation
 - A. If the test gives the maintenance message FMGS2 OUT OF RANGE:
 replace the FMGC-2 (1CA2) (Ref. AMM TASK 22-83-34-000-001) and (Ref.
 AMM TASK 22-83-34-400-001).
 - B. Do the test given in Para. 3.

22-83-00

Page A219

Aug 01/05

EFF:

ALL

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-891

CAT 2, CAT 3, CAT 3 DUAL Messages (INOP SYS) on ECAM STATUS Page

NOTE: Do not consider the CAT 3 DUAL information in the INOP SYS list, if it is no longer displayed after both engines are started.

- 1. Possible Causes
 - BTC-1 (11XU1)
 - BTC-2 (11XU2)
 - CNTOR-DC NORM BUS 2 SWITCHING (1PC2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE		DESIGNATION	
	22-97-00-710-001 24-22-55-000-001 24-22-55-400-002	Operational Test of the LAND CAT III Capability Removal of the Contactors (9XU1, 9XU2, 11XU1, 11XU2) Installation of the Contactors (9XU1, 9XU2, 11XU1,	
AMM	24-35-55-000-001 24-35-55-400-001	11XU2) Removal of the Contactor (1PC1, 1PC2) Installation of the Contactor (1PC1, 1PC2)	

- 3. Fault Confirmation
 - A. Do the Operational Test of the LAND CAT III Capability (Ref. AMM TASK 22-97-00-710-001).
- 4. Fault Isolation
 - A. If the test is good:
 - (1) Check the FG BITE (Trouble Shooting Data) of the previous flight:
 - retrieve a snapshot with event 7 from MON channel,
 - check the 2nd digit of the Word 2 (-X--).
 - (a) if this digit is even (0,2,4,6,8,A,C,E):
 - replace the BTC-1 (11XU1), (Ref. AMM TASK 24-22-55-000-001) and (Ref. AMM TASK 24-22-55-400-002)
 - if the fault persits, replace the BTC-2 (11XU2), (Ref. AMM TASK 24-22-55-000-001) and (Ref. AMM TASK 24-22-55-400-002)
 - if the fault still persists, replace the CNTOR-DC NORM BUS 2 SWITCHING (1PC2), (Ref. AMM TASK 24-35-55-000-001) and (Ref. AMM TASK 24-35-55-400-001).
 - (b) If this digit is odd:
 - no further action is required.

EFF: ALL

22-83-00

Page A220 Aug 01/05

TROUBLE SHOOTING MANUAL

- B. If the test is not good:
 - If there is a message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL
SROS

22-83-00

Page A221 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-892

FM 1/FM 2 Incoherence (Independant Operation)

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
 - wiring of the pin programming
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE	DESIGNATION	
AMM 22-83-34-000-001 AMM 22-83-34-400-001 AWM 22-85-30 AWM 22-85-31	Removal of the FMGC (1CA1,1CA2) Installation of the FMGC (1CA1,1CA2)	

- AWM 22-85-36
- AWM 22-85-37
- 3. Fault Confirmation
 - A. Not applicable.
- 4. Fault Isolation
 - A. Table of the circuit breakers used in this procedure:

PANEL	DESIGNATION	IDENT.	LOCATION
49VU	AUTO FLT/FMGC/1	10CA1	В02
12 1VU	AUTO FLT/FMGC/2	10CA2	M17

- B. If the message is still present in the scratchpad: - perform a C/B reset (10CA1 and 10CA2) of both FMGCs.
 - (1) If the message disappears, no maintenance action is necessary.
 - (2) If the fault continues:
 - (a) Do a check of:
 - the NDB cycle is the same for the two FMGCs.
 - the P/N is the same for the two FMGCs.
 - the wiring of the pin programming of the two FMGCs (Ref. AWM 22-85-30), (Ref. AWM 22-85-31), (Ref. AWM 22-85-36) and (Ref. AWM 22-85-37)

22-83-00 EFF: ALL

Page A222 Aug 01/05

TROUBLE SHOOTING MANUAL

- (b) If the fault continues:
 - replace the FMGC-1 (1CA1), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- (c) If the fault continues:
 - replace the FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).
- C. Not applicable.

EFF: ALL SROS 22-83-00

Page A223 Aug 01/05

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-893

FMGC Malfunction

- 1. Possible Causes
 - FMGC-1 (1CA1)
 - FMGC-2 (1CA2)
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

AMM 22-70-00-610-006 Downloading of the FM Data

AMM 22-83-34-000-001 Removal of the FMGC (1CA1,1CA2)

AMM 22-83-34-400-001 Installation of the FMGC (1CA1,1CA2)

AMM 22-96-00-710-001 Operational Test of the AFS

- 3. Fault Confirmation
 - A. Do the Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001)
- 4. Fault Isolation
 - A. If the test does not give maintenance message:
 - get access to the AFS/TROUBLE SHOOTING DATA/BITE SELECTION for the failed FM part (1 or 2) and do a check of the result:
 - (1) If the event code is equal to 4 or 7:
 - download the FM BITE data (Ref. AMM TASK 22-70-00-610-006) and send it back to Airbus for investigation.
 - (2) If the event code is not equal to 4 or 7:
 - replace the failed computer, FMGC-1 (1CA1) or FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

EFF: ALL **22-83-00**

Page A224 Nov 01/07

SROS

TROUBLE SHOOTING MANUAL

- R **ON A/C 247-253, 551-563, 565-599,
- R Post SB 22-1089 For A/C 247-253,555-557,561-563,
 - Post SB 22-1193 For A/C 555-555,
 - Post SB 22-1196 For A/C 553-553,
- R Post SB 22-1217 For A/C 247-253,557-557,561-563,
 - A. If the test does not give maintenance message:
 - get access to the AFS/TROUBLE SHOOTING DATA/BITE SELECTION for the failed FM part (1 or 2) and do a check of the result:
 - (1) If the event code is equal to 8 or 9:
 - download the FM BITE data (Ref. AMM TASK 22-70-00-610-006) and send it back to Airbus for investigation.
 - (2) If the event code is not equal to 8 or 9:
 - replace the failed computer, FMGC-1 (1CA1) or FMGC-2 (1CA2), (Ref. AMM TASK 22-83-34-000-001) and (Ref. AMM TASK 22-83-34-400-001).

**ON A/C ALL

- B. If the test gives one or several maintenance messages:
 - do the trouble shooting procedure related to the maintenance message.

EFF: ALL **22-83-00**

Page A225 Feb 01/08

TROUBLE SHOOTING MANUAL

TASK 22-83-00-810-894

FMS or Navigation Systems Malfunction

- 1. Possible Causes
- 2. Job Set-up Information

Not Applicable

- 3. Fault Confirmation
 - A. Not Applicable.
- 4. Fault Isolation
 - A. Do a check for a maintenance message (AFS or NAV) on the POST FLIGHT REPORT.

If there is no message, no maintenance action is necessary. If there is a message, do the trouble shooting procedure related to the maintenance message.

EFF: ALL

22-83-00

Page A226 Aug 01/05

TROUBLE SHOOTING MANUAL

R **ON A/C 201-225, 227-227, 229-253, 276-299, 426-450, 476-499, 503-549, R 551-599, 701-749,

TASK 22-83-00-810-895

FMGC Unserviceable on the Ground

- 1. Possible Causes
 - OBRM A13
- 2. Job Set-up Information
 - A. Referenced Information

REFERENCE DESIGNATION

3. Fault Confirmation

A. Not applicable

B. Table of the circuit breakers used in this procedure:

AMM 22-96-00-710-001 Operational Test of the AFS

______ PANEL DESIGNATION IDENT. LOCATION 49VU AUTO FLT/FMGC/1 10CA1 B02 121VU AUTO FLT/FMGC/2 10CA2 M17

4. Fault Isolation

A. Do the reset of the circuit breaker of the unserviceable FMGC as follows

CAUTION: MAKE SURE THAT YOU USE WRIST STRAPS WHEN YOU REMOVE AND INSTALL AN ONBOARD REPLACEABLE MODULE (OBRM). WRIST STRAPS WILL PREVENT POSSIBLE ELECTROSTATIC DISCHARGES, WHICH CAN CAUSE DAMAGE TO THE OBRM'S.

- Open the circuit breaker 10CA1(2) for the FMGC1(2),
- Remove the OBRM A13 from the FMGC1(2),
- Close the circuit breaker 10CA1(2),
- After 90 seconds (safety tests), open the circuit breaker 10CA1(2),
- Install the OBRM A13 on the FMGC1(2),

201-225, 227-227, 229-253, 276-299,

- Close the circuit breaker 10CA1(2).
- B. Do the Operational Test of the AFS (Ref. AMM TASK 22-96-00-710-001).

22-83-00

Page A227

May 01/08

426-450, 476-499, 503-549, 551-599, 701-749,

SROS

TROUBLE SHOOTING MANUAL

R **ON A/C ALL

TASK 22-83-00-810-896

CAT 2 (INOP SYS) on the SD

1. Possible Causes

- PFD-CAPT (2WT1)
- DMC-1 (1WT1)
- PFD-F/0 (2WT2)
- DMC-2 (1WT2)
- wiring of the PFD OWN VALID discrete from the DMC 1 (1WT1) to the first terminal block
- wiring of the PFD OPP VALID discrete from the DMC 2 (1WT2) to the first terminal block

2. Job Set-up Information

A. Referenced Information

REFERENCE		DESIGNATION	
AMM	22-97-00-710-001	Operational Test of the LAND CAT III Capability	
AMM	31-63-22-000-001	Removal of the Display Unit	
		(2WT1,2WT2,3WT1,3WT2,4WT1,4WT2)	
AMM	31-63-22-400-001	Installation of the Display Unit	
		(2WT1,2WT2,3WT1,3WT2,4WT1,4WT2)	
AMM	31-63-34-000-001	Removal of the DMC (1WT1,1WT2,1WT3)	
AMM	31-63-34-400-001	<pre>Installation of the DMC (1WT1,1WT2,1WT3)</pre>	
ASM	22-85/04		

3. Fault Confirmation

A. Do the Operational Test of the LAND CAT III Capability (Ref. AMM TASK 22-97-00-710-001).

EFF: ALL **22-83-00**

Page A228 Nov 01/06

SROS

TROUBLE SHOOTING MANUAL

4. Fault Isolation

A. If the test gives the maintenance messages:

AFS: CHK DMC 1 - FMGC 1 CKT (ISSUED BY: FG1) and AFS: CHK DMC 1 - FMGC 2 CKT (ISSUED BY: FG2)

- (1) Do the test given in Para. 3 with the EIS DMC selector switch (18WT) on the SWITCHING panel (8VU) at CAPT/3.
 - (a) If the fault continues:
 - replace the PFD-CAPT (2WT1) (Ref. AMM TASK 31-63-22-000-001) and (Ref. AMM TASK 31-63-22-400-001).
- (2) If the fault continues:
 - replace the DMC-1 (1WT1) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
- (3) If the fault continues:
 - do a check and repair the wiring of the PFD OWN VALID discrete from the DMC 1 (1WT1) to the first terminal block (Ref. ASM 22-85/04).
- B. If the test gives the maintenance messages:

AFS: CHK DMC 2 - FMGC 2 CKT (ISSUED BY: FG2) and AFS: CHK DMC 2 - FMGC 1 CKT (ISSUED BY: FG1)

- (1) Do the test given in Para. 3 with the EIS DMC selector switch (18WT) on the SWITCHING panel (8VU) at F/0/3.
 - (a) If the fault continues:
 - replace the PFD-F/O (2WT2) (Ref. AMM TASK 31-63-22-000-001) and (Ref. AMM TASK 31-63-22-400-001).
- (2) If the fault continues:
 - replace the DMC-2 (1WT2) (Ref. AMM TASK 31-63-34-000-001) and (Ref. AMM TASK 31-63-34-400-001).
- (3) If the fault continues:
 - do a check and repair the wiring of the PFD OPP VALID discrete from the DMC 2 (1WT2) to the first terminal block (Ref. ASM 22-85/04).
- C. Do the test given in Para. 3.

EFF: ALL

22-83-00

Page A229 Nov 01/06

TROUBLE SHOOTING MANUAL

- R TASK 22-83-00-810-898
- R Unsatisfactory Autoland
- R 1. Possible Causes
- R 2. Job Set-up Information
- R A. Referenced Information

R	REFE	RENCE	DESIGNATION	-
		22-96-00-710-001 22-97-00-710-001	Operational Test of the AFS Operational Test of the LAND CAT III Capability	

- R 3. Fault Confirmation
- R A. Not applicable, you cannot confirm this fault on the ground.
- R 4. Fault Isolation

R R

R

R

R

R R

R

- R A. If there is an Unsatisfactory Autoland entry in the log-book report:
 R Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001) and the LAND CAT III capability test (Ref. AMM TASK 22-97-00-710-001).
- R (1) If there is a maintenance message, do the trouble shooting procedure related to this maintenance message.
 - (2) If these tests are correct, find if there is:
 - A maintenance message related to RA and/or ILS fault(s) in the Post Flight Report, and/or
 - An entry related to RA and/or ILS fault(s) in the log-book report:
- R (a) If yes, do the trouble shooting procedure related to the maintenance message or to the log-book entry.
 - (b) If no, no maintenance action is necessary.
 - (3) If there are many Unsatisfactory Autoland entries in the log-book for the same aircraft:
 - Get the data from the DFDR or QAR and send them to AIRBUS for analysis.

EFF: ALL **22-83-00**

Page A230 Nov 01/05

TROUBLE SHOOTING MANUAL

R TASK 22-83-00-810-900 R Difference between the Target Speeds of the FMS1 and FMS2 1. Possible Causes 2. Job Set-up Information A. Referenced Information ______ REFERENCE DESIGNATION ______ R 34-11-00-810-865 Different Total Air Temperature R AMM 22-96-00-710-001 Operational Test of the AFS Different Total Air Temperature on the ADIRUs R 3. Fault Confirmation A. Not applicable. R 4. Fault Isolation A. Table of the circuit breakers used in this procedure: R R R PANEL DESIGNATION IDENT. LOCATION ______ R 10CA1 49VU AUTO FLT/FMGC/1 B02 R R 121VU AUTO FLT/FMGC/2 10CA2 M17 R B. If the message is shown on the scratchpad: Do the operational test of the AFS (Ref. AMM TASK 22-96-00-710-001). R (1) If the test gives a PRESS LINE KEY indication opposite the name of R one or more than one LRU(s): R R - Do the troubleshooting related to the maintenance message. R (2) If the fault continues: - Do a C/B reset (10CA1 and 10CA2) of the two FMGCs. R (a) If the message goes out of view, no maintenance action is R R necessary. (b) If the fault continues: R - Do the trouble shooting related to the Different Total Air R Temperature on the ADIRUs (Ref. TASK 34-11-00-810-865). R

EFF: ALL **SROS** Printed in France

C. Not applicable.

R

22-83-00

Page A231 Nov 01/07