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R **10.1 DESCRIPTION** (see schematic p. 17/18)

Numerous logic functions are performed by the MFC system. It consists of two independent computers (MFC 1 and MFC 2).

Each computer includes two independent modules (A and B).

Each module includes :

- A 28 VDC dual power supply.
- An input/output circuit.
- A computation unit.
- For modules 1A and 2A only, a hard-wired logic independent of the computation unit.

SIGNAL PROCESSING

Each module receives signals from the various systems and systems controls.

Each signal received by a module is then converted, if necessary, to a digital signal by the input circuit.

Then :

- For most of the functions, the signal is sent to the computation unit which processes the data according to the logic programmes.
- For some specific functions (stick pusher, flaps), signal processing is performed in a conventional way by the hard-wired card (to avoid computation errors or common failures).

An intercard dialogue is established between all modules to allow each module to use signals processed by other modules.

Signals from each system are taken into account by one or more modules depending on the degree of reliability/safety required for the system.

Each module is equipped with a self test system which monitor correct operation of that module.

FUNCTIONS

After processing, computation unit transmits orders from the output circuit to the various systems in order to :

- Monitor, control and authorize operation of the aircraft systems.
- Manage system failures and flight envelope anomalies and command triggering of associated warnings in the CCAS.

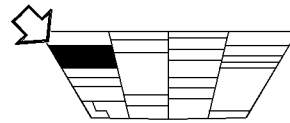
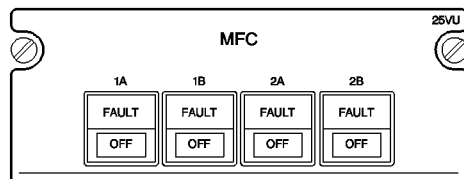
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10.2 CONTROLS

CONTROLS PANEL

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Controls operation of associated module

ON : (pushbutton pressed in) the module operates.

OFF : (pushbutton released) the module stops operating.
The OFF white indicator light comes on.

FAULT : The amber light comes on and the CCAS is activated when a malfunction or electrical supply fault is detected.
The module automatically becomes inoperative.

This light also flashes during self-test of the module.

During powering, since all four modules are selected ON, the following sequence is executed :

MFC 1A and MFC 2A FAULT lights (self-test of these modules) flashing.

MFC 1A and MFC 2A FAULT lights extinguish. MFC 1B and MFC 2B FAULT lights (self-test of these modules) flashing.

MFC 1B and MFC 2B FAULT lights extinguish.

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10.3 OPERATION

Charts on the following pages list the implementation and availability of the functions ensured by each module.

READING OF TABLES

The table uses the following symbols : ●, ◐, ◑, to indicate :

- Location of the functions :
A function is integrated in each module denoted by one of these symbols.
- Availability of the functions :
A function can be treated :
 - in one module only,
 - in several modules (redundancy),
 - partially in two modules, i.e. both modules considered are to be operative to process this function.

Example :

SYSTEM	FUNCTION	MODULE			
		1A	1B	2A	2B
FLIGHT	STICK PUSHER	◐	◐	◑	◑
CONTROLS	STALL WARNING		●		●

- The stick pusher function is integrated in modules 1A, 1B, 2A and 2B.
- The stall warning function is integrated in modules 1B and 2B.
- The stick pusher function is available if modules (1A AND 2A) OR (1A AND 2B) OR (1B AND 2A) OR (1B AND 2B) operate. This function is therefore not available if modules (1A AND 1B) OR (2A AND 2B) are lost.
- The stall warning is available if modules 1B OR 2B operate.
This function is therefore not available if modules 1B AND 2B are lost.

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SYSTEM	FUNCTION	MODULE			
		1A	1B	2A	2B
DOORS	* CARGO DOOR UNLK IND			●	
	CARGO DOOR CTL	●			
	EMER HATCH UNLK IND	●			
	FWD COMPT DOOR UNLK IND	●			
	CARGO DOOR CTL PANEL	●		●	
LIGHT	LIGHT TEST	●		●	
CCAS	AURAL ALERTS		●		●
	MASTER WARNING AND MASTER CAUTION		●		●
	AMBER ALERTS ON CAP		●		●
	RED "CONFIG" "ENG OIL" "PROP BRK" "PITCH DISCONNECT" ALERTS ON CAP		●		●
	RED "FLAPS UNLK" ALERT ON CAP	●		●	
AIR	PACK 1	●	●		
	PACK 1 FAULT IND	●	●		
	PACK 2			●	●
	PACK 2 FAULT IND			●	●
	GND TURBO FAN 1		●		
	GND TURBO FAN 2				●
	OUTFLOW VALVE AUTO OPENING AFTER LANDING		●		
	OVBD VALVE PWR RLY CTL			●	
	OVBD VALVE FAULT IND				●
	X VALVE			●	
	UNDER FLOOR VALVE PWR RLY CTL			●	
	EXTRACT FAN			●	
	EXTRACT FAN SHUT DOWN RLY COMMAND			●	

(*) Note : In case of MFC 2A failure, the cargo door can be normally operated except that closed limit position is not detected and actuator power supply cut-off shall be obtained by releasing control sw to "OFF" position. If this action is not promptly made the door will push against A/C structure (Damage unlikely to occurs as actuator clutch will yield).

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10.3 OPERATION

Charts on the following pages list the implementation and availability of the functions ensured by each module.

READING OF TABLES

The table uses the following symbols : ●, ◐, ◑, to indicate :

– Location of the functions :

A function is integrated in each module denoted by one of these symbols.

– Availability of the functions :

A function can be treated :

- in one module only,
- in several modules (redundancy),
- partially in two modules, i.e. both modules considered are to be operative to process this function.

Example :

SYSTEM	FUNCTION	MODULE			
		1A	1B	2A	2B
FLIGHT	STICK PUSHER	◐	◐	◑	◑
CONTROLS	STALL WARNING		●		●

– The stick pusher function is integrated in modules 1A, 1B, 2A and 2B.

– The stall warning function is integrated in modules 1B and 2B.

– The stick pusher function is available if modules (1A AND 2A) OR (1A AND 2B) OR (1B AND 2A) OR (1B AND 2B) operate. This function is therefore not available if modules (1A AND 1B) OR (2A AND 2B) are lost.

– The stall warning is available if modules 1B OR 2B operate.

This function is therefore not available if modules 1B AND 2B are lost.

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SYSTEM	FUNCTION	MODULE			
		1A	1B	2A	2B
DOORS	* CARGO DOOR UNLK IND			●	
	CARGO DOOR CTL	●			
	EMER HATCH UNLK IND	●			
	FWD COMPT DOOR UNLK IND	●			
	CARGO DOOR CTL PANEL	●		●	
LIGHT	LIGHT TEST	●		●	
CCAS	AURAL ALERTS		●		●
	MASTER WARNING AND MASTER CAUTION		●		●
	AMBER ALERTS ON CAP		●		●
	RED "CONFIG" "ENG OIL" "PROP BRK" "PITCH DISCONNECT" ALERTS ON CAP		●		●
	RED "FLAPS UNLK" ALERT ON CAP	●		●	
AIR	PACK 1	●	●		
	PACK 1 FAULT IND	●	●		
	PACK 2			●	●
	PACK 2 FAULT IND			●	●
	GND COOLING FAN 1		●		
	GND COOLING FAN 2				●
	OUTFLOW VALVE AUTO OPENING AFTER LANDING		●		
	OVBD VALVE PWR RLY CTL			●	
	OVBD VALVE FAULT IND				●
	X VALVE			●	
	UNDER FLOOR VALVE PWR RLY CTL			●	
	EXTRACT FAN			●	
	EXTRACT FAN SHUT DOWN RLY COMMAND			●	

(*) Note : In case of MFC 2A failure, the cargo door can be normally operated except that closed limit position is not detected and actuator power supply cut-off shall be obtained by releasing control sw to "OFF" position. If this action is not promptly made the door will push against A/C structure (Damage unlikely to occurs as actuator clutch will yield).

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SYSTEM	FUNCTION	MODULE			
		1A	1B	2A	2B
ENGINE BLEEDS	BLEED 1 SHUT-OFF VALVE	●	●		
	BLEED 1 HP VALVE	●			
	BLEED 1 "FAULT" IND		●		
	BLEED 2 SHUT-OFF VALVE			●	●
	BLEED 2 HP VALVE			●	
	BLEED 2 "FAULT" IND				●
	CROSS-FEED VALVE			●	
AFCS	"AP OFF" WARNING LIGHT	●		●	
	"AP OFF" AURAL WARNING		●		●
	ALTITUDE ALERT LIGHT	●		●	
	ALTITUDE AURAL ALERT		●		●
	GUIDANCE LIGHT	●		●	
	GUIDANCE AURAL		●		●
	AP DISENGAGEMENT IN CASE OF :				
	– STALL WARNING	●			●
	– PITCH TRIM ASYMMETRY				
	– STBY TRIM CONTROL				
	– PITCH EFFORT				
COM	MECHANICAL CALL IND	●			
	ATTENDANT CALL IND			●	
	CREW CALL IND			●	
	CVR ERASE		●		
	RECORDERS (START/STOP)	●		●	
	PUBLIC ADDRESS VOLUME			●	
	MUTING HP GALLEY			●	

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ELEC	DC	EMER BAT CHG CTL	●		●	
		MAIN BAT CHG CTL		●		●
		BAT DISCHARGE IN FLIGHT		●		●
		DC BUS 1 OFF WARNING	●			
		DC BUS 2 OFF WARNING			●	
		DC STBY BUS UNDV DETECTION		●		
		SUPPLY OF DC EMER BUS FROM HOT EMER BAT BUS OR FROM MAIN BUSES	●		●	
		SUPPLY OF DC ESS BUS FROM HOT MAIN BAT BUS OR FROM MAIN BUSES	●		●	
		EMER BAT PROTECTION	●		●	
		MAIN BAT PROTECTION		●		●
		LEFT PFTS	●			
		RIGHT PFTS			●	
	AC	SUPPLY OF INV 1 FROM DC BUS 1 OR FROM HOT MAIN BAT BUS	●		●	
		AC BUS 1/INV 1 RELAY	●			
		AC BUS 2/INV 2 RELAY			●	
		AC BUS TIE RELAY (BTR)		●		
		INV 1 FAULT LIGHT	◐	◐	◐	◐
		INV 2 FAULT LIGHT			◐	◐

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
FLIGHT CONTROL	FLAPS	EXTENSION AND ASYM PROTECTION	●	●	●	●
		RETRACTION AND ASYM PROTECTION	●	●	●	●
		RED "FLAPS UNLK" WARNING	●		●	
		AMBER "FLAP ASYM" ALERT		●		●
		EXTENSION INHIBITION ABOVE 195 KT	●		●	
		IN FLIGHT INHIBITION OF FLAPS UNLK TEST (MAINTENANCE)	●			
		ASYM TEST (MAINTENANCE)	●	●	●	●
	STALL WARNING	STICK PUSHER	●	●	●	●
		STICK PUSHER INHIBITION		●		●
		STICK PUSHER/SHAKER FAULT IND	●		●	
		STALL WARNING		●		●
		STICK SHAKER		●		●
		STICK PUSHER TEST	●	●	●	●
	PITCH TRIM	WHOOLER		●		●
		PITCH TRIM ASYM WARNING		●		●
	RUDDER TRIM	RELEASABLE CENTERING UNIT AUTO DISCONNECT DURING YAW TRIM ACTION OR YAW DAMPER ENGAGEMENT	●		●	
		TRAVEL LIMITATION UNIT AUTOMATIC CONTROL INDICATION	●		●	
	HYDRAULIC	BLUE HYDRAULIC PUMP (CTL)	●			●
		GREEN PUMP LO PR INDICATION		●		

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ICE AND RAIN PROTECTION	ENGINES	ENGINE 1 DE (OR ANTI) ICING	●			●
		ENGINE 2 DE (OR ANTI) ICING		●	●	
		ENGINE 1 DE (OR ANTI) ICING FAULT		●	●	
		ENGINE 2 DE (OR ANTI) ICING FAULT	●			●
	AIRFRAME	AIRFRAME DE-ICING (BOOTS A)	●	●		
		AIRFRAME DE-ICING (BOOTS B)			●	●
		AIRFRAME DE-ICING FAULT	●		●	
	PROPELLERS	MODES AUTO. SEL.		●		●
		PROP 1 ANTI-ICING	●	●		
		PROP 2 ANTI-ICING			●	●
		PROP 1 ANTI-ICING FAULT	●	●		
		PROP 2 ANTI-ICING FAULT			●	●
	WINDOWS	LEFT SIDE WINDOW ANTI-ICING PWR SPLY	●	●		
		RIGHT SIDE WINDOW ANTI-ICING PWR SPLY			●	●
		LEFT SIDE WINDOW ANTI-ICING FAULT DETECTION	●	●		
		RIGHT SIDE WINDOW ANTI-ICING FAULT DETECTION				●
	AAS (IND)					●
GEAR LANDING	LANDING GEAR CONTROL		●		●	
	CENTRAL PANEL	PRIMARY RED UNLK IND	●			
		PRIMARY DOWNLOCK IND	●	●		
	OVERHEAD PANEL	SECONDARY RED UNLK IND			●	●
		SECONDARY DOWNLOCK IND			●	●
	"LDG GEAR NOT DOWN" WARNING			●		●
		BRAKE OVERTEMP ALERT (L/H)		●		
		BRAKE OVERTEMP ALERT (R/H)		●		●
		BRAKE OVERTEMP TEST		●		●
		WEIGHT ON WHEELS (SYSTEM 1)		●		
	WEIGHT ON WHEELS (SYSTEM 2)					●
	NOSE WHEEL STEERING			●		●

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
FLIGHT CONTROL	FLAPS	EXTENSION AND ASYM PROTECTION	●	●	●	●
		RETRACTION AND ASYM PROTECTION	●	●	●	●
		RED "FLAPS UNLK" WARNING	●		●	
		AMBER "FLAP ASYM" ALERT		●		●
		EXTENSION INHIBITION ABOVE 195 KT	●		●	
		IN FLIGHT INHIBITION OF FLAPS UNLK TEST (MAINTENANCE)	●			
		ASYM TEST (MAINTENANCE)	●	●	●	●
	STALL WARNING	STICK PUSHER	●	●	●	●
		STICK PUSHER INHIBITION		●		●
		STICK PUSHER/SHAKER FAULT IND	●		●	
		STALL WARNING		●		●
		STICK SHAKER		●		●
		STICK PUSHER TEST	●	●	●	●
	PITCH TRIM	WHOOLER		●		●
		PITCH TRIM ASYM WARNING		●		●
	RUDDER TRIM	RELEASABLE CENTERING UNIT AUTO DISCONNECT DURING YAW TRIM ACTION OR YAW DAMPER ENGAGEMENT	●		●	
		TRAVEL LIMITATION UNIT AUTOMATIC CONTROL INDICATION	●		●	
		AILERON LOCKING DEVICE MONITORING	●	●	●	●
HYDRAULIC		BLUE HYDRAULIC PUMP (CTL)	●			●
		GREEN PUMP LO PR INDICATION		●		

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ICE AND RAIN PROTECTION	ENGINES	ENGINE 1 DE (OR ANTI) ICING	●			●
		ENGINE 2 DE (OR ANTI) ICING		●	●	
		ENGINE 1 DE (OR ANTI) ICING FAULT		●	●	
		ENGINE 2 DE (OR ANTI) ICING FAULT	●			●
	AIRFRAME	AIRFRAME DE-ICING (BOOTS A)	●	●		
		AIRFRAME DE-ICING (BOOTS B)			●	●
		AIRFRAME DE-ICING FAULT	●		●	
	PROPELLERS	MODES AUTO. SEL.		●		●
		PROP 1 ANTI-ICING	●	●		
		PROP 2 ANTI-ICING			●	●
		PROP 1 ANTI-ICING FAULT	●	●		
		PROP 2 ANTI-ICING FAULT			●	●
	WINDOWS	LEFT SIDE WINDOW ANTI-ICING PWR SPLY	●	●		
		RIGHT SIDE WINDOW ANTI-ICING PWR SPLY			●	●
		LEFT SIDE WINDOW ANTI-ICING FAULT DETECTION	●	●		
		RIGHT SIDE WINDOW ANTI-ICING FAULT DETECTION				●
	AAS (IND)					●
GEAR LANDING	LANDING GEAR CONTROL		●		●	
	CENTRAL PANEL	PRIMARY RED UNLK IND	●			
		PRIMARY DOWNLOCK IND	●	●		
	OVERHEAD PANEL	SECONDARY RED UNLK IND			●	●
		SECONDARY DOWNLOCK IND			●	●
	"LDG GEAR NOT DOWN" WARNING			●		●
		BRAKE OVERTEMP ALERT (L/H)		●		
		BRAKE OVERTEMP ALERT (R/H)		●		●
		BRAKE OVERTEMP TEST		●		●
		WEIGHT ON WHEELS (SYSTEM 1)		●		
	WEIGHT ON WHEELS (SYSTEM 2)					●
	NOSE WHEEL STEERING			●		●

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
FLIGHT CONTROL	FLAPS	EXTENSION AND ASYM PROTECTION	●	●	●	●
		RETRACTION AND ASYM PROTECTION	●	●	●	●
		RED "FLAPS UNLK" WARNING	●		●	
		AMBER "FLAP ASYM" ALERT		●		●
		IN FLIGHT INHIBITION OF FLAPS UNLK TEST (MAINTENANCE)	●			
		ASYM TEST (MAINTENANCE)	●	●	●	●
	STALL WARNING	STICK PUSHER	●	●	●	●
		STICK PUSHER INHIBITION		●		●
		STICK PUSHER/SHAKER FAULT IND	●		●	
		STALL WARNING		●		●
		STICK SHAKER		●		●
		STICK PUSHER TEST	●	●	●	●
	PITCH TRIM	WHOOLER		●		●
		PITCH TRIM ASYM WARNING		●		●
	RUDDER TRIM	RELEASABLE CENTERING UNIT AUTO DISCONNECT DURING YAW TRIM ACTION OR YAW DAMPER ENGAGEMENT	●		●	
		TRAVEL LIMITATION UNIT AUTOMATIC CONTROL INDICATION	●		●	
	HYDRAULIC	BLUE HYDRAULIC PUMP (CTL)	●			●
		GREEN PUMP LO PR INDICATION		●		

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ICE AND RAIN PROTECTION	ENGINES	ENGINE 1 DE (OR ANTI) ICING	●			●
		ENGINE 2 DE (OR ANTI) ICING		●	●	
		ENGINE 1 DE (OR ANTI) ICING FAULT		●	●	
		ENGINE 2 DE (OR ANTI) ICING FAULT	●			●
	AIRFRAME	AIRFRAME DE-ICING (BOOTS A)	●	●		
		AIRFRAME DE-ICING (BOOTS B)			●	●
		AIRFRAME DE-ICING FAULT	●		●	
	PROPELLERS	MODES AUTO. SEL.		●		●
		PROP 1 ANTI-ICING	●	●		
		PROP 2 ANTI-ICING			●	●
		PROP 1 ANTI-ICING FAULT	●	●		
		PROP 2 ANTI-ICING FAULT			●	●
	WINDOWS	LEFT SIDE WINDOW ANTI-ICING PWR SPLY	●	●		
		RIGHT SIDE WINDOW ANTI-ICING PWR SPLY			●	●
		LEFT SIDE WINDOW ANTI-ICING FAULT DETECTION	●	●		
		RIGHT SIDE WINDOW ANTI-ICING FAULT DETECTION				●
	AAS (IND)					●
GEAR LANDING	LANDING GEAR CONTROL		●		●	
	CENTRAL PANEL	PRIMARY RED UNLK IND	●			
		PRIMARY DOWNLOCK IND	●	●		
	OVERHEAD PANEL	SECONDARY RED UNLK IND			●	●
		SECONDARY DOWNLOCK IND			●	●
	"LDG GEAR NOT DOWN" WARNING			●		●
		BRAKE OVERTEMP ALERT (L/H)		●		
		BRAKE OVERTEMP ALERT (R/H)		●		●
		BRAKE OVERTEMP TEST		●		●
		WEIGHT ON WHEELS (SYSTEM 1)		●		
	WEIGHT ON WHEELS (SYSTEM 2)					●
	NOSE WHEEL STEERING			●		●

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
FLIGHT CONTROL	FLAPS	EXTENSION AND ASYM PROTECTION	●	●	●	●
		RETRACTION AND ASYM PROTECTION	●	●	●	●
		RED "FLAPS UNLK" WARNING	●		●	
		AMBER "FLAP ASYM" ALERT		●		●
		IN FLIGHT INHIBITION OF FLAPS UNLK TEST (MAINTENANCE)	●			
		ASYM TEST (MAINTENANCE)	●	●	●	●
	STALL WARNING	STICK PUSHER	●	●	●	●
		STICK PUSHER INHIBITION		●		●
		STICK PUSHER/SHAKER FAULT IND	●		●	
		STALL WARNING		●		●
		STICK SHAKER		●		●
		STICK PUSHER TEST	●	●	●	●
	PITCH TRIM	WHOOLER		●		●
		PITCH TRIM ASYM WARNING		●		●
	RUDDER TRIM	RELEASABLE CENTERING UNIT AUTO DISCONNECT DURING YAW TRIM ACTION OR YAW DAMPER ENGAGEMENT	●		●	
		TRAVEL LIMITATION UNIT AUTOMATIC CONTROL INDICATION	●		●	
		AILERON LOCKING DEVICE MONITORING	●	●	●	●
HYDRAULIC		BLUE HYDRAULIC PUMP (CTL)	●			●
		GREEN PUMP LO PR INDICATION		●		

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ICE AND RAIN PROTECTION	ENGINES	ENGINE 1 DE (OR ANTI) ICING	●			●
		ENGINE 2 DE (OR ANTI) ICING		●	●	
		ENGINE 1 DE (OR ANTI) ICING FAULT		●	●	
		ENGINE 2 DE (OR ANTI) ICING FAULT	●			●
	AIRFRAME	AIRFRAME DE-ICING (BOOTS A)	●	●		
		AIRFRAME DE-ICING (BOOTS B)			●	●
		AIRFRAME DE-ICING FAULT	●		●	
	PROPELLERS	MODES AUTO. SEL.		●		●
		PROP 1 ANTI-ICING	●	●		
		PROP 2 ANTI-ICING			●	●
		PROP 1 ANTI-ICING FAULT	●	●		
		PROP 2 ANTI-ICING FAULT			●	●
	WINDOWS	LEFT SIDE WINDOW ANTI-ICING PWR SPLY	●	●		
		RIGHT SIDE WINDOW ANTI-ICING PWR SPLY			●	●
		LEFT SIDE WINDOW ANTI-ICING FAULT DETECTION	●	●		
		RIGHT SIDE WINDOW ANTI-ICING FAULT DETECTION				●
	AAS (IND)					●
GEAR LANDING	LANDING GEAR CONTROL		●		●	
	CENTRAL PANEL	PRIMARY RED UNLK IND	●			
		PRIMARY DOWNLOCK IND	●	●		
	OVERHEAD PANEL	SECONDARY RED UNLK IND			●	●
		SECONDARY DOWNLOCK IND			●	●
	"LDG GEAR NOT DOWN" WARNING			●		●
	BRAKE OVERTEMP ALERT (L/H)			●		
	BRAKE OVERTEMP ALERT (R/H)			●		●
	BRAKE OVERTEMP TEST			●		●
	WEIGHT ON WHEELS (SYSTEM 1)			●		
	WEIGHT ON WHEELS (SYSTEM 2)					●
	NOSE WHEEL STEERING			●		●

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SYSTEM		FUNCTION	MODULE			
			1A	1B	2A	2B
ENGINE	ATPCS	ATCPS ARM LIGHT		●		●
		ENGINE 1 UPTRIM	●	●		
		PROP 1 A/FEATH	●	●		
		INHIBITION ON GROUND OF ENG 1 ELECTRICAL FEATH PUMP ACTIVATION BY CL 1.	●	●		
		ENGINE 2 UPTRIM			●	●
		PROP 2 A/FEATH			●	●
		INHIBITION ON GROUND OF ENG 2 ELECTRICAL FEATH PUMP ACTIVATION BY CL 2.			●	●
	PROP BRAKE	BRAKING			●	●
		RELEASING			●	●
		PROP BRAKE UNLK IND		●		●
		AUTOMATIC DC AUX PUMP CUT OFF AFTER PROP BRAKE LOCKING				●
		FAULT START 2 ILLUMINATION WHEN PROP BRAKE ENGAGED AND GUST LOCK NOT ENGAGED			●	
		PROP BRK ILLUMINATION ON CAP WHEN GUST LOCK IS RELEASED AND PROP BRK STILL ENGAGED		●		●
		DC AUX PUMP				●
		INHIBITION OF LOCAL "OIL LOW PRESS" ALERT DURING ENGINE 1 SHUT-DOWN		●		
		INHIBITION OF LOCAL "OIL LOW PRESS" ALERT DURING ENGINE 2 SHUT-DOWN				●
	IDLE GATE	IDLE GATE CTL	●		●	
		IDLE GATE AMBER ALERT			●	
	START	START IND LIGHTS	●		●	
		HIGH FLIGHT IDLE		●		●

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10.4 ELECTRICAL SUPPLY/SYSTEM MONITORING

ELECTRICAL SUPPLY

Each module is supplied by two separate electrical sources (primary and alternate).

Power supply switching is automatic :

- From primary to alternate if primary V < 19V and if alternate V > 22V,
- From alternate to primary if primary V > 22V.

UNIT	DC BUS SUPPLY (C/B)
MFC 1A	
Primary Supply	DC ESS BUS (Upper Panel PRIM SPLY)
Alternate Supply	HOT EMER BAT BUS (Upper Panel ALTN SPLY)
MFC 1B	
Primary Supply	DC BUS 1 (Upper Panel PRIM SPLY)
Alternate Supply	DC EMER BUS (Upper Panel ALTN SPLY)
MFC 2A	
Primary Supply	DC EMER BUS (Upper Panel PRIM SPLY)
Alternate Supply	HOT MAIN BAT BUS (Upper Panel ALTN SPLY)
MFC 2B	
Primary Supply	DC BUS 2 (Upper Panel PRIM SPLY)
Alternate Supply	DC EMER BUS (Upper Panel ALTN SPLY)

SYSTEM MONITORING

The following conditions are monitored by visual and aural alerts :

- MFC module (s) failed
 - See MFC "MODULE (S)" FAULT procedure in chapter 2.05.10.

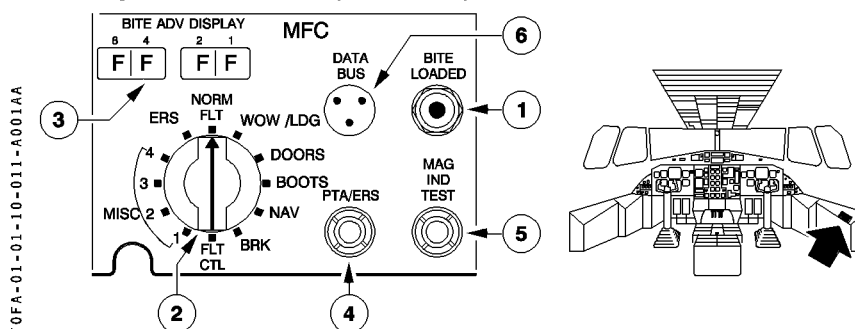
	MFC		1.01.10		
			P 11	001	
	GENERAL				DEC 95

AB

10.5 LATERAL MAINTENANCE PANEL

The right side maintenance panel includes a readout display for failures of systems linked to MFC.

Recording of these failures is performed by the MFC 1A module.



- ① "BITE LOADED" Magnetic indicator.
Indicates that a failure has been recorded by the maintenance system.
- ② SYSTEM SELECTOR switch
Normally placed in NORM FLT position (in all other positions the "MAINT PNL" light comes on amber on CAP).
During maintenance operations, enables the various systems to be selected, in order to consult the failures which have affected the system involved.
- ③ BITE ADVISORY DISPLAY (Failure Display)
Indicates, through illuminated lights, the code of the failure recorded (the combinations of illumination of these four lights enable up to 14 failures per system to be coded : the code/failure relationships are given in the following pages).
- ④ PTA/ERS pb
 - When a system is selected, PTA function (Push To Advance) enables recorded failures to be run on the failure display. FFFF code indicates the end of the list for the selected system.
 - When ERS position is selected :
 - If PTA/ERS pb is depressed for less than 2 seconds, ARINC test is performed and "-FF-" code is displayed if successful.
 - If PTA/ERS pb is depressed for more than 5 seconds, system memory is erased and "F--F" code is displayed during erasing.
- ⑤ TEST pb
Used to check operation of the BITE LOADED magnetic indicator.
When pressed for more than 3 s., the magnetic indicator is activated.
- ⑥ CONNECTOR OUTLET
Enables the optional MTS (Maintenance Test Set) system to be connected.

R

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AA

SYS	:	WOW & L/G					
CODE	8	4	2	1		DEFINITION	
1				F		Right Main Gear Prime DnLk Prox Switch Fail	
2			F			Nose Gear Prime DnLk Prox Switch Fail	
3			F	F		Left Main Gear Prime DnLk Prox Switch Fail	
4		F				Right Main Gear Sec. DnLk Prox Switch Fail	
5		F		F		Nose Gear Sec. DnLk Prox Switch Fail	
6		F	F			Left Main Gear Sec. DnLk Prox Switch Fail	
7		F	F	F		Left Main Gear WOW 1 Prox. Switch Fail	
8	F					Nose Gear WOW 1 Prox. Switch Fail	
9	F			F		Right Main Gear WOW 1 Prox. Switch Fail	
A	F		F			Left Main Gear WOW 2 Prox. Switch Fail	
B	F		F	F		Nose Gear WOW 2 Prox. Switch Fail	
C	F	F				Right Main Gear WOW 2 Prox. Switch Fail	
D							
E							

SYS	:	DOORS					
CODE	8	4	2	1		DEFINITION	
1				F			
2			F				
3			F	F		Left Aft Door Unlock Prox Switch 1 Fail	
4		F				Left Aft Door Unlock Prox Switch 2 Fail	
5		F		F			
6		F	F				
7		F	F	F		Right Aft Door Unlock Prox Switch 1 Fail	
8	F					Right Aft Door Unlock Prox Switch 2 Fail	
9	F			F		Emergency Hatch Prox. Switch Fail	
A	F		F			DOB CD HOOKS ENGAGED MAINT IND	
B	F		F	F		DOB CD LATLK LKD MAINT IND	
C	F	F				DOB CD HOOKS DISENG MAINT IND	
D	F	F		F			
E	F	F	F				

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AA

SYS : BOOTS						DEFINITION
CODE	8	4	2	1		
1				F		Left Engine Boot A Fault
2			F			Right Engine Boot A Fault
3			F	F		Left Engine Boot A Fault
4		F				Right Engine Boot B Fault
5		F		F		Left Wing Boot A Fault
6		F	F			Right Wing Boot A Fault
7		F	F	F		Left Wing Boot B Fault
8	F					Right Wing Boot B Fault
9						
A	F		F			Inner Wing Boot A Fault
B						
C	F	F				Inner Wing Boot B Fault
D	F	F				Horizontal tailplane Boot A Fault
E	F	F	F			Horizontal tailplane Boot B Fault

R
R
R
R
R

SYS : NAV						DEFINITION
CODE	8	4	2	1		
1				F		AHRS 1 Overheat
2			F			AHRS 2 Overheat
3			F	F		AHRS 3 Overheat
4		F		F		EADI 1 Overheat
5		F		F		EADI 2 Overheat
6		F	F			EHSI 1 Overheat
7		F	F	F		EHSI 2 Overheat
8	F					FMS Overheat
9	F			F		SGU 1 Overheat
A	F		F			SGU 2 Overheat
B	F		F	F		AFCS Anomaly
C						
D						
E						

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AA

SYS : BRK						DEFINITION
CODE	8	4	2	1		
1				F		Left Inboard Brake Overheat
2			F			Left Outboard Brake Overheat
3			F	F		Right Inboard Brake Overheat
4		F				Right Outboard Brake Overheat
5		F		F		L.INBD XMITTER PWR LOSS/OUTPUT OPEN
6		F	F			L.OUTB XMITTER PWR LOSS/OUTPUT OPEN
7		F	F	F		R.INBD XMITTER PWR LOSS/OUTPUT OPEN
8	F					R.OUTB XMITTER PWR LOSS/OUTPUT OPEN
9	F			F		L.INBD SNSR/XMITTER TEST FAIL
A	F		F			L.OUTB SNSR/XMITTER TEST FAIL
B	F		F	F		R.INBD SNSR/XMITTER TEST FAIL
C	F	F				R.OUTB SNSR/XMITTER TEST FAIL
D						
E						

SYS : FLT CTL						DEFINITION
CODE	8	4	2	1		
1				F		ENG 1 TORQUE INFORMATION FAULT
2			F			ENG 2 TORQUE INFORMATION FAULT
3			F	F		Radio altimeter valid and RA continuously < 500 (IAS1)
4		F				Radio altimeter valid and RA continuously < 500 (IAS 2)
5		F		F		Radio altimeter valid and RA continuously > 500 (IAS 1)
6		F	F			Radio altimeter valid and RA continuously > 500 (IAS 2)
7						
8	F					TRIM DIRECTION FAULT
9	F			F		FLAPS POSITION SWITCH FAULT
A						
B						
C	F	F				STICK PUSHER : LEFT ALPHA PROBE DISAGREE
D	F	F		F		STICK PUSHER : RIGHT ALPHA PROBE DISAGREE
E						

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AA

SYS : BOOTS						DEFINITION
CODE	8	4	2	1		
1				F		Left Engine Boot A Fault
2			F			Right Engine Boot A Fault
3			F	F		Left Engine Boot A Fault
4		F				Right Engine Boot B Fault
5		F		F		Left Wing Boot A Fault
6		F	F			Right Wing Boot A Fault
7		F	F	F		Left Wing Boot B Fault
8	F					Right Wing Boot B Fault
9						
A	F		F			Inner Wing Boot A Fault
B						
C	F	F				Inner Wing Boot B Fault
D	F	F				Horizontal tailplane Boot A Fault
E	F	F	F			Horizontal tailplane Boot B Fault

R
R
R
R
R

SYS : NAV						DEFINITION
CODE	8	4	2	1		
1				F		AHRS 1 Overheat
2			F			AHRS 2 Overheat
3			F	F		AHRS 3 Overheat
4		F		F		EADI 1 Overheat
5		F		F		EADI 2 Overheat
6		F	F			EHSI 1 Overheat
7		F	F	F		EHSI 2 Overheat
8	F					FMS Overheat
9	F			F		SGU 1 Overheat
A	F		F			SGU 2 Overheat
B	F		F	F		AFCS Anomaly
C						
D						
E						

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	GENERAL						NOV 96

AA

SYS : BRK						DEFINITION
CODE	8	4	2	1		
1				F		Left Inboard Brake Overheat
2			F			Left Outboard Brake Overheat
3			F	F		Right Inboard Brake Overheat
4		F				Right Outboard Brake Overheat
5		F		F		L.INBD XMITTER PWR LOSS/OUTPUT OPEN
6		F	F			L.OUTB XMITTER PWR LOSS/OUTPUT OPEN
7		F	F	F		R.INBD XMITTER PWR LOSS/OUTPUT OPEN
8	F					R.OUTB XMITTER PWR LOSS/OUTPUT OPEN
9	F			F		L.INBD SNSR/XMITTER TEST FAIL
A	F		F			L.OUTB SNSR/XMITTER TEST FAIL
B	F		F	F		R.INBD SNSR/XMITTER TEST FAIL
C	F	F				R.OUTB SNSR/XMITTER TEST FAIL
D						
E						

SYS : FLT CTL						DEFINITION
CODE	8	4	2	1		
1				F		ENG 1 TORQUE INFORMATION FAULT
2			F			ENG 2 TORQUE INFORMATION FAULT
3			F	F		Radio altimeter valid and RA continuously < 500 (IAS1)
4		F				Radio altimeter valid and RA continuously < 500 (IAS 2)
5		F		F		Radio altimeter valid and RA continuously > 500 (IAS 1)
6		F	F			Radio altimeter valid and RA continuously > 500 (IAS 2)
7						
8	F					TRIM DIRECTION FAULT
9	F			F		FLAPS POSITION SWITCH FAULT
A	F		F			SPRING TAB PIN PROG NOT GROUNDED
B						
C	F	F				STICK PUSHER : LEFT ALPHA PROBE DISAGREE
D	F	F		F		STICK PUSHER : RIGHT ALPHA PROBE DISAGREE
E						

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	GENERAL						DEC 95

AA

SYS : MISC 1						DEFINITION
CODE	8	4	2	1		
1				F		AIR BLEED : LH HP VALVE MAINT INDICATION
2			F			AIR BLEED : RH HP VALVE MAINT INDICATION
3			F	F		ELEC. LH OPEN WIRE MAINT IND
4		F				ELEC. RH OPEN WIRE MAINT IND
5		F		F		ELEC : SVCE/UTIL CNTOR FAULT MAINT IND
6		F	F			AIR COND : LH PACK MAINT OVHT IND
7		F	F	F		AIR COND : RH PACK MAINT OVHT IND
8	F					ANTI-ICE : LH MAIN W/S CTL OPEN FAIL SIGNAL
9	F			F		ANTIICE : RH MAIN W/S CTL OPEN FAIL SIGNAL
A						
B	F		F	F		AFTER CARGO EXTINGUISHER FAILED
C	F	F				AUX AFTER CARGO EXTINGUISHER FAILED
D	F	F		F		ADC1 OR ADC1 & 2 SWITCHES DISAGREE
E	F	F	F			ADC2 OR ADC2 & 1 SWITCHES DISAGREE

* If installed

SYS : MISC 2						DEFINITION
CODE	8	4	2	1		
1				F		ELEC : STBY CONTACTOR DEFAULT
2			F			ANTI-ICE AUTO MODE SWITCHES DISAGREE
3			F	F		COM : FDAU MEMORY FULL
4		F				QUICK ACCES RECORDER FULL
5		F		F		Engine 1 Feeder Jet Pump Fault
6		F	F			Engine 2 Feeder Jet Pump Fault
7		F	F	F		EEC 1 FAULT LATCH
8	F					EEC 2 FAULT LATCH
9	F			F		Fin Optional Boots A Fault
A	F		F			Fin Optional Boots B Fault
B						
C	F	F				PROP BRAKE : SWITCHES DISAGREE
D	F	F		F		ANTI-ICE : LEFT PROP HEATER FAULT
E	F	F	F			ANTI-ICE : RIGHT PROP HEATER FAULT

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	GENERAL						DEC 95

AA

SYS : MISC 3						DEFINITION
CODE	8	4	2	1		
1				F		MODULE 1A PIN-PROG DISAGREE
2			F			MODULE 1B PIN-PROG DISAGREE
3			F	F		MODULE 2A PIN-PROG DISAGREE
4		F				MODULE 2B PIN-PROG DISAGREE
5		F		F		MODULE 1A PIN-PROG ACQUISITION FAULT
6		F	F			MODULE 1B PIN-PROG ACQUISITION FAULT
7		F	F	F		MODULE 2A PIN-PROG ACQUISITION FAULT
8	F					MODULE 2B PIN-PROG ACQUISITION FAULT
9	F			F		ANC SYSTEM OPERATIVE FAULT
A	F		F			ANC SYSTEM INOPERATIVE FAULT
B						
C						
D						
E						

SYS : MISC 4						DEFINITION
CODE	8	4	2	1		
1				F		PROPELLER ELECTRONIC CTRL 1 FAIL
2			F			PROPELLER INTERFACE UNIT 1 FAIL
3			F	F		PROPELLER ELECTRONIC CTRL 2 FAIL
4		F				PROPELLER INTERFACE UNIT 2 FAIL
5						
6						
7						
8						
9						
A						
B						
C						
D						
E						

	MFC	1.01.10		
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	GENERAL			DEC 95

AA

10.6 SCHEMATIC

