DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A7EU
Revision 17
DASSAULT AVIATION
FAN JET FALCON
FAN JET FALCON SERIES C
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March 2, 2010

TYPE CERTIFICATE DATA SHEET NO. A7EU

This data sheet which is a part of Type Certificate No. A7EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder. DASSAULT AVIATION
9 Rond Point des Champs Elysees
75008 Paris
France

I. **Model FAN JET FALCON** (also called Basic FAN JET FALCON) (Transport Aircraft), approved 9 June 1965.
(See NOTE 4 - Aircraft modified in accordance with A.M.D. S.B. No. 155 (Performance Kits) or S.B. No. 361 (CF700-2D Engines, 3-disc brakes, etc.)
(See NOTE 12 - Aircraft modified in accordance with A.M.D. S.B. No. 362 (3-disc brakes installation).

Engines. 2 General Electric CF-700-2C Turbine Engines (See NOTE 14)
(FAA Engine Type Certificate Data Sheet No. E7EA)

Engine Limits.

Maximum continuous static thrust, standard day, sea level conditions, lb. (unrestricted)	4,000
Maximum take-off static thrust, standard day, sea level conditions, lb. (5 minutes)	4,200
Maximum take-off static thrust, sea level, temperature below 45ºF, lb. (5 minutes)	4,360
The CF-700-2C engine will develop: maximum take-off static thrust, sea level, up to 86ºF	4,125

Engine operation must be in accordance with procedures in D.G.A.C. Approved Airplane Flight Manual.

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I. Model FAN JET FALCON (cont'd)

Engine Limits. (Continued). Maximum permissible engine rotational speeds:

Gas generator:		r.p.m.		percent
Take-off		16,700		101.2
Maximum Continuous		16,500		100
For two minutes	17,160		104	
Transient		17,820		108
Fan:				
Maximum Continuous		9,000		105
For two minutes	9,300		108.4	
Transient		9,700		113

Maximum permissible turbine outlet gas temperature (T5):

Take-off (5 minutes)	730ºC
Maximum Continuous	705ºC (See NOTE 15)
Maximum transient, 10 sec.	782ºC
Maximum transient for starting	854ºC

Fuel and oil pressure limits:

Fuel:	Minimum, 5 p.s.i.g. above true fuel vapor pressure	
	Maximum, 50 p.s.i.g.	
Oil:	At idle	5 p.s.i.g. minimum
	Operating range	8 p.s.i.g. - 65 p.s.i.g.

Maximum oil temperature:

Service Bulletins A.M.D. and G.E. 72-51 not incorporated:	193ºC
Service Bulletins A.M.D. and G.E. 72-51 incorporated :	185ºC

Airspeed Limits (IAS).

V_{MO} (Maximum operating)
350 kts at sea level to 370 kts at 23,400 feet.
Straight line variation between these two points. (See NOTE 11)

M_{MO} (Maximum operating)
23,400 feet and above, M = 0.85 (See NOTE 11)

V_A (maneuvering) 200 kts

V_{FE} (flap speeds):

Deflection	Kts
40º	180
25º	190
15º	200

V_{LO} (Landing gear operation):

Extend	190 kts
Retract	190 kts

V_{LE} (Landing gear extended): 220 kts
V_{LLO} (Landing lights operation): 220 kts
V_{LLE} (Landing lights extended): 220 kts
V_{WWO} (Windshield wipers operation): 180 kts
V_{MC} (Minimum control speed (See NOTE 13)

In flight (Flaps 15º)	110 kts
On ground (Flaps 15º)	114 kts

I. Model FAN JET FALCON (cont'd)

Maximum Weights.

RAMP	26,675 lb.
Take-off (brake release)	26,455 lb.
Landing	25,200 lb.
Zero fuel	18,956 lb. (See NOTES 17, 18)

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks. (See NOTE 23)

Tank	Usable Fuel U.S. Gals	Usable Fuel Pounds	Arm (in)
Left wing	552.0	3,371	25.8
Right wing	552.0	3,371	25.8
Left fuselage	69.5	470	131.5
Right fuselage	69.5	470	131.5
TOTAL	1,243.0	8,402	37.1

Stabilizer Movements.

S.B. 179 not incorporated:

	Nose-down	Nose-up
Electrical stops	0º	- 7º
Mechanical stops	+ 10 '	- 7º10'
Cruise limit, droop L.E. retracted	0º	- 3º

S.B. 179 incorporated:

	Nose-down	Nose-up
Electrical stops	0º	- 7º45'
Mechanical stops	+ 10 '	- 7º55'
Cruise limit, droop L.E. retracted		
S.B. 480 not incorp.	0º	- 3º30'
S.B. 480 incorp.	0º	- 4º

Control Surface Movements.

Elevator	Up	16º	Down	6º
Rudder	Right	23º	Left	23º (See NOTE 13)
Aileron	Up	16º	Down	14º30'
Flaps (total)	Down	40º		
Airbrakes	Up	70º		
Wing droop leading edges	Down	25º		

For detail rigging and tolerance consult Maintenance Manual.

I. Model FAN JET FALCON (cont'd)

C.G. Range (Gear Down). (See NOTES 18, 20)

A.M.D. Service Bulletin No. 179 (Increased Stabilizer Travel) not incorporated:

Weight (lb)	Forward Limit % MAC			Aft Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
26,455	19	19		27.5	27.5	
25,200	19	19	19	28.5	28.5	28.5
23,000	19	16	16	28.5	28.5	28.5
19,800	19	16	14 flaps ext.	28.5	28.5	28.5
18,956	19	16	14	28.5	28.5	28.5

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in - lb.
Main gear retraction has no effect on airplane CG.

II. Model FAN JET FALCON SERIES C (Transport Aircraft), approved 24 February 1970.

The FAN JET FALCON SERIES C differs from the FAN JET FALCON mainly by: installation of 3-disc brakes, increase in capacity of rear compartment fuel tanks, extension of CG limitations.
(See NOTE 14 - Aircraft modified in accordance with A.M.D. S.B. 450 (CF700-2D engine installation)

Only two "Fan Jet Falcon Series C" model have been produced. These airplanes, serial number 237 and 238, have been converted into "Fan Jet Falcon Series D" after installation of CF-700-2D-2 engines (AMD M1570).

III. Model FAN JET FALCON SERIES D (Transport Aircraft), approved 27 June 1968.

The FAN JET FALCON SERIES D differs from the FAN JET FALCON mainly by: installation of G.E. CF-700-2D engines, 3-disc brakes, increase in capacity of rear compartment fuel tanks, extension of weight and CG limitations and increased horizontal stabilizer deflection.

Engines. 2 General Electric CF-700 2D Turbine Engines. (See NOTE 14).

Engine Limits.

Maximum continuous static thrust, standard day, sea level conditions, lb. (unrestricted) 4,120

Maximum take-off static thrust, standard day, sea level conditions, lb. (5 minutes) 4,325

Maximum take-off static thrust, sea level, temperature below 48ºF, lb. (5 minutes) 4,453

The CF-700-2D engine will develop:
maximum take-off, static thrust, sea level, up to 86ºF 4,250

Engine operation must be in accordance with procedures in D.G.A.C. Approved Airplane Flight Manual.

Maximum permissible engine rotational speeds:

Gas Generator:	r.p.m.	percent
Take-off	16,700	101.2
Maximum Continuous	16,500	100
For two minutes	17,160	104

	Transient	17,820	108

III. Model FAN JET FALCON SERIES D (cont'd)

Engine Limits (cont'd)

Fan:

Maximum Continuous	9,000	105
For two minutes	9,300	108.5
Transient	9,700	113

Maximum permissible turbine outlet gas temperature (T5):

Take-off (5 minutes)		730º (See NOTE 15)
Maximum Continuous		712º (See NOTE 15)
Maximum transient, 10 sec.	782ºC	
Maximum transient for starting		854ºC

Fuel and oil pressure limits:

Fuel: Minimum, 5 p.s.i.g. above true fuel vapor pressure
Maximum, 50 p.s.i.g.

Oil: At idle 5 p.s.i.g. minimum
Operating range 8 p.s.i.g. to 65 p.s.i.g.

Maximum oil temperature: 185ºC

Airspeed Limits (IAS).

V_{MO} (Maximum operating):
350 kts at sea level to 370 kts at 23,400 feet.
Straight line variation between these two points. (See NOTE 11)

V_{MO} (Maximum operating):
23,400 feet and above, M = 0.85 (See NOTE 11)

V_A (Maximum): 200 kts

V_{FE} (Flaps speeds):

Deflection	Kts
40º	180
25º	190
15º	200

V_{LO} (Landing gear operation):

Extend	190 kts
Retract	190 kts

V_{LE}	(Landing gear extended):	220 kts
V_{LLO}	(Landing lights operation):	220 kts
V_{LLE}	(Landing lights extended):	220 kts
V_{WWO}	(Windshield wipers operation):	180 kts
V_{MC}	(Minimum control speed) (See NOTE 13)	
	In flight (Flaps 15º)	110 kts
	On ground (Flaps 15º)	110 kts

Maximum Weights.

Maximum ramp weight	27,537 lb.
Maximum take-off weight	27,337 lb. (See NOTE 18)
Maximum landing weight	26,036 lb.
Maximum zero fuel weight	18,956 lb. (See NOTES 17, 18)

III. Model FAN JET FALCON SERIES D (cont'd)

Fuel Capacity.

(See NOTE 1 (g) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks: (See NOTE 22)

Tank	Usable Fuel		Arm (in)
	U.S. Gals	Pounds	
Left wing	552.0	3,371	25.8
Right wing	552.0	3,371	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,321.0	8,912	43.2

Stabilizer Movements.

	Nose-down	Nose-up
Electrical stops	0º	- 7º45'
Mechanical stops	+ 10'	- 7º55'
Cruise limit, droop L.E. retracted		
S.B. 480 not incorp.	0º	- 3º30'
S.B. 480 incorp.	0º	- 4º

Control Surface Movements.

Elevator	Up	16º	Down	6º
Rudder	Right	23º	Left	23º (See NOTE 13)
Aileron	Up	16º	Down	14º30'
Flaps (total)	Down	40º		
Airbrakes	Up	70º		
Wing droop leading edge	Down	25º		

For detail rigging and tolerances consult Maintenance Manual.

C.G. Range (Gear extended, flaps retracted).

Weight (lb)	Forward Limit % MAC			AFT limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
27,337	20.4	20.4		27.0	27.0	
26,036	19.0	19.0	19.0	27.9	27.9	27.9
25,200	19.0			28.5	28.5	28.5
23,000	19.0	16.0	16.0	28.5	28.5	28.5
19,800	19.0	16.0	14.0 Flaps ext.	28.5	28.5	28.5

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane C.G.

IV. Model FAN JET FALCON SERIES E (Transport Aircraft), approved 24 February 1970.

The FAN JET FALCON SERIES E differs from the FAN JET FALCON SERIES D mainly by: extension of weight and CG limitations, installation of CF-700-2D-2 engines, new VMC limits, extension of maximum operating speeds VMO-MMO and increased elevator deflection.
(See NOTE 14(c)) - Aircraft modified in accordance with A.M.D. S.B. No. 452 (CF700-2C engines installation)

Engines. 2 General Electric CF-700-2D-2 Turbine Engines.

Engine Limits.

Maximum continuous static thrust, standard day, sea level conditions, lb. (unrestricted)	4,120
Maximum take-off static thrust, standard day, sea level conditions, lb. (5 minutes)	4,390
Maximum take-off static thrust, sea level, temperature below 48ºF, lb. (5 minutes)	4,453
The CF-700-2D-2 engine will develop: maximum take-off static thrust, sea level, up to 86ºF	4,315
The CF-700-2D-2 engines, when modified according to S.B. GE CF-700-12-128, will develop maximum static thrust, sea level, up to 59ºF, lb.	4,500

Engine operation must be in accordance with procedures in D.G.A.C. Approved Airplane Flight Manual

Maximum permissible engine rotational speeds:

Gas generator:	r.p.m.	percent
Take-off	16,700	101.2
Maximum continuous	16,500	100
For two minutes	17,160	104
Transient	17,820	108
Fan:		
Maximum continuous	9,000	105
For two minutes	9,300	108.5
Transient	9,700	113

Maximum permissible turbine outlet gas temperature (T5):

Take-off (5 minutes)	740ºC
Maximum continuous	724ºC
Maximum transient, 10 sec.	782ºC
Maximum transient for starting	854ºC

Fuel and oil pressure limits:

Fuel: Minimum, 5 p.s.i.g. above true fuel vapor pressure
Maximum, 50 p.s.i.g.

Oil: At idle 5 p.s.i.g. minimum
Operating range 8 p.s.i.g. to 65 p.s.i.g.

Maximum oil temperature: 185ºC

IV. Model FAN JET FALCON SERIES E (cont'd)

Airspeed Limits (IAS).

V_{MO} (Maximum operating):
350 kts at sea level to 390 kts at 23,000 feet.
Straight line variation between these two points.

M_{MO} (Maximum operating):
23,000 feet and above, M = 0.88

V_A (Maneuvering) 200 kts

V_{FE} (Flap speeds):

Deflection	Kts
40º	180
25º	190
15º	200

V_{LO} (Landing gear operation):
Extend 190 kts
Retract 190 kts
V_{LE} (Landing gear extended): 220 kts
V_{LLO} (Landing lights operation): 220 kts
V_{LLE} (Landing lights extended): 220 kts
V_{WWO} (Windshield wipers operation): 180 kts
V_{MC} (Minimum control speed):
In flight (Flaps 15º) 100 kts
On ground (Flaps 15º) 102 kts

Maximum Weights.

Maximum ramp and take-off weight 28,660 lb.
Maximum landing weight 27,320 lb.
Maximum zero fuel weight 19,600 lb. (See NOTE 17)

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks: (See NOTE 22)

	Usable Fuel		Arm
Tank	U.S. Gals.	Pounds	(in)
Left wing	552.0	3,371	25.8
Right wing	552.0	3,371	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,321.0	8,912	43.2

Stabilizer Movements.

	Nose-down	Nose-up
Electrical stops	0º	- 7º45'
Mechanical stops	- 10'	- 7º55'
Cruise limits, droop L.E. retracted		
S.B. 480 not incorp.	0º	- 3º30'
S.B. 480 incorp.	0º	- 4º

IV. Model FAN JET FALCON SERIES E (cont'd)

Control Surface Movements.

Elevator	Up 16º	Down 9º
Rudder	Right 30º	Left 30º
Aileron	Up 16º	Down 14º30'
Flaps (total)	Down 40º	
Airbrakes	Up 70º	
Wing droop leading edges	Down 25º	

For detail rigging and tolerances consult Maintenance Manual.

C.G. Range (Gear extended, flaps retracted.

Weight (lb)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
28,660	20.0	20.0				
27,320	19.0	19.0	19.0			
23,000	19.0	16.0	16.0	28.5		
19,600	19.0	16.0	16.0			
19,000	19.0	16.0	14.0 flaps ext.			

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

V. Model FAN JET FALCON SERIES F (Transport Aircraft), approved 24 February 1970.

The FAN JET FALCON SERIES F differs from the FAN JET FALCON SERIES D mainly by: installation of new high lift devices on wing leading edge, extension of stabilizer travel, extension of weight and CG limitations, increase in capacity of wing fuel tanks, installation of CF-700-2D-2 engines, air-data change, new VMC limits, extension of maximum operating speeds VMO-MMO.

Engines. 2 General Electric CF-700-2D-2 Turbine Engines.

Engine Limits. See Engine Limits under Section IV.

Airspeed Limits (IAS).

V_{MO} (Maximum operating):
350 kts at sea level to 390 kts at 23,000 feet.
Straight line variation between these two points.

M_{MO} (Maximum operating):
23,000 feet and above, M = 0.88

V_A (Maneuvering): 200 kts

V_{MO} (Flap speeds):

Deflection	Kts
40º	180
10º and 25º	190

V_{LA} (Landing gear operation):
Extend 190 kts
Retract 190 kts

V_{LE} (Landing gear extended): 220 kts
V_{LLO} (Landing lights operation): 220 kts
V_{LLE} (Landing lights extended): 220 kts
V_{WWO} (Windshield wipers operation): 180 kts
VMC (Minimum control speed):
In flight (Flaps 10º) 99 kts
On ground (Flaps 10º) 100 kts

V. Model FAN JET FALCON SERIES F (cont'd)

Maximum Weights.

Maximum ramp and take-off weight	28,660 lb.
Maximum landing weight	27,320 lb.
Maximum zero fuel weight	19,600 lb. (See NOTE 17)

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks: (See NOTE 22)

Tank	Usable Fuel		Arm
	U.S. Gals.	Pounds	(in)
Left wing	572.0	3,864	25.8
Right wing	572.0	3,864	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,361.0	9,178	42.7

Stabilizer Movements.

	Nose-down	Nose-up
Electrical stops	0º	- 10º
Mechanical stops	+10'	- 10º10'
Cruise limit, slats L.E. retracted	0º	- 4º

Control Surface Movements.

Elevator	Up	16º	Down	9º
Rudder	Right	30º	Left	30º
Aileron	Up	16º	Down	14º30'
Flaps (total)	Down	40º		
Airbrakes	Up	70º		
Wing slats	Down	17º30' (inboard) and 25º (outboard)		

For detail rigging and tolerances consult Maintenance Manual.

C.G. Range (Gear extended), flaps retracted)

Weight (lb)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
26,660	20.0	20.0		28.5		
27,320	19.0	19.0	19.0			
23,000	19.0	16.0	16.0			
19,600	19.0	16.0	16.0			
19,000	19.0	16.0	14.0 flaps ext.			

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

VI. Model FAN JET FALCON SERIES G (Transport Airplane), approved July 31, 1981.

The FAN JET FALCON SERIES G differs from the FAN JET FALCON SERIES F mainly by: installation of ATF3-6-2C engines and new nacelles, adaptation of bleed air, anti-ice, hydraulic, electrical, and engine control systems, extension of weight limitations and change in CG range, increase in rudder travel and new VMC, automatic extension of leading edge slats at low speeds, new air data system and new VMO-MMO limitations, new autopilot and auto-throttle systems.

Engines.

2 Garrett Turbine Engine Company ATF3-6-2C turbine engines. (P/N 3001400-1) (See NOTE 25)

Engine Limits.

Maximum continuous static thrust:
sea level conditions, at 59ºF, lb 5.019

Maximum take-off static thrust:
sea level conditions, at 59ºF, lb (5 minutes) 5,440

Engine operation must be in accordance with procedures in D.G.A.C. Approved Airplane Flight Manual.

Maximum permissible engine rotational speeds:

Fan Rotor (N1)	r.p.m.	percent
Continuous	10,400	100
30-second transient	10,400	100
5-second transient	10,400	100

Low Pressure Rotor (N2)	r.p.m.	percent
Continuous	17,200	100
30-second transient	17,286	100.5
5-second transient	17,544	102

High Pressure Rotor (N3)	r.p.m.	percent
Continuous	36,900	100
30-second transient	37,269	101
5-second transient	38,007	103

Maximum Interstage Turbine Temperature (ITT):

Take-off (5 minutes)	1850ºF	(1010ºC)
Take-off (5 second transient)	1868ºF	(1020ºC)
Maximum Continuous	1778ºF	(970ºC)
Starting	1850ºF	(1010ºC)
Starting (5 second transient)	1868ºF	(1020ºC)

Oil Pressure Limits (psig):

Take-off, climb, flight idle and cruise	55 to 83
Ground idle	30 to 83
Transient (3 minutes maximum)	90 maximum

Oil Inlet Temperature ºF (ºC):

Take-off (maximum)	360	(182)
Take-off (minimum)	122	(50)
Continuous operation (Maximum)	360	(182)
Continuous operation (Minimum)	122	(50)
Starting (minimum)	-40	(-40)
Starting (3 minutes)	370	(188)

VI. Model FAN JET FALCON SERIES G (cont'd)

Airspeed Limits (IAS).

V_{MO} (Maximum operating):
350 kts at sea level to 380 kts at 20,000 feet.
Straight line variation between these two points.
380 kts from 20,000 ft to 22,500 feet.

M_{MO} (Maximum operating):
22,500 feet and above, M = 0.855

V_A (Maneuvering): 220 kts

V_{FE} (Flap speeds):

Deflection	Kts
40º	180
10º and 20º	190

V_{LO} (Landing gear operation):
Extend 190 kts
Retract 190 kts

V_{LE} (Landing gear extended): 220 kts

V_{LLO} (Landing lights operation): 220 kts

V_{LLE} (Landing lights extended): 220 kts

V_{WWO} (Windshield wipers operation): 220 kts

V_{MC} (Minimum control speed):
In flight (Flaps 10º) 103 kts (CAS)
On ground (Flaps 10º) 108 kts (CAS)

Maximum Weights.

Maximum ramp and take-off weight	32,000 lb.
Maximum landing weight	27,560 lb.
Maximum zero fuel weight	22,500 lb.

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks.

Tank	Usable Fuel		Arm
	U.S. Gals	Pounds	(in)
Left wing	572.0	3,864	25.8
Right wing	572.0	3,864	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,361.0	9,178	42.7

Stabilizer Movements.

	Nose-down	Nose-up
Electrical stops	0º	- 10º
Mechanical stops	+ 10º	- 10º10'
Cruise limit, L.E. Slats retracted	0º	- 4º

Control Surface Movements.

Elevator	Up	16º	Down	9º
Rudder	Right	36º	Left	36º
Aileron	Up	16º	Down	14º30'
Flaps (total)	Down	40º		
Airbrakes	Up	70º		
Wing slats	Down	17º30' (inboard) and 25º (outboard)		

For detail rigging and tolerance consult Maintenance Manual.

VI. Model FAN JET FALCON SERIES G (cont'd)

C.G. Range (Gear extended, flaps retracted).
(See NOTE 20)

Weight (lb)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
32,000	19.2	19.2				
27,500	19.0	18.0	17.6			
23,400	19.0	18.0	16.0		30	

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

VII. Model MYSTERE-FALCON 200 (Transport Aircraft) approved July 6, 1982.

The MYSTERE-FALCON 200 differs from the FAN JET FALCON SERIES F mainly by: installation of ATF3-6A-4C engines and new nacelles, adaptation of bleed air, anti-ice, fuel, hydraulic, electrical, air conditioning, pressurization and engine control systems, new design of fuselage fuel tanks and increase of fuel capacity, extension of weight limitation and change in CG range, automatic extension of leading edge slats at low speeds, new air-data system and new VMO/MMO limitations, new autopilot system and improved avionics.

Engines.

2 Garrett Turbine Engine Company ATF3-6A-4C turbine engines.
(P/N 3003100-1)

Engine Limits.

Maximum continuous static thrust:
sea level conditions, at 59ºF, lb 5,101

Maximum take-off static thrust:
sea level conditions, at 59ºF, lb (5 minutes) 5,200

Engine operation must be in accordance with procedures in D.G.A.C. Approved Airplane Flight Manual.

Maximum permissible engine rotational speeds:

	r.p.m.	percent
Fan Motor (N1)		
Continuous	10,700	100
30-second transient	10,700	100
5-second transient	10,700	100
Low Pressure Motor (N2)	r.p.m.	percent
Continuous	17,200	100
30-second transient	17,286	100.5
5-second transient	17,544	102
High Pressure Motor (N3)	r.p.m.	percent
Continuous	36,900	100
30-second transient	37,269	101
5-second transient	38,007	103

Maximum Interstage Turbine Temperature (ITT):

Take-off (5 minutes)	1850ºF	(1010ºC)
Take-off (5 second transient)	1868ºF	(1020ºC)
Maximum continuous	1778ºF	(970ºC)
Starting	1850ºF	(1010ºC)
Starting (5 second transient)	1868ºF	(1020ºC)

VII. Model MYSTERE-FALCON 200 (Transport Aircraft) (cont'd)

Engine Limits (cont'd)

Oil Pressure Limits (psig):

Take-off, climb, flight idle and cruise	55 to 83
Ground idle	30 to 83
Transient (3 minutes maximum)	90 maximum

Oil Inlet Temperature ºF (ºC):

Take-off (maximum)		360	(182)
Take-off (minimum)		122	(50)
Continuous operation (maximum)		360	(182)
Continuous operation (minimum)		122	(50)
Starting (minimum)	-40	(-40)	
Transient (3 minutes)		370	(188)

Airspeed Limits (IAS):

V_{MO} (Maximum operating):
350 kts at sea level to 380 kts at 20,000 feet.
Straight line variation between these two points.
380 kts from 20,000 ft. to 22,720 feet.

M_{MO} (Maximum operating):
22,720 feet and above, M = 0.865

V_A (Maneuvering): 220 kts

V_{FE} (Flap speeds):

Deflection	Kts
40º	180
15º	

V_{LO} (Landing gear operation):

Extend	190 kts
Retract	190 kts

V_{LE} (Landing gear extended): 220 kts

V_{WWO} (Windshield wipers operation): 220 kts

V_{MC} (Minimum control speed):

In flight (Flaps 10º)	99 kts (CAS)
On ground (Flaps 10º)	104 kts (CAS)

Thrust Reverser Minimum Operating Speed 50 kts

Maximum Weights.

Maximum ramp and take-off weight	32,000 lb.
Maximum landing weight	28,880 lb.
Maximum zero fuel weight	22,500 lb.

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks.

Tank	Usable Fuel		Arm
	U.S. Gals	Pounds	(in)
Left wing	572.0	3,864	-2.2
Right wing	572.0	3,864	-2.2
Left fuselage	225.5	1,507	+ 103.5
Right fuselage	225.5	1,507	+ 103.5
TOTAL	1,595.0	10,740	+ 27.5

Stabilizer Movements.

	Nose-down	Nose-up
Electrical stops	0º	- 10º
Mechanical stops	+ 10'	- 10º10'
Cruise limit, slats L.E. retracted	0º	- 4º

VII. Model MYSTERE-FALCON 200 (Transport Aircraft) (cont'd)

Control Surface Movements.	Elevator	Up	16º	Down	16º
	Rudder	Right	30º	Left	30º
	Aileron	Up	16º	Down	14º30'
	Flaps (total)	Down	40º		
	Airbrakes	Up	70º		
	Wing slats	Down	17º30' (inboard) and 25º (outboard)		

For detail rigging and tolerances consult Maintenance Manual.

C.G. Range (Gear extended, flaps retracted).
(See NOTE 20)

Weight (lb)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
32,000	21.75	21.75				
28,880	20.8	20.1	20.1		35	
24,315	20.8	17.0	17.0			

VIII. Model MYSTERE FALCON 20 - F5 - (Transport aircraft) approved on March 15, 1989.
C5 - (Transport aircraft) approved on May 23, 1989.
D5 - (Transport aircraft) approved on May 23, 1989.
E5 - (Transport aircraft) approved on May 23, 1989.

The MYSTERE FALCON 20-C5/D5/E5/F5 differs from the FAN JET FALCON Series F airplane mainly by:
- installation of Garrett TFE 731-5AR-2C engines and nacelles
- adaptation of bleed air, anti-ice, hydraulic, fuel, electrical and engine control systems.
- standardization of weight limitations and C.G. range.
- addition of an ATTCS (automatic take-off thrust control system)

This change is made applicable to Fan Jet Falcon airplanes already delivered and in operation through implementation of Service Bulletin AMD-BA No. FJF 731.
After implementation of this Service Bulletin the airplane are designated as follows:

Engines. 2 engines - Garrett Engine Division Model TFE 731-5AR-2C

Mystere Falcon 20-5 Aircraft incorporating Modification M.3530 (Service Bulletin 735) are equipped with 2 engines GARRETT Model TFE 731-5BR-2C.

Engine Limits.

	AC without SB 735	AC with SB 735
Maximum continuous thrust: sea level conditions, isa, lb	4,500	4,634
Maximum take-off static thrust: sea level conditions, at 73.5º F (5 minutes)	4,500	4,750
Engine operation must be in accordance		
Maximum normal operating rotor speeds		
Low pressure rotor (N1)	RPM 21,000	percent 100%
High pressure rotor (N2)	RPM 29,898 percent 101%	30,540 percent 100.8%
Transient Conditions*	5 seconds	
Low pressure rotor (N1)	100 % to 103 %	
High pressure rotor (N2)	101 % to 103 %	100.8 % to 103 %
*(See NOTE 7)		

VIII. Model MYSTERE FALCON 20 - F5, C5, D5, E5 (cont'd)

Engine Limits. (cont'd)

	AC without SB 735	AC with SB 735
Interstage turbine temperature (ITT):		
During starting	952ºC (1,746ºF)	978ºC (1,793ºF)
Starting (10 sec. transient)	974ºC (1,785ºF)	996ºC (1,825ºF)
Takeoff (5 minutes)	974ºC (1,785ºF)	996ºC (1,825ºF)
(5 sec. transient)	984ºC (1,803ºF)	1006ºC (1,842ºF)
(2 sec. transient)	994ºC (1,821ºF)	1016ºC (1,861ºF)
Maximum continuous	924ºC (1,696ºF)	968ºC (1,775ºF)

	AC without SB 735	AC with SB 735
Oil temperature at fan gearbox inlet:		
Maximum (sea level) to 30,000 ft	127ºC (260ºF)	
Maximum (above 30,000 ft)	140ºC (284ºF)	
Maximum transient (2 minutes)	149ºC (300ºF)	
Minimum continuous	30ºC (86ºF)	
Fuel pressure:		
Minimum fuel pressure warning, psig	5.5	
Oil pressure limits:		
At idle, psig	25 to 46	
Takeoff and maximum continuous, psig	38 to 46	

Airspeed Limits (IAS).

	AC without SB 735	AC with SB 735
V_{MO} (maximum operating):	350 kts	
- sea level	390 kts	
- 23,000 feet	Straight line variation between these two points	
M_{MO} (maximum operating)		
- 23,000 feet	M= 0.88	
V_A (maneuvering):		
V_{FE} (flap speeds):		
Deflection		
40º		
25º		
15º	(MF 20-C5/D5/E5 only)	200
10º	(MF 20-F5 only)	190
V_{LO} (Landing gear operation):		
Extend	190 kts	
Retract	190 kts	
V_{LE} (Landing gear extended):	220 kts	
V_{LLO} (Landing lights operation):	220 kts	
V_{LLE} (Landing light extended):	220 kts	
V_{WWO} (Windshield wipers operation):	180 kts	

VIII. Model MYSTERE FALCON 20 - F5, C5, D5, E5 (cont'd)

Airspeed Limits (IAS). (continued)

	AC without SB 735	AC with SB 735
V_{MC} (Minimum control speed) In flight:	110 KCAS (MYSTERE-FALCON 20-C5/D5)	112,5 kt
	103 KCAS (MYSTERE-FALCON 20-E5/F5)	105,5 kt
On ground:	115 KCAS (MYSTERE-FALCON 20-C5/D5)	117,5 kt
	108 KCAS (MYSTERE-FALCON 2O-E5/F5)	110,5 kt

Maximum Weights:

Maximum ramp and take-off weight	29,000 lb (13.200 Kg)
Maximum landing weight	27,734 lb (12.580 Kg)
Maximum zero fuel weight	22,000 lb (9.980 Kg)

Fuel Capacity.

(See NOTE 1 (c) for information relative to unusable fuel and NOTE 7 on use of fuel additives).

The following data is given for full fuel tanks. (See NOTE 23).

For MYSTERE-FALCON 20-C5:

Tank	Usable Fuel U.S. Gals	Usable Fuel Pounds	Arm (in)
Left wing	552.0	3,371	25.8
Right wing	552.0	3,371	25.8
Left fuselage	69.5	470	131.5
Right fuselage	69.5	470	131.5
TOTAL	1,243.0	8,402	37.1

For MYSTERE-FALCON 20-D5 and -E5 (See NOTE 22)

Tank	Usable Fuel U.S. Gals	Usable Fuel Pounds	Arm (in)
Left wing	552.0	3,731	25.8
Right wing	552.0	3,731	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,321.0	8.,912	43.2

VIII. Model MYSTERE FALCON 20 - F5, C5, D5, E5 (cont'd)

Fuel Capacity (con't)

For MYSTERE-FALCON 20-F5 (See NOTE 22)

Tank	Usable Fuel U.S. Gals	Usable Fuel Pounds	Arm (in)
Left wing	572.0	3,864	25.8
Right wing	572.0	3,864	25.8
Left fuselage	108.5	725	131.5
Right fuselage	108.5	725	131.5
TOTAL	1,361.0	9,178	42.7

Stabilizer Movements.

For MYSTERE-FALCON 20-C5:

S.B. 179 not incorporated:

	Nose-down	Nose-up
Electrical stops	0º	- 7º
Mechanical stops	+ 10'	- 7º10'
Cruise limit, droop L.E. retracted	0º	- 7º

S.B. 179 incorporated:

	Nose-down	Nose-up
Electrical stops	0º	- 7º45'
Mechanical stops	+ 10º	- 7º55'
Cruise limit, droop L.E. retracted		
S.B. 480 not incorp.	0º	- 3º30'
S.B. 480 incorp.	0º	- 4º

For MYSTERE-FALCON 20-D5 and -E5:

	Nose-down	Nose-up
Electrical stops	0º	- 7º45'
Mechanical stops	+ 10'	- 7º55'
Cruise limit, droop L.E. retracted		
S.B. 480 not incorp.	0º	- 3º30'
S.B. 480 incorp.	0º	- 4º

For MYSTERE-FALCON 20-F5:

	Nose-down	Nose-up
Electrical stops	0º	- 10º
Mechanical stops	+ 10'	- 10º10'
Cruise limit, droop L.E. retracted	0º	- 4º

VIII. Model MYSTERE FALCON 20 - F5, C5, D5, E5 (cont'd)

Control Surface Movements.

Elevator	up 16º down 6º for MYSTERE-FALCON 20-C5 and -D5 9º for MYSTERE-FALCON 20-E5 and -F5
Rudder	right and left 23º for MYSTERE-FALCON 20-C5 and -D5 30º for MYSTERE-FALCON 20-E5 and -F5 and for MYSTERE-FALCON 20-C5 and -D5 with Service Bulletin No. 456 incorporated
Aileron	up 16º down 14º30'
Flaps (Total)	40º
Airbrakes	70º
Wing droop leading edges	down 25º for MYSTERE-FALCON 20-C5, -D5, -E5.
Wing slats	17º30 (inboard) and 25º (outboard) for MYSTERE-FALCON 20-F5

for detail rigging and tolerances consult Maintenance Manual.

C.G. Range (gear extended)
(See NOTE 20)

MYSTERE-FALCON 20-C5 with AMD-BA Service Bulletin No. 189 not incorporated:

Weight (lb)	Forward limit % MAC			Aft Limit % MAC
	Take-off	Flight	Landing	
29,100 (T.O.)	20	20	20	
27,734	20	18.7	18.7	28.5
24,250	20	18	18	
22,000 (ZFW)	20	17.5	17.5	

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

MYSTERE-FALCON 20-C5 with AMD-BA Service Bulletin No. 179 incorporated, -D5, -E5, -F5:

Weight (lb)	Forward limit % MAC			Aft Limit % MAC
	Take-off	Flight	Landing	
29,100 (T.O.)	19	19	20	
27,734	19	17.5	17.5	
24,250	19	16	16	28.5
22,000 (ZFW)	19	16	16	
20,943	19	16	16	
20,635	19	16	14	

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

VIII. DATA PERTINENT TO ALL MODELS.

Fuel. See NOTE 7.

Oil. Synthetic type conforming to FAA Engine Type Certificate Data Sheets No. E7EA for General Electric CF-700 engine and No. E7WE for Garrett ATF3-6 engine and No. E6WE for Garrett TFE 731-5-AR-2C and TFE 731-5BR-2C engines (See NOTE 8).

Maximum Permissible Air Bleed.

General Electric CF700 engine (See NOTE 9):
6 percent of compressor output.

Garrett ATF3-6 engine:
a total bleed airflow equal to a maximum of 8.5 percent of the engine core airflow from the four bleed ports provided not more than 5 percent of the gas generator airflow is extracted from the high pressure bleed port.

Garrett TFE731-5AR engine:
A total bleed airflow equal to a maximum of 8 percent of the total engine core airflow may be extracted from the two low-pressure end one high-pressure bleed ports, provided that not more than 5 percent of the gas generator airflow is extracted from any low-pressure port and that not more than 3 percent is extracted from the high-pressure port at thrust settings above 30 percent of maximum continuous power.

A total bleed airflow equal to 10 percent of the engine core airflow may be extracted from the two low-pressure and the three high-pressure bleed ports provided not more than a total of 5 percent of the core airflow is extracted from any low-pressure bleed port and not more than a total of 6 percent of the core airflow is extracted from the three high-pressure bleed ports. The high-pressure bleed extraction shall be distributed equally through each of the three bleed ports.

Datum.

- FAN JET FALCON, FAN JET FALCON Series C, D, E, F and G and MYSTERE-FALCON 20-C5/D5/E5/F5:
  Datum is zero % of mean aerodynamic chord (MAC). Zero % MAC is marked on aircraft and coincides with fuselage station + 301.97 in. (See NOTE 20)
- (MYSTERE-FALCON 200):
  Datum is 25% of mean aerodynamic chord (MAC). 25% MAC is marked on aircraft and coincides with fuselage station + 330.00 in.

Mean Aerodynamic Chord. 112.08 inches.

Leveling Means. A bubble type level, when placed on a special leveling rule which in turn is placed on the top of 3 specific leveling pins on the floor of the fuselage rear compartment, facilitates leveling of the airplane in the longitudinal and lateral directions.

Minimum Crew. For any flight, two pilots (pilot and co-pilot).

Maximum Passengers. 10. As limited by number and type of emergency exits.
(See NOTE 19 regarding cargo operations with zero passengers).

Maximum Baggage.

- (FAN JET FALCON, FAN JET FALCON Series C, D, E, F and G and MYSTERE FALCON 20-C5/D5/E5/F5)

Compartment	Weight (lb)	Arm (in)
Forward	185	- 135
Rear	200	+ 90

- (MYSTERE FALCON 200)

Compartment	Weight (lb)	Arm (in.)
Forward cabin	220	- 163
Rear cabin	200	+ 62
Rear equipment bay	660	+ 142

Oil Capacity.

Engine tank oil is the oil that is available (usable) for circulation in the system:

General Electric CF-700 Engine (FAN JET FALCON, FAN JET FALCON Series C, D, E and F)

Tank	Usable Oil		Arm (in)
	U.S. Gals	Pounds	
Left	0.73	5.1	+ 108
Right	0.73	5.1	+ 108
TOTAL	1.46	10.2	+ 108

Garrett ATF3-6-2C Engine (FAN JET FALCON Series G)

Tank	Usable Oil		Arm (in)
	U.S. Gals	Pounds	
Left	0.75	6.3	+ 146
Right	0.75	6.3	+ 146
TOTAL	1.50	12.6	+ 146

Garrett ATF3-6-4C Engine (MYSTERE FALCON 200)

Tank	Usable Oil		Arm (in)
	U.S. Gals	Pounds	
Left	0.75	6.3	+ 118
Right	0.75	6.3	+ 118
TOTAL	1.50	12.6	+ 118

Garrett TFE731-5AR Engine (MYSTERE FALCON 20-C5/D5/E5/F5)

Tank	Usable Oil		Arm (in)
	U.S. Gals	Pounds	
Left	0.5	4.2	+ 118
Right	0.5	4.2	+ 118
TOTAL	1.0	8.4	+ 118

Required Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed on the aircraft for certification. The equipment lists for FAN JET FALCON, FAN JET FALCON SERIES C, D, E, F, G, MYSTERE FALCON 200 and MYSTERE FALCON 20-C5/-D5/-E5/-F5 contain lists of all required equipment as well as optional equipment approved by Direction Generale de l'Aviation Civile (D.G.A.C.) of France.

Maximum Operating Altitude.

42,000 ft

Service Information.

Each of the documents listed below that contain a statement that it is approved by the European Aviation Safety Agency (EASA) - or for approvals made before September 28, 2003 - by the the Direction Generale de l'Aviation Civile (D.G.A.C.) of France, are accepted by the FAA and are considered FAA approved. Additionally, approvals issued by Dassault Aviation under the authority of EASA approved Design Organization EASA.21J.051 - or for approvals made before September 28, 2003 - under the authority of DGAC Design Organization Approval No. No. F.JA.03 are considered FAA approved. These approvals pertain to the type design only.

- Dassault Aviation Service Bulletins, except as noted below,
- Structural repair manuals,
- Vendor manuals referenced in Dassault Aviation service bulletins
- Aircraft flight manuals,
- Repair Instructions.

Note: Design changes that are contained in Dassault Aviation Service Bulletins and that are classified as Level 1 Major in accordance with either the US/Direction Generale de l'Aviation Civile (D.G.A.C.) of France or US/EASA Bilateral Aviation Safety Agreement Implementation Procedures for Airworthiness must be approved by the FAA.

Certification Basis.

For Fan Jet Falcon Basic, Series C, D, E, F and G:
CAR Part 4b, effective 31 December 1953, Amendments 4b-1 through 4b-12, Special Regulation SR-422B and provisions of FAR Amendment 25-4 in lieu of CAR 4b.350 (e) and (f).

French airworthiness requirements AIR-2051, effective 15 June 1963, were found to provide a level of safety equivalent to CAR 4b, effective 31 December 1953, plus Amendment 4b-1 through 4b-12, to enable certification under the provisions of FAR 21.29 (a)(1)(ii).

Compliance has been shown with FAR 36.1 effective 1 December 1969.
For the Series G, the following additional requirements apply:
FAR 25.672 of amendment 25-23 applicable to Mach Trim System.
FAR 25.903(d)(1) as amended by amendment 25-23, applicable to burner can burn through
FAR 25.943 as amended by amendment 25-40.
FAR 25.954 of amendment 25.14.
In lieu of CAR 4b.437, FAR 25.1001 as amended by amendment 25-18.
In lieu of CAR 4b.440 to 4b.448, FAR 25.1011 to 25.1025 as amended by amendment 25-36.
FAR 25.1351(d) of amendment 25-41.
FAR 25.1353(c)(6) of amendment 25-42.
SFAR 27 through amendment SFAR 27-3.
FAR 36 through amendment 36-9.

For the MYSTERE-FALCON 200:
CAR 4b of December 1953 through Amendment 4b-12 and SR422B.
The following paragraphs of Federal Aviation Regulations Part 25 as amended to incorporate Amendments 25-1 through 25-43 thereto:
FAR 25.571(d)
FAR 25.671 (c) for the modified parts of the primary and secondary flight control system.
FAR 25.671 (d) in lieu of 4b.320(b)(2)

Certification Basis. (con't)

For Fan Jet Falcon Basic, Series C, D, E, F and G: (con't)

FAR 25.672 for the mach trim system
FAR 25.677 in lieu of 4b.322
FAR 25.772 in lieu of 4b.350(e) and (f)
FAR 25.853 through 25.857 in lieu of 4b.381 through 3b.384
FAR 25.865
FAR 25.903 in lieu of 4b.401
FAR 25.939 in lieu of 4b.409
FAR 25.943
FAR 25.951 (a) for the APU installation
FAR 25.954
FAR 25.993 in lieu of 4b.432
FAR 25.1001 in lieu of 4b.437
FAR 25.1011 through 25.1025 in lieu of 4b.440 through 4b.448
FAR 25.1041 through 25.1045 in lieu of 4b.450 through 4b.452
FAR 25.1091 in lieu of 4b.460
FAR 25.1121 in lieu of 4b.467(a)
FAR 25.1123 in lieu of 4b.467
FAR 25.1309 in lieu of 4b.467(b)
FAR 25.1309 in lieu of 4b.606 for new systems
FAR 25.1326
FAR 25.1337 in lieu of 4b.613
FAR 25.1351 through 25.1359 in lieu of 4b.621 through 4b.626
FAR 25.1435 in lieu of 4b.653 through 4b.655
FAR 25.1529
FAR 25.1549 in lieu of 4b.734
Appendix F

The following paragraphs of Federal Aviation Regulations Part 25 as amended to incorporate Amendments 25-1 through 25-46 thereto:
FAR 25.603 in lieu of 4b.301
FAR 25.723 in lieu of 4b.332(a)
FAR 25.863 in lieu of 4b.385
FAR 25.901 in lieu of 4b.400
FAR 25.1103 in lieu of 4b.463
FAR 25.1142
FAR 25.1181 through 25.1201 in lieu of 4b.480 through 4b.484 and 4b.486 through 4b.489
FAR 25.1522
FAR 25.1581 through 25.1587 in lieu of 4b.740 to 4b.743
SFAR 27 through Amendments SFAR 27-3
FAR 36 through Amendment 36-12

For the MYSTERE-FALCON 20-C5/-D5/-E5/-F5:
CAR 4b of December 1953 through Amendment 4b-12 and SR422B.
The following paragraphs of Federal Aviation Regulations Part 25 as amended to incorporate Amendment 25-1 through 25-35 thereto:
FAR 25.571(d)
FAR 25.1019 in lieu of 4b-447
FAR 25.1093(b)
FAR 25.1141(e)

The following paragraphs of Federal Aviation Regulations Part 25 as amended to incorporate Amendments 25-1 through 25-56 thereto:
FAR 25.581
FAR 25.863 in lieu of 4b-385
FAR 25.865
FAR 25.901(c) for the engine fuel control computer
FAR 25.903(b)
FAR 25.903(d)(1) for the burn-through condition only

Certification Basis. (con't)

For the MYSTERE-FALCON 20-C5/-D5/-E5/-F5 (con't)
FAR 25.903(e)(2)
FAR 25.939(c)
FAR 25.943
FAR 25.954
FAR 25.1011
FAR 25.1013
FAR 25.1015
FAR 25.1017
FAR 25.1021
FAR 25.1023
FAR 25.1025

The following paragraphs of Federal Aviation Regulations Part 25 as amended to incorporate Amendments 25-1 through 25-56 thereto:
FAR 25.1041 in lieu of 4b-450
FAR 25.1091(d)(2) in lieu of 4b-460(g)
FAR 25.1103(d)
FAR 25.1142 in lieu of 4b.480(c)
FAR 25.1183 in lieu of 4b.483
FAR 25.1189 in lieu of 4b.482
FAR 25.1309 in lieu of 4b-606, for modified power supply systems
FAR 25.904 and Appendix 1 at amendment 25-62 for Automatic Take-off thrust control system
SFAR 27 through amendment SFAR 27-6
FAR 36 through amendment 36-15

Type Certificate No. A7EU issued 9 June 1965, for Model FAN JET FALCON and:
27 June 1969, for FAN JET FALCON SERIES D.
24 February 1970, for FAN JET FALCON SERIES C.
24 February 1970, for FAN JET FALCON SERIES E.
24 February 1970, for FAN JET FALCON SERIES F.
31 July 1981, for FAN JET FALCON SERIES G.
6 July 1982, for MYSTERE FALCON 200
, for MYSTERE FALCON 20-C5/-D5/-E5/-F5

Ditching Provisions	4b.361	(Overwater operation can be approved when the aircraft has been equipped and installation approved according to 4b.361)
Ice Protection	4b.640	(and French regulation STAe/AB 36998 of 20 June 1968 for FAN JET FALCON SERIES F)

The Direction Generale de l'Aviation Civile (D.G.A.C.) of France originally type certificated this aircraft under its type certificate Number 103. The FAA validated this product under U.S. Type Certificate Number A7EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the DGAC.

Import Requirements.

The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Direction Generale de l'Aviation Civile (D.G.A.C.) of France on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to conform with Type Design approved under U.S. Type Certificate No. A7EU and to be in a condition for safe operation.'

Serial Nos. Eligible.

A French "Certificat de Navigabilite pour Exportation" endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for U.S. certification is made.

Airplanes with the following designations on the identification plates and meeting the import requirements are eligible under Type Certificate No. A7EU.

G.A.M.D. Mystere 20
A.M.D./Sud Aviation Mystere 20
A.M.D./Sud Aviation Mystere 20 Fan Jet Falcon
A.M.D./Sud Aviation Fan Jet Falcon "Series D"
Dassault-Sud Fan Jet Falcon "Series C"
Dassault-Sud Fan Jet Falcon "Series E"
Dassault-Sud Fan Jet Falcon "Series F"
Dassault-Sud Fan Jet Falcon "Series G"
Avions Marcel Dassault-Breguet Aviation MYSTERE-FALCON 200
Avions Marcel Dassault-Breguet Aviation MYSTERE-FALCON 20-C5/-D5/-E5/-F5

NOTES

NOTE 1.

(a) Current weight and balance report, including list of equipment in certified weight empty and loading instructions must be provided for each aircraft at the time of original certification and at all times thereafter.

(b) The airplane must be loaded so that the C.G. is within the specified limits at all times with the effects of fuel use and movement of crew and passengers from their assigned positions being considered.

(c) The "drainable unusable fuel" is the amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined in French AIR-2051 Regulation (CAR 4b.416). This drainable unusable fuel does not include the "tank trapped fuel" or "line unusable" fuel which in the unusable fuel retained in the fuel feed lines. The "total unusable fuel", which include the drainable unusable fuel, tank trapped fuel and line unusable fuel must be included in the airplane empty weight.

(FAN JET FALCON, FAN JET FALCON Series C,D,E,F, and G, and MYSTERE FALCON 20-C5/-D5/-E5/-F5)

	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Tank trapped fuel in both wings	0.3	2.00	+ 40
Tank trapped fuel in both fuselage tanks	0.1	0.67	+ 127
Drainable unusable fuel (in both wings)	2.0	13.30	+ 40
Drainable unusable fuel (in both fuselage tanks)	0.9	6.00	+ 127
Line unusable fuel	1.5	10.00	+ 80
Total unusable fuel	4.8	32.00	+ 71

Note 1 (con't) (MYSTERE-FALCON 200)

	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Tank trapped fuel in both wings	1.8	12.00	+ 12
Tank trapped fuel in both fuselage tanks	3.3	22.00	+ 99
Drainable unusable fuel (in both wings)	2.0	13.30	+ 12
Drainable unusable fuel (in both fuselage tanks)	4.0	26.70	+ 99
Total unusable fuel	11.1	74.00	+ 69

(d) Engine system oil is the total engine oil less the quantity drainable from the tanks:

General Electric CF700 engine (FAN JET FALCON, FAN JET FALCON Series C,D,E,F)

UNDRAINABLE FUEL			
	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Left	0.64	4.5	+ 108
Right	0.64	4.5	+ 108
Total	1.28	9.0	+ 108

Garrett ATF3-6-2C Engine (FAN JET FALCON Series G)

UNDRAINABLE OIL			
	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Left	1.0	8.4	+ 146
Right	1.0	8.4	+ 146
Total	2.0	16.8	+ 146

Garrett ATF3-6A-4C Engine (MYSTERE FALCON 200)

UNDRAINABLE OIL			
	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Left	1.0	8.4	+ 118
Right	1.0	8.4	+ 118
Total	2.0	16.8	+ 118

Garrett TFE731-5AR Engine (MYSTERE FALCON 20-C5/-D5/-E5/-F5)

UNUSABLE (DRAINABLE AND TRAPPED OIL)			
	Volume (U.S. Gals)	Weight (lb)	Arm (in)
Left	2.25	18.9	+ 118
Right	2.25	18.9	+ 118
Total	5.50	27.8	+ 118

Engine system oil (undrainable oil), which includes the oil in the engine gear boxes, and all hydraulic fluid must be included in the airplane empty weight.

NOTE 2. Required instrument markings and placards are listed in the following documents:
DTM 7058/82 for FAN JET FALCON basic, Series D, E and F.
DTM 260/A110 for FAN JET FALCON Series G.
DTM 484/A110 for MYSTERE-FALCON 200
DTM 30538/A120 for MYSTERE-FALCON 20-C5/-D5/-E5/-F5

NOTE 3. Components which are life limited are listed in the DGAC - approved Chapter 5.40.00 of the Maintenance Manual and must be replaced as indicated therein. In addition, the maintenance operations listed in the DGAC - approved Chapter 5.40.00 of the Maintenance Manual must be performed as indicated therein.

NOTE 4. Basic FAN JET FALCONS modified by A.M.D. S.B. No. 155 (Performance Kit) or S.B. No. 361 (CF 700-2D Engines, 3-disk brakes, etc.)

a) All Basic FAN JET FALCONS have been modified by AMD S.B. No. 155 (including new wing tips, new brakes, flush and low drag kits). Performance information given in Basic Approved Airplane Flight Manual DTM No. 589 is that of airplane modified in accordance with this service bulletin.
b) Airplanes incorporating all modifications of A.M.D. S.B. No. 361 (CF 700-2D engines, 3-disk brakes, increased maximum weight, etc.) are required to be operated in accordance with related pages of the Basic Approved Flight Manual DTM 589, Airplanes modified to A.M.D. S.B. No. 361 are not classified as type FAN JET FALCON Series D.

NOTE 5. Reserved.

NOTE 6. The airplane must be operated in accordance with the appropriate current Airplane Flight Manual approved by the Direction Generale de l'Aviation Civile (D.G.A.C.) of France as follows:

Doc. FAN JET FALCON approved A.F.M., Doc. No. DTM 589 for FAN JET FALCON Basic Airplanes.
Doc. FAN JET FALCON SERIES D approved A.F.M., Doc. No. DTM 590, for FAN JET FALCON SERIES D airplanes.
Doc. FAN JET FALCON SERIES E approved A.F.M., Doc. No. DTM 591, for FAN JET FALCON SERIES E airplanes.
Doc. FAN JET FALCON SERIES F approved A.F.M. Doc. No. DTM 592, for FAN JET FALCON SERIES F airplanes.
Doc. FAN JET FALCON SERIES G approved A.F.M. Doc. No. DTM 108A, for FAN JET FALCON SERIES G airplanes.
Doc. MYSTERE-FALCON 200 approved A.F.M., Doc. No. DTM 308A, Revision 2 or later issue, for MYSTERE-FALCON 200 airplanes.
Doc. MYSTERE-FALCON 20-( ) 5 approved A.F.M., Doc. No. DTM 30528, for MYSTERE-FALCON 20-C5/-D5/-E5/-F5 airplanes.

NOTE 7. Commercial kerosene, JP-4, JP-5 and JP-8 type fuels are acceptable, but whenever a change is made or a mixture is used, a readjustment of the fuel control specific gravity setting must be made for optimum engine acceleration performance.

Approved fuels by brand name are listed in the General Electrica Model CF-700 Operating Instructions, Doc. No. SEI-189, current issue, and in the Garrett Model ATF3-6 installation Manual, Doc. No. DM-2800, current issue, and in the Garrett Model TFE731-5 installation Manual, Doc. No. IM-4200, current issue.

Use of aviation gasoline as an emergency fuel for the General Electric CF700 engine is permitted provided that its use is limited to not more than 25 hours operation during any one overhaul period.

Use of aviation gasoline as a fuel for the Garrett ATF3-6 engine is prohibited, reference Garrett Model ATF3-6 Installation Manual IM-2800, current issue.

Use of aviation gasoline as a fuel for the Garrett TFD731-5 engine is prohibited, reference Garrett Model TFE731-5 installation Manual IM-4200, current issue.

NOTE 7 (con't) Anti-static additive, or equivalent, in amount to bring fuel up to 300 conductivity units is permissible except that in no event shall the additive exceed:
1 PPM for Shell ASA-3
3 PPM for STADIS 450

Anti-icing additive, conforming to AIR 3652 or MIL-I-27686 D or E (JP-4/JP-8), or to MIL-I-85470 (JP-5) or equivalent are approved for use in fuel in amounts up to 0.15 percent by volume.

SOHIO Biobor JP biocide additive, or equivalent, is approved for use in the fuel at a concentration not to exceed 270 PPM.

NOTE 8. Approved oils are listed in the General Electric CF-700 Operating Instructions, Doc. No. SEI-189, current issue, and in the Garrett Model ATF3-6 Installation Manual, Doc. IM-2800, current issue, and in the Garrett Model TFE731-5 Installation Manual, Doc. IM-4200, current issue.

NOTE 9. In case of General Electric CF700 engine failure, the maximum permissible bleed air extraction from the operating engine may be increased to 7% of compressor output, provided such use is limited to not more than 10 hours during any one overhaul period.

NOTE 10. All replacement seats (crew, passenger and lounge) although in compliance with TSO C39 must also be demonstrated to comply with provisions of CAR 4b.358(c).

Other installations such as berths, buffets and other compartments or items of mass which could create a hazard to safety of passengers or crew, must also be demonstrated to meet the same requirements.

The maximum permissible loads for the floor supporting structure are 562.8 pounds per linear foot between frames 13 and 29, and 281.4 pounds per linear foot between frames 29 and 33. (140.7 pounds per foot on each track).

NOTE 11. Airspeeds limits for FAN JET FALCON, FAN JET FALCON SERIES C and FAN JET FALCON SERIES D airplanes modified in accordance with A.M.D. S.B. No. 381, are extended as follows:

V_{MO}	(maximum operating) 350 kts at sea level to 390 kts at 23,000 ft. Straight line variation between these points.
M_{MO}	(maximum operating) 23,000 ft and above, M = 0.88

NOTE 12. FAN JET FALCON airplanes incorporating A.M.D. S.B. No. 362 (Goodyear 3-disk brakes installation) must be operated in accordance with related pages of the basic FAN JET FALCON approved Flight Manual, Doc. DTM 589.

NOTE 13. FAN JET FALCON and FAN JET FALCON SERIES D airplanes incorporating A.M.D. S.B. No. 456 (New VMC limits) must be operated in accordance with the related pages of the FAN JET FALCON approved Flight Manual, Doc. DTM 589 or FAN JET FALCON Series D approved Flight Manual, Doc. DTM 590 as applicable.

NOTE 14. Installation of different models on FAN JET FALCON airplanes:

Airplane Model / Engine model	Basic	Series D	Series E	Series F
CF 700-2C	Model Definition	SB 451 Note 14 (b)	SB 452 Note 14 (c)	
CF 700-2D	SB 361 Note 14 (a) & (g)	Model Definition	SB 668 Note 14 (d)	
CF 700-2D-2	SB 500/520 Note 14 (a) & (e)	SB 500/520 Note 14 (e)	Model Definition	Model Definition

(a) Basic Fan Jet Falcon airplanes may be operated with one or two CF 700-2D or CF700-2D-2 engine(s) in lieu of the CF 700-2C engine when the -2D or -2D-2 engines are modified in accordance with G.E. Service Bulletin No. 72-64 to conform to the CF700-2C ratings and limitations by incorporating G.E. Kit P.N. 5910 T15 G01. Engines so modified have the suffix letter K added to the engine serial number. Airplanes with one or two engines so modified must be operated in accordance with their basic Fan Jet Falcon approved Flight Manual.

(b) FAN JET FALCON SERIES D airplanes may be operated with one or two CF 700-2C engines installed in accordance with AMD Service Bulletin No. 451 (Temporary installation of CF-700-2C engine). An airplane so modified remains a SERIES D model, but must be operated with related pages of the FAN JET FALCON SERIES D approved Flight Manual, doc. DTM 590.

(c) FAN JET FALCON SERIES E airplanes modified in accordance with AMD SB No. 452: A FAN JET FALCON SERIES E airplane incorporating AMD SB No. 452 (Temporary installation of CF700-2C engines) remains a SERIES E airplane but must be operated in accordance with related pages of the FAN JET FALCON Series E approved Flight Manual, Doc. DTM 591.

(d) FAN JET FALCON Series E airplanes modified in accordance with SB 668 (installation of CF700-2D in place of CF 700-2D-2 engines) becomes identical to a Series D model and must be operated in accordance with related pages of the FAN JET FALCON Series D approved Flight Manual, Doc. DTM 590.

(e) FAN JET FALCON and FAN JET FALCON Series D airplanes modified in accordance with SB 500 or 520 (installation of CF 700-2D-2 in place of CF 700-2D as applicable) must be operated in accordance with related pages of the FAN JET FALCON approved Flight Manual, Doc. DTM 589 or FAN JET FALCON Series D approved Flight Manual, Doc. DTM 590 as applicable.

(f) FAN JET FALCON and FAN JET FALCON Series D, when modified in accordance with SB 520, FAN JET FALCON Series E and F, equipped with CF 700-2D-2 engines modified in accordance with GE Service Bulletin CF 700-72-128 (4500 Lb take-off thrust limit) must be operated in accordance with related pages of their applicable Flight Manuals.

(g) FAN JET FALCON when modified in accordance with AMD SB 361 and equipped with CF 700-2D engines. See NOTE 4(b).

NOTE 15. FAN JET FALCON and FAN JET FALCON SERIES D airplanes modified in accordance with AMD SB No. 455 (G.E. SB 77-4 and 77-1):

Turbine engine outlet gas temperature (T5) limits for CF700-2C and CF700-2D engines are changes as follows:

CF700-2C	
Maximum Continuous	724ºC
CF700-2D	
Take-off (5 minutes)	740ºC
Maximum Continuous	724ºC

NOTE 16. FAN JET FALCON, SN 73 modified in accordance with AMD SB No. 300 (Low pressure tires) is required to be operated with Specific Supplement No. 1 FAN JET FALCON

NOTE 17. FAN JET FALCON and FAN JET FALCON Series C, D, E and F maximum Zero Fuel Weight = AMD SB No. 363 revision 3 or later issue authorizes all airplanes to be operated at a max. Zero Fuel Weight of 22,000 lb (without any modification). Refer to airplane Flight Manual, Doc. No. DTM 589/590/591/592 at revision No. 42 or later issue.

NOTE 18. FAN JET FALCON airplanes, when equipped with 6 inches-type nose-wheels, modified in accordance with AMD SB No. 475, and FAN JET FALCON SERIES D airplanes modified in accordance with AMD SB No. 465:

The maximum weights, and c.g. range are changed as follows:

Maximum weights:

Maximum ramp weight	28,660 lb.
Maximum take-off weight	28,660 lb.
Maximum landing weight	27,320 lb.
Maximum zero fuel weight	22,000 lb.

C.G. Range (Gear Down) (See NOTE 20)

Weight (lb.)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
28,600	20.0	20.0				
27,320	19.0	19.0	19.0			
23,150	19.0	16.0	16.0			
19,600	19.0	16.0	16.0		28.5	
19,000	19.0	16.0	14.0 Flaps Ext.			

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

Each model must be operated in accordance with related pages of the approved Airplane Flight Manuals.

NOTE 19.

FAN JET FALCON (Basic) airplanes modified in accordance with A.M.D. S.B. No. 475 and FAN JET FALCON Series D airplanes modified in accordance with A.M.D. S.B. No. 465 (See NOTE 18) and further modified in accordance with A.M.D. S.B. No. 472, and used in accordance with Specific Supplement No. 2 of their respective approved Flight Manuals.

The C.G. range is changes as follows:

C.G. range (Gear Down) (See NOTE 20):

Weight (lb.)	Forward Limit % MAC			AFT Limit % MAC		
	Take-off	Flight	Landing	Take-off	Flight	Landing
28,600	18	18				
27,320	18	17.5	17.5			
23,150	18	16	16			
22,575	18	14	14		28.5	
22,000	18	14	12 Flaps Ext.			

Straight line variation between points.
Nose gear retraction moment (moves CG forward) is 6,000 in-lb.
Main gear retraction has no effect on airplane CG.

NOTE 20.

Fuselage station +0 is the forward end of the aircraft nose cone.

The fuselage stations for selected MAC values are as follows:

% MAC	Fuselage Station
0	301.97
12	315.42
14	317.66
16	319.90
17	321.00
17.5	321.58
17.6	321.69
18	322.14
18.7	322.92
19	323.26
19.2	323.49
19.4	323.71
20	324.38
20.4	324.83
20.8	325.28
21.75	326.35
25	330.00
27	323.23
27.5	323.79
28.5	333.91
30	335.59
35	391.52

NOTE 21. A FAN JET FALCON SERIES F airplane modified in accordance with AMD S.B. 600 becomes a SERIES G Approved Airplane Flight Manual no. DTM 108A.

NOTE 22. FAN JET FALCON Series D, E and F airplanes and MYSTERE-FALCON 20-D5/-E5/-F5, as modified by SB 666, have an usable feeder tank capacity of 98 U.S. Gals per each side.
Total capacity: 1,300 U.S. Gals for FAN JET FALCON Series D and E
1,340 U.S. Gals for FAN JET FALCON Series F

NOTE 23. FAN JET FALCON (Basic) and MYSTERE-FALCON 20-C5 airplanes not modified by A.M.D. S.B. No. 278 and modified by A.M.D. S.B. No. 554 have a feeder tank capacity of 64 U.S. Gals per each side giving a total capacity of 1,232 U.S. Gal.s

NOTE 24. FAN JET FALCON, FAN JET FALCON Series D, E, F and G airplanes modified by A.M.D. S.B. No. 535 (operation on unpaved runway) must be operated in accordance with the General Supplement No. 1 of their respective Flight Manuals.

NOTE 25. FAN JET FALCON Series G airplanes modified by AMD-BA SB 684 (installation of GARRETT engines model ATF3-6-4C) (PN 300-2200-1) must be operated in accordance with the general supplement No. 6 to the Airplane Flight Manual (DTM 108A)

NOTE 26. Thrust Reverser may be installed on the Mystere-Falcon 200 Model in accordance with AMD-BA Mod. No. 5169 or Service Bulletin No. F200-31. This installation has been shown to comply with the FAR 25 requirements. Section 25.933, 25.934 and 25.1155 at Amendment 25-46, in addition to the Basic Certification Requirements for the Mystere-Falcon 200 Model. When so modified, the A/C must be operated in accordance with the Supplement No. 12 to the DTM 308A Mystere-Falcon 200 Airplane Flight Manual.
Change in AFT CG Location: 16,539 lbs 30%
24,250 lbs 35%
Straight line variation between these two points.

NOTE 27 MYSTERE-FALCON 20-C5/-D5/-E5/-F5 models:
(a) AMD-BA Service Bulletin No. 731 defines the list of modifications and/or Service Bulletins which must be incorporated in a FAN JET FALCON or FAN JET FALCON Series D, Series E, Series F Model prior to installing the Garrett TFE731-5AR-2C engines, to have the airplane standardized in compliance with the MYSTERE-FALCON 20-( )5 Type Design.
(b) FAN JET FALCON Series D airplanes S/N 237 and 238, when modified per AMD-BA Service Bulletin No. 731, are eligible for the designation of MYSTERE-FALCON 20-E5.

NOTE 28. Effective June 19, 1990 the name of Avions Marcel Dassault-Breguet Aviation changed to DASSAULT AVIATION.

The new name will appear as of this date on all documents.
However, documents bearing the old name remain valid and will be up-dated when and where necessary.

NOTE: The Aircraft nameplate has evolved over the years. The manufacturer's name has been: GAMD/SUD-AVIATION, AMD/SUD-AVIATION, AVIONS MARCEL DASSAULT-BREGUET AVIATION, and DASSAULT AVIATION.

The Aircraft name has been: MYSTERE 20, FAN JET FALCON, MYSTERE FALCON.

.....END.....