

A50NM
Revision 14
DASSAULT AVIATION
FALCON 2000
FALCON 2000EX

May 24, 2021

[illegible]

Engine Limits (cont'd)

Turbine Interstage Temperature Limits

Ground starting 815 °C

Air starting 864 °C

Maximum take-off (5 min) 877 °C

Maximum take-off (2 min) 890 °C

Maximum continuous 861 °C

Airstart transient (10 sec) 890 °C

Airstart transient (2 sec) 1000 °C

Oil Temperature

Maximum continuous 138 °C

Minimum continuous 30 °C

Maximum transient (3 min) 155 °C

Fuel Pump Inlet Pressure

Minimum 5 psi above true vapor pressure

Maximum 50 psig

Oil Pressure

Idle 30-85 psig

Normal operating range 60-85 psig

Maximum transient (3 min) 100 psig (may be exceeded for 2.5 min. in case of a cold start (temp < 0 C))

Thrust Reversers

Thrust reverser use is not approved, unless Dassault Aviation change M3B has been incorporated.

APU

Allied Signal Model GTCP36-150 (F2M)

Limitation

Maximum operating starting altitude 35,000 ft

Maximum N1 (%) 110

Exhaust gas temperature, Steady 746 °C

Exhaust gas temperature, Starting 974 °C

Maximum oil temperature 163 °C

Minimum oil pressure 35 psi

Operation of the APU with passengers in the cabin and without crew member monitoring is not authorized.

Airspeed Limits

Unless otherwise stated, speeds are indicated airspeeds

VMO (Maximum Operating)

350 kt at sea level, 370 kt at 10,000 ft with straight line variation between those points.

370 kt from 10,000 to 25,000 ft

MMO (Maximum Operating)

M = 0.862 from 25,000 to 38,000 ft

0.862 at 38,000 ft, 0.85 at 42,000 ft with straight line variation between those points

0.85 above 42,000 ft

Airspeed Limits (cont'd)

VA (Maneuvering) 198 kt

VFE (Slat and Flap Speeds)

Slats + Flaps 10° 200 kt

Slats + Flaps 20° 160 kt

Slats + Flaps 40° 160 kt

VLO (Landing Gear Operation) 190 kt

MLO 0.70

VLE (Landing Gear Extended) 245 kt

MLE 0.75

VMC (Minimum Control Speed)

Flight 90 kt

Windshield Wiper Operation 215 kt

Direct Vision Window 215 kt

CG Range

(Gear Extended)

a. Without Option M57

Weight (lb) Forward Limit (% MAC) Rearward Limit (% MAC)

36,000 16.7 26.2

33,000 14 -

28,660 or less 14 32.5

b. With Option M57

Weight (lb) Forward Limit (% MAC) Rearward Limit (% MAC)

36,500 17.2 25.8

33,000 14 -

28,660 or less 14 32.5

Straight line variation between points.

Gear retraction has negligible effect on CG range.

Datum

Datum is 25% of mean aerodynamic chord (MAC) which coincides with fuselage station FS + 400.43 in (Fuselage station reference +0 is the forward end of the airplane nose cone).

Mean Aerodynamic chord (MAC)

Length 113.69 in

Zero percent MAC is at FS +372.01 in

Leveling Means

Standard bubble type level to be installed on the passenger seat tracks

<u>Weight Limitations</u>	<u>Without Option M57</u> Maximum ramp 36,000 lb 36,500 lb Maximum take-off 35,800 lb 36,500 lb Maximum landing 33,000 lb 33,000 lb Maximum zero fuel 28,660 lb 28,660 lb Minimum flight at 14% CG 23,075 lb 23,075 lb at 32.5% CG 20,100 lb 20,100 lb																																	
<u>Minimum Crew</u>	2 - Pilot and copilot																																	
<u>Maximum Passenger Seats</u>	19 - limited by emergency exit requirements of Federal Aviation Regulations § 25.807(c) 0 - Without passenger provision but incorporating Dassault Ferry flight configuration : M0054.																																	
<u>Maximum Baggage</u>	Baggage compartment 1,600 lb (not to exceed 61.4 lb per sq ft)																																	
<u>Fuel Capacity</u>	Nominal - Refer to weight and balance report of each airplane for exact capacity Refer to NOTE 1(b) for data on unusable system fuel and oil Usable Fuel <table><thead><tr><th>US Gallons</th><th>Pounds</th><th>Arm (in)</th></tr></thead><tbody><tr><td>LH outboard wing</td><td>348.42</td><td>334 22.64</td></tr><tr><td>LH inboard wing</td><td>213.71</td><td>432-27.68</td></tr><tr><td>LH center wing box</td><td>216.91</td><td>453-37.76</td></tr><tr><td>LH Feeder tank</td><td>127.85</td><td>1-16.34</td></tr><tr><td>RH outboard</td><td>349.22</td><td>340 22.64</td></tr><tr><td>RH inboard wing</td><td>214.11</td><td>435-27.68</td></tr><tr><td>RH center wing box</td><td>217.41</td><td>457-37.76</td></tr><tr><td>RH feeder tank</td><td>127.38</td><td>53-57.87</td></tr><tr><td>Total Usable</td><td>1,814.0</td><td>12,155</td></tr><tr><td>Total Fuel</td><td>1830.3</td><td>12,259</td></tr></tbody></table>	US Gallons	Pounds	Arm (in)	LH outboard wing	348.42	334 22.64	LH inboard wing	213.71	432-27.68	LH center wing box	216.91	453-37.76	LH Feeder tank	127.85	1-16.34	RH outboard	349.22	340 22.64	RH inboard wing	214.11	435-27.68	RH center wing box	217.41	457-37.76	RH feeder tank	127.38	53-57.87	Total Usable	1,814.0	12,155	Total Fuel	1830.3	12,259
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<u>Fuels</u>	Fuels conforming to General Electric specification No. D50TF2, current revision <i>See NOTE 4 for fuel additives</i> The above mentioned fuels and additives are also suitable for the APU																																	
<u>Pressure Fueling</u>	Maximum 50 psi																																	
<u>Oil Capacity</u> (each engine)	Refer to NOTE 1(b) for data on unusable system fuel and oil Usable 0.55 US gallon Total 1.25 US gallon																																	
<u>Oils</u>	Oil conforming to General Electric Specification No. D50TR1, or Allied Signal oil Specification EMS 53110, current revision <i>See NOTE 5</i>																																	
<u>Maximum Operating Altitude</u>	47,000 ft																																	
<u>Control Surface Movements</u>	Elevator Down 16° Up 20° Rudder Right 29° Left 29° Aileron Up 25° Down 24° Flaps Down 40°																																	

Control Surface Movements (cont'd)

Airbrakes Inboard up 68°
 Center up 50°
 Outboards up 37°
 Wing slats Down 30°
 Stabilizer Electrical stops AND 2° ANU 10°
 Mechanical stops AND Max 2°30' ANU Max 10°30'
 Structural stops AND Min 2°40' ANU Min 11°
 Rigging tolerances are included in Maintenance Manual

II. Model FALCON 2000EX (Transport Category Airplane) approved March 21, 2003**(a) Basic Model Definition**

The Falcon 2000EX is defined by Dassault modification M1802 and differs from the Falcon 2000 in the following major respects: (i) Pratt & Whitney Canada Engines PW308C replace CFE 738-1-1B engines; (ii) New forward and aft fuel tanks are added, (iii) New main and nose landing gear, (iv) New tires and brakes

Engines

2 engines. (PRATT & WHITNEY Canada) Model PW308C Turbofan
(see NOTE 3b)

Engine Limits

Static, Standard, Sea Level
 Take-off (5 min) 6,998 lb(3,114 daN)

 Maximum Continuous 6,998 lb(3,114 daN)

 Maximum Steady State Rotor Speeds
 Low pressure rotor (N1) RPM 10,660 (102.5%)
 High pressure rotor (N2) RPM 27,316 (102%)

 Turbine Interstage Temperature Limits
 Ground start 950 °C
 Air start 950 °C
 Normal Takeoff (5 min.) 860 °C
 Maximum take-off (5 min) 875 °C
 Maximum continuous 860 °C
 Restarting Max. (air start/ground start) 500 °C/ 340 °C
 Transient (20 sec) 885 °C

 Oil Temperature
 Maximum 135 °C
 Minimum takeoff/ in-flight 27 °C/ 16 °C
 Maximum transient (90 sec.) 143 °C
 Starting (minimum) -40 °C

 Fuel Pump Inlet Pressure
 Minimum (SEE ENGINE INSTALLATION MANUAL)
 Maximum (SEE ENGINE INSTALLATION MANUAL)

Engine Limits (cont'd)

Oil Pressure
Operating Range 36 to 100 psi
Minimum at Idle 20 psi
Transient (20 sec.) 0 to 220 psi
Transient (90 sec.) 10 to 220 psi
Cold start: during starting 240 psi

Thrust Reversers

Thrust reverser use is approved only on the ground.

APU

Allied Signal Model GTCP36-150 (F2M)

Limitation
Maximum operating/starting altitude 35,000 ft
Maximum N1 (%) 110
Exhaust gas temperature, Steady 746 °C
Exhaust gas temperature, Starting 974 °C
Maximum oil temperature 163 °C
Minimum oil pressure 35 psi

Operation of the APU with passengers in the cabin and without crew member monitoring is not authorized.

Airspeed Limits

Unless otherwise stated, speeds are indicated airspeeds

VMO (Maximum Operating):
350 kt at sea level, 370 kt at 10,000 ft with straight line variation between those points.
370 kt from 10,000 to 25,000 ft

MMO (Maximum Operating):
0.862 from 25,000 to 38,000 ft
0.862 at 38,000 ft, 0.85 at 42,000 ft with straight line variation between those points
0.85 above 42,000 ft

VA (Maneuvering) 198 kt

VFE (Slat and Flap Speeds)
Slats + Flaps 10° 200 kt
Slats + Flaps 20° 190 kt
Slats + Flaps 40° 180 kt

VLO (Landing Gear Operation) 190 kt

MLO 0.70

VLE (Landing Gear Extended) 245 kt

MLE 0.75

Airspeed Limits (cont'd)

VMC (Minimum Control Speed)
Flight 90 kt

Windshield Wiper Operation 215 kt

Direct Vision Window Opening 215 kt

CG Range

(Gear Extended)

Weight (lb)	Forward Limit (% MAC)	Rearward Limit (% MAC)
40,900	15.7	23.4
38,300	14	26.0
28,660 or less	14	32.5

Straight line variation between points.

Gear retraction has negligible effect on CG range.

Datum

Datum is 25% of mean aerodynamic chord (MAC) which coincides with fuselage station FS + 400.43 in (Fuselage station reference +0 is the forward end of the airplane nose cone).

Mean Aerodynamic chord (MAC)

Length 113.69 in
Zero percent MAC is at FS +372.01 in

Leveling Means

Standard bubble type level to be installed on the passenger seat tracks

Weight Limitations

(Maximums)

Without M1826 (serial no.1 only) with M1826 and M1842

Taxi and Ramp	40,900 lb	41,500 lb
Take-off	40,700 lb	41,300 lb
Landing	38,300 lb	39,300 lb
Zero fuel	29,700 lb	29,700 lb

Minimum flight

at 14% CG 23,444 lb 23,444 lb

at 32.5% CG 21,149 lb 21,149 lb

Minimum Crew

2 - Pilot and copilot

Maximum Passenger Seats

19 - limited by emergency exit requirements of Federal Aviation Regulations § 25.807(c)

Maximum Baggage

Baggage compartment 1,600 lb
(not to exceed 61.4 lb per sq ft)

Fuel Capacity

Nominal - Refer to weight and balance report of each airplane for exact capacity
Refer to NOTE 1(b) for data on unusable system fuel and oil

Without M1826 applied (serial no. 1 only)

Usable Fuel US Gallons Pounds

LH wing+1/2 center wing box 911 6,105

RH wing+1/2 center wing box 911 6,105

Rear Tank 244 1,630

Front Tank 329 2,205

Total Usable 2,395 16,045

Total Fuel 2,407 16,127

Fuel Capacity (cont'd)

With M1826 applied (serial no. 2 and on)

Usable Fuel US Gallons Pounds

LH wing+1/2 center wing box 909 6,092

RH wing+1/2 center wing box 912 6,112

Rear Tank 293 1,962

Front Tank 383 2,564

Total Usable 2,497 16,730

Total Fuel 2,509 16,812

Fuels

Fuels and additives conforming with the specifications listed in the applicable P&WC Maintenance Manual are approved.

See NOTE 4 for fuel additives.

The above mentioned fuels and additives are also suitable for the APU

Fuel anti-icing must be used for fuel temperature below -50 °C

Pressure Fueling

Maximum 50 psi

Oil Capacity
(each engine)

Refer to NOTE 1(b) for data on unusable system fuel and oil

Usable 0.49 US gallon

Total 2.4 US gallon

Oils

Oils conforming to the Specifications listed in the applicable P&WC Maintenance Manual (P/N 30C3882) are approved

Maximum Operating Altitude

47,000 ft

Control Surface Movements

Elevator Down 16° Up 20°

Rudder Right 29° Left 29°

Aileron Up 25° 20° Down 24° 50°

Flaps Down 40°

Airbrakes Inboard up 68°

Center up 50°

Outboards up 37°

Wing slats Down 30°

Stabilizer Electrical stops AND 2° ANU 10°

Mechanical stops AND Max 2° 30° ANU Max 10° 30°

Structural stops AND Min 2° 40° ANU Min 11°

Rigging tolerances are included in Maintenance Manual

(b) Falcon 2000EX EASy Definition (Approved June 21, 2004)

EASy designation for Falcon 2000EX does not correspond to a model designation. This is only a commercial designation for airplanes on which Major modification numbers M1691, M1745, and M1504 have been embodied.

Major Change Modification number M1691 to the Falcon 2000EX consists of the installation of an Enhanced Avionics System (EASy) based on the Honeywell "Primus EPIC" product line. This system architecture is mainly built around 2 cabinets called Modular Avionics Units (MAU), 2 Modular Radio Cabinets (MRC), 2 Audio panels, 2 reversionary panels and 4 14.1 inch Liquid Crystal Displays. The pilots have access to the system using the 2 CCDs with multipurpose knob, menu pushbutton, display switch, action pushbuttons and trackball, 2 alphanumeric keyboards and the hard controls.

M1745 installs an "Oxygen system electro-pneumatic altimetric controller"

M1504 installs an "All falcon Common pressurization system"

M1691, M1745, and M1504 are basic on all Falcon 2000EX aircraft serial numbers 6, 28 and subsequent.

All parameters listed in the preceding sub-section (a) for the basic Falcon 2000EX remain valid for airplanes which incorporate M1691, M1745 and M1504.

(c) Falcon 2000DX Definition (Approved October 3, 2007)

The DX definition of the Falcon 2000EX does not correspond to a model designation. The Falcon 2000DX is only a commercial designation for Falcon 2000EX airplanes in the EASy configuration on which modifications M3000 and M3001 are installed at production. Modification M3000 defines the airplane and reduces the fuel tank capacity. Modification M3001 installs a new fuel quantity indication system.

M3000 and M3001 are basic on all Falcon 2000EX airplanes in the EASy configuration starting with serial number 601 and subsequent.

All parameters listed in the preceding sub-section (b) above for the Falcon 2000EX EASy remain valid for airplanes which incorporate M3000 and M3001, except for the following weight limits and useable fuel.

Falcon 2000DX	Weight (lb)
Maximum landing weight	39 300
Maximum takeoff weight	41 000
Maximum taxi and ramp weight	41 200

Useable fuel

Front Tank 189 US Gallons 1,268 lbs

Rear Tank 183 US Gallons 1,224 lbs

(d) Falcon 2000LX Definition (Approved April 29, 2009)

The LX definition of the Falcon 2000EX does not correspond to a model designation. The Falcon 2000LX is only a commercial designation for Falcon 2000EX airplanes in the EASy configuration on which modifications M2846 and M3229 are installed. Modification M2846 incorporates winglets on the airplane and M3229 installs new slats.

All parameters listed in the preceding sub-section (c) above for the Falcon 2000EX EASy remain valid for airplanes which incorporate M2846 and M3229, except for the following weight limits.

Falcon 2000LX	Without M3390	With M3390
	Weight (lb)	
Maximum landing weight	39 300	39 300
Maximum takeoff weight	42 200	42 800
Maximum taxi and ramp weight	42 400	43 000

(e) Falcon 2000LXS Definition (Approved March 25, 2013)

The LXS definition of the Falcon 2000EX does not correspond to a model designation. The Falcon 2000LXS is only a commercial designation for Falcon 2000EX airplanes in the EASy configuration on which modifications M2846, M3229, M3254, M3390, M3453, and M5000 are installed at production. Modification M2846 installs winglets, M3254 incorporates the EASy Phase II, M3390, incorporates a weight and balance envelope increase for take-off, M3453 incorporates new FADEC software V9.03 for the PW308C engines and M5000 incorporates movable inboard leading edge slats.

All parameters listed in the preceding sub-section (d) above for the Falcon 2000LX remain valid for airplanes which incorporate modification M5000, except for the following weight limits.

Falcon 2000LXS	Weight (lb)
Maximum zero fuel weight	31 200

(f) Falcon 2000S Definition (Approved March 25, 2013)

The S definition of the Falcon 2000EX does not correspond to a model designation. The Falcon 2000S is only a commercial designation for Falcon 2000EX airplanes in the LXS configuration on which modifications M3000, M3001, and M5001 are installed at production. Modification M5001 incorporates movable inboard leading edge slats.

All parameters listed in the preceding sub-section (c) above for the Falcon 2000DX remain valid for airplanes which incorporate modifications M3000, M3001 and M5001, except for the following weight limits.

Falcon 2000S	Without M5031	With M5031
	Weight (lb)	
Maximum takeoff weight	41 000	42 800
Maximum taxi and ramp weight	41 200	43 000

Data Pertinent to all Models

Manufacturer Serial Number Eligible

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

Serial Numbers:

For FALCON 2000: Aircraft serial number 1 and up

For FALCON 2000EX: Aircraft serial number 1 through 5 and 7 through 27. Serial numbers 6 and 28 through 217 include M1691, M1745, and M1504 as standard (F2000EX EASy definition). Aircraft serial numbers 601 through 700 include M3000 and M3001 as standard (F2000DX definition). Aircraft serial numbers 218 through 262 include M2846 and M3229 (F2000LX definition). Aircraft serial number 263 and subsequent includes M2846, M3229, M3254, M3390, M3453, and M5000. Aircraft serial numbers 701 and subsequent include M3000, M3001, and M5001.

Import Requirements

Refer to the applicable bilateral agreement to verify eligibility for import into the United States of both new and used aircraft based on the scope of the agreement, to identify any required statements by the exporting authority on the export certificate of airworthiness (or equivalent document), and for procedures for coordinating exceptions to conformity statements on these documents. Refer to FAA Order 8130.2, *Airworthiness Certification of Aircraft*, for requirements for issuance of an *airworthiness certificate* for imported aircraft.

Certification Basis

(a) For FALCON 2000 (basic model):

1. FAR, Part 25 as amended by Amendment 25-1 through 25-69.

In addition, Dassault Aviation has elected to comply with amendments 25-71 for § 25.365(e), 25-72 for §§ 25.783(g) and 25.177; 25-75 for § 25.729(e); 25-79 for § 25.811(e)(2) and 25-80 for § 25.1316

2. FAR Part 34, original issue (Fuel Venting and Exhaust Emissions)

3. FAA, Part 36 as amended by amendment 36-1 through 36-20

4. FAA, Special Conditions:

25-ANM-90 - High Altitude Operation

25-ANM-91 - High -Intensity Radiated Fields

25-ANM-94 - Automatic Takeoff Thrust Control System

25-713-SC - Non-Rechargeable Lithium Batteries, effective to design changes applied for after January 18, 2018. See the applicability section of this special condition for more information on which design changes must meet it.

5. FAA Exemption No. 7104A (for side facing sofa)

For precision approach and landings, the applicable technical requirements are complemented by FAA Advisory Circulars (AC) 120-29 and AC 120-28(c)

For the automatic flight control system, the applicable technical requirements are complemented by AC 25.1329-1A for cruise.

Equivalent safety findings exist with respect to the following requirements:

- Design gust criteria, (refer to Issue Paper (IP) A-5)
- Use of the 1-g stall speeds instead of minimum speed in the stall as a basis for determining compliance (refer to IP F-1)
- Rejected take-off and landing performance (refer to IP F-3)
- N2 Digital Indication (refer to IP P-10)
- Flight Critical Thrust Reverser Certification (refer to IP P-7)

Compliance has been shown to the following optional requirement:

- Ditching, FAR § 25.801
- Ice Protection FAR § 25.1419

Type Certificate A50NM issued February 2, 1995

Reference date for type certification: November 30, 1989

(b) For Falcon 2000EX

(1) For parts of the airplane not changed or not affected by the modifications:

Unchanged from basic Falcon 2000

(2) For those parts of the airplane that are changed or are affected by the modifications M1802, M1803, M1804, M1805:

The following sections of 14 CFR 25 as amended by amendments 25-1 through 25-98 apply per the FAA derivative aircraft process FAA Order 8110.4B to the changes and areas affected by the changes for the Falcon 2000EX:

Subpart B – Flight:

All the paragraphs are applicable at amendment 25-98 except the following which are applicable as modified in Equivalent Level of Safety Finding Issue Paper F-4 titled “Use of 1-g Stall Speeds Instead of Minimum Speed in the Stall as a Basis for Determining Compliance”

25.103, 25.107, 25.111, 25.119, 25.121, 25.125, 25.143, 25.145, 25.147,
25.149, 25.161, 25.175, 25.177, 25.181, 25.201, 25.207, 25.231, 25.233, 25.237

Subpart C – Structure:

All the paragraphs are applicable at amendment 25-98

Subpart D – Design and Construction:

The following paragraphs are applicable at amendment 25-98:

25.601 to 25.703, 25.721, 25.723, 25.729, 25.801, 25.863 to 25.869

The following paragraphs are applicable as modified by Equivalent Level of Safety Issue Paper F-4 titled “Use of 1-g Stall Speeds Instead of Minimum Speed in the Stall as a Basis for Determining Compliance”:

25.735, 25.773

Subpart E – Powerplant:

All the paragraphs are applicable at amendment 25-98 except the following which is applicable as modified in Equivalent Level of Safety Finding Issue Paper F-4 titled “Use of 1-g Stall Speeds Instead of Minimum Speed in the Stall as a Basis for Determining Compliance”

25.1001

Subpart F – Equipment:

The following paragraphs are applicable at amendment 25-98:

25.1301, 25.1305 to 25.1322, 25.1337, 25.1431

The following paragraphs are applicable as modified by Equivalent Level of Safety Issue Paper F-4 titled “Use of 1-g Stall Speeds Instead of Minimum Speed in the Stall as a Basis for Determining Compliance”:

25.1323, 25.1325, 25.1587

Subpart G – Operating Limitations and Information:

All the paragraphs are applicable at amendment 25-98 except the following:

25.1515, 25.1522, 25.1523, 25.1525, 25.1529, 25.1531, 25.1547, 25.1561

(3) FAR Part 34, original issue (Fuel Venting and Exhaust Emissions)

(4) FAA, Part 36 as amended by amendment 36-1 through 36-24

(5) FAA, Special Conditions:

25-ANM-90 - High Altitude Operation

25-ANM-91 - High -Intensity Radiated Fields

25-ANM-94 - Automatic Takeoff Thrust Control System

25-713-SC - Non-Rechargeable Lithium Batteries, effective to design changes applied for after January 18, 2018. See the applicability section of this special condition for more information on which design changes must meet it.

(6) FAA Exemption No. 8007A (for side facing sofa)

(7) Equivalent safety findings according to 14 CFR 21.21(b)(1) for the following subjects:

- § 25.103 & related paragraphs, 1-G Stall Speeds (documented in TAD ELOS Memo AT0021IB-T-F-4)
- Section 933(a)(1)(ii): Reversing Systems (documented in TAD ELOS Memo AT0012IB-T-P-12)
- § 25.1203(a) Fire Detector System (documented in TAD ELOS Memo AT0021IB-T-P-15)
- §§ 25.809(b) and 25.813(c)(2)(ii) - Emergency Exit Access (documented in TAD ELOS Memorandum AT10010IB-T-CI-101)
- § 25.813(c)(2) "Emergency Exit Access" (documented in TAD ELOS Memo SP00843IB-T)

(8) Miscellaneous:

For precision approach and landings, the applicable technical requirements are complemented by FAA Advisory Circulars (AC) 120-29 and AC 120-28(c)

For the automatic flight control system, the applicable technical requirements are complemented by AC 25.1329-1A for cruise.

Reference date of application for amendment to type certificate is January 7, 2000.

(c) For FALCON 2000EX airplanes incorporating Dassault modifications M1691, M1745, and M1504 (Falcon 2000EX EASy definition):

- (1) For parts of the airplane not changed or not affected by the modifications:
Unchanged from basic Falcon 2000EX
- (2) For those parts of the airplane that are changed or are affected by the modifications M1691, M1745, and M1504:

The following sections of 14 CFR 25 as amended by amendments 25-1 through 25-98 apply per the FAA derivative aircraft process FAA Order 8110.4B to the changes and areas affected by the changes for the Falcon 2000EX EASy definition:

Subpart B – Flight:

25.207 : « Stall warning »

Subpart C – Structure:

25.581 : « Lightning protection»

Subpart D – Design and Construction:

25.601 : « General »
25.611 : « Accessibility provisions »
25.631 : « Bird strike damage »
25.671(b)(c) : « Control systems : general »
25.672 : « Stability augmentation and automatic and power-operated systems »
25.677(b) : « Trim systems »
25.699 : « Lift and drag device indicator »
25.703 : « Take-Off warning systems »
25.729(e) : « Retracting mechanism »
25.771 (a) (c) (e) : « Pilot compartment »
25.773(a)(d) : « Pilot compartment view »
25.777 (a)(b)(c)(d)(e)(f) : « Cockpit controls »
25.783(e) : « Doors »
25.789(a) : “Retention of items of mass in passenger and crew compartments and galleys”
25.791(a)(b) : “ Passenger information signs and placards”
25.812(f) : “Emergency lighting”
25.841(b)(5)(b)(6) : « Pressurised cabins »
25.863(c) : « Flammable fluid fire protection »
25.869(a) : « Fire protection : systems »

Subpart E – Powerplant:

25.901 (c) : « Installation »
25.903 (b) and (d)(2) : « Engines »
25.1141(a) and (f) : « Powerplant controls- General»
25.1143(a), (b) and (c) : « Engine controls»
25.1145(a)(b) : « Ignition switches »
25.1155 : « Reverse thrust and propeller pitch settings below the flight regime»
25.1189(f) : « Shutoff means»
25.1203 (b)(2)(b)(3)(d) : « Fire-detector system »

Subpart F – Equipment:

25.1301 : « Function and Installations »
25.1303 : « Flight and Navigation Instruments »
25.1305 : « Powerplant Instruments »
25.1307(c)(d)(e) : « Miscellaneous equipments »
25.1309 : « Equipment, systems and installations »
25.1316 : « System lightning protection »
25.1321 : « Arrangement and visibility »
25.1322 : « Warning, Caution and advisory lights »
25.1323 : « Airspeed indicating system »
25.1325(a)(c)(d)(e)(f)(g) : « Static pressure systems »
25.1326 : « Pitot heat indication systems »
25.1327 : « Magnetic direction indicator »
25.1329 : « Automatic pilot system »
25.1331 : « Instruments using a power supply »
25.1333 : « Instrument systems »
25.1335 : « Flight director systems »
25.1337(b)(d) : « Powerplant instruments »
25.1351 : « Electrical Systems and Equipment - General »
25.1353 : « Electrical equipment and installations »
25.1355 : « Distribution system »
25.1357 : « Circuit protective devices »
25.1381 : « Instrument lights »

25.1419(c) : « Ice protection »
25.1431 : « Electronic equipment »
25.1435 (a)(2) : « Hydraulic systems »
25.1457 : « Cockpit voice recorders »
25.1459 : « Flight recorders »

Subpart G – Operating Limitations and Information:

25.1501(b)(c) : « General »
25.1523 : « Minimum flight crew »
25.1529 : « Instructions for continued airworthiness »
25.1541 : « Markings and placards - General »
25.1543(b) : « Instrument markings : General »
25.1545 : « Airspeed limitation information »
25.1547 : «Magnetic direction indicator»
25.1549 : « Powerplant instruments »
25.1551 : « Oil quantity indicator »
25.1553 : « Fuel quantity indicator »
25.1555 : « Control markings»
25.1563 : « Airspeed placard »
25.1581 : « Airplane flight manual – General »
25.1585(a)(b)(d)(e) : « Operating procedures »

Special Conditions

25-713-SC - Non-Rechargeable Lithium Batteries, effective to design changes applied for after January 18, 2018. See the applicability section of this special condition for more information on which design changes must meet it.

(d) For FALCON 2000EX EASy airplanes incorporating Dassault modifications M3000 and M3001 (Falcon 2000DX definition):

See (c) above.

(e) For FALCON 2000EX EASy airplanes incorporating Dassault modification M2846 and M3229 (Falcon 2000LX definition):

- (1) For parts of the airplane not changed or not affected by the modifications:
Unchanged from basic Falcon 2000EX EASy
- (2) For those parts of the airplane that are changed or are affected by the modification M2846:

Based on the application date of September 14, 2006, for Modification M2846, under the provisions of Federal Aviation Regulation 14 CFR 21.101, the applicable type certification standards for the modification to the Model Falcon 2000EX series are as follows:

14 CFR part 25, effective February 1, 1965, including Amendments 25-1 through 25-117. The following are the applicable regulations:

Subpart A – General

25.1 Applicability.
25.2 Special retroactive requirements.

Subpart B – Flight

25.21 Proof of compliance.

25.23 Load distribution limits.
25.25 Weight limits.
25.27 Center of gravity limits.
25.29 Empty weight and corresponding center of gravity.
25.31 Removable ballast.
25.101 General.
25.103 Stall speed.
25.105 Takeoff.
25.107 Takeoff speeds.
25.109 Accelerate-stop distance.
25.111 Takeoff path.
25.113 Takeoff distance and takeoff run.
25.115 Takeoff flight path.
25.117 Climb: general.
25.119 Landing climb: All-engines-operative.
25.121 Climb: One-engine-inoperative.
25.123 En route flight paths.
25.125 Landing.
25.143 General.
25.145 Longitudinal control.
25.147 Directional and lateral control.
25.149 Minimum control speed.
25.161 Trim.
25.171 General.
25.173 Static longitudinal stability.
25.175 Demonstration of static longitudinal stability.
25.177 Static lateral-directional stability.
25.181 Dynamic stability.
25.201 Stall demonstration.
25.203 Stall characteristics.
25.207 Stall warning.
25.237 Wind velocities.
25.251 Vibration and buffeting.
25.253 High-speed characteristics.
25.255 Out-of-trim characteristics.

Subpart C – Structure

25.301 Loads.
25.303 Factor of safety.
25.305 Strength and deformation.
25.307 Proof of structure.
25.321 General.
25.331 Symmetric maneuvering conditions.
25.333 Flight maneuvering envelope.
25.335 Design airspeeds.
25.337 Limit maneuvering load factors.
25.341 Gust and turbulence loads.
25.343 Design fuel and oil loads.
25.345 High lift devices.
25.349 Rolling conditions.
25.351 Yaw maneuver conditions.
25.367 Unsymmetrical loads due to engine failure.
25.373 Speed control devices.
25.391 Control surface loads: General. (d)(e)
25.395 Control system.
25.427 Unsymmetrical loads.
25.445 Auxiliary aerodynamic surfaces. (a)
25.457 Wing flaps.
25.459 Special devices.
25.471 General. (a)(b)
25.473 Landing load conditions and assumptions. (a)(b)(c)(e)

25.479 Level landing conditions.
25.493 Braked roll conditions.
25.495 Turning.
25.519 Jacking and tie down provisions. (c)
25.571 Damage-tolerance and fatigue evaluation of structure. (a)(b)(e)
25.581 Lightning protection.

Subpart D – Design and Construction

25.601 General.
25.603 Materials.
25.605 Fabrication methods.
25.607 Fasteners.
25.609 Protection of structure.
25.611 Accessibility provisions.
25.613 Material strength properties and material design values.
25.619 Special factors.
25.621 Casting factors.
25.623 Bearing factors.
25.625 Fitting factors.
25.629 Aeroelastic stability requirements.
25.651 Proof of strength.
25.672 Stability augmentation and automatic and power-operated systems.
25.703 Takeoff warning system.
25.863 Flammable fluid fire protection. (a)(b)
25.869 Fire protection: systems. (a)(4)

Subpart E – Powerplant

25.954 Fuel system lightning protection.
25.981 Fuel Tank Ignition Prevention (a)(b)
25.1011 Oil Systems; General (b)

Subpart F – Equipment

25.1301 Function and installation.
25.1309 Equipment, systems, and installations.
25.1316 System lightning protection.
25.1327 Magnetic direction indicator.
25.1329 Automatic pilot system.
25.1351 General. (a)(d)
25.1353 Electrical equipment and installations. (a)(b)(d)
25.1357 Circuit protective devices. (a)
25.1385 Position light system installation.
25.1387 Position light system dihedral angles.
25.1389 Position light distribution and intensities.
25.1391 Minimum intensities in the horizontal plane of forward and rear position lights.
25.1393 Minimum intensities in any vertical plane of forward and rear position lights.
25.1395 Maximum intensities in overlapping beams of forward and rear position lights.
25.1397 Color specifications.
25.1401 Anticollision light system.
25.1419 Ice protection. (introduction paragraph only)
25.1431 Electronic equipment. (a)(c)(d)
25.1443 Minimum mass flow of supplement oxygen. (b)(c)

Subpart G – Operating Limitations and Information

25.1501 General (b)
25.1503 Airspeed limitations: general.
25.1505 Maximum operating limit speed.
25.1507 Maneuvering speed.
25.1511 Flap extended speed.
25.1513 Minimum control speed.
25.1515 Landing gear speeds.

25.1517 Rough air speed, V_{RA} .
25.1519 Weight, center of gravity, and weight distribution.
25.1527 Ambient air temperature and operating altitude.
25.1529 Instructions for Continued Airworthiness.
25.1531 Maneuvering flight load factors.
25.1533 Additional operating limitations.
25.1581 General.
25.1583 Operating limitations.
25.1585 Operating procedures.
25.1587 Performance information.
Appendix A (Sec 25.1)
Appendix C (Sec 25.1)
Appendix G (Sec 25.1)
Appendix H (Sec 25.1)
Appendix H (Sec 25.2)
Appendix H (Sec 25.3)
Appendix H (Sec 25.4)

(3) **Special conditions:** The following Special Conditions are applicable to Modification M2846:

a. Docket No. NM-100; Special Conditions No. 25-ANM-90 Dassault Aviation Model Falcon 2000 Airplane; High Altitude Operation.

b. Docket No. NM-101; Special Conditions No. 25-ANM-91 Dassault Aviation Model Falcon 2000 Airplane; High Intensity Radiated Fields.

c. Docket No. FAA-2017-1143; Special Conditions No. 25-713-SC Non-Rechargeable Lithium Batteries, effective to design changes applied for after January 18, 2018. See the applicability section of this special condition for more information on which design changes must meet it.

(4) **Equivalent Safety Findings:** According to the provisions of 14 CFR 21.21(b)(1), the following subject has been identified as an equivalent safety findings.

a. Section 25.1419 – Ice Protection (documented in TAD ELOS Memo TD0592IB-T-S-101)

(5) **Exemptions:** FAA Exemption No. 5991 (for side facing sofa).

(f) For FALCON 2000EX EASy airplanes incorporating Dassault modification M2846, M3229, M3254, M3390, M3453, and M5000 (Falcon 2000LXS definition):

(1) Airworthiness & Environmental Standards for components and areas not affected by the change

See (e) above.

(2) Airworthiness and Environmental Standards for components and areas affected by the change

Based on the application date of November 18, 2008, for Modification M5000, under the provisions of Federal Aviation Regulation 14 CFR 21.101, the applicable type certification standards for the modification to the Model Falcon 2000EX series are as follows:

14 CFR part 25, effective February 1, 1965, including Amendments 25-1 through 25-125, except for the sections which are complied with as amended through the indicated Amendments:

a) 14 CFR part 25 paragraphs at Amendment 125

25.21 to 25.27, 25.31, 25.101, 25.109, 25.113 to 25.117, 25.145 to 25.203, 25.231 to 235, 251(e), 25.301 to 25.351, 25.367, 25.391(d),(e), 25.393 to 25.397, 25.409 to 25.427, 25.457 to 25.495, 25.499, 25.507 to 25.519, 25.561 to 25.625, 25.631, 25.651, 25.657, 25.671, 25.675, 25.685, 25.693 to 25.701, 25.801, 25.863(a),(d), 25.1316, 25.1333, 25.1501, 25.1519, 25.1533, 25.1581, 25.1583(a),(c), 1585(a),(c),(d), 25.1587(b)

b) 14 CFR part 25 paragraphs at Amendment 122
25.1701 to 25.1731 (i.e. before EWIS implementation)

c) 14 CFR part 25 paragraphs at Amendment 120
25.21(g), 25.103, 25.105, 25.107, 25.111, 25.119, 25.121, 25.123, 25.125, 25.143, 25.207, 25.237, 25.253, 25.1419

d) 14 CFR part 25 paragraphs at Amendment 108
25.735

e) 14 CFR part 25 paragraphs at Amendment 98:
25.503, 25.655, 25.672, 25.677 to 25.683, 25.689, 25.703, 25.721, 25.729, 25.771, 25.773, 25.777, 25.783, 25.789, 25.791, 25.841, 25.865, 25.867, 25.899 to 25.1182, 25.1185 to 25.1315, 25.1321 to 25.1357, 25.1360, 25.1363, 25.1365, 25.1381, 25.1423 to 25.1431, 25.1435, 25.1457, 25.1459, 25.1529

f) 14 CFR part 25 paragraphs at Amendment 79:
25.811(e)(2)

g) 14 CFR part 25 paragraphs at Amendment 69:
25.725, 25.727, 25.731, 25.733, 25.772, 25.779, 25.781, 25.785, 25.787, 25.793, 25.795, 25.803, 25.805, 25.807, 25.809 to 25.820 (except 25.811(e)(2)), 25.832, 25.831, 25.833, 25.843 to 25.859, 25.871, 25.875, 25.1362, 25.1383 to 25.1403, 25.1411, 25.1413, 25.1415, 25.1421, 25.1433, 25.1436 to 25.1450, 25.1453, 25.1455, 25.1461

h) 14 CFR part 25 paragraphs at Amendment 144
25.733(e): « Pilot compartment view » For FalconEye System Installations

SSDs / SRDs and NSSDs / NSRDs are identified in the F2000EX M5000 CPR analysis DGT 118921.

3) Special Conditions

Special Conditions No. 25-713-SC Non-Rechargeable Lithium Batteries, effective to design changes applied for after January 18, 2018. See the applicability section of this special condition for more information on which design changes must meet it..

4) Equivalent Safety Findings

No new equivalent safety findings (existing equivalent safety findings for unchanged airplane still apply).

5) Exemptions

No new exemptions (existing exemptions for unchanged airplane still apply).

6) Optional Design Regulations

The follow approvals are unaffected by the modification:

Ditching §§ 25.801, 25.1411(d), (e), (f), (g) & 25.1415
Ice Protection § 25.1419

7) Noise Standards

14 CFR part 36 at Amdt 28

8) Fuel Venting and Exhaust Emissions Standards

No Change

9) 14 CFR 26

No Impact

(g) For FALCON 2000EX EASy airplanes incorporating Dassault modification M3000, M3001 and M5001 (Falcon 2000S definition):

See (f) above.

The Direction Generale de l'Aviation Civile (D.G.A.C.) of France originally type certificated this aircraft under its type certificate Number 185. The FAA validated this product under U.S. Type Certificate Number A50NM. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the D.G.A.C..

Type Definition

For the Falcon 2000, the type definition is DASSAULT AVIATION Drawing List 01-130 Ref. DGT 21172 Issue A

For the Falcon 2000EX, the type definition is DASSAULT AVIATION document M1802-01-130 (DGT-F/NAV89793) – Master Drawing Lists

Definition of Falcon 2000EX results of the addition of Falcon 2000 definition plus application of M1802, M1803, M1804, M1805, M1820, M1838 and M2233.

From aircraft s/n 2 and on, modification M1826 is applied resulting in an increase in fuel capacity and maximum weights.

Definition of the Falcon 2000EX EASy is the result of the basic Falcon 2000EX definition plus application of M1691, M1745, and M1504.

Definition of the Falcon 2000DX is the result of the basic Falcon 2000EX in the EASy definition plus application of M3000 and M3001.

Definition of the Falcon 2000LX is the result of the basic Falcon 2000EX in the EASy definition plus application of M2846 and M3229.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed on the aircraft for certification. The lists of all equipment as well as optional equipment approved by Direction Générale de l'Aviation Civile (DGAC) of France are contained in the documents:

For the FALCON 2000, in memos Nos.:

- DTM 38-2000/90 (01-940) - Equipment list of the basic airplane
- DTM 38-0735/91 (01-941) - Equipment list of the standard option and other options

In addition, the aircraft must be operated in accordance with the DGAC approved FALCON 2000 Airplane Flight Manual, document DTM 537 approved February 2, 1995

For the FALCON 2000EX:

M1802-01-940 (DGT-DTF/NAV81711) – Equipment List – Basis Aircraft

In addition, the aircraft must be operated in accordance with the DGAC approved FALCON 2000EX Airplane Flight Manual, Document No. DGT84278

For the Falcon 2000EX EASy:

M1691-01-101 (DGT-DTF/NAV 96502) - Equipment list for F2000EX EASy

In addition, the aircraft must be operated in accordance with the Falcon 2000EX EASy Airplane Flight Manual, document DGT88898.

For the Falcon 2000LX, the aircraft must be operated in accordance with the Falcon 2000EX EASy Flight Manual, document DGT88898.

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 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 certificate only such as changes to type design and repair/unrepair of damages.

- 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.

NOTES

NOTE 1 - Weight and Balance

(a) Current weight and balance report including a list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at its delivery.

(b) The following must be included in the airplane empty weight:

- The total unusable fuel, 82 lb, plus
- The unusable engine oil, 4.1 US gallons, 34 lb, (drainable and trapped oil) at arm + 150 in, and
- The hydraulic fluid 83 lb at arm + 127 in

- (c) The airplane must be loaded in accordance with the FALCON 2000 Loading Manual (DTM 541) or the FALCON 2000EX Loading Manual (DGT 65), as applicable and the CG must be within the specified limits at all times.

NOTE 2 - Reserved

NOTE 3 - Service Life Limits and required Maintenance/Inspections

- (a) Airframe components which are life limited, and associated retirement times, are presented in DGAC approved chapter 5.40.00 of the FALCON 2000 and Falcon 2000EX Maintenance Manual, and must be replaced as indicated therein.
- (b) For the Falcon 2000: CFE 738-1-1B engine life limits, established for critical rotating components, are published in the approved Engine Light Maintenance Manual, Report Number 72.08.03, Airworthiness Limitation Section.
For the Falcon 2000EX: PW308C engine life limits are listed in the Airworthiness Limitation Section of P&WC Maintenance Manual P/N 30C3882.
- (c) Required maintenance and inspections to maintain airworthiness based on involving reliability are presented in DGAC approved chapter 5.40.00 of the FALCON 2000 and Falcon 2000EX Maintenance Manuals.

Chapter 5-40 references :

F2000 : Airworthiness Limitation Section (Chapter 5-40, reference: DGT113876)

F2000EX : Airworthiness Limitation Section (Chapter 5-40, reference: DGT113877)

NOTE 4 - Fuel Specifications and Additives

- (a) For information concerning equivalent fuel specifications, see Airplane Flight Manual

- (b) Additives

For the CFE 738 engines; PW308C engines; and GTCP 36-150 auxiliary power unit, the following additive limitations are approved.

- Anti-icing additives, conforming to AIR 3652 of MIL-I 27686 D or E (JP-4/JP-8) or to MIL-I 85470 (JP-5) or equivalent are approved for use in the fuel in amounts up to 0.15 per cent by volume.
- SOHIO BIOBOR JF biocide additive, or equivalent, is approved for use in fuel at a concentration not exceeding 270 PPM
- Anti-static additive is approved for use in fuel at a concentration not exceeding 1 PPM for SHELL ASA 3; and 3 PPM for STADIS 450

NOTE 5 - Qualified Oils

- (a) Engine: See CFE 738 Engine Installation Manual IM 75 550 for specific oils approved per the subject specification.
- (b) APU: Brand names of oils approved for use in the APU are listed in the GTCP36-150 Maintenance Manual

NOTE 6 - The Model Falcon 2000 (incorporating M1251), Falcon 2000EX, and Falcon 2000EX EASy have been approved to operate in "Reduced Vertical Separation Minimum" (RVSM) airspace when the airplanes are operated in accordance with Airplane Flight Manual page 1-160-1 (for F2000/2000EX) or page 1-300-05 (for F2000EX EASy). Continued airworthiness and operational approval aspects of RVSM must be constructed according to Advisory Circular (AC) 91-RVSM, titled "Approval of Aircraft and Operators for Flight in Airspace Above Flight Level (FL) 290 Where a 1,000 Foot Vertical Separation Minimum is Applied."

NOTE 7 - An approved change to the AFM and ALS can be released either through a full revision of the manual or through a Change Project (CP) number bearing the same reference as the related manual.

..... END