



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EA-2008T01

Type Certificate Holder:

Dassault Aviation
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FRANCE

EA-2008T01
Sheet 01

DASSAULT AVIATION

FALCON 7X

May 2008

This data sheet, which is part of Type Certificate No. 2008T01, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model Falcon 7X (Transport Category) approved 05 May 2008.

ENGINE	Three engines PRATT & WHITNEY CANADA Corp Model PW307A (EM-2003T04) (See NOTE 5 (b))
FUEL	Refer to the Airplane Flight Manual
ENGINE LIMITS	Limits Static thrust standard day, sea level: Takeoff (limited to 5 min) 2 906 kg (6 405 lb) Maximum continuous 2 906 kg (6 405 lb) Max. engine rotor speeds: Condition of use N1 N2 Takeoff and Maximum Continuous 101.0% 100.0% Transient (10 sec max allowable) 100.5% Transient (15 sec max. allowable) 101.6 Max. permissible Interstage Turbine temperature (ITT): Ground start 950 °C Air start 950 °C Takeoff (5 min. max.) 920 °C Max. continuous 920 °C
APU	Model Honeywell – 36 – 150 [FN]. APU limits refer to the Airplane Flight Manual. APU is usable for ground operation only
THRUST REVERSERS	Engine is approved for operation with thrust reverser P/N F7XC782140020

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AIRSPEED LIMITS (IAS)

VMO at sea level	648 km/h (350 kts)
VMO straight line variation up to 3 048 m (10 000 ft)	685 km/h (370 kts)
VMO from 3 048 m (10 000 ft) to 8 532 m (28 000 ft)	685 km/h (370 kts)
MMO from 8 532 m (28 000 ft) to 15 544 m (51 000 ft)	0.9
VA maneuvering speed	403 km/h (218kts)
VFE Slat/Flap 1 extended	370 km/h (200 kts)
VFE Slat/Flap 2 extended	351 km/h (190 kts)
VFE Slat/Flap 3 extended	333 km/h (180 kts)

Note: Above 6 096 m (20 000ft), do not establish, nor maintain a configuration with the slats and the flaps extended

VLO landing gear operation	370 km/h (200 kts)
MMO landing gear operation	0.70
VLE landing gear extended	453 km/h (245 kts)
MLE landing gear extended	0.75
VMCA minimum control speed in flight	148 km/h (80 kts) (CAS)
VMCG minimum control speed on ground	150.5 km/h (81.3 kts) (CAS)

CG RANGE

	Weight		Forward limit % MAC	Aft limit % MAC
	kg	lb		
Minimum flight - aft	14 696	32 400	N/A	38.5
Minimum Flight forward	15 694	34 600	26.0	N/A
Maximum zero fuel	18 597	41 000	19.5	38.5
Maximum landing	28 304	62 400	19.5	38.5
Maximum for aft CG at 38.5%	25 890	57 078	19.5	38.5
Maximum takeoff	31 298	69 000	19.5	33.65
Maximum ramp	31 389	69 200	19.5	31.5

For weight and balance calculation refer to the Loading Manual (DGT 105608) (See NOTE 1)

DATUM

Datum is 25% of mean aerodynamic chord (MAC) 479.646 in (1 2183 mm) from the forward end of the aircraft nose cone

LEVELING MEANS

Aircraft is leveled in the longitudinal and lateral axis by means of a plumb bob and target in the left main landing gear bay

MEAN AERODYNAMIC CHORD

Mean aerodynamic chord (MAC): 131.793 in (3 347.54 mm)

MAXIMUM WEIGHT

Takeoff:	31 298 kg (69 000 lb)
Landing:	28 304 kg (62 400 lb)
Zero Fuel:	18 597 kg (41 000 lb)
Ramp:	31 389 kg (69 200 lb)

MINIMUM CREW

2 - Pilot and copilot

MAXIMUM PASSENGERS

19 - limited by emergency exit requirements of RBHA/FAR 25.807(c) (See NOTE 4)

Panos

MAXIMUM BAGGAGE

Baggage compartment: 909 kg (2 004 lb), not to exceed 400 kg/m² (81.9 lb/ft²)

FUEL CAPACITY

USABLE FUEL	Liters	kg (*)	US Gallons	lb (*)
Left circuit	5 944	4 773	1 570	10 522
Right circuit	5 944	4 773	1 570	10 522
Center circuit	6 154	4 942	1 626	10 896
Total usable	18 042	14 488	4 766	31 940
UNUSABLE FUEL				
Drainable	65	52	17	115
Undrainable	41	33	11	72
Total unusable	106	85	28	187

(*) assuming a fuel density of 0.803 kg/l

OIL CAPACITY (*)

	Liters	kg (**)	US gallons	lb (**)
Max oil level				
Left engine	7.87	7.67	2.08	16.90
Right engine	7.87	7.67	2.08	16.90
Center engine	7.87	7.67	2.08	16.90
Total	23.61	23.01	6.24	50.70
Min oil level				
Left engine	6.23	6.07	1.64	13.38
Right engine	6.23	6.07	1.64	13.38
Center engine	6.23	6.07	1.64	13.38
Total	18.69	18.21	1.64	40.14

(*) Tank quantities do not include undrainable oil or residual oil in the Accessory Gearbox, oil filter bowl or air-cooled oil cooler (ACOC).

(**) Based on specific gravity of 0.975

MAXIMUM OPERATING ALTITUDE

15 544 m (51 000 ft)

TEMPERATURE OPERATING LIMITS

Maximum: 50 °C

Minimum: -90 °C

For additional temperature limits refer to the Airplane Flight Manual

CONTROL SURFACE MOVEMENTS

Elevator:	Up 16°	Down 25°	
Rudder:	Right 29°	Left 29°	
Aileron:	Up 25°	Down 25°	
Flaps:	Down 40°		
Airbrakes:	Inboard up 50°	Outboard up 30°	
Spoilers:	Up 80°		
Wing slats	Inboard down 20°	Median down 35°	Outboard down 35°
Horizontal Stabilizer	Down 12°		Up 2°

SERIAL NUMBER ELIGIBLE

Serial numbers 001 and up.

IMPORT ELIGIBILITY

A Brazilian Certificate of Airworthiness may be issued on the basis of an EASA Export Certificate of Airworthiness (or a third country Export Certificate on Airworthiness, in case of used aircraft imported from such country), including the following statement:

“The aircraft covered by this certificate has been inspected, tested and found to be in conformity with the Brazilian approved type design as defined by the Brazilian Type Certificate No. 2008T01 and in condition of safe operation”.

The ANAC Report H.10-2280-00, dated 02 May 2008 or further revisions, contains the Brazilian requirements for the acceptance of these airplanes. (See NOTE 3)

CERTIFICATION BASIS

Brazilian Type Certificate No. 2008T01 issued on 05 May 2008 based on the RBHA 25, which endorses the Part 25 of Title 14 of the Code of Federal Regulation effective 1 February 1965, as amended by 25-1 through 25-111 in entirety.

RBHA 21 paragraph 21.29 effective on 18 February 2005, as amended by 21-1 through 21-5.

Special Conditions:

The following FAA special conditions are endorsed by ANAC:

- 25-343-SC Pilot Compartment View – Hydrophobic Coatings in Lieu of Windshield Wipers (IP F-17)
- 25-350-SC Sudden Engine Stoppage (IP A-04)
- 25-350-SC Operation Without Normal Electrical Power (IP SE-09)

The following EASA special conditions are endorsed by ANAC:

- CRI B-01 Stalling and scheduled operating speeds
- CRI B-02 Motion and effects of cockpit controls
- CRI B-03 Static directional, lateral and longitudinal stability and low energy awareness
- CRI B-04 Flight envelope protection
- CRI B-05 Normal load factor limiting system
- CRI C-01 Design maneuver requirements
- CRI C-02 Limit forces and torque
- CRI C-03 Design dive speed Vd
- CRI C-05 Interaction of systems and structure
- CRI C-06 Fuel tank crashworthiness
- CRI D-02 Electronic flight control unusual features
- CRI D-05 Flight controls - Harmonized 25.671
- CRI D-07 Nose wheel steering - Towbarless towing
- CRI D-09 Airworthiness standards for subsonic airplanes to be operated above 41 000 ft
- CRI D-11 Fire protection of thermal and acoustic insulation material
- CRI D-22 Fuselage doors

CERTIFICATION BASIS (Cont.)

CRI E-01	Fuel tank safety
CRI E-04	Reversing system requirements
CRI E-05	Sustained engine imbalance
CRI F-06	Protection from effects from HIRF
CRI F-24	Human factors aspects of flight deck design

Equivalent levels of safety findings:

The following FAA equivalent levels are endorsed by ANAC:

Section 25.671	Control Systems - General (documented in TAD ELOS Memo TC0030IB-T-A-6) (IP A-6)
Section 25.331(c)(2)	Pitch Maneuver Conditions (documented in TAD ELOS Memo TC0030IB-T-A-8) (IP A-8)
Section 25.1305	Powerplant Instruments (documented in TAD ELOS Memo TC0030IB-T-P-5) (FAA IP-5)
Section 25.971(a),(b)	Fuel Tank Sump (documented in TAD ELOS Memo TC0030IB-T-P-12) (FAA IP-12)
Section 25.841(b)(6)	Pressurized Cabins (documented in TAD ELOS Memo TC0030IB-T-SE-13)
Section 25.831(g)	Ventilation (documented in TAD ELOS Mem TC0030IB-T-SE-20)

The following EASA equivalent levels are endorsed by ANAC:

CRI C-09	JAR 25.251, 25.305 and 25.629 - Vibration, buffet and aeroelastic stability requirements
CRI C-15	JAR 25.341, 25.343(b), 25.345(c), 25.371, 25.373(a), 25.391, 25.1517 - Gust and continuous turbulence
CRI C-16	JAR 25.963(g) - Fuel tank access cover
CRI D-12	JAR 25.811(d)(1) and (d)(2) - Emergency exit locator sign used also as marking sign- cabin without divider
CRI D-13	JAR 25.811(d)(1) and (d)(3) - Emergency exit locator sign used also as marking sign- cabin with divider
CRI D-15	JAR 25.831(a) - Packs-off take off
CRI D-19	JAR 25.699(b) - Lift and drag device indicator
CRI E-02	JAR 25.865, 25.1181, 25.1195, 25.1203 - Engine fire protection in designated fire zones
CRI E-08	JAR 25.1093(b) - Falling and blowing snow
CRI E-10	JAR 25.1549 - Powerplant instruments - color markings

CERTIFICATION BASIS (Cont.)

CRI F-22	JAR 25.1357(e), 25.1309 – Honeywell PRIMUS EPIC Integrated Modular Avionics system (compliance with requirements for individual circuit protection)
CRI F-35	JAR 1459 (a)(2) - Use of IRS for DFDR vertical acceleration
CRI F-37	JAR 25.1329, JAR 25.1335 - Revisions to JAR 25.1329 and 25.1335 resulting from Flight Guidance Systems Harmonization
CRI F-41	JAR 25.1322 - CAS window red message line space

Additional ANAC Equivalent levels of safety:

Emergency Exit Locator Signs (FCAR EI-01)

Exemptions:

The following FAA exemptions are endorsed by ANAC:

Exemption No. 8792	Section 25.785(b) Side Facing Sofas (CRI D-18)
Exemption No. 9117	Section 25.901(c) Uncontrolled High Engine Thrust
Exemption No. 9148	Section 25.981(a)(3) Fuel Tank Ignition Prevention

The following FAA Optional Design Regulations are endorsed by ANAC:

RBHA/FAR 25.801, 25.1411(d), (e), (f), (g) and 25.1415	Ditching Sections
RBHA/FAR 25.141	Ice Protection

Noise requirements:

RBHA 36, corresponding to FAR Part 36 effective 01 Dec. 1969, including Amendments 36-1 through 36-26.

Emission requirements:

RBHA 34, corresponding to FAR Part 34 effective 10 Sep. 1990, including Amendments 34-1 through 34-3.

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 lists of all equipment as well as optional equipment approved by European Aircraft Safety Agency (EASA) are contained in the F7TC version stored in an electronic format under the virtual product management tool ENOVIA/VPM©.

In addition, the aircraft must be operated in accordance with the ANAC approved FALCON 7X Airplane Flight Manual, document DGT 105608.

FALCON 7X OPERATING AND SERVICE INSTRUCTIONS

The aircraft must be operated according to the EASA approved Airplane Flight Manual DGT 105608.

The Instructions for Continued Airworthiness consist of: Maintenance Review Board Report DGT 102566 Airplane Maintenance Manual included in FIELD publication number 787 Structural Repair Manual included in FIELD publication number 787

NOTES:**NOTE 1**Weight and balance.

- (a) A current weight and balance report must be carried in the aircraft at all times from the moment the aircraft is originally certified.
- (b) Loading of the aircraft must be accomplished in a manner that always maintains the center of gravity and transfer.

NOTE 2Markings and placards.

Markings and Placards according to the report 36901 "Translation of Placards and Exterior Markings for Brazil (Portuguese) – Country Code PP" latest revision and annex II of the report H.10-2280-0 latest revision. Aircraft must be operated with the Brazilian Airplane Flight Manual (AFM) approved by EASA on behalf of the ANAC, document DGT 105608.

NOTE 3

The differences of the Brazilian airplanes in relation to the basic EASA type design are summarized below:

The Brazilian Airplane Flight Manual (front page approved by EASA on behalf of ANAC).
Markings and placards.

NOTE 4

Cabin interior and seating configuration must be approved

NOTE 5

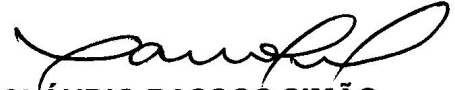
Service Life Limits and required Maintenance/Inspections

- (a) Airframe components which are life limited, and associated retirement times, are presented in chapter 5.40.00 of the FALCON 7X Maintenance Manual, approved by EASA, and must be replaced as indicated therein.
- (b) PW307A engine life limits, established for critical rotating components, are published in the approved PW307A Airworthiness limitation manual 30P0422.
- (c) Required maintenance and inspections to maintain airworthiness based on involving reliability are presented in chapter 5.40.00 of the FALCON7X Maintenance Manuals approved by EASA.

NOTE 6

The FALCON 7X has been approved to operate in "Reduced Vertical Separation Minimum" (RVSM) airspace when the airplanes are operated in accordance with Airplane Flight Manual page 1-300-05. Continued airworthiness and operational approval aspects of RVSM must be constructed according to the FAA 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."

NOTA 7 The use of electronic technology and alternative methods of data storage for the type definition of the FALCON 7X is managed in accordance with the procedures and documents defined in EASA CRI A-02 and Dassault document 00-113A-02, and is accepted by the ANAC.



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