DASSAULT FALCON 7X

SYSTEMS SUMMARY

Limitations

KINDS OF OPERATION

This airplane is certificated in the transport category and is eligible for the following kinds of operations when the appropriate instruments and equipment required by the airworthiness and/or operating regulations are installed and approved and is in operable condition:

- Day and night VFR, if permitted by flight regulations of the country over-which the airplane is flying,
- IFR flight,
- Automatic approaches to Categories I weather minimums,
- Extended over-water and uninhabited terrain,
- Icing conditions,
- The over-flight of Polar Regions is limited to north and south latitudes less than 85°.
- Flight in the former USSR airspace:
  - The airplane is not allowed to fly on routes equipped only with ATC secondary radars operating in UVD mode.
  - If GPS system is inoperative, the airplane can fly only on routes equipped with VOR/DME. In that case the VOR/DME ruptures are limited to 1 hour and 20 minutes on routes which are ± 5 km (2.70 NM) width, and 2 hours and 40 minutes on routes which are ± 10 km (5.40 NM) width.
  - Airplanes flying in polar regions outside areas covered by VHF communications are allowed to do so only in the case of favorable forecast for HF radio waves propagation.
  - It is recommended not to use TA/RA mode of TCAS II in flight in the former USSR airspace. The actions of pilot shall be coordinated with ATC when mode TA is selected.

RVSM

As stated in the Type Certificate Data Sheet, the type definition of the FALCON 7X meets the applicable requirements for RVSM operations (JAA Temporary Guidance Leaflet No 6 rev 1: "Guidance material on the approval of aircraft and operators for flight in airspace above flight level 290 where a 300m (1,000 ft) vertical separation minimum is applied").

Airworthiness approval alone does not authorize flight into airspace for which an RVSM operational approval is required by an ICAO regional navigation agreement.

NOTE

Secondary Flight Display is not part of equipment for RVSM operation.

FMS GENERAL

FMS software must be identified FMS 7.0 on the AVIONICS Setup windows, Software section.
TOLD software is not implemented.
The FMS when not operating in degraded or dead reckoning mode, has been demonstrated to comply with the applicable requirements for:

- Multi-sensors RNAV systems (FAA AC 20-130A) providing position calculation, lateral navigation and vertical navigation (FAA AC 20-129) for after take-off, en route, terminal area operations and for instrument approaches procedures (excluding final approach segment of localizer-based approaches) and missed approaches procedures.
- RNP RNAV operations, down to RNP 0.3 RNAV (RTCA/DO-236A and DO-283).

IFR OCEANIC / RNP 10 / NAT-MNPS

Dual FMS or triple configuration with GPS module, as installed, has been found to comply with the requirements for GPS primary means of navigation in oceanic and remote airspace as defined by FAA Order 8110.60 when used in conjunction with the P/N 169−613970−105 or later approved prediction program.

2 FMS receiving data from at least:

- 2 GPS,
- or 2 IRS,
- or 1 GPS and 1 IRS,

are available and operating prior to entering the oceanic-remote RNP10 airspace and:

the P/N 169-613970-501 or later approved prediction program was used for flight planning. In case some RAIM holes exists on the flight plan, the duration of the flight in IRS blending navigation mode shall not be greater than 6.2 hours. If no use of GPS is planned, the maximum duration of the flight after radio updating is 5.7 hours.

NOTE

DME / DME and VOR / DME FMS navigation modes are B-RNAV / RNP 5 approved and therefore are RNP 10 compliant under radio navaids coverage.

This does not constitute an operational approval.

B-RNAV / RNP 5

Basic RNAV (B-RNAV) airworthiness requirements (JAA Temporary Guidance Leaflet no 2 rev 1: AMJ 20X2 - "JAA guidance material on airworthiness approval and operational criteria for the use of navigation systems in European airspace designated for Basic RNAV operations") are met provided airplane is equipped with:

- FMS software 7.0 or later,

and no DGR warning is present on HSI,
and either of the following navigation mode:
- GPS,
- DME / DME,
- VOR / DME,
- IRS (2 hour time limit after last IRS alignment).

NOTE

When GPS remains the unique means of B-RNAV navigation source (GPS stand-alone), use of GPS Integrity Monitoring (RAIM) Prediction program is mandatory before B-RNAV operation.

This does not constitute an operational approval.

P-RNAV (JAA TGL-10)

Basic P-RNAV airworthiness requirements (JAA Temporary Guidance Leaflet No 10 : "Airworthiness and operational approval for Precision RNAV operations in designated European airspace") are met provided airplane is equipped with:
- FMS software 7.0 or later,

and no DGR warning is present on HSI,
and either of the following navigation mode:
- GPS,
- DME / DME,
- VOR / DME,
- IRS (30 minute time limit after last IRS alignment).

AC 90−100

US TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS

AC 90−100 airworthiness requirements are met provided airplane is equipped with:
- FMS software 7.0 or later,
  and the RNP value is set to the correct value in sensors page, performance tab,
  and no UNABLE RNP or UNABLE RNP NXT WPT, DEGRAD, DR, NO POSITION SENSOR is displayed,
  and the NOTAM NAVAIDS have been inserted in the FMS.

RNAV airworthiness approval has not accounted for database accuracy or compatibility.

POLAR OPERATIONS

Polar operations are limited to 85°NORTH or 85°SOUTH.
Provided the crew selects TRUE reference in HSI when passing 73°North northbound or 60°South southbound.

SSR MODE S ENHANCED SURVEILLANCE

The installed Mode S system satisfies the data requirements of ICAO Doc 7030/4, Regional Supplementary Procedures for SSR Mode S Enhanced Surveillance in designated European airspace. The capability to transmit data parameters is shown in column 2.

Magnetic Heading	Available
Indicated Airspeed	Available
Mach No	Available
Vertical Rate	Available
Roll Angle	Available
Track Angle Rate	Available
True Track Angle	Available
Groundspeed	Available
Selected Altitude	Available
Barometric Pressure Setting	Available

Extended squitter is disabled.

MINIMUM FLIGHT CREW

Two pilots (one pilot and one copilot).

MAXIMUM NUMBER OF PASSENGERS

19

WEIGHTS

STRUCTURAL LIMITATIONS

- Maximum ramp weight ..... 69,200 lb (31,389 kg)
- Maximum take-off weight ..... 69,000 lb (31,298 kg)
- Maximum landing weight ..... 62,400 lb (28,305 kg)
- Maximum zero fuel weight ..... 41,000 lb (18,597 kg)
- Minimum flight weight ..... 32,400 lb (14,696 kg)

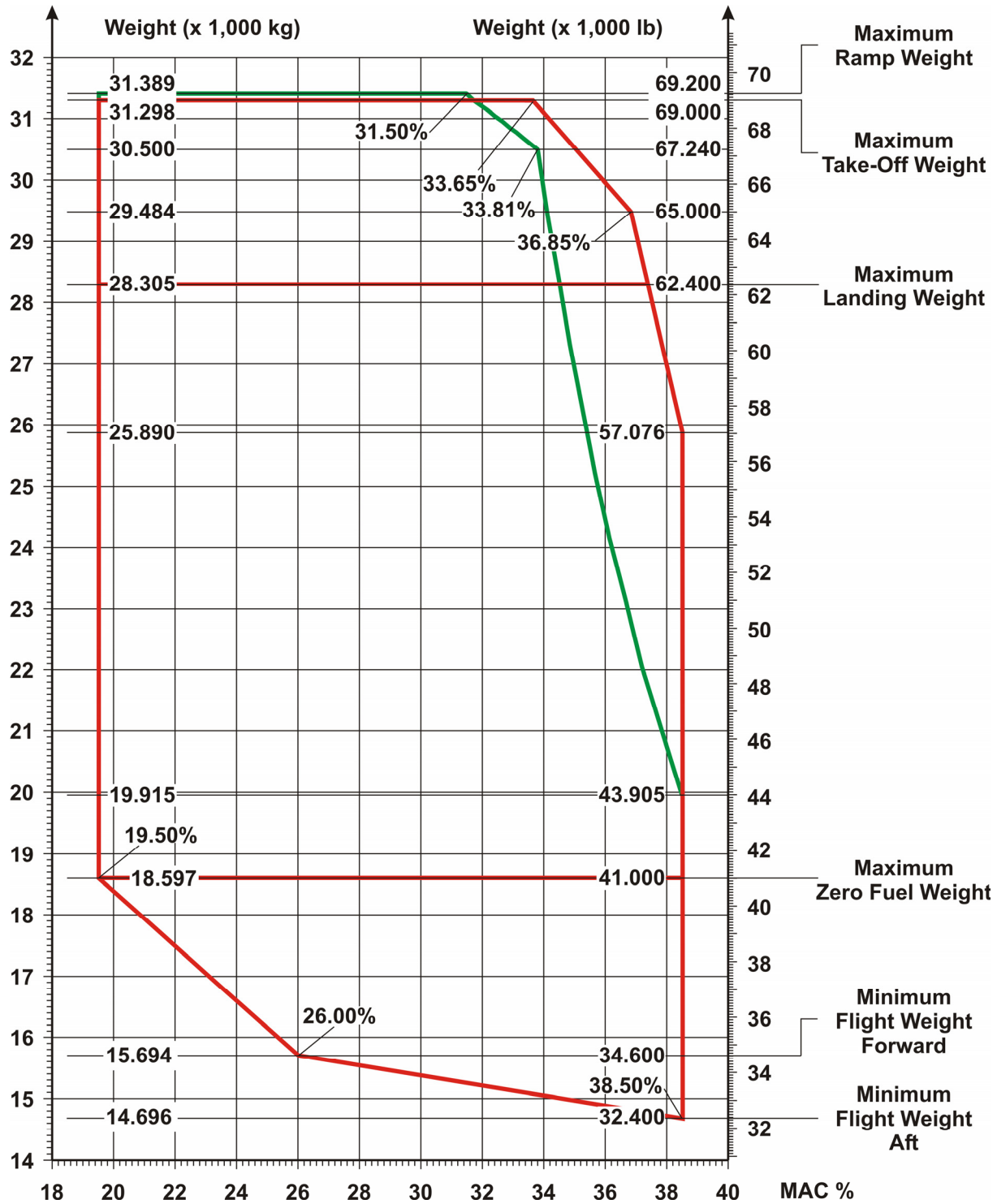
LIMITATIONS DUE TO PERFORMANCE

The maximum take-off weight and the maximum landing weight given as structural limitations may have to be reduced to comply with performance and operating requirements (refer to Maxi. Allowable Weights, 5-150-10).

NOTE

In case of landing at weight beyond Maximum Landing Weight, read and record vertical speed at touch down.

CENTER OF GRAVITY LIMITS



The red line shows the in-flight limits.
The green line shows the on-ground limits.

DATUM

Datum is 25% of mean aerodynamic chord (MAC) which coincides with fuselage station (12,183 mm). Origin of Fuselage Station is the forward end of the airplane nose cone

MEAN AERODYNAMIC CHORD

Length: 3,347.54 mm.
Zero % MAC is at Fuselage Station + 11,346.1 mm.

LOADING

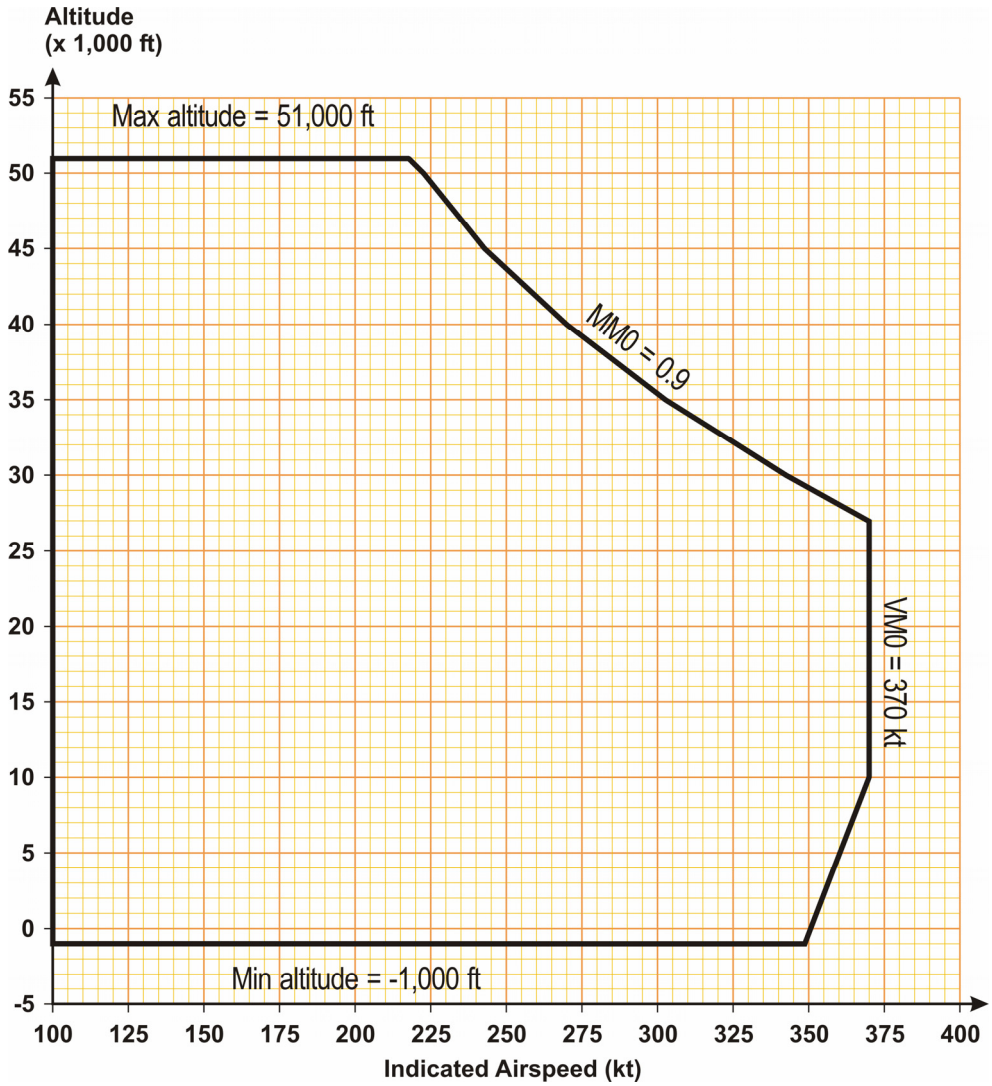
The airplane must be loaded in compliance with the center of gravity limits (see CENTER OF GRAVITY LIMITS 1-100-10) . Information for determination of airplane's weight and balance are included in Loading Manual DGT 108840
The weights indicated below must not be exceeded when loading the airplane:

- Baggage compartment: 300kg/m2.
- Galley floor: 400kg/m2.
- Cabin and servicing compartment: 200kg/m2.
- Payload: 2,717kg (5,990lb).

MAXIMUM OPERATING LIMIT SPEED: VMO / MMO

VMO / MMO ENVELOPE

Unless otherwise specified, limits are expressed in terms of indicated values.
Instrument error is assumed to be zero.



CAUTION

The maximum operating limit speed VMO / MMO must not be deliberately exceeded in any regime of flight (climb, cruise, descent) unless a higher speed is authorized for flight test or pilot training.

MANEUVERING SPEED

➨ VA (alternate or direct laws) ..... 218 KIAS.

When operating in normal laws, full control input on one axis at a time is authorized whatever the speed.

CAUTION

Full rapid simultaneous control inputs on two or three axis must be avoided whatever the speed and flight control system laws.

HIGH LIFT DEVICES OPERATING OR EXTENDED LIMIT SPEEDS: VFE

➨ SF 1: ..... 200 KIAS
➨ SF 2: ..... 190 KIAS
➨ SF 3: ..... 180 KIAS

CAUTION

En route or above 20,000 ft do not establish or maintain a configuration with the flaps or the slats extended.

MAXIMUM LANDING GEAR SPEED

MAXIMUM LANDING GEAR OPERATING SPEED: VLO / MLO

➨ VLO ..... 200 KIAS
➨ MLO 0.7

NOTE

VLO / MLO is the maximum speed at which it is safe to extend or retract the landing gear.

MAXIMUM LANDING GEAR EXTENDED SPEED: VLE / MLE

➨ VLE ..... 245 KIAS
➨ MLE 0.75

NOTE

VLE / MLE is the maximum speed at which the airplane can be safely flown with the landing gear extended and locked and main gear doors closed.

MINIMUM CONTROL SPEED IN THE AIR: VMCA

➨ VMCA ..... 80 KIAS.

MINIMUM CONTROL SPEED DURING LANDING AND APPROACH: VMCL

➨ All engines operating ..... VMCL = 84 KIAS.
➨ One engine inoperative ..... VMCL-2 = 84 KIAS.

MINIMUM CONTROL SPEED ON THE GROUND: VMCG

➨ VMCG ..... 81.3 KIAS.

MISCELLANEOUS LIMIT SPEEDS

➨ Tire maximum operating speed ..... 195 kt (225 mph), ground speed.

INDICATED STALL SPEED

NOTE

RESERVED

BUFFET ONSET ENVELOPE

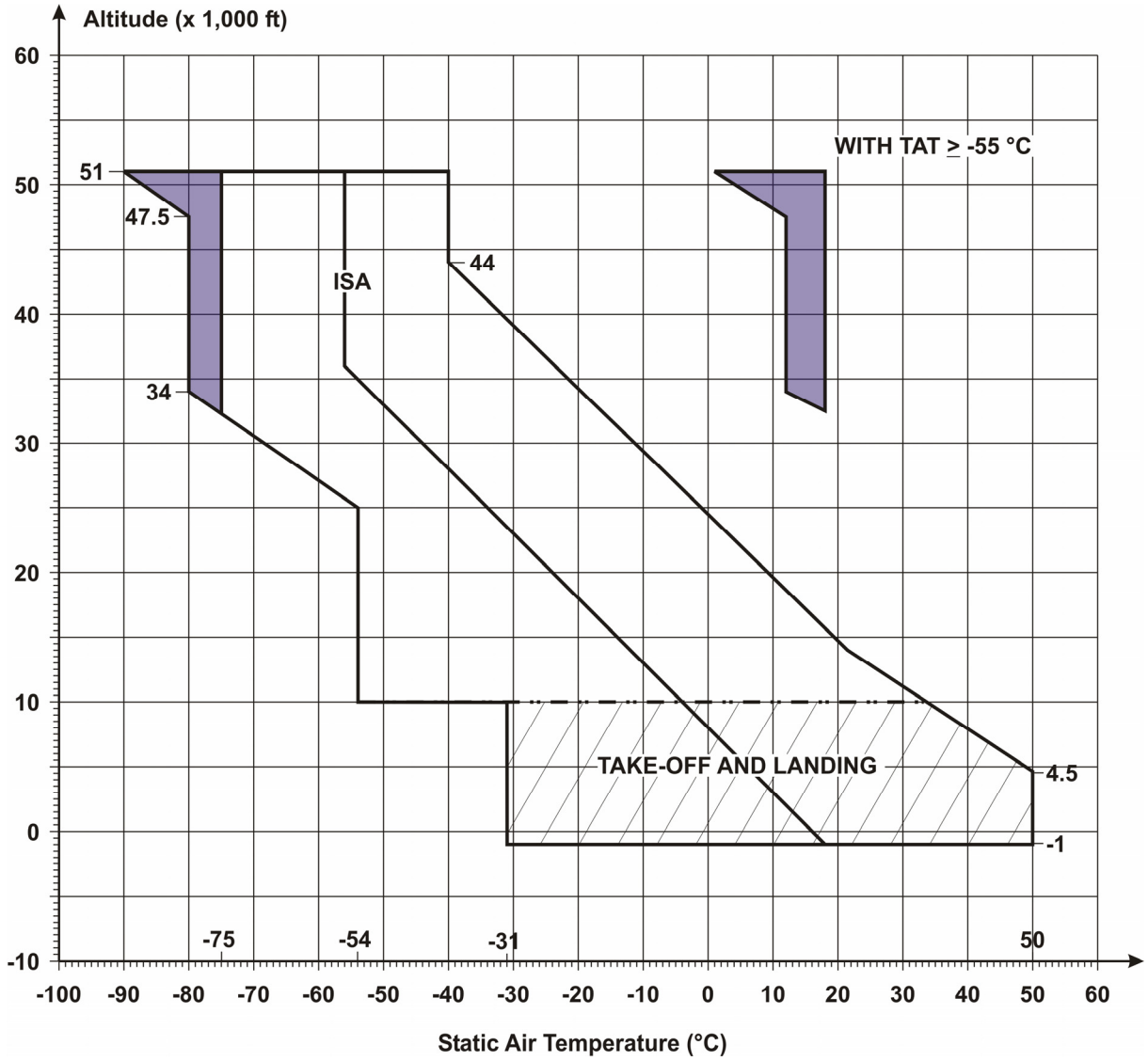
NOTE

RESERVED

MANEUVERING FLIGHT LOAD FACTORS

➨ Flaps up: ..... + 2.5 to - 1.
➨ Flaps down: ..... + 2 to 0.

TEMPERATURE AND ALTITUDE LIMITS



TAKE OFF AND LANDING

- Airport pressure altitude ..... -1,000 ft / + 10,000 ft
- Runway slope ..... +/- 2%
- Runway ..... Paved and hard-surfaced
- Tailwind ..... 10 kt

WARNING

TAKE OFF MUST BE PERFORMED IN SF2 CONFIGURATION.IN SF 1 CONFIGURATION THE NO TAKE OFF CAS MESSAGE WILL NOT TRIGGER AT TAKE-OFF IN ANTICIPATION OF PERFORMANCE INFORMATION AVAILABILITY

NOTE below not applicable to US aircraft:

NOTE

Operation on contaminated runways is not permitted.

DEMONSTRATED CROSSWIND

Satisfactory controllability during take–offs and landings has been demonstrated with 90 degree crosswind component up to 23 kt.

TAKE-OFF

- Crosswind.....23 kt

LANDING

Landing in crosswinds of greater values is entirely at the operator discretion.
Landing in strong gusty crosswinds is not recommended.

EN ROUTE

- Maximum operating altitude ..... 51,000 ft
- Maximum operating altitude with:
  - One engine inoperative.....See sub sub section 5-600-10
  - Two engines inoperative.....See sub sub section 5-600-15
- Ambient temperature.....See sub sub section 1-150-05

TOWBARLESS TOWING

Only the towbarless towing vehicles approved by the constructor, as listed in the Ground Servicing Manual (DGT TBD), section TOWING, should be used.

BAGGAGE COMPARTMENT

Access to the baggage compartment is prohibited during any normal operation above 40,000 ft.
The baggage compartment access door must be closed and latched during any normal operation above 40,000 ft.

AIRFRAME CONTAMINATION

NOTE

The effect of ice accumulation on airframe takes into account unprotected surfaces, runback ice on protected surfaces with operative ice protection and ice accumulation on nacelle air inlet in case of engine failure.

RUNWAY CONDITION

All performance data are established based on a smooth, hard surfaced runway, dry or wet as applicable.

CABIN PRESSURIZATION

- Maximum differential pressure .....10.1 psi / 701 mbar (pressure relief valve setting)
- Maximum negative pressure ..... -0.3 psi / -20 mbar

AUTOMATIC PILOT

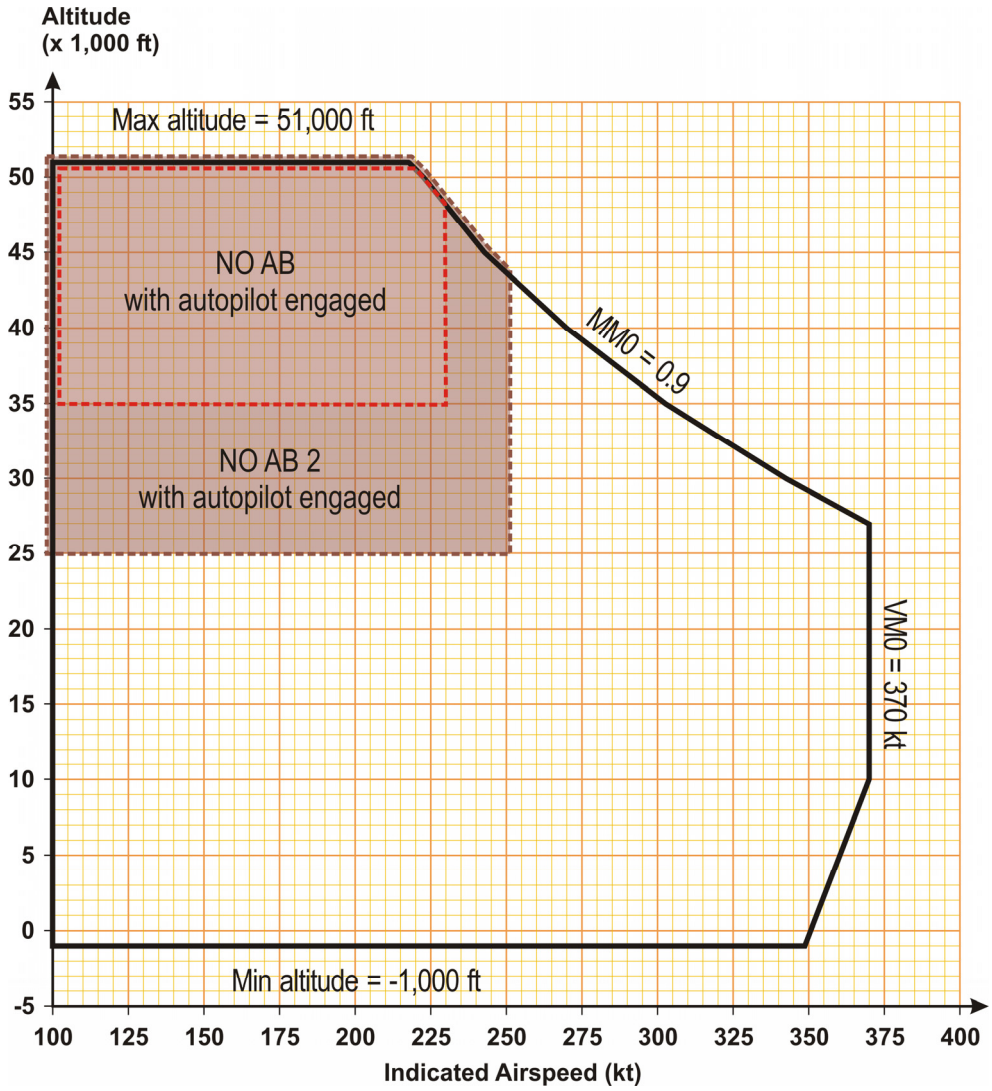
The autopilot must not be engaged for take-off or landing.

- Minimum height to engage autopilot after take-off ..... 400 ft
- Minimum height for autopilot operation except during approach..... 400 ft
- Minimum height for autopilot operation during approach without path reference ..... 120 ft
- Minimum height for autopilot operation during approach with vertical path reference ..... 80 ft

CAUTION

-Above 35,000ft and airspeed below 230 KIAS
Do not use airbrakes while automatic pilot is in use

-Above 25,000ft and airspeed below 250 KIAS
Do not use airbrakes AB2 position while automatic pilot is in use.



AUTOTHROTTLE

The autothrottle must not be engaged for take-off, go-around and landing.

- Minimum height to engage autothrottle in climb after take-off..... 400 ft
- Minimum height to disengage autothrottle at landing..... 50 ft

ELECTRICAL

- Maximum voltage of DC system ..... 32 V
- Maximum generator output:
  - Transient (5 minutes max.) ..... 600 A
  - Transient (5 seconds max.) ..... 800 A
  - Continuous in flight ..... 400 A
  - Continuous ground idle ..... 350 A
  - Continuous with one generator inoperative ..... 500 A

CAUTION

Ram Air Turbine deployement during normal operations is prohibited

Flight time with Ram Air Turbine deployed, during abnormal operations is time limited to 3 hours 45 minutes.

FLAPS

WARNING

IN SF 1 CONFIGURATION THE NO TAKE OFF CAS MESSAGE WILL NOT TRIGGER AT TAKE-OFF IN ANTICIPATION OF PERFORMANCE INFORMATION AVAILABILITY

USE OF FUEL

- No flight altitude limitation after booster pumps failure with XBP cross feed.

CAUTION

Flight altitude is limited to 25,000 ft after dual booster pumps failure without XBP cross feed.

USABLE FUEL

Fuel used must conform to the following specifications.
This table is representative of the fuel definition on the year 2001

Designation	Specification		Freezing point (°C)	Additives		NATO code
		Equivalence (for info.)		Anti-ice	Anti–static	
KEROSENE	(JET A)	ASTM D 1655-82 Type A CAN 2-3.23 M.D.2494 Issue 9 DCSEA 134	- 40	* * * *	* WITH * *	F-35
	(JET A-1)	ASTM D 1655-82 Type A CAN 2-3.23 DEF STAN 91-91 M.D.2494 Issue 9 DCSEA 134	- 47	* * WITHOUT * *	* * WITH WITH *	F-35
	(JP-8)	MIL-T-83133 M.D.2453 Issue 4-Amd1 DCSEA 134 DEF STAN 91-87	-50	WITH * WITH WITH	* * * WITH	F-34
HIGH FLASH POINT TYPE FUEL	(JP-5)	DCSEA 144 DEF STAN 91-86 CAN 3GP24 M.D.2452 Issue 2-Amd1 MIL-T-5624H	- 46	WITH WITH WITH - WITH	* WITHOUT * - WITHOUT	F-44

* Information to be checked with the fuel supplier.

USABLE FUEL QUANTITY

This total quantity is distributed as follows:

	liter	kg (d=0.803)	US gal	lb
ENGINE 1: LH forward tank + LH wing tank + LH feeder	5944	4773	1670	10522
ENGINE 2: Front tank + Center tank + Rear comp. tank	6154	4942	1625	10896
ENGINE 3: RH forward tank + RH wing tank + RH feeder	5944	4773	1670	10522
Airplane total capacity	18042	14488	4766	31940

NOTE

There is no fuel imbalance limitation.

PRESSURE FUELING SYSTEM

➨ Maximum feed pressure: .....50.8 psi / 3.5 bars / 350 kPa.

FUEL TEMPERATURE

In flight tank fuel temperature must be maintained 3°C above the freezing point of fuel being used.

FUEL ADDITIVES

The following additives are authorized for use in the fuel:

- SOHIO Biobor JF biocide additive, or equivalent, is approved for use in the fuel at concentrations of 135 ppm (Preventive treatment) and 270 ppm (curative treatment).
- Kathon at concentrations of 50 ppm (Preventive treatment) and 100 ppm (curative treatment)
- Anti-icing additive, conforming to MIL-I-27686D/E (JP-4/JP-8) or MIL-I-85470 (JP-5) specifications or equivalent at a concentration not in excess of 0.15 % by volume
- Anti-static additive providing the quantity added does not exceed: 1 ppm for SHELL ASA 3.

Factors such as hail, volcanic ash, or wind blown sand may degrade prematurely the Dry Coat. As specified in the Maintenance Manual, functional check of its efficiency must be performed after such exposures.

ICING CONDITIONS

Icing conditions exist when the OAT on the ground and for take-off, or TAT in flight is +10 °C or below, and visible moisture in any form is present (such as clouds, fog with visibility of one mile or less, rain, snow, sleet and ice crystals).

Icing conditions also exist on the ground and at take-off when the OAT is +10 °C or below when operating on ramps, taxiways or runways where surface snow, ice, standing water, or slush may be ingested by the engines or freeze on engines, nacelles or engine sensor probes.

Ice detection system is only performing a back-up detection function.

CAUTION

Extended flight in icing conditions with slats/flaps extended must be avoided.

WING ANTI-ICE

The wing anti−ice system must not be used with total air temperature in excess of + 10 °C.

Once activated the Wing anti–ice system (WING ANTI–ICE) must remain ON for at least 5 minutes unless the crew has visual confirmation that the slats are completely free of ice.

The wing anti−ice system is inhibited on ground except for limited checks conducted in accordance with Airplane Flight Manual or Maintenance Manual instructions.

ENGINE ANTI-ICE

The engine anti-ice system must be used on ground and in flight when icing conditions exist or are anticipated.
The engine anti-ice system must not be used with total air temperature in excess of + 10 °C.

WINDSHIELD RAIN PROTECTION

Primary rain protection is ensured by using the Dry Coat, a hydrophobic coating applied on the main windshields. In addition, the Rain Repellent System can be used to improve visibility though windshield during approach in rain condition and during ground operation in dew condition.
Hydrophobic Coat must be handled with care: refer to relevant sections of Maintenance Manual for approved cleaning materials, approved cleaning procedures and approved de-icing fluids.

TIRES AND BRAKES

- Nose wheels must be equipped with chined tires.
- Brake kinetic energy limit: 25,700 kJ per brake.

SHOCK ABSORBERS HEIGHT

NOTE

RESERVED

IRS

Alignment is functional between 78°25' North and 78°25' South latitude.

TCAS II SYSTEM OPERATION

Pilots are authorized to deviate from their current ATC clearance to the extend necessary to comply with a TCAS II resolution advisory (RA).
Following a TCAS II "clear of conflict" advisory, the pilot should expeditiously return to the applicable ATC clearance unless otherwise directed by ATC.

EGPWS SYSTEM OPERATION

Pilots are authorized to deviate from their current Air Traffic Control ATC clearance to the extend necessary to comply with an EGPWS warning.
In order to avoid unwanted alerts, the enhanced modes (Terrain Awareness Alerting and Display **TAAD** and Terrain Clearance Floor **TCF** and Runway Field Clearance Floor **RFCF** functions) must be INHIBITED by selecting the **TERR INHIB** MKB pushbutton:

- When within 15 NM of take-off, approach or landing at an airport that is not included in the airport data base.
- For operation with QFE reference if in the SENSORS window TAB both GPS's are not in navigation mode.

Alerting algorithms take into account man made obstructions, but the EGPWS obstacle data base only covers a few areas in the world.
The Terrain Awareness Display must not be used for navigation.

NOTE

The EGPWS does not take into account specific airplane configuration and climb performance and a PULL UP maneuver, for certain situations may not ensure terrain clearance.

OPERATION BARO-SETTING

Below transition altitude or level, altimeter setting must be set to QNH to use VNAV and VSD.

FMS

Barometric VNAV guidance during approach including the approach transition, final approach segment, and the missed approach procedure is not temperature compensated. Unless a temperature limitation is reflected on the approach chart, operating at uncompensated minimum IFR altitudes will not provide expected terrain and obstacle clearance for temperatures below ISA.

SENSORS WINDOW

FMS OPERATING MODE

FMS do support synchronous and single mode operation. Selecting synchronous for a FMS which is in single operation will result of the synchronization of that FMS with the Pilot Flying FMS (Master FMS).

NAVIGATION MODE AND PERFORMANCE

GPS: GPS, as installed, has been found to comply with the requirements for the use of GPS for IFR oceanic, domestic en route, and terminal area operations as defined in JAA Leaflet No 3 REV 1 when used in conjunction with the P/N CDN 169-613970-501 or later approved prediction program.
The here-above statements are valid if there is no FMS and/or GPS related failure message/label on PDU / MDU.
GPS updating must be disabled when operating in countries whose national airspace is not referenced to WGS-84 reference datum in accordance with the criteria of AC20-130A, unless other appropriate procedures are used.

NAVIGATION

RNP flight operations are subject to GPS satellite availability and/or navaid coverage for the selected route. Navigation based on DME/DME or VOR/DME updating modes is permitted but may be restricted by the availability or performance of the applicable ground navaids. Crews should deselect (NOTAM) ground navaids that are not to be used for navigation.

NAVIGATION MAP (INAV, VSD) AND LOG (WPT LIST):

INAV AND VSD DATA LAYERS

INAV including VSD (obstacle, terrain) are provided for advisory purpose only.
AIRWAYS layer should be used for flight planning on ground to avoid cluttering INAV display in flight.
INAV including VSD must not be displayed with amber **DGR** in HSI or displayed EPU above 15NM.

GRAPHICAL FLIGHT PLANNING

Hold dialog box:

- The FMS does not always take into account the published maximum Holding Pattern speed. Only the protection area calculated in accordance with the FAA (7130-3) model is taken into account.
- Adapt and stabilize the airplane speed 2 minutes prior the airplane over flies the fix for the first time.
- Check that the FMS message **HIGH HOLDING GRD SPD** is out when passing the fix.

CRUISE PERFORMANCE

FUEL, TIME and SMART PERF prediction information are provided for advisory purpose only and must not be used for flight planning.
The fuel predictions will be totally inaccurate with one or two engines inoperative.

SID / STAR / APPROACHES / TERMINAL PROCEDURES

WARNING

INSERTING AND ACTIVATING A NEW APPROACH OR A NEW FPLN WILL RESET MINIMUMS SELECTIONS. THEREFORE, THEY SHOULD BE VERIFIED AFTER SUCH ACTION.

CAUTION

- It is crew responsibility to check the system-proposed VGP angle against the chart-published descent angle.

- Once VGP is armed, no pilot intervention should be made to ease the capture.

Steep App check box must not be used

NOTE

During holding pattern Flight Director mode may revert from VPATH to PATH mode.

- It is crew responsibility to check procedures retrieved from data base with SID / STAR / approach charts.
- Approach procedures retrieved from data base cannot be modified by the crew.
- For approach procedures retrieved from data base where only one approach transition (IAF) is proposed, this transition will not be automatically selected by the system. It is crew responsibility to select this approach transition or not (vector to FAF), depending on the intended trajectory to execute the approach.
- Some approaches and STAR procedures are not in the data base. This is because of the way some procedures are defined by the controlling agency and the limitations of the FMS.

FMS-BASED APPROACHES

The following table describes the approach procedures approved for being automatically executed with the FMS (i.e. use of LNAV/VNAV flight director guidance manually flown or coupled to the autopilot).
The FMS navigation mode must be checked prior to the IAF.
Performing a Vertical Direct TO (VDTO) on a altitude constrained FAF will lead to a late activation capability and may lead to a steep flight path angle up to minus 10 degrees.
Whatever the kind of FMS-based approach, following one of the 3 events, the approach must be discontinued:

- **UNABLE RNP** in FMS message window (I-NAV),

or

- Green **APPR** not displayed prior to FAF (ADI),

or

- Amber **DGR** displayed (HSI).

Observing the Minimum Safe Altitude and obstacles clearances remains a crew responsibility.
Prior to executing an FMS based approach, the RNP Value in sensor page shall be set to the value indicated in first column. The FMS navigation and synchronization modes shall be checked against second and third columns.

Approach type and RNP	**Approved FMS navigation mode**	**Special considerations**	**Specific events following which the approach must be discontinued**
NDB or NDB-DME RNP 0.6 (or lower)	GPS	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	
	DME-DME	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	

Approach type and RNP	Approved FMS navigation mode	Special considerations	Specific events following which the approach must be discontinued
VOR RNP 0.5 (or lower)	GPS	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	
	DME-DME	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	
	VOR-DME provided the procedure specified NAVAID has DME capability	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	

Approach type and RNP	Approved FMS navigation mode	Special considerations	Specific events following which the approach must be discontinued
VOR-DME or TACAN RNP 0.5 (or lower)	GPS	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	
	DME-DME	Dual FMS synchro	**NAV: FMS/GPS 1+2 MONIT** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	
	VOR-DME	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** message in CAS
		Single FMS and procedure specified NAVAID available and displayed in HSI	

Approach type and RNP	Approved FMS navigation mode	Special considerations	Specific events following which the approach must be discontinued
RNAV RNP 0.3	GPS	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS or **GPS RAIM UNAVAILABLE** or **GPS RAIM ABOVE LIMIT** FMS message
	DME-DME unless otherwise indicated on the approach chart	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS
GPS RNP 0.3	GPS	Dual FMS synchro	**NAV: FMS..-GPS 1+2 POS MISC** **NAV: FMS/GPS 1+2 MONIT** message in CAS or **GPS RAIM UNAVAILABLE** or **GPS RAIM ABOVE LIMIT** FMS message

LOCALIZER-BASED APPROACHES

The use of FMS guidance (lateral and vertical) on the final approach segment of a localizer-based approach (LOC, LOC-DME, LOC B/C, LDA, SDF, ILS, ILS-DME) is prohibited.
The final part of these approaches shall be executed on LOC or LOC/GS guidance only (depending on the type of procedure).
However, the FMS LNAV / VNAV can be used up to interception of the localizer. For these phases (initial approach and intermediate approach), the limitations associated with the following events (**UNABLE RNP** in FMS message window, amber **DGR** on HSI, **NAV:FMS ..-GPS 1+2 POS MISC** and **NAV: FMS/GPS 1+2 MONIT** in CAS message) are applicable.

VIDEO WINDOW (OPTIONAL)

In current state of approval, only cameras recording visible frequency range are authorized.

- Video must not be used to fly the airplane or as a primary means to taxi the airplane.
- Video must not be displayed in MDU during take-off, approach and landing.
- Displaying video window in flight requires 4 DU operative.
- No entertainment video shall be displayed in MDU.

NOTE

Selection of the displayed video should be such that no red color is visible in the video display.

JEPPESEN ELECTRONIC TERMINAL CHARTS (OPTIONAL)

GENERAL

The use of the Jeppesen Electronic Terminal charts requires:

- In flight 4 DU operative,
- A valid effectivity for the charts database,

It does not exempt the crew from:

- Checking the NOTAM (Charts NOTAM are only supplemental information).
- Having an adequate backup documentation available on board and readily at hand.

CAUTION

In case of discrepancies between the electronic chart and the adequate reference documentation, the adequate reference documentation takes precedence.

AIRPLANE POSITION

Airplane position displayed on the AIRPORT diagram must not be used as a primary means for the guidance during taxiing. Airplane position displayed on AIRPORT diagram must be cross-checked with visual reference position prior to its use. When no visual position cross-check can be established to use airplane position on AIRPORT diagram, Pilot Flying FMS must be in GPS navigation mode.

AUXILIARY POWER UNIT (APU)

➨ The APU must be operated on the ground only.
The APU must be shutdown by depressing the APU **START STOP** pushbutton before the beginning of the take-off phase.
Operation of the APU with passengers in the cabin and no crew member monitoring is not authorized.

- Maximum N1 speed ..... Green (below 102 %)
- Maximum EGT ..... Green

EXHAUST GAS TEMPERATURE LIMIT (T5)	
Starting	1050 °C maximum during less than 1 second 980 °C maximum during less than 4 seconds
Stabilized	760 °C

- Maximum generator output:
  - Transient (1 minutes max.) ..... 600 A
  - Stabilized ..... 400 A

Refer to approved fuels and oils for the engine (sections 02-15-20 and 02-15-60).

THRUST RATINGS (UNINSTALLED, SEA LEVEL, ISA).

- Take–off .....6405 lb (2849 daN)
- Maximum continuous .....6405 lb (2849 daN)

CAUTION

The take-off thrust rating is time limited to 5 minutes.

THRUST SETTING

The engine low pressure rotor speed N1 is used as the thrust setting parameter.
The take–off and maximum continuous thrusts as defined in section 5-050 are based on the N1 values given in section 5-400 or 5-450.

MAXIMUM ENGINE ROTOR SPEEDS: N1 AND N2

Condition of use	N1	N2
Take–off - Maximum continuous	101.0 %	100.0 %
Transient .... 10 second max. allowable		100.5 %
Transient .... 15 second max. allowable	101.6 %	

- 100 % N1 = 11000 rpm
- 100 % N2 = 28500 rpm

MAXIMUM INTERSTAGE TURBINE TEMPERATURE: ITT

Ground start		950 °C
Air start		950 °C
Take-off	5 minutes max.	920 °C
Maximum continuous		920 °C

STARTING TIME

Ground start must be aborted upon amber START annunciation on N1 gauge.

CAUTION

Last engine must have been started 4 minutes minimum before brake release at take-off

THRUST REVERSER

THRUST REVERSER

The thrust reverser is approved for ground use only.
Continuous maximum reverse thrust is limited to 30s.
Maximum reverse thrust in static condition should be limited to 20 kt tailwind.

OIL PRESSURE

Thrust setting	Minimum pressure	Maximum pressure
Ground idle	20 psid	145 psid
Flight idle and above	35 psid	145 psid
Transient		200 psid less than 4 minutes

NOTE

54 ENG 1 OIL TOO LO PRESS or
55 ENG 2 OIL TOO LO PRESS or
56 ENG 3 OIL TOO LO PRESS messages in CAS illuminate for an oil pressure :
-below 10 psid
or
-below 20 psid for more than 3 minutes.

OIL TEMPERATURE

Thrust setting	Minimum temperature	Maximum temperature
Starting	-40°C	
Above ground idle	25°C if SAT < 5°C 16°C if SAT ≥ 5°C	
Steady state		141°C
Transient		146°C less than 5 minutes

APPROVED OILS

Type II approved oil conforming to FALCON 7X Aircraft Maintenance Manual.