

中国民用航空总局  
GENERAL ADMINISTRATION OF CIVIL AVIATION OF CHINA

型号认可证数据单

THE VALIDATION DATA SHEET

编号/No: VTC069A

版次/Revision: 0

型号/Type:

MF50

MF900

F900EX

批准人/Approved By:

日期/Date: 2006 年 2 月 24 日

本数据单是型号认可证(编号: VTC069A)的组成部分, 它规定了符合中国民用航空总局的适航要求所颁发此型号认可证的产品状态和限制。

This data sheet, which is part of Validation of Type Certificate (No: VTC069A) , prescribes condition and limitation under which the product for which the type certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号认可证持有人/Validation of Type Certificate Holder:

DASSAULT Aviation  
9 Rond Point Marcel Dassault  
75008 PARIS  
France

有效页清单/List of effective pages :

|             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 页数/ Pages   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
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**总则（所有型别）/GENERAL (ALL MODELS)****1. CAAC 认可数据单和型号合格证数据单****CAAC Validation Data Sheet and Type Certificate Data Sheet**

|               |                                                                                         |                                                                                     |
|---------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|               | 中国民用航空总局认可数据单号、版次和颁发日期<br>CAAC Validation Data Sheet Number, Revision and issuance date | 型号合格证数据单号、版次和颁发日期<br>Type Certificate Data Sheet Number, Revision and issuance date |
| 历史<br>History | 直接认可 DGAC 数据单<br>Validated DGAC TCDS directly                                           | DGAC TC 163, Revision 11, February 1997                                             |
| 当前<br>Current | 175A, Revision 0, 2005 年 2 月 24 日                                                       | EASA.A.008, Revision 1, 25 October 2004                                             |

2. 适航类别/Airworthiness Category: 大飞机/Large Aeroplanes

3. 认可当局/Validation Authority: 中国民用航空总局/CAAC  
 审定当局/Certifying Authority: 欧洲航空安全局/EASA

4. 型号合格证持有人/Type Certificate Holder: DASSAULT AVIATION  
 9, Rond Point des Champs Elysées  
 75008 PARIS

5. ETOPS: 依据 JAR OPS 1.245 限定 120 分钟/As per JAR OPS 1.245 (§a)(2) limited to 120 Min

6. CAAC Special Requirements:

交付到中国的每一 AAA 航空器须满足下述特殊要求:

Each of AAA aircraft delivered to China shall meet the following special requirements:

(1) 必须满足中国民用航空总局的运行要求（例如标记标牌的中文要求）。

The operational requirements of CAAC must be met (e.g. Chinese language requirements for markings and placards).

(2) 燃油符合“中国国标 3 号燃油—GB6537-94”的规范。

Fuel conforming to Specification “PRC National Standard No.3 Jet Fuel -- GB6537-94”

(3) 在每一航空器上必须安装快速存储器（QAR）（参照中国适航指令 CAD-97-MULT-38）。

Quick Access Recorder (QAR) must be installed on each aircraft (reference to CAD97-MULT-38).

## 1 MF50 型别/MYSTERE-FALCON 50 MODEL

### 1.1 MF50 基本型别/MYSTERE-FALCON 50 Basic model

没有进行改装的序列号直到 252（含 252）的航空器被称为 MYSTERE-FALCON 50，经过改装后航空器符合 MYSTERE-FALCON 50 EX 版。MYSTERE-FALCON 50 的商业名称为 MYSTERE-FALCON 50 B (F50B)。

So called aircraft are MYSTERE-FALCON 50 up to serial number 252 inclusive which have not received the modifications in order to make them conform to MYSTERE-FALCON 50 EX version. The commercial name of MYSTERE-FALCON 50 is MYSTERE-FALCON 50 B (F50B).

#### 1.1.1 发动机/Engines

型别: GARRETT TURBINE ENGINE COMPANY TFE 731-3-1C (型号合格证数据单 E6WE)

Model: GARRETT TURBINE ENGINE COMPANY TFE 731-3-1C (Type Certificate Data Sheet n° E6WE)

数量/Number: 3.

发动机限制/Engine limits:

- 直到 24°C 海平面条件（5 分钟）最大起飞静推力: 3700 磅（1.646 daN）
- Maximum takeoff static thrust up to 24° C - Sea level condition (5 minutes): 3.700 lb (1.646 daN).
- 15°C 海平面条件最大连续静推力: 3700 磅（1.646 daN）
- Maximum continuous static thrust at 15° C - Sea level conditions : 3.700 lb (1.646 daN).

注: 参见飞机飞行手册, 发动机运行要求

Note: Refer to Airplane Flight Manual for engine operating instructions

- 最大发动机运行速度/Maximum engine operating speed :

|                                 |                              |
|---------------------------------|------------------------------|
| • 低压转子/Low pressure rotor (N1)  | RPM : 21.000 (Percent 101,5) |
| 瞬时/Transient (1 minute)         | 101.5 to 103 %               |
| 瞬时/Transient (5 seconds)        | 103 to 105 %                 |
| • 高压转子/High pressure rotor (N2) | RPM : 29.692 (Percent 100)   |
| 瞬时/Transient (1 minute)         | 100 to 103 %                 |
| 瞬时/Transient (5 seconds)        | 103 to 105 %                 |

- Maximum Interstage Turbine Temperature (ITT)

|                             |       |
|-----------------------------|-------|
| • 启动时/During starting       | 907°C |
| 瞬时/Transient (10 seconds)   | 927°C |
| • 起飞/Takeoff (5 minutes)    | 907°C |
| 瞬时 Transient (10 seconds)   | 939°C |
| • 最大连续工作 Maximum continuous | 885°C |

- 滑油压力限制/Oil pressure limits

|                                          |               |
|------------------------------------------|---------------|
| • 怠速时/At idle                            | 25 to 46 psig |
| • 最大和连续工作/Takeoff and maximum continuous | 38 to 46 psig |

For more information, refer to Airplane Flight Manual.

- 滑油温度限制/Oil temperature limits (风扇变速箱进气道处/at fan gearbox inlet)

|                                                                          |       |
|--------------------------------------------------------------------------|-------|
| • 最大/Maximum, 从海平面到 30,000ft/from sea level up to 30.000 ft              | 127°C |
| • 最大/Maximum 30,000ft 以上/above 30.000 ft                                 | 140°C |
| • 在任意运行高度的瞬时最大/Maximum transient at any operational altitude (2 minutes) |       |

149°C

• 最小/Minimum, 连续运行/continuous operation

30°C

- 燃油压力/Fuel pressure

• 最小燃油压力警告/Minimum fuel pressure warning

4,5 psig

## 1.1.2 辅助动力装置/Auxiliary Power Unit (参见注 6/see Note 6)

型别/Model: ALLIEDSIGNAL / HONEYWELL ENGINES COMPANY - GTCP 36 - 100(A)

APU 限制/APU limits: 只能在地面使用/usable for ground operation only

EGT: Normal operation: 680°C - Maximum : 732°C

RPM: Normal operation: 100% - Maximum : 109%

## 1.1.3 空速限制/Airspeed limits

(除非另有规定, 速度为指示空速/Unless otherwise specified, speeds are indicated airspeeds)

|                                                             |               |
|-------------------------------------------------------------|---------------|
| VMO 海平面/at sea level                                        | 350 kt        |
| VMO 线性变化直到 10,000ft/straight line variation up to 10.000 ft | 370 kt        |
| VMO 从 10,000 ft 到 24,000 ft/from 10,000 ft to 24.000 ft     | 370 kt        |
| MMO 24,000 ft 以上/above 24.000 ft                            | 0.86          |
| VA 机动速度 maneuvering speed                                   | 210 kt        |
| VFE 前缘缝翼/slats                                              | 200 kt        |
| 前缘缝翼+襟翼/slats + flaps 20°                                   | 190 kt        |
| 前缘缝翼+襟翼/slats + flaps 48°                                   | 175 kt        |
| VLO 起落架运行/Landing gear operation                            | 190 kt        |
| MLO                                                         | 0.70          |
| VLE 起落架放下/Landing gear extended                             | 220 kt        |
| MLE                                                         | 0.75          |
| DV 开窗速度/window opening speed                                | 180 kt        |
| 风挡刷运行速度/windshield wiper operating speed                    | 205 kt        |
| VMCA 飞行中最小控制速度/minimum control speed in flight              | 82.5 kt (CAS) |
| VMCG 地面最小控制速度/minimum control speed on ground               | 87.5 kt (CAS) |

## 1.1.4 重心范围/CG range (起落架放下/gear extended)

(参见注 9 和 10/see notes 9 and 10).

重量和配平表包含在 DGAC 批准的飞行手册中。

The weight and balance charts are contained in the DGAC approved Manuel de Vol.

| 重量/Weight |        | 前重心限制               | 后重心限制           |
|-----------|--------|---------------------|-----------------|
| Kg        | lb     | Forward limit % MAC | AFT limit % MAC |
| 8.600     | 18.959 | 14                  | 32              |
| 13.700    | 30.203 | 14                  | 32              |
| 16.200    | 35.715 | 19.8                | 32              |
| 17.600    | 38.800 | 22.3                | 32              |

Note: 14

19.8

22.3

25

32

% MAC is 0.312 m forward of datum

% MAC is 0.148 m forward of datum

% MAC is 0.077 m forward of datum

% MAC is datum

% MAC is 0.199 m aft of datum

起落架收上对重心范围影响很小 Gear retraction has a negligible effect on CG range (- 50 mkg, i.e. 0.2 % on CG range at minimum flight weight).

- 平均气动弦/Mean aerodynamic chord:  
MAC = 2.839 m

- 测量基准/Datum

测量基准是 25%平均气动弦，标记在航空器上，从机头向后 9.724 m 处。

Datum is 25 % of mean aerodynamic chord (MAC) which is marked on aircraft and is 9.724 m from the forward end of the aircraft nose cone.

- 水平测量方法/Leveling means

气泡型水平仪放置在机组头部处，安装在机身后货舱的结构组件处。

A bubble type level may be placed on the head of screws provided on structural components in the fuselage rear compartment.

在水平方向和纵向处进行水平测量/Leveling can be obtained in the lateral and longitudinal directions.

#### 1.1.5 重量限制/Weight limitations

(参见注 9 和 10/see notes 9 and 10).

|                           |                         |
|---------------------------|-------------------------|
| - 最大停机坪/Maximum ramp      | : 17.600 kg (38.800 lb) |
| - 最大起飞/Maximum takeoff    | : 17.600 kg (38.800 lb) |
| - 最大着陆/Maximum landing    | : 16.200 kg (35.715 lb) |
| - 最大零燃油/Maximum zero fuel | : 11.600 kg (25.570 lb) |
| - 最小飞行/Minimum flight     | : 8.600 kg (18.959 lb)  |

#### 1.1.6 最小机组/Minimum crew

1. 两名飞行员/Two pilots.

2. 当实施了服务通告 No F50-011（由副驾驶大气数据系统激活 VMO/MMO 警告）后，一名飞行员和一名训练机组乘员。/One pilot and one trained crew member when Service Bulletin No F50-011 (VMO/MMO warning activated by copilot air data system) is incorporated.

第二机组乘员职责见飞机运行手册，2.99 节：第二机组的资质。/The second crew member duties are specified in the Aircraft Operating Manual, Section 2.99: Qualification of the second crew member.

#### 1.1.7 最大乘客座位数/Maximum number of passenger seats

(见注 12/see note 12).

- 客舱内 19 座，符合 FAR 25.807 (c)适用的应急出口（AMD-BA 文件 DTM 800 定义了经批准的 8 或 9 座的客舱内部构型）。

- 19 seats in the passenger cabin, in compliance with the requirements of FAR 25.807 (c) applicable to emergency exits (AMD-BA document DTM 800 defines an approved cabin interior accommodation for 8 or 9 passengers).

#### 1.1.8 机组座椅/Crew seats

- 飞行位置中 2 座椅/2 seats in the flight station.

- 飞行位置中的第三座椅（实施了 M604 A opt 25-11-02 后），在起飞和着陆中使用。/A third seat (foldable or swiveling) in the flight station (when M604 A opt 25-11-02 is incorporated), which may be used during takeoff and landing.

## 1.1.9 行李舱负载/Baggage compartment loading

1.000 kg and 600 kg 每平方米/per square meter.

## 1.1.10 Fuel capacity

燃油箱容积/Fuel tank capacity (名义/nominal)

|                                        | 升/Liters | Kg (*)  | 美加仑 US gallons | 磅/lb (*) |
|----------------------------------------|----------|---------|----------------|----------|
| 可用燃油/USABLE FUEL                       |          |         |                |          |
| - 左机翼/Left wing                        | 2.117    | 1.700   | 559.3          | 3.748    |
| - 中央翼/Center wing                      | 1.553    | 1.247   | 410.2          | 2.749    |
| - 右机翼/Right wing                       | 2.117    | 1.700   | 559.3          | 3.748    |
| - 左机身/Left fuselage                    | 793      | 637     | 209.5          | 1.404    |
| - 中机身/Center fuselage                  | 1.390    | 1.116   | 367.2          | 2.461    |
| - 右机身 Right fuselage                   | 793      | 637     | 209.5          | 1.404    |
| TOTAL USABLE                           | 8.763    | 7.037   | 2.315.0        | 15.514   |
| 不可用燃油/UNUSABLE FUEL 可<br>排出/Drainable: |          |         |                |          |
| - Left wing                            | 3        | 2.4     | 0.8            | 5.3      |
| - Center wing                          | 2        | 1.6     | 0.5            | 3.5      |
| - Right wing                           | 3        | 2.4     | 0.8            | 5.3      |
| - Left fuselage                        | 2.5      | 2       | 0.7            | 4.4      |
| - Center fuselage                      | 2        | 1.6     | 0.5            | 3.5      |
| - Right fuselage                       | 2.5      | 2       | 0.7            | 4.4      |
| 残留在邮箱和管道中/Trapped :<br>Tanks and lines | 37.3     | 30      | 9.8            | 66.2     |
| TOTAL UNUSABLE                         | 52.3     | 42      | 13.8           | 92.6     |
| 总燃油/TOTAL FUEL                         | 2 927 5  |         |                |          |
| - 左发/Left engine                       | 2 960    | 2 351   | 773.3          | 5 183    |
| - 中发/Center engine I                   | 2 927 5  | 2 376.7 | 782.2          | 5 240    |
| - 右发/Right engine                      | 8 815    | 2 351   | 773.3          | 5 183    |
| TOTAL                                  |          | 7 078.7 | 2 328.8        | 15 606   |

(\*) 燃油密度/Fuel density : 0.803 kg/l

- 参见每一飞机的重量和平衡报告

- Refer to weight and balance report of each individual airplane for exact capacity

- 参见注 4, 使用燃油添加剂的信息

- Refer to note 4 for information on the use of fuel additives.

## 1.1.11 滑油容量/Oil capacity

Engine lubrication system capacity :

| LH, center or RH engine | liters | US GALLONS |
|-------------------------|--------|------------|
| Unusable                | 1.89   | 0.5        |
| Usable                  | 8.52   | 2.25       |

1.1.12 Maximum operating altitude  
(see note 13).

Flight level : FL 450

## 1.1.13 Control surface travel (to mechanical stops)

|                              |           |         |
|------------------------------|-----------|---------|
| Elevator, up                 | 20°       |         |
| Elevator, down               | 16°       |         |
| Rudder, right                | 23°       |         |
| Rudder, left                 | 23°       |         |
| Aileron, up                  | 25°       |         |
| Aileron, down                | 25°       |         |
| Trailing edge flaps, total   | 48°       |         |
| Inboard slats                | 20°       |         |
| Outboard slats               | 30°       |         |
| Airbrakes, up, total         | 68°       |         |
| Horizontal stabilizer travel | Nose down | Nose up |
| - Limit switches             | 1°        | 11°     |
| - Mechanical stops (maximum) | 1°30'     | 11°30'  |
| - Structural stops (minimum) | 2°        | 12°     |

Note : refer to Aircraft Maintenance Manual for rigging tolerances.

## 1.1.14 Principal dimensions

|                                     |          |
|-------------------------------------|----------|
| Length                              |          |
| Weidth                              |          |
| Height                              |          |
| Distance between main landing gears | 18.516 m |
| 18.858 m                            |          |
| 6.975 m                             |          |
| 3.98 m                              |          |

## 1.1.15 Serial numbered airplanes

Aircraft 2 and subsequent.

On aircraft 253 and subsequent, modifications M 1200, M 2159, M1810, M1890, M1939, M1940 are embodied on assembly line - Mystere Falcon 50 EX ; refer to § 1-20 and subsequent.

## 1.2 Mystere Falcon 50 EX version airplanes

F50EX designation for Mystere Falcon 50 airplane, does not correspond to a new model designation . This is only a commercial designation for airplanes on which the 6 major modifications listed in paragraph 1.2.1 are embodied.

## 1.2.1 Definition

Mystere Falcon 50 EX airplanes are airplanes on which the following modifications are embodied on assembly line.

M1810 : new engines - assembly line configuration - TFE 731-40

M1939 : new engines control EIED

M1890 : new avionics - EFIS

M1940 : Bleed air system computer

M2159 : ADC New calibration (Reduce Vertical Separation Minimum)

M1200 : Increase of rudder control authority

## 1.2.2 Engines

Type : ALLIEDSIGNAL / HONEYWELL TFE 731-40 (JAA Data sheet JAA/E/96-012)

Number : 3

Engine limits :

- Maximum takeoff static thrust up to 24° C - Sea level condition (5 minutes) : 1.646 daN (3.700 lb).

- Maximum continuous static thrust at 15° C - Sea level conditions : 1.623 daN (3.641 lb).

Note : Refer to Airplane Flight Manual for engine operating instructions

- Maximum engine operating speed :
  - Low pressure rotor (N1) RPM : 21.021 (Percent 100.1)  
Transient (5 seconds) 21.105 (Percent 100.5)
  - High pressure rotor (N2) RPM : 31.845 (Percent 101)  
Transient (5 seconds) 31.952 (Percent 102.5)
- Maximum Interstage Turbine Temperature (ITT)
  - During starting 991°C
  - Takeoff (5 minutes) 1 013°C
  - Maximum continuous 991°C
- Oil pressure limits
  - At idle 50 to 80 psig
  - Takeoff and maximum continuous 65 to 80 psig

For more information, refer to Airplane Flight Manual.
- Oil temperature limits (at fan gearbox inlet)
  - Maximum, from sea level up to 30.000 ft 127°C
  - Maximum above 30.000 ft 140°C
  - Maximum transient at any operational altitude (2 minutes) 149°C
  - Minimum, continuous operation 40°C
- Fuel pressure
  - Minimum fuel pressure warning 4,5 psig (320 mbars)

### 1.2.3 Weight and CG range

#### a) Airplanes without Service Bulletin Dassault Aviation 161

| Weight (kg) | Forward limit % MAC | Aft limit % MAC |
|-------------|---------------------|-----------------|
| 8 600       |                     |                 |
| 13 689      |                     |                 |
| 18 008      |                     |                 |
| 14          |                     |                 |
| 14          |                     |                 |
| 22.96       |                     |                 |
| 32          |                     |                 |
| 32          |                     |                 |
| 32          |                     |                 |

#### b) Airplanes with Service Bulletin Dassault Aviation 161

| Weight (kg) | Forward limit % MAC | Aft limit % MAC |
|-------------|---------------------|-----------------|
| 8 600       |                     |                 |
| 13 888      |                     |                 |
| 18 280      |                     |                 |
| 18 500      |                     |                 |
| 14          |                     |                 |
| 14          |                     |                 |
| 22.99       |                     |                 |
| 23.3 32     |                     |                 |
| 32          |                     |                 |

32  
29.57

#### 1.2.4 Weight limitations

##### a) - Airplanes without Service Bulletin Dassault Aviation 161

|                     |                         |
|---------------------|-------------------------|
| - Maximum ramp      | : 18.008 kg (39.700 lb) |
| - Maximum takeoff   | : 18.008 kg (39.700 lb) |
| - Maximum landing   | : 16.200 kg (35.715 lb) |
| - Maximum zero fuel | : 11.600 kg (25.570 lb) |
| - Minimum flight    | : 8.600 kg (18.959 lb)  |

##### b) - Airplanes with Service Bulletin Dassault Aviation 161

|                     |                         |
|---------------------|-------------------------|
| - Maximum ramp      | : 18.500 kg (40.785 lb) |
| - Maximum takeoff   | : 18.500 kg (40.785 lb) |
| - Maximum landing   | : 16.200 kg (35.715 lb) |
| - Maximum zero fuel | : 11.600 kg (25.570 lb) |
| - Minimum flight    | : 8.600 kg (18.959 lb)  |

#### 1.2.5 Oil capacity

Engine lubrication system capacity :

| LH, center or RH engine | liters | US GALLONS |
|-------------------------|--------|------------|
| Unusable                | 1.18   | 0.31       |
| Usable                  | 3.82   | 1.01       |

#### 1.2.6 Control surface travel (to mechanical stops)

|               |       |
|---------------|-------|
| Rudder, right | : 29° |
| Rudder, left  | : 29° |

#### 1.2.7 Flight Manual

Mystere Falcon 50 EX Airplanes are operated with flight manual Mystere Falcon 50 number FM 813 EX, approved by DGAC on November 28, 1996.

#### 1.2.8 Other characteristics

Other characteristics of Mystere Falcon 50 EX are identical to Mystere Falcon 50.

#### 1.2.9 Retrofit of Mystere Falcon 50 airplanes

Airplane serial number 251 has been retrofitted by manufacturer ; it is operated with flight manual FM 813 EX and it's supplement number one.

TFE 731-40-1C are installed as retrofit through modification M2017 ; new avionic is installed as retrofit through modification M1924. Other modifications, as retrofit, have the same number as new.

## 2 MYSTERE-FALCON 900 MODEL

### 2.1 Engines

Note : Mystere Falcon 900 Airplanes with modification M 1200 and M 1548 (BSF 900-100) are equipped with ALLIEDSIGNAL / HONEYWELL ENGINES TFE 731-5BR-1C engines. (See note 15). Commercial name of Mystere-Falcon 900 airplanes fitted with M1200 and M1548 modifications is F900B.

Number : 3.  
M 1200 and M1548  
M 1200 and M1548  
Type : ALLIEDSIGNAL / HONEYWELL ENGINES

Aircraft without  
Aircraft with

- Engine limits : TFE 731-5AR-1C TFE 731-5BR-1C  
 . Maximum takeoff static thrust up to 23°C  
     Sea level conditions (5 minutes) 2002 daN(4500 lb) 2113 daN (4750 lb)  
 . Maximum continuous static thrust at 15° C  
     Sea level conditions 2002 daN(4500 lb) 2061 daN (4634 lb)  
 Note : refer to Airplane Flight Manual for engine operating instructions.

- Maximum engine operating speeds :  
 . Low pressure rotor (N1) RPM 21 000 (percent 100% RPM 21000  
     (percent 100%)  
 . Transient (5 seconds) 100% to 103% 100 % to 103 %  
 . High pressure rotor (N2) RPM 29989 (percent 101%) RPM 30540 (percent  
     100.8 %)  
 . Transient (5 seconds) 101% to 103 100.8 % to 103 %

- Maximum Interstage Turbine Temperatures (ITT)  
 . During starting 952° C 978° C  
     Transient (10 seconds) 974° C 996° C  
 . Takeoff (5 minutes) 974° C 996° C  
     Transient (5 seconds) 984° C 1006° C  
     Transient (2 seconds) 994° C 1016° C  
 . Maximum continuous 924° C 968° C

- Oil pressure limits  
 . At idle 25 to 46 psig  
 . Takeoff and maximum continuous 38 to 46 psig  
 For more information, refer to Airplane Flight Manual.

- Oil temperature limits (at fan gearbox inlet)  
 . Maximum, from sea level up to 30,000 ft 127° C  
 . Maximum above 30,000 ft 140° C  
 . Maximum transient at any operational altitude (2 minutes) 149° C  
 . Minimum, continuous operation 30° C

- Fuel pressure  
 . Minimum fuel pressure warning 4.5 psig

## 2.2 Auxiliary Power Unit (see note 6)

Model : ALLIEDSIGNAL / HONEYWELL ENGINES COMPANY - GTCP 36 - 150(F)

APU limits : usable for ground operation only

|                  |         |       |       |
|------------------|---------|-------|-------|
| Normal operation | Maximum |       |       |
| EGT              | :       | 720°C | 973°C |
| RPM              | :       | 102%  | 110%  |

## 2.3 Airspeed limits

(unless otherwise specified, speeds are indicated  
airspeeds ).

|                                             |                                                   |
|---------------------------------------------|---------------------------------------------------|
| VMO at sea level                            | 350 kt                                            |
| VMO straight line variation up to 10,000 ft | 370 kt                                            |
| VMO from 10,000 to 25,000 ftt               | 370 kt                                            |
| Weight lower than 15,876 kg (35,000 lb)     |                                                   |
| MMO                                         | from 25,000 to 38,000 ft 0.87                     |
| MMO                                         | from 38,000 to 42,000 ft, straight line variation |
| down to                                     | 0.84                                              |
| MMO                                         | above 42,000 ft 0.84                              |
| Weight higher than 15,876 kg (35,000 lb)    |                                                   |
| MMO                                         | from 25,000 to 33,000 ft 0.87                     |
| MMO                                         | from 33,000 to 37,000 ft, straight line variation |
| down to                                     | 0.84                                              |
| MMO                                         | above 37,000 ft 0.84                              |
| VA maneuvering speed                        | 228 kt                                            |
| VFE slats + flaps 7°                        | 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                                              |
| DV window opening speed                     | 215 kt                                            |
| windshield wiper operating speed            | 215 kt                                            |
| without M 1200 and M1548                    | with M 1200 and M1548                             |
| VMCA                                        | Minimum control speed in flight 83 kt (CAS)       |
| 85,3 kt (CAS)                               |                                                   |
| VMCG                                        | Minimum control speed on ground 83,6 kt           |
| (CAS)                                       | 86 kt (CAS)                                       |
| 2.4 CG range (gear extended)                |                                                   |
| Weight                                      | (See note 14)                                     |
| Kg                                          | Forward limit Aft limit                           |
| 9390                                        | lb % MAC % MAC                                    |
| 19051                                       | 20700 14 31                                       |
| 20639                                       | 42000 14 31                                       |
|                                             | 45500 14 31                                       |
| Nota : 14 % MAC is 0.318 m forward of datum |                                                   |
| 15                                          | % MAC is 0.289 m forward of datum                 |
| 25                                          | % MAC is datum                                    |
| 31                                          | % MAC is 0.173 m aft of datum                     |

The weight and balance charts are contained in the DGAC approved Manuel de Vol.

Gear retraction has a negligible effect on CG range (-46 mkg, i.e. - 0,17 % on CG range at minimum flight weight).

- Mean aerodynamic chord : MAC 2.888 m

- Datum

Datum is 25 % of mean aerodynamic chord (MAC) which is marked on aircraft and is 10.679 m from the forward end of the aircraft nose cone.

- Leveling means

A bubble type level may be placed on the passenger seat tracks.  
Leveling can be obtained in the lateral and longitudinal directions.

## 2.5 Weight limitations

(See Note 14)

|                     |                         |
|---------------------|-------------------------|
| - Maximum ramp      | : 20 729 kg (45 700 lb) |
| - Maximum take off  | : 20 639 kg (45 500 lb) |
| - Maximum landing   | : 19 051 kg (42 000 lb) |
| - Maximum zero fuel | : 12 800 kg (28 220 lb) |
| - Minimum flight    | : 9 390 kg (20 700 lb)  |

## 2.6 Minimum crew

- Two pilots.

## 2.7 Maximum number of passenger seats

- 19 seats in the passenger cabin, in compliance with the requirements of FAR 25.807 (c) applicable to emergency exits (AMD-BA document DTM 20 164 defines an approved cabin interior accommodation for 12 passengers).

## 2.8 Crew seats

- 2 seats in the flight station

- an optional third seat in the flight station, which may be used during take off and landing when M 137 or M 20 is embodied.

2.9 Baggage compartment floor loading  
1,300 kg and 600 kg per square meter.

## 2.10 Fuel capacity

| Fuel tank capacity (nominal) | Liters | Kg (*) | US gallons | lb (*) |
|------------------------------|--------|--------|------------|--------|
| USABLE FUEL                  |        |        |            |        |
| - LH wing and center section | 3,422  | 2,748  | 904        | 6,058  |
| - RH wing and center section | 3,422  | 2,748  | 904        | 6,058  |
| - Forward and aft fuselage   | 3,925  | 3,152  | 1,037      | 6,949  |
| TOTAL USABLE                 | 10,769 | 8,648  | 2,845      | 19,065 |
| UNUSABLE FUEL                |        |        |            |        |
| Drainable :                  |        |        |            |        |
| - LH wing and center section | 11.2   | 9      | 3          | 20     |
| - RH wing and center section | 8.7    | 7      | 2.3        | 15.4   |
| - Forward and aft fuselage   | 8.7    | 7      | 2.3        | 15.4   |
| Trapped : Tanks and lines    |        |        |            |        |
|                              | 38,6   | 31     | 10.2       | 68.4   |
| TOTAL UNUSABLE               | 67.2   | 54     | 17.8       | 119.2  |
| TOTAL FUEL                   |        |        |            |        |
| - LH engine                  | 3,445  | 2,767  | 910        | 6,100  |
| - RH engine                  | 3,440  | 2,762  | 909        | 6,089  |
| - Center engine              | 3,951  | 3,173  | 1,044      | 6,995  |
| TOTAL                        | 10,836 | 8,702  | 2,862.8    | 19,184 |

(\*) Fuel density : 0.803 kg/l

Refer to weight and balance report of each individual airplane for exact capacity.

Refer to NOTE 4 for information on the use of fuel additives.

## 2.11 Oil capacity

Engine lubrication system capacity

| LH, center or RH engine | Liters | U.S. GALLONS |
|-------------------------|--------|--------------|
| Unusable                | 1,42   | 0,37         |
| Usable                  | 10,82  | 2,86         |

## 2.12 Maximum operating altitude

Flight level : FL 510

## 2.13 Control surface travel

Angular deflection (to control stops)

|                            |       |
|----------------------------|-------|
| Elevator, up               | 20°   |
| Elevator, down             | 16°   |
| Rudder, right              | 29°   |
| Rudder, left               | 29°   |
| Aileron, up                | 25°20 |
| Aileron, down              | 24°50 |
| Trailing edge flaps, total | 40°   |
| Inboards slats             | 20°   |
| Outboard slats             | 30°   |
| Airbrakes, up, total       | 68°   |

Horizontal stabilizer travel

Nose down      Nose up

|                              |      |       |
|------------------------------|------|-------|
| - Limit switches             | 2°   | 10°   |
| - Mechanical stops (maximum) | 2°30 | 10°30 |
| - Structural stops (maximum) | 2°40 | 11°   |

Note : Refer to Aircraft Maintenance Manual for

rigging tolerances.

## 2.14 Principal dimensions

Length

20,2 m

Span

19,33 m

Height

7,5 m

Distance between main landing gears

4,45 m

## 2.15 Airplane Serial Numbers

Aircraft No 3 and subsequent.

## 2.16 Mystère-Falcon 900 version C airplanes

F900C designation for Mystere Falcon 900 airplane, does not correspond to new model designation. This is only a commercial designation for airplanes on which one major modification (M1975) has been applied.

## 2.16.1

## Définition

Mystere Falcon 900C airplanes have received Modification M1975 « Primus 2000 avionics installation on MF900 » on the production assembly line starting with s/n 179.

## 2.16.2

## Engines

Type : ALLIEDSIGNAL / HONEYWELL TFE 731-5BR-1C

Number : 3

Engine limitations : idem MF900

## 2.16.3

## Flight Manual

F900C airplanes are operated with FM900C flight manual ; approved by the DGAC on 15-Jun-99.

## 2.16.4

## Other characteristics

Other characteristics of F900C are similar to the one listed in paragraph 2 for the MF900. For more details, M1975 Falcon 900C definition versus the definition of MF900 and F900EX is described in Dassault Aviation document « F900C – Doc M1975-100 » (ref. DGT-DTF/NAV 74.838 issue 4 dated 4-Juin-99).

## 2.16.5

## Retrofit of Mystere Falcon 900 airplanes

Retrofit of MF900 airplanes to F900C airplanes is done by application of Dassault Aviation Service Bulletin SB F900-250 (Modification M2695).

## 3 FALCON 900EX MODEL

Definition of Falcon 900EX (F900EX) is given by modification M 3000 Revision B2 of Mystere Falcon 900.

## 3.1 Engines

Model : ALLIEDSIGNAL / HONEYWELL ENGINES TFE 731-60.

Number : 3.

Engine limits :

- Maximum takeoff static thrust : 2 225 daN (5 000 lbs) (sea level, not installed, ISA conditions + 17°, 5 min max).

Note : Refer to Airplane Flight Manual for engine operating instructions.

- Maximum engine operating speed :

|                            |                  |  |
|----------------------------|------------------|--|
| • Low pressure rotor (N1)  | 21 000 RPM       |  |
| Transient (1 second)       | 100 % to 100,5 % |  |
| • High pressure rotor (N2) | 31 485 RPM       |  |
| Transient (1 second)       | 100 % to 100,5 % |  |

- Maximum Interstage Turbine Temperatures (ITT)

|                             |         |  |
|-----------------------------|---------|--|
| • During starting on ground | 994°C   |  |
| During starting in flight   | 994°C   |  |
| • Takeoff (5 minutes)       | 1 022°C |  |
| Transient (10 seconds)      | 1 032°C |  |
| • Maximum continuous        | 991°C   |  |

- Oil pressure limits

|                                                           |              |             |
|-----------------------------------------------------------|--------------|-------------|
| • At idle                                                 | 25 to 46 psi |             |
| • Takeoff and maximum continuous                          | 38 to 46 psi |             |
| • Transient .....                                         |              | max 100 psi |
| - Oil temperature limits (at fan gearbox inlet)           |              |             |
| • Maximum, from sea level up to 30,000 ft                 | 127°C        |             |
| • Maximum above 30,000 ft                                 | 140°C        |             |
| Maximum transient at any operational altitude (2 minutes) |              | 149°C       |
| Minimum, continuous operation                             | 30°C         |             |
| - Fuel pressure                                           |              |             |
| • Minimum fuel pressure warning                           | 4,5 psi      |             |

## 3.2 Auxiliary Power Unit

Model : ALLIEDSIGNAL / HONEYWELL ENGINES COMPANY - GTCP 36 - 150(F)

APU limits : usable for ground operation only

|       |                    |       |             |
|-------|--------------------|-------|-------------|
| EGT : | Normal operation : | 720°C | - Maximum : |
| 973°C |                    |       |             |
| RPM : | Normal operation : | 102%  | - Maximum : |
| 110%  |                    |       |             |

## 3.3 Airspeed limits

(Unless otherwise specified, speeds are indicated airspeeds )

|                                             |        |
|---------------------------------------------|--------|
| VMO at sea level                            | 350 kt |
| VMO straight line variation up to 10,000 ft | 370 kt |
| VMO from 10,000 ft to 25,000 ft             | 370 kt |

|                                          |                          |      |
|------------------------------------------|--------------------------|------|
| Weight lower than 15,980 kg (35,000 lbs) |                          |      |
| MMO                                      | from 25,000 to 38,000 ft | 0,87 |
| MMO from 38,000 to 42,000 ft,            |                          |      |
| straight line variation down to          | 0,84                     |      |
| MMO above 42,000 ft                      | 0,84                     |      |

|                                           |      |
|-------------------------------------------|------|
| Weight higher than 15,890 kg (35,000 lbs) |      |
| MMO from 25,000 to 33,000 ft              | 0,87 |
| MMO from 33,000 to 37,000 ft,             |      |
| straight line variation down to           | 0,84 |
| MMO above 37,000 ft                       | 0,84 |

|                      |        |
|----------------------|--------|
| VA maneuvering speed | 228 kt |
| VFE slats + flaps 7° | 200 kt |
| slats + flaps 20°    | 190 kt |
| slats + flaps 48°    | 180 kt |

Note : Above 20,000 ft, do not extend, nor keep extended slats and flaps.

|                                  |        |
|----------------------------------|--------|
| VLO Landing gear operation       | 190 kt |
| MLO                              | 0,70   |
| VLE Landing gear extended        | 245 kt |
| MLE                              | 0,75   |
| DV window opening speed          | 215 kt |
| windshield wiper operating speed | 215 kt |

|      |                                 |      |    |
|------|---------------------------------|------|----|
| VMCA | minimum control speed in flight | 85,2 | kt |
|------|---------------------------------|------|----|

|       |                                 |         |
|-------|---------------------------------|---------|
| (CAS) |                                 |         |
| VMCG  | minimum control speed on ground | 88,9 kt |
| (CAS) |                                 |         |

### 3.4 Weight limitations and CG Range (gear extended)

| Without M3020 (BS N° 1)    | Weight | Forward limit | Aft limit |
|----------------------------|--------|---------------|-----------|
| kg                         | lb     | % MAC         | % MAC     |
| Minimum flight             |        |               |           |
| Maximum zero fuel          |        |               |           |
| Maximum landing            |        |               |           |
| Maximum for aft CG at 31 % |        |               |           |
| Maximum takeoff            |        |               |           |
| Maximum ramp               | 9 390  |               |           |
| 14 000                     |        |               |           |
| 19 051                     |        |               |           |
| 21 228                     |        |               |           |
| 21 908                     |        |               |           |
| 22 000                     | 20 700 |               |           |
| 30 864                     |        |               |           |
| 42 000                     |        |               |           |
| 46 800                     |        |               |           |
| 48 300                     |        |               |           |
| 48 500                     | 14     |               |           |
| 14                         |        |               |           |
| 14                         |        |               |           |
| 14                         |        |               |           |
| 14                         |        |               |           |
| 14 31                      |        |               |           |
| 31                         |        |               |           |
| 31                         |        |               |           |
| 31                         |        |               |           |
| 24,20                      |        |               |           |
| 23,45                      |        |               |           |

| Without M3020 (BS N° 1)    | 3.4.1.1 Weight | Forward limit | Aft limit |
|----------------------------|----------------|---------------|-----------|
| kg                         | lb             | % MAC         | % MAC     |
| Minimum flight             |                |               |           |
| Maximum zero fuel          |                |               |           |
| Maximum landing            |                |               |           |
| Maximum for aft CG at 31 % |                |               |           |
| Maximum takeoff            |                |               |           |
| Maximum ramp               | 9 390          |               |           |
| 14 000                     |                |               |           |
| 20 185                     |                |               |           |
| 21 228                     |                |               |           |
| 22 226                     |                |               |           |
| 22 317                     |                |               |           |
| 20 700                     |                |               |           |
| 30 864                     |                |               |           |

44 500

46 800

49 000

49 200

13

13

13

13

13

13 31

31

31

31

21,35

20,50

Note :

25 % MAC is datum

13 % MAC is 347 mm forward of datum

14 % MAC is 318 mm forward of datum

31 % MAC is 173 mm aft of datum

Gear retraction has a negligible effect on CG range (- 50 mkg,, i.e. 0.2 % on CG range at minimum flight weight).

- Mean aerodynamic chord :

MAC = 2 888 mm

- Datum

Datum is 25 % of mean aerodynamic chord (MAC) which is marked on aircraft and is 10 679 mm from the forward end of the aircraft nose cone. 0 % MAC is at 9 957 mm from the forward end of the aircraft.

- Leveling means

A bubble type level may be placed on the head of screws provided on structural components in the fuselage rear compartment.

Leveling can be obtained in the lateral and longitudinal directions.

### 3.5 Minimum crew

Two pilots (One pilot and one copilot).

### 3.6 Maximum number of passengers seats

- 19 seats in the passenger cabin.

- 12 passengers accomodation cabin layout taken as a reference for performance is given by document F 900EX DTM 35-1 N° 177/94.

### 3.7 Crew seats

2 seats in cockpit

A third seat in cockpit is optional. When installed, it can be used during takeoff and landing.

### 3.8 Baggage compartment loading

Baggage compartment : 1 300 Kg and 600 kg per square meter.

### 3.9 Fuel capacity

(Initial specification has been confirmed through tests)

USABLE FUEL

liters kg (\*) US Gallons lb (\*)

Left wing  
Left center fuselage  
Front left tank  
Left feeder tank  
Total left circuit

Right wing  
Right center fuselage  
Front right tank  
Right feeder tank  
Total right circuit

Front tank  
Aft tank  
Aft compartment tank  
Center feeder tank  
Total center circuit

TOTAL USABLE

2 129  
822  
534  
481  
3 966

2 129  
822  
509  
481  
3 941

1 656  
1 706  
300  
193  
3 857

11 764  
1 710  
660  
429  
386  
3 185

1 710  
660  
409  
386  
3 165

1 330  
1 370  
241  
155  
3 097

9 446

563  
217  
141  
127  
1 048

563  
217  
135  
127  
1 041

438  
451  
79  
51  
1 019

3 109  
3 769  
1 455  
945  
852  
7 021

3 769  
1 455  
901  
852  
6 977

2 932  
3 020  
531  
342  
6 828

20 825

UNUSABLE FUEL

Drainable :  
Left circuit  
Right circuit  
Center circuit

Trapped : Tanks and lines  
TOTAL UNUSABLE

21,4  
23,0  
19,8  
26  
90

17,2  
18,5  
15,9  
21  
73

6  
6  
5  
7  
24

38  
41  
35  
46  
160

#### TOTAL FUEL PER ENGINE

Left circuit  
Right circuit  
Center circuit  
TOTAL FUEL

3 996,14  
3 972,76  
3 885,52  
11 854

3 208,9  
3 190,1  
3 120,1  
9 519

1 056  
1 050  
1 027  
3 133

7 074,4  
7 033,1  
6 878,6  
20 986

\* Fuel density : 0,803 kg/l

- Refer to weight and balance report of each individual airplane for exact capacity.
- Refer Note 4 for information on the use of fuel additives.

#### 3.10 Oil Capacity

|                           |                        |
|---------------------------|------------------------|
| Total oil engine capacity | : 6,9 l. (7,3 quarts)  |
| Usable                    | : 3,8 l. (4,05 quarts) |
| Unusable                  | : 1,2 l. (1,25 quart)  |

#### 3.11 Maximum operating altitude

Aircraft is approved for 51,000 feet operation.

### 3.12 Control surface travel

Angular deflection (to control stops)

|                            |        |
|----------------------------|--------|
| Elevator, up               | 20°    |
| Elevator, down             | 16°    |
| Rudder, right              | 29°    |
| Rudder, left               | 29°    |
| Aileron, up                | 25° 20 |
| Aileron, down              | 24° 50 |
| Trailing edge flaps, total | 40°    |
| Inboards slats             | 20°    |
| Outboard slats             | 30°    |
| Airbrakes, up, total       | 68°    |

|                              |           |         |
|------------------------------|-----------|---------|
| Horizontal stabilizer travel | Nose down | Nose up |
|------------------------------|-----------|---------|

|                              |      |       |
|------------------------------|------|-------|
| - Limit switches             | 2°   | 10°   |
| - Mechanical stops (maximum) | 2°30 | 10°30 |
| - Structural stops (maximum) | 2°40 | 11°   |

Note : Refer to Aircraft Maintenance Manual for rigging tolerances.

### 3.13 Principal dimensions

|                                     |        |
|-------------------------------------|--------|
| Length                              |        |
| Width                               |        |
| Height                              |        |
| Distance between main landing gears | 20,2 m |
| 19,33 m                             |        |
| 7,5 m                               |        |
| 4,45 m                              |        |

### 3.14 Aircraft Serial Numbers

Aircraft number 1 and subsequent.

## 4 适用于所有型别的特性/CHARACTERISTICS COMMON TO ALL AIRCRAFT MODELS

### 4.1 认可审定基础/Validation basis

#### 4.1.1 Mystere-Falcon 50 aircraft

##### 4.1.1.1 Mystere-Falcon 50 Basic

- Application date for Certificat de Navigabilité de Type: 14 November 1973.

- Federal Aviation Regulations Part 25, Amendments 1 through 34, supplemented by the following sections.

|                    |                  |
|--------------------|------------------|
| 25.979 (d) and (e) | of Amendment 38. |
| 25.1013 (b) (1)    | of Amendment 36. |
| 25.1351 (d)        | of Amendment 41. |
| 25.1353 (e) (6)    | of Amendment 42. |

- Supplementary conditions, Revision 4 of 22 February 1979.
- Compliance with FAR Part 25 requirements relative to flight in icing conditions (25.1093 and 25.1419) has been shown.
- Compliance with FAR Part 25 requirements relative to ditching (25.801) has been shown.
- Compliance with "Arrêté du 16 Novembre 1990" relative to the " operation of subsonic jet aircraft in order to limit their noise effect " has been shown.

This "Arrêté" is in force in France at the edition date of type Certificate Data Sheet number 163 issue number 10.

(See NOTE 8).

#### 4.1.1.2 Aircraft serial number 253 and subsequent - commercial designation Falcon 50 EX

Applicable requirements (refer to CRI Falcon 50-M1810 A-01 issue 5 and CRI Falcon 50-M1924/1890 A-01 issue 2.

##### 1 - Whole aircraft :

- FAR part 25 amendments 1 to 34 plus the following paragraphs  
FAR 25.979 (d) and (e) amendment 38  
FAR 25.1013 (b) (1) amendment 36  
FAR 25.1351 (d) amendement 41  
FAR 25.1353 (e) (6) amendement 42
- Supplemental Technical Conditions (revision 4 dated 22 Février 1979) updated in the CRI Falcon 50-M1810 A-03 and CRI Falcon 50-M1890 A-02.
- Supplementary Condition for flight operation above 41000 ft.
- Arrêté du 15 juin 1994 for noise certification.

##### 2 - New parts :

##### 2.1 - M1939 (Installation of Engine Indicator Electronic Displays derived from the F2000 EIED system) :

JAR 25X899 change 14  
JAR 25.1309 change 14  
JAR 25.1322 change 14

##### 2.2 - For the new avionics itself (M1890 : "new avionics - EFIS"), the following paragraphs of JAR 25 change 14 :

JAR 25.773 (d)  
JAR 25.777  
JAR 25X899  
JAR 25.1301  
JAR 25.1303  
JAR 25.1307  
JAR 25.1309  
JAR 25.1321  
JAR 25.1323  
JAR 25.1325  
JAR 25.1326  
JAR 25.1327  
JAR 25X1328

JAR 25.1322

JAR 25.1329  
 JAR 25.1331 JAR 25.1333  
 JAR 25.1335  
 JAR 25.1381  
 JAR 25.1431  
 JAR 25X1524  
 JAR 25.1543  
 JAR 25.1583

Plus JAR AWO change 1 plus amdt AWO/91/1.

3 - Dassault Aviation elect to comply requirements :

JAR 25.997 change 14  
 JAR 25.1013 change 14  
 JAR 25.1015 change 14  
 JAR 25.1019 change 14  
 NPA AWO-3 (Miscellaneous amendment to JAR AWO cat 2)  
 NPA AWO-4 (Automatic landing system)

4 - Special conditions :

- SC E-01 - Reverse - based upon INT/POL/25/7 dated 28 Jul. 92
- SC S-01 - Lightning protection indirect effects based upon INT/POL/25/4 - Rev 1 dated 01 Oct. 94.
- SC S-03 - H.I.R.F. based upon INT/POL/25/2 dated 10 Feb. 92.

5 - CAAC Additional Technical Conditions

Each of Mystere Falcon 50 aircraft delivered to China is needed to satisfy the following FARs and must be approved by EASA and CAAC.

|               |             |
|---------------|-------------|
| FAR 25.853(c) | Amdt. 25-59 |
| FAR 25.855(a) | Amdt. 25-60 |
| FAR 25.853(b) | Amdt. 25-60 |
| FAR 25.812    | Amdt. 25-58 |
| FAR 25.1403   | Amdt. 25-38 |

4.1.2 Mystere-Falcon 900 model

4.1.2.1 Mystere-Falcon 900 Basic

- Application date for Amendment to Certificat de Navigabilité de Type : 12 February 1982.

- Federal Aviation Regulations Part 25, Amendments 1 through 56, except for the following sections of Amendments 35 through 56.

|                    |                     |                            |
|--------------------|---------------------|----------------------------|
| 25.107             | Amendt. 42          | - Takeoff speeds           |
| 25.109             | Amendt. 42          | - Accelerate-stop distance |
| 25.111             | Amendt. 42 & 54     | - Takeoff path             |
| 25.149             | Amendt. 42          | - Minimum control speed    |
| 25.629             | Amendt. 46          | - Flutter, deformation and |
| fail-safe criteria |                     |                            |
| 25.933             | Amendt. 40          | - Reversing systems        |
| 25.997             | Amendt. 36          | - Fuel strainer or filter  |
| 25.1019            | Amendt. 36          | - Oil strainer or filter   |
| 25.1093            | Amendt. 36, 38 & 40 | - Induction system deicing |

and anti-icing provisions

|             |                        |   |                     |   |
|-------------|------------------------|---|---------------------|---|
| 25.1141     | Amend. 40              | - | Powerplant controls | - |
| General     |                        |   |                     |   |
| 25.1167     | Amend. 38              | - | Accessory gearboxes |   |
| 25.1305     | Amend. 35, 36, 38 & 54 | - | Powerplant          |   |
| instruments |                        |   |                     |   |

- Supplementary conditions (DGAC letter 54-147 SFACT/TC of 22 November 1985, supplemented by DGAC letter 53-260 SFACT/TC of 5 March 1986).

- French Special Condition for operation between 41,000 and 51,000 ft (DGAC letter 54-063 SFACT/TC of 28 October 1985).

- " Circulaire " No 3938 DTA/M relative to conditions applicable to airborne equipment and installations required to perform precision approaches to Category II landing minimums, 25 November 1971 issue.

(See Note 8).

- Compliance with "Arrêté du 16 Novembre 1990" relative to the " operation of subsonic jet aircraft in order to limit their noise effect " has been shown.

This "Arrêté" is in force in France at the edition date of type Certificate Data Sheet number 163 issue number 10.

(See Note 8)

- Compliance with FAR Part 25 requirements relative to ditching (25.801) has been shown.

- Compliance with FAR Part 25 requirements relative to flight in icing conditions (25.1093 and 25.1419) has been shown.

- Equivalent safety

Compliance with FAR Part 25 requirements relative to illumination of Type III passenger emergency exit operating handle (25.811 (e) (3) ) has been shown on the basis of an equivalent safety.

4.1.2.2 Aircraft modified per M1975 (basic production line) or M2695 (retrofit) - commercial designation Falcon 900C:

F900C Certification Basis is defined in CRI F-01 « New avionics installation, certification basis » (F900C certification plan is presented in Dassault document DGT/NAV 74.373 Doc. M1975-001 Issue 4 dated 4-Jun-99). It consists in MF900 Certification basis, plus the following:

- The following JAR 25 paragraphs concerned by significative changes are applicable at Change 14 plus OP/96/1:

|   |               |                                       |
|---|---------------|---------------------------------------|
| • | JAR 25.773(d) | Pilot Compartment View                |
| • | JAR 25X899    | Electrical bonding and protection     |
| • | JAR 25.1301   | Function and installation             |
| • | JAR 25.1303   | Flight and navigation instruments     |
| • | JAR 25.1307   | Miscellaneous Equipment               |
| • | JAR 25.1309   | Equipment, systems, and installations |
| • | JAR 25X1315   | Negative Acceleration                 |
| • | JAR 25.1316   | System Lightning Protection           |
| • | JAR 25.1321   | Arrangement and Visibility            |
| • | JAR 25.1322   | Warning, caution, and advisory lights |
| • | JAR 25.1323   | Airspeed indicating system            |
| • | JAR 25.1326   | Pitot heat indication systems         |
| • | JAR 25.1327   | Magnetic direction indicator          |
| • | JAR 25X1328   | Director Indicator                    |

- JAR 25.1329 Automatic pilot systems
- JAR 25.1331 Instruments using a power supply
- JAR 25.1333 Instrument systems
- JAR 25.1335 Flight director systems
- JAR 25.1381 Instrument Lights
- JAR 25.1431 Electronic Equipment
- JAR 25.1457 Cockpit Voice Recorders
- JAR 25.1459 Flight Recorders
- JAR 25X1524 Systems and equipment limitations
- JAR 25.1529 Instructions for Continued Airworthiness
- JAR 25.1543 Instrument Markings: General
- JAR 25.1545 Airspeed limitation information
- JAR 25.1547 Magnetic Direction Indicator
- JAR 25.1549 Powerplant Instruments

Plus JAR AWO Change 2.

- Special conditions: DGAC Special conditions are :
- CRI F-02 HIRF,
- CRI F-04 Lightning indirect effects,
- CRI F-08 EGPWS airworthiness approval (option).

#### CAAC Additional Technical Conditions

|              |                                 |
|--------------|---------------------------------|
| CCAR 25.772  | CCAR 25 R3 amended by AA2002093 |
| CCAR 25.795  | CCAR 25 R3 amended by AA2002093 |
| CCAR 25.811  | CCAR 25 R3                      |
| CCAR 25.855  | CCAR 25 R3                      |
| CCAR 25.857  | CCAR 25 R3                      |
| CCAR 25.951  | CCAR 25 R3                      |
| CCAR 25.1093 | CCAR 25 R3                      |

#### 4.1.3 Falcon 900EX model

- Date of application for type Certificate : DGQT/NAV letter No. 153/93 dated March 3, 1993.
- Applicable requirements (refer to CRI A01 issue 8) :

1. FAR part 25 up to and including amendment 25.56 except for amendments 36 through 56 which have not been selected for the following paragraphs :

|                    |                    |                               |
|--------------------|--------------------|-------------------------------|
| 25.109             | Amdt 42            | Accelerate-stop distance      |
| 25.149             | Amdt 42            | Minimum control speed         |
| 25.629             | Amdt 46            | Flutter, deformation, and     |
| fail-safe criteria |                    |                               |
| 25.933             | Amdt 40            | Reversing systems             |
| 25.1093            | Amdt 36, 38 and 40 | Induction system icing        |
| protection         |                    |                               |
| 25.1141            | Amdt 40            | Powerplant controls : general |

2. Requirements of JAR 25 change 13 plus Orange Paper 90/1 and associated interpretations for M1466 modifications (300 l tank in rear servicing compartment) and M3008 (Upgrading of Falcon 900EX avionics).

JAR 25X899  
JAR 25.901(c) (OP 90/1)

JAR 25.963(e) (and referenced JAR 25.561)

JAR 25.1141(f)

JAR 25.1303

JAR 25.1305

JAR 25.1309 (OP 90/1)

JAR 25X1315

JAR 25.1322

JAR 25.1323

JAR 25.1329

JAR 25.1331

JAR 25.1333

JAR 25.1335

Plus JAR AWO Change 1 and Amdt AWO/91/1

### 3. Requirements applied upon Dassault Aviation's request :

JAR 25.107 change 13

Take-off speeds

JAR 25.111 change 13

Take-off path

JAR 25.997 change 13

Fuel strainer or filter

JAR 25.1019 change 13

Oil strainer or filter

JAR 25.1167 OP 90/1

Accessory gearboxes

NPA AWO - 3

Miscellaneous amendments to JAR AWO cat 2

NPA AWO - 4

Automatic landing system Proposal 2

### 4. Special conditions :

CS S-01

Thrust reverser

CS S-02

Lightning, indirect effect

CS S-04

HIRF

### 5. CAAC Additional Technical Conditions

CCAR 25.772

CCAR 25 R3 amended by AA2002093

CCAR 25.795

CCAR 25 R3 amended by AA2002093

CCAR 25.811

CCAR 25 R3

CCAR 25.855

CCAR 25 R3

CCAR 25.857

CCAR 25 R3

CCAR 25.951

CCAR 25 R3

CCAR 25.1093

CCAR 25 R3

### 4.2 Definition of certified aircraft

- Mystère-Falcon 50 :

The type aircraft is defined in Note DTM 800, Revision H (F50EX Technical Specifications are detailed in Note DGT/RTP – JCL/FR n°218952 at latest revision)

- Mystère-Falcon 900 :

(including F900C Technical Specifications).

The type aircraft is defined in Note DTM 20.078

- Falcon 900EX :

The type aircraft is defined in modification M3000 revision B2 of Mystère Falcon 900 (F900EX Technical specification are detailed in document DTM 35-I N°177/94 at latest revision).

### 4.3 Fuel - Engine and APU

In compliance with ALLIEDSIGNAL ENGINES Specifications.

SPECIFICATION  
FRANCE

EMS 53 111  
EMS 53 112  
EMS 53 113  
(JP4)  
EMS 53 116

EQUIVALENCE  
U.S.A.

AIR 3405 ASTM JET A  
TRO ASTM JET A1  
AIR 3407 / TR4 ASTM JET B / MIL.T.5624  
AIR 3404 / TR5 MIL.T.5624 (JP5)

#### 4.4 Oil - Engine and APU

Synthetic type oil in conformance with Garrett Turbine Engine Company Specification EMS 53110. (See NOTE 5).

#### 4.5 Required equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (paragraph 3.1 above) must be installed.

The lists of certified basic and optional equipment are contained in the following documents :

- AMD-BA notes DTM 380075/91 and 4510/78 for the Mystère-Falcon 50 aircraft.
- AMD-BA notes DTM 5100/84 and 5257/84 for the Mystère-Falcon 900 aircraft.
- Note DTM 35-3287/95 for the Falcon 900EX.

## 5 NOTES

### NOTE 1 :

- a) - A current weight and balance report, including the list of the certified empty weight equipment and the loading instructions (Performance Manual - Section 2) 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 within the specified limits considering crew and passenger movements as well as fuel consumption and transfer.
- c) - The weight of unusable fuel must be included in the aircraft empty weight and the fuel quantity indicators must read zero when the usable fuel quantity is zero.
- d) - The total weight of unusable oil in the tanks and lines (25.66 kg for the Mystère-Falcon 50, 33.39 kg for the Mystère-Falcon 900 and 18,82 kg for the Falcon 900EX) must be included in the aircraft empty weight.
- e) - The total weight of hydraulic fluid (48 kg) must be included in the aircraft empty weight.

### NOTE 2 :

- a) - The aircraft must be operated in compliance with the limitations set forth in the DGAC approved Manuel de Vol.
- b) - For the Mystere-Falcon 50 aircraft, the DGAC approved " Manuel de Vol " is DTM No 803.  
For the Mystere-Falcon 900 aircraft, the DGAC approved " Manuel de Vol " is DTM No 20102. For the F900C aircraft, the DGAC approved " Manuel de Vol " is FM900C.  
For the Falcon 900EX aircraft, the DGAC approved " Manuel de Vol " is DTM No 561.  
For the Mystere-Falcon 50EX, the DGAC approved "Manuel de Vol" is DTM 813EX.

## NOTE 3 :

- a) - Airworthiness limitations (life limited airframe components and required maintenance/inspections) are listed in DGAC approved Recommended Maintenance Schedules and TBO's, chapter 5-40-00 of the Maintenance Manual..
- b) - For the Mystere-Falcon 50 aircraft, this document is DMD No 11765.  
For the Mystere-Falcon 900 aircraft, this document is DMD No 35542.  
For the Falcon 900EX, this document is DTM No 568.

## NOTE 4 :

If a different type of fuel, or a mixture of fuels, is used, the engine computer must be adjusted (in order to adapt the computer to the density of the fuel used) so as to preserve the starting, acceleration and deceleration characteristics of the engine.

The use of anti-ice additive conforming to Air 3652 or MIL.I.27686 D or E, (JP4 and JP8) or MIL.I.8570 (JP5) or equivalent, is approved in amounts up to 0.15 % by volume.

The use of an antistatic additive is approved for use in the fuel provided concentration do not exceed

- 1 part per million for SHELL ASA 3.
- 3 parts per million for STADIS 450.

SOHIO Biobor JF biocide additive, or equivalent, is approved for use in the fuel at a concentration not to exceed 270 parts per million.

## NOTE 5 :

- a) - ALLIEDSIGNAL ENGINES Service Information letters give brand names of oils conforming to Specification EMS 53 110, Class B, Type 2.
- b) - Brand names of oils approved for use in the Auxiliary Power Unit are listed in the Maintenance Manuals of the GTCP 36-100A and GTCP 36-150 (F) APU's.

## NOTE 6 :

The installation of the GARRETT GTCP 36-100 (A) Auxiliary Power Unit in the Mystere-Falcon 50 aircraft is an approved option. This Auxiliary Power Unit may be installed in aircraft in service per AMD-BA Service Bulletin No F50-002.

## NOTE 7 :

The cabin interior arrangements must be in compliance with the DASSAULT AVIATION general specifications for cabin interior completion, and are covered by the document DTM 802-30 for Mystere-Falcon 50 airplane and DTM 20-167 for Mystere-Falcon 900 and Falcon 900EX. These specifications mainly cover the gust and forced landing load factors.

## NOTE 8 :

The Mystere-Falcon 50, Mystere-Falcon 900 and Falcon 900EX certified noise levels are specified in the Airplane Flight Manual of each model. All airplanes meet requirements of Chapter III of annex 16 of ICAO convention.

## NOTE 9 :

The Mystere-Falcon 50 aircraft modified by incorporation of Modification M1230 in production or AMD-BA Service Bulletin No F50-0161 in service must be operated at the following weight and CG limits.

a) - CG range (gear extended)

| Kg     | Weight |       | Forward limit Aft limit |  |
|--------|--------|-------|-------------------------|--|
|        | lb     | % MAC | % MAC                   |  |
| 8,600  | 18,959 | 14    | 32                      |  |
| 13,900 | 30,640 | 14    | 32                      |  |
| 16,200 | 35,715 | 19.2  | 32                      |  |
| 18,260 | 40,255 | 22.8  | 32                      |  |
| 18,500 | 40,780 | 23.3  | 29.6                    |  |

The weight and balance charts are contained in the DGAC approved Manuel de Vol.

Mean aerodynamic chord, datum and leveling means are as specified in paragraph (1.4) of the present Fiche de Navigabilité.

NOTE :

- 14% MAC is 0.312 m forward of datum
- 19.2% MAC is 0.165 m forward of datum
- 22.8% MAC is 0.062 m forward of datum
- 23.3% MAC is 0.048 m forward of datum
- 25% MAC is datum
- 29.6% MAC is 0.130 m aft of datum
- 32% MAC is 0.199 m aft of datum

Gear retraction has a negligible effect on CG range (-50 mkg, i.e. 0,2 % on CG range at minimum flight weight).

b - Weight limitations

|                     |                       |
|---------------------|-----------------------|
| - Maximum ramp      | 18,500 kg (40,780 lb) |
| - Maximum takeoff   | 18,500 kg (40,780 lb) |
| - Maximum landing   | 16,200 kg (35,715 lb) |
| - Maximum zero fuel | 11,600 kg (25,570 lb) |
| - Minimum flightl   | 8,600 kg (18,959 lb)  |

NOTE 10 :

The Mystere-Falcon 50 aircraft modified by incorporation of Modification M1430 in production or AMD-BA Service Bulletin No F50-0191 in service must be operated at the following weight and CG limits.

a) - CG range (gear extended)

| Kg     | Weight |       | Forward limit Aft limit |  |
|--------|--------|-------|-------------------------|--|
|        | lb     | % MAC | % MAC                   |  |
| 8,600  | 18,959 | 14    | 32                      |  |
| 14,800 | 32,624 | 14    | 32                      |  |
| 16,200 | 35,715 | 17.3  | 32                      |  |
| 18,260 | 40,255 | 20.6  | 32                      |  |
| 18,500 | 40,780 | 20.9  | 29.6                    |  |

The weight and balance charts are contained in the DGAC approved " Manuel de Vol ".

Mean aerodynamic chord, datum and leveling means are as specified in paragraph (1-4) of the present type Certificate Data Sheet.

NOTE :

- 14% MAC is 0.312 m forward of datum
- 17,3% MAC is 0.218 m forward of datum
- 20,6% MAC is 0.125 m forward of datum
- 20,9% MAC is 0.116 m forward of datum
- 25% MAC is datum
- 29,6% MAC is 0.130 m aft of datum
- 32% MAC is 0.199 m aft of datum

Gear retraction has a negligible effect on CG range (-50 mkg, i.e. 0,2 % on CG range at minimum flight weight).

b - Weight limitations

- Maximum ramp 18,500 kg (40,780 lb)
- Maximum takeoff 18,500 kg (40,780 lb)
- Maximum landing 16,200 kg (35,715 lb)
- Maximum zero fuel 11,600 kg (25,570 lb)
- Minimum flight 8,600 kg (18,959 lb)

NOTE 11 :

Operation of the Mystere-Falcon 50 aircraft with one pilot and one trained crew member is not permitted when AMD-BA modification M1000 (Installation of EFIS) is incorporated.

NOTE 12 :

The Mystere-Falcon 50 aircraft modified by incorporation of Modification M1230 in production or AMD-BA Service Bulletin No F50-0161 in service must not carry more than 12 passengers (FAR 25.831 Ventilation) any time the flight is made at an altitude above 45,000 ft.

NOTE 13 :

The Maximum operating altitude for Mystere-Falcon 50 aircraft modified by incorporation of Modification M17 or AMD-BA Service Bulletin No F50-0163 is Flight level 490.

NOTE 14 :

Mystere-Falcon Aircraft on which modification M1196 has been incorporated must be used with the following weight and balance limits

a) - CG Range :

| Kg     | Weight |       | Forward limit |  | Aft limit |
|--------|--------|-------|---------------|--|-----------|
|        | lb     | % MAC | % MAC         |  |           |
| 9,390  | 20,700 | 14    | 31            |  |           |
| 19,051 | 42,000 | 14    | 31            |  |           |
| 21,092 | 46,500 | 14    | 31            |  |           |

- 14%      MAC is 0,318 m forward of datum
- 25%      MAC is datum
- 31%      MAC is 0,173 aft of datum

## b - Weight limitations :

- |                     |                       |
|---------------------|-----------------------|
| - Maximum ramp      | 21,183 kg (46,700 lb) |
| - Maximum takeoff   | 21,092 kg (46,500 lb) |
| - Maximum landing   | 19051 kg (42000 lb)   |
| - Maximum zero fuel | 14,000 kg (30,865 lb) |
| - Maximum flight    | 9,390 kg (20,700 lb)  |

## NOTE 15 :

History of re-engining of Mystere-Falcon 900.

Basic certified aircraft is equipped with TFE-5AR-1C engines.

When embodying modification M1200 (Service Bulletin F900-100, original issue dated 7.8.91) TFE-731-5BR-1C P/N 3075330-2, engines are installed.

Following technical incidents (burst out of planetary gear), the latter engines have been put out of use through an FAA airworthiness Directive (AD 92.02.18 dated January 14th 1992).

These engine are then modified by embodiment of modification M 1507 or Service Bulletin F 900 - 114 and become type TFE 731-5AR-3C P/N 3075150-1 (with lower thrust in respect to TFE 731-5BR-1C, identical to 5AR).

Actual thrust of TFE 731-5BR-1C is brought back with a new planetary gear designed by GARRETT. This new

planetary gear has been certified by Modification M 1548A on TFE 731-5BR-1C P/N 3075330-2 and by modification M1548B on TFE 731-5BR-3C. The engine type then become TFE 731-5BR-1C.

Conclusion : Two types of engines can be found on Mystere-Falcon 900.:

- TFE 731-5AR-1C (basic certification) (Engine Data sheet FAA n° E6WE)
- TFE 731-5BR-1C :
  - M 1200 + M 1548A (BS F 900-100 revision 1 and subsequent revisions)
  - M 1200 + M 1507 + M 1548B (BS F-900-100 original issue + BS F 900-114 + BS F 900-120).

For a temporary time a third type of engine can also be found :

- TFE 731-5AR-3C P/N 3075150-1 : M 1200 + M 1507 (BS F 900-100 original issue + BS F 900-114).

## SUMMARY

Basic Certification  
TFE 731-5AR-1C  
M1200  
BS F 900-100  
Original issue  
BS F 900-114

Certificated engining  
TFE 731-5AR-1C

M1507

M1548B

BS F 900-120

TFE 731-5AR-1C  
TFE 731-5BR-1C  
P/N 3075330-2  
TFE 731-5AR-3C  
P/N 3075150-1  
TFE 731-5BR-1C

TFE 731-5AR-1C  
M 1200 + M 1548 A  
BS F 900-120 rev. 1 or  
Subsequent revision

TFE 731-5BR-1C  
Temporary engining

TFE 731-5AR-1C  
M1200  
BS F 900-100  
édition originale

TFE 731-5BR-1C  
P/N 3075330-2  
M1507  
BS F 900-114

TFE 731-5AR-3C  
P/N 3075150-1

NOTE 16 :

On June 19th 1990 the name of manufacturer (AMD-BA : Avions Marcel Dassault - Breguet Aviation), has been changed. The new name, Dassault Aviation is now used on all documents and airplanes nameplates. However documents where old name still appear are valid.

NOTE 17 :

For the Mystere Falcon 900 and the Falcon 900EX, optional cabin layout modifications may introduce a door inside cabin passengers. In order to comply with FAR 25-813 DASSAULT AVIATION has determined an equivalent safety. This equivalent safety has been found acceptable by DGAC (refer to letter 54123 SFACT/TC dated July 28, 1988).

## NOTE 18 :

Falcon 50 EX Ferry Kit.

Modification M2133 has been developed and approved by DGAC to allow long range ferry flights overseas in order to enable to complete the aircraft delivered at completion center.

The aircraft equipped with the "ferry-kit" may have a french airworthiness certificate for export which can be exchanged for an US airworthiness certificate.

As long as the aircraft is not certified, the aircraft may be flown only with a "laisser-passer exceptionnel".

## NOTE 19 :

Production agreement N° P05 was delivered by DGAC on december 12, 1991 then JAR 21 G Production Agreement N° F.G.006 on December 22, 1997.

Consequently :

a - Mystère Falcon 50 airplanes S/N 226, and beyond, are produced in the scope of one of these agreements.

b - Mystère Falcon 900 airplanes S/N 100 ; 106 ; 112 and beyond, are produced in the scope of one of these agreements.

c - Falcon 900EX airplanes, all serial numbers, are produced in the scope of one of these agreements.