

European Aviation Safety Agency

EASA

**TYPE-CERTIFICATE
DATA SHEET**

CESSNA MODEL 680 Sovereign

**Type Certificate Holder:
CESSNA AIRCRAFT COMPANY**

P.O. Box 7704
Wichita, KS 67277-7704
U.S.A.

Issue 2, date 19 December 2006

List of effective Pages:

Page	1	2	3	4	5	6	7	8			
Issue	2	2	2	2	2	2	1	2			

TABLE OF CONTENTS

TABLE OF CONTENTS	2
SECTION 1: GENERAL	3
SECTION 2: CESSNA MODEL 680 SOVEREIGN	3
I. GENERAL.....	3
1. Aeroplane: Cessna Model 680.....	3
II. CERTIFICATION BASIS.....	3
1. Reference Application Date for EASA Certification: 27 April 2000.....	3
2. EASA Certification Date: 31 March 2005.....	3
3. EASA Certification Basis:.....	3
3.1 EASA Mandatory Requirements.....	3
4. Special Conditions:.....	4
4.1 Novel or Unusual Design Features.....	4
4.2 Unconventional Use	4
None.....	4
4.3 General Experience	4
5. Equivalent Safety Findings:.....	4
6. Exemptions.....	4
None.....	4
7. Environmental Requirements.....	4
8. Elect to Comply Requirements.....	5
III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS.....	5
1. General:.....	5
1.1 Type Design Definition:	5
1.2 Engines:	5
1.3 Fuel.....	5
1.4 Limit Speeds Refer to EASA approved Airplane Flight Manual.	6
1.5 Centre of Gravity Range Refer to EASA approved Airplane Flight Manual.....	6
1.6 Maximum Certified Weights.....	6
1.7 Fuel quantity	6
1.8 Minimum Flight Crew: Two (2): One pilot and one co-pilot.....	6
1.9 Maximum Certificated Passenger Seating Capacity: The aircraft is eligible for carriage of 12 passengers provided approved seating arrangement and related required passenger provisions are incorporated in accordance with the EASA Certification Basis.....	6
1.10 Cargo compartment loading	7
1.11 Environmental Flight Envelope Refer to EASA approved Airplane Flight Manual.....	7
1.12 Other Limitations Refer to EASA approved Airplane Flight Manual.	7
1.13 Auxiliary Power Unit (APU) APU model RE100[CS] of Honeywell (Allied Signal)	7
1.14 Equipment The equipment required by the applicable requirements shall be installed.	7
1.15 Service Information.....	7
1.16 Maintenance Instructions.....	7
IV OPERATING AND SERVICE INSTRUCTIONS.....	7
1 Operating Instructions: 68FM-03, Model 680 Sovereign EASA Approved Airplane Flight Manual (or later revision).....	7
2 Service Instructions:.....	7
V NOTES.....	8

SECTION 1: GENERAL

1. **Data Sheet No:** .A.033 (IM)
2. **Airworthiness Category:** Large Aeroplanes
3. **Performance Category:** A
4. **Certifying Authority:** **FAA**
5. **Type Certificate Holder:** **Cessna Aircraft Company**
P.O. Box 7704
Wichita, Kansas, 67277-7704 U.S.A.
6. **Manufacturer:** **Cessna Aircraft Company**
P.O. Box 7704
Wichita, Kansas, 67277-7704 U.S.A.

SECTION 2: Cessna Model 680 Sovereign

I. General

1. **Aeroplane:** Cessna Model 680

II. Certification Basis

1. **Reference Application Date for EASA Certification:** 27 April 2000
2. **EASA Certification Date:** 31 March 2005
3. **EASA Certification Basis:**
 - 3.1 EASA Mandatory Requirements
 - 3.1.1 Applicable JAR Requirements at the Reference Date 27 April 2000:
JAR-25, Change 14, effective 27 May 1994,
Orange Paper 96/1, effective 19 April 1996,
JAR AWO Change 2, effective 01 August 1996 and
JAA IL-23 RVSM, effective April 1994.

4. **Special Conditions:**

- a. Issued in accordance with Paragraph 16 of JAR-21
- b. The following Special Conditions were identified as part of EASA's Type Certification Basis of the Cessna Model 680 Sovereign:

4.1 Novel or Unusual Design Features

CRI B-01	Human Factors	JAA Int/Pol 25/14
CRI D-06	Sidefacing Seat/ Divans	JAR-25.562
CRI E-02	Location Engine Fire Extinguishing System	JAR-25.903(d)

4.2 Unconventional Use
None

4.3 General Experience

CRI B-04	Uncontrolled Thrust Increase	JAR 25.901(c)
CRI C-01	Interaction of Systems & Structure	JAR-25.302, NPA 25C-199
CRI C-09	Aeroelasticity / Flutter	JAR-25.629; NPA 25C-236
CRI C-13	Ground Gust Effects	JAR-25.415, NPA 25C-284.
CRI C-16	Sustained Engine Imbalance	JAA PNPA 25E-306
CRI D-07	Halon Concentration in Cargo Class C Comp.s	JAR-25.851(b), TGM/25/09
CRI D-08	Improved Standards Flammability of Insulation	JAR-25.856
CRI D-10	Operation to 51,000 ft.	JAR-25.841(a)
CRI E-03	Fuel Tank Safety	JAR-25.981, Int/Pol 25/12
CRI F-01	Protection from the effects of HIRF	JAR-25.1431, Int/Pol 25/2

5. **Equivalent Safety Findings:**

Equivalent Safety Findings requested and concurred with, in accordance with Paragraph 21 of JAR-21.

CRI C-12	Continuous Turbulence	JAR-25.341, NPA 25C-309
CRI D-03	Ditching Emergency Exits for Passengers	JAR-25.807
CRI D-04	Door Between Passenger Compartments	JAR-25.813(e)
CRI D-05	Width of Aisle	JAR-25.815
CRI D-09	Emergency Exit Locator/Marking Signs	JAR-25.811(b)
CRI F-04	Brakes and Braking Systems	JAR-25.731 , NPA 25D-291
CRI F-05	Requirements Equipment, Systems & Install.	JAR-25.1309, NPA25F-281
CRI F-21	Pressurisation / low pressure pneumatic systems	JAR 25X1436, .1438 and ACJ 1438
CRI F-22	MAU individual circuit protection, EPIC	JAR-25.1309

6. **Exemptions**

None

7. **Environmental Requirements**

Application of ICAO Annex 16, Volume I, Third Edition – July 1993 on Aircraft Noise (Chapter 3 for Subsonic Jet Aeroplanes and Chapter 9 for the APU) and ICAO Annex 16, Volume II, Second Edition – July 1993 on Aircraft Engine Emissions (Part II for Vented Fuel and Part III for Emissions Certification) is considered as an Acceptable Means of Compliance on an Elect to Comply Basis for the Certification of the Cessna Model 680 Sovereign if not otherwise specified by a Member State as shown in JAA Administrative and Guidance Material, Section 3/Part4/Chapter 10 or otherwise defined by the responsible Authority.

Refer to the EASA Noise Type Certificate Data Sheet nr. **TCDSN IM.A.033**.

8 **Elect to Comply Requirements**

The following requirements have effectivity dates later than the Reference Date but Cessna have requested to include them in the EASA Type Certification Basis:

JAR-25, Change 15, effective 01 August 2000.

The Aft Openable (Foul Weather) Cockpit Window now has CS 25 Amdt. 1 as Certification Basis.

III. Technical Characteristics and Operational Limitations

1. **General:**

The Cessna Model 680 Sovereign is a corporate jet, with a straight wing and a conventional empennage. The maximum certificated passenger seating configuration is 12 passengers, the maximum operating altitude 47.000 ft. The aircraft is powered by two Pratt & Whitney PW306C engines.

1.1 Type Design Definition:

680-02-001, Revision B, Model 680 Master Drawing List, dated 17 January 2005
Parts List No. 6900000, Revision AJ, Airplane Assembly, dated 14 February 2005

1.2 Engines:

Two Pratt & Whitney Canada Corp. PW306C, refer to JAA Data Sheet JAA/E/99-022, Iss. 7, dated 20 August 2003

1.2.1 Engine Limits:

Static thrust at sea level: lbs

- Take-off (5 minutes)	5,770
- Maximum continuous	5,770

Fluids: (Fuel, oil, additives) see maintenance manual for approved fluids.

Other engine limitations: See the relevant Engine Type Certificate Data Sheet.

1.3 Fuel

Conforming to Pratt & Whitney company specifications CPW 204, refer to the limitations section of the EASA approved Aeroplane Flight Manual.

1.4 Limit Speeds
Refer to EASA approved Airplane Flight Manual.

1.5 Centre of Gravity Range
Refer to EASA approved Airplane Flight Manual.

1.6 Maximum Certified Weights
Ramp Gross Weight 30,550 lbs (13,857 kg)
MTOW (lbs) 30,300 lbs (13,743 kg)
MLW (lbs) 27,100 lbs (12,292 kg)
MZFW (lbs) 20,800 lbs (9,434 kg)

1.7 Fuel quantity
(Density: 0.8 kg/litre, 6.7 lbs per US Gallon)

	LH WING TANK	LH FEED TANK	RH FEED TANK	RH WING TANK		
Tank Capacity		N/A	N/A			
LBS	5652.9			5652.9		
kg	2564.1			2564.1		
Tank Usable Fuel		N/A	N/A			
LBS	5611.5			5611.5		
kg	2545.3			2545.3		
Arm		N/A	N/A			
Inches	412.80			412.80		
Meters	10.49			10.49		
Unusable Fuel		N/A	N/A			
LBS	41.45			41.45		
Kg	18.80			18.80		
Arm		N/A	N/A			
Inches	405.86			405.86		
Meters	10.31			10.31		

Total Usable Fuel (all tanks): 11,223 lbs (5,090.6 kg)

Fuel System lbs (kg) ARM
Inches (Meters)

Unusable:

- drainable and undrainable 82.9 (37.6) 405.86 (10.31)

1.8 Minimum Flight Crew:
Two (2): One pilot and one co-pilot

1.9 Maximum Certificated Passenger Seating Capacity:
The aircraft is eligible for carriage of 12 passengers provided approved seating

arrangement and related required passenger provisions are incorporated in accordance with the EASA Certification Basis.

- 1.10 Cargo compartment loading
Cargo compartment loading must be accomplished in accordance with limitations as outlined in 68WB-00, Weight and Balance Manual, or later approved revision.
- 1.11 Environmental Flight Envelope
Refer to EASA approved Airplane Flight Manual.
- 1.12 Other Limitations
Refer to EASA approved Airplane Flight Manual.
- 1.13 Auxiliary Power Unit (APU)
APU model RE100[CS] of Honeywell (Allied Signal)
Oils: Refer to applicable approved Manuals.
- 1.14 Equipment
The equipment required by the applicable requirements shall be installed.
- 1.15 Service Information
Service Bulletins and Continuing Airworthiness Instructions (Maintenance Manual Chapter 4), which contain a statement that the document is approved by the USA's Federal Aviation Administration, according to the EASA Certification Basis and the EASA approved Type Design of the aeroplane, are accepted by the EASA.
- 1.16 Maintenance Instructions
Information essential to the proper servicing and maintenance of the aircraft is contained in the Manufacturer's Manual section of the Instructions for Continued Airworthiness, Maintenance Manual marked 68MM02 or later revision.

Mandatory replacement times, structural inspection intervals and related structural inspection procedures and Certification Maintenance Requirements are presented in the approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness, Cessna document 68MM02, Model 680 Maintenance Manual, or later revision.

IV Operating and Service Instructions

- 1 **Operating Instructions:**
68FM-03, Model 680 Sovereign EASA Approved Airplane Flight Manual (or later revision)
68WB-00, Model 680 Sovereign Weight & Balance Manual (or later revision)
Model 680 Sovereign EASA Master Minimum Equipment List
- 2 **Service Instructions:**

68MM02, Model 680 Sovereign Maintenance Manual (or later revision)
68MM02, Chapter 4, Airworthiness Limitations and Certification Maintenance
Requirements (or later revision)
68MM02, Chapter 5, Time Limits/Maintenance Checks (or later revision)
68SR00, Model 680 Structural Repair Manual (or later revision)
68PC02, Model 680 Illustrated Parts Catalogue (or later revision)
68WD01, Model 680 Wiring Diagram Manual (or later revision)
Service Bulletins
Service Letters

V Notes