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## TYPE-CERTIFICATE DATA SHEET

No. EASA.IM.A.033

for  
**Cessna 680 (Sovereign)**

Type Certificate Holder:  
**Textron Aviation Inc.**

One Cessna Boulevard  
P.O. Box 7704  
Wichita, Kansas 67277  
USA

For Models: 680  
680A



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## **SECTION 1: Model 680**

### **I. General**

#### 1. Type/Model/Variant

- 1.1 Type: Cessna  
1.2 Model: 680  
1.2.1 Variants: Citation Sovereign (S/N 680-0001 thru 680-0500)  
Citation Sovereign+ (S/N 680-0501 and on)

#### 2. Performance Class A

#### 3. Certifying Authority

Federal Aviation Authority (FAA) USA  
Wichita Aircraft Certification Office  
1801 Airport Rd, Room 100  
Wichita, KS 67209  
USA

#### 4. Manufacturer

Textron Aviation Inc.  
One Cessna Boulevard  
P.O. Box 7704  
Wichita, Kansas 67277  
USA

#### 5. FAA Certification Application Date

- 5.1 Citation Sovereign 24 November 1999  
5.2 Citation Sovereign+ 05 October 2011

#### 6. EASA Validation Application Date

- 6.1 Citation Sovereign 02 June 2004  
6.2 Citation Sovereign+ 20 December 2013

#### 7. FAA Type Certificate Date

- 7.1 Citation Sovereign 27 April 2000  
7.2 Citation Sovereign+ 05 October 2011

#### 8. EASA Type Certification Date

- 8.1 Citation Sovereign 31 March 2005  
8.2 Citation Sovereign+ 10 June 2014



## **II. Certification Basis**

### 1. Reference Date for determining the applicable requirements

Same as FAA certification application date

### 2. FAA Type Certification Data Sheet No.

T00012WI

### 3. State of Design Airworthiness Authority Certification Basis

See FAA Type Certificate Data Sheet No. T00012WI

### 4. EASA Airworthiness Requirements

#### 4.1 EASA Airworthiness Requirements for Citation Sovereign

JAR 25, Change 15, effective 01 August 2000,  
CS 25 amendment 1 for the Aft Openable (Foul Weather) Cockpit Window  
JAR AWO Change 2, effective 01 August 1996,  
JAA IL-23 RVSM, effective April 1994.

#### 4.2 EASA Airworthiness Requirements for Citation Sovereign+

JAR 25, Change 15, effective 01 August 2000 with the following additions:

##### a) Certification Specification CS 25 Amendment 9, dated 05 August 2010

<b>CS 25 paragraphs</b>	<b>Applicability</b>
§§ 25.20, 25.21, 25.23, 25.25, 25.27, 25.29, 25.31, 25.101, 25.103, 25.105, 25.107, 25.109, 25.111, 25.113, 25.115, 25.117, 25.121(a)(b)(c), 25.123(a), 25.145, 25.147, 25.149, 25.161, 25.171, 25.173, 25.175, 25.177, 25.181, 25.201, 25.203, 25.231, 25.233, 25.235, 25.251, 25.253, 25.255	For entire airplane.
§§ 25.301, 25.303, 25.305(a)(b)(c)(e), 25.307, 25.321,	For the wing modification and winglet installation aspect.
§§ 25.331(a)(b)(c1), 25.333, 25.335, 25.337, 25.341, 25.343,	For entire airplane.
§ 25.345(a)(b)	For the wing modification and winglet installation aspect.



<b>CS 25 paragraphs</b>	<b>Applicability</b>
§§ 25.349, 25.351, 25.361, 25.365(a)(c)(d), 25.367	For entire airplane.
§§ 25.373(a), 25.391(a)(e), 25.393, 25.395, 25.397(a)(c)	For the wing modification and winglet installation aspect.
§ 25.399	For entire airplane.
§ 25.405	For the wing modification and winglet installation aspect.
§ 25.427	For entire airplane.
§§ 25.445, 25.457, 25.459, 25.571	For the wing modification and winglet installation aspect.
§ 25.581	For winglet installation and all aircraft installations requiring electrical bonding and p-static protection.
§§ 25.601, 25.603, 25.605, 25.609, 25.611(a), 25.613(a)(b)(d)(e), 25.623, 25.625(a)(b)(c)	For the wing modification and winglet installation aspect.
§ 25.629	For entire airplane.
§§ 25.631, 25.651, 25.657, 25.671, 25.681, 25.683, 25.693, 25.697(d), 25.863(a)(b)(1)(2)(3)(5)(d), 25.865	For the wing modification and winglet installation aspect.
§ 25.899	For winglet installation and all aircraft installations requiring electrical bonding and p-static protection.
§§ 25.951(c), 25.954(a)(b), 25.965(a), 25.967(b)	For the wing modification and winglet installation aspect.
§ 25.981	For winglet installation.
§ 25.1001	For entire airplane.
§ 25.1316	Applies to all electrical/electronic systems installed that have system failures classified as Major, Hazardous (Severe-Major), and Catastrophic.
§§ 25.1323, 25.1325	For entire airplane.
§§ 25.1385, 25.1387, 25.1389, 25.1391, 25.1393, 25.1395, 25.1397, 25.1401	For exterior position and anti-collision lights.
§ 25.1419	For entire airplane. (Additionally, ref. Reversion B-05.)
§ 25.1431	For winglet installation, powerplant improvements, and avionics systems



<b>CS 25 paragraphs</b>	<b>Applicability</b>
§ 25.1457(a)(6)	When an optional data link system is installed.
§ 25.1457(d)(5)	When the optional flight data recorder is also required.
§ 25.1459	For when the optional flight data recorder is installed.
CS 25 Subpart G	For entire airplane.

b) CS 25 subpart B paragraphs amended by Reversion CRI B-05

<b>CS 25 paragraphs</b>	<b>Applicability</b>
§§ 25.119, 25.121(d), 25.123(b), 25.125, 25.143, 25.207, 25.237	For entire airplane.

c) CS 25 at amendment 4

<b>CS 25 paragraphs</b>	<b>Applicability</b>
§ 25.1329	For autothrottle aspects only.

All Weather Operations: JAR AWO change 2

## 5. Special Conditions

### 5.1 Special Conditions for Citation Sovereign

- SC B-01 Human Factors
- SC B-04 Uncontrolled Thrust Increase
- SC C-01 Interaction of Systems & Structures
- SC C-09 Aeroelasticity / Flutter
- SC C-13 Ground Gust Effects
- SC C-16 Sustained Engine Imbalance
- SC D-06 Single Place Sidefacing Seat/Sidefacing Divans
- SC D-07 Interpretation of Halon Concentration Levels in Class C Compartments
- SC D-08 Improved Flammability Standards for Thermal Acoustic Insulation Materials
- SC D-10 System Operation to 51,000 ft
- SC E-02 Location of the Engine Fire Extinguishing System
- SC E-03 Fuel Tank Safety
- SC F-01 Protection from Effect of HIRF

### 5.2 Special Conditions for Citation Sovereign+

- SC B-01 Human Factors



SC B-04	Uncontrolled Thrust Increase
SC C-01	Interaction of Systems & Structures
SC C-09	Aeroelasticity / Flutter
SC C-13	Ground Gust Effects
SC C-16	Sustained Engine Imbalance
SC D-06	Single Place Sidefacing Seat/Sidefacing Divans
SC D-07	Interpretation of Halon Concentration Levels in Class C Compartments
SC D-08	Improved Flammability Standards for Thermal Acoustic Insulation Materials
SC D-10	System Operation to 51,000 ft
SC D-16	Towbarless Towing
SC E-02	Location of the Engine Fire Extinguishing System
SC E-03	Fuel Tank Safety
SC F-01	Protection from Effect of HIRF
SC F-33	Data Link Services for the Single European Sky
SC F-34	Data Link Recording
SC F-43	Compliance to Single European Sky mandate for Mode S & ADS-B Out
SC F-48	Security Protection of Aircraft Systems and Networks
SC F-50	Flight Guidance Systems

## 6. Exemptions

Reserved

## 7. Deviations

Reversion B-05      Flight in Icing Conditions

## 8. Equivalent Safety Findings

### 8.1 Equivalent Safety Findings for Citation Sovereign

ESF C-12	Continuous Turbulence
ESF D-03	Ditching Emergency Exits for Passengers
ESF D-04	Door Between Passenger Compartments
ESF D-05	Width of Aisle
ESF D-09	Emergency Exit Locator Signs/Marking Signs
ESF F-04	Brakes and Braking Systems
ESF F-05	Equipment, Systems & Installation Requirements
ESF F-21	Draft Harmonized 25.1438 for the Pressurization and Pneumatic Systems
ESF F-22	Honeywell EPIC Integrated Modular Avionics System

### 8.2 Equivalent Safety Findings for Citation Sovereign+

ESF C-12	Continuous Turbulence
ESF D-03	Ditching Emergency Exits for Passengers
ESF D-04	Door Between Passenger Compartments



- ESF D-05 Width of Aisle
- ESF D-09 Emergency Exit Locator Signs/Marking Signs
- ESF D-17 Use of Single Fire Suppression Bottle for Protection of APU and Baggage Compartment
- ESF D-19 Flap Control Handle
- ESF E-04 Thrust Reversers
- ESF F-04 Brakes and Braking Systems
- ESF F-05 Equipment, Systems & Installation Requirements
- ESF F-21 Draft Harmonized 25.1438 for the Pressurization and Pneumatic Systems
- ESF F-44 APU Instrumentation
- ESF F-45 Digital Display of Engine Instruments

## 9. Environmental Protection

### 9.1 Environmental Protection Requirements for Citation Sovereign

- A-03 Noise requirements: ICAO Annex 16, Volume I, 3<sup>rd</sup> edition Amendment 6  
Refer to the EASA Noise Type Certificate Data Sheet, TCDSN IM.A.033
- A-03 Emission requirements: ICAO Annex 16, Volume II, 2nd edition, Amendment 4

### 9.2 Environmental Protection Requirements for Citation Sovereign+

- N-01 Noise requirements: ICAO Annex 16, Volume I, 5<sup>th</sup> edition, Amendment 9  
Refer to the EASA Noise Type Certificate Data Sheet, TCDSN IM.A.033
- N-02 Emission requirements: ICAO Annex 16, Volume II, 3rd edition, Amendment 6

## **III. Technical Characteristics and Operational Limitations**

### 1. Type Design Definition

The Cessna Model 680 Variants Citation Sovereign and Citation Sovereign+ are defined by Cessna Airplane Assembly Drawing Number 6900000.





## 2. Description

The Cessna Model 680 Variants Citation Sovereign and Citation Sovereign+ are pressurized, low-wing monoplanes that are certified for up to fourteen occupants including a minimum crew of two.

## 3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

## 4. Dimensions

### 4.1 Dimensions for Citation Sovereign

Span	19.24 m (63.13 ft)
Length	19.37 m (63.54 ft)
Height	6.17 m (20.25 ft)
Wing Area	47.93 m <sup>2</sup> (515.9 ft <sup>2</sup> )

### 4.2 Dimensions for Citation Sovereign+

Span	22.04 m (72.32 ft)
Length	19.37 m (63.54 ft)
Height	6.17 m (20.25 ft)
Wing Area	50.40 m <sup>2</sup> (542.52 ft <sup>2</sup> )

## 5. Engines

Variant of Model 680		Sovereign	Sovereign+
Engines		Two Pratt & Whiney Canada Corp. Model PW306C Turbofan Engines refer to EASA Data Sheet IM.E.051	Two Pratt & Whiney Canada Corp. Model PW306D Turbofan Engines refer to EASA Data Sheet IM.E.051
Engine Limits Static thrust, standard day, sea level	Takeoff (5 min., Normal All Engines Operating)	25.66 kN (5770 lbs)	26.27 kN (5907 lbs)
	Maximum continuous	25.66 kN (5770 lbs)	26.27 kN (5907 lbs)
Engine Limits Maximum	N1 (Fan) steady state	105% r.p.m. (100% = 10,608 r.p.m)	105% r.p.m. (100% = 10,608 r.p.m)



Variant of Model 680		Sovereign	Sovereign+
permissible engine rotor operating speeds	N2 (Gas Gen.) steady state	105% r.p.m. (100% = 29,930 r.p.m)	105% r.p.m. (100% = 29,930 r.p.m)
Engine Limits Maximum permissible interturbine gas temperatures	Takeoff	920°C (1688°F)	920°C (1688°F)
	Max. continuous	920°C (1688°F)	920°C (1688°F)
	Transient (20 sec.) and starting	950°C (1742°F)	950°C (1742°F)

## 6. Auxiliary Power Unit

APU model RE100(CS), from Honeywell (Allied Signal), APU is non-essential.

APU limitations: according to applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

Maximum operating altitude      9144 m (30,000 feet)

Maximum Starting Altitude      6096 m (20,000 feet)

## 7. Propellers

Reserved

## 8. Fluids (Fuel, Oil, Additives, Hydraulics)

The fluids are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.



## 9. Fluid Capacities

### 9.1 Fluid capacities for Citation Sovereign

#### 9.1.1 Fuel Capacity [Density: 0.8 kg/dm<sup>3</sup> (6.7 lbs/US gallon)]

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Usable Fuel LH Wing Tank	3170.7 (837.6)	2,545.3 (5,611.5)	10.49 (+412.80)
Usable Fuel RH Wing Tank	3170.7 (837.6)	2,545.3 (5,611.5)	10.49 (+412.80)

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

See NOTE 1 for data on unusable fuel

#### 9.1.2 Oil (Density: 0.95 kg/dm<sup>3</sup> (7.94 lbs/gal) or (1.99 lbs/qt)

	<b>Volume per engine [dm<sup>3</sup> (qts (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Engine Oil (Total)	8.00 (8.45)	7.60 (16.75)	13.57 (+534.17)
Engine Usable Oil	5.00 (5.28)	4.75 (10.48)	13.57 (+534.17) (full)

See NOTE 1

#### 9.1.3 Hydraulics [Density: 0.84 kg/dm<sup>3</sup> (7.0 lbs/US gallon)]

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Hydraulic Fluid - System (Total)	25.32 (6.69)	21.24 (46.83)	+12.84 (+505.53)

See NOTE 1



## 9.2 Fluid capacities for Citation Sovereign+

### 9.2.1 Fuel Capacity [Density: 0.8 kg/dm<sup>3</sup> (6.7 lbs/US gallon)]

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Usable Fuel LH Wing Tank	3217.6 (850)	2,584.1 (5,697)	10.50 (+413.43)
Usable Fuel RH Wing Tank	3217.6 (850)	2,584.1 (5,697)	10.50 (+413.43)

Total Usable Fuel (all tanks): 5,168.2 kg (11,394 lbs)

See NOTE 1 for data on unusable fuel

### 9.2.2 Oil [Density: 0.95 kg/dm<sup>3</sup> (7.94 lbs/gal) or (1.99 lbs/qt)] (same as Citation Sovereign)

	<b>Volume per engine [dm<sup>3</sup> (qts (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Engine Oil (Total)	8.00 (8.45)	7.60 (16.75)	13.57 (+534.17)
Engine Usable Oil	5.00 (5.28)	4.75 (10.48)	13.57 (+534.17) (full)

See NOTE 1

### 9.2.3 Hydraulics [Density: 0.84 kg/dm<sup>3</sup> (7.0 lbs/US gallon)] (same as Citation Sovereign)

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Hydraulic Fluid - System (Total)	25.32 (6.69)	21.24 (46.83)	+12.84 (+505.53)

See NOTE 1

## 10. Airspeed Limits

The airspeed limits are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.



## 11. Flight Envelope

The flight envelope is defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

Maximum Operating Altitude      14,325 m (47,000 ft.)

## 12. Operating Limitations

### 12.1 Approved Operations

#### 12.1.1 Approved Operations for Citation Sovereign

The Citation Sovereign is eligible for the following kinds of operation when the appropriate equipment and instruments required by the operating requirements are installed, approved, and operating as defined by the MMEL or MEL:

- Category I
- Category II
- VFR (Visual)
- IFR (Instrument)
- Day
- Night
- Icing
- Enhanced Surveillance
- RVSM

#### 12.1.2 Approved Operations for Citation Sovereign+

The Citation Sovereign+ is eligible for the following kinds of operation when the appropriate equipment and instruments required by the operating requirements are installed, approved, and operating as defined by the MMEL or MEL:

- Category I
- VFR (Visual)
- IFR (Instrument)
- Day
- Night
- Icing
- Enhanced Surveillance
- RVSM



## 12.2 Other Limitations

Other limitations as defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

## 13. Maximum Certified Masses

	<b>Sovereign</b>	<b>Sovereign+</b>
Ramp	13,857 kg (30,550 lbs)	14,072 kg (31,025 lbs)
Takeoff	13,743 kg (30,300 lbs)	13,959 kg (30,775 lbs)
Landing	12,292 kg (27,100 lbs)	12,508 kg (27,575 lbs)
Zero fuel	9,434 kg (20,800 lbs)	9,525 kg (21,000 lbs)

## 14. Centre of Gravity Range

The Centre of Gravity Ranges are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

## 15. Datum

3.57 m (140.40 in.) forward of the nose jack point.

## 16. Mean Aerodynamic Chord (MAC)

2.72 m (107.06 in.) [Leading Edge of MAC at 9.72 m (382.68 in.) aft of datum]

## 17. Levelling Means

Longitudinal – Place level on the outboard floor panel at B.L. 0.33 m (13.00 in.), inside of the cabin door.

Lateral – Place level across inboard seat tracks behind crew seats at most aft position.

## 18. Minimum Flight Crew

For all flights: 2 (pilot and co-pilot)



## 19. Minimum Cabin Crew

None

## 20. Maximum Seating Capacity

Up to 14 (2 pilots and up to 12 passengers)

## 21. Baggage/ Cargo Compartment

### 21.1 Baggage / Cargo Compartment for Citation Sovereign

Aft Cabin	133.8 kg (295 lbs) [11.20 m (440.82 in.) aft of datum]
Tail Compartment	453.5 kg (1000 lbs) [14.02 m (552.07 in.) aft of datum]

### 21.2 Baggage / Cargo Compartment for Citation Sovereign+

Aft Cabin	141.5 kg (312 lbs) (11.22 m (441.63 in.) aft of datum)
Tail Compartment	453.5 kg (1000 lbs) (14.02 m (552.09 in.) aft of datum)

## 22. Wheels and Tyres

Tire limit-maximum ground speed: 182 Knots

## 23. ETOPS

Reserved

## **IV. Operating and Service Instructions**

### 1. Airplane Flight Manual (AFM)

#### 1.1 AFM for Citation Sovereign

68FM-03, Airplane Flight Manual Model 680 Citation Sovereign (or later revision)



## 1.2 AFM for Citation Sovereign+

68FMA-01, Airplane Flight Manual Model 680 Citation Sovereign+ (or later revision)

## 2. Instructions for Continued Airworthiness and Airworthiness Limitations

### 2.1 Instructions for Continued Airworthiness and Airworthiness Limitations for Citation Sovereign

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 component 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, Chapter 4, or later revision approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision).

### 2.2 Instructions for Continued Airworthiness and Airworthiness Limitations for Citation Sovereign+

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 68MM20 or later revision.

Mandatory component 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 68MM20, Model 680 Maintenance Manual, Chapter 4, or later revision approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision).

## 3. Weight and Balance Manual (WBM)

### 3.1 WBM for Citation Sovereign

68WB-00, Citation 680 Sovereign Weight & Balance Manual (or later revision)





### 3.2 WBM for Citation Sovereign+

68FMA-01, Section VI – Weight and Balance Data and Equipment List (or later revision)

## **V. Operational Suitability Data (OSD)**

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate [original TC number] as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

### 1. Master Minimum Equipment List

Master Minimum Equipment List (MMEL reference CE-680) approved at Revision 1 or later approved revisions.

### 2. Flight Crew Data

The Operational Evaluation Board processes conducted, in line with the Common Procedures Document for Operational Evaluation Boards, dated 10 June 2004, for the Model 680 and 680+ are applicable for the Flight Crew Data (FCD) determination.

Pilot Type Rating: 'Model 680'.

### 3. Cabin Crew Data

Not required for aircraft already registered in the European Union (EU).

## **VI. Notes**

NOTE 1: The airplane must be loaded according to the appropriate approved Weight and Balance Manual. The list of equipment included in certificated empty mass must be provided for each airplane at the time of original certification.

The certified empty mass and corresponding centre of gravity location must include

<b>Citation Sovereign</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Unusable Fuel	37.60 (82.9)	+10.308 (+405.86)
Full Oil	15.20 (33.50)	+13.567 (+534.17)
Hydraulic Fluid	21.24 (46.83)	+12.840 (+505.53)



<b>Citation Sovereign+</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Unusable Fuel	39.39 (86.85)	+10.430 (+410.66)
Full Oil	15.20 (33.50)	+13.567 (+534.17)
Hydraulic Fluid	21.24 (46.83)	+12.840 (+505.53)



## **SECTION 2: Model 680A**

### **I. General**

#### 1. Type/Model/Variant

- 1.3 Type: Cessna  
1.4 Model: 680A  
1.4.1 Variants: Latitude (S/N 680A-0001 and on)

#### 2. Performance Class A

#### 3. Certifying Authority

Federal Aviation Authority (FAA) USA  
Wichita Aircraft Certification Office  
1801 Airport Rd, Room 100  
Wichita, KS 67209  
USA

#### 4. Manufacturer

Textron Aviation Inc.  
One Cessna Boulevard  
P.O. Box 7704  
Wichita, Kansas 67277  
USA

#### 5. FAA Certification Application Date

25 January 2012

#### 6. EASA Validation Application Date

03 December 2014

#### 7. FAA Type Certificate Date

05 June 2015

#### 8. EASA Type Certification Date

10 February 2016



## **II. Certification Basis**

### 1. Reference Date for determining the applicable requirements

Same as FAA certification application date

### 2. FAA Type Certification Data Sheet No.

T00012WI

### 3. State of Design Airworthiness Authority Certification Basis

See FAA Type Certificate Data Sheet No. T00012WI

### 4. EASA Airworthiness Requirements

JAR 25, Change 15, effective 01 August 2000, with additions specified in the tables below:  
CS-ACNS, Initial Issue, dated 17<sup>th</sup> December 2013

#### a) CS-25 Amendment 2, dated 2 October 2006

<b>CS 25 paragraphs</b>	<b>Applicability</b>
CS-25 Appendix C	For entire airplane.

#### b) CS-25 Amendment 4, dated 27 December 2007

<b>CS 25 paragraphs</b>	<b>Applicability</b>
§ 25.1329	For auto-throttle aspects only.

#### c) CS-25 Amendment 9, dated 5 August 2010

<b>CS 25 paragraphs</b>	<b>Applicability</b>
§ 25.343	For entire airplane.
§ 25.571, 25.611(a), 25.623, 25.625(a)(b)(c), 25.631, 25.671, 25.681, 25.683, 25.693, 25.697(d), 25.965(a), 25.967(b)	For the wing modification and winglet installation aspect.
§ 25.981	For winglet installation.
§ 25.1385, 25.1387, 25.1389, 25.1391, 25.1393, 25.1395, 25.1397, 25.1401	For exterior position and anti-collision lights.



d) CS-25, Amendment 11, dated 4 July 2011

CS 25 paragraphs	Applicability
§§ 25.20, 25.21, 25.23, 25.25, 25.27, 25.29, 25.31, 25.101, 25.103, 25.105, 25.107, 25.109, 25.111, 25.113, 25.115, 25.117, 25.119, 25.121, 25.123(a)(b), 25.125, 25.143, 25.145, 25.147, 25.149, 25.161, 25.171, 25.173, 25.175, 25.177, 25.181, 25.201, 25.203, 25.207, 25.231, 25.233, 25.235, 25.237, 25.251, 25.253, 25.255, 25.301, 25.303, 25.305(a)(b)(c)(e), 25.307, 25.321, 25.331, 25.333, 25.335, 25.337, 25.341, 25.345, 25.349, 25.351, 25.361, 25.362, 25.363, 25.365, 25.367, 25.373, 25.391, 25.393, 25.395, 25.397(a)(c), 25.399, 25.405, 25.407, 25.409, 25.427, 25.445, 25.457, 25.459, 25.471, 25.473, 25.477, 25.479, 25.481, 25.483, 25.485, 25.487, 25.491, 25.581, 25.601, 25.603, 25.605, 25.607, 25.609, 25.613, 25.629, 25.651, 25.657, 25.773, 25.775, 25.777, 25.783, 25.807, 25.810, 25.820, 25.831, 25.832, 25.841, 25.843, 25.857, 25.858, 25.863, 25.865, 25.867, 25.871, 25.899, 25.903, 25.939, 25.951, 25.954, 25.955, 25.959, 25.961, 25.971, 25.993, 25.1001, 25.1041, 25.1043, 25.1045, 25.1163, 25.1165, 25.1182, 25.1185, 25.1187, 25.1191, 25.1193, 25.1195, 25.1207, 25.1323, 25.1325, 25.1419, 25.1431, 25.1439, 25.1441, 25.1443, 25.1445, 25.1449, 25.1455, 25.1461, Subpart G (except 25.1535)	For entire airplane.
§ 25.571, 25.631	For the fuselage and engine supports only.
§ 25.809, 25.981(a)(d)	For the fuselage only.
§ 25.1457(a)(6)	When an optional data link system is installed.
§ 25.1459	When an optional flight data recorder is installed.

e) CS-25, Amendment 17, dated 15 July 2015.

CS 25 paragraphs	Applicability
§ 25.1316, 25.1317	For entire airplane.

f) CS-25 amended by Reversion CRI C-01.

CS 25 paragraphs	Applicability
§ 25.302, 25.305(f)	For entire airplane.

## 5. Special Conditions



SC B-01	Human Factors
SC B-04	Uncontrolled Thrust Increase
SC C-01	Interaction of Systems & Structures
SC C-13	Ground Gust Effects
SC C-16	Sustained Engine Imbalance
SC D-06	Single Place Sidefacing Seat/Sidefacing Divans
SC D-07	Interpretation of Halon Concentration Levels in Class C Compartments
SC D-08	Improved Flammability Standards for Thermal Acoustic Insulation Materials
SC D-10	System Operation to 51,000 ft
SC D-16	Towbarless Towing
SC D-21	Pilot Compartment View – Hydrophobic Coatings in Lieu of Windshield Wipers
SC E-02	Location of the Engine Fire Extinguishing System
SC E-03	Fuel Tank Safety
SC F-01	Protection from Effect of HIRF
SC F-34	Data Link Recording
SC F-43	Compliance to Single European Sky mandate for Mode S & ADS-B Out
SC F-48	Security Protection of Aircraft Systems and Networks
SC F-50	Flight Guidance Systems

## 6. Exemptions

Reserved

## 7. Deviations

Reserved

## 8. Equivalent Safety Findings

ESF D-04	Door Between Passenger Compartments
ESF D-09	Emergency Exit Locator Signs/Marking Signs
ESF D-17	Use of Single Fire Suppression Bottle for Protection of APU and Baggage Compartment
ESF D-19	Flap Control Handle
ESF D-22	Use of Water Barrier
ESF D-24	Acceptable High Temperature Physiological Environment During Failure Conditions
ESF D-25	Cabin Entry Door – Independence of Latch Security Mean and Locking System
ESF D-26	Unpressurized Doors – Independence of Latch Securing Means and Locking System



- ESF D-29 Combined Aircraft Pressurization Outflow and Positive Pressure Differential Relief Valves
- ESF E-04 Thrust Reversers
- ESF F-05 Equipment, Systems & Installation Requirements
- ESF F-21 Draft Harmonized 25.1438 for the Pressurization and Pneumatic Systems
- ESF F-44 APU Instrumentation
- ESF F-45 Digital Display of Engine Instruments

## 9. Environmental Protection

### 9.1 Noise requirements:

Volume I, Sixth Edition (Amendment 10), of Annex 16 to the Chicago Convention, and as implemented in Decision No. 2003/4/RM amended by Decision No. 2013/003/R of the Executive Director of the Agency, on certification specifications providing for acceptable means of compliance for aircraft noise (CS-36, Amendment 3)

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

### 9.2 Emission requirements:

Chapter 2 of Part II of Volume II, Third Edition (Amendment 7), of Annex 16 to the Chicago Convention, and as implemented in Decision No. 2003/3/RM amended by Decision 2013/002/R of The Executive Director of the Agency, on certification specifications providing for acceptable means of compliance for aircraft engine emissions and fuel venting (CS-34, Amendment 1)

## **III. Technical Characteristics and Operational Limitations**

### 1. Type Design Definition

The Cessna Model 680A is defined by Parts List number 7400000, Airplane Assembly.

### 2. Description

The Model 680A is a pressurized, high-performance, low-wing, turboprop-powered aircraft derived from the Model 680 that is certified for up to eleven occupants including a minimum crew of two.

### 3. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.



#### 4. Dimensions

Span	22.04 m (72.320 ft)
Length	18.98 m (62.256 ft)
Height	6.34 m (20.798 ft)
Wing Area	50.40 m <sup>2</sup> (542.51 ft <sup>2</sup> )

#### 5. Engines

Two Pratt & Whiney Canada Corp. Model PW306D1 Turbofan Engines (refer to EASA Data Sheet IM.E.051).

Engine Limits Static thrust, standard day, sea level:

Takeoff	26.27 kN (5907 lbs)
Maximum continuous	26.27 kN (5907 lbs)

Engine Limits Maximum permissible engine rotor operating speeds

N1 (Fan) steady state	105% r.p.m. (100% = 10,608 r.p.m)
N2 (Gas Gen.) steady state	105% r.p.m. (100% = 29,930 r.p.m)

Engine Limits Maximum permissible interturbine gas temperatures

Takeoff	920°C (1688°F)
Max. continuous	920°C (1688°F)
Transient (20 sec.) and starting	950°C (1742°F)

#### 6. Auxiliary Power Unit

APU model RE100, from Honeywell (Allied Signal)

APU is non-essential.

APU limitations: according to applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

Maximum operating altitude	9144 m (30,000 feet)
Maximum starting altitude	6096 m (20,000 feet)

#### 7. Propellers

Reserved





## 8. Fluids (Fuel, Oil, Additives, Hydraulics)

The fluids are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

## 9. Fluid Capacities

### 9.1 Fuel Capacity [Density: 0.8 kg/dm<sup>3</sup> (6.7 lbs/US gallon)]

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Usable Fuel LH Wing Tank	3217.6 (850)	2,584.1 (5,697)	10.13 (+399.03)
Usable Fuel RH Wing Tank	3217.6 (850)	2,584.1 (5,697)	10.13 (+399.03)

Total Usable Fuel (all tanks): 5,168.2 kg (11,394 lbs)

See NOTE 1 for data on unusable fuel

### 9.2 Oil [Density: 0.95 kg/dm<sup>3</sup> (7.94 lbs/gal) or (1.99 lbs/qt)] (same as Citation Sovereign)

	<b>Volume per engine [dm<sup>3</sup> (qts (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Engine Oil (Total)	8.00 (8.45)	7.60 (16.75)	13.20 (+519.73)
Engine Usable Oil	5.00 (5.28)	4.75 (10.48)	13.20 (+519.73) [full]

See NOTE 1



## 9.2 Hydraulics [Density: 0.84 kg/dm<sup>3</sup> (7.0 lbs/US gallon)]

	<b>Volume [dm<sup>3</sup> (gals (US))]</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Hydraulic Fluid - System (Total)	30.81 (8.14)	25.84 (56.97)	+10.55 (+415.52)

See NOTE 1

## 10. Airspeed Limits

The airspeed limits are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

## 11. Flight Envelope

The flight envelope is defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

Maximum Operating Altitude      13,716 m (45,000 ft.)

## 12. Operating Limitations

### 12.1 Approved Operations

The Model 680A is eligible for the following kinds of operation when the appropriate equipment and instruments required by the operating requirements are installed, approved, and operating as defined by the MMEL or MEL:

- Category I
- VFR (Visual)
- IFR (Instrument)
- Day
- Night
- Icing
- Enhanced Surveillance

### 12.2 Other Limitations

Other limitations as defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

## 13. Maximum Certified Masses



Ramp	14,084 kg (31,050 lbs)
Takeoff	13,970 kg (30,800 lbs)
Landing	12,507 kg (27,575 lbs)
Zero fuel	9,720 kg (21,430 lbs)

#### 14. Centre of Gravity Range

The Centre of Gravity Ranges are defined in the applicable EASA approved Aircraft Flight Manuals (AFM); the AFMs are referenced in Chapter IV.1.

#### 15. Datum

3.442 m (135.52 in.) forward of the nose jack point.

#### 16. Mean Aerodynamic Chord (MAC)

2.719 m (107.06 in.) [Leading Edge of MAC at 9.353 m (+368.24 in.) aft of datum]

#### 17. Levelling Means

Longitudinal – Put the levelling bar on the centre of the floorboard panel at approximately B.L. 0 m (0.00 in), directly in front of the cabin entry door.

Lateral – Put the levelling bar behind the inboard crew seat rails and flush against the rear of the seat rails.

#### 18. Minimum Flight Crew

For all flights: 2 (pilot and co-pilot)

#### 19. Minimum Cabin Crew

None

#### 20. Maximum Seating Capacity

Up to 11 (2 pilots and up to 9 passengers)

#### 21. Baggage/ Cargo Compartment

Tail Compartment 453.5 kg (1,000 lbs) [12.702 m (500.09 in.) aft of datum]



## 22. Wheels and Tyres

Tire limit-maximum ground speed: 182 Knots

## 23. ETOPS

Reserved

## **IV. Operating and Service Instructions**

### 1. Airplane Flight Manual (AFM)

Model 680A Airplane Flight Manual, document number 68AFM-00 (or later revision)

### 2. Instructions for Continued Airworthiness and Airworthiness Limitations

Information essential to the proper servicing and maintenance of the aircraft is contained in the Maintenance Manufacturer's Manual section of the Instructions for Continued Airworthiness, Maintenance Manual marked 68AMM-00 or later revision.

Mandatory component replacement times, structural inspection intervals and related structural inspection procedures and Certification Maintenance Requirements (CRM) are presented in the approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness, Cessna document 68AMM-00, Model 680A Maintenance Manual, Chapter 4, or later revision approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision).

### 3. Weight and Balance Manual (WBM)

68AFM-00, Section VI – Weight and Balance Data and Equipment List (or later revision)



## **V. Operational Suitability Data (OSD)**

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate [original TC number] as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

### 1. Master Minimum Equipment List

Master Minimum Equipment List (MMEL reference 680AMMELEU-00) approved at Revision 0 dated 10 February 2016 as per the defined Operational Suitability Data Certification Basis recorded in CRI A-MMEL for Model 680A, or later approved revisions.

### 2. Flight Crew Data

The Operational Evaluation Board processes conducted, in line with the Common Procedures Document for Operational Evaluation Boards, dated 10 June 2004, for the Model 680 and 680+ remain applicable for the Model 680A for the Flight Crew Data (FCD) determination.

Pilot Type Rating: 'Model 680A'.

### 3. Cabin Crew Data

Not required for aircraft already registered in the European Union (EU).

## **VI. Notes**

NOTE 1: The airplane must be loaded according to the appropriate approved Weight and Balance Manual. The list of equipment included in certificated empty mass must be provided for each airplane at the time of original certification.

The certified empty mass and corresponding centre of gravity location must include:

<b>Citation Latitude</b>	<b>Mass [kg (lbs)]</b>	<b>Distances aft of datum [metres (inches)]</b>
Unusable Fuel	39.39 (86.85)	+10.038 (+395.22)
Full Oil	15.20 (33.50)	+13.201 (+519.73)
Hydraulic Fluid	25.84 (56.97)	+10.554 (+415.52)



## **SECTION: ADMINISTRATIVE**

### **I. Acronyms and Abbreviations**

ACNS:	Airborne Communications, Navigation and Surveillance
APU:	Auxiliary Power Unit
AWO:	All Weather Operation
CRI:	Certification Review Item
CS:	Certification Specification
EASA:	European Aviation Safety Agency
ESF:	Equivalent Safety Finding
FAA:	Federal Aviation Administration
ICAO:	International Civil Aviation Organization
JAR:	Joint Aviation Requirement
MMEL:	Master Minimum Equipment List
MEL:	Minimum Equipment List
NPA:	Notice of Proposed Amendment
OSD:	Operational Suitability Data
INT/POL:	JAA Interim Policy
RVSM:	Reduced Vertical Separation Minima
SB:	Cessna Service Bulletin
SC:	Special Condition
S/N:	Serial Number
TCDS:	Type Certificate Data Sheet
TCDSN:	Type Certificate Data Sheet for Noise

### **II. Type Certificate Holder Record**

<b>Holder's name</b>	<b>Holder's address</b>	<b>TC held from</b>	<b>TC held to</b>	<b>Note</b>
Cessna Aircraft Company	P.O. Box 7704, Wichita, Kansas 67277, USA	2 June 2004	10 February 2016	Certificate holder's name change (ref.# Textron Aviation Inc. letter L381-15-1989)
Textron Aviation Inc.	One Cessna Boulevard P.O. Box 7704 Wichita, Kansas 67277, USA	10 February 2016	---	---



### **III. Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>
Issue 01	31 March 2005	Initial Issue
Issue 02	19 December 2006	Editorial revision to reflect latest EASA TCDS format
Issue 03	10 June 2014	Incorporated data for Model 680 variant Sovereign+. Editorial revision to reflect latest EASA TCDS format
Issue 04	10 February 2016	Incorporated data for Model 680A (Section 2) as well as Chapter V (OSD) for Model 680 (Section 1) Certificate holder's name change and editorial revision to reflect latest EASA TCDS format.
Issue 5	04 June 2018	Model 680A MZFW increased to 9,720 kg (21,430 lb)
Issue 6	21 June 2018	Alignment of Type Name

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