Issue: 03 Date: 07 January 2016



# TYPE-CERTIFICATE DATA SHEET

No. EASA.IM.A.097

for

CESSNA 750 (Citation X)

## **Type Certificate Holder:**

Textron Aviation Inc.

One Cessna Boulevard

P.O. Box 7704

Wichita, Kansas 67277

**USA** 

For Models: 750

Cessna 750

TCDS No.: EASA.IM.A.097

Issue: 03 Date: 07 January 2016

# **TABLE OF CONTENTS**

TABLE OF CONTENTS	2
SECTION 1: MODEL 750	3
I. General	
II. Certification Basis	3
III. TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS	5
IV. OPERATING AND SERVICE INSTRUCTIONS	11
V. OPERATIONAL SUITABILITY DATA (OSD)	12
VI. Notes	13
SECTION: ADMINISTRATIVE	
I. ACRONYMS AND ABBREVIATIONS	15
II. Type Certificate Holder Record	15
III. CHANGE RECORD	16

Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750**

#### I. General

1. Type/Model/Variant

1.1 Type: Cessna

1.2 Model: 750 (Citation X)

1.2.1 Variants: a) S/N 750-0001 to 750-0172

not incorporating

SB 750-71-10 & S/N 750-0001 to 750-0172 incorporating SB

750-32-50

b) S/N 750-0173 and on or incorporating SB 750-71-10

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 15 October 1991

6. EASA Validation Application Date 09 April 1992

7. FAA Type Certificate Date 31 May 1996

8. EASA Type Certification Date 01 July 1999 (UK CAA)

#### **II. Certification Basis**

1. Reference Date for determining the applicable requirements

Same as FAA certification application date



Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750 – continued**

2. FAA Type Certification Data Sheet No.

T00007WI

3. State of Design Airworthiness Authority Certification Basis

See FAA Type Certificate Data Sheet No. T00007WI

4. EASA Airworthiness Requirements

JAR-25, Change 13, effective 5 October 1989,

Orange Paper 90/1, effective 11 May 1990,

Orange Paper 91/1, effective 12 April 1991,

Orange Paper 93/1, effective 8 March 1993

JAR AWO Change 1, effective 29 Nov. 1985 and

JAR AWO Change 2, effective 01 August 1996

NPA AWO-5, CAT. II

NPA AWO-9, CAT. II

JAR APU Change 2, 26 September 1983, (Note: APU is classified as non-essential on this aircraft.)

JAA IL-23 RVSM, effective April 1994.

NPA 25G-255 Issue 1 from 28 August 1992, Flight Manuals – General

NPA 25B-240 Landing performance in abnormal configurations

#### 5. Special Conditions

CRI A-01	Thrust reversers (TGM/25/01) Yawing manoeuvring conditions (INT/POL/25/8)
SC B-07	Accelerate-Stop Distances and Related Performance Matters, 16 February 1993 (INT/POL/25/5)
SC B-08	Performance Calculator (CPCalc) (TGL-OPS Leaflet No. 36)
SC C-03	Interaction of Systems with Structures (TGM/GEN/01; NPA 25C-199)
SC C-04	Ground Gust (TGM/GEN/01)
SC C-10	Personal injury criteria for dynamic testing of Single Place Side-Facing Seats
SC D-01	Worn Brakes (INT/POL/25/6)
SC D-02	Protection from the effects of HIRF (INT/POL/25/2)
SC D-03	Protection from the Effects of Lightning Strike; Direct Effects (INT/POL/25/3)
SC D-04	Protection from the Effects of Lightning Strike; Indirect Effects (INT/POL/25/4)



Issue: 03 Date: 07 January 2016

# **SECTION 1: Model 750 – continued**

SC D-09	Special Conditions for operation to 51000 feet Altitude
SC D-11	Side-facing Divan
SC F-01	Basic RNAV (B-RNAV) Systems Airworthiness Approval (TGL/3 Rev 1)
SC F-10	Enhanced Vision System (INT/POL/25/2; (INT/POL/25/4))

#### 6. Exemptions

Engine-out lateral trim requirements of § 25.161(d) (FAA exemption number 6431) (Ref: CRI A-01)

#### 7. Deviations

Reserved

#### 8. Equivalent Safety Findings

ESF B-04	High Altitude Minimum Speed System
ESF D-05	Towing, towbarless towing
ESF D-06	Emergency Exit Marker and Location Signs
ESF D-07	Ditching Emergency Exits for Passengers
ESF D-08	Cabin Pressurization-High Altitude Take-off and Landing Operations
ESF D-10	Emergency Exit Access
ESF D-12	Width of Aisle
ESF D-13	Testing Standard for Thermal Acoustic Insulation
ESF K-01	Approach Flight Path – Automatic Control, Audible Warning

#### 9. Environmental Protection

CRI A-03	Noise requirements:	ICAO Annex 16, Volume I, 3rd edition
CRI A-03	Emission requirements:	ICAO Annex 16, Volume II, 2nd edition

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

#### 1. Type Design Definition

The Cessna Model 750 is defined by Cessna Airplane Assembly Drawing Number 6700000.

Issue: 03 Date: 07 January 2016

# **SECTION 1: Model 750 – continued**

#### 2. Description

The Cessna Model 750 is a corporate jet with a swept wing, conventional empennage that is certified for a passenger seating configuration of up to 12.

## 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
 19.39 m (63.6 ft)

 Length
 22.04 m (725.3 ft)

 Height
 5.85 m (19.2 ft)

 Wing Area
 48.96 m² (527ft²)

#### 5. Engines

Variants of Mode	el 750	S/N 750-0001 to 750-0172 not incorporating SB 750-71-10 & S/N 750-0001 to 750-0172 incorp. SB 750-32-50	S/N 750-0173 and on or incorporating SB 750-71-10
Engines		Two Rolls-Royce Model AE3007C Turbofan Engines P/N 23057202 refer to JAA Data Sheet JAA/E/96-017	Two Rolls-Royce Model AE3007C1 Turbofan Engines P/N 23074408 refer to JAA Data Sheet JAA/E/96-017
Engine Limits Static thrust, standard day, sea level	Takeoff (5 min., Normal All Engines Operating)	28.66 kN (6442 lbs)	30.09 kN (6764 lbs)
	Maximum continuous	28.66 kN (6442 lb)	30.09 kN (6764 lbs)
Engine Limits Maximum permissible	N1 (Fan) steady state	100% r.p.m.	100% r.p.m.
engine rotor operating speeds	N2 (Gas Gen.) steady state	101.6% r.p.m.	101.6% r.p.m.

Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750 – continued**

Engine Limits Maximum	Take-off (5 minute limit)	888°C (1630°F) *850°C (1562°F)	907°C (1665°F)
permissible interturbine gas temperatures	Max. continuous	850°C (1562°F)	857°C (1575°F)
temperatures	Starting, starter assisted	800°C (1472°F)	800ºC (1472°F)
	Starting, windmill	888°C (1630°F) *850°C (1562°F)	888°C (1630°F)

<sup>\*</sup>For aircraft serial numbers 750-0003 through 750-0022 not incorporating Cessna Service Bulletin SB 750-34-04

#### 6. Auxiliary Power Unit

APU model GTCP 36-150 (CX), P/N 3800576-1 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 9449 m (31,000 feet) Maximum Starting Altitude 9449 m (31,000 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.

Issue: 03 Date: 07 January 2016

# **SECTION 1: Model 750 – continued**

#### 9. Fluid Capacities

#### 9.1 Fuel Capacity (Density: 0.8 kg/dm³ (6.7 lbs/US gallon))

	Volume [dm³ (gals (US))	Mass [kg (lbs)]	Distances aft of datum [metres (inches)]
Usable Fuel LH Wing Tank	1,972 (521)	1,588 (3,500)	10.41 (+410.07)
Usable Fuel RH Wing Tank	1,972 (521)	1,588 (3,500)	10.41 (+410.07)
Usable Fuel Center Tank	3,361 (888)	2,722 (6,000)	8.52 (+335.32)

Total Usable Fuel (all tanks): 5,897 kg (13,000 lbs)

See NOTE 1 for data on unusable fuel

## 9.2 Oil (Density: 0.93kg/dm³ (7.74 lbs/gal) or (1.93lbs/qt))

	Volume per engine [dm³ (qts (US))	Mass [kg (lbs)]	Distances aft of datum [metres (inches)]
Engine Oil (Total)	11.4 (12.1)	21.22 (46.80)	13.83 (+544.30)
Engine Usable Oil	11.2 (11.8)	20.77 (45.80)	13.83 (+544.30) (full)

See NOTE 1

## 9.3 Hydraulics (Density: 0.98 kg/dm³ (8.2 lbs/US gallon))

	Volume [dm³ (gals (US))	Mass [kg (lbs)]	Distances aft of datum [metres (inches)]
Hydraulic Fluid - System A (Total)	16.4 (4.3)	16.13 (35.56)	+11.65 (+458.82)
Hydraulic Fluid - System B (Total)	10.2 (2.7)	9.97 (21.97)	+12.65 (+497.96)

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.

Issue: 03 Date: 07 January 2016

# **SECTION 1: Model 750 – continued**

#### 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 15,545 m (51,000 ft.)

#### 12. Operating Limitations

## 12.1 Approved Operations

The Cessna 750 type 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 (See note No. 2)
- VFR (Visual)
- IFR (Instrument)
- Day
- Night
- Icing
- Enhanced Surveillance (See note No. 3)
- RVSM (See note No. 4)

#### 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

	S/N 750-0001 to 750-0172 <u>not</u> incorporating Cessna Service Bulletin 750-71-10 or Service Bulletin 750-32-50	S/N 750-0173 and on or incorporating Cessna Service Bulletin 750-71-10 or Service Bulletin 750-32-50
Ramp	16,329 kg (36,000 lbs)	16,511 kg (36,400 lbs)
Takeoff	16,193 kg (35,700 lbs)	16,375 kg (36,100 lbs)
Landing	14,424 kg (31,800 lbs)	14,424 kg (31,800 lbs)
Zero fuel	11,068 kg (24,400 lbs)	11,068 kg (24,400 lbs)

Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750 – continued**

#### 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

Zero reference datum is 4.686 m (184.5 in.) forward of the levelling screw located 2.50 inches forward of the cabin door frame on Water Line 3.232 m (127.25 in.)

16. Mean Aerodynamic Chord (MAC)

3.012 m (118.60 in.) (Leading Edge of MAC at Frame Station 9.845 m (387.60 in.))

17. Levelling Means

Outboard floor panel inside of door parallel to B.L. 0.33 m (13.00 in.)

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

Tail Compartment: 317.5 kg (700 lbs) (at Frame Station 12.446 m (490 in.))

Floor loading density: 830 kg/m² (170 lbs/ft²)

22. Wheels and Tyres

Tire limit-maximum ground speed: 182 Knots



Issue: 03 Date: 07 January 2016

#### **SECTION 1: Model 750 - continued**

#### 23. ETOPS

Reserved

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

- 1. Airplane Flight Manual (AFM)
- 1.1 AFM for S/N 750-0001 to 750-0172 not incorporating Cessna Service Bulletin 750-71-10 Approved EASA Aircraft Flight Manual Model 750 (Citation X) (Metric, ICAO Units of Measure).

Document No. 75EUM

Approved EASA Aircraft Flight Manual Model 750 (Citation X) (Imperial Units of Measure), Document No. 75EU

1.2 AFM for S/N 750-0173 and on, and S/N incorporating Cessna Service Bulletin 750-71-10 Approved EASA Aircraft Flight Manual Model (750 Citation X) (Metric, ICAO Units of Measure),

Document No. 75EUMA

Approved EASA Aircraft Flight Manual Model (750 Citation X) (Imperial Units of Measure), Document No. 75EUA

1.3 AFM for S/N 750-0001 to 750-0172 incorporating Cessna Service Bulletin 750-32-50

Approved EASA Aircraft Flight Manual Supplement Model 750 Citation X, Document No. 75FM-S43 plus

Approved EASA Aircraft Flight Manual Model 750 (Citation X) (Metric, ICAO Units of Measure),

Document No. 75EUM

Approved EASA Aircraft Flight Manual Model 750 (Citation X) (Imperial Units of Measure), Document No. 75EU

2. Instructions for Continued Airworthiness and Airworthiness Limitations

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 75MM00 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 75MM00, Model 750 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).

Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750 – continued**

3. Weight and Balance Manual (WBM) (see NOTE 1)

- 3.1 WBM for S/N 750-0001 to 750-0172 not incorporating Cessna Service Bulletin 750-71-10 75WB-02, Cessna 750 (Citation X) Weight & Balance Manual or later revision approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision)
- 3.2 WBM for S/N 750-0173 and on, and S/N incorporating Cessna Service Bulletin 750-71-10 or Cessna Service Bulletin 750-32-50

75WBA-03, Cessna 750 (Citation X) Weight & Balance Manual or later revision approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision)

#### 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 750MMELEU-00), Initial Issue or later approved revisions.

2. Flight Crew Data

The Flight Crew data 750OSDFC-01, Initial Issue, as per the defined Operational Suitability Data Certification Basis recorded in document 750OSDFC-01, or later recorded CRI A-FCD. Required for entry into service by EU operator.

Pilot Type Rating: 'Model 750'.

#### 3. Cabin Crew Data

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

Issue: 03 Date: 07 January 2016

## **SECTION 1: Model 750 – continued**

#### 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 the data from III.8 and:

	Mass [kg (lbs)]	Distances aft of datum [metres (inches)]
Unusable Fuel-Wing	29.48 (65.00)	+9.779 (+385.00)
Unusable Fuel-Center	6.8 (15.00)	+9.779(+385.00)
Trapped Fuel	10.07 (22.20)	+9.31 (+366.50)
Engine Unusable Oil	0.45 (1.00)	+13.83 (+544.30)

- NOTE 2. The Aircraft is approved for Category II operations (flight director autopilot-coupled only). This does not constitute operational approval. Minimum approved integrated computer (IC-800) software is Phase IV (P/N 7017300-31201).
- NOTE 3. Aircrafts incorporating Laseref III or Laseref IV IRS equipment are Enhanced Surveillance compliant. Aircrafts incorporating AHRS equipment are not Enhanced Surveillance compliant.
- NOTE 4. Aircraft with part number 7014700-607 or 7030700-70706 Micro Air Data Computers meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace.

Two (2) AZ-840 or AZ-940 Honeywell Micro Air Data Computers (MADC) are required equipment. Approved part numbers are listed in the following table:

#### **Production Installations**

MADC Part Number	Model 750-xxxx serial range	
7014700-904	-0003 through -0041	
7014700-604	-0001, -0002, -0042 through -0105	
7014700-607	-0106 through -0240	
7030700-70706	-0241 and on	

Service Bulletin Installations

Issue: 03 Date: 07 January 2016

# **SECTION 1: Model 750 – continued**

MADC Part Number	Service Bulletin	
7014700-604	SB750-34-05 Rev. 0, 1	
7014700-607	SB750-34-05 Rev. 2	

Note: SB750-34-05 Rev. 2 supersedes SB750-34-05 Rev. 0,1. Rev. 0,1 are no longer applicable.

- NOTE 5. Instrument Panel Mounted Stand-by Nav-Com Control is required equipment for all EASA certified aircrafts.
- NOTE 6. Customized Cabin and Interior Seating Configurations must be approved.
- NOTE 7. Required placards are included in the Maintenance Manual, ref. 75MM00 (or later approved revision) Chapter 11, Placards and Markings.
- NOTE 8. Two Honeywell Primus II Radio Systems (Model RCZ-833) are installed as standard equipment on the Model 750. Radio installation complies with the 8.33 kHz channel spacing requirements.

Issue: 03 Date: 07 January 2016

#### **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

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**

Holder's name	Holder's address	TC held from	TC held to	Note
Cessna Aircraft Company	P.O. Box 7704, Wichita, Kansas 67277, USA	2 June 2004	10 December 2015	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	06 January 2016		

Issue: 03 Date: 07 January 2016

## **III. Change Record**

Issue	Date	Changes	
Issue 01	28 September 2006	Initial Issue	
Issue 02	17 August 2010	Implementation of an optional mass increase of 181.4 kg (40 lbs) by Cessna Service Bulletin 750-32-50 for S/N 750-000 through 750-0172	
		Editorial revised to reflect latest EASA TCDS format	
Issue 03	07 January 2016	Incorporated data for Chapter V (Operational Suitability Data OSD) for Model 750 (Section 1)	
		Editorial revision to reflect latest EASA TCDS format	