TYPE-CERTIFICATE

DATA SHEET

NO. EASA.IM.A.073

for
Beechcraft 390
(PREMIER I and IA)

Type Certificate Holder:
Textron Aviation Inc.

One Cessna Boulevard
Wichita, Kansas 67215
USA

For Models: Model 390

CONTENT

SECTION 1: GENERAL Model 390 (Premier I / IA)

CHANGE RECORD

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SECTION 1: GENERAL Model 390 (Premier I / IA) Type Design

I. General

Data Sheet No.: EASA IM A.073	Issue 2
1. a) Model:	Model 390
b) Variant:	N/A
2. Airworthiness Category:	JAR-23 Normal Category
3. Type Certificate Holder:	TEXTRON AVIATION INC. One Cessna Boulevard Wichita, Kansas 67277 USA
4. Manufacturer:	TEXTRON AVIATION INC. One Cessna Boulevard Wichita, Kansas 67277 USA
5. LBA Certification Application Date:	11 December 2000
6. FAA Type Certification Date:	23 March 2001
7. LBA Type Certification Date:	03 September 2001

II. Certification Basis

1. Reference Date for determining the: Applicable requirements	6 August 1996
2. (reserved)	
3. (reserved)	
4. Certification Basis:	FAR 23, effective February 1, 1965, as amended by Amendments 23-1 through 23-52. The EASA Aircraft Type Certification standard includes that of FAA TCDS A00010WI, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003, Other standards conforming to TC/TCDS standards certificated by individual EU member States prior to 28 September 2003 are also acceptable. Compliance with ice protection has been demonstrated in accordance with FAR 23.1419.

5. Special Conditions:	23-096-SC and 23-096A-SC additional requirements for: Performance, stalling speed, takeoff speeds, takeoff performance, accelerate-stop distance, takeoff path, takeoff distance and takeoff run, takeoff flight path, climb, climb all engines operating, takeoff climb one engine inoperative, climb one engine inoperative, reference landing approach speed, landing distance, balked landing, longitudinal control, minimum control speed, control during landings, trim, stability, static longitudinal stability, demonstration of static longitudinal stability, static directional and lateral stability, dynamic stability, wings level stall, turning flight and accelerated turning stalls, stall warning vibration and buffeting, high speed characteristics, out-of-trim characteristics, flutter, takeoff warning system, engine fire extinguishing system, fire extinguishing agents, extinguishing agent containers, fire extinguishing system materials, airspeed indicating system, static pressure system, operating limitations and information, airspeed limitations, minimum control speed, minimum flight crew, markings and placards, airspeed indicator, airplane flight manual and approved manual material, operating limitations, operating procedures, and performance information. Effects of Contamination on Natural Laminar Flow Airfoils. 23-122-SC-HIRF
6. Exemptions:	No. 6558 for landing gear loads from §§ 23.25, 23.29, 23.235, 23.471, 23.473, 23.477, 23.479, 23.481, 23.483, 23.485, 23.493, 23.499, 23.723, 23.725, 23.726, 23.727, 23.959, 23.1583(c)(1) and (2), Appendix C23.1, Appendix D23.1 Compliance has been shown for the additional requirements as specified in the exemption and identified as paragraphs 1 through 25. Any change in type design must also show compliance with these additional requirements. No. 7190 partial exemption from the requirements of 23.181(b).
7. Equivalent Level of Safety Findings:	No. ACE-99-11 § 23.853(a) for small parts that would not contribute significantly to the propagation of fire. The compensating feature for this equivalent level of safety was compliance with the vertical burn requirements of FAR 23, Appendix F for larger interior furnishings and panels. No. ACE-00-02 §§ 23.1305(a)(2), (a)(3), (c)(2), (c)(5) and 23.1549(a) through (c) as required by FAR 21.21(b) for direct reading digital only displays.

No. ACE-05-04 to use 1-g stall speeds rather than traditional Vsmin stall speed as the reference datum for regulatory compliance.

9. EASA Environmental Standards: ICAO Annex 16, Volume I, Chapter 3
ICAO Annex 16, Volume II, Part II, Chapter 2

III. Technical Characteristics and Operational Limitations

1. Type Design Definition: Aircraft General Assembly, Model 390, Premier I, Drawing No. 390-000000, Document No. DOC33674, latest FAA approved revision.

2. Description: Airplane with two aft mounted turbofan engines, swept wings, retractical tricycle landing gear, T-tail

3. Equipment: Equipment List according AFM, P/N 390-590001-3A1, or later approved revision (see Note 1)

4. Dimensions:

Span	13.56 m (44 ft. 6 in.)
Length	14.02 m (46 ft. 0 in.)
Height	4.67 m (15 ft. 4 in.)
Wing Area	22.9 sq.m (247 sq. ft.)

5. Engines: Two Williams-Rolls, Inc. International FJ-44-2A Turbofan engines (TCDS IM.E.016)

Engine Limits: Static thrust at sea level:

Takeoff (5 minutes)*	1,043.26 kg (2,300 lbs)
Maximum Continuous	1,043.26 kg (2,300 lbs)

Other engine limitations: referred to the engine TC

6. (reserved)

7. (reserved)

8. Fluids

8.1 Fuel: Commercial kerosene JET A, JET A-1, per ASTM-D-1655, or JP-8 per MIL-T-83133 (Limited use Av-gas 100LL per ASTM D910. Limited to 18,927.06 liters (5,000 gallons) per engine between major periodic inspections. Operation is limited to 3,048 m (10,000 feet) and below with the electric boost pumps on per AFM procedures. (see Note 2)

8.2. Oil:

Mobil Jet II	MIL-L-23699
Mobil 254	MIL-L-23699
Exxon 2380	MIL-L-23699

Mixing of oils is permissible

8.3. Coolant: Not applicable.

9. Fuel capacities:

9.1. Fuel

	U.S. CAP.GAL.	U.S. USABLE GAL.	ARM
Gravity Fill	552.8 gallons (2092.6 liters)	539 gallons (2040.3 liters)	290.8 gallons (1100.8 liters)
Single Point	541.8 gallons (2050.9 liters)	528 gallons (1998.7 liters)	289.8 gallons (1097,0 liters)

For aircraft serial numbers RB-75 and after, or prior aircraft that embody Kit No. 390-9200:

	U.S. CAP.GAL.	U.S. USABLE GAL.	ARM
Gravity Fill	552.8 gallons (2092.6 liters)	547.8 (2073.7 liters)	290.5 (1099.7 liters)
Single Point	541.8 gallons (2050.9 liters)	537.0 (2032.8 liters)	289.5 (1095.9 liters)

See Note 3. for data on unusable and undrainable fuel.

9.2 Oil: 2.5 Quarts usable per engine – ARM 390.5

See Note 4. for data on undrainable oil.

10. Airplane Limit Speeds (KCAS)

Maximum Operating	V_{MO} Sea Level to 27,600 feet	320
	M_{MO} above 27,600 feet	.80
Manoeuvring	VO	200
Flaps Extended	V_{FE}	170 (Flaps 30°)
		200* (Flaps 20°)
		201** (Flaps 20°)
		200 (Flaps 10°)
Landing Gear Operating	V_{LO} (Extension)	200*
		201**
Landing Gear Extended	V_{LE}	200*
		201**
Minimum Control Air	V_{MCA}	
	Flaps Up	102
	Flaps 10°	97
	Flaps 20°	93

*RB-4 thru RB-69 and aircraft not modified per kit 390-3203
**RB-2, RB-3, RB-70 and after and aircraft modified per kit 390-3203

11. Maximum Operating Altitude 12,497 m (41,000 ft.)

12. Operational Capacity: VFR Day and Night
IFR Day and Night
RVSM
Flight into known icing (See Limitations Section of EASA Approved Airplane Flight Manual regarding RB-4 thru RB-14, RB-20 thru RB-22, RB-24 thru RB-32 and RB-34 without Service Bulletin 57-3521 incorporated)

13 Maximum Certified Weights in kg (lbs)

Max. Zero Fuel	Max. Ramp	Max. Take-Off	Max. Landing
4,535.9 kg (10,000 lbs)	5,711.1 kg (12,591 lbs.)	5,669.9 kg (12,500 lbs.)	5261.6 kg (11,600 lbs.)

14. Centre of Gravity Range (Gear and Flaps Extended)

Allowable Forward C.G. Up to 5,669.90 kg (12,500 lbs)	F.S. 294.37
Aft C.G. Up to 4,535.92 kg (10,000 lbs)	F.S. 303.97
Aft C.G. Up to 5,669.90 kg (12,500 lbs)	F.S. 300.14

Straight line variation between given points

15. Datum F.S. 0.00 is located .86 m (34.00 in.) forward of the nose of the aircraft.

16. (Reserved)

17. Levelling means Level is determined with a level gauge placed on the cabin door floor longeron.

18. Minimum Flight Crew 1 (Pilot)

19. Maximum Passenger Seating Capacity 6 Passengers

20. (Reserved)

21. Baggage / Cargo Compartment

Nose Baggage	68.0 kg (150 lbs.)
Aft Cabin Baggage	63.5 kg (140 lbs.)
Aft Fuselage Baggage—Forward	90.7 kg (200 lbs.)
Aft Fuselage Baggage – Aft	90.7 kg (200 lbs.)

22. Wheels and Tyres

Main Landing Gear (MLG) H22 x 8.25 x 10
Nose Landing Gear (NLG) 18 x 4.4

IV Operation and Service Instructions

Airplane Flight Manual (AFM)	Model 390 FAA Approved Airplane Flight Manual, P/N 390-5900001-3A1, or later approved version.
Airplane Maintenance Manual	Model 390 Maintenance Manual, P/N 390-590001-15 or later approved revision Chapter 4, “Airworthiness Limitations” for inspections, mandatory life information and other requirements for continued airworthiness may not be changed without the approval of EASA.

V. Notes

1. The basic required equipment as prescribed in applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. (See Limitations Section of FAA Approved Airplane Flight Manual for Kinds of Operation Equipment List.)

2. Fuel:
   Fuels not containing icing inhibitors must have MIL-I-27686 or MIL-I-85470 fuel system icing inhibitor added in amounts not less than 0.10% nor more than 0.15% by volume. Minimum fuel icing inhibitor content during refuelling is 0.10% by volume.

   Dupont Stadis 450 anti-static additive or equivalent is permitted to bring fuel up to 300 conductive units, but not to exceed 1 part per million.

   SOHIO Biobor JF biocide additive or equivalent is permitted at a concentration not to exceed 20 parts per million (270 ppm total additive) of elemental boron.

3. Cabin interior and seating configurations must be approved.

4. Current weight and balance data, loading information and a list of equipment included in empty weight must be provided for each airplane at the time of original certification.

   (a) Basic empty weight includes unusable fuel of 47.7 kg (105.2 lbs) for gravity fill (5.7 kg (12.5 lbs) undrainable); 49.5 kg (109.2 lbs) for single point refuelling (7.5 kg (16.5 lbs) undrainable).

   For aircraft serial numbers RB-75 and after, or prior aircraft that embody Kit No. 390-9200:

   Basic empty weight includes unusable fuel of 20.6 kg (45.4 lbs) for gravity fill (6.5 kg (14.4 lbs) undrainable); 22.4 kg (49.4 lbs) for single point refuelling (18.4 lbs undrainable).

   (b) Basic empty weight includes engine oil of 7.8 kg (17.2 lbs).
   (c) Basic empty weight includes hydraulic fluid of 8.2 kg (18.1 lbs).

5. All placards required in the FAA approved Airplane Flight Manual P/N 390-590001-3A1 or later approved version must be installed in the appropriate location.

6. The Model 390 is approved for the single seating installation shown in the AFM. Removal, alteration or relocation of seats, restraint systems, cabinets or tables is subject to approval by EASA.

7. The Model 390 has been approved for Group Reduced Vertical Separation Minimum (RVSM) as described below:

   (a) Serials RB-70 and after.
   (b) Serials RB-2, RB-3, RB-46, RB-51, RB-60, RB-66 when modified by kit 390-3205.

(c) Serials RB-4 through RB-69 with Kits 390-3205 and 390-3203 installed, exceptions are outlined in notes 2., 4., and 5.
(d) Currently non-group RVSM approved serials RB-27, RB-35 which have been modified by kit 390-3203, and 390-3205.
(e) Currently non-group RVSM approved serials RB-21, RB-19, RB-48, and RB-10, which have been modified by kit 390-3205.

Final certification for RVSM operations must be obtained by the operator from its local authority.

8. Type Certificate A00010WI issued March 23, 2001, obtained by the manufacturer using Delegation Option Authorization Procedures of Part 21 of the Federal Aviation Regulations.

11. Production Certificate No. PC-8 Delegation Option Manufacturing No. DOA-230339-CE.

12. The Model 390 is also known as the Premier I, serial numbers RB-1 through RB-101 and RB-103 through RB-134. The Model 390 with avionics and interior upgrades is also known as the Premier IA, serial numbers RB-102 and RB-135 and after.