DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A9NM Revision 26 CESSNA 650 October 30, 2000

TYPE CERTIFICATE DATA SHEET NO. A9NM

This data sheet which is part of Type Certificate No. A9NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Cessna Aircraft Company

P.O. Box 7704 Wichita KS 67277

I. Model 650, Citations III and Citation VI, (Transport Category), approved April 30, 1982

Engines Two Garrett TFE731-3B-100S (Standard)

Two Garrett TFE731-3BR-100S (Optional) (See Note 11) Two Garrett TFE731-3C-100S (Standard) (See Note 18) Two Garrett TFE731-3CR-100S (Optional) (See Note 18)

Fuel Commercial kerosene Jet A, Jet B, Jet A-1, JP-4, JP-5, and JP-8, fuel, conforming to

AiResearch Manufacturing Co. fuel specifications, EMS 53111, EMS 53112, or

EMS 53116.

Engine Limits Static thrust standard TFE731-3B-100S TFE731-3BR-100S

day, sea level: (Standard) (Optional)
Takeoff (5 min.) 3650 lb. 3850 lb.

(Emergency Only)

Max. continuous 3650 lb. 3650 lb.

Max. permissible engine rotor operating speed:

 N_1 (Fan) steady state 101.5% r.p.m. 101.5% r.p.m. N_2 (Gas gen.) steady state 100% r.p.m. 101% r.p.m.

N₁ (Fan) 101.5% to 103% r.p.m. 101.5% to 103% r.p.m. limited to 1 min

limited to 1 min. limited to 1 min. 100% to 103% r.p.m. 101% to 103% r.p.m.

 N_2 (Gas gen.) 100% to 103% r.p.m. 101% to 103% r.g. limited to 1 min. 101% to 1 min.

Max. permissible interturbine gas temperatures:

Takeoff (5 minutes) 890° C. 890° C.

916° C. (Emergency only)

 Max. continuous
 890° C.
 890° C.

 Starting
 890° C.
 890° C.

Static thrust standard TFE731-3C-100S TFE731-3CR-100S

day, sea level: (Standard) (Optional)
Takeoff (5 min.) 3650 Lb. 3850 Lb.

(Emergency Only)

Max. continuous 3650 Lb. 3650 Lb.

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Model 650, Citations III and Citation VI (cont'd)

Engine Limits (cont'd) Max. permissible engine rotor operating speed:

> N₁ (Fan) steady state 101.5% r.p.m. 101.5% r.p.m. N2 (Gas gen.) steady state 100.0% r.p.m. 101.0% r.p.m. N₁ (Fan) 101.5% to 103 % r.p.m. 101.5% to 103% r.p.m. Limited to 1 min. Limited to 1 min. 100% to 103% r.p.m. 101% to 103% r.p.m. N₂ (Gas Gen.)

Limited to 1 min. Limited to 1 min.

Max. permissible interturbine gas temperatures:

Takeoff (5 minutes) 910° C. 910° C.

APR Takeoff (5 minutes) 929° C. (Emergency Only)

Max. continuous 910° C. 910° C. Starting 910° C. 910° C.

Airspeed Limits Airplane Serial Numbers (S/N) Airplane Serial Numbers (S/N)

> 650-0001 through 650-0093 650-0094 through 650-0241; and earlier

Serials incorporating SB650-32-13

305 KIAS below 8000 ft. 305 KIAS below 8000 ft. V_{MO} (Maximum Operating) 346 KIAS at 8000 ft. with 336 KIAS at 8000 ft. with (Calibrated Altitudes) linear decrease to 293 KIAS

linear decrease to 278 KIAS (.851 M) at 34,275 feet (.851 M) at 36,524 feet

See NOTE 8 for V_{MO} with Optional Zero Wing Fuel Weight

.851 M above 34,275 feet 851 M above 36,524 feet M_{MO} (Calibrated Altitude)

> V_A (Sea level) 10,000 lb. **155 KIAS** 12,000 lb. **164 KIAS** 15,000 lb. **184 KIAS**

22,000 lb. **224 KIAS**

See AFM for variations with weight and altitude and optional configurations.

V_B (Speed for maximum gust intensity) **220 KIAS**

V_{FE} (Flaps extended)

Partial flaps, 7° or 20° **210 KIAS** Ldg Position - Full Flaps **170 KIAS** V_{MCA} (Minimum control speed) Air 98 KIAS V_{MCG} (Minimum control speed) Ground **99 KIAS** (19,000 lb., and below, see AFM for variation with weight) V_{LO} (Landing gear operating) **210 KIAS** V_{LE} (Landing gear extended) **210 KIAS** Landing light extended **250 KIAS**

Max. tire ground speed 165 knots Speed Brakes Extension Speed Maximum No Limit Minimum Panels 2, 3, 6 & 7 $V_{REF} + 15 KIAS$

(Airplanes S/N 650-0152 through 650-0241; and Airplanes S/N 650-0001 through 650-0151 incorporating SB650-27-23.) Extension of the speed brakes with the flaps in any position other than the UP position is prohibited below 500 feet AGL. Above 500 feet AGL the speed brakes may be extended with the flaps in any position. (Airplanes S/N 650-0001 through 650-0151 not incorporating SB650-27-23.) Extension of the speed brakes is prohibited in flight with flaps in any position other than the UP position.

Spoiler Extension Speed (In flight restricted to emergency descent)

Panels 1, 2, 3, 4, 5, 6, 7 & 8 Maximum V_{MO}/M_{MO}

150 KIAS Minimum

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I. Model 650, Citations III and Citation VI (cont'd)

Spoiler extension in flight is restricted to emergency descent use.

Extension of the spoilers is prohibited in flight with the flaps in any position other than

the up position.

There is no restriction on roll control spoilers (Panels 1 & 8)

C.G. Range <u>Takeoff weights up to 21,000 lb. (Landing Gear Extended)</u>

Airplanes S/N 650-0001 through 650-0093 [airplanes not incorporating SB650-32-13 or

SB650-32-14]

Forward limit: Linear variation from 324.29 inches aft of datum (23.89% MAC) at 21,000 lb. to

316.20 inches aft of datum (14.00% MAC) at 18,000 lb.; 316.20 inches aft of datum (14.00% MAC) at 18,000 lb. to 14,500 lb.; Linear variation from 316.20 inches aft of datum (14.00% MAC) at 14,500 lb. to 321.10 inches aft of datum (20.00% MAC)

at 12,000 lb.

Aft Limit: 330.1 inches aft of datum (31.00% MAC) at 21,000 lb. or less.

C.G. Range <u>Takeoff weights up to 21,000 lb. (Landing Gear Extended)</u>

Airplanes S/N 650-0001 through 650-0093 [airplanes incorporating SB650-32-14 but not

SB650-32-13]

Forward limit: Linear variation from 321.66 inches aft of datum (20.67% MAC) at 21,000 lb. to

316.20 inches aft of datum (14.00% MAC) at 19,000 lb.; 316.20 inches aft of datum (14.00% MAC) at 19,000 lb. to 14,500 lb.; Linear variation from 316.20 inches aft of datum (14.00% MAC) at 14,500 lb. to 321.10 inches aft of datum (20.00% MAC)

at 12,000 lb.

Aft Limit: 330.10 inches aft of datum (31.00% MAC) at 21,000 lb. or less.

C.G. Range Takeoff weights up to 21,500 lb. (Landing Gear Extended)

Airplanes S/N 650-0001 through 650-0093 [airplanes incorporating SB650-32-13 or

SB650-32-14]

Forward limit: Linear variation from 323.02 inches aft of datum (22.33% MAC) at 21,500 lb. to

316.20 inches aft of datum (14.00% MAC) at 19,000 lb.; 316.20 inches aft of datum (14.00% MAC) at 19,000 lb. to 14,500 lb.; Linear variation from 316.20 inches aft of datum (14.00% MAC) at 14,500 lb. to 321.10 inches aft of datum (20.00% MAC)

at 12,000 lb.

Aft Limit: 330.10 inches aft of datum (31.00% MAC) at 21,500 lb. or less.

C.G. Range <u>Takeoff weights up to 22,000 lb. (Landing Gear Extended)</u>

Airplanes S/N 650-0094 through 650-0241

Forward limit: Linear variation from 324.38 inches aft of datum (24.00% MAC) at 22,000 lb. to

316.20 inches aft of datum (14.00% MAC) at 19,000 lb.; 316.20 inches aft of datum (14.00% MAC) at 19,000 lb. to 14,500 lb.; Linear variation from 316.20 inches aft of datum (14.00% MAC) at 14,500 lb. to 321.10 inches aft of datum (20.00% MAC)

at 12,000 lb.

Aft Limit: 330.10 inches aft of datum (31.00% MAC) at 22,000 lb. or less.

Empty Wt. C.G. Range None

Datum Zero reference datum is 221.0 inches forward of the leveling screw just aft of the cabin

door on Water Line 127.25.

MAC 81.725 in. (L.E. of MAC at Sta. +304.768)

Leveling Means Seat rails

Maximum Weight Airplanes S/N 650-0001 through 650-0093 [airplanes not incorporating SB650-32-13]:

Ramp 21,200 Pounds
Takeoff 21,000 Pounds
Landing 17,000 Pounds
Zero fuel 14,650 Pounds

Design Zero Wing fuel (optional) 16,300 Pounds [See NOTE 8]

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Model 650, Citations III and Citation VI (cont'd)

Airplanes S/N 650-0001 through 650-0093 [airplanes incorporating SB650-32-13]:

Ramp 21,700 Pounds

Takeoff 21,500 Pounds Landing 19,000 Pounds

Zero Wing fuel 16,300 Pounds [See NOTE 8]

Airplanes S/N 650-0094 through 650-0241:

22,200 Pounds Ramp Takeoff 22.000 Pounds

Landing 20.000 Pounds

Zero Wing fuel 16,300 Pounds [See NOTE 8]

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 15 (2 pilots, 13 passengers)

See NOTE 5

Tail compartment Maximum Baggage 700 lb.

(500 lb.. for A/C with APU)

Two wing tanks: Usable 480.4 each; Arm 315.46 in. Fuel Capacity (Gal.)

Fuselage tank: Usable 133.5; Arm 387.5 in. See NOTE 1 for data on unusable fuel

Oil Capacity (Gal.) Two engine mounted tanks: Total 2.9 each; usable 1.87 each

Arm = +411.24 in.

See NOTE 1 for data on unusable oil.

Max. Operating Altitude 51,000 ft.

Control Surface Movements Stabilizer Range of Stabilizer Setting (Primary Trim)

Max Down -13° Max. Up +2° Down $15^{\circ} \pm 1^{\circ}$ Up $15.5^{\circ} + 0^{\circ}, -.5^{\circ}$

Rudder (perpendicular

to hinge) Right $25^{\circ} + 1^{\circ}$, -0° Left $25^{\circ} + 1^{\circ}$, -0° Rudder trim tab Right $11.75^{\circ}, +1^{\circ}$ Left $11.75^{\circ} \pm 1^{\circ}$

(Perpendicular to hinge) (Servo Action $11^{\circ} + 1^{\circ}, -1^{\circ}$)

Aileron Up $12.5^{\circ} + 1^{\circ}, -0^{\circ}$ Down $12.5^{\circ} + 1^{\circ}, -0^{\circ}$

from neutral from neutral

Wing flap positions: Up 0° 20°, 7° T.O./Appr 37°, 20°* Ldg.

Speed brakes

Panels 2, 3, 6 & 7 0° to $47^{\circ} + 3^{\circ}$, -0°

Spoiler

Elevator

Outboard (Panels 1 & 8) 0° to $47^{\circ} + 3^{\circ}$, -0° 0° to $30^{\circ} + 1^{\circ}$, -1° Inboard (Panels 4 & 5)

(See Instructions for Continued Airworthiness for rigging instructions)

*See AFM for required Approach flap settings.

Citation III: S/N 650-0001 through 650-0199, -0203, 0204, -0205, and -0206 Serial Nos. Eligible

Citation VI: S/N 650-0200, -0201, -0202 and S/N 650-0207 through -0241

Certification Basis Model 650 (Citation III and Citation VI)

Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 (1) through 25-39;

I. Model 650, Citations III and Citation VI (cont'd)

Certification Basis

Model 650 (Citation III and Citation VI) (cont'd)

(a) Additions:

FAR §§ 25.901(c) and 25.1199 as amended by Amendments 25-1 through 25-40; §§ 25.1309 and 25.1351(d) as amended by Amendments 25-1 through 25-41; §§ 25.177, 25.255 and 25.703 as amended by Amendments 25-1 through 25-42; § 25.1326 as amended by Amendments 25-1 through 25-43; § 25.1413 as amended by Amendments 25-1 through 25-44; §§ 25.1305 and 25.1529 as amended by Amendments 25-1 through 25-54.

(b) Additions for the Sperry EDZ-601, EDZ-603, EDZ-605, and SPZ-8000 Electronic Flight Instrument Systems only:

FAR §§ 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, and 25.1335 as amended by Amendments 25-1 through 25-41.

- (c) Addition for airplanes incorporating Cessna EC-20600 Auxiliary Power Unit Inflight Operable Installation:
 - FAR § 25.901(d) as amended by Amendments 25-1 through 25-46.
- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-12.
- (3) SFAR Part 27 as amended by Amendments 27-1 through 27-2, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes.
- (4) Special Conditions as follows:
 - (a) 25-102-NM-7, High Altitude Operations (51,000 feet). See NOTE 20.
 - (b) 25-ANM-6, Automatic Takeoff Thrust Control System (ATTCS).
- (5) Exemption as follows:
 - (a) Exemption No. 3436 from compliance with FAR § 25.1305(d)(3), for type certification without an engine rotor system unbalance indicator.
- (6) Equivalent levels of safety as follows:
 - (a) FAR § 25.807(d), Emergency exits ditching;
 - (b) FAR § 25.773(b)(2), Cockpit Side Window;
 - (c) FAR § 25.1549(a) and (b), Digital Turbine Speed N₂ Indicator;
 - (d) FAR § 25.815, Aisle Width;
 - (e) FAR § 25.812(b)(2), Emergency Exit Signs;
 - (f) FAR § 25.813(e), Passenger Compartment Door;
 - (g) FAR § 25.1305(a)(4), Oil Pressure Indicator (See NOTE 12);
 - (h) FAR § 25.1305(a)(6), Oil Temperature Indicator (See NOTE 12);
 - (i) FAR § 25.1305(c)(1), Gas Temperature Indicator (See NOTE 12); and
 - (j) FAR § 25.1305(c)(3), Tachometer (See NOTE 12).
- (7) FAR § 25.801 ditching not complied with.
- (8) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Application for Type Certificate dated April 30, 1977. Type Certificate No. A9NM issued April 30, 1982. The Model 650 [Citation III and VI] are defined by Cessna Airplane Assembly Drawing Number 6200000.

Production Basis Production Certificate No. 312. Effective February 15, 1985, and on, Production

Certificate No. 4 is applicable to all spares production. See NOTE 9 for specific S/N

effectivity of P.C. 4.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations

(see Certification Basis) must be installed in the aircraft for certification.

I. Model 650, Citations III and Citation VI (cont'd)

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.

The certified empty weight and corresponding center of gravity location must include:

	WEIGHT – lbs.	C.G. LOCATION – in.
Alcohol	3.4	+ 92.5 (full)
Hydraulic Fluid	37.2	+ 379.8 (full)
Unusable Fuel Wing	56.8	+ 304.0
Unusable Fuel Fuselage	3.0	+ 387.2
Engine Unusable Oil	16.0	+ 411.2
Engine Usable Oil	29.0	+ 411.1 (full)

- NOTE 2. These airplanes must be operated according to the appropriate FAA Approved Airplane Flight Manual, including latest approved revisions. FAA Approved Airplane Flight Manual, P/N 65C3FM-01 is applicable to the Citation III. FAA Approved Airplane Flight Manual, P/N 65C6FM-03 is applicable to the Citation VI. Required placards are included in Chapter Eleven (11) of the Instructions for Continued Airworthiness.
- NOTE 3. See the FAA approved airworthiness limitation section of the Instructions for Continued Airworthiness for mandatory compliance retirement life or inspection.
- NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with FAR 25.785.
- NOTE 5. For operation with 10 or more passengers, Cessna Drawing 6211274 must be complied with.
- NOTE 6. The following nose wheel tires are approved:

BFG	P/N 031-613-2	S/N 650-0001 through 650-0241
Goodyear	P/N 184F13-5	S/N 650-0001 through 650-0241
BFG	P/N 031-613-8	S/N 650-0001 through 650-0093 not incorporating SB650-32-13 or SB650-32-14
Goodyear	P/N 184F13-3	S/N 650-0001 through 650-0093 not incorporating SB650-32-13 or SB650-32-14

- NOTE 7. Airplanes modified in accordance with Cessna Drawing 6200011 or Service Bulletin SB650-03-01 are eligible for Canadian Registration (S/N 650-0001 through 650-0241).
- NOTE 8. Airplanes S/N 650-0001 through 650-0083 incorporating SB650-34-10 or airplanes S/N 650-0064 through 650-0093 incorporating the optional zero wing fuel weight (EC19432) are eligible for operation with zero fuel weight of 16,300 lb. with the following V_{MO}/M_{MO} limitations:
 - 305 KIAS below 8,000 ft.
 - 336 KIAS at 8,000 ft. with linear decrease to 278 KIAS/.851 M at 36,524 ft.
 - .851 M above 36,524 ft.

Zero fuel weight plus fuel in the fuselage tank cannot exceed 16,300 lb.

- NOTE 9. Production Certificate No. 4 effective at Serial 650-0079 through 650-0241.
- NOTE 10. Deleted at Rev. 25.
- NOTE 11. Applicable to those airplanes incorporating EC 19112 or SB650-76-1. Automatic Performance Reserve Installation.

L. Model 650, Citations III and Citation VI (cont'd)

NOTE 12. Applicable to those airplanes incorporating EC 20600 Auxiliary Power Unit Inflight Operable Installation.

NOTE 13. Airplanes S/N 650-0100 through 650-0178 which are modified in accordance with Cessna Drawing 6200019 are eligible for export to France.

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NOTE 14. Equipment installations or other modifications to the tailcone area must be coordinated with the Wichita Aircraft Certification Office.

NOTE 15. Airplanes S/N 650-0100 through 650-0178 which are modified in accordance with Cessna Drawing 6200012 are eligible for export to the United Kingdom.

NOTE 16. Airplanes S/N 650-0001 through 650-0241 which are modified in accordance with Cessna Drawing 6200017 are eligible for export to Denmark.

NOTE 17. Airplanes S/N 650-0001 through 650-0241 which are modified in accordance with Cessna Drawing 6200018 are eligible for export to Brazil.

NOTE 18. Applicable to airplane S/N 650-0227 through 650-0241; and prior serial numbers that incorporate Service Bulletin SB650-72-01.

NOTE 19. Deleted at Rev. 25.

NOTE 20. Model 650 airplanes (Citation III and VI) have been approved for high altitude operations (altitudes above 41,000 feet), by Special Conditions. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than 3.98 sq. in.

NOTE 21. Citation III Model 650 airplanes that incorporate the factory installed Honeywell SPZ-8000 (IFCS) and have accomplished Cessna Service Bulletin SB650-34-97, meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace. Citation III or Citation VI Model 650 airplanes that incorporate the factory installed Honeywell SPZ-650 (AFCS) and have accomplished Cessna Service Bulletin SB650-34-107 or SB650-34-105 respectively, meet the initial airworthiness requirements for operation in RVSM airspace. Each operator must obtain final RVSM operating approval directly from the FAA.

II - Model 650, Citation VII, (Transport Category), Approved January 23, 1992

Engines Two Garrett TFE731-4R-2S

Fuel Commercial kerosene Jet A, Jet B, Jet A-1, JP-4, JP-5, and JP-8 fuel, conforming to

AiResearch Manufacturing Co. Fuel Specifications EMS 53111, EMS 53112, or EMS

53116.

Engine Limits Static thrust standard day, sea level: TFE731-4R-2S

Takeoff (5 min.) 4080 lb. Max. continuous 4080 lb.

Max. permissible engine rotor operating speed:

 N_1 (Fan) steady state 101.5% r.p.m. N_2 (Gas gen.) steady state 101% r.p.m.

 $\begin{array}{lll} N_1 \mbox{ (Fan)} & 101.5\% \mbox{ to } 104.5\% \mbox{ r.p.m. limited to 5 sec.} \\ N_2 \mbox{ (Gas gen.)} & 101\% \mbox{ to } 103\% \mbox{ r.p.m. limited to 5 sec.} \end{array}$

Max. permissible interturbine gas temperatures:

Takeoff (5 minutes) 952° C.

974° C. (Emergency only)

Max. continuous 924° C. Starting 952° C.

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II - Model 650, Citation VII (cont'd)

Airspeed Limits	V _{MO} (Maximum Operating)	275 KIAS below 8000 ft.		
	(Calibrated Altitudes)	336 KIAS at 8000 ft. with		

336 KIAS at 8000 ft. with linear decrease to 278 KIAS/.851 M at 36,524 ft. See NOTE 8 for alternate

 V_{MO} & ZFW

M_{MO} (Calibrated Altitude) .851 M above 36,524 ft.

V_A (Sea level) 14,500 lb. **177 KIAS** 16,500 lb. **191 KIAS** 19,600 lb. **210 KIAS** 23,000 lb. **227 KIAS**

See AFM for variations with weight and altitude and optional configurations.

V _B (Speed for maximum gust intensity)		220 KIAS			
V _{FE} (Flaps extended)					
Partial flaps, 7° or 20°		210 KIAS			
Ldg Position - Full Flaps		170 KIAS			
V _{MCA} (Minimum control speed) Air		103 KIAS			
V _{MCG} (Minimum control speed) Ground	102 KIAS				
(19,000 lb and below, see AFM for	variation with wei	ght)			
V _{LO} (Landing gear operating)		210 KIAS			
V _{LE} (Landing gear extended)		210 KIAS			
Landing light extended		250 KIAS			
Max. Tire Ground Speed		165 knots			
Speed Brakes Extension Speed	Maximum	No Limit			
Panels 2, 3, 6 & 7	Minimum	$V_{REF} + 15 KIAS$			
Extension of the speed brakes with the flaps in any position other than					

Extension of the speed brakes with the flaps in any position other than the UP position is prohibited below 500 feet AGL. Above 500 feet AGL the speed brakes may be extended with the flaps in any position.

Spoiler Extension Speed (In flight restricted to emergency descent)

Panels 1, 2, 3, 4, 5, 6, 7 & 8

Maximum V_{MO}/M_{MO} **150 KIAS** Minimum

Spoiler extension in flight is restricted to emergency descent use. Extension of the spoilers is prohibited in flight with the flaps in any position other than the up position.

There is no restriction on roll control spoilers (Panels 1 & 8)

C.G. Range

(Landing Gear Extended)

Forward limit:

Linear variation from 324.55 inches aft of datum (24.21% MAC) at 23,000 lb. to 316.20 inches aft of datum (14.00% MAC) at 19,000 lb.; 316.20 inches aft of datum (14.00% MAC) at 19,000 lb. to 16,500 lb.; Linear variation from 316.20 inches aft of datum (14.00% MAC) at 16,500 lb. to 321.00 inches aft of datum (19.86% MAC) at 14,500 lb.

Aft Limit:

Linear variation from 324.55 inches aft of datum (24.21% MAC) at 23,000 lb. to 330.10 inches aft of datum (31.00 % MAC) at 22,450 lb.; 330.10 inches aft of datum (31.00 % MAC) at 22,450 lb. to 13,705 lb.

II - Model 650, Citation VII (cont'd)

Empty Wt. C.G. Range None

Datum Zero reference datum is 221.0 inches forward of the leveling screw just aft of the cabin door on

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Water Line 127.25.

MAC 81.725 in. (L.E. of MAC at Sta. +304.768)

Leveling Means Seat rails

Maximum WeightRamp23,200 PoundsTakeoff23,000 PoundsLanding20,000 Pounds

Zero fuel 16,500 Pounds Alternate Zero Fuel (See NOTE 8) 15,350 Pounds

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 15 (2 pilots, 13 passengers) See NOTE 5

Maximum Baggage Tail compartment 700 lb. (500 lb. for A/C with APU)

Fuel Capacity (Gal.) Two wing tanks: Usable 480.4 each; Arm 315.46 in.

Fuselage tank: Usable 133.5; Arm 387.5 in. See NOTE 1 for data on unusable fuel

Oil Capacity (Gal.) Two engine mounted tanks: Total 2.9 each; usable 1.87 each

Arm = +411.24 in.

See NOTE 1 for data on unusable oil

Max. Operating Altitude 51,000 ft.

Control Surface Movements Stabilizer Range of Stabilizer Setting (Primary Trim)

 $\begin{array}{ccccc} & Max.~Up & +2^{\circ} & Max~Down & -13^{\circ} \\ Elevator & Up & 15.5^{\circ} +0^{\circ}, -.5^{\circ} & Down & 15^{\circ} \pm 1^{\circ} \end{array}$

Rudder (perpendicular

to hinge) Right $25^{\circ} + 1^{\circ}$, -0° Left $25^{\circ} + 1^{\circ}$, -0° Rudder trim tab Right 11.75° , $\pm 1^{\circ}$ Left $11.75^{\circ} \pm 1^{\circ}$

(Perpendicular to hinge) (Servo Action 11° +1°, -1°)

Aileron Up $12.5^{\circ} + 1^{\circ}$, -0° Down $12.5^{\circ} + 1^{\circ}$, -0° from neutral from neutral

 0° to $47^{\circ} + 3^{\circ}$, -0°

Wing flap positions: Up 0° T.O./Appr 20° , 7° Ldg 37° , 20° *

Speed brakes

kes

Panels 2, 3, 6 & 7 Spoiler

Outboard (Panels 1 & 8) 0° to 47° +3°, -0° Inboard (Panels 4 & 5) 0° to 30° +1°, -1°

(See Instructions for Continued Airworthiness for rigging instructions)

*See AFM for required Approach flap settings.

Serial Nos. Eligible 650-7001 and on

II - Model 650, Citation VII (cont'd)

Data Pertinent to Model 650, Citation VII

Certification Basis Model 650 (Citation VII) S/N 650-7001 and on:

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-39;
 - (a) Additions:

FAR §§ 25.901(c) and 25.1199 as amended by Amendments 25-1 through 25-40; §§ 25.1309 and 25.1351(d) as amended by Amendments 25-1 through 25-41; §§ 25.177, 25.255 and 25.703 as amended by Amendments 25-1 through 25-42; § 254.1326 as amended by Amendments 25-1 through 25-43; § 25.1413 as amended by Amendments 25-1 through 25-44; §§ 25.1305 and 25.1529 as amended by Amendments 25-1 through 25-62; § 25.773 as amended by Amendments 25-1 through 25-72.

- (b) Additions for the Sperry SPZ-8000 Digital Integrated Flight Control System only: FAR §§ 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, and 25.1335 as amended by Amendments 25-1 through 25-41.
- (c) Addition for airplanes equipped with inflight operable Auxiliary Power Unit (APU): FAR § 25.901(d) as amended by Amendments 25-1 through 25-46.
- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-18.
- (3) FAR Part 34 effective September 10, 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes.
- (4) Special Conditions as follows:
 - (a) 25-102-NM-7, High Altitude Operations (51,000 feet). See NOTE 10.
 - (b) 25-ANM-54, Protection from the induced effects of lightning and High Intensity Radiated Fields (HIRF) due to installation of digital electronic engine controls.
- (5) Exemption as follows:
 - (a) Exemption No. 3436 from compliance with FAR § 25.1305(d)(3), for type certification without an engine rotor system unbalance indicator.
- (6) Equivalent levels of safety as follows:
 - (a) FAR § 25.807(d), Emergency exits ditching;
 - (b) FAR § 25.1549(a) and (b), Digital Turbine Speed N₂ Indicator;
 - (c) FAR § 25.815, Aisle Width;
 - (d) FAR § 25.812(b)(2), Emergency Exit Signs;
 - (e) FAR § 25.813(e), Passenger Compartment Door;
 - (f) FAR § 25.1305(a)(4), Oil Pressure Indicator (See NOTE 9);
 - (g) FAR § 25.1305(a)(6), Oil Temperature Indicator (See NOTE 9);
 - (h) FAR § 25.1305(c)(1), Gas Temperature Indicator (See NOTE 9); and
 - (i) FAR § 25.1305(c)(3), Tachometer (See NOTE 9).
- (7) FAR § 25.801 ditching not complied with.
- (8) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

The Model 650 [Citation VII] is defined by Cessna Airplane Assembly Drawing Number 6200000.

Production Basis Production Certificate No. 4.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations

(see Certification Basis) must be installed in the aircraft for certification.

II - Model 650, Citation VII (cont'd)

Data Pertinent to Model 650, Citation VII, (cont'd)

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each airplane at the time of original certification.

The certified empty weight and corresponding center of gravity location must include:

Hydraulic Fluid
Unusable Fuel Wing
Unusable Fuel Fuselage
Engine Unusable Oil
Engine Usable Oil

37.2 lb. + 379.8 in. (full)
56.8 lb. + 304.0 in.
3.0 lb. + 387.2 in.
16.0 lb. + 411.2 in.
29.0 lb. + 411.1 in. (full)

- NOTE 2. The airplane must be operated according to the FAA Approved Airplane Flight Manual P/N 65C7FM-09 (or later approved revision). For applications requiring ICAO units, Airplane Flight Manual P/N 65C7EU-00 is equivalent to P/N 65C7FM-09. Required placards are included in Chapter Eleven (11) of the Instructions for Continued Airworthiness.
- NOTE 3. See the FAA approved airworthiness limitation section of the Instructions for Continued Airworthiness [Chapter 4 of Maintenance Manual] for mandatory compliance retirement life or inspection.
- NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with FAR 25.785.
- NOTE 5. For operation with 10 or more passengers, Cessna Drawing 6211274 must be complied with.
- NOTE 6. The following nose wheel tires are approved:

BFG P/N 031-613-2 Goodyear P/N 184F13-5

- NOTE 7. Equipment installations or other modifications to the tailcone area must be coordinated with the Wichita Aircraft Certification Office.
- NOTE 8. The following alternate V_{MO}/M_{MO} limitations apply when airplanes are loaded to the alternate zero fuel weight of 15,350 pounds:

275 KIAS below 8000 ft.

346 KIAS at 8000 ft. with linear decrease to 293 KIAS/.851 M at 34,275 ft.

.851 M above 34,275 ft.

- NOTE 9. Applicable to those airplanes incorporating Auxiliary Power Unit Inflight Operable Installation.
- NOTE 10. The Model 650 (Citation VII) has been approved for high altitude operations (altitudes above 41,000 feet), by Special Conditions. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than 3.98 sq. in.
- NOTE 11. Model 650 airplanes (Citation VII, S/N 650-7001 through 650-7075), that have accomplished Cessna Service Bulletin SB650-34-97, and Model 650 airplanes (Citation VII, S/N 650-7076 and on) meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace. Each operator must obtain final RVSM operating approval directly from the FAA.

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