DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A37CE
Revision 12
CESSNA
208
208A
208B
June 15, 1999

TYPE CERTIFICATE DATA SHEET NO. A37CE

This data sheet which is part of Type Certificate No. A37CE 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, Kansas 67277

I Model 208, Caravan I, 10 PCLM (Normal Category), Approved October 23, 1984; 10 PCSM (Normal Category), Approved March 26, 1986

Engine [Applicable to S/N 20800001 through 20800276]
Pratt & Whitney of Canada Ltd., PT6A-114 Turbo Prop
Pratt & Whitney of Canada, Ltd., PT6A-114A Turbo Prop
(When operated to PT6A-114 operating limitations)

Engine [Applicable to S/N 20800277 and Up]
Pratt & Whitney of Canada, Ltd., PT6A-114A Turbo Prop

Fuel of — Aviation turbine fuel Jet A, Jet A-1, Jet B, JP-1, JP-4, JP-5 or JP-8. For required use anti-icing additives and emergency use of aviation gasoline, refer to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Engine Limits: [Applicable to S/N 20800001 through 20800276]

P&W PT6A-114 or PT6A-114A when operated to PT6A-114 operating limits

	Shaft Horsepower	NG Gas Generator Speed (% rpm)	Indicator Torque (ft.-lbs.)	Prop Shaft Speed (rpm)	Maximum Permissible Interturbine Temp. (°C)
Takeoff static & max. continuous	600 (1)	101.6	1658	1900	805
Maximum climb	600 (1)	101.6	1658/1970(2)	1900	765
Maximum cruise	600 (1)	101.6	1658/1970(2)	1900	740
Idle	-	52 min.	-	-	685
Starting (2 sec.)	-	-	-	-	1090
Max. reverse (1 min.)	600 (1)	101.6	1658	1825	805
Transient (2 sec.)	-	102.6	2200	2090	850

I Model 208, Caravan I (cont'd)

Engine Limits: [Applicable to S/N 20800277 and Up] P&W PT6A-114A

	Shaft Horsepower	NG Gas Generator Speed (% rpm)	Indicator Torque (ft.-lbs.)	Prop Shaft Speed (rpm)	Maximum Permissible Interturbine Temp. (°C)
Takeoff static & max. continuous	675 (1)	101.6	1865	1900	805
Maximum climb	675 (1)	101.6	1865/1970(2)	1900	765
Maximum cruise	675 (1)	101.6	1865/1970(2)	1900	740
Idle	-	52 min.	-	-	685
Starting (2 sec.)	-	-	-	-	1090
Max. reverse (1 min.)	675 (1)	101.6	1865	1825	805
Transient (2 sec.)	-	102.6	2200	2090	850

(1) Flat Rated:
The engines may produce more power than that for which the airplane has been certificated. Under these conditions, the stated torque, ITT, or Ng limitations shall not be exceeded.

(2) If maximum torque is used, propeller r.p.m. must be set so as not to exceed power limitations.

Propeller and Propeller Limits [Applicable to S/N 20800001 through 20800276]:

Hartzell composite three-bladed, constant speed, full-feathering, reversible Model: HC-B3MN3/M10083
Diameter: Maximum 100 inches, minimum 100 inches, no cutoff approved
Pitch at 42-inch station:

Low pitch (Beta pickup)	9°
Feathered	78.4°
Maximum Reverse	-18°

Propeller and Propeller Limits [Applicable to S/N 20800001 and Up]:

McCauley aluminum three-bladed, constant speed, full-feathering, reversible
Model: 3GFR34C703/106GA-0
Diameter: Maximum 106 inches, minimum 104 inches (2-inch cutoff on diameter allowed)
Pitch at 30-inch station:

Low pitch (Beta pickup)	+15.6°
Feathered	+88°
Maximum Reverse	-14°

*Airspeed Limits
S/N 20800001 through 20800060

V_{MO} (Max Operating)	175 KIAS
V_A (Maneuvering) at 7300 lbs.	148 KIAS

See POH/AFM for variations with weight and altitude.
V_{FE} (Flaps extended)

To 10°	175 KIAS
10° to 20°	150 KIAS
20° to 30°	125 KIAS

*Airspeed Limits
S/N 20800061 and Up

V_{MO} (Max Operating)	175 KIAS
V_A (Maneuvering) at 8000 lbs.	150 KIAS

See POH/AFM for variations with weight and altitude.

V_{FE} (Flaps extended)	
To 10°	175 KIAS
10° to 20°	150 KIAS
20° to 30°	125 KIAS

I Model 208, Caravan I (cont'd)

*Airspeed Limits	V_{MO} (Max Operating)	175 KIAS
Amphibian	V_A (Maneuvering) at 7600 lbs.	141 KIAS
S/N 20800014 and Up	See POH/AFM for variations with weight and altitude.	
	V_{FE} (Flaps extended)	
	To 10°	175 KIAS
	10° to 20°	150 KIAS
	20° to 30°	125 KIAS
C.G. Range	Takeoff, flight, and landing	
S/N 2080001 through 20800060	(+171.91) to (+182.68) at 7300 lbs.	
	(+162.41) to (+182.68) at 4200 lbs.	
	Straight line variation between points given	
C.G. Range	Takeoff and flight	
S/N 20800061 and Up	(+174.06) to (+184.35) at 8000 lbs.	
	(+162.41) to (+184.35) at 4200 lbs.	
	Straight line variation between points given	
	Landing	
	(+173.44) to (+184.35) at 7800 lbs.	
	(+162.41) to (+184.35) at 4200 lbs.	
	Straight line variation between points given	
C.G. Range	Takeoff and flight	
Amphibian	(+172.83) to (+182.68) at 7600 lbs.	
S/N 20800014 and Up	(+165.47) to (+182.68) at 5200 lbs.	
	Straight line variation between points given	
	Landing	
	(+171.91) to (+182.68) at 7300 lbs.	
	(+165.47) to (+182.68) at 5200 lbs.	
	Straight line variation between points given	
Empty Wt. C.G. Range	None	
Maximum Weight	7300 lb. takeoff, flight, and landing	
S/N 2080001 through 20800060	7335 lb. ramp	
Maximum Weight	8000 lb. takeoff and flight	
S/N 20800061 and Up	7800 lb. landing	
	8035 lb. ramp	
Maximum Weight	7600 lb. takeoff and flight	
Amphibian	7300 lb. landing	
S/N 20800014 and Up	7635 lb. ramp	
No. of Seats	1 through 10 (2 at +133.5 to +146.5, 2 at +169.6, 1 at +185.9, 2 at +201.9, 1 at +217.9, 2 at +233.9)	
	1 through 10 (2 at +133.5 to +146.5, 2 at +166.5, 2 at +193.5, 2 at +220.5, 1 at +245.5, 1 at +248.5) Refer to current Pilot's Operating Handbook and FAA Approved Airplane Flight Manual for other seating arrangements.	

Maximum Baggage	Reference weight and balance data
Fuel Capacity	335 gal. (332 gal. usable), two 167.5 gal. tanks in wings at +183.8 See NOTE 1 for data on unusable fuel.

I Model 208, Caravan I (cont'd)

Oil Capacity: 3.5 gal. total, 2.37 gal. usable in engine mounted tank at +69.2

Maximum Operating Altitude: 30,000 ft. - Landplane
20,000 ft. - Amphibian

Control Surface Movements:

Wing flaps 0° ±1° Up, 10° +0° -2° Down, 20° ±2° Down, 30° +1° -2° Down

LH & RH Flap Extension to be symmetric within 1/2° at all positions

Main surfaces

Ailerons	Up	25° +4° -0°	Down	16° +1° -0°
Spoiler	Up	40° ±5°	Down	0° +0° -5°
Elevator	Up	25° ±2°	Down	20° ±2°
Rudder (Landplane)	Right	25° ±2°	Left	25° ±2°
(Amphibian)	Right	23° +2°, -0°	Left	23° +2°, -0°

(Measured perpendicular to hinge line)

Tabs (main surfaces in neutral)

Aileron (RH)	Up	15° ±2°	Down	15° ±2°
Elevator	Up	15° ±2°	Down	15° ±2°

Tabs servo actions

Aileron (RH) (tab adjusted to neutral)
50% of aileron travel ±1° Up and Down
Aileron (LH) 50% of aileron travel ±1° Up and Down

Serial Nos. Eligible: 20800001 and up - Landplane
20800014 and up - Amphibian with Wipine Model 8000 amphibious floats.

II - Model 208A, Caravan I, 2 PCLM (Normal Category), Approved February 11, 1985

Engine: Pratt & Whitney of Canada Ltd., PT6A-114 Turbo Prop
Pratt & Whitney of Canada Ltd., PT6A-114A Turbo Prop
(When operated to PT6A-114 operating limitations)

Fuel: Aviation turbine fuel Jet A, Jet A-1, Jet B, JP-1, JP-4, JP-5 or JP-8. For required use of anti-icing additives and emergency use of aviation gasoline, refer to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Engine Limits: P&W PT6A-114 or PT6A-114A when operated to PT6A-114 operating limits

	Shaft Horsepower	NG Gas Generator Speed (% rpm)	Indicator Torque (ft.-lbs.)	Prop Shaft Speed (rpm)	Maximum Permissible Interturbine Temp. (°C)
Takeoff static & max. continuous	600 (1)	101.6	1658	1900	805
Maximum climb	600 (1)	101.6	1658/1970(2)	1900	765
Maximum cruise	600 (1)	101.6	1658/1970(2)	1900	740
Idle	-	52 min.	-	-	685
Starting (2 sec.)	-	-	-	-	1090
Max. reverse (1 min.)	600 (1)	101.6	1658	1825	805
Transient (2 sec.)	-	102.6	2200	2090	850

(1) Flat Rated:
The engines may produce more power than that for which the airplane has been certificated. Under these conditions, the stated torque, ITT, or

Ng limitations shall not be exceeded.

II - Model 208A, Caravan I (cont'd)

(2) If maximum torque is used, propeller r.p.m. must be set so as not to exceed power limitations.

Propeller and Propeller Limits

Hartzell composite three-bladed, constant speed, full-feathering, reversible
Model: HC-B3MN3/M10083
Diameter: Maximum 100 inches, minimum 100 inches, no cutoff approved
Pitch at 42-inch station:

Low pitch (Beta pickup)	9°
Feathered	78.4°
Maximum Reverse	-18°

McCauley aluminum three-bladed, constant speed, full-feathering, reversible
Model: 3GFR34C703/106GA-0
Diameter: Maximum 106 inches, minimum 104 inches (2-inch cutoff on diameter allowed)
Pitch at 30-inch station:

Low pitch (Beta pickup)	+15.6°
Feathered	+88°
Maximum Reverse	-14°

***Airspeed Limits**

V_{MO} (Max Operating)	175 KIAS
V_A (Maneuvering) at 8000 lbs.	150 KIAS

See POH/AFM for variations with weight and altitude.
V_{FE} (Flaps extended)

To 10°	175 KIAS
10° to 20°	150 KIAS
20° to 30°	125 KIAS

C.G. Range

Takeoff and flight
(+174.06) to (+184.35) at 8000 lbs.
(+162.41) to (+184.35) at 4200 lbs.
Straight line variation between points given

Landing
(+173.44) to (+184.35) at 7800 lbs.
(+162.41) to (+184.35) at 4200 lbs.
Straight line variation between points given

Empty Wt. C.G. Range

None

Maximum Weight

8000 lb. takeoff and flight
7800 lb. landing
8035 lb. ramp

No. of Seats

2 (+133.5 to +146.5)

Maximum Baggage

Reference weight and balance data

Fuel Capacity

335 gal. (332 gal. usable), two 167.5 gal. tanks in wings at +183.8
See NOTE 1 for data on unusable fuel.

Oil Capacity

3.5 gal. total, 2.37 gal. usable in engine mounted tank at +69.2

Maximum Operating Altitude	30,000 ft.

II - Model 208A, Caravan I (cont'd)

Control Surface Movements

Wing flaps 0° ±1° Up, 10° +0° -2° Down, 20° ±2° Down, 30° +1° -2° Down

LH & RH Flap Extension to be symmetric within 1/2° at all positions

Main surfaces

Ailerons	Up	25° +4° -0°	Down	16° +1° -0°
Spoiler	Up	40° ±5°	Down	0° +0° -5°
Elevator	Up	25° ±2°	Down	20° ±2°
Rudder	Right	25° ±2°	Left	25° ±2°

(Measured perpendicular to hinge line)

Tabs (main surfaces in neutral)

Aileron (RH)	Up	15° ±2°	Down	15° ±2°
Elevator	Up	15° ±2°	Down	15° ±2°

Tabs servo actions

Aileron (RH) (tab adjusted to neutral)

50% of aileron travel ±1° Up and Down

Aileron (LH) 50% of aileron travel ±1° Up and Down

Serial Nos. Eligible: 20800007 through 20800102

III - Model 208B, Caravan I, 2 PCLM (Normal Category), Approved October 9, 1986
Model 208B, Caravan I, 11 PCLM (Normal Category), Approved December 13, 1989

Engine: Pratt & Whitney of Canada Ltd., PT6A-114 Turbo Prop, S/N 208B0001 through S/N 208B0178 and 208B0180 through 208B0229, and as modified by SK208-84

Pratt & Whitney of Canada Ltd., PT6A-114A Turbo Prop,

(a) S/N 208B0001 through S/N 208B0178 and 208B0180 through 208B0229 and as modified by SK208-84 when operated to PT6A-114 operating limits

(b) S/N 208B0179, S/N 208B0230 and on, and as modified by SK208-80 S/N 208B0230 and on, and as modified by SK208-80

Fuel of: Aviation turbine fuel Jet A, Jet A-1, Jet B, JP-1, JP-4, JP-5 or JP-8. For required use anti-icing additives and emergency use of aviation gasoline, refer to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Engine Limits: P&W PT6A-114 or PT6A-114A when operated to PT6A-114 operating limits

	Shaft Horsepower	NG Gas Generator Speed (% rpm)	Indicator Torque (ft.-lbs.)	Prop Shaft Speed (rpm)	Maximum Permissible Interturbine Temp. (°C)
Takeoff static & max. continuous	600 (1)	101.6	1658	1900	805
Maximum climb	600 (1)	101.6	1658/1970(2)	1900	765
Maximum cruise	600 (1)	101.6	1658/1970(2)	1900	740
Idle	-	52 min.	-	-	685
Starting (2 sec.)	-	-	-	-	1090
Max. reverse (1 min.)	600 (1)	101.6	1658	1825	805
Transient (2 sec.)	-	102.6	2200	2090	850

III - Model 208B (cont'd)

Engine Limits (cont'd) PT6A-114A (675 hp)

	Shaft Horsepower	NG Gas Generator Speed (% rpm)	Indicator Torque (ft.-lbs.)	Prop Shaft Speed (rpm)	Maximum Permissible Interturbine Temp. (°C)
Takeoff static & max. continuous	675 (1)	101.6	1865	1900	805
Maximum climb	675 (1)	101.6	1865/1970(2)	1900	765
Maximum cruise	675 (1)	101.6	1865/1970(2)	1900	740
Idle	-	52 min.	-	-	685
Starting (2 sec.)	-	-	-	-	1090
Max. reverse (1 min.)	675 (1)	101.6	1865	1825	805
Transient (2 sec.)	-	102.6	2200	2090	850

(1) Flat Rated:
The engines may produce more power than that for which the airplane has been certificated. Under these conditions, the stated torque, ITT, or Ng limitations shall not be exceeded.

(2) If maximum torque is used, propeller r.p.m. must be set so as not to exceed power limitations.

Propeller and Propeller Limits

Hartzell composite three-bladed, constant speed, full-feathering, reversible
Model: HC-B3MN3/M10083
Diameter: Maximum 100 inches, minimum 100 inches, no cutoff approved
Pitch at 42-inch station:

Low pitch (Beta pickup)	9°
Feathered	78.4°
Maximum Reverse	-18°

McCauley aluminum three-bladed, constant speed, full-feathering, reversible
Model: 3GFR34C703/106GA-0
Diameter: Maximum 106 inches, minimum 104 inches (2-inch cutoff on diameter allowed)
Pitch at 30-inch station:

Low pitch (Beta pickup)	+15.6°
Feathered	+88°
Maximum Reverse	-14°

*Airspeed Limits

V_{MO} (Max Operating)	175 KIAS
V_A (Maneuvering) at 8750 lbs.	148 KIAS

See POH/AFM for variations with weight and altitude.

V_{FE} (Flaps extended)

To 10°	175 KIAS
10° to 20°	150 KIAS
20° to 30°	125 KIAS

C.G. Range

Takeoff and flight
(+199.15) to (+204.35) at 8750 lbs.
(+193.37) to (+204.35) at 8000 lbs.
(+179.60) to (+204.35) at 5500 lbs.
Straight line variation between points given

Landing
(+197.22) to (+204.35) at 8500 lbs.

(+193.37) to (+204.35) at 8000 lbs.
(+179.60) to (+204.35) at 5500 lbs.
Straight line variation between points given

III - Model 208B (cont'd)

Empty Wt. C.G. Range	None
Maximum Weight	8750 lb. takeoff and flight 8500 lb. landing 8785 lb. ramp For Flight Into Known Icing: With PT6A-114 engine and PT6A-114A when operated to PT6A-114 operating limits 8000 lb. takeoff and flight - cargo pod installed 8450 lb. takeoff and flight - cargo pod removed With PT6A-114A (675 hp.) engine 8550 lb. takeoff and flight - cargo pod installed 8750 lb. takeoff and flight - cargo pod removed
No. of Seats	2 (+133.5 to +146.5) Pilot Seat Locations for Cargo and Passenger Versions. 1 through 10 (refer to POH for seat locations for the particular seating configuration installed for passenger version only).
Maximum Baggage	Reference weight and balance data
Fuel Capacity	335 gal. (332 gal. usable), two 167.5 gal. tanks in wings at +203.8 See NOTE 1 for data on unusable fuel.
Oil Capacity	3.5 gal. total, 2.37 gal. usable in engine mounted tank at +69.2
Maximum Operating Altitude	25,000 ft. 20,000 ft. for Flight Into Known Icing
Control Surface Movements	Wing flaps 0° ±1° Up, 10° +0° -2° Down, 20° ±2° Down, 30° +1° -2° Down LH & RH Flap Extension to be symmetric within 1/2° at all positions Main surfaces Ailerons Up 25° +4° -0° Down 16° +1° -0° Spoiler Up 40° ±5° Down 0° +0° -5° Elevator Up 25° ±2° Down 20° ±2° Rudder Right 25° ±2° Left 25° ±2° (Measured perpendicular to hinge line) Tabs (main surfaces in neutral) Aileron (RH) Up 15° ±2° Down 15° ±2° Elevator Up 15° ±2° Down 15° ±2° Tabs servo actions Aileron (RH) (tab adjusted to neutral) 50% of aileron travel ±1° Up and Down Aileron (LH) 50% of aileron travel ±1° Up and Down
Serial Nos. Eligible	208B0001 and up

Data Pertinent to All Models

Datum	100.00 in. forward of center of nose gear jack point (Landplane). 100.00 in. forward of front face of firewall (Amphibian).
Leveling Means	Two jig located nutplates and screws installed on left side of fuselage

below side windows and forward of cargo door.

Data Pertinent to All Models (cont'd)

Certification Basis - Applies to Models 208, 208A and 208B when equipped with PW PT6A-114 engine and Hartzell propeller:

(1) FAR Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-28.
(2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-12.
(3) SFAR 27 effective February 1, 1974, as amended by Amendments 27-1 through 27-4.
(4) Special Conditions as follows:
  (a) 23-ACE-3; Dynamic Evaluation, Engine Installation.
(5) Equivalent Level of Safety as follows [Applicable to Model 208B only]:
  (a) FAR 23.955(f)(2), Fuel System.
(6) Compliance with ice protection has been demonstrated in accordance with § 23.1419 when ice protection equipment is installed in accordance with the airplane equipment list and is operated per the Pilot's Operating Handbook FAA Approved Airplane Flight Manual.

Certification Basis - Applies to
  (a) Models 208, 208A and 208B when equipped with P&W PT6A-114 engine and McCauley propeller; and
  (b) Model 208B when equipped with P&W PT6A-114A engine and either McCauley or Hartzell propeller; and
  (c) Model 208 when equipped with P&W PT6A-114A engine and McCauley propeller:

(1) FAR Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-28.
(2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-18.
(3) SFAR 27 effective February 1, 1974, as amended by Amendments 27-1 through 27-4.
(4) Special Conditions as follows:
  (a) 23-ACE-3; Dynamic Evaluation, Engine Installation.
(5) Equivalent Level of Safety as follows [Applicable to Model 208B only]:
  (a) FAR 23.955(f)(2), Fuel System.
(6) Compliance with ice protection has been demonstrated in accordance with § 23.1419 when ice protection equipment is installed in accordance with the airplane equipment list and is operated per the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Application for type certificate dated June 2, 1982. Type Certificate No. A37CE issued October 23, 1984, obtained by the manufacturer under delegation option provisions of Part 21 of the Federal Aviation Regulations.

Production Basis	Production Certificate No. 4. Delegation Option Manufacturer No. CE-1 (2080001 through 20800246, 208B0001 through 208B0501) and CE-3 (20800247 and on, 208B0502 and on), and Delegation Option Manufacturer No. CE-3 (20800247 and on, 208B0502 and on) authorized to issue airworthiness certificates under delegation option provisions of Part 21 of the Federal Aviation Regulations.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. This equipment must include a current Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Data Pertinent to All Models (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 full oil of 29 lbs. (at +69.2), and unusable fuel as follows:

MODEL	SERIAL EFFECTIVITY/MODIFICATION	UNUSABLE FUEL lbs. @ c. g.
208/208A	20800001 through 20800130 *NOT* modified with SK208-52	20.1 @ +185.7
208/208A	20800001 through 20800130 modified with SK208-52	24.1 @ +186.4
208	20800131 and On	24.1 @ +186.4
208B	208B0001 through 208B0089 *NOT* modified with SK208-52	20.1 @ +205.7
208B	208B0001 through 208B0089 modified with SK208-52	24.1 @ +206.4
208B	208B0090 and On	24.1 @ +206.4

NOTE 2 The placards specified in the Pilot's Operating Handbook and FAA Approved Airplane Flight Manuals listed below (or later revision) must be displayed:

MODEL	CESSNA PART NUMBER
208 [600 SHP]	D1307-27-13PH
208 [675 SHP]	D1352-13PH
208A	D1287-10-13PH
208B [600 SHP]	D1309-21-13PH
208B [675 SHP]	D1329-16-13PH

Model 208 airplanes modified in accordance with SK-208-12 should use Cessna P/N D1307-27-13PH (or later revision).

Model 208A airplanes modified in accordance with SK-208-85 should use Cessna P/N D1307-27-13PH (or later revision) along with Supplement P/N D1331-2-13 (or later revision).

NOTE 3 Airplanes 20800001 through 20800060 are eligible for operation at the same weight and C.G. approved for S/N 20800061 and up when modified in accordance with SK-208-12 or SK-208-85.

NOTE 4 Mandatory inspection times for all wing and wing carry through structural components are contained in the Model 208 Series Maintenance Manual.

NOTE 5 In addition to the placards required by NOTE 2 above, the prescribed operating limitations indicated by an asterisk (*) must also be displayed as permanent markings.

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