

**MINISTÉRIO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISA E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL**

TYPE CERTIFICATE DATA SHEET N° EA-8805

TYPE CERTIFICATE HOLDER

CESSNA AIRCRAFT COMPANY
P.O. Box 7704
Wichita, Kansas 67277
USA

EA-8805-02

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CESSNA
MODEL 208,
208A, 208B

APR 1997

I- MODEL 208, Caravan I, (Normal Category), Approved February 12, 1988

ENGINE Pratt & Whitney of Canada, Ltd., PT6A-114

FUEL Aviation turbine fuel ASTM-D-1655, Jet A, Jet A-1, or Jet B; MIL-T-5624, JP-4, JP-5; MIL-T-83133A, JP-8; CPW46, Arctic Diesel; MIL-F-5616, JP-1. Anti-icing additive per MIL-I-27686 or Phillips PFA55MB must be blended into the aircraft fuel in concentrations not less than 0.060 % or more than 0.15 % by volume. For further approved fuel additive information and mixing procedure, refer to CTA Approved Airplane Flight Manual. For emergency use of aviation gasoline and fueling procedures, refer to CTA Approved Airplane Flight Manual.

ENGINE LIMITS

	Operating Limit				Maximum Permissible Inter-turbine Temp. (°C.)
	Shaft Horse Power	Ng Gas Generator Speed (% r.p.m.)	Indicated Torque (ft.-lb.)	Prop Shaft Speed (r.p.m.)	
Take-off 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 for which the airplane has been certified. 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-inches station:

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

Mc Cauley aluminum three bladed, constant speed, full feathering, reversible.

Model: 3GFR34C703/106GA-0.

Diameter: Maximum 106 inches , minimum 104 inches.

Pitch at 30 inches station:

Low pitch (Beta pickup)	+15.6°
Feathered	+88°

Maximum reverse	-14°
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AIRSPEED LIMITS

V _{MO} (Maximum Operating)	175 KIAS
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V _A (Maneuvering) at 8000 lb.	150 KIAS
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V_{FE} (Flaps extended)

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

C. G. RANGE

(+ 174.06) to (+ 184.35) at 8000 lb.

(+ 162.41) to (+ 184.35) at 4200 lb.

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

N° OF SEATS 1 pilot and 1 copilot plus 9 passenger seats (maximum)
 - with 1 pilot configuration the maximum number of passengers is limited to 9.
 - See AFM for approved configurations.

MAXIMUM BAGGAGE See the AFM 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
 See NOTE 1 for data on undrainable oil

MAXIMUM OPERATING ALTITUDE 30,000 ft.

CONTROL SURFACE MOVEMENTS Wing flaps 0° + 1° Up
 10° + 0° - 2°
 20° + 2°
 30° + 1° - 2°

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 N°S ELIGIBLE 20800061 and up

II- MODEL 208A, Caravan I, (Normal Category), Approved September 22, 1989

ENGINE

Pratt & Whitney of Canada, Ltd., PT6A-114

FUEL

Aviation turbine fuel ASTM-D-1655, Jet A, Jet A-1, or Jet B; MIL-T-5624, JP-4, JP-5; MIL-T-83133A, JP-8; CPW46, Arctic Diesel; MIL-F-5616, JP-1. Anti-icing additive per MIL-I-27686 or Phillips PFA55MB must be blended into the aircraft fuel in concentrations not less than 0.060 % or more than 0.15 % by volume. For further approved fuel additive information and mixing procedure, refer to CTA Approved Airplane Flight Manual. For emergency use of aviation gasoline and fueling procedures, refer to CTA Approved Airplane Flight Manual.

ENGINE LIMITS

	Operating Limits PT6A-114 (600 Hp)				
	Shaft Horse Power	Ng Gas Generator Speed (% r.p.m.)	Indicated Torque (ft.-lb.)	Prop Shaft Speed (r.p.m.)	Maximum Permissible Inter-turbine Temp. (°C.)
Take-off 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 for which the airplane has been certified. 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°

Mc Cauley aluminum three bladed, constant speed, full feathering, reversible.

Model: 3GFR34C703/106GA-0.

Diameter: Maximum 106 inches , minimum 104 inches.

Pitch at 30 inches station:

Low pitch(Beta pickup) +15.6°

Feathered +88°

Maximum reverse -14°

AIRSPPEED LIMITS

V_{MO} (Maximum Operating) 175 KIAS

V_A (Maneuvering) at 8000 lb. 150 KIAS

V_{FE} (Flaps extended)

To 10° 175 KIAS

10° to 20° 150 KIAS

20° to 30° 125 KIAS

C. G. RANGE

(+ 174.06) to (+ 184.35) at 8000 lb.

(+ 162.41) to (+ 184.35) at 4200 lb.

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

N° OF SEATS

2 (+133.5 to +146.5)

MAXIMUM BAGGAGE

See the AFM 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

See NOTE 1 for data on undrainable oil

MAXIMUM OPERATING ALTITUDE 30,000 ft.

CONTROL SURFACE MOVEMENTS

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

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 N^os ELIGIBLE 20800007 and up

III- MODEL 208B, Caravan I, (Normal Category), Approved September 22,1989

ENGINE Pratt & Whitney of Canada, Ltd., PT6A-114
or
Pratt & Whitney of Canada, Ltd., PT6A-114A

FUEL Aviation turbine fuel ASTM-D-1655, Jet A, Jet A-1, or Jet B; MIL-T-5624, JP-4, JP-5; MIL-T-83133A, JP-8; CPW46, Arctic Diesel; MIL-F-5616, JP-1. Anti-icing additive per MIL-I-27686 or Phillips PFA55MB must be blended into the aircraft fuel in concentrations not less than 0.060 % or more than 0.15 % by volume. For further approved fuel additive information and mixing procedure, refer to CTA Approved Airplane Flight Manual. For emergency use of aviation gasoline and fueling procedures, refer to CTA Approved Airplane Flight Manual.

ENGINE LIMITS

Operating Limits PT6A-114 (600 Hp)					
	Shaft Horse Power	Ng Gas Generator Speed (% r.p.m.)	Indicated Torque (ft.-lb.)	Prop Shaft Speed (r.p.m.)	Maximum Permissible Inter-turbine Temp. (°C.)
Take-off 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

Operating Limits PT6A-114A (675 Hp)					
	Shaft Horse Power	Ng Gas Generator Speed (% r.p.m.)	Indicated Torque (ft.-lb.)	Prop Shaft Speed (r.p.m.)	Maximum Permissible Inter-turbine Temp. (°C.)
Take-off 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 for which the airplane has been certified. 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-inches station:

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

Mc Cauley aluminum three bladed, constant
speed, full feathering, reversible.

Model: 3GFR34C703/106GA-0.

Diameter: Maximum 106 inches, minimum 104
inches.

Pitch at 30 inches station:

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

AIRSPEED LIMITS

V_{MO} (Maximum Operating) 175 KIAS
 V_A (Maneuvering) at 8750 lb. 148 KIAS
 V_{FE} (Flaps extended)
 To 10° 175 KIAS
 10° to 20° 150 KIAS
 20° to 30° 125 KIAS

C. G. RANGE

(+ 199.15) to (+ 204.35) at 8750 lb.
 (+ 193.37) to (+ 204.35) at 8000 lb.
 (+ 179.60) to (+ 204.35) at 5500 lb.
 Straight line variation between points
 given

**EMPTY WT. C.G.
RANGE**

None

MAXIMUM WEIGHT

8750 lb. takeoff and flight
 8500 lb. landing
 8785 lb. ramp
 8000 lb. for flight into icing conditions

N° OF SEATS

2 (+133.5 to +146.5) for cargo
 configuration,
 or
 1 pilot and 1 copilot plus 9 passenger
 seats (maximum)
 - with 1 pilot configuration the maximum
 number of passengers is limited to 9.
 - See AFM for approved configurations.

MAXIMUM BAGGAGE

See the AFM 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
 See NOTE 1 for data on undrainable oil

**MAXIMUM OPERATING
ALTITUDE**

25,000 ft.
20,000 ft. for flight into icing
conditions

**CONTROL SURFACE
MOVEMENTS**

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

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

Main surfaces
Ailerons Up 25° +4° -0° Down 16° +1° -0°
 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°
 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 N^{os}
ELIGIBLE**

208B0001 and up

Data Pertinent to All Models**DATUM**

100.00 in. forward of center of nose gear
jack point.

LEVELLING MEANS

Two jig located nutplates and screws
installed on the left side of fuselage
below side windows and forward of cargo
door

CERTIFICATION BASIS

Brazilian Type Certificate N° 8805
issued in February, 1988 based on the
following requirements: RBHA 23,
equivalent to FAR Part 23 of the Federal
Aviation Regulations dated February 1,
1965, as amended by 23-1 through
23-28; RBHA 36, equivalent to annex 16 of
ICAO.

Compliance with ice protection has been demonstrated in accordance with RBHA 23.1419 when ice protection equipment is installed in accordance with the airplane equipment list and aircraft is operated per the CTA Airplane Flight Manual.

**EQUIVALENT SAFETY
ITEMS**

Fuel system RBHA 23.955 (f) (2) (Applies to Model 208B only)

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 CTA Airplane Flight Manual.

NOTE 1 - APPLICABLE TO MODELS 208/208A

Current weight and balance report including list of equipment included in the certified 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 unusable fuel of 20.1 lb. at (+185.7) and full oil of 29 lb. at (+69.2).

APPLICABLE TO MODEL 208B

Current weight and balance report including list of equipment included in the 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 unusable fuel of 20.1 lb. at (+205.7) and full oil of 29 lb. at (+69.2).

NOTE 2- The placards specified in the CTA Approved Airplane Flight Manual must be displayed.

NOTE 3- Mandatory inspection times for all wing and wing carry through structural components are contained in the applicable Model 208 Series Maintenance Manual.

NOTE 4- 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.

CLODOALDO MATIAS DE OLIVEIRA Ten.Cel.Av.
Chefe da Divisão de Homologação Aeronáutica

Maj Brig do Ar REGINALDO DOS SANTOS
Diretor do CTA