

Cessna 208B Grand Caravan Model Guide

The Cessna 208B Grand Caravan is a single-engine, fixed-gear turboprop with a first year of 1990. It has a PT6A-114A engine flat rated at 675 shaft horsepower. The library lists 9 to 14 seats. The G1000 cargo-version handbook gives a maximum takeoff weight of 8750 lb, a useful load of 4105 lb and a maximum cruise of 175 kt at 10,000 ft.

KEY TAKEAWAYS

- G1000 cargo version: 8750 lb max takeoff, 4680 lb standard empty, 4105 lb max useful load.
- Max cruise at 10,000 ft is 175 kt (cargo) or 184 kt (passenger). Service ceiling is 22,800 ft.
- Check which engine or weight STCs are fitted. The TPE331-12JR and PT6A-42A swaps change performance and fuel flow.
- Inspect horizontal stabilizer mount bolts for corrosion and torque. A 15,000-hour 1988 airframe had a broken one.

PAYLOAD, FUEL AND FIELD PERFORMANCE

The G1000 cargo version lists 8785 lb ramp, 8750 lb takeoff and 8500 lb landing weight. Fuel capacity is 335.6 gal, with 2224 lb usable. Takeoff ground roll is 1405 ft (2500 ft over a 50 ft obstacle). Landing ground roll is 915 ft (1740 ft over a 50 ft obstacle). Stall speed is 78 kt flaps up and 61 kt flaps full.

SEATS AND CERTIFICATION

The library lists 9 to 14 seats. An FAA Cert Alert says the Caravan is certificated in the normal category for nine passenger seats or less, excluding pilot seats. In Part 91 flying the second pilot seat may carry a passenger. Section 135.113 bars this in scheduled passenger service when configured with 9 or more passenger seats.

MODIFICATIONS AND ENGINE LIFE

Supervan's TPE331-12JR STC fits a 900 shp Honeywell engine with a 4-blade propeller. It is compatible with the 8950 lb and 9062 lb gross weight STCs. Fuel flow can exceed the PT6A-114A, cutting range. A Blackhawk PT6A-42A STC is not compatible with G1000 aircraft. A survey operator lists 4,600 hours engine overhaul and 4,000 hours or 10 years for the propeller.

SPECIFICATIONS

Engine Model	PT6A-114A
Seats Min	9
Seats Max	14
First Year	1990
Propeller Diameter In	106
Fuel Capacity Gal	335.6
Wing Loading Lbs Per Sqft	31.3
Power Loading Lbs Per Shp	13

PERFORMANCE

Cruise Speed Cargo 10000ft Kt	175
Cruise Speed Passenger 10000ft Kt	184
Range Cargo Max Cruise 10000ft Nm	862
Rate Of Climb Sea Level Fpm	925
Service Ceiling Ft	22800
Max Operating Altitude Ft	25000
Takeoff Ground Roll Ft	1405
Landing Ground Roll Ft	915

V-SPEEDS

Vmo Kts	175
Va At Max Weight Kts	148
Vfe Full Flaps Kts	125
Vy Kts	104
Vx Kts	72
Stall Flaps Up Kts	78
Stall Flaps Full Kts	61
Max Crosswind Kts	20

WEIGHT & BALANCE

Max Ramp Weight Lbs	8785
Max Takeoff Weight Lbs	8750
Max Landing Weight Lbs	8500
Standard Empty Weight Lbs	4680
Max Useful Load Lbs	4105
Usable Fuel Lbs	2224
Fuel Capacity Gal	335.6

SAFETY NOTES

- Stabilizer bolts: the FAA found broken, corroded horizontal stabilizer mount bolts on three 208/208B airplanes. Follow the maintenance manual and Service Bulletin CAB01-8 torque.
- ATSB report: selecting 30° flap on a Cessna 208B caused a violent left roll. Retracting to 20° flap restored partial control. Check the flap system closely.
- Known-icing equipment does not cover freezing rain, freezing drizzle, mixed or severe icing. Flight in those conditions is prohibited.