

CESSNA 177B Model Guide

The CESSNA 177B is a single-engine piston Cardinal powered by a 180 BHP Lycoming O-360-A1F6D with a constant-speed propeller. The 1977 handbook gives a 2500 lb maximum weight, 130 kt cruise at 75% power and 10,000 ft, and 49 or 60 gallons usable fuel. The 177 family is listed as carrying up to 4 people.

KEY TAKEAWAYS

- CESSNA 177B: 180 BHP, 2500 lb max weight, 139 kt maximum speed at sea level per the 1977 handbook.
- Standard tanks hold 49 gal usable and long-range tanks 60 gal; the 1977 handbook gives 535 to 780 NM range depending on tanks and power.
- Standard empty weight is 1533 lb (Cardinal) or 1560 lb (Cardinal II); useful load is 967 or 940 lb, so full fuel plus a full cabin may exceed limits.
- Climb is 840 fpm, service ceiling is 14,600 ft, and takeoff over a 50 ft obstacle needs 1400 ft.

PERFORMANCE AND RANGE (1977 HANDBOOK)

Maximum speed at sea level is 139 kt. Cruise at 75% power and 10,000 ft is 130 kt. Range at 75% power is 535 NM (49 gal) or 675 NM (60 gal). Maximum range is 615 NM or 780 NM. Takeoff ground roll is 750 ft and landing ground roll is 600 ft. Stall speed is 55 kt flaps up and 46 kt flaps down.

LOADING AND FUEL PLANNING

Normal category maximum weight is 2500 lb and utility category is 2200 lb. Baggage is limited to 120 lb, with 25 lb of that on the hatshelf. In the utility category the baggage area and rear seat must be empty. The 1973 manual says a full cabin normally means a reduced fuel load. It also lists 1450 lb empty weight, against 1533 lb in the 1977 handbook, so weigh the actual aircraft.

WHAT TO CHECK ON INSPECTION

The 1973 manual's walk-around covers the fuel strainer drain, fuel bay vents, static ports and pitot opening. It also covers propeller nicks and oil leaks, the carburetor air filter and tire inflation. Check the oil level: the manual says not to operate with less than six quarts. Check the fuel selector, the fuel shutoff valve (safety-wired ON) and the auxiliary fuel pump.

SPECIFICATIONS

Engine Power Hp	180
Fuel Capacity Total Gal	50
Usable Fuel Gal	49
Long Range Total Fuel Gal	61
Long Range Usable Fuel Gal	60
Propeller Diameter Inches	76
Max Oil Temperature F	245
Max Cylinder Head Temperature F	500

PERFORMANCE

Max Speed Sea Level Kt	139
Cruise Speed 75 Pct Kt	130
Rate Of Climb Fpm	840
Service Ceiling Ft	14600
Takeoff Ground Roll Ft	750
Takeoff Over 50ft Ft	1400
Landing Ground Roll Ft	600
Landing Over 50ft Ft	1220

V-SPEEDS

Vne Kias	167
Vno Kias	138
Va Kias	102
Vfe To 10 Deg Kias	115
Vfe 10 To 30 Deg Kias	90
Stall Flaps Up Kt	55
Stall Flaps Down Kt	46

WEIGHT & BALANCE

Max Takeoff Weight Lbs	2500
Max Landing Weight Lbs	2500
Utility Max Weight Lbs	2200
Standard Empty Weight Lbs	1533
Max Useful Load Lbs	967
Max Baggage Lbs	120
Aft Cg Limit Inches	114.5

SAFETY NOTES

- Avoid continuous operation between 1700 and 1900 RPM with less than 10 inches of manifold pressure.
- Flight into known icing is prohibited. Spins and aerobatics are not approved in the normal category.
- Takeoff and landing with the fuel selector on BOTH. Refuel with the selector on LEFT or RIGHT to get full capacity.