

Cessna 177 Model Guide

The CESSNA 177 is a four-seat, single-engine piston, fixed-gear high-wing airplane, also sold as the Cardinal. The type certificate covers the 177, 177A and 177B. The base 177 has a 150 hp Lycoming O-320-E2D. The 177A and 177B have a 180 hp Lycoming O-360. The library figures are about 110 kts cruise, 500 nm range, 40 gal of fuel and 1,050 lbs useful load. Factory documents for specific variants differ from these figures, so check numbers against the exact airplane's papers.

KEY TAKEAWAYS

- Know which variant you are buying. The 177 (serials 17700001 through 17701164) has 150 hp. The 177A (17701165 through 17701370) and 177B (17701371 through 17702752) have 180 hp.
- Library figures are 110 kts cruise, 500 nm range, 1,050 lbs useful load and 200 lbs baggage allowance. The 1968 owner's manual lists 120 lbs baggage and 49 gal total fuel, so verify against the specific airplane's papers.
- The carry-thru spar corrosion inspection (Service Letter SEL-57-09) is mandatory. Confirm it is logged as done.
- Use a structured prebuy inspection. One published checklist estimates 12 labor hours for fixed-gear airplanes and 16 for retractables.
- Check the logbooks for complete engine and airframe history, damage history and AD compliance.

WHAT IT IS AND WHAT IT CARRIES

The type certificate data sheet lists 4 seats (2 at station +93.0 and 2 at +134.0) in the Normal category, with a Utility category approval as well. The original 177 has a 2,350 lb maximum weight. The 177A has 2,500 lbs Normal category, and the 177B has 2,500 lbs Normal. The library lists a 2,400 lb MTOW, 1,400 lb empty weight and 1,050 lb useful load. The 1968 manual lists 49 gal total fuel and 120 lbs baggage. A 1975 owner's manual for a 177B shows 2,500 lbs gross, 1,426 lbs basic empty and 1,073 lbs useful load. It also shows 773 lbs payload with full fuel, about 11 gph fuel flow and 49 gal usable fuel.

PERFORMANCE

The library lists 110 kts cruise, 120 kts max speed, 700 fpm climb, 15,000 ft service ceiling, 1,600 ft takeoff distance and 1,500 ft landing distance. The 1968 manual for the 150 hp airplane lists 141 mph top speed at sea level, 130 mph cruise at 75% power at 9,000 ft, 670 fpm climb, a 12,700 ft service ceiling, and a 1,575 ft takeoff distance over a 50-ft obstacle. A 150 hp airplane should be expected to perform below the 180 hp library figures.

ENGINE, FUEL AND SERVICING

The 177B uses a Lycoming O-360-A1F6 or O-360-A1F6D, and the later 177B (serial 17702523 and on) is approved for 100LL/100 grade fuel. The 1975 manual gives an oil sump capacity of 8 quarts and says not to operate on less than 6 quarts. It also says to change oil at least every 6 months, even if the recommended hours have not been reached.

WHAT TO CHECK BEFORE BUYING

The prebuy checklist covers hot compression and a borescope, oil filter inspection for metal, exhaust and heat exchanger pressure tests, engine mount and shock mount condition, and complete logbooks. It also covers serial number matches, AD compliance, and a check for damage history. It also checks cabin door sag and play, cabin wall cracks, fuel leaks at the wing root, and the ELT. The mandatory carry-thru spar service letter SEL-57-09 applies to the 177, 177A and 177B, as well as the 177RG. Its compliance time was within 200 flight hours or the next annual, whichever came first. The NZ AD schedule also lists 2023-02-17 Wing Carry-thru Spar inspection and AD items covering the fuel system, flaps, stabilator and seat adjustment mechanism. A Skybolt cowlking kit document says the C177 cowlking is simple to convert and presents the fewest problems.

SPECIFICATIONS

Range Nm	500
Engine Hp	180
Height Ft	8
Length Ft	24
Wingspan Ft	36
Max Speed Kts	120
Cruise Speed Kts	110
Fuel Capacity Gal	40
Rate Of Climb Fpm	700
Service Ceiling Ft	15000

PERFORMANCE

Takeoff Distance Ft	1600
Landing Distance Ft	1500
Stall Speed Clean Kts	55
Stall Speed Landing Kts	60
Rate Of Climb Fpm	700
Cruise Speed Kts	110

V-SPEEDS

Vr Kts	60
Vx Kts	65
Vy Kts	75
Vfe Kts	85
Vne Kts	150
Vso Kts	50

WEIGHT & BALANCE

Max Takeoff Weight Lbs	2400
Max Ramp Weight Lbs	2450
Max Landing Weight Lbs	2400
Basic Empty Weight Lbs	1400
Useful Load Lbs	1050
Baggage Allowance Lbs	200
Cg Range Min Inches	34
Cg Range Max Inches	40

SAFETY NOTES

- The carry-thru spar can develop corrosion and cracks. A crack can progress to structural failure, resulting in loss of airplane control or wing separation (SEL-57-09).
- Do not operate with less than 6 quarts of oil (owner's manual).
- Check the fuel strainer and sumps for water on preflight. The 1968 manual says to drain the strainer for about four seconds and check the sump drain plugs if water is found.
- If the airplane has STCs such as wing cuffs, STOL kits or add-on tanks, ask the STC holder for revised spar inspection intervals.

