

Cessna 177RG Cardinal Model Guide

The Cessna 177RG Cardinal is a four-seat, single-engine piston airplane with retractable landing gear, built from 1971 to 1978. It has a 200 hp Lycoming IO-360 engine. The 1976 handbook lists 156 knots top speed at sea level, 148 knots cruise at 75% power at 7000 ft, and a 2800 lb maximum weight.

KEY TAKEAWAYS

- Four seats, 200 hp, retractable gear. 1976 handbook: 148 knots cruise at 75% power at 7000 ft.
- Fuel capacity changed: 1971-72 airplanes carry 50 gal usable, 1973 and later carry 60 gal usable.
- Landing gear condition is the key inspection item: a UK accident report found fatigue failure of a main gear downlock pivot pin.
- Check for the Hartzell propeller or turbonormalizer modifications, since each comes with its own placards and paperwork.

PERFORMANCE AND LOADING

The 1976 handbook lists a 925 fpm sea-level climb rate and a 17,100 ft service ceiling. Takeoff ground roll is 890 ft (1585 ft over a 50 ft obstacle). Landing roll is 730 ft (1350 ft over 50 ft). Maximum weight is 2800 lbs with up to 120 lbs of baggage. Range at 75% power is 715 NM with 60 gal usable.

WHAT TO INSPECT

Check the landing gear first. A UK Cessna F177RG accident report found out-of-adjustment nose gear downlock and fatigued main gear downlock pivot pins, after earlier signs of incomplete gear retraction. Also review the log for the service manual temporary revisions, which add component time limits and a fuel quantity indicating system test.

FUEL, ENGINE AND MODIFICATIONS

Serials through 177RG1051 need 100/130 minimum grade avgas. Serial 177RG1052 and up use 100LL/100. Alcohol-based fuels are prohibited. A mandatory bulletin covers turbonormalized airplanes (fuel servo reflow, new flight manual supplement) for better hot-weather cooling. A Hartzell 78-inch propeller STC is also available.

SPECIFICATIONS

Engine Power Hp	200
Propeller Diameter Inches	78
Fuel Capacity Total Gal	61
Usable Fuel Gal	60
Max Baggage Lbs	120
Max Takeoff Weight Lbs	2800

PERFORMANCE

Max Speed Sea Level Kt	156
Cruise Speed 75pct Kt	148
Range 75pct Nm	715
Max Range Nm	895
Rate Of Climb Fpm	925
Service Ceiling Ft	17100
Takeoff Ground Roll Ft	890
Landing Ground Roll Ft	730

V-SPEEDS

Vne Kt	174
Vno Kt	142
Va Kt	113
Vfe Kt	95
Vlo Kt	125
Vle Kt	125
Stall Flaps Up Kt	57
Stall Flaps Down Kt	50

WEIGHT & BALANCE

Max Weight Lbs	2800
Max Baggage Lbs	120
Empty Weight Lbs	1680
Useful Load Lbs	1120
Cg Forward Limit Light Inches	101
Cg Forward Limit At Max Weight Inches	105.8
Cg Aft Limit Inches	114.7

SAFETY NOTES

- Do not fly with the gear pump circuit breaker pulled or with unresolved gear retraction faults; the UK accident airplane did so and its nose gear collapsed on landing.
- Hartzell propeller STC placard: continuous operation is prohibited between 2000 and 2300 RPM with less than 10 inches manifold pressure.
- Alcohol-based fuels can cause serious performance degradation and fuel system damage, and are prohibited.