

Piper PA-24 Comanche Model Guide

The Piper PA-24 Comanche is a four-seat, single-engine piston airplane built from 1958 to 1972. The handbooks supplied cover the 180 hp PA-24-180 and the 250 hp PA-24-250. The wider family also includes the PA-24-260 and PA-24-400, with family-level figures of up to 185 kt cruise and 960 nm range. It has retractable tricycle gear, so gear and exhaust condition are key buying checks.

KEY TAKEAWAYS

- Two engines in the handbooks: PA-24-180 (Lycoming O-360, 180 hp) and PA-24-250 (O-540, 250 hp). Both need 91/96 octane minimum fuel.
- Handbook top speed is 167 mph for the 180 and 190 mph for the 250. Both list a 750 ft take-off run and 200 lb maximum baggage.
- Fuel burn at 75% power is 10 gph (180) or 14 gph (250). Standard fuel is 50 gal and 60 gal respectively.
- Before buying, inspect the exhaust (AD 68-05-01), the stabilator torque tube fittings and the gear oleos.

PERFORMANCE AND RANGE

Handbook figures are for Custom models at gross weight. Cruise at 75% power, sea level, is 150 mph (180) and 171 mph (250). At optimum altitude it is 160 and 181 mph. Service ceiling is 18,500 ft (180) and 20,000 ft (250). Flaps-down stall is 61 mph in later handbooks. Landing roll is 600 ft (180) and 650 ft (250). Rate of climb is 910 ft/min (180) and 1,350 ft/min (250); the 1958 handbook gives 1,400 for the 250.

WEIGHTS AND LOAD

Gross weight for the 180 is 2,550 lb. For the 250 the handbooks disagree: 2,800 lb in the 1958 edition and 2,900 lb in later ones. Confirm against the FAA-approved flight manual. Maximum baggage is 200 lb in a 20 cubic ft compartment. Useful load varies with trim level and edition; the 180 Standard lists 1,020 lb in later handbooks and 1,095 lb in 1958.

PRE-BUY CHECKS

Check the exhaust system for cracks, corrosion and weld separation (AD 68-05-01, PA-24-250). Check the stabilator torque tube bearing fittings for looseness. Check that both main oleos are properly inflated, since the gear needs them extended to retract. If a Hartzell propeller is fitted under STC SA00631CH, ask whether the spinner assembly was dealt with under Hartzell bulletin HC-SB-61-311. The handbook also warns to learn your foot position around the rudder pedal torque tube.

SPECIFICATIONS

Pa 24 180 Engine Hp	180
Pa 24 250 Engine Hp	250
Pa 24 180 Fuel Capacity Standard Gal	50
Pa 24 250 Fuel Capacity Standard Gal	60
Wing Span Ft	36
Baggage Capacity Lbs	200

PERFORMANCE

Take Off Run Ft	750
Pa 24 180 Rate Of Climb Fpm	910
Pa 24 250 Rate Of Climb Fpm	1350
Pa 24 180 Service Ceiling Ft	18500
Pa 24 250 Service Ceiling Ft	20000
Pa 24 180 Fuel Burn Gph	10
Pa 24 250 Fuel Burn Gph	14

WEIGHT & BALANCE

Pa 24 180 Max Takeoff Weight Lbs	2550
Max Baggage Lbs	200

SAFETY NOTES

- AD 68-05-01: inspect PA-24-250 exhaust for cracks, corrosion and weld separation. Under 950 hrs, every 100 hrs; over 950 hrs, every 50 hrs.
- Loose stabilator torque tube bearing fittings risk loss of pitch control. Reinspect every 100 hrs until Piper Kit 760 835 is fitted to all four (CASA AD/PA-24/33).
- Do not operate with flat gear oleos: a deflated right oleo stopped gear retraction and led to a wheels-up landing (AAIB, 2011).