

Piper PA-28 Archer III Model Guide

The Piper PA-28 Archer III (PA-28-181) is a four-seat, single-engine piston airplane in production since 1994. It has a carbureted, naturally aspirated Lycoming O-360-A4M four-cylinder engine. It is FAA approved in Normal and Utility categories. The handbooks cover serial numbers 2843001 and up, plus a Garmin G1000 version for serial 2843701 and up.

KEY TAKEAWAYS

- Four seats. Max takeoff weight is 2550 lbs Normal or 2130 lbs Utility. Baggage limit is 200 lbs and fuel is up to 48 gallons.
- Carbureted Lycoming O-360-A4M with two spark plugs per cylinder. Archer III adds an electric backup vacuum pump and a 28-volt electrical system.
- Key speeds: best glide 76 kts, Vfe 102 kts, Vno 125 kts, Vne 154 kts.
- Match the handbook to the airplane's serial number. Non-Piper STC installations (avionics, autopilot) have their own inspection rules.

WEIGHT AND LOADING

Max ramp weight is 2558 lbs Normal and 2138 lbs Utility. Max takeoff and landing weight is 2550 lbs Normal and 2130 lbs Utility. At 2550 lbs the CG limits are 88.6 inches forward and 93.0 inches aft of the datum. At 2050 lbs or less the forward limit is 82.0 inches. The datum is 78.4 inches ahead of the wing leading edge.

ENGINE AND SYSTEMS

The engine is a Lycoming O-360-A4M, carbureted, four-cylinder and horizontally opposed. It has 8 spark plugs, 2 per cylinder, each fed by a different magneto. The belt-driven alternator is 28 volt, 70 amp. The Archer III has an electrically driven backup vacuum pump with an Aux Vac button. It also has a 24 volt ground power input, an electric fuel pump used for takeoff and landing, and a gascolator that is sumped at every preflight.

WHAT TO CHECK ON INSPECTION

Use the preflight list as a buyer's checklist. Look at the alternator belt, oil quantity (quick reference: 6 qts, 5 minimum), fuel sumps and strainer for contamination, fuel tank vents, and the propeller and spinner. Also check the pitot heat and stall warning, the aux vacuum pump and the annunciator panel. Confirm the handbook revision and the equipment list match the airplane.

SPECIFICATIONS

Fuel Capacity Gal	48
Max Baggage Weight Lbs	200
Max Takeoff Weight Lbs	2550
Max Ramp Weight Lbs	2558

PERFORMANCE

Best Glide Speed Kts	76
Power Off Final Approach Speed Kts	66
Emergency Descent Speed Kts	102

V-SPEEDS

V So Kts	45
V S1 Kts	50
V X Kts	64
V Y Kts	76
V Fe Kts	102
V A Max Weight Kts	113
V No Kts	125
V Ne Kts	154

WEIGHT & BALANCE

Max Ramp Weight Lbs	2558
Max Takeoff Weight Lbs	2550
Utility Max Takeoff Weight Lbs	2130
Max Landing Weight Lbs	2550
Max Baggage Weight Lbs	200
Forward Cg Limit At Max Weight Inches	88.6
Aft Cg Limit Inches	93
Forward Cg Limit Light Inches	82

SAFETY NOTES

- The handbook is valid only for the airplane named on its title page and must be kept current. It must be carried in the airplane.
- Non-Piper approved STC installations change inspection requirements. Piper inspection criteria may not apply to those parts.
- Engine roughness: carburetor heat on, then switch tanks, run the electric fuel pump and cycle the magnetos. Power-off short final speed is 66 kts.