

Piper PA-44 Seminole Model Guide

The Piper PA-44 Seminole is a four-seat, twin-engine piston airplane, listed in the library from 1979 with no end year. It is certified in the Normal category and has two 180 hp Lycoming engines that burn 100 or 100LL avgas. It is widely used for multi-engine training. The sources include factory handbooks, checklists, a training supplement and a regulatory data sheet. Several of the handbooks are not kept current, so a buyer should confirm the exact airplane's serial number and current approved manual.

KEY TAKEAWAYS

- Four seats, two piston engines, Normal category. Each engine is a Lycoming rated 180 hp at a maximum of 2700 RPM.
- Key speeds from the checklists: rotate at 75 KIAS, climb at 88 KIAS, and best single-engine rate of climb (Vyse, the blue line) at 88 KIAS. Minimum control speed is 56 KIAS and demonstrated crosswind is 17 kts.
- Gear speeds are 140 KIAS maximum extended and 109 KIAS maximum for retraction. Flaps are limited to 111 KIAS.
- Avionics vary by airplane. The EASA data sheet lists factory Avidyne Entegra, Garmin G1000 and GFC700 autopilot options, and the training supplement covers a Garmin G500 and differences between '79 and '00 airplanes.
- The handbooks in these sources carry warnings that they are not kept current. Use the approved POH/AFM for the specific airplane, with all supplements.

WHAT IT IS AND WHAT IT CARRIES

The Piper PA-44 Seminole is a four-seat twin-engine piston airplane. The EASA data sheet lists it as model PA-44-180 (Seminole) of Type PA-44, Normal Category, made by Piper Aircraft, Inc. The US design approval date is 10 March 1978, and the data sheet also covers a PA-44-180T (Turbo Seminole). Each engine is an IO-360-B1G6 (left) or LIO-360-B1G6 (right), rated 180 hp at 2700 RPM. The propellers are two-blade Hartzell units, straight-blade or scimitar-blade, with diameters between 72 and 74 inches. The two blade styles may not be mixed on one airplane. Fuel is 100 or 100LL avgas.

SPEEDS AND OPERATING LIMITS

Never-exceed speed (VNE) is 202 KIAS. Maximum structural cruising speed (VNO) is 169 KIAS. Maneuvering speed is 135 KIAS at 3800 lb and is lower at lighter weights. Maximum gear-extended and gear-extension speed is 140 KIAS, and maximum gear-retraction speed is 109 KIAS. Maximum flaps-extended speed is 111 KIAS. Single-engine, the best rate of climb is 88 KIAS, best angle is 82 KIAS and minimum control speed is 56 KIAS. Engine limits include 500°F maximum cylinder head temperature, 245°F maximum oil temperature and oil pressure between 25 and 115 PSI.

SYSTEMS AND WHAT TO CHECK ON A PRE-BUY

Checklist items worth verifying on an inspection: three green gear lights, feathering and prop governor checks, magneto drop (maximum drop 175, maximum difference 50), alternator output, and gyro suction (4.8 to 5.2 on one checklist). One checklist also covers an emergency battery and a GPU start. Check which avionics are installed, because the limitations and supplements depend on them. Any non-Piper-approved STC installation is not covered by the Piper inspection criteria. Review the maintenance records against applicable airworthiness directives. One example is AD 80-14-03, which covers a radio muting relay on PA-44-180 serial numbers 44-7995001 through 44-8095020.

SINGLE-ENGINE OPERATION

Single-engine procedures in the checklists call for closing the throttle, feathering the propeller and setting the mixture to idle cutoff on the failed engine. They also call for banking 2 to 3 degrees toward the operative engine and flying 88 KIAS (Vyse). The training supplement covers single-engine aerodynamics, critical engine, VMC and engine-out maneuvering. A prospective owner should plan on specific multi-engine training.

SPECIFICATIONS

Seats	4
Number Of Engines	2
Engine Power Each Hp	180
Max Rpm	2700
Propeller Diameter Max Inches	74
Propeller Diameter Min Inches	72

PERFORMANCE

Max Demonstrated Crosswind Kts	17
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V-SPEEDS

Vne Kts	202
Vno Kts	169
Va At 3800 Lb Kts	135
Vle Kts	140
Vlo Extend Kts	140
Vlo Retract Kts	109
Vfe Kts	111
Vr Kts	75
Vx Kts	82
Vy Kts	88
Vxse Kts	82
Vyse Kts	88
Vsse Kts	82
Vmca Kts	56
Vso Kts	55
Vs Kts	57

SAFETY NOTES

- The manuals in these sources state that they are for general or training use only. They must not substitute for the current FAA-approved POH/AFM for the airplane.
- Handbook applicability is limited to the airplane identified by serial number and registration. Confirm the manual matches the airplane being bought.
- Maneuvering speed drops at lighter weights. Do not make full or abrupt control inputs above it, and do not exceed it in turbulence.
- Minimum control speed with one engine inoperative is 56 KIAS, and the checklist calls for 88 KIAS (blue line) for single-engine climb.

