

Secret STOL Airplane: Aeronca 15AC Sedan

by NP Staff

eed a four-place tail wheel airplane that is seaplane certified and can haul 700 pounds or more? Tired of partially opened doors and cramped cabins? The little-known Aeronca 15AC Sedan may be the plane for you.

Produced in 1948, '49 and '50, 190 to 220 Sedans remain active today. The number varies as airframes are retired and then rebuilt. *NP* flew N1428H, an immaculate 1950 model owned by Rich and Ernie Walker, to check out what Sedan owners have been trying to keep secret.

The Sedan is a big little airplane. The cabin is about three-inches wider than a Cessna 185. When an average pilot approaches the tail, the horizontal tail hits waist level – good brush clearance. One thing you notice about many Sedans is the level of modifications and ownership care. The

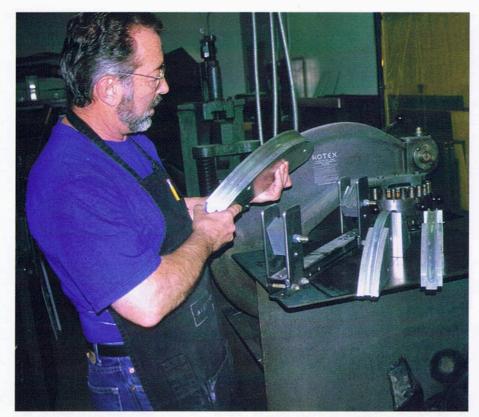
Sedan is not an orphan design. In fact, Burl Rogers of Burl's Aircraft Rebuild LLC (BAR) of Chugiak, Alaska, owns the type certificate and provides parts support from his compact, but wellequipped shop.

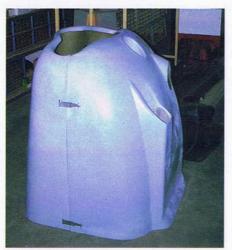
To suit the Sedan to the bush, several common modifications are made: replacement of the original Goodyear brakes with Clevelands, replacement of the post-style tail wheel with a Scott (not truly a modification since both the Scott and Maule tail wheels are on the type certificate), installation of a larger engine, extended baggage and Cessna or Cherokee front seats, just to name a few. 28H is equipped with top-hinged doors available by STC. The doors are large and open fully, providing uncompromised access to the spacious cabin. Many Sedan pilots use the airplane as a two-place, taking advantage of the large rear seat area and baggage compartment to haul a serious quantity of gear. There is even an STC to restructure the rear seat supports to make the aft cabin more suitable for cargo.

Given its size, the Sedan's flight controls are light and well balanced. Roll is particularly crisp without being snappy or unstable. An odd feature of the 15AC is the sloped instrument panel. While in a three-point attitude the panel is vertical or nearly so, but when in cruise the panel slopes noticeable forward. The slope is not a concern and lends to an open and spacious feeling. It does, however, pose a problem for gyro instrumentation. BAR offers several vertical-mount panel STC kits, most of which group the instruments into subpanels for easy access and maintenance. Another oddity is the low-mounted control yokes. With the seat in normal rudder pedal position, the yoke feels low on the panel and may be subject to pilot or passenger knee interference.

Even with the high profile Cherokee



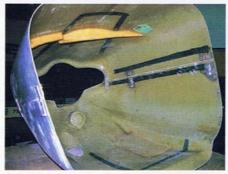




seats, there was plenty of headroom in 28H and visibility out the side window did not require excessive neck-scrunching. Visibility over nose, even when sitting in a three-point on 26-inch Gar-Aero tires, is excellent.

Single-strut all-aluminum wings require little maintenance. Of the two ADs on the Sedan, one is on the fuselage to wing strut attachment fitting. The original is a thick-wall aluminum tube, several of which have cracked, most likely due to overtightening of the attach bolts, according to Rogers. BAR produces a steel replacement fitting available by STC.

The welded tubular steel fuselage is fabric covered although several Sedans have been "metalized." A Sedan fuselage is distinctive due to the large round vertical stabilizer.



Burl Rogers displays several tooling dies used to manufacture Sedan elevators. Rogers's 180 hp conversion uses a modified Cherokee 180 cowl. Despite its size, the new cowl weighs only 26 lb.

The 15AC stock engine is the six cylinder 145 hp O-300 Continental; a smooth running engine, albeit not a very powerful one. 28H has a stock O-300 and is propelled by a fixed pitch



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prop. With full fuel and two aboard, 28H used 550 to 600 feet of runway. 28H mustered a respectable cruise of 105 mph indicated at 2,400 RPM and 2,000 MSL.

"Sedan owners are different type of pilot," said Rogers. "They don't need or want the performance of a Cub. They like the room of a Sedan. One thing about Sedan owners, they never sell. They keep them for life!"

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Landing a Sedan is like any '40s vintage flapless design. The Sedan is happy on final at 70 mph slowing to 65 mph close in. If you slow to 60 mph be prepared for an aggressive sink rate to develop. To fully utilize the Sedan's capabilities the pilot must be a master of the forward slip and at managing induced drag. The nose high attitude required for short field operations could be unusual to those used to flying flap-equipped airplanes. On the other hand, the Sedan does not have the floating tendency associated with flapless Taylorcrafts of the era probably due to its higher wing loading.





During our photo mission we routinely operated from 1,000 to 1,200 feet of prepared gravel and unprepared surfaces. The big main gear easily sucked up any reasonably sized bumps and the little O-300 performed admirably. The large Sedan airframe just begs for more power, though.

"I have heard of Franklin 220 hp installations," said Rogers, "but the Franklin 165 is on the type certificate due to a conversion made by Doyne."

At the time of the conversion the FAA automatically placed STCs on the original type certificate. The most common power upgrade is a switch to the 180 hp Lycoming O-360-A1A or AD and a Hartzell constant speed prop. Rogers sells such a kit.

"Our kit includes everything required except for the engine and prop," said Rogers. "Engine mount, cowl, throttle and mixture cables, and oil cooler

The installation makes use of a Piper Cherokee induction and exhaust system, which is considered by many in the industry as the best system for the O-360, particularly for conversions such as the Sedan or popular PA12. N1363H, previously owned by Rogers and now owned by Craig Laurie, sports most of the modifications available. "63H on Edo 2000s will do 114 mph, and I have seen 128 mph on skis," said Rogers. "I've surprised many a Cessna 172!"

When looking for a Sedan use appropriate old-airplane inspection techniques. According to Rogers, one item that deserves a close look is the spar end caps. "In the past three to five years I have seen spar cap angles show signs of corrosion," said Rogers. "It is an easy item to inspect, though, and I have PMA replacement parts in stock."

With over 21 modifications available, a Sedan owner can pick and choose in order to create an airplane that suits their flying style. Surprisingly Sedan prices are still very reasonable and with a significant amount of parts support, including tail feathers, landing gear, instrument panels, engine upgrade and soon wing ribs, available from Burl's Aircraft, the 15AC is a sleeper STOL airplane. Typical Sedan prices range from \$25,000 to \$30,000. The Rogers engine upgrade kit is \$5,500 plus engine and prop.



For more information contact Burl's Aircraft Rebuild LLC, P.O. Box 671487, Chugiak, AK 99567: 907-688-3715: 907-688-5031 FAX: Web site: www.burlsaircraft.com





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