CANADIAN AVIATION

FIRST IN CANADA — 21st YEAR OF PUBLICATION

JUNE, 1948

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The Aeronca Sedan Comes to Canada

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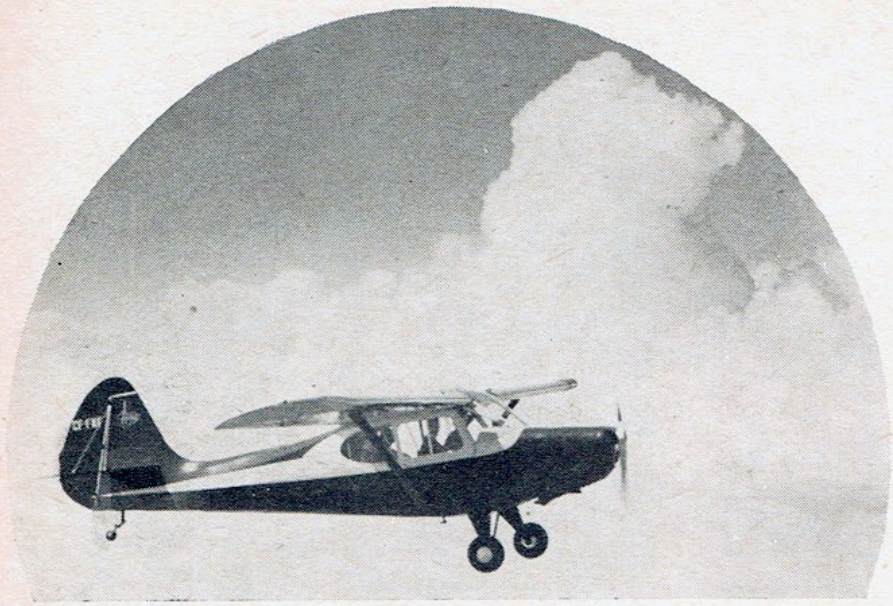


AERONCA SEDAN SIMPLE TO FLY

By Ronald A. Keith

THE Aeronca Sedan is likely to prove a powerful contender in the increasingly-competitive four-seat airplane market. This conclusion resulted from several hours of familiarization flying in CF-FNF, the first of its type to appear in the Canadian sky.

Creators of the Sedan set for themselves two main objectives. 1. A four-place aircraft which would be as easy for inexperienced pilots to fly as the average two-place plane. 2. A low-cost aircraft.

The Sedan turns out to be reasonably successful on both counts. It is safe to say that any student checked out on the Chief could be trusted with the Sedan.

In achieving a Canadian price tag of $5,679 (with duty and taxes paid) the manufacturers have had to eliminate such features as flaps, hydraulic undercarriage and a door on the port side. But the Sedan has solid virtues which more than compensate for its absence of frills.

Entering the Sedan is no simpler and no more difficult than other high-wing lightplanes. The single large door on the starboard side swings forward to a stop at the leading edge of the wing. There is a single step for mounting to the front or back seats. Entrance to the rear seat is gained by tilting the hinged seat-backs forward.

Interior spaciousness is an important and sometimes neglected feature of lightplanes in the two-four seat categories. In this respect, the Sedan rates high marks.

The front seats in particular provide ample width and leg room even for larger-than-normal people. The pilot's seat can be adjusted forward and back by rotation of a small screw gear crank at its base. There are individual seat belts. An abundance of elbow room is a gratifying feature of this aircraft. (Actual cabin width at the front seat is four feet).

Width of the rear seat is 39.5 inches at the knee position, 36 inches across the back. Fore-and-aft dimension is 26.5 inches from seat back to seat back. The feet can slide under the forward seats, giving sufficient room for an average person's comfort.

The only criticism which occurs to us on this subject is in respect to the vertical head room above the rear seat. A person of average height finds his hat pressed against the roof fabric. One would imagine that this restriction could be eased somewhat by fairing a recess between the structural members.

The baggage compartment, behind the rear seat, has a capacity of 120 lb. Its dimensions are 31 in. wide by 22 in. by 18 in. deep.

Scanning the Cockpit

The cockpit layout is the essence of simplicity and utility. With seat adjusted and belt in place, you give attention to some of the details. The elevator trim adjustment and indicator is on the roof above the pilot's right shoulder. Unlike the Champion and Chief, which have sliding knob trims, the Sedan has the crank type of adjustment. Clockwise rotation moves the indicator back for nose-up, anticlockwise for nose-down.

While probably it is easier to make fine adjustments with the latter type of control, one sometimes has to pause to remember which way is up.

The fuel gauges, on the other hand, are a very gratifying improvement over anything we have seen for a long time. They consist of liquid levels in transparent tubes located inside the cabin near the leading edge of the wing root.

These tubes are connected directly with the fuel tank in each case. It is very comforting to see the actual fuel in the gauges rather than having to rely while in flight on remote reading and not very accurate dials.

Each gauge is graduated up to 18 U.S. gals. The tanks, one in each wing root, are neoprene bags with a combined fuel capacity of 30 gallons. There is a permanent crossfeed between these two wing tanks, both draining simultaneously. This feature avoids the embarrassment of forgetting to change tanks or selecting the empty one.

The fuel selector is a two-position indicator which is turned simply to "OFF" or "ON."

Across the base of the instrument

The Sedan flies over the Scarboro Bluffs near Toronto soon after its arrival in Canada.

panel, from left to right, are the following: Starter, mixture control, fuel selector, parking brake, carburetor heat, throttle, ignition switch (key type), master switch (toggle), master switch light (which glows when switch is on), navigation light switch, and landing light switch.

Mounted overhead at the rear of the windscreen is a hooded and adjustable red light which will illuminate the instrument panel for night flying. Under the panel is a small map reading light. Beside it is the rheostat control for the overhead panel light.

Powerful Landing Light

The landing light is flush-mounted in the leading edge near the port wing tip. The installation encloses twin 400,000-candlepower lights, one glide path and one taxi.

The pull starter is well designed, having wide finger grips on a T-handle in contrast to the small and inconvenient buttons on some starters.

The excellent hydraulic toe brakes give very satisfactory control for taxiing. The low-set nose of the Sedan gives creditable forward visibility even though the larger engine has resulted in a longer nose than the Chief.

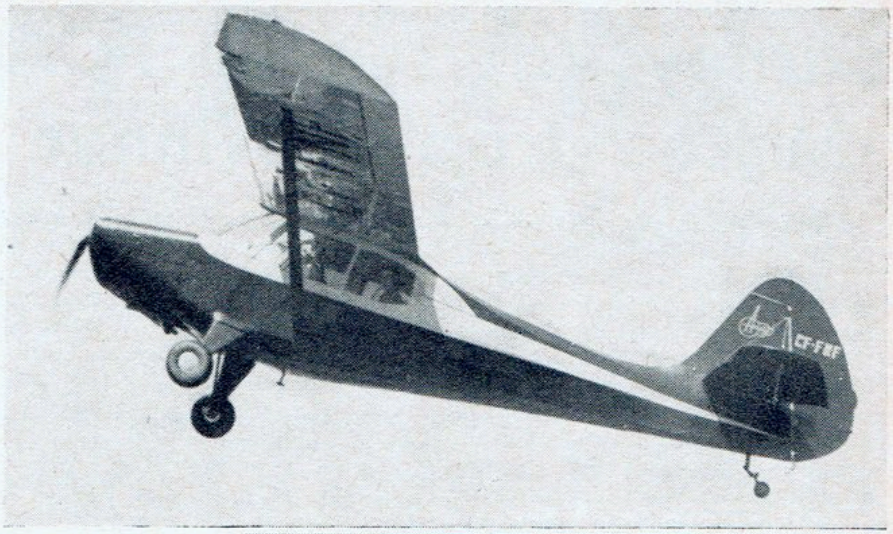
The Sedan's undercarriage, being the bungee type rather than hydraulic, is exceptionally rigid, a fact which results in a rather rough ride over poor surfaces. This would not apply, of course, on paved surfaces. Apparently this type of undercarriage represents one of the compromises necessary in the program of keeping the costs down. (Another is the elimination of flaps which one would expect to see on a four-place aircraft).

Gets Up Smartly

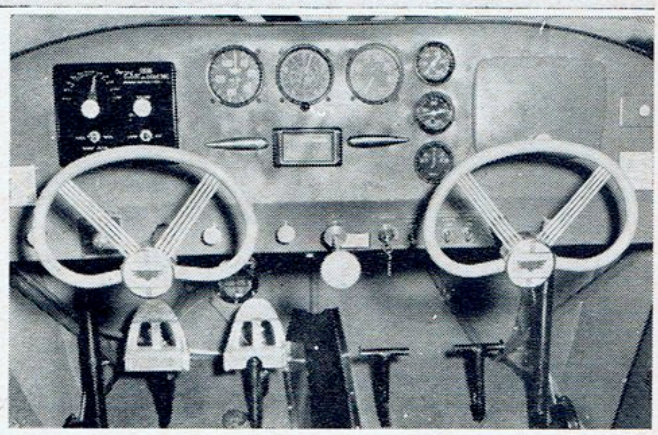
With four people and nearly full tanks, the Sedan got off from the rather uneven grass runway after a 12-second run into a 10 mph wind. The climb, at 65 mph, was distinguished by the slightly startling steepness of its angle.

The climb to 500 ft. was accomplished in 22 seconds and to 1,000 ft. in 70 seconds. This was somewhat better than the advance billing which, according to the manufacturer, called for 650 ft. of climb in the first minute after takeoff.

The noise level inside the cabin is rather high during the climb. Cruising at 2,450 rpm, the noise is sufficient to be bothersome on a long cross-country. Muffled exhausts and cabin soundproofing have not succeeded in reducing the 145-hp Continental's roar to a purr, but this complaint is by no means peculiar to the Sedan.



ABOVE— Climbing attitude of the Sedan is quite steep at 80 mph with four people.



RIGHT — Instrument panel is simple, practical, conventional. Note large toe brakes.

—Photos for Canadian Aviation by Photographic Arts.

At 1,200 ft. with 2,450 rpm, the Sedan settled down to an indicated 108 mph with the McCauley metal propeller.

We experimented with the stall characteristics of the Sedan under a variety of conditions and loadings. No unusual features came to light, except for the virtual impossibility of persuading the aircraft to stall with a forward centre of gravity.

SEDAN SPECIFICATIONS

Wing span	37 ft. 6 in.
Height	7 ft. 0 in.
Length	25 ft. 3 in.
Power	Continental 145 hp.
Cruising (75% power, full gross wt.,)	
At sea level	105 mp.h
Optimum altitude	112 mph.
Top speed (s/1, full gross)	120 mph.
Stalling speed (power off)	53 mph.
Climb first min. (full gross)	650 ft.
Gross wt.	2,050 lb.
Baggage allowance	120 lb.
Useful load	900 lb.
Wing area	200 sq. in.
Wing loading	10.2 lb/ sq. ft.

With two in the front and an empty back seat we closed the throttle and eased the stick all the way back. The airspeed declined to 53 mph and continued to flicker there while the aircraft mushed along in a nose-high incompletely stalled condition. There was a gradual loss of altitude but no tendency to drop the nose or a wing.

With normal load in the back, the stall came, at just over 50 mph, in a quite definite manner but without any flick or other surprises. There was a degree of aileron control right up to the stall. A dropping wing could be picked up briefly by a touch of opposite rudder.

With climbing power, the stalling attitude was remarkably steep with the aircraft virtually hanging on the propeller. At 46 mph, the nose dropped gradually with the stick fully back. This was followed by a lowering of the left wing. Control could be regained within a matter of seconds by easing the wheel forward slightly.

Stalling in a steep turn to left or right brought on an over-the-top revolution about the longitudinal axis as the upper wing, with its greater aileron drag, lost its lift first.

It is worthy of note that the Sedan

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Aeronca Sedan Easy to Fly

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can be recovered from a power-off stall with a burst of throttle which almost eliminates loss of altitude.

The aircraft carried a CAA placard advising against intentional spinning. However, we could discover violent characteristic in the spin.

Full rudder at the stall throws the Sedan into a spin to the right or left. The speed of rotation is quite low, the most impressive feature of the spin being its apparently steep nose-down angle. Recovery is achieved in the fraction of a turn simply by centralizing the rudder and easing the stick forward. We lost only 500 ft. of altitude in one complete turn of a spin in the Sedan.

The Sedan is quite stable in flight and trims satisfactorily. The demonstrator which we flew had exceptionally stiff aileron control but this being purely a mechanical adjustment could hardly be described as a characteristic of the aircraft.

The approach glide without the benefit of flaps seems to be remarkably flat at 70 mph. The angle of descent gets somewhat steeper if another five mph or so is dropped off the airspeed. However, the Sedar side-slips very effectively so there is no excuse for overshooting.

The Sedan is surprisingly easy to land. It is heavy enough to avoid the feathery features of some of the ultra-lights, yet by no stretch of imagination could it be described as a hot-landing airplane.

With no load in the rear seat or baggage compartment there is likely to be a slight difficulty in getting the tail down for a three-pointer.

Except for the V-shaped members converging from the sides to the front centre of the windscreen, visibility in the Sedan is above average. The windscreen itself is composed of two formed sheets of plexiglas with a single seam in the centre. The side windows are unusually generous as evidenced in the accompanying photographs.

The Sedan construction features a single-strut all-metal wing and fabric-covered fuselage with welded tube steel framework. The metal-skinned wing is a distinct departure from the Aeronca tradition.

Standard equipment includes the landing lights, cabin heater, position lights, map and instrument lights, hydraulic toe brakes, parking brake, strut fairings and steerable full-swivel tail wheel.