



Close-up of the new Aeronca Sedan taken over New Haven, Conn. It is designed to handle like a light trainer.

## AFA Acceptance Test

A team from the New Haven Squadron of AFA checks the Aeronca Sedan, newest of the nation's fours

**EDITOR'S NOTE:** This is another in the series of personal plane reviews, conducted in cooperation with test teams provided by AFA Squadrons. When a new personal plane is made available, we select a squadron to conduct the test. The squadron assembles a six-man test team consisting of qualified pilots, maintenance men and general observers from among its members, and brings them together with the airplane at a convenient airport. They examine the airplane, fly it, discuss the results. We then interrogate the team and compile the findings.

### The Test Team

This month's team was provided by the New Haven, Conn., Squadron of AFA. It consisted of two pilots, two mechanics, and two general observers. The pilots were William H. Johnson of New

Haven, Conn., and Jerome A. Downs III of Milford, Conn. Bill was a C-46 and C-47 instructor for Troop Carrier Command during the war, and is still active in the 491st Bomb Sq. (Res.) in New Haven. He is married and has two children. He holds an active commercial pilot's rating.

Jerry Downs flew 11 sorties with the 27th Air Transport Group into the Ar-

dennes and the Rhineland during his Air Force career. Since his separation, he has kept up his flying both with the 140th Composite Sq. (Res.) and in civil aircraft. He maintains a commercial and flight instructor's ticket with instrument ratings.

The technical section of the team was unique in that both the members are Air Force personnel on active duty.

Francis J. LaPierre is line chief for reserve aircraft at the New Haven Municipal Airport. He was a bombardier during the war, and flew on 77 missions, many of them in the Po Valley and Northern Apennines campaign. He holds the DFC and the Air Medal with eight clusters. He is married and has two children. He is the holder of a CAA commercial pilot's rating.

Sgt. Bobby L. Diener of Prospect, Ohio, is also a reg-

### AFA ACCEPTANCE TEST

Aircraft *Aeronca Sedan*

AFA Test Team *New Haven, Conn.*

Airport *New Haven Municipal*





Alfred B. Bennett, Sales Manager of the County Airport Corporation, points out the Sedan's interior features to the pilot members of the AFA test team, Wm. H. Johnson, center, and Jerome A. Downs, right.



Arthur Dean, left, and Samuel Gordon, general observers, inspect landing lights on the new Aeronca. One points straight ahead, the other is canted downward for taxiing. Wing skin is all metal.

## AFA Acceptance Test (Continued)

ular on active duty. Bobby is typical of the postwar Air Force. He crews the AT 6s and 11s used by the reserves in the New Haven area, and is an enthusiastic member of the New Haven Squadron of AFA.

Samuel M. Gordon of New Haven, the first general observer, instructed aviation cadets during the war. He is an active pilot and puts in considerable time on commercial aircraft. The second observer was Arthur H. Dean, a former 20th Bomber Command parachute rigger. Art now studies photography under the GI Bill. While he was stationed in India he studied hypnotism.

The builders of the Aeronca Sedan—the plane being inspected—were represented by Alfred B. Bennett, popular sales manager of the County Airport Corporation, operators of Westchester County Airport at White Plains, N. Y. Al was one of the pioneers in the application of automotive sales methods to aircraft, and his individual record for unit sales, established while he was at Hightstown, N. J., remains virtually unchallenged in the field of light planes.

### The Aircraft

The Aeronca Sedan is a four-place, braced high-wing monoplane powered by a 145 hp opposed-type continental engine. It was designed and built both

from the standpoint of operation and maintenance for the Sunday flyer.

The fuselage and tail surfaces of the Sedan are built of conventional steel tubing, covered in fabric. The structure was selected as the most desirable for personal aircraft because most damage inflicted to such planes occurs in the fuselage section, and most shops are equipped to handle this kind of repair.

The wing, which represents the greatest portion of the exposed surface, is all metal for minimum maintenance. It is a very simple structure made up of a single metal spar, stamped dural ribs and a flat rivetted skin. It is supported by a single steel strut on either side.

The landing gear is a single main strut affair, built for maximum ruggedness and simplicity of operation. Brakes are hydraulic, with toe-type control.

The fuselage is wider than most light fours, probably the widest seat allowance of any plane in its class. The rear two seats are removable so that the space allowed the 120 pound capacity baggage section can be enhanced for cargo haulage.

The door is unusually wide, allowing easy access to the rear seat, a feature not too frequently found in light planes.

During circuit inspection Bennett pointed out to the test team that the Sedan was not designed as a "hot" air-

plane; rather, its characteristics were matched to the Aeronca Chieftain in stall performance, take-off and economy. Flaps, gear retraction, movable pitch propellers were eliminated purposely, and the instrumentation was kept simple in order to create a plane that would be easy to fly and maintain.

The Sedan has a span of 37 feet 6 inches. Its overall length is 25 feet 3 inches and its standing height is 7 feet. Gross weight is 2050 pounds, useful load is 900 pounds. Loading on its 200 square feet of wing surface is 10.2 pounds per square foot. The fuel is stored in two twenty-gallon wing tanks, each of which is checked in the cabin by means of visual level gauges. These are plastic circuit-tubes connected directly to the tank, so that the pilot can read the actual level of fuel in the tank without reference to any mechanical transmission.

Performance was test flown against the following factory claims:

Cruising speed, sea level,	
gross weight .....	105 mph
Rate of climb for the first	
minute .....	650 feet
Top speed .....	120 mph
Stalling speed .....	53 mph

The special features which were brought to the team's attention for observation in flight were the engine mufflers and cabin soundproofing, the cockpit heaters and ventilation, and





The team technicians, Bobby L. Diener and Francis J. LaPierre, check over the power plant installation. They reported that the engine and accessories were unusually accessible for servicing.



Originator of the Acceptance Test idea, Technical Editor Blimp Friedman watches as Al Bennett (hand on prop) briefs the members. Standing, Johnson, Gordon; kneeling, Dean, Downs, LaPierre, Diener.

the balanced control system for easier flight operation.

### The Findings

The team, as usual, accepted the test in two separate three-man teams of pilot, observer and mechanic. During the circuit inspection, La Pierre commented that the power plant was as accessible for maintenance as any he had ever seen on civil or military planes. His general comment was that the airframe had been kept simple and rugged for routine maintenance with simple tools. Both he and Diener commented that the hand and inspection hatches were well located and were large enough to permit work and adjustment as well as inspection. This was particularly true of the hatch under the stabilizer that allows access to the upper reaches of the tail-wheel assembly. The only addition proposed by the mechanical crew was a built-in support for the auto-type engine cowls.

Both Johnson and Downs found the cockpit comfortable. Leg room proved adequate for a couple of tall men. Jerry Downs, however, would have liked the door on the pilot's side rather than on the right, and would have added a rear view mirror. However, both pilots were surprised to discover the degree of circuit vision that the Sedan has for a high-wing monoplane. From the pilot's seat, the tail is visible.

Except for a slightly higher landing speed, the Sedan's characteristics are much like a light plane. Taxiing vision is good for a conventional landing gear airplane. The sloped cowling allows an average sized pilot to see an object on the ground adequately, about seven feet from the prop hub.

An ample fin gives the ship favorable take-off directional stability. Both pilots agreed that ground characteristics are good, generally like a light plane with the advantage of a little more weight.

On take-off, the Sedan made its 650 feet of altitude in a little under a full 60 seconds, probably due to a mild breeze. The plane was, at the time, carrying virtually its full payload. In both steep and shallow turns, the ship tended to recover laterally and longitudinally with a minimum of control. The ship approached stalls with adequate warning on controls and showed no tendency to fall off.

Bill Johnson stated that he liked the craft's general ease of handling, and, within design limits, its overall performance. Both pilots conceded that the plane fulfilled the manufacturer's claims.

From the back-seat department, the general observers thought adequate consideration had been given the passengers. Two better-than-average-beamed men sat in the rear on one trip and found themselves totally uncrowded in length and breadth. Passenger vision,

both from the side windows and the front proved adequate. Their complaints were minor. One was an urgent plea for bigger ash trays, the second was an mild criticism of an exposed aileron control cable, which was purely an esthetic argument. Conversation within the cockpit was conducted between all seats at ordinary levels under cruising conditions. Vibration was of very low magnitude.

### Conclusions

The consensus was that the Aeronca Company had achieved its aim. The Sedan is a satisfactory vehicle for non-professional pilots who need ease of operation and maintenance. In the test the ship performed satisfactorily, was totally free from inherent flying defects and seemed capable of being maintained with relative ease. The general balloting averaged thus:

General performance: Superior.  
Pilot vision: Excellent  
Passenger vision: Superior  
Cockpit comfort: Superior  
Handling qualities: Superior.  
Operational utility: Excellent.  
Structural qualities: Superior.  
Maintenance qualities: Superior.  
Stall characteristics: Excellent.  
Speed: Satisfactory.  
Range: Satisfactory.  
General fidelity to claimed performance: Complete.