





'All-Plastic' Aircraft In Production

(See Cover)

■ Billed as "a space-age vehicle" and the "greatest single advance in general aviation since the advent of the all-metal airframe," the first production model of the *Eagle 1* recently rolled off the line at Windecker Research, Inc., Midland, Tex.

Constructed of plastic reinforced with Fiberglas, Windecker credits the *Eagle 1* with achieving "a substantial increase in structural integrity over metal airplanes." The first production model was sold to the First National Bank of Midland in special ceremonies conducted at Windecker's production facilities at the Midland-Odessa (Tex.) Regional Air Terminal.

Robert E. Hefner, Windecker's chief executive officer, said, "Sale of the first production model of the *Eagle* marks a significant milestone, as we have now accomplished the transition from a development to a production program."

The *Eagle 1* is a four-place, single-engine, low-wing retractable-gear airplane that has "a top speed of 210-plus m.p.h." at sea level. It is the first piston-powered "plastic airplane" to receive a type certificate from the FAA.

Power for the aircraft is a fuel-injected Continental engine (IO-520-C) that develops 285 b.h.p. Standard 84-gallon fuel capacity gives the aircraft an optimum range of 1,230 miles with a 45-minute reserve, according to the company's specifications. Rate of climb

is listed as 1,220 f.p.m., and service ceiling is 18,000 feet. Stall speed with power off, gear and flaps down, is 66 m.p.h.; with gear and flaps up, 71 m.p.h.

Gross weight is 3,400 pounds; empty weight, 2,150 pounds; and useful load, 1,250 pounds. Cruise, at 75% power and 7,000 feet, is "204-plus m.p.h." Takeoff ground run is 855 feet; over a 50-foot obstacle, 1,690 feet. Equipped with a door on each side of the cabin, the aircraft measures 28.5 feet in length, has a 32-foot wingspan, and stands 9.5 feet in height. It also boasts a one-piece top cowl; and the nose landing gear incorporates a gear door that functions as a cowl flap, when the gear is retracted.

Price of the standard-equipped *Eagle 1*, which was kept under wraps for announcement at AOPA's annual Plan-tation Party in Hollywood, Fla., is \$41,500.

In addition to standard flight instruments and items already mentioned, the standard-equipped price also includes dual controls, an EGT gauge, external power plug, two rotating beacons (one on top of the vertical fin, one on the belly), and a map light on the control wheel.

Windecker marketing officials reported plans for establishing a production rate of six to 10 aircraft per month initially, with the rate increasing when

necessary to meet demand. The company currently is in the midst of establishing a dealer network, and all sales are being made directly from the factory.

Sale of the first production model of the *Eagle 1* climaxed more than 10 years of research and development that began in 1958, when Dr. Leo J. Windecker (AOPA 160253) became intrigued with the possibilities of utilizing reinforced plastics in the manufacture of aircraft. The most attractive feature of such material reportedly is its strength-to-weight ratio.

Dr. Windecker, and his wife, Dr. Fairfax Windecker, initially began experimentation under the sponsorship of Dow Chemical Company. This arrangement continued for nine years. In March 1967, a group of Midland, Tex., businessmen formed Windecker Research, Inc., to pursue commercial aspects of Dr. Windecker's work. Starting with six employees, Windecker now employs more than 200 people at its production facilities at the Midland-Odessa Regional Air Terminal.

William B. Blakemore of Midland is chairman of Windecker's board of directors. Dr. Windecker is president, and Hefner is executive vice president. Besides its aircraft manufacturing, Windecker also is developing and marketing a number of reinforced plastic products and allied agents that are an outgrowth of efforts on the *Eagle 1*. In addition, a Windecker subsidiary, World Weather, Inc., is engaged in weather modification projects, such as chemical seeding of clouds, smog, smoke, and fog. □