"Lone Eagle" Charles A. Lindbergh—An Aviation Hero

A S we prepare to begin our celebration next year of 100 years of powered flight, we pause this month to recognize the 75th anniversary of perhaps the most notable aviation event since that historic flight of Orville Wright on Dec. 17, 1903.

For only 24 years later, on May 20, 1927 the 25-year-old Charles A. Lindbergh—the "Lone Eagle"—took off by himself from the rain-soaked original Roosevelt Field, Long Island, NY, in a small single-engine plane called the "Spirit of St. Louis." Heavily laden with fuel, the plane bounced down the muddy field, gradually became airborne, and barely cleared the telephone wires at the field's edge. "Lucky Lindy" landed $33-\frac{1}{2}$ h and 3600 miles later at Le Bourget field near Paris—the first solo, nonstop trip from New York to Paris. This historic heroic flight brought the concept of domestic and international flight sharply into public view and stimulated a new commercial and military aviation era, realized only 25 years later as the jet age was born.

With his backers entrusting in him their full confidence, Lindbergh had set off to find the right plane. While other aviators were placing their faith in the increased power and purported safety of multi-engine planes, Lindbergh determined that multiple engines increased, rather than decreased, the odds of failure. "I'm not sure three engines would really add much to safety on a flight like that. There'd be three times the chance of engine failure," he later recorded. For his transatlanticattempt, he sought out a single-engine plane. His equation was simple (and familiar for current designers): less weight (one engine and one pilot) would increase fuel efficiency and allow for a longer flying range. Although the initial plan was to modify a standard model Ryan M-2, Colonel Lindbergh quickly determined that modification was less practical than redesign. His

active participation in the development of the aircraft is noted. He laid out the following specifications: That the plane should be of monoplane type, powered by a single Wright J-5-0 engine, have adequate reserve power on take-off when loaded with over 400 gal of gasoline, and must have the pilot located in the rear of all tanks for safety in a forced landing. Thus the airplane, actually designed by Donald Hall, was laid out from scratch to these specifications. Any item considered unnecessary or too heavy was left behind. These included a radio, a parachute, gas gauges, and navigation lights. Colonel Lindbergh designed for himself special lightweight boots for the flight, and went so far as to cut his maps down to include only those reference points he would need. Every ounce mattered. Instead of a heavy leather pilot's seat, Lindbergh would be perched in a far lighter wicker chair.

The "Spirit," which did not even exist as a design concept prior to Feb. 1927, weighed just over a ton empty, but over 5000 lbs. fully loaded, mainly with 451 gal of fuel.

The rest of Charles A. Lindbergh's life was devoted to the development of commercial aviation, medical research, technical assistance to the military in World War II, and aviation consulting.

Orville Wright's historic first flight and the next three to follow challenged the piloting skills of the Wrights, for it was regarded as a miracle that they were able to fly their machine at all. Charles Lindbergh, in his *Autobiography of Values*, explains how they were able to handle the unstable craft: "There are elements in man that escape rational description, that lie beyond the measurements of science. They may exist at distance beyond the body, yet still exert an influence within."

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