



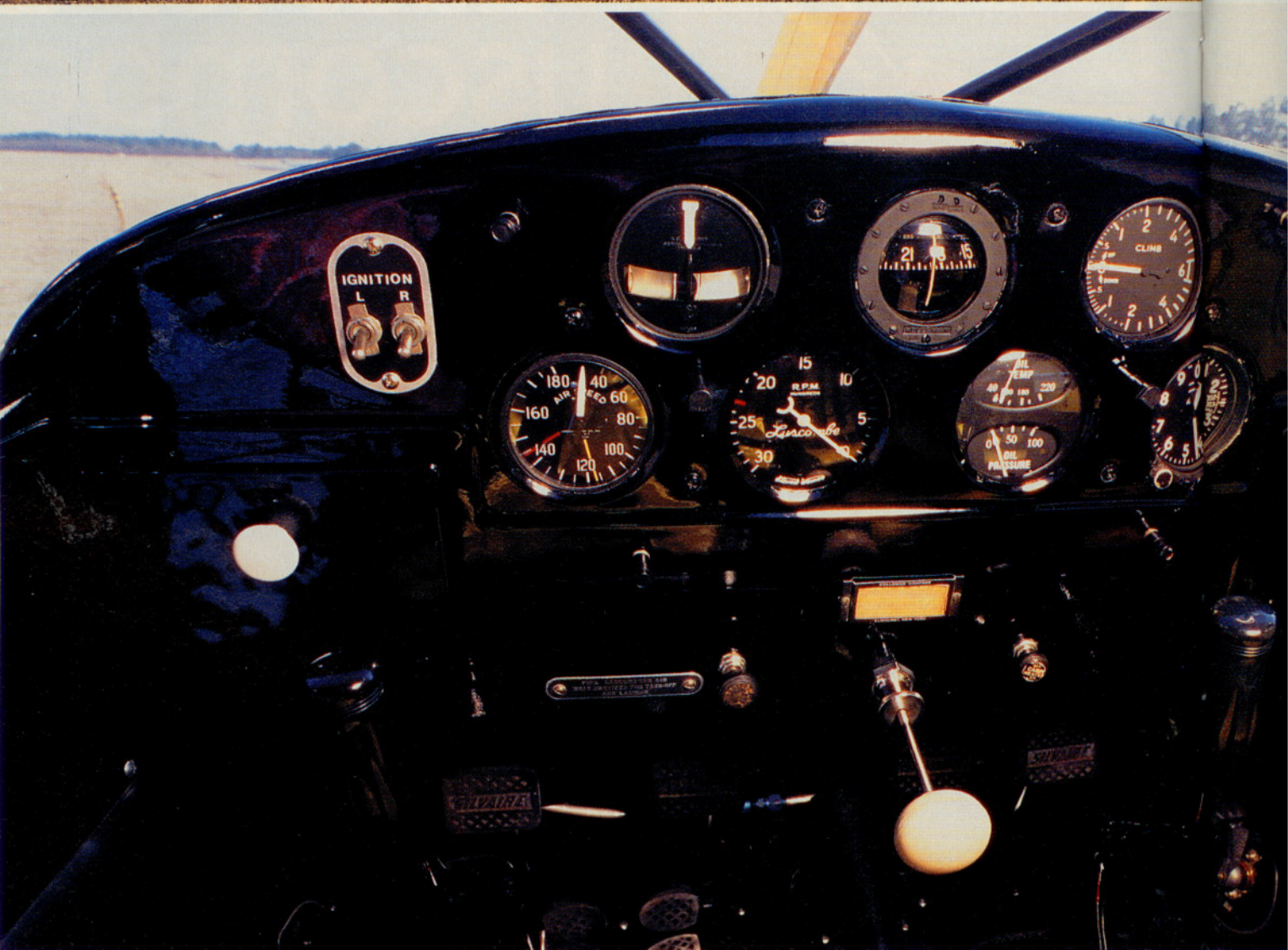
Lust for a Luscombe

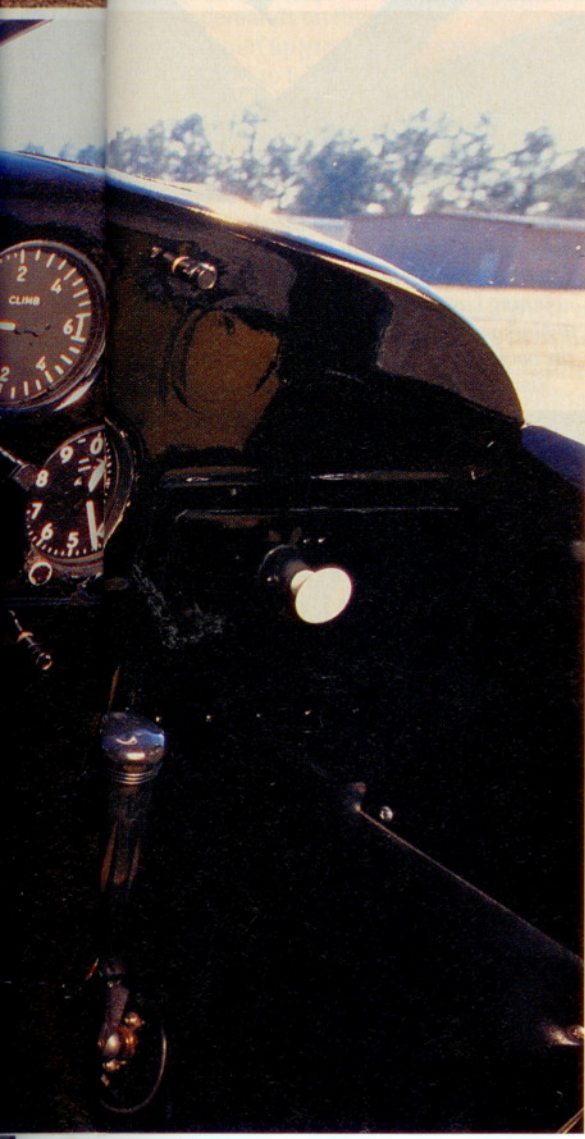
A look at a unique design dating back to the 1930s

BY RICK DURDEN

They exist because of the determination of an affable scalawag to create and mass-produce all-metal airplanes. They have been the victims of unfairly critical accusations about their ground handling. They make it clear that they will not tolerate a milque-toast on the stick and rudder but will reward the pilot who truly knows how to operate those devices. They are admired and prized by those who know them well. They are the Luscombe 8 series, sometimes referred to as the Silvaire but generally known to all as simply the Luscombe. ■ Don Luscombe worked much of his adult life to develop and market an all-metal airplane, fighting almost constant financial crisis in the process. He left Mono Aircraft, maker of the speedy Monocoups, to set up his own company in Kansas City, Missouri, in 1933. Luscombe Aircraft Company created the expensive two-place, radial-engine Phantom, whose ground handling was so awful that more than one buyer canceled the sale after taking his first flight. Perhaps that started the reputation that persists to this day describing Luscombes as a ground loop waiting to happen. ■ In January 1935, Luscombe moved

PHOTOGRAPHY BY MICHAEL P. COLLINS





to West Trenton, New Jersey, where development started on the Model 90 (to be renamed the Model 4), another radial-engine machine with a lower price tag. It failed miserably in the market; only six were sold. In 1937, Continental Motors approached Luscombe with a new 50-horsepower, four-cylinder, horizontally opposed engine. The pancake engines, as they were called, had a reputation for unreliability, so Luscombe was justifiably skeptical of using one. However, salesmen will be salesmen, and Luscombe soon turned his engineers loose on the idea of wrapping a small all-metal airplane around this engine. The engine immediately lived up to the skeptics' fears, as it proved to be cantankerous. Continental, determined to make the engine work, added a second magneto and set of spark plugs, provided for carburetor heat, and made some other changes. To everyone's pleasure, the little powerplant became reliable enough to use on an airplane.

The renamed Model 8 emerged from its brief gestation, someone spun the propeller, and it flew on the propitious date of December 17, 1937. The attractive, extremely strong, tailwheel two-place personal airplane came out of the factory for an initial price of \$1,895. It proved to be faster than its competition, albeit slightly less forgiving on the ground, despite having a much superior landing gear to that of the Phantom or Model 4.

As in a Greek tragedy, just as Don Luscombe reached his goal of mass-producing all-metal airplanes, the continuing effects of the Depression, constant lack of capital, and his financial shenanigans—including failure to repay loans and creative use of stock—caught up with him. He lost control of the company within sixteen months and resigned in April 1939, never again to be involved with the organization that continued to bear his name.

The basic prewar 8 rapidly evolved into the 65-hp 8A, then the B, which had a 65-hp Lycoming; the C with a very rare, fuel-injected Continental of 75 hp (and the first to be advertised as a Silvaire); and, finally, in 1941, the D. The D had the same engine as the 8A and was targeted at the Civilian Pilot Training Program, which bought Luscombes in quantity until World War II got under way and general aviation manufacturing was stopped. About 1,000 Silvaire were built between the first part of 1938 and the early months of 1942. Given the ruggedness of the metal aircraft, one

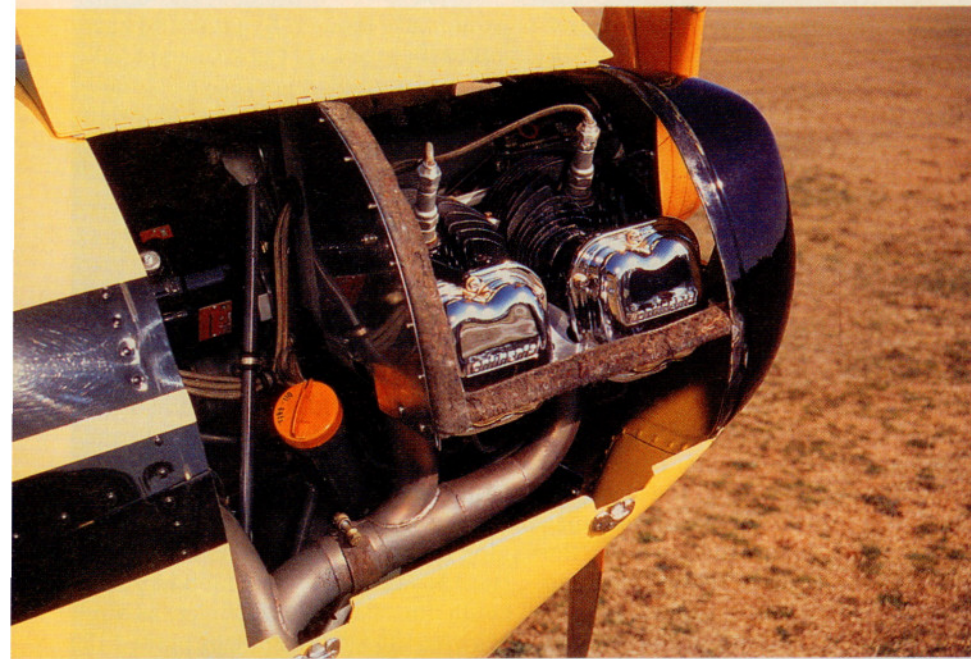
would have thought that it would have joined the legions of Cubs, Champs, and other L-birds that served in so many roles and locations during the war. It was not to be. At the time, the company president and largest stockholder turned out not to be a U.S. citizen, but an Austrian—which did not endear the company to the Army in the wake of the Anschluss. The United States did not buy Luscombes for wartime duty.

As World War II wound down, Luscombe moved its factory to Garland, Texas, and decided to resurrect the basic 8A. It also developed the 8E and 8F with electrical systems and 85- and 90-hp Continentals, respectively. Difficulty in getting production up and running meant that Luscombe was late to the 1946 airplane-selling party and could not cash in as effectively as others, even though it eventually pushed 15 airplanes out the door each day.

Luscombe developed a four-place, 145-hp tailwheel airplane called the Model 11A Spartan that fought certification difficulties and simple poor timing to come out when there was no market to penetrate. On a positive note, the current Luscombe Aircraft Company of Las Vegas, Nevada, has upgraded the design and anticipates selling a 185-hp nosewheel version to be called the Model 11E. An attempt to sell the tandem-seat T8F Observer to the Air Force went nowhere. All were sold to private owners who desired tandem seating and extraordinary visibility. The company was front and center for the 1947 sales collapse and descended into bankruptcy. Temco took over Luscombe and produced some 8Fs with wing flaps while also building the Swift before throwing in the towel. In 1955 the type certificate was sold to an organization in Colorado. It managed to sell about 80 8Fs before collapsing in 1960.


The type certificate and tooling were acquired by Moody Larsen of Belleville, Michigan, in 1964. On a small grass strip four miles south of Henry Ford's behemoth B-24 plant at Willow Run, Larsen lived, worked, and quietly became the Luscombe doctor. He never went into production; rather, he overhauled, rebuilt, repaired, modified, obtained STCs for, and upgraded Luscombes from around the world. He dropped progressively larger engines into the tough, diminutive airframes until, by the late 1960s, 150-hp stud brutes were rocketing off of the grass at Larsen Field.

In 1980, an organization in Georgia sought to revive the production line and



The pristine 1946 Luscombe 8A shown on these pages belongs to Jim Zazas of Carthage, North Carolina. He has flown the award-winning Luscombe across the country and to Alaska several times. Zazas literally wrote the book on Luscombes—he is the author of Visions of Luscombe: The Early Years.





entered into an agreement with Larsen to buy the type certificate and tooling. The details are the stuff of disagreement even today, but it seems that the type certificate changed hands while money did not, so Larsen kept the tooling. There was the usual painful litigation resolving little, so the Luscombe assembly line continued to lie dormant.

John Larsen, son of Moody, now runs things at Larsen Field. John grew up in Luscombes, holds an A&P certificate, and has acquired the breadth of knowledge held by his father, who is now in failing health. When Renaissance Aircraft decided to start up the line with a 150-hp version of the 8E it came to John Larsen and asked him to build the first one. That airplane was in Oshkosh last year and attracted a lot of attention, so there is hope that the proud heritage is not over.

To consider a flight in a Luscombe after being away from them for a time generates equal parts anticipation and trepidation. It is exciting because of its responsiveness in flight, yet it induces a healthy level of heightened alertness for its demands on the ground.

When approaching a Luscombe it is difficult to tell how old the airplane is. Its clean lines belie its years. Perhaps that is because Luscombe was the first to completely enclose the engine within a cowl, a feat of development at a time when Aeronca and Piper were still cooling flat engines by leaving the cylinders out in the breeze and hoping for the best.

The preflight is without surprise or duplicity. The cowling opens to allow contemplation of the wonders within. The gear is housed in tapered fairings and the shock-absorption mechanism is located inside the airframe, so there is little drag and little to inspect other than the brakes. Gaze at them and think fond thoughts, for they can be the Achilles heel of a Luscombe. They are cable-actuated and must be adjusted at the brake mechanism itself. Woe may betide the pilot who has an uninformed mechanic who tries to adjust the brakes by pulling on the cables, for that pilot may find nothing when the brakes are most needed. The original mechanical disc brakes mostly have been replaced by either Goodyear units that are acceptable but frightfully expensive, or Clevlands, which are very good indeed.

Most Luscombes now have 12.5-gallon fuel tanks in each wing, converting to the style of the later marques and away from the original 14-gallon tank behind the

seat. Fairly large quantities of fuel in the fuselage tend to give most pilots the heebie-jeebies, so the wing tanks are an improvement, despite the substantial concern Luscombe showed in 1937 for crashworthiness in designing and protecting the original fuselage tank. After all, the factory employees had received a practical education in crashworthiness because for several years a major portion of the company's income came from rebuilding wrecked Phantoms.

The corrugated metal control surfaces are easy to inspect. The tailwheel is in clear view and should be examined carefully, for tailwheels have been known to break off. Shaking a wing during the walkaround inspection reminds one that the Silvaire is remarkably strong. Luscombe aficionados point

Experienced Luscombe pilots recommend taxiing no faster than a brisk walk to keep things under control.

with pride to the numerous pictures of the airplanes with 16 to 20 people perched atop the wing. While that only proves the airplane is able to withstand negative Gs, it is impressive nonetheless. The airplanes met the rather primitive aerobatic certification requirements of the day. Because more than 50 years have lapsed since most rolled off the assembly line, the idea of aerobatics in the airplane should be approached with extreme caution while contemplating the timeless question: How many times can you bend a tin can?

For those pilots taller than about five feet, 10 inches, boarding the Silvaire is challenging. Bluntly speaking, the cabin is just plain small by today's standards. With a full fuel load, the maximum allowable weight in the cabin is only about 400 pounds—a motivator, combined with the space available, to keep pilots from becoming too portly. Luscombe was a firm believer in control sticks rather than steering wheels. For the sake of cost, there are two sticks but only one throttle, located in the center of the panel, so the command stick is held in one's left hand. Most pilots adjust fairly quickly to this slightly unusual state of affairs.

Experienced Luscombe pilots recommend taxiing no faster than a brisk walk so as to keep things well under control. The gear is stiff and narrow, yet the rudder is effective, as is the tailwheel. Visibility over the nose is outstanding. The rudder has a relatively short throw, so a pilot used to more travel or less responsive rudders may overcontrol a bit at

first. The brakes are actuated by independent floor pedals that were a marvel of innovation in their time. Now, because they are pushed by one's heels rather than toes, there are those who insist they are a nefarious plot on the part of those who make airframe replacement parts to ensure a steady flow of business. On a gusty day in a Luscombe with questionable brakes, the sweating occupant of the left seat may be in full agreement. Taxiing one in a stiff crosswind is work. If the pilot is using one of the brakes a great deal, the length of time for a successful crosswind taxi may be limited, as the brake may heat up and fade.

Runup takes only moments: Move the stick about to check the ailerons and elevators (after taxiing, the pilot

should know if the rudder is properly attached), check the mags and carb heat (on some models the manual recommends landing *and* taking off with full carburetor heat), scrutinize the engine gauges, set the elevator trim, set such gyros as are installed, and line up with the runway.

For the first several takeoffs in a Silvaire, it is a good idea to use grass runways to take advantage of the drag on the tailwheel. Line up with the center of the runway and stop with the tailwheel straight. The critical next step is to pick out a point beyond the departure end of the runway, straight ahead of the airplane, and resolve to keep the airplane pointed at that spot no matter what happens. If the nose wanders a degree to the left or right, apply the necessary rudder to bring it back and keep it there.

Depending on the model, loading (the maximum gross weight of all but the lowest-powered versions is 1,400 pounds), and temperature, acceleration ranges from sedate to brisk. The tail comes up of its own volition, or earlier if motivated by the pilot. Rotation speed is about 55 mph. Once in the air the pilot discovers that the Silvaire has crisper handling than its tube-and-fabric brethren. Even at the climb speed of 72 mph, the airplane answers control inputs nicely.

Climb rate for the 8E and 8F was claimed to be 800 feet per minute. That is somewhat optimistic. If Moody Larsen did his magic and caused a 115- or 150-hp engine to be up front, climb rate can easily exceed 1,000 fpm. Yes, a tur-

bine has been hung on a Luscombe. Yes, sadly, it has already crashed. In cruise the 8E or F will scoot along at a little better than 100 mph on about 5.5 gph. A properly leaned Silvaire generally has greater endurance than its pilot, simply because of the small cabin. Those who have sat in the new Renaissance Luscombe and experienced the magic that John Larsen did to the interior are astonished that what had been cramped confinement is now far more comfortable.

The flight controls are relatively well harmonized for an airplane designed in

the 1930s. Maneuvering is precise. Steep turns are such pleasure that it is difficult to stop. Slowing to speeds just above the stall demonstrates that the controls, particularly the rudder, remain effective. The stall breaks cleanly. If the airplane is rigged correctly, it does not want to drop a wing; it just pitches down, straight ahead. Recovery is conventional and only requires the pilot to reduce back pressure on the stick rather than shove the nose down. The power-on or departure stall demands that the ball be kept in the center, or the airplane will roll briskly and

drop the nose sharply at the break. Overall, the airplane is most pleasant to fly and travels cross-country efficiently. With appropriate equipment it is a passable IFR airplane, although range and endurance can be a little short when trying to reach an alternate. For something between \$15,000 and \$21,000 and the willingness to learn to fly the airplane, the Luscombe can be a most enjoyable personal magic carpet.

Returning to the field for landing, plan on using carburetor heat when the power is reduced, then slow the airplane to about 65 to 70 mph on final—or slower if flying one with flaps. Full stall and wheel landings are a little deceptive in a Silvaire. Because the flare and touchdown are so easy to do well, new Luscombe pilots occasionally experience a false sense of security. After greasing the airplane onto the runway, they sometimes make the mistake of thinking that they can relax once they are on the ground. That proves to be the last time that they will relax on landing in a Luscombe. Ever.

The handling of a Luscombe on landing has to be put in perspective. A Pitts Special is a very difficult airplane to land. A Luscombe does not come close to being in that category. A Bellanca Citabria is considered an easy tailwheel airplane to handle on landing. A Luscombe is a few steps more difficult to keep straight on landing than a Citabria and a few steps easier than a Stearman. The combination of relatively stiff landing gear, fairly narrow gear tread, and effective flight controls means that a pilot who does not position the controls correctly is going to have trouble during landing rollout. Those who have flown Luscombes for a time have learned that because the controls are very responsive, even at fairly low speeds, the aircraft can handle very stiff crosswinds. Luscombe pilots have broken off tailwheels on bumpy fields and discovered that they could fly home, make a wheel landing, apply a little brake and power, then taxi to the ramp while holding the tail in the air. While it may be nothing but showmanship, the Silvaire can make a good pilot look very good and let the pilot flying it have a ball. □

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i Links to additional information about Luscombes and other vintage aircraft can be found on AOPA Online (www.aopa.org/pilot/links.shtml). Rick Durden, AOPA 684126, is an aviation attorney who holds an airline transport pilot certificate and enjoys flying antique and classic aircraft.