



By Bill Cox

Photography By James Lawrence

It was probably one of the most common mistakes made at Oshkosh 2001. "Boy, that sure is a beautiful, polished Luscombe restoration. Don't think I've ever seen one rebuilt as nicely as that." John Deardon simply smiled and said, for the 187th time, "Well, thank you, but this isn't a restoration. This is a brand-new production airplane."

In fact, Oshkosh 2001 was effectively the public coming-out party for Deardon's all-new/old Luscombe. John and Linda Deardon have been pursuing the dream of a new Luscombe for at least the last two years. "Our question wasn't whether

we could build the airplane," says John. "We knew that wouldn't be the problem. The question was whether the Luscombe would sell in today's economy. That determination took two years of market analysis before we were willing to commit our time, energy and money to the project."

Inevitably and inexorably, a little history is in order. Back in 1934, Don Luscombe, better known as the father of the Monocoupe, started his own manufacturing facility and initially developed the efficient, two-seat, 145-hp Luscombe Phantom. Luscombe Aircraft produced its first 50-hp model 8 in 1937. The company built about 1,100 of the slick, little, fabric-covered two-seaters before suspending all civilian aircraft production to participate in the war effort.

In 1946, Luscombe resumed production of the model 8



Luscombe to his friend, Jerry Cox.

Something old, something new!

Silvaire with fully metalized airplanes and eventually produced a total of some 7,100 of the popular model 8's before selling all rights to Temco Aircraft (later Ling-Temco-Vought) in 1948. Final versions of the all-metal 8F were produced sporadically by the Silvaire Uranium & Aircraft Company through 1960 with 90-hp Continental engines on the nose—and they sold for \$6,500.

The most significant change in this all-new Luscombe is power, incorporating one of the simplest and most reliable engines in general-aviation history, the 150-hp Lycoming O-320. Perhaps surprisingly, the 150-hp installation isn't new to the Luscombe. It was developed back in 1956 by McKenzie Flying Service of Portland, Ore., intended to help the airplane cope with the high-density altitudes of the Pacific Northwest.

The bigger Lycoming does dictate some slight differences in the airplane's appearance. The new 8F's cowling is slightly modified from the original 90-hp Continental's enclosure, though not as much as you might imagine. Both the original and the new engines are four-cylinder mills, so the nose of the airplane wasn't pushed forward much to accommodate the O-320 Lycoming and fixed-pitch Sensenich prop. The larger Lyc is slightly heavier than the little Continental, however, and that allowed an aft cockpit baggage area 60% larger than the original. Luscombe certified a child jump seat for the rear area in 1946, approved for up to 100 pounds, similar to the small, optional seat sometimes installed in the Cessna 152.

Other improvements include dual hydraulic toe brakes in place of those atrocious heel brakes used on the original.



ABOVE: The 2001 Renaissance Luscombe's makeover included reshaping to shift the panel slightly forward, giving the cockpit a roomier feel. **RIGHT:** If Deardon hits his mark of a new 1,800-pound gross weight, he plans to increase the two-seater's max fuel load to 50 pounds.

2001 RENAISSANCE LUSCOMBE 8F N999RA

SPECIFICATIONS

Base price: \$71,200
 Engine make/model: Lycoming O-320
 Horsepower@rpm@altitude: 150@2700@SL
 Horsepower for takeoff: 150
 TBO hours: 2000
 Fuel type: 100
 Propeller type: Sensenich FP
 Landing gear type: Fixed/Conv.
 Max ramp weight (lbs.): 1400
 Gross weight (lbs.): 1400
 Landing weight (lbs.): 1400
 Std. empty weight (lbs.): 990
 Useful load - std. (lbs.): 410
 Payload - full std. fuel (lbs.): 230
 Usable fuel - std. (gals.): 30
 Oil capacity (qts.): 8
 Wingspan (ft.): 35
 Overall length (ft.): 20
 Height (ft.): 7
 Wing area (sq. ft.): 140
 Wing loading (lbs./sq. ft.): 9.3
 Power loading (lbs./hp): 10
 Seating capacity: 2
 Cabin doors: 2
 Cabin width (in.): 40
 Cabin height (in.): 40

PERFORMANCE

Cruise speed (knots):

	ALTITUDE	SPEED
75% power:	8,000	126
75% power:	1,000	120
65% power:	8,000	120
55% power:	10,000	110

Max range (w/reserve) (nm):

75% power:	375
65% power:	420
55% power:	440

Fuel consumption (@ .42 lbs./hp/hr. sfc) (gph):

75% power:	7.9
65% power:	6.8
55% power:	5.8

Estimated endurance (65%) (hrs.): 3.5

Stall speed (flaps up) (kts.): 41

Stall speed (flaps down) (kts.): 37

Best rate of climb, SL (fpm): 1500

Service ceiling (ft.): 21,000

Takeoff distance (ft.): 400

Landing distance (ft.): 300

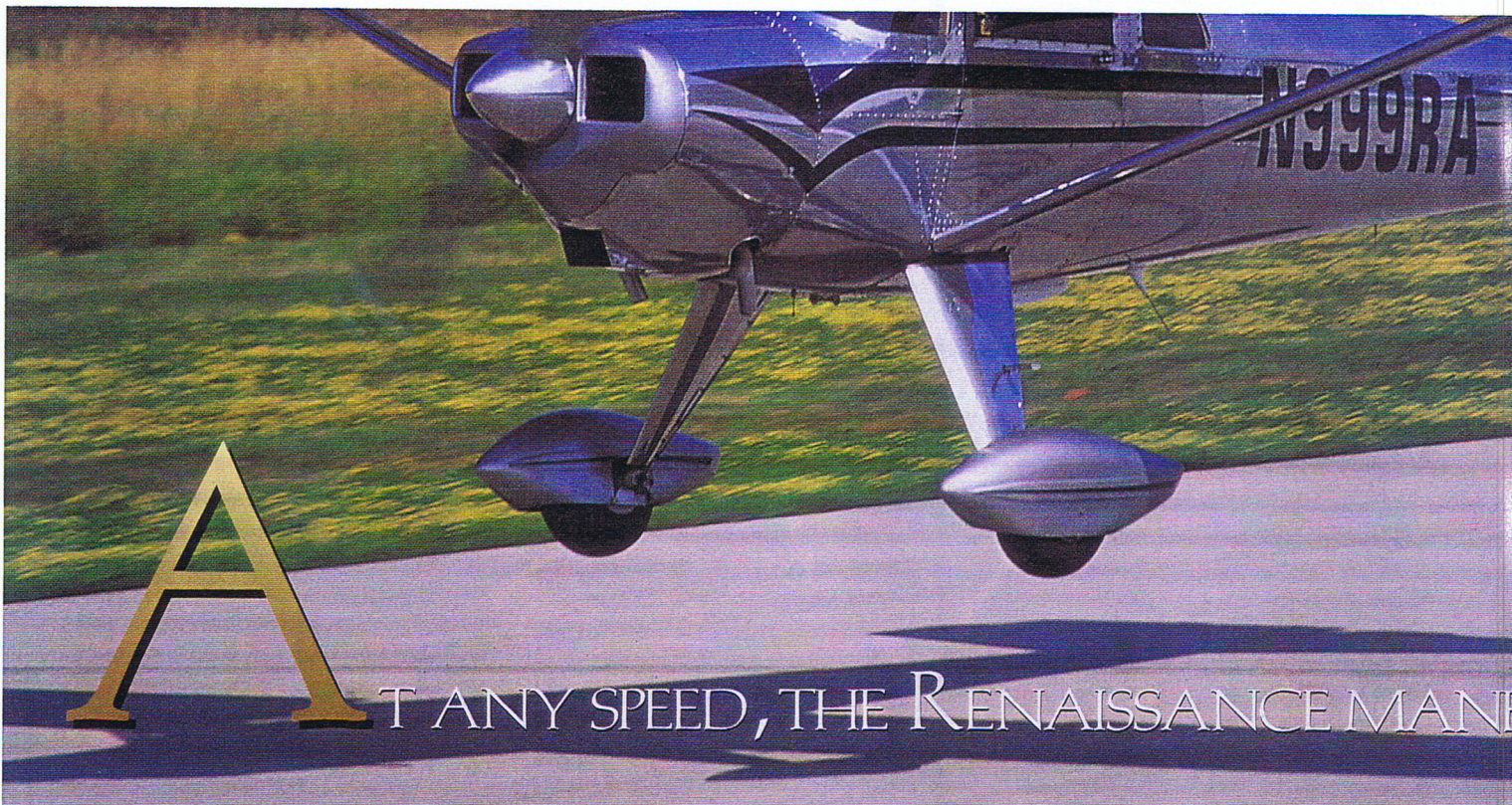
Reshaping the cabin to accommodate the new CG allowed moving the panel slightly farther forward to reduce the claustrophobic feel of the cockpit. The prototype I flew had fixed seats for both occupants, but final-production airplanes will feature adjustable, ergonomically correct, high-G, Jack Norris seats, specifically designed to absorb severe impacts.

Despite the considerable upgrade in power, the first of the new Renaissance 8Fs may be certified at the original 1,400-pound gross weight, with later upgrades retroactive. With a 990-pound empty weight and 30 gallons of standard fuel, the current 1,400-pound limit leaves only 230 pounds for people and things. For that reason, the Deardons are hard at work on a weight increase to at least 1,600 pounds, possibly even 1,800 pounds. Such an increase is easily in line with the new powerplant.

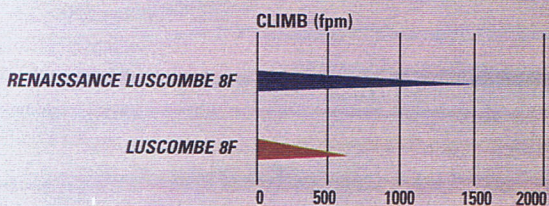
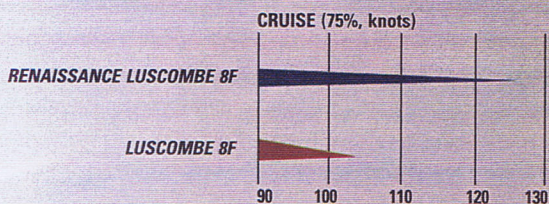
A higher gross weight will be welcome not only for the extra passenger payload, but also to accommodate a higher fuel capacity. At a specific fuel consumption of 0.42 lbs./hp/hr., the O-320's burn at 75% works out to just under 8.0 gph, so the present 30-gallon tanks provide only three hours plus reserve at high cruise. Even at 125 knots, that leaves the 8F a little short on range—375 nm at max cruise, 440 nm at 65%. When and if the airplane is certified for 1,800 pounds, Deardon hopes to offer a fuel option of 20 gallons in a fuselage baggage tank,

THIS ALL-NEW LUSCOMBE IS POWER

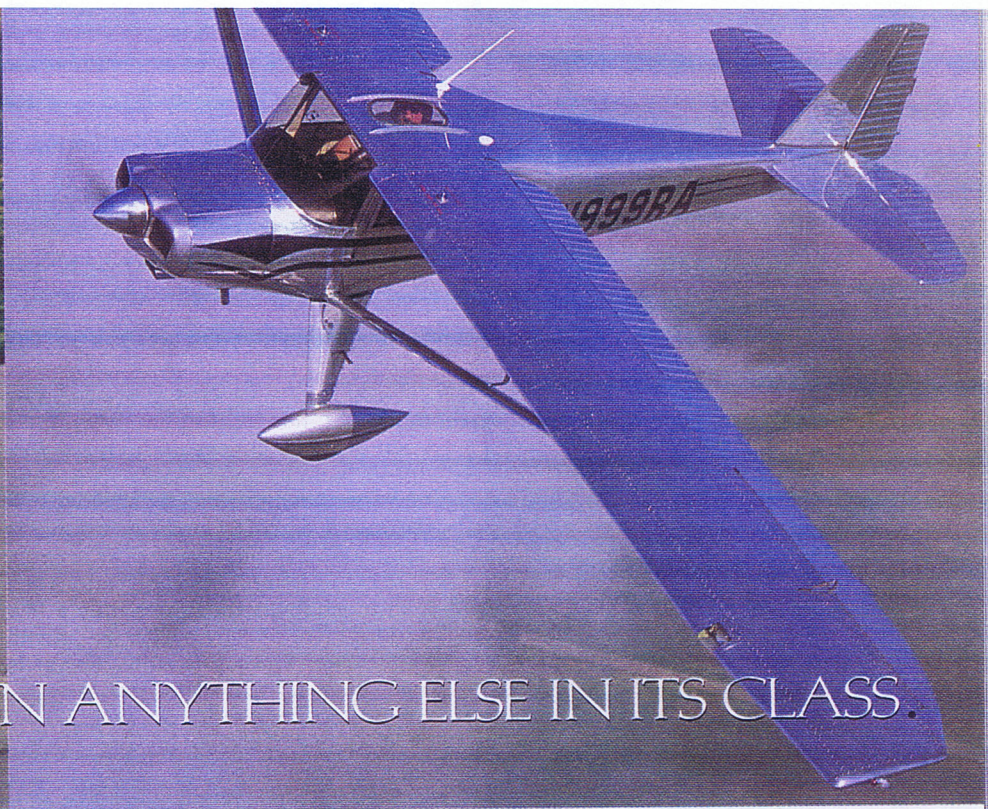




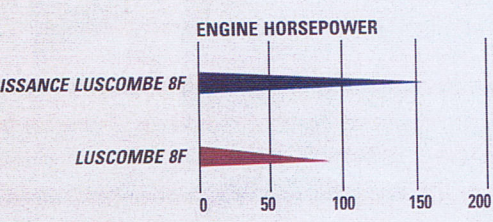
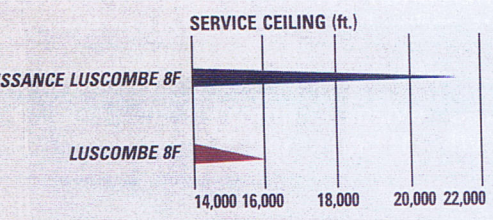
FACTORY COMPARISON



	2001 RENAISSANCE LUSCOMBE 8F	1948 LUSCOMBE 8F
Gross Weight (lbs.):	1400	1400
Empty Weight (lbs.):	990	870
Useful Load (lbs.):	410	530
Standard Fuel (gals.):	30	25
Payload (lbs.):	230	380
Engine Horsepower:	150	90
Wing Span (ft.):	35	35
Fuselage Length (ft.):	20	20
Height (ft.):	7	7
Cabin Width (in.):	40	40
Cabin Height (in.):	40	40
Wing Area (sq. ft.):	140	140
Wing Loading (lbs./sq. ft.):	10	10
Power Loading (lbs./hp):	9.3	15.6
Climb Rate (fpm):	1500	660
Cruise Speed (knots):	126	104
Stall Speed (knots):	37	37
Service Ceiling (est.) (ft.):	21,000	16,000



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bumping total fuel to 50 gallons and extending 65% endurance to more than seven hours.

Another interesting option at an 1,800-pound gross weight will be a choice of landing gear—standard wheels, oversized tundra tires, skis or floats. Perhaps amazingly, in view of the original airplane's limited payload and power, early Luscombe 8Fs were certified with pure Edo seaplane floats, and the new airplane should qualify for the same STC. Deardon plans to seek approval for amphibious floats sometime down the road, working with both Edo-Aire and Wipline.

Predictably, mounting 150 hp on the nose of an airplane previously protected by only 90 hp results in some rather dramatic performance increases. At the 8F's current gross weight, it's the most enthusiastic two-seater available short of a Pitts S2C. Like all lightweight airplanes with comparatively big power, climb is especially sensitive to weight. Flying solo, you'll see an easy 1,700 to 1,800 fpm on the VSI at best-rate speed. The spec for full

gross operation is 1,500 fpm, and that's not hard to understand with so much power out front.

Of course, the big question many pilots are asking is, "What does that extra power do for cruise?" In straight-and-level mode at 8,000 feet with 75% dialed in, the little Luscombe zips along at a reasonable 126 knots, at least 20 knots quicker than the best effort of the original. Even if you elect to aviate down low in true puddle-jumper mode, plan on 120 knots on about 8.0 gph.

At any speed, the Renaissance maneuvers better than anything else in its class. Back in the '40s, the original Luscombe was alleged to be an aerobatic airplane. It was certified under the old CAR 4 regulations that didn't stipulate specific requirements for aerobatic certification, and the combination of tough construction, comparatively quick controls and a stick for roll and pitch encouraged some pilots to try a few garden-variety loops and rolls.

For that reason, the new airplane may be marginally legal for the same maneuvers, though it won't be certi-



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mode, no matter what the attitude. If you do elect to try some acro, one nice feature is the overhead window, an oblong plexiglas portal directly above center cabin that provides a great view straight up (straight down if you happen to be inverted).

Landings were always a challenge in the original Luscombe, and that won't change noticeably on the Renaissance 8F. Deardon has adapted the late-model Silslex gear that widens the track by six inches, but the narrow track will still be susceptible to crosswinds. Like any taildragger, however, the 8F isn't that much of a handful for a pilot who has been properly checked out and is willing to maintain proficiency. The good news is that the ridiculously low full-flap stall speed of 37 knots means everything seems to happen in slow motion. Throw in 10 knots of wind, and a full stall touchdown consumes only a few hundred feet of runway. As usual with high power and low weight, power is a universal panacea. If you get into trouble during the flare, you can usually blast yourself back into the sky with the left knob.

Deardon's pricing philosophy is a little different from that of most other manufacturers. In fact, in some respects, it's exactly the opposite of current industry trends, a throwback to the '70s and '80s. These days, many manufacturers prefer to sell packaged airplanes, fitted with the

wingtip strobes, EGT/CHT system, super sound proofing, custom paint and custom Pfleuger wood panel overlays.

There are two optional avionics packages. The first is a VFR option that adds a single 720/200 navcom, transponder, intercom, PTT and GPS to the qualifications for \$7,500; the second adds all of the above plus the second navcom, a switching panel, an IFR-certified KLN-89B GPS and heated pitot for a total add-on of \$19,900.

Add it all up, however, and you'd be hard-pressed to spend more than about \$105,000 on a fully equipped 8F. While that isn't cheap, it's far below what you'd pay for any other fully IFR-equipped, certified, general-aviation airplane. Deardon promises a two-year spinner-to-tail warranty, by the way.

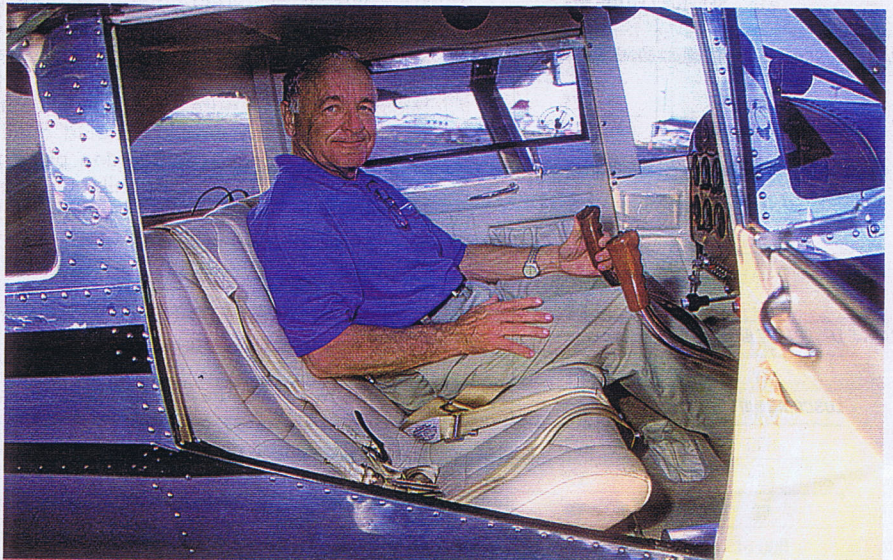
The new 8F isn't alone in the two-seat trainer market, of course. There's always the Katana, American Champion, CH2000 and the new Australian-built Eagle 150.

None of those have the advantage of a Renaissance, however. If you want to fool your friends into thinking you're flying a classic, you can't do better than a new 8F.

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