he coming of spring meant it was time to make travel arrangements for another trip to Lakeland, Florida. I was looking for a way to travel from the central coast of California, where I live, to Lakeland for the twenty-eighth annual Sun 'n Fun EAA Fly-In.

When I was in Bend, Oregon, in December of 2001 I offhandedly (fingers crossed behind my back) asked Mike Schrader, head of sales and marketing at Lancair at the time, if he could fulfill my hope of a ride east in one of the speedy Lancair airplanes that had to be flown to Florida. Happily for me he said yes. To cast this arduous task into the realm of work, I decided to compare the Lancair flight out to Florida with the airline-style trip back to California. Seriously, the 300-horsepower Lancair Columbia 300 measured up well against the Saab 340 and Boeing 757 commercial aircraft during this coast-to-coast trip. In the past, one widely accepted rule of thumb was that for trips of 400 nm or less, a private airplane would always beat an airliner (see "Proficient Pilot: The Tortoise and the Hare," April 2002 *Pilot*). Pilots of airplanes that are capable of 160 to 165 KTAS in cruise are now arguing that any flight of 1,000 miles can be accomplished in the same or less time than it takes to travel on a scheduled airliner, especially when ground travel is required to arrive at a final destination. Because of recent expansion of the amount of time needed for before-flight security screenings, Lancair's fixed-gear Columbia 300 showed that it's time to revise those thumby rules once again.

The big XC

On a Tuesday morning in April, Schrader and Jody Logsdon, the organizer at the Lancair plant in Bend (she is the one who

N6500

The tortoise and the hare, round 2

Lancair vs. the airlines

BY STEVEN W. ELLS PHOTOGRAPHY BY MIKE HOUSKA



sits at the desk by the front door, but that's a disguise), flew from the Lancair factory in Bend to Paso Robles, California, in a Lancair Columbia 300 to pick me up. We departed the Paso Robles Municipal Airport at 1:56 p.m. Pacific Standard Time for our longest leg of the trip—four hours and 34 minutes across the great southwestern deserts If we could have flown direct from the Paso Robles airport to Lakeland Linder Regional Airport the total distance in nautical miles would have been 2,007. The curves in our flight path that were caused by the need to avoid special-use airspace, and a diversion to make an end run around a line of slow-moving thunderstorms that stretched in an east-

Hours and minutes

Airline flight times obtained via the Internet showed that the flight times from San Luis Obispo (20 miles south of Paso Robles, the nearest town with commuter airline connections) to Tampa would range from seven hours and two minutes to 10 hours and four minutes, depending on the airline and the routing.

We averaged 178 knots from the moment the wheels left the ground until

to El Paso, Texas. After launching at 8:28 the next morning we refueled—and had a nice Cajun-style lunch—in Lafayette, Louisiana. Launching again at 3:41 p.m., we flew on arriving in Lakeland at 7:10 p.m. Eastern Standard Time on Wednesday. Our total flight time was 12 hours and six minutes. The ability to fly across the United States in 12 hours is a remarkable achievement for a normally aspirated, fixed-gear airplane. northeasterly line from the Mobile, Alabama, area, required us to fly 2,155 nm. We averaged 178 knots from the moment the wheels left the ground until they again touched down. Before someone credits these speeds to the prevailing winds, be advised that we flew into headwinds for the first day before the more normal westerly winds (tailwinds when flying east) returned for the remainder of the trip. Experienced travelers always add a few hours on each end of every flight in order to get a realistic estimate of the total time required to reach a final destination.

For this comparison I penciled in two hours before the scheduled commuter airplane departure for the drive to the airport and the required security screening, and an hour and a half at the end of the flight for gather-



The premium IFR avionics package in this Lancair included a UPS Aviation Technologies avionics suite featuring an SL15 stereo audio panel, an SL70 transponder, two SL30 nav/coms, a GX50 approach-approved GPS, and a pair of MX20 multi-function displays. Rounding out the package was a fully coupled S-Tec 55 autopilot with altitude hold, and an Allied Signal KCS-55A horizontal situation indicator (HSI). **Engine information was** displayed on an optional **Vision Microsystems** VM1000 engine management system. Avionics and instrumentation package options for new production airplanes had not been determined as this article went to press.

ing baggage, renting a car, and driving from Tampa to Lakeland (it's 32 miles one way). In fairness, we didn't taxi the Lancair into the motel lobby, so we also had some time on the ground at both ends of the flight to account for.

After factoring in these estimates, an airline flight would have taken be-

The comfort factor

Airliners have bathrooms, and enough room to stand up, walk around, and stretch during long flights. No one can do that in a Lancair Columbia 300. But because of the 49-inch-wide cabin we never felt crammed in. I'm not the most gracious traveler—I can, and sometimes do, revert to acting like a snivelson who was taught by his uncle to be prepared to survive. He carries a small pocket flashlight into movie theaters and so do I. Personal-use airplanes add an element to travel—the very American element of being involved—that is suspended when the threshold of an airliner door is crossed. I don't know how to measure it, but it's there.

they touched down again, and we'd flown into headwinds the first day.

tween 10 hours and 32 minutes and 13 hours and 34 minutes. The time required for the weather briefing, preflight, and finding a cab to take me to my motel on arrival in Lakeland added approximately one hour to the Lancair total. The best-case airliner combination beat the Lancair by three hours; less expeditious routings resulted in the Lancair getting the checkered flag by at least 30 minutes. ing four-year-old when I get tired or bored—but I never felt like I couldn't wait to get out of the airplane, even though each of the three legs averaged 700 nm.

One plus for traveling GA is the comfort I get from feeling that I have some control over the decision-making process. Do I lack faith in the skills of the pilots and maintenance people of airlines? Not at all, but I'm the kind of perWe even had entertainment—an MP3 player that Schrader plugged into the audio panel fed Jimmy Buffett's slightly twisted and politically incorrect lyrics into our headsets as we flew above places named Blythe, Gila Bend, and San Simon on our way across the bland and parched Southwest.

DOC versus a one-price ticket

The same travel Web site I consulted



for flight times told me the trip would cost \$403 for an economy-class ticket, \$1,866 for a business-class ticket, and \$2,091 for a first-class ticket. Average fuel burn for the Lancair was 15.5 gallons per hour. Based on an average cost per gallon of \$2.65 for 100LL, the direct operating cost for our XC adventure was \$497. Remembering that there were three souls aboard the Lancair reduces the per-person costs to about \$165. That's \$5 more than it costs for one person to take the same trip on a Greyhound bus.

At El Paso we descended for a landing to Runway 8. The ATIS lulled us by announcing, "Winds are 220 at 6...." Our final ATIS check cautioned us by announcing that "low-level wind shear has been reported on final approach." And then it got rough and gusty. While Schrader kept an interested eye on my stirrings of the side-stick control, the airplane carried us down to a serviceable landing into what felt like a 20knot wind. As I grumbled about the shortcomings of ASOS technology, the kind folks at Cutter Beechcraft found space in the hangar for the sleek bird and gave us a lift to our digs. The next morning the Cutter line crew fueled us-we added 66.2 gallons-and we launched again. With taxes and a Continental breakfast, we paid \$80 each for our motel rooms, and we ate three meals along the way (\$30 per person). The direct cost (adding the above fig-



The combination of a 49-inch wide cabin, comfortable leather-covered seats, excellent visibility, and true airspeeds greater than 180 knots made our 12-hour cross-country flight a memorable trip. ures plus a little for in-flight food) was right around \$830—but that's for three people. Since the airline ticket prices quoted are round-trip fares, the Lancair didn't win the dollars-to-dollars competition, but I'll remember my Lancair coast-to-coast flight long after the memory of the ride back in an airliner fades.

dBs

I brought along some instruments that helped me compare the Boeing 757 and the Saab 340 I rode home on with the Lancair Columbia 300.

The first thing I measured was noise. I turned on my RadioShack sound-level meter, set it to the "A" scale, and selected the slow-response-time setting. For reference, normal conversation measured 60 decibels (dB), and cruising at

The Teledyne Continental 310-horsepower TSI0-550C pictured at right will be installed on the Lancair 400, which will be certified at a future date. It is the turbocharged (and intercooled) version of the normally aspirated 310horsepower I0-550N engine that provided power for the Lancair 300 featured in this article. 65 mph in my Toyota Cressida sedan yielded readings of 75 dB. Although I was a little apprehensive about carrying this meter through preboarding security checks, no one batted an eye, nor did any member of the on-board crew seem to care as I took readings during our flight.

I sat in the last row—row 45—in the right-side window seat. I measured 91 dB during our takeoff roll. This lessened to 87 dB on climbout and then settled into a steady 79 dB during the cruise part of the flight. Aisle seats, I learned, are quieter than window seats by 2 dB.

The Lancair noise level was measured by positioning the meter between the two front seats at shoulder level. Our cruising altitudes varied between 11,500 feet to 13,500 feet during our leg from Paso Robles airport to El Paso International Airport. Schrader set the power at full throttle and 2,500 rpm. This resulted in power settings of 68 to 72 percent. These settings, and the speeds that resulted, caused the cabin's sound level to measure a steady 90 dB. Noise-canceling headsets were worn throughout the flight.

I also brought along my pulse oximeter (see "Airframe & Powerplant: Hypoxia Lowdown," March 2002 *Pilot*). No one on the airliner batted an eye as I clipped the small black block on my forefinger and read my blood-oxygen saturation levels and heartbeat during the flight. Departing Tampa at 5:30 p.m. and flying west into the night may have contributed to the lack of interest in my mini science lab in the fortyfifth row.



Between Blythe and Gila Bend VORs, as we sped along at 12,500 feet msl in the Lancair, we all took turns with the oximeter. I measured 79-percent saturation and 80 beats, Schrader measured 81 percent and 87 beats, and Logsdon turned in readings of 82 percent and 85 beats. Go figure, Logsdon smokes. Aboard the 757 in high-altitude cruise, I recorded readings of 91-percent saturation and 74 beats. This corresponds with a cabin pressure of approximately 8,000 to 9,000 feet msl.

During our big cross-country we flew for hours at altitudes that resulted in saturation levels below 90 percent. These findings reinforce the idea that supplemental oxygen is a very valuable safety and comfort tool in general aviation airplanes, especially when flying routes that require extended legs above 6,000 to 8,000 feet.

The avionics

This particular Columbia 300 was equipped with a sweet UPS Aviation Technologies avionics suite. It had all you'd expect in a twenty-first-century avionics package—a brainy SL70 transponder, a standalone SL30 digital nav/com, and a GX50 GPS/com. They all talk to each other, store frequencies, and feed not one, but two MX-20 multifunction displays (MFDs). Soon

Lancair starts anew

After four months of hopeful uncertainty, The Lancair Company of Bend, Oregon, announced in late January 2003 that the final touches were being put on a funding agreement that will provide the solid financial foundation Lancair needs to return to production. This is very good news for the future of Lancair, and for the 173 pilots who have secured delivery positions for Lancair 300-, 350-, and 400-series airplanes.

Lancair's production goals have been slowed by cash flow problems from time to time. At EAA Air-Venture in July 2002 the company announced that it was stopping production indefinitely. The 2003 funding deal, reported to be worth \$55 million, enables Lancair to work through the inevitable cash flow lag that occurs between startup and full-scale production as it works toward a goal of producing one airplane a day.

Lancair's board of directors also has changed, with new members representing Composite Technology Research Malaysia (CTRM) added. CTRM CEO Malek Packeer said, "We are fully committed in our support to Lancair and its categorydefining aircraft."

CTRM operates a group of companies that design and manufacture airframe components.

Lancair maintained contact with its trained management, supervisory, and production staff since the suspension announcement. The production-restart process began in



mid-December. Mike Schrader, who oversaw my flight to Sun 'n Fun, left Lancair to pursue an opportunity in advertising sales. Vice President of Sales and Marketing Mark Cahill has temporarily taken over Schrader's duties.

One other member of the management staff left to take a position with Sino Swearingen in San Antonio. Jody Logsdon, who accompanied Schrader and me on our long cross-country, transferred to Lancair's kit facility. The product line comprises three airplanes—a 310-horsepower Lancair 300 and an all-electric (no vacuum system) 310-hp Lancair 350, both normally aspirated, and a turbocharged Lancair 400. Certification of the 350 and 400 is pending. For more information, visit the Web -SWE site (www.lancair.com).

after being relieved of his pilot-incommand duties at Paso Robles airport, Schrader explored the capabilities of the center-mounted UPSAT stack of avionics before deciding to display an IFR chart on the top MFD, and a VFR chart with sectional chartlike displays that automatically moved east on the lower MFD. The avionics worked perfectly, and the detail and scope of the JeppView database made the rustling of paper charts that were stowed within reach fade like a distant memory.

If the airplane had been equipped with a sferics-type lightning strike detector (one that detects electromagnetic radiation from severe weather formations), we would have been able to overlay the direction and distance of discharges on our moving maps. Lightning detection would have eased our concerns when we encountered the line of storms during the afternoon of our second day.

In the months since I made this flight, real-time weather data, in Nexrad graphical and TAF/METAR/ pirep textual formats, has become available for display on in-cabin MFDs (see "Wx Watch: Weather Links," March 2002 *Pilot*).

This kind of information also would have helped us determine the safest course through that weak front that lay across our direct route. Without it, we were forced to make the end run. But it wasn't so tough because the S-Tec System 55 autopilot (the X GPSS upgrade was not installed) augmented the avionics and performed flawlessly by locking onto selected altitudes and tracking both nav and heading inputs.

Personal-use light airplanes that

Links to additional information about Lancair's kit and production aircraft may be found on AOPA Online (www. aopa.org/pilot/ links.shtml). Keyword search: Lancair. can really deliver during flights like this monster cross-country trip—flights that small-airplane owners once considered frivolous because of the time and distance involved—are time and money savers, especially

when compared with other modes of long-distance travel.

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