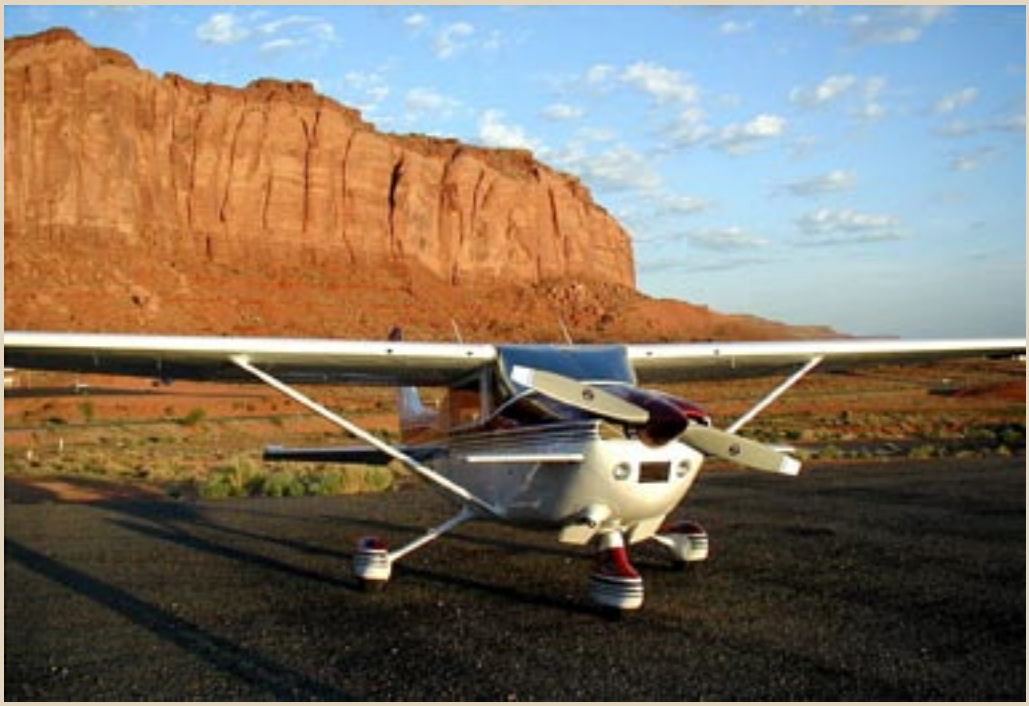
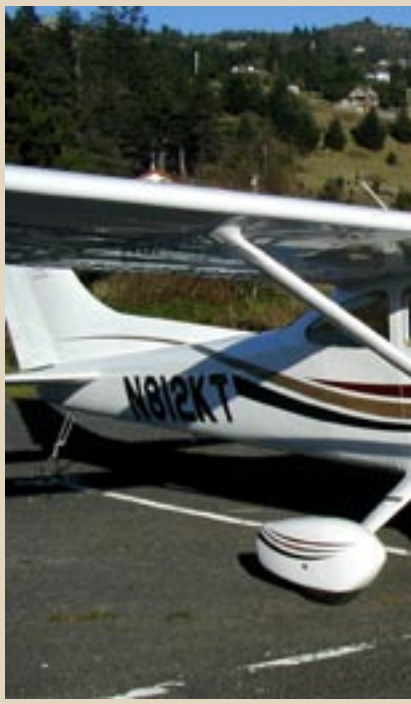
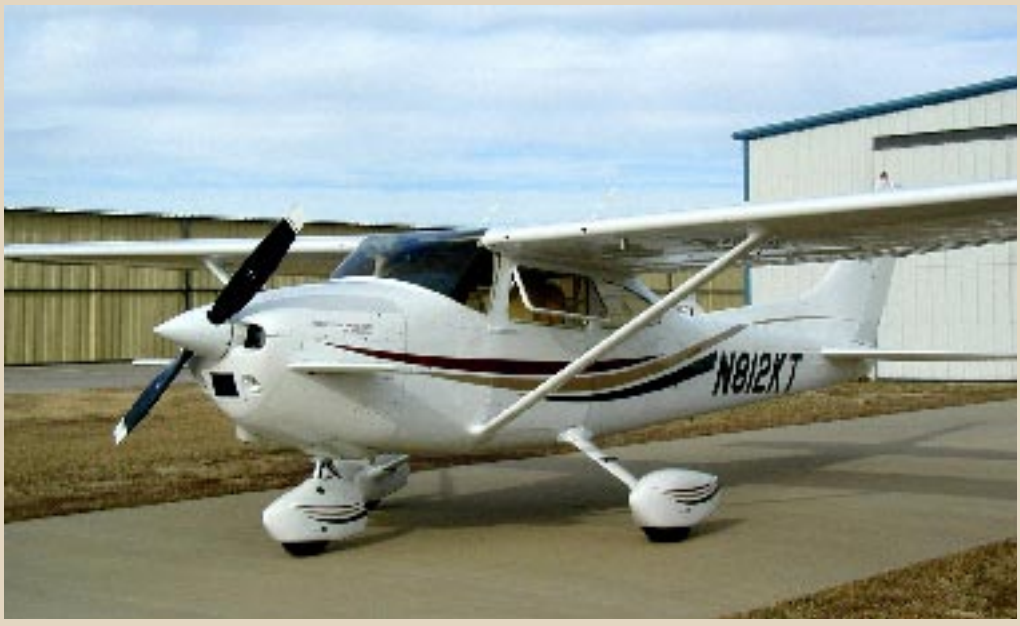
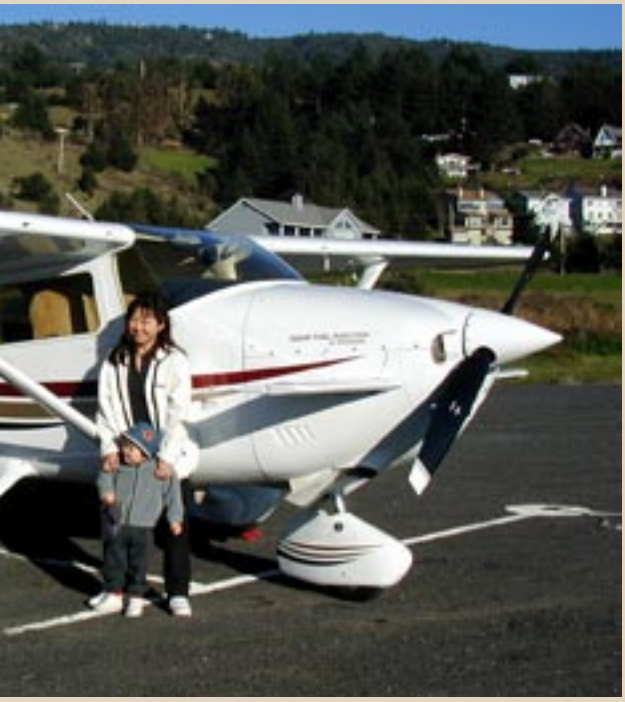






OWNING THE ULTIMATE



It was time. Eleven years earlier in 1988 I had fulfilled a childhood dream and obtained my pilot's license, and in 1993 the instrument rating. I had a stable job in a successful company, with considerable vacation earned over many years of service. I could foresee 200+ hr/year of flying, and an increased commitment to Angel Flight. My new bride Tina was an enthusiastic right-seat companion. The Moon was in the Seventh House, Jupiter had aligned with Mars, and I wanted my own airplane.

by Kevin Moore

CESSNA SKYLANE

After the checkout with Todd and an additional day of practice, I brought my new flame home to meet the family.

There was an additional consideration. The aircraft available to rent were…well, with scant exception the flightline evoked an Albanian used car lot. Every third or fourth rental had some exasperating deficiency: a broken door latch or radio, an inoperative transponder or instrument, often leading to cancelled flights. I also experienced an engine failure in a club plane with Tina and our baby aboard. Tina ("Senior Management") decreed in her soft-spoken way that if we were to continue flying it would have to be in our own, preferably new, airplane. I dutifully concurred, being one ever devoted to pleasing Senior Management.

What was the right plane for us? I pondered the sage advice of an experienced pilot/A&P friend: "Buy the airplane that suits 85-90% of your flying." We rarely carried more than 500 lb of people and things. There are mountains out here, so it had to reliably if not effortlessly climb to and cruise at 9500-11,500 feet, even in summer. Flying mostly day trips within 200 nm, occasional weekends or Angel Flights out to 300-400 nm, and once or twice yearly trips of 800-1200 nm: we were obvious candidates for a 180-200 hp four-seat aircraft. Initially we considered the 172SP, Archer III, early '90s American General Tiger, or Cirrus SR20, all fine airplanes. Senior Management favored the latter with its airframe parachute, but at the time the waiting list was over two years.

Of course, when it comes to airplanes, sage advice sounds like your father when you were in high school. "Want" loomed as large as "need." Laboring mightily to subdue aviation lust, I pruned the list of "wants." I wanted a comfortable cross-country cruiser with at least 140 KTAS on tap. I wanted to fly the Intermountain West and not agonize about load and density altitude. I wanted something that wasn't a clone of every second or third aircraft on the ramp. Most of all, I wanted Senior Management to feel that our chosen craft was very safe and reliable.

The "sensible" answer was a 182. The Skylane has been called the best airplane to own if one could only own one airplane. It boasts benign handling, a fine safety record, solid short field and climb performance, a comfortable cabin, and simple systems with comparatively few maintenance or operating issues. Many 182R and earlier Skylanes are full fuel/full seats aircraft. While not reputed for speed, the 182 is fast enough for cross-country travel and is a fine IFR platform. Even today it is a distinguished example of effective design compromise, and this is reflected in the high market value of used aircraft.

Yet I hesitated. Couldn't we do better—more speed, better short field and density altitude performance? As it turned out, this was not original thinking. With more than 20,000 produced and a large majority of those still registered in the US, the 182 has been the subject of many STCs intended to improve some aspect of the aircraft such as speed, climb, range, useful load, or STOL capability. However, I was not enthralled by the prospect of multiple modification projects. Happily, I found a perfect solution for us: the 260SE/STOL modification of the Cessna Skylane produced by Todd and Jo Peterson of Peterson's Performance Plus in El Dorado, Kansas [photo #1 here]. This conversion remarkably addresses nearly all of these areas in one package and, in the hands of one who invests some time to learn its capabilities, achieves impressive STOL performance.

The Petersons exchange the stock 230 hp O-470 for a fuel-injected 260 hp TCM IO-470 engine. The installation is similar to the early Cessna 185's which also used this powerplant. The IO-470 eliminates carburetor icing, delivers higher manifold pressure at altitude than the carbureted engine on virtually the same fuel burn, and enables lean-of-peak operation, significantly extending the aircraft's range. A speed kit with aerodynamic cleanups for the landing gear and exhaust is also included. The combined effect of the extra power and drag reduction is a 10-15 kt increase in cruise speed (150-153 KTAS) and nearly 40% increase in rate of climb (1380 fpm) compared to the original airplane.

However the heart of the 260SE is the high-lift canard [photo #2 here], bolted to the engine mount a few inches behind the propeller arc. The aft portion moves in concert with the elevator, deflecting 7 degrees downward as the yoke is brought full aft, or 1 degree -2 degrees up when the yoke is forward. There is little effect on cruise performance, but at the slow end the canard generates lift at the heaviest part of the airplane, relieves the download on the tail, and enhances pitch authority. Stall speed is reduced to 35 kt, but this number by itself fails to convey the complete transformation of the Skylane's low-speed handling. Takeoffs are strikingly abbreviated: in barely enough time to scan the gauges one rotates rotation is at 38 kt and the plane levitates in a surprisingly flat attitude. One can motor around at 55-60 kt in a level attitude at a power setting of only ~16", barely above idle. Completely cross-controlled flight at these speeds can be done with no fear of a stall or spin. Steep turns—trimmed, hands-off—at 50-55 kt are a trifle. Particularly impressive are short field landings: arrive over the threshold at 46-50 KIAS carrying but 13-14" of manifold pressure and flare without reducing power. The canard provides ample pitch authority

for a nose-high full stall landing and the plane will settle to the runway like a butterfly with sore feet. The amazing degree of control afforded the pilot at 40-45 kt in the flare makes consistent spot landings achievable. Close the throttle at touchdown, raise flaps, apply brakes, and chuckle as tower tells that 152 on final to do a 360 for spacing. In both takeoff and landing, the 260SE uses half or less the runway required by a stock 182. The profoundly enhanced safety margin at low speeds or in an emergency is obvious.

The extra power, speed kit, and canard combine to give the 260SE a 115-120 kt flight envelope, expanded by 10-15 kt at each end compared to the stock 182, outperforming the latter in every respect. There was no doubt in my mind, this was to be our airplane. Senior Management bestowed her approval, and in late 1999 I purchased a 1974 182P airframe from the Petersons. By May the conversion, airframe refurbishment, paint, interior, and avionics installation were complete. She gleamed in the hangar like a brand new airplane and I was smitten.

Every bit the grinning dunce taxiing out for the first time in my very own airplane, I earnestly announced position and intentions. Todd smiled knowingly from the right seat as one who'd seen this hundreds of times before.

"You know, there's no one else here," he observed.

Indeed. This was not my busy home field with hundreds of daily operations; there was not a person or airplane to be seen. Several cows grazed placidly in a nearby field.

"El Dorado traffic, Skylane back-taxiing on runway 4 for takeoff," I called dutifully, then noticing Todd's grin, added, "If anybody cares."

Run-up complete and takeoff flaps set, we taxied into position.

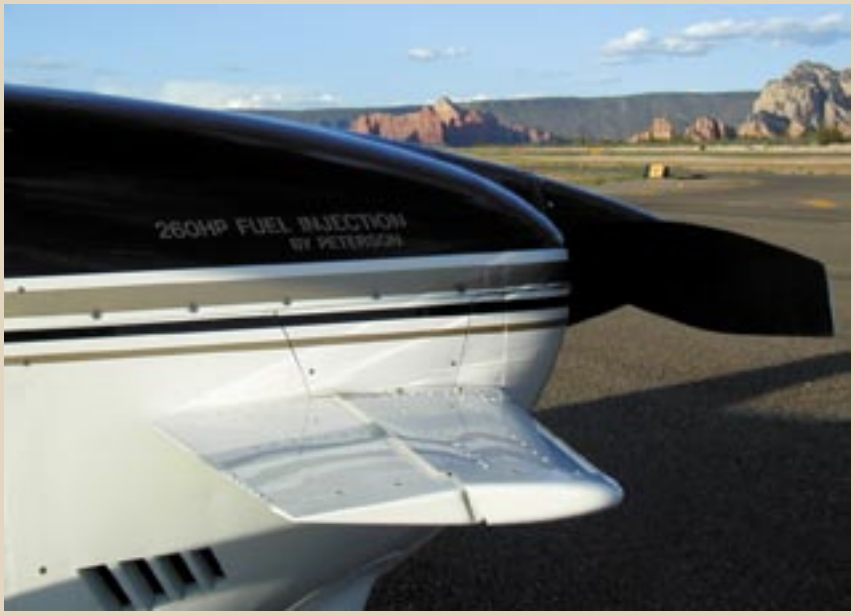
"Let's make this a normal Skylane takeoff for starters," advised Todd.

No way. I had read everything I could about this plane's short field capability and low speed maneuverability, rehearsed the procedures in my head for hours, and I was going to consummate this relationship right now. In went the throttle and in barely enough time to scan the gauges we accelerated through the 38 kt rotation speed and were airborne. Scant seconds later at 55 kt I rolled into a 30 degree left bank. The plane climbed enthusiastically in the turn at 55-60 kt and we rolled out on downwind abeam our starting point.

Exhilarated and just a bit cocky, I turned base and final, configuring for the recommended final approach speed of 55 kt. The flat deck angle on approach to landing was different from a stock Skylane and I immediately regretted not using a booster cushion. Unable to sight the end of the runway in the flare, I closed the throttle, hoping I hadn't misjudged our height too badly. The plane shuddered as we found the runway like an F-18 catching the #3 wire. More than a little humbled, I was grateful for Todd's smile and diplomatic suggestion, "That was OK. Let's try some more."

After the checkout with Todd and an additional day of practice, I brought my new flame home to meet the family.

The plane exceeded our expectations in its performance and comfort, so much so that we decided to trade for a new one two years later! We flew our 260SEs for more than 650 hr all over the Western US [photos #3 here], enjoying some of the most spectacular scenery that our nation has to offer, often taking advantage of the slow flight capability to loiter over particularly appealing spots. We frequently visited family in Southern California: a 2.3 hr flight to a small GA field near their home handily trumped either an 8-9 hr



drive or the airlines, making weekend trips feasible. Perhaps most memorable for me was a two-week trip through the West and Midwest with my oldest son just prior to his leaving for college: more than 32 hr of trouble-free aviating over some unforgettable landscape.

Both planes performed as advertised: 146-153 KTAS at 65%-75% power, using 13-13.5 gph block-to-block, similar to a 182RG. Even more remarkable was lean-of-peak operation: 138-141 KTAS at 9500-11,500 feet, burning 10.5-11 gph, with all CHTs comfortably at 355 or below even in summer. Reliability was superb. I also came to love slow flight and short field work in this plane, and often went out to practice just for fun. [photo #4 here]

Regrettably in 2004 professional and personal circumstances allowed only 60-80 hr of flight time. Ownership was just too expensive a proposition for so little flying; and it was with great sadness that I delivered our 260SE back to El Dorado to be sold. However I am hopeful that in 3-4 years this situation will change, and plan to return for our third edition of what was for our family The Ultimate 182.

For more details see the Peterson's Performance Plus (http://www.260se.com) and 260SE/STOL Owners' Group (http://www.260sepilots.org) websites.

Kevin Moore's day job is biotechnology research and development. He is a 1700 hour instrument-rated private pilot who currently rents new Cessna and Cirrus aircraft out of West Valley Flying Club at Palo Alto (PAO) and San Carlos (SQL) California.