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# New, Improved Lake

## The Turbo Renegade gets more power.

By Mary F. Silitch

GENERAL AVIATION airplanes no longer can be sold the way General Motors sells cars, the way Cessna and Piper used to mass-market airplanes in the good old days of the 1970s aviation boom. Too many things have changed since then, and the whole infrastructure necessary to support sales at those levels is nearly gone. The low-interest easy money, reasonable insurance, investment tax credit and cheap fuel are all gone, along with advertising agencies and salesman whipping up enthusiasm. Even most of the dealers are gone, too, though their signs are still fading in the sun at hundreds of local airports.

Piper, under the direction of new owner Stuart Millar, has made a resounding rebound in the piston-engine field, but before Stuart Millar there was Armand Rivard.

President, chief executive officer and owner of Lake Aircraft, Rivard was one of the first to realize that a new book was being written in the aviation business. "We've made money every year since I bought the company in 1979," Rivard says, and since 1979 marks the beginning of the present decline in the aviation business, one begins to feel he might be privy to some marketing secrets.

Rivard obviously is pleased to be in the airplane business. His whole family is involved and his personal touch and style can be seen at the company's manufacturing plant in Sanford, Maine, and corporate offices in Laconia, New Hampshire, and in the branch offices at Kissimmee, Florida, and Renton, Washington. One of the nicer things about being in the amphibian business seems to be that the airplanes operate in attractive areas. New Hampshire in the summer, Florida in the winter and Washington in between. Why not?

"We moved to Florida in 1980 because Florida has the largest number of Lakes (aircraft), and the water and weather suit our sales and training needs. We opened the Renton facility for much the same reasons: The northwest has the second highest concentration of our airplanes."

Rivard isn't revealing his business secrets, but in addition to the smaller size, there are a number of obvious differences between Lake's style of operation and other manufacturers' operations. For one thing, the product doesn't stagnate. In the 11 years that Rivard has owned the company, the airplane has been improved a little almost every year, and a lot in some years. The four-cylinder Lake Buccaneer and its much-modified descendants finally gave way to the six-cylinder Renegades in 1983, and now the 200-hp, four-cylinder model (200 EP) is available only on special order. Today's airplane bears little resemblance to the original Colonial Skimmer from which it derived, or even the pre-Rivard Buccaneer.

The Renegade was a new airplane, flying on a new type certificate. The six-passenger airplane is about 3 feet longer than the old LA-4-200 (18 inches of the addition are in the cockpit), with a 250-hp, six-cylinder Lycoming 10-540 mounted on the pylon. In addition to the engine and fuselage, the rudder, elevators and hull design also were new, and the large rear access door that had been an option became standard. In 1988, the gross was raised 90 pounds, and in 1989, the horsepower of the turbocharged version was raised to 270.

Small manufacturers have problems related to their size that large ones don't, and one of the main ones is credible support of the product once it is in the field. Prospects are loathe to part with upward of a quarter million dollars for a product that they feel may

be orphaned by its manufacturer, so Lake has overcompensated in other ways.

Three maintenance facilities are attached to its sales facilities. Here any and all maintenance can be accomplished, from annuals to overhauls and rebuilds. The shop rate is \$36 an hour, about on a par with everybody else these days, but the hours are always shorter when the mechanics know the airplane as well as Lake's A&Ps do. Annuals are flat-rated at \$575 for four-cylinder airplanes, \$655 for Renegades, not bad for a complex single. "An annual on a well-maintained Renegade averages between \$900-\$1000, and the average Buccaneer \$1200-\$1500, because they're older," Rivard says. Work is done quickly, because the mechanics are familiar with the airplane and the parts are on hand.

Speaking of parts, Lake's parts credibility is in the capable hands of Hans Vosteen, product support manager, a legend in the water-flying business. On our last visit to Laconia, his office was being moved to the factory in Sanford. In addition to being a parts guru, he operates and dominates what is the equivalent of a Lake owner's club.

Vosteen has been with Lake since 1971. "When Lake was in Indiana, I used to ferry an occasional tail dragger for the company. One day, about 1962, or so, I was stuck somewhere and had to fly a Colonial Skimmer home. That started me flying the airplanes." In 1971, he went to work for Lake full time, writing the parts book between 1972 and 1979. At present, he is the only interpreter of it, which seems a good form of job security.

The resale value of low-production airplanes always has been a little irregular, so like a Wall Street underwriter, Lake is active in maintaining the after-market for its airplanes. The company buys and takes in trade a number of used Lake airplanes, which are refurbished and sold. These activities, in addition to being profitable on their own, allow the company to maintain or control the used Lake market, to the benefit of Lake owners. Used airplanes are sold with a fresh annual, and the mandatory 25-hour training course.

Insurance is a special problem with water aircraft. A slight miscalculation that might do no more than scratch the paint on a runway landing can result in heavy damage on the water. Amphibians also risk gear-up landings on land, in which the damage is generally insignificant, and gear-down landings on the water, which are invariably catastrophic, usually totaling the airplane.

Aware of the damping effect that unbelievably large insurance premiums have on amphibian sales, Rivard attacked the insurance problem with a very thorough training program for Lake buyers, in an attempt to keep those owners from making expensive mistakes. The factory sponsored training is tied in with an insurance program; premiums reflect the decreased risk inherent in insuring a well-trained pilot. The training program has worked: Lakes in the program are now insured from 2 1/2% - 6% of hull value, a great reduction of prior rates, and an improvement over rates generally available for other amphibians.

The training operation, although it supports new and used sales by reduction of accidents and thus insurance premiums, pays for itself. At \$70 an hour (your airplane) or \$200-\$250 (theirs), it's not cheap, but it's the best Lake training available, and may be the best seaplane training anywhere. If you just want to get a seaplane endorsement on your private ticket, 7-10 hours is the norm at Lake. Most seaplane

endorsements, at the advertised, specialized schools run about four hours, so for the added expense, you will get a little more training with your Lake ticket and will be a better water pilot.

When you buy a new or used airplane from Lake, the full course is included in the price, so you have to allow a week or so for the training when you pick up your new pride-and-joy. By the time you leave the factory, you have received more than the usual hour-long checkout-you have been given the same sort of training that a corporate pilot gets from the manufacturer of a business jet, and for the same reasons. It radically improves safety and reduces insurance premiums.

Training operations are full-time in Kissimmee and Renton, but seasonal in New Hampshire.

The policy of improving the current design didn't stop with the Renegade, in addition to many other smaller changes, a turbocharged version-the Turbo 250-was made available in 1988. The excuse for our trip to Lake's Renton, Washington, facility was that the gross of this model had been raised 90 pounds, and the horsepower upped to 270 since our last visit with Lake in Laconia, New Hampshire ("Lake Turbo Renegade," May 1988 PRIVATE PILOT).

Renton is a surprisingly metropolitan airport, right on the shore of Lake Washington, with a diverse mix of traffic. A seaplane base is part of the operation at the lake end, and Boeing has its 737 assembly plant at the other end, with Lake's facility-and many others-in between. A ramp at the seaplane base allows amphibians to land on the water and taxi onto the airport if they wish.

Lake's facility is about halfway up the airport from the ramp, almost under the shadow of parked Boeing jets waiting for paint jobs. Unlike Lake's facilities in New Hampshire and Florida, which are off-airport-style, architecturally distinct stone buildings set in park-like surroundings, the Renton facility is in a hangar, so it looks different. The difference is only skin-deep, however, and once inside, the Rivard style is evident, and it all seems very familiar.

We planned a short trip from Renton to Lake Isabella, about 25 n.m. northeast of Renton, spectacularly nestled in the mountains. Other than by seaplane, the only access to the lake is by foot, a full day's hike up the mountains from sea level, so it is really remote, which is a shock, only 10 minutes from urban Renton.

Although the weather was somewhat doubtful, Lake Isabella's 3500-foot altitude was the perfect place to demonstrate the 270's altitude performance, for although there is a general performance

improvement at sea level, discernible to the experienced Lake pilot, it's at altitude that the change is really evident, even to the neophyte. One of the joys of owning an amphibian is climbing into its sports-car interior, firing up the pusher propeller, leaving the busy airport environment and plopping down on a remote lake miles from everywhere.

As we rolled down Renton's ramp into the Lake Washington water, a combination of the wakes of the heavy boat traffic and the wind made the surface particularly choppy, a true test of the Renegade's strengthened hull.

At very close to full gross weight, the hull came up on the step quickly, and after a brief but bumpy takeoff run, we lifted into the air. The climb is noticeably improved; at gross weight, the 270's time to its service ceiling of 20,000 feet is about 24 minutes, down from the 250's 28 minutes. (The artificially low service ceiling is determined by the certification regulations rather than the airplane's capability.)

The cruise speed, at 20,000 feet and 75% power, shows an 8-knot increase, to 155 knots true, not bad for an airplane that can land on the water. Actually, it's a fabulous speed for an amphibian. To set it in its proper perspective, I'm currently the coholder of the absolute speed record for light turbine amphibians. The record was set in a Cessna 206 with a 475-hp Allison turbine conversion, mounted on Wipline amphibious floats. The record speed was 154.4 knots-and that was, as they say, pedal to the metal (and then some)!

The ceiling was about 4000 feet, so we didn't do any altitude work on our Isabella flight; the altitude performance figures quoted are from the factory.

Lake Isabella showed the Turbo 270 at its best. The water was neither too smooth or too rough, just about right, as we slipped under the low stratus and descended. The takeoff was agile and quick, in spite of the 3500-foot altitude.

The change in the Turbo 250's engine that makes it a 270 is mostly in the paperwork and the turning of a screw.

Once Armand Rivard decided to upgrade the Renegade to the 270-hp configuration, he modified all previously sold Turbo 250's to the 270 specification at Lake's expense, including the required cowling changes but sans new paint. There are no 250-hp Turbo Renegades.

The whole Lake operation, and the people involved, reflect an interest in airplanes in general, and water flying in particular. Perhaps that's the greatest secret of Lake's success.