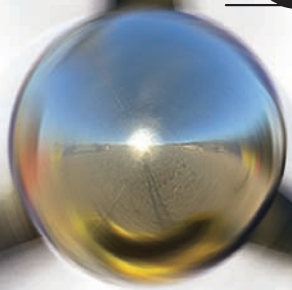


GETTING

UP THERE



Jump Planes Through the Years

by Ed Scott

Built for a One-Way Trip

The airplane was invented only eight years before someone first used it for parachuting in 1911. (The first balloon jump had been made in 1797.) Over the past century, hundreds of airplane types have been put to use for altitude. While some of those airplanes seemed tailor-made for skydiving, they weren't; they were all built for other purposes, such as pleasure-flying, cargo-hauling or as commercial passenger planes, and had been appropriated and modified for jumping. It wasn't until Pacific Aerospace Corporation unveiled the PAC 750XL in 2004 that an airplane was purpose-built just for skydiving.

The idea for the PAC 750XL, the first airplane custom designed and built specifically for jump operations, began in early 1999. But long before this could happen, two men had to meet, share knowledge and take each other's measure in 1987. Ray Ferrell had been a skydiver since 1976 and a jump pilot, aircraft owner and DZO since almost as early. He and a partner opened SkyDance SkyDiving in 1987 near Davis, California. Phil Esdaile, a Kiwi from New Zealand, had been the owner of Davis Air Repair, a nearby maintenance shop for aircraft large and small. In due course, Davis Air Repair began servicing Ferrell's jump planes, and over the years, Esdaile became intimately familiar with all the common jump ships—Caravans, King Airs, Twin Otters, etc.—each with their own drawbacks when it came to skydiving operations.



PHIL ZIDEK



PAC 750XL™



As the two men became close, they shared a common frustration with the compromises inherent in every airplane put to skydiving use, whether due to a lack of available horsepower, complex aircraft systems or high maintenance costs of older technology (the newest Twin Otter is 25 years old; some King Airs are 40). Ferrell had more personal reasons to find a more suitable jump plane—he'd lost several friends to airplane crashes over the years.

GOING SOUTH FOR IDEAS

In 1999, Ferrell learned from Esdaile about an amazing single-turbine airplane called the Cresco, built by New Zealand-based Pacific Aerospace Corp. At the time, the Cresco had a 25-year history, primarily as a crop duster, with proven reliability in a very challenging environment. Along the way, someone down under had gotten resourceful, pulled the hopper out of the Cresco and turned it into a jump plane able to carry eight to 10 jumpers, and New Zealand and Australian DZs quickly embraced the little turbine.

At first, Esdaile proposed that he and Ferrell partner to import Crescos for skydiving. Though intrigued, Ferrell knew the Cresco was too small to appeal to many DZOs. Together, the two hatched a plan to visit Pacific Aerospace and discuss the feasibility of building an airplane specifically for skydiving. First, they armed themselves with market research revealing that the U.S. skydiving industry in 1998 operated more than 600 aircraft, 120 of which were turbines, with a net worth of over \$52 million dollars. Next, they put their wish list of jump-plane qualities together. They wanted a maximum payload of 18 jumpers, an average climb rate to 13,000 feet of 15 minutes,

a wide range for the plane's center of gravity, docile and forgiving flight characteristics, and a single, but powerful turbine engine (a 750 hp Pratt & Whitney PT6-34) for efficiency and cost-effectiveness. As icing on the cake, they wanted factory-installed steps and rails and a pilot-closable jump door for fast descents.

TO THE DRAWING BOARD

Early the next year, Esdaile and Ferrell were at a conference table in Hamilton, New Zealand, home of Pacific Aerospace. Over the course of a week, they had several meetings with officers of the company, including CEO Brian Hare. When the pair flew home, they had their answer. Pacific Aerospace agreed in principle; the skydiving world would have its first purpose-built jump plane. The company also saw potential sales to the utility, cargo and bush-flying markets, but the PAC 750XL's first application would be as a jump plane. Esdaile and Ferrell formed Utility Aircraft Inc. to sell the new airplane in the U.S.

Though many design ideas were borrowed from the Cresco, the PAC 750XL would be a brand-new design, and a new design required approval from the New Zealand Aviation Authority—approval that would only come after thousands of hours of computer-aided design and fatigue- and flight-testing. Once New Zealand approval was in hand, bilateral agreements with the U.S. meant that FAA approval would also be granted. In hindsight, optimism in accomplishing the goal was overabundant, with first delivery of a certified jump plane targeted for 2001, just two years after the idea was born. Despite bureaucratic and testing delays, Pacific Aircraft stayed focused and committed, and a brand-new, FAA-certified PAC 750XL was delivered to SkyDance in July 2004.



RAY FERRELL

GETTING UP THERE

A couple weeks later, the airplane made its large-scale debut at the 2004 World Free Fall Convention. Jumpers got an eye full as the colorful jump plane flew alongside all the big players at the convention, such as Twin Otters, CASAs, King Airs and Skyvans. On a day when low cloud cover grounded most of the fleet, the PAC kept going, flying 43 hop-and-pop loads in half a day. The “big” planes could only sit and watch, since it wasn’t economically feasible for them to fly such light loads to low altitudes.

ALL THE RIGHT MOVES

DZO’s love a simple, efficient, load-hauling airplane. With its fast climb and descent rates, the PAC 750XL can fly as many jumpers per hour as a Super Otter. But the beauty is it can also fly light and still pay its own way. Many DZO’s reportedly fly it with only five or six skydivers while still making money. The airplane is also simple to fly, with gentle stall characteristics and no nasty surprises for an unwary pilot.

Skydivers love a quick ride to altitude, but they also like to see the plane loading often, and the PAC seems to satisfy. The door is bigger than a King Air’s, the climb is faster than a Caravan’s, and there are more steps and rails than the Washington Monument. The single-

point fueling system allows for quick turnarounds. Some give a wary eye to the tail, but a normal flaps-down jump run pitches the nose down and raises the tail largely out of the way.

There are now 32 PAC 750XLs operating worldwide. Most are operating as full-time jump planes, with seven currently based in the U.S.: Chicagoland Skydiving in Illinois, Raeford Parachute Center in North Carolina, Sky Knights Sport Parachute Club in Wisconsin, SkyDance SkyDiving, Skydive DeLand in Florida, Skydive Suffolk in Virginia and Skydive Tahoe in Nevada.

While some jumpers are concerned with giving up some of the room they’re accustomed to in larger planes such as an Otter, others claim the economical and time-efficiency tradeoffs are worthwhile. Sky Knights has leased a PAC for the past two seasons, and it’s the first time the club has made any money from regular jump tickets. Before, the club had always subsidized fun jumps with student training income.

The cost of the airplane is just over \$1.3 million. At that price, it may be a long while before the PAC sits on the ramp at every DZ, but the price compares favorably for drop zones considering a Twin Otter or a Caravan; with DZs facing rising fuel prices and decreased skydiver participation, it’s worth looking at any possibility that helps keep fun jumpers in the air. ♦



The Cresco, the precursor to the PAC 750XL.



PETER GALLI