

Jan. 4, 2013 - Walhalla, SC and the SuperSTOL

Years ago, while attending a military airshow at the Navy Beaufort (SC) Air Station I had a chance to see a Marine Corps. Harrier Jet do a vertical take-off and landing. It was truly an impressive sight to watch as this gigantic jet literally leapt into the air and a few minutes later settled vertically to a soft landing.

I had the opportunity, myself, to participate in an almost similar situation the other day after I made a drive to the Just Aircraft Company factory in the upstate of South Carolina. I needed to pick up some parts for my own plane, which is undergoing its annual condition inspection. While there, Gary Schmitt, one of the owners arrived in the company's new SuperSTOL aircraft. While I had seen a You-Tube video of the airplane in flight, I had not seen their new offering in real life. There have been so many changes in the overall design of the Highlander Light Sport Aircraft since I built mine back in 2006-07 that is almost a different flying machine. However I was not expecting what I was about to experience. Co-owner Troy Woodland, the design genius behind all of the Just Aircraft aircraft models, offered to take me up for a ride to experience this beast "in the flesh".

Equipped with the Rotex 914 turbo-charged engine, the plane literally was airborne in about 100 feet of take-off roll. While doing a short sightseeing ride around SC's hilly foothills to the Smokies, I asked Troy about the plane's stall characteristics. He replied that the airplane will not stall. When the plane slows down enough to border on losing all lift to the airfoil, the wing's leading edge slats deploy and the plane then begins its vertical mush downward. Troy told me that in this configuration and with flaps and the stick fully back, the airship will simply continue to settle in a nose high configuration until ground contact is attained. When that happens the main gear's nitrogen filled olio struts will absorb and cushion the ground's impact so that it is barely felt. To wit, he proceeded to demonstrate.

The first thing that I noticed was that instead of the normal pattern entry to the factory's 600 foot long landing strip, (which is a low approach around some trees at the very end of the runway), which you literally do not see until rolling out on final, we came straight in, high... very high. My first thought was that we were so high that we were going to overshoot and land on the factory's roof. However with full flaps deployed we did a very steep decent, almost to the vertical, with very little forward movement. It reminded me of what you would experience in a helicopter approach. As we neared the touchdown point, the nose pitched up dramatically and the rear hydraulic tail-wheel touched down, immediately followed by the mains.

While the bottom photo in this series clearly show the fully depressed olios and the flexing of the main gear longitudinal's along with the cambered out wheel axles, inside the plane it felt like we had just jumped into a feather bed... and then we were stopped. I don't think that even 100 feet of the runway was used, despite the very brisk quartering tailwind. To show me that this was not a fluke, Troy duplicated this feat again with much the same result. So, short of being able to afford the \$20+ million for a Harrier Jump Jet, the Just Aircraft Highlander SuperSTOL might just fill the bill at under \$100K.



Here I am in the left seat, with Troy flying right



The aircraft arrives after a very steep decent



Just prior to touch down the nose pitched up



The mains contacted in a solid but gentle landing

photos courtesy of John Moyers, a prospective customer from TN