



Flying the Aerocomp Comp Air 10 on Floats

– Big airplane, big engine, and lots of performance –

Text by Norm Goyer
Photos by Bill Fedorko and Norm Goyer

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THE LAST TIME I had seen this particular Aerocomp aircraft about a year ago, it was still in the shop being finished. I was amazed to see its huge cabin, and I saw that a nice interior had been installed. The landplane version can carry 10 passengers or any combination of fuel, people or cargo up to its useful load of 3000 pounds. The cabin of the Comp Air 10XL (Extra Long) is 13 feet long and 5 feet wide. Of course, the floats must be quite large to keep the correct amount of freeboard at gross weight for proper off-the-water operation. The floats, as well as the many struts needed to properly mount the floats to the aircraft, all contribute to added drag and the loss of some of this version's top speed. There's some lift from the floats to offset the weight, but performance is, naturally, slightly less than that of the wheeled version. On wheels, the Comp Air 10, with a cruise of more than 200 mph, is virtually your own private commuter airliner. It's available as a Standard 10 or as the 10 XL, in which another 22.5 cubic feet of cabin interior is added to an already huge cabin. The cabin can seat nine to 11 people. There's also a cargo pod available to carry more luggage. The plane has demonstrated it is capable of takeoff at gross within 300 feet and that it can still climb up to 2000 fpm. Stall speed is a slow 46 to 54 mph, depending on the aircraft's configuration. You've probably already started reading between the lines, and it has undoubtedly dawned on you that the Comp Air 10 would make an ideal bush aircraft for a pilot who wants to point his plane's nose "North to Alaska."

If you're a sportsman as well as a pilot and you want to make the Comp Air 10 even more useful, all you have to do is add a set of floats, and you'll have a

capable aircraft – one in the same category as the deHavilland Otter.

Aerocomp started in the float manufacturing business even before it added its aircraft line. Its brand name SuperFloats™ have a unique look – one not everybody will find exactly beautiful. Nor do the bok of Super Floats conform to the familiar shapes of floats we've seen in the past, like EDOs and Wiplines. Nevertheless, floats serve two purposes: keeping the plane off the bottom of the pond and allowing the plane to transition from a boat to an airplane and back to a boat once the flight is over.

Floats are closely related to boat hulls both in shape and construction. The big difference is that the designers and engineers attempt to keep boat hulls on the water, not airborne. Floats, on the other hand, are designed to get an airplane off the water in the least amount of time possible. I was thinking about this while preparing to test-fly the aircraft recently. I remembered that when I'd flown the Comp Air 8 on floats last year, we experienced a bit of trouble getting off the water because of a problem with the prototype floats mounted on the big eight-passenger aircraft. From the feel of the aircraft and its reluctance to become airborne, it appeared that the aft portion of the floats would contact the water before the plane's wings had achieved a sufficient angle of attack. We finally managed to get the plane off, but it was evident that the design of the prototype floats had to be changed. After all, that's why they build prototypes -- to see if any changes might be needed.

While walking the ramp at Merritt Island Airport, I was shown another prototype Comp Air 10 on amphibious floats. It was being prepared for flight testing. Ron Lueck, company co-owner, pointed out the changes in

the float design and mentioned the fact that the new floats had a much larger kick-up than the original prototype floats. Amphibious floats are more complex and expensive to build. The wheels must retract, and when tucked into the float bodies, they must not interfere with water takeoffs by adding too much drag.

Just as there are two types of landing gear (conventional and tricycle gear) there are also two kinds of amphibious floats. The new Aerocomp Super Floats were tricycle gear, the type favored by the majority of pilots who fly off the water. Pilots who make long cross-country trips especially like amphibious floats because they allow them to land at any airport for fuel or repairs. Whereas there are all too few seaplane bases that can serve these purposes.

The float-flying area used by Aerocomp is located on the Indian River on Florida's Intracoastal Waterway. There are no ramps, no docks, no roads, no paths here -- nothing but a rather swampy area shared by a great many beautiful water birds and quite a number of alligators. When we were planning our test flight, we weren't aware that our takeoff area was also shared by huge numbers of other Florida seashore creatures. More about this later.

The Super Floats mounted on the Comp Air 10 were designed with built-in ladder steps to make climbing into the plane's huge cabin slightly less effortless. We conscientiously conducted our usual thorough preflight while the plane was still nosed up on the shore, secured by manila hemp lines holding the plane onto the shore and providing a toll-free road into the composite condo for any creature that might prefer the smell of epoxy to that of damp ground. Once ready to go, several Aerocomp associates untied the plane, then shoved it off to free-

float in the peaceful waters of the Indian River.

We fired up the 724-hp Walter 601 D engine (which had also gone through the shops of John Cook's Diemech Turbine Overhaul Facility). It seems that floatplanes and turbine engines, with their beta props, were made for each other because, thus equipped, you can even back up the plane. Of course, if you give it too much power, you and the plane might get drenched, because those big paddle blades on the prop can certainly suck up a lot of salt water. Because both the plane and the floats are built of composites, not aluminum, there's no danger of corrosion.

We water-taxied the plane away from the shore, then headed into the wind to do our pre-takeoff engine check. This is simple in a turbine. All was well – until Lueck set the engine for full takeoff power. The plane surged ahead, came up on the step and rotated – all within a few hundred feet. The new floats were doing their job admirably. We were climbing out at a steep angle when we saw thousands of little red ants crawling out every opening on the instrument panel, while another army of the little creatures marched up the control stick, rudder pedals and up Lueck's feet and legs! The cockpit was alive with ants!

Lueck yelled, 'You've got it! I've got ants in my pants -- and everywhere else!' I hadn't yet been attacked, so I took over the flying while Lueck feverishly began brushing, cursing and slapping. We've all heard the phrase "Ants in your pants," but as soon as you've experienced the real thing, it takes on a whole new meaning. What our ant emergency did was to completely obliterate any takeoff, climbout or other kind of flight testing until we were able to stop swatting ants and start flying the plane. They

finally either went back into hiding or we squashed them all, but we breathed a sigh of relief when they all disappeared.

Just then, the new Cessna 182 camera plane pulled into formation with us, and the photo mission began. I've flown several large aircraft with flight characteristics that reminded me of those of the Comp Air 10. The Cessna Caravan has a similar feeling, as does the deHavilland Otter. The Comp Air 10 doesn't do anything quickly, and that's OK because you certainly wouldn't want a big 10-passenger airplane to flit around the sky like a Pitts. When an airplane is carrying a lot of weight, slower is always better, but the Comp Air 10 can be placed in any position the pilot desires. All the controls have a solid feel to them.

After the photo shoot, it was my turn to fly, and I wanted to see how the redesigned floats would handle on takeoff. There was almost no wind, and the Indian River was ripple-free, except for those made by the wake of a few alligators and the playful jumping and splashing of a pair of dolphins. Once I made sure there were no large birds (herons, seagulls or marsh eagles) in the takeoff path, it was launch time. Because these new floats had a much higher angle of kick-up, it was possible to get the nose almost too high in the air with full-up elevator. It was easy to find the right spot though, because the plane seemed to surge ahead, looking for the command to rise up on the step so we could accelerate to rotation speed. Once the plane got up on the step, the speed almost immediately came up to about 80 mph, and with a bit of back pressure the plane rotated a bit, then took off. As soon as the drag of the water was eliminated, the climb rate soared to more than 2000 fpm. The Comp Air 10 on wheels can cruise right around

200 mph; on floats it wasn't quite as fast. But for such a large floatplane, it was still impressive.

I'd flown the plane several times before on wheels and knew it was stable – even in high-angle 360-degree turns – and that its stalling characteristics were mild. Over the years I've learned that adding a set of floats to a good-flying aircraft makes it fly even better because it lowers the longitudinal axis, as well as the accompanying point of its C.G. This action is somewhat like that of a pendulum. When you establish a turn, the plane tends to stay right where you put it.

Landing the big floatplane was simple. All you have to do is set up a safe approach speed at the right angle of attack, then fly it down with power. When the tail of the floats contact the water, throttle off and the plane is finished flying. The floats on this particular Comp Air hadn't yet been equipped with a water rudder, but the combination of the large twin vertical stabilizers and the rudders, plus the beta feature of the prop, made the job of maneuvering on the water quite easy.

Beta props aren't new. More than 50 years ago, I flew an original Sea Bee, equipped with a 225-hp Franklin engine, and it had a beta prop. But the Lake amphibians I owned didn't, and that's when I realized it was not as easy to handle on the water without a beta prop.

Aerocomp has many different kinds of Super Floats. Whatever the size or weight of your experimental aircraft, there's bound to be a set that will fit your plane.

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Text by Norm Goyer. Photos by Bill Fedorko and Norm Goyer.

PHOTO CAPTIONS:

1) “The Aerocomp Comp Air 10 can cruise at speeds approaching 200 mph. This is quite fast for such a large floatplane.”

2) “There’s seating for 9-11 and an added baggage module attached to the fuselage.”

3) “The floats are attached to the aircraft with a series of struts and cross braces. Parts of the struts are also utilized as a ladder to enter the aircraft.”

4) “Amphibious floats, now under evaluation for the Comp Air 10, will make the aircraft even more versatile.”

5) “The floats have a unique design that gets the huge plane off the water in a short distance.”

6) “The Aerocomp Comp Air 10 is a large high-performance floatplane powered by a Walter turbine engine with a four-blade Avia prop.”

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