

A man with a beard, wearing a blue t-shirt with a 'Seaplane' logo, a grey baseball cap, and sunglasses, is leaning over the side of a white floatplane. He is using a red-handled tool to work on a blue component on the fuselage. The floatplane is on a body of water with green grass and a brick building in the background.

*Floatplanes
Surprises
A Quick Sidebar
Discussion*

Sidebar: Floatplane Surprises

By Mike Jones

Cessna Pilots Magazine, originally published: June 2019

Every time I visited a new seaplane base I was surprised by what I learned. One surprise is the variety of technologies. There are three general categories of water-planes: seaplanes, float planes, and amphibians:

- ◆ Seaplanes are true flying boats, like the Icon, the SeaRay, or the Lake (photo, below, at Oshkosh 2021). The fuselage carries the weight of the plane when it's in the water, and it also takes the abuse of landing and take-offs. The world's most famous seaplane was a flying boat design — the enormous Spruce Goose, built by Howard Hughes. It was designed to carry 700 army troops.



- ◆ Float planes are regular land airplanes with the landing gear removed and pontoons bolted underside. “Straight floats” are pontoons lacking wheels, so those planes are restricted to water-landings only.



This Cessna 180 amphibian floatplane was being refueled at the seaplane base at Oshkosh in 2021.

- ◆ Amphibians can be seaplanes like the SeaRay or float planes such as the ones I flew. In either case, they require a complex systems of wheels, wires, pumps, hydraulics, and interconnects to enable the plane to extend wheels when landing on pavement and retract the wheels when working on the water. These systems are impressive but heavy and expensive. Nonetheless, amphibians are the most versatile airplanes in the G.A. fleet.

Another surprise: Standard props on land-planes usually are tuned to optimize cruise speed. But a floatplane uses a climb prop to pull the plane off the water more quickly. Between the climb props and the drag of the floats, most float planes fly more slowly than their wheeled cousins.



This handsome Republic Seabee is a classic seaplane amphibian. The fuselage of the plane itself is designed with the hydrodynamics and strength required of a high-speed motorboat. Notice the top-mounted, rear-facing engine which keeps the prop away from the erosive effects of water spray.

The good news: floats are engineered to create lift, so most floatplanes stall at slightly lower speeds than land-based aircraft.

Another surprise: water in the floats. All floats collect water, from leaks, rain or condensation. Each of my pilots spent a portion of every preflight opening hatches and pumping from the compartments. In every instance the tanks had some water; a few had quite a bit.

One last surprise: seaplanes like really low altitudes. In my normal Cessna steed, my primary mode is fast and high; flights in the mid-teens are common.

Altitude is my friend. But with seaplanes, low is home. In six hours of float plane flying we never went over 1,500 feet. It's all very odd and very wonderful.

About the Author



With about 40 hours of tailwheel time, and six hours of floatplane time, Mike Jones is not quite ready for his bush-pilot rating. For a day job, he works with small airports, helping them boost their performance and become more important to the communities they serve. He's based in Pinehurst, NC. You always can reach him at PilotMike2012@gmail.com.