Check your Tail Wheel Microswitch

I had an incident occur which I feel most Seabee owners should check out at their first convenience to prevent it from happening to them. This situation could cause the tailwheel not to extend fully and though not life threatening, on a hard surface it could ruin your whole day.

I, along with six other Seabee owners, was lucky enough to attend the Glenn Curtiss Seaplane Homecoming in Hammondsport, NY and some owners volunteered their Seabees for airplane rides that benefit the Curtiss Museum. A worthy cause. As the morning disappeared into afternoon, I was giving three people a ride up Keuka Lake and back; about fifteen minutes and after I landed on the lake and prepared for an exit onto the boat ramp that was graciously provided for us, I noticed the green gear light did not illuminate. Recycle the gear. No light. Check the bulb. It's good. (You do carry spare bulbs, right?) I had to assume that the tailwheel wasn't down as I could see the main gear down and I heard the signature "clunk" under the back seats indicating an over-center down and locked position of it.

After trying three times to get a green light, I resigned myself to the fact that I was going to have to pull up the ramp and hope that perhaps the tail wheel was in fact down. As I pulled up the ramp I noticed an unusually nose high attitude as the main gear made its way up the gravel ramp. Okay, the tailwheel isn't down. (Remember that you need TWO switches to close to get a green light. Only ONE to turn on the red light. See illustration below)

I was up the ramp just enough to let the three people out without getting their feet wet and also, unfortunately, not far enough to prevent blocking anybody trying to get up the ramp to park their trusty seaplanes! What a deal. We had to work fast as I didn't want to be the roast of that night's activities after the flying is done plus we had seaplanes "hovering" in the lake waiting to get in. D-oh!

There were ample volunteers to help lift the tailwheel out of the water and onto a wooden block so I could get the tail wheel down and pull the Seabee back up on the beach. By the way, if you ever have to do this fill the cabin with the heaviest guys you can find and put a couple of guys on the bow cleat (via a looped rope) so it is easier to lift the tail and block it up.

After getting the tailwheel down and the Seabee back on dry land, I opened up the right and left-hand tail inspection covers. With the help of Jerry Belcher, the local mechanic, we noticed
the tail wheel microswitch had rotated 45° and was jamming against the tail wheel drum support inside the fuselage. This allowed the hydraulic pump (electric) to operate normally and shut off at its preset pressure of 800 psi. but <u>without</u> the tailwheel being fully extended. The small bulkhead was strong enough that it didn't get damaged when the switch came in contact with it and the switch was strong enough to take the punishment. Amazing.

What had happened was the jam nuts used to hold the microswitch in place had loosened and allowed it to rotate. After the fact someone else told me that the same thing had happened to him so consequently I am passing this along because I'm sure it could happen again. If this had happened on a hard surface runway the damage would have been significantly greater so check your tail wheel microswitch soon!