

Habits, Good and Bad

By Chris Hope, Master CFI

The thought of habits and habit patterns has been wandering through my mind a bit this past week or two. The thought actually struck from two different sources. The first came from the number of different airplanes that I fly regularly. The second from my first flight back after six weeks of cruddy weather.

Operating similar but different pieces of equipment is not all that unusual. We all do it. We all drive different cars on a regular basis. We all fly airplanes and we drive cars. Some of us drive trucks for a living, then we drive our car home, and then we fly on the weekend. I am not that different.

On a regular basis, I fly five different airplanes, built by three different manufacturers in three different eras - 70's, 90's, and within the past five years. Because of the time of manufacture and the different approaches to cockpit layout by different manufacturers, (as well as the changes made over the ages), all of them are laid out differently. Add to that mix the fact that some have retractable gear and some fixed, some have a prop controller and some do not, they might or might not have cowl flaps, and if they are fuel injected they do not have carb heat, but if they have a carburetor they do.

I had not thought too much about this state of affairs until the weather broke earlier this month and I actually got to fly again. Generally, I fly something at least two or three

times a week, and five flights a week is not unusual. But I suffered from the same weather most of us experienced in January and February early March this year. Every day saw snow, or cold temps, or high winds. And on the few days that were decent, the results of the previous ice and snow storms were piled up against hangar doors, trapping airplanes inside.

Finally, a warm day in March. My wife says, "Get out of the house and find a friend to go fly with. Go get barbecue or biscuits and gravy or something. Just get out. You are driving me crazy!" So I did.

The day was nice, we pulled the plane out of the hangar, preflighted and hopped in. I was in the 172 that my club has owned for several years, but all of a sudden I was stopped for a second while I remembered that the headset plugs for this plane were down under the instrument panel. It is the 182 where they are up high on the right side. I started to dial in the atis frequency, and 119.35 did not jump into my fingertips. And oh yeah, I was at that airport where Ground is on 121.6, not the other one where it is on 121.9. All of these tiny events were small warnings that cry out, "SLOW DOWN!"

All of us who operate a piece of machinery, be it a car, boat or plane, or equipment in the shop, have the experience that after a while, our hand and our fingers and our mind

just go to the correct spot at the correct time. Athletes and musicians call this "muscle memory", the recognition that our fingers, arms and legs respond automatically when required. We pilots depend on muscle memory as well. And that is great. Until it doesn't work.

We as instructors teach this, although we don't call it that. How many times, in training, do we repeat a maneuver until we get it right, and then until it just becomes natural. For my pre-solo students, we turn base with the left hand on the stick or yoke, retard the throttle to idle and pull the carb heat knob and lower the flaps with the right hand, while our eyes are looking for the roll-out spot. And we do it so often that our hands and eyes begin to make the correct movements without any conscious thought.

I have had several engine failures over the years. After I restarted the engine, I realized that that my hand had switched on the fuel pump, moved the mixture to full-rich, switched tanks, and moved the nose to best glide, all within a few seconds and without being consciously aware that I had done so.

But all of us have been in the situations that I have described earlier. All of us have moved to a different plane than the one we were comfortable with. All of us have been forced to sit on the ground for a few weeks or months. And it is times such as this that our muscle memory fails us or even works against us.

So when does it work against us? Well, first of all, any time we get out of our normal routine. There is a common refrain in nearly all of the inadvertent gear-up situations: "Tower called out traffic to me and told me to extend my downwind and I forgot to extend my gear as I looked for the traffic"; or, "I got in a hurry when exiting the runway. I meant to raise the flaps and I raised the gear instead"; or, "I was so focused on keeping the runway in sight during a circling approach that I did not even hear the gear warning horn." Sound familiar?

Or have you heard yourself saying this when checking out in a new plane? "It was awful. The radios were right there, but I found myself turning the knobs the wrong way. The audio panel was in the wrong place. I kept confusing the mixture for the prop control, and I kept looking for carb heat and then realized that I didn't have one. And more than once, the instructor had to remind me either to set the flaps to TAKEOFF before we rolled onto the runway, or to raise them after takeoff." These are situations where your muscle memory is giving you the wrong information.

So how do you handle the situation where you fly a number of different airplanes regularly? How do you handle getting back into the air after an absence? There are several techniques. One, for flying different aircraft, is a technique I call "one size fits all."

I know that all of my different aircraft have different requirements for

configuration settings just before entering the runway and just after takeoff. For every takeoff, I say to myself, "Flaps, where do I set them?" as I enter the runway which forces me to think, not just to act. After every lift-off, I say to myself, "Gear up, Flaps up, Throttle set, Prop set, Cowl Flaps closed." Each particular requirement might not apply to the plane that I am flying at the moment, but I have forced myself to consider each item for every takeoff.

Another technique is the "Slow Down!" technique. If I have not flown or a while, or if I have just switched

to a different aircraft, I tell myself to slow down and think about my hand and eye movements. I tell myself not to rely on habits. And the key to realizing that I need to do this is when I first observe myself making small mistakes. I know that if my habit patterns are leading me astray when I have not even yet taxied, they will lead me astray even more-so later on. Now is the time to take a deep breath and think before acting.

So while it is great to be back in the air, slow down and think about what you are doing before you do it.

Don't just practice until you get it right. Practice until you don't get it wrong

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