

## Fresh Air Matters... with Capt. Yaw

Another week of flying – and seeing our amphibian X-Air-S get in the air in its ‘land-land’ mode but all ready for the water landings in the coming days. This really brings home the importance of another checklist that we use and the first checklist I committed to memory. It is called the downwind or ‘before landing’ check – but we all call it ‘BUMFITCH’. This list is contentious amongst pilots, for a lot of reasons, but I will not enter into that debate here. I learnt it the old-school way from an old-school pilot and it enhances safety for me and my students – and that is what checklists are all about.

I chose to learn it first because I thought it sounded funny. It sounds like ‘BUM – \* – ITCH’ or ‘itchy-bum’, well to me at least. This is the check normally carried out on the so-called ‘downwind leg’, but always prior to landing, and I must admit that I still love this checklist the most. I will shuffle my bottom in the seat and raise my shoulders, take a deep breath, ready to sing loud and long. My eyes widen as if to absorb the entire landscape in high definition. Then I embark on the BUMFITCH pre-landing safety check that I have carried out so many thousands of times before, and that has most probably saved me from a major accident, at least on one occasion.

**B** – Brakes off. There is nothing more annoying than landing with the brakes on! It can really spoil your day if those wheels touch the ground and can’t roll. Generally it results in a sudden lurch forward, followed by a sensational pitch onto the nose, and a graceful tumble onto the back of the aircraft, fuel spilling and a spoiled aircraft. Not something to forget!

**U** – Undercarriage down (normally). The undercarriage is the name for the wheels, landing gear, et al. If the undercarriage can be retracted for flight (as seen on the airliners), it is a good idea to have those ‘dangly bits’ down and locked, ready to transition from metal bird to winged car. However, those with fixed undercarriages should also check that the wheels are still there! It is not unknown for a pilot to identify a puncture or a lost wheel, or indeed a broken under-carriage leg, during this check. I have carried out many, many thousands of landings in aircraft with fixed undercarriage and ALWAYS check my wheels. To date I have detected one failed weld (and fixed it in flight with a piece of cord by climbing half out of the cockpit to bind the area securely), and two punctures - prior to landing (there is a standard technique for landing with a known puncture). All three occasions – out of several thousand landings – were non-eventful and no damage or injuries sustained – BECAUSE I checked and then ACTED on the facts found. Now, the amphibian gets more exciting. Gear is DOWN and locked for land-landings and UP and locked for water splash-downs. Get it wrong and it is a mess!!! All those years ago I was trained to check the undercarriage – whether retractable or not, whether for land or water. Today it really serves me well – even if 99.999% of the time I find that all is in order, the check is for the 0.001% of the times!

**M** – Mixtures to rich. Make sure that the fuel-to-air ratio is correct, so that we get maximum power in case we need to ‘go around’. It would be very embarrassing to decide to abort a landing, whack in the power and hear the engine go ‘phut-phut-phut’. Of course, we fix our aircraft where possible with constant depression carburettors to avoid this being a necessary check – but we still call it out so that, the day we fly a plane with a mixture control, we are ready to fly it professionally and safely.

**F** – Is the correct fuel tank selected and, more importantly, is there enough fuel to go around? Fuel starvation is still the number-one reason for engines stopping in aircraft. I guess it is probably also the number one reason for stoppage of engines in cars too!!! When an aircraft runs out of fuel in flight, it demonstrates a lack of flight management; but when the tank runs dry just a few meters short of the runway, it demonstrates that ‘nearly’

is not good enough! I am glad to say that 'fuel starvation' in Ghana seems to be rare. I am sure that the 'hostile terrain' focuses our minds, and makes this something that we are more conscious of than our counterparts in other parts of the world.

**I** – Are instruments set and correct? The altimeter needs to be on the correct pressure setting for QNH (altitude) or preferably QFE (height above the aerodrome). In flying, we seem to always be checking and cross-checking, because it really makes a difference to safety – not only of the aircraft and its occupants, but all of those on the ground; and getting the correct altitude/height reading is essential to avoid 'controlled flight into terrain'.

**T** – Are temperatures and pressures within range? There are many pressure and temperature gauges – for cylinder heads, oil temperatures, exhaust gas temperatures, etc. The monitoring of the power plant provides early warning of potential failures; again, contributing to the overall safety of operations.

**C** – Carburettor heat and make a communications call. There is a risk of icing in the carburettor, even in Ghana! Consequently, we check that the 'carbs' are given a blast of hot air taken off of the exhaust shroud (if not kept warm by another system), and then make our call to the radio station at the facility where we are going to land, as well as alerting all other traffic as to our location and intentions.

**H** – Are all hatches closed and harnesses secured? It is a good time to make sure that the doors, glove box and cargo areas are locked down, and that all seatbelts are secure. Sometimes the belts can loosen a little in flight, and so making sure that they are well tight prior to touchdown is a sensible option. Remember, we keep our seatbelts on ALL of the time – as you should in your car too!

As we considered during the past two checklist discussions, these can all be applied to our lives, businesses and driving. Because 'Safety is NO accident', checklists are an important tool in the safety-aware framework of our flights, daily lives, work and projects. Perhaps you should take a trial flight and witness these things first-hand over the beautiful landscapes of Ghana!

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