



Typical start to a competition day at Masterton

Aerobatic Pre-flights for Pilots

It's a good idea ahead of any flight to also pre-flight yourself, but the process goes to a whole new level if it's a competition aerobatic flight you're off on. Aerobatic expert and regular KiwiFlyer contributor Grant Benns offers some recommendations:

“Grant you're up in two flights, after Desmond and Andy”. Which is Starter code for ‘get ready to go... now!’

Luckily, being the organised, cool/calm/collected, experienced and seasoned competitor, I am ready to go – mostly, and most of the time. However, the process proceeding turning-in and diving for speed for the first manoeuvre of any aerobatic flight should start an hour or more beforehand, regardless of what is at stake.

PPPPPP

Prior Preparation Prevents Probable Poor Performance, or something like that. As does practice – plenty of it. But getting your head in the right space before strapping on the plane is vital, and no different to the process professional athletes, in any sport, develop and utilise. Watch a pro-golfer stepping up to hit the ball – same routine, every time. Developing your own routine that you rigidly stick to is a good platform for achieving consistent results, or at the least giving yourself a chance.

The Order of Flight

Whether it be an aerobatic competition, an airshow, or a Sunday afternoon carve through the sky, it is a good idea to know roughly at what time you are expecting or expected to fly. And if not the exact time, at least have an idea of the order of the aircraft/pilots in front of you. At rapid-fire events, where each competition/display flight may only be 4-8 minutes duration, you need to know how long it takes you to pre-flight, strap-in, start-up, get airborne and climb to the designated holding position, so that when you get the call-up to ‘commence when ready’ you are ready to go. Note – it always takes longer than you think, until you have done it a few times, so add 50% to your initial estimates. Depending on how fast your plane climbs, there is no harm and very little cost in getting started a few minutes early, then sitting idling at the holding point for take-off, with all your run-up and checks complete. I find this a good time to breath, chill-out a little, and watch the sky in relative peace before the mayhem starts...

Once you have established the order or time for your flight, maintain an awareness of those flying ahead of you, and also of your watch (if you wear one – old school, I know!). Try to avoid distractions that will disrupt your focus on the upcoming flight, such as deep conversations on the theory of flight, or Donald Trump, or even seemingly harmless casual conversations with spectators – time can ebb away quite quickly and the aim at this point is to keep your focus and not be rushed.




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The Pre-Flight Check of You

We mostly fly on fine sunny days, and in aircraft with big canopies, which are great for visibility but can become very hot, both before the flight and inflight too. You need to be in good shape before you get in the cockpit, the foundation of which can go back to the previous night. Getting a good sleep and having a clear head at the start of the aerobatic day is vital. It goes without saying that medications that will affect your alertness are totally off the plate, and a healthy breakfast ('breaking the fast') with plenty of fluid – ideally water – is a good kick-starter for your long day ahead. Airshows and competitions are always long days.

Throughout the day, maintaining hydration is essential – dry eyes and a head-buzz must be avoided – and drinking diuretics like coffee are best avoided until after your flying is complete. We all have different ideas on what feels best in your stomach before pulling 'G', but the consensus is that 'nothing' is not the correct answer – stick to what works for you, but something filling and plain such as sandwiches or bread-rolls an hour or two before flying seem popular options. Probably not a warm fish milkshake!

The Pre-Flight Check of Your Plane

Knowing your plane is good to go and you have total confidence in it is vital, for safety and to free up your mind for the task of flying. You should know your plane very well by this stage of practise and preparation, however be aware that this can be a possible liability when considering the issue of complacency. Every flight is a new flight, and the last flight may have shaken something loose, so treat every pre-flight inspection the same, each and every time. Be thorough, rigorous and carry it out without distractions. Are there any leaks? Any loose fairings or excessive

movement in bearings or support structures? Enough fuel and oil? Most importantly, don't forget not to totally forget it at all, in the rush to get going.

The Pre-Flight Walk-through

If you have attended an aerobatic competition, you may have seen pilots holding a small piece of paper in one hand and making twitching/flapping motions with their other hand, all the while walking in small circles. They will be totally absorbed in this strange behavior, and most likely deaf to any outside conversations. Some wear headphones and are possibly listening to Bob Marley. Or Pink Floyd (Learning to Fly?). Be assured they are not mad - they are focused, wanna-be professional athletes, going through a pre-flight walk-through of their sequence.

Mental rehearsal of the sequence, many times over, but particularly just prior to the flight, is a cheap form of practise, and very beneficial. You imagine flying the whole sequence, in order, from beginning to end – the speeds and heights, the scenery outside and your positioning relative to the judges, crowd or landmarks, and the flow of the sequence. Many pilots will have notes written on their sequence card – this is the time to make final adjustments and confirmations based on the actual wind and direction of flight. Lock them in and believe they will work – second guessing them in the air doesn't work, as I have discovered many times...

Complacency

As mentioned earlier, the repetitive nature of the practise and build-up to flying a competition sequence can lead to aspects of complacency in regular actions, many of which are critical to the

safety of the flight. Generally, if you fly the aircraft within the limits of its flight manual you should expect the aircraft to look after you, but in the same respect that 'junk-in = junk-out' with computers, there are some critical checks that must be done, on every flight, to ensure that we are safely 'good to go'. To assist with ensuring the pilot is ready for flight, an organised competition event will have a Starter – a person with a checklist who will methodically do a final check that both you and the plane are fully prepared for the flight. They will check such basic things such as having the correct altimeter setting (normally set to QFE – zero feet), that your seatbelts are actually done-up, and you have sufficient fuel for the flight. Believe it or not, these regularly get missed by the excited/excitable pilot! The Starter is also tasked with discretely checking on your mental wellbeing – it is very difficult to be self-critical of this, so an outsider 'looking in' may be your saving grace. If they say you don't seem in the right mental space to be going flying, heed their advice.

Prior to starting, and again with the run-up and preflight check, DON'T RUSH. Do your normal procedures, just like it is another day in the office, but perhaps be just a little more vigilant and a touch paranoid, knowing that an actual competition flight has the ability to create pressures not normally felt. Check your belts and canopy an extra time, just to be sure.

Most aerobatic pilots (in fact most pilots) should have heard of the mnemonic 'HASELL', referring to the checks carried out immediately prior to commencing aerobatics. Don't forget to do these. Don't be rushed by somebody on the ground radioing you that they are waiting for you to start. Make them wait, do your checks with your usual discipline, get the plane to the right height and speed and start when YOU are ready.

Pace yourself, you special pilot.

Throughout this article you may have noticed frequent references to 'time'. Whilst the actual flight will seem to be over in flash, the successful outcome of it is a result of taking the time to practise prior to the event, making time for the preparation of yourself and the aircraft on the day, and having a methodical, appropriately-paced discipline to your entire flight. Quite often

endurance athletes will win from the middle of the pack, but in a sport like competition aerobatics where there is only you and your plane in the air, with nobody around you, you must be both the pacesetter and pace-follower, which requires a mental discipline not apparent to the casual observer or regular pilot. This is what makes you special!

Grant Benns 