

“Line Up and Wait... I said WAIT!”

When issued with a clearance or departure instruction, you need to keep your headspace in the right kind of airspace. The biggest threat to your inner cockpit zen is confirmation bias.

Confirmation bias is a tendency to search, or interpret, information in a way that confirms given preconceptions.

Always listen carefully when communicating with air traffic control (ATC), as the misinterpretation of a single word can alter the entire context of a clearance or instruction.

ATC uses standardised phrases to reduce the risk of occurrences, such as runway incursions, and takeoffs without a clearance.

If you're ever unsure, “say again” is your best friend.

“Cleared for Takeoff”

In the aviation environment, the phrase TAKEOFF should only ever be used as part of a takeoff clearance. At other times the words DEPARTURE or AIRBORNE are used.

Be aware that an air traffic controller is, in most cases, unlikely to clear an aircraft for takeoff until the pilot has actually called ‘ready’.

“I’ve had two turboprop aircraft depart without a takeoff clearance this year,” one New Zealand air traffic controller remarks.

“In both cases, given the traffic situation at the time, those aircraft could have departed safely (the release had been obtained), but neither pilot had actually reported ‘ready’.

“In situations where the pilot reports ‘ready’ and cannot be cleared for takeoff, another instruction such as ‘line up and wait’, or ‘hold position’ would normally be issued.”

Some Possible Takeoff Misinterpretations

VFR Departure Clearance



Tower: *XYZ leave control zone via SEAGROVE 2000 feet or below report SEAGROVE.*

A departure clearance instructs a pilot how to leave controlled airspace after departure. Usually, the departure clearance will be given in a separate transmission from the takeoff clearance, to prevent the two being confused.

Departure Instruction



Tower: *ABC turn left after departure.*

The key word which accompanies the above left turn instruction is DEPARTURE. Until the word TAKEOFF is issued by ATC, the aircraft's wheels must stay firmly planted on the ground.

Traffic Information



Tower: *ABC traffic is a Cessna operating in the Matakana sector 2500 feet or below.*

Giving traffic information is the controller's way of helping you paint the big picture – don't misinterpret it as a takeoff clearance.



Note that relevant traffic information will be issued whenever ATC is aware of conflicting aircraft if separation is not required. It's your job to sight that traffic (if necessary) and maintain a safe distance.

Conditional Line-up



Tower: *Fastair 354 report the blue Dash 8 on final in sight.*



Fastair 354: *Blue Dash 8 in sight.*



Tower: *Fastair 354 behind the landing Dash 8 on short final line up behind.*



Fastair 354: *Behind the landing Dash 8, line up behind, Fastair 354.*

If the preceding aircraft causing the condition is on final, a conditional line-up instruction will contain the key word BEHIND at the beginning and end of the instruction.

If the preceding aircraft is occupying the runway, or taxiing in front of the aircraft receiving the clearance, the controller will use the word AFTER, instead of BEHIND, in a conditional line-up instruction.

It's worth noting that the controller will only issue a conditional line-up clearance if they consider that the aircraft receiving the clearance can see the aircraft causing the condition.

Helicopter Departure Investigation

The CAA conducted a theme investigation to analyse the reasons for helicopter takeoffs without a clearance. A theme investigation tries to identify common themes in a set of aviation accidents and incidents.

The analysis revealed three locations where 61 per cent of incidents predominantly occurred involving helicopter takeoffs without a clearance. They were Nelson, Hamilton, and Palmerston North.

Matt Harris, CAA Safety Investigator, explains that the potential consequences of a departure without a takeoff clearance is classed as 'high risk'.

"At those three aerodromes, there's a large amount of commercial traffic, and that raises the risk. We determined that the helicopter occurrence rate is approximately seven times higher than the fixed wing rate at the same three aerodromes," says Matt. ■

Further Reading

Advisory Circular AC172-1 *Radiotelephony Manual*
– see www.caa.govt.nz, "Advisory Circulars".

Plane Talking booklet – email info@caa.govt.nz for a free copy.

Plane Talking online course – go to www.caa.govt.nz/avkiwi.

Alternative Process for Determining Cardiovascular Health

The CAA has adopted an alternative process for determining cardiovascular health which, for many participants, may cost less. The new process may not be the best option for everyone, however.

"We've recently reviewed cardiac imaging methodologies and accept that CT coronary artery calcium scoring (CT calcium scoring) is a useful way of assessing cardiovascular risk," says Dougal Watson, CAA's Principal Medical Officer.

The calcium test will only be applied to participants who are judged to have an elevated cardiovascular risk. There are many factors that determine cardiovascular risk including age, blood pressure, and whether someone smokes.

"If you have a CT calcium score of 0, then you may not need another test for five years," says Dougal. "That could make it cheaper and easier than the current process."

However, if the test comes back higher than 0, then you will need to follow the existing process which usually involves an exercise stress electrocardiography test, incurring the cost of both tests.

The CAA suggests that you discuss with your doctor which process will be best for you.

"We will be looking at our cardiovascular risk protocols in more depth in the future," says Dougal. "However, this interim step should make the process easier for many applicants without affecting safety." ■



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