

CAUTION WAKE TURBULENCE

6/15/2018

We routinely train wake turbulence avoidance but does every pilot truly realize the risk involve when flying near or into airports with large aircraft operations. It is not just a “landing or takeoff” concern. Flying across the vortices created by a passing heavy airplane can have disastrous effects on small airplanes. The following excerpt is from a Fox news report dated 6/13/2018:

Passengers have described the terrifying moment a vortex sent their Qantas flight into a 10-second “nosedive. Hundreds of horrified travelers held hands -believing they were about to die as the aircraft suddenly dropped over the Pacific Ocean on Sunday. The dramatic ordeal afflicting passengers on the QF94 from Los Angeles to Melbourne is understood to have been caused by a vortex, or “wake turbulence,” caused by another aircraft that took off just two minutes earlier.

QF94 passenger Janelle Wilson told The Australian the “three-quarters-full” plane suddenly entered a “free-fall nosedive ... a direct decline toward the ocean” for about 10 seconds. “We were all lifted from our seats immediately and we were in a free fall. It was that feeling like when you are at the top of a roller coaster and you’ve just gone over the edge of the peak and you start heading down. “It was an absolute sense of losing your stomach and that we were nose-diving. The lady sitting next to me and I screamed and held hands and just waited but thought with absolute certainty that we were going to crash. It was terrifying.”

Thankfully nobody onboard the aircraft, with a seating capacity of 484, was injured.

The aircraft involved was an Airbus 380, not a tiny airplane. With a capability of taking off at 870,000 lbs, this is among the largest passenger planes in service today. Imagine what similar wake turbulence would do to a small aircraft! It probably would have been a catastrophic event to many smaller airplanes.

Proper wake turbulence avoidance means more than landing long or rotating early and side stepping. Visual awareness of the flight path of any heavy airplane crossing ahead of your flight path is critical to avoiding an encounter with dangerous wake turbulence. The best way to avoid severe wake turbulence is to avoid operations at an airport serviced by heavy aircraft. If that is not possible or, when operating in a terminal area serviced by heavy aircraft, be aware of any large aircraft passing in front of your flight path. Ask for a turn or climb to get away from these invisible vortices. Remember, dissipation rates vary with atmospheric conditions but they always settle downward. Don’t try to go under the flight path!

Vigilance and awareness is the key. Fly smart, fly safe!

David Lodes

Chief Flight Instructor

An additional note:

This is why it is very important for every OU pilot to be aware if flying on the east side of the practice area in the vicinity of the Tinker AFB large/heavy traffic (B-52, KC-135, AWACS, TACAMO, KC-10 and others) radar pattern to runway 36 at KTIK. Tinker traffic will fly in the radar pattern there from 2,300 MSL to 4,000 MSL and if you are not paying attention – you may pass behind a track of a larger/heavier aircraft generating wake turbulence vortices. Take a quick look at the You Tube NASA video of a wake turbulence vortices generated by the C-5 Galaxy and L-1011 below. Notice the delay of the “action.” The two vortices off of each wing are “continuous” **and are always present somewhere behind the jet!** Even at high altitude.

<https://www.youtube.com/watch?v=E1ESmvyAmOs>

<https://www.youtube.com/watch?v=uy0hgG2pkUs>

NTSB Safety Recommendation to the FAA

<https://www.nts.gov/layouts/nts.recsearch/Recommendation.aspx?Rec=A-94-057>

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