

Heads Up, Eyes Out Transcript

Vigilance while taxiing on airport surfaces is a critical piece in FAA's mission for safe operations. For all pilots, the primary tasks during this phase of flight are looking outside for signs, markings and lighting, as well as effectively communicating with ATC.

Where are you located?

Where are you going?

What is happening around you?

Each airport layout is unique so it's important that you keep your heads up and eyes out whenever taxiing an aircraft as you are approaching the runway environment, also known as the Runway Safety Area, or RSA.

The RSA is the surface surrounding the runway for reducing the risk of damage to airplanes in the event of an excursion from the runway.

Runway Holding Position Markings, the two solid and two dashed lines, identify the boundary of the RSA. When instructed by ATC to hold short of the runway, a pilot must stop prior to the marking so that no part of the aircraft extends beyond the runway holding position marking.

Crossing the first solid line, even just the nose of the aircraft, means the pilot has entered the Runway Safety Area even though the aircraft has not yet entered the runway pavement. This is a runway incursion.

Pilots approaching runways at airports without an operating control tower must ensure adequate separation from other aircraft, vehicles, and pedestrians prior to crossing the holding position markings.

In this real-life event, we focus on pilots who were involved in heads-down tasks. These may be tasks such as reviewing a checklist or programming the avionics, as they approached an area where heightened attention is required.

The most common runway incursions involve either entering a runway's safety area without permission or entering it at the wrong location because of erroneous routing.

Let's change the trend...Heads Up and Eyes Out. Don't miss the visual cues.

Flight 10 is preparing to taxi to Runway Two Eight Right.

Meanwhile, Flight 84 is also receiving ATC instructions to Runway Two Eight Right.

Start Audio Soundbites

ATC: xxx10 ground Runway Two Eight Right at Echo Echo taxi to bridge transition and then Foxtrot and November join Hotel behind ~~xxx~~.

xxx10: Ok Foxtrot November to join Hotel behind ~~xxx~~ xxx10.

ATC: xxx84 ground Runway Two Eight Right at Echo Echo taxi via November two and November go ahead and monitor three two point seven.

xxx84: November two November two two eight right Echo Echo xxx84.

ATC: xxx10 squawk six two six two.

xxx10: Six two Six Two xxx10.

ATC: xxx34 turn right heading zero four zero and Runway Two Eight Right Echo Echo cleared for Takeoff.

xxx34: Right at zero four zero two eight right Echo Echo cleared for takeoff xxx5034.

ATC: xxx84 turn right line up and wait.

ATC: xxx84 turn right heading three two zero stay with me for another turn Runway Two Eight Right Echo Echo cleared for takeoff.

xxx84: Three two zero to the right two eight right Echo Echo cleared for takeoff xxx84.

ATC: xxx10 monitor tower one three two point seven.

xxx10: One three two point seven, 10.

ATC: xxx54 tower two eight right Echo Echo line up and wait.

xxx54: Turn right at Echo Echo xxx3854.

xxx45: Copy ready at the Echo Echo xxx845.

ATC: xxx45 heavy roger roll it out.

xxx45: Roger

ATC: xxx10.

xxx10: Yes sir, my apologies xxx10 we exit my apologies.

ATC: xxx10 make left turn at papa and hold short of Echo Echo for more.

ATC: Copy xxx10.

End Audio Soundbites

What actually happened in this event? Let's take a look.

The controller gave instructions to Flight 10 to taxi to Runway Two Eight Right. The pilot read back the taxi clearance correctly.

The aircraft was supposed to turn left on Taxiway November but continued straight ahead past the runway holding position marking.

Both pilots were heads down and taxied onto an active runway! When Flight 10 entered the runway without ATC authorization, they conflicted with Flight 84 on departure roll on the same runway.

An accident was narrowly avoided. The ND80 triggered the alarm 3 seconds before it entered the runway. Meanwhile, a Cessna Citation was on take-off roll, climbing out at 90 Knots, and on collision course towards the incurring aircraft, resulting in a near miss.

What can we learn from this event?

During the taxi, both pilots were heads down, missed the turn, and did not see the many cues that they were entering the runway safety area.

They missed the enhanced taxiway centerline, the red and white surface-painted sign, and the mandatory runway signs and the runway holding position marking.

Pilots must be vigilant when navigating on airport surfaces.

Best practices for safe taxi include:

- Use the current airport diagram
- Write down taxi clearance and read back all hold short instructions

- Ensure authorization to cross runway holding position markings
- Look both directions before entering the runway
- For single-pilot operations, pilots should perform all essential tasks prior to taxi
- For multi-pilot operations, ensure at least one pilot is heads up and eyes out at all times
- Use all visual cues
- Eliminate distractions

For more information, see Advisory Circulars 91-73 and 120-74 by clicking the Resources button on the upper right corner.