

Are We (Really) Cleared to Cross?

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The recent near-disaster at JFK on January 13th involving a Delta 737 and an American 777 illustrates the continuing problem of runway incursions. Imagine two airlines, one accelerating for liftoff and the other taxiing out for departure, suddenly trying to share the same runway.

Here's what we know so far. The Delta 737 was cleared for takeoff from runway 4L bound. The American was cleared to taxi to runway 4L for departure.

Instead for remaining clear of the active runway 4L, the American 777 crossed 4L without a clearance directly into the path of the departing Delta 737 which was now accelerating down the runway a high speed. Fortunately, a very alert air traffic controller noticed the American 777's potentially fatal error and quickly cancelled the Delta 737's takeoff clearance, forcing the 737's pilots to perform a high-speed abort.

The Delta 737 rejected its takeoff roll at approximately 150 knots, a huge problem in and of itself. Rejecting a takeoff beyond V1, the maximum speed at which a rejected takeoff can be initiated without going off of the runway, presents a huge accident risk. The Delta jet reportedly stopped within 1000 feet of the American 777, a very close call indeed.

Many will recall the Tenerife runway incursion in 1977 that resulted in 583 fatalities and is considered to be the deadliest aircraft accident in aviation history. The recent JFK incident clearly shows that we are still struggling with the same pervasive problem nearly 50 years later.

What is a runway incursion?

Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft.

— [*International Civil Aviation Organization \(ICAO\), PANS-OPS Doc 4444, Ch.1*](#)

Runway incursions continue to be one of the greatest hazards in aviation. The FAA's statistics show that there were 1574 incursions in 2021 and 1732 in 2022, with no sign of abating.

Taxiing an aircraft seems like it should be fairly simple. In reality, it is a very complex task that becomes even more complex at busy airports. Throw in fatigue, limited visibility, darkness, congested frequencies, time pressure, and a seemingly endless variety of distractions, and we have now turned what would seem to be a basic maneuver into a recipe for disaster.

The FAA investigation will likely take some time. In the meantime, we should ask the following questions:

- Was the crew adequately rested? Its no secret; fatigued pilots make mistakes.
- Did the crew follow good operating practices?
- Were sterile-cockpit procedures followed, which limit cockpit conversation to essential communications only below 10,000 feet?

- Was the crew task saturated or distracted? Were they running checklists, programming the computer, starting engines, or otherwise “heads-down”?
- Was there expectation bias? Did they “expect” to depart from runway 31L?

I firmly believe in one procedure that might have prevented this incident, one that I have used in my airline pilot career. That would be to require a specific crossing clearance to cross any runway, a procedure that is not required today. Had the American 777 simply requested a clearance to cross runway 4L as it approached that runway, the controller would have surely denied it, providing a much-needed error check in a situation where the result of human error is unthinkable.