

# CALLBACK

From NASA's Aviation Safety Reporting System



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## The High Stakes of Runway Incursions

A runway incursion is defined as “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.”<sup>1</sup> Runway incursions are categorized A through D for seriousness using well-defined criteria. Category A incursions are the most serious and are those in which a collision is narrowly avoided. Category D incursions are the least serious and are deemed to have no immediate safety consequences.

Causes can stem from Human Factors affecting pilots, controllers, or other airport vehicle operators. Airport design, markings, traffic, visibility, and environmental phenomena can also be instrumental. Significant work is being done to reduce the incidence of runway incursions and to mitigate the enormous, unacceptable consequences they can present.

This month, *CALLBACK* presents reports of runway incursions that may or may not have been “expected.” Examine each incident to identify the threats and errors (TEM)<sup>2</sup> present in each; then consider how they might have been trapped. Will you expect the unexpected the next time you approach or use a runway? Be ready!

### Part 121 – “Know When to Hold”

An A220 First Officer reported a runway incursion having a subtle undertone that is occasionally misunderstood. The event occurred while taxiing to the assigned takeoff runway.

■ *We were cleared to taxi via 1, 2, 3 and to hold short of [Runway] XXL. I copied the instructions on a piece of paper and then read back the instructions, including the hold short detail. After the taxi instructions were read back, we proceeded to taxi along that route, and while under way, we completed the...flight control checks along with the Taxi Checklist. I was performing my duties of monitoring Ground Control while running our checklists. I completed the checklist prior to entering the area of the designated hotspot between Runway XXL and Taxiway 3. We were both heads-up. Around the time of completing the checklist and going heads-up, Ground Control instructed us to follow Aircraft Y ahead and from the right and to monitor Tower. I read those instructions back. Approaching XXL on Taxiway 3, we each cleared the runway, including the final approach path in accordance with our policies and procedures. When I looked*

*to clear the final, I did not see any aircraft. When we reached the middle of the runway, we both realized that we couldn't clear it because of the traffic ahead associated with Runway XY. It was at that point that I had a feeling we were not in the correct position and that perhaps we were not, in fact, cleared to cross XXL. As I queried the Tower to see if they could move the plane up ahead of us, the Captain noticed a small landing light coming from Aircraft Z approaching XXL. Aircraft Z was then instructed to go around. Traffic moved ahead and we proceeded off the runway.*

### Part 91 – A Controller's Lament

This Ground Controller reported a runway incursion that combined a skeleton crew, situational awareness, and a dash of training and inexperience in the recipe.

■ *I was working Ground Control combined with Clearance Delivery, and my Local Control position was in training. I certified in Ground about 2 months prior. I had an Aircraft Y taxiing out of the FBO to RWY 19 via C holding short of RWY 19 [at] C. After scanning the field and radar, I believed the RWY 19 was clear to cross. I coordinated with LC (Local Control) for the crossing and was told to cross. While I was transmitting to Aircraft Y to cross, the trainer on LC got my attention and told me to hold, as Aircraft X was cleared for takeoff on RWY 19 and just rotated. In the same transmission (I never unkeyed), I told Aircraft Y to disregard and hold position. Aircraft Y subsequently keyed their mic and said they were crossing. I then immediately followed by instructing them to hold position and never was acknowledged by the pilot. Aircraft X flew over Aircraft Y at about 200 AGL mid-cross. Recommendation: I don't believe there is much a procedural change could do to help prevent this. I, as well as the Local Controller, should have a better scan before coordinating any crossing.*

### Part 135 – The Primrose Path

A Lear 75 Captain described several factors and circumstances that landed them at the wrong destination before they had left the ground.

■ *We were given taxi clearance from the ramp via B11, B to Runway 29L. Rain and night conditions made it difficult taxiing. The beginning of Runway 29L is at B2. We were*

not given this taxiway and missed it during our taxi. We continued taxiing via B and after we had passed B2 were issued a takeoff clearance for 29L. As we approached 29R, we were cleared for takeoff 29L and advised of traffic on final for the parallel [runway]. We had the aircraft on final and in sight assuming he was landing on the 29R, not realizing that we were lining up on 29R...not 29L. We taxied onto the Runway (29R) and we heard an airplane go around due to [us] taxiing into position on the wrong runway. Our takeoff clearance was canceled, and we were advised to taxi off the runway. Contributing factors: Nighttime raining, unfamiliar airport. Close parallel runways in operation. One ATC Controller handling Clearance, Ground, & Tower frequencies. ATC Controller could not see us at runway. Takeoff clearance issued after we continued beyond...B2 on B. Runway 29R at B2 not mentioned in taxi clearance.

## Part 121 – Trapping Threats and Errors

A commercial fixed wing air carrier Captain described two imminent runway incursions where judgment and situational awareness trapped the threats and errors. Some good advice is included.

■ *We were holding short of Runway XX...for takeoff.... Tower cleared us for takeoff when there was a Company aircraft still on short final. My First Officer did the right thing and did not accept the takeoff clearance due to the Company aircraft on final. Someone, not sure who, got on the radio after we didn't accept the clearance and said, "Good decision." After that another person on the radio, who I assume was one of the pilots landing the plane, also said, "Yes, thank you." After the Company aircraft landed, we received a clearance to line up and wait, and we accepted it. I proceeded to line up and wait. After the Company aircraft cleared the runway down the field, Tower cleared a different Company aircraft for takeoff on Runway XX. That Company aircraft did not accept the clearance, explaining there was another plane on the runway, referring to us; we were still on the runway. After that radio call, Tower cleared us for takeoff. We departed and continued the flight without any issues. Just want crews to be aware of this so they can be extra vigilant when getting a takeoff clearance. Make sure to always check both sides of the runway before accepting any crossing, line up and wait, or takeoff clearance.*

## Part 121 – To Go or Not to Go?

During takeoff, this A321 crew was presented with a situation that required a split-second threat assessment and a fast decision. After the decision was made, the flight continued without injury, damage, or adverse consequences.

From the Captain's report:

■ *I was Captain and Pilot Monitoring of Aircraft X [from] ZZZ-ZZZ1. We were cleared for take-off on Runway XXR, and as we reached V1, I noticed a GA aircraft at the end of the runway enter and stop in the middle of our departure runway. I called, "VR," and then, "Positive rate," and the FO called for gear up. I said to him, "Is that airplane on our runway?" ...but by that time, we were in a pitch up attitude, and the end of the runway was no longer in view.... Tower had just cleared the aircraft behind us for takeoff and then immediately told them to reject their takeoff. He then told us to contact Departure, and I asked if there was an aircraft that entered our departure runway and he replied, "Yes." After reaching a safe altitude I contacted Clearance Delivery at ZZZ and told them who we were and asked for a number to call when we arrived in ZZZ1 to exchange any information they might need and acquire the needed information for my safety report. Cause: The GA aircraft came into view at our V1 speed and did not pose an immediate action on our part because they were more than 1500 feet away. Rejecting our takeoff at that moment, above V1 would have been far more detrimental and potentially consequential than continuing our takeoff and our flight path clearing this GA aircraft by more than 300 ft. I have no suggestions to help mitigate risks by our crew. We were diligent and performed as trained.*

From the First Officer's report:

■ *Immediately after the Captain and [I]...called, "Positive rate," and I requested, "Gear up," he noticed a general aviation business jet on our runway at the departure end. ... I cannot answer what factors led up to the...business jet causing a runway incursion. However, the incident definitely reinforced the importance of situational awareness while taxiing and following proper standard operating procedures, such as briefing your assigned taxi instructions with a current chart, and both pilots being heads-up when the aircraft is moving. I certainly appreciate the AMM (Aircraft Moving Map) feature on the EFB we use at our Company to help mitigate the potential for these mistakes.*

1. FAA Advisory Circular 120-74B, Parts 91, 121, 125, and 135 Flightcrew Procedures During Taxi Operations, USDOT, FAA, 7/30/2012
2. Threat and Error Management (TEM), <https://skybrary.aero/articles/threat-and-error-management-tem>, <https://skybrary.aero/articles/threat-and-error-management-tem-flight-operations>

*The reports featured in CALLBACK are offered in the spirit of stimulating thought and discussion. While NASA ASRS does not verify or validate reports, we encourage you, our readers, to explore them and draw your own conclusions.*

| ASRS Alerts Issued in September 2025 |               |
|--------------------------------------|---------------|
| Subject of Alert                     | No. of Alerts |
| Aircraft or Aircraft Equipment       | 3             |
| Airport Facility or Procedure        | 9             |
| ATC Equipment or Procedure           | 9             |
| Hazard to Flight                     | 2             |
| <b>TOTAL</b>                         | <b>23</b>     |

550  
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| September 2025 Report Intake |              |
|------------------------------|--------------|
| Air Carrier/Air Taxi Pilots  | 5,402        |
| General Aviation Pilots      | 1,708        |
| Flight Attendants            | 1,513        |
| Military/Other               | 422          |
| Controllers                  | 354          |
| Mechanics                    | 253          |
| Dispatchers                  | 216          |
| <b>TOTAL</b>                 | <b>9,868</b> |