



PHOENIX IN FLIGHT AVIATION TRAINING RESOURCES

CFI: AO2 Task C

Runway Incursion Avoidance



References: AC 91-73; AIM; Chart Supplements;
FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-25

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Objective:

- Learn practical guidance to increase the safety and efficiency of aircraft movement on the airport surface
- To exhibit satisfactory knowledge, risk management, and skills associated with taxiing, including runway incursion avoidance.

Knowledge:

- Definitions, Statistics, Examples
- Taxi Instructions
- Plan, Review, & Brief
- Appropriate Flight Deck Activities
- Airport Markings, Signs, & Lights
- Airport Operations & Runway Incursions

Risk Management:

Identify, assess, and mitigate risk associated with:

- Distraction, task prioritization, loss of situational awareness, disorientation
- Confirmation or expectation bias as related to taxi instructions
- Entering or crossing runways
- Night taxi operations
- Low visibility taxi operations
- Runway incursion after landing
- Operating on taxiways between parallel runways

Why Is This Important:

- Runway incursions can lead to serious accidents with significant damage to aircraft and even loss of life
- With increasing air traffic, runway incursions have been on the rise



Surface Movement Incidents / Accidents: Incursions, Excursions, Surface Incidents

1) RUNWAY INCURSION:

- “Any occurrence in the airport runway environment involving **an aircraft, vehicle, person, or object** on the ground that creates a collision hazard or results in a loss of required separation with an aircraft taking off, intending to take off, landing, or intending to land.”

2) RUNWAY CONFUSION – a subset of runway incursions:

- “**Unintentionally taking off or landing on a taxiway or wrong runway.**”

3) RUNWAY EXCURSION:

- “A **veer off or overrun from the runway surface**. These surface events occur while an aircraft is taking off or landing, and involve many factors ranging from unstable approaches to the condition of the runway.”

4) SURFACE INCIDENT:

- “An unauthorized or unapproved movement within the designated movement area (excluding runway incursions) or an occurrence in that same area associated with the operation of an aircraft that affects or could affect the safety of flight.”



Surface Movement Incidents / Accidents: Runway Incursions vs Surface Incidents

1) 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 take off of aircraft.”

2) EXCURSION:

- “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 take off of aircraft.”

3) SURFACE INCIDENT:

- “an unauthorized or unapproved movement within the designated movement area (excluding runway incursions) or an occurrence in that same area associated with the operation of an aircraft that affects or could affect the safety of flight.”



Air Canada Express CRJ-900 crashes with a Port Authority fire truck at KLGA on 23 March 2026 (ANGELA WEISS / AFP via Getty Images)



Runway Incursions Are NOT Rare

Runway Incursion Totals by Quarter **FY2026 vs. FY2025**

		FY2026					FY2025				
		Operational Incident	Pilot Deviation	Vehicle/ Pedestrian Deviation	Other	Total	Operational Incident	Pilot Deviation	Vehicle/ Pedestrian Deviation	Other	Total
Q1	Oct	22	87	26	1	136	24	86	15	6	131
	Nov	27	80	19	3	129	28	63	24	4	119
	Dec	34	65	33	2	134	23	68	15	7	113
	Total	83	232	78	6	399	75	217	54	17	363
Q2	Jan	18	56	22	2	98	24	70	36	3	133
	Feb	25	61	21	5	112	30	67	13	4	114
	Mar						27	71	25	2	125
	Total	43	117	43	7	210	81	208	74	9	372
Q3	Apr						21	100	18	4	143
	May						36	94	19	2	151
	Jun						35	103	29	1	168
	Total						92	297	66	7	462
Q4	Jul						21	101	31	2	155
	Aug						26	87	18	3	134
	Sep						35	88	22	5	150
	Total						82	276	71	10	439
Total		126	349	121	13	609	330	998	265	43	1636

Source: Air Traffic Organization (ATO) Safety and Technical Training (AJI)

Data is current as of April 16, 2026 and shown through February 28, 2026.

Caveat: Events can take weeks for official classification so recent months' counts and rates are subject to change. Most recent 2 months of Airport Operations are preliminary counts since OPSNET numbers are not finalized until 20 days after the last day of the previous month.

**Average
Daily
Runway
Incursions
thus far
FY 2026
4.03**

**Average
Daily
Runway
Incursions

FY 2025
4.48**

Source: https://www.faa.gov/airports/runway_safety/statistics



Sources of Runway Incursions

Runway Incursion Severity

Sources of Runway Incursions

Operational Incidents	Pilot Deviations	Vehicle/Pedestrian Deviations
Action of an Air Traffic Controller that results in: Less than required minimum separation between 2 or more aircraft, or between an aircraft and obstacles, (vehicles, equipment, personnel on runways) or Clearing an aircraft to take off or land on a closed runway	Action of a pilot that violates any Federal Aviation Regulation Example: a pilot crosses a runway without a clearance while enroute to an airport gate	Pedestrians or vehicles entering any portion of the airport movement areas (runways/taxiways) without authorization from air traffic control

Runway Incursion Severity

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Available Reaction Time	Evasive of Corrective Action	Environmental Conditions	Speed of Aircraft and/or Vehicle	Proximity of Aircraft and/or Vehicle
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Runway Incursion Categories

Category D	Category C	Category B	Category A	Accident
Incident that meets the definition of runway incursion such as incorrect presence of a single vehicle/person/aircraft on the protected area of a surface designated for the landing and take-off of aircraft but with no immediate safety consequences.	An incident characterized by ample time and/or distance to avoid a collision.	An incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective/ evasive response to avoid a collision.	A serious incident in which a collision was narrowly avoided.	An incursion that resulted in a collision

Source: https://www.faa.gov/airports/runway_safety/resources/runway_incursions



How To Avoid Runway Incursions

♦ **Majority are caused by a lack of Situational Awareness** ♦

Los Rodeos Airport on the Spanish island of Tenerife
Runway Incursion Accident
March 27, 1977

Number of deaths: 583
Injuries: 61

Summary: Runway collision due to
dense fog and miscommunication between KLM crew and ATC

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

<https://pifaviation.com/rwy-incursions/>



Things That Make You Go... Hmm?



QUESTIONS?

