



Runway Excursion

Definition

A veer off or overrun off the runway surface. (ICAO)

Description

A runway excursion occurs when an aircraft departs the runway in use during the take-off or landing run. The excursion may be intentional or unintentional.

Types of Runway Excursion

- A departing aircraft fails to become airborne or successfully [reject the take off](#) before reaching the end of the designated runway.
- A landing aircraft is unable to stop before the end of the designated runway is reached.
- An aircraft taking off, rejecting take off or landing departs the side of the designated runway.

Effects

- Death or injury to persons on board the aircraft
- Damage to the aircraft
- Death or injury to persons not on the aircraft
- Damage to airfield or off-airfield installations
- Damage to other aircraft or to vehicles
- Delay consequent upon runway obstruction due to the excursion

Typical Scenarios

- An aircraft departs from or lands on a runway other than that designated or a taxiway either of which may be obstructed and/or shorter and/or narrower than the intended runway. In exceptional cases, the landing case may involve the use of the wrong airport.
- A departing aircraft fails to get airborne before end of the runway due to:
 - Inappropriate aircraft handling technique; or,
 - Decision to reject a take off taken at a speed exceeding [V1](#); or,
 - Aircraft weight exceeds maximum for prevailing conditions; or,
 - Reported runway conditions differing from actual conditions; or,
 - Aircraft weight and/or trim used for setting thrust/power or pitch trim position is wrong; or,
 - Aircraft system malfunction (e.g. nose wheel steering or engine malfunction).
- A landing aircraft is unable to stop before end of runway due to:
 - Touch-down speed is excessive; or,
 - Threshold crossing height is too high and/or the touchdown point is beyond the normal touch down zone; or,
 - Aircraft weight exceeds maximum for prevailing conditions; or,
 - Reported wind velocity or runway surface conditions differ from actual conditions; or,
 - Aircraft system on which landing performance is predicated such as brakes or spoilers malfunctions; or,
 - significant [Aquaplaning](#) occurs
- An aircraft landing or taking off departs the side of the runway due to:
 - Inappropriate aircraft handling technique; or,
 - Wind Velocity exceeds the maximum specified [AFM](#) limitations for crosswind component or the maximum demonstrated POH [cross-wind](#) ; or,
 - Aircraft malfunction (e.g. engine failure or low power, asymmetric brake or spoiler failure, nose-wheel steering failure); or,
 - Loss of directional control due to the effects of [Aquaplaning](#).
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Contributory Factors

- Wind velocity headwind or crosswind components exceptionally variable and/or in the vicinity permitted aircraft maxima.
- Poor and fluctuating forward [visibility](#).
- [Runway contaminated](#) by water, ice, [snow](#) or slush, whether or not this status correctly advised in advance