Subject: High Collision Risk During Runway Crossing

Purpose: This SAFO serves to warn pilots of high-risk category A or B runway incursions and potential collisions in the first two-thirds (2/3) of an active runway.

Background: A Category A runway incursion is a serious incident in which a collision is narrowly avoided. A Category B runway incursion is 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. The diagram below (generic) shows data (depicting FY14 to FY16 Category A and B incursions) from Airport Surface Detection Equipment, Model X (ASDE-X) alerts when aircraft or vehicles crossed prior to an arriving or departing aircraft passing the point of intended crossing. A very high percentage of the time Category A or B runway incursions, and the highest risk of collisions, occur in the first two-thirds of a runway.

Discussion: In an attempt to decrease the risk of Category A and B runway incursions, the following procedure will be added to FAA Order JO 7110.65, paragraph 3-7-2, Taxi and Ground Movement Operations:

“Crossing of active runway(s) by aircraft/vehicle(s): 1. During departure operations, ensure that aircraft/vehicles intending to cross a runway do not cross the runway holding position markings until the controller visually observes the departure aircraft in a turn, or the departure aircraft has passed the point where the crossing aircraft/vehicle is located, regardless of altitude, unless authorized in FAA Order JO 7110.65, 3-10-10, Altitude Restricted Low Approach.”

In addition, the following actions should be taken:
Pilot Actions:
- Actively listen to Air Traffic Control (ATC);
- Maintain high awareness of runway hold lines;
- Remain clear of the runway hold lines unless you are certain you have received a clearance to cross the runway, line up and wait (LUAW), or takeoff;
- Ensure there is no aircraft that could overfly your aircraft and that the runway is completely clear before entering it for takeoff; and
- After receiving a LUAW clearance, expect a communication from ATC within 90 seconds. (Reference AC 120-74(7)(c)(9) and AC 91-73, Appendix 3).

Vehicle and Aircraft Tug/Towing Driver Actions:
- Actively monitor ATC;
- Maintain high awareness of runway hold lines;
- Remain clear of runway hold lines unless certain you have received a clearance to cross the runway;
- Clear left and right before you begin to cross; and
- Review airport driver training materials for your specific airport regarding airport signage and markings, HOT SPOT locations, and construction.

Operator Actions:
- Individuals authorized to taxi an aircraft, other than pilots, must per Title 14 of the Code of Federal Regulations Part 139 § 139.329 (e) attend the driver training course for the specific airport. (Reference AC 150/5210-20);
- Ensure that all training events and training programs include runway incursion prevention; and
- Track runway incursion trends to determine the need for a review of causes and current practices.

Additional Information and References:
- Aeronautical Information Manual
- Pilot Handbook of Aeronautical Knowledge, Runway Incursion Avoidance
- Airports AC-150-5210-20A Ground Vehicle Operations On Airports to include Taxiing or Towing an Aircraft on Airports
- AC-120-74B, Parts 91, 121, 125, and 135 Flightcrew Procedures During Taxi Operations


Contact: Questions or comments regarding this SAFO should be directed to the AFS-220, Air Carrier Operations Branch at (202) 267-8166 or AFS-820, General Aviation Commercial Operations Branch at (202) 267-1100.