



**U.S. Department
of Transportation
Federal Aviation
Administration**

SAFO

Safety Alert for Operators

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Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

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
- AC-91-73B, Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations
- FAA Office of Runway Safety at: http://www.faa.gov/airports/runway_safety/

Recommended Action: Pilots and vehicle operators should familiarize themselves with the information contained in this SAFO, review and comply with Best Practices for Airfield Safety – Pilots at: http://www.faa.gov/airports/runway_safety/pilots/best_practices/ and FAA Runway Safety Best Practices Guide to Operations and Communications at: http://www.faa.gov/airports/runway_safety/publications/media/Runway_Safety_Best_Practices_Brochure.pdf.

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.