



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

# SAFO

Safety Alert for Operators

SAFO 11004  
DATE: 6/10/11

Flight Standards Service  
Washington, DC

[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/safo](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:** Runway Incursion Prevention Actions

**Purpose:** This SAFO notes an increase in Runway Incursions, and offers recommendations and resources to reduce the number of occurrences involving pilot errors.

**Background:** In August 2007 the Federal Aviation Administration (FAA) Administrator issued a “Call to Action” on runway safety. This included an internal challenge to the FAA to reduce runway incursions by 10% in five years ending in 2013. After the 2007 “Call to Action,” runway incursions involving pilots steadily decreased, however, as time has passed the trend has reversed. Most reported incursions are attributed to loss of situational awareness and not adhering to Air Traffic Control (ATC) instructions. Air carrier and multi-pilot crew operations are involved in 20 percent of runway incursion events. These operators, who carry the majority of US passenger traffic, need to be mindful of this persistent problem and be proactive in prevention actions for air carrier operations.

**Discussion:** For effective safety management, a top down approach results in a coordinated effort to mitigating identified hazards. The problem of runway incursions touches many parts of an air carrier’s organization thus it deserves attention at all levels of air carrier management and line operations. Through continued management emphasis and specific training for pilots and maintenance personnel, air carriers can instill permanent and effective understanding of the runway incursion problem and the means to eliminate it. Although this SAFO is directed to pilots, air carrier mechanics, ground personnel, and tug/tow drivers can benefit from this guidance. The following are recommended practices that enhance situational awareness and safety during airport surface operations:

*NOTE: The following information is general in nature, and must be determined by the operator as to which parts apply to their operation, e.g. single pilot, multi-crew, and helicopter.*

- **Planning:**

- Review the meaning of airport signage, markings, and lighting.
- Review airfield NOTAMS and current ATIS for any taxiway closures, runway closures, construction activity, or other airfield specific risks.
- Review the current airport diagrams, and planned taxi route, including Hot Spots.
- Be aware that hold short lines may be located as far as 400 feet from runway edge.
- Before initial taxi out, or before landing, brief a plan to include location of hold short lines.
- Plan to complete as many checklist items as possible at the gate before initial taxi.

- **Situational Awareness:**
  - All pilots display the current airport diagram for immediate reference during taxi.
  - Cross reference the heading indicator to assure turns are being made in the correct direction and you are following the assigned taxi route.
  - Exercise increased awareness when taxiing between parallel runways.
  - Wait until you have exited the runway and you are sure of your taxi clearance prior to beginning an after-landing checklist, or non-essential communications.
  
- **Written Taxi Instructions:**
  - Write down the taxi clearance or enter it into the FMC “scratch pad.”
  - Clarify complex, or lengthy taxi instructions, or request a “progressive taxi”.
  
- **Crew Resource Management (CRM):**
  - Use CRM to control crew workload, and reduce distractions.
  - Keep other crewmembers in the loop by announcing when going “heads down” and also reporting “back up, are there any changes?”
  - Approaching a clearance limit, verbalize the hold short clearance limit.
  - Prior to crossing any hold short line visually check to ensure there is no conflicting traffic on the runway. Verbalize “clear right, clear left”
  
- **Communication:**
  - Adhere to proper radio terminology guidelines set forth in the Aeronautical Information Manual.
  - Be alert to similar aircraft call signs operating on the field.
  - STOP aircraft on the taxiway and request ATC clarification if there is confusion regarding aircraft position or ATC taxi clearance.
  - If you have been holding in position on the runway for more than 90 seconds, or upon seeing a potential conflict, contact the Tower.
  - When assigned a departure at an intersection, state “intersection departure” during the clearance read back.
  
- **Taxi:**
  - Maintain appropriate taxi speed.
  - Avoid transferring aircraft control at unsafe speeds or in turns.
  - Have a heightened situational awareness of hold short line location when using high speed taxiways or during shorter taxi distances.
  
- **Exterior Lighting:**
  - Taxi with taxi light on when moving, off when stopped.
  - Turn on all exterior lights when crossing any runway.
  - If cleared to “Line Up and Wait”, turn on all exterior lights except landing lights.
  - When “Cleared for take-off”, turn on all exterior lights, including landing lights
  - If you see an aircraft in take-off position on a runway with landing lights ON, that aircraft has most likely received its take-off clearance and will be departing immediately.

**Recommended Action:** The FAA strongly urges Chief Operating Officers, Directors of Operations, Directors of Safety, Directors of Training, Directors of Maintenance, and Chief Pilots to collaborate to:

- Distribute runway incursion prevention information and resources to pilots, maintenance personnel, as well as other personnel involved in taxiing aircraft or operating vehicles within the Airport Operation Area.
- Ensure all training events and training programs include runway incursion prevention.
- Track runway incursion trends to determine need for review of causes and current practices.

**Additional Reference:** For additional references, please see the following:

- Aeronautical Information Manual
- AC-120-74, Parts 91, 121, 125, and 135 Flightcrew Procedures during Taxi Operations
- AC-91-73, Part 91 and Part 135 Single-Pilot Procedures during Taxi Operations
- Office of Runway Safety at: [http://www.faa.gov/airports/runway\\_safety/](http://www.faa.gov/airports/runway_safety/)

**Contact:** Questions or comments regarding this SAFO should be directed to Air Carrier Operations Branch, AFS-220, at (202) 267-8166 or Certification and Flight Training Branch, AFS-810, at (202) 385-9600.