



U.S. Department
of Transportation

**Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 06013
DATE: 9/1/06

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.

Subject: Flight crew techniques and procedures that enhance pre-takeoff and takeoff safety

Purpose: To provide techniques, procedures and items for consideration in training programs that emphasize safe operations in the pre-takeoff and takeoff phases of flight.

Background: The recent tragic accident of a commuter jet taking off from the wrong runway brings into sharp focus the importance of maintaining situational awareness and adherence to crew resource management procedures. It is important to note that many airports are involved in construction activities that result in changing environments. This heightens the importance of pilot vigilance.

There are many other factors that can distract a pilot and cause the loss of situational awareness. Even subtle distractions could demand a share of the pilot's workload, such as dealing with company procedures, passengers, running late and even personal issues.

It is imperative that flight crews maintain the highest levels of airmanship discipline and crew resource management. This is especially significant during the critical phases of flight, takeoff and landing. In this vein, this SAFO provides the following reminders:

Reminders of Existing FAA Aircraft Ground Operation Guidance:

- As part of preflight planning review airport layouts and know airport signage
- Review Notices to Airmen (NOTAMs) for information on runway/taxiway closures and construction areas
- During taxi operations have a current airport diagram readily available for reference and check the assigned taxi route against the diagram, paying special attention to any unique or complex intersections
- Write down complex taxi instructions. When unsure of the taxi route request progressive taxi instructions from ATC
- If the flight has more than one crewmember, it is important that both fully understand taxi clearances and runway assignments
- During taxi operations the pilots' maximum attention should be placed upon maintaining situational awareness. The pilot taxiing should have his attention focused outside the aircraft at all times while the other pilot should monitor the taxi progress by reference with the airport diagram and give guidance to the taxiing pilot.

- Apply crew resource management procedures to:
 - Identify and resolve conflicting perceptions of ATC instructions
 - Confirm, by using the challenge and response technique, proper execution of ATC instructions
 - Confirm, using the challenge and response technique, that the aircraft is actually positioned on the assigned runway by reference to the heading indicator
- Use all available resources to ensure the aircraft is positioned on the proper runway. One technique for airplanes that are FMS-equipped is to verbally announce that the proper runway and departure procedure are selected in the FMS and that the aircraft heading agrees with the assigned runway for takeoff.

This SAFO is to remind you that the following references contain excellent information for aircraft ground operations:

AC-120-74A, Parts 91, 121, 125 and 135 Flight Crew Procedures During Taxi Operations

AC120-71A, Standard Operating Procedures for Flight Deck Crewmembers

AC 120-51E Crew Resource Management Training

FAA Order 8430.17, Change 5, Paragraph 974 “Crewmember Procedures and Responsibilities During Ground Operations In All Weather Conditions”

FAA Takeoff Safety Training Aid, Pilot Guide to Takeoff Safety, available through the National Technical Information Service.

Recommended action: Directors of safety, directors of operations, trainers, and pilots of transport category airplanes should be familiar with the content of this SAFO. They should work together to ensure that the content of this SAFO is provided to pilots during ground training, and is reinforced in flight training, supervised operating experience, line checks and proficiency checks.