

Wing Tips

Summer 2007 Des Moines Flight Standards District Office

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Precipitation Reports from ATC - New Terms



There is a four-level scheme of precipitation observations now used by air traffic controllers (ATC), and corresponding terms used in reporting precipitation to pilots.

ATC work stations normally use a weather processing system, permitting a controller to see, and report to pilots, four levels of precipitation as a function of reflectivity expressed in decibels (dBZ), as follows:

“LIGHT” <30dBZ*	Rainfall rate of .01 - .10 inches per hour
“MODERATE” 30 to 40 dBZ	Rainfall rate of .175 - .50 inches per hour
“HEAVY” >40 to 50 dBZ	Rainfall rate of .5 - 2.0 inches per hour
“EXTREME” >50 dBZ	Rainfall rate of 2.0 - 16+ inches per hour.

***Air Route Traffic Control Center (ARTCC, also known as “center radar”) controllers will not use the term “LIGHT” because their systems do not display “LIGHT” precipitation.**

None of the air traffic control weather processing systems distinguish between types of precipitation such as snow, rain, hail, or ice pellets (sleet). Hence, all observations reported to pilots are expressed as “precipitation”. Pilots should understand that precipitation data may be up to 6 minutes old when actually displayed to a controller.

The WINGS program, as we know it, is going to change. We have been told the current program will be ending December 31, 2007.

If you want to learn more about the FAA’s new WINGS Pilot Proficiency Program, you can go to the following website:

www.avtrain.net/WINGS

“A conscience is what hurts when all of your other parts feel so good.”



Changes to Light Sport Aircraft Definitions

This action appeared in the April 19, 2007, Federal Register, and corrects an unintended consequence created when the FAA adopted the original Light-

Sport Aircraft (LSA) Rule. The FAA did not have sufficient information when the original rule was adopted to foresee this difficulty. Since then, the FAA has been working with the LSA industry in evaluating the overall LSA program. This action amends the definition of an LSA in two areas. The changes will (1) permit development of lighter-than-air (LTA) LSA, and (2) allow retractable landing gear for LSA intended for operation on water. The LTA change will result in a common land-based LSA maximum takeoff weight limit and allow the LTA LSA industry to design and build

safe, functional LTA aircraft. Allowing retractable landing gear for LSA intended for operation on water recognizes the realities of the operation of these LSA and will also enhance the growth of that industry. The effective date of this action is June 4, 2007.

For more information on these and other FAA rulemaking documents, visit the FAA Web site at: http://www.faa.gov/regulations_policies/rulemaking/recently_published/



Safe operations at non-Towered airports require good communication practices (transmitting one's intentions and listening actively), cooperation with other pilots, courtesy, and constant vigilance. In this month's selection of *CALLBACK* reports, we take a closer look at a specific area of non-Towered airport operations:

Make Standard Traffic Patterns

A PA-28 pilot discovered that his traffic pattern was not in the "right" place.

- I heard an aircraft in the pattern giving position reports. The runway in use was 13. A call to UNICOM appeared unnecessary since I had the weather information from AWOS and the runway information from the local traffic. As I approached the airport from the north, a light jet began making announcements for Runway 13 as well. Since I was close to the field, but not in the pattern and not in a hurry, I elected to make a simple 360 at 1,000 feet AGL to give the faster jet the time it needed. Afterwards, I proceeded to enter the pattern myself as the only plane airborne and landed without conflict or incident.

As I was taxiing in, another aircraft called UNICOM asking for an airport advisory, and was told that Runway 13 was active and that it was right traffic. The problem is I had just flown left traffic, and so my procedure was improper. No conflict occurred because there were no other aircraft in the pattern at the time. A conflict could easily have resulted from this, however. The "cause" was my failure to note the proper information in a timely fashion...I did get a full weather brief and checked the airport information before departure, but...did not notice that Runway 13 was right traffic.

Both...aircraft [that] landed before me did call their turns properly, but failed to mention "left" or "right." Whenever I fly to an uncontrolled field, I make it a point to say "left downwind" or "right base," etc. I've noticed other pilots do this as well in many places, and I've seen more than one get corrected in the process, either by other aircraft or by UNICOM.

Straight-in approaches to non-Towered fields by VFR aircraft are discouraged to ensure safe and predictable traffic pattern flows. A Comanche pilot learned that straight-in approaches are problematic for another reason – they may inhibit the use of landing checklists that are commonly linked to traffic pattern legs.

- While on third straight-in final for Runway 3, I lowered the gear switch, added 1 notch of flaps, and called my position on CTAF. One other aircraft reported his position as I thought and felt the familiar drag of gear. I located [the] other aircraft as I continued my approach, added more flaps, and prepared to land...I failed to verify down and locked. Once flared over the runway, my aircraft continued to "float" and then started to sink farther than normal. I decided to go around and added full power just as the bottom started to scrape. I kept full power in, nose-up attitude normal soft field speed. Once airborne, I realized the gear had not extended... I reset circuit breaker and gear came down and locked then made a safe landing. Once shut down, I discovered I had

significant prop strike, but very little other damage.

Three things I will do differently:

- 1) No more straight-in landings at uncontrolled airports, I will fly the normal pattern;
- 2) I will keep my hand on landing gear switch till down and locked;
- 3) If by chance I land gear up again, I will shut down and walk away. Taking off with a broken airplane could have been disastrous.

The preceding article courtesy of NASA's CALLBACK.

Young Eagles Flights OK Under Air Tours Rule

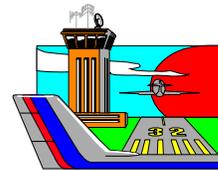
The FAA has amended its National Air Tours rule to ensure that the EAA's Young Eagles flight



familiarization program for young people can continue basically unchanged. The rule, which tightened regulations for most types of sightseeing flights, contained wording that banned so-called charity flights from taking place in experimental aircraft. However, in its amendments, the FAA said that wasn't the intention. The experimental ban applies only if the flight is done for compensation or hire. There was also some confusion over the application of EAA's FAA exemption on Young Eagles flights. The agency thought all Young Eagles flights were undertaken under the exemption it issued to EAA for the program, but EAA uses the exemptions only for the very few flights that are

done for compensation or hire. "We therefore clarify that the final rule applies to only Young Eagles flights that are flown for compensation or hire, but the rule does not apply to other Young Eagles flights," the amendment said. It took effect June 7, two days before EAA celebrated Young Eagles Day.

"Middle age is when broadness of the mind and narrowness of the waist change places."



Confirming the Takeoff Runway

The following is a SAFO (Safety Alert for Operators) and contains important safety information.

Subject: Confirming the Takeoff Runway

Purpose: This SAFO emphasizes the importance of implementing standard operating procedures (SOPs) and training for flight crews to ensure that an airplane is at the desired takeoff runway, and to recommend some modern resources and procedures for doing so.

Background: Recently the crew of a commercial jet attempted a takeoff while on the wrong runway at Lexington, Kentucky, resulting in a fatal accident. This accident was one more in a history of takeoffs from the wrong runway or, in some cases, from a taxiway. In the past the NTSB and the FAA have recommended various procedures in an attempt to prevent such mistakes.

Discussion: This SAFO expands upon information by taking particular note of modern resources not previously available to pilots when attempting to positively confirm and cross-check the takeoff runway. Some of these resources are in the airplane, others are not.

a. Horizontal Situation Indicator (HIS).

One of the most vivid pictures available to pilots today is the HIS display in modern, electronic flight instrument system (EFIS)-equipped cockpits. When holding short and when in takeoff position, one pilot should select to the most expanded scale available on the HIS to confirm that the airplane is where the crew intends it to be.

b. Flight Management System (FMS).

When in takeoff position, one pilot should verbally announce that the correct runway and departure procedure are selected in the FMS and that the airplane’s heading agree with the assigned runway for takeoff. Most “glass” (EFIS) airplanes display that FMS information on the HSI.

c. Air Traffic Control (ATC).

A pilot may call upon ATC (ground control) for help in confirming position at any time during taxi or when holding short of a runway. At many U. S. airports, airport surveillance radar (ASR) is being supplemented by more precise ground surveillance equipment, such as airport surface detection equipment (ASDE and ASDE-X) and airport movement area safety systems (AMASS). Help from ATC might be particularly valuable in conditions of reduced visibility.

The Golden Rule – Use all available resources, old and new, to ensure your airplane is positioned correctly for the desired takeoff runway – when holding short and when in takeoff position.

The best SOPs may be a blend of proven old practices and new ones.

*Don’t worry what people think,
They don’t do it very often.”*

WINGS AWARDS

Phase I

Tao Long, Gary Rasso, Craig Sommerfeld,
Aubrey Ross

Phase II

Jordan Birkholz, Jeff D. Wubben

Phase III

Renee Bryngelson

Phase VI

Donald V. Hall, Edward M. Wilson

Phase VII

Louis B. Fontana, Larry G. VandeVoort

Phase VIII

John Einck

Phase XI

Brian Hunter

Phase XVI

David Pearson

Phase XVIII

Barry A. Brown



Miscommunications are a Major Cause
of Runway Incursions.

Below is a regional survey breakdown of the 39
runway incursion errors caused by pilots in the
Southern region this year through 6/7/2007:

- 12 Entered runway or crossed runway hold bars without ATC clearance *
- 11 Issued and read back hold short instructions, then entered runway
- 4 Landed without ATC clearance

10 Departed without ATC clearance *

2 Departed from wrong runway

**A single aircraft is responsible for multiple (2) RIs.*

The following is a review of good communication procedures:

Good Radio Technique

Prepare first – Know what you want to say before keying your transmitter.

Listen before you transmit. If you have just changed frequency pause, listen and make sure the frequency is clear.

Communication with ATC should be concise and to the point. For unusual situations or lengthy communications, initial contact should first be established.

Acknowledge all clearances with the aircraft call sign.

Taxi Instructions

A taxi clearance will consist of either “Taxi To” or “Hold Short”. A “Taxi To” clearance authorizes the aircraft to “cross” all runways/taxiways which the taxi route intersects. This clearance **does not** authorize the aircraft to “enter” or “cross” the assigned runway at any point.

It is important to listen carefully to ATC instructions and not to anticipate what you expect to hear.

ACCIDENTS

The Private pilot in a CE-182 was involved in a landing accident when the aircraft ran off the end of the runway following a downwind approach and landing. The pilot reported after four hours of flight and not knowing where he was, he squawked emergency and received radar vectors to the airport. The aircraft sustained minor damage to the landing gear and propeller.

INCIDENTS

A Student pilot in a CE-172 lost control on landing when practicing takeoffs and landings. The aircraft exited to the side of the runway striking runway lights.

The pilot of an experimental Barracuda was performing a high speed taxi and went off the end of the runway. The aircraft sustained minor damage to the main gear.

A Private pilot in a PA-32 was not injured when the left main gear collapsed on landing.

A Commercial pilot in a PA-23 made an emergency landing due to landing gear problems. There was a loss of hydraulic pressure from a leak in the hydraulic line caused from rubbing against an aileron cable. The aircraft made a gear-up landing with minor damage to the aircraft.

The Commercial pilot of an EC-130-B4 medical flight made an emergency autorotation landing. The pilot reported a partial loss of power and the aircraft started to yaw or torque. There were no injuries or damage to the aircraft. Inspection revealed a failure of the FEDEC system.



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<http://www.faa.gov/fsdo/dsm> or
http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/qms/

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**Until Next Time!
Have a Safe Flight**



Kenneth F. Rieger
Manager, DSM FSDO

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**HOURS OF OPERATION
MONDAY THROUGH FRIDAY
7:45 a.m. – 4:15 p.m.**

Visitors are requested to make appointments.

**The DSM FSDO will be closed on the following dates
in observance of national holidays:**

**Independence Day
Labor Day**

**July 4, 2007
September 3, 2007**

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