

Wing Tips

Winter 2005

News from the Des Moines Flight Standards District Office

CALENDAR SAFETY SEMINARS 7:00 P.M.

February 2, 2005
Municipal Airport
Carroll, Iowa

March 8, 2005
AOPA Seminar
Kirkwood College
Cedar Rapids, Iowa

March 14, 2005
Municipal Airport
Algona, Iowa

CALENDAR SAFETY SEMINARS 7:00 P.M.

RUNWAY INCURSION INFORMATION EVALUATION PROGRAM

One of the FAA's top safety priorities is to prevent runway incursions. To help achieve this goal, the FAA has implemented several initiatives designed to reduce runway incursions through enhanced education and training of pilots and maintenance technicians, and by gathering and evaluating data on the causes of runway incursions and surface incidents. One method to achieve this goal is the renewed Runway Incursion Information Evaluation Program (RIIEP) which became effective September 19, 2004.

To encourage participation in the renewed RIIEP and to assure pilots and/or maintenance technicians that the FAA will not normally take punitive legal enforcement action that typically would be taken for an alleged violation resulting from a runway incursion or surface incident, the FAA will normally process all reported runway incursions and surface incidents using counseling or administrative action, provided:

- ✦ The nature of the apparent violation does not indicate that a certificate holder lacks qualification to hold a certificate.
- ✦ The apparent violation was inadvertent; that is, it was not the result of purposeful conduct.
- ✦ The apparent violation was not a substantial disregard for safety or security.
- ✦ The apparent violator has a constructive attitude toward complying with the regulations.
- ✦ The apparent violation does not indicate a trend of noncompliance.

The FAA recognizes pilots and maintenance technicians will have concerns that the information they provide under this program will be used by the FAA to take legal enforcement actions against them. The FAA, however, does not expect to use information provided by pilots or maintenance technicians during interviews conducted by FAA inspectors under the RIIEP in any FAA punitive legal enforcement action.

Each reported surface incident or runway incursion will be investigated by the FAA inspector to determine what course of action should be taken considering the above criteria. If it is determined the alleged violator is eligible to participate in the RIIEP, the FAA inspector will contact that person and complete a questionnaire that is part of the program. Completion of the questionnaire and investigation by the FAA inspector will determine what final action will be taken.

The whole purpose of this program is to try and determine what factors are contributing to surface incidents and runway incursions. With pilots and maintenance technicians participating, the objective is to "learn and not penalize".

Complete information on this program can be downloaded online at:
<http://www.faa.gov/avr/afs/fsga/fsga0401.doc>

The Des Moines FSDO

recently honored Mr. Hashem Hashem-Toroghi for earning a Double Ruby Award from the United States Parachute Association (USPA). On August 22, 2004, Hashem completed his 12,000th parachute jump. Hashem is one of 20 individuals in the United States to complete this milestone.

Hashem was also honored by the USPA for completing 132 hours of freefall. Hashem is a qualified instructor and has more than 4000 tandem jumps to his credit.

He has participated in 5 world record attempts for the largest formation jump. In 1998, he was one of 246 jumpers that actually set a world record for the largest formation jump.

Hashem normally operates from the Boone Municipal Airport. He is D-Pro rated and conducts numerous exhibition jumps in the Central Iowa area annually. These exhibition jumps are typically sanctioned under an authorization issued from the Des Moines FSDO.

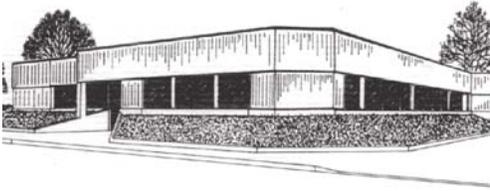
Hashem has become very well known in our office as he has been requesting these types of authorizations for over 25 years. The Des Moines FSDO considers Hashem a true professional in the sport parachuting community. His continued effort to promote safety has long been recognized by this office.

Congratulations to Hashem for a job well done!

*contributed by
Larry Arenholz
Operations Supervisor
DSM FSDO*



FROM THE DESK OF



FORT DODGE AFSS

Courtesy of Steve Hyde

STRUCTURAL ICING

Now that we are well into the winter months, this would be a good time to review one of the major hazards to aviation: **STRUCTURAL ICING**.

Structural icing is extremely dangerous because it has a cumulative effect on an aircraft. It reduces aircraft efficiency by increasing weight, reducing lift, decreasing thrust and increasing drag, all of which result in control problems. Visibility may be reduced as ice builds up on the windscreen and radio. Navigation systems could be affected as ice covers antennas.

It is important to remember that structural icing can occur either in flight or on the ground. Icing experienced on the ground can cause problems with propeller and landing gear operation. Wind tunnel and flight tests have shown that frost, snow and ice accumulations no thicker or rougher than a piece of coarse sandpaper can reduce lift by 30 percent and increase drag up to 40 percent.

There are two ingredients necessary for structural icing to occur: (1) visible water or cloud droplets, and (2) the temperature must be 0 degrees Celsius or colder. Aerodynamic cooling can lower the temperature of an airfoil to 0 degrees C even though the outside air temperature is a few degrees warmer.

There are three types of ice that can form on your aircraft during flight: rime ice, clear ice and mixed ice. All of these types of ice should be taken seriously and be avoided. Remember, visible moisture must be present for structural ice to form.

✈ **Clear ice** forms when raindrops flow out over the aircraft surface, gradually freezing as a smooth sheet of solid ice. This type of ice forms when encountering large drops of rain or when flying through cumuliform clouds. Clear ice is hard, heavy and tenacious. Clear ice is considered the most serious form of ice because it tends to accumulate quickly and adheres itself strongly to the surfaces of the aircraft, making removal by deicing equipment especially difficult.

✈ **Rime ice** forms when tiny water droplets freeze immediately on impact with the surface of the aircraft. As the droplets freeze, they trap air bubbles in the ice giving the ice a milky appearance. Since the droplets freeze immediately, rime ice tends to build up on the leading edges of the airfoils. This changes the shape of the airfoil and destroys lift. Rime ice is the most common type of icing and is generally considered to be the least serious type.

✈ **Mixed ice** forms when drops vary in size or when liquid drops are intermingled with snow or ice particles. Ice particles that are imbedded in clear ice build a very rough accumulation, sometimes in a mushroom shape on leading edges.

✈ **Ground Icing** is icing which occurs while you are on the ground prior to takeoff. Frost, ice pellets, frozen rain, or snow should be removed prior to takeoff. Water blown by propellers or splashed during taxiing can form in wheel wells, brake mechanisms, flap hinges, etc. and prevent proper operation of these parts.

✈ **Frost** is a hazard to flying long recognized in the aviation community. While frost may not look like a threat, it does interfere with the airflow over the wing causing loss of lift. This loss of lift means that the aircraft will stall at a lower-than-normal angle of attack. While your aircraft may be able to reach takeoff speed, it may stall shortly after takeoff. Always remove all frost from the surface of the aircraft prior to departure. A heavy coat of hard frost will cause a 5 to 10 percent increase in stall speed.

In closing, icing is extremely dangerous. It destroys the smooth flow of air. It accumulates on every exposed frontal surface of the airplane, not just on the wing, propeller and windshield, but also on the antennas, vents and cowlings.

As power is added to compensate for additional drag and the nose is lifted to maintain altitude, the angle of attack is increased, allowing the underside of the wing and fuselage to accumulate additional ice. Now you have ice building where no heat or boots can reach it. At the first sign of icing, decide what needs to be done to get out of the icing condition and advise ATC.

2004 IOWA AIRCRAFT

ACCIDENTS & INCIDENTS

The following is a summary of what happened in Iowa in 2004 regarding accidents and incidents.

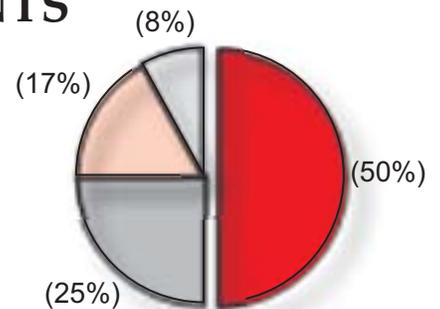
Every year I wish I could say there is only *one cause* of these accidents and incidents. That way we could concentrate all our resources on that one causal factor. But it seems every year we tend to follow the national trend in accident causes. We just need to keep working on what we've been doing. Actually we're pretty close to that *one cause* when we see nationwide over 80% of accidents and incidents continue to be caused by "pilot error". When you look at the following data, see how many of those accidents and incidents you would attribute to pilot error.

In 2004, we had 12 accidents that included 4 fatalities and 3 serious injuries. One of the fatal accidents involved an aerial application when the pilot struck a tree. The aircraft was destroyed by post impact fire and the pilot fatally injured. The other three fatalities were the result of apparent stall/spin accidents. Two of the fatalities occurred in the same accident.

Here is a breakdown on the Categories of Accidents and Causal Factors.

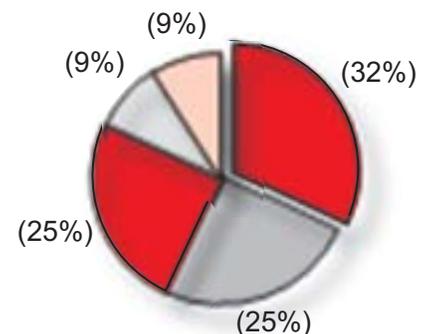
CATEGORIES OF ACCIDENTS

Personal/Pleasure	6	50%
Instruction	3	25%
Corporate	2	17%
Aerial Application	1	8%



CAUSAL FACTORS

Stall/Spin	4	32%
Landing/Takeoff (Loss of control)	3	25%
Instructional	3	25%
Mechanical	1	9%
Fuel Mismanagement	1	9%



Usually, the leading cause of accidents in Iowa and the nation is in the landing/takeoff phase. You can see in Iowa "Stall/Spin" was the largest causal factor for accidents and was also the leading causal factor for fatalities.

Of the four stall/spin accidents, one was attributed to structural icing and the other three were a loss of control leading to the stall/spin accidents.

Only one of the twelve accidents occurred in IFR conditions. So, low weather was **not** a factor in the majority of the accidents.

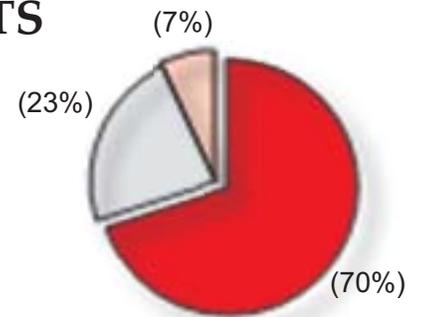
Although not a significant factor, here is the listing of types of Pilot certificates held:

Non-certificated	1
Student	1
Private	5
CFI	1
Commercial	3
ATP	1

There were a total of 13 incidents in Iowa in 2004. Remember that incidents means there were no fatal or serious injuries and/or less than substantial damage to the aircraft.

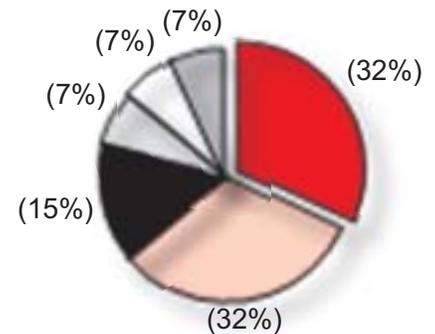
CATEGORIES OF INCIDENTS

Personal/Pleasure	9	70%
Corporate/Commercial	3	23%
Instructional	1	7%



CAUSAL FACTORS

Gear-Up Landings	4	32%
Landing/Takeoff (Loss of Control)	4	32%
Mechanical (Power loss, gear problems)	2	15%
Fuel Exhaustion	1	7%
Taxi	1	7%
Struck Power Lines (Helicopter)	1	7%



When you see “Gear-Up Landings” in causal factors, these are **not** due to mechanical problems. These are situations related to “Pilot Error” where the pilot forgets to lower the gear or mistakenly raises the gear after landing. Again, it happens at all pilot certificate levels and experience levels and is usually associated with landing at an uncontrolled airport and getting “distracted” for some reason.

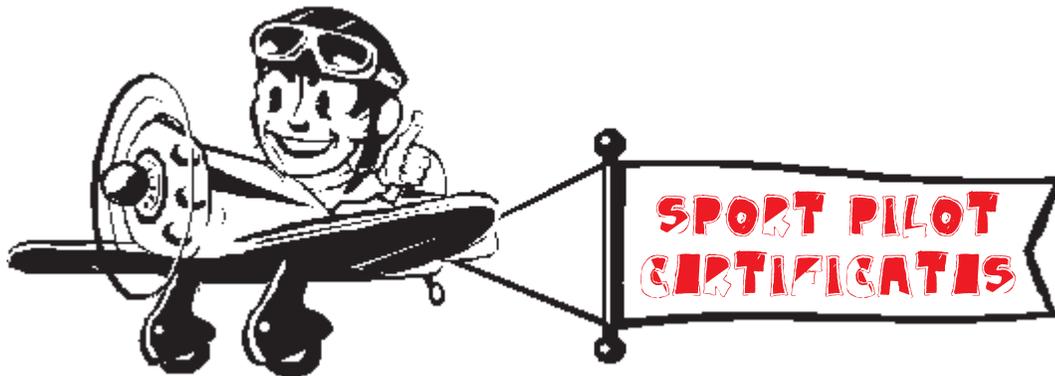
Why do we get distracted? There can be several reasons e.g., doing a go-around, looking for other traffic, passengers interfering with our thought process, some type of problem with the aircraft that interferes with the normal checklist procedure, or anything that interrupts the “normal” procedures. So if this happens to you, be extra alert to situational awareness and **USE YOUR CHECKLIST.**

SENATE PASSES BILL THAT INCLUDES PHOTO PILOT CERTIFICATES

The U.S. Senate passed the National Intelligence Reform Act (S.2845) by a 96-2 vote. The bill implemented several aviation security recommendations from the 9/11 Commission report. It also included a directive to the FAA to start issuing pilot certificates with a photo ID.

The bill does not require pilots to immediately replace existing certificates with new photo certificates. Pilots will get a photo certificate when they add a new rating or certificate.

One method of compliance allows the FAA to use designees to process the new certificates e.g., pilot examiners.



We are getting quite a few questions regarding the new Sport Pilot certificates. I am not going to try and answer all those questions in this newsletter because we are trying to keep up with all the changes and implementation dates. The latest information may be found at these websites: aopa.org, sportpilot.org, afs600.faa.gov, just to mention a few.

Some of the highlights so far are:

- ✦ Knowledge tests available at Computer Testing Centers.
- ✦ Selected candidates to start the first Sport Pilot Designated Examiner and first Sport Pilot Flight Instructor training in January 2005.
- ✦ Student pilot certificates for Sport Pilot can be issued by FSDOs and Designated Pilot Examiners by completing FAA Form 8710-1.
- ✦ The new Sport Pilot application, FAA Form 8710-11, is to be available after January 1, 2005.

January 15, 2005, the FAA will start accepting applications, FAA Form 8710-11, for the following new certificates or ratings:

- ✦ Student pilot seeking a sport pilot certificate
- ✦ Sport pilot certificate
- ✦ Flight Instructor certificate – sport pilot rating
- ✦ Private Pilot certificate – weight-shift control rating powered parachute ratings

The FAA will accept applications, FAA Form 8710-11, for additional sport pilot or sport pilot CFI category or class privileges on this date (completion of a proficiency check).

The FAA will accept FAA Form 8610-1, for a repairman (light-sport aircraft) certificate with a maintenance or inspection rating. FAA Form 8610-1 is currently available, but the policy for the issuance of a repairman certificate (light-sport aircraft) will not be published until January 2005.

Note: The FAA will not accept any applications for the new certificate, rating or privileges listed above that are submitted prior to January 15, 2005. (This does not include FAA Form 8710-1, submitted for a student pilot seeking a sport pilot certificate submitted after November 15, 2004).

Introducing . . . Ken Rieger, DSM FSDO Manager



Let me take this opportunity to re-introduce myself, to say hello and that it's good to be back home. As most of you know, I was selected to fill the Manager's position for the Des Moines Flight Standards District Office when my good friend Tim Griffith retired on June 30, 2004. As an update, Tim and Linda are doing very well, keeping extremely busy and enjoying their retirement tremendously.

I started my aviation career in 1963, when I joined the United States Air Force and served four years as an aircraft mechanic/crew chief. Over the forty-one years I've been associated with aviation, I've had the great fortune to experience many facets of this industry. I'm a certified A&P Mechanic with Inspection Authorization, Commercial Pilot with AS/MEL, Instrument, Certified Flight Instructor and Certified Ground Instructor. I owned and operated a Fixed Base Operation and Charter Service for more than fifteen years, ran a corporate aviation department for five years and joined the FAA in 1989. My first tour of duty in the FAA was with the Des Moines FSDO, where I served as a Principal Maintenance Inspector for about nine years. In 1998, I was promoted to the position of Assistant Manager

for the Little Rock FSDO. In 2000, I was selected to fill the position of Manager for the Lincoln FSDO and served in that capacity until accepting this latest assignment.

I'm an aviation enthusiast in every sense of the word and am firmly committed to protecting the rights and freedoms of anyone choosing to participate in this industry. However, I'm equally committed to ensuring that as an industry we all strive to continue to raise the bar of safety to its highest level possible.

It's an honor and a privilege to once again serve the Iowa aviation community. My pledge to our customers is to continue providing the best service possible that is within our control. I look forward to traveling around the state promoting safety as well as our customer service initiatives and having the chance to get reacquainted with the aviators of this district.

I wish each of you a happy and
prosperous New Year.

Ken Rieger
Manager



ACCIDENTS

There have been five accidents since the last newsletter that include 1 fatality and 1 serious injury.

The Private Pilot in an experimental aircraft was fatally injured during an apparent stall/spin accident. A witness reported it was the first flight in the aircraft and the pilot was trying to turn back to the airport when the accident occurred.

A Student Pilot escaped injury when the CE-150 landed long and nosed over into a ditch.

Another stall accident caused substantial damage to a PA-28 when the Private Pilot lost control during a second attempt at landing. The aircraft drifted and hit a hangar.

The pilot and two passengers escaped injury when the PA-30 made an emergency landing in a field after the engines quit. Initial investigation revealed fuel mismanagement led to the engines failing.

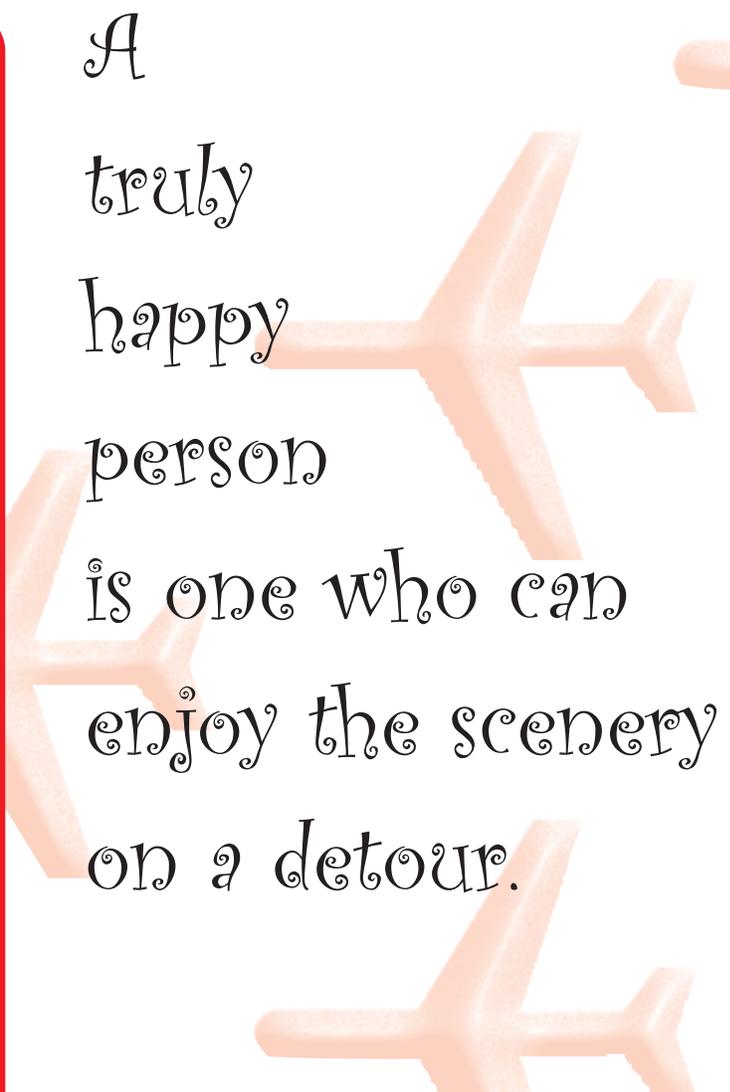
An uncertificated pilot was seriously injured when the experimental aircraft stalled following engine failure.

INCIDENTS

The Commercial Pilot landed a 112B gear-up when the pilot forgot to lower the gear. There were no injuries and the aircraft sustained minor damage.

The ATP pilot in an EMB-145LR ran off the runway during landing. The cause was apparent loss of control due to a strong gusty crosswind and heavy rain.

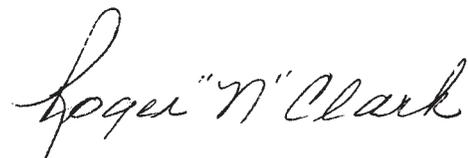
The Commercial Pilot in a BK-117 struck power lines. The pilot reported flying lower to avoid deteriorating weather when the power lines were struck.



A
truly
happy
person
is one who can
enjoy the scenery
on a detour.

Until Next Time

Have A Safe Flight



Roger "N" Clark
Safety Program Manager

2005 MIDWEST REGIONAL

AIRCRAFT MAINTENANCE

The 2005 Midwest Regional Aircraft Maintenance Symposium & Trade Show will be held Friday & Saturday, February 4 & 5, 2005, at the Gateway Center in Ames, Iowa. Sessions will be held from 8 a.m. to 9 p.m. on Friday and from 7:30 a.m. to 3:45 p.m. on Saturday.

This symposium is sponsored by the Iowa Chapter of PAMA in conjunction with the Iowa DOT Office of Aviation and FAA Flight Standards District Office in Ankeny, Iowa.

The PAMA event provides a refresher on current maintenance topics and allows attendees to meet first hand with vendors to learn what is available to them. This event is open to all IAs, A & Ps, students, pilots, or anyone with an interest in learning more about aircraft maintenance.

www.pama.org

SYMPOSIUM & TRADE SHOW



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