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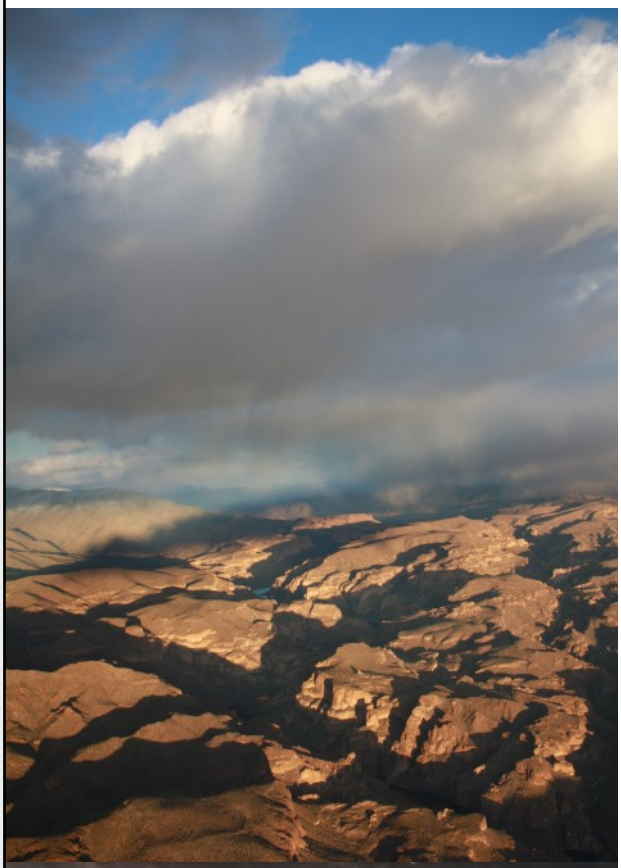
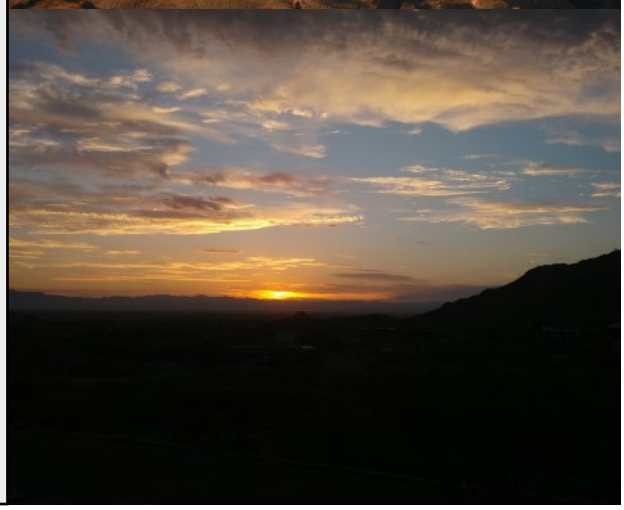
GAARMS Report

December 2016 *APA NEWSLETTER*





President's Report

Happy Holidays Aviators and aviation enthusiasts,

I certainly hope everyone is taking the opportunity to enjoy the great flying weather that we have had this past month or so. As you read through this month's newsletter, you will discover lots of activities and articles our members have been participating in. Fred Gibbs and Howard Deevers continue to provide us with some great information. This month, Mike Andresen has submitted the first of several flight training articles, which I'm sure you will find educational. The FAASTeam also continues to conduct safety seminars around the state in an effort to educate the flying community and keep us safe. If you haven't already done so, go to www.faasafety.gov and sign up to receive all the upcoming safety seminars and events. The Arizona Pilots Association is dedicated to preserving general aviation in Arizona and along with our partners, like the Recreational Aviation Foundation, we've made some phenomenal headway in the last few years. As always, if you have any comments, suggestions, or criticisms, please let us know. We are also always looking for volunteers to help with the various projects and events that we host.

Have Fun, Fly Safe,

Tommy

Hangars for Sale

SkyRanch at Carefree — www.skyranchcarefree.com

480 488-3571 — Click here for a PDF list...

A big thank you to our Corporate Sponsor!

CAE Oxford Aviation Academy

Executive Director's Report

Jim Timm — December 2016

So far, the winter flying weather has been good, the temperatures are down, and the airplane/engine performance is up, so what more could you ask for. With all the flying events happening, and good places to fly for that Saturday morning fly in breakfast, it's decision time to decide where to go. So, where ever you go, please do it safely! So far, as we approach the end of the year, it appears that everyone has been flying safer. Enjoy the holidays.

Have you installed your ADS-B equipment yet? We are nearly at the end of 2016 and we are required to be ADS-B equipped by January 1, 2020, not the end of 2020. Time is rapidly marching on, the deadline is coming up fast, and the FAA keeps insisting that there definitely will not be an extension of the deadline. While the ADS-B Out is mainly for the benefit of air traffic control, the In feature of weather and traffic information is going to be helpful to the pilot. Unless you do a lot of long distance traveling, the weather information in may not be too beneficial. However, if you fly much in the vicinity of the Bravo or Charlie airspaces in the state, or even near any airport, the traffic in information provided can prove to be extremely helpful for spotting and tracking potentially conflicting traffic. The benefit is obvious, because many pilots out there have recognized this benefit and have bought small ADS-B in receivers for this traffic alert feature. If only for the reliable in cockpit traffic information, the time is now to have the compliant equipment installed. The prices are most likely not going to be coming down and the installation shops are getting busier and busier. The airspace keeps getting busier and busier and anything that can enhance flight safety will be worth it. Put it on your Christmas List.

MISCELLANEOUS ITEMS

Another GPS Interference testing notice just showed up from the NTTR (Nevada Test and Training Range) near Las Vegas, NV. Testing will be conducted on:

Nov. 29	from 0300Z - 1200Z
Nov. 30	from 0530Z - 1200Z
Dec. 1-3	from 0530Z - 1200Z
Dec. 8	from 0530Z - 1200Z
Dec. 12-13	from 0300Z - 1200Z
Dec. 14	from 0530Z - 1200Z

The GPS testing impact will include WAAS and ADS-B. Pilots are advised to check NOTAMs frequently for possible changes prior to operations in the area. NOTAMs will be published at least 24 hours in advance of any GPS tests. Notify air traffic control if you encounter GPS signal problems providing date, time, and location.

The FAA facilities people have advised us that the remote communications outlet (GLOBE RCO) towers and equipment located on Pinal Peak near Globe have been upgraded and we should now have improved remote communications with Prescott on 122.3.

Luke AFB has announced that starting November 24, the RAPCON will be closed on holidays and weekends, unless NOTAMed otherwise, until further notice. They will remain open for special events such as NASCAR, Super Bowl, NCAA Final Four, etc. All air traffic control services during these periods, when the RAPCON is closed, will be handled by the PHX TRACON.
NOTE: during these periods when the RAPCON is closed, the Luke SATR Airspace is still active and the SATR air traffic is handled by the PHX TRACON.

Unfortunately, Gateway Airport (IWA) is still charging a $20 fee for parking at the general aviation terminal. The fee will be waived with the purchase of 10 or more gallons of fuel. Be aware of this if you are planning on flying in for a safety program at ASU and want to park at the G/A terminal.

Be advised that Mesa Falcon Field will have their main runway (4R - 22L) closed from Nov 28 thru December 19 for runway construction. The north, shorter, runway (4L - 22R) will be open, but carefully note taxi instructions to and from the runway during the construction period. With the present student activity, runway use at times could be a bit heavy, so use caution, and patience.

Please be aware, there are still a lot of major and minor construction projects going on at many airports around the state, and unfortunately, the activity will be going on for a while. Before you take off, make sure you check for NOTAMS at your destination airport so you don't have a surprise awaiting you when you arrive.

The good news is that flight safety has continued to improve, and in this past reporting period there were only two accidents reported by the NTSB, and fortunately, neither of them involved any injuries.

We only have one more month to go for the year, and I hope we can continue to keep the accident numbers down and injuries, if any, minor. Please fly safe! See my December Accident Summary for details.

APA is still continuing to work with various airports around the state, providing the pilot and aircraft owner's perspective in the process of updating their Airport Master Plans. An update of the Sedona Airport (SED), Flagstaff, and Grand Canyon Airport (GCN) master plans are currently in process.

THINGS TO DO - PLACES TO GO FOR BREAKFAST:

- The fly in breakfast at Coolidge Municipal Airport (P08) is on the first Saturday of the month.
- The second Saturday of the month, Ryan Field (RYN) a fly in breakfast is available at the restaurant. (Check NOTAMs before you go to make certain ramp construction has been completed.)
- The Mesa Falcon Field EAA Warbirds Squadron fly in breakfast and car show is on the third Saturday.

- The third Saturday of the month there is a fly in breakfast at Benson (E95) at Southwest Aviation. (There are special fuel prices for breakfast attendees.)
- Also on the third Saturday, around noon, a donation lunch is served by APA at the USFS Grapevine Airstrip next to Roosevelt Lake.
- The last Saturday of the month there is a fly in breakfast at Casa Grande Municipal Airport (CGZ). The Airport's restaurant, Foxtrot Cafe, operating in the Terminal Building, is open 6:30am to 2:00pm Monday thru Saturday. On the last Saturday of the month they have a "Fly in Breakfast Special" available on the menu; the price for adults is $7 and kids $5.

Check with the APA Getaway Flights program and the online calendar for fun weekend places to fly.

Jim

A Few Words About Safety

Denny Granquist

"Safety is a way of life, not something you practice only when flying."

"Reading lots of accident reports make you a better pilot. "

December Aviation Accident Summary

by Jim Timm

The following are the NTSB reports of aviation accidents that have occurred in Arizona from late October thru late November, 2016. APA and others will use this detailed accident information to develop safety programs and briefings to help pilots learn from the mistakes being made by others and hopefully then take the action necessary to prevent similar accidents from happening to them. We are getting very close to the end of the year and I hope the number and severity of the accidents remains low.

From a flight safety standpoint, this reporting period has been very good compared to what was going on earlier in the year. There were only two accidents reported by the NTSB in this period, and neither of the accidents involved injuries. However, the two airplanes did get seriously bent. From

these two, and earlier accidents, it should be obvious to all, that good safety restraints are important, and can reduce injuries. If you don't have *shoulder restraints* in your airplane yet, get them installed NOW, and use them!

BASED ON INFORMATION AVAILABLE WHEN THIS SUMMARY WAS PREPARED, THE REPORTED ACCIDENTS THIS PERIOD ARE AS FOLLOWS:

Accident Date: **Friday, October 21, 2016**
Report Dated: 11/9
Title 14 CFR Part 91
Location: Mesa
Aircraft Type: Arion Lightening (Experimental)
Injuries: 1 Uninjured

POWER LOSS ON TAKEOFF

On October 21, 2016, about 1730 MST, an Arion Lighting was substantially damaged following a reported loss of engine power during initial climb, loss of control, and subsequent impact with terrain at Falcon Field (FFZ), Mesa. The pilot, who had recently purchased the airplane, was not injured. The flight was originating at the time of the accident, with a planned destination of Henderson Executive Airport (HND), Henderson, Nevada.

In a telephone interview with the National Transportation Safety Board investigator-in-charge, the pilot reported that just after taking off, and about 50 feet above ground level, "…the engine seemed to lose power, and the airplane rocked back and forth, like there was a problem with the controls." The pilot added that he remembered impacting the left side of the runway in a nose down attitude. The airplane, which was recovered for further examination, was substantially damaged due to impact forces.

Visual meteorological conditions prevailed for the proposed cross-country flight, and a flight plan was not filed.

Accident Date: **Saturday, November 12, 2016**
Report Dated: 11/22
Title 14 CFR Part 91
Location: Taylor, Arizona
Aircraft Type: Piper PA 28-235
Injuries: 2 Uninjured

FORCED LANDING

On November 12, 2016, about 1640 MST, a Piper PA 28-235 struck a berm during a forced landing, following a loss of engine power near Taylor. The flight instructor and student pilot were not injured. The airplane sustained substantial damage during the accident sequence. The local instructional flight departed Taylor Airport about 1600. Visual meteorological conditions prevailed and no flight plan had been filed.

The flight instructor reported that about 40 minutes after takeoff, and after completing a series of training maneuvers with the student, he decided to demonstrate an emergency descent. He asked the student to look for an appropriate simulated landing spot, and he pitched the nose down about 20-degrees, configuring the airplane for a 100 knot descent. They began the maneuver at an elevation of about 8,000 ft (1,700 agl), and after descending about 500 ft the instructor sensed that something was not right. He lifted off his headset, and the engine sounded quiet; he then pushed the throttle forward but the manifold pressure gauge remained static, and the engine did not respond. He "pumped" the throttle, switched the fuel selector valve from the left to right tank, and set the fuel mixture to full rich, with no change. Concerned that they did not have sufficient altitude for further troubleshooting, he began to look for an emergency landing site.

On final approach he secured the airplane, shutting off the fuel selector valve, and as they got closer to the ground he could see a berm and fence obstructing the landing area. They were unable to deviate, and the airplane landed hard, separating the nose and right main landing gear. The airplane sustained damage to the aft fuselage and right side of the stabilator during the impact.

GAJSC

General Aviation
Joint Steering Committee

Flight Risk Assessment Tools

This outreach guidance is provided to all FAA and aviation industry groups that are participating in outreach efforts sponsored by the General Aviation Joint Steering Committee (GAJSC). It is important that all outreach on a given topic is coordinated and is free of conflicts. Therefore, all outreach products should be in alignment with the outline and concepts listed below for this topic.

Outreach Month: December 2016

Topic: Flight Risk Assessment Tools (FRATs) (SE 3 Output 2)

The FAA and industry will conduct a public education campaign emphasizing the benefits of assessing Flight Risk through the use of Flight Risk Assessment Tools.

Background:

Hazard identification and risk assessment are essential components of effective safety management systems. Pilots are required by regulation to acquire information relevant to proposed flights and plan for how to deal with hazards identified during the information gathering process. Flight Risk Assessment Tools are designed to assist with the risk assessment process. The GAJSC recommends that pilots use FRATs to improve their risk assessment processes.

Teaching Points:

- Discuss the scope and safety benefits of FRATs
- Acquaint pilots with available resources.
  - ◊ FAASTeam FRAT
- Discuss means of managing resources.
- Encourage pilots to use FRATs.

References:

- ***FRAT Power Point, Notes, and Guidance***
- ***FAASTeam FRAT***
- Aviation Risk Management Handbook (FAA-H-8083-2)

DOWNLOADS: PowerPoint Presentation Slides...

Navajo Christmas Airlift

By George Pohlman

KFHU - The 32nd Christmas Airlift to the Navajo Nation took place on Saturday, November 12, 2016.

The weather that day was perfect for our flight. There were 9 planes from the Sierra Vista area and 26 from the PHX / Deer Valley area, a total of 35 planes in all, landing at Gallup, NM, airport.

We filled their ramp with all sorts of aircraft. Each plane was packed with clothing, food, toys, and gifts for the Navajo Nation.

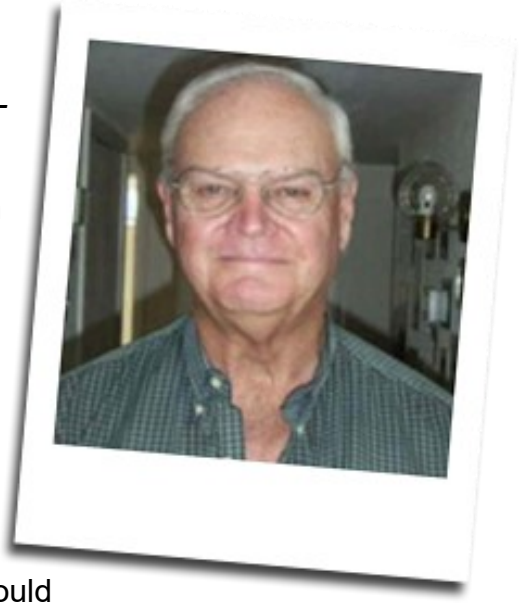
We were met at the airport by a group of Navajo men, women, and children, and two pickups plus a long horse trailer to haul the cargo which each pilot had unloaded in front of their plane. The Native Americans from The Thoreau Navajo Outreach organization warmly expressed their appreciation for the thoughtfulness and the goods we provided. They also sang a couple of songs in the Navajo language, which was very special.

After our “Pow-Wow,” many of us walked a few blocks to town for brunch followed by our departure home. All flights were without incident and much enjoyed.

History: This annual event was started by the late Dick McColley, 32 years ago, when he lived in Deer Valley. It continued when he and his wife Betty moved to Sierra Vista. The Christmas Airlift has continued under the direction of Greg McColley (Dick’s son) who currently lives in Deer Valley.

POLITICS, AGAIN

By Howard Deevers



(Disclaimer: These comments and thoughts are mine, and not necessarily those of Arizona Pilots Association)

For many of us there was a great feeling of relief when this election cycle ended. Never mind who won, but the feeling that *it is finally over!* The election may be over, but the next cycle is just beginning.

What am I talking about? User fees, of course.

I made a statement a few years ago, that Obama would not leave office without some kind of aviation user fees in place. To my relief, and to many others, I was wrong. Not that he didn't try to get user fees in place. In 2013 the Administration wanted a $100.00 *per flight* user fee on general aviation operations. Piston aircraft would be exempted. So, I'm not so good at predicting the future after all! But I can predict that once user fees get started, they expand and every flight, even piston airplanes, would eventually be taxed with a user fee.

To the great credit of AOPA, NBAA, EAA, and many other aviation advocates, user fees have been blocked. Just about every administration since Kennedy has tried to put some kind of aviation user fees in place. We have been lucky, so far.

Why is aviation so successful in the United States? No user fees! Just read any story about traveling by private aircraft outside of the U S, and you will see what user fees have done to aviation in other countries. Oh, sure, we do pay some user fees: taxes on our fuel, landing fees at some airports, or parking fees. Those fees are relatively small, and the money goes to the local facility, not to the FAA or the Federal Government. If you do fly out of the country, for example to Canada or Mexico, you will need a Customs and Border Protection (CBP) decal, actually called "a user fee." The cost is $27.50 per year for the decal and I suspect that the "user fee" terminology is there to get us used to the term and the idea of user fees (remember, this is only my opinion). A portion of your fuel taxes do go to the Federal Government, and that pays for the FAA and ATC, at least in part if not all.

The President-elect has stated that he favors "privatizing ATC." I consider that a bad idea. Privatizing is a first step to getting user fees. The reason we have been successful in blocking user fees, is the letter writing, hard work, and personal contacts with our Congress members. Remove ATC from the control of Congress, and they won't have to take the heat from constituents on user fees. Once you start such a cycle, it is really hard to go back. The AOPA and other general aviation organizations have their work cut out for them already.

Past Republican and Democrat administrations have proposed user fees on general aviation. Why is general aviation such a target? Most administrations have little understanding of GA and what it does for this country. Can you imagine any administration suggesting a user fee on automobiles? Try to put a ten cent user fee on every auto for every trip to the store. Sounds crazy doesn't it? The public outcry would be that we already pay in the form of taxes on our gasoline. Wait a minute. Did I get that right? Doesn't aviation pay fuel taxes as well? Sure they do. And it is the fairest system available. The bigger the plane, the more fuel it uses, and thus the more taxes it pays. A Boeing 737 would pay a lot more tax than a Cessna 172, but then the 172 would not use the ATC system nearly as much as the larger plane, if he used it at all. Yes, I do know that the airlines are taxed at a different rate than GA, and that the airlines just pass on the tax built into their airfares. GA does not have that luxury.

If user fees are such a bad idea, why do they keep coming back over and over again? It's all about the money. The government's never ending quest for more money. In every presidential election cycle, taxes are a number one subject. You cannot pledge to raise taxes and expect to get elected. So to disguise the "tax" they call it a "user fee." That might be OK if there was no other tax already involved, but there are, in the form of fuel taxes and registration fees. You will never hear a proposal to eliminate the fuel taxes and replace the funding with user fees. Politicians just don't think that way. Once you have a tax in place, it is very hard to get rid of it, but apparently not so hard to *increase* the tax.

The General Aviation system in the US is the finest in the world. Just ask anyone that flies anywhere else and they will tell you that. Foreign airlines send their pilot candidates to the US for training. The cost of training, including transportation to and from the US, and including the living expenses, is still much less than just about anywhere else in the world. Why would anyone want to screw up such a good thing? I don't know. Write your Congressman and ask them why they want to make a good thing worse. We have been lucky so far, but do not let your guard down. We need to protect this good thing that we do have.

Can we make a good thing even better? We should try. Keep on trying to reduce the accident rate, and increase aviation safety. You can do that by attending safety seminars, and getting recurrent training. Check the APA website and come to a seminar near you, and don't forget to "bring your wingman."

Howard

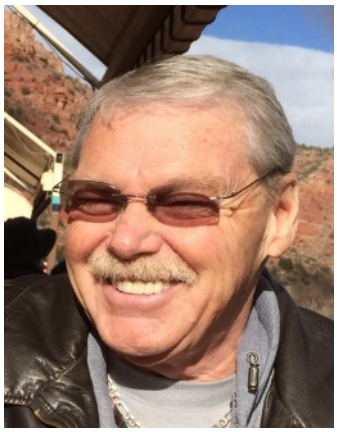
Got great aviation photos that you're willing to share?

We are always on the lookout for photos to add and enhance our monthly newsletter. If you'd like to contribute your photos to this effort please email them to us at:
newsletter@azpilots.org

GAARMS REPORT

DECEMBER 2016

By Fred Gibbs



Again, thankfully there have been no fatal accidents since the last newsletter, nor has the NTSB releases any findings on any of the 2016 accidents to date, thus there is not much to report. We currently stand at 6 fatal accidents so far, with 9 fatalities, all pilots, including 2 CFII's. We only have one more month to go, and let's hope there continues to be nothing to report.

In case you haven't noticed, winter is coming! I have, and in fact as I am writing this, it is snowing up here in Flagstaff! Arizona, with its huge diversity of terrain and elevations, can cause some significantly different weather patterns and conditions over a relatively short distance. Think of flying from Deer Valley to Flagstaff: DVT, with clear and 10 miles visibility, Sedona (SEZ) at 3000 broken-to-overcast with 10 miles visibility, and then there is Flagstaff, with indefinite ceiling 800 feet, 1 ½ miles with light snow and blowing snow. All that in less than 100 miles! And then, of course, there is the temperature – mid 60's in the Phoenix area (almost short-sleeve weather) and only 30 degrees and *FREEZING* up in Flagstaff! So not only do you have to consider the airplane, the weather and the airport conditions, you have to consider the pilot and his/her exposure to the elements. How does the cabin heat work? Smell anything funny? Got a carbon monoxide detector in the cabin? How about dressing appropriately for any anticipated conditions? Flip-flops, Bermuda shorts and a Hawaiian shirt do not offer much protection trudging across the wind and snow swept ramp up here in Flag!!! But winter is not all bad. A really beautiful flight is one in the dead of the winter, in the dead of night, over snow covered territory, brightly lit up by a full moon – it is spectacular! But again, caution is advised; slick, slippery runways and taxiways, ice in them there clouds, frozen brakes, snow-packed wheel pants, cold starts with the associated potential for fire, ice-jammed control surfaces, balky instruments, cold-soaked radios, and frozen-solid seat cushions can make the whole experience less than wonderful.

People often ask me if the flight school up here even flies during the winter, and I always answer with an enthusiastic "FER SHURE!" In fact, the 172s really like the cold weather; they like the cold dense air. They get more power out of the engine, the propeller gets to bite into denser air producing more thrust, the wings love the dense air and produce more lift, and the airplane gets to act like a youngster again, jumping into the air in less than 800 feet of run down the runway – vs the 2500-3000 feet it needs in the heat (and density altitude) of the summer. We just dress warmer!

TALPA – Takeoff and Landing Performance Assessment:
During my winter safety program I just did up here in Flag, we discussed the NEW braking action and runway condition reporting procedures just introduced by the FAA. It is called TALPA – Takeoff and Landing Performance Assessment. The entire document can be read at - https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/media/2016/SAFO16009.pdf

Synopsis: The Takeoff and Landing Performance Assessment (TALPA) initiative aims to reduce the risk of runway overruns by providing airport operators with a method to accurately and con-

sistently determine the runway condition when a paved runway is not dry. This information will enable airplane operators, pilots, and flight planners to determine the distance required to stop on a wet or contaminated paved runway in a more accurate way. Beginning October 1, 2016, 0900 UTC, federally obligated airports will use TALPA procedures to conduct runway assessments and to report those conditions in newly formatted Field Condition (FICON) Notices to Airmen (NOTAMs). This will allow pilots and flight planners to use the information, along with manufacturer's aircraft-specific data, to determine the runway length needed to safely stop an aircraft after a rejected takeoff or a landing

Assessment Criteria		Downgrade Assessment Criteria		
Runway Condition Description	**Code**	**Mu (μ) [1]**	**Vehicle Deceleration or Directional Control Observation**	**Pilot Reported Braking Action**
• Dry	**6**	**40 or Higher**	---	---
• Frost • Wet (Includes Damp and 1/8 inch depth or less of water) ***1/8 inch (3mm) depth or less of:*** • Slush • Dry Snow • Wet Snow	**5**		Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
5° F (-15°C) and Colder outside air temperature: • Compacted Snow	**4**	**39 to 30**	Braking deceleration OR directional control is between Good and Medium.	Good to Medium
• Slippery When Wet (wet runway) • Dry Snow or Wet Snow (Any depth) over Compacted Snow ***Greater than 1/8 inch (3mm) depth of:*** • Dry Snow • Wet Snow ***Warmer than 5° F (-15°C) outside air temperature:*** • Compacted Snow	**3**		Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
Greater than 1/8 (3mm) inch depth of: • Water • Slush	**2**	**29 to 21**	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor
• Ice [2]	**1**		Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	Poor
• Wet Ice [2] • Slush over Ice • Water over Compacted Snow [2] • Dry Snow or Wet Snow over Ice [2]	**0**	**20 or Lower**	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	Nil

The airport operator will use the RCAM chart above to assess paved runway surfaces, report contaminants present, and through the assistance of the Federal NOTAM System, determine the numerical Runway Condition Codes (RwyCC) based on the RCAM. The RwyCCs apply to paved runways and may be the same or vary for each third of the runway depending on the type(s) of contaminants present. RwyCCs will replace Mu reports which will no longer be published in the NOTAM system. Additionally, contaminant coverage will be expressed in percentage terms for

each third of the runway, beginning at the Runway end from which it was assessed. This is typically the primary runway in use.

Pilot braking action reports will continue to be solicited and will be used in assessing braking performance. ***Effective October 1, 2016, the terminology "Fair" will be replaced by "Medium" and pilot braking action reports will now describe conditions as Good, Good to Medium, Medium, Medium to Poor, or NIL.*** This will harmonize the NAS with ICAO standards. Additionally, it will no longer be acceptable for a federally obligated airport to report a NIL braking action condition. NIL conditions on any surface require the closure of that surface. These surfaces will closed until the airport operator is satisfied that the NIL braking condition no longer exists.

For example, using today's assessment process, a runway that is covered with two inches of dry snow would be reported as:
"FICON 2IN DRY SN OBSERVED AT 1601010139. 1601010151-1601020145" along with Mu values as:
"TAP MU 29/27/29 OBSERVED AT 1601010139. 1601010151-1601020145.
(FYI - A Mu number describes a braking co-efficient of friction derived from a piece of equipment used by the airport operator to determine braking actions. The Mu value is converted to plain English for the pilot.)

Starting October 1, 2016, the same NOTAM with contaminants would be reported using Runway Conditions Codes as follows:
DEN RWY 17R FICON (5/5/3) 25 PRCT 1/8 IN DRY SN, 25 PRCT 1/8 IN DRY SN, 50 PRCT 2 IN DRY SN OBSERVED AT 1601010139. 1601010151-1601020145

This example says that runway 17Right at Denver has a braking action value of 5 (which is Good – see chart above) for the first 1/3rd of the runway, a braking action value of 5 for the middle 1/3rd of the runway, and a braking action value of 3 (which is Medium – see chart above) for the last 1/3rd of the runway, and the first 1/3rd of the runway is 25% covered with 1/8th inch of dry snow, and the middle 1/3rd of the runway is 25% covered with 1/8th inch of dry snow, and the last 1/3rd of the runway is 50% covered with 2 inches of dry snow, and the big long numbers at the end are the date and time of observation(s).
But after all that, The tower will still tell you the braking action(s) in plain English, i.e., Good, Good to Medium, Medium, Medium to Poor, Poor, or Nil. So, be careful when landing on snow-covered or ice-slick runways – you need to be straight, slow, and use minimal brakes. It can be done safely…but beware of cross winds!!

The story of "Bad Angel": Pima Air and Space Museum's P-51 as received from a long time friend...

On Saturday following Thanksgiving 2013, I was visiting Pima Air and Space Museum. We were in Hanger #4 to view the beautifully restored B-29, when I happened to take notice of a P-51 Mustang near the big bomber. Its name ? "Bad Angel". I was admiring its aerodynamic lines and recalled enough history to know that until the Mustangs came into service, the skies over the Pacific Ocean were dominated by Japanese Zeros. Then something very strange caught my eye. Proudly displayed on the fuselage of 'Bad Angel' were the markings of the pilot's kills: seven Nazis; one Italian; one Japanese, ***AND ONE AMERICAN!***

Huh? "Bad Angel" shot down an American airplane? Was it a terrible mistake? Couldn't be! If it had been an unfortunate mistake, certainly the pilot would not have displayed the American flag. I knew there had to be a good story here. Fortunately for us, one of the Museum's many fine docents was on hand to tell it.

****

In 1942, the United States needed pilots - lots of planes, lots of pilots! Lt. Louis Curdes was one. When he was 22 years old, he graduated flight training school and was shipped off to the Mediterranean to fight Nazis in the air over Southern Europe. He arrived at his 82nd Fighter Group, 95th Fighter Squadron in April 1943 and was assigned a P-38 Lightning. Ten days later he shot down three German Messerschmitt Bf-109 fighters. A few weeks later, he downed two more German Bf -109's. In less than a month of combat, Louis was an Ace.

During the next three months, Louis shot down an Italian Mc.202 fighter and two more Messerschmitts before his luck ran out. A German fighter shot down his plane on August 27, 1943 over Salerno, Italy. Captured by the Italians, he was sent to a POW camp near Rome. No doubt this is where he thought he would spend the remaining years of the war. It wasn't to be. A few days later, the Italians surrendered. Louis and a few other pilots escaped before the Nazis could take control of the camp.

One might think that such harrowing experiences would have taken the fight out of Louis, yet he volunteered for another combat tour. This time, Uncle Sam sent him to the Philippines where he flew P-51 Mustangs. Soon after arriving in the Pacific Theater, Louis downed a Mitsubishi reconnaissance plane near Formosa. Now he was one of only three Americans to have kills against all three Axis Powers: Germany, Italy, and Japan.

Lt. Louis Curdes in “Bad Angel”

Up until this point, young Lt. Curdes combat career had been stellar. His story was about to take a twist so bizarre that it seems like the fictional creation of a Hollywood screenwriter. While attacking the Japanese-held island of Bataan, one of his wingmen was shot down. The pilot ditched in the ocean. Circling overhead, Louis could see that his wingman had survived, so he stayed in the area to guide a rescue plane and protect the downed pilot.

It wasn't long before he noticed another, larger airplane, wheels down, preparing to land at the Japanese-held airfield on Bataan. He moved in to investigate. Much to his surprise the approaching plane was a Douglas C-47 transport with American markings. He tried to make radio contact, but without success. He maneuvered his Mustang in front of the big transport several times trying to wave it off. The C-47 kept head to its landing target. Apparently the C-47 crew didn’t realize they were about to land on a Japanese held island, and soon would be captives. Louis had read the daily newspaper accounts of the war, including the viciousness of the Japanese soldiers toward their captives. He knew that whoever was in that American C-47 would be, upon landing, either dead or wish they were. But what could he do?

Audaciously, he lined up his P-51 directly behind the transport, carefully sighted one of his .50 caliber machine guns and knocked out one of its two engines. Still the C-47 continued on toward the Bataan airfield. So, Louis shifted his aim slightly and knocked out the remaining engine, leaving the baffled C-47 pilot no choice but to ditch in the ocean. The big plane ditched successfully, in one piece, about 50 yards from his bobbing wingman. At this point, nightfall and low fuel forced Louis to return to base. The next morning, Louis flew cover for a rescuing PBY that picked up the downed Mustang pilot and 12 passengers and crew, including two female nurses, from the C-47. All survived, and later, quite ironically, Louis would end up marrying one of the nurses!

For shooting down the unarmed American transport plane, and thus saving the lives of all aboard the C-47, Lt. Louis Curdes was awarded the Distinguished Flying Cross. Thereafter, on the fuselage of his P-51 "**Bad Angel**", he proudly displayed the symbols of his kills: seven German, one Italian, one Japanese, **and one American flag.**

How's that for a true American hero story???

SAFETY PROGRAMS:

Should you desire a safety or educational program at your local airport, simply contact APA via our website and connect with me through the Safety Program Director. You can also contact me directly at fredgibbs@npgcable.com, or call me at 410-206-3753. The Arizona Pilots Association provides the safety programs at no charge. We can also help you organize a program of your choice, and we can recommend programs that your pilot community might really like.

Fred

Don't come to a safety program by yourself, but don't just bring your old buddy who always comes with you. Bring someone new, and get your BFF to also bring someone new.

We need you to help us expand our audience, to expand our reach, and to expand that ocean of faces.

Statistics show that the folks having accidents are the ones who don't participate in the WINGS or safety programs, so help us reach out to those folks and pull them in.

We never complain when a program runs out of chairs!!!

The Take-Off Roll

by Mike Andresen

As a flight instructor, I get to peer into the procedures of people of various training backgrounds while giving Biennial Flight Reviews. Some were trained in local or distant flight schools, some have training from professional backgrounds, and some were trained by a free-lance CFI that they just happened to know.

Just before taking off on a BFR, I ask the pilot what our rotation (Vr) and climb speeds (Vy) will be. One particular pilot responded to me that he does not rotate. He said that he just lets the airplane fly when it "wants" to. My response was: if it doesn't "want" to fly and the airport fence starts looking really large, at what point do you become a pilot rather than a passenger?

The purpose of this article is to review a topic that is somewhat taken for granted - the take-off roll and how to minimize take-off distance. The physics involved is actually quite simple. Apply a force (thrust minus drag) to a mass (the airplane) and it accelerates. To accelerate to take-off speed in the shortest time possible we need to maximize thrust, minimize drag and minimize the mass accelerated.

Minimize Airplane Mass

Your rate of acceleration is directly proportional to the weight of your airplane. If I fly my airplane at one-third fuel (1,970 lbs) versus full fuel (2,210 lbs) my take-off roll will be 11% shorter. Carrying the right amount of fuel and fuel reserves will improve performance.

Maximize Engine Thrust

Full rich and wide open throttle are the norms. If you do lean for high altitude, monitor temperatures to be sure you don't overheat the cylinders.

Maximize Propeller Efficiency

Variable pitch propellers should be in the low pitch position which minimizes blade drag and requires the least amount of engine torque to turn the propeller. Propeller efficiency will be poor at the start of your take-off but will improve as airspeed increases.

Minimize Drag

This is where our BFR pilot was wrong. To minimize drag, the wing should be held at low angle of attack until reaching rotation speed. That will minimize a large drag contributor and minimize take-off distance. You can convince yourself of this by demonstrating the soft-field take-off which is performed with the wing held in high angle of attack and has a longer ground roll compared to the normal take-off.

Rolling resistance is another form of drag that is minimized by proper tire inflation.

So you've done all of the above and it's time to rotate. What does that mean? We can find the answer in Part 23.51 of the federal regulations for small single engine aircraft certification. For normal, utility,

and acrobatic category airplanes, rotation speed, Vr, is the speed at which the pilot makes a control input, with the intention of lifting the airplane out of contact with the runway. By certification standards, Vr, must not be less than VS1.

Now for the best part: Vr is the speed that will result in a speed at 50 feet altitude that is shown to be safe under all reasonably expected conditions, including turbulence and complete engine failure or 1.20 VS1. So Vr is the speed that has been demonstrated to allow you to accelerate to a safe speed by the time you are at 50' altitude.

Next month we will talk about climb speeds.

Mike

Flying Companion Seminar

This event is geared towards the Non-flyer, your "right seater". Cost $50.00 for the day prepaid, $60.00 at the door.

Saturday, Feb. 11, 2017

702 West Deer Valley Road
Phoenix, AZ 85027
(Deer Valley Airport terminal upstairs)

9 - 4 with Lunch included

All materials provided

Reservations required

For more info and to register go to

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APA Website

Please visit our website for the latest information. www.azpilots.org A great resource for APA's work in the state, archived newsletters, current events, APA's continuous work with legislators, a calendar of activities, and more.

APA is a completely voluntary organization. It survives on membership dues and sponsor revenue. One of the highlights of the organization is the Website. Stefanie Spencer manages the complete Website on a continuous basis. Leave email for Stefanie:

Webmaster@AZPilots.org

Stefanie Spencer— Webmaster

Newsletter Contributors

Article Deadline

20th	Editor reminds "The Team" to submit articles
25th	Authors submit articles and advertisements

Contact the newsletter editor:

Newsletter Editor@AZPilots.org

For anyone wanting to contribute to this newsletter please submit your writing in an email file along with photos and captions (separate files). The APA would like to publish information about what's happening in your area of Arizona. Subject matter could range from regulatory issues to new places to eat (or old places) to airport management to safety. Of course the APA would like to know about any political activities that could potentially compromise Arizona's pilots or its airports.

New pilots welcomed!

Writers welcomed!

APA Clothing

The online store is currently on the Square Market, click here.

Advertisements

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APA Membership

If you are not a member of APA you are encouraged to join and help us keep General Aviation available, safe and fun for all. Your support is very much appreciated. Please visit our website for details and where you can join APA, If you have questions, please go to our website's contacts web page where you can send an email, see our mailing address or contact us by telephone. You can also help APA by purchasing some of our logo items, Caps & T-Shirts.

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