PLANE TALK

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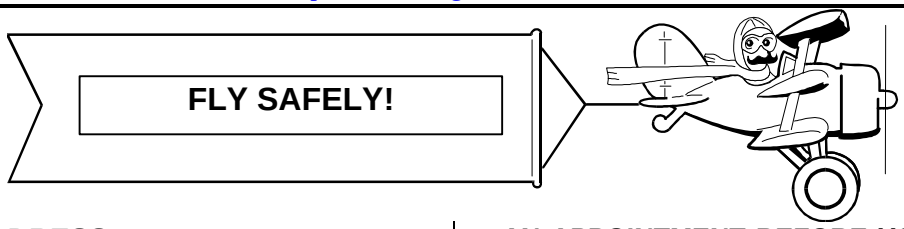

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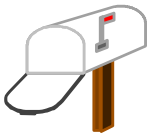


If you change your address or do not want to continue to receive PLANE TALK, please let us know so we can change our address listing.

FAA AVIATION NEWS

For more FAA information, you can subscribe to the **FAA AVIATION NEWS** magazine by calling the Government Printing Office (GPO) at (202) 512-1800. GPO's code for the magazine is FAN. You can also call the FSDO, (402) 475-1738, and ask for a copy of the magazine and use the subscription form included in the magazine. We only get a few extra copies of the magazine for each edition, but we will put your name on a waiting list and send you one when we get it. Cost of the magazine is $28.00 per year.

SECURITY

As we reported in our last newsletter, because of increased security at FAA offices, we must keep our office locked; therefore, no one will be allowed in the office without an appointment. **Also, when entering our facility, you may not have any items in your possession that are not fully exposed and easily viewed. Briefcases, purses and backpacks are not allowed. REMEMBER: PLEASE CALL FOR AN APPOINTMENT BEFORE YOU MAKE A TRIP TO OUR OFFICE.**

SUN 'n FUN 2003

The Sun 'n Fun 2003 EAA Fly-In in Lakeland, Florida, will run from April 2-8, 2003. NOTAM and schedule information can be found at www.sun-n-fun.org/content

UPCOMING EVENTS

Tuesday, March 25, 2003 – Pilot Safety Meeting – 7-9 p.m. – GHL Aviation, Inc., Municipal Airport, Wayne, NE

Wednesday, March 26, 2003 – Pilot Safety Meeting, 7-9 p.m., Administration Building, Municipal Airport, O'Neill, NE

Thursday, March 27, 2003 – Pilot Safety Meeting, 7-9 p.m., New Courthouse Meeting Room, 365 North Main Street, Valentine, NE

Tuesday, April 8, 2003 – Pilot Safety Meeting 7 p.m., Terminal Building, Searle Field, Ogallala, NE

Wednesday, April 9, 2003 – Pilot Safety Meeting, 7 p.m., Kimball Air Service Hangar, Municipal Airport, Kimball, NE

Thursday, April 10, 2003 – Pilot Safety Meeting 7 p.m., L & D Aero Services Hangar, Municipal Airport, Chadron, NE

Thursday, May 15, 2003 – Pilot Safety Meeting, 7-9 p.m., Lancaster County Cooperative Extension Building, 444 Cherrycreek Road, Lincoln, NE

KEEP YOUR BRAIN A COUPLE OF STEPS AHEAD OF YOUR AIRPLANE!

Neil Armstrong

WINGS PROGRAM PARTICIPANTS

Congratulations to the following pilots for having successfully participated in the Pilot Proficiency Award (WINGS) Program.

PHASE 1: Stephen G. Amundson, Jonathan Fuller, Christopher Hintz, Jimmy D. Jackman, Bradley D. Krumel, Robert S. McKee, Richard D. White
PHASE II: Rodney Matlock, Amy McNaught, Todd L. Rickenbach, Rodger J. Schmit, Warder L. Shires, John Sidle
PHASE III: John C. Brager, Wilmer D. Brauer, Mauro Giacomet, Douglas O'Hare, Jeremy C. Strack, Rodney Wells
PHASE IV: Gregory J. Finzen, K. C. Hehnke, Steve D. Lukehart, Mike A. Manzitto
PHASE V: John E. Drap, Jr., William J. Greiner, George W. Ketner, Marvin J. Masten Jr., Ron Rife
PHASE VI: Barton Kreider, Michael P. Quinn, Roger W. Schmidt, Chuck Stokes
PHASE VII: Vergil Heyer, Michael A. Kieffer, Larry M. Smith
PHASE VIII: Rodney J. Rudebusch
PHASE IX: Ralph W. Anderson, Ken Maughan Jr.
PHASE X: J. Arthur Curtiss, Albert J. Dyczek, Edward T. Foster
PHASE XIV: James Lalumendre, Jacob E. Wilson

CONGRATULATIONS!

We are proud to announce that Central Cylinder Service, Inc., has won the "Good Friend Award" for our District and also for the Central Region. Their nomination will now be forwarded to Headquarters to be considered for the National Award.

We thank Central Cylinder for all of their help and continued support. We wish them good luck in the national competition.

DENSITY ALTITUDE

1. Always check density altitude against aircraft performance figures. Density altitude is pressure altitude (the altitude read from the altimeter when you set it to 29.92 inches) corrected for nonstandard temperature. Many pilots depart short runways on high density altitude days by leaving early in the morning or late in the evening where there are cooler temperatures. If in doubt, ***DON'T GO!***

2. When departing a high density altitude airport in a non-turbocharged aircraft, be sure to ***lean the mixture*** according to the pilot's operating handbook. A temperature of 105 degrees F at sea level means a ***density altitude of 3,000 feet*** and proper leaning is important.

3. If you are flying with a full load from a short field with high density altitude, it may be safer to take passengers and payload in two trips to a nearby airport with longer runways. Then fully load the aircraft and depart on course. Be sure to stay within the aircraft's performance capabilities and your personal minimums for an extra margin of safety.

4. Multiengine pilots should consider the obstacles in the departure path against aircraft climb gradient on one engine. Climb gradient is the altitude gained per horizontal distance traveled.

5. Single engine service ceiling should also be considered for en route planning purposes. Can your multiengine aircraft maintain the minimum en route altitude if IFR, or a safe altitude, should an engine failure occur. Select a course that allows suitable airports along the route.

6. Don't forget to take care of the most important part of the aircraft - the ***pilot!*** Bring some water along on trips to avoid dehydration.

AVIATION MAINTENANCE TECHNICIAN AWARDS

A "well done" to the maintenance technicians who have successfully participated in the aviation maintenance awards program:

CHARLES TAYLOR AWARDS:
Alfred C. Glaser, Jack A. Jackson, Robert L. Kilmer, Eugene T. Martin, Donald F. Maxfield

AGRICULTURAL AIRCRAFT

AC 43-16A Aviation Maintenance Alerts, Alert Number 293

Cessna: Model A188B; AG Wagon; Loss of Engine Power; ATA 2820

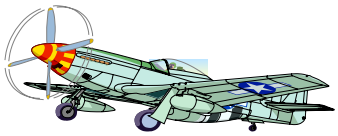
While engaged in aerial application work, the pilot lost engine power, which resulted in an accident.

While investigating the accident, a technician discovered the cockpit mixture control was set properly; however, the engine fuel/air mixture was

extremely lean. The fuel filter assembly (P/N 0756009-7) was contaminated to the point of restricting the engine fuel supply. He did not say what "contamination" was found in the filter assembly or how it got there.

The submitter recommended repositioning the fuel filter/strainer drain. He stated this would allow better access when the technician checked the condition of the drained fuel. Part total time not reported.

AIR SHOWS AND FLY-INS



The air show and fly-in breakfast season is fast approaching. If your airport is planning on having an air show with aerobatics, this will require much advanced planning with the FSDO, and will involve airspace waivers, crowd control, etc. So, don't wait until the last minute. Start your planning now. If your airport is going to have a fly-in, now is the time to be thinking about crowd control, aircraft parking, car parking, medical facilities, etc. Advance planning is the name of the game.

BENDIX MAGNETO DEFECT

AC 43-16A Aviation Maintenance Alerts, Alert Number 293

This article was submitted by a technician (A&P, IA) and forwarded through the FAA Flight Standards District Office, located in Fargo, ND.

The subject magneto (Bendix type S4LN-21) was installed on a Teledyne Continental Model C-90 engine being used on a Cessna Model 140A aircraft.

During an engine teardown because of a broken rocker boss, the owner decided to overhaul the engine due to performance degradation. When the engine was disassembled, a technician discovered the crankshaft was cracked. The engine maintenance records indicated the engine was involved in a "propeller strike" approximately 18 months prior. When the magnetos were removed, he found that the flyweights on one magneto were starting to rub on the posts. The washer was "welded" to the axle. (Refer to the illustration) Normally, the flyweights are secured by countersunk washers that are "hot riveted" to the axle. In this case, someone had "brazed" the washers to the axle, evidently because it was loose.

The manufacturer's inspection requires checking the washers with hand pressure for rotation. Movement of the washer requires replacement of the cam/flyweight assembly. It was not possible to determine the identity of the person who improperly welded the washer in this assembly.

BIRDS AND THE BEES

With spring in the air, it is time to pay special attention to the birds and bees. An infestation of living, creeping, crawling and flying things can wreak havoc for both aircraft and their occupants. An invasion of these critters into an aircraft has caused damage and/or destruction to virtually all aircraft systems. Even the smallest opening can be like "putting out the welcome" mat for these varmints to set up housekeeping.

Birds seem to have an attraction for engine cowling and fuselage sections big enough for their purpose. Even domestic animals (cats) have been known to "take up" residence in these places.

Other than "stopping up" orifices, vents, air intakes, and other openings, the material left behind by these intruders may be corrosive, toxic, and/or a fire hazard. Bees have been known to "swarm" an aircraft tail section causing a large change in the center of gravity. Probably the greatest damage is done by members of the rodent family (including squirrels). Rodents have a habit of eating or gnawing on almost any part of an aircraft, and (in a short amount of time) their "deposits" have been known to cause severe corrosion.

Before your aircraft is asked to carry you and your passengers aloft, a very "close" inspection and an operational check of all systems should be completed.

Many methods have been devised to keep these creatures out of aircraft. Some work and some don't. All aircraft owners are encouraged to take every measure possible to keep these creatures out of their aircraft. Be especially alert if your aircraft has been inactive for any period of time. Remember, a **"thorough"** preflight is always warranted.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

AC 43-16A Aviation Maintenance Alerts, Alert Number 293

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.
Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is: http://av-info.faa.gov/isdr

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

AERIAL APPLICATOR OPERATIONS AND TRAFFIC PATTERNS

Soon, the aerial applicators will be getting ready to start the spray season. FAR 137 which governs aerial applicator operations states that aerial applicators may deviate from the traffic pattern at airports without a control tower if prior coordination is made with airport management, deviations are limited to ag aircraft operations, landings and takeoffs are not made on ramps, taxiways, or other areas of the airport not intended for such use, and the ag aircraft at all times remains clear of, and gives way to, aircraft conforming to the traffic pattern for the airport. Most ag aircraft do not have radios so we will have to be alert and make that extra effort to clear the area, double check base and final, and watch carefully the other runways. Remember, one of the best anti-collision devices we have is our eyes.

FAA ISSUES PHOTO ID RULE FOR GENERAL AVIATION PILOTS

In a move to further balance security and needs of the aviation community, the FAA issued revised rules that provide a readily available, low-cost way for pilots to carry acceptable photo identification when flying. The new regulations also require pilots to present that ID when requested by the FAA, Transportation Security Administration, National Transportation Safety Board or any law enforcement officer.

The FAA expects the most commonly used photo ID will be a valid driver's license. The rule requiring this is FAR 61.3(a).

ADVISORY CIRCULARS ON THE INTERNET

You can access Advisory Circulars by going to www.airweb.faa.gov and clicking on Advisory Circulars on the left side of the screen.

AVAILABILITY OF PILOT CERTIFICATE DATA ON THE INTERNET

The office responsible for maintaining the Federal Aviation Administration's (FAA) airmen records has developed a means for anyone to search the airmen database using the Internet. The FAA believes this will provide the aviation community with the means to help establish the validity of credentials or identification of an airman who may attempt to gain employment, rent aircraft, or wish to begin flight training at an FBO or flight school. An airman's certificate(s) may be verified at the following URL: http://registry.faa.gov/amquery.asp.

PREPARE FOR TAKEOFF

The Transportation Security Administration has developed an informative new web site to help airline passengers prepare to go to the airport and what to expect when they arrive. These travel tips, found at www.tsatraveltips.us should make passengers' trips smoother.

THUNDERSTORMS

1. Avoid cells by 20 miles - this means having 40 miles between two cells.

2. Provide extra distance from cells moving 20 knots or greater and the cell at the south end of the line of storms. This cell does not have to compete for moisture with other cells so it has an abundant "fuel" supply to generate turbulence.

3. Surface dew point and temperature are a good indicator of storm severity. Thunderstorms forming over an area where the dew point is 50 degrees F or higher with more than a 30 degree spread between

temperature and dew point indicate a potential for ***extremely*** strong storms.

4. If flying a radar-equipped aircraft, learn to use the antenna tilt feature effectively to identify tops of the moisture and to determine if rain is so heavy that it is attenuating the radar beam. Cell shapes and rain gradients provide key information on the hazards of storms. Remember, radar and storm scopes are for avoiding, not penetrating, storms.

5. Storm hazards are linked to the overall instability of the atmosphere. Ask the briefer to check the convective outlook which categorizes thunderstorm risks.

6. Check the winds at 18,000 feet. If they are southwesterly, you can expect storms to form.
7. Consider flying in the morning before the afternoon heat can trigger storms.

8. Consider delaying takeoff when a cell is closer than 20 miles to the departure airport.

9. Summer haze can reduce flight visibility to almost zero, even when ground visibility is 3 miles. This can pose serious problems for students and low-time private pilots as the haze makes clouds, thunderstorms, and other aircraft difficult to see. Flying when there are reported "embedded" thunderstorms can be very hazardous unless you have thunderstorm detection equipment on board.

10. When in doubt, ***DON'T GO!***

HAIL

Here is another good reason to stay away from thunderstorms unless you are looking for a really thrilling experience. Having my windshield knocked out by hail has always ranked right up there with one of my great fears in aviation. Hail competes with turbulence as the greatest thunderstorm hazard to aircraft. Supercooled drops above the freezing level begin to freeze. Once a drop has frozen, other drops latch on and freeze to it, so the hailstone grows - sometimes into a huge ice ball. Large hail occurs with severe thunderstorms usually towering to great heights. Eventually the hailstones fall, possibly some distance from the storm core. In fact, hail has been observed in clear air several miles from the parent thunderstorm.

As hailstones fall through the melting level, they begin to melt and precipitation may reach the ground as either hail or rain. Rain at the surface does not mean the absence of hail aloft. You should anticipate possible hail with any thunderstorm, especially beneath the anvil of a large cumulonimbus. Hailstones larger than 1/2 inch in diameter can severely damage an aircraft in a few seconds

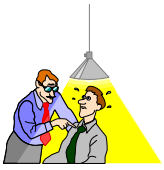
INCIDENTS

During climbout, the pilot of a Cessna 150 was unable to maintain a positive rate of climb due to inadequate engine power. At approximately 500 feet AGL, the PIC diverted to the airport and was forced to land in a field one mile east of the airport. There were no injuries. Investigation confirmed low engine power due to a combination of low cylinder compression and a malfunctioning carburetor heat control system.

NEBRASKA ACCIDENTS

An Avid Flyer took off and was at 200-300 feet when the engine quit. After turning back to the airport, the aircraft stalled and the left wing tip caught the terrain and crashed 50 feet from the runway. The pilot received fatal injuries and the passenger received minor injuries.

NEBRASKA ENFORCEMENTS



During a review of an applicant's qualifications for a flight check, it was discovered that the student had flown cross-country without the benefit of a Certified Flight Instructor checking the current weather and endorsing the student's logbook. The Certified Flight Instructor was counseled and issued a Letter of Warning.

A Beech 1900 with two crewmembers and seven passengers was on a scheduled passenger flight. A VOR instrument approach was executed. The aircraft approached the runway high and slow. A missed approach was executed and the left wing was allowed to make contact with runway approximately 1800 feet beyond the approach end. The aircraft received substantial damage. A 90-day suspension has been recommended for the pilot and copilot.

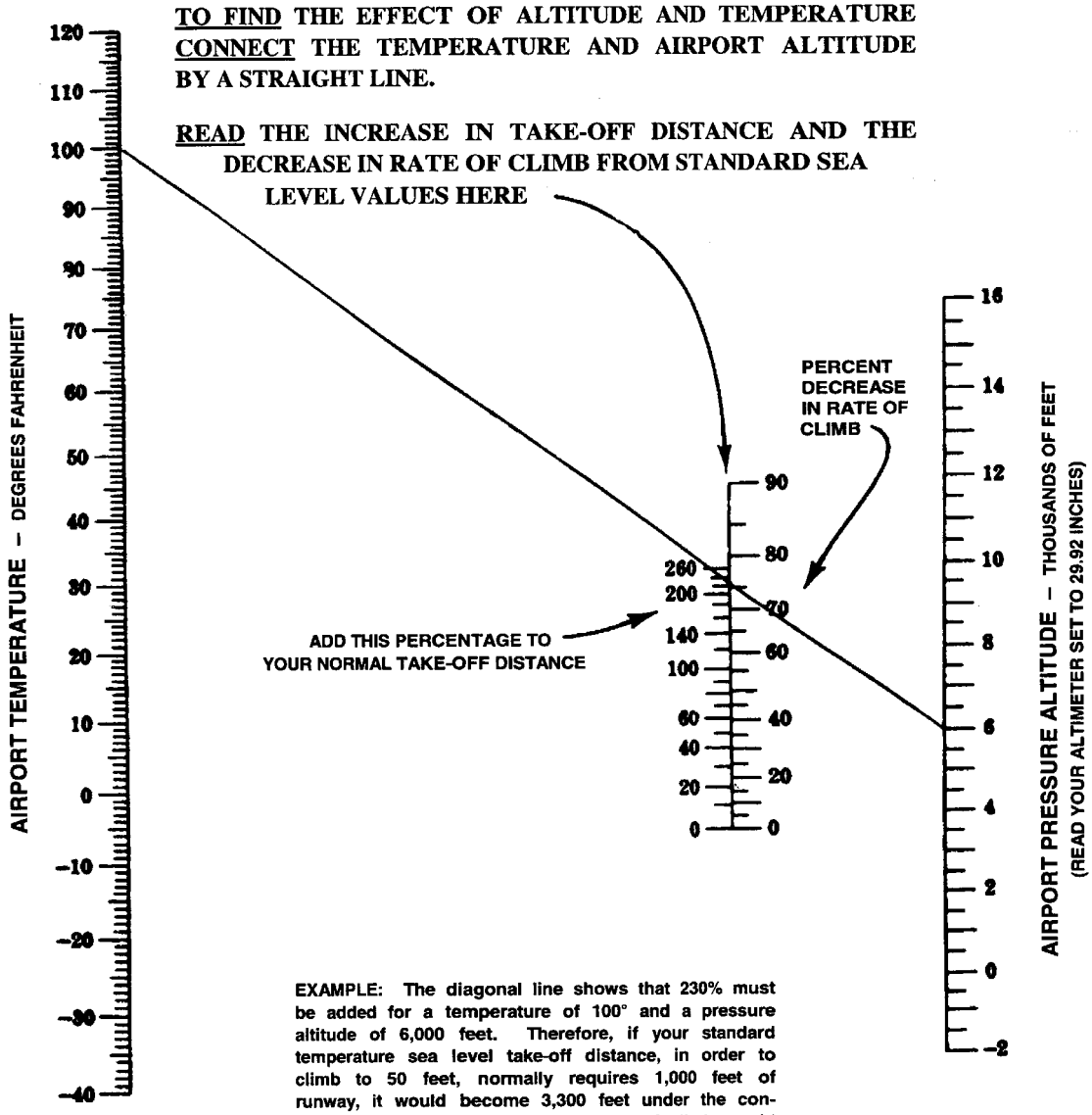
The pilot of a Piper PA-32R was assigned by ARTCC to maintain 6000 feet MSL. While looking for traffic, he descended to 5600 feet. The nearest conflicting traffic was at 2.35 nautical miles horizontal and 500 feet vertical. The pilot received counseling and was issued a Warning Notice.

A repair station approved a Beech 35 for return to service after installing oil cooler P/N 639171. They also replaced a generator, a voltage regulator and a circuit breaker. This repair station did not have an authorization to work on any aircraft airframe. A $1000 civil penalty has been recommended.

A pilot was issued a landing clearance to runway 14L and landed on the taxiway adjacent to runway 14L. The pilot completed remedial training.

A student arrived for a flight test with a Piper PA-18 tail wheel aircraft. During review of the student's logbook, it was discovered that he did not have the authorization to conduct operations a tail wheel aircraft. He was counseled and issued a Letter of Warning.

THE KOCH CHART FOR ALTITUDE AND TEMPERATURE EFFECTS



EXAMPLE: The diagonal line shows that 230% must be added for a temperature of 100° and a pressure altitude of 6,000 feet. Therefore, if your standard temperature sea level take-off distance, in order to climb to 50 feet, normally requires 1,000 feet of runway, it would become 3,300 feet under the conditions shown. In addition, the rate of climb would be decreased 76%. Also, if your normal sea level rate of climb is 500 feet per minute, it would become 120 feet per minute.

This chart indicates typical representative values for "personal" airplanes.
For exact values contact your airplane flight manual.
The chart may be conservative for airplanes with supercharged engines.
Also remember that long grass, sand, mud or deep snow can easily double your take-off distance.