

U42 GA HANGARS PAINTING UPDATE

Hangar rows A, B, and C at South Valley Regional Airport (U42) have been painted and re-occupied.

Row D painting and cleaning should be completed by August 8th.

Contact Properties Management Specialist Mike Rawson at 801-575-2894 or General Aviation Manager Steve Jackson at 801-647-5532 for additional information.

ANNUAL GA BBQ DATE SET

Saturday, October 10th, has been selected for the annual SLCDA General Aviation barbeque at South Valley Regional Airport (U42) in West Jordan, UT. It will be held beginning at 1:00 p.m. with location to be announced.

Fire extinguisher servicing will be available for a reasonable fee starting at 11:00 a.m.

SUMMER FLYING COMPLACENCY

Mountain flying in Utah and the intermountain area during the warm/hot days of summer often provides a possibility of beautiful skies, smooth air, unlimited visibility, attractive back-country airstrips, and good weather that sometimes leads complacent pilots to experience problems with density altitude.

Operations at an airport with even moderately high elevation, hot temperature, and possibly high humidity will likely raise the "performance altitude" of the airplane, often by thousands of feet, resulting in decreased aircraft performance.

Density altitude (DA), by official definition, is ***the pressure altitude corrected for non-standard temperature variation***. It relates to the takeoff and climb performance of the airplane. In this vein it is an expression of the thickness of the air, or lack of thickness. A high density altitude means thin air. Thin air reduces the lift of the wings, the thrust of the propeller and the power output of the engine.

In effect, density altitude is *the altitude the airplane "thinks" it is at and performs in accordance with*. An airplane operating at sea level with standard conditions will experience a density altitude of sea level. But add a low-pressure area and temperatures well above standard and the sea level operation may be the equivalent of a 4,000-foot density altitude. In this case, even though the airplane is at sea level, it performs as if it were flying at 4,000 feet during standard conditions. So 8,000-foot DA's are not uncommon at 4,000-foot (MSL) airfields during summer months.

Many intermountain airfields are in excess of 7,000-feet MSL.

It is often necessary to off-load some baggage or other unnecessary weight to be able to operate at high density altitude airports.

When a pilot is exposed to a high density altitude operation, it becomes the pilot's responsibility to determine that the airplane has the required performance to make the takeoff and then out climb any obstructions or terrain during the transition to the en route phase of flight.

Rule of thumb to determine density altitude:

For each 10-degrees Fahrenheit above (or below) standard temperature for an airport's elevation, add (or subtract) 600 feet to (from) the field's elevation.

Standard temperature at sea level is 59-degrees F. Subtract 3.5 degrees per 1,000-feet elevation above sea level to determine standard temperature. For example, at an airport at 6,000-feet elevation, multiply 3.5 times 6 for 21. Subtract 21 from 59 to find the standard temperature at a 6,000-foot airport is 38° F.

If the temperature is 80 degrees, subtract $80 - 38 = 42$, about 4 10-degree intervals. Multiply 4 times 600 for 2,400. Add 2,400 to the elevation (6,000) for a density altitude of 8,400 feet. Although the physical altitude is 6,000 feet, the airplane will perform as if it is operating at a standard day at 8,400 feet.

Obtaining a value for the density altitude doesn't particularly help the pilot unless he looks at the owner's manual of pilots operating handbook to find the effect on performance. The DENALT Performance Computer provides a factor for applying to the sea level takeoff distance and sea level rate of climb to determine anticipated performance under density altitude conditions.

A Cessna 172 (180 horsepower) at a high elevation airstrip may require delaying the takeoff until ambient temperatures cool and take-off winds increase to provide more lift.

FEDERAL LAW ENFORCEMENT HOTLINES

Report All Suspicious Aviation Activities:

1-866-AIR-BUST or 1-866-GA-SECUR

An airplane with a fixed-pitch propeller, like the Cessna 172, suffers performance deterioration from a high density altitude. Generally you can use the Owner's Manual or Pilots Operating Handbook to determine the sea level takeoff distance. Then, based on the density altitude, add to this takeoff distance a value of 12 percent for each 1,000 feet up to 8,000 feet; and, add 20 percent for each additional 1,000 feet density altitude above 8,000 feet.

The constant-speed (variable pitch) propeller airplane, like the Cessna 180, suffers less than the fixed-pitch prop airplane, but it still experiences a significant deterioration in performance. Here, add 10 percent for each 1,000-foot density altitude up to 8,000 feet. Add 15 percent for each 1,000-foot density altitude above 8,000 feet.

Density altitude is a good gauge of the performance you may expect from your airplane. Keep in mind some other factors that require consideration: gross weight, wind, runway surface, gradient, aircraft and engine condition and the pilot's skill.



Kinky Creek Divide airstrip (8,838-foot MSL elevation) located about 38-nautical miles east of Jackson, WY. Expect degraded aircraft performance in summer.

A rule of thumb that becomes invaluable for density altitude operations describes the runway length requirement. If you have doubts as to whether the runway is long enough for takeoff, walk the length of the runway and mark the half-way point in some manner; maybe a high-visibility streamer on a stick or a pile of rocks.

During the takeoff, if 70 percent of the speed necessary for takeoff is obtained by the half-way point of the runway, there will be sufficient runway to continue the takeoff. If you don't have 70-percent takeoff speed, abort and wait until conditions are more favorable (cooler temperature, head wind, or off-load some weight).

Even under the best of conditions, with adequate mountain flying experience, and a great airplane, one's motivations and confidence may still lead one down a path to disaster.

Don't let complacency spoil your summer flying adventures.

HELPFUL POINTS OF CONTACT

For GA operational, facilities maintenance, aviation newsletter, airfield, and SLC Title 16 questions call: Steve Jackson, SLCD General Aviation Manager, 647-5532 or e-mail at steve.jackson@slcgov.com.

For hangar lease and repair questions call: Mike Rawson, Properties Management Specialist, at 575-2894 or e-mail at mike.rawson@slcgov.com.
For aviation security questions call: Connie Proctor at 575-2401.

For gate access problems call: Airport Control Center at 575-2401.

For emergencies call: at SLCIA, 575-2405
at TVY or U42, 911 then 801-575-2405

For common General Aviation information call the GA Hotline: 575-2443

ELECTRONIC GA NEWS

If you would like to receive the Salt Lake City Department of Airports' monthly general aviation newsletter by e-mail, send your e-mail address to: steve.jackson@slcgov.com.

UPCOMING EVENTS

Leading Edge Aviation Logan (LGU) - Leading Edge Aviation has a free breakfast in their hangar on the 2nd Saturday of each month from 8:00 am to 10:00 am. They'd enjoy seeing you there. For more information about Leading Edge events, visit www.leaviation.com.

Wendover Air Show and Fly-in (ENV) – Scheduled for Saturday, September 26... more information to follow.

July Local FAA Seminars the SLC FAA Safety Team and Cornerstone Aviation are sponsoring the 4th of 8 quarterly Flight Instructor Workshops on Aug 25 at 6:00 p.m. in the Kibbie Executive Terminal at Salt Lake City International Airport. TSA record keeping, training, and citizenship requirements will be covered as will security related airspace issues. The workshop will be held in the downstairs classroom on the right as one enters the Executive Terminal on the Corporate and General Aviation side of the airport. Non flight instructors are also invited to attend

Additional seminar and related information may be found at www.faasafety.gov under events/seminars or one may contact Dennis Seals FAA Safety Program Manager, at 801-257-5056.

--SAFETY FIRST--

**Do NOT Fuel or Start Aircraft
Inside of Hangars!**



Enjoy a safe summer flying season!