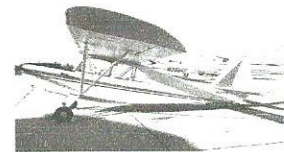




**FIRST FLIGHT CORP.**  
Brown Field Airport  
6810 Curran St. San Diego, CA 92154  
(619) 661-6522



**August 2015**

*We would like to take this time to remind you that we are here to provide you with quality service and information about Pilot Certifications, Aircraft Rental and Aircraft Maintenance.*

**Thoughts from Tom**  
**Make sure to do a good preflight inspection whoever flew the aircraft last will get charged for any damages not reported prior to the flight.**

**Density Altitude**

By Ian J. Twombly - AOPA's Flight Training Magazine  
When temperature and altitude go up, performance goes down

How to calculate Density Altitude

**Mathematically:**

Density altitude + pressure altitude = 120 X ([current temperature in degrees Celsius - standard temperature])

Assume a pressure altitude of 3,000 feet and a temperature of 30 degrees Celsius

3,000 + (120 X [30-9])

3,000 + (120 X 21)

3,000 + 2,520

Density altitude = 5,520

**E6B**

An E6B can be used to calculate many difficult parameters, but calculating density altitude isn't complicated. Simply slide the pressure altitude under the temperature in the left window and read density altitude off the center window.

**Pilot's Operating Handbook Chart:**

Most POH's have takeoff distance charts that account for density altitude. By calculating the distance at a particular elevation for a specific temperature, you are automatically figuring out your aircraft's expected performance.

Simply, pressure altitude is altitude corrected for nonstandard pressure. To find it either put 29.92 in the altimeter and read the value, or find the difference between the current setting and 29.92, multiply by 1,000, and add it to the elevation for values lower than standard and subtract for values higher. For example, if the current setting is 30.01 and the elevation is 1,000, subtract 29.92 from 30.01 to get 0.09. Multiply that by 1,000 to get 90. Because the current value is higher than standard, subtract it by 1,000 feet to get a pressure altitude of 910 feet.

Humidity also affects density altitude, although it's not a common practice to incorporate it into the calculation. However, the FAA says a good rule of thumb is to add 10 percent to the takeoff distance when it's particularly hot and sticky.

Because the airplane performs at the density altitude and not the elevation, it may be necessary to lean the engine before taking off, even at a lower elevation airport. Pilots in the mountains do this routinely, but a hot day in Kansas, Texas, or even Florida might call for it as well. Ask your flight instructor for specific guidance.

**. What's Going On?**

Check us out at:

[www.FirstFlightCorp.com](http://www.FirstFlightCorp.com)

Email:

[FirstFlightCorp@yahoo.com](mailto:FirstFlightCorp@yahoo.com)

**CHALLENGE:**

Applying carburetor heat will?

- A. result in more air going through the carburetor.
- B. enrich the fuel/air mixture.
- C. not affect the fuel/air mixture.

Last month's newsletter CHALLENGE Question and Answer:

**QUESTION:** One purpose of the dual ignition system on an aircraft engine is to provide for?

**ANSWER:** B. improved engine performance.

**Congratulations to our new SOLO Pilot!**  
*Julio Gonzalez July 15<sup>th</sup>, 2015*



**CFI: Pete Grootendorst Cessna 172 N9151H**

**We would like to congratulate you for your hard work, perseverance and dedication!!!!**

**Ken's Korner**

**THINK**