

WELCOME

The Villages Aviation Club

HAPPY THANKSGIVING

November 2019

SAFETY BRIEF

HONORING ALL WHO SERVED

**THANK YOU
VETERANS**

VETERANS
DAY

Short Video

736265

(POLICE OFFICER HEADING TO DONUT SHOP)

AUG01 2019

(No sound. Subtitles totally my own. Feel free to read out loud)

736265



(POLICE OFFICER HEADING TO DONUT SHOP)

AUG01 2019

Is the Pilot being a 'Smart Alec?

Do You Know How Fast Your Plane is Going?

**The answer is harder than
you think...**



You're sitting in the cockpit with six round dials in front of you, and your instructor asks how fast you are going. One of the dials has small letters that say AIR SPEED. It looks a lot like the speedometer in your car, and the needle is pointing to 90. "Ninety," you say. "We are going 90." But thinking it might be a trick question, you quickly add, "KNOTS. Our *airspeed* is 90 *KNOTS*."

Good try.

You remembered the KNOTS thing. But the answer to how fast you are going in an airplane is so much more complex than that.

How Fast Are You Going?

- Your airplane can not have the same connection to the atmosphere that the car has to the road.
- The airspeed indicator relies on air molecules collected by the pitot tube on the outside of the airplane and from the static air sources.
- Temperature, air pressure, wind and other factors conspire to make the question, “How fast are we going?” a bit complicated for pilots.

At any given time, **the question could have five right answers.** It is important to reference and understand which airspeed you are using.

Diaphragm

Long lever

Sector

P

P Pitot t

P



Ram a



pinion

Calibrated Airspeed (CAS)

Indicated Airspeed corrected for installation and instrument error.

At certain times, usually at slow airspeeds with certain flap settings, there can be an error of several knots due to disruptions in the airflow to the pitot tube.

The error usually disappears at higher speeds, so indicated and calibrated airspeed can be nearly identical at higher speeds.

The aircraft's AFM/POH (Aircraft Flight Manual/Pilots Operating Handbook) contains an airspeed calibration chart. Using this chart, a pilot can determine his CAS by using the IAS and applying a correction. Still not too hard, is it?



True Airspeed (TAS)

True airspeed is calibrated airspeed corrected for non-standard temperature and pressure.



Ground Speed (GS)

Ground speed is the actual speed at which the airplane moves across the surface of the earth.

- To determine ground speed, we adjust the true airspeed to account for wind conditions.
- Ground speed is of critical importance, used in determining the range of the airplane and the length of time it will take to make it to your destination.



Check ride question

“How can a plane have a true airspeed of 500 knots and a ground speed of zero on a day with no wind?”



A jet pilot could be vertical in a fighter at 500 knots and have a ground speed of zero. While this is not relevant in the real world, it serves to show that **factors other than wind can influence ground speed.**



Equivalent Airspeed (EAS)

- Jet aircraft operating at or near the speed of sound need to account for the compressibility of the air as it enters the pitot tube.
- Equivalent airspeed takes this compressibility into account and expresses it as a **Mach number** which relates the speed of the airplane to the speed of sound.

“Do you know how fast you were going?”



SAFETY SEMINARS

Date	Title and Description	Location
11/12/2019 09:00 EST SO1596549	Orlando FSDO FAASTeam CFI Special Emphasis Program at Embry Riddle CFI Special Emphasis Program by Orlando FSDO... This time, our FREE program will include: ~ WINGS Incentives and Credit Packages ~ CFI Professionalism and...	Daytona Beach, FL  41 seats remaining.
11/14/2019 19:00 EST SO1596523	CFIT (Over-Reliance on Automation) Pilot Proficiency in Flying With and Without... Audience discussion of CFIT (over-reliance on Automation) in this two-hour presentation: -Know the hazards...	Orlando, FL  93 seats remaining.
11/15/2019	FAA Compliance Program	Daytona Beach, FL

11/21/19 Thursday 7pm

Leesburg Admin Building

S/E and M/E IFR Departure Procedures and Night Flying Regulations and Techniques

See you again soon



Fly Safe