Smoke Signals
January 2017
HAPPY NEW YEAR!

Next Meeting: Saturday
Jan 21st, 2017
5:30 p.m. Dinner/Social/Awards

President's Corner

CALL OR EMAIL DENNY NOW TO RSVP FOR DINNER!

813-390-2106/Eaa48@aol.com

I hope everyone enjoyed some "down time" with their significant others…family, spouses, friends, etc. It seems to be a busy world and we all need to set the chocks for a bit and just "chill."

The new year will be bringing some new activities as we ramp up for one or more Young Eagles event(s) with or without the help of another chapter. We'll try to get an Eagles Flight day as well, although any pilot can take that challenge upon him or herself by inviting a potential aviation enthusiast up for a ride. We can always be an ambassador for flying on our own.

I had the pleasure of attending Capt Sullenberger's talk last night about his life's' lessons learned from the Hudson River landing 8 years ago, a very sharp ambassador for aviation, very professional. His talk mostly oriented around preparing yourself for what's coming in life each day; making the most of your experiences and relationships to make yourself a better person.

Remember, we're also looking for a new YE coordinator and a newsletter editor. Please let me know if you're interested.

Our annual upcoming dinner on Jan 21st is a must come participate, of course. Mike Tippin and son Richard performed this in an outstanding manner (with other helpers as well) last May and we look forward to another successful fun time of camaraderie, awards and GREAT food.

See you on the 21st!

Jeff Kaloostian

FROM THE BACK SEAT

January 2017

HAPPY NEW YEAR and may 2017 be a year of great aviation activities for all. We are finalizing the programs for this coming year and will kick off with the Annual Awards banquet scheduled for 21 January 2011 at the chapter club house from 5:30-8:00 PM. Steve will make a short awards presentation as the goal of the event is to enjoy each other's company and reminisce about last year. We have secured the world's best steak and lobster chef, Mike Tippin, to cook for us. The meal choice is steak, lobster, potato, and corn for around $10 per person. The chapter will pick up the difference in cost and provide drinks. Members are asked to bring a favorite side dish and adult beverage of their choice…just bring a little extra so we can share. Bring your family and friends…trust me it is a good time for all. The cutoff date for signing up is 18 January 2017 and our numbers are low this year, so please send an email to me at EAA48@aol.com if you plan to attend. Thanks.

As for speakers, the next two months of speakers should be very interesting.

In February we have Barry Ford from Wing Waxers who will talk about acquiring and flying his Scottish Aviation Bulldog airplane from the UK. The Bulldog is an RAF ex-trainer and is a great little aerobatic aircraft. Barry routinely flies the airplane in formation and will let us know what it is like to own and operate this unique aircraft. Additionally, he will inform us on how to care for aircraft by giving us insight into his day job as the purveyor of Wing Waxers in Zephyrhills. Barry's products can help to restore and keep your aircraft or car looking great. This will be a very informative program.

In March, we bring Steve Ritizi to the chapter to make his presentation on the Reno Air Races and the future of the unlimited class. Steve is very active with the Reno Air Races and will provide us with an "under the tent" view of what it is like to race in Formula One and the Sport Class, and a look into the future of the Unlimited Class. This is a must attend event.

I will have more on the programs lineup next month, so stay tuned. Until then enjoy the upcoming flying season…this is the perfect time of year to fly in Florida, so get airborne and renew your passion for flying with a friend. See you on 21 January and don't forget to…

…keep 'em flying.

Dd

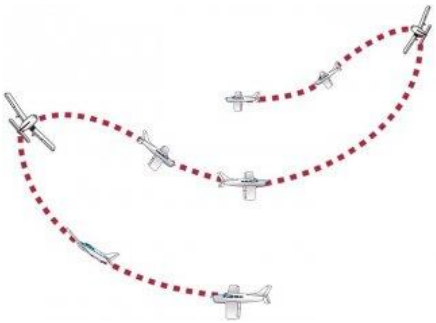
EAA 175 CHAPTER MEETING MINUTES

NONE for December….

SAFETY TIP OF THE MONTH

The performance maneuvers required for the commercial certificate are rarely used, but they can get you out of a situation.

By Joseph E. (Jeb) Burnside | December 22, 2016



Most pilots are content do drone along in the straight-and-level, rarely banking beyond 30 degrees or pitching up and down beyond 10. Meanwhile, aerobatic pilots enthuse in their ability to fly upside down, vertically and in all combinations. Somewhere in the middle of these two extremes are what the FAA calls “performance maneuvers,” generally thought of as those required on the commercial airplane pilot’s practical test.

Chandelles, steep turns and steep spirals all are part of that curriculum, and most pilots who go on to professional careers rarely, if ever, perform them again. Thanks to their lack of application in the kind of everyday flying most of us do, many pilots believe these maneuvers exist only to have something to do on the commercial checkride. Maybe. But as we’ll see, they can have practical applications. The catch? You generally have to be in some kind of a predicament to need them.

What They’re For

The FAA’s Airplane Flying Handbook (AFH), FAA-H-8083-3B, pretty much ignores any of this “controversy” when describing performance maneuvers. Instead, it says they are “used to develop a high degree of pilot skill. They aid the pilot in analyzing the forces acting on the airplane and in developing a fine control touch, coordination, timing and division of attention for precise maneuvering of the airplane.” The AFH goes on to note, “An important benefit of performance maneuvers is the sharpening of fundamental skills to the degree that the pilot can cope with unusual or unforeseen circumstances occasionally encountered in normal flight.”

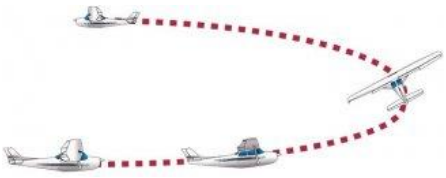
What kinds of “unforeseen circumstances” are we talking about here? Well, pretty much anything out of the ordinary that might be encountered by a pilot flying an airplane: weather, traffic, obstructions, mechanical difficulty...or the need to reverse course quickly, or descend steeply over the same spot. The point isn’t that private pilots should be examined on their ability to perform a steep spiral. The point is even pilots who never aspire to fly for money can get into a jam; knowing from experience how the airplane handles at high power and angles of attack and low airspeed in a shallow bank might be useful in getting out of it.

In fact, I can think of specific predicaments several of these maneuvers can be used to get out of: It shouldn’t require a rocket surgeon to figure out a steep spiral can come in handy when descending through a hole in an overcast, or that something approaching a Chandelle can help escape a box canyon. And despite their having specific names and way different descriptions, they all need to be flown the same way: By using all the airplane’s primary controls simultaneously, and in a coordinated fashion.

Commonalities

In addition to being in the commercial practical test standards, these maneuvers all share some basic characteristics. These include:

Maximum Performance. They each are designed to eke out of an airplane its best rate of climb or descent in a confined space, or execute a rapid heading change. Because the bank angles are in the region where load factors rise, and because substantial control inputs may be required to initiate or perfect them, they should be entered at the manufacturer's recommended speeds, or at VA, whichever is least.



The Chandelle, cover picture, and even the Lazy 8, above, actually have some practical uses, but usually only after you've done something or ignored something else to the point you need to a dramatic maneuver to recover. While it's best to avoid such a situation in the first place, second place goes to the pilot who can use these and other tricks of the trade to get back to the straight-and-level.

Substantial Control Deflection. If you're doing these right, you may need inputs approaching the specific control's mechanical limit. This is especially true for rudder, at the Chandelle's completion. Of course, if we're going to perform these maneuvers correctly, we're going to need to coordinate aileron and rudder, which can demand relative control inputs—opposite aileron to correct any overbanking tendency, for example—to which we're not accustomed.

Changing Attitudes. In the Chandelle and Lazy 8 especially, control pressures are constantly changing when the maneuver is being flown correctly. Learning how these changes affect the airplane's aerodynamics and the controls' effectiveness, and how to correct for those effects is one of the stated reasons for learning and practicing them.

Power Management. Many pilots don't normally think of the throttle as a primary flight control, but it is when considering these maneuvers. For example, it would be exciting to perform a steep spiral at cruise power, and fairly useless to try a Chandelle without it.

Beyond The Commercial PTS

While learning and perfecting these maneuvers will get you through the commercial checkride, they also will instill the skills and understanding necessary to control the airplane in extreme situations. You'll learn, for example, how much opposite aileron might be required to counter an airplane's overbanking tendency, or how much rudder is required with cruise power at minimum controllable airspeed, and how to recover from them without losing altitude.

Can this come in handy? Of course. The classic application of a steep spiral—for instance, maneuvering over a landing area for an emergency landing—is diagrammed below. Some of this is learned in primary training, but it's perfected and practiced later. Likewise, learning what it takes to maintain heading at high power settings and angles of attack, as performed in a Chandelle, has applications in banner and glider towing, short-field operations and many others.

But the most critical and important applications of these skills and knowledge come when the chips are down.

A classic example might be in the traffic pattern, where an abrupt avoidance maneuver is necessary to avoid colliding with an airplane whose pilot prefers a straight-in approach to the pattern you're flying. An abrupt, full-power, climbing turn, starting from an already-slow speed and banked attitude, for example, can be just the thing to get out of his way. Meanwhile, we've already touched on the steep spiral as a tool for positioning the airplane for an emergency landing, or to descend through a hole in the clouds to VMC below. The same maneuver can be used to establish a get-down-now emergency descent: Pull the power to idle, roll into a 45-degree bank, drop the gear and flaps, adjust pitch to fly at the top of the white arc and you're spiraling down like an express train, under control and remaining over roughly the same location throughout.

Handle With Care

One thing these maneuvers may not teach adequately is how to manage control inputs when applying increased loading to the airplane. The central problem to avoid is the so-called rolling G, where a simultaneous application of roll and pitch combine to impose additional loads on the airframe. While a certificated airplane is supposed to withstand up to 3.8 G without breaking or bending, that value presumes its G loading is applied to one axis at a time, not more than one simultaneously.

Ever watched an aerobatic display, or video of a maneuvering fighter airplane? If the maneuver being performed will exert more than, say, 2 G, its pilot will apply aileron first or pitch first, never both at the same time. Rolling and pitching at the same time, for example, exerts a twisting moment on the airframe, imposing uneven loads on the wings or horizontal stabilizer. Instead, we want to uniformly and smoothly load up the airplane to the desired G level in one axis or another, then apply loading to the other axis. For example, roll into a steep bank, then apply nose-up pitch to counter the reduction in the vertical lift component. (Yes, an exception is the Lazy 8, but the G-loading applied in a well-executed example shouldn't approach 2 G, much less the airframe's load limit.) All of these maneuvers, of course, are entered at appropriate airspeeds, to minimize G loading.

The Punchline

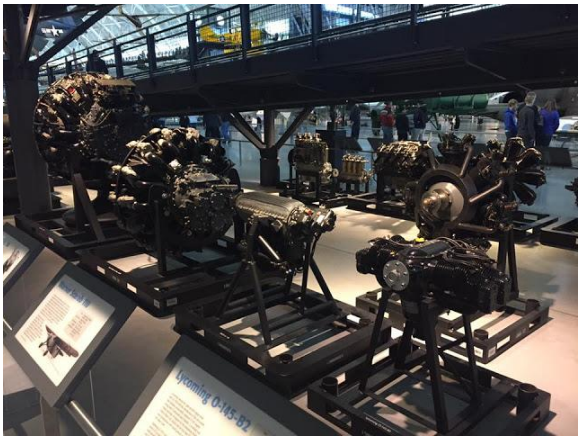
What's the point? Just this: Recovering from unusual attitudes, or the need for abrupt maneuvering to avoid an obstacle or another airplane, can require a well-developed feel for the airplane, what it's doing and how much further you can push it. One way to gain this kind of understanding is to learn and practice these and other "performance" maneuvers, regardless of whether you plan to add a commercial certificate to your wallet.

This article originally appeared in the December 2014 issue of *Aviation Safety* magazine.

See: http://www.avweb.com/news/features/Extreme-Maneuvering-228244-1.html

INTERESTING NOTAMS

1. Check out some interesting engines like the one below at VA Air and Space Museum: http://justacarguy.blogspot.com/2016/12/at-air-and-space-museum-dulles-virginia.html



2. Can anyone guess what's going on here…and who that is? See:

3. You might have another way of determining the risk for a flight, but there's a great Flight Risk Assessment Tool available for download at: https://www.faasafety.gov/gslac/ALC/libview_normal.aspx?id=103987

4. By the way, I try to keep our schedule up to date in socialflight.com as well…check it out at Tampa Executive Airport. There is LOTS of information about other aviation activities in the area here.

5. I'll keep this one in here, because they're too good to forget…take some of the AOPA online courses occasionally…. keep those flying skills in check!

   a. https://www.aopa.org/training-and-safety/online-learning

6. Enjoy some neat aviation facts during the year? Send links to me and I'll include them here in the "NOTAMS" section.

7. From the last annual dinner!

HMMMMMMMM…. don’t miss it!

CHAPTER 175 PRESENT AIRCRAFT BUILDERS

1. Jack Poff
   217-821-2868
   Vans RV-9A

(Example only)

2. Mike Tippin
   813-404-0075
   Van RV-10

(Example only)

3. Ronald LeBlanc
   (813) 957-4193
   Zenith CH 750, Cruzer builder

(Example only)

4. Don Hughes; (813)598-2030; Midget Mustang

(Example only)

** If I missed you, please email me with your information…one good picture is worth a thousand words!

5. **Rich Ilfeld; (813) 645-3786**; Tripacer@ Manatee, motor project, osprey project

Tripacer:

Motor Project:

Osprey:

Continuing from Rich….below:

a. Here's what I have sorted so far:

   i. AN Bolts: 3-4, 4-5, 5-10, 6-20 thru 3-11, 4-56, 5-60, 6-60

   ii. no fewer than 8 of each when considered in groups of 3/16, ie 4-16, 4-17, 4-18 is a group.

   iii. AN stop nuts, nylon inserts, AN stop nuts, Metal, AN castle nuts High and low profile, and AN plain nuts in all sizes

   iv. AN machine bolts, 8, & 10 - 32 lengths 4 through about 60

   v. AN machine nuts nylock mostly

   vi. A good variety of plain and lock washers

   vii. [if you need a few nuts, bolts, washers it's probably available -- that's the majority of the collection]

   viii. A lot of standard rivets, and blind rivet nuts and many sizes.

   ix. Some Cherry and blind rivets (not pop rivets)

   x. Several specialty bolts such as hex head or close tolerance

   xi. An assortment of camlocks and camlock parts.

   xii. Some pitot static fittings

   xiii. A Huge assortment of ear nuts

   xiv. An assortment of small 12 V lamps

   xv. An assortment of flying wire hardware

   xvi. A large variety of specialty fittings like

blind latches, post lights, etc.

xvii. Assorted clecos and more

xviii. There is a lot of stuff I haven't even gone through it yet. As I mentioned, I had a similar collection of my own and

b. So here's the deal; My position is that over the years I probably spent 3-4 hundred dollars on assortments and parts bags at flymarkets, and the donors to EAA have done at least that, plus tools. I've used parts over the years that would have been several thousand dollars at retail. And I've used a fair number of parts in the shop just because I had them. I see no reason the chapters would want to try to limit folks to using the parts on an airplane. It's not a sin to put an AN part on a lawn mower.

    i. **I will take email requests from members for parts for their projects or airplanes. I prefer email to phone, but if you are in the middle of something and need a part now- I won't hang up.**

c. Visitors are welcome at the shop, of course. And the parts are much better organized for browsing that they were before.

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