Winter 2015

Wings Newsletter

Inside:

The Summer of 68X

By Jesse Kalisher

My family and I had an incredible summer thanks to WOCFC and N1068X. My wife affectionately called it "the summer of Jesse" but it really should have been called the summer of 68X.

Adventure Number One – Visiting 88-Year-Old Dad in South Florida

My father is a 4000-hour Mooney pilot, long since retired from flying. I caught my flying bug from the roughly 300 hours of flying I had with him in the right seat when I was younger. When I think of how he flew IFR and shot approaches when he flew, not to mention no auto-pilot to steady the plane while he dug out charts and plates from a bag in the back seat, it boggles the mind. And so I was excited to fly Helen and the kids down to Boca Raton to see my father for the weekend.

I filed IFR and flew via CHS and STARY, ever so slightly cutting the corner at the coast. I requested and was approved for 10,000 feet over the water. We were not that far out, but altitude is everything and having once lost an engine over Lake Michigan with my father 30 years ago, I am ever mindful.

The flight was largely uneventful until we hit Melbourne, at which point the daily pop-ups appeared. Now at 8,000 feet, I quickly found myself riding the tops of the troughs with towering clouds rising off both wings. None of these had matured into a thunderstorm as yet, but the turbulence inside the pop-ups was clearly to be avoided. I quickly requested and was granted a deviation to the right to avoid a pop-up directly ahead. I veered around the cell only to find a maze of cells towering ahead. As long as I remained above the troughs and as long as ATC would allow me to, I figured I could pick my way through the pop-ups like a kid weaving through a carnival maze.

The radio came alive with deviation requests and it seemed every pilot had the same thought. It was comforting to hear all deviations being approved, and quickly. We flew like this for 20 minutes, flying as if angels in an imaginary canyon made of cotton candy, before the troughs rose and we found ourselves in the soup more often than not. Visibility gone and 45 minutes from our destination the only reasonable option left was to descend. We were never fully in the clear until below 3,000 feet. At which point it was an easy VFR approach into KBCT.

Dad didn't meet us at the airport – no effective way to time that. But he did drive out to see us off. While he declined my offer of a fun flight, before we loaded up he climbed up on the wing and peered into the cockpit. "Wow," he said. "Completely different." He flew with VORs and HIs, but never an HIS, so that was different. As was the large Garmin GPS Screen. And

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The Great 2015 Chili Cook off

By William T. Sawyer

On Saturday 14 November 2015, a hearty group of members assembled at the Club to participate in the first 'Wings of Carolina Second Saturday, Fly By the Seat of Your Pants, Who Needs AV Gas When You Have Chili Beans, This Too Shall Pass Chili Cook-off'. And, those brave souls were just the 'eaters'. To accommodate the eaters' lust for chili, an equally intrepid group of self-proclaimed chili chefs (classifications included Amateur, Skilled, Dangerous, or Lethal) put on their aprons, got out their spices, checked grammar books for proper wording in the names of their creations, and brought 11 outstanding pots of chili down to Sanford. And, these chefs invested no small level of effort to participate in the event.

In one case plans were made to airlift the chili, but bumpy conditions at cruise altitude required that a ground convoy be organized instead. It is rumored (but not yet confirmed) that some chefs turned down all-expenses-paid invitations to participate in other national chili events being held that day (The Sweetheart Chili Cook-off in Denton TX, or Joe's Thirsty Lizard Chili Cook-off, in Horn Lake MS), in order to be present for the Club cook-off.

In a patriotic display of 'democracy-in-action', the 'eaters' were asked to vote, for

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Presidents Message

By John Gaither

It seems strange to be writing my last President's Corner. It does not seem like I have been doing this for two years. I would like to report to all members on the state of the Club, but before I do that, I want to thank Club Members showed confidence in me to elect me to two terms of office.

I would also like to thank all of the members of the board and the key volunteers who have contributed during the past two years. The Club is a special place because of the contributions of its members. The president may be the orchestra conductor, but he makes no music of his own. I am reluctant to start a litany of thanks because inevitably I will miss someone and we will both feel badly about that. Yet I will mention five people – and I arbitrarily limited myself to five. George has seen presidents come and go, but he has been a true partner to me in running the flight operations side of the Club. Jim Carlson served both years as my vice president. I thank him for always being available to help and his historical insight into Club operations. I do not think that most members understand how important the role of treasurer is in the Club and how time consuming the task. I thank Mat Waugh for keeping our financial affairs in order during my term of office. Jan Squillace and David Greenfield may have been past presidents, but both have supported me in my role as president and made extraordinary individual contributions to the Club. As safety officer, Jan has organized monthly "pizza nights" and started the IMC Club within the Club. As building committee chairman, David spent huge hours in helping to design the building additions and in supervising construction. Thanks also to everyone else who contributed to the Club in past two years.

I believe that I leave the Club in good condition after two years in office but not without future challenges.

Membership

As of the end of October, the Club has more than 402 members. We have added 81 new members this year (24 net of resignations). This is not as good as the 88 that we had added by this time last year (40 net or resignations) but well above of the 62 new member 10 year average. Of the members, 231 are "Full Members" i.e. flying members. While Membership is a group effort, by way of comparison, membership was 344 as of January 1, 2014, giving a 8.0% compound grown rate over the past two years coming off a flat 2013.

Flight Hours

Flight hours have been strong but highly variable from month-to-month in 2015, we believe largely due to weather. While it is hard to measure what would have happened if we had not had multiple incidents that resulted in a shortage of aircraft, I believe that flight hours would have been materially better if we had more availability. The incidents are further discussed under Finances.

All flight hours referenced are through October. Total flight hours are as follows:

Year-Over-Year YTD Flight Hours Through Oct

	C152	PA28	C172S	M20J	M20S	All AC
Current	1703.6	1065.0	1249.3	647.6	118.8	4784.3
Historical Avg	1739.2	956.9	947.5	575.2	-	4218.9
over/under %	-2%	11%	32%	13%	-	13%
3 year avg	1821.8	1218.4	1070.2	684.8	-	4795.2
over/under %	-6%	-13%	17%	-5%	-	0%

Total flight hours for all aircraft are 13% over the historical average and approximately equal to the average for the last three years. Based on trending, we expect flight hours for the year to end up about the same as last year, which is about 100 hours under 2012, our best year in recent history.

Things have changed since last year on an average basis. The following numbers have been adjusted to reflect periods in which aircraft were unavailable for extended periods.

Avg Monthly Flight Hours by Type per Aircraft

Year	C152	PA28	C172S	M20J	M20S	All AC	Sim
2014	42.4	45.8	39.8	29.9	-	36.7	19.8
2015+	41.9	44.2	58.6	29.7	19.0	37.6	14.7
2015*	42.6	45.2	58.1	30.1	19.8	38.0	14.6

+ 2015 Annualized, * 2015 Data Through Oct

Last year the Warriors were the aircraft most in demand. This year the honor goes to the 172s. The 152s historically have flown more hours because they are mostly used for local training flights. Some of the training load has shifted to the Warriors and 172s. Mooneys typically fly less than the Warriors and 172s because they are more often used for longer cross country flights.

Our Program

I believe that our program is the best that it has ever been. The AOPA named us as one of the top 10 flight schools in the country, even if we are actually a Club, not a flight school. They named one of the instructors who instruct for the Club as one of the top 10 instructors in the country and two more made its honor roll. We continue to offer ground school training for private pilots, commercial pilots and instrument pilots. We have increased the frequency of our Safety Seminars (pizza nights) to monthly and have added monthly meetings as a chapter of the IMC Club. Our fleet offers a wide range of aircraft and is well maintained. There is no one in the area that can compete with us for range of experience or cost.

Facilities.

When I started this term of office, we were just completing refurbishment of our facilities. The project has been completed and in the John Hunter Room, we have a larger facility for classes separate from the briefing and social area. We have added new furniture and, thanks to the generous donations of some of our members, we have a deck overlooking the field. We have a reasonable sized room for our flight training device (simulator). We have necessary parts and equipment storage as well was a workshop in our hanger area. Thanks to Obdulio Batista who arranged the purchase and installation of a low cost heat pump, soon the workshop area off the hanger soon will be heated and cooled.

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President's Message

Handicapped Accessibility

At its November meeting, the board voted to add a handicapped lift to the building. It seems that there is a fair amount of misinformation around the Club regarding this expense. The issue is complicated and the board requested that I address this in the newsletter.

To set this issue in context, I must first summarize the nature of the Club. Under our certificate of incorporation, the purpose of the Club is "to stimulate an interest in aviation, to provide authorized personnel an opportunity to engage in flying as a recreational activity, to provide flying experience at minimal cost to the members, and to encourage and develop skills in aeronautics, navigation, mechanics, and related aero sciences." Under the Internal Revenue Code, the Club is a 501(c)(7) organization. A (c)(7) organization is a social Club. It may limit membership consistent with the purpose of the Club. It may not hold itself out to the public to provide goods and services and any revenue derived from non-members is very limited. Contributions to a (c)(7) are not tax deductible. Based on this, the Club could choose to only serve our members and limit our membership as we chose to do so under appropriate criteria. In general private Clubs which serve only their members are exempt from the American's with Disabilities Act, but the scope of this exemption has often been the subject of dispute.

The Club has chosen to open many of its events to the public without charge or with only a minimal charge as has been required to cover our expenses. Examples include ground school classes, instrument school classes, and commercial school classes held in our facilities. We also invite the public to our safety seminars ("pizza nights") and IMC Club meetings. We do this as a service to the community and to attract members. Many of our safety seminars are co-sponsored by the FAA FASTEAM. The FAA requires its events to be handicapped accessible.

We chose to put the multipurpose room where we hold our classes on the second floor when we remodeled the Club because this was the only place that we had space for larger classes, larger seminars, and our expanding membership. It was also the only location where we could hold events without the disruptive traffic that we had experienced in the past. As many members know, the inconsistency of inviting members of the public to attend our events and having events co-sponsored by the FAA FASTEAM in this inaccessible room was brought to our attention by a non-member who frequently attends our safety seminars. He could alternatively brought this to the attention of the Department of Justice, which could assess serious fines, or the FAA.

Based on all of this, the board was faced with the question of making the Club more handicapped accessible or limiting events held in the John Hunter Room to Club members. The board decided that it did not want to cease offering our classes and seminars as a community service and to attract members. The board did not want to litigate whether we were exempt as a Club from compliance with the ADA because the costs

2015 President: John Gaither

of this dispute, even if we won, would exceed the cost of compliance. The board did not want to cease its co-sponsorships with the FAA. For the last few months, the board experimented with holding its Safety Seminars in the flight briefing area/lounge. It also considered holding the events in the hanger. The board concluded that neither of these alternatives met the requirements of the Club except on a short term basis. The board explored various lift solutions and obtained proposals for alternative solutions from several contractors. Ultimately, the board concluded that installing an external lift to access the John Hunter Room was the best long term solution for the Club. The board concluded that it could absorb this cost without substantially adversely affecting its ability to fulfill its mission. The board was reluctant to do this because it expects that the lift will get minimal usage, but it was the best solution that permitted us to continue to operate as we have in recent years. We will finance this purchase with debt over five years to avoid depleting our cash resources.

Financial Affairs

The Club remains financially strong, but we have recently incurred some unexpected blows.

I will cover the bad news first. There were several incidents during the year that were very expensive for the Club. There was serious damage to N972WW when it ran off the runway after landing in March. Also in March, N8116J struck a taxi light resulting in an engine teardown and inspection and prop damage. Shortly after N972WW was brought back on line, there was another prop strike in a landing at GSO, resulting in an engine tear down and inspection and prop damage. While some of the repairs that we made following these incidents was discretionary, these incidents cost the Club over $33,000 in out of pocket expenses and these do not include the many hours spent by James and Terry in performing these inspections and repairs. Some of the damage was covered by insurance, but claims such as these have an impact on rates and potentially insurance availability and coverage limits. I have written previously on this topic, but the Club cannot sustain the incident rate we had in 2014. On top of these expenses, we have had several engines that were scheduled for reconditioning this year and some required reconditioning prior to TBO. The long scheduled painting and repairs on N8080A are being completed as I write this. At the beginning of 2015, we purchased N5760R, which we had previously leased. This will be more economic for the Club over time, but it consumed cash. Combined together, all of this has significantly reduced our cash reserves but not below the level at which we can comfortably operate.

Two aircraft engines will reach TBO in about May, 2016 and we anticipate borrowing to replace these engines, something that the Club has frequently done in the past. In July 2016, we will pay off the loan that we incurred in purchasing N53587. I expect that the debt payments for the two engines and the handicapped lift with approximate the current debt service charges for N52587, which we are paying off.

People periodically express concern about the impact of our facilities expansion on our financial condition. I have explained this before, but I will do so briefly again for those who tuned in late. Before we began the building project, we had a loan on the building, which would have been paid

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Presidents Corner cont..

off in September 2018. We rolled this loan into a new one at a more favorable interest rate and will pay it off over 10 years. While the new loan payments are a little higher, mostly the new building loan will be paid off between 2018 and 2024, the period beyond the existing loan. We had hoped to spread it over a longer term, but the bank would not allow it. This will save us interest in the long run, but it does create a greater cash flow burden in the interim. Thus, while the loan reduces our financial flexibility; but it does not significantly adversely impact our cash flow compared to the loan payments we had before.

Our operations are cash flow positive after all debt service. Our goal over time is for fixed income from membership to approximate operating expenses and our variable income from flight operations to approximate our variable flying costs. Last year I commented that we were supplementing our flight operations with dues income. For this year, the situation has reversed and we are supplementing our fixed costs with a flight operations surplus. We need to monitor this, as we always do, but we do not believe it is a cause for concern at this time.

In summary, largely due to extraordinary incident expenses in 2015, we have less financial flexibility than we have had in the recent past, but the Club remains in solid financial condition as long as we avoid similar expenses in 2016.

Fleet Review

This is a goal that I failed to achieve this year. I had hoped that we would take a hard look at our fleet this year and develop a strategy for the next five years. We have done that with respect to electronics and ADS-B but not with respect to the fleet as a whole. The world has not evolved as we expected when we last did a fleet review 6-7 years ago. The Sky Catcher is not available to replace C152's. C152's are alive and well at the Club and throughout the industry as an ideal primary trainer. Refurbished C152s are being sold for as much as $96,000! Light sport aircraft, which might be their logical replacement have not been proven in a Club environment, but more importantly cost 2-5 times as much, depending on condition. Last year we thought that Warriors were the aircraft most in demand. This year it has been the 172s, which is as it was several years ago. Refurbished 172s are hot in the market. It has been hard to look at the fleet with aircraft out of service for substantial parts of the year. The Club needs to look at its fleet strategy for the next five or so years and include such challenges as how to integrate glass into the fleet. I am sorry that we did not get to this project this year – but then I needed to leave something for the next president to do.

Summary

Membership is in good shape, flight hours are in good shape, our program is the best it has ever been, and finances are in good shape. Our recent safety record leaves something to be desired, but fortunately no one has been hurt. We need to improve on this. We need to develop a fleet strategy for the next 5-10 years. Thank you again for allowing me to serve as president for the last two years and a board member for the last five years. I look forward to great things to come for the Club.

Summer of 68X (Cont..)

the digital engine management tool. Dad shook his head and marveled at all I had to keep track of. I, in turn, marveled at all that he had accomplished in 4000 hours all over this country and in all types of weather with little more than two VORs, two radios, an ADF and a stopwatch.

Adventure Number Two - Old Rhinebeck

If you don't already know about Old Rhinebeck, allow me to share one of my favorite aviation experiences with you. Old Rhinebeck is a remarkable tribute to the early days of flight tucked away in upstate New York near Poughkeepsie and Woodstock. Every Saturday over the summer they put on an airshow in which they demonstrate the very earliest days of flight using functional, flying aircraft from the pages of history. Every Sunday, they put on a WWI airshow complete with a tank (!), a Tiger Moth and a Fokker Tri-plane and a mock dogfight.

We departed TTA on Saturday morning and headed to 20N or Kingston Ulster, a 3100x60 airfield that's five miles from the Old Rhinebeck Aerodrome. Landing at the Aerodrome itself is not forbidden, but it's fairly well discouraged. It's a small grass strip nestled between reasonably large trees – great for a Cub or perhaps a Warrior, but not for a Mooney (with its low prop clearance) under any circumstance except perhaps an emergency.

The flight north was mostly IFR and offered us many spectacular moments as we danced atop the cloud layer and then, later in the flight, darted in and out perfectly formed puff clouds. "I can't believe I get to do this," ran through my head multiple times. On long flights like this (4.5 hours), once at cruise, I run the auto pilot 30 minutes on and 30 minutes off. Even then, I use only the heading and altitude settings and never tie the auto-pilot to the GPS route. I never want to be too far removed from control of the plane. There are exceptions to my 30 on/30 off rule. I never fly auto-pilot in the clouds. This is for two reasons: one, to keep my skills up and two: I trust myself – I want to feel the airplane.

The approach to Kingston Ulster is slightly unbelievable. We broke out under the clouds and just above some local mountains. Once past the mountains and cleared to descend at pilot's discretion, Helen and I started peering ahead for the 20N filed. We thought we had it spotted, but the southern end of the strip appeared to abut the western edge of a bridge over the Hudson. No one would do that, would they? Have an airstrip start at the base of (and just below) a busy bridge? Well, yes they would. I cancelled IFR, headed toward the bridge and then entered crosswind with the intent of landing toward the bridge. The winds were calm and that option initially appeared a bit more sane but then also included dropping over a rather pronounced hill on final. Thank goodness for all my landings at Carthage, albeit in the Warrior. I dropped 68X over the hill and set her down with plenty of room to spare.

As a kid, mom and I would take a bus from NYC to the airshow at Old Rhinebeck. That was always a special experience and one that I have never forgotten.

So here I was, on the cusp of taking my two kids, ages 11 & 9, to Old Rhinebeck. Memories of my mother danced in my head and my heart. I hugged my kids and watched them nod off to sleep in our hotel room, excited for the next day. After a hearty breakfast, we drove the fifteen minutes to the Old Rhinebeck Aerodrome and arrived at 10:30. Having called in advance (and made a donation to their fund) Old Rhinebeck President Mike DiGiacomio greeted us in turn-of-the-century costume and with his young son slung above his shoulders. We spent the next three hours touring ancient airplanes – peering into all the cockpits, sitting in some, stroking the wings and propellers of others. We saw planes in various stages of repair inside different workshops – and both of our kids were full of questions and occasional

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knowledge. Jordan volunteered what he knew about the timing mechanism developed to make sure WWI pilots firing forward didn't shoot their props off. Mike countered with the fact that, at first, the inside of the props were covered with steel to deflect the bullets. We saw all manner of aircraft and even sat in the cockpit of genuine vintage, still-flying, wing-warping plane that was, in its day, piloted by a 12-year-old boy. Jordan clambered inside the WWI Tank. And we took turns getting open cockpit rides in a restored 1929 D-25 bi-plane. The show itself was all that I remembered it to be. Part Keystone Cops. Part old time airshow, complete with a great take on the crazy farmer routine. Pilots in WWI garb dropped fake bombs out of vintage planes and occasionally the loudspeaker would rattle SFX off as if a dogfight was taking place. It's all great fun with remarkably cool airplanes flying across the runway and overhead. The airshow lasted three hours, followed by a visit to the museum across the street.

All in all, an amazing day and well worth the trip. My only advice is to book your hotel well in advance and look to stay at a charming inn in Rhinebeck, thus avoiding the strip-mall hotels if at all possible. That, and be prepared to land at the base of a bridge. It's weird, and completely doable.

Adventure Number Three – Oshkosh!

I was reconsidering the full tanks as I stared down the 3,100 foot runway and the obstacles at either end of Kingston-Ulster. That's why there are flaps on airplanes, I told myself. Helen, the kids and I had gotten up extremely early the day after our adventures at Old Rhinebeck. I wanted to lift off well ahead of the morning heat and we wanted to make into KOSH ahead of the 2:30 airshow closure. We would have our hands full making it all happen.

The wind was calm – if I took off to the East, it would mean going toward the bridge and directly over the Hudson River – taking off to the West meant immediately climbing above a small hill and then heading toward the Catskill mountains. So the river it would be.

I climbed in circles above the river to be sure I had altitude to cross the Catskills, re-crossed the airfield at 3,000 feet and called for my clearance. Within minutes we were off on our journey to KOSH. Much of the flight turned out to be IFR and the worst of it was 20 – 25 knots on the nose the entire journey. Twenty knots on our tail and it's a 3-hour trip, 20 on the nose and it's five hours. We overflew Lake Erie and entered Canadian airspace. I had never done that before and learned right then that we can fly in international airspace on a US flight plan, talking to US controllers and without so much as a specific clearance to overfly another country. In short, there's less formality to overflying Canada than there is to entering Class B airspace here in the USA. We made a quick pit stop in Michigan to fuel up and re-check weather ahead of the final push to KOSH. Timing was everything as KOSH shut down from 2:30 – 7PM for the afternoon airshow. I flew IFR until it became clear that asking ATC to route me any closer was more trouble than it was worth – cancelled IFR and took VFR flight following at 10,000 feet over Lake Michigan. Even that was a bit dodgy. With all the traffic, ATC cancelled flight following for all aircraft halfway across the lake – I was instructed to squawk 1200, to monitor Green Bay Approach and to only call them in an emergency. With the headwinds, we arrived at Ripon at 2PM. It was solid overcast and the flat light made it a challenge to pick out the landmarks on this, my inaugural flight to Oshkosh. With Helen's help we picked out the telltale railroad tracks and I made my turn to Fisk just ahead of another pilot entering the KOSH approach from the southwest.

The radio came alive with the controllers asking various planes to rock their wings and asking if any of them would accept runway 18 which came with a 25 knot crosswind. None of the pilots accepted. Based on the chatter, it seemed as if the three planes in front of me were all Mooneys – all being identified by position and not color – and that made things slightly confusing.

I re-briefed the approach to runway 27, rocked my wings as directed over FISK, rejected the option of runway 18 with a 25 knot crosswind, cut in underneath the rock quarry, and began my descent at midfield – just as I began to descend, I heard the call, "Mooney at midfield begin your descent." I focused on the shoreline and knew I was required to turn base prior to reaching that point. That would give me plenty of room to get down – but then only barely past the numbers I heard the call, "Mooney, turn base NOW." I turned. It's a tight pattern and just to be sure we're on the ball, I heard, "Mooney turn final NOW and cleared to land, welcome to Oshkosh." I heard a small telltale chirp – the one you never want to hear - while turning base to final, a reminder that landing at KOSH is full of dangerous distractions. I pushed the nose over and added power – mad at myself for having even let myself get in that position. Lesson learned. I wasn't given a dot to land on – rather disappointing. Given the short final, I landed just short of the blue (or middle) dot. Seemed the reasonable option and allowed them to land someone short behind me. Once safely on the ground, I followed the flagmen onto the grass and taxied on grass for what felt like 5-10 minutes to what would be our tie-down spot for the week. For the uninitiated, Mooneys have an unusually low prop clearance and club members had forewarned me about the distinct possibility of a prop strike while taxiing on the grass. As a result, Helen and I yanked the yoke as far as we could into our stomachs during the entire taxi… (next year, I'll trim to help!). After we shut down, I checked the prop – no ground strikes, but the tips were all painted green from helping the folks at KOSH cut their grass.

We rented a car and a house for the week and had a blast. We put rivets in wings, the kids made different airplane components during hours on end spent at KidVenture, we saw the Apollo 13 Astronauts in a panel discussion which our kids got to watch from front row, center. We followed that with watching the film Apollo 13 at the outdoor theater. We ate cheese curds and ice cream daily. And we saw more airshows – day and night – than I can either remember or count. It was all amazing.

We arrived on Monday and left on Sunday morning. I checked weather and based on someone else's recommendation filed a flight plan to pick up in the air over Muskegon. Departing KOSH is fun. No ground control, just taxi on out to the active, hold short and await instructions.

"Plane at the east end of 27, cleared to take off." I was at the far, east end of the field. With a watchful eye on another plane at an intersection, I taxied slowly across the hold short line. "Mooney at 27, say your intentions." I stopped short and answered - I thought they had just cleared me for take off. "Mooney, line up and wait." I clicked the mike twice and proceeded. As I lined up, the Cessna at the intersection had pulled out in front of me and was on the roll. "Mooney, cleared for take off." I began my roll even as the Cessna hadn't yet lifted off in front of me. Welcome to Oshkosh.

The departure is straight

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Unmatched insurance

By Dick Kinney

When you enter the building on a Saturday or Sunday you will see a mobile sign at the doorway listing the club's many attributes. The last one listed is "Unmatched Insurance". While this may seem like a bit of bragging on our part, it is certainly justified. Consider:

Who is insured:
One factor that separates our club aviation insurance policy from that offered by other schools or FBOs is the definition of who is insured. Our policy reads that it covers the Wings of Carolina Flying Club and "the individual members thereof". Every single member of the club is automatically covered by the club policy while flying club airplanes. This is a huge benefit of membership.

Limits of Liability
The club policy provides limits of liability of $2,000,000 per occurrence for bodily injury and/ or property damage with no sub-limits per passenger or per person. The full amount is available without limitation. Most other policies offer a total limit of $1,000,000 but it is limited to $100,000 for any one passenger. One policy (Avemco) limits the coverage to $100,000 for any one person.

Open any aviation magazine and you almost always find a full page ad from some insurance company urging you to buy non-owned or renters insurance. They usually include a story of some unlucky pilot who has an accident and then discovers that the FBO or flight school does not cover the renter in their own policy. In short, the renter has no insurance to pay for the damage he inflicted on the plane he rented (let's assume it is a Cessna 172 valued at $100,000) let alone the bodily injury to the people in his or any other plane.
If one were to attempt to buy a non- owned policy with the above limits, the premium would be $1,200. And that is for only $1,000,000 with a sub limit of $100,000, not the $2,000,000 limit in our policy.

Subrogation:
Insurance companies have a rather nasty provision in their policies giving them the right to sue a negligent pilot for reimbursement of the amount they pay their insured for damages. This is called subrogation. The beauty of our club policy is that, because each of us is an insured the insurance company cannot seek reimbursement from us. But just to make sure we are protected, the policy also has a separate endorsement specifically stating that the insurance company has waived its rights to subrogate against any of us. Sort of belt and suspenders.

Territory:
Our territory limits are the United States (lower 48), Canada, Mexico, the Bahamas, and the islands of the Caribbean. Alaska is specifically excluded but might be covered with an individual request. Mexico is covered but it is strongly recommended that anyone going there purchase specific coverage for the trip. Mexico does not recognize "foreign" (to them) insurance companies and could impound an airplane not insured in a Mexican insurance company. Cuba and Haiti are still excluded from coverage.
Because of the volatile nature of the world today, anyone planning an international trip to anywhere should first talk to the club board. The club policy does require an instrument rating for some extended trips. Don't leave home without it. Similarly, at all times make sure that you are current on all FAA and/or club requirements such as medical or club flight review.

In short, if you are planning any sort of trip outside of the ordinary, talk to the board or George Scheer. They will discuss the matter and make sure that the proposed venture does not have a very unhappy ending.

Summer of 68X (Cont..)

forward. Fly at 1300 feet until clear of Class D within a heading range of 270 - 360. We're low and fast and it's a fun departure. Outside Class D, I climbed to get as much altitude as possible and requested flight following over the lake that was, thankfully, accepted. ForeFlight was alive with traffic. Over the lake, level at 9,000, I noticed a bogie overtaking me at the same altitude. With no traffic alert from ATC, I called them and inquired. "I see a target at my 6, same altitude, gaining on me, do you see the same?" ATC confirmed and made the call to the other aircraft. In all, three of us crossed Lake Michigan in close proximity.

There was only one more challenge on the flight home. The briefer had given me a favorable forecast with one minor challenge – a warm front and cold front were meeting over central Michigan. We would cross Michigan well in advance of convective activity, but that didn't mean the convergence wouldn't go unnoticed. At 9,000 feet the tops of the clouds began to rise to greet me. ATC cleared me to 11,000 and I bought myself a bit more time. Eventually, the clouds reached 11,000 feet, and many cumulous cells thousands of feet above that. With ATC approval, I dodged what I could and pushed through the rest. Even in the clear, it was getting very bumpy and at one point, I was caught in a downdraft, struggling to maintain 11,000 feet and watching my airspeed bleed away. I pushed the nose over, got my speed back and accepted a quick 500 foot drop.

We got through the confluence of the fronts fairly quickly and the rest of the flight was uneventful, just the way you'd want it. KTTA was a joy to see and I made one of those landings that reminded me to be humble about my skills and hope that no club members were watching.

Adventure Number Four – The Bahamas!

My Bahama flight planning started at Oshkosh with a conversation with fellow club member Grover McNair for advice. As soon as I was back from KOSH, I had a series of hurdles to clear to legally get the plane out of the country. I'll summarize those in another posting in case anyone's curious – but it included getting WCFC Board Approval as well as a special customs sticker. Nothing was difficult, but it required attention to detail. Nearly 24 years ago, I took a trip in the Bahamas in which I lived on a boat for a week and swam with wild spotted dolphins. Now it was time to take my wife and kids on the same adventure. We flew IFR to Port St. Lucie (KFPR) where Grover mentioned it's easiest to get through customs. We flew past Cape Kennedy (very cool!) and then asked for and received re-routing to avoid the Florida weather over the mainland and eventually touched down at KFPR which was solid VFR surrounded on three sides by thunderstorms. At KFPR, I filed an international flight plan (ICAO) that included seemingly arcane questions about the equipment on board the plane (I did my best, but undoubtedly got some of that info wrong). Next, we fueled up, checked in with customs (unnecessary on the way out of the country, apparently), donned our life jackets, climbed back into 68X and lifted off to head out over the ocean.

I love flying over the ocean. It was gorgeous and peaceful and we were mostly out of the clouds. I was conscious of the wind and considered at various times if I would turn back to Florida or head for the Baha-

Continued page 7

Get Social

By Nate Johnson

As pilots, we're always flying. If we're lucky, we're in the cockpit headed for a $100 hamburger (or BBQ plate!), a fly-in, or a getaway spot. Even when we're not in the air, we're hangar-flying at the Club, reading about aviation, or playing on Flight Simulator. And now, you can get your aviation fix on Facebook! As the Social Media volunteer for the Club, I'd like to invite you to join us online.

WCFC has two ways to connect to the Club: Our Club Page and a Members-Only discussion group. Each serves a slightly different purpose, and I hope you'll sign up for both.

Facebook is an excellent way for us to stay in touch with each other, with the Club, and with our love for flying. But it's also a great way to let people know about the Club and all we have to offer. Anytime you interact with the Club page – Liking the page, checking in at the Club, tagging the Club in pictures of your adventures, and sharing posts from the Club page – it lets a wider circle of people know about us, and it may draw someone a step closer to taking their dreams to flight. If you have any questions — or if you have a milestone, picture, story, or article to share — drop me a note anytime. My goal is to have our social media accounts mirror the real-life experience of our Club as an active, vibrant, welcoming, and safety-first group of aviation junkies. I welcome any suggestions you may have toward that end!

PS – We're also on Twitter and Instagram as @wingsofcarolina. We'll be having some fun with both of those coming up in

1. **Like** the Wings of Carolina Facebook page
2. **Check in** when you're at the Club & tag the WCFC page
3. **Share** your milestones, adventures, and pictures!

Wings of Carolina Flying Club Members
https://www.facebook.com/groups/22483385979/

The discussion group is another way for our members to do some hangar flying online. Recent posts include a discussion about the build-your-own-Stratus project (called "Stratux"), an unexpected bill for a pilot forced into an emergency landing, and an assortment of cool aviation videos. Only members can post or comment on posts in this group.

Wings of Carolina Flying Club
http://facebook.com/WingsOfCarolinaFlyingClub

Our public-facing page serves two purposes: 1) Get people excited about aviation and 2) Let folks know about the Club and the opportunities we provide. It's all about why flying is fun, the doors that your pilot certificate opens, and how WCFC can help people open those doors. I'll also share some of our members' milestones and adventures here, including pictures from first solos, check rides, and the many adventures we have in Club aircraft. This page will also include announcements for Club events like Second Saturdays, group flights, and more.

Summer of 68X (Cont..)

mas if I ran into trouble. An hour after leaving Florida, Miami Center brought us into The Bahamas. With Bimini in clear sight, we canceled IFR, looped around the island and dipped into pattern altitude and a 3-mile final.

Landing in the Bahamas was the culmination of a dream that began with my first lesson with Betsy McCracken back in June, 2012. Even then, as I struggled to taxi in a straight line and could only dream of managing to land a Warrior, I knew that I was taking the first of many steps that would ultimately land me in a club Mooney with an IFR rating and a family flight to precisely where I was about to land. Our wheels touched down, I taxied to the only building in sight and when no one came out to park us, found a spot on the ramp that looked to be fine. Note to self, bring chocks next time. I found some on the tarmac, but realized I should have grabbed some at the club. We went through customs, waited on a taxi that took us to a ferry that took us to a taxi that took us to our hotel.

Two mornings later we got on the Indigo for a short week of sailing the waters off Bimini and swimming with dolphins in the open ocean that was all as advertised.

The flight home was effectively the reverse. I filed an ICAO flight plan using ForeFlight on my iPad while still in Bimini, lifted off and circled the island once fully before radioing into Miami and picking up my clearance. We cleared customs easily at KFPR (thanks Grover!) and I took a 30 minute nap on a couch at the FBO before heading home. There were three thunderstorm cells just northwest of Charleston and I considered landing and waiting out the weather. But as we got closer, there seemed to be a few options on how to get through or around them - and a series of very helpful controllers ultimately helped us thread the needle between two of the cells. In the end, a perfectly uneventful flight home.

Back at KTTA, we enjoyed one of those sweet landings that Mooneys are capable of – one that caused my son called out, "Best landing ever, dad!" That seemed the perfect way to round out the perfect summer with 68X.

Flying is full of Decisions—the go/no go decision

By Ward Sax

As in life, flying is full of decisions. Therefore, a requisite pilot skill is good aeronautical decision-making (ADM) and risk management. And, as life would have it, sometimes there may not be an easy answer to the question and there may not always be a single "right" answer to the decisions at hand. Many of us may find ourselves in trouble in the plane not because of deficient "Stick & Rudder Skills" or lack of "Avionics/Systems Mastery," but because of faulty Aeronautical Decision Making and risk management skills. If you fly long enough, sooner or later you will be faced with a difficult Go/NoGo decision and you will hear yourself saying "it will probably be okay to fly." When that time comes, and it will come, it is definitely time for an honest, balanced reality check. It is a time we must maintain a disciplined approach to ADM and that we take the time to understand how and why we reached our decision.

My time for that reality check came during the October 3rd Navy vs Air Force football weekend which took place with the onshore remnants of Hurricane Joaquin impacting the environmental conditions for the "out and in" cross country flight. Let me set the stage:

I am a U.S. Naval Academy grad.

- My son is a 2/c Midshipman (junior) at USNA.
- My best friend would be joining me for the game since his son is a US Air Force Academy grad and his daughter married a USAFA grad.
- This USAFA vs USNA game will be the last USAFA vs USNA game my son and I will likely attend together, certainly will be the last while he is attending USNA.
- The tickets were purchased!
- My friend said "How cool would it be to fly to Annapolis, grab Chase for lunch, go to the game, have dinner with Chase, and then fly home and be in bed before 11 p.m.??!!!"
- The out and in flight would total less than 4 hours of flight time. The out and in drive in the bad weather would total 12+ hours.
- I have over 1500 hours of total flying experience: 1200+ hours of carrier based naval aviation, but only 290 hour in general aviation aircraft spread across all 4 types of club aircraft.

My Personal Minimums are:

- 800' and 1 mile
- Crosswinds 75% of maximum demonstrated crosswinds for the type aircraft flow. Since I was flying a Mooney, that would be approximately only 8 KTS of crosswind!

The forecast weather conditions +/- 1 hour of takeoff and landing, both legs out and in:

- 800' and 1 mile throughout the day at both Raleigh Exec and at Easton/ Newman Field (Annapolis)
- Crosswinds 7 Kts
- Moderate Turbulence across the entire route
- Light Rain along the entire route
- Solid IMC at all altitudes along the entire route…both ways
- No Icing at altitude
- No Convective Activity.

It should be noted that ALL of the forecast weather conditions are within my personal minimums: Crosswinds – "Check"; Weather Minimums – "Check"; IMC enroute – Not afraid of no clouds – "Check"; Turbulence – Light to moderate turbulence…Not afraid of things that go bump in the sky – "Check." I noted that when I established my personal minimums, I set each minimum in isolation…I hadn't given much thought to the simultaneous present of ALL of factors being at my maximum allowable value and not to mention the added stressor of IMC and light to moderate turbulence along the entire route. To say the least, the weather conditions presented a very real test of my aeronautical decision making and risk management skills.

In my younger years, when I was flying 300 hours per year in an aircraft with enough bleed air to heat all of Kansas and 200 – ½ approaches were not uncommon, I wouldn't have thought twice about going…we would strap in and go! But, the fact is that I am not a naval flight officer anymore! The fact is I am a relatively new GA pilot flying only 80 to 90 hours per year spread across four club aircraft, and my aeronautical skills and avionics systems mastery skills, as much as I hate to admit it, aren't as sharp as they used to be…I shouldn't expect them to be as sharp when one is flying 1/3 the hours across four different types of aircraft…they simply cannot be as sharp.

And so I was left asking myself:

- "Do I have to have to make the flight? While I don't want to drive, I certainly can drive."
- "Am I prepared to meet the physical and mental challenges of a flight that pushes the limits of each of my personal minimums and in weather conditions all along the route that are subnormal and tiring?"
- "Notwithstanding that the forecast weather conditions are marginally within my personal minimums, am I not only qualified to make the flight, but am I also confident and proficient enough to make the flight?"
- "Is my confidence in my aeronautical skills based upon my proficiency or my hubris?"

And so for 24 hours before the flight's Go Time I assessed and reassessed the Go/ NoGo decision (obsessed really), and I determined that I would make the final decision no later than 7:00 a.m. Saturday morning.

Based upon the marginal weather forecast at 6:50 a.m. Saturday morning, I determined that it would be best to park the plane and to drive the car. There were simply too many challenging factors that, individually would not present a significant challenge or risk to me, but in the context of all the challenges being taken together, I determined that they posed a combined risk that was simply unacceptable. I am confident that I made the right decision.

Post Script: In the end, the weather forecasts proved to be too optimistic. The surface winds actually increased and the weather at TTA and the surrounding areas degraded to LIFR.

Got Food?

This morning at the TTA airport authority meeting, Gabby announced that there are food trucks coming to the airport regularly on Tuesday and Wednesday from 11am to 1pm. It is now possible to get lunch at the airport without having to drive miles.

Tuesday - taco truck (other menu items, too)
Wednesday - Mr. Hotdog, but they serve a variety

The food trucks set up near the FBO.
Also, there are now discount coupons for some Sanford restaurants available in the FBO.
Look out for more food options available at the airport in the future.

David & Patrick's Corner

By David Greenfield & Patrick Lofvenholm

our adventures in search of the illusive 1500 hours of total time …..

Mission accomplished! Patrick has been writing about our adventures of time building toward our ATP ratings. I need to report that our yearlong quest to gain 1500 hours of flight time and an ATP rating has been accomplished. On October 25th Patrick and I went for our checkrides and we both passed. Wow, still hard to comprehend we are done.

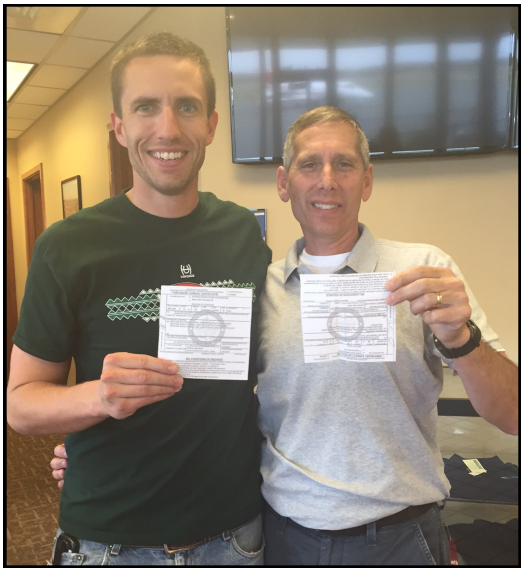
Over the past year Patrick has written articles for the newsletter about our weekly flights, where we flew to, and what we did. For those of you who read these articles, I hope you enjoyed our escapades. We had a bundle of fun. While we have plenty more flights to tell you about, I thought for this article I would write about what it is like to take an ATP checkride.

Can anyone get an ATP rating? Absolutely! All it takes is time, determination, patients, and of course money. For me it has been an 8 year process. I soloed at the club on 8/12/07 and never stopped flying and training. What are the requirements for an ATP? 1500 hours total time of which you need 500 hours cross country, 100 hours night, 50 hours multi engine (assuming you want a ME ATP), 75 hours instrument flight (simulated or actual), and pass a knowledge exam. These are the requirements if you took and passed the knowledge exam prior to July 31 2014. If you did not take the knowledge exam by this date, there are additional requirements.

The actual checkride is like any other checkride, part oral and part flight. The ATP is just a little more in-depth. Both of our oral portions lasted about an hour. The questions focused on the airplane and systems, Vspeeds, and regulations. We both were asked a few general questions on density altitude, weather, take off & landing distance, accelerated stop distance, etc. For the most part, the oral was fairly straight forward. Then came the flight.

We were both given the same four approaches at BUY. 2 ILS runway 6, RNAV 24, and VOR/DME A. After preflight and initial set up, Zenda told me as soon as the wheels leave the ground put your foggles on. During my initial ground roll one engine was cut. The challenge is now to maintain directional control and get the plane stopped while staying on the runway. One task completed, many more to go. I powered up and started my ground roll again. Once my wheels left the ground, foggles down and I only saw the ground for a few minutes for a landing during the entire checkride.

The first approach was the ILS runway 6. I was given vectors to final, established on the LOC, and flew in. I was told to not look up and go missed and hold as published, which I did. After a turn around the "racetrack" I was given vectors a few miles away from the airport when all of a sudden my engine died. Go figure, second "engine problem" during the checkride, boy this plane needs to see an A&P. Maintain directional control, everything forward, identify, verify, feather, the left engine came to a stop. Yikes. Once the task was completed I was told I can restart the engine. Two operating engines in a twin is always better than one.



A few more vectors back to the approach course for the ILS 6 and this time I experienced a simulated right engine failure. Same process as before, got everything set, intercepted the LOC, and flew in on one engine. This time flew down to minimums and landed. Break time or so I thought. Clean up the plane, taxi back, lets go. We departed runway 24 (winds shifted). I was vectored away from the airport so we could do a few maneuvers. Commercial steep turns, slow flight, stalls, accelerated stall, and emergency descent all under the hood. Not too bad, Patrick and I practiced these maneuvers until we were sick of them.

I was then given the RNAV 24 approach with an initial approach fix of DALSY. About two miles from DALSY my attitude indicator and heading indicator "failed." Gosh this plane needs work. Luckily I did not experience an engine failure while partial panel. One trip around the "racetrack" at DALSY and I was inbound for landing. I have to admit at this point I got a little behind the plane. During the inbound leg I kept passing through my course. If I was doing S turns over a road, I would have done the maneuver perfectly, but I was not. After two passes through the course I got it back together and flew down to minimums. Again I was told to not look up and go missed. Suddenly my panel came back to life, both engines were turning, life was good.

A few vectors and I was told to head to GUMME for the VOR/DME-A approach. If my calculations were correct this was my fourth and final approach, hoping it was because I was starting to get tired. Then it happened again, my engine quit. OK, keep it together, I am almost done. Worked through the engine out procedure, kept the plane under control, and intercepted the 029 radial and turned inbound all at the same time. A few miles to go, landing gear down, added some flaps, prop and mixture full forward. Just about there. Descended down to 1100', looked up and there was the runway. A runway has never looked so good. Greaser landing, roll out, and taxi off. I was done.

I waited what seemed like eternity to hear the magic words from Zenda…. Congratulations, you passed! A big sigh of relief and a smile from ear to ear. Then I remembered I still need to taxi to the ramp and shut down. Total flight time 1.7 hours.

For me this was a journey that I never imagined when I started to fly. I remember my first few flight lessons with Betsy and thinking if only I can get my private. All those doubts we beginning pilots have. Hitting plateaus and thinking the training will never end. I can assure you that the training will end and you can achieve any goal in aviation you want to achieve. All it takes is time and money.
Blue skies,
David

Scare a Controller

By Jan Squillace

Scare a Controller
Saturday 31OCT2015
Goldsboro/Wayne County Airport (GWW)

Have you ever wanted to get an air traffic controller in your airplane so they can see what they are asking you to do? Yes, I surely do…

EAA 1114 (Apex) and the EAA Chapter at GWW sponsored an event to fly as many of the air traffic controllers from Seymour Johnson Air Force base as possible. The controllers were invited to bring spouses, children, significant others on the outing.

Several of us from Wings of Carolina Flying Club and aircraft based at TTA answered the call. Three airplanes took off from TTA just as the sun was coming up. The first was Don Poitras' Beechcraft Muskateer, the second Dick Kenny and Frank Ricketts in Dick's RV12 then me in Len Felton's and my DA40, Pretty Penny. When I called Raleigh Approach for flight following to GWW, the controllers at RDU wanted to know what was going on at that hour to create the unusual traffic. "We're off to scare the controllers at Seymour Johnson", I responded.

"They must deserve it", was the response with my squawk code.

Breakfast! Yes, that's the way to start an event.

Pancakes and coffee for all, then the safety briefing. Going around and introducing myself as one of the pilots, a couple of the controllers recognize that I fly through the area fairly often. "Isn't your airplane called Pretty Penny"? Yes. Many of the controllers come over to say hello. The word goes out, Pretty Penny is here! I feel like a minor celebrity.

The flight profile is to take off from GWW, go to the Kinston VOR (ISO), turn right, low approach over Kinston's runway (to the amusement of the Kinston tower folks). Then to an intersection, low approach over Seymour Johnson's runway (KGSB).

DO NOT land, yeah, yeah, it's a military field. Head to KJNX, go around the pattern, then back to KGWW. Okay, sounds like fun.

I picked up my first passengers, a controller and his 9 year-old son. We took off with the requested 3-minute wait after the previous airplane. Kinston VOR, Kinston runway, intersection…

"226PA, traffic 10 miles at 11 o'clock". I'm not going to see anything. My passenger asks, "Are we going to see it?" Not likely.

Seymour Johnson runway, ZOOM. I love low approaches. KJNX, next destination.

"226PA, traffic 9 miles at 1 oclock". My passenger comments, "Now why is he telling us that? We'll never see it". Education already. Smile on my face.

Back at KGWW, the son wants to know how the control stick works. He sits in the cockpit with a giant grin, gently moving the stick left and right to see what the ailerons are doing. Then back and forth while craning his head out to see the tail. I think that was as much fun as the flight itself.

My next set of passengers is an F16 pilot, "Pongo" and his daughter. The daughter wants to fly with me because I am the only female pilot in the group of 30 airplanes. The fighter pilot wants to fly in Pretty Penny because of the glass cockpit. Whatever the reason, I'm the chosen pilot and we're heading out on the flight. Pongo wants to run the radios, so I showed him how to tune them and where the push-to-talk (PTT) button is. He likes the stick and wants to know where the armament buttons are. Ha, Ha.

Kinston VOR, low approach, intersection. I have climbed a couple of hundred extra feet so we can be going faster downhill on the low approach of Seymour Johnson. After all, I have a fighter pilot on board.

Pongo: "226PA, Pongo on low approach".
GSB: "Uh, Colonel, are they actually letting you fly that thing?"
Me: "No, I have the controls. I've always wanted to be a fighter pilot".
GSB: "Very good."
I can almost hear the laughter.

Meanwhile, we're doing 150KT (faster than I usually fly) down the runway. Pongo is rocking back and forth, wanting to know if this "thing" goes any faster… I don't think he'll be giving up his F16 for a DA40 very soon.

An educational and fun day all around. The ATC controllers at Kinston and Seymour Johnson seemed highly entertained. More than one controller figured out that we can't see traffic more than 5 miles away. Several young people got a chance to see and ride in a General Aviation airplane. And Pongo likes my glass cockpit. He's trying to see if he can somehow get one installed in his F16. I got to pretend to be a fighter pilot. Not many retired ladies get to pretend to be Top Gun.

Postscript: I flew to the Outer Banks on Sunday 15NOV. Talked to RDU then I was turned over the next sector, Seymour Johnson.

Me: "226PA level 3 thousand 5 hundred"
GSB controller: "Barometer 30.44, isn't this Pretty Penny?"
Me: "30.44, yes it is"
GSB: "Thanks for coming out here a couple of weeks ago giving us rides. We're all still talking about it. Please pass it along to the other pilots."

Here you go guys.

Tips from the Ramp

By Jay Nabors

With the weather grounding most all of us I sat down to ponder this month's TIPR corner articles. As I reflected I began a texting dialog with a fellow WCFC member who was contemplating a flight with a combination of weather factors to contend with. That text session provided the inspiration for this first article. Aeronautical Decision Making (ADM). Are you "proficient"? Do you make a habit of having ADM considerations as part of your flight planning process? Do you know your limits? It's probably a good time to refresh on our ADM. After you read Ward Sax's article (Page 8) take a read below.

Where would we be without good ADM and yet how often do we consider and assess ADM factors in our preflight actions or worse let external factors sway good judgment on go/no-go or testing or stretching our limitations? A snippet from my text conversation from a fellow pilot went as follows "…All of the forecast conditions are within my personal mins…but what I never thought of before was the simultaneous presence of ALL three factors. That is why I am assessing and reassessing the flight…". . It impressed me the thoughtful thorough and repeatable approach that was taken. Taking a holistic view as well as assessing individual components isn't always stressed. In this real world example it was. As you see in the above text personal limits for any individual risk may be within your personal minimums but collectively may put you out of your personal minimums.

Also, note the emphasis of reassessing. We often make a decision and stick with it. In all phases from pre-flight to post-flight ADM involves a constantly revolving set of assessment tasks (3Ps). On more than one occasion I've made a go decision and reassessed before engine start or take-off to make a no-go. Similarly, I've made decisions in mid-flight to divert or return for a variety of reasons ranging from precautionary returns because I didn't like how the oil pressure gauge was behaving to weather to passenger/student comfort. The key to all of this ADM is are you using it? Are you constantly assessing and reassessing through all phases of flight? Do you objectively know when you find you are pushing your personal limits? Do you realistically know what your personal limits are both individually and as noted above collectively? Are you making thoughtful decisions based on the situation or taking the approach to press forward when otherwise without external pressures you might make a different decision? Do you become complacent in your preflight ADM actions on a nice sunny calm morning? Do you reassess your personal limits based on how proficient and how recent your flying skills are? All good questions. So, below is just the "tip of the iceberg" on some ADM considerations and processes to help bring ADM and personal limits to the forefront of your piloting processes.

ADM – Aeronautical Decision Making

What is ADM? Well, as every CFI knows (and has committed to memory) ADM is a systematic approach to the mental process used by pilots to consistently determine the best course of action in response to a given set of circumstances. It is what a pilot intends to do based on the latest information he or she has. ADM includes a variety of factors such as understanding risky behaviors and having a systematic way to assess risk through all phases of flight from pre-flight to post-flight. As you will note in the next article – GPS – you can fill a book on Risk Management and ADM (and in fact they do – see below references). The focus topics for this ADM article is to "refresh" everyone with two key processes that can help organize the pilots' planning with risk management/ADM considerations: The 3Ps and the 5Ps

The 3Ps. – Situational Awareness and a thoughtful approach for constantly assessing your situation.

- **Perceive** - Perceive the given set of circumstances for a flight or changes in circumstances
- **Process** - Process by evaluating their impact on flight safety.
- **Perform** - Perform by implementing the best course of action

Boiling it down, it means – pay attention to what's going on and if circumstances change evaluate how they impact you; what options you have; select the best option; and do it and as the old shampoo commercial used to say "lather, rinse and repeat". Start the whole process again. Now, sprinkle in considerations on consequences to your decisions or the lack of making a decision or taking action. Does it impact your personal limits as well as other outcomes? Do you press beyond good judgement due to external pressures? (e.g. I'm low on fuel and I may have to spend the night at an airport without self-fuel in the airplane or do I press going beyond fuel minimums to the next airport in the hopes that nothing else will go wrong and I can stretch it just this one time…besides someone has the plane tomorrow morning and I have to get back and of course the fuel gauges always show less fuel than I really have…".

The 5Ps – A way to categorize the variables and associated challenges

The Plan
The Plane
The Pilot (IMSAFE)
The Passengers and
The Programming.

Chapter 17 of the Pilot's Handbook of Aeronautical Knowledge explains the 5Ps as follows:

"5 Ps consist of "the Plan, the Plane, the Pilot, the Passengers, and the Programming." Each of these areas consists of a set of challenges and opportunities that face a single pilot. And each can substantially increase or decrease the risk of successfully completing the flight based on the pilot's ability to make informed and timely decisions. The 5 Ps are used to evaluate the pilot's current situation at key decision points during the flight, or when an emergency arises. These decision points include, preflight, pretakeoff, hourly or at the midpoint of the flight, pre-descent, and just prior to the final approach fix or for visual flight rules (VFR) operations, just prior to entering the traffic pattern…."

Very thoughtful considerations. The 5Ps make a good model for organizing Risk Management and overall flight planning. You may feel comfortable going IMC with one type of GPS but would not be as comfortable with another type that you have not used in a year. You may reassess your go decision as the winds begin kicking a bit with some turbulence and this is a first flight for your passenger that has never flown in a GA aircraft. You know if you don't make it to the football game in another city by air you have a backup plan to drive. The examples are endless. What's the Key? – **JUST ASSESS and TAKE Appropriate Actions – DON'T GET COMPLACENT WITH ADM DECISIONS -**

Continued page 12

Tips from the Ramp (Cont..)

JUST DO IT!- OFTEN!

If you haven't (recently) read the FAA's Risk Management chapter 17 in the Pilot's Handbook of Aeronautical Knowledge I would encourage you to do so. Also, do you have your personal minimums form filled out and on file at the club? If not, I recommend doing so. Your next flight instruction/club annual/90 day/Flight Review check may include the instructor asking to see it!:

GPS

With most all of us flying VFR and IFR with the GPS these days it's worth an article in the TIPR corner When I first thought of putting in something about our GPS's in this month's newsletter I had in mind a very narrow focus topic of some routine operational tidbits that we often overlook or may not be paying attention to along with a recommendation to members to get "proficient" with the GPS if not already. As I dug into this topic more I quickly realized I could fill a few volumes on just GPS and this narrow slice of operational considerations. So, with that said I'll limit this initial article to a very narrow peek into some lesser known aspects and commonly misunderstood (or unnoticed) aspect of flying with the GPS.
(And send your comments and questions to me and we'll publish answers in next month's TIPR corner).

Remember the 5 "Ps" in your SRM checklist? (You do have an SRM checklist don't you?) . The Plan, The Plane, The Pilot, The Passengers, and The **Programming**. (Note as mentioned above this is not a GPS tutorial but a short brief on some topics you may find interesting.)

RNAV and GPS

Have you ever wondered what the difference is between RNAV and GPS? Here's the short version. RNAV stands for Area Navigation. GPS is defined as Global Positioning System and is a type of RNAV. RNAV is simply navigation between arbitrary points, using any type of navigation equipment (even if the equipment often turns out to be GPS). GPS is a specific type of navigation equipment that is particularly well adapted to RNAV. In short, before GPS there were (are) other means of area navigation (e.g. Integrated VOR/DME Flight Management Systems). What are the differences between LPV, LNAV/VNAV, LNAV, LP, etc? What are other area navigation systems? We'll tackle that in next month's newsletter (if there's enough membership interest in the topic).

WAAS and non-WAAS GPS

The fleet's WAAS-enabled GTN650s have different accuracy or "sensitivity" modes depending on what flight segment you are on. VFR Pilots please read. This can be helpful for you as well as the IFR pilots. (Again I won't attempt to detail the specifics and differences between WAAS and non-WAAS in this article. We can save that for a future article). Operationally, what you should know about our WAAS-enabled GPSs.

- **En Route mode.** The WAAS Enabled GTN 650s will automatically sequence to en route mode when you are more than 30 miles from your destination. Each dot on the CDI equates to 0.4 nautical mile and a full scale deflection (FSD) equates to 2 nautical miles. (As a comparison non-WAAS GPS is 1nm/dot and total of 5NM FSD).
- **Terminal Mode:** When you are within 30 nautical miles of your destination the GPS will switch sensitivities to .2nm per dot and a FSD equates to 1 nautical mile
- **Approach mode**: FSD will be .3 NM.

Thus, in en route mode you will be 2 miles off you intended centerline with a FSD left or right. Helpful hint – it's never a good idea to plan any flight that brings you "too" close to a restricted, prohibited, etc area. With the government intentional degrading sensitivities for national security reasons from time to time, it's not out of the question that you could breach a special use airspace instead of "cutting the corner".

Tips and Techniques – Here's the few tidbits to share:
Confirm Approach on GPS
The GTN650 displays what approach "mode" it is in. For IFR pilots shooting a GPS approach, check and confirm the approach mode before you reach the FAF (should be in your final approach checklists (e.g.
when shooting a LPV approach the GPS should indicate "LPV"))

LOI – Loss of Integrity. Note where this indicator is located and check it as part of your periodic systems check.
(From the GTN 650 manual 190-01007-A2 Rev. 3 AFMS, Garmin GTN GPS/SBAS System Page 22 of 35 FAA APPROVED)
"3.2 Abnormal Procedures
3.2.1 LOSS OF GPS/SBAS NAVIGATION DATA
When the GPS/SBAS receiver is inoperative or GPS navigation information is not available or invalid, the
GTN will enter one of two modes: Dead Reckoning mode (DR) or Loss Of Integrity mode (LOI). The mode is indicated on the GTN by an amber "DR" or "LOI".
If the Loss Of Integrity annunciation is displayed, revert to an alternate means of navigation appropriate to the route and phase of flight. If the Dead Reckoning annunciation is displayed, the map will continue to be displayed with an amber 'DR' overwriting the ownship icon. Course guidance will be removed on the CDI. Aircraft position will be based upon the last valid GPS position, then estimated by Dead Reckoning methods. Changes in true airspeed, altitude, heading, or winds aloft can affect the estimated position substantially. Dead Reckoning is only available in Enroute and Oceanic modes. Terminal and Approach modes do not support Dead Reckoning"

GTN650 Resources and links:

1. WCFC GTN640 Simulator on CD
2. Your Flight Instructor
3. http://static.garmin.com/pumac/190-01004-04_G.pdf
4. http://static.garmin.com/pumac/190-01004-03_H.pdf

If you have questions or need a brush up on programming GPS., please sit down with your instructor. The Club has GPS simulators on CD. Also, you can reserve an airplane and an instructor for a ground session (no hobbs time). This hands on, interactive session has proven very helpful for folks to brush up or get up to speed on our GPSs, both VFR and IFR.

https://www.faa.gov/training_testing/training/fits/guidance/media/personal%20minimums%20checklist.pdf

Have you visited our WCFC Safety Tips page?
http://wingsofcarolina.org/safety-tips

Some other relevant links
http://flighttraining.aopa.org/magazine/2005/June/200506_Features_Risk_management.html

https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/pilot_handbook/media/PHAK%20-%20Chapter%2017.pdf

Upcoming Election Info

Wings of Carolina will hold its annual meeting and elections in the John Hunter Room on **December 10, 2015, at 7:00 p.m**. At that meeting, we will elect directors and officers for 2016. The board has discretion to eliminate the use of absentee ballots if positions are uncontested. For someone's name to appear on the ballot, advance notice is required. More details will follow from the election coordinators at a later date.

At the board meeting held on September 8, 2015, the board established the following dates:

Declare Candidacy Absentee Ballots

11/29/2015 23:59

Declare Candidacy for Ballot

11/29/2015 23:59

Deadline for requesting absentee ballot

12/08/2015 19:00

Annual Meeting

12/10/2015 19:00

All times Eastern Standard Time

The board also appointed Barbara Eldredge, Keith Silva, and Ken Williams as coordinators of election.

Details may be found in the Voting Procedures and Club Handbook on our website.

Dead Reckoning

By John Hunter

(First published in the Club newsletter in 4 -2011. Introductory paragraphs edited out in 3/2014)

Dead Reckoning (DR) has been around as a navigational method for about a thousand years, first invented by the Chinese at approximately 1050, and then adopted by every seafaring nation in the 1300s with the development of the dry compass. As the only practical method of navigation without constant reference to landmarks or celestial bodies, DR was naturally adopted early on in the aviation era and remains fundamental even today. DR is not only what every pilot does on any excursion away from the airport but it also provides the fundamental basis for the math underlying the latest RNAV computers in modern aircraft. (Random Navigation (RNAV) computers are embedded in what most pilots think of as GPS receivers – the GPS actually being the one of the smallest parts of the navigation box, with the far greater functions being the data base and its software, moving map technology and screen drivers, RNAV computation, and user interface features.) But back to Dead Reckoning...

In it's simplest form, DR is the notion that if we start from a known position and fly a planned direction at a known speed for a specific time, we then can accurately predict arrival at our destination. On every flight away from the airport (or voyage away from landmarks on the water), a pilot plans in advance what direction (heading) she or he will need to travel to arrive at the intended destination. But, of course, it is a little more complicated. While a rough heading may get you in the general vicinity of where you plan to go, there are complicating factors of crosswinds and headwinds or tailwinds and the issue of magnetic variations. Fortunately, methods for dealing with these factors were long-since worked out in the naval world as ocean currents are the equivalent of winds aloft for pilots (and sailing ships also had the further complicating factor of leeway which would be the rough equivalent of a pilot flying in a uncoordinated manner.)

In the English speaking world, the methods used to make these calculations came to be known as "Dead Reckoning" with reference to this terminology found in ships logs dating back to the early 1600s. The term "Dead" is an older English usage meaning "accurate," "precise," "in the middle of." We moderns still recognize this usage when we hear "You're dead right," "It's dead-on target," or "The destination is dead ahead," or the original character of "Deadeye Dick" (the accurate marksman, not Dick Cheney.) "Reckoning" has a more modern meaning of "reasoning" or "calculation." Consequently, the term "Dead Reckoning" means "Precise Calculation" in modern language. In this meaning, it has nothing to do with death.

Nor does the actual etymology have to do with "deduced." This canard came out of the WW-II era where may pilots were trained to think that "dead" must surely have historically been a misspelling of an abbreviation for "deduced." Prior to the late 1930s there was no controversy about this term. It has only been in the last 80 years that folk etymology has maintained that "deduced" should be the origin. And in the rest of the English speaking world, there still is no controversy. It is only in America that we have confused the issue by falling for the faulty folk etymology.

Consequently, when we navigate without reference to landmarks we may choose to navigate by "Precise Calculation" for which many of us use prefer the quaint term, "Dead Reckoning".

Safety Management Systems, Safety Culture, And Safety at WCFC

By George Scheer

In the commercial aviation world these days, Safety Management Systems and the Safety Culture are much discussed. The FAA, the NBAA and various international aviation regulatory agencies and industry associations are all promoting these tools and concepts as a means of improving aviation safety. Much of the ink spilled over these ideas, however, more describes what they will do than what they are. Eventually it all begins to sound like a perpetual motion machine – it goes around and around and never stops, but what is it? From the FAA website: "SMSs integrate modern safety concepts into repeatable, proactive processes in a single system, emphasizing safety management as a fundamental business process to be considered in the same manner as other aspects of business management."

I have read page after page, article after article, about Safety Management Systems and Safety Cultures. In its essence, a Safety Management System is a top-down set of procedures adopted by an organization to promote safety. A Safety Culture is what we do when no one is looking.

I have been thinking about how these ideas may or may not apply to the club. Do we have a Safety Culture? Do we have anything resembling a Safety Management System? I believe we do have a Safety Culture. We talk about aviation safety long and often. The club's ground school emphasizes safety, not as a separate concept, but as it pertains to every element of aviation. In our discussion of aerodynamics, we emphasize why an understanding of maneuvering speeds, load factors, angle of attack, stability and other design concepts is critical for safety. In our discussion of flight planning, safety, notably fuel planning and monitoring, is stressed. In our discussion of the FARs, we emphasize how so many regulations are responses to specific tragedies arising from inattention to safety. And so on, through weather and systems and navigation and flight physiology, we look at how each impacts safety, positively or adversely. We applaud cautious decisions made in the service of safety, such as a go around on an approach or a decision to wait for a calmer day. We do not criticize nor mock a pilot who chooses not to fly an airplane for what another pilot might consider a minor squawk, such as a nose wheel shimmy or a soft attitude indicator for a local flight on a pure VFR day. Just the other day, James Garlick told me that he fetched a club plane from another airport because the pilot was uncomfortable flying it home with

Continued page 15

Chili (cont)

their favorite three chilis. And, it was readily apparent that objective, scientific, rigorously vetted, criteria were applied by the members in their ranking and voting.

For example, one member rated chilis as 'Extremely Yummy', 'Very Yummy', 'Pretty Yummy', 'A Little Spicy But Yummy', 'Not Spicy but Yummy', etc. And, when the final results were tallied, also using a rigorous, objective, numerical algorithm, it was also apparent that every chili had captured the attention of the members.

But, there had to be some 'winners' selected – after all, what else could we do with the valuable prizes – chili aprons, chili hot glove, chili-shaped spoon holders, etc. – which had been purchased for the occasion.

The overall winner was Jennifer Smith, whose pumpkin chili was a particular favorite with the 'eaters'. Prizes were also awarded to: Roger Montgomery, Nate Fisher, Jan Squillace, and Jeremy Wilson. Thanks to all who participated, as a producer or as a consumer. Several intrepid members decided that it was their moral obligation to sample EVERY chili, and submit detailed analytical comments about each.

The event was so successful, planning is already underway for a repeat event next November. So, for those of you that participated as chefs, you have 12 months to refine / optimize / enhance / revise your chilis. For those who did not heed the Call of Duty this time (but secretly knew that, if they had, their chili would have been a winner), you have 12 months to regret your decision and make plans to correct it, by cooking a pot of chili next November.

And, for the Club members who served as guinea pigs, er, um, eaters', you have 12 months to recover, and to look forward to another opportunity to meet, greet, eat, and vote.

CHILI	Master Chef
100 Liquid Lava – Fuel the Burn Chili	Jeremy Wilson
A Little Bit of Heaven with a Wild Side Pumpkin Chili	Jennifer Smith
Best-in-Class vegetarian Chili (Intended to Airlifted from TDF)	Brian Grant
Chili BP&V	Patty Carlson
Even Our Mechanics Couldn't Make It This Good	Gloria Martin
Flirting with Disaster	Tonya Lord
No-Name But Still Deadly Vegetarian Chili	George Scheer
Spice Jet Chili	Yusuf Matcheswala
Vampire Slayer's Chili	Jan Squillace
Whiskey Tango Foxtrot Chili	Roger Montgomery
Zero PIO Sweet Chili	Nate Fisher

Safety Mgt systems (Cont...)

a shimmying nose wheel. James remarked, "I know the airplane was fine to fly, but I never want a pilot flying an airplane that doesn't feel safe to him." With more experience, that pilot might make a different decision, but he made the safest decision he could given his level of experience and for that we respect his judgment. We do not micromanage safety; we share a collective belief that safety is paramount and trust each other to make that choice when no one is looking over our shoulder. This is our culture: we respect safety and admire those who practice it. That is my sense of a Safety Culture.

A Safety Management System is something else. Whereas a Safety Culture is an informal collection of attitudes and beliefs, a Safety Management System requires a formal structure that flows through an entire organization, from top to bottom, side to side. I dare say that there are few flying clubs in the entire country with a set of Standard Operating Procedures and Flight Standards as comprehensive as ours. And many of ours were written specifically to address known safety concepts. Because recent flight time and currency are predictors of safety we require every member to fly with an instructor if he or she has not flown a club airplane in the past 90 days. Because cavalier fuel planning has been the cause of too many serious accidents, we require ourselves to plan for an hour of fuel reserve, even on those flights allowable by the FAA with less. Similarly, we require a greater interval between drinking alcohol and flying. In many ways, we ask ourselves to make a more cautious, a safer, flight than would be necessary outside of the club. We require not merely the FAA's Biannual Flight Review but an annual proficiency check – and that proficiency check includes participation in three safety events as evidence of an ongoing commitment to safety. These club requirements have served us well and could, in themselves, be important elements of a Safety Management System, but an SMS requires other elements that are difficult for an organization such as ours to implement.

An SMS is a systematic approach to improving safety at the organizational level. In a volunteer organization such as ours, a specific, dedicated apparatus is probably too cumbersome, but some of the principles of an SMS are achievable. One of the goals of an SMS is to move from a reactive approach to safety to a proactive and ultimately a predictive approach to safety, to move beyond merely reacting to adverse events toward a mindset of proactively examining organizational processes for potential hazards to, ultimately, a practice of looking ahead and anticipating ways in which problematic processes and practices might be changed before they trigger adverse events. The goal is to put in place not merely a means of reacting to safety failures as they occur but to create a process for continually looking ahead and evaluating practices for the future. Whereas a Safety Culture is an attitude, a collective set of beliefs, a Safety Management System is a process, a machine to turn the crank on those attitudes.

A first step in any SMS is a review of safety failures with an eye to which among them could be organizational failures or might be prevented in the future by organizational changes. We have never had a formal process for cataloguing accidents and incidents; they live in our institutional memory, which is idiosyncratic and fades over time. Recently, calling upon that institutional memory residing in the recollections of several long-time club members, notably John Hunter, who has been for all of those years something like our unofficial safety officer, I have compiled an admittedly anecdotal list of WCFC accidents and incidents occurring over the past 35 years.

Some of the details are quite certainly mistaken, altered by fallible memory and the passage of years, but certain patterns are evident. In more than three decades, flying on average between four and six thousand hours each year, the club has suffered only one fatality, an accident that supports our current practice of examining the driving records of potential members. A report on that accident, which occurred in August of 1988, can be found on the NTSB website. Over the first decade of this century, the general aviation rate of fatal accidents was approximately 1.4 per 100,000 flight hours. Note that GA includes not only Skyhawks and Warriors but also corporate aviation, which has a much better safety record. It is likely that our rate of fatal accidents is much lower than that of other forms of general aviation similar to us – small airplanes flown by amateur pilots. Over that same time period, the club has suffered ten accidents that resulted in no injury or injuries that were not life-threatening. This would produce an accident rate of approximately 5.8 per 100,000 flight hours, slightly less than the GA accident rate over the first decade of this century – and, again, quite possibly substantially less than that of the segment of general aviation where we reside. Many approximations are built into these numbers: among them, the estimate of total club flight hours and some judgment about whether one or two incidents would be classified as accidents by the NTSB. We can, however, safely conclude that our accident rate is somewhat lower than the average of all general aviation and perhaps substantially lower than that of other similar operations in similar airplanes.

That said, we see an additional twenty or so discouraging incidents – bent airplanes that do not involve the major damage or injury required to qualify as an accident – that nevertheless have done much harm -- harm to the club's finances, harm to the dispatch availability of the fleet, harm to the value of the fleet, and harm to the pride of individual pilots and to the reputation of the club. These incidents, mostly airplanes bent by inept landings in their proximate cause and often the result of faulty judgment, do not appear in any statistics and are difficult to compare to any national standard because most incidents of this sort are not tabulated. These are the vexing safety failures that are so costly to the club. With the understanding that no amount of bent aluminum can compare to the health or life of one of our fellow members, his or her friends and family, or innocent bystanders, these bent airplanes are taking a heavy toll on the club in repair costs and lost utilization. The cost of a single repair has approached a hundred thousand dollars and the lost utilization of that airplane stretched over many months. The question then is why these failures? Why us? Why now? And what do these incidents and their nature, almost all botched landings and most of those lost to pilot induced oscillations upon landing, tell us about our training, our culture, and our safety?

We must wonder if there is something systemic about our operation that either contributes to these safety failures or might be changed to reduce their frequency and toll. In a future newsletter article, I will express my speculation. I would be curious to hear yours. In the meantime, please be careful.

George Scheer
Chief Flight Instructor
Wings of Carolina

Events Calendar

01 Dec 2015:	IMC Club—ICING Scenarios
05 Dec 2015:	Medicals
10 Dec 2015:	Elections
12 Dec 2015:	Saturday Cook out
05 Jan 2016:	IMC Club
09 Jan 2016:	Medicals
09 Jan 2016:	Saturday Cook out
26 Jan 2016:	How to survive FAA Ramp check
02 Feb 2016	IMC Club
13 Feb 2016:	Medicals
13 Feb 2016:	Saturday cook out
23 Feb 2016:	VFR into IMC accidents

FAA Medicals

We are pleased to be offering on-site FAA medicals on selected days of each month by Dr. James Fogartie of Carolina Vascular. The following dates have been set to get your Class II or III medical right at the club!
Email medicals@wingsofcarolina.org for more information or to sign up for your exam!!

Saturday, December 5, 2015
Saturday, January 9, 2016
Saturday, February 13, 2016

Back Page News

2016 Winter/Spring
Private Pilot Ground School
January 6 through April 13
(Wednesdays 7-10pm)

2016 Winter/Spring
Instrument Ground School
January 18 through April 4
(Mondays 7-10pm)

New Members
Orientations are every second Saturday 12:30pm to about 1:00pm.

Editor
barry.i.moore@gmail.com

Facebook Page:
http://facebook.com/WingsOfCarolinaFlyingClub

Monday Maintenance Night

Most Monday Nights at 6pm at the club. All club members are welcome — no prior experience in auto or aircraft maintenance is needed! Contact James Garlick at : maintenance@wingsofcarolina.org .

Http://www.wingsofcarolina.org

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