



June 2017

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<b>JUNE MEETING</b>	<b>WHEN:</b>	<b>WHERE:</b>	<b>PROGRAM:</b>
	<b>Thurs. the 8th ~6:30 pm</b>	<b>Marshalltown Airport East Hangars</b>	<b>FUNFLY with PANCAKE GRILL</b>

## WHAT'S FLYIN' THIS WAY !!!

It's already time to relax and sit in the shade, and what better venue than in the shade of a hangar door. We will have the pancake grill going and hopefully the weather will cooperate so we can get airplanes out and fly around the patch. Fly, drive, pedal or walk to the airport early and take a peek in the open hangars at what is taking to the air around Marshalltown, then have some cakes and sausage. We will meet in the hangar where the grill is fired up.

BUT FIRST!!! It is time for our Springtime community service...that is, walking the airport road and picking up wayward man-made refuse (otherwise known as 'garbage'). Please arrive around 5pm and Garry Brandenburg will meet us at the entrance to the airport to issue vests and bags. The more who help, the faster it goes.

## WHAT FLEW BY !!!

We had a really good potluck at our last meeting. Hangar talk and even Don Lutes served up some cake and ice cream for his birthday!

Then, later in the month, there was the thunderstorm...

Hangar doors blown in, airplanes damaged, a real big mess. Fortunately, everything is fixable. Many airplanes just received superficial damage, but Mike Hargrave's Cygnet was pushed into the vertical columns in his hangar and sustained major wing damage. The airplane is now apart and with the help of Dave McCurry and Wayne Bausch, the wings will be rebuilt. Amazing what a "little" wind will do, eh?

Also, president Paul Adams is in Oshkosh again working on the B-25, but he has been doing taxi testing of his Double Eagle and hit a little snag on his brake system. The anti-rotation mechanism isn't quite strong enough to hold the airplane with out unduly stressing the brakes. If he hasn't yet, he will get that taken care of as soon as he has had enough fun working on the B-25!



**Everyone partook of some great potluck above while Don Lutes serves up ice cream and cake for dessert to celebrate his 85th birthday .**



# CALENDAR

June 10	9am-Noon	Iowa City Municipal	EAA Chapter 33 Young Eagle Flights
June 11	6am-1pm	Denison Municipal	Flight Breakfast
June 17	7am-10am	Keosauqua Municipal	Fly Van Buren Fly-in
June 17	5pm-7pm	Vinton Airpark	Evening Cookout
June 18	7am-Noon	Maquoketa Municipal	Fly-in Breakfast
June 20	5pm-8pm	Independence Municipal	Summer Grill-out
June 20-23		Decorah Municipal	Air Race Classic (Stop #3) <a href="http://www.airraceclassic.org">www.airraceclassic.org</a>
June 21-22		Spencer Municipal	Air Race Classic (Stop #5)
June 25	6am-1pm	Marion Municipal	Fly-in Breakfast
June 25	8am-11am	Red Oak Municipal	Flight Breakfast
July 2	7am-12:30pm	Emmetsburg Municipal	Flight Breakfast
July 4	7am-11am	Estherville Municipal	Flight Breakfast
July 9	8am-12:30pm	Charles City Regional	Fly-in Breakfast
Sept 16	7am-11am	Marshalltown Municipal	Fly-in Breakfast and Open House

The Air Race Classic, best known in the earlier days as the Powder Puff Derby, is a national air race covering approximately 2400 miles. Iowa will be the only state that has two stops. The pilots and airplanes will be in and out for much of the days listed above. It is a timed event so the airplanes are not racing head to head. Check out the website for more information...[www.airraceclassic.org](http://www.airraceclassic.org)



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## WHAT'S A NA21, NA40 AND A NA62 YOU ASKED?

Two newsletters ago I wrote about the awesome experience I had participating in the B25 Work Party at EAA's Kermit Weeks Maintenance Facility. Fun times and great new friends. As I mentioned in the meeting, I'm going back for more; two different times actually. With those trips in my mind, I occasionally think about the B25. Things like...how did it evolve? When that happens I get to researching the answer and this month's article is on what I found. Hope you find it interesting. I did.

To start we need to role the calendar back to the 1930's. The US Army Air Corp put out a bid request for a medium range bomber. North American's entry into the contest was the NA 21 as seen below.



NORTH AMERICAN NA-21 (NAA\*)



North American failed to win the bid, but this endeavor did gain them some valuable experience in the design and manufacture of a medium range bomber. The bid was awarded in 1936 to Douglas Aircraft and the B18 "Bolo" which is pictured below. An interesting side note was one of the determining factors why North American lost. It was cost. Douglas quoted \$64,000 and North American quoted \$122,000. How much was a loaf of bread back then?

Another side note I may add to this is, while working on the B25 at Oshkosh I learned an interesting tidbit about the B25 versus the B17. John, the Weeks Facility manager was telling us about the drawings availability for the B25. He made mention that even though the B17 is much larger and a four engine bomber, there are 25 times more drawings for a B25 than the B17. The reason is complexity. Maybe that helps explain the difference in the above quote price also.



I have no idea were the name "Bolo" came from, but if I was flying it, the name would remind me of being "bowled over" and thus not provide a high level of confidence in my ride. Well back to the history lesson.

Eventually in the 1940's it was decided to look again at a new medium range bomber with even better performance and one that could be used in a ground attack role. A bid was sent out and with the experience gained with the NA21 design, North American entered the contest with an all new design, the NA40. The NA40 is pictured below, followed by the production version of the eventual winner, the Douglas A20 Havoc.



You can see some resemblance with the present day B25 and with the first picture above of the NA40, but there are obvious differences. Again, North American did not win the contract. The contract eventually went to Douglas and resulted in the A20 "Havoc". The Douglas Havoc was destined to be an excellent ground attack aircraft. I understand we may see an A20 Havoc at Oshkosh this year. Now with two losses to Douglas Aircraft the Army Air Corp still showed some interest in the NA40. The prototype was modified and presented to the Army Air Corp as the NA62 as seen below. They won a contract. Their design was the better concept for a medium range bomber. I also found a couple of interesting aircraft they competed against. The first is a Stearman, I assume the same Stearman as the Lloyd Stearman we all are familiar with. Their entry was the Stearman X100 as seen below.

A little different looking don't you think?



And the other the Martin 167 as seen below. This design was eventually produced for export.



With the win of the contract the NA62 became the Army Air Corp B25 "Mitchel". Over 9000 were built and the primary assembly plant was in Kansas City. Below is a shot of the assembly line.



As with many designs the B25 went through some evolution as different missions were envisioned. I believe the most unusual variant was one that performed the A20 Havoc role, that of a ground attack bomber. A cannon was first mounted in the field by Army Air Corp personnel. Eventually North American finally made a model incorporating the Cannon and along with some 50 caliber machine guns in the nose. It is my understanding that the machine guns are first fired to see if you are on target then they let loose with the cannon. They say it was devastating.

Here's a picture of the nose. It appears the pilot sits above the rather large cannon. The loader is behind in the bomb bay.



A lot more can be said about this very versatile highly produced aircraft. I feel honored to be able to work on one. I will add one interesting fact I learned about the B25 wing configuration. If you look from the front you will notice it has an inverted gull design. Want to know why? Apparently the first few aircraft had the typical dihedral we see in most aircraft of that period and for that matter, today. However there was some sort of instability and it was solved with the redesign of the outer panel of the wing. You can see that change in dihedral in the picture below. It changes just past the engine nacelle.



One last thing in closing. If you ever wondered what kind of contribution North American made to the war effort, think about this...

All at the same time, they had in production the AT6 trainer that trained most of our WWII pilots and many pilots from other countries, The P51 Mustang that allowed us to escort the B17 into Germany and clear the European skies for the invasion of Normandy (D-DAY) and of course the B25. And the P51 and the B25 saw action in every theater throughout the war. With this stable of aircraft they were the highest producer of aircraft and the only manufacturer to have in production at the same time a trainer, a fighter and a bomber. Hats off to those folks!

Want to work on one now. Join me on the next trip.

*(Paul will be in Oshkosh during our upcoming meeting doing, guess what?)*

See a video of the restoration Paul is a part of here...

<https://www.youtube.com/watch?v=50MZUx0Nx8Q>

Watch closely and you may see some familiar faces.