



Illinois Valley Beacon

July

Chapter 563 Chartered in 1976

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News From the PIA Directors

Went to the PIA meeting--New items

#1- Mt Hawley was added to the Lined items for monthly discussion---So they are welcoming the EAA's monthly comments for the Good of Mt Hawley.

#2- The money that was taken to keep the air traffic controllers on the job was taken from air port repairs. So they are back to asking the state and feds for monies for air-port repairs. That will set back the grinding and black top repair.

#3- Someone will inspect hangar #20 to observe floor damage and HIGH HUMIDITY and recommend a fix.

#4- The six foot sink hole is repaired, cause was a rusty 12" Drain pipe going into a 60" pipe. Rust and lack of Concrete at the bottom of the joint were the cause and repaired.

Greg LePine

Interesting WWII facts

These are very moving statistics.

On average 6600 American service men died per MONTH during WW2 (about 220 a day).

People who were not around during WW2 have no understanding of the magnitude. This gives some insight.

276,000 aircraft manufactured in the US . 43,000 planes lost overseas, including 23,000 in combat. 14,000 lost in the continental U.S.

The staggering cost of aircraft in 1945 dollars.

B-17 \$204,370. P-40 \$44,892.
B-24 \$215,516. P-47 \$85,578.
B-25 \$142,194. P-51 \$51,572.
B-26 \$192,426. C-47 \$88,574.
B-29 \$605,360. PT-17 \$15,052.
P-38 \$97,147. AT-6 \$22,952.

From Germany's invasion of Poland on Sept. 1, 1939 until Japan's surrender on Sept. 2, 1945 = 2,433 days. America lost an average of 170 planes a day.

A B-17 carried 2,500 gallons of high octane fuel and carried a crew of 10 airmen.

9.7 billion gallons of gasoline consumed.

108 million hours flown.

460 thousand million rounds of aircraft ammo fired overseas.

7.9 million bombs dropped overseas.

2.3 million combat flights.

299,230 aircraft used.

808,471 aircraft engines used.

799,972 propellers.

WWII MOST-PRODUCED COMBAT AIR-CRAFT

Russian Ilyushin IL-2 Sturmovik 36,183
Yakolev Yak-1,-3,-7, -9 31,000
Messerschmitt Bf-109 30,480
Focke-Wulf Fw-190 29,001
Supermarine Spitfire 20,351
Convair B-24/PB4Y Liberator/Privateer 18,482
Republic P-47 Thunderbolt 15,686
North American P-51 Mustang 15,875
Junkers Ju-88 15,000
Hawker Hurricane 14,533
Curtiss P-40 Warhawk 13,738
Boeing B-17 Flying Fortress 12,731
Vought F4U Corsair 12,571
Grumman F6F Hellcat 12,275
Petlyakov Pe-2 11,400
Lockheed P-38 Lightning 10,037
Mitsubishi A6M Zero 10,449
North American B-25 Mitchell 9,984
Lavochkin LaGG-5 9,920
Grumman TBM Avenger 9,837
Bell P-39 Airacobra 9,584
Nakajima Ki-43 Oscar 5,919
DeHavilland Mosquito 7,780

Avro Lancaster 7,377

Heinkel He-111 6,508

Handley-Page Halifax 6,176

Messerschmitt Bf-110 6,150

Lavochkin LaGG-7 5,753

Boeing B-29 Superfortress 3,970

Short Stirling 2,383

The US lost 14,903 pilots, aircrew and support personnel plus 13,873 airplanes --- inside the continental United States . There were 52,651 aircraft accidents (6,039 involving fatalities) in 45 months. Average 1,170 aircraft accidents per month---- nearly 40 a day.

It gets worse.....

Almost 1,000 planes disappeared en route from the US to foreign climes. But 43,581 aircraft were lost overseas including 22,948 on combat missions (18,418 in Europe) and 20,633 due to non-combat causes overseas.

In a single 376 plane raid in August 1943, 60 B-17s were shot down. That was a 16 percent loss rate and meant 600 empty bunks in England . In 1942-43, it was statistically impossible for bomber crews to complete the intended 25-mission tour in Europe .

Pacific theatre losses were far less (4,530 in combat) owing to smaller forces committed. The B-29 mission against Tokyo on May 25, 1945, cost 26 Superfortresses, 5.6 percent of the 464 dispatched from the Marianas .

On average, 6,600 American servicemen died per month during WWII, about 220 a day. Over 40,000 airmen were killed in combat and another 18,000 wounded.

Some 12,000 missing men were declared dead, including those "liberated" by the Soviets but never returned. More than 41,000 were captured. Half of the 5,400 held by the Japanese died in captivity, com-

On average, 6,600 American servicemen died per month during WWII, about 220 a day. Over 40,000 airmen were killed in combat and another 18,000 wounded.

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The US forces peak strength was in 1944 with 2,372,000 personnel, nearly twice the previous year's figure.

Losses were huge---but so were production totals. From 1941 through 1945, American industry delivered more than 276,000 military aircraft. That was not only for US Army, Navy and Marine Corps, but also for allies as diverse as Britain, Australia, China, and Russia.

Our enemies took massive losses. Through much of 1944, the Luftwaffe sustained hemorrhaging of 25% of aircrews and 40 planes a month.

Experience Level:

Uncle Sam sent many men to war with minimum training. Some fighter pilots entered combat in 1942 with less than 1 hour in their assigned aircraft.

The 357th Fighter Group (The Yoxford Boys) went to England in late 1943 having trained on P-39s, then flew Mustangs. They never saw a Mustang until the first combat mission.

With the arrival of new aircraft, many units transitioned in combat. The attitude was, "They all have a stick and a throttle. Go fly 'em." When the famed 4th Fighter Group converted from P-47s to P-51s in Feb 44, there was no time to stand down for an orderly transition. The Group commander, Col. Donald Blakeslee, said, "You can learn to fly 51s on the way to the target."

A future P-47 ace said, "I was sent to England to die." Many bomber crews were still learning their trade. Of Jimmy Doolittle's 15 pilots on the April 1942 Tokyo raid, only five had won their wings before 1941. All but one of the 16 co-pilots were

less than a year out of flight school.

In WW2, safety took a back seat to combat. The AAF's worst accident rate was recorded by the A-36 Invader version of the P-51: a staggering 274 accidents per 100,000 flying hours. Next worst were the P-39 at 245, the P-40 at 188, and the P-38 at 139. All were Allison powered.

Bomber wrecks were fewer but more expensive. The B-17 and B-24 averaged 30 and 35 accidents per 100,000 flight hours respectively-- a horrific figure considering that from 1980 to 2000 the Air Force's major mishap rate was less than 2.

The B-29 was even worse at 40 per 100,000 hours; the world's most sophisticated, most capable, and most expensive bomber was too urgently needed to be able to stand down for mere safety reasons.

EAA Chapter 563 June Update

In June our Aviation Explorers continued to work on their balsa wood models. Each Explorer selected a different airplane to build. They understand the structure is similar to the many tube and fabric style aircraft that are still flying today. The attached pictures show some of our Explorers at work on their models. They are having the same fun as many of us did when we were their age.....

We intended to have a Young Eagles event at the Pekin Fly-in, Drive-in on Saturday June 15, but the weather did not cooperate. We will schedule another young Eagles event in the future.

The Explorers had a successful practice overnight campout on Saturday June 22 in preparation for going to AirVenture at Oshkosh. Our Explorers will be camping with other Aviation Explorers from around the Midwest. There will be over 200 Explorers from 9 states attending. We will have 7 Explorers and 3 adult advisors from Peoria. As the result of fundraising activities and youth program donations the cost per participant is only \$50.00....a great deal for 4 days of camping, AirVenture admission, all meals and transportation from Wednesday, July 31 to Saturday August 3. We will be camped near the Warbirds area.....stop by to say hello...

Thanks to EAA Chapter 563 for making this trip to AirVenture possible for our Aviation Explorers.



OneX 107

Last month we assembled a AeroVee engine and mounted it on the airframe. The carburetor and the exhaust pipes have been added and the cowling has been fitted and mounted on the firewall. A baffle kit was ordered and installed along with the oil cooler. On this engine the oil cooler sits on top of the engine instead of the bottom, unlike the Sonex.

I then started to add wires from the firewall forward. Four thermocouples were added to the cylinder heads for CHT and four thermocouples were added to the exhaust pipes for EGT. The secondary ignition coils were mounted on the firewall with the voltage regulator mounted underneath the coils. The primary ignition is supplied by the Magnatron coils mounted on the flywheel. This system is similar to those on motorcycles. The secondary ignition is supplied by two coils that are triggered by a sensor also mounted on the flywheel. The cylinders each have two spark plugs that are independently fired by the two ignition systems.

The oil pressure transmitter and temperature sensor were also installed. All the sensors have to transmit their voltages to an instrument on the firewall call an RDAC. I



think it stands for Resistive Analog to Digital Converter. All the wires forward of the firewall go to the RDAC and only one wire goes from the

RDAC to the Extreme EIFS on the panel. Sixteen thermocouple wires, two oil temp./press. wires, RPM and voltage, all go to the RDAC. The digital age is here. It won't be long

until the whole airplane will be wireless. WIFI is coming to airplanes also.

I decided to run all the positive wires down the left side from the firewall to the panel and all the negative wires back up the right side to the ground block on the inside of the firewall. I also use different colors of wire and that helps keep things separated in my records.

I put fuses in the panel and got up enough nerve to turn on the master---- nothing happened. No sparks, no blown fuses, no juice. First mistake, I found, was the master contactor was wired backwards. Battery on the wrong side. This required turning the contactor around and mounting it vertical instead of horizontal. Hooked the wires up the way they should be and did the same thing above. No juice. Forgot to mount the wire to the fuse block, It was hanging down and I didn't see it. Hooked it up and tada, I have a beautiful Extreme and a radio that works great. All I have to do is learn how to program everything to display what I want to see. I did hit the starter and the engine turned over real fast. No oil, no fuel yet. Radio antenna is on the way. That and the pito/static are the last things to hook up. Maybe. I seems there is always something else to do. I forgot about the outside temperature thermocouple and the push to talk switch. I have to caulk the baffles with Silicone, mount the wheel pants, rivet the belly skin on, test and calibrate the fuel gage, get a quote on seat cushions, polish the right side of the fuselage, and ————— I'm sure I will think of something else. But. It won't be long before the OneX fuselage will be parked in the EAA hangar so I can build the wings at home.





JULY 2013
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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
30	1	2	3	4	5	6 First Breakfast
7	8	9	10	11 Regular Meeting	12	13
14	15	16	17	18 Directors Meeting	19	20 Second Breakfast
21	22	23	24	25	26	27
28	29	30	31	1	2	3

The Regular Chapter 563 meetings will be held at the Chapter Hangar at 7:00pm on the second Thursday of each month.

All Chapter 563 breakfasts will be held at the Chapter Hangar from 8:00 am to 10:00 am on the first and third Saturday mornings.

The Chapter 563 Directors meetings will be held at the Chapter Hangar on the third Thursday of each month at 7:00pm.