# HEBER DISPATCH

***December 2017***

## *2017 Season Recap*

Another successful fundraising season is in the bags for the Utah Wing of the Commemorative Air Force. Every year, Bomber Week, the car show, and the hangar dances continue to grow, as they certainly did this year from the last. These events would not be successful without the diligence and hard work of the wing's volunteers, as well as the ardent support of our local donors and patrons. From the war effort itself to preserving the war's history and its legacy in the present day, there will always be an unwavering support for such a historic cause in the state of Utah. Worth noting is the various groups and demographics which came out to our events this season. From World War II to Korea to Vietnam, veterans of every era came out to take a tour through the *Maid in the Shade* in June, with their proud posterity in tow. The wing hosted two hangar dances in June and August, both of which were phenomenally successful. The younger crowds, who are always keen to romanticize about the 1940's, enjoyed the dances as much as the group of veterans who actually lived it. The car show in August was filled to capacity, as numerous car clubs turned up to show their support for the wing. About 80 cars were registered, 36 of which were given a special photo-op with the planes. The Rocky Mountain Wing's TBM Avenger headlined the car show, making for a wonderful backdrop for the photo-ops and complementing the Utah Wing's own Texan, SNJ, and Stearman. A month after the car show the wing made an appearance at the Wendover Air Show. Despite Wendover's claim to fame today, the historic airfield made a considerable contribution to the war effort in World War II. The proceeds from these events will continue to preserve the museum and keep our historic aircraft flying.

The Utah Wing is already planning ahead for the 2018 fundraising season. This will include the increasingly popular hangar dances in June and August, as well as appearances at local air shows and fly-ins (most notably Hill Air Force Base's Warriors Over the Wasatch, scheduled for June 23rd and 24th of next year). The fourth annual car show

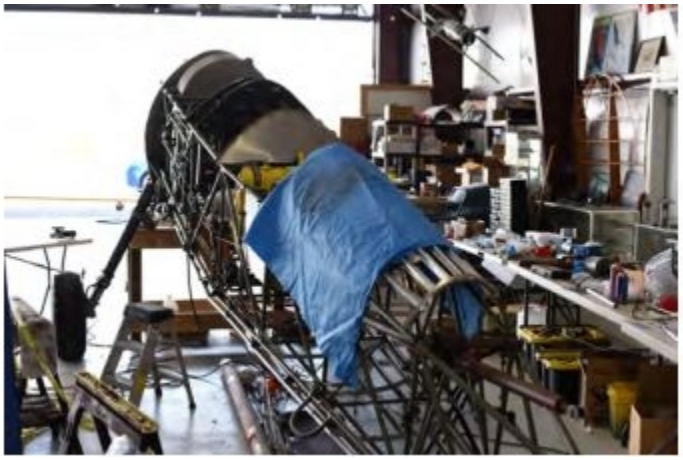
GHOST SQUADRON
CAF
COMMEMORATIVE AIR FORCE
UTAH WING

| In This Issue |
|---|
| 2017 Season Recap |
| Stearman Update |
| Remembering Pearl Harbor |
| Planes and Horsepower Cross-Country Road Trip |
| --Dayton and the Wright Brothers |
| --National Museum of the United States Air Force |
| --Early History of the US Air Force |
| --Detroit |
| --The Henry Ford Museum |
| --Willow Run Airport |
| --The All-American Road Trip |
| --Planes and Horsepower 2017 |
| Special Thanks |
| Wing Information |

will also occur in early August of next year-and will feature another warbird to headline the show alongside our Texan, SNJ, and Stearman. Warbird rides will also be available during the season, with our Stearman N1387V due to be completely restored by then. Whatever the event, the wing hopes to see the same unwavering support that it has seen in years previous. Volunteers are always needed as well for these events (CAF membership is required to volunteer, see wing information at the end of this newsletter for details). The wing gives special thanks to all who supported our efforts this fundraising season, from our volunteers, to our patrons, and of course, to our generous sponsors.

## *Stearman Update—12 Planes of Christmas*

The Utah Wing's Stearman restoration effort is still ongoing, with parts procurement being among the main hold ups. The frame has been cleaned and repainted, and now assembly is occurring slowly but surely as parts are made available. The goal is to have the project complete by May 2018, in time for the next flying season. Donations to this effort may be made through the national CAF fundraising effort at: https://www.crowdrise.com/12Planes/



## *Remembering Pearl Harbor--December 7th, 1941*

### *The Utah Wing's Visit to Pearl Harbor*

The words are perhaps recited as often as the Gettysburg Address--December 7th, 1941, a date which will live in infamy. The United States would never be the same. On this day she dusted off whatever isolationist sentiments remained as she finally entered the stage of the Second World War. Her Pacific fleet was caught unprepared against a well-executed surprise attack by the Empire of Japan, though it was conceded that she had been awoken with a terrible resolve. This meant war. Seventy-five years after the attack, the Utah Wing

would visit the site where it all happened, Pearl Harbor. It is around 8 AM on a Sunday morning in the harbor, as visitors stand ashore looking across at the USS Arizona Memorial. Across from the memorial on the other side of the harbor, the *John C Stennis* aircraft carrier, the emblem of the US Navy's modern naval might, prepares to leave port. In the background rests the USS Missouri. All three of these in the same panorama bore significance to the attack on Pearl Harbor, and to how the war would transpire. One battleship is where the war began, the other is where the war ended, and the modern carrier leaving port bears us to mind its predecessors, which having been spared that day would tip the balance from initial defeat to final victory. An aura of reverence veiled the ferry as it pulled up to the Arizona Memorial, all chit-chat and small talk subsiding. This is where World War II began for the US. On Sunday, December 7th, 1941, at 7:48 AM, the first of two waves of Japanese torpedo planes and dive bombers arrived undetected to begin their assault, the Arizona and her sister ships in their sights. The Arizona would fall victim to a bomb detonating in her forward magazines, the magnificent explosion accounting for almost half of the 2,403 lives lost that day. The Arizona now lay at rest on the harbor floor, serving as a final resting place for those killed in the attack. The site today is hallowed ground, and thousands visit every year to honor the fallen.

In line with the memorial are markers for the Arizona's sisters who were with her on that day--the Vestal, the Nevada, California, Oklahoma, Maryland, Tennessee, and West Virginia. Japan's overarching strategy behind the attack was to neutralize the US by immobilizing her Pacific Fleet, such that it could not interfere with further Japanese pursuits in the western Pacific. The prize in their sights was the battleships, which Japan falsely believed to be the decisive weapon in naval warfare (the United States still somewhat held to this tradition as well). The Arizona and her sister ships would therefore take the brunt of the attack, with the Arizona suffering the worst. The Arizona and Oklahoma would be the only two battleships not to be returned to service (the Utah also still rests on the harbor floor on the other side of Ford Island, but she was relegated to a target ship before the attack, and was deemed not worth saving). Battleship row and its line of memorial markers is now resided over by the towering battleship USS Missouri, which is where the war with Japan

would officially end. The official surrender occurred on her decks on September 2nd, 1945, as key military figures signed an official armistice (Japan announced surrender on August 15th).

There is a lot to fill in on the timeline between the Arizona and the Missouri. As the *Stennis* was underway, however, it bore to mind the first pivotal miscalculations of the war that led from one point to the other. The Empire of Japan did efficiently plan and execute a surprise attack, which caught the United States off guard and kept her dejected for many months to follow. There were critical errors on both sides, but historians today with perfect hindsight vision argue that the attack on Pearl Harbor was perhaps ultimately a fatal miscalculation by the Japanese. The predecessors of the *Stennis* were one saving grace for the US during the attack on Pearl. On the day of the attack, our precious carriers were not in port. Knowing this, Japan proceeded with the attack anyways, convinced of the battleships' prevailing significance. Even though six of their own carriers conducted an impressive attack on Pearl, Japanese naval doctrine throughout the war would continue to hang its hat on battleships. Our carriers would be spared to fight another day-and would later take the fight to the Japanese in the Doolittle Raid and the battles of Corral Sea and Midway--three pivotal moments that would turn the tide in the US's favor. In addition to carriers, submarines would be instrumental in attacking Japanese cargo shipments, which would nearly halt Japanese industry during the war. Battleships would be relegated to a smaller role in the Pacific campaign, used mostly to bombard coastal positions in support of amphibious invasions. Even if Japanese naval doctrine was correct about the role of battleships, being harbored in shallow water meant that many of the battleships could be salvaged and eventually returned to service. A large portion of their sailors would also be off ship in the harbor, or could be rescued with relative ease from the shallow harbor water. It would have been much more detrimental to the US had our battleships been lost in deeper waters. In fact, historians argue that to a degree, Japan arriving undetected was also a saving grace for the US. If Kimmel had been alerted to an arriving Japanese fleet, he could have perhaps left port and engaged Yamamoto and his six carriers. He would have likely done so only with his battleships, not being able to assemble his sparse carriers in time. In this theoretical engagement, our battleships if sunk would have been lost forever (it is tough to say what Yamamoto would have done in this hypothetical, everything hinging on the element of surprise). Being moored in the shallow harbor however, six of the eight battleships would be repaired and returned to service.

The Empire of Japan took a considerable gamble with their attack on Oahu, but as far as achieving surprise they played their cards right. Strict radio silence was observed all the way from Japan to the north of the Hawaiian islands, allowing no chance of a signal interception. Most of the success of the attack however can be attributed to the lack of preparedness by the United States. Admiral Kimmel, along with other top brass and the US public in general, did not seriously consider the possibility that Hawaii would actually be a target. This was in despite of hypotheticals and warnings of a Japanese fleet arriving undetected from the north to attack the entire fleet while at anchor, which is how it transpired. The island was believed to simply be too far from Japan, and in the eyes of Americans, the Japanese wouldn't be capable of launching such an audacious strike. It was widely accepted that the Philippines and other southwest Pacific locations would be the main objective of any Japanese aggression (which indeed they were, as the Philippines and other locations were attacked the day after Pearl Harbor). Furthermore, lapses in communication between Admiral Kimmel and the Army's General Short meant that adequate radar and scouting patrols were never implemented. These lapses allowed the Japanese to slide right into the harbor undetected. The top command also did not understand the imminent threat, lining aircraft wingtip to wingtip to protect against sabotage. The aircraft parked so close together made easy targets from the air. To exacerbate the unpreparedness when the Japanese arrived, any attempt at firing back was hampered by ammunition being locked up, having been done so as a preventative measure. Also playing into the Japanese hands were the training routines of the Pacific Fleet. Japanese reconnaissance was able to observe and report patterns, merely by overlooking the harbor. About half the fleet would be out of port on maneuvers at irregular schedules during the week, but without fail, most of the fleet was at anchor and unalert on Sunday mornings. This gem of information is what Yamamoto used to decide to attack on Sunday morning. The

element of surprise was crucial to success.
The first two waves had achieved their defined objective, but whether or not a third wave would be launched was still to be decided. This wave would hit dry docks, oil, and torpedo reserves. This was ultimately decided against because of the Japanese fleet's dwindling fuel reserves, the still unknown location of the US's carriers, and the increased readiness of the ground forces on Oahu. Historians today argue that had this third wave occurred, the US without dry docks and oil reserves would have been set back in the Pacific at least as far as a year. With the war against Hitler demanding the US's attention, there is no telling in this scenario how the delayed efforts in the Pacific would have panned out. Events as history tells would eventually transpire in the US's favor. Six of the eight battleships were raised and returned to service between 1942 and 1944, the dry docks at Pearl remaining at the fleet's disposal. From rebuilding Pearl Harbor, the US would go on to shock Japan with the Doolittle Raid, turn back their advance for good at Midway, and steamroll to Japan itself by 1945, where, on board the USS Missouri, Japan would officially surrender to the US.

# *Planes and Horsepower*

The morning of August 5th was a setting which the Utah Wing of the Commemorative Air Force is always keen to take in. On this morning another relic of the Second World War is perched on the airport's ramp. The war being long gone for this TBM Avenger, she now awakens to a much more benevolent rising sun. Her looming but aesthetic figure would be lovely and unspoiled in the morning ambiance, if not for the irreverent idle of two muscle cars perched in front of the plane. Their own ambiance would resonate later in the day as they would be joined by more of their own. Cars of every era would later appear, reminding us as they do at every car show, that the automobile has been an icon of American culture for decades. The TBM too would have a company of her own. Other historic aircraft with the same iconic status would join the complement of cars. Seldom are these icons assembled together in this fashion. Many have perhaps heard about Ford and GM helping take the fight to the Axis by producing planes and engines, but few realize the depth and history of the symbiotic relation between planes and horsepower. The perch in front of the TBM on that morning was actually the final destination of a long journey for one of those muscle cars, its high beams and gloss finish keen to distract from the old warbird. This car had come not only from an iconic lineage, but from across the country.

***The Commemorative Air Force's Cross-Country Planes and Horsepower Road Trip***

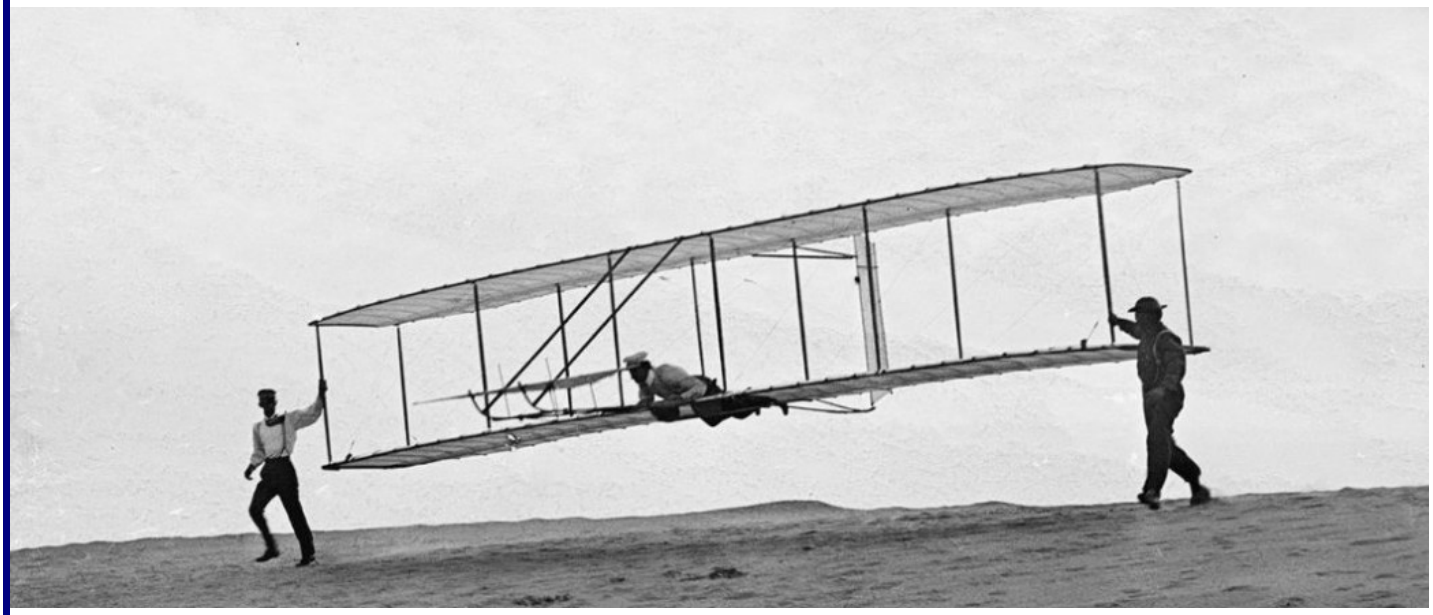
That irreverent muscle car in the preface was none other than the 2017 Chevrolet Camaro SS (the 50th anniversary commemoration to the Camaro's 1967 debut), which would embark on its journey from Dayton, Ohio. Dayton continues its reputation today as a nexus of technological innovation, but is most noted of course as the birthplace of modern aviation and home of the Wright Brothers. Exploring the birth and development of aviation would continue in Detroit, Michigan, whose claim to fame as Motor City almost need not be mentioned. Traveling through Dayton and Detroit would be a journey through America's reign of innovation, as aviation took off, as automobiles became the transport to a new way of life, and as we answered to war when it came to our doorstep. After departing Detroit, the Camaro would embark on the All-American road trip, which would become a staple in American culture after the war. The 1,600 mile road trip would end at Heber City, Utah, where the Camaro would be entered into the Commemorative Air Force--Utah Wing's Annual Planes and Horsepower Car Show.

***Dayton, Ohio***

Exiting the gate of Dayton International Airport at a reverent 20 miles per hour, the Camaro promptly made its way to the prairies outside Dayton, where 455 horsepower was used as it was meant to be. There was an intoxicating effect as the exhaust roared louder and as 60 miles per hour became 80, and then increased further to unmentionable speeds. In those open roads and those open fields, there was an inherent excitement in going faster and farther and pushing limits. This car after all was treading on ground where more than a century ago, this same manner of excitement propelled mankind into a new age—the age of modern flight. At the turn of the 20th century, we had always dreamed of flying, but not until this point were we finally making strides. Although Kitty Hawk in North Carolina is technically where the first powered flight took place, it was in Dayton where modern aviation was conceived and refined. It was specifically at a now preserved site known as Huffman Prairie, where the Wright Brothers would test their new prototypes, and where the Camaro now paused to rest.

The Wright Brothers were living in Dayton when they capitalized on the bike craze, opening up their own bicycle repair shop in 1892 and establishing their own brand of bicycle in 1896. During this time aviation was still an unrealized dream, but with new developments it became a passion for many. Every day came mention of the latest glider, and occasionally came mention of a huge setback. Samuel Langley had developed an unmanned steam-powered glider, and Octave Chanute had made several developments with gliders on the shores of Lake Michigan. Both endeavors however would ultimately fall flat. It was the death of one Otto Lilienthal in particular which created a spark within the Wright Brothers. They were enamored with newspaper articles and photos detailing the feats of the German pioneer, who was the first to record repeated successful flights in unpowered and uncontrolled gliders. It was the plunge to his death that bred the idea of controlled flight with the Wright Brothers. With further deaths in the news from gliding flight, they pressed on believing that control was the key to producing a practical method of flight. Their contemporaries generally believed that the recipe to get airborne simply required more power, and the go-to solution every time was for more powerful engines and larger wings. The Wright Brothers however diverged from the popular conception of power and focused instead on control as the missing keystone. Between 1900 and 1903, they ventured out to Kitty Hawk, North Carolina, to test control with various gliders (Kitty Hawk being recommended by fellow aviator Chanute). After observing birds in Dayton, they conceived the idea of wing warping, or torsioning the wings to create a difference in lift, thereby turning the glider. Their gliding tests saw improvements and re-evaluation of data provided by earlier pioneers such as Lilienthal. Test after test yielded both disappointments and strides. They returned to Dayton from Kitty Hawk every time looking to improve their controlled glider, in the process developing wind tunnel testing and gathering

empirical data on their own. Such was the resourcefulness of the Wright Brothers which separated them from other pioneers. With validated data, refined wings, and development of a vertical rudder to stabilize their turning problem, their controlled glides became sustainable for longer periods of time. Returning to Dayton one more time, they were ready to add the final ingredient that contemporaries were so adamant on—power. After not being able to find a sufficient motor, they turned to their own mechanic, Charlie Taylor, who developed their own engine for them. They made it of cast aluminum to reduce weight, which interestingly enough, was not typical for automobiles at the time, despite its commonplace today. The propeller, after much deliberation, could not be the same as a boat propeller, but would essentially be a rotating flying surface like the wings. They again used their wind tunnel testing to develop and build their own propellers. Overcoming initial delays and breakdowns in Kitty Hawk, on December 17th history was made as the first heavier-than-air, powered, and controlled flight took place. The famous photograph of the first flight captures this moment, lasting 120 feet, 12 seconds, and averaging 6.8 miles per hour. The altitude was only 10 feet off the ground for that and successive flights.



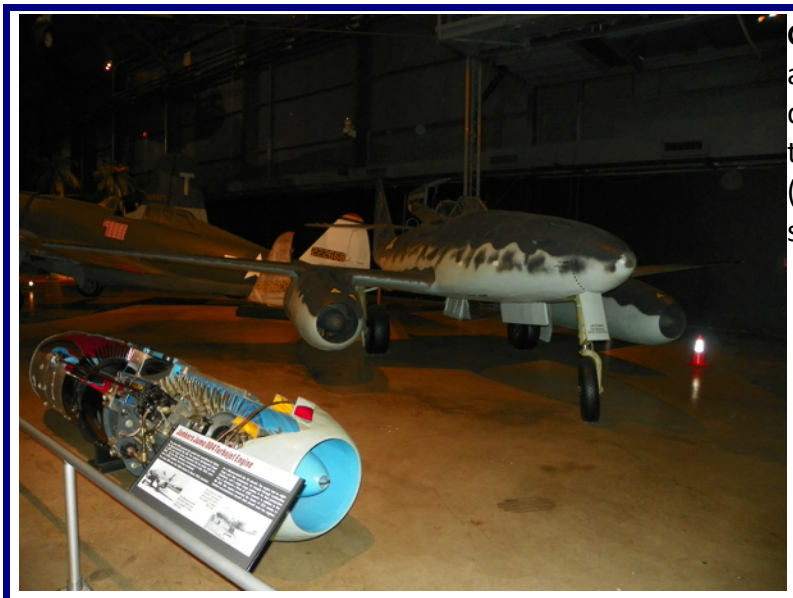
In present day Dayton, the Camaro makes its way between the national historic site of Huffman Prairie to nearby Wright-Patterson Air Force Base, the namesake of the Wright Brothers. Having made the first successful flight, the brothers came back to Dayton in 1903 ready to determine where to go next. To patent and sell their flying machine as anything of practical use, they had to further develop it such that they could make reliable demonstrations. Their Flyer II was tested here at Huffman Prairie, and it was here where more history was made. After exceeding the performance of Flyer I at Kitty Hawk, the brothers flew the first complete circle in history, an ability that was proving difficult to iron out in previous efforts. Improvements such as elongated structures and independent controls for pitch, roll, and yaw, allowed for much better control of the aircraft. Flights were becoming longer and traveling farther, the longest at this point traveling 24.5 miles in 38 minutes. The Wright Brothers were now confident that they could sell a patent for an aircraft of “practical utility”. They however experienced a turbulent time trying to sell their product, with the US military not even showing interest (after dumping millions of dollars into Langley's failed attempts). People during this time were more interested in the automotive industry, and remained skeptical about practical aviation. Although the US military would not immediately be interested in the Wright Flyer until after international interest, Wright-Patterson Air Force Base adjacent to Huffman Prairie is now the center of Air Force research and development.

***National Museum of the United States Air Force***


Outside of Wright-Patterson lies the world's oldest and largest military aviation museum. From a replica of the Wright Brother's 1908 Flyer that they sold to the US Army Signal Corp (earliest ancestor of the US Air Force) to the space race and beyond, the National Museum of the US Air Force tells the history of the aviation and its role in the military. As you walk through the Early Years exhibit, balloons preceding the advent of the airplane are on display, as are several artifacts of the Wright Brothers. These include parts of their original 1903 Flyer, bicycles from their shop, and their wind tunnel they used to acquire data on various wing shapes. In the World War I exhibit are several artifacts, including diaries and other items from the aerial fighters who would shoot down 756 airplanes and 76 derigibles, despite being ill-equipped. Notable among these exhibits is Eddie Rickenbacker's restored Spad XIII, which he used to shoot down a confirmed 26 enemy aircraft. In addition to scoring 26 victories in four months and earning the Medal of Honor, Eddie Rickenbacker was a race car driver before the war, participating in the Indy 500 at least four times. After the war he would continue to make strides in both the automotive and the aerospace industries, founding his own car company and airline.

***Notable Exhibits in the Museum***

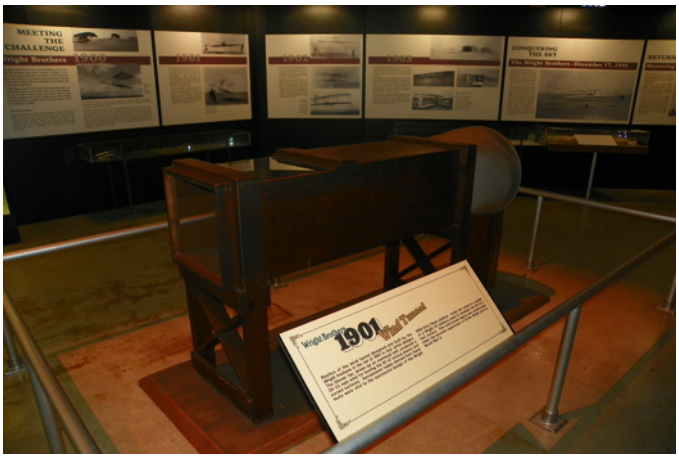

**B-29 "Bockscar"**, which dropped the second atomic bomb "Fat Man" on Nagasaki, Japan, on August 9th. On August 15th, Japan surrendered, ending World War II.



**German Me-262**—First operational jet-powered aircraft. Although vastly outperforming propeller-driven aircraft, it fell victim to technological teething pains, as well as high-level misuse (namely Hitler, who wanted to use it as a high-speed bomber).


**A6M Mitsubishi "Zero"**--Light, agile, and dominant early in the Pacific campaign, its light armor was unable to protect it against later US aircraft which could outperform it.

**Apollo XV Command Module Endeavour—**David Scott and James Irwin successfully landed on the Moon on July 26, 1971.




**Wright Brothers Artifacts—**Including one of their bicycles and an early wind tunnel

***A Brief History of the US Air Force and Military Aviation***

The very first progenitor of the United States Air Force was the Aeronautical Division of the Signal Corp, which itself traces its origins to forward observations by balloon in the US Civil War. In 1898-1899, the corp followed suit with the popular imagination invested in heavier-than-air flight. Their go-to was the Secretary of the Smithsonian, Sam Langley, whose much-flouted experiment is noted in the books for its monumental failure not long before the Wright Brothers' own feat in 1903. With the success of the Wright Brothers' Flyer III in Huffman Prairie, the Signal Corp resumed interest in heavier-than-air flight and purchased one Wright Flyer for demonstration in 1908. In 1910 the Signal Corp acquired the Wright Model B, which was sold to the civilian market as well as the Signal Corp, the Navy, and foreign interests as well. During this time aeronautics had advanced considerably in Europe, and by the time the US had entered World War I in 1917, American aircraft development had lagged far behind European advancements. In addition to lagging Germany by at least two years in all aspects of aviation, the US arsenal consisted of no more than 250 trainers, and no aircraft which were combat-ready. Despite appropriations, American industry did not produce a single combat-worthy aircraft for the war. An investigative board after World War I found that the Air Service's failure of preparation for the conflict was partly due to production. Aircraft that were designed thus far were not built by parts which could be mass produced, in a way that the automotive industry excelled at already in the turn of the 20th century.

Post-war efforts to increase an independent military branch from the new Army Air Services lead to research and development at McCook Field (progenitor of Wright-Patt) in Dayton. The strategy was to increase popular and thus political support for a separate Air Force by championing aeronautical advancements. This effort produced the first monoplane, with retractable landing gear, a metal propeller, and advancements in airplane engines. Technological firsts led to performance firsts, as in this era speed, altitude, distance, and endurance records were constantly and repeatedly being surpassed. This was the era of Kelly and McReady, Doolittle, Lindberg, and the like. In 1923, the first cross-country endurance flight was accomplished, and in 1927 was Lindberg's famous trans-Atlantic flight, a feat even the Wright Brothers proclaimed would be impossible. In 1924, the Air Service established the first flight around the world. The public imagination was captivated. Just two decades prior it was proclaimed that man would never fly. It was throughout the thirties that the design of the airplane continued to evolve, as fabric and wood biplanes (such as the Utah Wing's own PT-17 Stearman) would give way to metal monoplanes. As planes continued to evolve and advance in the 1920's and 1930's, the US Army Air Service became the US Army Air Corps, and then the US Army Air Forces by 1941. During this time advancements in Europe, particularly in Germany, worried Jimmy Doolittle and others who foresaw a global conflict, and the role that aviation would play in it. Despite lagging Germany still, by wartime such aircraft as the B-17 and B-24 were refined to become a detriment to the German war effort. With the Army Air Forces playing such a critical role in the war, the Air Force finally became its own

independent branch of the US military in 1947. From here it would break the sound barrier and would be instrumental in landing on the Moon (a mere 66 years after the Wright Brothers' first flight).

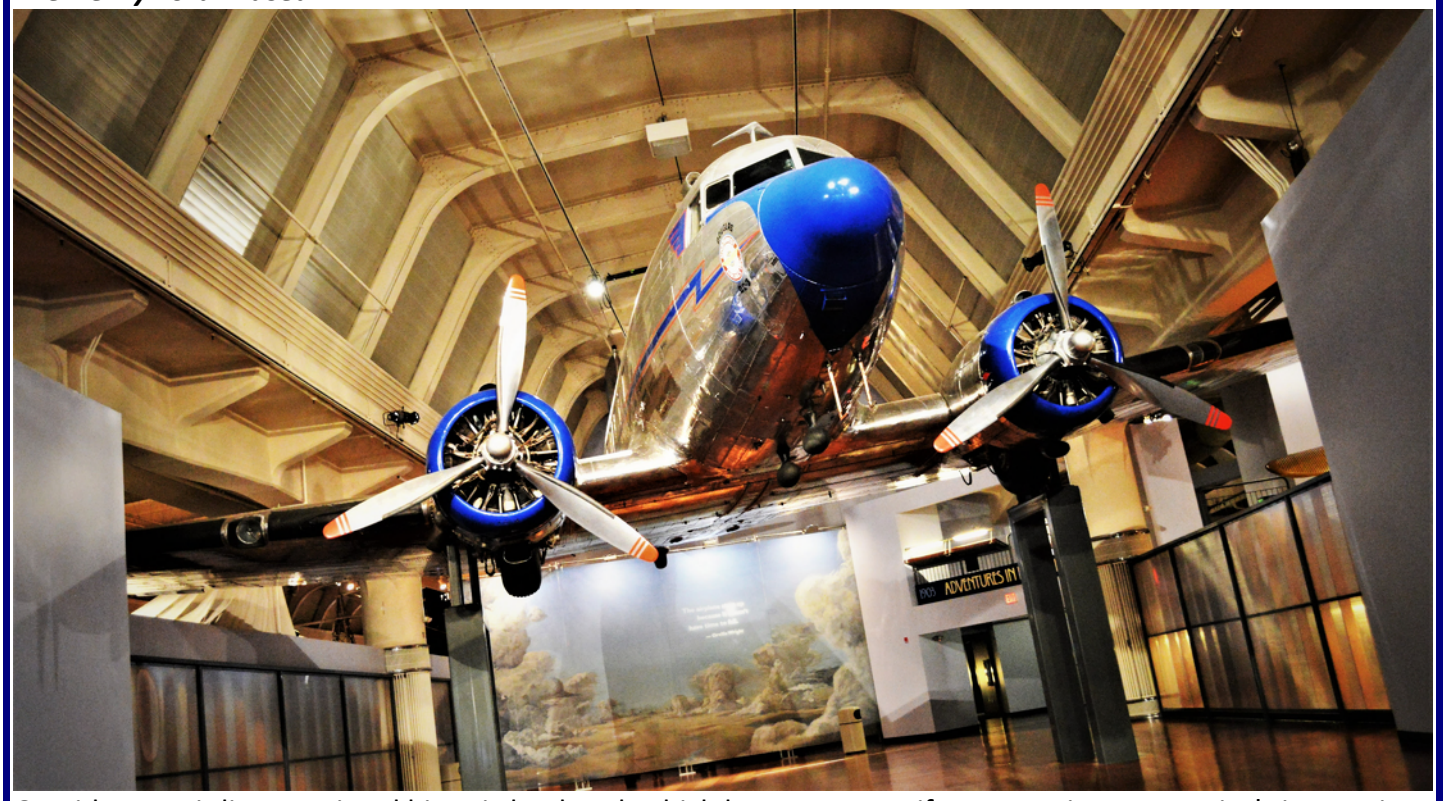
***Detroit***

In 1903, the Wright Brothers made history with their first heavier-than-air, controlled flight, thereby introducing modern aviation. In that same year, Henry Ford founded his own automotive company in Detroit. In 1908, as the Wright Brothers were delivering their Wright Flyer III to the Signal Corps for demonstration, Henry Ford introduced the Model T and had begun to tune the advent of the assembly line. Also in 1908, General Motors was founded. Straight off the line the two industries grew and progressed in tandem. Both industries saw a flurry of innovations at the turn of the twentieth century, and subsequently both industries saw thousands of start-up companies, many eventually going out of business or being acquired by larger companies as the industries progressed. As rudders, propellers, and ailerons were being developed in the aviation industry, brakes, four cycle internal combustion engines, and transmissions were being fine-tuned in Detroit. One of the reasons attributing to the relative lack of serious interest in aviation pre-World War I is that the automotive industry had already captured imaginations, airplanes in their infancy considered merely a toy. The world wars however would propel the aviation industry forward, with a little help from the automotive industry. Although a shadow of its former self (not to glance over its recent recovery), Detroit has long been the Mecca for the motorhead, at one point producing three-quarters of the world's automobiles. Henry Ford would revolutionize industry by implementing the assembly line. His intent was to reduce costs of production and make an automobile affordable for more people (as opposed to the status symbol philosophy that GM and Chrysler had at the time). This advent of course would play a critical role in World War II, as one of the US's key factors in helping win the war was its industrial prowess and efficiency.


The Big Three automakers even ventured into aviation. Henry Ford along with some of his investors would acquire Stout Aircraft Company in 1926, which produced the Ford Tri Motor. The Tri Motor, like the cars that Ford had produced up to that point, would be noted for reliability and for its relative low cost to produce. It was among the first visions for a people carrier, as commercial aviation was being hatched. In the 1930's however, the Tri-Motor was being outclassed by other competitors in the aviation market, such as the Douglas DC-2. Likewise across Detroit, General Motors would have its hand in the aerospace industry. They acquired Fokker Aircraft Corp of America and Berliner-Joyce Aircraft in 1930, later merging them to form General Aviation Manufacturing Corporation. GM also had controlling interest in North American Aviation and merged it with its General Aviation division from 1933-1948. North American of course would produce

the P-51 Mustang, an icon of World War II (and disputably the namesake of the Ford Mustang).

***The Henry Ford Museum***




Outside Detroit lies a national historic landmark which hosts many artifacts attesting to America's innovative genius. A visitor can walk through Thomas Edison's laboratory, through the Wright Brothers' bicycle shop (transplanted from Dayton), and Henry Ford's original prototype garage where he developed his first vehicle. The museum was birthed from Henry Ford's desire to preserve items of historical interest and to commemorate America's innovative spirit and the industrial revolution. Henry Ford's vision was to “collect the history of our people as written into things their hands made and used.....When we are through, we shall have reproduced American life as lived, and that, I think, is the best way of preserving at least a part of our history and tradition....”

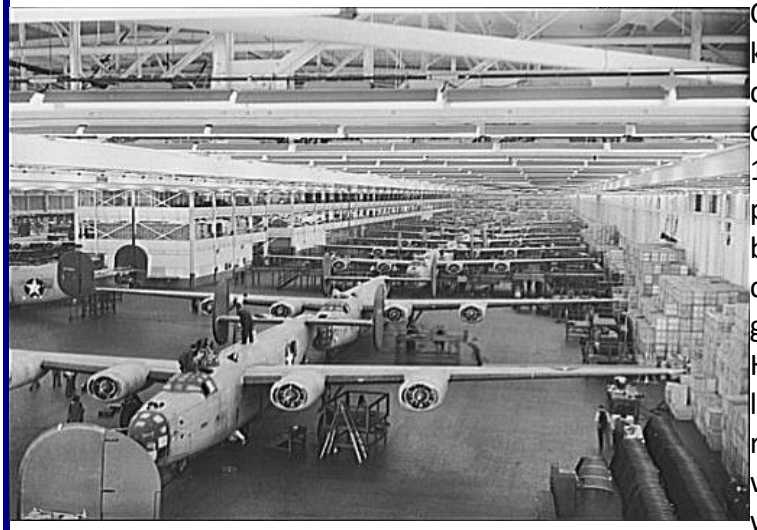
A large part of the interior of the museum tells of the history of the automobile, extending beyond Henry Ford's own beginnings. The exhibit unsurprisingly displays a lot of aviation history, with a replica of a the Wright Flyer, both a Ford and Fokker Tri-Motor (the latter of which was the first plane to fly over the north pole), an exhibit to air shows and air racing, one of Sikorsky's first helicopter prototypes, and a tribute to the Wright Brothers. Perched over the entrance is a Douglas DC-2, which was one of the first of a new generation

of aircraft in the 1930's, as mishaps with wooden aircraft had driven a transition to all-metal aircraft. The successor of the DC-2, the DC-3, would have a military variant which would be the packhorse of the war effort in World War II. The C-47 would drop troops over Normandy, make numerous airdrops, and carry cargo over the Hump.

**Wartime Production in Detroit**

In the 1930's many of the automakers felt the sting of the great depression, many going under completely. With conflict in Europe and the Pacific erupting, the automotive industry received $4 billion appropriations from the government to begin shifting their production to the war effort. The automotive industry, like the majority of the country, had an isolationist mentality and was reluctant to shift production away from making automobiles. Henry Ford in particular was vocal about his isolationist sentiments, regarding war as a waste of time. Likewise with the rest of the country though, their attitudes changed swiftly after the attack on Pearl Harbor. By 1942 all automobile production had ceased completely, and the automotive industry received another $10 billion in appropriations to produce for the war effort. Factories everywhere were enlarged to accommodate the new line of work and the hundreds of thousands who came in search of it. GM would go on to produce over 600,000 trucks for the Army. Ford, despite Henry Ford's staunch isolationism, would produce 390,000 tanks and trucks, 27,000 engines, and over 8000 B-24 Liberators. In total, 5.9 million weapons, 2.8 million tanks and trucks, and 27,000 aircraft were produced by the automotive industry.

***Willow Run Plant***



Outside of the Detroit area lies a municipal airport known as Willow Run. Two hangars, a little run down, house the Yankee Air Museum, and were once an arsenal for the Second World War. Between 1942 and 1945, Henry Ford's factory at Willow Run produced more than 8,700 B-24 Liberators, rolling a brand new one out every 55 minutes. This feat was critical in winning World War II. After joining the government's Liberator Production Pool Program, Henry Ford selected this site for production, as this land belonging to him could also accommodate a runway. Ford Motor Company had long since parted with aviation since the Tri-Motor in the 1920's, and was initially reluctant to support the war effort given Henry Ford's stance. Initially the production line at Willow Run saw many quality problems at the start, due mostly to Ford employees being accustomed to the automotive assembly process. A Congressional query into quality issues in fact cited the automotive production line culture being difficult to translate into airplane manufacturing. At the beginning, the plant was only assembling subcomponents and shipping them to Consolidated and Douglas Aircraft for final assembly. Ford though eventually obtained permission to assemble entire aircraft, and the first Ford-built B-24 rolled off the line at Willow Run in September of 1942. After the war, the plant would be converted to an automobile manufacturing plant, churning out 739,000 cars for Kaiser-Fraser from 1947 to 1953. That company would eventually purchase Willys-Overland (maker of the iconic Willys Jeep) and move its facilities to Ohio. (This acquisition would find its way to Chrysler as the Jeep-Eagle division). The plant would also produce C-119 and C-123 aircraft under contract during the Korean War, in an effort to assist the Air Force's airlift effort. Today, the Yankee Air Museum is making an effort to preserve a portion of the buildings, which are now leased as distribution centers.

***Post-World War II Car Culture and the Road Trip to Planes and Horsepower***

The United States would see several cultural shifts after World War II. The automotive industry would balloon into a giant and would give birth to numerous staples of American culture that exist to this day. As production shifted from the war effort, automakers turned again to making automobiles. Experts predicted correctly that becoming proficient at producing advanced aircraft would be conducive to advancements in the automotive industry. By 1950 the US produced nearly three quarters of the the automobiles in the world. In many ways, the automotive industry would embody the prosperity of the late 1940's and 1950's. Cars, and their engines, would grow in overall size. Henry Ford's dream of affordable cars for the working man was realized, and by 1958 more than 67 million cars were registered in the United States, increased from 25 million in 1950. By the end of the 1950's, one in six Americans, most of them World War II veterans, were employed either directly or indirectly by the automotive industry. As many aerospace developments took flight in the 1950's and 1960's, the influence was evident in the automotive industry. Cars in the 1950's exhibited large tail fins, which were supposed to resemble sleek aerodynamic aircraft (the aerodynamics of these fins were actually counterproductive). This explosion in the automotive industry gave rise to several other pop culture icons. Most notable among these was the hot rod culture, where it became immensely popular to modify cars. Cars in a way became a symbol of individuality, serving as a statement of the driver's personality and perhaps even an extension of their identity. This increased car sales further, and fashion as much as function affected new car designs. The car culture also gave rise to fast food, drive-in movies, and the All-American road trip. The 1950's saw the introduction of the US Interstate Highway system, which was inspired by Germany's Autobahn. President Eisenhower (then General) was so impressed by the ease of transportation in the waning months of the war and in the ensuing occupation of Germany that he sought a similar mode of transportation in the United States (a more dreary realization too is that large populations would need to evacuate fast in the event of a nuclear conflict). With almost every family owning a car, and with anywhere in the country easily accessible by the new freeways, the family road trip became another staple of American culture. The last part of this road trip would embody this new found sense of freedom with an excursion across the country, taking I-80 from Detroit to Heber City, UT.

## *Planes and Horsepower Car Show—August 5th, 2017*

The road trip culminated in the Commemorative Air Force-Utah Wing's annual Planes and Horsepower Car Show. The Camaro which traveled through the history of both automotive and aerospace industries arrived in

Heber to rest in front of the TBM Avenger, and would now participate in a day of celebrating the symbiotic relationship between planes and horsepower. The car would be joined by other Camaros, Mustangs, Corvettes, Challengers, and other car culture icons. Patrons of the show were given professional photo-ops of their cars in front of Commemorative Air Force planes—including the Rocky Mountain's TBM Avenger and the Utah Wing's Texan, SNJ, and Stearman. Here are some of the best photos.


MIDNIGHT
EXPRESS
94
GT 500


MIDNIGHT
EXPRESS
94


WZ
S
51414


B58EAST


SS
AE 3478
UTAH

## *Special Thanks to Our Sponsors*

The Commemorative Air Force could not put on their events without the help and support of our sponsors. The organization is delighted to always receive such unyielding support from other members of the community.

| | | | | |
|---|---|---|---|---|
| *Redmond Real Salt* | *Lee's Market* | *Zermatt Resort* | *Heber City Corp.* | *UAMPS* |
| *Ridley's Market* | *Heber City Smith's* | *Heber City Walmart* | *Holiday Inn Express* | *CRC Designs* |
| *Brian Lee Farmers Insurance* | *CRC Designs* | *Zions Bank* | *Ackerson Eye Care* | *Wasatch Wave* |
| *Park City Rotary* | *Midway AmBank* | *Burton Lumber* | *Tracer Barricades* | *Watts Enterprise* |
| *Utah Division of Arts & Museums* | | *K.W. Robinson Construction Inc. Diversify* | | *Wealth Management* |

## *Volunteering with the Commemorative Air Force*

Although most members of the CAF are licensed pilots, no special skills are required to volunteer with us. We have volunteers from every skill set and every walk of life. All members share a passion for history and a dedication to preserving it. The only requirement for volunteering is annual membership dues to the national organization and a smaller annual due to the Utah Wing. Volunteers who pay these dues can assist with our summer events and make greater contributions! Info regarding membership can be found on our website.

## *Commemorative Air Force-Utah Wing Information*

The CAF Utah Wing Museum is located in Hangar 38D at the Russ McDonald Airfield, Heber City, UT. The museum will be open May 6--October 29, 10:00 AM to 4:00 PM, Saturdays and Sundays only.

Contact Information
Phone: 435-709-7269
Ride Coordinator:
Chris Ryan
(435) 671-6441
www.cafutahwing.org

Follow us on Facebook!
https://www.facebook.com/cafutahwing/