

## DOWNLOAD PDF B-17 FLYING FORTRESS UNITS OF THE PACIFIC WAR (COMBAT AIRCRAFT)

### Chapter 1 : New PDF release: Osprey Combat Aircraft - B Flying Fortress Units of - Katrice Cohen Books

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Of the 13 YBs ordered for service testing, 12 were used by the 2nd Bomb Group of Langley Field, Virginia, to develop heavy bombing techniques, and the 13th was used for flight testing at the Material Division at Wright Field, Ohio. A 14th aircraft, the YBA, originally destined for ground testing only and upgraded with the turbochargers, [57] was redesignated BA after testing had finished. To enhance performance at slower speeds, the BB was altered to include larger rudders and flaps. While models A through D of the B were designed defensively, the large-tailed BE was the first model primarily focused on offensive warfare. The XB was an engine test bed for Allison V liquid-cooled engines, should the Wright engines normally used on the B become unavailable. The only prototype XB to fly crashed on its ninth flight, and the type was abandoned. The Allison V was allocated to fighter aircraft. Additional armament included an additional dorsal turret in the radio room, a remotely operated and fired Bendix-built "chin turret" and twin. The ammunition load was over 11, rounds. The YBs with their numerous heavy modifications had trouble keeping up with the lighter bombers once they had dropped their bombs, so the project was abandoned and finally phased out in July. The BG was the final version of the Flying Fortress, incorporating all changes made to its predecessor, the BF [57], and in total, 8, were built, [64] the last by Lockheed on 28 July. The operation, which involved remotely flying Aphrodite drones onto their targets by accompanying CQ "mothership" control aircraft, was approved on 26 June, and assigned to the 19th Bombardment Group stationed at RAF Fersfield, a satellite of RAF Knettishall. Blast damage was caused over a radius of 5 miles. British authorities were anxious that no similar accidents should again occur, and the Aphrodite project was scrapped in early July. The 19th Bombardment Group had deployed to Clark Field in the Philippines a few weeks before the Japanese attack on Pearl Harbor as the first of a planned heavy bomber buildup in the Pacific. Kenney when he arrived in Australia in mid-1942. The Bs were primarily involved in the daylight precision strategic bombing campaign against German targets ranging from U-boat pens, docks, warehouses, and airfields to industrial targets such as aircraft factories. The defense expected from bombers operating in close formation alone did not prove effective and the bombers needed fighter escorts to operate successfully. Their first operation, against Wilhelmshaven on 8 July was unsuccessful, [75] [76] but on 24 July they attacked the Scharnhorst, anchored in Brest, and inflicted considerable damage on the vessel. A Fortress from No. 8. They could also pose as ground controllers themselves with the intention of steering nightfighters away from the bomber streams. The bombardier essentially took over flight control of the aircraft during the bomb run, maintaining a level altitude during the final moments before release. As the raids of the American bombing campaign grew in numbers and frequency, German interception efforts grew in strength such as during the attempted bombing of Kiel on 13 June [90], such that unescorted bombing missions came to be discouraged. Eaker and the Eighth Air Force placed highest priority on attacks on the German aircraft industry, especially fighter assembly plants, engine factories, and ball-bearing manufacturers. The 8th Air Force then targeted the ball-bearing factories in Schweinfurt, hoping to cripple the war effort there. The first raid on 17 August did not result in critical damage to the factories, with the attacking Bs being intercepted by an estimated Luftwaffe fighters. The Germans shot down 36 aircraft with the loss of 2 men, and coupled with a raid earlier in the day against Regensburg, a total of 60 Bs was lost that day. Of 2, men in the crews, about did not return, although some survived as prisoners of war. Only 33 bombers landed without damage. These losses were a result of concentrated attacks by over German fighters. At the same time, the German nightfighting ability noticeably improved to counter the nighttime strikes, challenging the conventional faith in the cover of darkness. Lieutenant General James Doolittle, commander of the 8th, had ordered the second Schweinfurt mission to be cancelled as the weather deteriorated, but the lead units had already entered hostile air space and continued

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with the mission. Most of the escorts turned back or missed the rendezvous, and as a result, 60 Bs were destroyed. Losses to flak continued to take a high toll of heavy bombers through , but the war in Europe was being won by the Allies, and by 27 April , 2 days after the last heavy bombing mission in Europe, the rate of aircraft loss was so low that replacement aircraft were no longer arriving and the number of bombers per bomb group was reduced. The Combined Bomber Offensive was effectively complete. An onboard fire burnt the aircraft in two shortly after landing on 7 December One crewman was killed by Zero attack. Navy was giving the flight a gun salute to celebrate the arrival of the bombers, after which he realized that Pearl Harbor was under attack. The Fortress came under fire from Japanese fighter aircraft, though the crew was unharmed with the exception of one member who suffered an abrasion on his hand. Enemy activity forced them to divert from Hickam Field to Bellows Field. On landing, the aircraft overran the runway and ran into a ditch, where it was then strafed. Ten of the 12 Fortresses survived the attack. The antennae mounted upon the nose were used for radar tracking surface vessels. Brereton sent his bombers and fighters on various patrol missions to prevent them from being caught on the ground. Brereton planned B raids on Japanese air fields in Formosa , in accordance with Rainbow 5 war plan directives, but this was overruled by General Douglas MacArthur. By the time the Bs and escorting Curtiss P Warhawk fighters were about to get airborne, they were destroyed by Japanese bombers of the 11th Air Fleet. The FEAF lost half its aircraft during the first strike, [] and was all but destroyed over the next few days. Nonetheless, this deed made him a celebrated war hero. Kelly was posthumously awarded the Distinguished Service Cross. One B broke up in the air, and its crew was forced to take to their parachutes. Japanese fighter pilots machine-gunned some of the B crew members as they descended and attacked others in the water after they landed. Arnold had decided that the B was unsuitable for the kind of operations required in the Pacific and made plans to replace all of the Bs in the theater with Bs and later, Bs as soon as they became available. Although the conversion was not complete until mid, B combat operations in the Pacific theater came to an end after a little over a year. Special airdrop Bs supported Australian commandos operating near the Japanese stronghold at Rabaul, which had been the primary B target in and early A number of BGs, redesignated BHs and later SBGs, were used in the Pacific during the final year of the war to carry and drop lifeboats to stranded bomber crews who had been shot down or crashed at sea.

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## Chapter 2 : B Flying Fortress - History and Specs of Boeing's WW2 Bomber

*The B saw combat in the Pacific from the moment a formation of these bombers arrived at Pearl Harbor during the midst of the 7 December Japanese attack. By the end of World War II (), SB rescue craft were saving combat crews in the waters off Japan.*

Bs Join Group In flight over town and farmland. Note unusual white-bordered or possibly yellow-bordered roundel. Six engines being serviced in foreground. The st was based at Ridgewell Airfield in Essex. Later used in Aphrodite mission. Launched against V-1 site at Pas-de-Calais, but impacted short of target. Assigned to 97th BG, crashed in Greenland Jun 27, Armed with six 0. Updated January 21, In , the Army issued specs for a "multi" engine bomber, which Boeing interpreted as four engines. While the Martin B bomber seemed adequate at the time to defend the continental United States, with great foresight Boeing designed an altogether heavier, faster, higher-flying, and longer-range bomber, which proved to be invaluable in the strategic air battles over Germany. Boeing started design work on its Model in June, ; just over a year later the first flight of the prototype took place at Boeing Field, July 28, Despite this accident, which was traced to human error - not a design flaw, the Air Corps recognized the potential of the Model aka XB , and orderd thirteen service-test models Y1B for evaluation. Among the most influential views were those of Billy Mitchell and his bomber advocates. For them, the B was a godsend - the manufactured, tangible embodiment of a "Flying Fortress. Fighter escort was considered impractical, and even undesirable by the bomber advocates. In a way, any admission that fighter escort was necessary would imply that enemy fighters posed a real threat and that the Flying Fortresses were not invulnerable. More improvements followed in the BC: Even though all these increased the weight of the "C" model to 49, pounds, the installation of the 1, Wright Cyclones made the "C" capable of MPH, the fastest of all B variants. BD This was a slightly modified BC, with different engine cowling flaps and an extra pair of machine guns, bringing its total armament to six. While only 42 model "D"s were built, by the time of Pearl Harbor the existing "C" models had been upgraded to "D" specifications. The first BD flew on February 3, Most were sent to Hawaii and the Philippines. BE The "E" model introduced some significant changes from the earlier versions, the most visible being the addition of a dorsal fin forward of the now-larger tail, greatly thickening the profile view of "E" and later versions when compared to earlier models. These features increased flight stability, especially during high-altitude bomb runs. Equally significant was the addition of a pair of. The addition of the tail turret required a completely redesigned rear fuselage, resulting in a six foot longer aircraft. The third big change was the installation of powered turrets in the ventral and dorsal positions. The navigator or bombardier used the nose gun, and the flight engineer operated the dorsal turret With the same hp engines, these add-ons made for a somewhat slower, but eminently more defensible, BE. Boeing produced "E"s. Because of the pressing demand for the Flying Fortress, Boeing provided blueprints and cooperation for the B to be built at the Douglas plant in Long Beach and the Vega plant in Burbank. Altogether, they would turn out BFs: The first BF flew in May, From the outside, the "F" closely resembled the "E;" only the unframed, bubble-style plexiglass nose appeared different. Internally, over changes made the BF a better bomber: The stage was set for the BG, the definitive variant of the Flying Fortress. BG This version fairly bristled with defensive firepower: Chin, dorsal, ventral, and tail turrets each mounted a pair of guns 8. Left- and right- side guns in the cheeks and waist added 4 more. And a single, rear-firing gun on the top of the fuselage made No wonder Luftwaffe pilots suffered from "vier motor schreck" "four-engine fear". The most distinctive change was the "chin" turret, sticking out below the nose. It looks like an after-thought, and it was. With 8, produced between July and April , the "G" was the most numerous B variant: The vast majority of surviving Bs are "G"s. Sixteen were in the Canal Zone. And, as every student of the attack on Pearl Harbor knows, six more Bs were approaching Hickam Field on the morning of December 7th. They touched down wherever they could. In the Japanese attack that morning, five Bs were destroyed and eight were damaged. In the Philippines, an odd drama

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unfolded. The bombers at Clark Field were stationed there as a deterrent. Plans were in place for an immediate strike against Japanese bases on Formosa in the event of war. The next day, the Japanese struck Clark Field and destroyed or damaged all but one of them. A few damaged planes were repaired and joined up with the squadrons at Del Monte. He died on landing, but won great acclaim and a DSC. Postwar research indicated that he had slightly damaged a cruiser. Crews lived in makeshift accommodations with swarms of insects, disease, poor food, and lack of spare parts. They battled furious tropical storms as much as the enemy and flew incredibly hazardous missions, often at night. The strategic choices, the debates over daylight "precision" bombing vs. Indeed the story of the air war in Europe HAS filled volumes. What follows here is very summary. The first BE arrived in Britain on July 1, Six weeks later, August 17, eighteen Flying Fortresses launched their first raid against Nazi Europe, hitting rail yards at Rouen. Light opposition continued for the next ten missions. It was an ineffective campaign; the thick concrete pans were difficult to damage and the many aircrew were lost. As the heavy bomber demands of the North African campaign eased in the winter of , the air war in Northwest Europe accelerated. On January 27, , for the first time, American bombers hit inside of Germany itself, the submarine facilities at Wilhelmshaven. On the 17th of August, a large force of bombers raided Schweinfurt and Regensburg. At that rate, the Eighth Air Force could not continue. The appalling wastage continued: September 6 - Over bombers attacked the Stuttgart ball-bearing plant; 45 were lost. October 14 - Schweinfurt again. January 11, - German aircraft industry targets. Because of bad weather, only reached Germany; 60 were shot down. German industrial capacity proved remarkably resilient. Armaments Minister Albert Speer mobilized German and captive labor and decentralized critical production. In his *Inside the Third Reich: Memoirs* , Speer told of his efforts "After the second heavy raid on Schweinfurt on October 14, , we again decided to decentralize. Some of the facilities were to be distributed among the surrounding villages, others placed in small, as yet unendangered towns in eastern Germany. This policy of dispersal was meant to provide for the future; but the plan encountered The Gauleiters did not want new factories in their districts for fear that the peacetime quiet of their small towns would be disturbed. But the ultimate answer, the P Mustang , which could reach Berlin, only appeared in March, Its losses in the air were almost as damaging as the destruction of the factories. The following month, March , Mustangs escorted the Bs all the way to Berlin. As Goering later said, when he saw Mustangs over Berlin, "he knew the jig was up. In retrospect it seems that the Allies shifted the focus of their bombing too often. First submarines, then ball-bearings, the aircraft builders, then in May, oil. Both Galland and Speer, in their memoirs, suggested that continued concentration on one of these industrial jugular veins might have yielded better results. Perhaps by May of , the Allied analysts thought that enough damage had been done to the aircraft industry. They turned their attention to oil production, oil refineries, and synthetic oil plants. In four February missions, the th sent out 36, 18, 18, and 25 bombers, losing 4. Fifteen somewhat larger raids in April, typically with 24 planes, hit airfields and rail marshalling yards; the shift toward these tactical targets in anticipation of D-Day. In May - 19 raids of similar size, suffering two percent losses. With D-Day in June, the th flew 23 missions, mostly against tactical targets, airfields, and marshalling in northern France. These missions included sorties, with only nine planes lost. In the last five months of , the th ran 87 missions, about sorties per month , and lost 66 planes 13 per month , for a monthly loss ratio of 2. Higher than earlier in the year, but far below the unbearable experience of You can read more details about the th at the excellent th Bomb Group website. More than any other airplane, the big Boeing bombers brought the war to the Germans.

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## Chapter 3 : Boeing B Flying Fortress in the Pacific

*The B saw combat in the Pacific from the moment a formation of these bombers arrived at Pearl Harbor during the midst of the 7 December Japanese attack. By the end of the war, SB rescue craft were saving combat crews in the waters off Japan.*

They also had smaller tails, which reduced stability for accurate bombing. It had extra wing fuel cells "Tokyo tanks" containing gallons and extending its range by about miles km. The BG was the definitive model, with an added chin turret having two 0. It would have carried a powerful airborne radar and fighter controllers, prefiguring the modern AWACS aircraft. It was an extremely rugged and reliable aircraft, with very sedate handling that allowed many a pilot to bring his badly damaged aircraft home. It was deployed by the thousands to Europe and was the backbone of the strategic bombing campaign against Germany until well into the war. However, the B failed to live up to expectations that it could defend itself in enemy airspace, though it gave the Japanese a harder time than the Germans because the German fighters were armored and much sturdier than Japanese fighters. Its Norden bomb sight was amazingly accurate " in the absence of cloud cover, wind shear , and flak. Under real combat conditions, accuracy varied from fair to abysmal. The B also never lived up to expectations that it could interdict shipping: Its crews found that hitting a moving target from five miles 8 km up was almost impossible. However, under the right conditions, the B could do massive damage to stationary targets, such as airfields , ports , and troop concentrations. The aircraft had a long gestation, with elements of the design going back to the Model Monomail, of which only two were built. Other projects that contributed elements to the design included the Model YB-9 "Death Angel" twin engine bomber, the Model twin engine transport , and the XB The B was dubbed the Flying Fortress by Seattle Times newspaper reporter Dick Williams when the prototype was rolled out for its first flight on 28 July Boeing very nearly lost their gamble: When the prototype crashed on 30 October , killing the test pilot, skepticism of the design grew in spite of an investigation showing the crash was due to failure to unlock the control surfaces. Working under the tight budgets of the Great Depression, the Air Corps initially purchased just thirteen YBs and allocated the rest of the bomber budget to purchasing of the much cheaper, but also much less capable, B However, many Air Corps officers regarded the B equipped with the Norden bombsight as the embodiment of their doctrine of pinpoint strategic bombing. Thus, the Air Corps and Boeing found a common interest in promoting the new strategic bomber, and the initial thirteen YBs were given extensive publicity by both organizations. The round trip took twelve days, broke records, and won the Mackay Trophy for that year. The aircraft underwent extensive modification over its production run, so that the original B and the BG hardly appeared to be the same aircraft. Early improvements included the YBA, the first turbosupercharged heavy bomber. The BC, which was the first model to see combat, incorporated some but not all of the lessons of the early years of the Second World War, while the BE was the first fully modernized model. Delivery of the BE was delayed by a dispute over the pricing of the model, and the awkward remote controlled ventral ball turret, which apparently never hit a target in anger, was not replaced with the more practical Sperry ball turret until units had already been delivered Production was greatly expanded in late when Douglas and Lockheed Vega began manufacturing the BF under license. The XB, an otherwise unsuccessful escort version, demonstrated the value of a chin turret, and this was adopted for the definitive BG, which went into production in mid Most Bs were equipped with bombing radar by the beginning of As a long-range strategic bomber, the B had a heating system and provisions for heated flight suits for its crew. It had four separate oxygen systems with sixteen outlets, plus walk-around bottles, with a total capacity of 72 man-hours. The crew were protected by patches of armor plating, with the pilots having the most protection armored seats and forward and aft armored bulkheads and the ball turret gunner the least a small seat patch. Two squadrons of Bs were in the Philippines when war broke out, with additional squadrons on the way. Many of those in the Philippines were the obsolescent C and D models, with their inadequate defensive armament, which were regarded by Boeing and

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the Air Corps as suitable only for training purposes. The reinforcements were diverted elsewhere mostly Australia and the Netherlands East Indies when it became clear that the Japanese were firmly in control of the air over Luzon. Over half of all B crews were deployed to the Pacific during the first year of the war, but by mid the B was being rapidly replaced by the B , whose longer range made it more suitable for the vast distances of the Pacific. The B was also preferred for European service because of its perceived ruggedness and higher service ceiling. By September , the B had been completely withdrawn from regular squadron service in the Pacific, though a small number of Bs converted to transport or air and sea rescue remained in the theater. Had the war continued longer, the PB-1W with its powerful airborne radar might have seen service in the invasion of Japan. Though much emphasis was put on the B as a coastal defense aircraft in the late s, it proved a dismal failure in this role at Midway , where Bs dropped bombs on Japanese ships without scoring a single hit. On the other hand, the B found an unexpected small role intercepting Japanese flying boats off Guadalcanal in the autumn of , claiming two destroyed and one damaged. The B had the advantages of greater speed and armament and comparable armor protection to the Mavis. The B remained in production until May

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### Chapter 4 : Boeing B Flying Fortress - Wikipedia

*Nice effort to cover most of the B units that fought in the Pacific War. Familiar Osprey format with the usual nice profiles. Lots of text and photos of combat in the Southwest and Central Pacific, does not include the 28th CG flying for 11th AF in the Aleutians.*

The origin of the Fortress was very different, its gestation long and troubled. His burning belief in air power led to a bitter campaign, against the US Navy initially, but later involving also the US Army. He resigned very soon after this verdict, so that he could continue his campaign for the creation of the air force which he believed was needed by the USA. Although Mitchell had been discredited in , there were many of his former colleagues who were less outspoken but nevertheless believed in the concept of air power. With Mitchell no longer there to provide support and encouragement, the efforts of this small steering nucleus were necessarily slow. Boeing, for example, began work in on its Models and , twin-engined developments of its revolutionary Model Monomail civil airliner. Built as a private venture these were ordered in small numbers as Y1B-9 and YB-9, but the first significant order for monoplane bombers went to the Glenn L. Martin Company for 48 twin-engined B bombers. For Boeing the Model , built as a private venture, was a make or break gamble. The failure of the B-9 to win a worthwhile order had forced economies af near desperation upon Boeing, with its work force split in half and working two weeks on and two weeks off. Unless the Model entered production in significant numbers the company faced, at the least, a very bleak prospect. Not surprisingly, every effort was devoted to the success of the project; every employee knew that he or she had an important contribution to make if the company was to survive. The US Army specification had stipulated that the prototype should be available for test in August , and however impossible this target had seemed in mid, it became reality on 16 July when the Model was rolled out of its hangar at Boeing Field, Seattle, for its first introduction to the press. USAAC protagonists of air power were still compelled to step warily, despite procurement of the B bomber, for the US Navy had the most prestigious support in the corridors of power and was determined to keep the upstart US Army in its place. Even if strategic bombers were required, efforts must be made to prevent the US Army acquiring such machines. The USAAC was, however, quite astute when needs be and so, with tongue in cheek, succeeded in procuring 13 YBs, the original service designation of the Fortress, for coastal defence. However, this explanation anticipates the story. On 28 July the Model flew for the first time: The elation of the Boeing company was understandable, especially with confirmation that initial trials were progressing well. On 30 October hopes were dashed with the news that the prototype had crashed on take-off. Subsequent investigation was to prove that the attempt to take-off had been made with the controls locked, and in view of the satisfactory testing prior to this accident, the USAAC decided on the procurement of 13 YBs later Y1Bs , plus one example for static testing. The cantilever monoplane wings were in a low-wing configuration, the wing section at the root so thick that it was equal to half the diameter of the circular-section fuselage; and wide-span trailing-edge flaps were provided to help reduce take-off and landing speeds. Landing gear was of the electrically retractable tailwheel type. Armament comprised five machine-guns, and a maximum bomb load of 4, lbs kg could be carried in the fuselage bomb bay. The initial Y1B flew for the first time on 2 December , and differed from the prototype by having hp kW Wright GR Cyclone radials, accommodation for a crew of nine, and minor changes in detail. The thirteenth aircraft went to Wright Field for further tests and after one of the Y1Bs survived without damage the turbulence of a violent storm, it was decided that the static test example would, instead, be completed as an operational aircraft. It flew for the first time on 29 April , and subsequent testing by the USAAC gave convincing proof of the superiority of the turbocharged engine over those which were normally aspirated, and such engines were to become standard on all future versions of the Fortress. Orders for additional Bs had to be reduced after it had been underlined by Major General Stanley D. The order for Y1Bs was followed by a contract for 39 BBs, more or less identical to the Y1BA prototype with turbocharged engines. The first of these flew on 27 June , and all had been delivered by March In the BC was

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ordered, the first of the 38 on contract making its first flight on 21 July. They differed by having 1, hp kW R engines, and by an increase from five to seven machine guns. In the 26 attacks made on German targets during the next two months the Fortress Is proved unsatisfactory, although there was American criticism of the way in which they had been deployed. Nonetheless, their use in daylight over German territory had proved that their operating altitude was an inadequate defence in itself, and so they needed more formidable defensive armament, for Messerschmitt Bf E and F fighters had little difficulty in intercepting them at heights of up to 32, ft m. Until improvements in the Fortress were made, or means found of deploying them more effectively, they were withdrawn from operations over Europe. With the end of drawing near, the USA was soon to become involved in World War II, initially in the Pacific theatre, but following the containment of the initial explosion of Japanese expansion it was decided that the Allies would first concentrate their efforts on bringing about a speedy conclusion of the war in Europe. In Boeing received an order for 42 B-17Ds. These differed little from the B-17C, but as a result of early reports of combat conditions in Europe were provided with self-sealing tanks and additional armour for protection of the crew, and these were delivered during. A major redesign provided a much larger tail unit to improve stability at high altitude, and to overcome the criticism of inadequate defence. 13 machine-guns were mounted in one manual and two power-operated turrets, radio compartment, waist stations and in the nose. Of the of this version built under two contracts, the first flew on 5 September. B-17Ds were the first to serve with the 8th Air Force in Europe, with deliveries beginning in July. They were used operationally for the first time by the 97th Bombardment Group, 12 aircraft being detailed for a daylight attack on Rouen on 17 August, with fighter escort provided by RAF Supermarine Spitfires. The B-17D, of which the first flew on 30 May, was the first version to be built in large numbers. Boeing produced 2, at Seattle, and further construction of 1, came from Douglas and Lockheed Vega. Major changes included a redesigned nose, and strengthened landing gear to cater for a higher gross weight. Other changes included increased fuel capacity, the introduction of additional armour, provision of external bomb racks beneath the inner wings and, on late production aircraft, the introduction of R engines. The B-17Ds and B-17Es became used extensively by the 8th Air Force in Europe, but in two major operations against German strategic targets, on 17 August and 14 October, a total of aircraft were lost. Clearly the Fortresses could not mount an adequate defence, no matter how cleverly devised was the box formation in which they flew. The hard truth was that without adequate long-range fighter escort they were very vulnerable to attack during mass daylight operations. Many of the losses were attributed to head-on attack, and the final major production version was planned to offset this shortcoming. Although used most extensively in Europe and the Middle East, B-17s were operational in every area where US forces were fighting. In the Pacific theatre they offered invaluable service for maritime patrol, reconnaissance, and conventional and close-support bombing. A number of variants were also produced or converted for special purposes and operations, and details of these follow. Although almost 13, B-17s were built, only a few hundred B-17Gs were retained in USAAF service after the end of the war, and these were soon made redundant. Four 1, hp Wright R Cyclone turbocharged radial piston engines. Weight:

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### Chapter 5 : B Flying Fortress units of the United States Army Air Forces - Wikipedia

*[PDF] B Flying Fortress Units of the Pacific War (Combat Aircraft) Popular Collection [PDF] B Flying Fortress Units of the Pacific War (Combat.*

Common measurements, and their respective conversions, are shown when possible. Maximum internal bombload of 7, kg 17, lb. Authored by Staff Writer. While the Consolidated B Liberator four-engined heavy bomber dropped more war tonnage and was built in greater numbers, the Boeing B "Flying Fortress" four-engined "heavy" left a longer lasting memory on American military aviation history for its part in World War 2 The aircraft was a primary component of the famed Eight Air Force "The Mighty Eighth" as it took over daytime bombing operations over Europe in the march to Berlin - amassed forces launching from airfields all over England. The bomber made a name for itself as a workhorse component and was the subject of many war bond drives back in the United States to help drum up continued support of the war effort. Before the end, the Kingdom of Italy, Germany, and the Empire of Japan would all be defeated in full - each nation having tasted as least some of what the Boeing product could offer. Many of the line continued in service after the war with foreign players while many more were sent to the scrap heap after their flying days were over - leaving few in operational condition today. For its contribution in the Grand Conflict, the B accounted for nearly , total sorties against enemy targets and dropped a staggering , tons of bombs. It helped to refine American bomber doctrine that needed attention even prior to the start of the war and led to the development of another classic multi-engined platform of the conflict - the Boeing B "Superfortress" detailed elsewhere on this site. At the start of the Eighth Air Forces commitment in Europe, several hundred Bs could be seen making up one bomber flight but, before the end of the war in , the enemy was being pummeled into oblivion by what would become thousands of individual bombers making up wave-after-deadly wave of formational flying. It was this kind of determination on the part of the Allies that led to an unrelenting bombing campaign - the Americans to handle the daylight duties and the British to enact their own brand of bombing justice in the low-light hours. Such attention to enemy targets eventually led to much destabilization of enemy infrastructure - disrupting supply lines, damaging key industry, and - of course - lowering pro-war morale. As the B made a name for itself over Europe, the B - of similar over-battlefield function - also made its case as another of the classic heavy American bombers of the war - its commitment eventually graduated from European airspaces to that of the Pacific Theater against the might of the Empire of Japan. Flying Fortress Crews A single flying fortress required the specialties of multiple, specially-trained crewmen. Some were charged with its flying, others with its repair, and still others with its defense. Depending on the model, the crew total could range up to ten personnel. The bombardier was positioned at the extreme front-end of the fuselage with a commanding view of the action ahead. A seat and the all-important bombing equipment was fitted here. Immediately behind him was the navigator whose station allowed paper maps to be splayed out for navigating the bomber to its expected location. A seat and light were allotted to this position for some creature comforts. The two pilots sat side-by-side above and behind the nose section with a clear view of both engine pairings located at each wing mainplane. A passageway located under the cockpit floor allowed crewmembers to reach the nose compartment as needed. Aft of the cockpit was the bomb bay with a plank set across the chasm for accessing the further rear of the aircraft. The tail gunner again, this position depended on the production model was rather segregated at his station which was found at the extreme end of the fuselage. Crewmen were called to operate in noisy, smelly, and utterly drafty conditions at altitudes that would freeze exposed skin. As such, fleece-lined flight suits were the norm as were oxygen supplies for breathing in the thin air. Individual comm systems allowed the crew to communicate with one another. No pressurization was possible with the crew spaces of the Flying Fortress. Flying Fortress Development The Flying Fortress had its roots set in the s as the world seemingly geared up for another lengthy and bloody World War. Tactical bombers typically light and medium classes were called against smaller, more defined enemy targets often operating closer to the front

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lines while strategic bombers were to take the long-range approach and strike at enemy targets deep within enemy-held territory. Once over the target, accuracy over the target became another important quality. The XB detailed elsewhere on this site very much mimicked the form and function of the future B as its four engines were spread across wide-spanning wing mainplanes, the nose was glazed over, and the cockpit being stepped. The tail unit was conventional and "blisters" set off the waist gunner positions while a dorsal turret was overhead present towards the nose. At the time, the XB marked the largest aircraft ever built by the Americans and went on to be a record-setter under some related class categories. While the XB was something of a technological marvel for the time, it was deemed obsolete by the time it recorded its first-flight on October 15th, and the program was eventually cancelled with just a single flyable prototype completed. This form was evolved into the Y1B by Boeing but this model was never built by the company as it was also cancelled after. Nevertheless, the two aircraft were influential in the development of the B and its equally-storied successor, the B "Superfortress" - forever cementing Boeing as a competent large aircraft-maker. The USAAC requirement, now more refined after some years in existence, sought a heavy, multi-engined bomber-type capable of long distance travel with a full 2,lb bomb load. The aircraft would be able to reach speeds between and miles per hour and range out to 2, miles. The four engines became a requirement for such a design and was highly favored for all heavy bomber forms during this time period - offering the necessary power to take-off, make the flight under full load, and eventually return home. Interestingly, the USAAC considered the heavy bomber to fulfill the primary role of "coastal defender" and to be sent to attack inbound enemy ships nearing American shores. Design of the Model was credited to a Boeing team headed by Edward Curtiss Wells and was a originally private venture initiative by the company which had yet to secure a formal USAAC development contract. A tricycle undercarriage was used for ground-running and gave the product a pronounced "nose-up" posture which limited pilot vision but was accepted practice in the world of aviation for the period. Various window ports were set along the fuselage and the cockpit took its usual place above and behind the nose. The tail unit incorporated a single vertical fin and low-set horizontal planes. During the rollout of this aircraft, it is said that a journalist present at the ceremony commented on the bomber as a "flying fortress" and the name apparently stuck with Boeing and its Model when it entered service. The prototype made its maiden flight on July 28th, and official Army testing followed at Wright Field in Ohio during the latter part of that year. The project suffered a setback during October of that year when the prototype crashed, killing several of the crew. The first of this form appeared before the end of the year in December. This model then graduated to become a flyable version as the "BA". With a revised nose section, enlarged control surfaces, and 4 x R radial engines of 1, horsepower, the Model M fulfilled the BB designation and thirty-nine aircraft were ordered in to the standard to continue testing under more realistic operational conditions. Another key switch was the shift from pneumatic braking to hydraulic. World War 2 Arrives The arrival of World War 2 in Europe on September 1st, pushed the American military network into action for the inevitable defense of the United States homeland as well as its overseas territories. The mark carried R series radials while the beam blister gun positions were replaced by teardrop-shaped shrouds for reduced drag. A gondola-type "bathtub" turret succeeded the ventral gun blister. It was these forms that the British took into service during the early part of the war under the Lend-Lease Act of British Bs were named "Fortress" followed by the variant designations Mk. The USAAC was quite hesitant to hand over its new bomber to a foreign party for it wished to shore up its own limited heavy bomber stock. Each of these sub-services was charged with defense of a particular patch of global real estate. The BE After some practical usage, the B was soon found to lack adequate rearward-facing defensive armament. British bombers were mauled from the rear by German Luftwaffe Bf fighters with little resistance so this led Boeing to answer with the Model O, the BE in service, which introduced the twin-gunned tail position overlooking the action directly to the rear of the aircraft. Firing arcs were limited but the guns were better than nothing at this critical section of the aircraft. They were, however, improved with the "Cheyenne" installation in soon-to-come BG models which offered a greater field-of-fire and as well as improved gun-laying. Like the belly turret gunner, the tail gunner made his

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way to his station only after the aircraft was in flight and connected to his oxygen supply and intercom system. He took on a kneeling position sitting on his legs during action - which was not the most comfortable over hours of scanning the skies. Boeing would go on to build of the E-model forms from its Seattle plant before the end of the run and this variant was monumental for the series at it became the first to see consistent operational service including combat exposure. Its importance early-on cannot be understated as the platform was used as a deterrent as much as it was a bomb delivery system. For the early part of , a few were beginning to be stationed on Australian soil in preparation for Japanese incursions in and around Australian territory across the South Pacific. By the middle part of that year, the E-models were arriving in England to shore up the Allied bomber arm over Europe as well. This carried 4 x Wright R "Cyclone" air-cooled radials of 1, horsepower each which improved higher-altitude performance and increased range, the latter made possible by the inclusion of what came to be known as "Tokyo Tanks". Defensive armament was once-again addressed: This addition encompassed a ball enclosure which encapsulate the machine gunner who managed a pair of heavy machine guns. With feet placed into stirrups and a simple belt holding him in place, the small-statured gunner was expected to defend the bomber from threats emerging below the belly. Ammunition fed to each gun from outside the ball though within the fuselage and access to the ball turret was by a hatch. Power to the system was electrical. This gave the bombardier one of the most impressive views from the aircraft as he was able to see through an unobstructed pane over all of the forward field of the bomber - very useful in identifying ground-based target areas for his role. These changes led to a greater overall weight for the heavy bomber but this was acceptable amidst the growing demands of the war. The F-models took over production lines from the now-abandoned E-models and 3, units were added to the B stable - Boeing contributed 2, aircraft while arrived from Douglas Aircraft plants, and a further came from Lockheed Vega facilities - a joint effort to be sure. The BG model was a major upgrade over previous versions and became the undisputed definitive form of the series. One of the lingering limitations of the defensive network of earlier Bs was its defense against oncoming attacks by enemy fighters. There were "cheek" machine guns the bombardier and navigation could rely on as well as some support from the dorsal turret but these held restricted firing arcs when concerning direct frontal threats. The Bendix installation gave unrestricted access to the forward field of the aircraft and could scan across the horizon for threats side-to-side. German pilots were, no doubt, surprised that their frontal attacks were no longer useful and, instead, greeted with hot lead from twin 0. Beyond this armament improvement came an increased war load capability: Boeing contributed 4, G-models while Douglas added 2,, and Lockheed Vega another 2, units. The B In Action B Flying Fortresses followed common bomber doctrine of the time in that the units were arranged in what was known as a "box formation". This formation, made up of multiple individual bombers flying within relatively close proximity to one another, allowed virtually every machine gunner onboard the respective aircraft to bring their guns to bear against any impending threat as needed through combined firepower. With no fewer than twelve machine guns featured on a single G-model, a sole B was quite the defensive network for enemy fighters to get through during an attack run. Gunner positions on a BG model included 2 x 0. In theory, no one approach route outside of the bomber was uncontested. All positions were afforded some level of armor protection but this varied considerably by position. The Norden Bombsight One of the major challenges of bombing in the period was accuracy and there were several technological attempts made to aid the bombardier in his role but none were as critical to the war effort as was the Norden Bombsight designed by Carl Lukas Norden - who previously had worked for the Sperry Gyroscope Company before World War 1 Lucas first interested the United States Navy USN in his invention as the service sought to increase the lethality of its own bombers against moving enemy warships. The early-form Mk III bombsight was developed in from this requirement and the design eventually progressed to the M-Series units which were adopted in The bombardier was also allowed lateral control of the aircraft from the pilot during the bombing run which further gave aided the bombardier in placing the ordnance where it had to go. Bomber flights frequently followed a lead plane as their "director" and would drop war loads on queue. As such, the lead bombardier was to make absolutely sure he was over

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the correct target and this was accomplished by studying photography and maps for hours on end to verify physical structures and landmarks. During the bomb run itself, there were also the pressures of Flak attack, enemy fighter drives, and the like - external distractions not properly replicated in training.

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### Chapter 6 : The Pacific War Online Encyclopedia: B Flying Fortress

*The B Flying Fortress was the first true strategic bomber and the iconic American heavy bomber of the Second World War. It was an extremely rugged and reliable aircraft, with very sedate handling that allowed many a pilot to bring his badly damaged aircraft home.*

The B Flying Fortress first saw combat in American colours in the Pacific, on the first day of the Japanese onslaught, when nearly 30 aircraft were destroyed on the ground. Despite this inauspicious start to the war, the B went on to perform important duties in the Pacific in the first two years of the war. The B was the first version of the aircraft seen to be fully combat ready, and three quarters of the aircraft produced were sent to the Pacific. This was the first time a large group of bombers had flown so far over the ocean, but the aircraft arrived intact, within five minutes of their estimated arrival time. They were allocated to the 5th Bombardment Group. In September nine aircraft were transferred to the 19th Bombardment Group on the Philippines, where they were joined by another 26 aircraft in November. Finally, on 6 December six B-17s of the 7th Bombardment Group took off from the United States on the first stage of their journey to the Philippines. Their next stop would be at Pearl Harbor. Of those two 5th and 11th began the war with the Hawaiian Air Force. They were then transferred to the 13th Air Force and took part in the campaign in the South Pacific, fighting in the Solomon Islands. The 7th and 19th Bombardment Groups were either in the Philippines or on their way in December. They took part in the Allied retreat through the south west Pacific, ending up in Australia, where they were joined by the 43rd Bombardment Group. The 19th and 43rd groups remained in the south west Pacific with the 5th Air Force, while the 5th Bombardment Group was sent to India to join the 10th Air Force in May. The majority of the twelve B-17s on Hawaii were destroyed on the first day of the war. On the Philippines eighteen B-17s were destroyed. Only the 14th Bombardment Squadron escaped the destruction, having been sent to Del Monte field just before the attack. By the end of the first day of the war in the Pacific only seventeen B-17s were left in service. This first mission saw Captain Colin Kelly win a posthumous Distinguished Service Cross for an attack that at the time was believed to have sunk a Japanese battleship although actually achieved near misses against the Japanese cruiser Ashigara. After a week of costly operations, the surviving aircraft of the 19th Bombardment Group were withdrawn to Batchelor Field, Australia. From there they conducted a shuttle mission, attacking Japanese targets and then flying on to Del Monte airfield, before returning to Australia on 24 December. By the end of December the surviving aircraft of the 19th BG moved back north to Java. On 14 January they were joined there by the 7th BG. Both units would remain on Java until March, taking part in the brave but ultimately futile attempts to defend the Philippines and the Dutch East Indies. The B-17s were never present in large enough numbers to make any real difference to the course of the campaign. There they were joined by the 43rd Bombardment Group. The two units took part in the campaign on Papua New Guinea, before the 19th BG was moved back to America at the end of the war. The 43rd BG kept its B-17s into when they were replaced by B-29s. Nine B-17s from Midway fired the first shots of the battle of Midway, attacking five large Japanese ships miles from Midway. The B-17 crews claimed five direct hits, but research after the war suggests that they only scored one near miss. During the battle the B-17s based on Midway flew 55 sorties in 16 separate attacks, but probably without actually scoring any direct hits on Japanese ships. Combat experience during the Second World War proved that the level bomber was not a very good anti-shiping weapon. It was far too easy for the enemy ship to take evasive action. Defenders of the B-17 as an anti-shiping weapon point out that there were never enough B-17s involved in these naval battles. In this case at least those opponents of the B-17 who would have preferred to have had a larger number of smaller aircraft were right – the dive bomber and the torpedo bomber were much more effective anti-shiping weapons. A more valid defence of the B-17 was that it forced the Japanese carriers into evasive manoeuvres that greatly reduced their efficiency, increasing the amount of time it took to launch or recover aircraft. Both the 5th and 11th Bombardment Groups joined the 13th Air Force during and took part in the American campaign

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in the south west Pacific, fighting during the campaigns in the Solomon Islands including the battle for Guadalcanal and the return to the Philippines. By the middle of both units had replaced their Bs with B Liberators. It continued to operate its Bs for most of the rest of the year, operating against the Japanese in Burma.

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## Chapter 7 : Boeing B Flying Fortress Four-Engine Heavy Bomber Aircraft - United States

*The B Flying Fortress first saw combat in American colours in the Pacific, on the first day of the Japanese onslaught, when nearly 30 aircraft were destroyed on the ground. Despite this inauspicious start to the war, the B went on to perform important duties in the Pacific in the first two years of the war.*

A Boeing BE in flight. Facebook Twitter Strategic bombing missions had properly begun during World War 1 and the post-war years saw a number of world powers working on the development of state-of-the-art bomber fleets. During the month of August, in anticipation of rising tensions in the Pacific, the US Army Air Corps proposed a new multi-engine bomber that would replace the outdated Martin B Enter the B Flying Fortress. Boeing competed against both Martin and Douglas for the contract to build units of such a bomber but failed to deliver as the first B Flying Fortress crashed. The Air Corps loved the design so much that they ordered 13 units for evaluation and analysis. After a string of tests, it was introduced in ; the B was now the prime bomber for all kinds of bombing raids. Initially, it could carry a payload of kg along with 5x. The company lost the tender because the model crashed but the Air Corps designated a special F1 Fund for the procurement of 13 Bs on an experimental basis. Boeing BEs under construction. This is the first released wartime production photograph of Flying Fortress heavy bombers in production. They would use any means necessary, be it carpet bombing or precision bombing. On August 17th, 18x Bs launched a bombing raid over Nazi-held territory in Europe, hitting railway networks and strategic points. Here are some notable losses: September 6th, , bombers sent out to attack a ball-bearing plant, 45 were lost. October 4th, Bs sent to the same location, 60 were lost. January 11th, , Bs sent to various industries. Bad weather brought down this number to out of which 60 were lost. Almost BGs were produced, the most of any variant because of their superior specs. A BG weighed 65, pounds and could cruise at a speed of mph, peaking at mph. It could attain a service ceiling of 35, feet, and carry a pounds payload. Drawings of the different models of B Flying Fortress. A Rugged Machine One particular B Bomber survived a bombing mission and flew back to safety with flak holes and only 2 out of 4 engines. Subsequently, Operation Aphrodite was launched, during which the US Airforce carried out a precision bombing against bunkers and hardened enemy targets. Initially, the operation was a success but as a whole, out of the 14 missions flown, none could completely neutralize their respective targets. The B was chosen by the Americans while the British primarily chose the Wellington or Lancaster bomber. The US would attack during the day while the British would carry out operations during the night. The Luftwaffe fighters managed to inflict considerable damage to the bombers but they never really recovered to their previous glory. Bs on a bombing run. Bringing it down After a detailed analysis of the fighter attacks on Bs, it was found by the Germans that on average about 20 hits with 20mm shells were required to bring down a B A B shot down by Me Captured Almost 40 Bs were captured by the Luftwaffe. They were re-painted and used by the Luftwaffe for training exercises. In addition, they were reverse engineered to improve existing German bombers. Similarly, the Soviets acquired Bs that had landed in their territories due to mechanical failure and by they had reverse engineered both the B and the B to produce their very own Tu VIP transport After the war ended, many Bs were converted into commercial aircraft and purchased for VIP transport and rescue missions. Still, Bs were used during the Korean War and for analyzing nuclear mushroom clouds for experimental purposes. They were everywhere The B was operated by almost all countries either militarily or commercially in Asia, North America, South America and Europe due to their versatility. The aircraft saw limited action during WWII as it was delivered too late in In the USA there are more flying examples.

## Chapter 8 : Boeing B Flying Fortress | Weapons and Warfare

*This is a list of United States Army Air Forces B Flying Fortress units of the United States Army Air Forces including variants and other historical information. Heavy bomber training organizations primarily under II Bomber Command in*

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*the United States and non-combat units are not included.*

### Chapter 9 : Boeing: Historical Snapshot: B Flying Fortress

*The B Flying Fortress was used in every single World War II combat zone and by the time production ended in , Boeing along with Douglas & Vega had built 12, bombers. Boeing BEs under construction.*