

DOWNLOAD PDF GERMAN A7V TANK AND THE CAPTURED BRITISH MARK IV TANKS OF WORLD WAR 1

Chapter 1 : [TMP] "German use of captured tanks" Topic

The A7V tank was Germany's not terribly distinguished answer to the British and French tanks of World War I. In fact, it was sufficiently second rate that the Germans frenetically put into service every British Mark IV they could find and repair.

Three Centuries of American Wars World War 1 Tanks There is a gathering consensus among historians that the introduction of the "landship" on World War 1 battlefields was an answer to the trench warfare stalemate. This meant adding greater mobility on the battlefield. Troops could rise out of their trenches and follow behind the metal giants that would lead the way through enemy barbed wire and shield the infantry from withering machine gun fire. In , motorized cars were still a rarity, but engineers in Britain envisioned a larger engine to power a vehicle with mounted guns that could traverse inhospitable terrain. Essentially, a moving fort. The farm tractor was an ideal starting point. Their tracks operated against their built-in climbing face. The earliest tractor models were steam driven and useful in agriculture for threshing. There were several demonstrations in , and presented to the British Mechanical Transport Committee. King Edward attended one such event in and viewed a tractor in operation with a mock-up of a mounted gun. There was some interest in the concept, but the Royal Artillery officers were unimpressed and their negative appraisal won the day. By , a year into the war and the forces of both sides were so static that there were conversations between the opposing trenches. That would rule out wheeled vehicles. The British sought tractors to pull the guns. However, the British owner of the patent, discouraged, had sold his rights to the American Holt Company predecessor of the current, giant Caterpillar Inc. The British ordered the tractors from the Americans and this engendered a second look at the possibilities of the tank. World War 1 Tanks The Holt tractor in its original military use as transportation for big cannon at Vosges, France in The advantages of the Holt tractor would be incorporated in all British Mark tank designs and almost simultaneously in the French version. Winston Churchill, first Lord of the Admiralty, surprisingly presenting a war plan for the army, formed the Landship Committee to conduct trials for the development of "Little Willie". This was a line of Mark vehicles I through V that were forerunners of the tank. The "Little Willie" was ready for tests in with emphasis on its ability to pull loads on the scarred battle fields. The major setback was its poor ability to cross trenches. Engineers would solve that problem with the next generations of "Big Willies" and ultimately in the Mark IV line. The Mark I was built low to the ground, and the 28 ton, armoured body was spread over a 26 foot length. There was a female no side cannon model that carried a crew of eight that manned 4 Vickers machine guns and one 8 mm Hotchkiss machine gun. The male model side cannon had a compartment on each side of the tank. Each housed a 6 pounder cannon. The fire power also included 3 additional Hotchkiss guns. World War 1 Tanks The Mark I appeared for the first time in at the Battle of the Somme in the northern part of France the central part of the infamous western front. Only 9 of some 40 tanks reached enemy lines. Their attack was moderately successful, but their dispersion over a wide front blunted the strategy. The rear wheels were attached for navigating the tank. The vehicle was plagued with mechanical difficulties. It became stuck in large bomb craters, ventilation was lacking and called for further refinements. Although Great Britain and France were closely allied, and operated with integrated forces, there does not appear to have been cooperation between them in the development of the tank. However, France also was proceeding with tank development. Their vision was to use the tank as "assault artillery" to clear the field ahead as the infantry would advance behind its bulk. The French referred to the tank as a "land battleship" cuirrasse terrestre. They and their allies made every effort to produce a viable armored weapon to support their infantry. Not so for the Germans and their Triple Alliance allies. The Germans built some tanks, but their focus was on anti-tank guns. France was conducting experiments to create their "Land Battleship". In , a farsighted Colonel Jean Baptiste Estienne noted: The French understood the need for mobility in a modern war. They had drafted 10, conscripts with transport for about 4, men. Six thousand were sent to the front in Parisian taxis made by Renault. That

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company would introduce the best tank of the war. By the spring of 1918, they produced a battleship. This led them to an internal power supply and a tractor base. Late in December 1917, they began using the Holt tractor base concept. They produced the CA1 and in quick succession the quite modern St. Their efforts were aimed at anti tank warfare and a trench weapon capable of penetrating the enemy tank. Mauser guns Their singular effort in was the A7V with a speed of 3 mph. The behemoth carried a complement of 18 and a 57mm cannon. The Germans built only 20 and added to that small force some 50 tanks captured from the British. In contrast, the British Mark IV was manned by an 8 man crew. World War 1 Tanks.

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Chapter 2 : Sturmpanzerwagen A7V

The extremely limited production of 20 made a very minor contribution, and most of the tanks (about 50 in total) that were fielded in action by Germany in World War I were captured British Mark IV tanks (Beutepanzer).

Mark III; tank no. British tanks captured by the Germans being transported by rail German forces using captured British Mark IVs during the Second Battle of the Marne The conceptual roots of the tank go back to ancient times, with siege engines which were able to provide protection for troops moving up against stone walls or other fortifications. With the coming of the Industrial Revolution and the demonstrable power of steam, James Cowan presented a proposal for a Steam Powered Land Ram in 1855, towards the end of the Crimean War. Hornsby tractor Artillery tractors here a Holt tractor were in use in the French Army in 1864. At one point in 1870, Major William E. Donohue of the Mechanical Transport Committee remarked to Roberts that he should design a new machine with armour, capable of carrying its own gun. But, disheartened by years of ultimately fruitless tinkering for the Army, Roberts did not take up the idea. In later years he expressed regret at not having pursued it. The Austrian government said it would be interested in evaluating it if Burstyn could secure commercial backing to produce a prototype. Lacking the requisite contacts, he let it drop. An approach to the German government was similarly fruitless. In 1880, a South Australian, Lancelot De Mole, submitted a proposal to the British War Office for a "chain-rail vehicle which could be easily steered and carry heavy loads over rough ground and trenches". De Mole made more proposals to the War Office in 1881 and 1882, with a culminating proposal in late 1882, accompanied by a huge one-eighth scale model, yet all fell on substantially deaf ears. Inquiries to the government of Australia, after the war, yielded polite responses that Mr. De Mole noted in that he was urged by friends before the war to approach the Germans with his design, but declined to do so for patriotic reasons. Armoured cars soon became more commonplace with most belligerents, especially in more open terrain. Armored cars did indeed prove useful in open land such as in deserts, but were not very good at crossing obstacles. The other issue was that it was very hard to add much protection or armament. This could be solved by adding more wheels, but unless they also were driven, the effect was to reduce traction on the powered wheels. Driving extra wheels meant more drive train weight, in turn requiring a larger and heavier engine to maintain performance. Even worse, none of this extra weight was put into an improvement of armor or armament carried, and the vehicles were still incapable of crossing very rough terrain. The adoption of caterpillar tracks offered a new solution to the problem. The tracks spread the weight of the vehicles over a much greater area, which was all used for traction to move the vehicle. The limitation on armor and firepower was no longer ground pressure but the power and weight of the power-plant. He recounts in his book Eyewitness how the idea of using caterpillar tracks to drive an armoured fighting vehicle came to him on October 19, 1914, while he was driving through northern France. In July he had received a letter from a friend, Hugh Marriott, a mining engineer, drawing his attention to a Holt caterpillar tractor that Marriott had seen in Belgium. Marriott thought it might be useful for transport over difficult ground, and Swinton had passed the information on to the appropriate departments. Now Swinton suggested the idea of an armoured tracked vehicle to the military authorities, by sending a proposal to Lieutenant-Colonel Maurice Hankey. Hankey in turn tried to interest Lord Kitchener in the idea; when this failed he sent a memorandum in December to the Committee of Imperial Defence, of which he was himself the secretary; Winston Churchill the First Lord of the Admiralty was one of the members of the committee. Hankey proposed to build a gigantic steel roller, pushed by tracked tractors, to shield the advancing infantry. Churchill in turn wrote a note on January 5 to the Prime Minister H. Asquith, in which he warned that the Germans might any moment introduce a comparable system. He created the Landships Committee in February 1915, initially to investigate designs for a massive troop transporter. As a truer picture of front-line conditions was developed the aims of the investigation changed. The Russian Tsar Tank At first, protecting heavy gun tractors with armour appeared the most promising line of development. However, adapting the existing Holt Company caterpillar designs

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the only robust tracked tractors available in 1917 into a fighting machine, as France and Germany did, was decided against. While armour and weapon systems were easy to acquire, other existing caterpillar and suspension units were too weak, existing engines were underpowered for the vehicles that the designers had in mind, and trench-crossing ability was poor because of the shortness of the wheelbase. The Killen-Strait tractor with three tracks was used for the first experiments in June but was much too small to be developed further. The large Pedrail monotrack vehicle was proposed in a number of different configurations, but none were adopted. Trials to couple two American Bullock tractors failed. There also were considerable differences of opinion between the several committee members. Crompton, a veteran military engineer and electrical pioneer, drafted numerous designs with Lucien Legros for armoured troop carrying vehicles and gun-armed vehicles, to have used either Bullock tracks or variants of the Pedrail. The two men fell out bitterly as their plans came to nought; Macfie in particular pursued a vendetta against the other members of the Landships Committee after the war. Ltd, a company having done some prewar design work on heavy tractors and known to Churchill from an earlier experiment with a trench-crossing supply vehicle, to produce a proof-of-concept vehicle with two tracks, based on a lengthened Bullock tractor chassis. Construction work began three weeks later. A Mark I tank, moving from left to right. The rhomboidal shape allowed it to climb parapets and cross trenches. Photo by Ernest Brooks. Fosters of Lincoln built the 14 ton "Little Willie", which first ran on 8 September. Difficulties with the commercial tracks supplied led to Tritton designing a completely new track system different from, and vastly more robust than, any other system then in use. In order to achieve the demanded gap clearance a rhomboidal shape was chosen—stretching the form to improve the track footprint and climbing capacity. A final specification was agreed on in late September for trials in early 1918, and the resulting 30 ton "Big Willie" later called "Mother" together with "Little Willie" underwent trials at Hatfield Park on 29 January and 2 February. On 12 February an initial order for "Mother" type vehicles was made, later expanded to 100. Crews never called tanks "Willies"; at first they referred to them as "landships", and later informally "buses". The committee therefore looked for an appropriate code term for the vehicles. Factory workers assembling the vehicles had been told they were producing "mobile water tanks" for desert warfare in Mesopotamia. Water Container was therefore considered but rejected because the committee would inevitably be known as the WC Committee WC meaning water closet was a common British term for a toilet. The term tank, as in water tank, was in December finally accepted as its official designation. From then on, the term "tank" was established among British and also German soldiers. While in German Tank specifically refers to the World War I type as opposed to modern Panzer, in English, Russian and other languages the name even for contemporary armoured vehicles is still based on the word tank. A captured British tank in German hands destroying a tree It is sometimes mistakenly stated that, after completion, the tanks were shipped to France in large wooden crates. For secrecy and in order to not arouse any curiosity, the crates and the tanks themselves were then each labelled with a destination in Russian, "With Care to Petrograd". In fact the tanks were never shipped in crates: The first fifty had been delivered to France on 30 August. It had a crew of eight, four of whom were needed to handle the steering and drive gears. The Schneider CA1, the first French tank The first use of tanks on the battlefield was the use of British Mark I tanks at the Battle of Flers-Courcelette part of the Battle of the Somme on 15 September, with mixed results; many broke down, but nearly a third succeeded in breaking through. On the other hand, the French Army was critical of the British employment of small numbers of tanks at this battle. They felt the British had sacrificed the secrecy of the weapon while employing it in numbers too small to be decisive. Considering that the British attack was part of an Anglo-French offensive while the Russians were also attacking at the same time, Haig felt justified in making a maximum effort, regardless of the limitations of the tank force. The Mark Is were capable of performing on the real battlefield of World War I, one of the most difficult battlefield terrains ever. They did have reliability problems, but when they were working they could cross trenches or craters of 9 feet 2. It was still common for them to get stuck, especially in larger bomb craters, but overall the rhomboid shape allowed for extreme terrain mobility. Splatter mask used by tank crews in World War One Tank crews who had read press reports

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depicting the new weapon driving through buildings and trees, and crossing wide rivers, were disappointed. Their steel armour could stop small arms fire and fragments from high-explosive artillery shells. However they were vulnerable to a direct hit from artillery and mortar shells. The environment inside was extremely unpleasant; as ventilation was inadequate the atmosphere was heavy with poisonous carbon monoxide from the engine and firing the weapons, fuel and oil vapours from the engine and cordite fumes from the weapons. Entire crews lost consciousness inside the tanks, or collapsed when again exposed to fresh air. Fragments were not as dangerous as fire, because of explosive fumes and the large amount of fuel aboard; smoking was prohibited inside and within 20 yards outside tanks. There was also the danger of being overrun by infantry and attacked with grenades. The next generation had thicker armour, making them nearly immune to the K bullets. In response, the Germans developed a larger purpose-made anti-tank rifle, the 3. Engine power was a primary limitation on the tanks; the roughly one hundred horsepower engines gave a power-to-weight ratio of 3. Many feel that because the British Commander Field Marshal Douglas Haig was himself a horse cavalryman, his command failed to appreciate the value of tanks. In fact, horse cavalry doctrine in World War I was to "follow up a breakthrough with harassing attacks in the rear", but there were no breakthroughs on the Western Front until the tanks came along. Despite these supposed views of Haig, he made an order for 1, tanks shortly after the failure at the Somme and always remained firmly in favour of further production. The circumstances which called it into existence were exceptional and not likely to recur. If they do, they can be dealt with by other means. Light tanks with a crew of only two, these were mass-produced during World War I. France at the same time developed its own tracked AFVs, but the situation there was very different. In Britain a single committee had coordinated design, and had to overcome the initial resistance of the Army, while the major industries remained passive. Almost all production effort was thus concentrated into the Mark I and its direct successors, all very similar in shape. In France, on the other hand, there were multiple and conflicting lines of development which were badly integrated, resulting in three major and quite disparate production types. In December, the influential Colonel Estienne made the Supreme Command very enthusiastic about the idea of creating an armoured force based on these vehicles; strong Army support for tanks was a constant during the decades that followed. Already in January and February quite substantial orders were made, at that moment with a total number of much larger than the British ones. French Saint-Chamond tanks had long bodies with a lot of the vehicle projecting forward off of the short caterpillar tracks, making them more liable to get ditched in trenches. Army enthusiasm and haste had its immediate drawbacks however. It was unreliable as well; a maximum of only about of the built were ever operational at the same time. Then industrial rivalry began to play a detrimental role: Its innovative petro-electrical transmission, while allowing for easy steering, was insufficiently developed and led to a large number of breakdowns.

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Chapter 3 : THE GERMAN A7V Tank and the captured British Mark IV tanks of World War I - EUR 59,00 |

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The project to design and build the first German tank was placed under the direction of Joseph Vollmer , a reserve captain and engineer. It was to have a mass of around 30 tons, be capable of crossing ditches up to 1. The running gear was based on the Holt tractor, copied from examples loaned by the Austrian Army. A wooden mockup of a final version was completed in May and demonstrated in Mainz with 10 tons of ballast to simulate armour. During final design the rear-facing cannon was removed and the number of machine-guns was increased to six. The first pre-production A7V was produced in September , followed by the first production model in October Design Edit The A7V was 7. It was thick enough to stop machine-gun and rifle fire, but not larger calibres. This offered protection comparable to the thinner armour of other tanks of the period, which used hardened steel. The crew normally consisted of up to seventeen soldiers and one officer: Some of these cannons were of British manufacture and had been captured in Belgium early in the war; others were captured in Russia in and appear to have included some Russian-made copies. Ammunition Edit Between forty and sixty cartridge belts, each of rounds, were carried as well as shells for the main gun, split These were the official figures " up to rounds for the main gun were stowed for combat. The " female " variant had two more machine guns in place of the main gun. It is believed that only chassis number saw combat as a female before being converted to accommodate the 5. The top speed was about 15 kilometres per hour 9. The 24 wheel suspension was individually sprung"an advantage over the unsprung British tanks. Compared to other World War I tanks the road speed was quite high, but the tank had very poor off-road capability and was prone to getting stuck. The large overhang at the front and the low ground clearance meant trenches or very muddy areas were impassable. This was worsened by the fact that the driver could not see the terrain directly in front of the tank, due to a blind spot of about 10 metres. However, on open terrain it could be used to some success and offered more firepower than the armoured cars that were available. Power-to-weight ratio was 6. Three of the A7Vs suffered mechanical failures before they entered combat, but the remaining pair helped stop a minor British breakthrough in the area, but otherwise saw little combat that day. Second Battle of Villers-Bretonneux The first tank against tank combat in history took place on 24 April when three A7Vs including chassis number , known as "Nixe" taking part in an attack with infantry incidentally met three Mark IVs two female machine gun-armed tanks and one male with two 6-pounder guns near Villers-Bretonneux. During the battle tanks on both sides were damaged. According to the lead tank commander, Second Lieutenant Frank Mitchell, the female Mk IVs fell back after being damaged by armour-piercing bullets. They were unable to damage the A7Vs with their own machine guns. Mitchell then attacked the lead German tank, commanded by Second Lieutenant Wilhelm Biltz , [4] with the 6-pounders of his own tank and knocked it out. He hit it three times, and killed five of the crew when they bailed out. He then went on to rout some infantry with case shot. The two remaining A7Vs in turn withdrew. Four of these were knocked out in the battle, and it is unclear if any of them engaged the retreating German tanks. The damaged A7V was later recovered by German forces. The only remaining A7V tank, Mephisto , at the Queensland Museum in Brisbane, Australia Three detachments Abteilungen of five tanks each were at Villers-Bretonneux at the head of the four German divisions committed over a 4 mile front. One tank refused to start, but the fourteen that saw action achieved some success, and the British recorded that their lines were broken by the tanks. Two A7Vs toppled over into holes, and some encountered engine or armament troubles. After a counterattack, three fell into Allied hands. One was unusable and scrapped, one was used later for shell testing by the French, and the third was eventually recovered by Australian troops. The A7V was not considered a success, and other designs were planned by Germany. However the end of the war meant none of the other tanks in development, or planned ones, would be finished such as the Oberschlesien , the ton K-Wagen , and the light LK I or LK II. The extremely limited production of twenty made a very minor

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contribution, and most of the tanks about 50 in total that were fielded in action by Germany in World War I were captured British Mark IV tanks Beutepanzer.

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Chapter 4 : World War 1 Tanks

The German A7V Tank and the Captured British Mark IV Tanks of World War I by Hundleby, Maxwell, and Rainer Strasheim and a great selection of similar Used, New and Collectible Books available now at www.nxgvision.com

With a crew of 18,, only 20 built. Easy and fun to build!! Tank met tank for the first time at Villers-Bretonneux on April 24, , and too late the Germans realized that the best way to fight a tank is with another tank,, a principle still valid today. On 24 April when three A7Vs including chassis number , known as "Nixe" taking part in an attack with infantry incidentally met three Mark IVs two Female machine gun-armed tanks and one Male with two 6-pounder guns near Villers-Bretonneux. During the battle tanks on both sides were damaged. According to the lead tank commander, 2nd Lt Frank Mitchell, the Female Mk IVs fell back after being damaged by armour piercing bullets. They were unable to damage the A7Vs with their own machine guns. Mitchell then attacked the lead German tank, commanded by 2nd Lt Wilhelm Biltz, with the 6 pounders of his own tank and knocked it out. He hit it three times, and killed five of the crew when they bailed out. He then went on to rout some infantry with case shot. The two remaining A7Vs in turn withdrew. Four of these were knocked out in the battle, and it is unclear if any of them engaged the retreating German tanks. The damaged A7V was later recovered by German forces. All 18 available A7Vs had been put into action that day with limited results; two toppled over into holes, some encountered engine or armament troubles. After a counterattack, three ended up in Allied hands. One was unusable and scrapped, one used for shell testing by the French, and the third taken by the Australians There is no question that World War I was decided by the tank. But it was the first war in history in which technological and economic factors played an important role. The veritable revolution in the art of war began with the appearance on the battlefield of tanks and other motor vehicles. Thus the importance of an industrial technology and economic power on the outcome of a war was clear to see. It is true that the tank was not "exploited" to the full in World War I despite Colonel Swinton and other early tank corps officers, who from the start had wanted them to be deployed in massed formation. But whatever may have been the shortcomings on the part of the Allies, the tank owed much of its remarkable success to its underestimation by the Germans. The German General Staff did however, but allow the development of anti-tank weapons. Britain was to have increased its tank fleet by 2, to a total of 7, The French wanted to have 8, 10, in place instead of fewer than 3, The United States intended building 10, When the war ended Germany possessed only 45 tanks, including captures, but had planned to have a total of the following year. Happily, the war was lost before that was possible. The only project to be produced and fielded was the A7V, although only fifteen A7Vs were built. The majority of the roughly hundred or so tanks fielded by Germany were captured British and French vehicles. A7Vs were captured by the Allies, but they were not used, and most ended up being scrapped. What people are Saying: Please tell Richard that these tanks he has been designing are fantastic. I am really excited about the WW1 tank line, They are excellent models. I bought a year of magic keys, and will add three more years later in They are helping me keep my sanity as I deal with the sudden onset of almost completely losing my hearing. I am getting two hearing aids next month, so hopefully things will work out. May they get the joy from your efforts that I have. I hope you will include the smaller version as well. Putting this two-man light tank next to the other monster tanks like the mark IV or German A7V and comparing the size can be a good way to see the variations in tank design during WWI. The JU 87 Stuka for instance has me drooling. I think there are modelers who enjoy a good challenge I suppose its easier to shrink things to make a smaller version later The larger format would probably be better for museum gift shops, as it will be more appealing to less hard core paper modelers I downloaded it today and i had to build it this day. The result can be seen in the pics. If you want to use one for Fiddlers Green, be my guest. Chip and Richard thanks for the WWI tanks. I shall start on the other ones soon.

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Chapter 5 : Tanks in World War I - Wikipedia

The German A7V Tank and the captured British Mark IV tanks of World War I ISBN: 0 X Publisher: Haynes Publishing Group Writers: Maxwell Hundleby & Rainer Strasheim Number of pages: State: Cover lightly damaged Please, feel free to contact me to know the delivery charges.

Overview[edit] German A7V called the Siegfried, later scrapped by the Allies in The development of tanks in World War I began as an attempt to break the stalemate which trench warfare had brought to the Western Front. The British and French both began experimenting in , and deployed tanks in battle from and respectively. The Germans , on the other hand, were slower to develop tanks, concentrating on anti-tank weapons. The German response to the modest initial successes of the Allied tanks was the A7V , which, like some other tanks of the period, was based on caterpillar tracks of the type found on the American Holt Tractors. Initially unconvinced that tanks were a serious threat, the High Command ordered just twenty A7Vs, which took part in a handful of actions between March and October, They suffered from numerous design faults, and Germany actually used more captured British tanks than A7Vs. As it became clear that the tank could play a significant role on the battlefield, Germany began working on designs for both heavy and light tanks, but only a small number of prototypes were completed by the end of the War. After the Armistice, all tanks in German hands were confiscated. Almost all were eventually scrapped, and the various postwar treaties forbade the former Central Powers from building or possessing tanks. Although he initially headed a coalition government , he quickly eliminated his government partners. He ignored the restrictions imposed by the Treaty of Versailles and began rearming, approving the development of many German tank designs he was shown. During the invasion of Russia in , the Germans encountered the famous and technologically advanced Soviet T tanks. This led Germany to develop the Panther or Panzer V in response. Its 75mm gun could penetrate the new Soviet tanks. Germany also developed the heavy Tiger I , released in The Tiger could defeat any Allied tank and was soon joined by the Tiger II , also known as King Tiger, but too few were produced to impact the war in any discernible way. Tiger I on a production line. The book *The Last Battle* by Cornelius Ryan makes mention of the 7 million foreign workers who were forcibly brought into Germany to work in the factories and businesses many of them in military assembly lines. Ryan specifically writes about these foreign workers in German tank manufacturing, who sabotaged every part they could [2] and may have contributed to the rate of breakdown of German tanks in the field. This especially affected tanks built later in the war such as the Panther and Tiger when forced labor had replaced German manpower in their manufacture. Repair of the transmission of a Panther In the Battle of Kursk , when the newly arrived Panther tanks moved into their assembly areas, 45 out of experienced mechanical problems requiring repair. D tanks come under its operational control before the battle. After the launch of Operation Citadel , the new Panthers were plagued by technical problems, suffering from engine fires and mechanical breakdowns, many before reaching the battle, in which the division was heavily engaged. Tiger undergoing engine repair It also may have been an issue with the Tiger tanks. It was rare for any Tiger unit to complete a road march without losing vehicles due to breakdown. The Jagdtiger , built on a lengthened Tiger II chassis, suffered from a variety of mechanical and technical problems and had frequent breakdowns; ultimately more Jagdtigers were lost to mechanical problems or lack of fuel than to enemy action. The next tank design started as a collaborative project between Germany and France in the s, [5] but the partnership ended, and the final design was ordered by the Bundeswehr , production of the German Leopard 1 starting in In total, 6, Leopard I tanks were built, of which 4, were battle tanks and were utility and anti-aircraft variants, not including eighty prototypes and pre-series vehicles. The Leopard quickly became a standard of European forces, and eventually served as the main battle tank in Germany. It was superseded by the Leopard 2. He patented his design in in Germany but it never progressed beyond paper. World War I[edit] After British tanks went into action on 15 September , the German Army immediately demanded their own landships. Following the appearance of the first British tanks

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on the Western Front , the War Ministry formed a committee of experts from leading engineering companies, answerable to the Allgemeines Kriegsdepartement, Abteilung 7, Verkehrswesen "General War Department, 7th Branch, Transportation" , [6] The project to design and build the first German tank was placed under the direction of Joseph Vollmer , a leading German automobile designer and manufacturer. The "K" Panzerkampfwagen front of the vehicle is at right The A7V tank which actually got into the war, was known as the Sturmpanzerwagen A7V, named after the committee that oversaw its development. It was to weigh around 30 tons, capable of crossing ditches up to 1. The running gear was based on the Holt tractor, parts for which were copied from examples borrowed from the Austrian army. Powered by two Daimler engines, the tank was first demonstrated in the Spring Offensive of Internally, the Sturmpanzerwagen was cramped, smelly and noisy. No fewer than 18 men were called upon to man the machine to full potential. Each machine gun would need to be addressed by a further two personnel per gun - a firer and an ammunition re-supplier. The engine sat in the lower-middle of the design with the main gear components resting under the rear. Two drivers sat in the upper center budge area operating a steering wheel and lever controls. Stowage was allotted for individual crew weapons in the form of rifles. During final design the rear-facing cannon was removed and the number of machine-guns was increased to six. Grab ropes were provided throughout as the design had plenty of headroom space for the average soldier, though travel made for an uneasy and overall bumpy ride. In practice, however, the large design was far from perfect. The vehicle was top-heavy, making it impractical to be used on uneven terrain. The system was slow as well, often meaning that it could be outpaced by the very infantry it was to assist. The short tracks of the tractor system also made the vehicle relatively unsafe and uncontrollable in some cases. If the A7V has one saving grace, it was that the all-around armor protection for the crew was second to none - even when compared to the British designs - over an inch in some areas. Twenty of these tanks were produced, and the first of these were ready in October Although some of its features, such as the sprung tracks and the thicker armour, made it better than British tanks at that time, the A7V was less successful as a battle vehicle. The main problems concerned its mechanical reliability and the difficulty it encountered crossing enemy trenches. Sturmpanzerwagen Oberschlesien By the time of the arrival of the Sturmpanzerwagen, the Germans had already successfully developed their own brand of armor-piercing projectile as well. Near the end of the First World War it was clear that the A7V was a failure, being too slow and clumsy in action and slow to build. Therefore, it was decided that a lighter tank was required which could spearhead assaults and which could be mass-produced, and was called the Sturmpanzerwagen Oberschlesien. It was a radical design for a fast-moving, lightly armored assault tank. The Oberschlesien included a track which was placed under the tank and only wrapped around half of it. The tank featured such advanced features as a main cannon mounted on top of the tank in a central revolving turret, separate fighting and engine compartments, a rear-mounted engine and a low track run. Neither the ordered test models nor the improved "Oberschlesien II" already planned were finished before the end of the war. In the end, time running out on the new designs and the limitations of the A7V design, and being a part of the losing side of a war and fighting on the defensive, all led to a very average first try in the realm of tank design for the Germans. Limitations for the land army included a ,strong infantry army, absolutely no tanks of any kind and just a few armored vehicles for spot duty. The German Army became a shell of its former self. Paragraph Twenty-four of the treaty provided for a , mark fine and imprisonment of up to six months for anybody who "[manufactured] armoured vehicles, tanks or similar machines, which may be turned to military use". Seeckt took to heart the lessons learned in the Great War and set about in rewriting the foundation of the German Army. Infantry still remained the heart and soul of any planned offensive, but the tank would become the spearhead of actions that could shatter enemy defenses through speed, force and firepower. Tactics involved the splitting up of enemy formations and counteractions involving pincer movements to surround and ultimately decimate the enemy in whole. By , German Army doctrine was all rewritten to fulfill this vision. Although at first the concept of the tank as a mobile weapon of war met with apathy, German industry was silently encouraged to look into tank design, while quiet cooperation was undertaken with the Soviet Union. There was also minor military

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cooperation with Sweden , including the extraction of technical data that proved invaluable to early German tank design. The Rheinmetall and Krupp designs resembled each other to a great extent, the main difference being the weapons placement. Both designs had a secondary turret mounted to the front and the rear of the main turret. These turrets were slightly adapted Panzer I turrets, with the standard machine gun armament. It was intended that these designs would fulfill the role of heavy tank in the armored forces, but the design proved to be too complex and unreliable for this role. Nevertheless, development continued in order for the nascent German military to gain experience with multi-turreted tanks. In Rheinmetall built two mild steel prototypes, both with their own turret design. Three more prototypes were built with proper armor and the Krupp turret in and In the late s and early s German tank theory was pioneered by two figures: Guderian became the more influential of the two and his ideas were widely publicized. This included a slow infantry tank , armed with a small- caliber cannon and several machine guns. The infantry tank, according to Guderian, was to be heavily armored to defend against enemy anti-tank guns and artillery. He also envisioned a fast breakthrough tank, similar to the British cruiser tank , which was to be armored against enemy anti-tank weapons and have a large millimeter 2. Lastly, Germany would need a heavy tank , armed with a massive millimeter 5. At this time, the Army did not have a formal plan of action in terms of what it realistically needed. Light tanks could be made available in large quantities for a relatively low price while medium tanks afforded firepower but came at a price. At any rate, the German industrial infrastructure - both the post-war limitations and the economical hit caused by the crash of - made the call easy for the Germany Army - the pursuit would be for the development of light tanks to start with. Simplifying his earlier proposal, Guderian suggested the design of a main combat vehicle which would be developed later into the Panzer III, and a breakthrough tank, the Panzer IV. As a stopgap, the German Army ordered the preliminary vehicle to train German tank crews. This became the Panzer I. The tank was armed with two obsolescent 7. This version was accepted into service after testing in Its debut combat test was during Spanish Civil War " However the Panzerkampfwagen I was also a propaganda tool and as a show piece of the Third Reich and its military might in the years leading to beginning of World War II. Lesson learned from Panzerkampfwagen I provided the German designers and manufacturers with valuable experience in designing and producing next generation of new panzers that were soon to come. Although, Panzerkampfwagen I was not a superb combat tank, it proved to be an excellent training tank and most of the panzer crews were trained on Panzerkampfwagen I until the end of the war or operated it in combat as their first armoured vehicle. The Panzer II came about in a German Ordnance Department requirement enacted in , this time proposing a ton light tank development with 20mm cannon and 7. As was the case in developing the Panzer I, it became common practice for the new Germany, now wholly under Hitler, to skirt the rules of the Versailles Treaty and develop its systems of war under various peaceful disguises such as farm equipment. As such, this new light tank design fell under the designation of "Landwirtschaftlicher Schlepper " or "LaS " under the guise that it was a farm tractor.

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Chapter 6 : Medium Mark A Whippet | Military Wiki | FANDOM powered by Wikia

They influenced, along with the few captured Whippets Mark A light tanks, the design a new enhanced model, the A7V-U. U stands for "Umlaufende Ketten" or full-length tracks, a German-made but British-looking rhomboid tank.

The timing coincides with the 100th anniversary of the Armistice. She says the tank is the only one of its kind. Surprisingly, the tank has spent 98 of its years in Queensland. At the end of WWI, tanks were seen to be game changers. Still, Germany was only able to get 20 of the armored vehicles into the war before it ended. All twenty of the tanks were A7Vs. This particular tank was nicknamed Mephisto. It weighs 33 tonnes and suffered the same fate many other tanks of the era experienced; the weight of the tank caused it to bog down in the mud at Villiers-Bretoneaux. Once they got to the Mephisto, they hooked it to two British tanks and towed it to friendly territory where it immediately became a hit with the troops. Everyone vied to get a photo of themselves standing next to it. Photograph taken 8 September by Henry Armytage Sanders Co-author Jeff Hopkins-Weise said that, since the tank had been captured by soldiers from Queensland, it was seen as a prize for Queensland. It was valuable for morale on the home front for people to see that their soldiers from their home had captured this special prize from the Germans. The Mephisto spent decades outdoors at the Old Museum in Brisbane before it was moved to the Queensland Museum on Southbank in the 1980s. During the Brisbane floods in 1974, the Mephisto was covered with mud. It has since been restored and has been on display at the Australian War Memorial. It is now back home at the Queensland Museum for good. An extensively damaged A7V tank near Villers-Bretonneux. This is apparently tank Nixe in which Second Lieutenant Wilhelm Biltz of Abteilung 2 fought the first tank versus tank battle on 24 April 1918. Since it is the only remaining tank of its kind, it is considered priceless. Hopkins-Weise said that, in the past, the Germans would have like to have had it back. The Sturmpanzerwagen A7V was built after German leaders witnessed the psychological effect the British and French tanks had on the infantry troops. German command placed an order for tanks, of which only 20 were ever built. The plans also included several machine guns and a rapid-fire gun. The final prototype was ready by May 1918. Following successful tests of the final prototype, the design was slightly tweaked, and production began in September of 1918. The tank was named after the department that had designed it, the 7. Abteilung, Verkehrswesen A7V. The roof and floor were thin and could not block fragmentation grenades. The use of regular steel instead of an armored compound in order to facilitate production meant that the armor was weakened and unable to resist artillery fire – similar to the weakness the Germans had already noted in the Allied designs. French Postcard The A7V also had low ground clearance making it difficult to cross heavily cratered battlefields. The first ten A7Vs were deployed to relatively flat areas due to this limitation. After a disastrous attack in which most of the A7Vs broke down or fell into holes and were captured by the Allies, the Germans canceled the order for the remaining tanks and ruled the entire endeavor a failure. Based on an original drawing by Professor Anton Hoffmann. Photo Bundesarchiv, Bild P

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Chapter 7 : A7V - Wikipedia

The last remaining German A7V Sturmpanzerwagen tank from World War I is going on permanent display at the Queensland Museum in November. The timing coincides with the 100th anniversary of the Armistice.

The Whippet was first produced in 1917. On 3 October 1917 William Tritton, about to be knighted for developing the Mark I, proposed to the Tank Supply Department that a faster and cheaper tank, equipped with two engines like the Flying Elephant, should be built to exploit gaps that the heavier but slow tanks made, [4] an idea that up till then had been largely neglected. At that time the name for the project was the Tritton Chaser. Traditionally the name Whippet is attributed to Sir William himself. The next day, in a meeting with the French to coordinate allied tank production, the Commander-in-Chief of the British forces Field Marshal Haig ordered the manufacture of two hundred vehicles, the first to be ready on 31 July. Although he was acting beyond his authority, as usual, [7] his decisions were confirmed in June. The first production tanks left the factory in October and two were delivered to the first unit to use them, F Battalion of the Tank Corps [8] later 6th Battalion, on 14 December. In December the order was increased from two to 100 but this was later cancelled in favour of more advanced designs. Although the track design appears more "modern" than the British Tanks Mark I to V, it was directly derived from Little Willie, the first tank prototype, and was unsprung. The crew compartment was a fixed, polygonal turret at the rear of the vehicle, and two engines of the type used in contemporary double-decker buses were in a forward compartment, driving one track each. Steering Edit When driving in a straight line the two engines were locked; turning the steering wheel gradually closed the throttle for the engine of one track and opened the throttle for the engine driving the other. When steering the clutches joining the cross-shafts were released, one engine sped up while the other slowed down, the turn being on the side opposite to that of the faster running engine. The steering effect could be increased by use of the brakes on one engine or another. This arrangement had the advantage over that of earlier tanks of being controlled by one man only, but called for great skill on the part of the driver, because one or both of the engines could be stalled if care was not exercised. Drivers grew wary and stopped the vehicle and locked one track before every turn; this caused many track breaks, as the movement became too abrupt. Other features The fuel tank was in the front of the hull. The sides featured large mud chutes which allowed mud falling from the upper treads to slide away from the tank, instead of clogging the track plates and rollers. Armament Edit Armament was four 0. As there were only three crewmen, the gunner had to jump around a lot, though often assisted by the commander. Sometimes a second gunner was carried in the limited space, and often a machine gun was removed to give more room, as the machine guns could be moved from one mounting position to another to cover all sides. This project made Johnson the best qualified man to develop the later fast Medium Mark D, which looks like a reversed Medium A. Other experiments included the fitting of a large trailing wheel taken from an old Mark I tank and attaching a climbing tail, in both cases attempts to increase trench-crossing ability. For a time it was common to describe any of the lighter tank designs as a Whippet, even the French Renault FT. It had become a generic name. Combat history Edit Whippets arrived late in the First World War, at a time when the entire British Army, crippled by the losses in Flanders, was quite inactive. They first went into action in March 1918, and proved very useful to cover the flight of the infantry divisions recoiling from the German onslaught during the Spring Offensive. Whippets were then assigned to the normal Tank Battalions as extra "X-companies" as an expedience. In one incident near Cachy, a single Whippet company of seven tanks wiped out two entire German infantry battalions caught in the open, killing over 1000 Japanese Whippets in Manchuria, early 1940s British losses were so high however that plans to equip five Tank Battalions Light with 36 Whippets each had to be abandoned. The Whippets broke through into the German rear areas causing the loss of the artillery in an entire front sector, a devastating blow from which the Germans were unable to recover. For nine hours it roamed at will, destroying an artillery battery, an Observation balloon, the camp of an infantry battalion and a transport column of the German Division,

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inflicting heavy casualties. The crew had to wear gas masks to survive the fumes. Eventually, a German shell disabled it and as the crew abandoned the tank one was shot and killed and the other two were taken prisoner. The Germans gave them the designation Beutepanzer A. The Soviets, incorrectly assuming that the name of the engine was "Taylor" instead of "Tylor" a mistake many sources still make called the tank the Tyeilor. A few perhaps six were exported to Japan, [18] where they remained in service until around This tank, part of B-Company, is still in its original paint and markings. It still carries battle damage from when it was hit on 17 August

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Chapter 8 : Today in World War I - First Tank vs. Tank Battle

The first action of the German A7V tank, on 21 March, is not very well known from the British side. Probably because most of those in action against them were either killed or captured and very little information reached the British authorities at the time.

Heavy tank "20 built High command scepticism In , both the British and the French introduced tanks on the battlefield and gradually improved their performances and design through frontline experience. But still, even by , the German high command still considered they could be defeated by using special rifle bullets and artillery, in direct or indirect fire. But the psychological effect on an unprepared infantry was such that this new weapon had to be seriously taken in consideration. They proved successful during the spring offensive and further hampered the need for a tank. Designed by Joseph Vollmer Despite initial resistance against tanks, their first, shocking appearance on the battlefield in the fall of , led, in September of the same year, to the creation of a study department, the Allgemeines Kriegsdepartement, 7 Abteilung, Verkehrswesen. Department 7, Transport This Department was responsible for all the information gathering on Allied tanks and for formulating both anti-tank tactics and devices and specifications for a possible indigenous design. Based on these specifications, the first plans were drawn by Joseph Vollmer, a reserve captain and engineer. These specifications included a top weight of 30 tons, use of the available Austrian Holt chassis, ability to cross ditches 1. The chassis was also to be used for cargo and troop carriers. The first prototype built by Daimler-Motoren-Gesellschaft made its first trials on April 30, , at Belin Marienfeld. The final prototype was ready by May It was unarmored but filled with tons of ballast to simulate the weight. After successful trials in Mainz, the design was modified once more to incorporate two more machine-guns and a better observation post. Pre-production started in September Production started in October with an initial order of units and a training unit was formed in the process. The overall use of regular steel and not an armored compound, for production reasons, meant that the effectiveness of the mm plating was reduced. Like contemporary tanks, it was vulnerable to artillery fire. The Holt track, using vertical springs, was hampered by the overall weight of the tall structure and its very low ground clearance and large overhang at the front meant very poor crossing capabilities on a heavily cratered and muddy terrain. With this limitation in mind, these first two units ten tanks each were deployed on relatively flat grounds. The amount of ammunition carried was considerable, further reducing the internal space. Around cartridge belts, each with bullets, plus rounds for the main gun, split between special HE explosive rounds, canisters and regular rounds. In operation more shells were loaded, up to As initially no engine was powerful enough to move the 30 tons of the A7V in the restricted allocated space, two Daimler petrol 4-cylinder engines, each delivering about bhp 75 kW , were coupled together. This solution produced the most powerful tank of the war, with a speed even greater than British late tanks Mk. The driver had very poor vision. The A7V was committed mostly on open terrains and roads, just like armored cars, were its speed and armament could reveal its true potential. Last but not least, the A7Vs were all hand-built and of great manufacture quality and very high cost. Every model had unique features as no standardization was achieved. Led by Hauptmann Greiff, this unit was deployed during the attack on the St Quentin canal, part of the German spring offensive. Two broke down but successfully repelled a localized British counter-attack. As the two females, damaged, were unsuccessful in damaging the German tanks with their machine-guns, they withdrew, and left the leading male Second Lieutenant Frank Mitchell dealing with the leading A7V Second Lieutenant Wilhelm Biltz , in what was to become the first tank-to-tank duel in history. However, after three successful hits, the A7V was knocked-out and the crew with five dead and several casualties promptly bailed out. The disabled tank was recovered and repaired later. The victorious Mark IV roamed the German lines, creating havoc and was joined later by several Whippets. But after murderous mortar fire, this attack was stopped in its tracks. Three Whippets were destroyed, as well as the Mark IV. This attack included all available A7Vs, but some broke down, other toppled into holes and were

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captured by British and Australian troops. The entire attack was deemed a failure, and the A7V removed from active service. The machines order was cancelled and several were scrapped in November. Aftermath The commitment of all available tanks with poor results increased the resistance from the German high command. Some successes were achieved by the most numerous German tank in service during the spring offensives, the Beutepanzer Mark IV and V. They showed the advantage of full-length tracks over difficult terrains. Its featured two 57 mm 2. Although the prototype was ready by June , this ton monster proved to have a high center of gravity and poor maneuverability. However twenty were ordered in September. None were completed by the armistice. Starting late in the war, the Germans never had the opportunity to fully develop their tank arm both tactically and technically. This was achieved, mostly clandestinely, but successfully, during the twenties and early thirties. Nevertheless this early and deceiving attempt was a landmark in German development. Big, tall and symmetrical, with sloped armor, surprisingly fast, bristling with machine-guns, it was indeed more akin to a moving fortification than a real tank. With only 20 built of the initially ordered, it was more a propaganda tool than an effective breakthrough apparatus. A7V replica on display at the Munster Panzer Museum. All A7Vs were christened by their crews. It is now displayed at Brisbane Anzac museum.

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Chapter 9 : The Tank Museum: Action Debut Of The A7v Tank

The extremely limited production of twenty A7Vs made a very limited contribution, and most of the tanks (less than a hundred in total) that were fielded in action by Germany in World War I were captured British Mark IV tanks (Beutepanzer).

PST Going from memory, as my books are in storage, they had but did not use Whippet tanks in anger in WW1 – too few and their resources were already stretched to add another limited set of captured vehicles to their inventory ditto FTs etc. I listed the pages of these interesting photos in an early Time Portal Passages as a filler article. Some of the interesting ones showed the US troops using them. In some cases the American tanks are in German marking and had just been recaptured. One was of a Stuart tank in Africa and another was of a Sherman in Italy. One interesting photo showed a German Stuka with German markings rubbed out and replaced with Italian markings. Next to those were British marking as it had been captured recently. Needless to say it was shot down over Allied landing beaches. A large number of photos of Allies using captured German artillery and support trucks. PST I recall seeing a photo of a French artillery tractor with Russian markings, implying that it had been taken by the Germans and used on the Eastern front before being captured again. In the main, the Germans used captured heavy tanks only. This included their own as well as any that were captured. The main centre was in Charleroi. Large numbers of British Mk IVs were captured during the Battle of Cambrai and were recovered in the aftermath in late and early This gave a big enough pool that made it worthwhile to create an operational Beutepanzer force, divided up into tank Abteilungen or sections. Additional tanks were captured in Operation Michael during the Spring of Whippets, FT17s, and Mk Vs did not become available to the Allied armies for operational use until the late Spring of The earlier use of Schneiders and St Chamonds were not used in big enough numbers to enable sufficient to be captured. The St Chamond had a very tricky transmission, which ruled it out from a maintenance perspective. Few Schneiders were captured intact, given that few were used and most left of the battlefield were in no fit state to recover until the petrol tank location was modified. There are photos of a Whippet, FT17, and a Schneider in German markings but these were being evaluated behind the lines and never saw action in German hands. Once the major battles involving tanks got under from July onwards, the gains in each battle were such that, unlike Cambrai, the Germans were not able to capture any significant numbers of the later marks and versions.