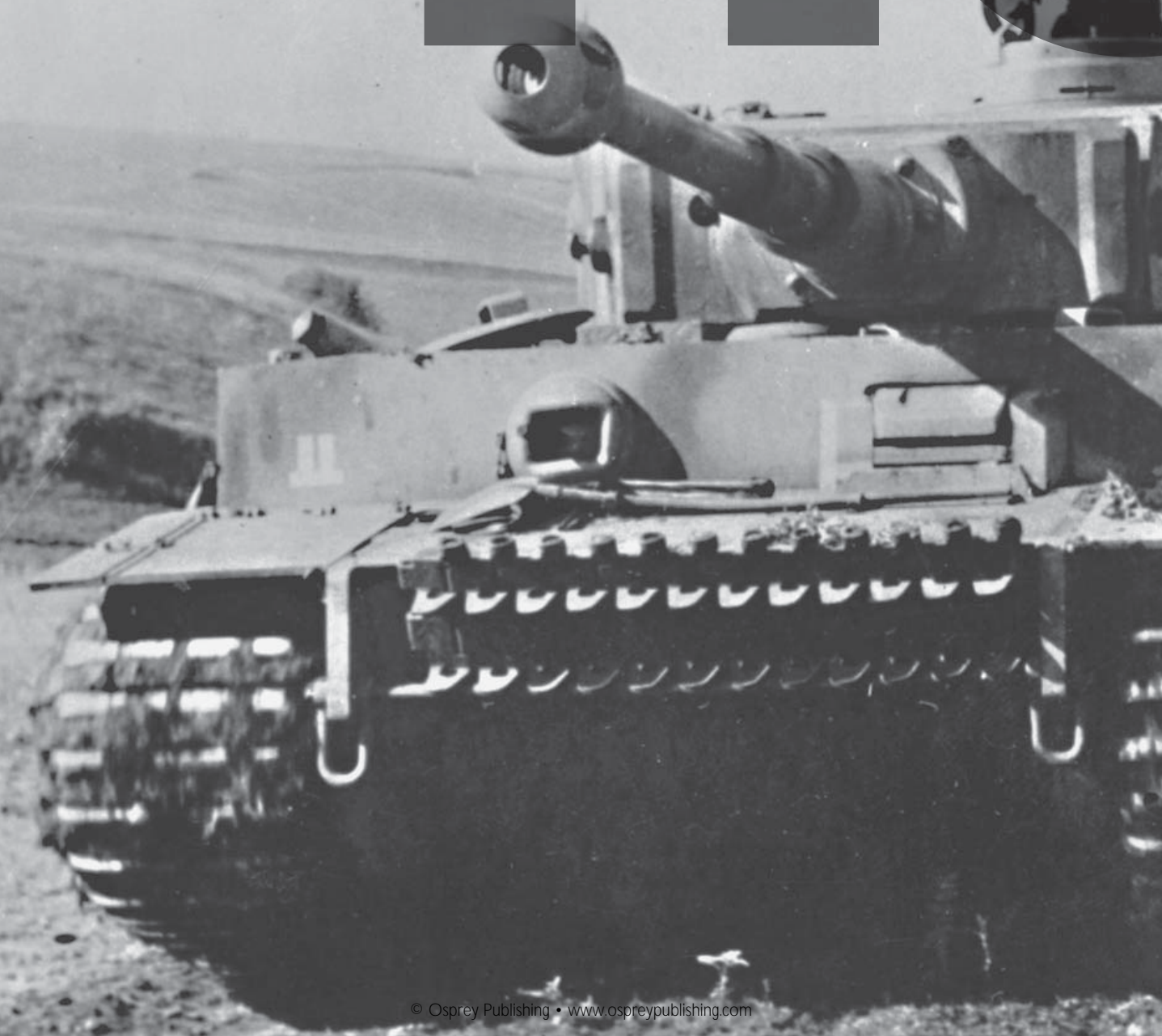


Thomas Anderson

# TIGER



# TTC





# GREYER

**Thomas Anderson**



# CONTENTS

chapter 1	<b>Development</b>	6
chapter 2	<b>Organization</b>	22
chapter 3	<b>Mobility</b>	52
chapter 4	<b>Firepower</b>	74
chapter 5	<b>Armour</b>	90
chapter 6	<b>Combat</b>	102
chapter 7	<b>Maintenance</b>	196
chapter 8	<b>Under Fire</b>	226
chapter 9	<b>Conclusion</b>	238
	Index	250





# Development

# 1

There is possibly no other weapon more well known, and more revered than the *Panzerkampfwagen* VI Tiger. In late 1942, when the Tiger was first seen on the battlefield, it was quickly used for propaganda purposes. Of course the national press, now under the control of the Nazi government, used the new tank to pronounce the superiority of German weapons, especially after the defeat of their forces at the Battle of Stalingrad (23 August 1942 to 2 February 1943).

A former German Army officer who had once served with sPzAbt 503 on the Tiger in the East noted:

We had better tanks. But what was more important, our mission tactics combined with our fighting spirit were clearly superior. When there were no *Jabos* (fighter-bombers), we could easily defeat any *Panzerfeind* (enemy tank) even when outnumbered three to one...

Ironically, the press in Great Britain also did their best to emphasize the effectiveness of German weapons. The 8.8cm FlaK anti-aircraft gun and the Tiger tank were just two which were vaunted in many published articles.

What was it about this tank? Were the many stories true? Did the Tiger really withstand *any* fire? Was the feared 8.8cm gun that effective? And was the Tiger really that unreliable?

It is interesting to follow the development of the Tiger through three different events which were to effect German military planning.

The first can be traced back to the outcome of World War I which ended with the signing of the Treaty of Versailles (one of several treaties made in succession at the end of the war). In brief, Germany was declared responsible for beginning the war. The country had to make great territorial concessions. All former overseas colonies were handed over to the victorious nations

One of eight Tiger Ausf E tanks issued to *Tigergruppe* Meyer in August 1943. It carries the name "*Strolch*" (Vagabond) and is painted with a dark yellow base camouflaged with olive green and possibly red brown stripes. A single-digit turret numbering system was chosen for this small combat unit. The shield with a *Balkenkreuz* (German cross), painted on the front plate, was adapted for this *Tigergruppe*. (Münch)





The T-34 was a nasty surprise for the German troops invading the Soviet Union. The sloping armour offered good protection against most German weapons. The powerful long-barrelled 7.62cm F-34 gun proved to be a formidable weapon able to deal with all German tanks. The T-34 had a good power-to-weight ratio and wide tracks made it much more mobile than any other tank then in service. (Anderson)

and large parts of the country to the east were consigned to Poland and Czechoslovakia. In the west, the Saar region became part of France. Massive war reparations were to be paid by Germany in the form of coal, wood or food and other supplies. The army was limited to 100,000 men and any sophisticated weaponry such as tanks was forbidden.

In the prophetic words of Major General Foch of the French Army, "This is not peace, but an armistice for twenty years."

A majority of the German people felt this treaty to be an insult to the honour of the nation. Over the next decade many political parties were to use this underlying resentment to build a new political ideology. Consequently, the national parties quickly grew stronger and during this problematic time it was easy for Adolf Hitler to seize power. From this very moment violations of the Versailles Treaty were carried out more or less freely and without any consequences. By 1935, the first Panzer division had been formed.

The second was the unsuspected ease with which German forces were able to invade and conquer Poland and large parts of Western Europe in early 1941. The nationalistic fervour behind everything, the strategic and tactical skills of the military, and the Panzer force in the role of the impregnable spearheads appeared to underline Nazi propaganda...that Germany was superior!

The third was Operation *Barbarossa*, the invasion of Russia on 22 June 1941, which began promisingly but the ambitious strategic aims of the attack could not be achieved. Instead of reaching a proposed line from Archangelsk to Astrakhan, the German advance became stuck in the mud and snow of the harsh Russian winter.

A further problem for German forces on the Eastern Front was the appearance of an ever increasing number of modern Soviet-built tanks. Unnoticed by foreign nations, the underdeveloped Soviet Union had managed to design and develop two outstanding types of tank. The T-34 medium tank, based on the US-built Christie fast tank, had been in production since 1940 and was a revolutionary design which broke with all contemporary tank conventions. The hull had sloped armour providing enhanced protection and was fitted with a reliable 12-cylinder Model V-2 diesel engine. A powerful high-velocity 7.62cm F-34 tank gun was mounted in the turret.

The second tank was a heavy type. On first inspection the KV-1 appears to be of a more conventional design. However, as a heavy tank it was fitted with formidable armour protection combined with the same F-34 gun and diesel engine as fitted on the T-34. On each type, the engine and transmission was mounted in the rear of the hull, an ambitious technical solution, to save vital space inside the tank.

The sudden appearance of the T-34 and the KV-1 in the summer of 1941 came as a shock to German troops, who were to need all their tactical skills and the use of anti-aircraft guns such as the formidable 8.8cm FlaK as well as medium and heavy artillery to defeat this new threat. German infantry leaders for the first time encountered *Panzerschreck* (tank-shock). Troops became desperate after firing round after round at these heavy tanks without causing any damage. This desperation often led to a type of shock-induced panic, followed by a hopeless need to escape. Although this phase was soon overcome, the term *Panzerschreck* would not disappear completely.

German troops examine a KV-1 model 1939 in the summer of 1941. The turret has been hit 14 times by well-aimed 3.7cm or 5cm rounds, further impacts can be seen on the hull. None of the rounds penetrated the armour. In such a situation only determined action by close combat teams, or fire from the 8.8cm FlaK, could put this heavy tank out of action. The KV-1 mounts the 7.62cm Machanov L-11 gun. (Anderson)





## Key data on German pre-war tanks

Type	Weight	Engine	Power/ weight ratio	Top speed	Ground pressure	Range on road	Range off road	Max. armour	Armament
PzKpfw I Ausf A	5.4t	Petrol, 60 hp	11.1	37 kp/h	0.39 kg/cm <sup>2</sup>	140	93	13	two MG
PzKpfw II Ausf C	8.9t	Petrol, 140 hp	16	40 kp/h	0.73 kg/cm <sup>2</sup>	190	126	14.5	2cm KwK, one MG
PzKpfw III Ausf E	19.5t	Petrol, 265 hp	13.6	67 kp/h	0.92 kg/cm <sup>2</sup>	165	95	30	3.7cm KwK, two MG
PzKpfw IV Ausf B	18.5t	Petrol 265 hp	14.3	42 kp/h	0.77 kg/cm <sup>2</sup>	210	130	30	7.5cm KwK, two MG

## Key data on German experimental heavy tanks

Type	Manufacturer	Weight	Transmission	Performance	Top speed	Max. armour	
VK 30.01 (P)	Porsche	30t	Petrol-electric	2 x 210 hp	60 kp/h	50	?
VK 30.01 (H)	Henschel	30t	Petrol	300 hp	35 kp/h	60	?
VK 36.01 (H)	Henschel	36—40t	Petrol	550 hp	40 kp/h	100	?
VK 45.01 (P)	Porsche	59t	Petrol-electric	2 x 320 hp	35 kp/h	100	80
VK 45.01 (H) (Tiger Ausf E)	Henschel	57t	Petrol	650 hp	45 kp/h	100	100

Type	Range on road	Range off road	Ground pressure	Proposed main armament	Number produced
VK 30.01 (P)	?	?	0.9 kg/cm <sup>2</sup>	7.5cm KwK L/24 or 10.5cm	one, hull only
VK 30.01 (H)	?	?	0.9 kg/cm <sup>2</sup>	7.5cm KwK L/24	four
VK 36.01 (H)	?	?	0.9 kg/cm <sup>2</sup>	Waffe 0725, taper bore gun	one, hull only
VK 45.01 (P)	80	?	1.06 kg/cm <sup>2</sup>	8.8cm KwK L/56	ten
VK 45.01 (H) (Tiger Ausf E)	100	60	1.04 kg/cm <sup>2</sup>	8.8cm KwK L/56	1,346

Reinforcements became younger having been rushed through training and were poorly equipped to fight the ever-growing number of Soviet tanks. As morale deteriorated, the greater was the temptation to desert when facing a superior enemy force. Many archive documents detail that this complex problem was disputed by all levels of command. The approach of the general staff was simple: “The achievers of the German advance – captains and non-commissioned officers, should do what they were trained for – leading!”

## German armoured forces in the 1930s

In the 1930s, the fledgling German armaments industry had developed a number of light and medium tanks. All the work was carried out under a cloak of great secrecy with each project given a code name.

The first tank to be produced in greater numbers was the LAS (*Landwirtschaftlicher Ackerschlepper* – agricultural tractor), later the PzKpfw I. Development of the vehicle began at the end of the 1920s, and resulted in a light tank armed with two machine guns and the typical layout of future German tanks – engine in the rear, driver and transmission in the front. The PzKpfw I was fitted with a turret mounting the main armament and also carried radio equipment, a significant feature at this time. This first mass-produced tank was used to establish a number of Panzer divisions, but was to be purposely used as the vehicle to train thousands of future tank crews. Germany was not motorized to a high degree (unlike the US military) but those mechanized units that did exist helped to train a large number of technically and tactically skilled personnel. In World War II, the tactical value of the PzKpfw I was very limited. However, it must not be forgotten that these tanks were developed under secrecy and with limited funding. The result was important, an operational tank which was available in substantial numbers.

The PzKpfw I was the first tank to be mass produced by Germany to equip the first *Panzerdivisions* and later it was used as a training vehicle. Armed with two *Maschinengewehr 34* (MG 34) guns the type had armour only thick enough to protect the crew against small arms fire. Used extensively in the first two years of the war, the PzKpfw I had only a limited value in combat. The chassis of the PzKpfw I was used for a number of *Selbstfahrlafette* (self-propelled) guns. (Anderson)







The PzKpfw II was lightly armoured and mounted a 2cm KwK 30 cannon but was effectively used to attack and defeat enemy infantry positions. Although obsolete, it was still being used in 1944 as an escort tank in *Panzer-Begleit-Kompanien* (Tank Support Company) of the *Heeres-StuG-Brigaden* (Assault Gun Brigade). (Münch)

By early 1930, further light tanks had been ordered. One was to mount a 2cm *Kampfwagenkanone* 30 (2cm KwK 30) gun in combination with a machine gun. Developed under the designation LAS 100, it was later designated as the PzKpfw II and had a light armour hull designed to withstand light armour-piercing projectiles fired by infantry. When the PzKpfw II was used in action the design proved to be unsuitable for the intended role as a part of a *leichte Panzerkompanie* (light tank company).

The PzKpfw III was design as a *Zugführerwagen* (ZW – platoon leader vehicle) and was originally armed with a 3.7cm *Kampfwagenkanone* 36 (3.7cm KwK36) gun and three 7.92mm *Maschinengewehr* 34 (MG 34) machine guns. The vehicle was built using light armour plate intended to withstand only small arms fire. However, the PzKpfw III proved to be worthy of being uparmoured and upgunned. Later versions mounted a 5cm *Kampfwagenkanone* 39 L/60 (5cm KwK 39 L/60) gun, which made it an effective fighting vehicle.

The last mass-produced tank to be developed before outbreak of war was the *Begleitwagen* (BW – escort vehicle), which became the PzKpfw IV. Designed as a support tank, to control the battlefield, the PzKpfw IV mounted a 7.5cm KwK 37 L/24 gun, which fired effective high-explosive (HE) shells. The first versions were built with very light armour and as with the PzKpfw III the vehicle was progressively upgraded. The frontal armour

on the PzKpfw IV Ausf A was 14.5mm thick, whereas on the final version the PzKpfw IV Ausf J this had been increased to 80mm. The PzKpfw IV entered production in 1937 and was still being built when the war ended in 1945.

## The birth of the heavy tank

As mentioned earlier, the appearance on the battlefield of the T-34 medium and the KV-1 heavy tank certainly marked a turning point. Although the PzKpfw IV and the *Sturmgeschütz* III (StuG – assault gun) still had the potential to undergo upgrading programmes to improve combat efficiency, German military planners knew that the combat performance of these tank designs was limited. All future tank programmes were to be rigidly scrutinized.

By 1937, the *Heereswaffenamt* (Army Ordnance Bureau) had already given orders to develop a new tank in the 30-ton class with the companies Daimler-Benz, Henschel and MAN. By German standards of the late 1930s, these would have been designated as *schwere Panzer* – heavy tanks. At that time Nazi intelligence had become disturbed by the Char B1 (bis) and Char 2C heavy tanks in service with the French Army. These were the only contemporary heavy enemy tanks known to the German military as being ready for action.

A well loaded Panzer III Ausf J or L crossing a bridge in Russia, early 1942. (Tank Museum)





The PzKpfw IV was originally fitted with a short-barreled 7.5cm KwK L/24 gun. This low-velocity weapon lacked armour-piercing capabilities and accuracy over longer ranges. After the first engagements with Soviet T-34 and KV-1 tanks, a long-barreled version of the gun, the 7.5cm KwK 40 was quickly developed. With this gun the PzKpfw IV served until the end of the war. The PzKpfw IV shown is from 23.PzDiv (note the Eiffel tower marking under the tactical number 814). Although officially forbidden, the crew of this tank has mounted spare track links for added protection. (Wilhelm)



## Designing a 30-ton tank

At the end of 1937, the first DW 1 (*Durchbruchswagen* – breakthrough tank) test vehicle had been completed and thoroughly tested. This was quickly followed by the DW 2 version. In 1939, Henschel delivered the VK 30.01 – the German military used a simple designation system, VK denoted *Vollkette* – fully-tracked and the first two digits denoted the weight class in metric tons, the last two the number of the test vehicle. The VK 30.01 test vehicle – a hull without a turret – followed proven German tank design principles with a rear-mounted engine and the transmission in the front of the hull. Frontal and rear armour plates were almost vertical and the superstructure did not overhang the hull side plates.

A PzKpfw V Panther Ausf A of II./SS-PzRgt "Wiking" passes through a Russian village in the spring of 1944. This medium tank was developed as the direct answer to the Soviet T-34 and broke with many traditions of German tank design. Fast and mobile, the Panther combined excellent armour protection with the powerful 7.5cm KwK 42 L/70 gun. Weighing 46 tons, it was heavier than a T-34 which weighed approximately 27 tons. (Anderson)



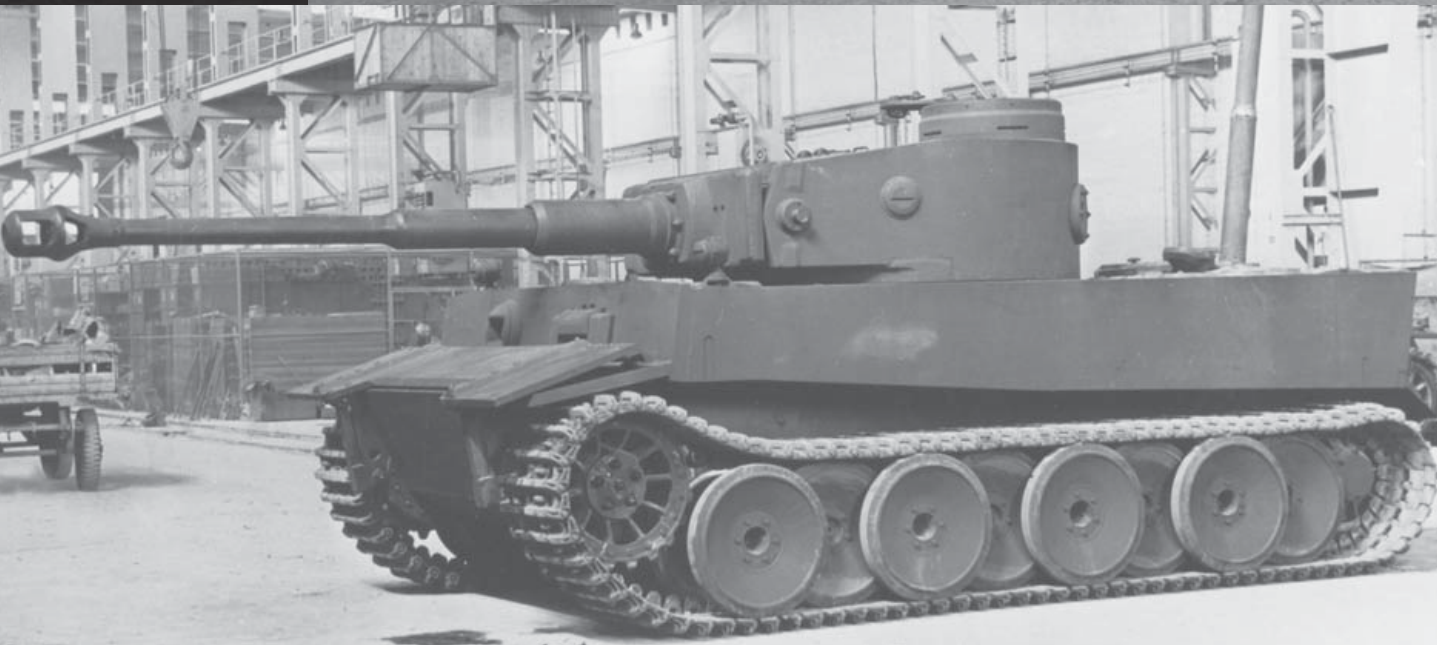


At approximately the same time, Professor Dr. Ferdinand Porsche received a development order for a heavy tank. As with the DW 1 and 2, a 7.5cm KwK L/24, the same gun as used on the PzKpfw IV and StuG III, was to be mounted in the turret. However, a suggestion was made to install a 10.5cm main gun.

The unsolved armament question kept the designers and engineers busy. In the early 1940s, a further type of gun was under discussion. Adolf Hitler, was keen on modern weaponry and demanded high armour penetration. He favoured a powerful gun with a low calibre; a large calibre gun would require more space in the turret and extra space for ammunition storage. The technology for such a gun with armour-piercing ammunition existed. Rheinmetall had worked on the 7.5cm *Panzerabwehrkanone* 41 (7.5cm PaK 41) with good results. The problem with the supply of special raw materials was to be a deciding factor. Tungsten in particular, essential to the manufacture of highly effective armour-piercing rounds, was available in very limited quantities. Two anti-tank (AT) guns designed to fire this ammunition were introduced, the 2.8cm *schwere Panzerbüchse* 41 (2.8cm sPzB 41) and the 7.5cm *Panzerabwehrkanone* 41 (7.5cm PaK 41). Only the PaK 41 was a success. However, the shortage of tungsten was so critical that these guns were never completely ready for action.

The VK 45.01 (P) was one of two design studies for a heavy tank. One team was headed by Ferdinand Porsche, who favoured a complex petrol-electric drive system. The other VK 36.01(H) was designed by Henschel and he chose to use a more conventional petrol engine and gearbox. Both designs were fitted with the same cylindrically-shaped turret mounting 8.8cm KwK 36 gun. (Tank Museum)





A pre-production PzKpfw VI Tiger (H) in the Henschel factory. The vehicle is fitted with an additional armour plate (not used on production tanks) which was lowered to provide extra protection for both the front plate and drive sprockets. The vehicle is still to be fitted with track guards and tools. (Tank Museum)

By the end of 1941, the first Porsche VK 30.01 (P) or *Typ* 100 test vehicle was ready. In mid-1941, it had been decided to mount a new type of gun, the 8.8cm KwK L/56 in the turret. This gun was to be manufactured by Krupp (as was the turret) and was developed from the formidable 8.8cm *Flugzeugabwehrkanone* (8.8cm FlaK).

Porsche, who was a brilliant engineer, chose to use an electric drive for the new tank. The power to operate the drive system was to be produced by using two air-cooled petrol engines to drive the generators. This technology was indeed very old but well-proven having been used on electric tramways, locomotives and some commercial vehicles. However, usage to power a tank capable of operating under extreme conditions was unknown territory.

In late 1941, new armour specifications were defined forcing Henschel to a complete redesign designated VK 36.01. The frontal armour protection was increased to 100mm from the proposed 80mm and it was intended to equip the tank with a taper-bore gun. The VK 36.01 was also fitted with improved running gear which had larger interleaved running wheels and no return roller.

The VK 36.01 was only an interim prototype. The final decision to mount the 8.8cm KwK L/56 in the Krupp turret led to a further redesign. The superstructure on the subsequent VK 45.01 (H) was widened to accept a larger turret ring. The tracks were widened to carry the increased weight of the vehicle. Despite the designation VK 45.01 (H), the tank weighed over 55 tons.

The designers and engineers at Porsche had to contend with the new specification for the armour. By May 1941, work on a new tank, the *Typ* 101 commenced. Unlike the VK 45.01 (H), which differed in almost every technical detail from the earlier VK 30.01 (H), the Porsche *Typ* 101 was based on the *Typ* 100. The armour was increased at the front from 50 to 100mm, the hull sides from 40 to 80mm and the rear

plates were increased to 80mm. The performance of the two engines was boosted to 310hp and the transmission positioned in the rear of the hull. The rubber-tired road wheels were replaced by solid steel wheels and the return rollers were removed.

## The decision

In early 1942, a decision to select which of the heavy tanks for production was not discussed. On the contrary, military planners established new units which should be issued with *schwere Panzer*. Interestingly, those units selected for deployment to North Africa (sPzAbt 501 and 503) were to be equipped with the Porsche PzKpfw VI, surely because this tank had air-cooled power units. A third unit ready for establishment should receive the Henschel PzKpfw VI.

However, there was a certain discrepancy between the plans and reality. A letter from the *Panzerkommission* (Tank Commission) addressed to the Minister of Ordnance and Ammunitions dated 24 June 1942 reveals:

According to an official *Überblick* (a survey published monthly) dated 20 June, the planned production of PzKpfw VI Tiger was as follows:

Number 114 commanded by Alfred Rubbel of sPzAbt 503, during manoeuvres in May 1943 near the city of Karkov, in preparation for *Unternehmen Zitadelle* (Operation Citadel). Due to earlier combat experience, additional track links have been fixed to the front of the tank. Smaller improvements *Formänderungen* (modifications) were continuously incorporated and included a rain guard over the binocular telescope in the gun mantlet, fitted by the crews in the field. (Rubbel)







	PzKpfw Tiger (P)	PzKpfw Tiger (H)
June	---	---
July	12	15
August	12	10

Professor Porsche had no reservations regarding deliveries. Henschel stated delivery on the condition of solving the problem with the Argus Bremse steering mechanism until 10 July.

The *Panzerkommission* reported by 3 July 1942:



### 1. PzKpfw Tiger (H)

July:

The promised 15 vehicles cannot be delivered due to problems occurring with the gearbox, the steering unit and the brakes.

August:

At least ten vehicles will be delivered. It is very likely that the July deficit can be made up.

### 2. PzKpfw Tiger (P)

Due for delivery

PzKpfw VI Tiger "123" of sPzAbt 503, being replenished with ammunition. The 3-ton truck in the background carries the letter "M" (*Munition* – ammunition). A large indentation is visible below the cupola, an indication of heavy fighting. (Münch)



July 20	– two units
July 31	– eight units
August 10	– four units
August 20	– four units
August 31	– four units

Severe problems delayed the introduction of both the Henschel and the Porsche Tiger. By August 1942, only nine Henschel Tigers had been delivered and these were issued only to sPzAbt 502.

The continuous problems with the Porsche version led to the termination of the contract to build this vehicle and the Nibelungenwerk in St. Augustin, Austria had ceased production by August 1942. However Krupp, responsible for manufacturing the hull, had already completed the order.

By September 1942, Hitler demanded the production of a *schweres Sturmgeschütz* (heavy assault gun) based on the hull and running gear of the Porsche-built Tiger. Within a very short time the project had been thoroughly planned. In early 1943, the first vehicle was delivered and the last of the 91 vehicles ordered was ready for action in May 1943. These vehicles became famous under the name Ferdinand (the first name of Dr. Porsche). In 1943, after the surviving vehicles were returned to Germany to be rebuilt, the name *Elefant* (Elephant) was adopted.

The last Porsche-Tiger to be built was a *Befehlswagen* (command tank). In early 1944, and after a number of modifications the Befehls-Tiger was issued to *schwere Panzerjägerabteilung* (sPzJgAbt 653), equipped with the *Elefant* tank destroyers on the Eastern Front.

The last note dealing with the Porsche-Tiger can be found in a collection of *Führervorträge* (lecture to the Führer), dated 4 November 1944. This interesting document, written under the impression of a totally lost war shows a lot of erratic statements. Every single paragraph starts with the words “the Führer demands”:

The Führer demands that the Porsche-Tiger, which are at present existent in the *Ersatzheer* (replacement training army), shall be combined in a company. These tanks, issued to different infantry divisions, shall serve as battering rams...

All of the Porsche-Tigers available at that time could not be driven over long distances due to continuing engine problems. The idea to get the vehicles into a fighting company and subsequently to spread the tanks over different infantry divisions without any support services shows a complete disregard of reality by Hitler and his cohorts.

## Evolution – the Tiger B

While the Henschel Tiger Ausf E was being produced (1,346 units built), work on a successor had started. Hitler instructed Henschel to simply “improve” all components of the successful tank.



The armour plates of the new tank were sloped, creating a tank similar in appearance to the PzKpfw V Panther. The thickness of the frontal armour was significantly increased (from 100 to 150mm) but the side and rear plates of the hull remained at 80mm, but with an improved slope.

A longer gun, again derived from the 8.8cm FlaK 41, was to be installed. The 8.8cm KwK 43 L/71 was the most powerful tank gun available.

The weight of the new Tiger Ausf B increased to a massive 70 tons. The Maybach HL 250 P45 engine as used in the PzKpfw V Panther tank was used to power the 15 tons heavier vehicle. The reliable Olvar gearbox as used on the Tiger Ausf E was dropped, as it was thought not to be robust enough and a more conventional, but difficult to operate, transmission was installed. The result was a true heavy tank and comparable with the only other tank in this class, the Soviet-built JS-2. The latter was 20 tons lighter, but mounted a powerful 122mm D 25-T gun.

A total of 489 Tiger Ausf B was built. Quite naturally, Hitler still required advancements. Although the heavy tank had already exceeded all justifiable weight limits, a *schweres Sturmgeschütz* (heavy assault gun) was demanded. A massive 12.8cm PaK 80 L/55 gun was mounted in a fixed superstructure and the hull of the Tiger Ausf B had to be lengthened and the frontal armour increased to 250mm.

The first fifty PzKpfw VI Tiger B built by Henschel were fitted with the Porsche-designed turret as these had already been completed for the defunct VK 45.02 (P). The vehicle is not equipped with tools and recovery hawsers; track guards are not fitted and it is not coated with *Zimmerit*. This suggests that the tank is on trials at the Henschel *Panzerversuchsstation* (tank testing ground) in Haustenbeck. (Anderson)

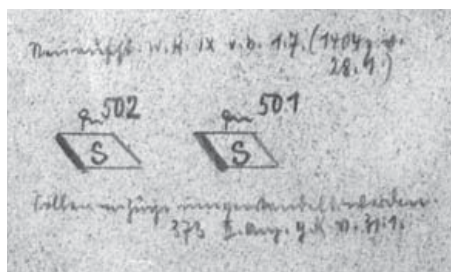




# Organization 2

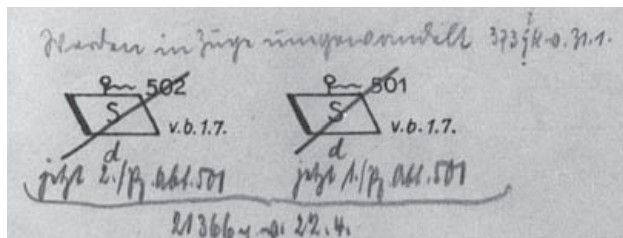
In early 1942, the organizational framework for what would become a *schwere PanzerAbteilung* (sPzAbt – heavy tank battalion) evolved long before the first Tiger tank was built.

By 16 February 1942, two heavy tank companies had been established, initially without equipment, as detailed in this part of the *Kriegsgliederung* (Order of Battle).



This excerpt of the *Kriegsgliederung des Feldheeres* May 1941 through May 1942 shows the newly established *schwere Panzer-Kompanie* (sPzKp) 501 and 502, to be ready for action by 1 July 1942. Changes in this order of battle were recorded handwritten. These core units had no tanks at all.

By 10 May 1942, *schwere PanzerAbteilung 501* (sPzAbt 501) had been established and the two independent heavy tank companies were immediately subordinated under this battalion. Some days later, sPzAbt 502 and 503 were formed and ordered to be ready for action. However, the heavy tanks were still not available.

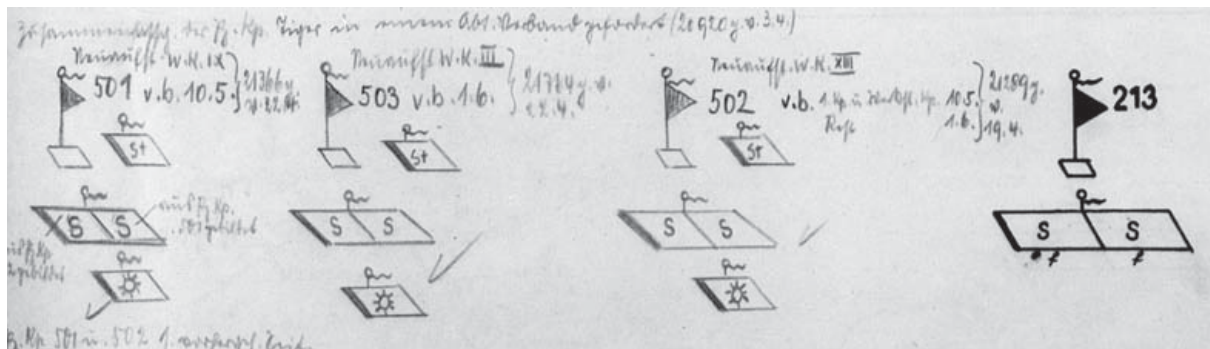


Only one week later the companies were officially disbanded and subordinated under sPzAbt 501. From this time the companies were listed as sPzKp.

The commander of a *Befehlstiger* from sPzAbt 503 gives a hand signal, certainly on the direction of a propaganda photographer. Other simple ways of communication used throughout the war included flares, signal batons and flags. Behind the officer is the "star"-type antenna for the *Funksprechgerät 8* (Fu 8) radio set. The letter "I" denotes that the tank is from the signals echelon of the staff company. (Buchner)



This handwritten change to the *Kriegsgliederungen* shows the new sPzAbt 501, 502 and 503, units as battalion size. The sPzAbt 213 also detailed here was equipped with *Beutepanzer* – captured ex-French Army Char B1 (bis) heavy tanks. The unit was later transferred to the Channel Islands.



At that time it was planned to equip sPzAbt 501 and 503 with the PzKpfw VI (P). Both units were to be sent to North Africa, since the Porsche-built tanks had air-cooled engines which was thought to be an advantage in the hot desert conditions.

The sPzAbt 502 was to be issued with the Henschel PzKpfw VI (H) and it was planned for the unit to go into action on the East front.

The PzKpfw IV (P) proved to be ill-fated. Necessary changes to the engines and suspension forced the closure of all production. By October 1942, only ten tanks had been completed by Nibelungenwerke and these were used for trials, as well as for training the first Tiger crews.

The Henschel design, designated PzKpfw VI Tiger Ausf E (H) was selected to equip all Tiger units. However, production was slow. By August 1942, sPzAbt 502 deployed near Leningrad received only nine tanks. In North Africa, sPzAbt 501 was issued with 21 by the end of the year. The sPzAbt 503 were to receive 29.

## Organizational structures

German military units were assembled in accordance to standardized organizational structures. The *Kriegsstärkenachweisung* (KStN – table of organization) involved the equipping the unit with vehicles, weapons and men. The *Kriegsausstattungsnachweisung* (KAN – table of basic allowances) described basic requirements to be supplied to any unit. Since the latter included almost many items from typewriters to torches, it was far more comprehensive. For that reason, only detail from available KStN documents is used.

However, over time actual equipment changed due to new tables of organization being created. Heavy tank battalions in the field received reinforcements and new equipment only when necessary and, more importantly, when available. For this very reason, actual strength reports

prepared by the staff for the higher command were not always correct. Often, surplus equipment was simply not reported and retained. A fine example was sPzAbt 505, which was allowed to retain some surviving PzKpfw III even after a new KStN had become valid.

PzKpfw VI tanks were regularly issued to battalion sized units on an army group level and were designated as *Schwere Kompanie* of PzRgt "Grossdeutschland". This should be the standard organization, underlining the combat characteristics of the Tiger. However, there were exceptions. In late 1942, the first *schwere Tiger Kompanien* (heavy companies) were integrated into tank regiments. The first units to be equipped with the Tiger Ausf E in *schwere Kompanien* (sKp) were SS-PzRgt. 1 (five tanks in December 1942 plus four in January 1943) and SS-PzRgt. 2 (one tank in December 1942 plus nine in January 1943). Also by January 1943, SS-PzRgt. 3 was equipped with nine Tigers. *Abteilung* of PzRgt "Grossdeutschland" took delivery of seven Tigers and another two in February.

Initially, the first three sPzAbt 501, 502 and 503 not only had PzKpfw VI in their inventories, but also PzKpfw III, (see KStN 1150d and 1176d dated 15 August 1942). In the staff company, one PzKpfw III was used as a command tank (PzBefWg/SdKfz 268) by the ground-to-air liaison officer.

Photographed in the early summer of 1943, the crew of this Tiger from sKp/SS-PzRgt 1 "Leibstandarte Adolf Hitler" is cleaning the bore of the 8.8cm KwK 36 gun with a *Rohrwischer* (gun tube brush). Other than the *Balkenkreuz* (German cross) no further markings are visible. The tank is camouflaged with stripes (possibly olive green) painted over the standard dark yellow base colour. The smoke grenade dischargers have been removed from the sides of the turret. (NARA)

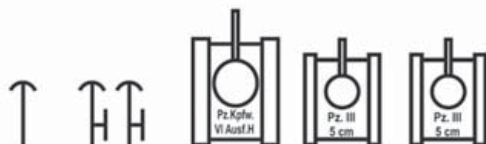




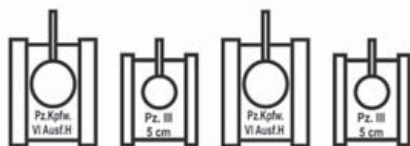
## ***Schwere Panzerkompanie d***

Theoretical organization structure according to KStN1176d dated 15 August 1942

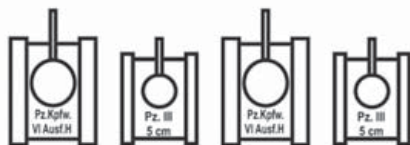
### *Kompanietrupp*



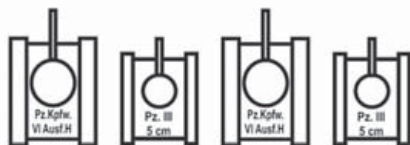
### *1. Zug*



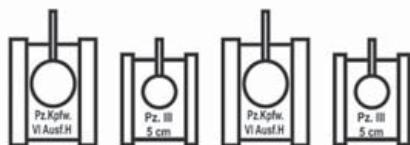
### *2. Zug*



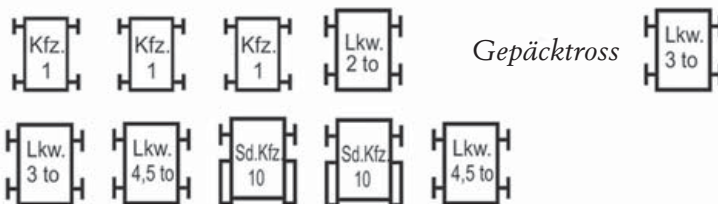
### *3. Zug*



### *4. Zug*



### *Kfz-Instand- setzungsgruppe*



### *Gefechtstrass*





Another five PzKpfw III formed 1. Platoon *leichte Panzerzug* (light tank platoon) of the staff company and were mainly used for reconnaissance and communication duties. Furthermore, each combat company was equipped with ten PzKpfw III. The thinking behind this was to give the Tigers, if necessary, the assistance of light tanks in specific combat situations. All early sPzAbt were equipped with more PzKpfwg III (26) than PzKpfw VI Tigers (20).

It is obvious that the supply of vehicles to combat units depended on availability. As an example, if a *Typ 166 Schwimmwagen* was not available then another type of cross-country car would be delivered. Units, which were sent to the East received more *Maultier*-type tracked vehicles in place of standard 3-ton and 4½-ton trucks. Again, the number being allocated depended on availability.

Both allocation of the light tank in a platoon and actual deployment were the responsibility of the commander of the *Abteilung*. If necessary, this would be changed to meet requirements.

The crew of this Tiger Ausf E from sPzAbt 505, attempt to conceal the tank under straw and foliage. The number "324" is painted on the side of the turret. A small tactical marking is visible next to the driver's visor which identifies it as a Tiger from 3rd Company. The tanks of sPzAbt 505 often carried tree trunks strapped to the sides of the hull. This vehicle has additional smoke grenade dischargers mounted on the hull. (NARA)