

The Tank Museum

Podcast 1

The Tank Museum's Tiger tank

by David Fletcher

Introduction

Hello and welcome to the first in a series of Tank Museum podcasts. In this podcast the Museum's Historian, David Fletcher, talks about the German Tiger - the most feared tank of the Second World War. He explores its design and development, combat use, crew conditions, the capture of our Tiger tank, number 131, in North Africa by the 48th Royal Tank Regiment in 1943 and finally, its life in The Tank Museum.

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This is the Tiger, probably the most famous tank in the world. You don't have to take my word for it, this is what the British newspaper the Daily Mail had to say about it in January 1943, under the headline;

'62-TON GERMAN TANKS ARRIVE' it says: 'The land-battleships though not much bigger than the German Mark IVs are about twice the weight – the difference being entirely due to the tremendous armour of the Tiger'.

The same brief piece, by a Reuters correspondent, explained that the new tank carried an eighty-eight millimetre gun and seven inch thick armour on the turret and that a few of them had recently arrived in Tunisia.

Of course many of these details are exaggerated, this is a newspaper after all. The Tiger actually weighs 56 tons (compared with 23 tons for a Panzer IV) and the thickest armour is 110mm, say 4.5 inches at most. Even so, when compared with British or American tanks of the period it is formidable. This is the birth of a legend.

The Tiger came as quite a surprise to the Allies, despite the fact that some warning had come from the Russians, who captured one near Leningrad in 1942. Yet it did not just spring from nowhere. German tank design was driven by a need to keep ahead of the enemy. They believed that quality, in terms of firepower and protection, would offset Allied superiority in quantity and they had been designing heavy tanks since 1935. As it turns out they were wrong; quantity will invariably win the day, but under Adolf Hitler it was unlikely that a rational programme would be followed.

Even so it was not simply a matter of designing a tank, showing it to the Fuhrer, and then letting production begin. Indeed at the outset the Tiger faced stiff competition from a rival design by Hitler's favourite Herr Doctor Ferdinand Porsche. Yet in the end our Tiger design, by Henschel, was selected and a full size mock-up shown to Hitler on his 53rd birthday, 20 April 1942. Production began almost at once and by August a few of these formidable tanks had been delivered to the Russian front and saw their first action around Leningrad in August 1942.

Let me describe some of the details for you. The shape you can see for yourself, but notice that all of the armour plate is welded and the standard of workmanship throughout is excellent. Notice also that you do not have sloping armour plates, such as you would see on later designs like the Panther and Tiger II but the turret is curved, like an enormous horseshoe. The engine is at the back, behind the turret. It is a V-12, designed by the Maybach company although it is not diesel, as you might expect, but petrol, or gasoline, which gives a better performance. Like most German tanks of the Second World War the gearbox is at the front and it is highly sophisticated with an eight-speed pre-selector arrangement. This meant less physical effort for the driver so long as he handled it with care. You can see where the driver sits, at the front, on the right as you look at it. There is a glass vision block in front of him and a periscope in the hatch above his head but, when he is not in action, he can raise his seat and drive with his head out, which gives a much better view. To his right is a crew member who fires the hull machine-gun and operates the radio as required. The other three crew members occupy the turret. Senior to all of them is the tank commander who sits high up at the back, viewing the world through a series of vision blocks around the circumference of his cupola or standing, head and shoulders out if no danger threatens. Inside the turret, on the other side, is the loader, the only crew member who must stand up to work. It is his job, as swiftly and precisely as possible, to grab hold of a round of ammunition, turn and feed it into the gun. No easy task in this limited space, especially when, as tank guns get bigger, the ammunition becomes ever larger and heavier. Once the gun has fired, recoiling back into the turret and rocking the tank on its suspension, the loader must dispose of the used shell case and replace it with another round. The gunner sits in front of the commander and it is probably fair to say that his task is the most critical of all. True he is firing one of the best and most accurate guns of its day, and the sights, like most German optical equipment, is probably as accurate as it can be, but in the end it comes down to the man who operates it. He needs a keen eye, a steady hand and the ability to remain calm and focussed in the most stressful of all conditions, in the middle of a battle. The gunner sits in his seat, bending forwards with his eyes pressed against the sighting telescope and a foot hovering over the firing pedal. The tank itself is stopped, the Tiger could not fire on the move, but the gunner is tracking his target by turning the turret until he has it dead on. Then, all other things being equal, what his sights are set upon he will hit, and what the gun hits it will most probably destroy. There is a second machine-gun, located in the turret and lined up with the main gun which the gunner can use when he needs to.

Of course no new machine can be expected to work perfectly from the word go, this is certainly true of new tanks but most particularly so with a monster like the Tiger. For a while transmission failures were endemic but the equipment was improved and, as drivers gained more experience, this was reduced. Another problem, which was less easy to cure, was the risk of engine fires on starting. Experience made a difference of course but a nervous driver, trying to start up in a hurry, could easily flood the engine compartment with fuel and the tank was likely to brew up in no time.

Other failures were only discovered later. For instance if one Tiger tried to tow another out of trouble it was likely to wreck its own gearbox in the process and simply add to the casualty list. But winter was the worst enemy of the Tiger. In Russia, at night, when the winter temperatures dropped well below freezing tanks were linked in pairs so that one, with its engine running, could feed warm water through the cooling system of another to prevent a total freeze up. It was also necessary to move the tanks to and fro now and then to prevent them from freezing to the ground.

But worst of all was the effect of mud and snow. In order to spread the enormous weight each of the torsion-bar axles was designed to carry three road wheels. These interleaved and overlapped so that they would even out the pressure applied to the tracks. Trouble is that, with so many wheels, mud and snow would pack between them to the point that the suspension was forced out of place, the tracks became bowstring tight and the tank was brought to a standstill. Given time this could be repaired but, in retreat, which was normally the case, there was no time and the tank had to be abandoned.

Incidentally you may not be aware of this but, when the Tiger tanks had to be moved by rail, which was the normal thing in those days, the crew had to remove a substantial number of hull fittings and replace the wide Battle Tracks with a special narrow set for travelling. And this would be hard work in anybody's language.

It is 21st of April 1943 and six Churchill Tanks of 48th Royal Tank Regiment are lining up in a cornfield, ready to support the infantry in an attack against the hills of the Djebel Djaffa in Tunisia. Progress is slow, they have no radio contact with the infantry and the ground is broken at regular intervals by deep wadis, or gullies, that are difficult for the tanks to cross. Then, all of a sudden, the tanks come under fire. One Churchill is hit and brews up, only two of the crew get out. Lieutenant Gudgin's tank is struck at the front by a shell so powerful that it passes clear through the tank and buries itself in the engine, which catches fire. Gudgin and his crew need to bale out but their tank is under intense machine-gun fire until Sergeant Warner, on his own initiative drives his Churchill across in front of Gudgin's tank, providing enough cover for the five men to get away.

With smoke rising from the burning tanks, drawing more German armour to the scene the surviving Churchills pull back, still firing into the scrub from which the enemy fire was coming. Returning to the site next day the British tank men identified three Panzer III, one Panzer IV and, best of all a Tiger

tank, all abandoned by their crews. It was the 88mm gun of this Tiger that had blasted nearly all the way through Lieutenant Gudgin's Churchill.

The 504th Heavy Tank Battalion was stationed at Fallingbommel in Germany in January 1943. In March they travel, via Italy and across the Mediterranean to Tunis. They see some scattered action against British and American forces. It is Tiger 131 from this battalion that finds itself pitted against 48th RTR on 21 April and, to quote a translation of the Battalion War Diary : *'The crew members of Tiger 131 panic and abandon the tank after two harmless hits from a Churchill.'*

How harmless were those hits? We have highlighted some of them with silver paint and you should look, in particular, at the deep scratches on the underside of the 88mm gun. These were made by a six-pounder (that is a 57mm) round from a Churchill tank and, although the damage looks insignificant there is more to it than that. There is evidence of damage and repair above the driver's seat which suggests that the armour was penetrated and, possibly, the driver wounded. During restoration it was also discovered that the Tiger received a powerful blow which may well have jammed the turret and prevented further firing. Even so, as British troops found out when they captured it, Tiger 131 was still a runner so there is no obvious reason why it should have been abandoned.

Its story after that is well known. As the first complete Tiger captured by British forces it was exhibited in Tunis where it was inspected by Winston Churchill and the King. Later it was shipped to Britain, shown to the public on Horse Guards Parade in London and then examined in detail by the School of Tank Technology. In 1951 it was presented to the Tank Museum, rapidly becoming one of the most popular exhibits; it was restored to full running order, with help from the Heritage Lottery Association in 2003.

Epilogue

Thank you for listening to the Tank Museum's first podcast. It was presented by David Fletcher who talked about the Tiger tank. Watch the website for more podcasts on our exhibits coming soon.