

WARMACHINES N°17

Military Photo File

Jagdpanzer IV/L/70

24 Pages covering the Jagdpanzer in a lifelike environment, filled with over 70 detailed photographs that can be used as a guide.



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MILITARY PHOTO FILE

Jagdpanzer IV/L/70



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OVERVIEW

The Panzer IV tank was the backbone of both German Army and SS armored units during WWII. German weapons designers continued throughout the war to design ever bigger and more powerful weapons systems. Their habit in most cases was to mate them with existing vehicles, which were modified to accept the new weapons system. The Panzer IV was one of the favorites for modification.

In late 1944, the 7.5 cm PaK 42 L/70 gun was ready for a chassis. An interim solution was to mount the gun in a raised boxy superstructure on the Panzer IV chassis. This vehicle was designated the Panzer IV/70(A), and Nebelungewerke produced 278 between August 1944 and March 1945.

Vomag, however, figured out how to use the gun on a modified Panzer IV chassis along the lines of the Jagdpanzer IV, which housed the shorter 7.5cm PaK L/48 gun. Starting in August 1944, Vomag produced 930 vehicles with the designation Panzer IV/70 (V), or SdKfz. 162/1. Called the "Jagdpanzer IV Lang" (long) by some,

production replaced the Jagdpanzer IV completely in December 1944.

The tank destroyer weighed 25.8 tons, and was home to four crewmen. Powered by a Maybach HL 120 TRM engine, developing speeds up to 35 kph, the vehicle had a range of 210 kilometers. Its well-sloped frontal armor was thick and formidable, but the weight of the armor and the length of the main gun made the vehicle nose heavy and difficult to steer off road. For this reason, steel road wheels were used in the first two positions on each side.

The main gun had limited traverse (10 degrees each side) and elevation (-5 to +15 degrees), and was supplemented with an MG42 in a ball mount in the glacis to the right of the main armament.

The vehicle was first issued to the 105th and 106th Independent Panzer Brigades, then to independent panzer jaeger brigades. It was first employed in significant numbers during the Ardennes Offensive in December 1944.

IN THE FIELD

An infantry section takes a break by the side of a road. The soldier in the foreground is wearing the 1943 or 1944 herringbone twill camouflage uniform in the "pea" pattern. Canvas gaiters with leather straps cover the tops of his ankle boots. He appears fully equipped with bayonet, entrenching shovel, canteen, bread bag, gas mask canister, mess kit, and Kar 98 rifle. The soldier in the middle sports an oak leaf pattern camouflage smock and field gray wool trousers. He is also carrying a box of extra ammo.

A pair of tank destroyer crewmen prepares to transfer fuel into their thirsty Panzer IV/70(V). They are inserting a manual transfer pump into the side port of the fuel drum. The kneeling soldier wears the black wool tanker uniform, without the blouse. The other wears the oak leaf pattern herringbone twill uniform, but he has his black panzer field cap, adopted in September 1943. (The German shepherd is an original, not a reproduction.) Note the standard three-color camouflage scheme on the tank destroyer, and the difference between the steel road wheel (left) and the standard ones.



An SS Kubelwagen has pulled alongside the Panzer IV/70(V) to swap orders and a Jerry can of gas or water. The Kubelwagen is in the standard three-color camouflage pattern and carries the markings for the "Nederland" Panzer Division. This view presents a good look at the drive sprocket on the tank destroyer, the steel road wheel in the first position, and the main gun in travel lock.



The Panzer IV/70(V) provided very welcome anti-armor support for infantry. Here, it is teamed up with an infantry squad and a SdKfz. 251 halftrack. Note the two MG34s mounted fore and aft on the halftrack, and the MG42 carried by the soldier.



An infantryman discusses the situation with a small group of field police (feldgendarmerie). The field police wear the distinctive gorget on a chin around the neck. The gorget was of dull metal, with the word "Feldgendarmerie" on a field gray banner. The letters, national eagle, and buttons were painted with luminous paint so that they could be seen in the dark. The soldier in the foreground is wearing field gray trousers and a plane tree pattern camouflage smock. Note the arrangement of his equipment and the canteen cup with most of the paint worn off.

The tank destroyer crew and the Kubelwagen crew compare reference points on the map. The soldiers in the left foreground and right background are wearing the black leather jacket, originally meant for U-Boat crews. The other two are wearing the oak leaf pattern uniform, issued to tank crews in 1944. It was worn in place of the cloth uniform or over the top of it. Note the variety of headgear.



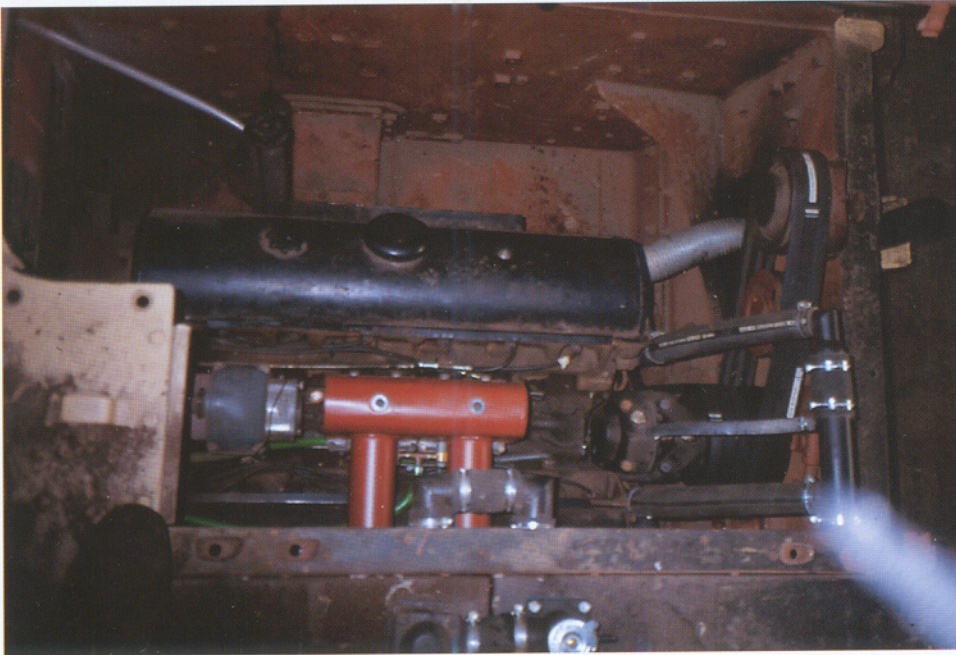


A good view of the Kubelwagen interior. An MP40 stands next to the driver, and an MG34 with two ammo boxes are in the back. The driver is wearing an M34 field cap, the oak leaf pattern uniform blouse and field gray wool trousers. The ribbons in his lapel indicate he has been awarded the Iron Cross Second Class and the 1941/42 winter campaign medal. He also wears the tank assault badge.

The long 7.5cm PaK 42 L/70 gun is in travel lock. Note the interlocking weld beads on the glacis and the steel road wheels at the first two stations. This was a characteristic of the Panzer IV/70(V) because the long gun made the vehicle nose heavy. Note the casting marks on the gun mantlet.



THE ENGINE AND COMPARTMENT

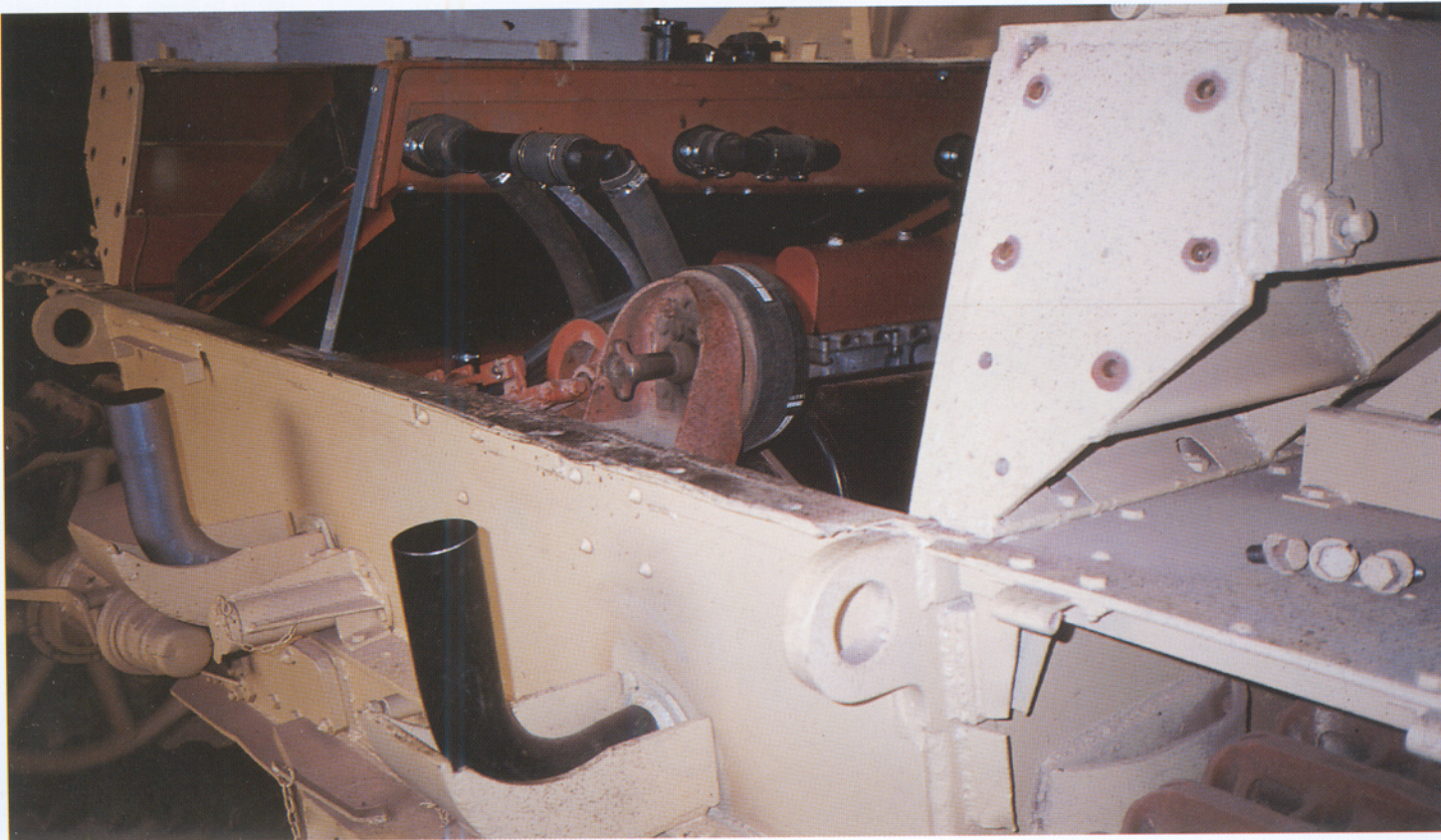


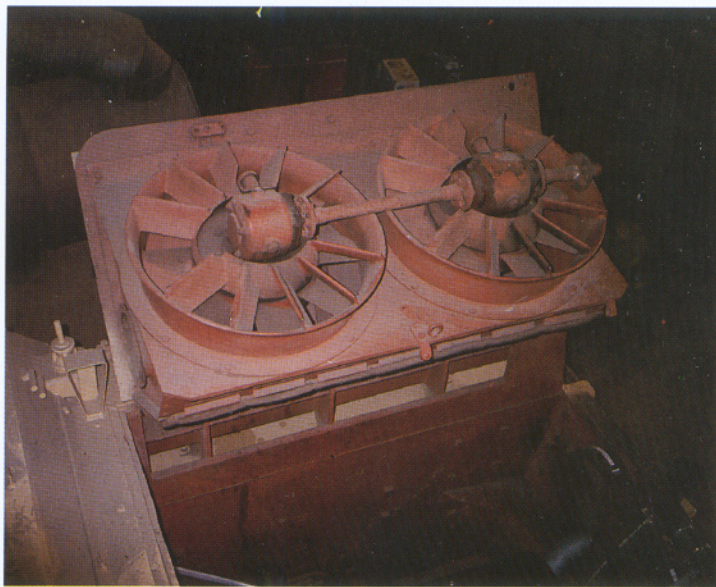
The engine compartment with the engine deck panels removed. The Panzer IV/70(V) was powered by the Maybach HL 120 TRM engine, with a starter and generators by Bosch. It was water-cooled and had two mechanical and one electric fuel pumps. With one reverse and 6 forward gears, it could generate speeds up to 35 kph. Details to note in this right side view are the red oxide primer used on the vehicle, the engine pulley arrangement, and the fuel and oil stains.

The radiator is in place on the left side of the compartment, and you can see the coolant hose connections between the radiator and the engine. Note also the exhaust pipes and their partial armored covers. The receptacle protruding from between the exhaust pipes is the connection for manually cranking the engine. A detail worth noting is the red oxide primer around the bolt holes.



The oil filler tube, the manifold and the manifold cover are illustrated here. What looks like extra space in the compartment is filled by the exhaust fan units when the deck plate is lowered into position.

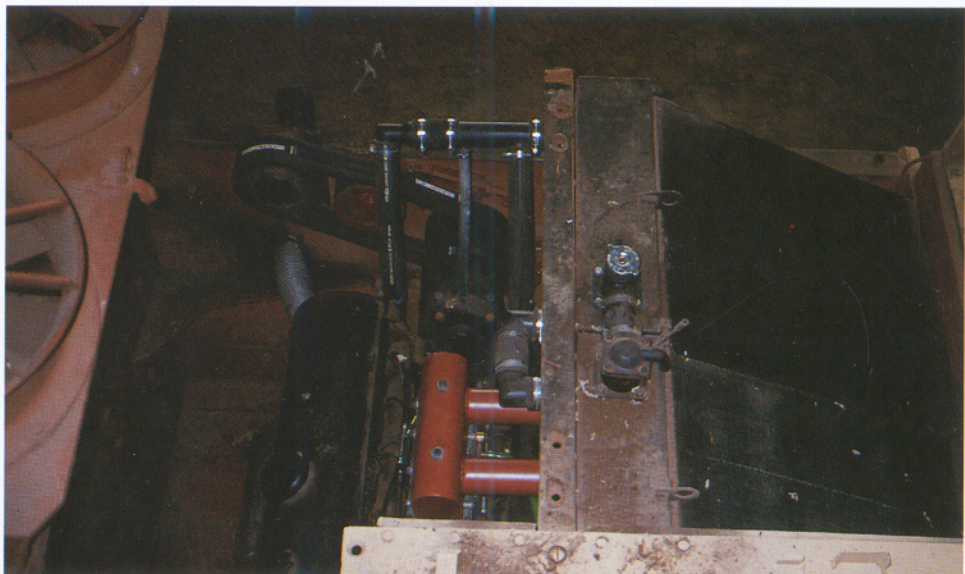




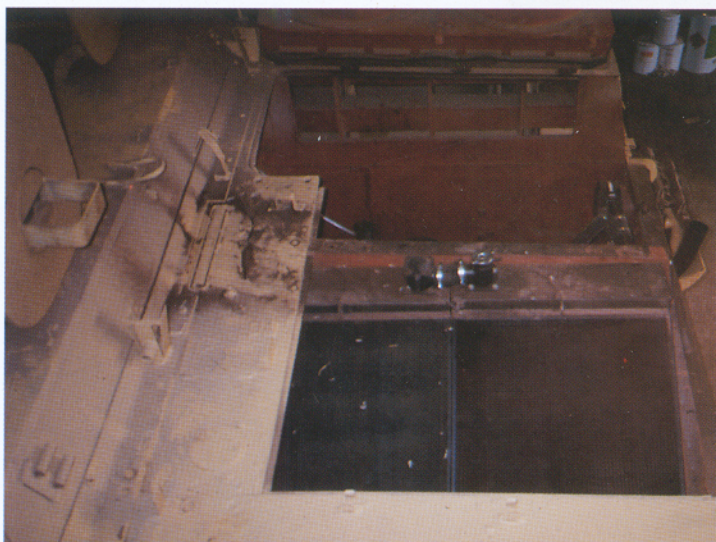
This is the dual exhaust fan unit on the right side of the engine compartment, lifted up on its hinges. The fans are connected with a drive shaft running between the two fan motors and were connected to the engine with a belt. Just to the left of the fan unit is an antenna mount and the starboard bracket for the gun cleaning rods.



The relationship between the engine and the rear armor plate are evident in this view. Note the coolant hoses, and the baffles for air intake on the right of the engine compartment.

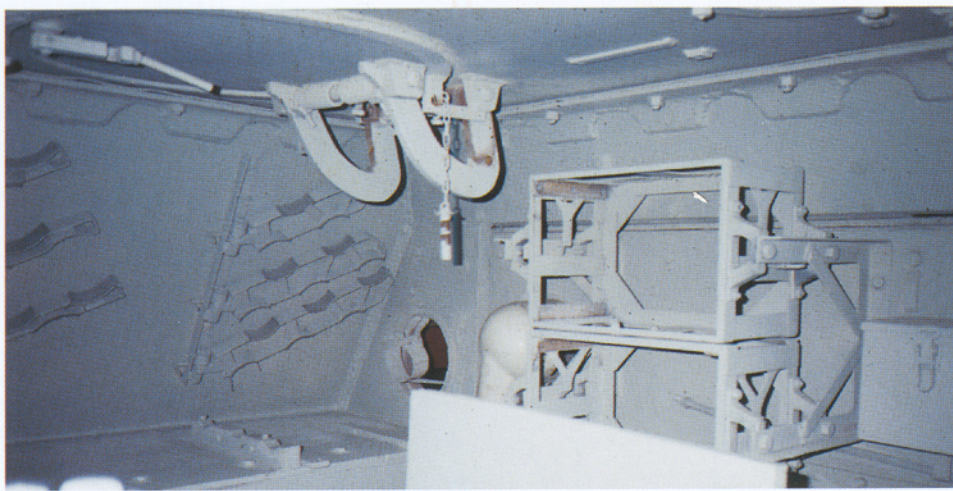


This is a good view that shows the arrangement of the radiators and the exhaust fans looking rearward. This view shows the radiator (right) and the hinged exhaust fan unit (left). Note the radiator coolant filler cap on the top center of the unit and the air intake baffles.

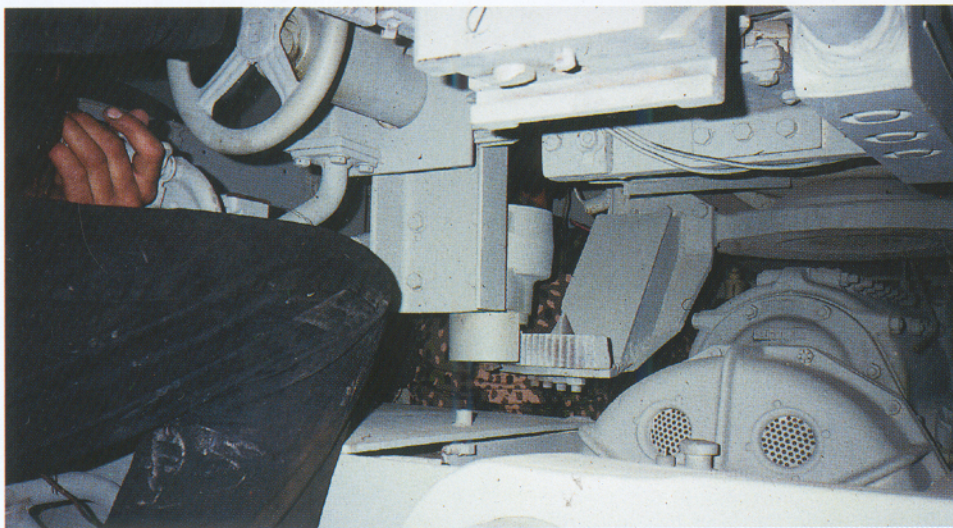


Looking left to right across the rear deck. There is not much room for the stowage of equipment we see on other German vehicles. A few brackets are present, however. On the left, note the protective guard for the hatch periscope.

INTERIOR



Looking toward the right rear of the fighting compartment, the radio racks are on the right. On the roof of the fighting compartment is the round hatch on the right side of the vehicle. This hatch had no periscope. The brackets against the wall swing out to hold the 7.5cm main gun ammunition. The breech of the gun is in the foreground.



A view from below the gun toward the gunner's position on the left of the fighting compartment. To the right is the aft end of the transmission housing. The two wheels controlled the limited traverse and elevation for the 7.5cm main gun. In the center of the picture you can see the very short traverse gear.



This is the radio rack removed and sitting on the front of the hull. Further details to note are the "saukopf" mantlet, the driver's vision aperture, weld beads and hinge detail for the final drive access hatches.



Installing the gunner's sight. It is linked to an azimuth indicator, which tells the gunner the direction the gun is pointing. The sight extends through an opening in the roof of the fighting compartment.

To the left of the gunner and vehicle commander, who was stationed behind him, are ready racks for main gun ammunition. Brackets swung out from the fighting compartment walls to hold rounds, and swung back out of the way when rounds were expended. The silver device behind the gunner was used to raise the commander's binocular range finder.



The gunner looks through his sight. Note the elevation and traverse wheels, the position of main gun ammo relative to the gunner, and the arrangement of his earphones and throat microphones.

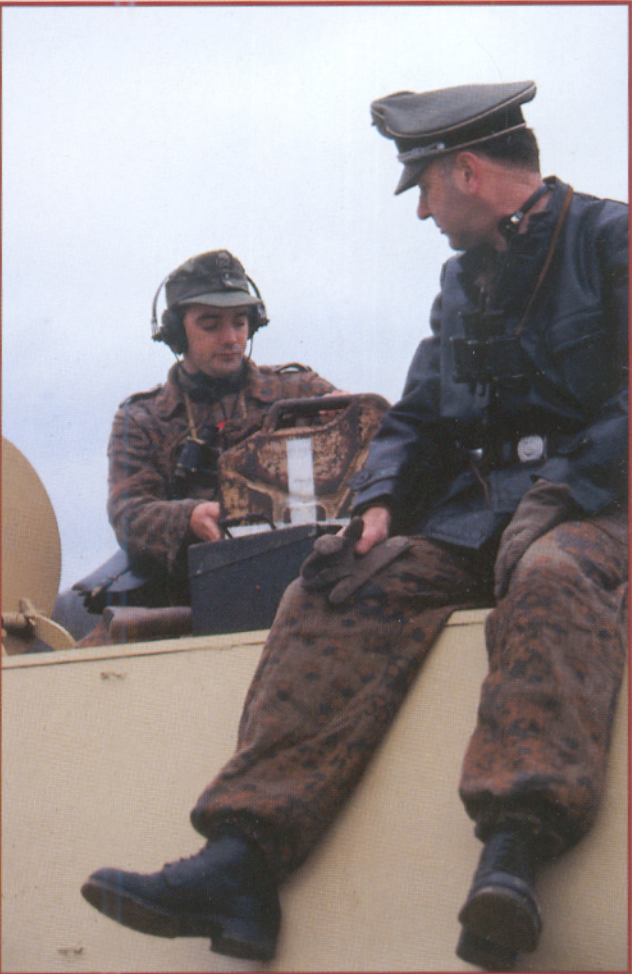


The complete fire control arrangement is seen here to the left of the main gun. The traverse hand wheel is at the bottom. Above that, the elevation hand wheel, then the sight and azimuth indicator – all linked to the main gun. The gunner's headphone and microphone hang on the sight. The driver looks back from his position. Imagine trying to get out of the vehicle quickly! That's why there is an escape hatch. At the upper right, note how the sliding cover for the gunner's sight aperture is latched in the open position.



A view looking down through the commander's hatch. The main gun ammunition is stored in ready racks on the side of the fighting compartment and in the sponson area over the tracks. To the right is the commander's binocular range finder and its elevating/retraction mechanism. Note the two-piece hatch that allowed the main hatch to be closed, while the range finder poked up through the turret.







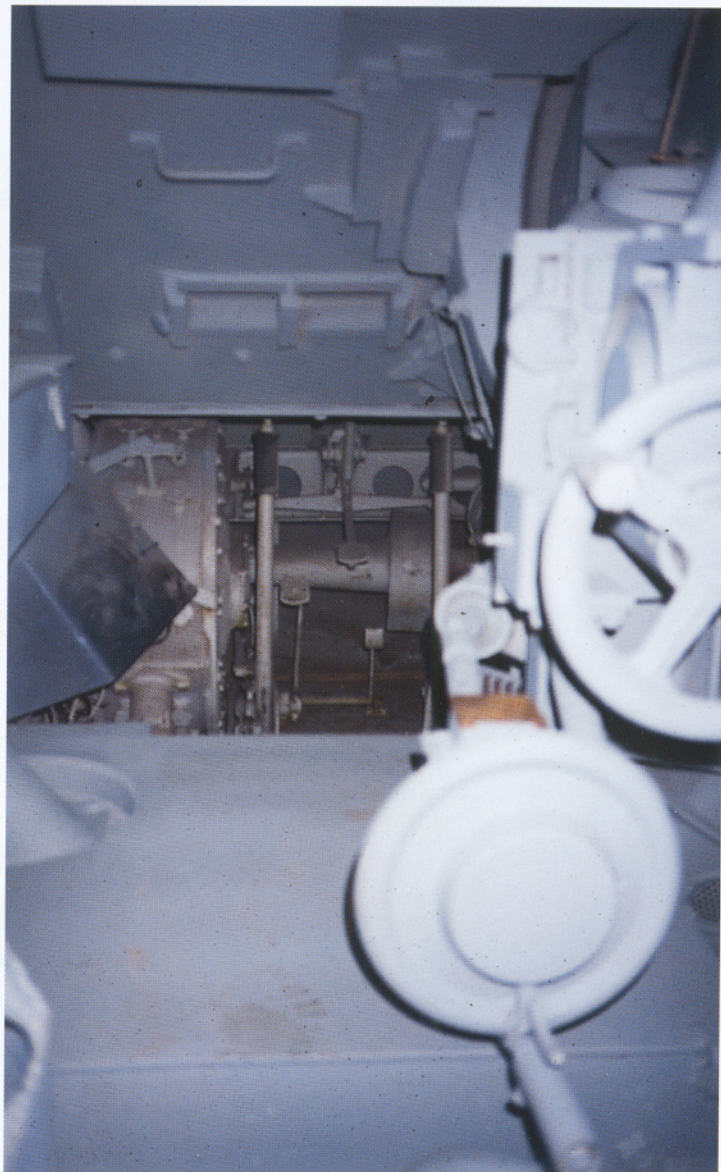




Looking toward the left across the breach at the gunner. This picture shows the relationship between the gunner's sight and the commander's range finder.

This is the view past the gunner's position into the driver's position. To the left is the final drive housing. You can see the two steering laterals (one for each track), and the clutch and accelerator pedals. In the top center of the picture, you can see the two driver vision slits.

The escape hatch on the left side floor of the fighting compartment allowed crewmen to escape a damaged vehicle quickly, or could even let someone in under fire. To the right of the photo is the transmission and drive train housing. The engine was in the rear, and the drive sprockets were in front, so the drive train had to run the length of the vehicle.





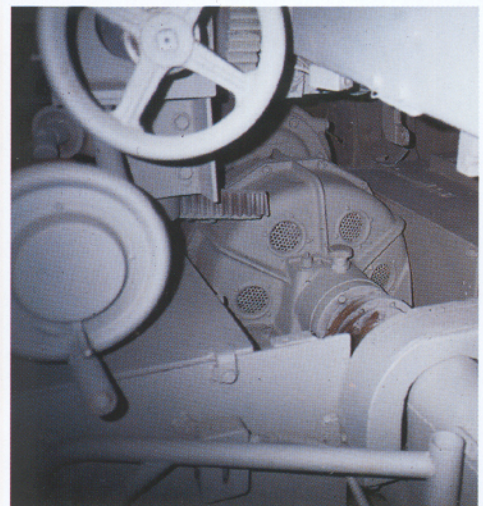
This is a good view of the breech of the 7.5cm PaK 42 L/70 gun. The recoil shield protected the gunner from getting injured by the recoil of the main gun. The loader needed more access to the breech, so had less protection on his side.

This is the loader's position to the right side of the main gun. He used the breech-operating handle seen here to open and close the breech. More ammunition storage was in the sponson to his right. Above his head is the opening for a non-rotating periscope. The loader operated the vehicle's secondary weapon, the MG42 we see here in travel lock.

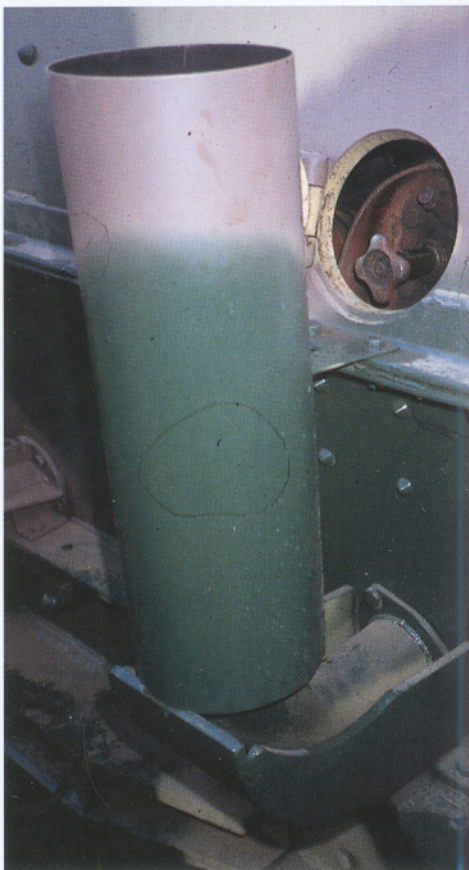


The loader did not have much of a view through a small opening above the machine gun. When not in use, the gun was stabilized with a travel lock that extended from the roof. You can see more brackets for main gun rounds folded up against the side of the fighting compartment.

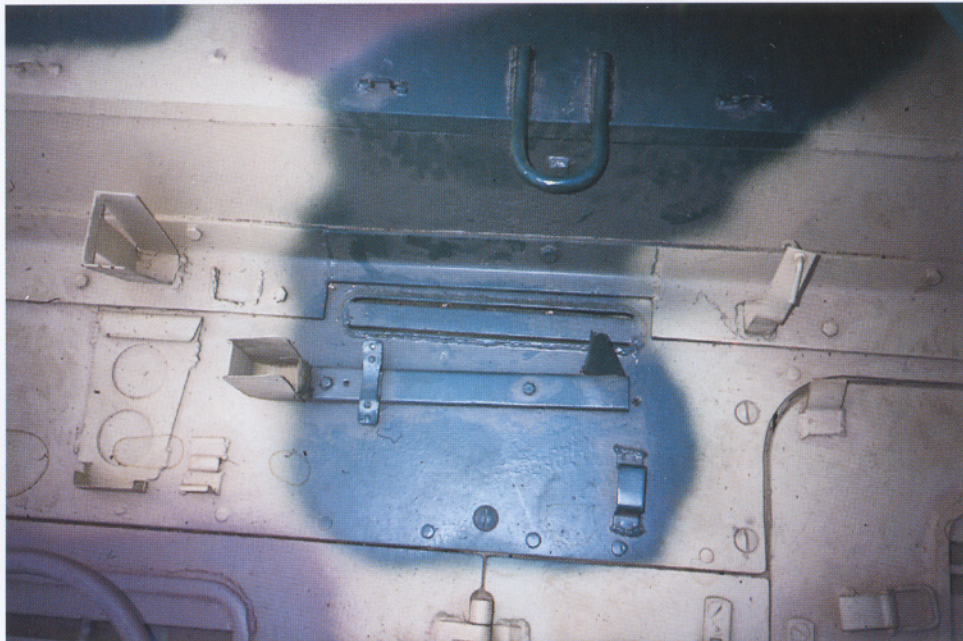
This is another view of the aft end of the transmission housing, connected to the drive train. It is located in the center of the fighting compartment directly beneath the main gun.



EXTERIOR



The exhaust pipes were protected with armored covers. The opening in the rear of the engine compartment allowed adjustment of the engine belt tension with a knob, rather than having to open up the engine compartment.

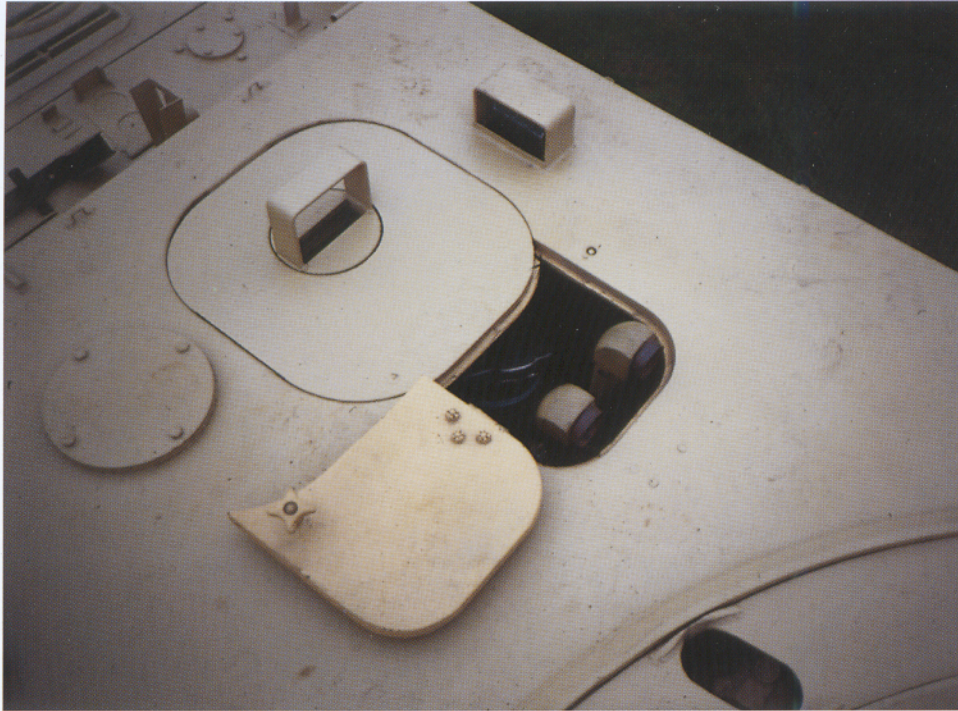


This is a view, looking forward, of the back deck where it meets the fighting compartment. The U-shaped bracket was a lifting point for removing the roof of the fighting compartment. The various brackets and latches were for attaching equipment such as gun cleaning rods, track jacks and pioneer tools.



The left rear of the engine deck that shows ventilation slits for the radiator and two half-moon brackets for pairs of spare road wheels. The smaller access hatch was for access to the radiator fill cap. Other brackets are for tools.

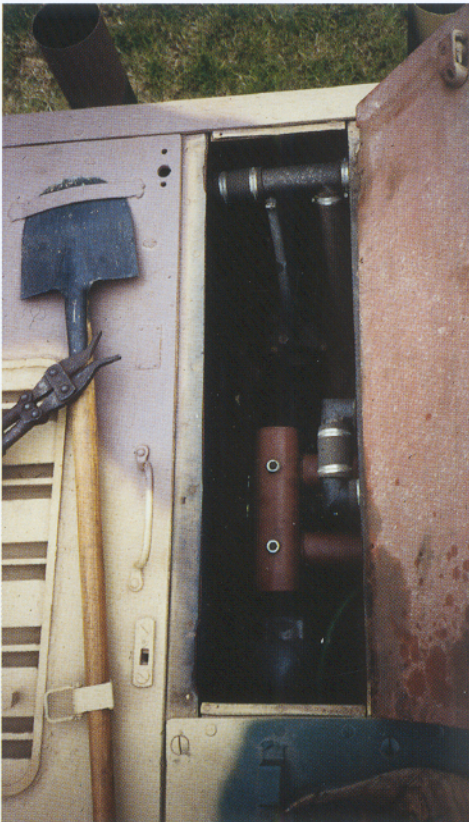
This is the left rear corner of the vehicle. Lying on top is a jack, common to all German tracked vehicles in World War II. Manually operated with the hand crank, it was used to lift road wheels, track and anything else that needed jacking.



This is a good view of the two-piece commander's hatch. To the left of the hatch is the left side fixed periscope housing. At the bottom of the photo is the gunner's sight aperture.



The left front fender showing the hinged mud flap flipped up. You can also see the power cable coming out from the hull and going up over the fender to the headlight mount. The headlight is missing. This shot provides a good view of the track detail. Note the U-Boat leather jacket worn by the vehicle commander.



The center of the engine deck looking aft. The long center access door allowed the crew to get to the carburetor. Coolant hoses are also accessible. On the left is a shovel in its proper place and the set of bolt cutters. Note the fuel and oil stains on the door and the fact that it is painted in red oxide primer.



This is a rare view of the top of this vehicle. It is pretty simple and uncluttered, as German vehicles go. To the right front of the loader's hatch is the armored cover for the fixed periscope. The commander's binocular range finder peeks out from the left side of the fighting compartment in front of the commander's hatch. The curved track at the front of the roof accommodates a sliding armored cover that protects the aperture for the gunner's sight when it is not in place. Details to note are the mounting brackets to the rear of the fighting compartment that held the gun cleaning rods. To the bottom right of the photo, you can see the mounting points for shurtzen.



Another rare view of the back deck and rear of the fighting compartment. Note the engine access hatches with ventilation slits, the mounting brackets for spare road wheels and tools, the radio antenna mount, and the shape of the two hatches. You can also see the thickness of the rear side armor and their forward attachment brackets.

The details of the rear of the vehicle are evident here. Note the exhaust pipes without their armor sleeves, the idler arms attached to the rear plate, and the simple towing pintle. This view gives the modeler a good idea of the wear points on the track. This is a late production vehicle as evident by the three track return rollers. Earlier models had four.

German steel track was "dead track," so it sagged between return rollers from its own weight. You can see some of the detail on the road wheel mounts where they attach to the hull. Note the attachment points for shurtzen and the all steel roads wheels in the first two positions. The rest are rubber rimmed.





Details of the drive sprocket, track and front fender. Because the vehicle was nose-heavy, the first two road wheel stations utilized all-steel road wheels. The track return rollers were also of steel. Note the wear on the center guides of the track.

Details of the right idler wheel and housing. The idler wheel could be adjusted to tighten or reduce track tension.

Details evident in this view are the MG42 port, which had a pivoting conical armored cover; the casting marks on the mantlet; the interlocking armor plates; and the fender support bracket.



CREWS



Crew members check the suspension. Preventive maintenance on armored vehicles is critical. If a road wheel goes bad, you could lose a track. Lose a track, and you are left behind. If a tank can't move, it is vulnerable, and not much more than a pillbox. Crews checked the suspension often. Note the interlocking armor plates on the front hull and the details of the main gun travel lock.

The commander confers with a courier, who has arrived on his motorcycle and sidecar. The commander wears the oak leaf pattern 1944 camouflage uniform. The courier wears trousers made of Italian camouflage material, a field gray jersey shirt with epaulets, and a helmet with camouflage cover. His goggles are around his neck.



The driver of a Kubelwagen and the Panzer IV/70 loader exchange a few words and perhaps some new information. Directly in front of the loader is the right side fixed periscope. The canvas top of the Kubelwagen is collapsed in the stowed position.



The commander's hatch and detail of his binocular range finder. This is the same range finder as used by ground units in other branches of the service. It was attached to a special mount that could be raised into position or lowered from inside the vehicle. On the inside of the hatch cover, you can see the spring detail and housing for the rotating periscope.

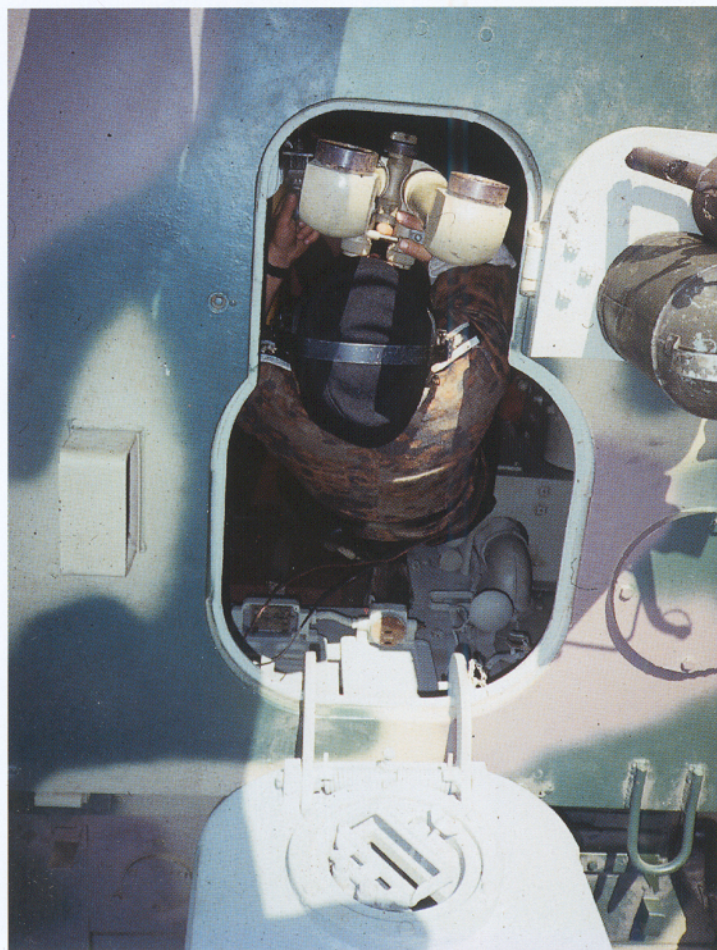


A crewman holds the binocular range finder, while the gunner's sight lies to his right. To his left is the fixed periscope housing, and above his head, you can see the details of the periscope housing for the hatch cover.



Another view of the commander's hatch. In this one, the binocular range finder is in its mounted position. The two-piece hatch is evident.

This view is straight down on top of the commander as he looks through the binocular range finder. Note that the wires from his head set and throat microphone plug into a junction box on the rear of the fighting compartment.



The vehicle commander, resplendent in his U-boat leather jacket, surveys the battlefield. In typical fashion, he listens to the chatter on his headset through one ear, but the other is free to take in outside sounds. His throat microphone is in place in case he needs to give orders to the crew or speak to another vehicle, and he carries a map case on his hip. His binocular range finder is in its "up" position. Note the knob, which locks down the hatch cover when it is closed.





Three main gun rounds are stored nose down in a ready rack next to the gunner's position. The geared shaft on the left is the attachment for the binocular range finder. It is raised and lowered by the crank handle. Note the swing-out brackets for other main gun rounds and the interesting weld bead pattern at the top of the side.



The loader removes one of the main gun rounds from the storage rack in the sponson. To the right in the photo is the rack for the radios. It is obvious that there isn't much room to maneuver the big rounds in the fighting compartment.

The driver at his duty station. It wasn't very comfortable, and there wasn't much room. You can imagine the driver getting out of the vehicle to sit on top whenever they were stopped. He looks through two vision slits in the front glacis and steers with two laterals. The main gun is above and to his right.

The loader sights and fires the secondary machine gun. To his right, we see the empty main gun round racks folded up against the wall of the fighting compartment. Note the large earpieces of the headset.





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