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Wespe in detail®

František Kořán
Jiří Starosta

Sd.Kfz 124 Wespe in WTS Museum at Koblenz

PHOTO MANUAL FOR MODELERS®

Wespe in detail®

SPECIAL MUSEUM LINE n° 20

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Wespe in collection of the WTS Museum at Koblenz.
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Spielberger - Panzerkampfwagen I und II
Spielberger, Feist - Sturmartillerie
Chamberlain, Ellis, Batchelor - German Fighting Vehicles 1939-45
Wespe, Nuts & Bolts Vol. 2
Panzers at Saumur No. 3, Dai Nippo Kaiga 1992
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Contact address: RAK, P. O. Box 35
170 06, Prague 7, Czech Republic
e-mail: wwp.rak@iol.cz, fkoran@mac.com

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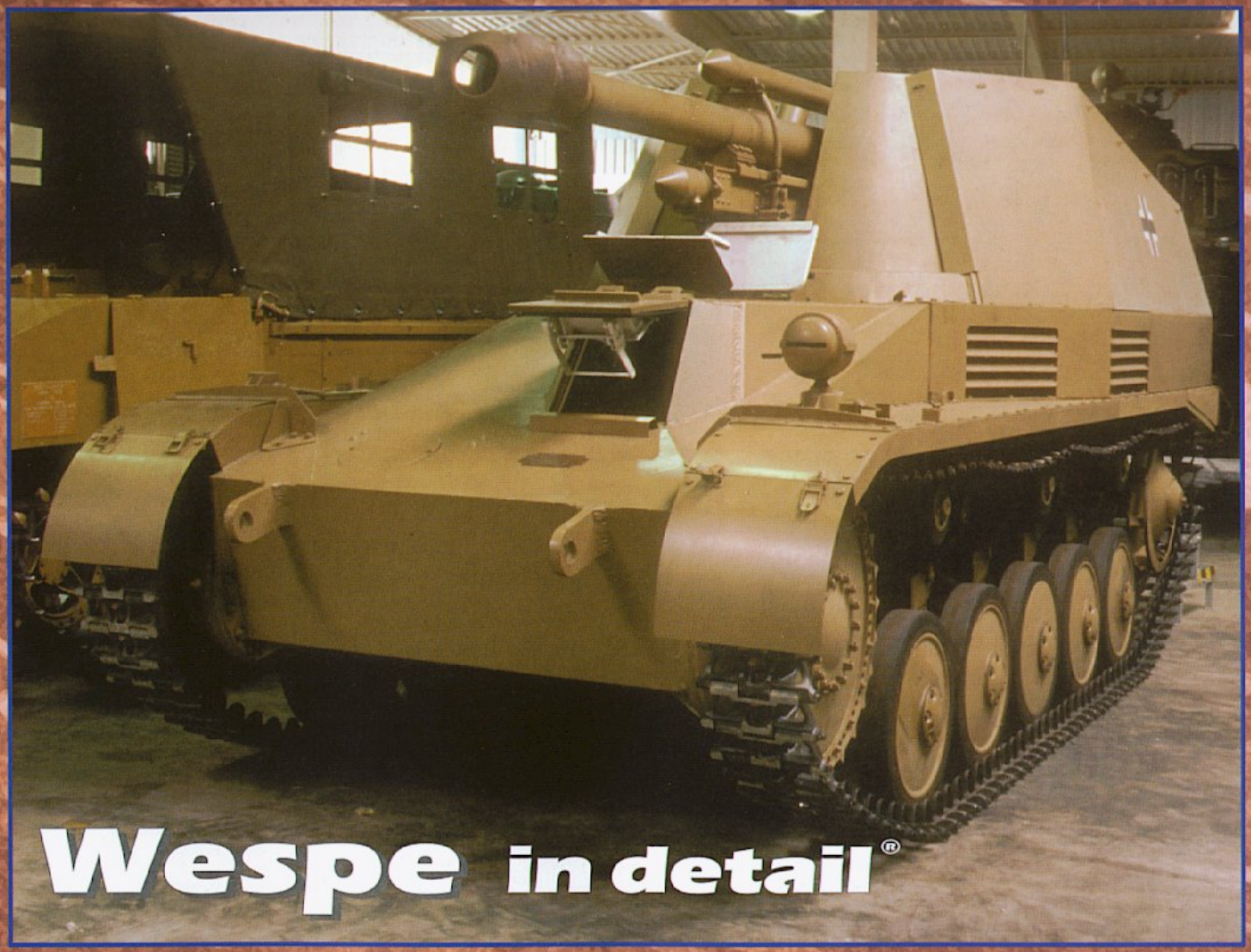

Wespe in detail®

Sd.Kfz 124 Wespe in WTS Museum at Koblenz, Germany

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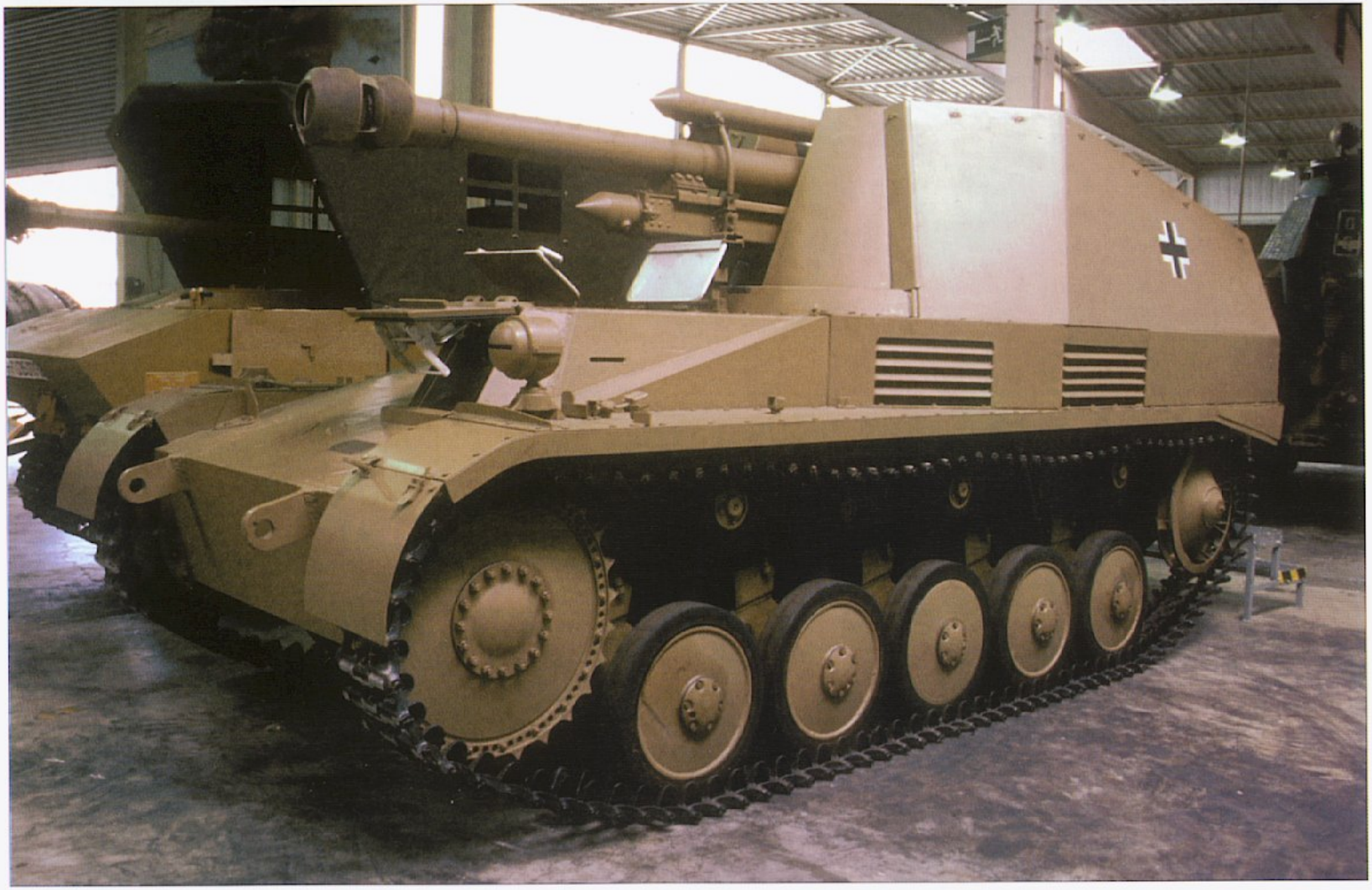
Sd.Kfz 124 Wespe Walk Around

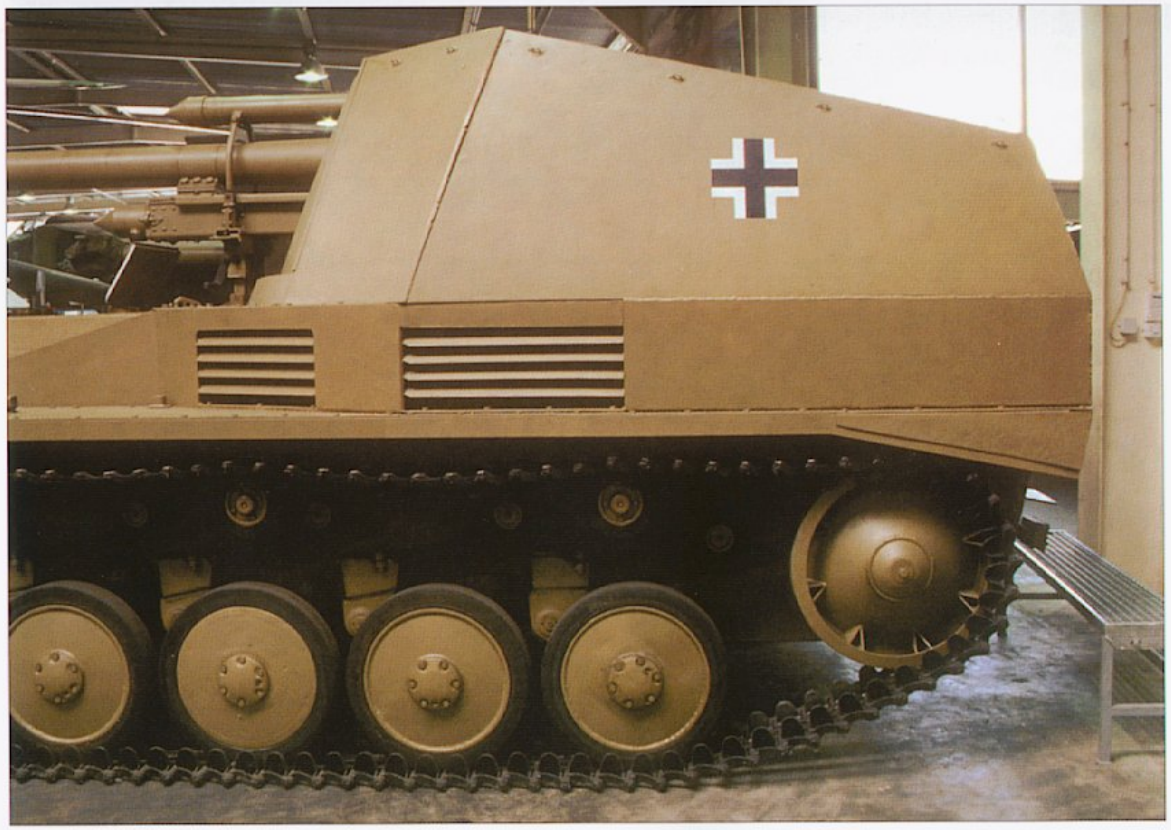


As of 1942 there were no armored self-propelled guns in use by the German Army. As the Russian campaign progressed, the need becaming increasingly apparent. On January 23, 1942 Hitler ordered the organization of self-propelled artillery units. The self-propelled guns known as Panzer-Haubitzen (armored howitzers) had a carriage equipped with tracks and guns mounted on the carrige either on cross supports or pivots. The advantage of these vehicles was their high battlefield mobility, excellent cross-country maneuverability, high radius, and above all their all-around firing capability. The armor of these vehicles was not as thick as that used on tanks, but the new vehicles were not intended to act as first line guns. The armor was enough to protect the crew from grenade fragments and infantry weapons.

The Gwll fuer die LeFH 18/2 (Sd.Kfz. 124) Wespe went into production at Fahrzeug und Motorwerke GmbH (FAMO) in Breslau and Warsaw in Poland. The Pz.Kpfw. II Ausf F was selected for carrying the 105mm light field gun and the first Wespe left the production line in December 1942. In February 1943 Hitler ordered that the total production of Panzer IIs be diverted to this purpose. This measure was based on the popularity of field service of first-produced pieces

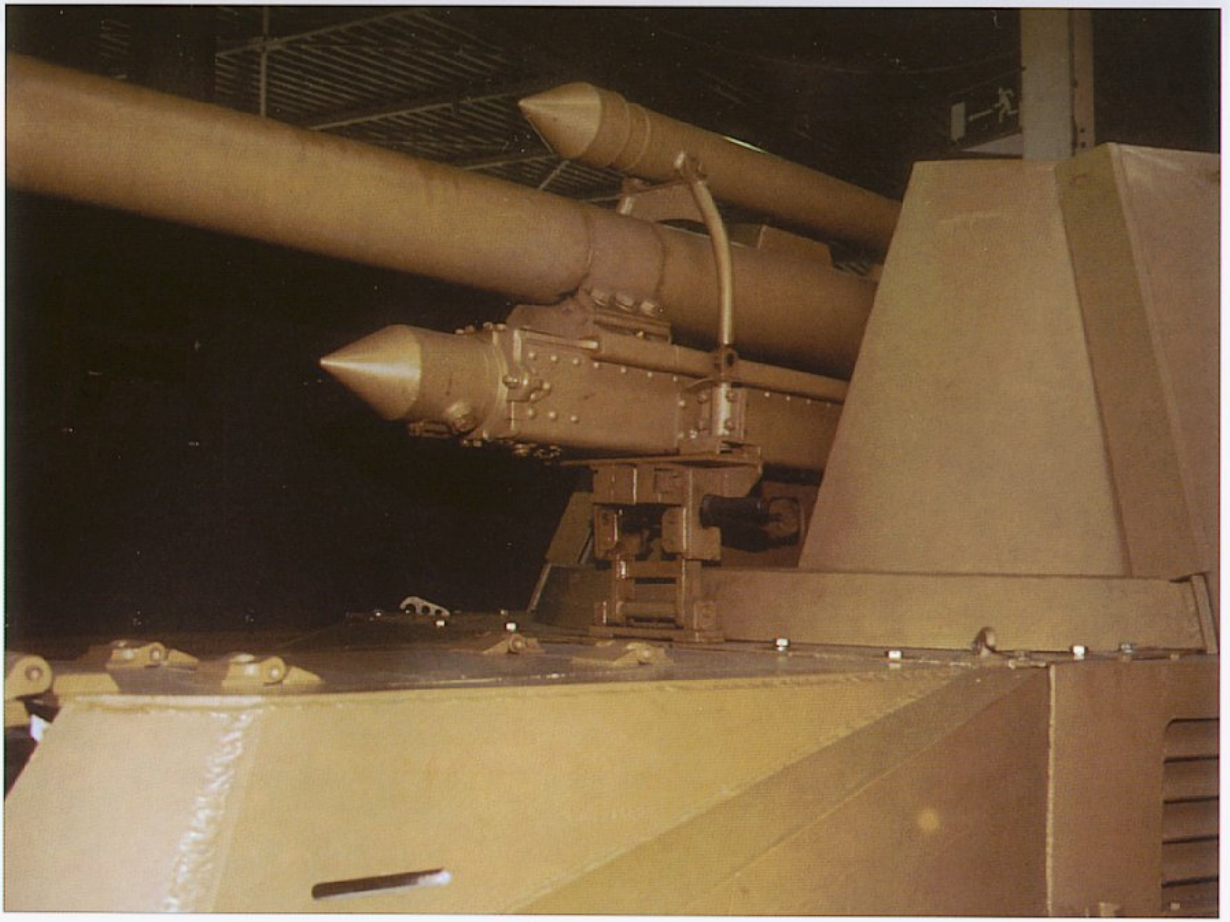
and early attempts at standardization. The main reason was probably the effectiveness of new hollow charge artillery ammunition that could supplant the conventional anti-tank guns.

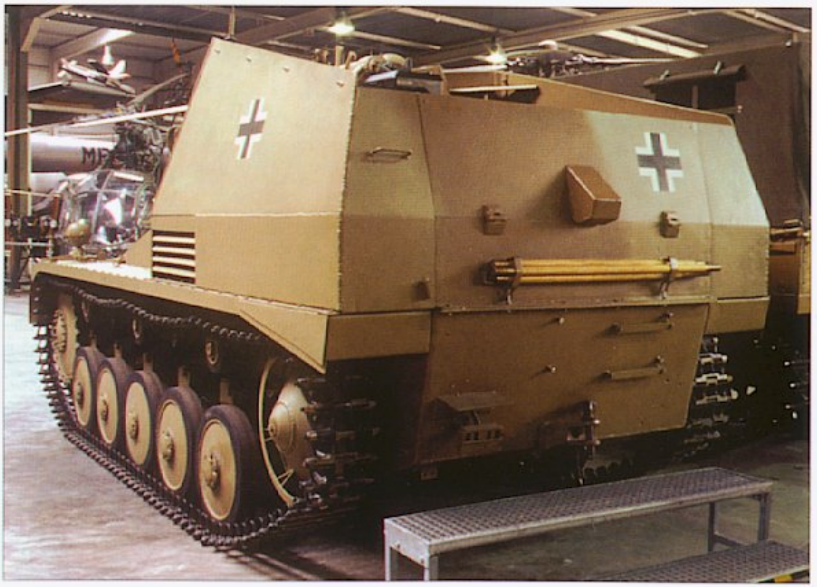
This small self-propelled gun was probably the best known of all the German artillery pieces. The idea was excellent - to combine the then obsolete chassis of a Panzer II (for which there was ample production capacity) and a proven artillery piece with sufficient caliber that was not too heavy as to overload the chassis. The superstructure was a simple open box with a slot for the gun and high sloping sides, and an open back. The original engine was moved from the rear to the mid position, and the driveręs compartment and gear box remained in their original positions. The fuel tank that was originally in the fighting compartment on the driver's right was moved to the back below the fighting compartment. Thus there was not much additional work from the original series factory production. Despite the height of the Wespe's superstructure, the sides only concealed the crew from the shoulders downward, with higher exposure from the rear. Therefore the crew was more at peril, but as mentioned previously this vehicle was not intended for first line fighting, and the armor provided adequate protection for most actions.

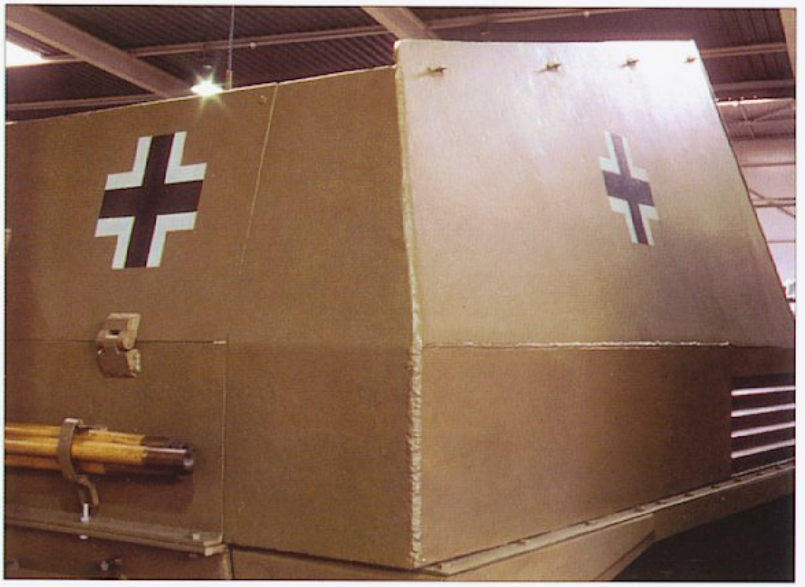


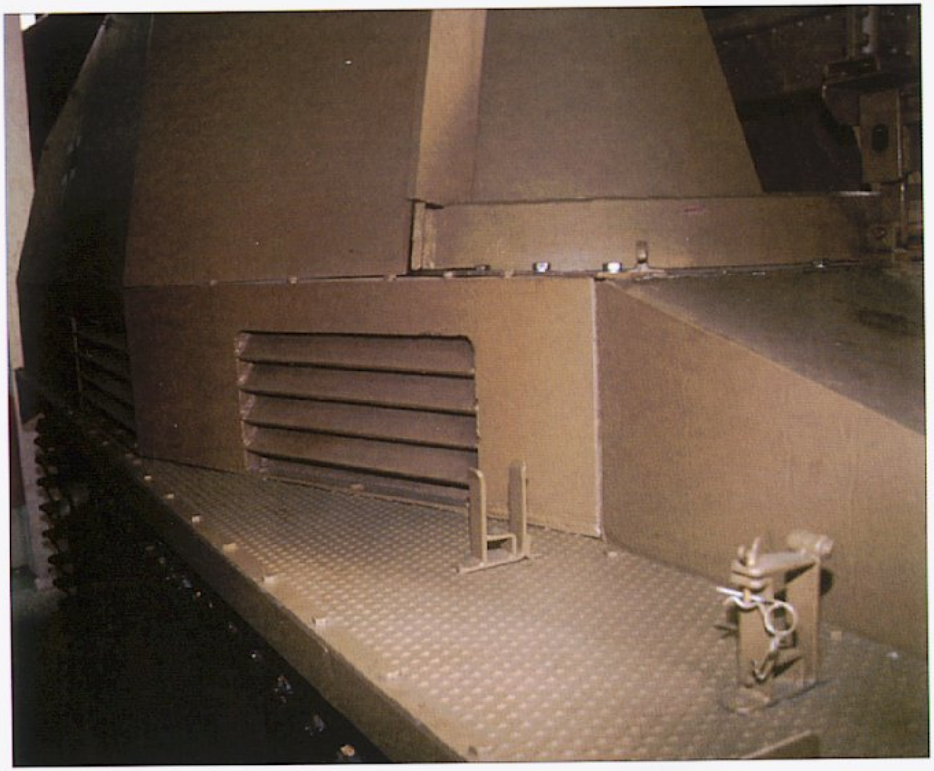
The gun was the standard 105mm field gun of Rheinmetall-Borsig design. It had an elevation of 40 degrees and traverse of 20 degrees to the right and 20 degrees to the left. The elevation was generous enough but the traverse was sometimes a problem, and the driver actually had to move the vehicle under fighting conditions. The gun barrel had to be changed after every 10,000 rounds. These operations were mostly carried out in the field and only a small crane was used for the barrel change. The gun was hand fired and used Rbl F 36 optical instruments for aiming. In addition to Rheinmetall-Borsig, other manufacturers were used to create the 105mm, including Schichau at Elbing, Krupp at Marksteadt, and Menck und Hambrock in Hamburg. There were a total of 108 links on each side of the Wespe's tracks, with a total weight on each side of 385 kg. A total of 682 Wespes were manufactured in World War Two.

The crew consisted of a driver and and a four-man gun team in the fighting compartment. The space was cramped and only 32 rounds of ammunition could be carried for the gun. This meant that the Wespe had to be accompanied by an ammunition carrier, which was a normal series production Wespe without the gun. This vehicle carried 90 rounds and was designated Munitions-Selbstfahrlafette auf Fahrgestell Panzerkampfwagen II (SfP Gw II). In addition to the armed Wespe, 158 of these ammo carriers were produced during the war. They had a crew of three men - a driver and two ammo loaders. With 90 rounds of ammunition the vehicle weighed about 11 tons - the same as the fully armed Wespe. With minor changes these ammunition carriers could be used as armored personnel carriers. The carriers always operated in conjunction with the Wespe.







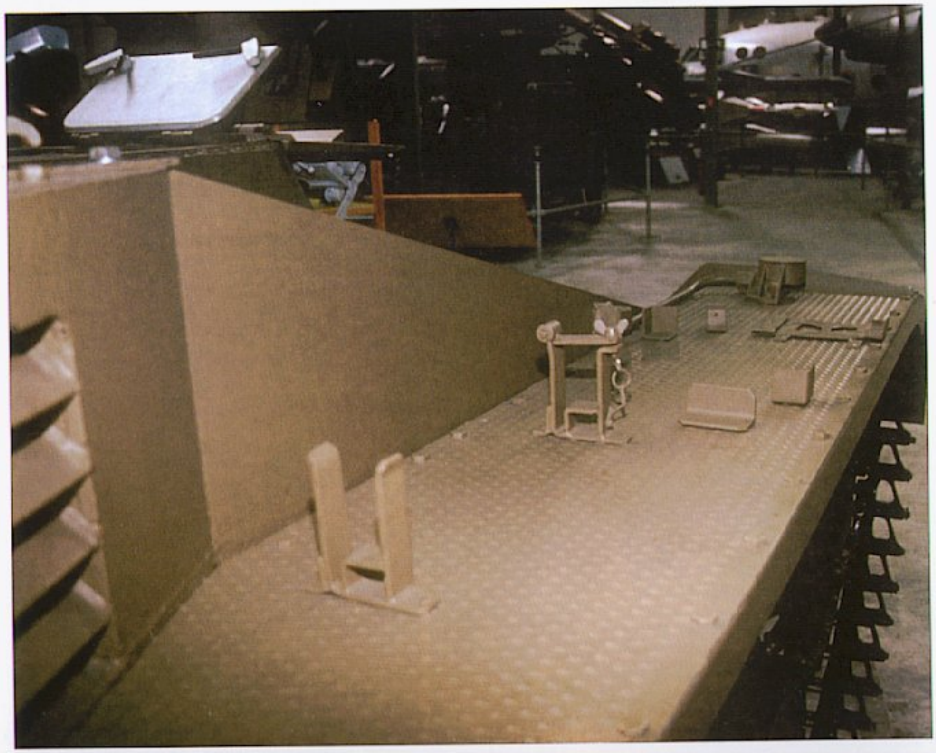


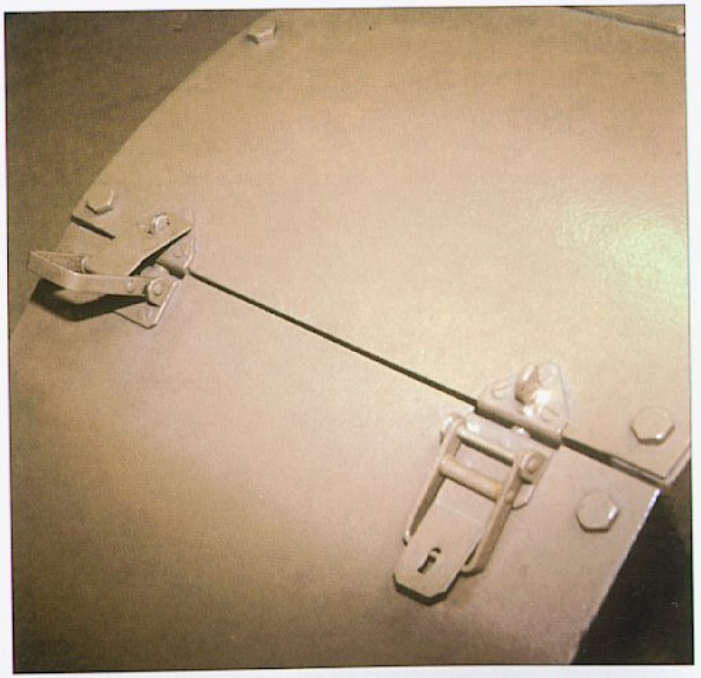
Exterior Details

Technical specifications:

Engine: Maybach HL-62 TRM
Displacement: 6191 ccm
Output: 140 hp
Starter: Bosch
Coolant: Water
Number of speeds: 6 forward, 1 reverse
Highest speed: 40 km/h paved,
20 km/h cross country
Brake manufacturer: MAN/FAMO
Width: 2280 mm
Firing height: 1940 mm
Fuel consumption:
90 litres/100 km paved,
135 liters/100km cross country
Number of cylinders: 6 in line
RPM: 2,600
Carburetor: 1x Solex 40 JFF II
Battery: 1x 12 volts 120 Ah
Gearing: F and S K 230 K
Running wheels: Front
Brakes: Mechanical
Turning diameter: 4.8 meters
Lenghth: 5810 mm
Height: 2300 mm
Chassis weight: 6800 Kg
Fuel tank: 200 liters

Armor: 18 mm front, 14.5mm sides and rear, 10mm superstructure
Design firm: ALKETT, Berlin

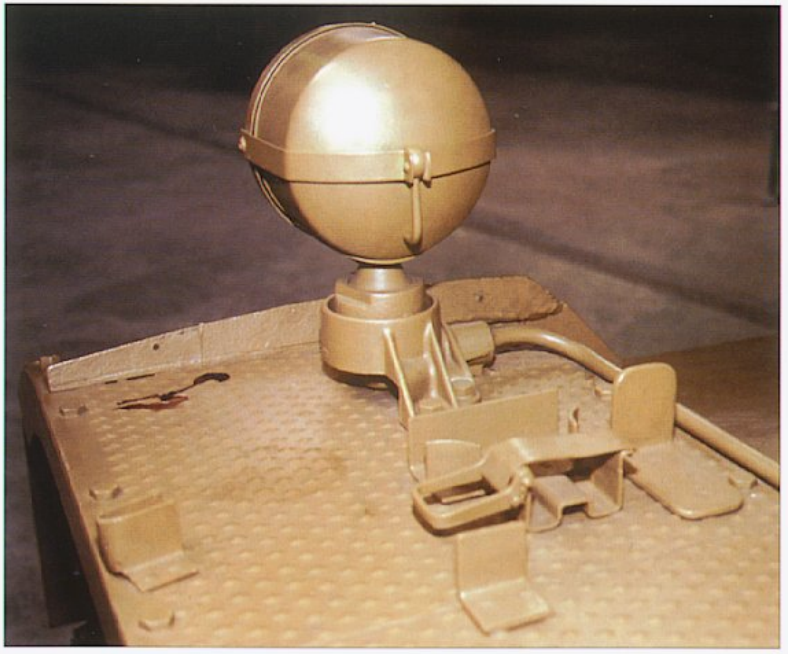




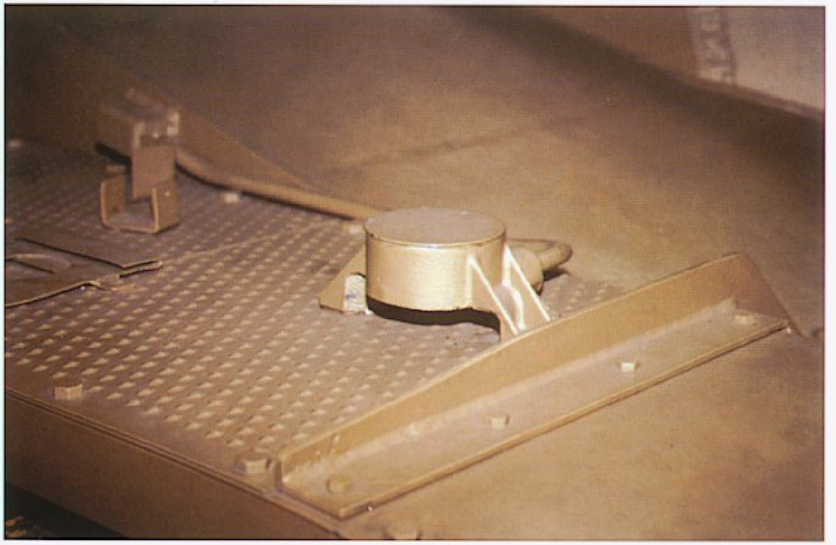
Details of fenders with empty brackets for tools. Note the engine louvres and folding mudguard flap.

By the beginning of 1944 there were still 346 Wespes in service on the east, west, and southeast fronts. Panzer divisions of the Army and Waffen-SS included 38 Light PanzerHaubitze Abteilungen, at minimum 76 LeFH batteries with Wespes, and at maximum 85 with the Panzer Brigades and special units. It is interesting to note the prices for the chassis and the 105mm gun; the Wespe chassis cost 49,228 Reichsmarks and the gun cost 16,400. Total price for the Wespe therefore was 65,628 Reichsmarks.

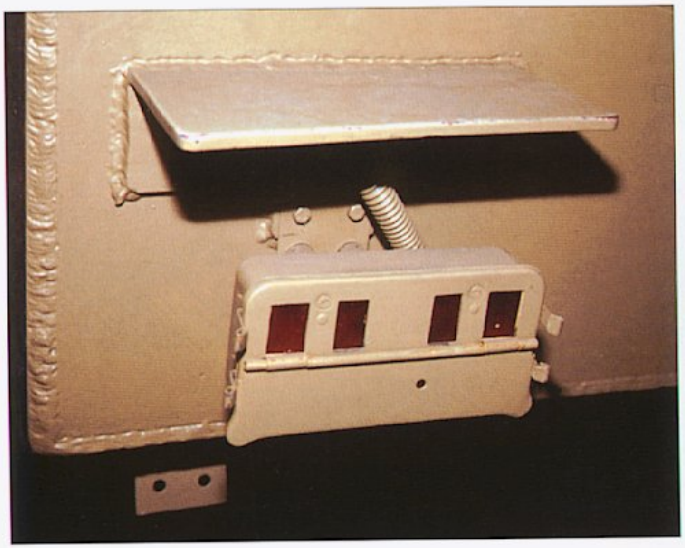
Though the vehicle was rather high and was unstable during cross country maneuvers, it was a reasonable sucess and one of the more highly produced German self-propelled howitzers of World War Two. The chassis was certainly overloaded but the Wespe served a full four years of active service.



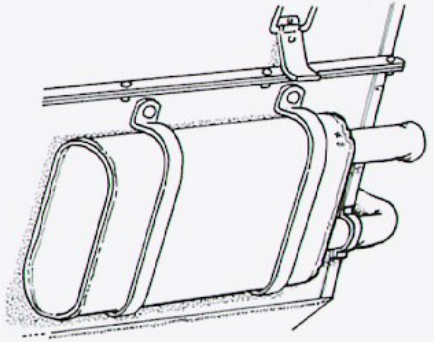
Light mounted on the right fender. All vehicles on the Panzer II chassis were designed to use two lights, one on each fender. Some Wespes used one, some used two. The second mount on the fender is empty.

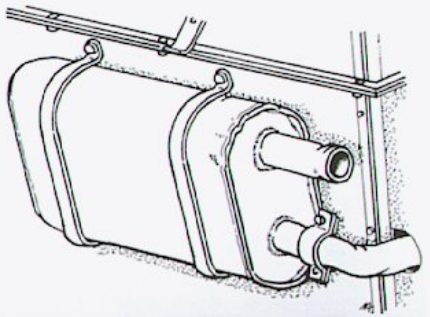


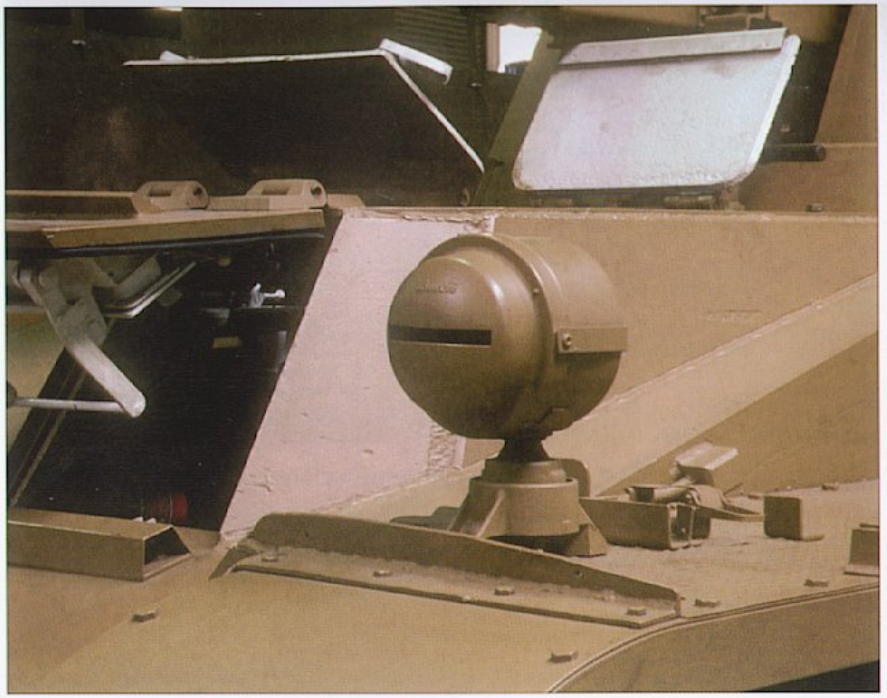
Exterior Details



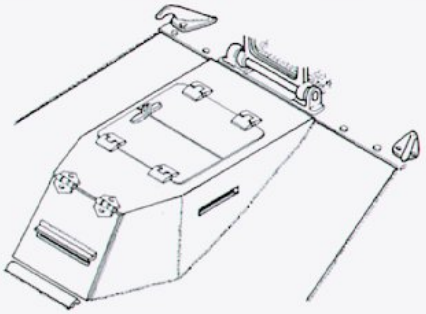
Rear view of the vehicle. At upper right is the original taillight. The towing device is on the left, and range marking poles are above. In the same photo note the oblique box on the rear doors had to protrude outside to allow space for the gun's travel lock. Below are drawings of the muffler and exhaust pipe.



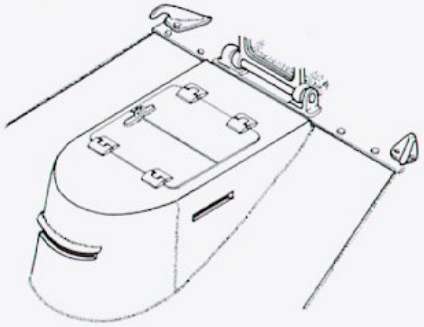


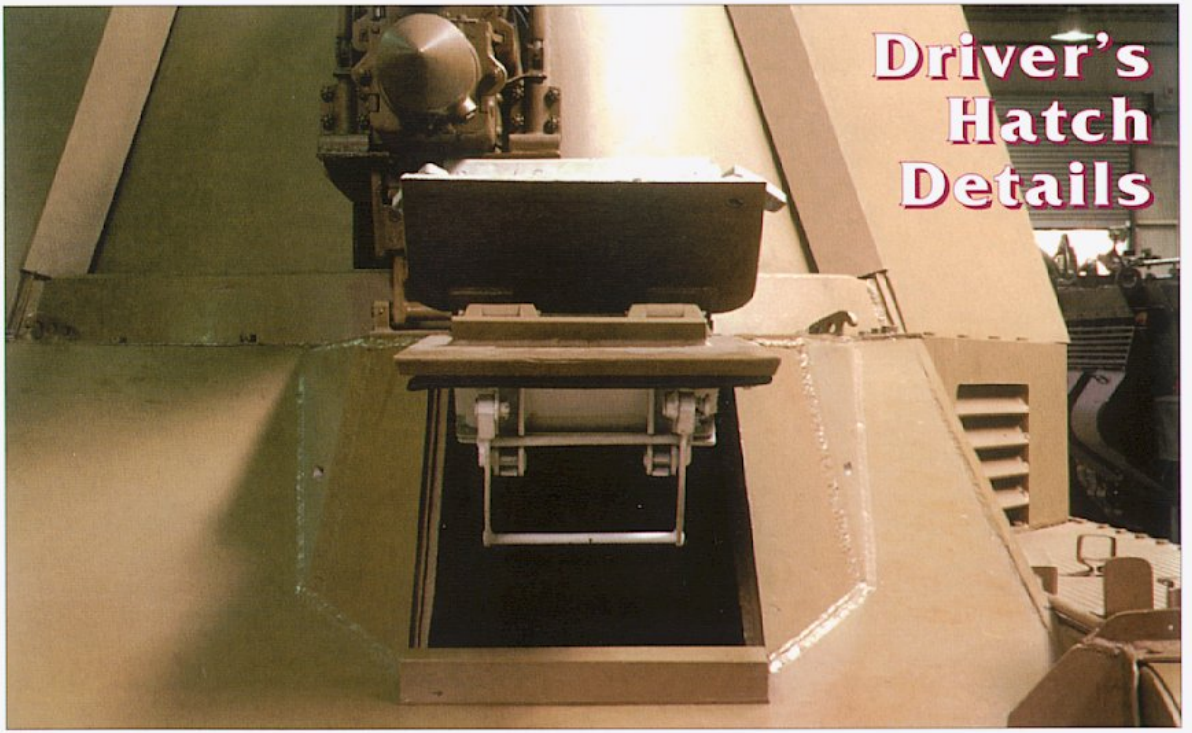


Note the difference in hinges on the driver's hatch.

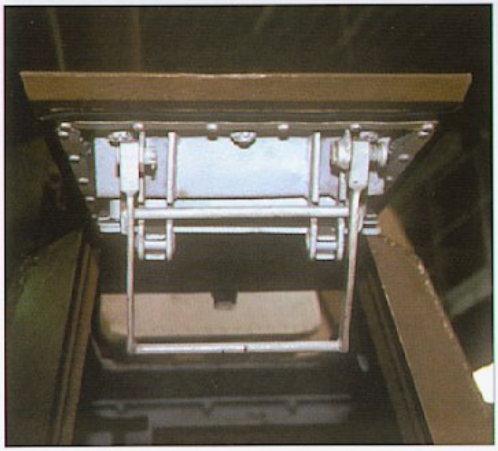


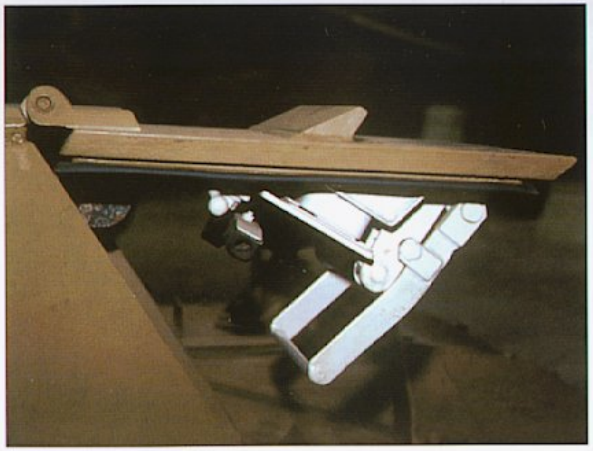
Below left is a different driver's hatch with rounded armor plate - not a common feature on the Wespe.

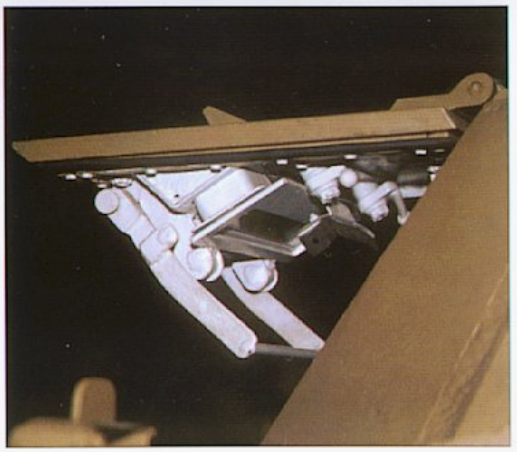




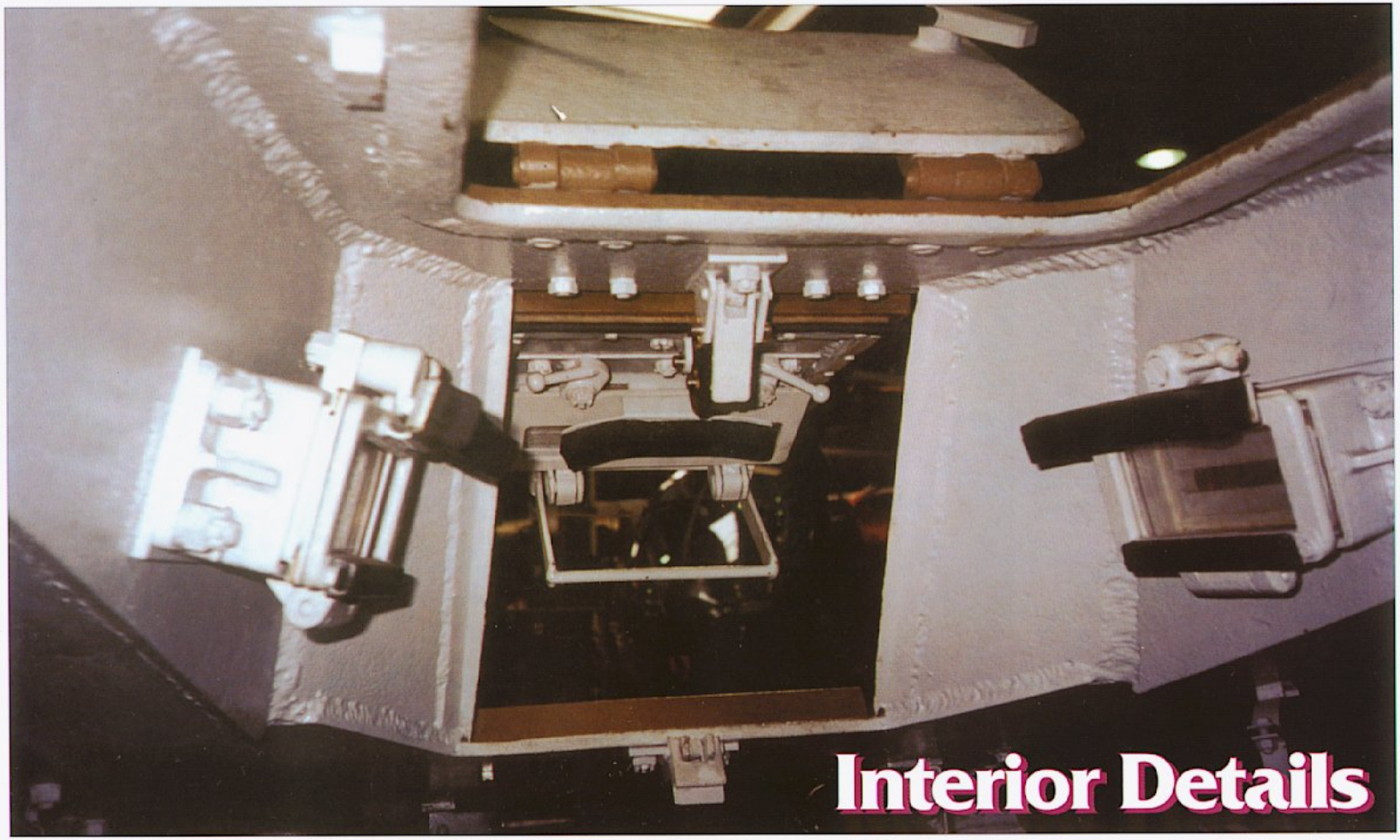
Driver's Hatch Details





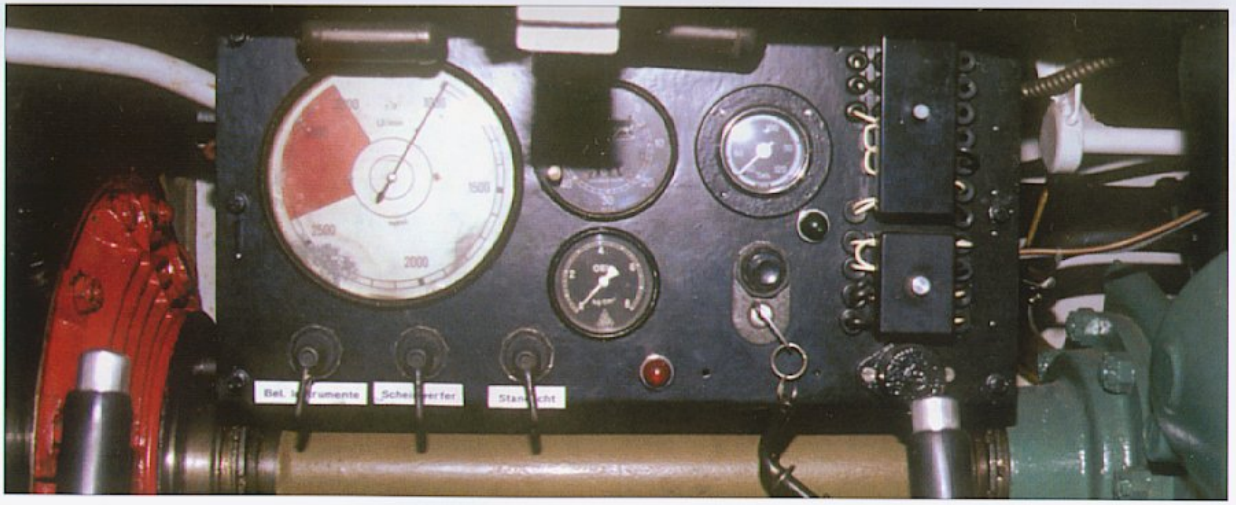


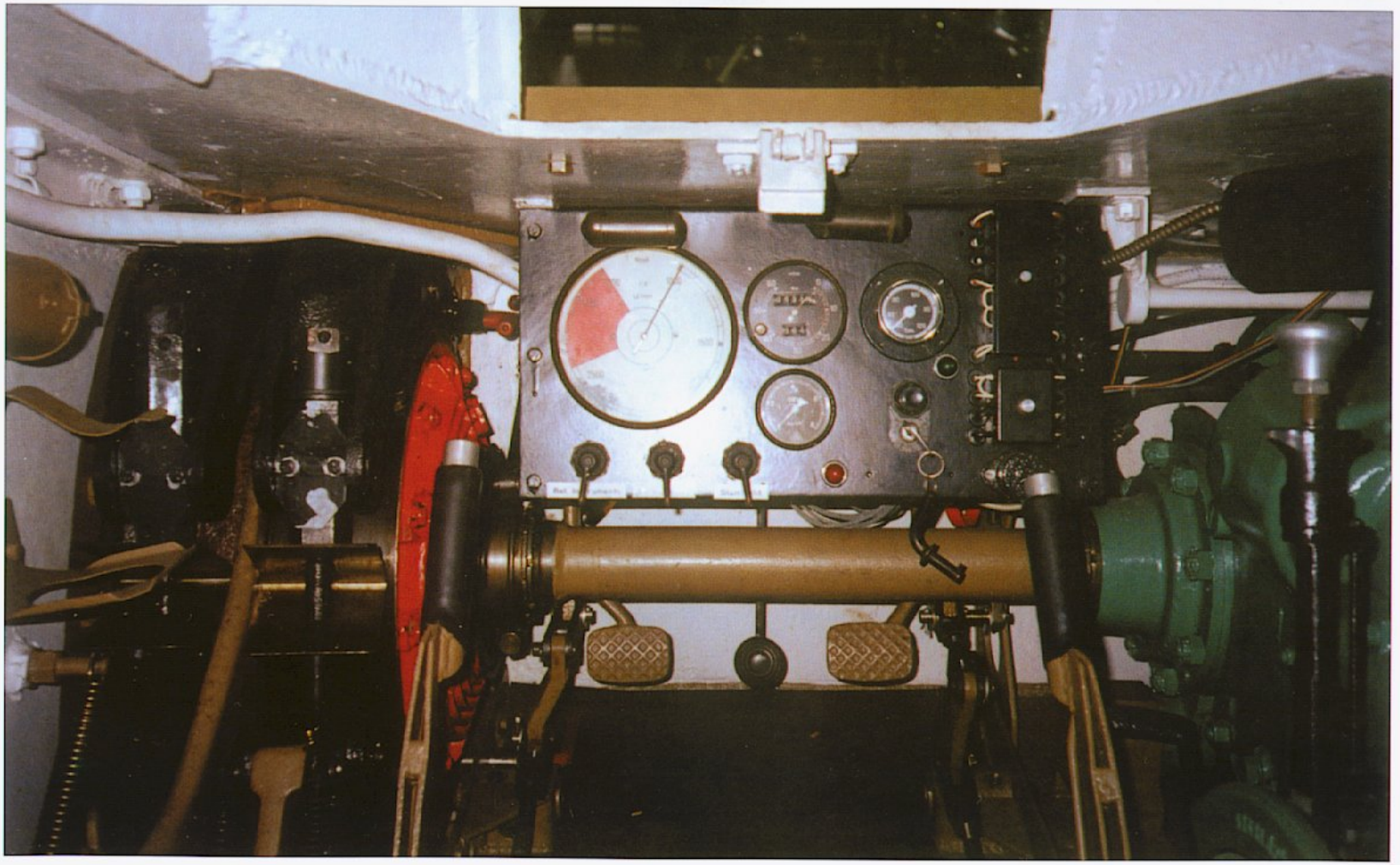
Driver's vision flaps from front and sides. Photo below - View from driver's compartment with flap and hatch opened. Note the side vision ports on right and left inside the driver's compartment. Originally these contained glass blocks.

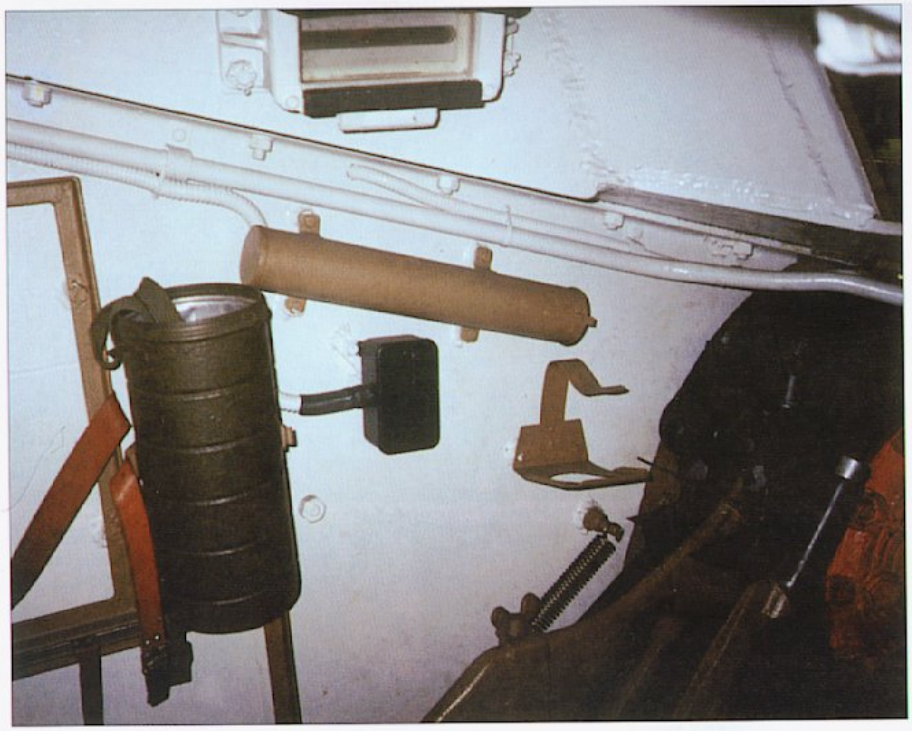


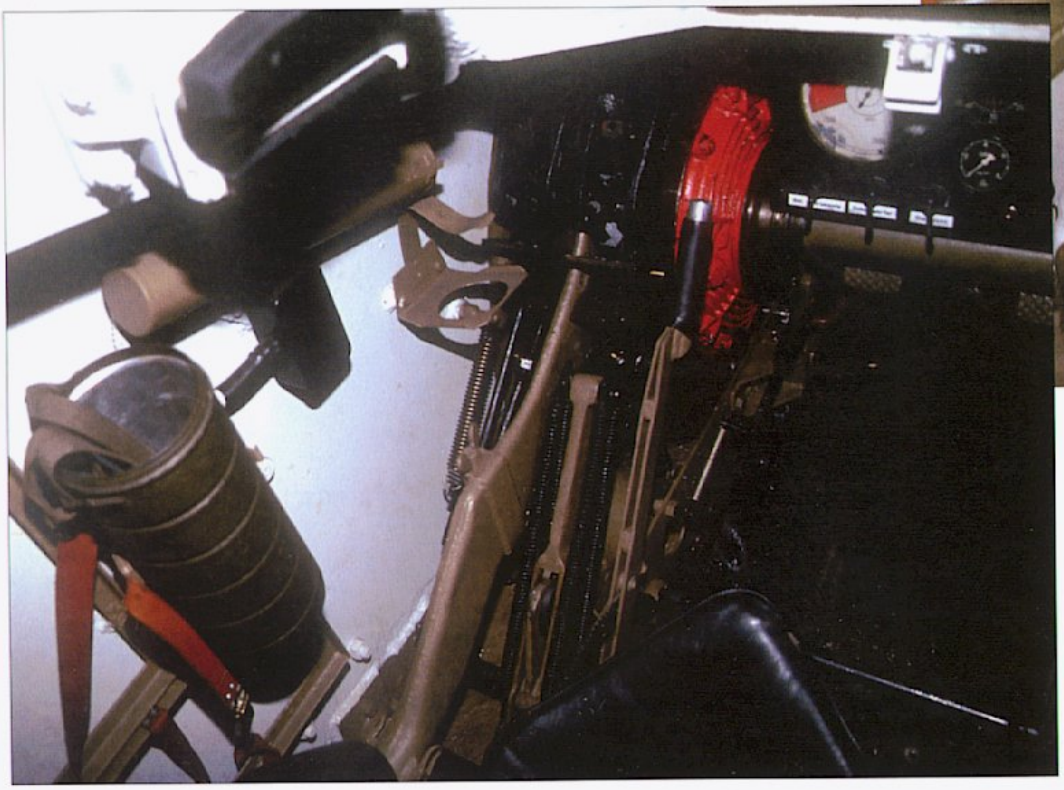
Interior Details

Photos on this page show the instrument panel. This panel was standard on all Panzer II chassis including the Wespe. Also standardized was the full layout of the driver's compartment, steering, and transmission. Below - Shaft from the transmission to the running wheel. Note the classic layout of pedals: from left are the brake, clutch and accelerator. Left and right steering handles are also evident. On the right side is the gear lever, which moves forward and backward.





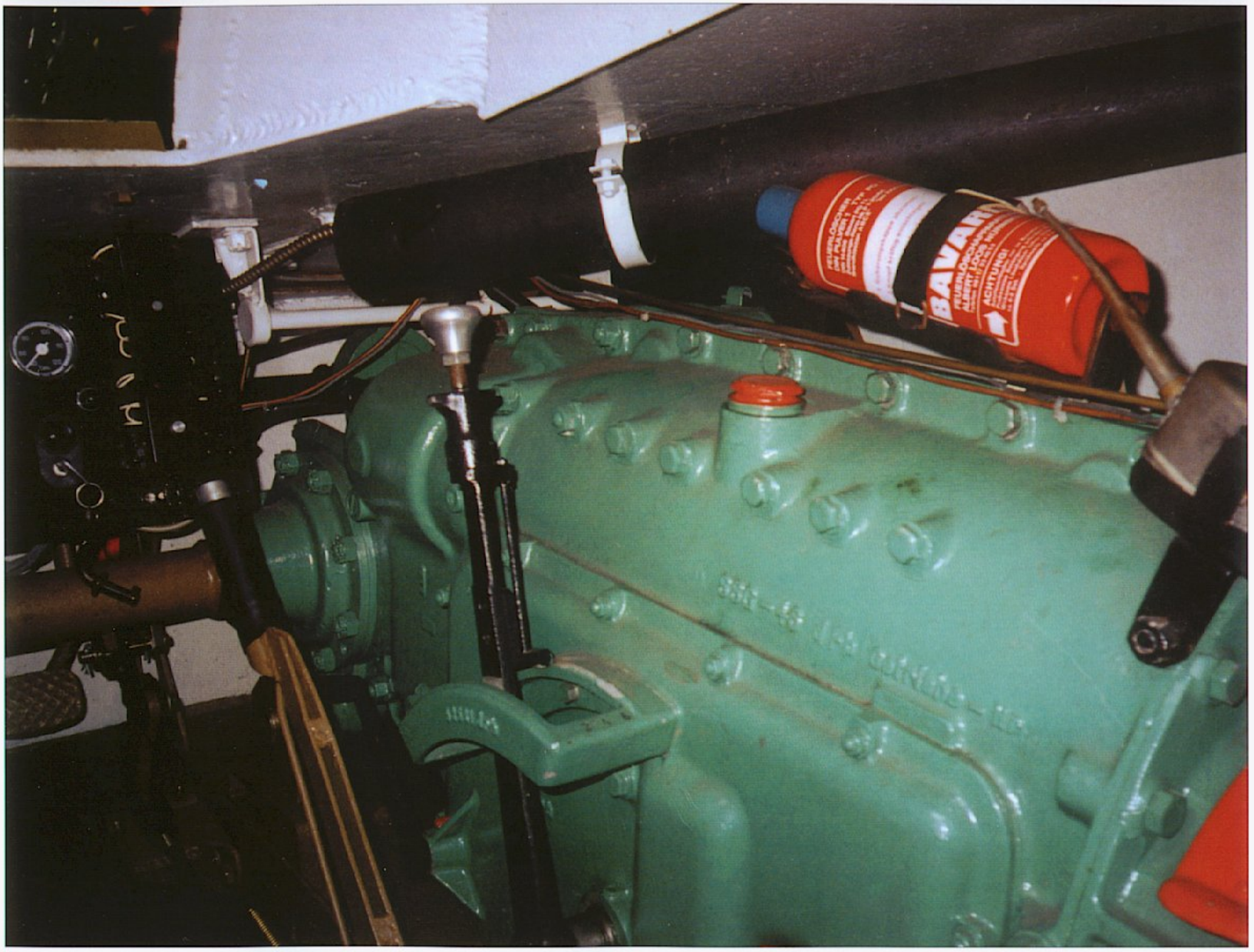




Driver's Compartment Details

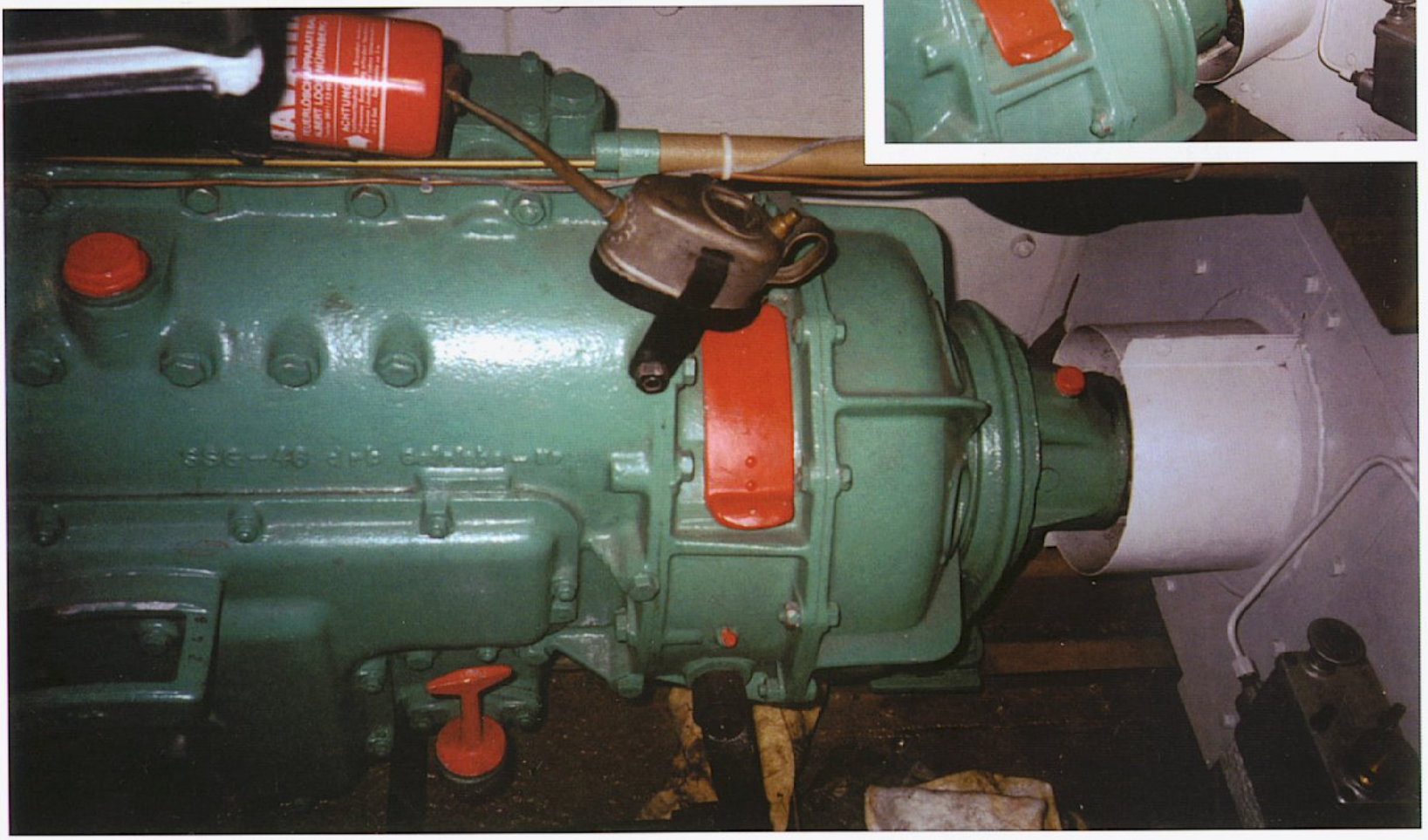
Driver's compartment details and stowage. Note the springs behind the running wheel inside the vehicle.

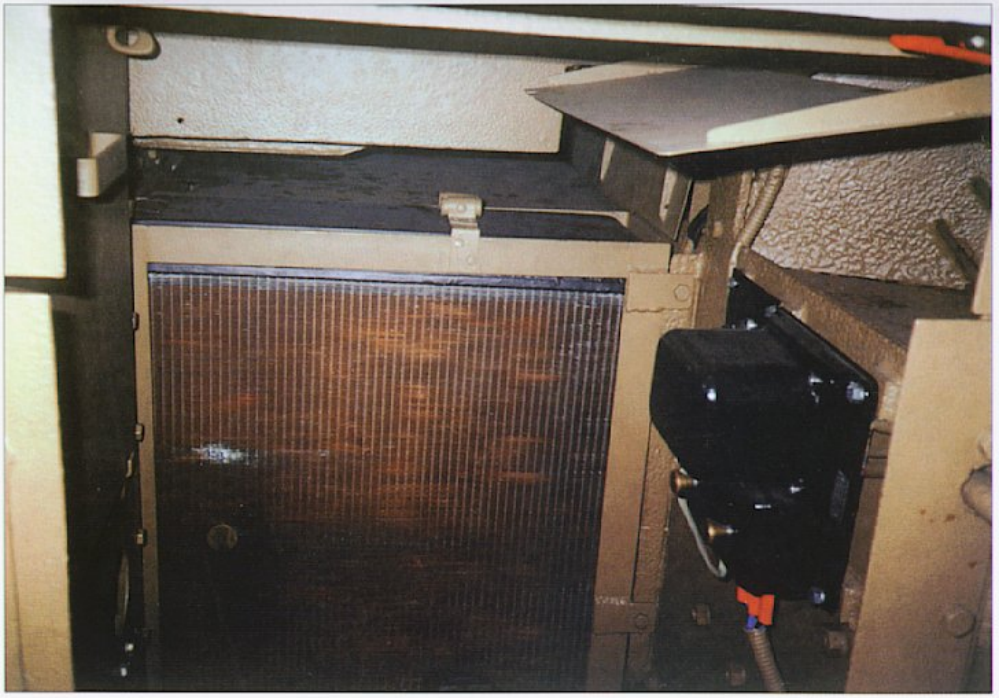
Wespe Driver's Compartment Details

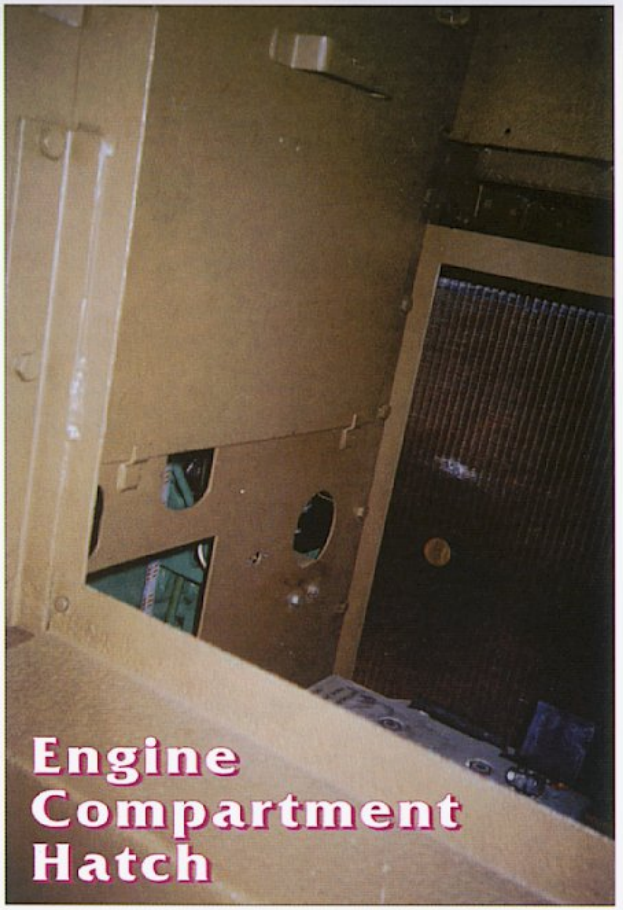


Pages 13 and 14 - Transmission details inside the driver's compartment. Instrument panel is on the left side and one steering handle is on the right side. At the extreme right is the gear lever with 6 speeds forward and one reverse. The transmission block was painted green, as was standard on all German armored vehicles. Above is the transmission block with fire extinguisher on top (not original) and oil can mounted on the block. On the Wespe the oil can holder was located on the last upper screw; on the Panzer II, this item was located on the second screw from the right. Note the bulkhead dividing the driver and engine compartments.

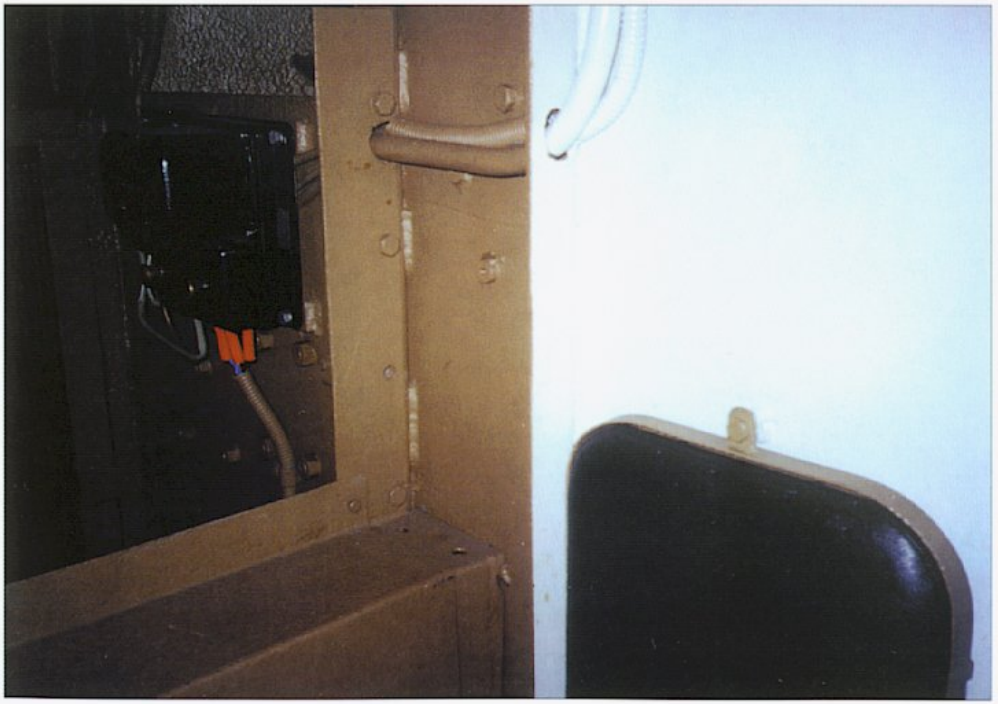
Transmission Details

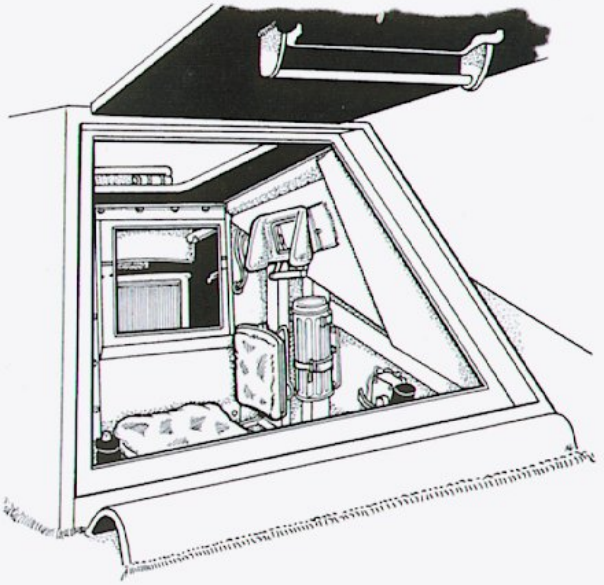




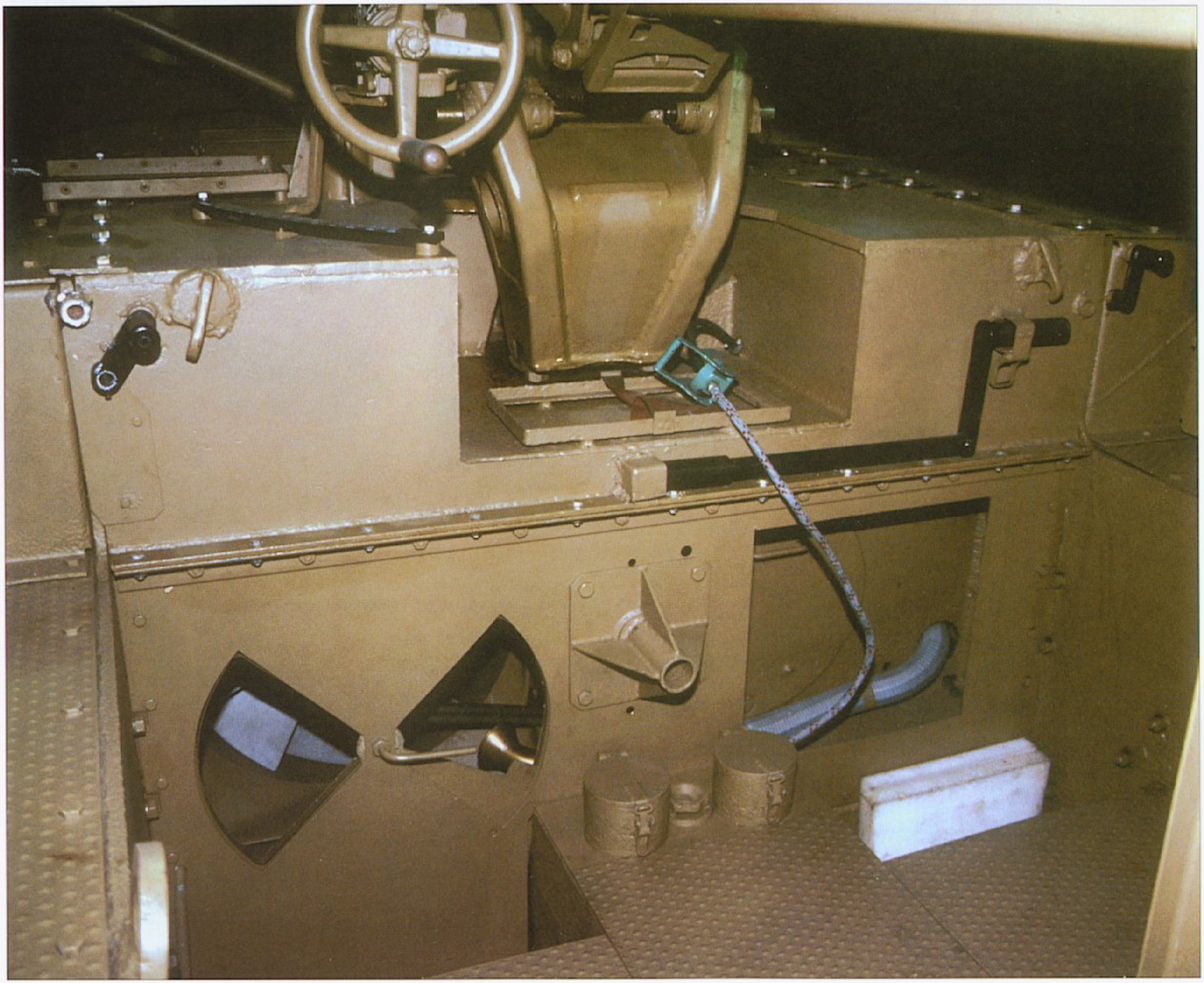


Drawing on the right lower photo provides an overall view of the bulkhead separating the driver and engine compartments. As seen in the photos, the engine was not easily accessible.

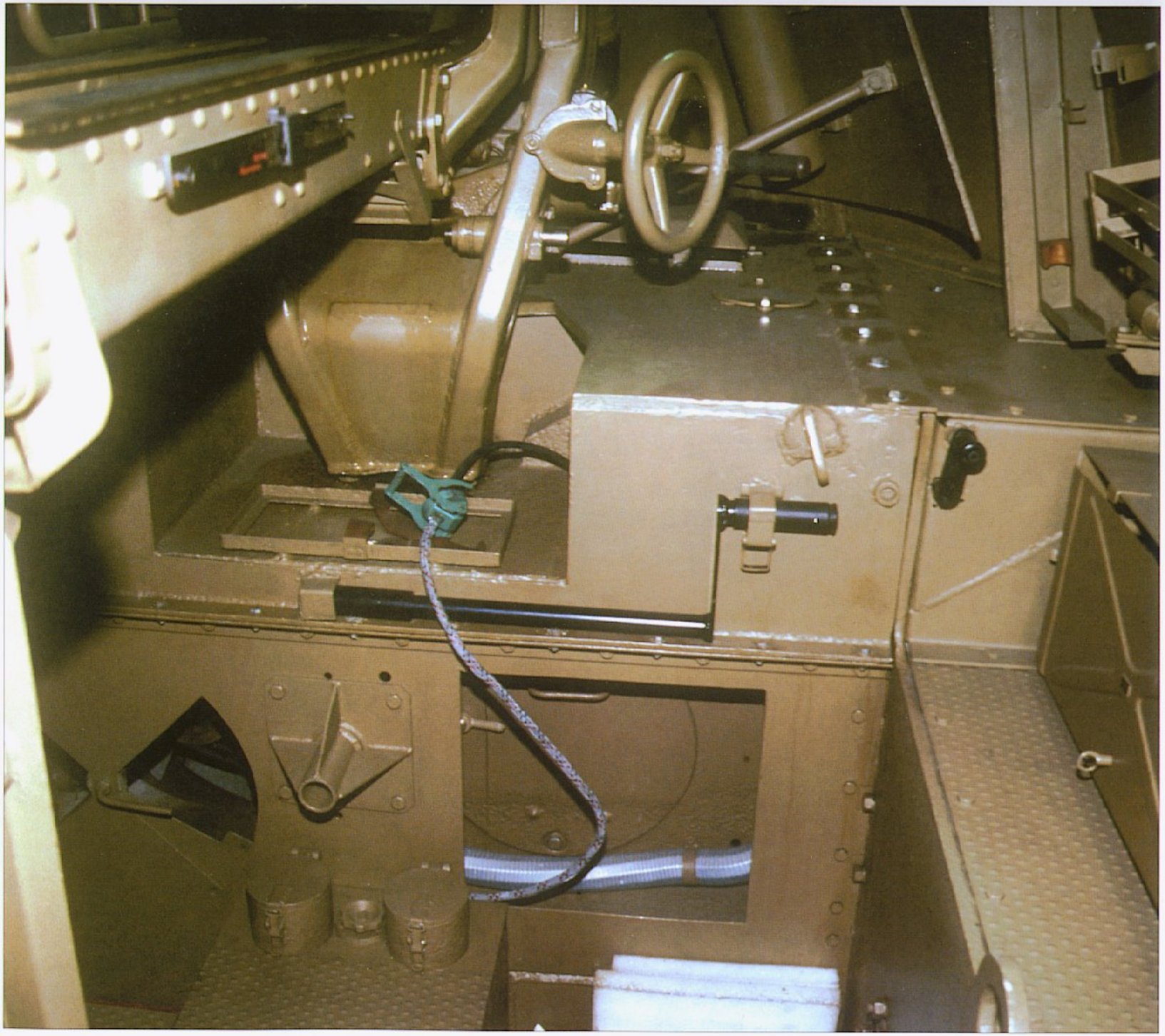




Gunner's Compartment Details

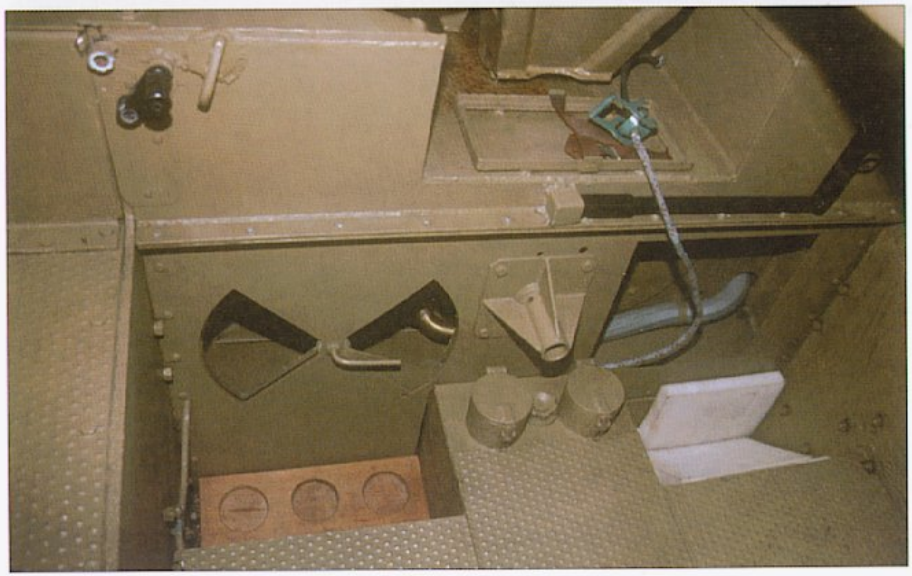


View from the left - Gun/engine compartment bulkhead separating the fighting compartment from the engine. Note the two fuel filling caps in the lower part of the photo. Ammunition boxes were placed to the left and right of the fuel spouts.

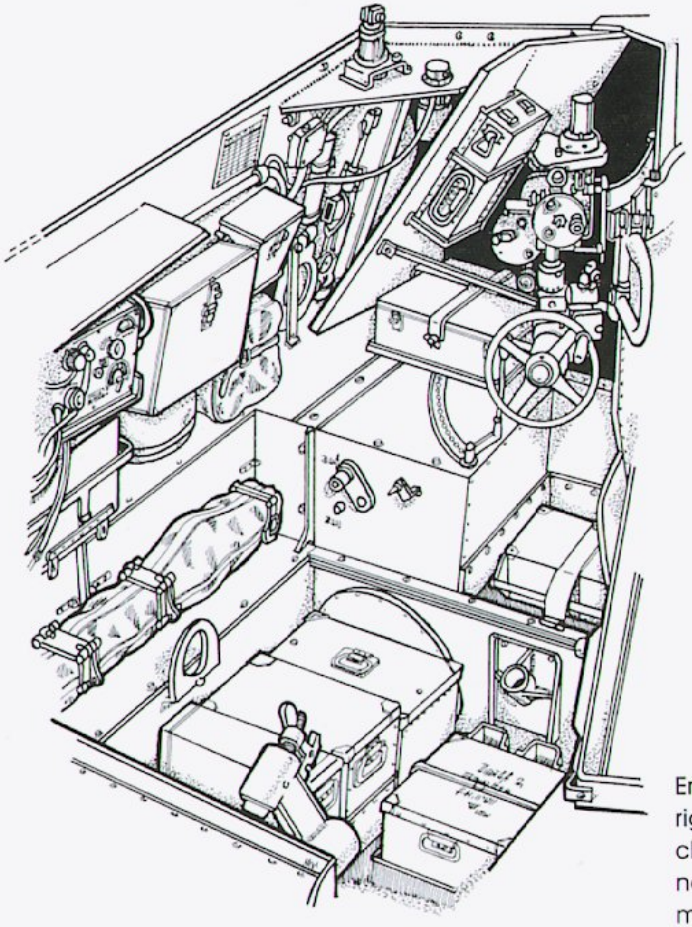


View from the right - The ammunition boxes on the right side carried powder charges (the Wespe carried divided ammunition). Note the opening to the engine.

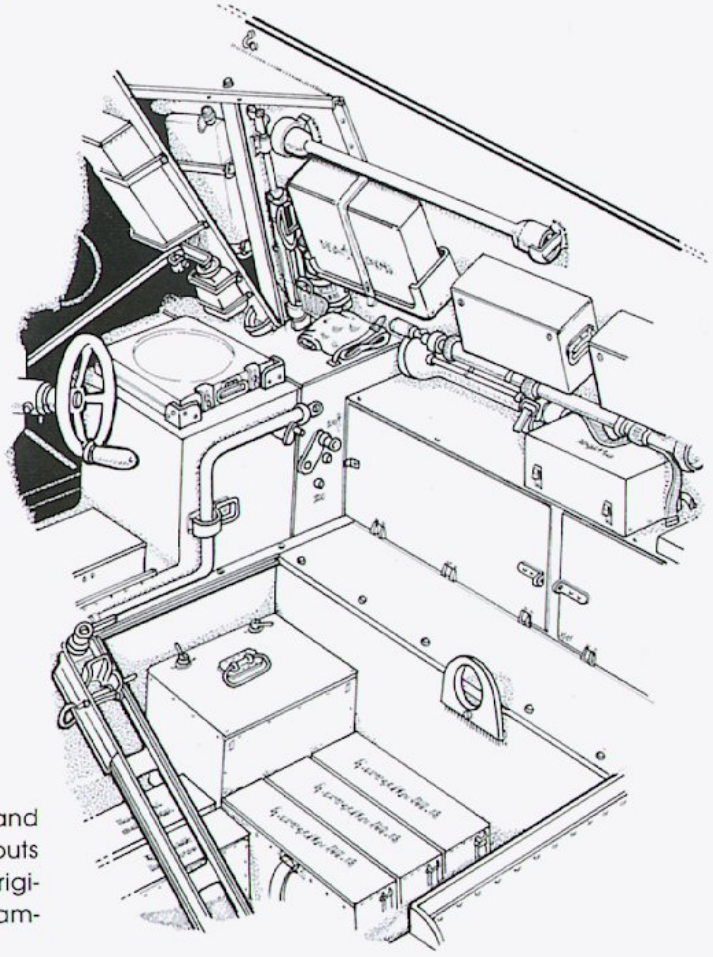
Gunner's Compartment Details

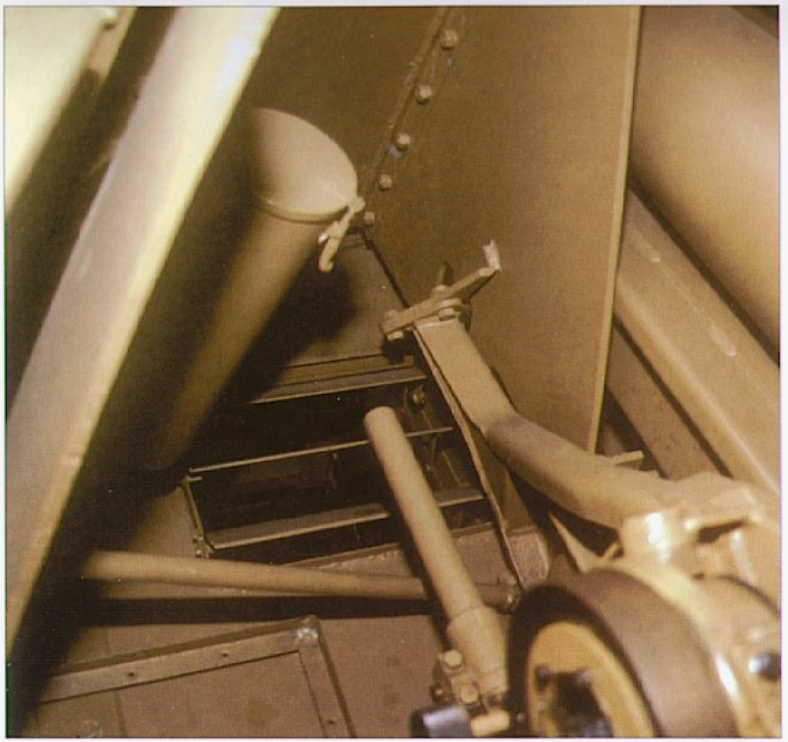


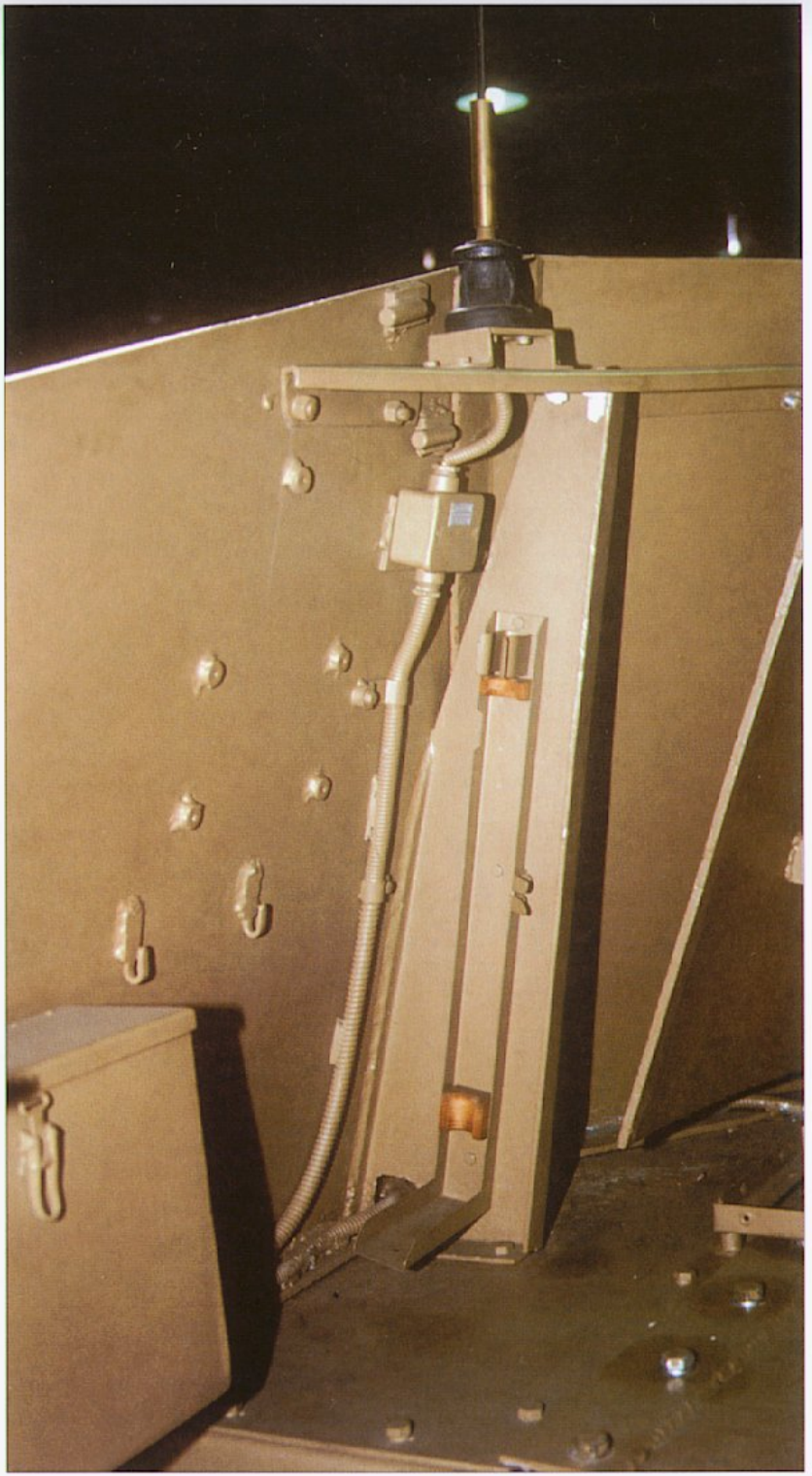
Opposite page - ventilation louvre from the engine behind the front curved gun shield. The cylinder on the left side contains the barrel cleaning head, with extension rods stored on the right. Below - Ammunition boxes on the rear of the fighting compartment. Right - Antenna with wiring plus submachine gun holder.



Empty spaces left and right of the fuel spouts clearly show the original location of the ammunition boxes.



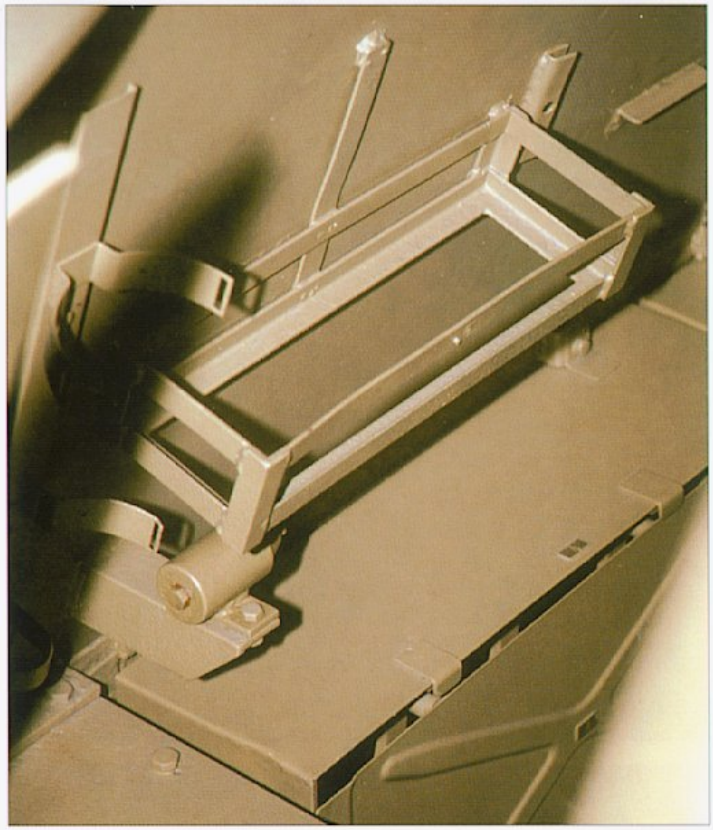


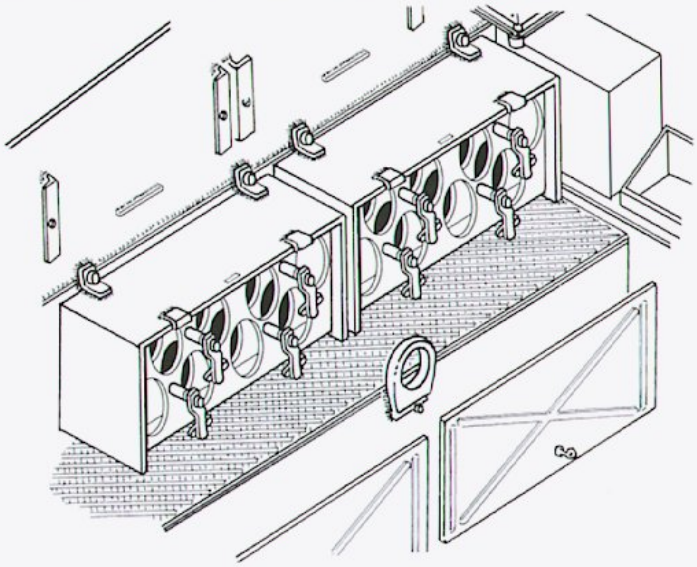


Gunner's Compartment Details

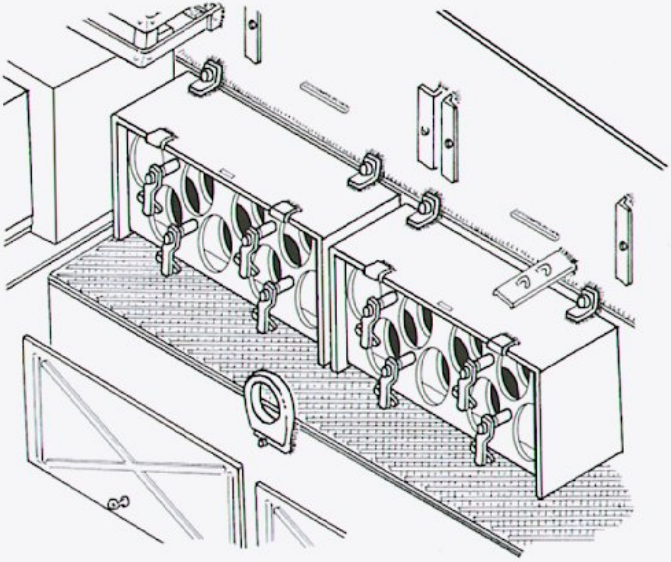
Ammunition Boxes

Large photo - Bracket for the MP40 submachine gun plus bracket for the fire extinguisher. At far right note the welded frame on the side wall for stowage boxes. Smaller photo - Stowage box.



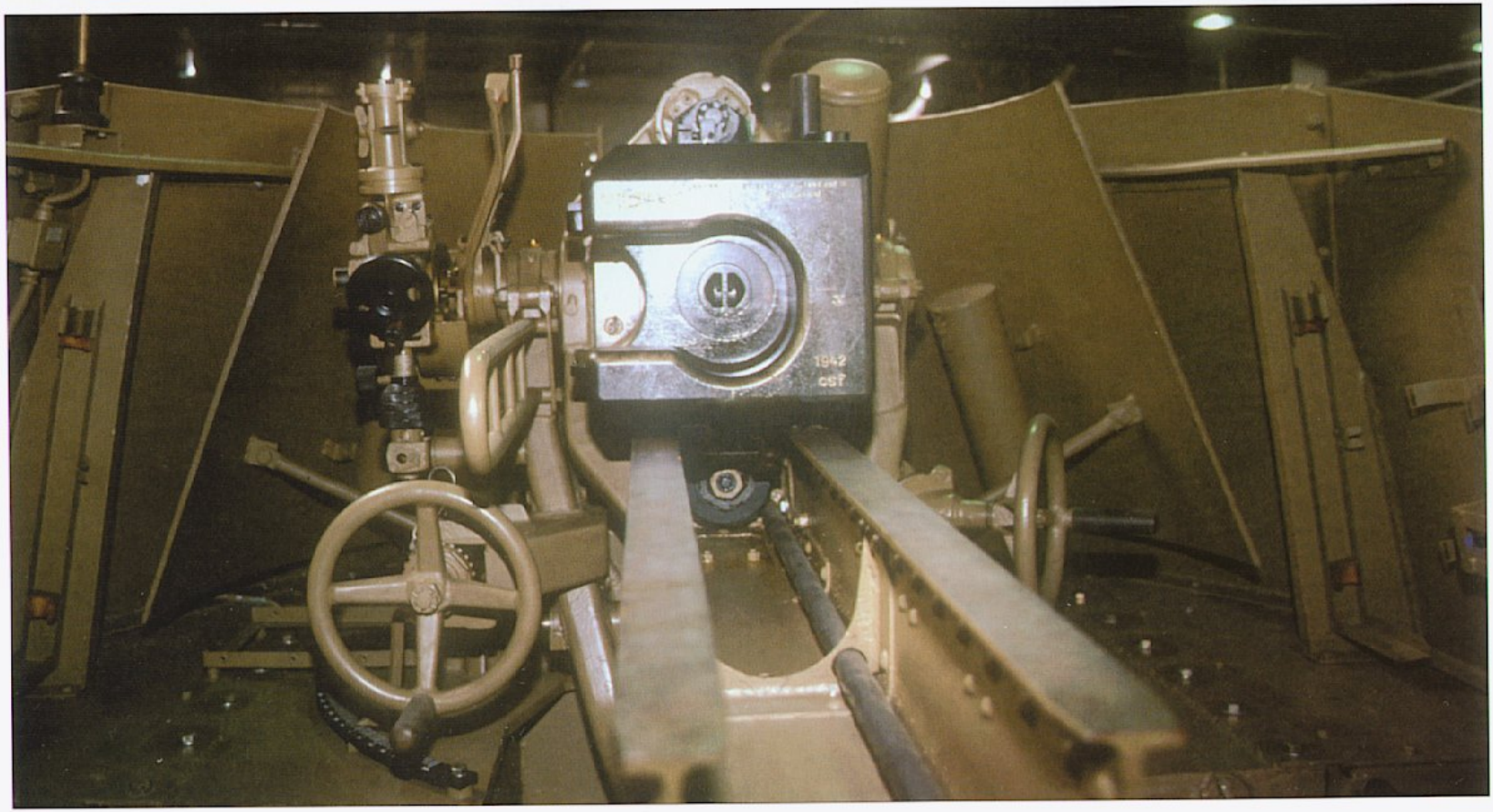


Upper photo - Two ammunition boxes for powder charges, and above are welded frames on the side for stowage boxes. Lower drawings - Open ammunition boxes for powder charges. Each box held eight powder charges.

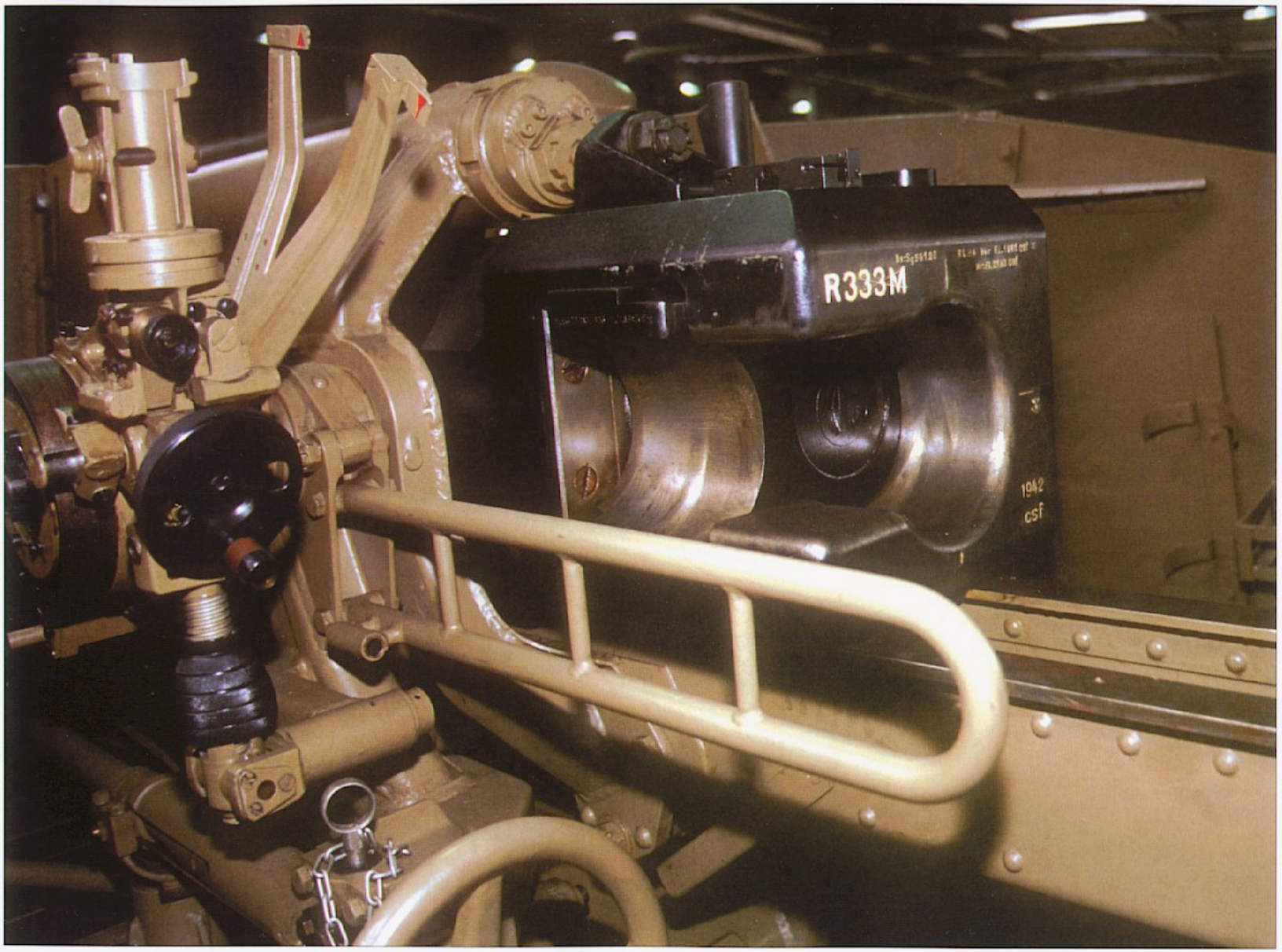


Ammunition Boxes


R333M


1942
cst

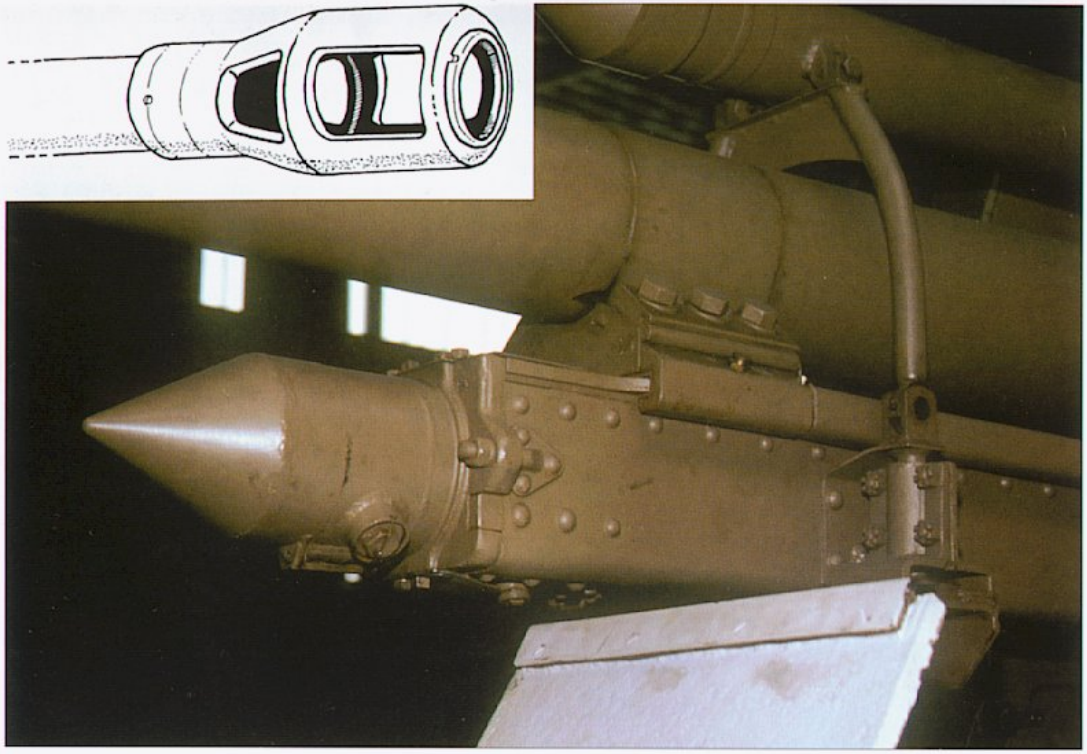
10.5cm Le FH. 18/2L/28 Details

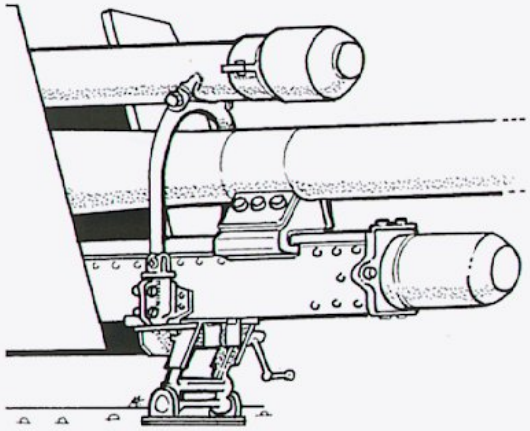


Detail of gun breechblock where the separate ammunition was installed. View is from the gun loader's position. Note the elevating mechanism.

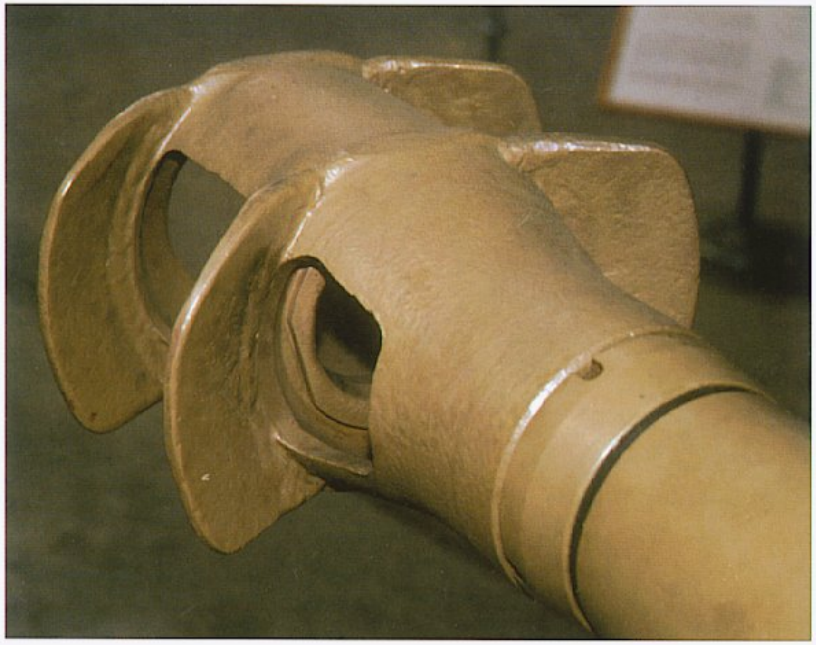
Opposite page - Mounting of the 10.5cm Le FH 18/2L/28 gun from the rear. The cylinder on the right side of the gun shield contains rods for gun barrel cleaning. Below is the Rblf36 sighting device.

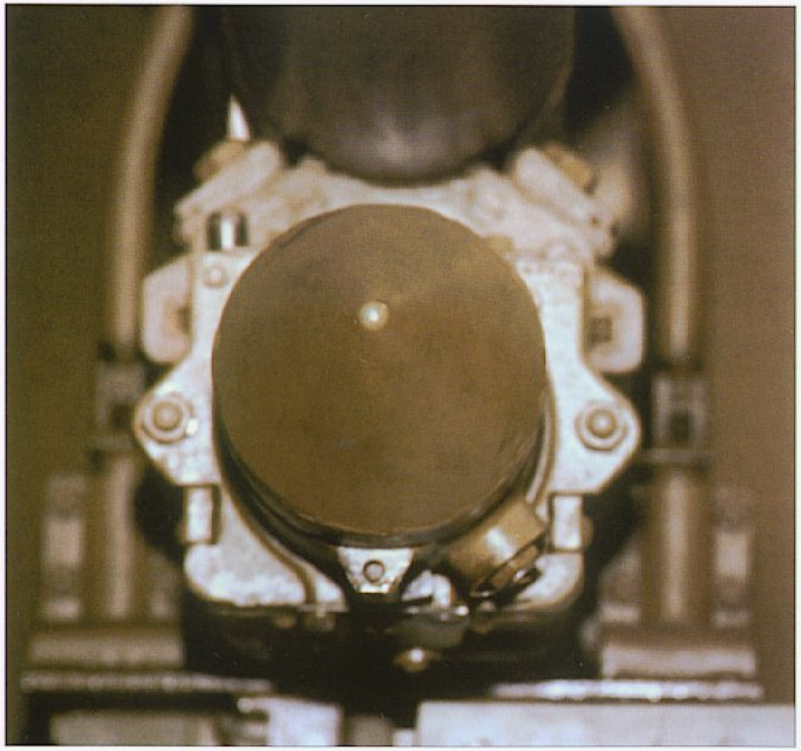
Gun Details

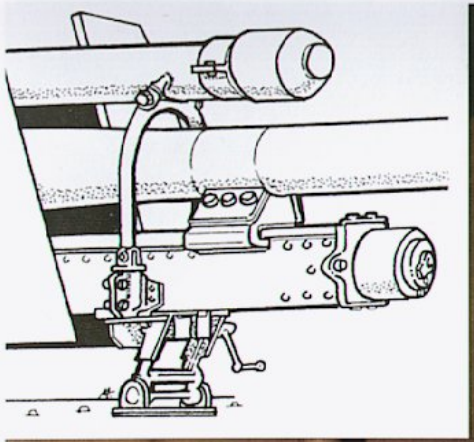


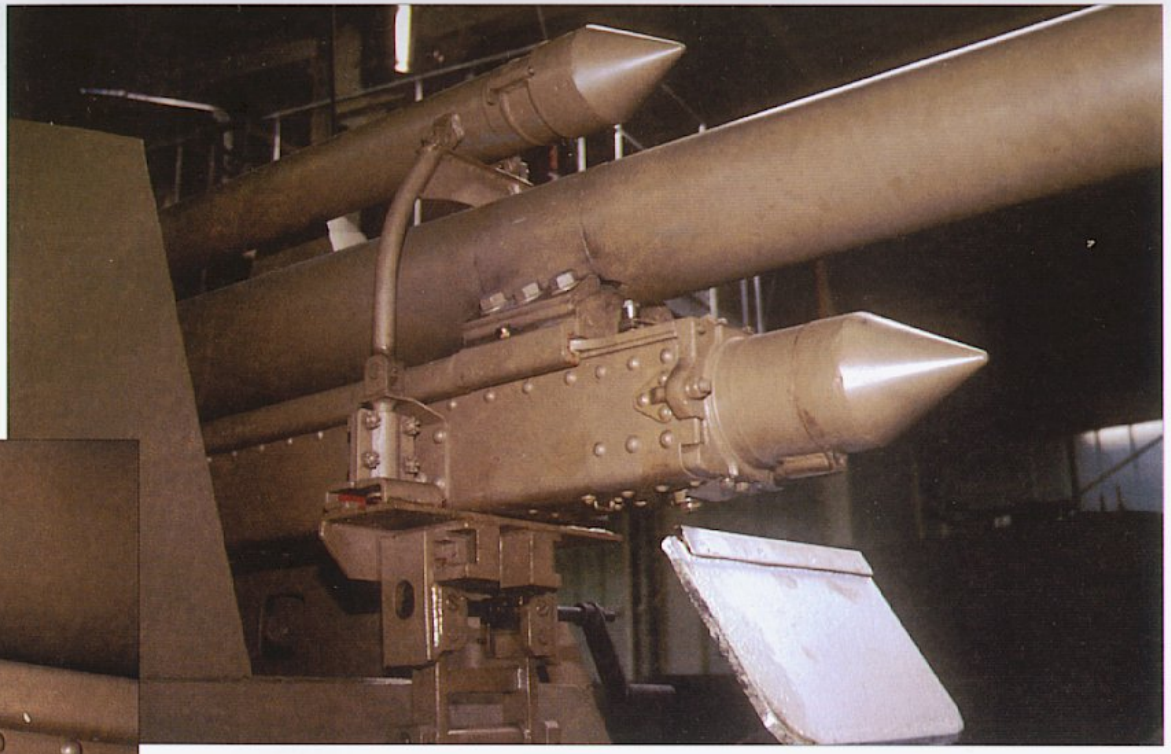


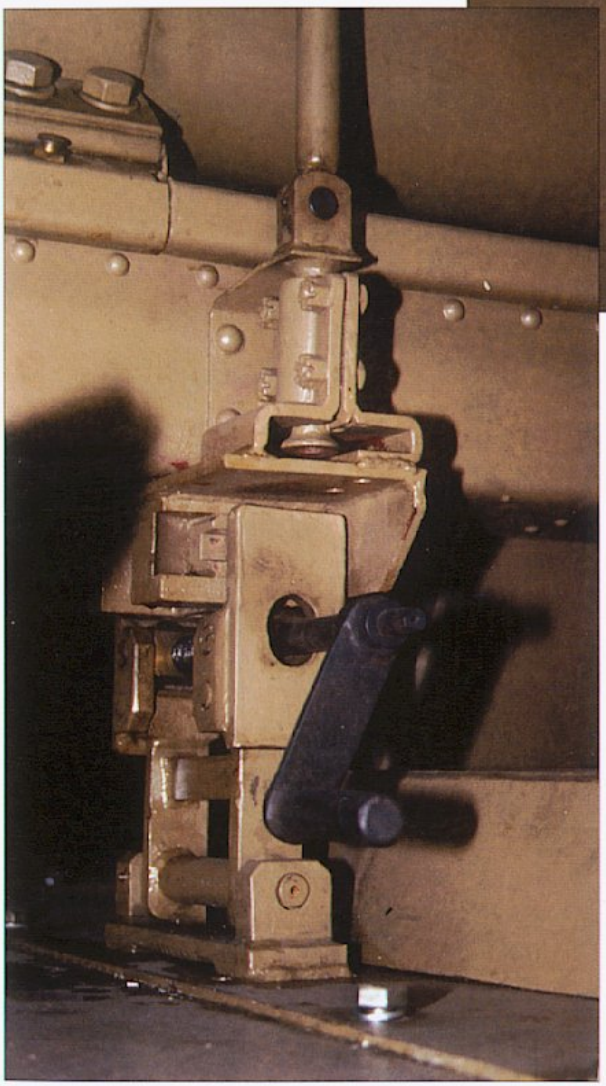
Top drawing - Original Wespe muzzle brake used on 10.5cm gun. Drawing on the right - Cylindrical "Rohrbremse" - barrel stop and "Luftvorholer". Below left - non-original muzzle brake.



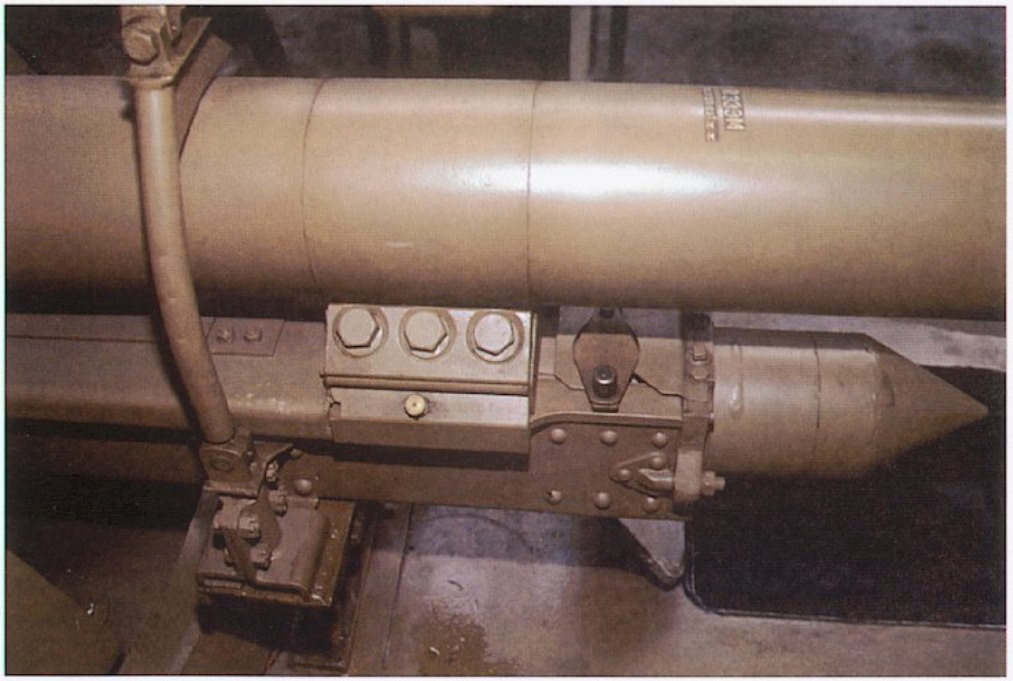


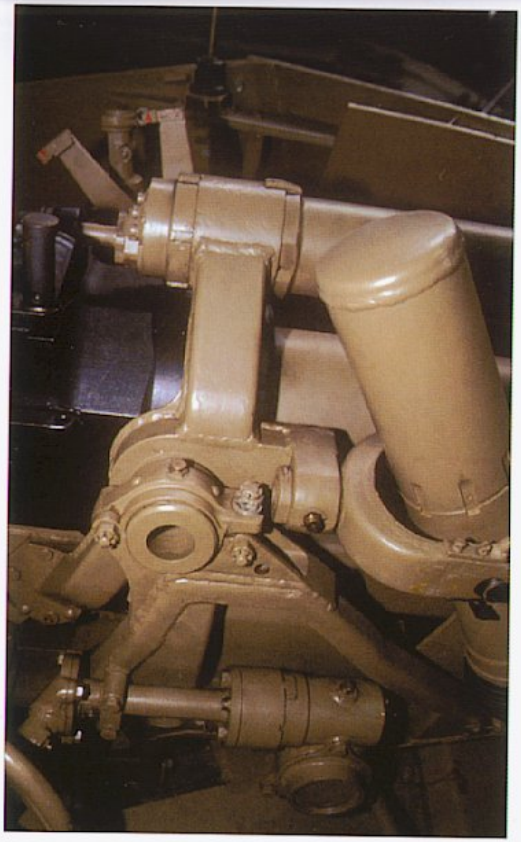


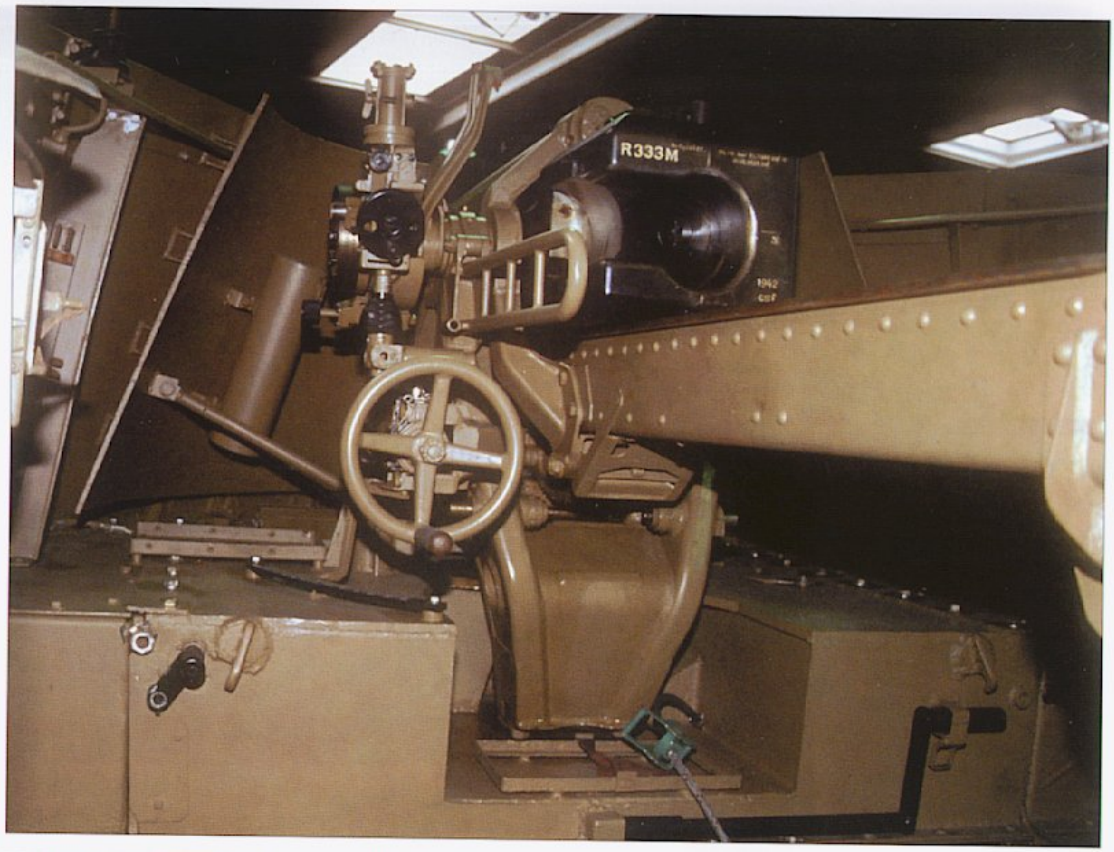


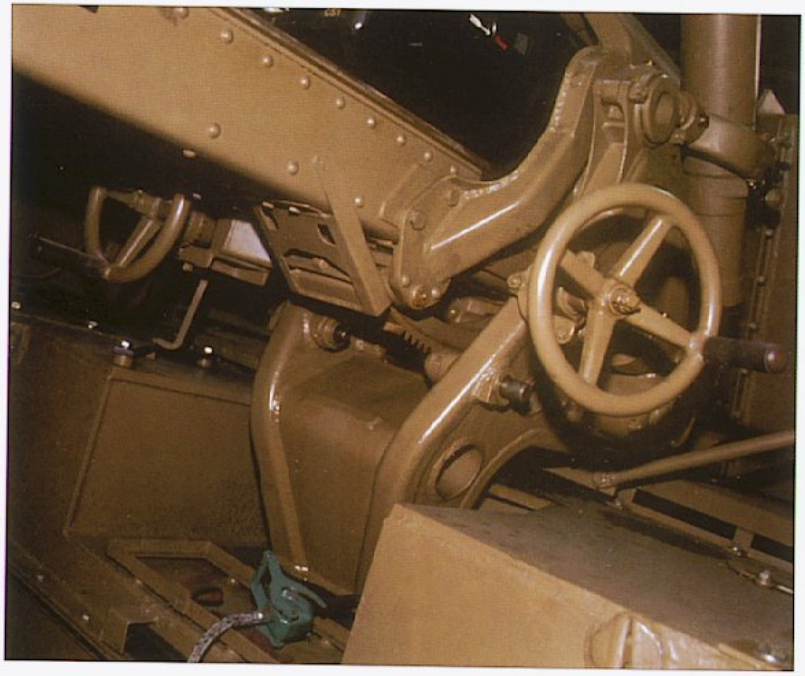


The upper drawing and photo depict details of various gun types. Below - The gun barrel clamp seen from the right.

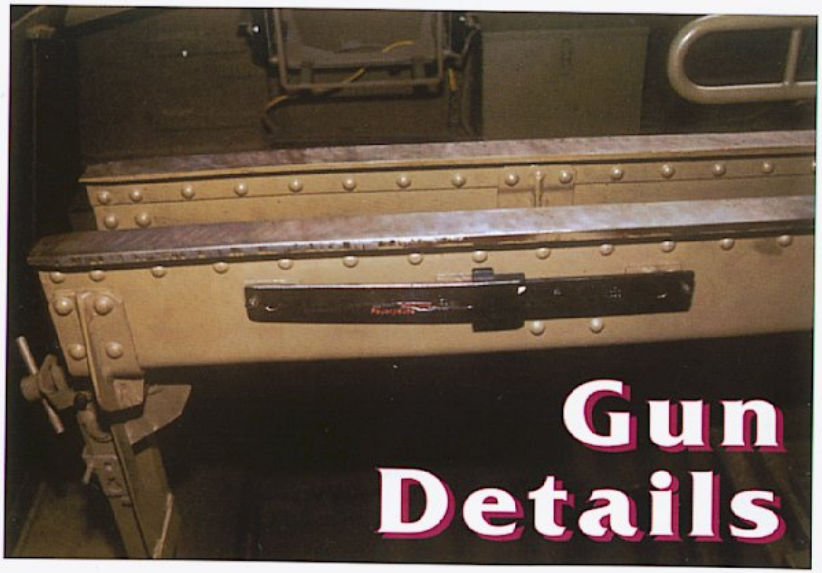




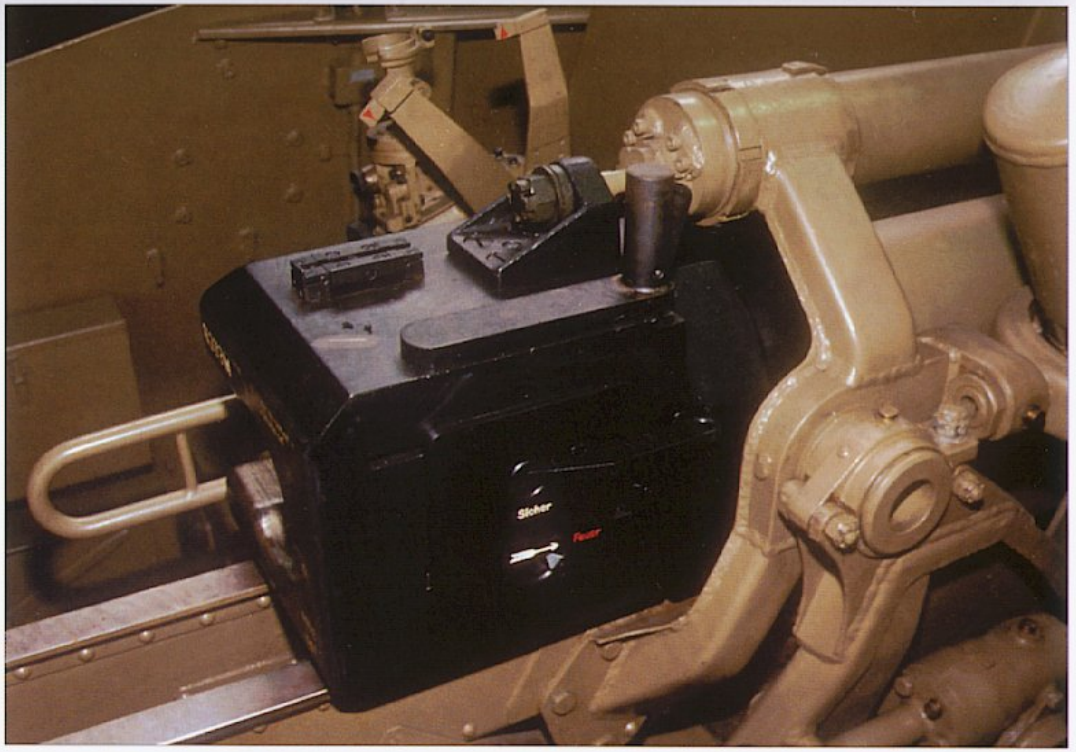


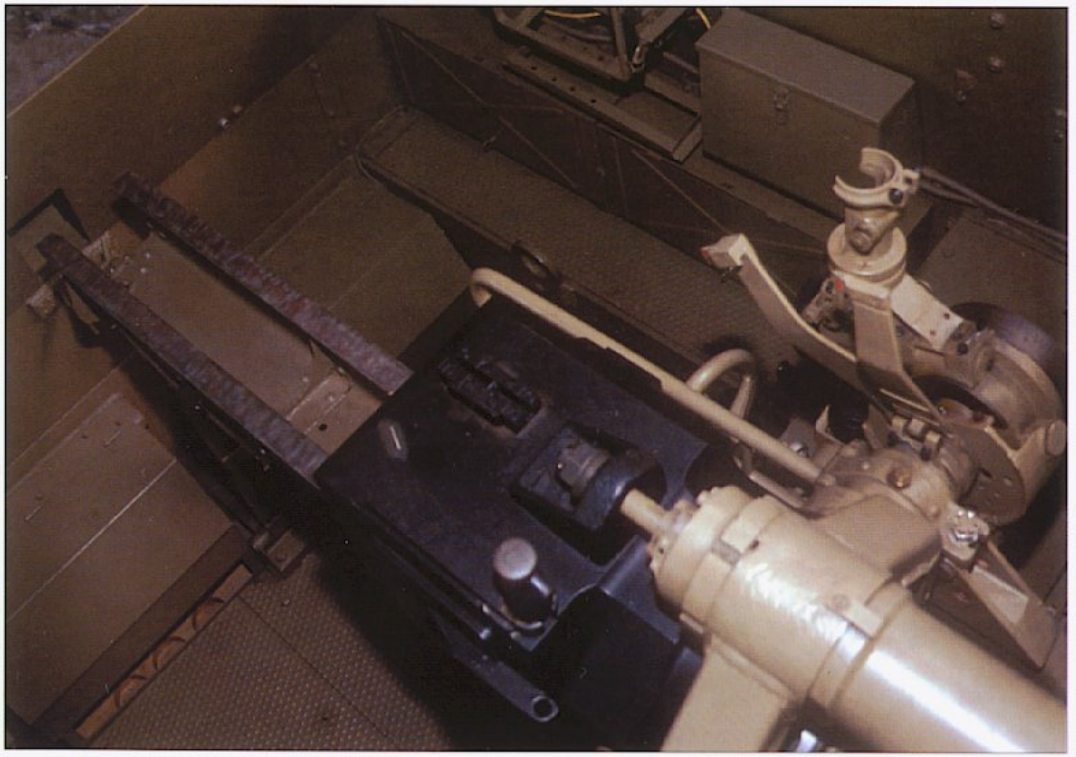


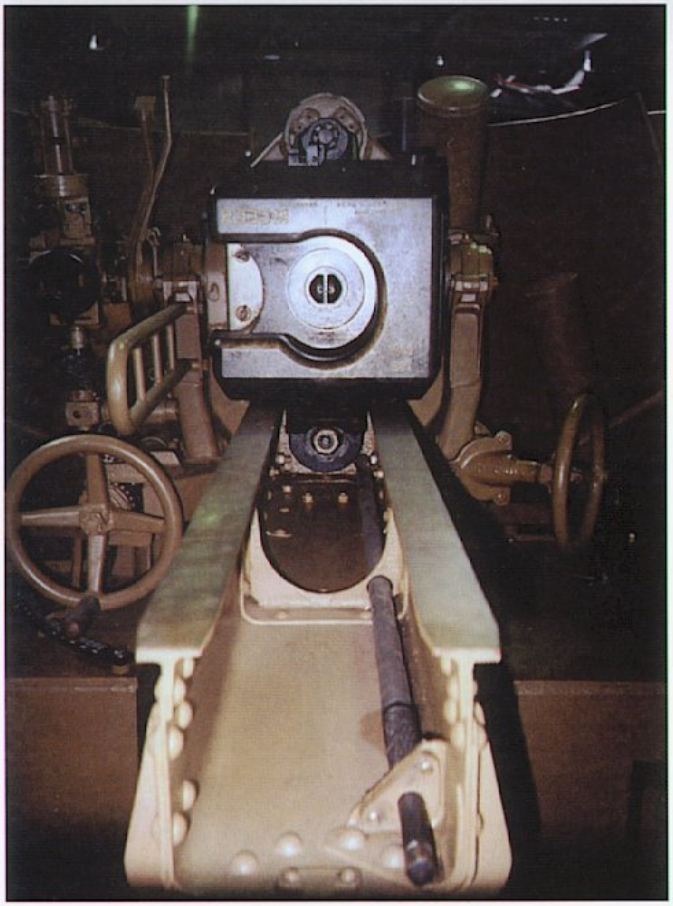
Upper left - air equalizer for the gun (they were located on each side). Note details of the gun emplacement in the fighting compartment.

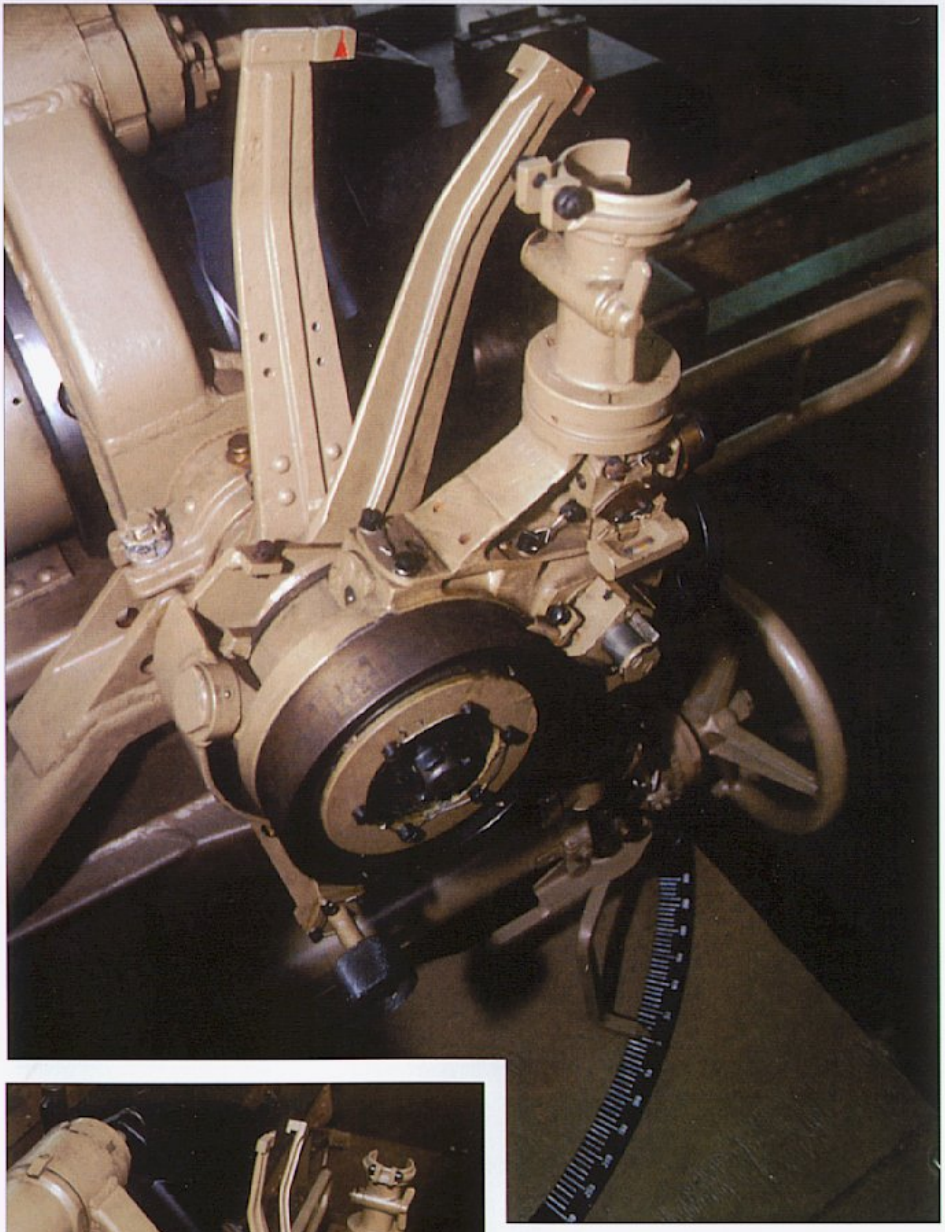


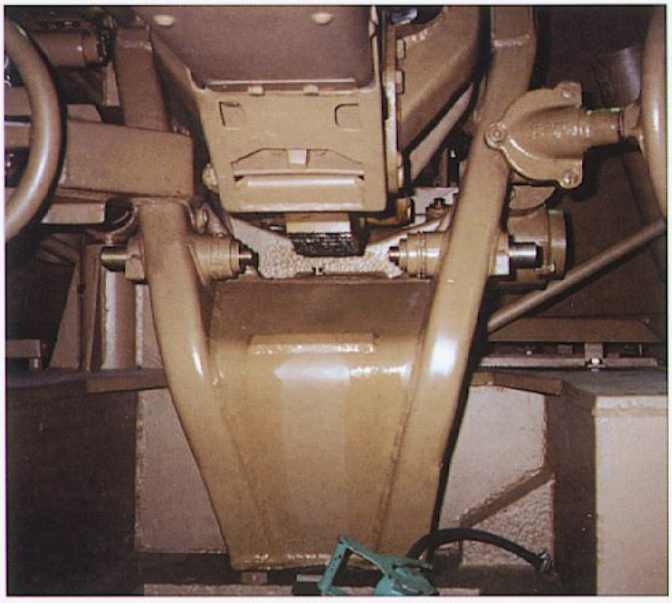
Gun Details

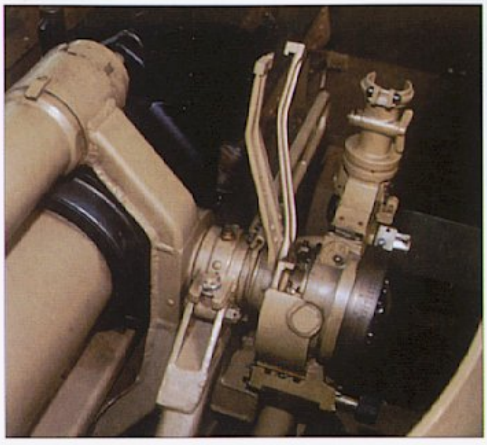

Stoker
Fester



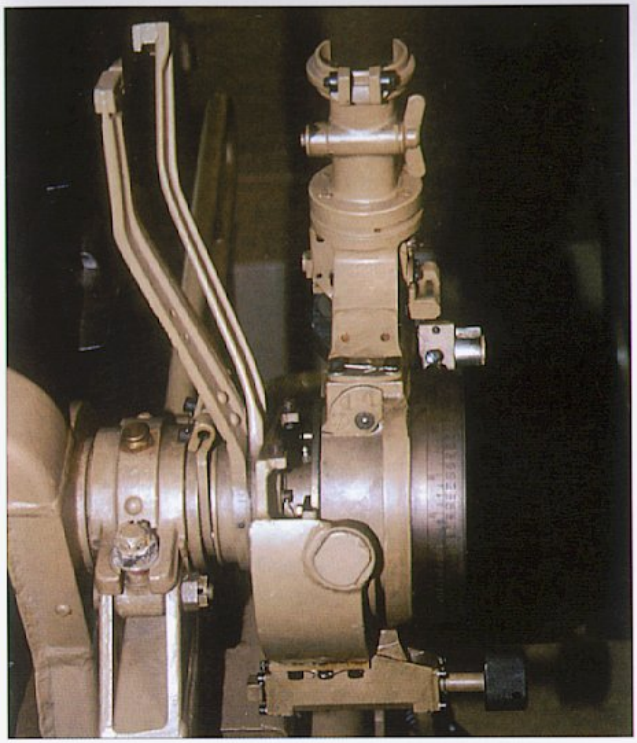


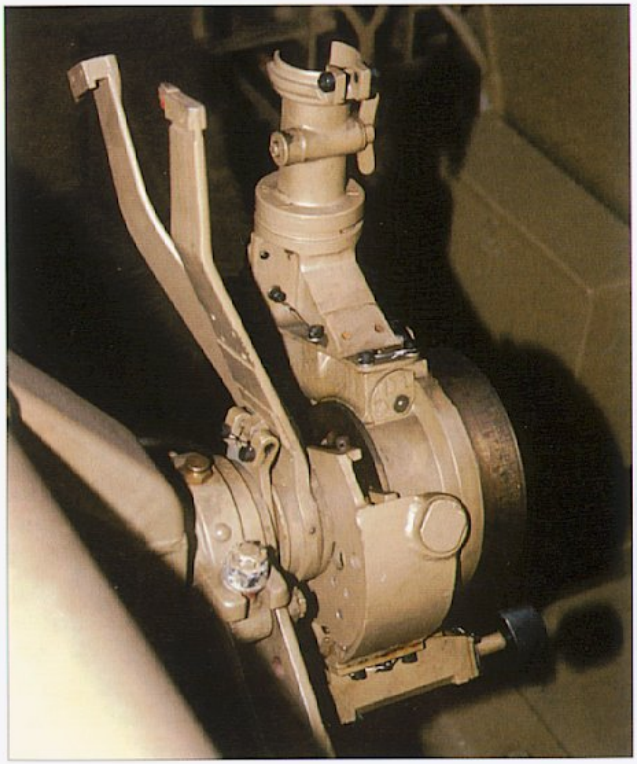


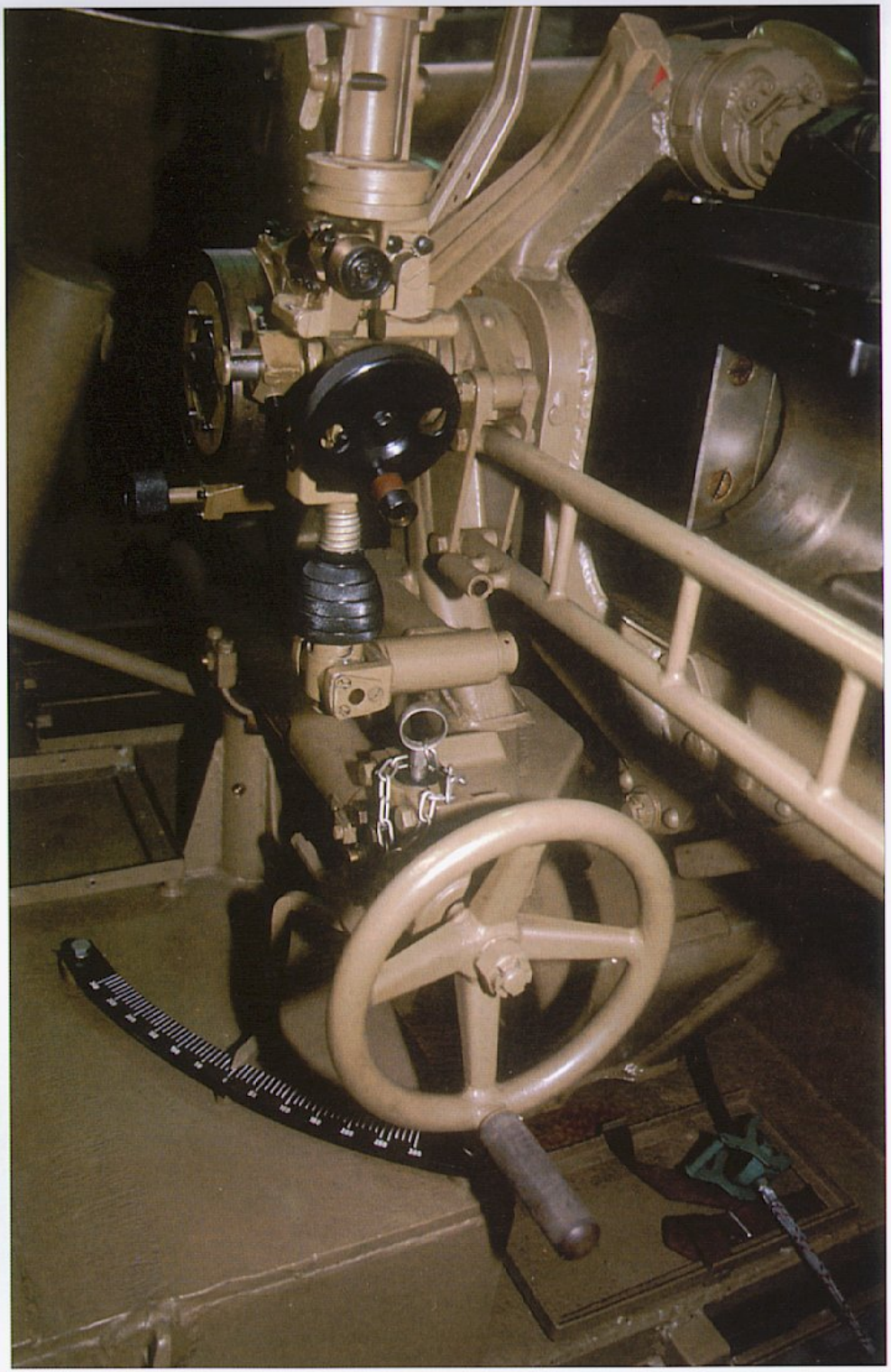


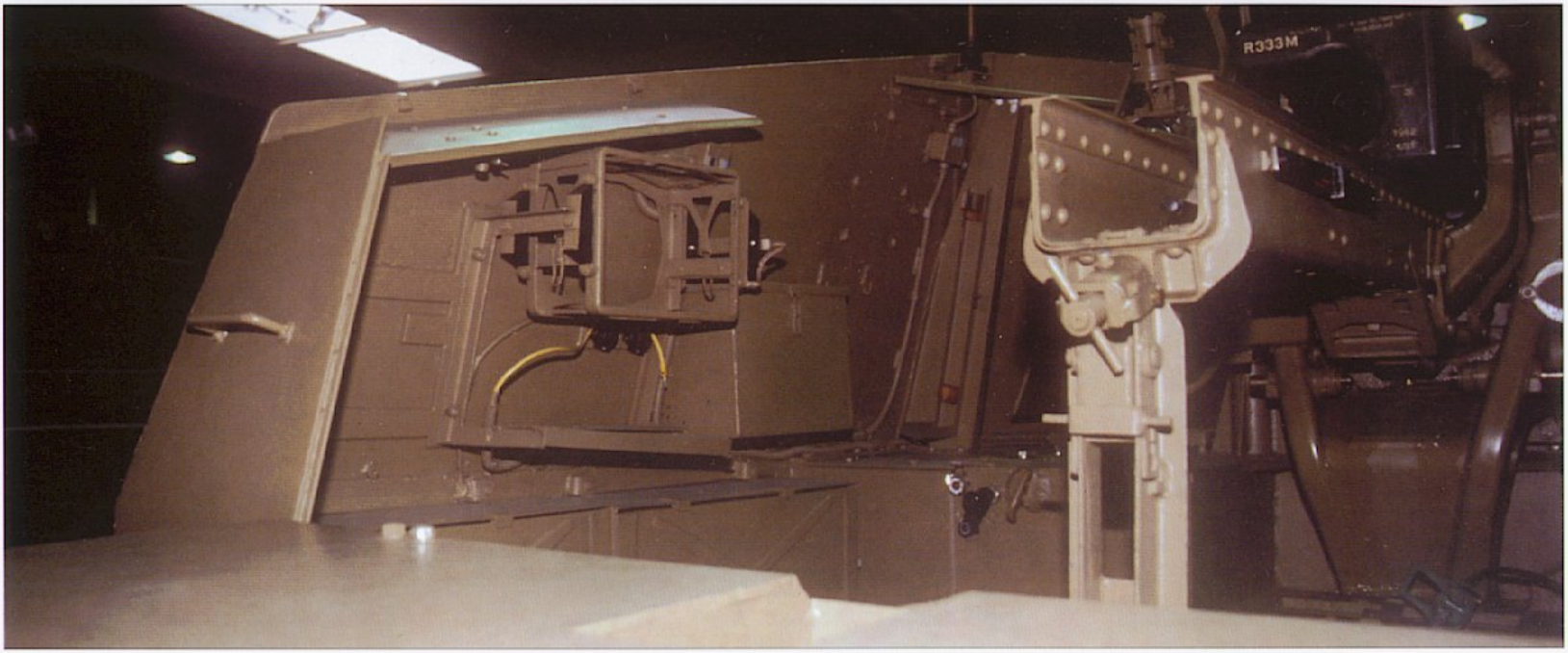


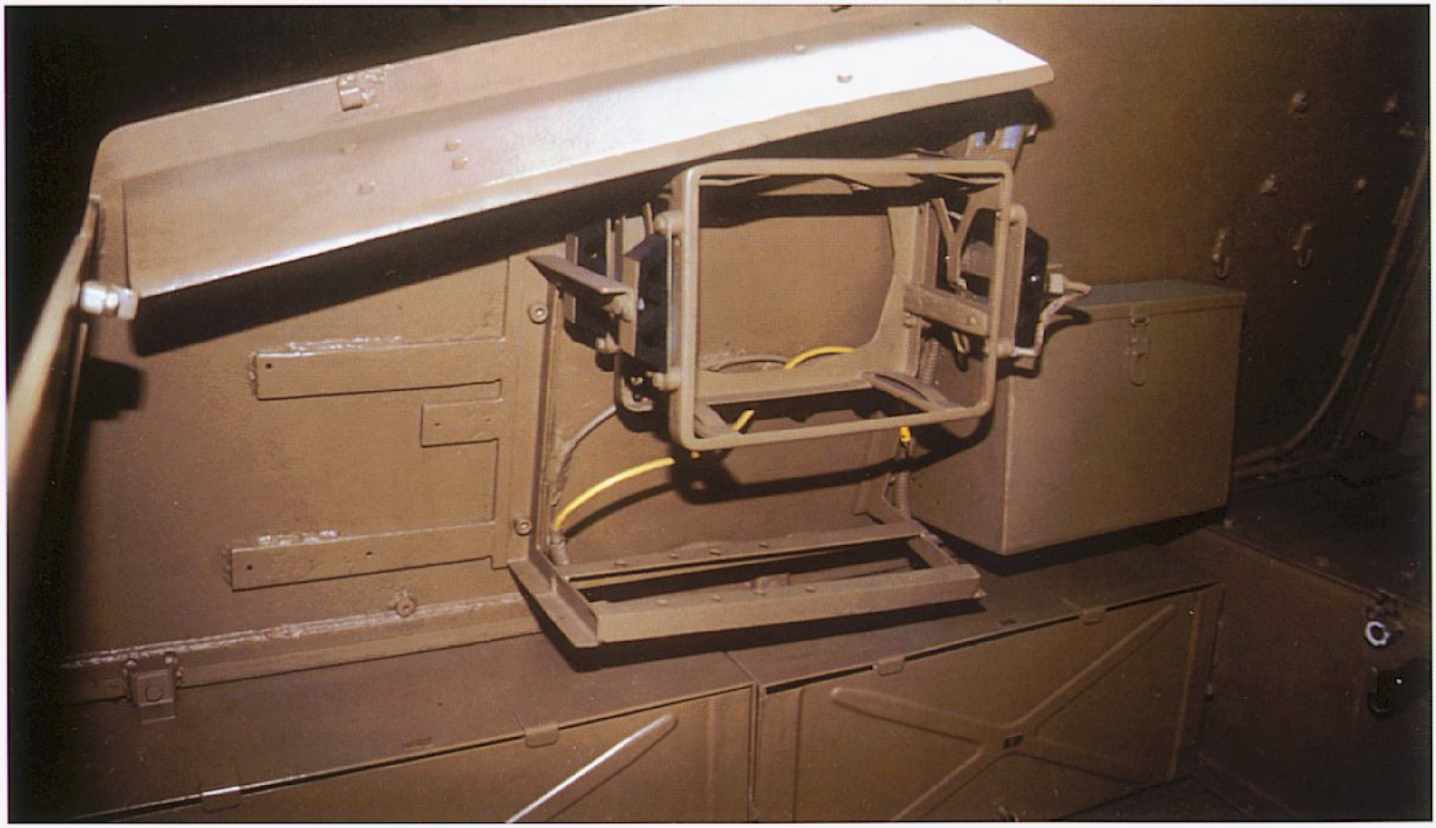
Rblf36 Sighting Device Details





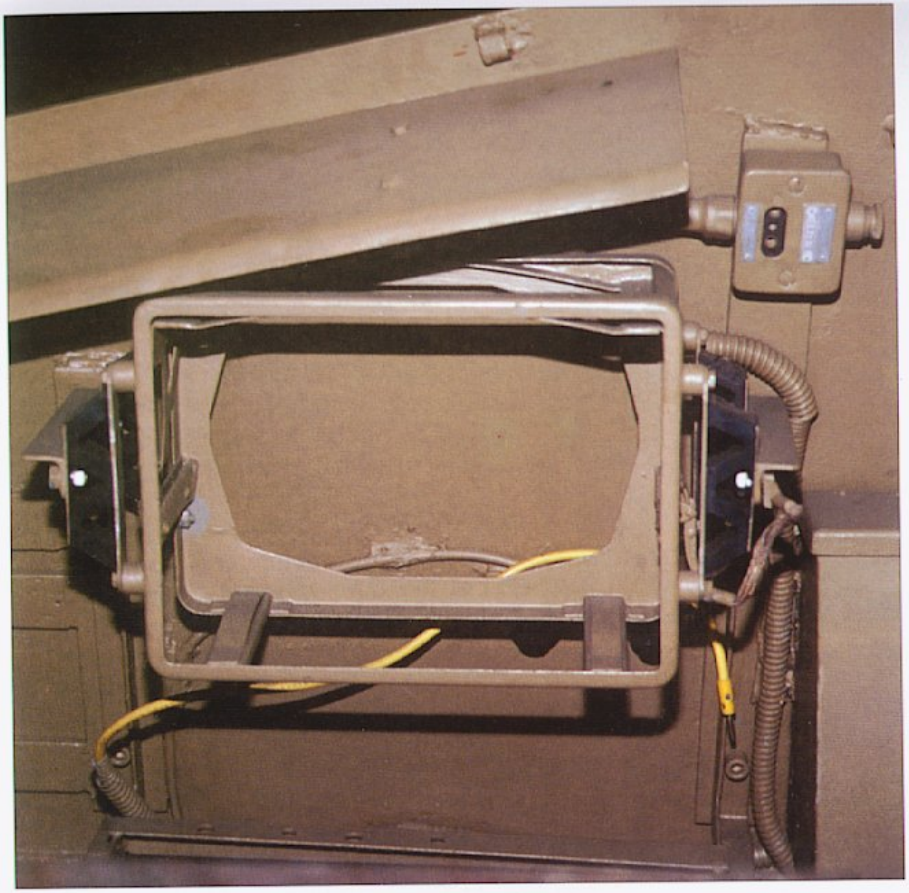






Rear doors opened; a view not frequently seen on museum vehicles. The radio bracket is on the left side. The gun travel lock is on the right. The metal sheet above the radio bracket protected the radio against climatic conditions such as rain and snow. Below the radio bracket are closed ammunition boxes.

Fusprech Details



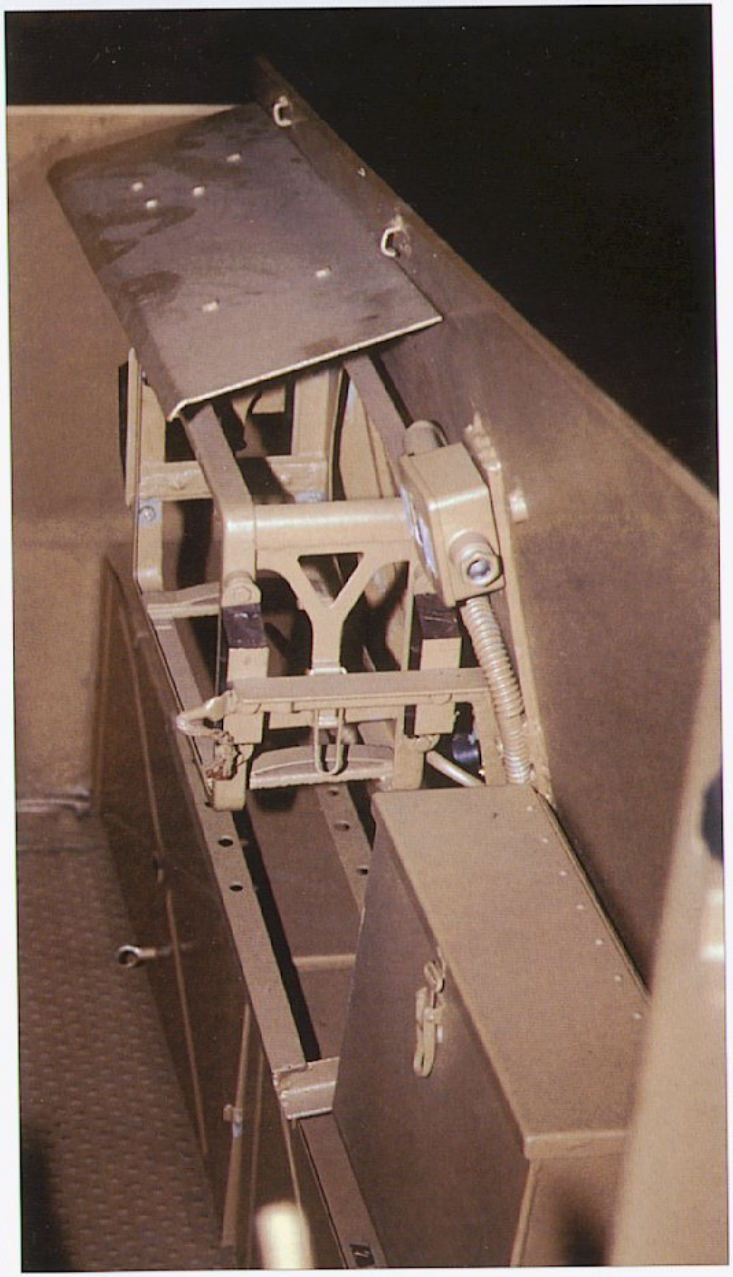
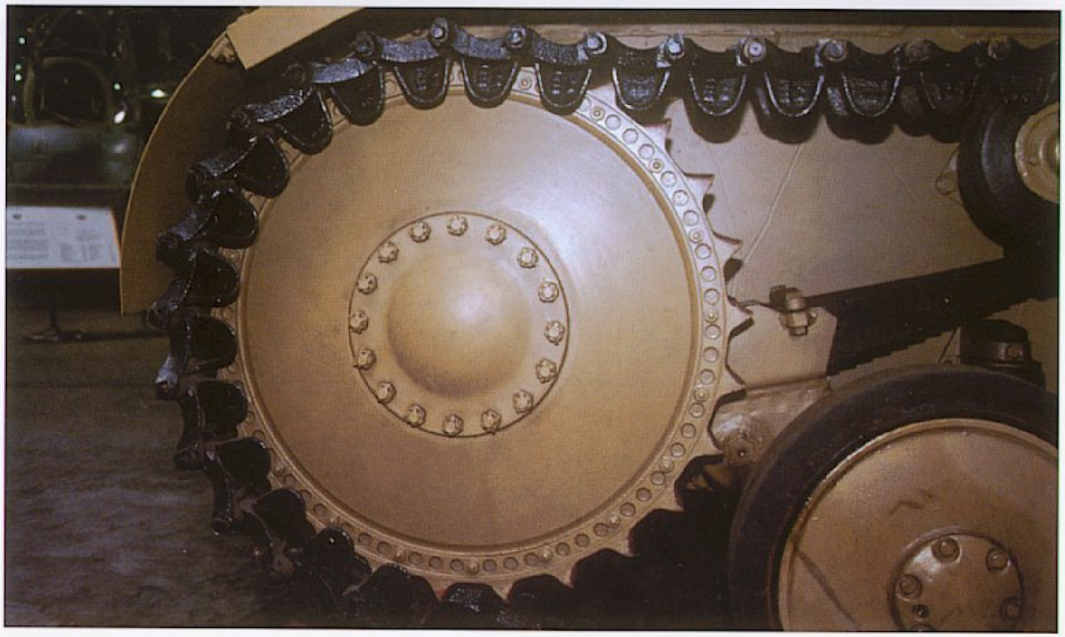


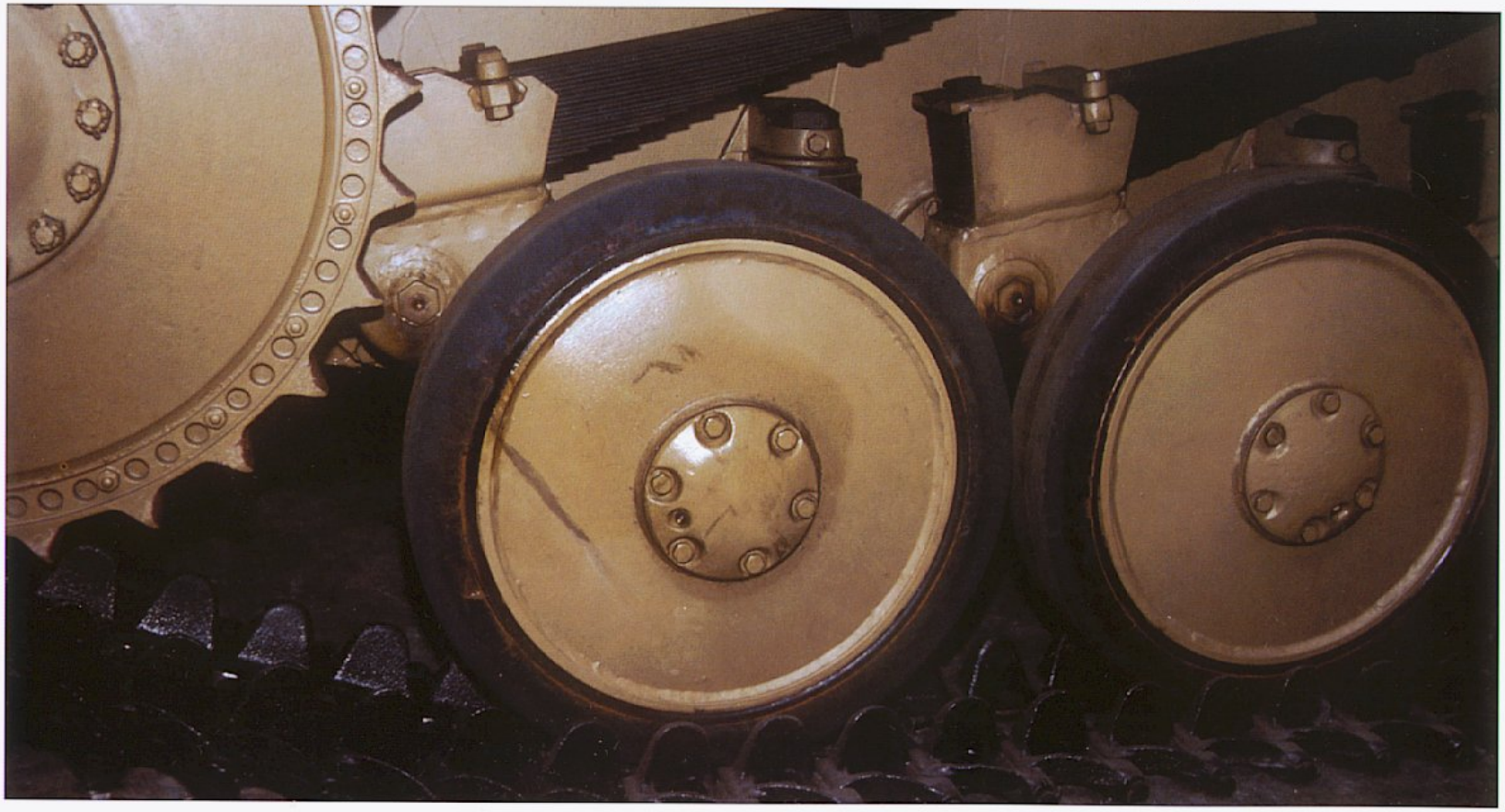
photo by Alois Veselý

Detail of bracket for radio. Below left - Photo of original radio "Fusprech.a", one of many types placed in every German AFV. Right - Another view of the radio bracket with metal sheet above.

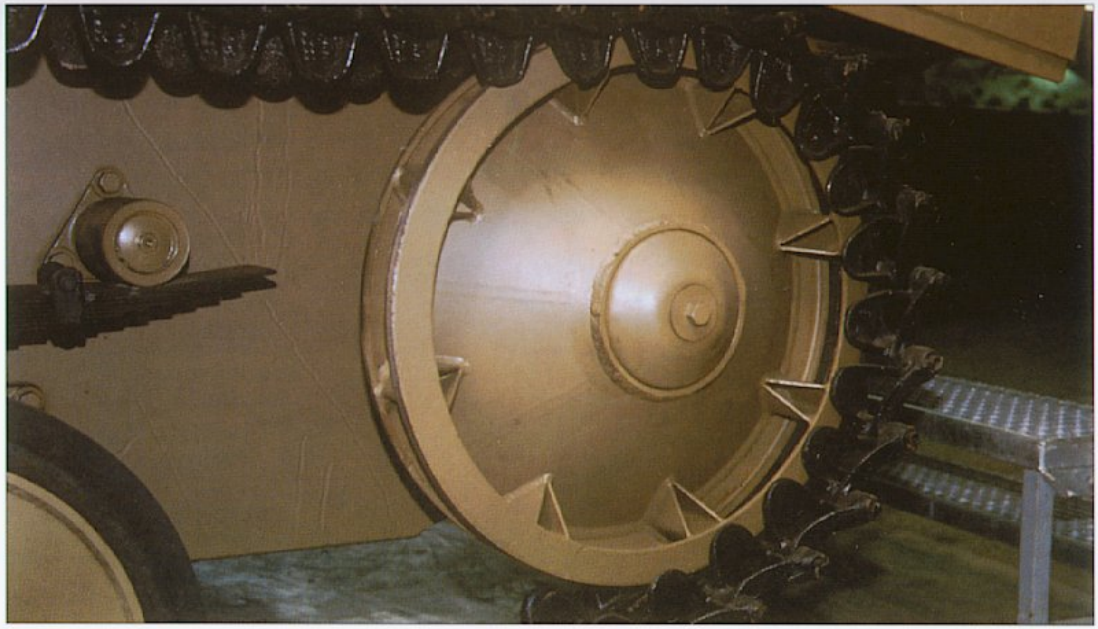
Tracks & Wheels Details



Detail of the drive sprocket. Below are road wheels and springs.

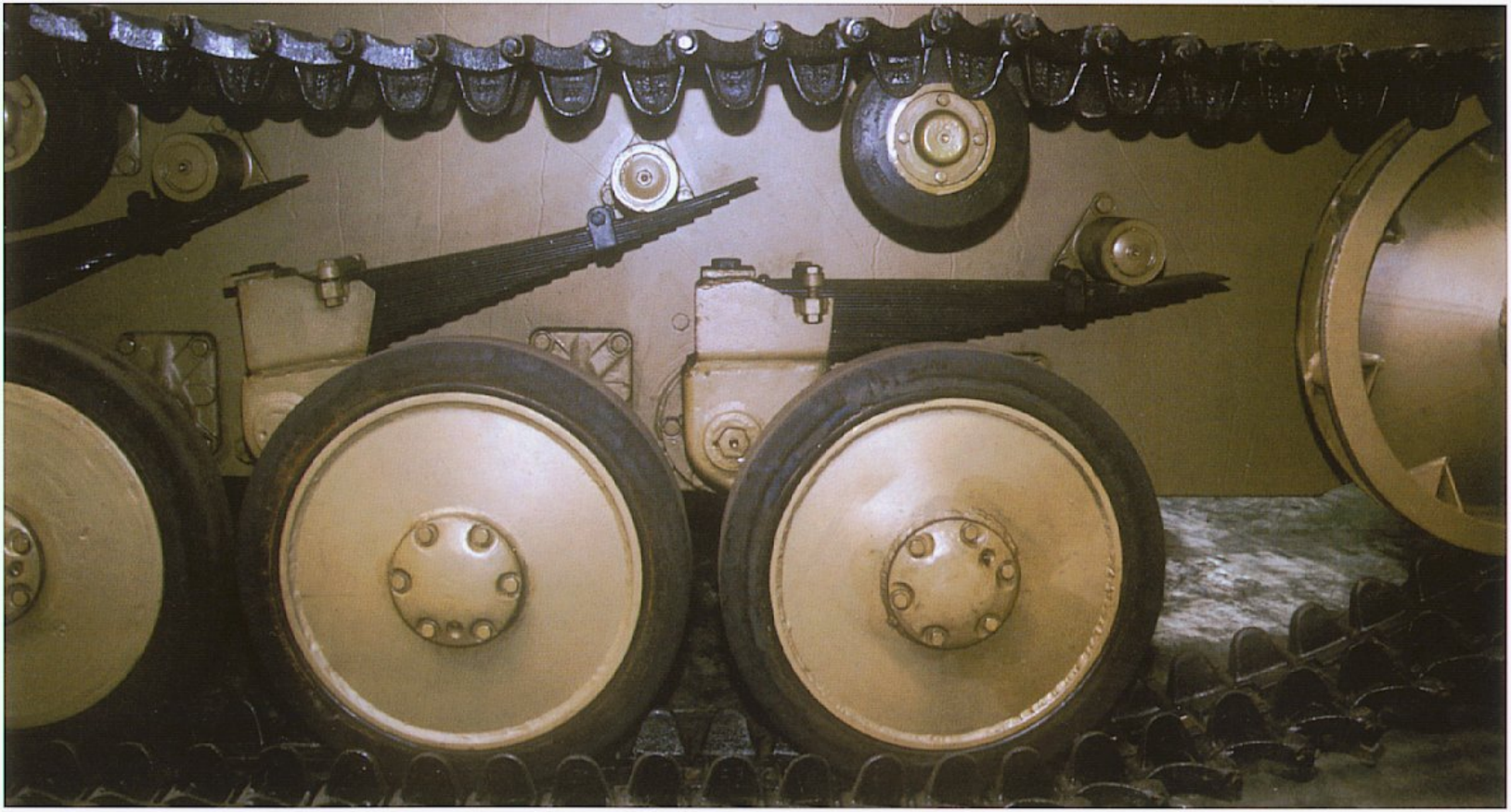


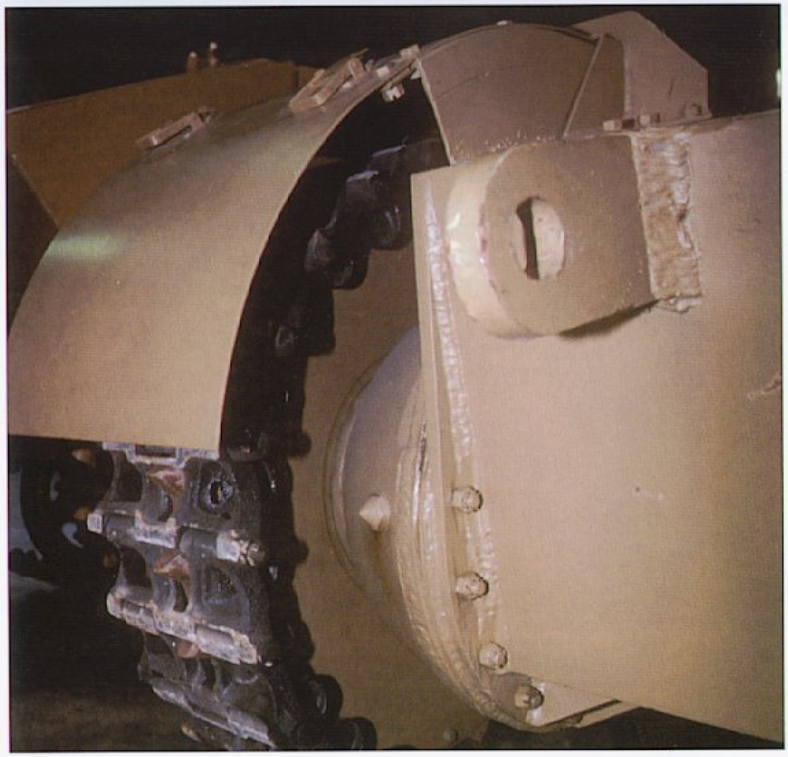
Rear idler wheel showing details of tracks with closed horns. Below - Road wheels. This photo clearly shows the absence of a truncated cone spring on the last road wheel, normally mounted on most vehicles. The large road wheel measured 550 x 100 mm, the smaller 220 x 105 mm.

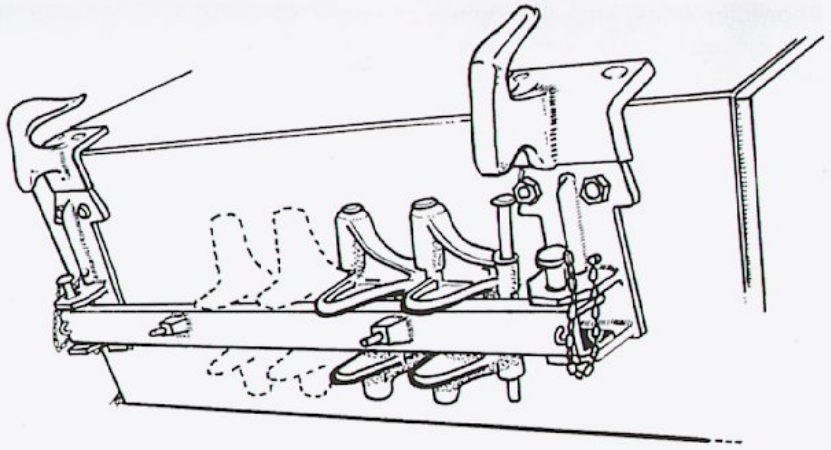


Page 34 - detail of road wheels and springs with original pattern tracks. Note the two front truncated cone springs on the first and second road wheels. The third cone spring on the last road wheel is missing on this vehicle. (bottom on page 33)

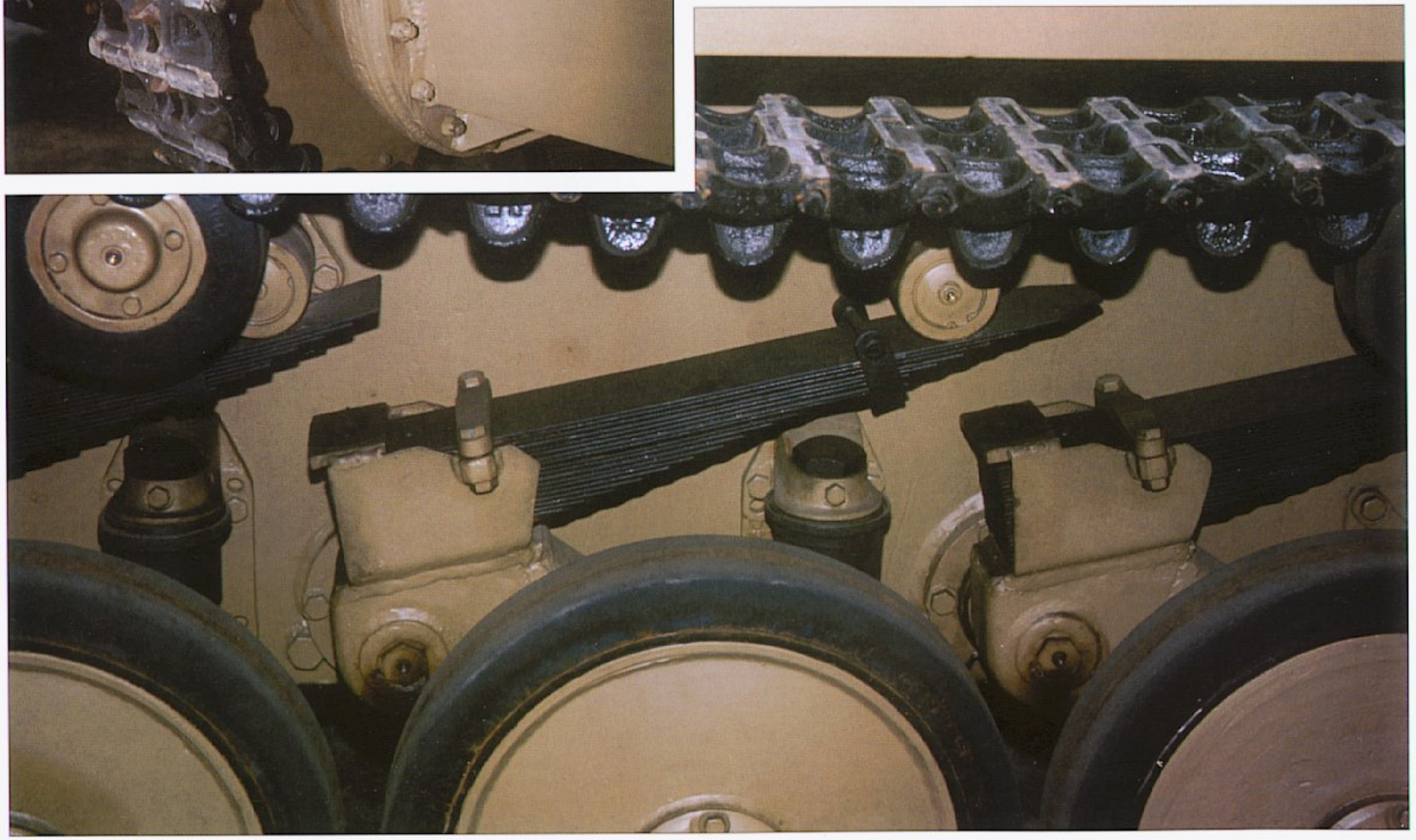
Page 35 - detail of springs and carrying rollers. Below is the truncated cone spring on the left and the usual leaf spring on the right.

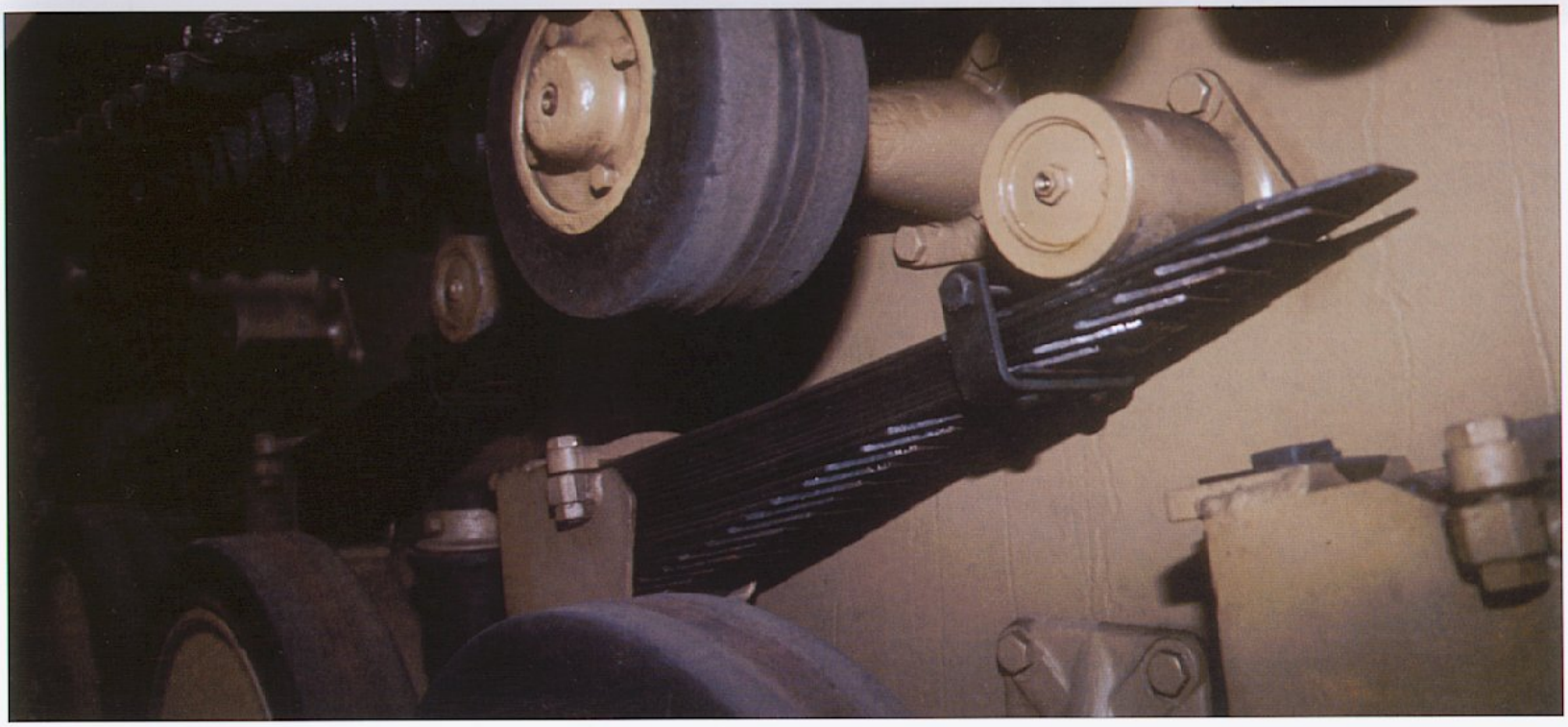




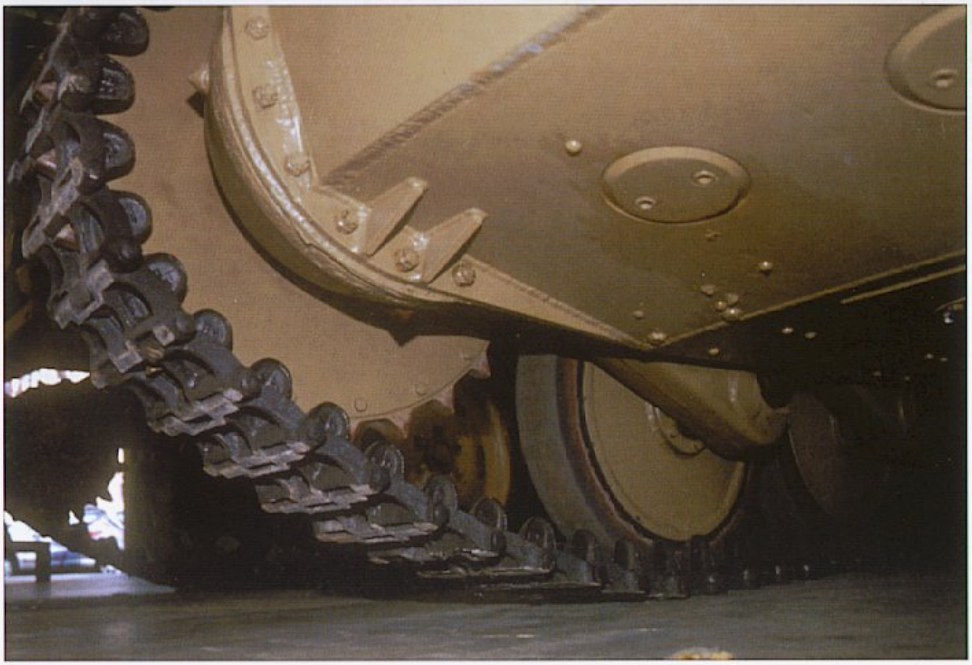


Rather unusual towing hook where more common "T" type towing hook was found. Though unusual, it seems to be an original feature.





Tracks & Wheels Details



View of the vehicle underside. Note the original tracks and running wheels. Width of the track was 300 mm, with a full track weight on each side of 385 Kg. Note the rubber rims on all road wheels.

Tracks & Wheels Details

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