

Armor in detail n° 1 :

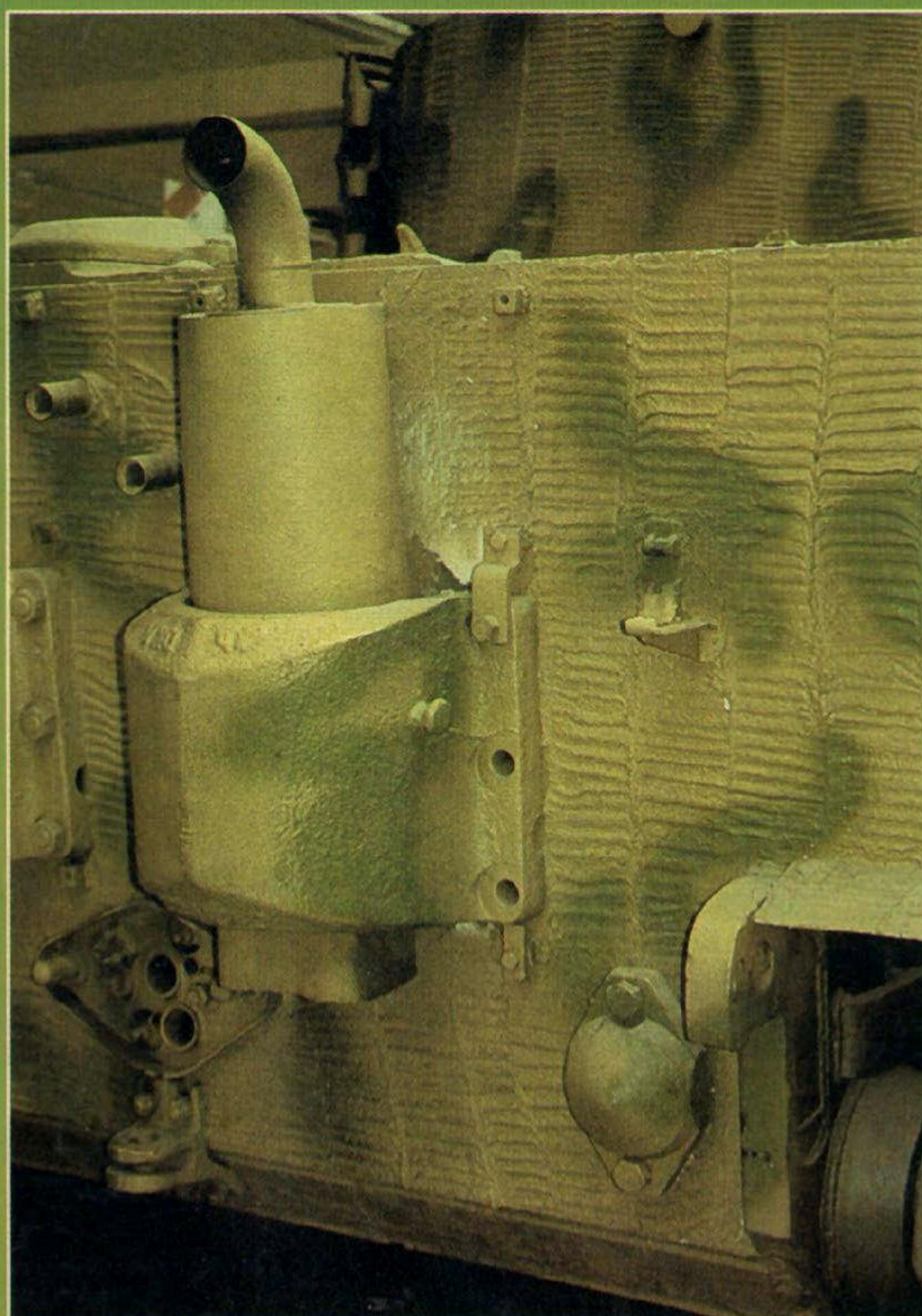
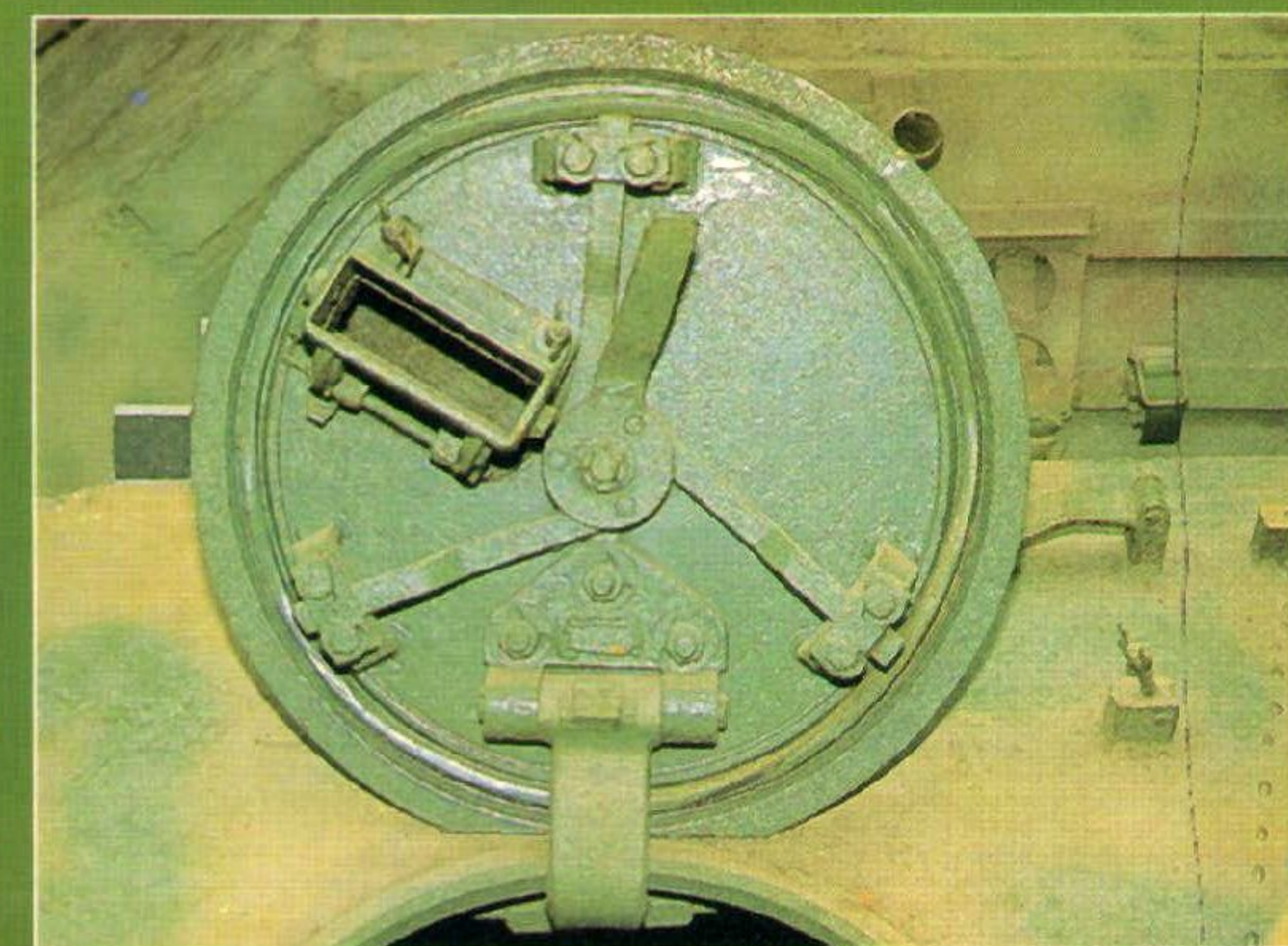
TIGER I Ausf. E (Sd.Kfz. 181)



From the SAUMUR Tank Museum collection

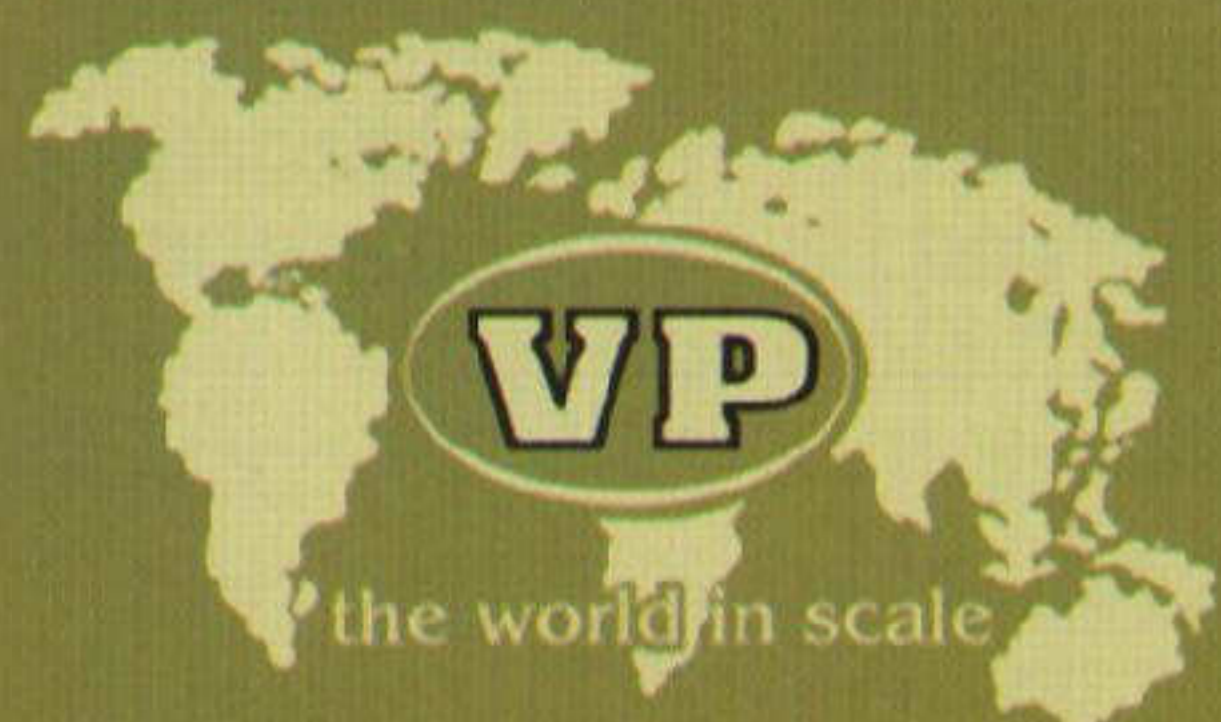
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Armor in detail : TIGER I Ausf. E (Sd.Kfz. 181) Abschlußausführung



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Photo's by Alain HANEL
& D. SADOK
Text by Willy PEETERS

Rear cover : Comparison of the beautiful 1/35th Tamiya TIGER I and the awesome 1/15th VP counterpart, illustrating the impact of this Super Scale model. The amount and accuracy of detail is stunning.

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INTRODUCTION

Although its initial combat engagement on the Russian front near Leningrad, August 1942, was not successful and its involvement in the North Africa campaign resulted in the loss of all 32 TIGER's being sent, this 60-ton monster earned itself a reputation as the most powerful combat tank in WWII.

Although both Porsche and Henschel were engaged in producing a battle tank superior to the heavy Soviet tanks, it was the latter who was finally awarded the full scale development contract. Production facilities were set up head over heels to meet the requirements.

Due to a lack of TIGERS for training, most of the initial training on this heavy tank had to be acquired in combat. The first TIGER crews were therefor drawn from existing medium tank

divisions and involved only the most experienced men. This selection, and the German propaganda machine describing the tank and its crew as "unbeatable" on all fronts, soon established an "elite corps" status for the TIGER crews. Their tenacity (and sometimes arrogance) scared off many Allies, increasing the feeling of superiority.

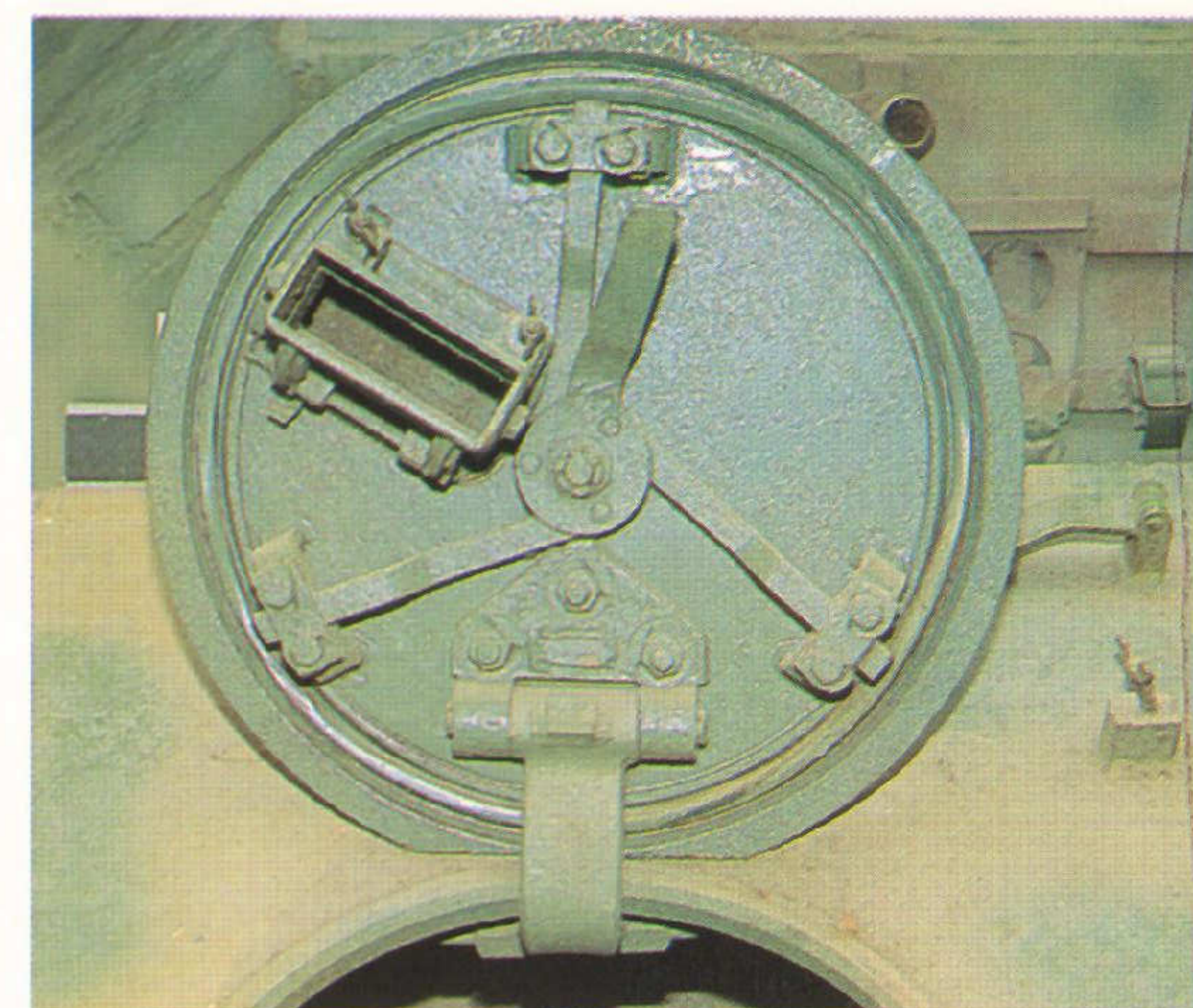
Although it had its mechanical problems that were never fully resolved, the TIGER not only benefitted from its heavy armor but the most powerful gun in the German army inventory at that time, the 8,8cm KwK 36 L/56 antitank gun, outranged any Allied tank.

Its massive rectangular box shape and wide tracks added to its impressive appearance and its silhouette must have been a source of fear for many Allied soldiers in WWII.

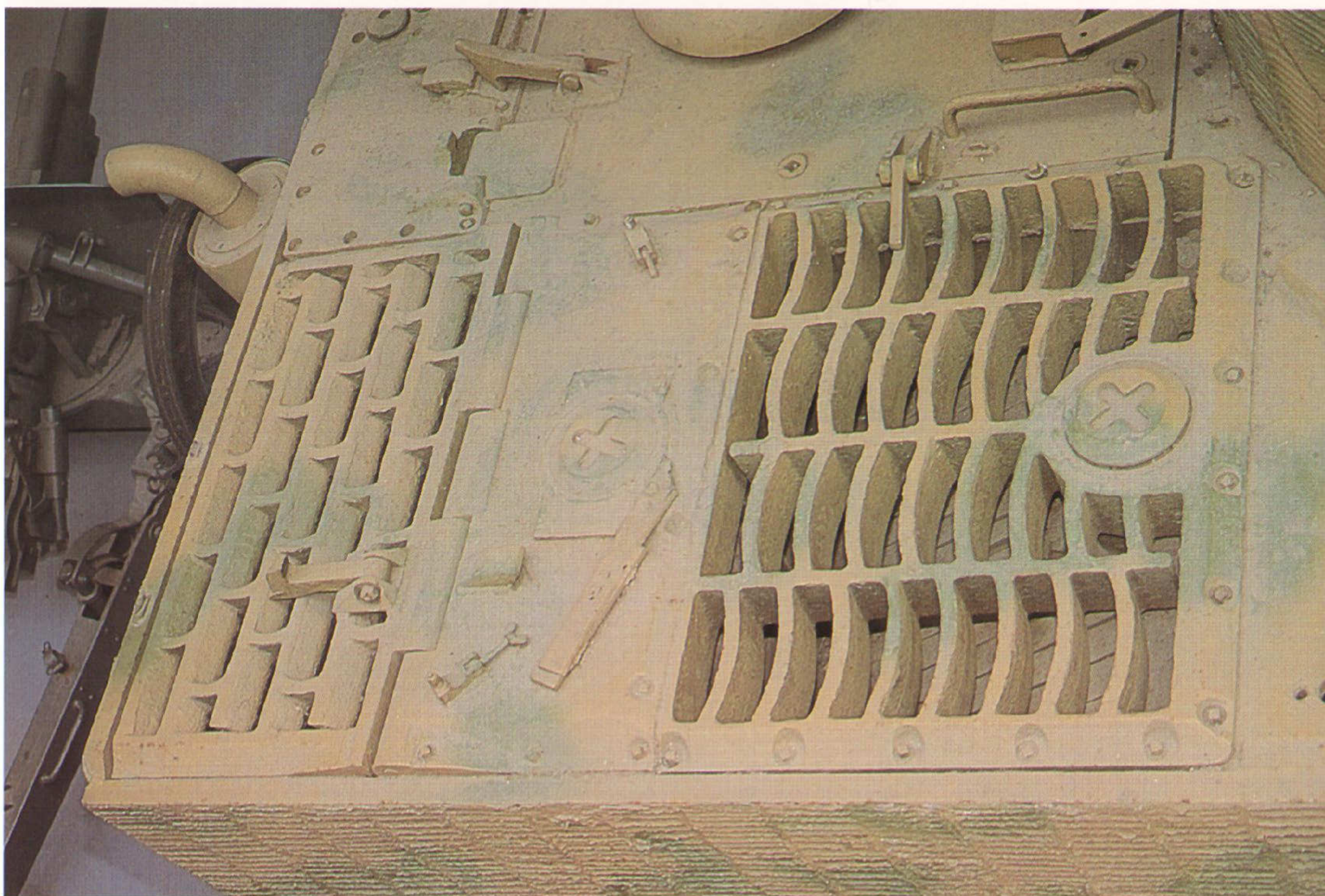
Heavy armor plating on the front made the TIGER tank almost invulnerable to most allied ammo. Turret front and gun mantlet both had a 100mm thickness, front vertical and nose plate were 102mm thick while a 63mm armor plate was used for the front lower nose plate. The glacis plate (10° angles from the horizontal) was "only" 61mm thick.

Several tool mounting brackets (shovel, jacking block, etc.) are welded on the top front plate. Note the single headlight cable next to the roof ventilator.





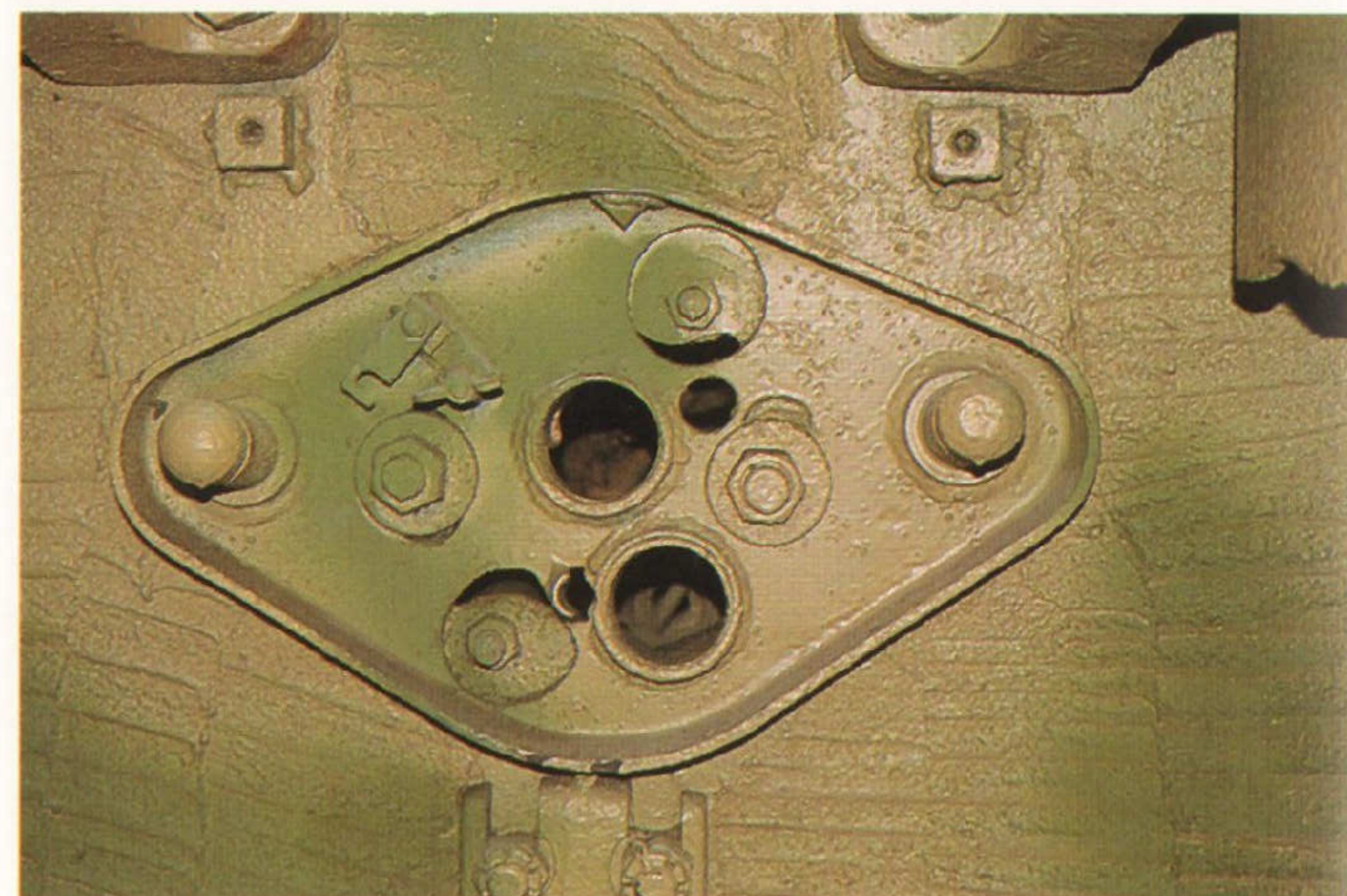
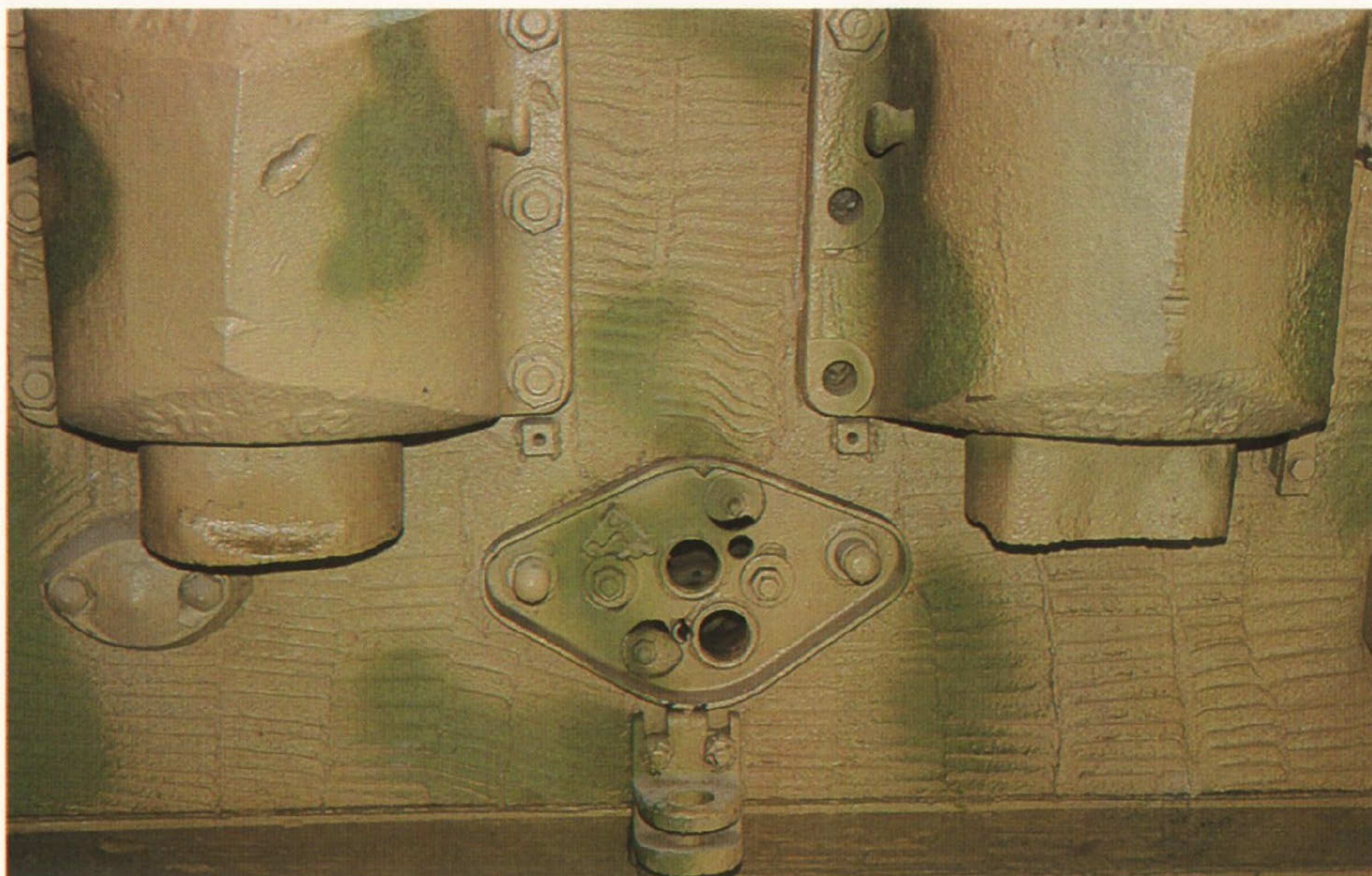
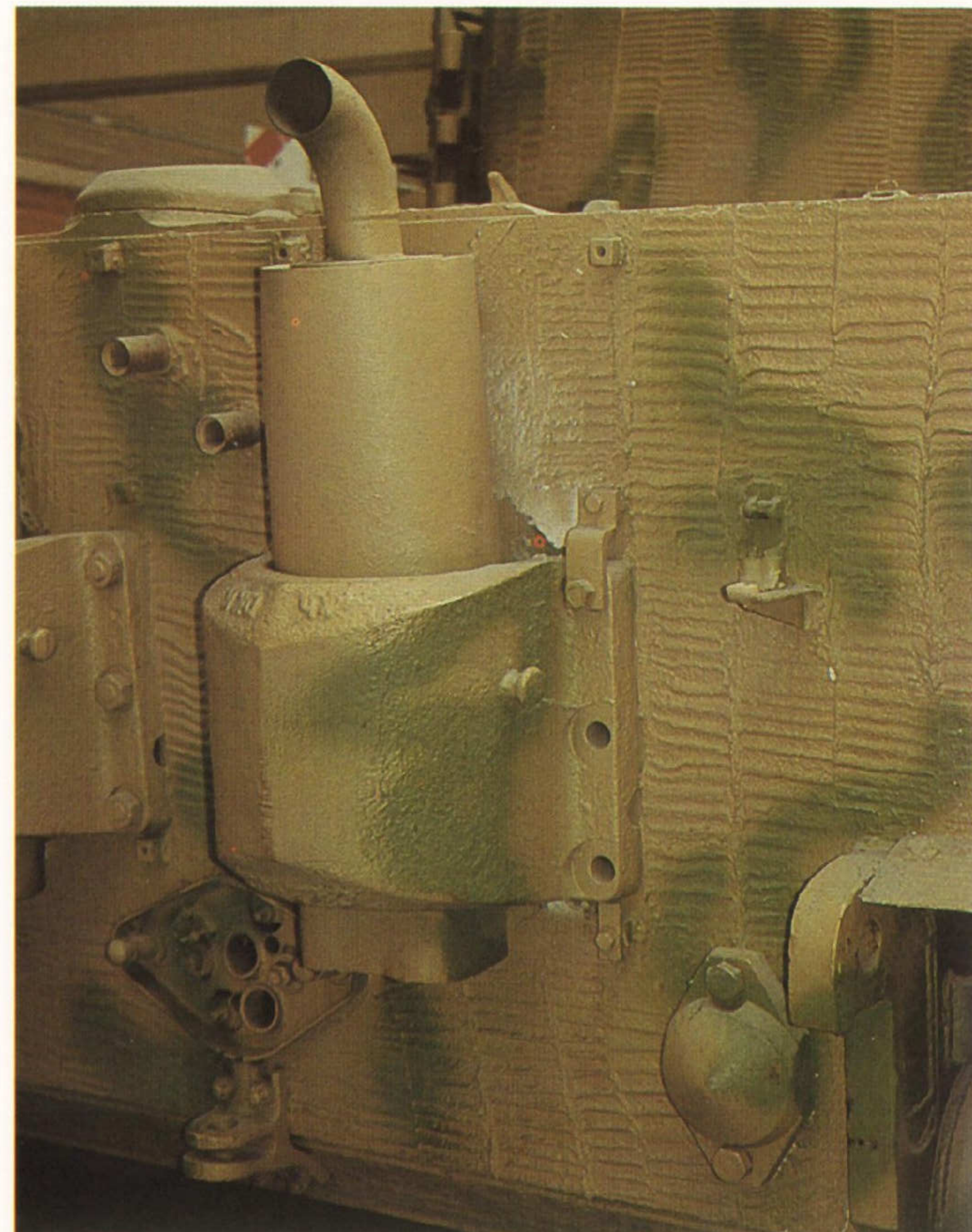
(Above, left & right) View on the radio operator's hatch area at right front of the hull. Note the heavy welding seams of the hull armor plates. The balance spring of the driver's and RO's hatches (enabling easy opening) is welded to the hull roof. Note the episcopes mount and the crank handle opening mechanism.



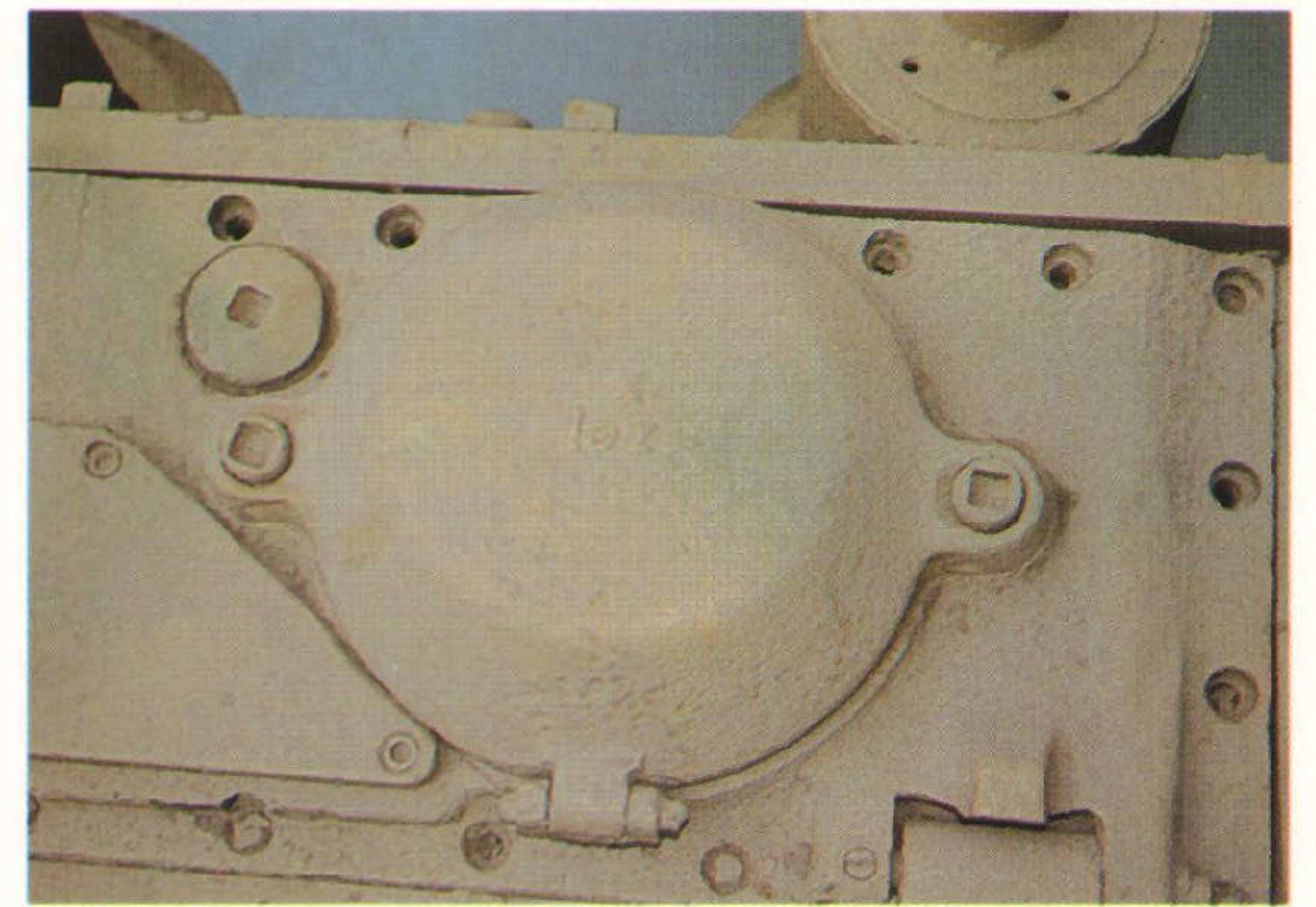
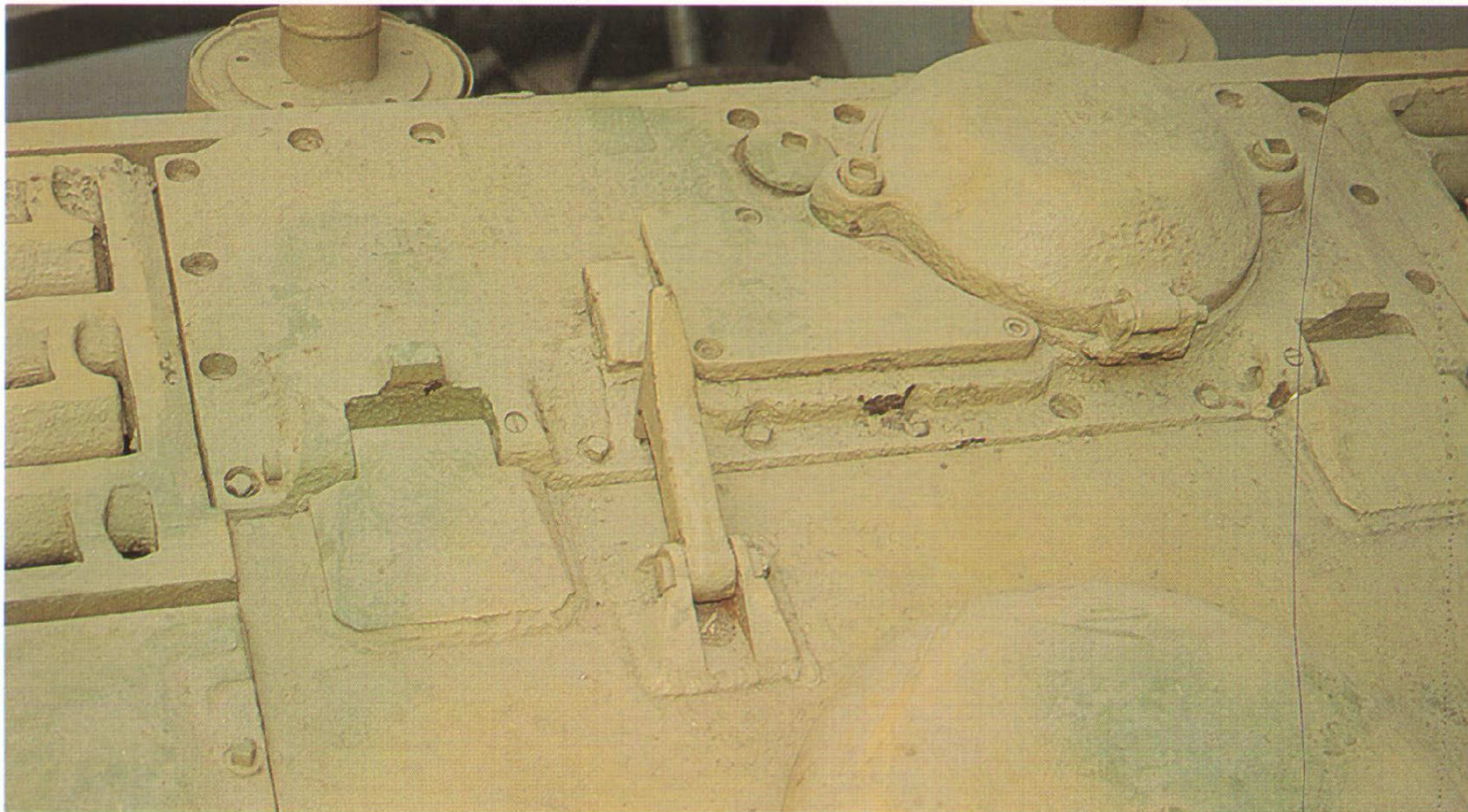
(Left) Heavy grill doors characterize the rear of the upper hull. Those covering the cooling fans are hinged and can be locked in an upward position. Notice the fuel filler cap in the front grille and the radiator filler cap in the solid middle plate. These grilles were usually covered with thin wire. Also note the mounting holes for the antenna mount at bottom right of the picture.



Two heavy cast exhaust manifolds are bolted to the 82mm thick rear plate. Omitted on this museum model are the large metal sheet covers that serve as heat protectors. Located in the bottom corners of the rear hull plate are the track tension access covers.



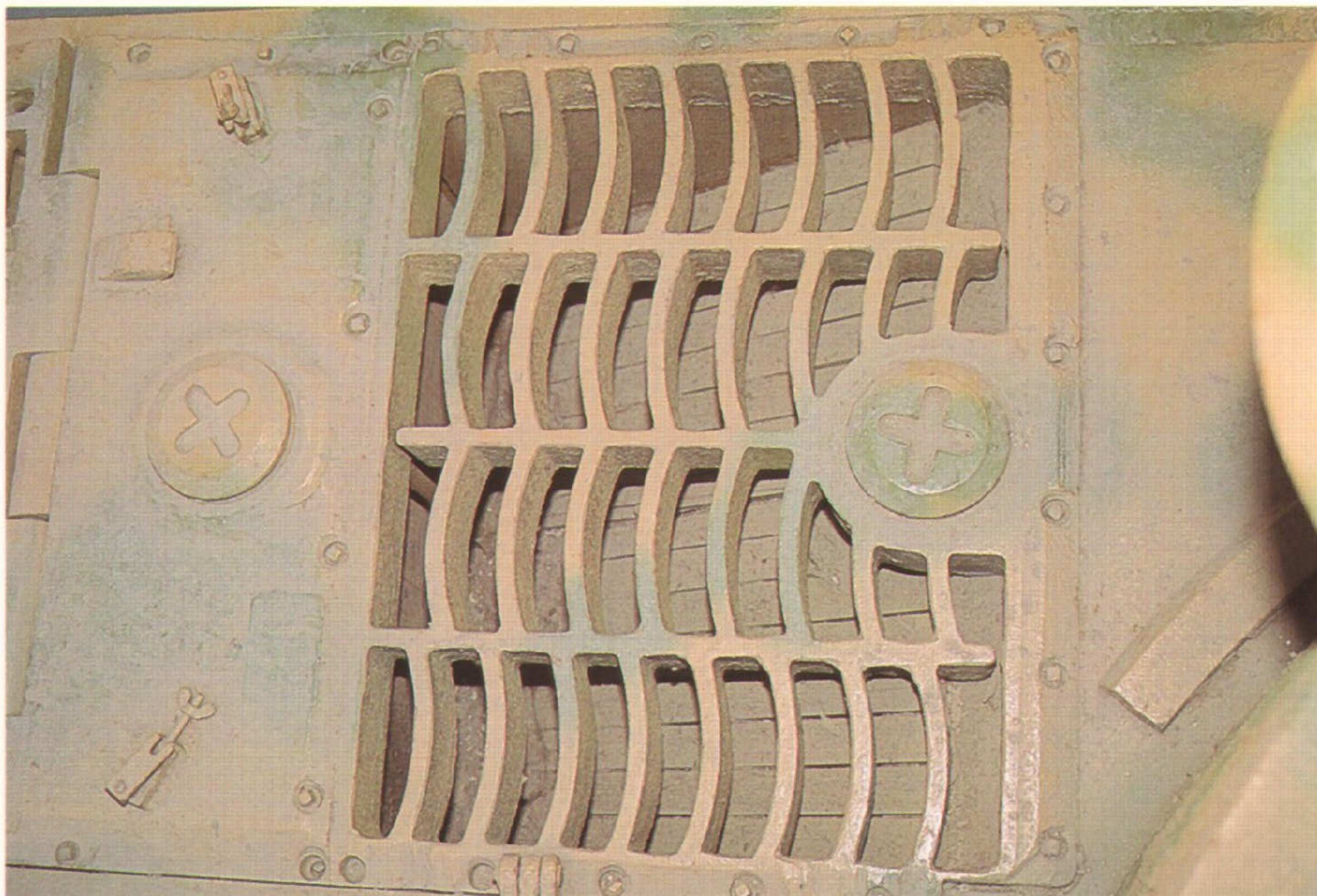
The engine can manually be cranked through holes in the rear hull plate. The device seen here locked over these holes serves to mechanically crank the engine by a Kubelwagen.



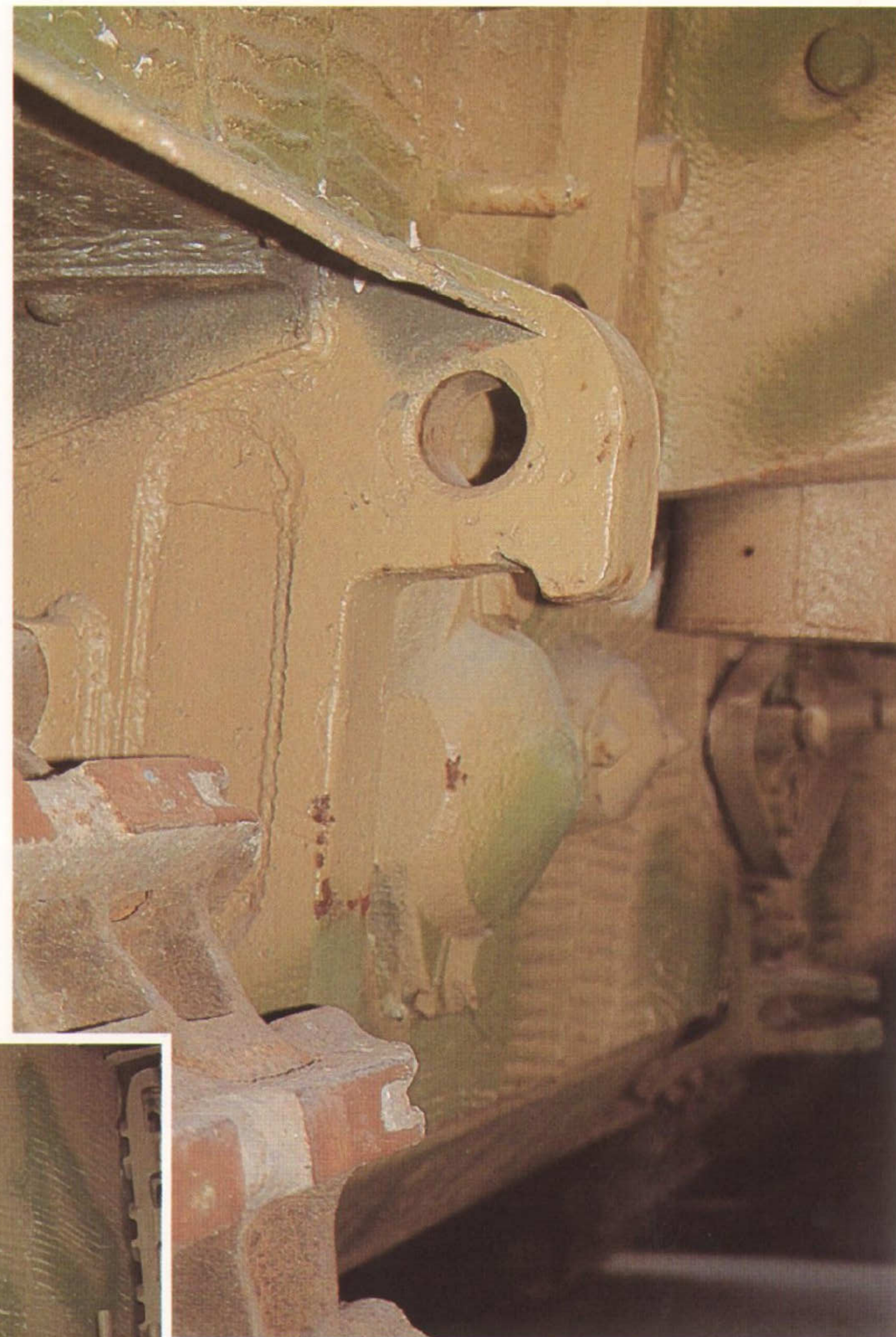
The large engine access cover is hinged at the rear and is secured in the open position by means of the locking lever seen here next to the right hinge. The hinged cover seen in the picture above seals the hole for the fording snorkel.



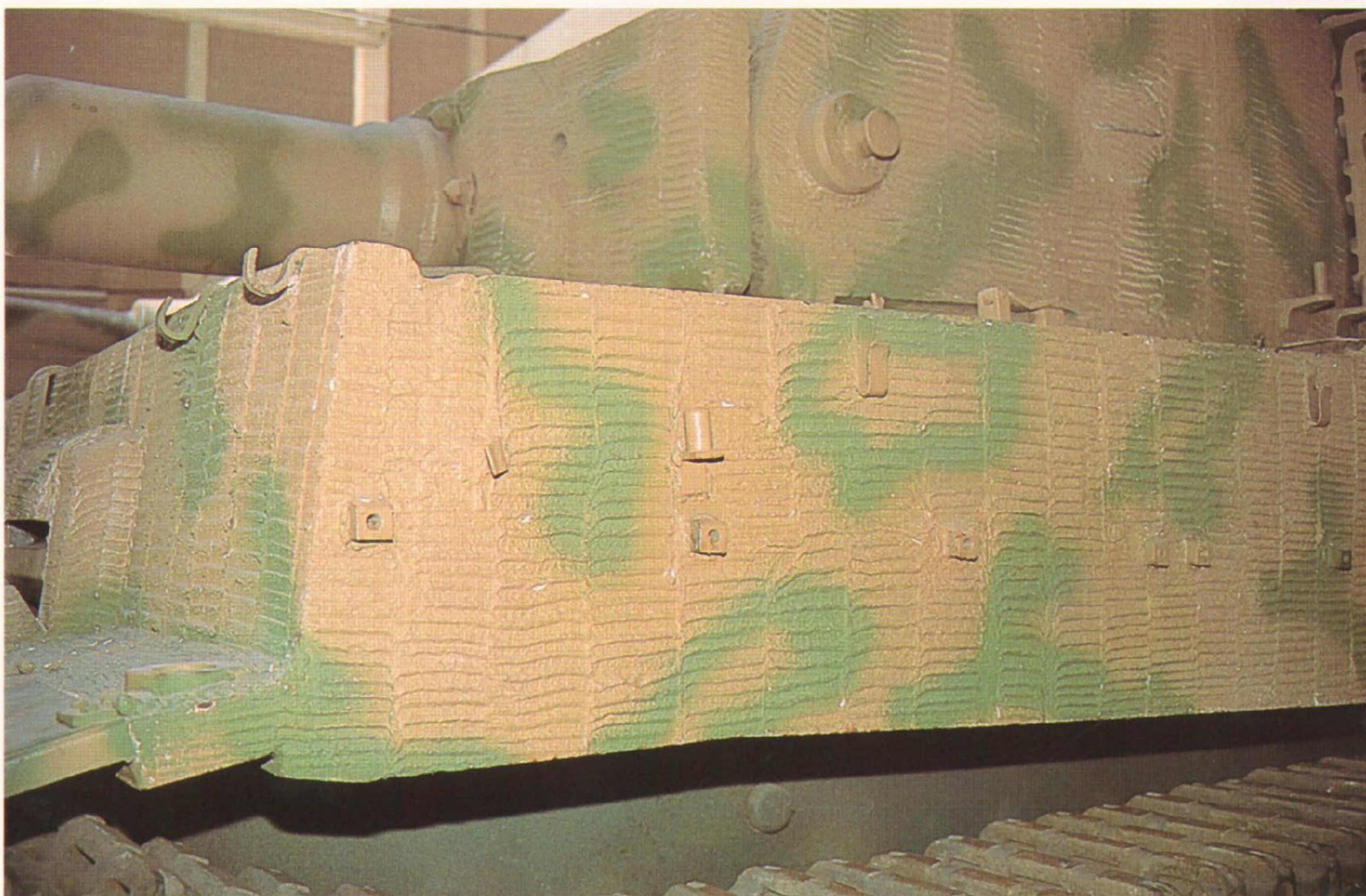
Left hull side showing mounting pads for the side skirts and fasteners for the track cables.



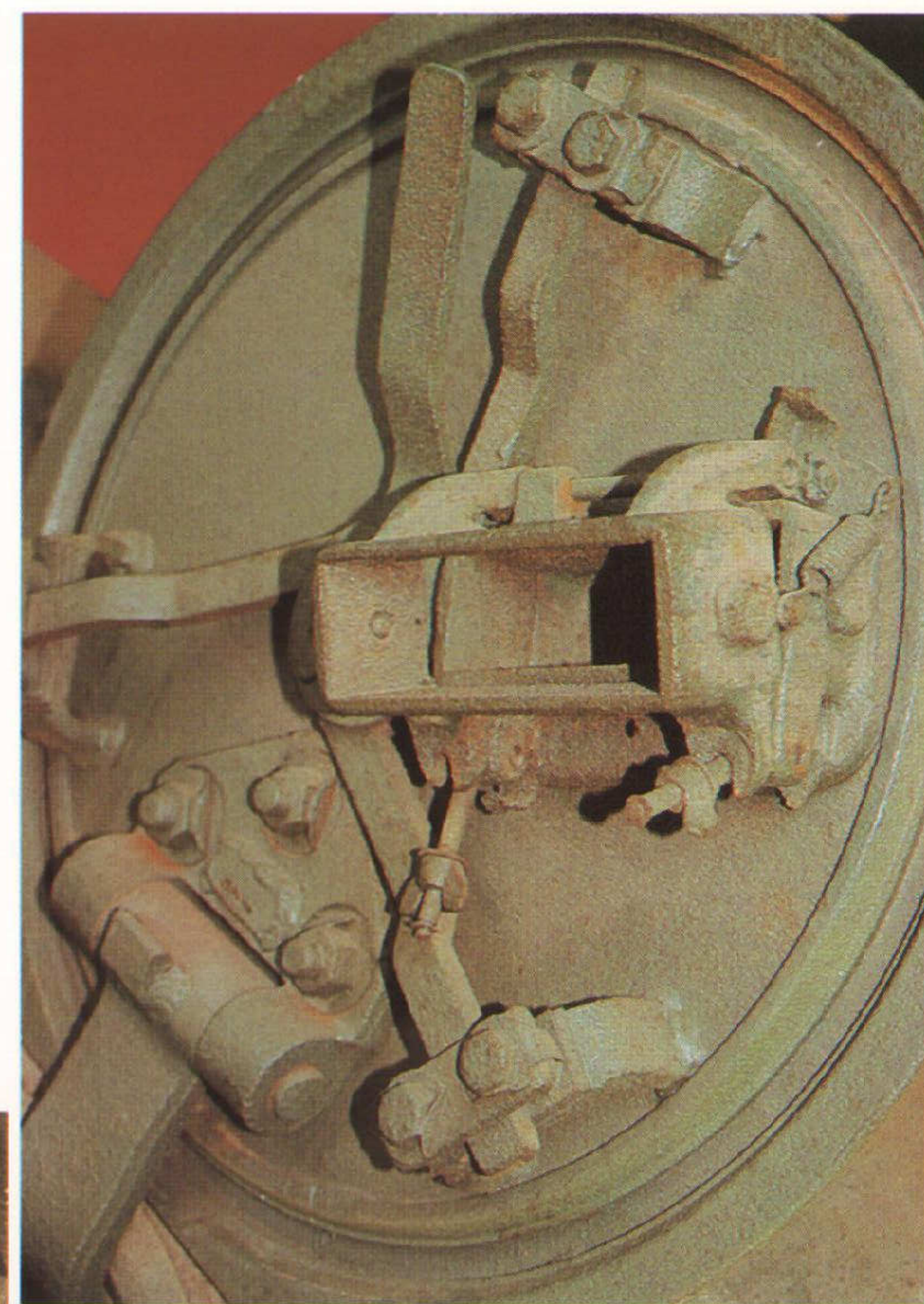
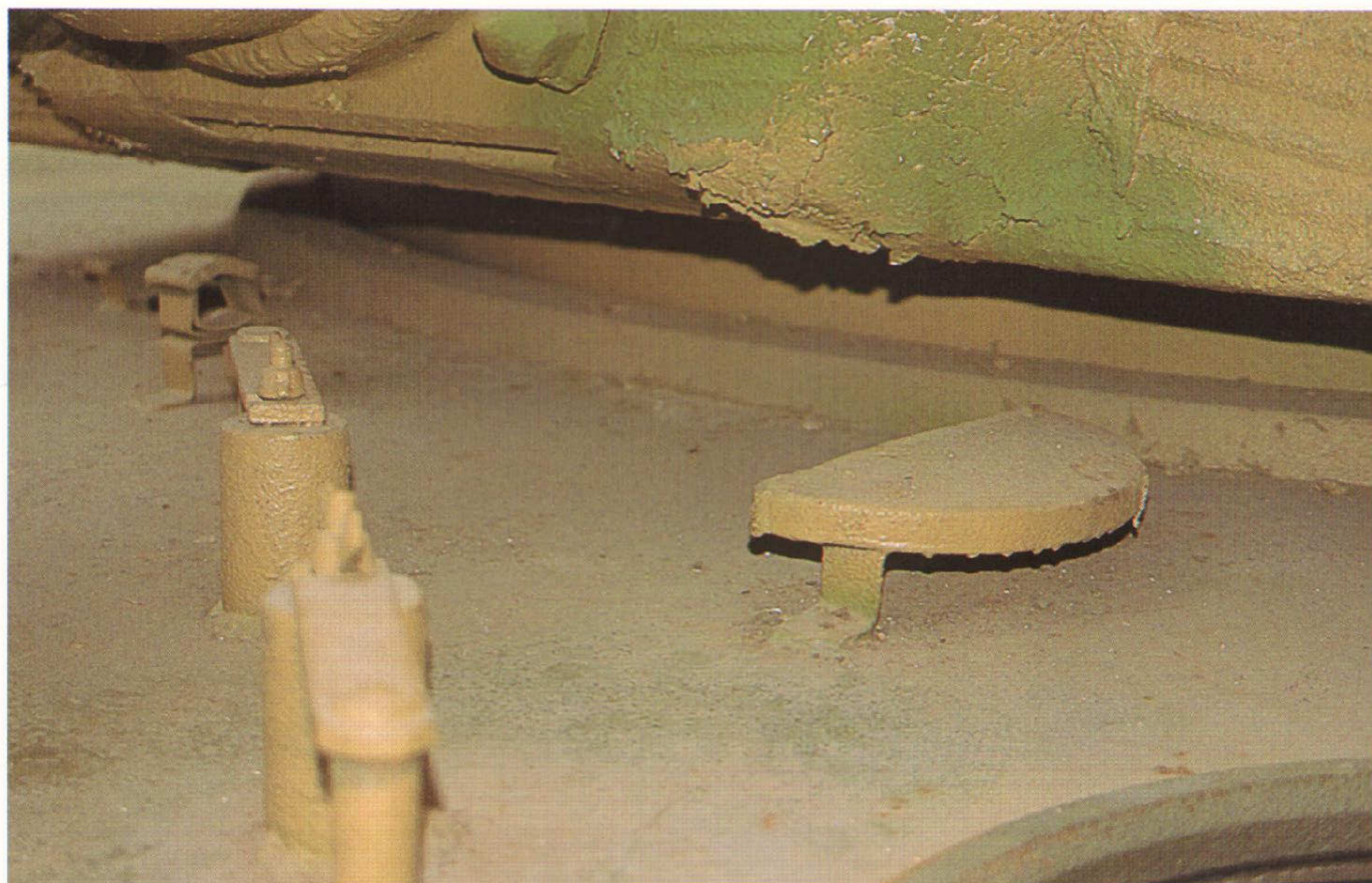
Left rear hull detail with similar louvered hatches over the radiator intake funnels. The latter is formed by the sloped side of the fuel tank. Both brackets on the solid hatch part serve to stow the towing cable.



Rear hull extension to hold heavy duty lifteye.

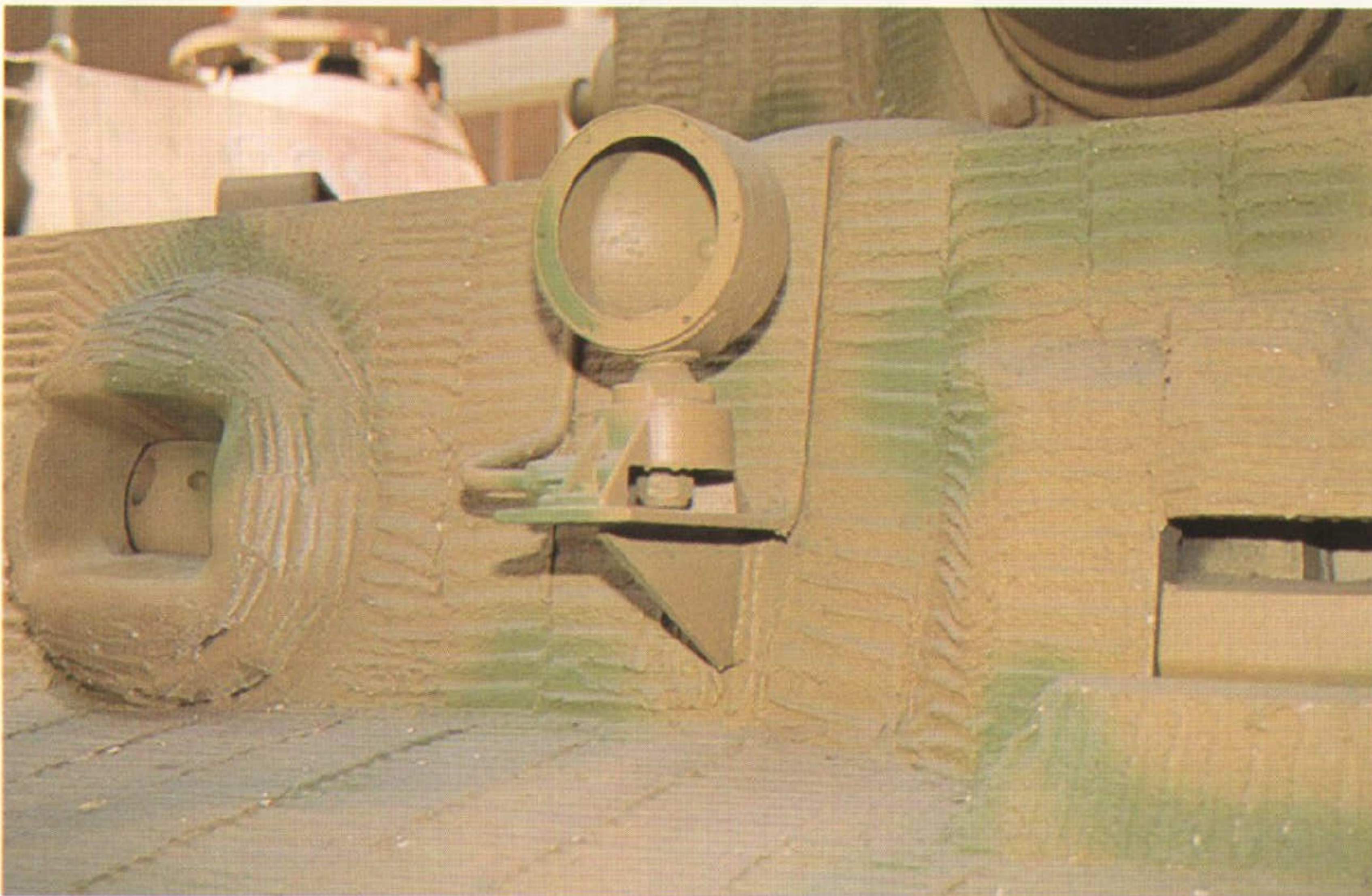
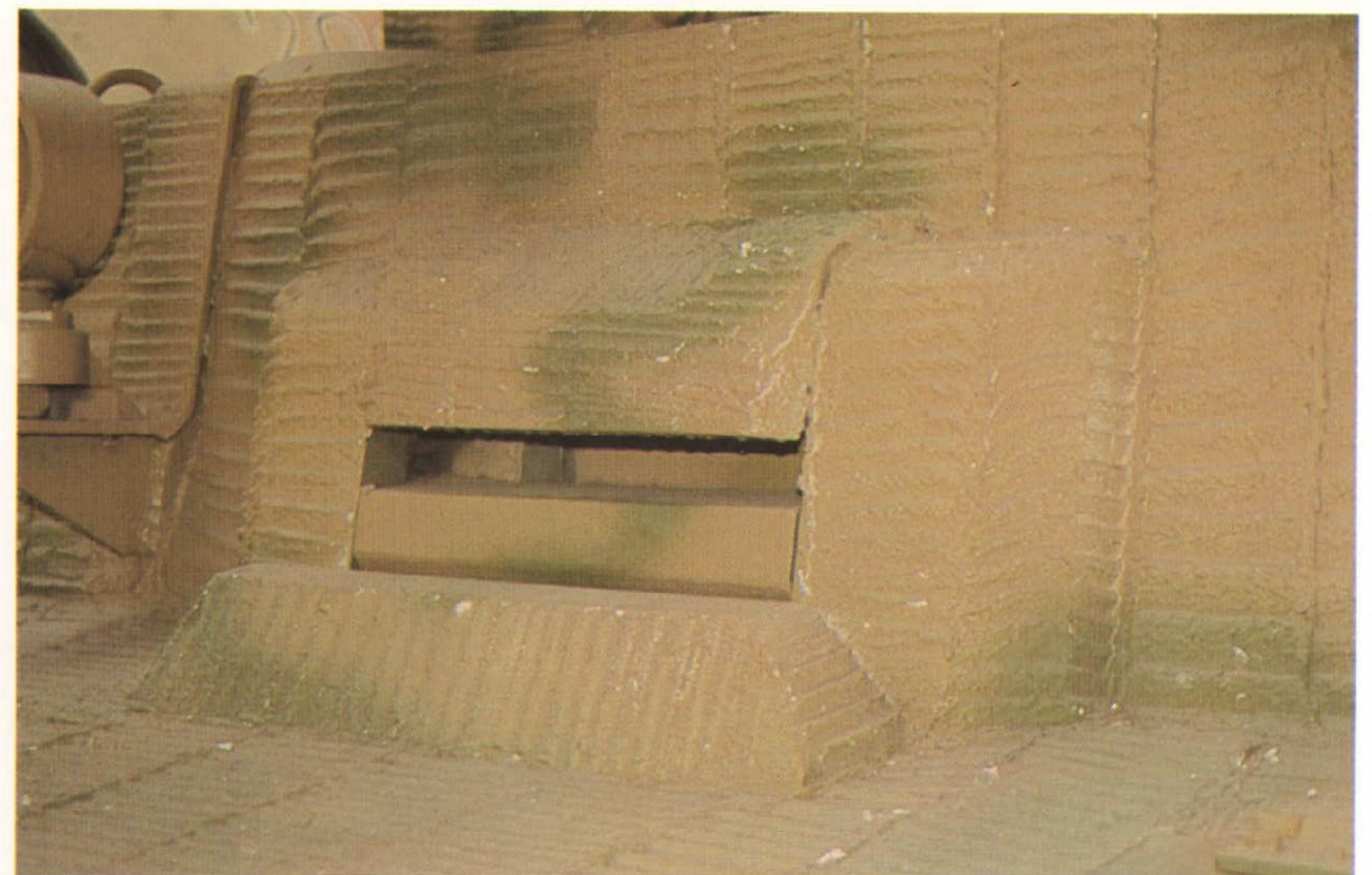
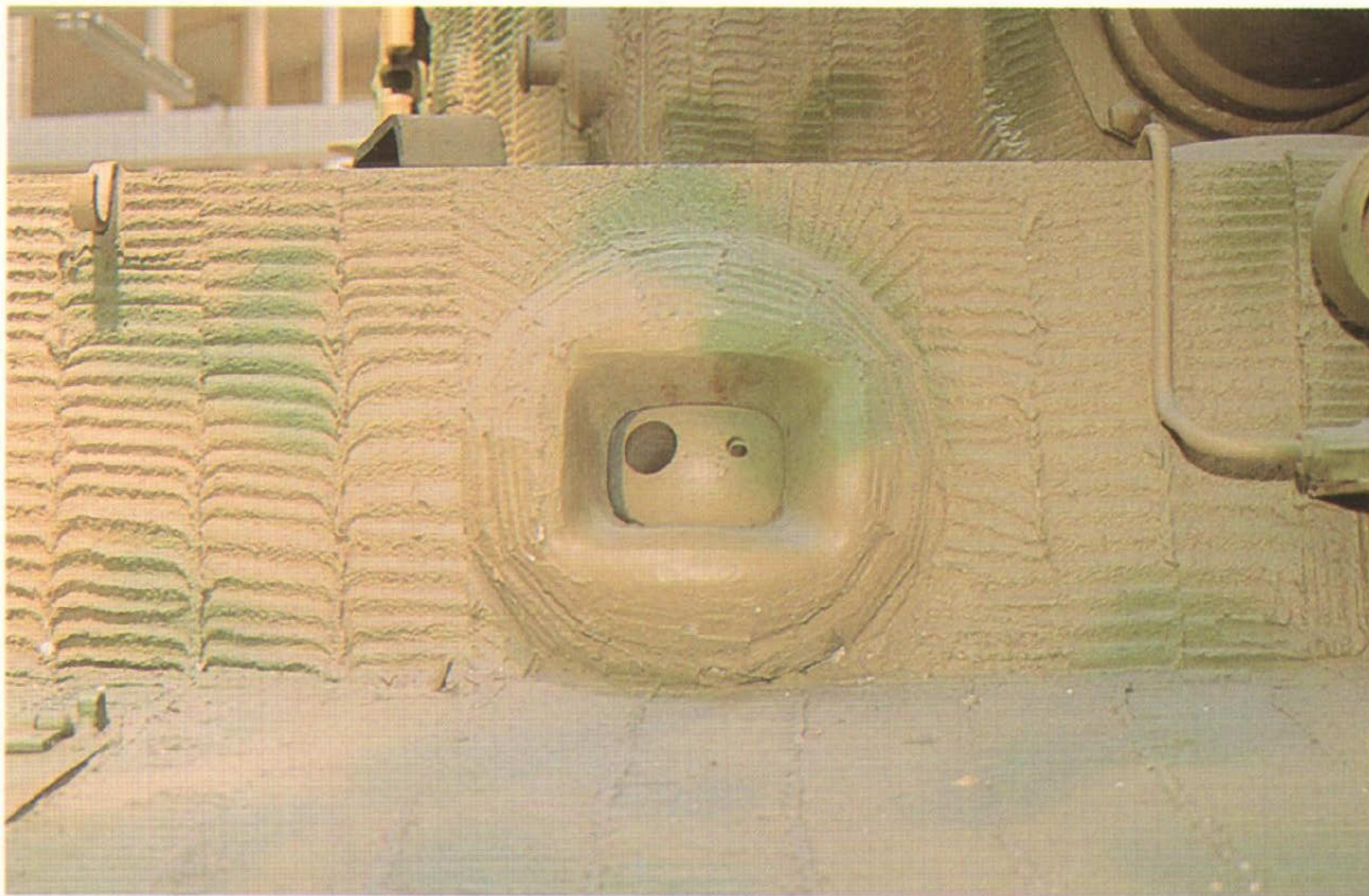


Left forward hull side constructed of 63mm armor plating. Note the bottom edge of the hull side drops slightly at the front. Mounting brackets are again for track cable stowage. Zimmerit anti-magnetic paste was usually applied in the factory before roll-out and tanks in combat never looked as neat as this example.



(Top left & above) The shovel stowage position on this type was below the gun mantlet, slightly inboard of the driver's hatch. The latter is a mirror image of the RO hatch described on page 5 with the episcopes mount at front.

General view of the left forward hull with a clear view on the front narrow-type mudguard stopping short of the glacis plate edge. These narrow front mudguards are typical of early production TIGER's.

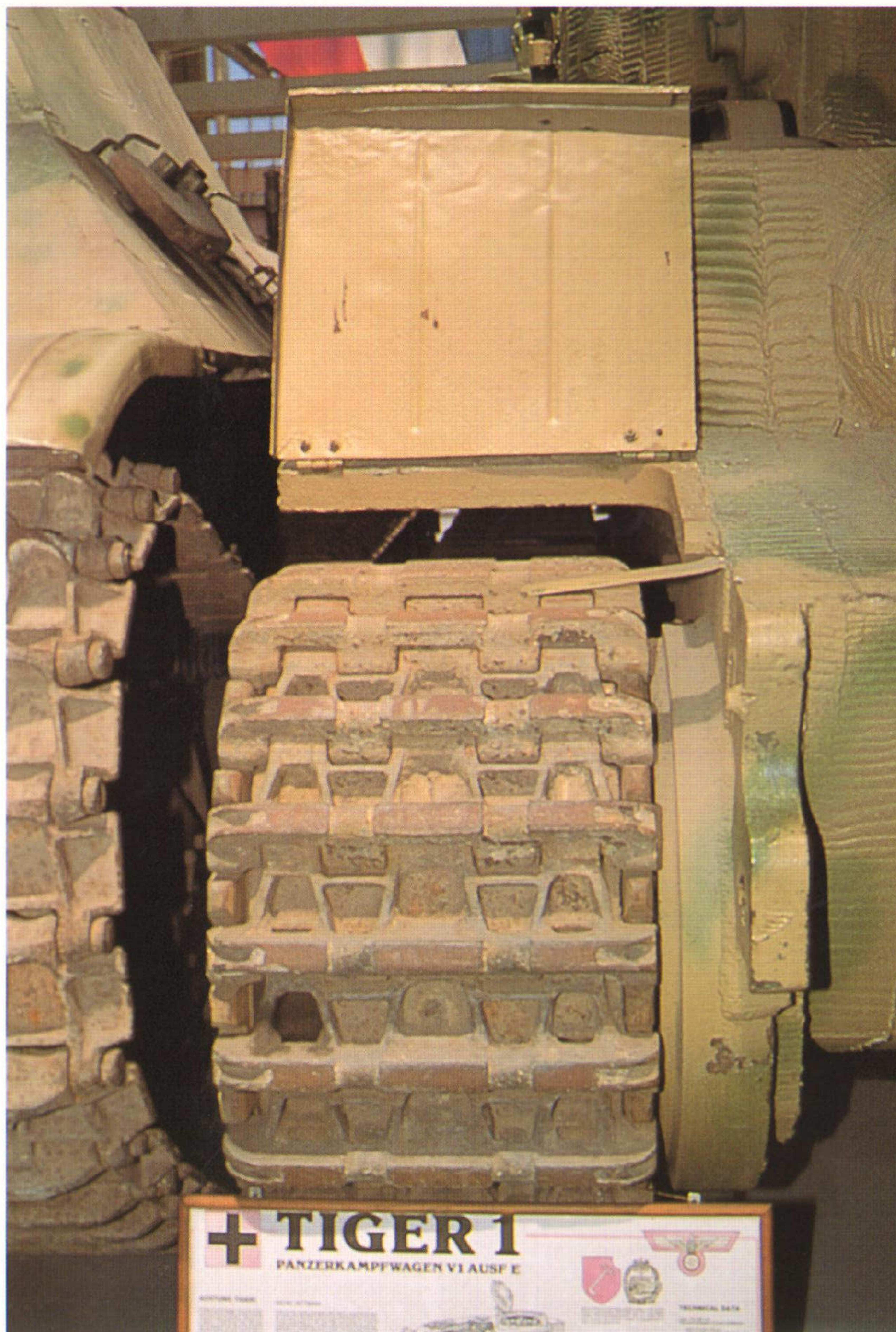


(Top left) An auxiliary MG34 could be carried inside this bow mount on the front vertical plate. The internal moving mantlet is visible here although the gun and barrel jacket have been removed.

(Top right) The driver's vision slot with a sliding shutter that can be operated manually by a handwheel from the driver's position.

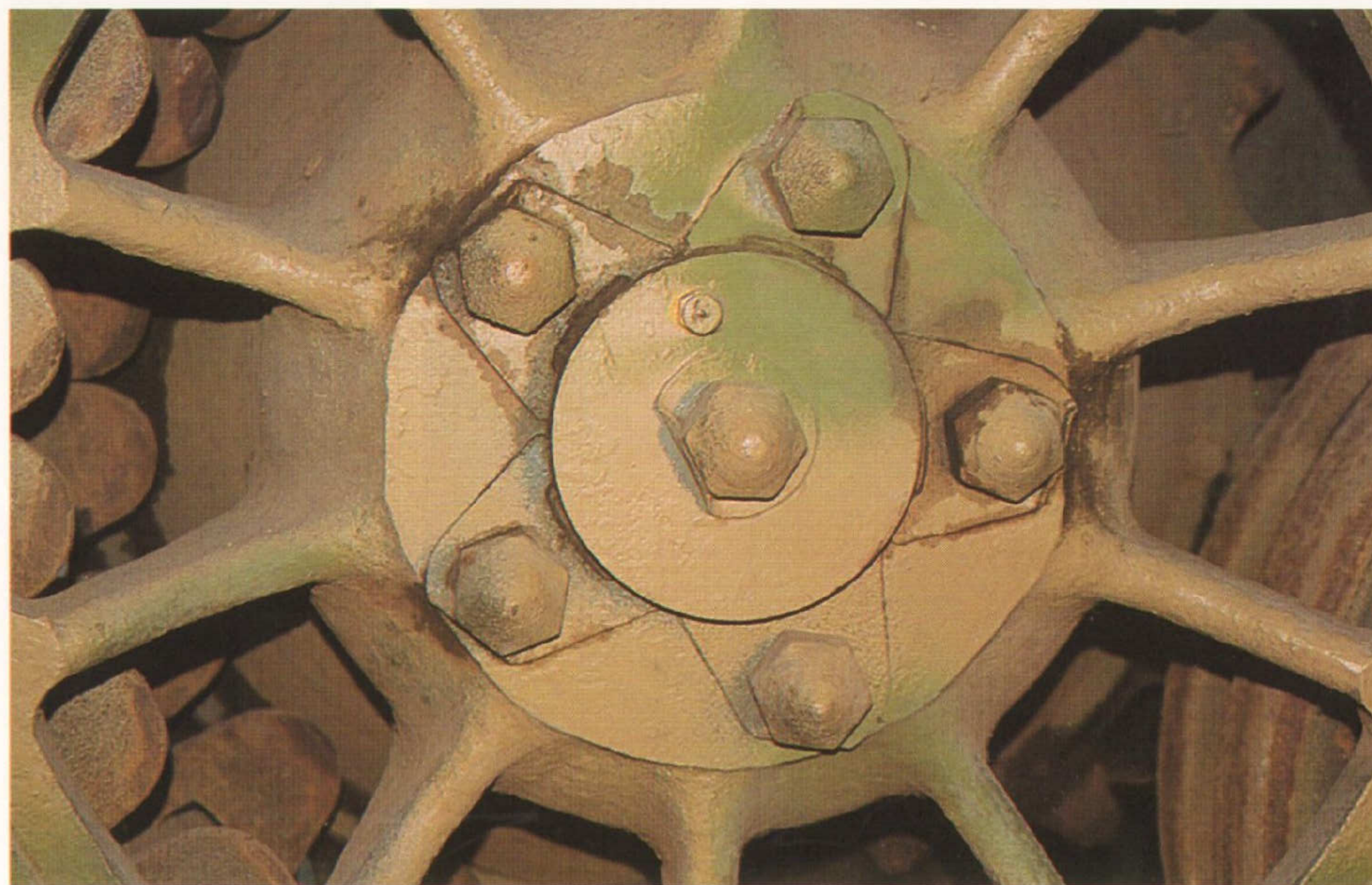
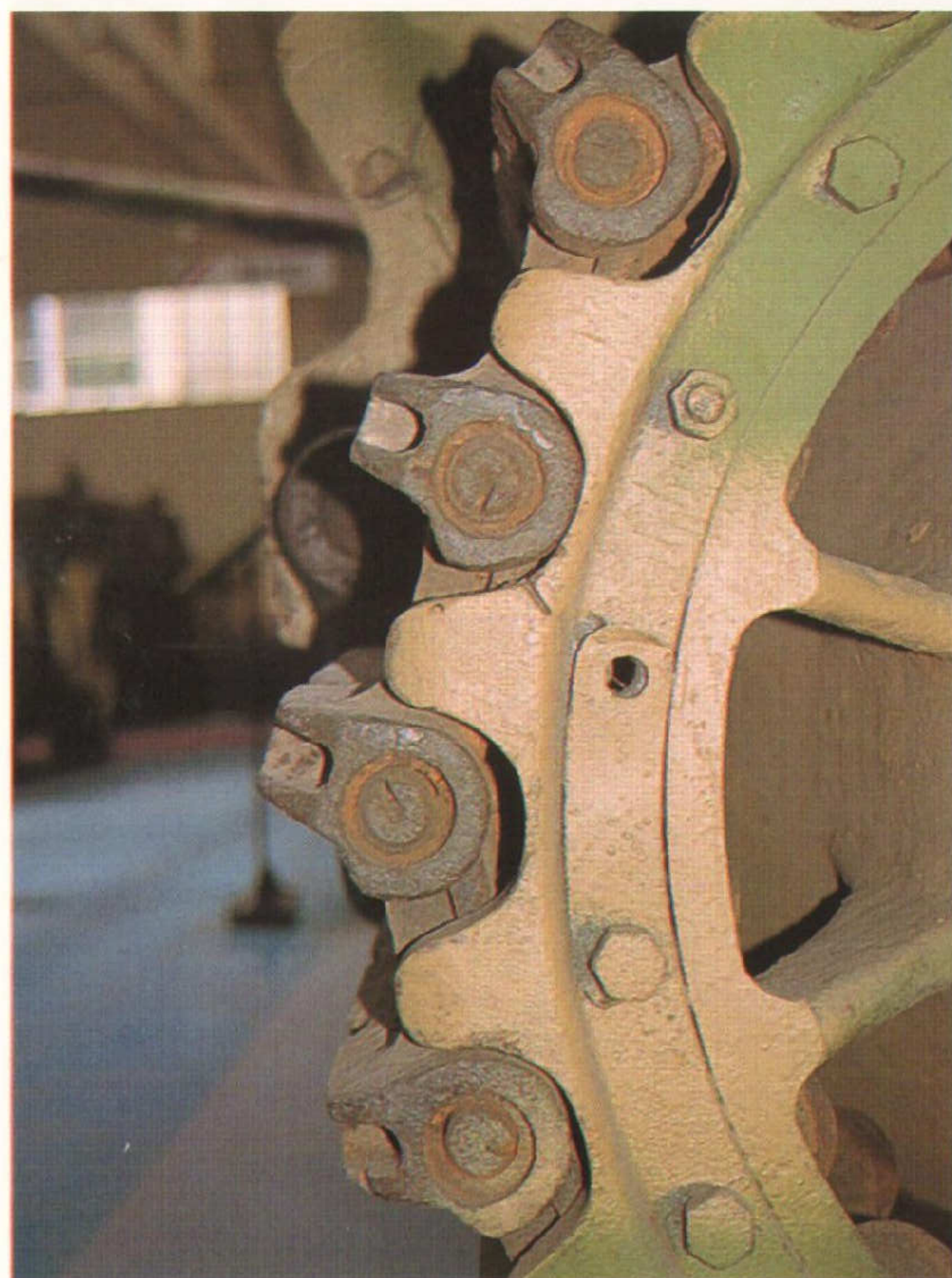
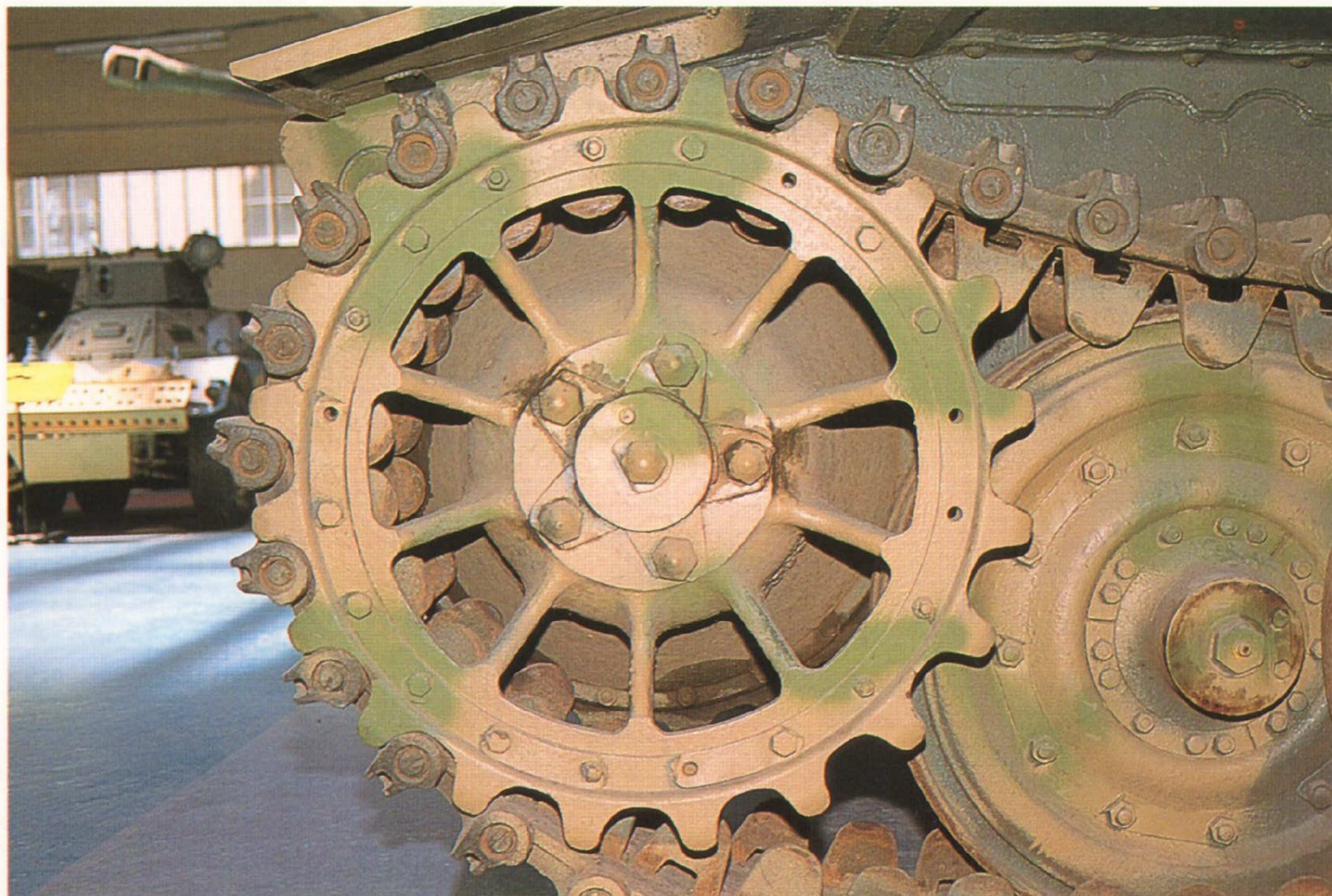
(Above) A single headlight was installed on this type of TIGER which was bolted on top of a bracket welded to the vertical hull plate.

(Right) A single lifeye was spotted on this TIGER used both for towing and lifting. Note the damage to the Zimmerit paste probably caused by a tool used to unscrew the lifeye fastener.

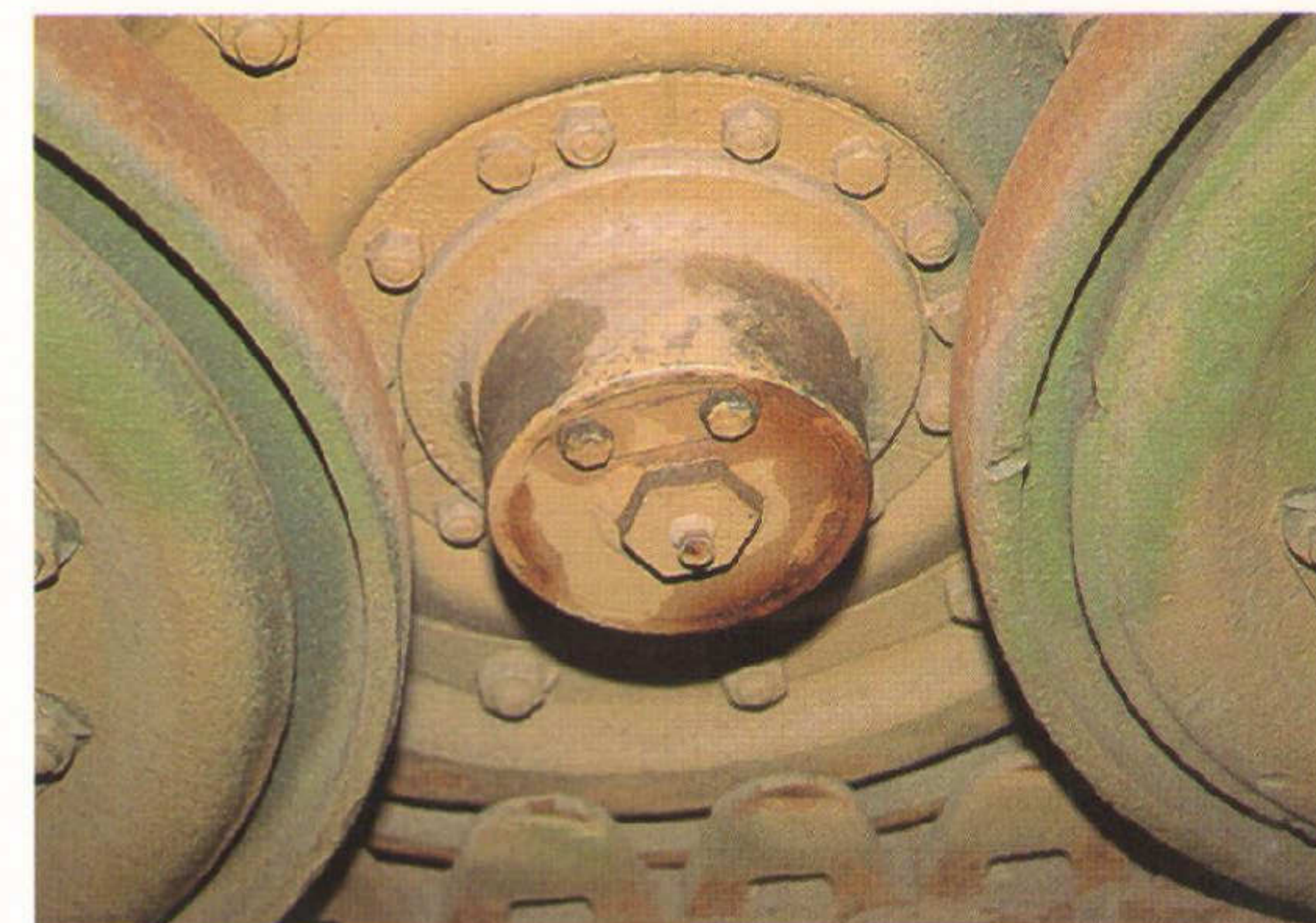
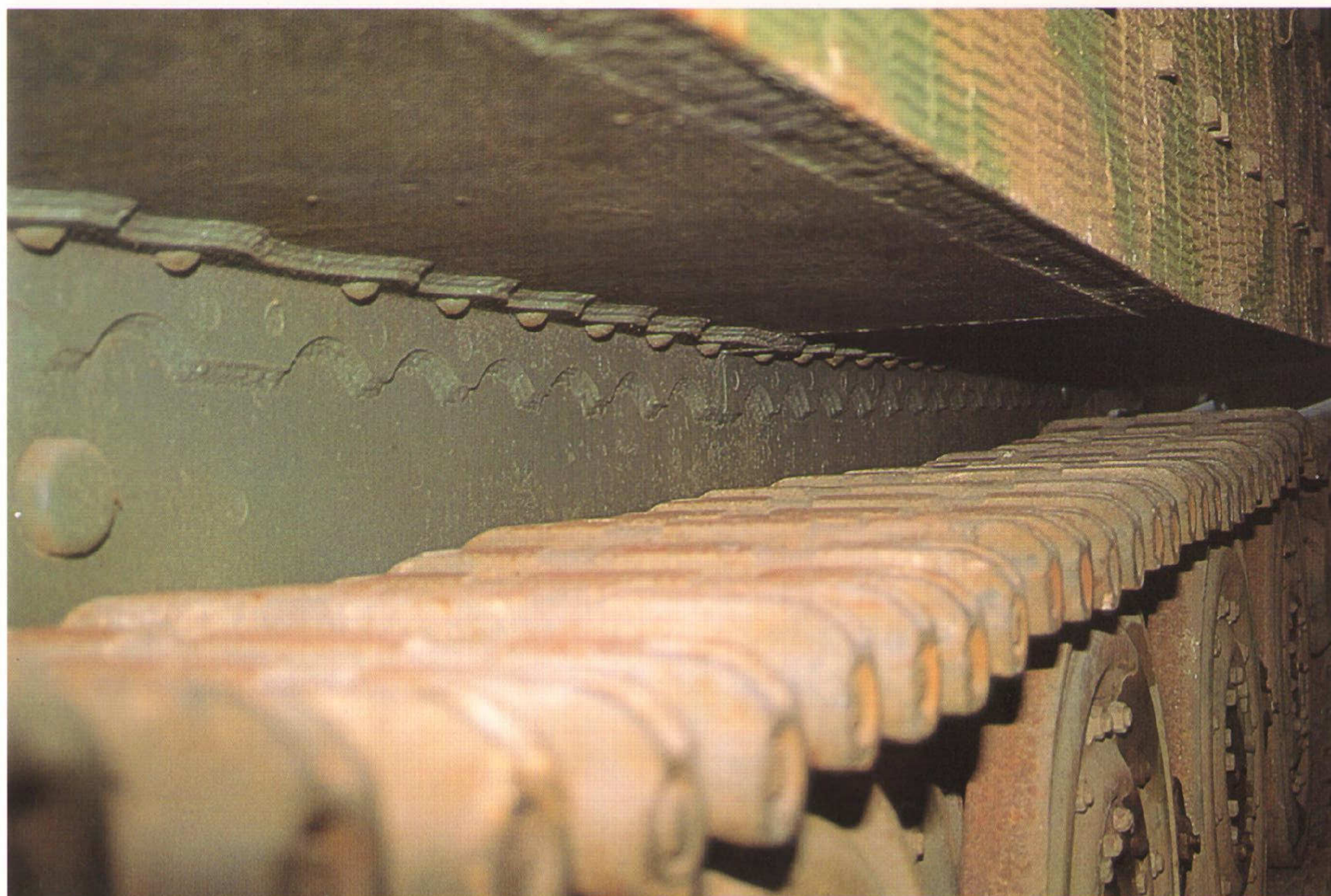
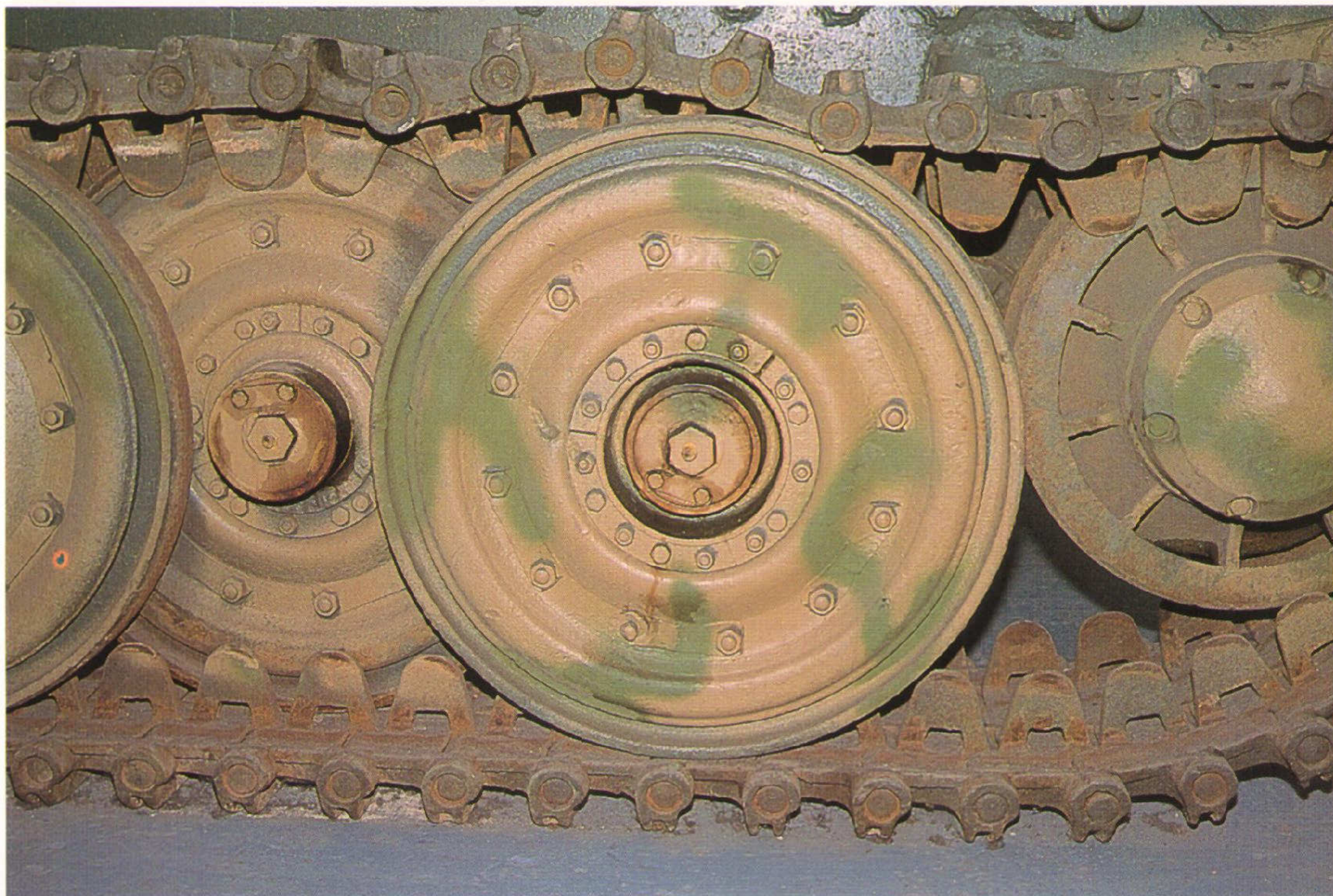


Two types of tracks could be fitted to the TIGER, in which case only two tires are required on each suspension arm. The smaller track shown here was usually fitted for rail transport. In combat, 730mm extended tracks were installed (reducing ground pressure), requiring an extra road wheel on the outer side for support. These were later again omitted when the steel rim wheel became standard. Note the bottom detail of the mudguard and its support bracket welded to the hull side.

The casted drive sprocket wheels had detachable gear rings (featuring 20 teeth per ring) of which several different types existed. Wheel hubs also came in several patterns.

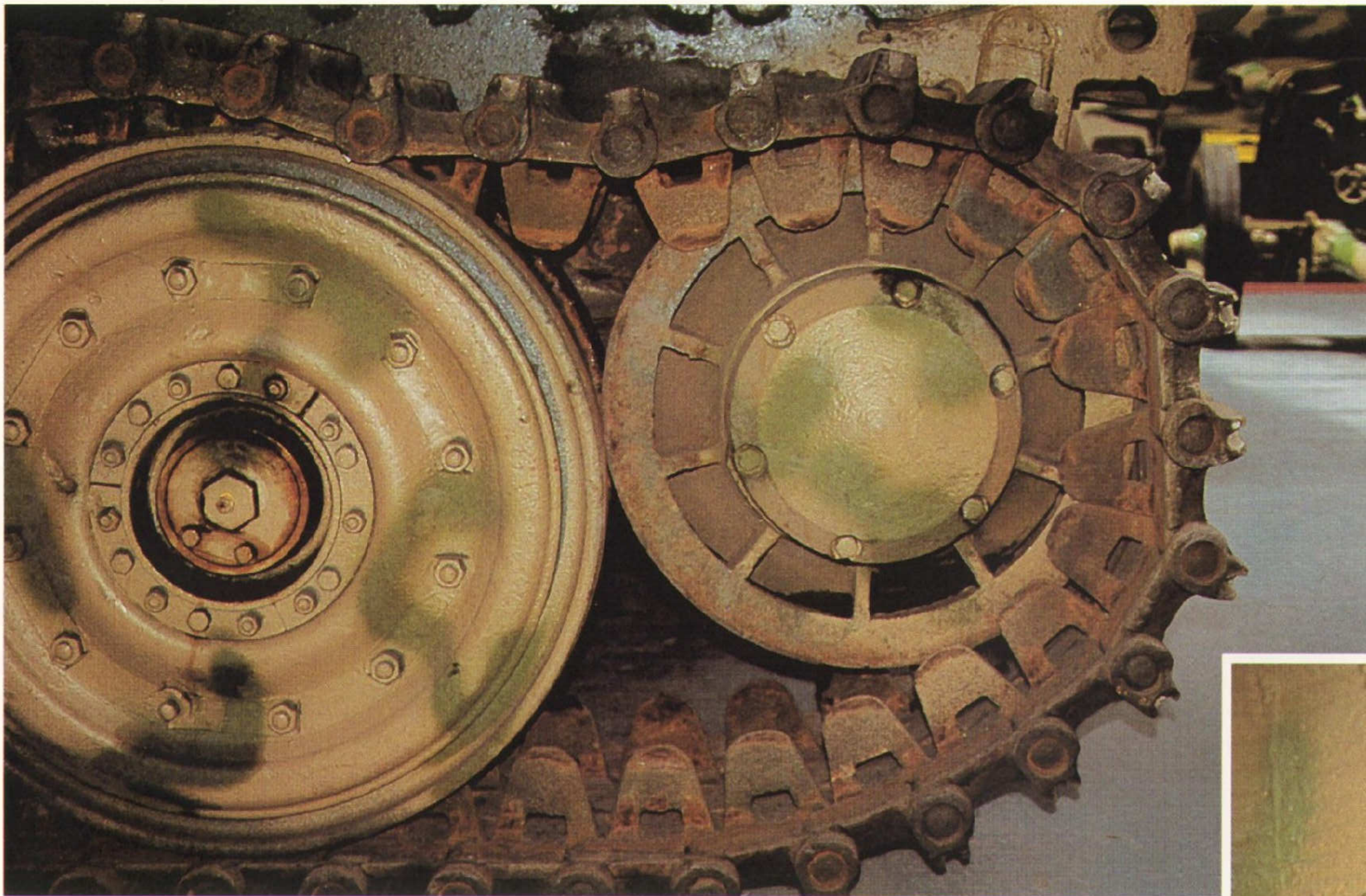


Production improvements included the introduction of solid resilient steel rings that replaced the rubber-lined covers on the roadwheels. They were tailored after a soviet design and proved less susceptible to wear and battle damage. Besides, supply shortages became a real problem toward the end of the war and some compounds became extremely rare. Furthermore, the outer set of wheels was deleted to conserve more material.

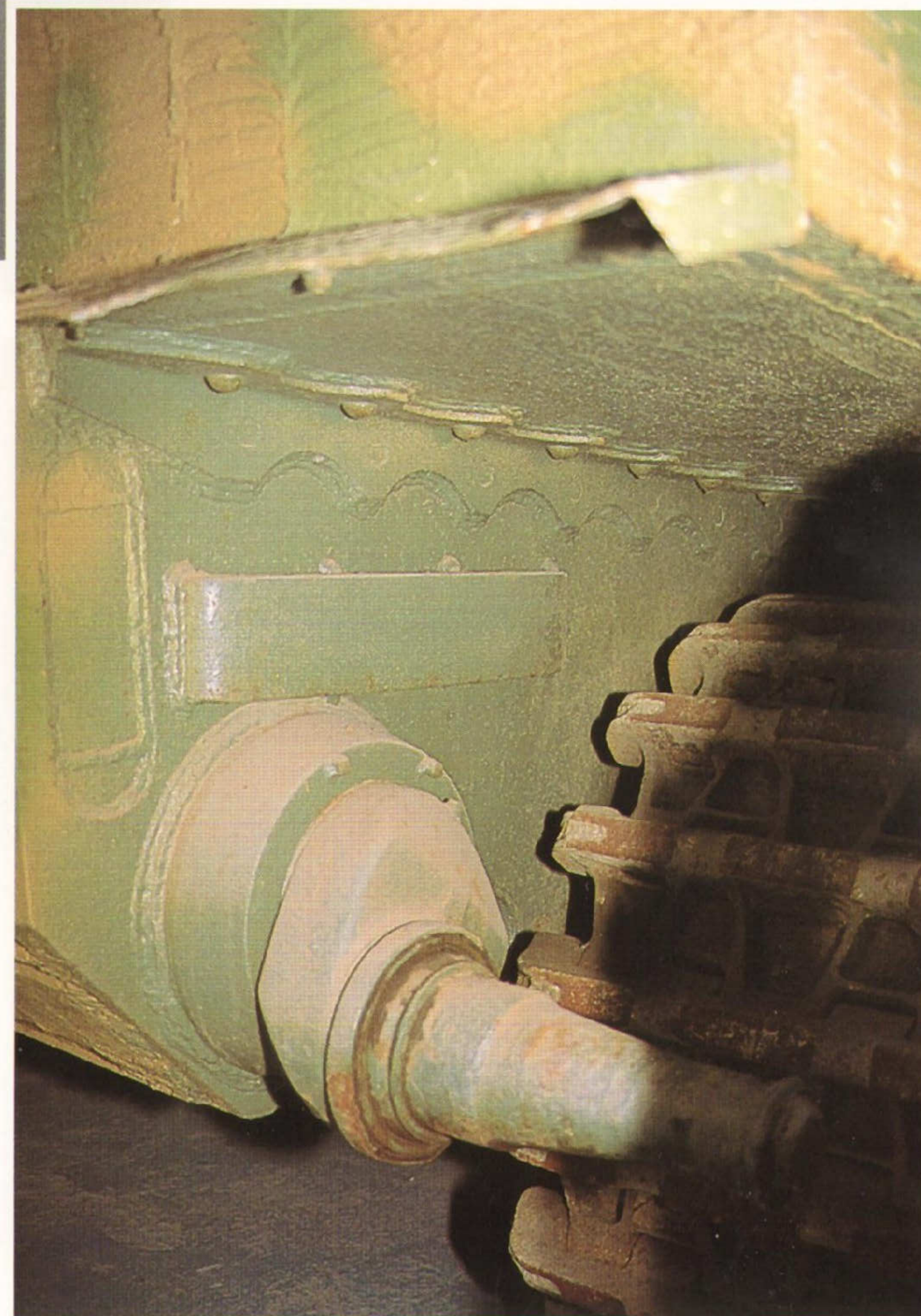


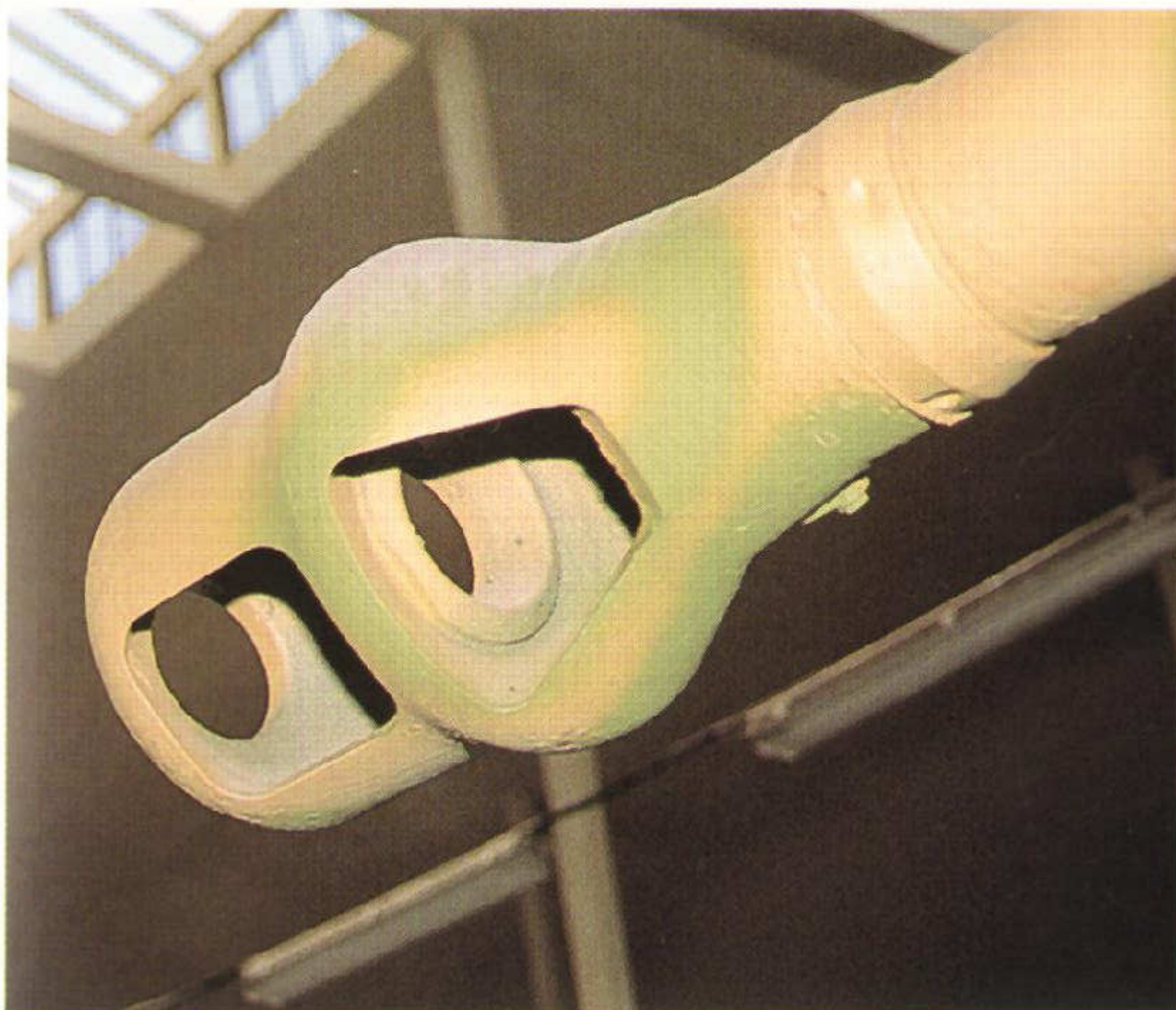
Wheel hubs replaced the hub extension to which the third wheel was attached.

A view between the tracks and the bottom hull side, clearly showing the bottom hull/superstructure joint. Note thickness of the hull side armor plating.



The idler wheel, measuring 686 mm in diameter on the rear is placed between the track guidance teeth. The right idler arm can be seen at right. Track tension is adjusted by a spindle assembly inside the hull (reached through the hole described on page 6), resulting in rotation of this idler arm, the position of the idler wheel thus depending on the amount of tension on the tracks.

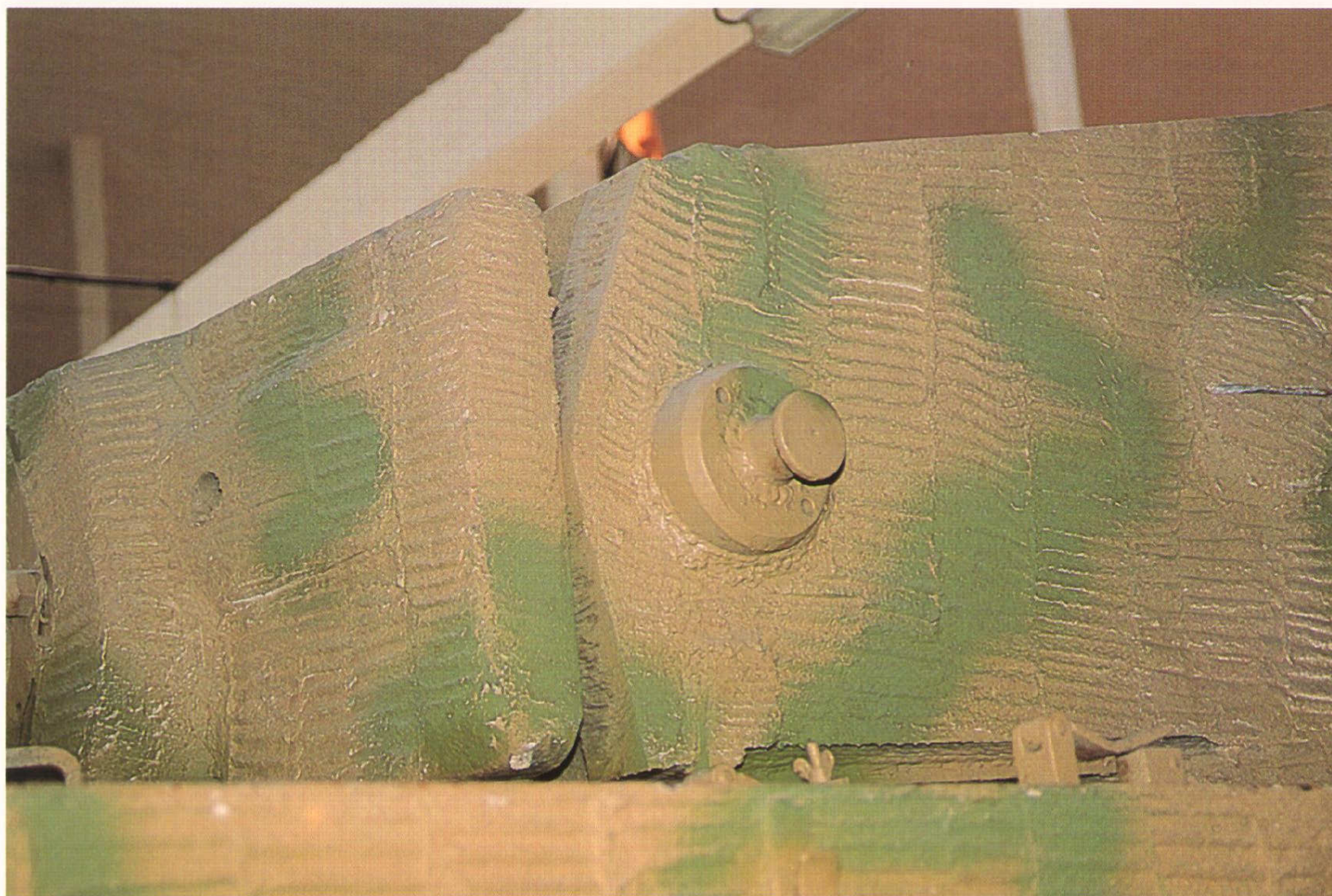


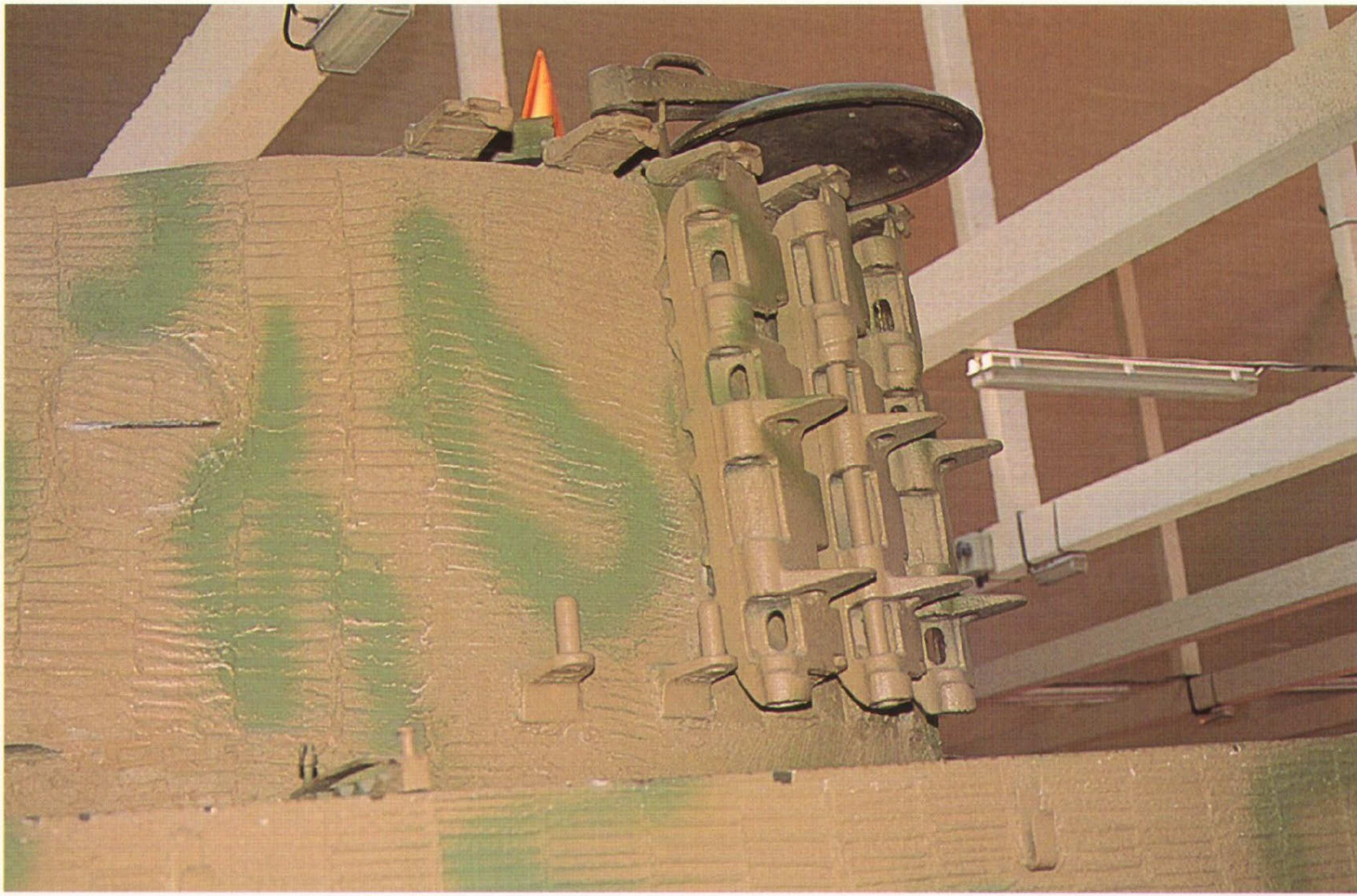


Main armament of the TIGER I was the heavy 8.8cm KwK 36 gun already used in the Flak 18, effective at ranges of over 2,000 meters. With its tremendous firepower, the TIGER tank could knock out the heavy soviet tanks like the KV-I and KV-II at ranges of well over 1,000 meters. It was not only the caliber of its gun but the range at which it could fire that left most allied tanks standing. In fact, the TIGER dominated tank warfare for about two years.



Three lifting lugs can be found on the turret. Two at front are formed by the extension of the gun mantlet trunnions while a third one is centrally located at the turret rear for a balanced three-point slinging. The gun mantlet armor is 100 mm in thickness and this late production TIGER has only one hole at left of the barrel housing instead of two found on earlier models. These had the TTZF9b binocular gun sight installed while this was replaced by the TZF9c monocular sight in 1944. Also note the gunner's vision slot in the turret side.

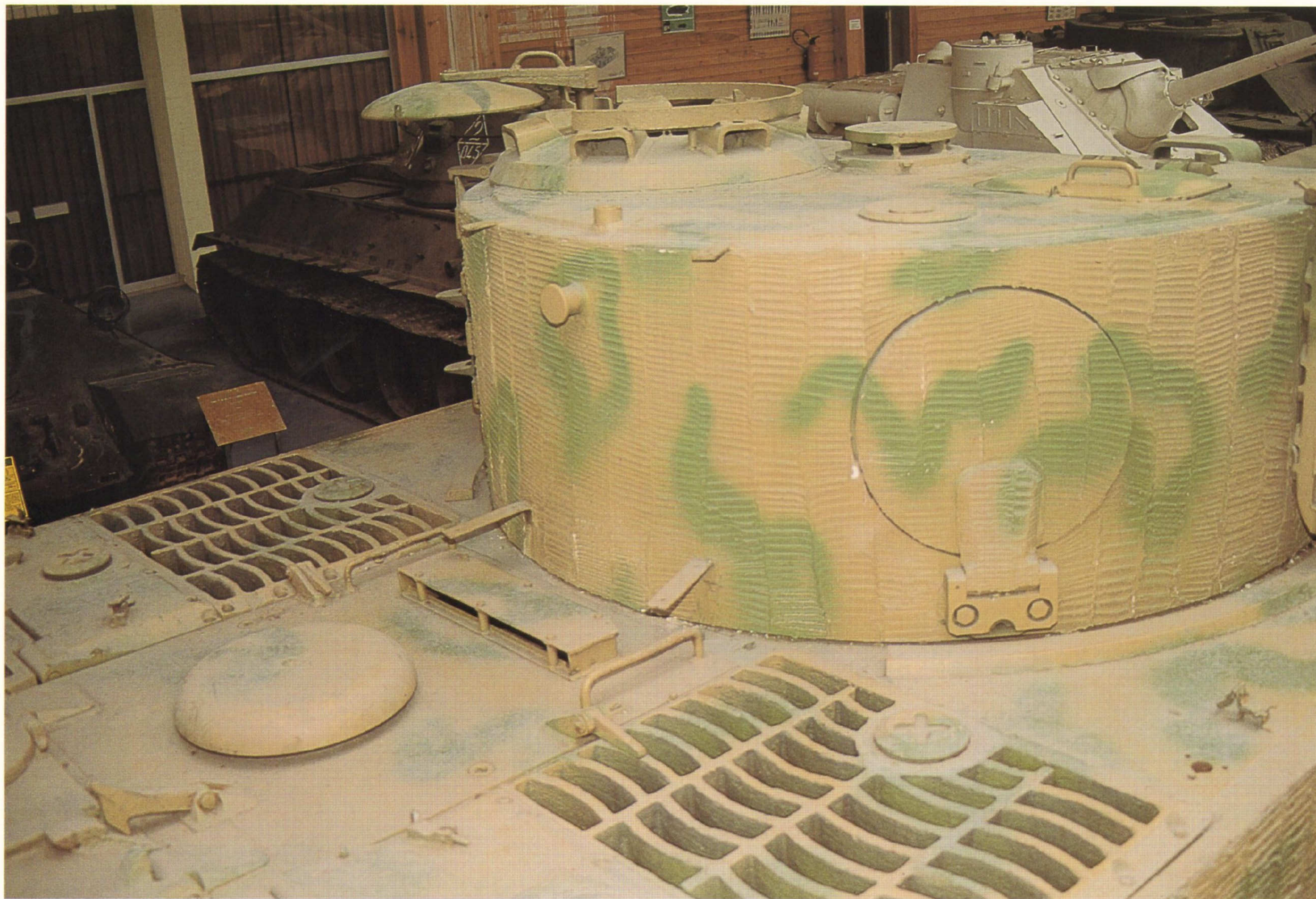




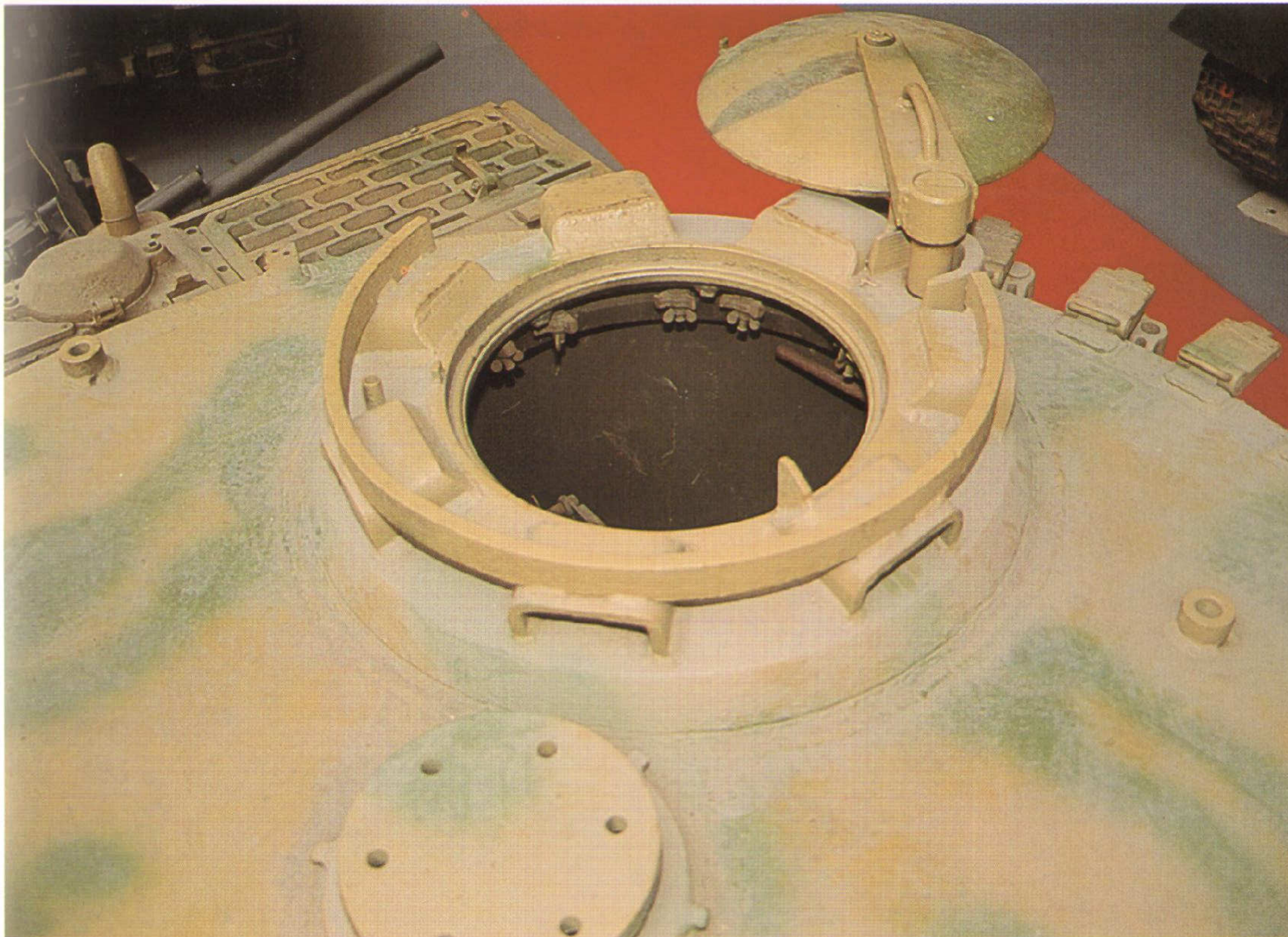
Also featured at a later stage was the stowage of track links to the side of the turret which gave additional protection to the already 82 mm thick side turret armor. The upper locking bracket was spring-loaded and could easily be lifted to insert or remove a spare track link. Note the track links are positioned with the track guidance teeth facing outward. Note the position of these track guidance teeth in relation to the center of the track. The bracket for the towing cable and the gun barrel cleaning rods on the hull side are shown in the photo at right.



A general view of the turret from the right showing only two spare track links attached to this side. Note the rectangular shape of the loader's hatch closest to the camera and its hinges at the leading edge. The thick armor of the turret side can easily be established from this view. Note the rim surrounding the lower turret edge for side protection of the turret traverse ring. Also apparent is the turret roof ventilator.



A view from the rear with a better look on the aft turret escape hatch, hinged at the bottom and locked from the inside. The third lifting lug can be seen at the turret rear and also the mounting brackets for the rear turret stowage bin. When installed, this bin has an opening in the center providing free access to the lifting lug. Note the air intakes on the engine deck hatch.

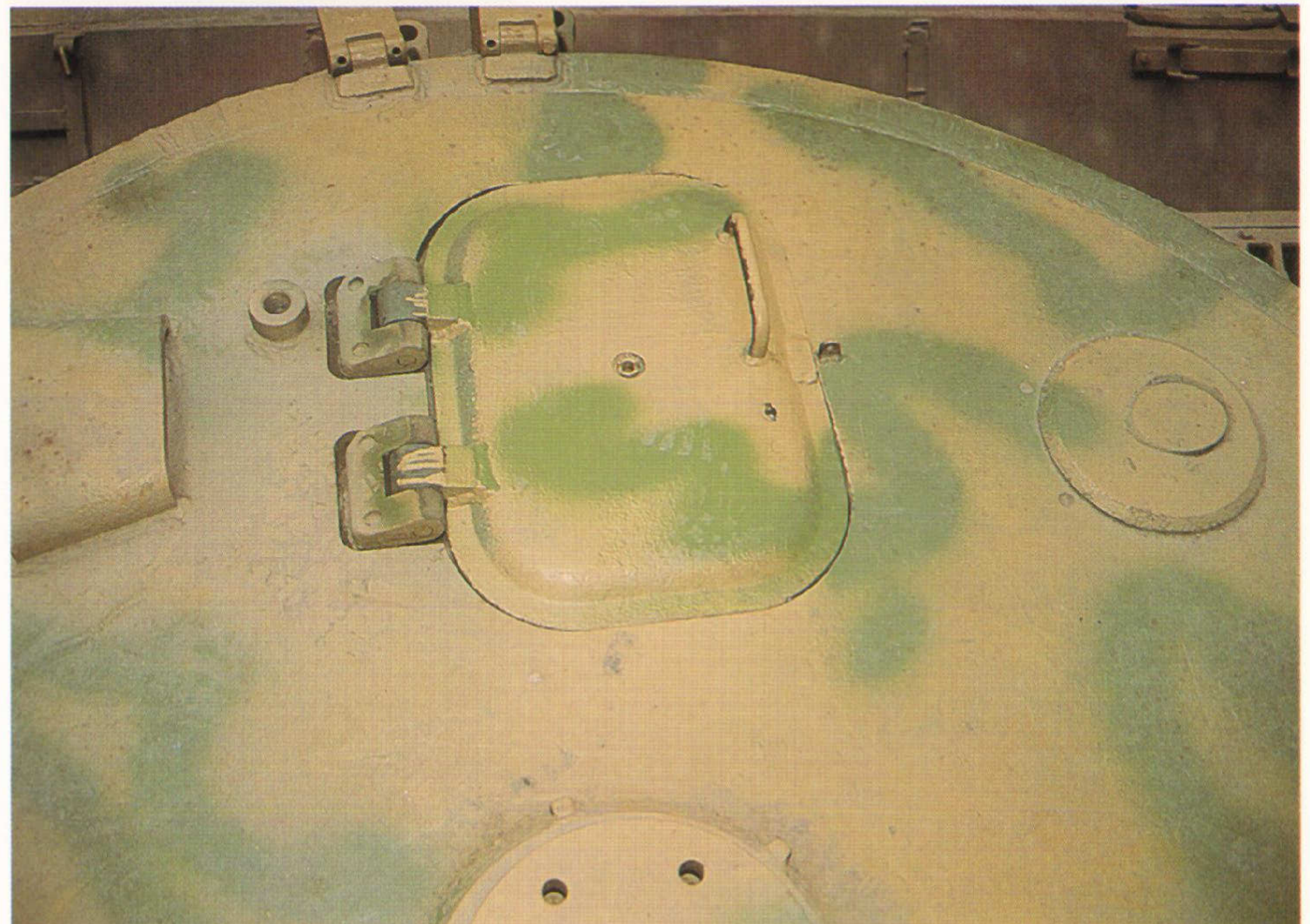


By mid-1943 a new low cast cupola was introduced for better protection and vision. This hatch was used by both the commander and the gunner. Seven vision blocks with 15mm covers provided 360° coverage of the area. A turret ring for a MG mount was welded on top of these vision block protectors. Note the swivel mount for the hatch is located at approximately the nine o'clock position on the cupola.

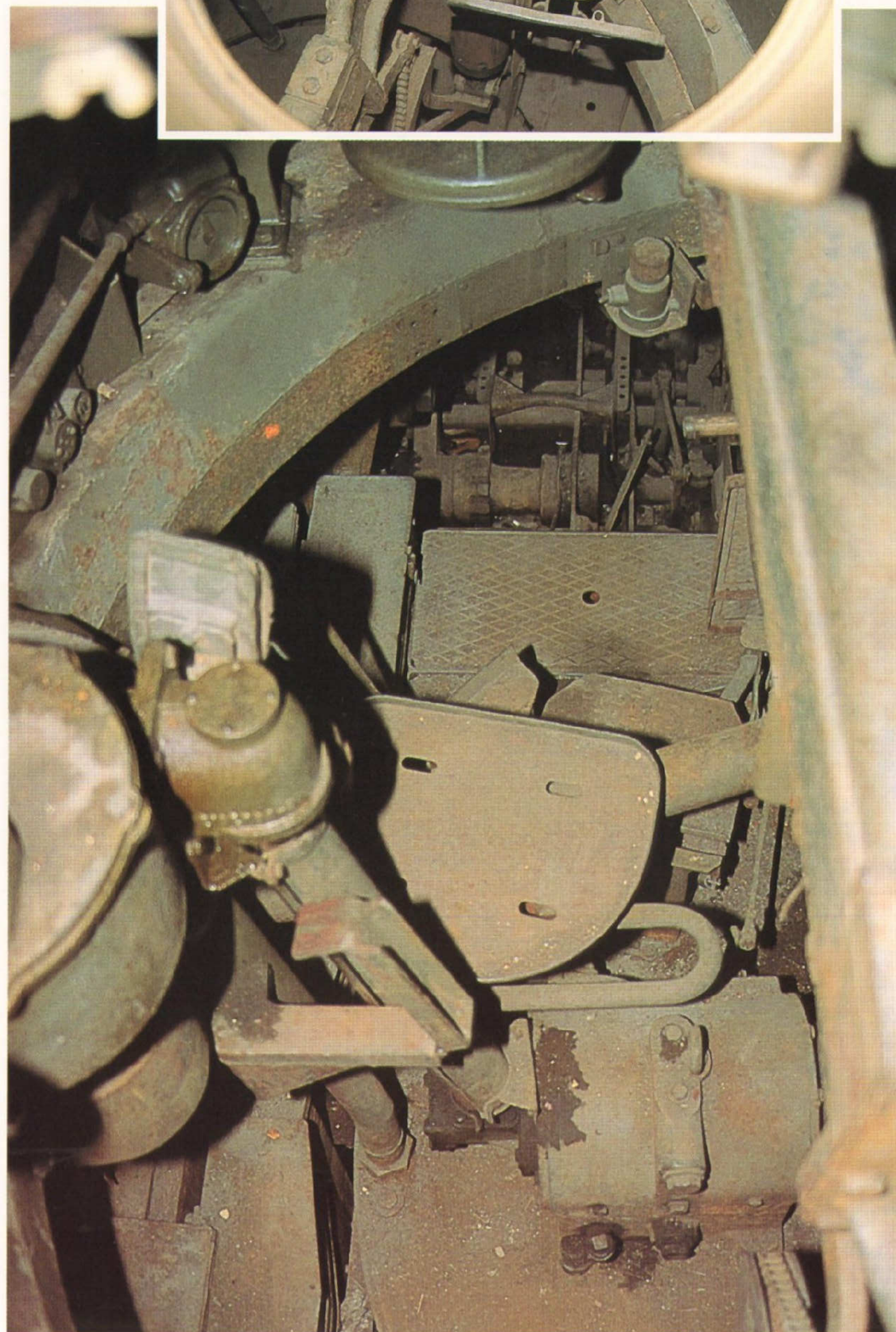
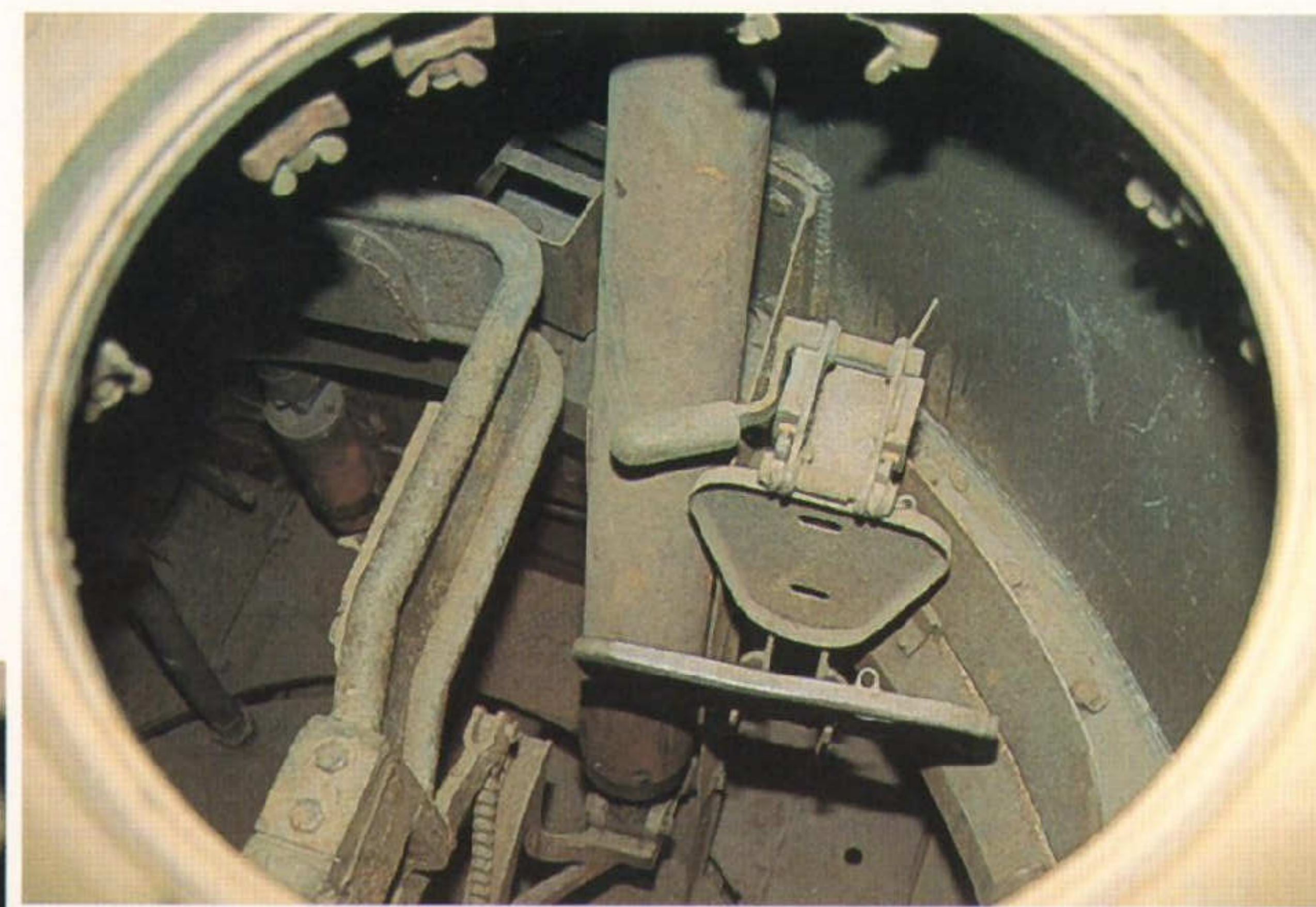
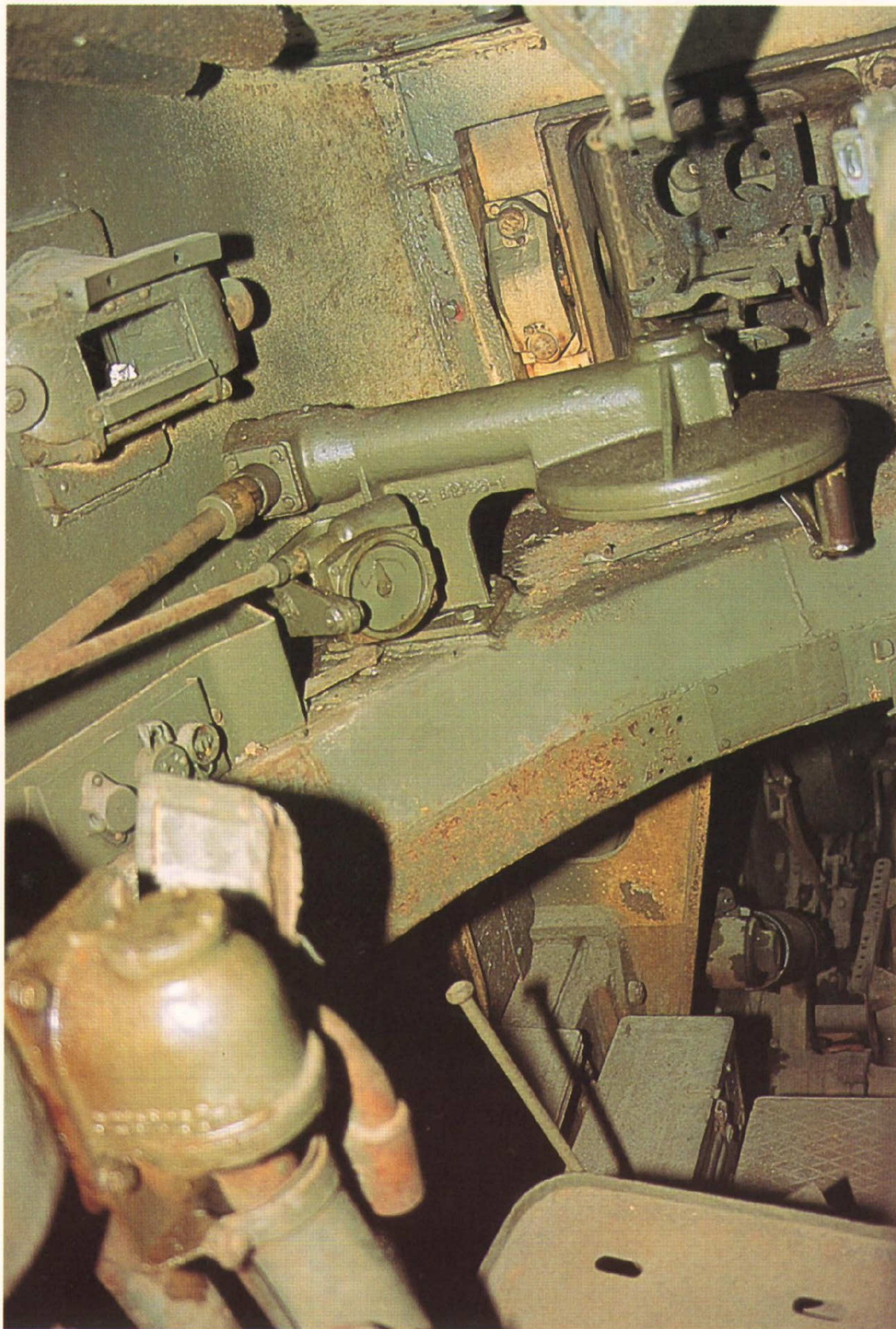
The circular cover to the rear of the loader's hatch is the fume extractor fan.

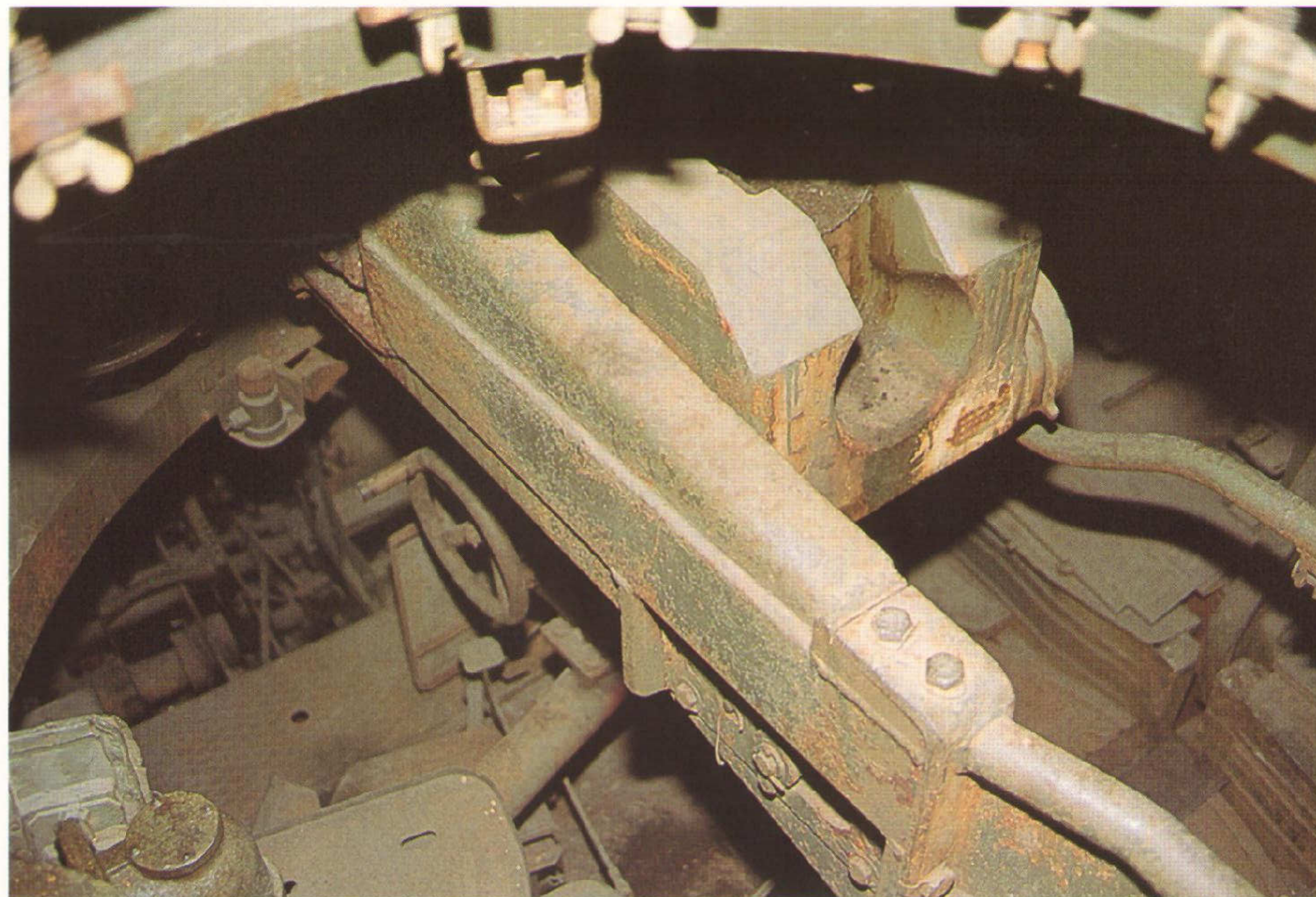
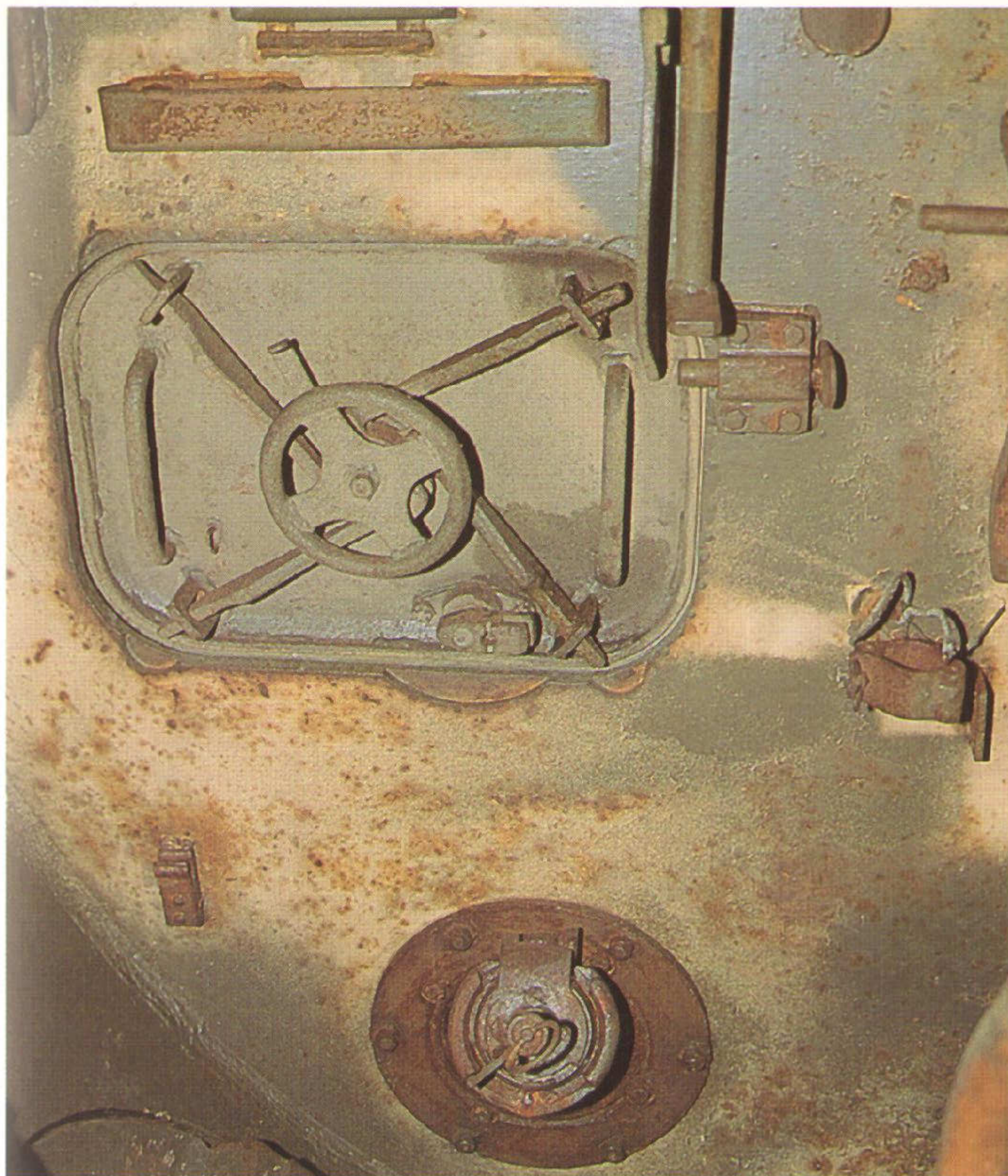


The hole at right of the gun mantlet is the location of a coaxial MG34, mechanically fired by the gunner with a foot operated trigger.

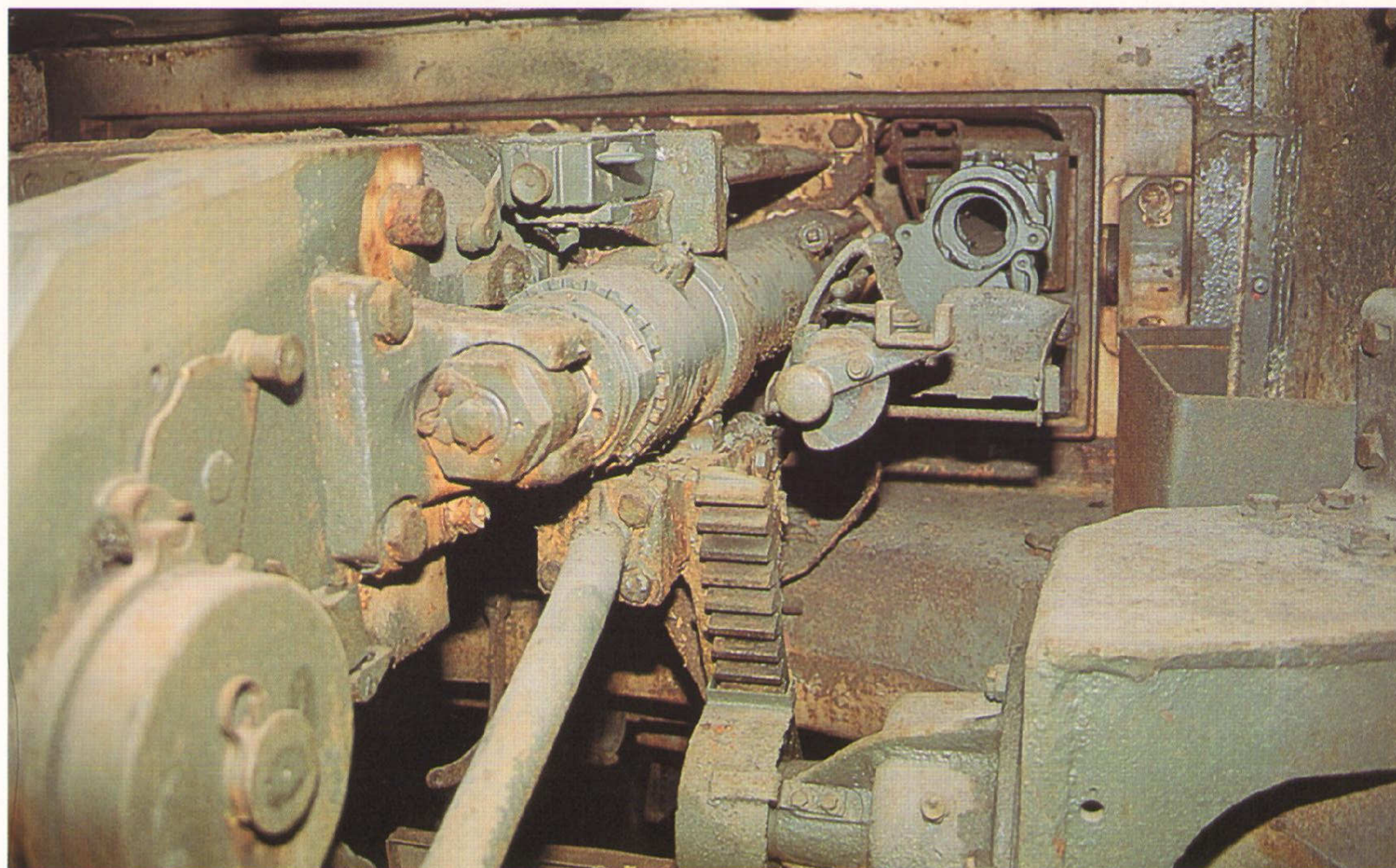
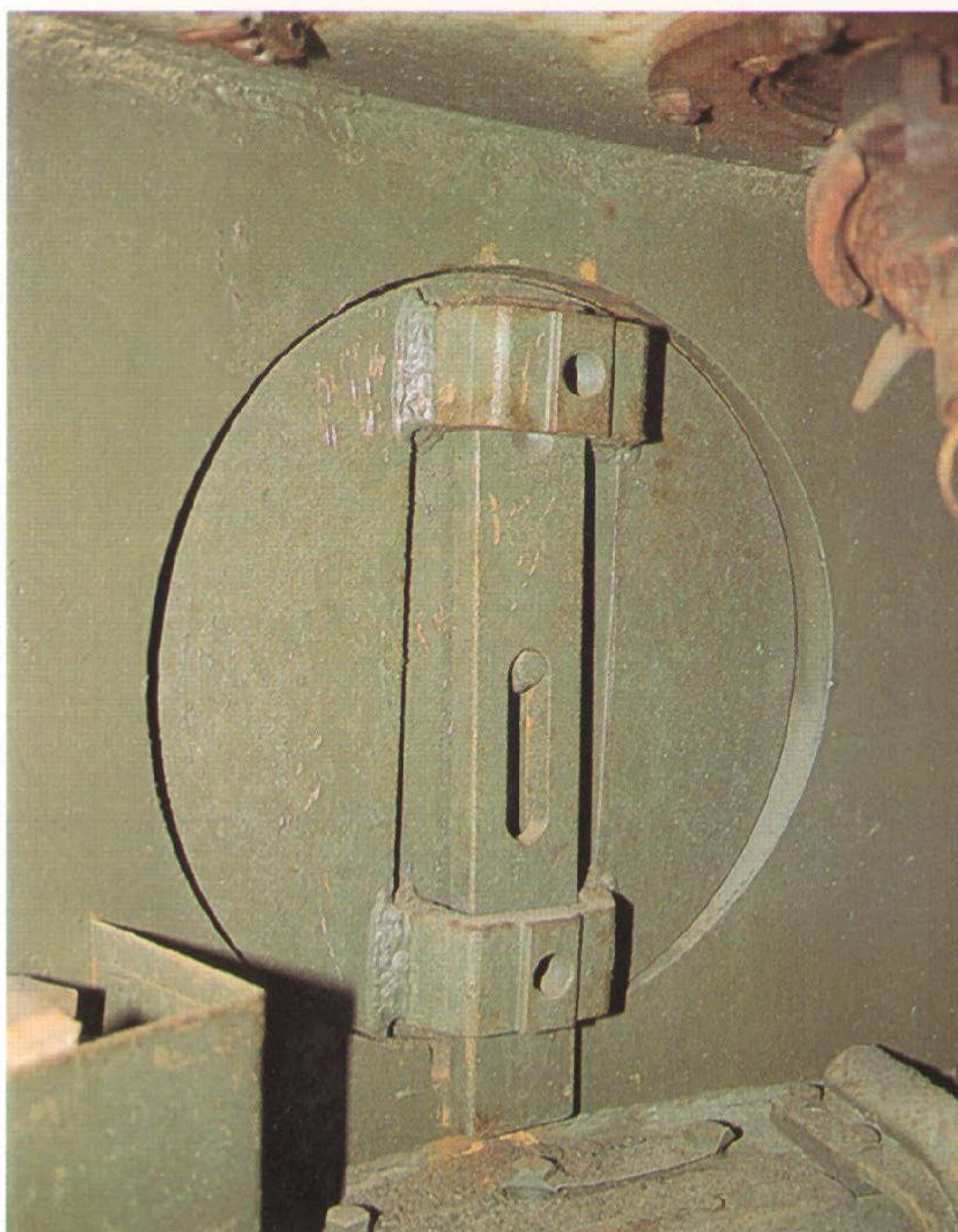


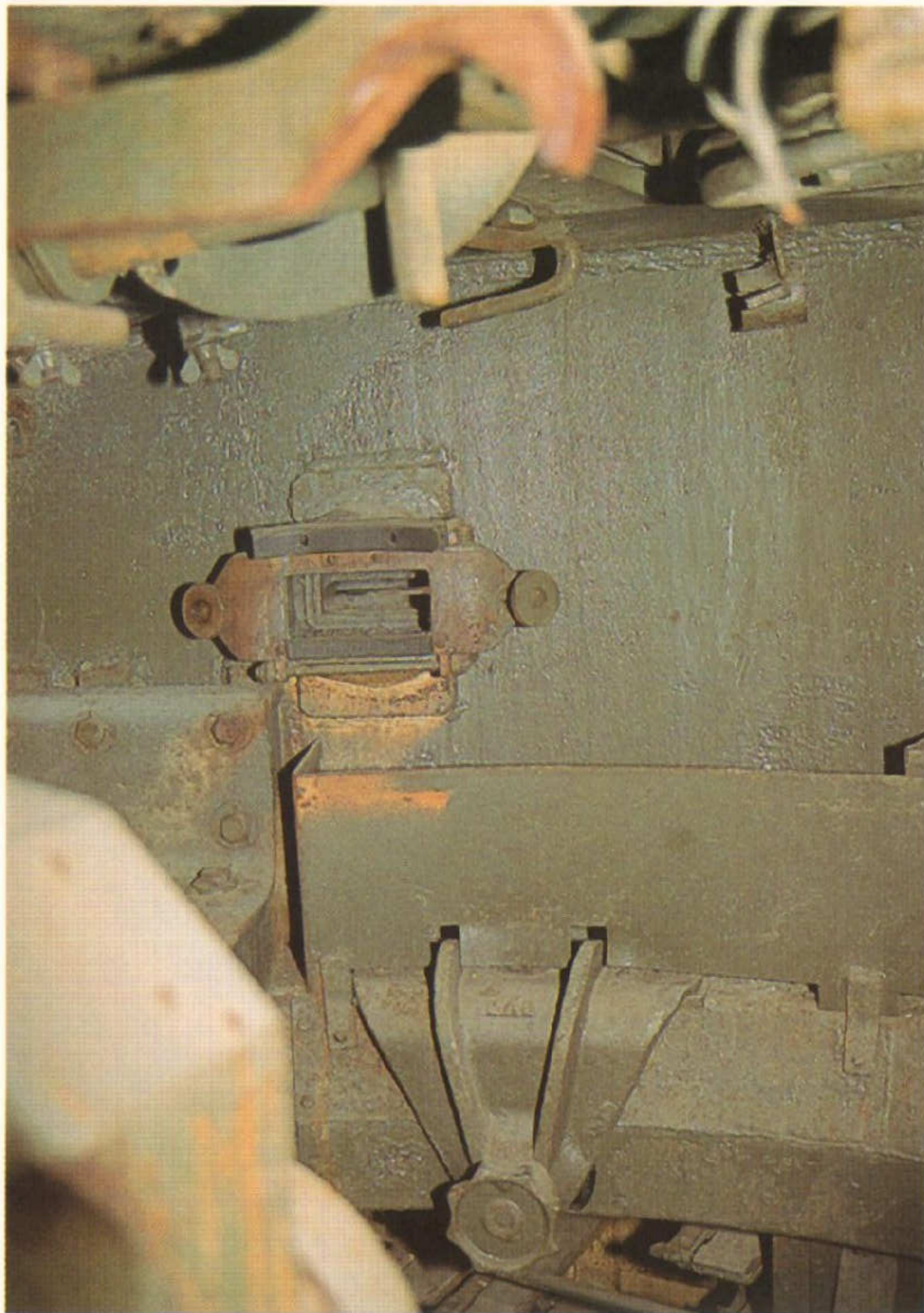
The gunner's position in the left turret side, located in front of the commander's seat. Centrally located is the turret traverse wheel for manual operation. The upper shaft connects to the commander's traverse wheel while the lower shaft operates the azimuth indicator seen on the left side. The monocular eyepiece bracket can be seen in front of the wheel. The complete turret floor is suspended to the turret and rotates simultaneously with any turret movement. This may sound obvious but some tank designs forced gunner and loader to move following turret traverse. The gunner's rocker plate that he uses to control power traverse is just below his seat.



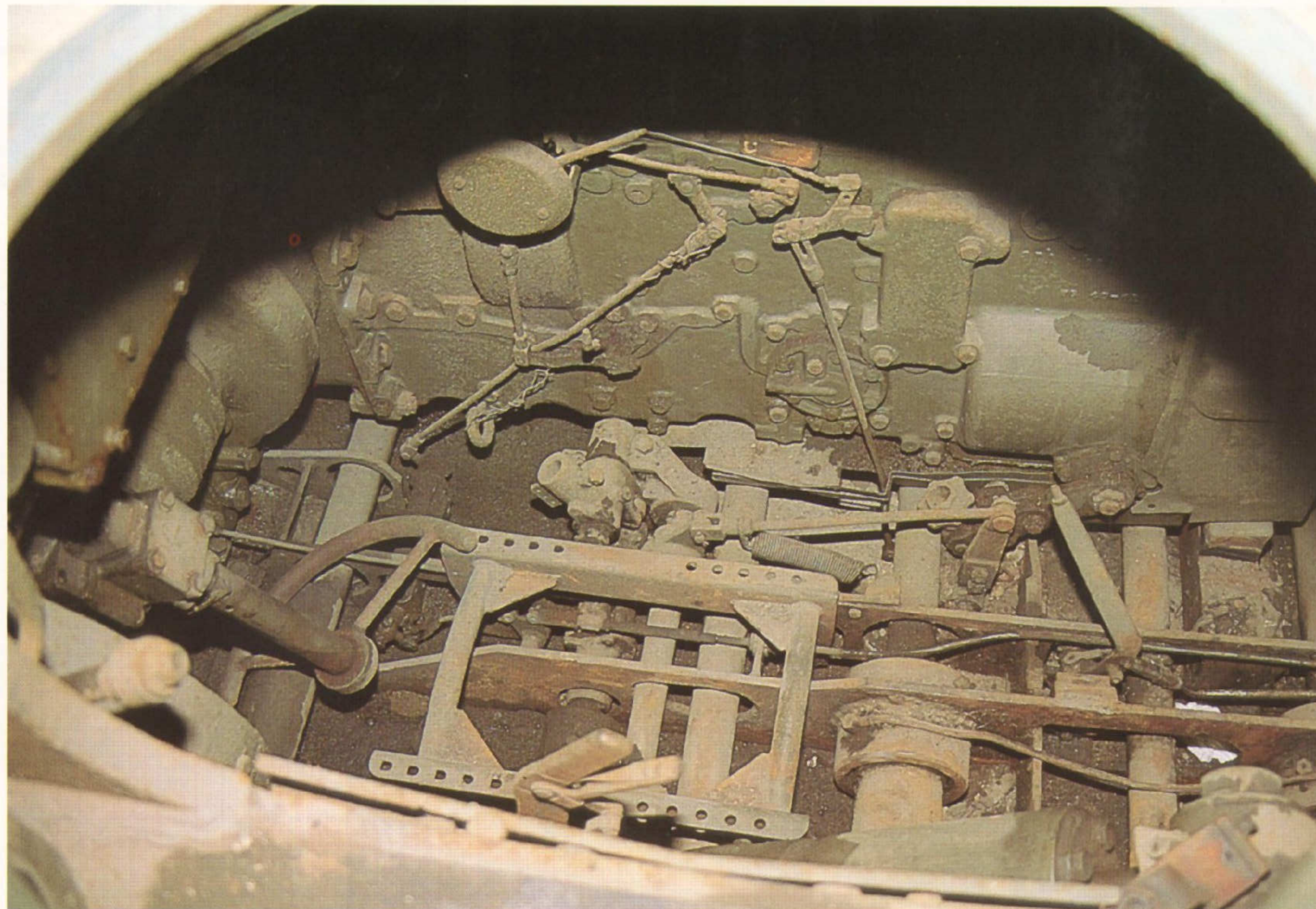


(Left) Close up of the turret roof from the loader's station looking aft with fume extractor and circular escape hatch locking mechanism revealed (bottom left). Both photos at right show the gun breech with recoil cylinder and coaxial MG mount.

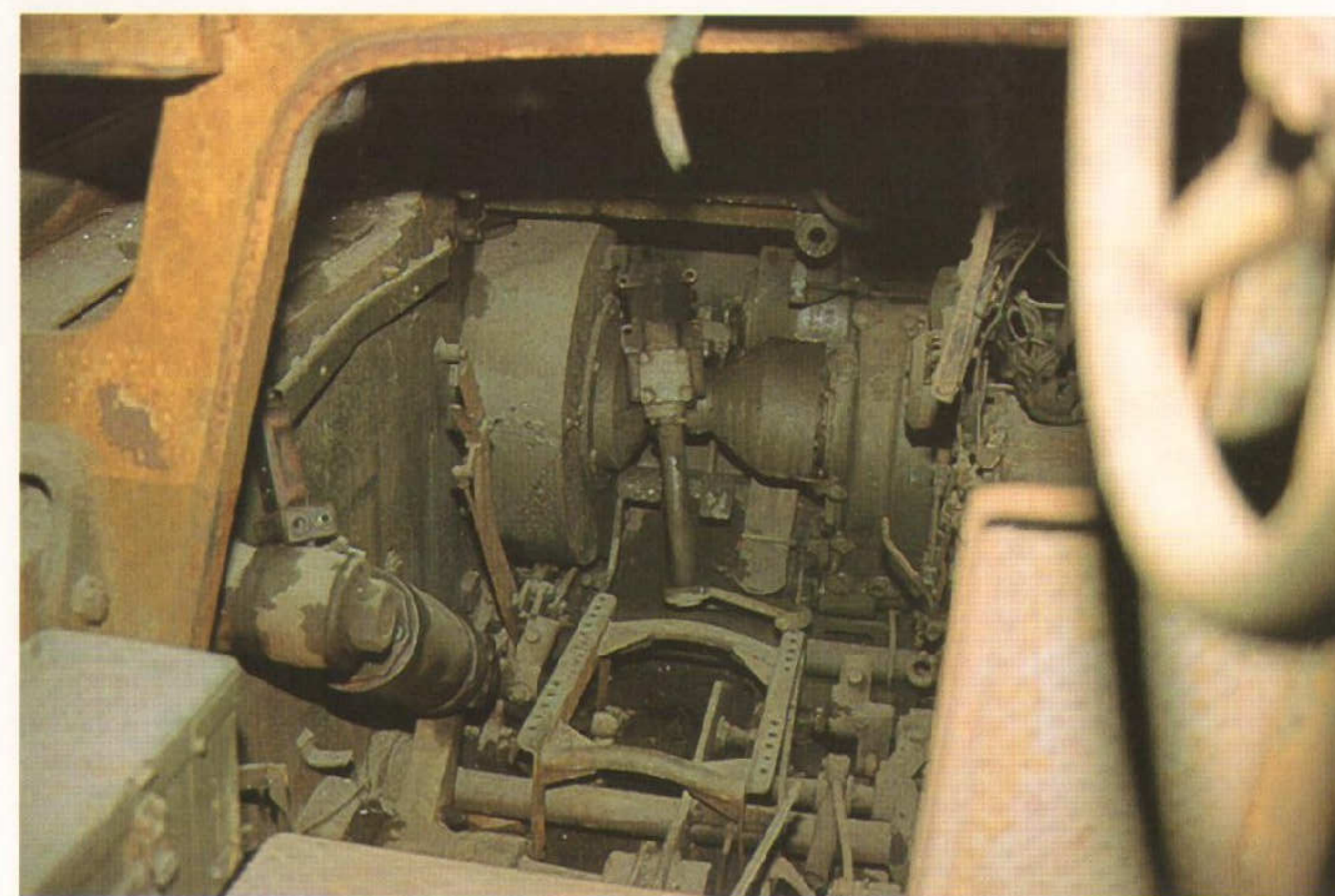
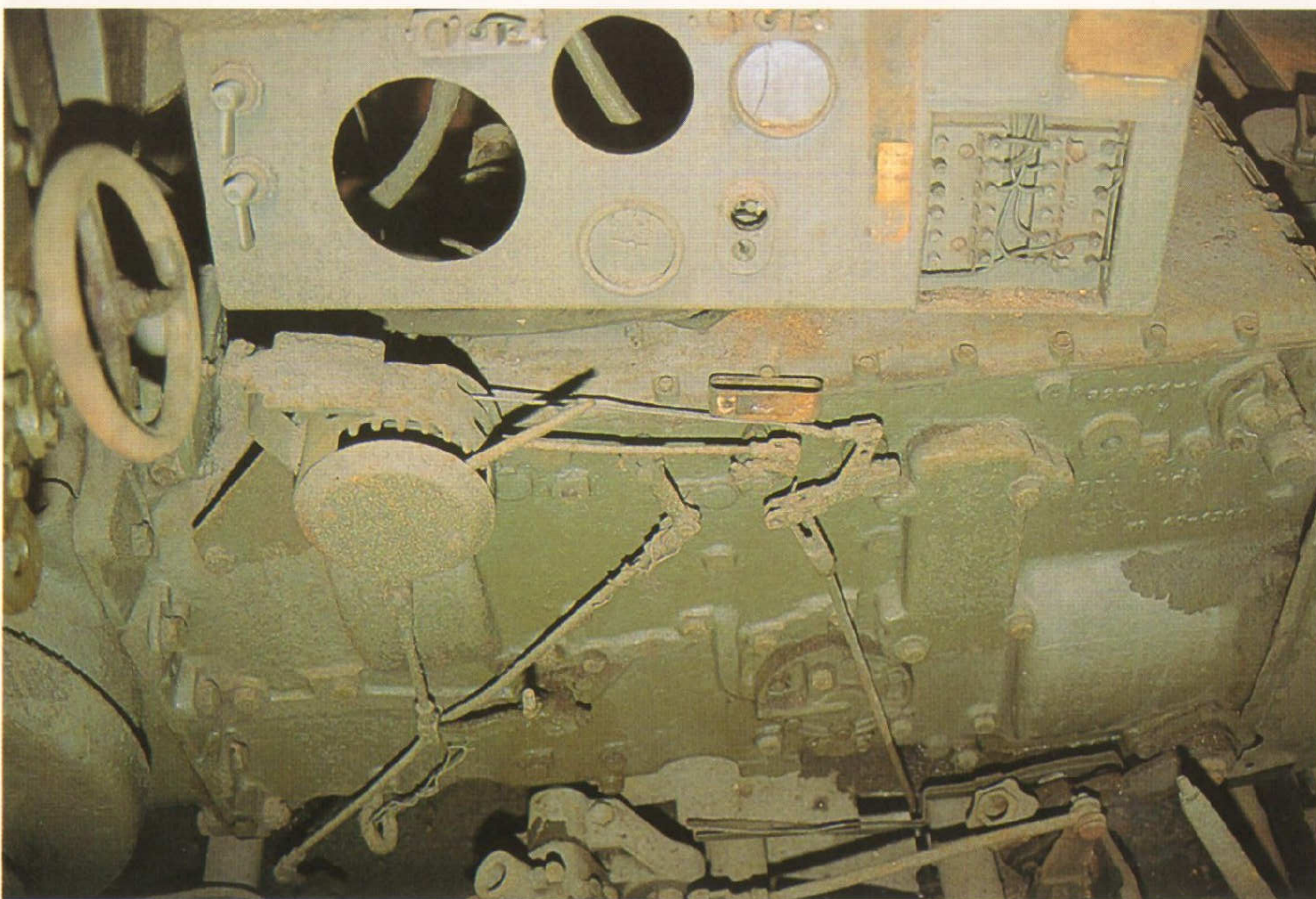




View to the right side of the turret with the loader's vision slot.



This view on the driver's position has several items missing, but clearly shows the installation of the torsion bars. Note the disconnected steering wheel at left.



Some instruments are still missing from this tank as seen at left. Clearly visible are the gear selector quadrant and the handwheel to operate the sliding shutter of the driver's vision slot. The photo above reveals the left side of the driver's position viewed from behind.

TIGER I Ausf. E (Sd.Kfz. 181) 1/15th SCALE Manufactured by VERLINDEN PRODUCTIONS



What initially started as simple accessories and equipment to support the ever increasing market for the 120mm figure range has literally grown into a monster. In the Summer of '91, VP began developing artillery and vehicles. The Nebelwerfer, Flak AA gun and 37mm Pak were such a success the Kubelwagen (a complete resin and photoetched kit) was quickly released. This highly detailed replica triggered unprecedented interest in Large Scale armor. Figure painters began modeling armor and former 35th scale armor modelers fell in love with the accuracy and detail only possible in this larger scale.

Following the release of the STURMGESCHUTZ III and PANZER II, it was decided to produce a true "piece de resistance". The latest version of this heavyweight, known as the "Abschlussausführung", was chosen as the subject. The result can be studied on this page featuring a completely finished VP model as assembled from more than 300 parts, including the MG34 and the Michael Wittmann figure.

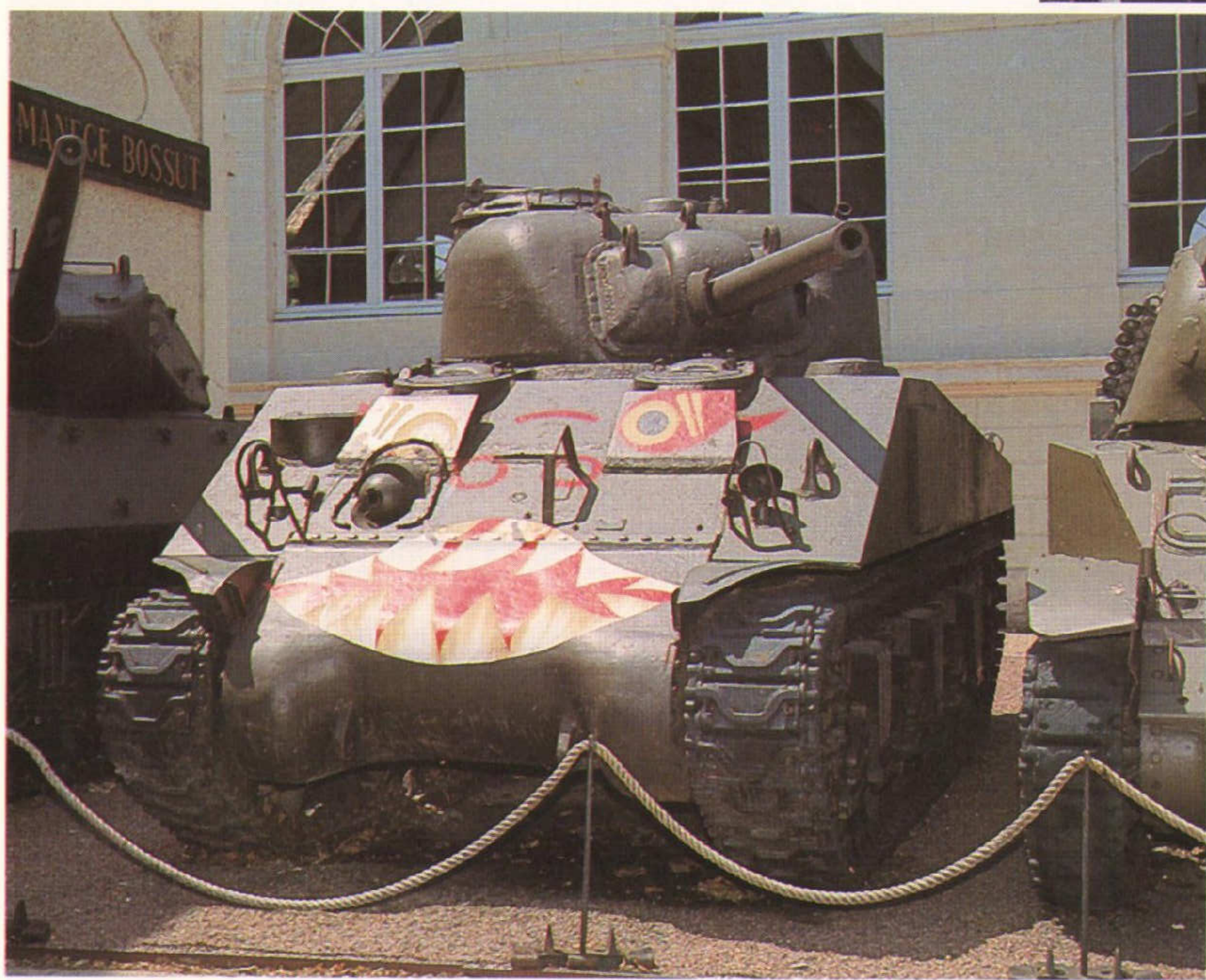


Musée des Blindés SAUMUR, FRANCE

The TIGER I, which was the subject of this monograph, is presently on display at Saumur, a village some 60 kilometers from Angers, Le Mans and Tours.

Today housing the elite of the French armored cavalry it was once the home of the King's musketeers, the Emperor's cavaliers and cavalry cadets in WWII.

In 1965 the High Command itself entrusted Colonel Michel AUBRY the task of collecting these tanks and armored fighting vehicles, witnesses of a



recent past, saving them from the scrapyard or the artillery target area.

Although established as early as 1968, it took until 1987 before the museum was inaugurated and opened to the public, presenting the cream of tank warfare.

The models currently on display are part of the immense C.D.E.B. collection of over 800 vehicles (some 500 tanks), 300 combat vehicles and some 30 artillery pieces.

In comparison with other museums, the most important Allied vehicles have been gathered here but, and that is quite unique, it's the only place in the world to have Germany's PANTHER and KING TIGER (two of an impressive collection of German tanks) in running condition.



