

CONDITION

GENERAL

The vehicle is a runner, and the automotive units are in good order. The total mileage recorded on the speedometer is 2793 Km. (1731 miles.)

Various hits have registered, the B.P flap to the driver's visor having been hit and rendered inoperative. The offside driving sprocket has sustained a hit which has partially torn away one spoke. A neat field repair has been executed by the welding of a section of spring plate at this point.

The wire grill protections to the air intakes at each side of the engine compartment are damaged. The nearside lamp is deficient.

The fifth bogie on the offside is deficient.

TRACKS

An interesting failure of the tracks is noted, a number of the plates having fractured at the base of the horn. The failure is common to both tracks, and is also not confined to those emanating from one foundry, since the affected plates bear the markings of two manufacturers. A spare track plate stowed on the vehicle, which had this defect, has been repaired by welding. There are 50 defective plates in the offside track and 26 on the nearside.

Samples of the defective plates were submitted to Messrs. Birmingham Electric Furnaces Ltd., for examination and their report is quoted below:

"	Examination of defective Pz.K. III
	<u>Track Links</u>

Failure had occurred on both links by cracking at the point where the horn joins the body of the link on the four lug side.

One of the links was cut up, and microsection prepared of the metal at this point. This showed the material to be austenitic manganese steel of normal structure and grain size and more homogeneous than the sample link of this type examined some time ago; the amount of martensite in the surface layers was not more than would be expected to result from work hardening under service conditions.

Hardness of the body of the metal was 215 - 225 V.P.N. which is normal. The section showed numerous cracks at the point of failure, starting from the upper side of the link and spreading inwards; the cracks were mainly intergranular but a piece of the metal from near this point showed no sign of abnormal intergranular weakness where fractured.

When cutting up the link, shrinkage cavities were found at some points, notably where the centre lug joins the body of the casting on the three lug side, but there were no signs of marked unsoundness at the point where cracking occurred, and no evidence that this was a primary cause of weakness.

Conclusions drawn were that the material of these links is manganese steel, of normal structure and properties, but that the thickness of metal at the point of failure is insufficient to withstand the transverse bending stresses encountered in service, with the result that failure has occurred by fatigue cracking.

"

The other two wireless sets are carried in a mounting at the back of the fighting compartment, and are additional sets since ammunition stowage is covered by the mounting. The rotary transformers are low down on the fighting compartment left wall. There is only one station in the vehicle, and a Klaxon horn is provided for signals from the fighting compartment to the driver. The horn is mounted near the driver's right ear with the push on the fighting compartment roof.

5. ELECTRICAL EQUIPMENT

The hull electrical arrangements of this vehicle are identical with those of the Pz.Kw.III. Two 12 volt accumulators in the engine compartment give 24 volts for starting and 12 volts for lighting, etc., the changeover to the series connection of the batteries being carried out by a solenoid switch operated by the starter button. Charging is by a 12 volt generator with voltage regulation.

The external lighting consists of two headlamps in blast proof cases, two side lights and a normal tail-stop light. The usual German night march lighting system is also fitted.

Internal lighting is confined to one festoon lamp on the fighting compartment roof and two festoon lamps on the driver's panel.

6. ARMAMENT

(i) THE PIECE

This is the standard 7.5 cm. KwK (Short) tank pattern gun.

(a) Markings

The breech ring is inscribed:

1941. R. 459. csf. Bs. Sg. 60504
Rl. 2194. Rhm. 394. Fl. 236. csf
WaA. 337. Vr. Fl. 203 csf.

The breech block is inscribed:

R. 459. Sg. 60066. Rl. 1037. Rh.
206. Fl. 209. csf.

The barrel is inscribed:

Vr. Sg. 5324. Rl. 148. Rh. 206.
Fl. 203. csf.

Captured documents indicate that the gun has fired at least 236 rounds. It appears serviceable.

(b) Description

Monobloc barrel with detachable breech ring. Semi-automatic vertical sliding wedge breech block operated by separate clock springs for opening and closing. Electric primer firing.



FIG. 4

The driver is provided with the normal elongated laminated glass block and shutter.

In addition, he uses an episcopes formed by two KFF. 2" periscopic telescopes. The carrier for these is deficient, but it must differ from the normal type since there is no room on the right to slide it away when not in use. Presumably the carrier is pivoted and swings away to one side.

On his left only is a fixed slit backed by a 50 mm. laminated glass block.

Access to the driver's compartment is normally through the gunner's hatch, but he can also escape through the steering brake inspection flaps in the glacis plate. Each of these flaps comprises two doors of equal size, hinged to the sides.

10. STOWAGE

Details of some of the equipment carried are given in a captured equipment list. This is not complete, and in addition, many of actual fittings on the vehicle cannot yet be identified and some have been removed.

11. MANUFACTURERS' MARKINGS

On plate on driver's instrument panel:

Gp. Sfl. für Stu. G. 7.5cm. K.
Sd.Kfz. 142 Ausf.
Fahrgest Nr: 90683 csg.

On plate on engine

NORDEUTSCHE - MOTORENBAU G.m.b.H.
Motortyp: HL. 120 TRM
Leistung: 300 P.S.
Motor Nr: 541379

On Carburettors:

- (i) SOIEX DRP Deutsche Vergasser Gesellech
40 JFF 2. 2 K 264
- (ii) SOIEX DRP Deutsche Vergasser Gesellech
40 JFF 2. 2 K 164

On Radiators:

N/Side:

HANS WINDHOFF - BERLIN - SCHONENBURG
Kuhl Nr: 90572
Com. Nr: 44335
Lfd Nr : 23 7 41
44419 L. 81

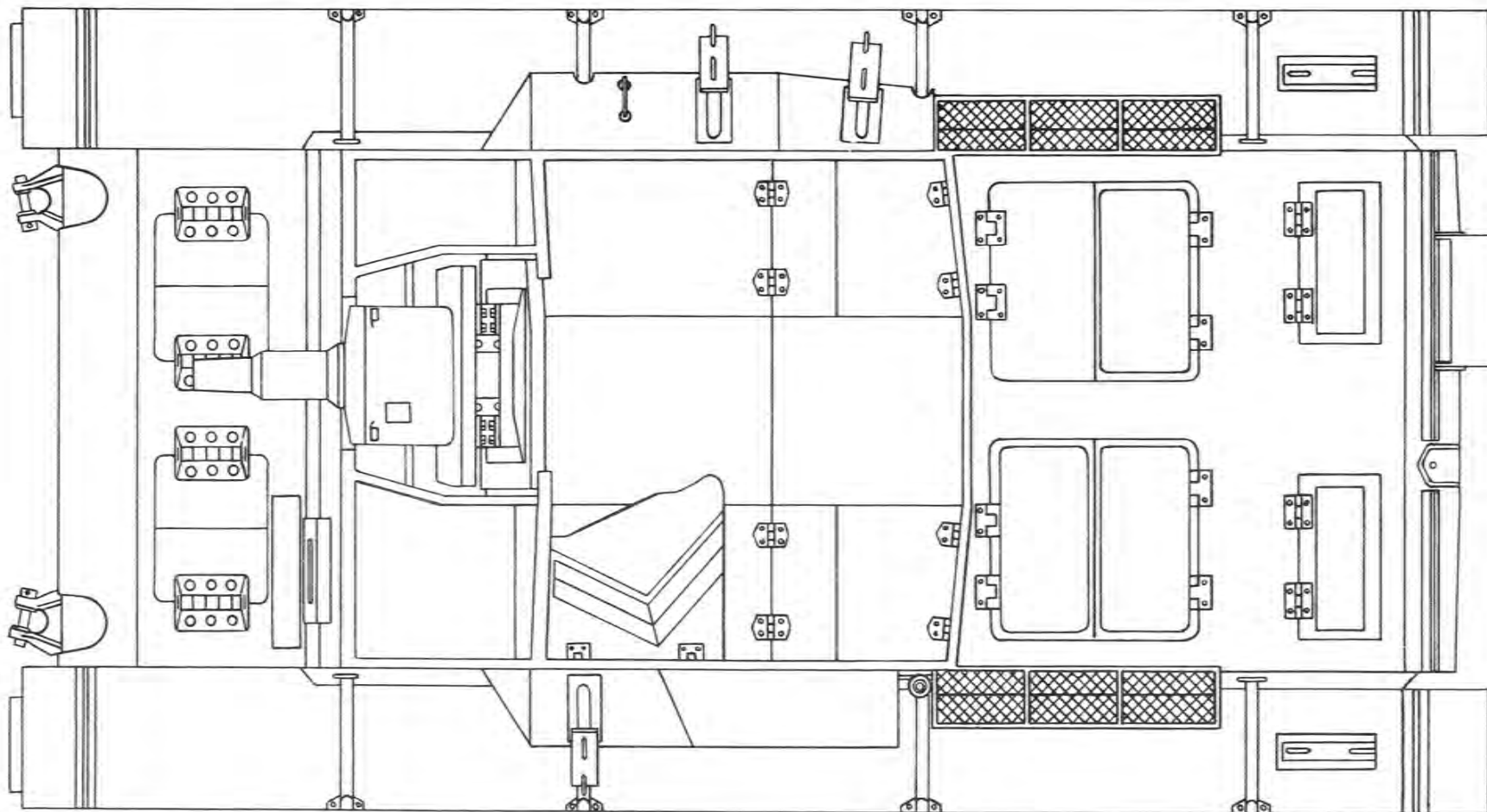
O/Side:

Kuhl Nr: 90373
Com. Nr: 44838
Lfd. Nr: 24. 41
44423 R. 73

On Tracks: (The tracks apparently emanate from two foundries and bear the following respective markings):

- (i) 2034 eyc.
- (ii) ccq 2079 bwo 1941.

GERMAN 7.5 CM.
STURMGESCHÜTZ
(STU.G. 7.5 CM. K.)



PLAN

	STURMGESCHÜTZ
	Drg.Nº 466
F 18	C.G.P. 9/43
	S.T.T. 8/4/3