

R E S T R I C T E D

HEADQUARTERS  
COMMUNICATIONS ZONE, ETOUSA  
OFFICE OF THE CHIEF ORDNANCE OFFICER  
APO 887

10 March 1945

ETO ORDNANCE TECHNICAL INTELLIGENCE REPORT NO. 175

SUBJECT: German Heavy Semi-Tracked Military Tractor, S.W.S.

Observations by: Lt. J. F. Eppes, Ord. Tech. Intell. Team No. 3.

1. GENERAL

German heavy semi-tracked military tractors, "Schwerer Wermachtschlepper", have been examined in the area of THIRD U. S. Army. This vehicle is similar in construction to the standard semi-tracked prime movers, the principal difference being the use of a steel track of the design used on German tanks. The S.W.S. is highly maneuverable. Its high ground clearance and good traction combine to make it an excellent mud vehicle.

2. NAME PLATE DATA

The following data was taken from the plate on the dashboard:

Type S.W.S.  
Chassis No. 150636  
Body No. 3636  
Motor No. 524875  
Horsepower 100 at 3000 r.p.m.  
Piston displacement 4198 c.c. (256.3 cu. in.)  
Weight empty 9500 kgs. (20,900 lbs.)  
Payload 4000 kgs. (8,800 lbs.)  
Axle load 2000 kgs. (4,400 lbs.)  
Track load 11,500 kgs. (25,300 lbs.)  
Trailed load 8,000 kgs. (17,600 lbs.)  
Radio suppression group II

3. ENGINE

The engine is the Maybach HL 42,6 cylinder, water-cooled, gasoline engine, with pushrod operated overhead valves. The two carburetors are of Solex manufacture, type JFF 30. Ignition is by Bosch magneto mounted at the rear of the engine. The fuel tank is mounted at the rear of the chassis.

4. INSTRUMENTS

An instrument panel on the dashboard carries:

Oil pressure gauge (Gearbox)  
Oil pressure gauge (Engine)  
Tachometer  
Water temperature gauge

5. TRANSMISSION

From the engine the drive is taken through a dry plate clutch to a gearbox with four forward speeds and one reverse. The gearbox is manufactured by Zahurad fabrich - Friedrichschafen and its type is "K 40 D". There is, in addition, a high-low ratio gear box alongside the main gearbox.

DISTRIBUTION SEE PAGE 3.

6. STEERING

Steering is by the steering wheel through a worm for the front wheels and is in some cases aided by a controlled differential system for the tracks. The steering linkage to the front wheels is coupled to the track steering brakes, though under normal driving conditions the vehicle is steered only by use of the steering wheel. In difficult terrain, steering by the tracks independently may be effected by means of a control switch on the dashboard to the left of the steering column. The steering and tracks brakes are operated hydraulically with air assistance. The steering linkage for the front wheels is shown in Photo #3.

7. FRONT SUSPENSION

Suspension of the front axle is by a transverse, semi-elliptic spring anchored at the center. The front wheels are of the pressed steel, flat rim type. The tires are manufactured by "DEKA" and are size 270 x 20. They are held on the wheels by split locking rings. The spare wheel is carried mounted on the back of the cab.

8. REAR SUSPENSION

a. Tracks: The tracks are of skeleton type with chevroned soles and are believed to be cast manganese steel. Each link consists of two members, a plain shoe and a shoe with a double guide horn. The linkage is made with a single headed pin retained by a sleeve and cotter pin (Photos #3 and #4). The width of the shoe is  $19 \frac{3}{4}$  inches. Track adjustment is by draw bolt fastened to the idler mounting.

b. Bogie wheels: There are five double bogie wheels on each side. They are interleaved; the first, third and fifth wheels being widely spaced and the second and fourth closely spaced (Photo #2). The bogie wheels are pressed steel with rubber tires (Photo #4). Overall diameter is  $31 \frac{1}{2}$  inches. The bogie wheels are sprung on torsions bars which are mounted side by side.

c. Sprockets: The pitch diameter of the driving sprocket is  $2' 5 \frac{1}{2}"$ . The sprocket is of fabricated construction having 12 teeth, with a pitch of  $7 \frac{1}{4}"$ , and 6 spokes. (Photo #4).

d. Idlers: The idlers are of cast construction. Their overall diameter is  $29 \frac{1}{2}$  inches. Rubber tires, which are fitted in four segments, are bolted to the rim of each wheel.

9. BODY

The body of the vehicle is fastened to the longitudinal frame members. It is built of  $1 \frac{1}{2}"$  tongued and grooved board, amply braced with steel strips. The sides and tail gate are hinged along the lower edges. Metal supports are fitted at front and rear for a canvas cover (Photo #2).

The cab is spacious and is open at the top and sides. A canvas hood is fitted. This may be folded back when desired. The windshield is hinged to fold forward (Photo #1).

10. DIMENSIONS

Overall length	21 ft. 0 in.
Overall width	8 ft. 1 $\frac{1}{4}$ in.
Overall height	8 ft. 10 in.
Length of body	13 ft. 4 in.
Width of body	7 ft. 11 in.
Height of body sides	1 ft. 10 $\frac{1}{2}$ in.
Height from ground to top of body sides	5 ft. 8 $\frac{1}{2}$ in.
Tread of front wheels	7 ft. 0 in.
Track centers	6 ft. 3 in.
Center of front bogie wheel to center of rear bogie wheel	6 ft. 8 $\frac{3}{4}$ in.
Center of sprocket above ground	2 ft. $\frac{1}{2}$ in.
Ground clearance	1 ft. 8 in.

For the Chief Ordnance Officer:

*A. P. Heintz*  
for H. N. TOFTOY,  
Col., Ord. Dept.,  
Assistant.

DISTRIBUTION: Automotive 1.

Military Intell. War Department General Staff, Washington, D. C. ....	3
C.G., ASF. Attn: Director of Intell. Washington, 25, D. C. ....	4
Chief of Ordnance, Washington, 25, D. C. Attn: SPOTB (Intell.) ....	5
SHAEF (Main), G-2 (Tech. Intell.), APO 757, U. S. Army ....	1
" " , G-3 (Training & Experimental), APO 757, U. S. Army ....	1
Assistant Military Attache, Ordnance, London, England Attn: Col. F. F. Reed (4 copies for M.I. 10 and other British Agencies) ....	9
Allied Force Headquarters, APO 512, U. S. Army (1 copy for G-2, 1 copy for OTIU-D) ....	2
Hq., Com.Z., ETOUSA, G-2, APO 887, U. S. Army ....	1
" " " " , Ordnance, Tech. Div. ....	2
" " " " , M.I.T.U., APO 887, U. S. Army ....	1
" " " " , OTIT-C, APO 887 ....	1
" " " " , Ordnance, Mail & Records (Thru Chief Ord, Officer) ...	1
" " " " , AFV & W, APO 887 ....	1
Hq., Advance Section Communications Zone, APO 113, U. S. Army (1 copy for G-2, 1 copy for Ordnance Officer, 1 copy for OTITeam-A).	3
Ord. Officer Continental Advance Section, APO 667, U. S. Army (1 copy for OTITeam-S) ....	2
Hq., Sixth Army Group, APO 23, U. S. Army (1 copy for G-2, 1 copy for Ordnance Officer) ....	2
Hq., Twelfth Army Group, APO 855, U. S. Army (1 copy for G-2, 1 copy for Ordnance Officer) ....	2
Hq., Twenty-first Army Group, (Main), B.L.A. (1 copy for BGS (1), 1 copy for WTSFF) ....	2
Hq., First U. S. Army, APO 230, U. S. Army (1 copy for Ordnance Officer, 1 copy for G-2, 1 copy for OTITeam-1) ....	3
Hq., Third U. S. Army, APO 403, U. S. Army (1 copy for Ordnance Officer, 1 copy for G-2, 1 copy for OTITeam-3) ....	3
Hq., Seventh U. S. Army, APO 758, U. S. Army (1 copy for Ordnance Officer, 1 copy for G-2, 1 copy for OTITeam-7) ....	3
Hq., Ninth U. S. Army, APO 339, U. S. Army (1 copy for Ordnance Officer, 1 copy for G-2, 1 copy for OTITeam-9) ....	3
Hq., Fifteenth U. S. Army, APO 408, U. S. Army (1 copy for G-2, 1 copy for Ordnance Officer) ....	2
Hq., First French Army, APO 23, U. S. Army ....	1
General Arnaud, Inspection des Etudes et Recherches Techniques, 1, Place Saint-Thomas d'Aquin, Paris VII <sup>o</sup> ....	1
Depot O-626, APO 562, U. S. Army Attn: 612th OBAM Battalion ....	1

R E S T R I C T E D



Photo No. 1. Heavy semi-tracked tractor , S.W.S.  
Note front suspension and shock absorbers, and  
canvas cover for driver's cab.



Photo No. 2. Right rear view showing track suspension.  
Note fuel tank filler pipe below tail gate, hinged sides,  
supports for cover over body, and spare tire mounting.

Report No. 175

Appendix "A".

- 4 -

R E S T R I C T E D

R E S T R I C T E D



Photo No. 3. Front suspension and steering linkage,  
track and interleaved bogies.

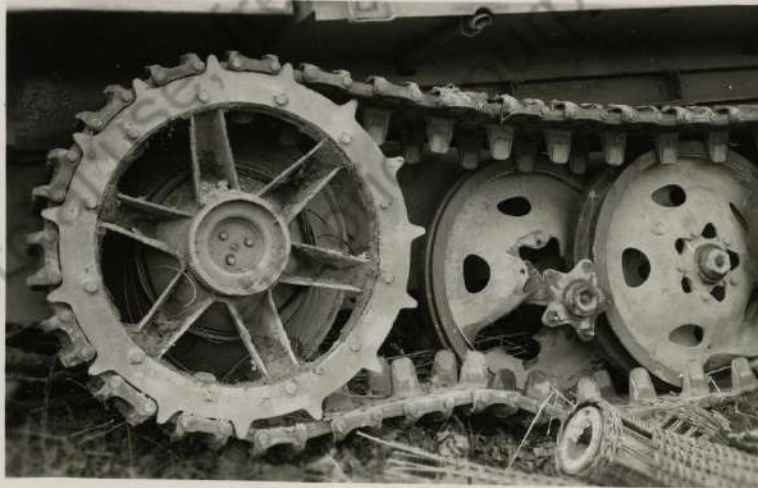


Photo No. 4. Close-up of sprocket, track and  
bogie wheels.

Report No. 175

Appendix "A".

- 5 -  
R E S T R I C T E D



for sale or commercial use, free of charge Dmitry Bushmakov Rest



akow Restoration BUSHMAKOW.COM not for sale or commercial use, free of charge Dmitry Bushmakow Restoration only, not for sale or commercial use, free of charge





