

RED STAR

Oliver Missing's digital models of the Soviet Red Army's tractors

German enthusiast, Oliver Missing, is fascinated with military history and modelling – and in particular the vehicles used by the Soviet Red Army during the Second World War. Having been a military modeller until 20 years ago, he focused on building kits until dozens of unfinished models began to stack up in the cellar. He then turned his hand to something different and began modelling digitally using computer graphics programs.

Oliver has concentrated on producing scaled multi-view colour profiles of the 'Engines of the Red Army'. These cover the very wide range of vehicles that saw service with the Soviet Red Army (officially the Workers & Peasants Red Army or RKKA) during the Great Patriotic War;

the term used by Russia to describe the conflict on the Eastern Front during the Second World War.

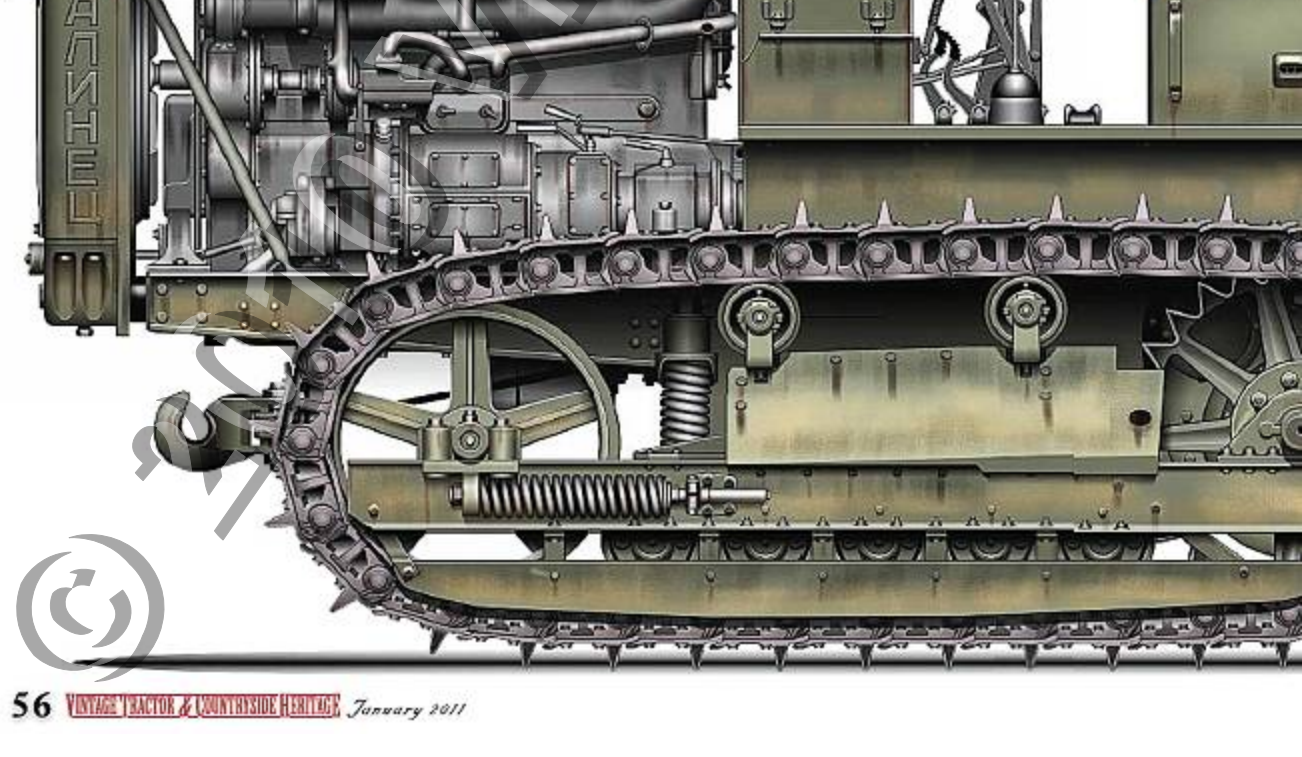
The scope is enormous and the many types of Russian vehicles, both armoured and softskin, used by the Red Army would fill hundreds of drawings alone. But Oliver hasn't just confined himself to domestic production and has also looked at the machines supplied to the Soviet Union by the Allies under Lend-Lease. He believes that the fact that Russia received some 430,000 vehicles, including trucks, jeeps, tractors, tanks and armoured cars, from the

USA, Britain and Canada during the Second World War is often overlooked and he has made this an important facet of his work.

Creating the profiles has been a massive undertaking, but Oliver has risen to the challenge and has produced more than 1,000 single drawings to date – although he feels that so far he has only scratched the surface. The categories he has worked in include tanks and armoured vehicles, trucks, tractors, artillery guns, motorcycles and railways. The profiles are beautifully executed and highly accurate and he has kindly allowed us to showcase some of his digital images of the heavy crawlers, both Russian and American, used as artillery tractors by the Red Army during the conflict.

RUSSIAN TRACTORS

The Russian tractor industry, which was almost completely diverted to tank production during the Second World War, had been established with substantial American assistance in the late 1920s and early '30s. The fledgling communist state's



56 **VINTAGE TRACTOR & COUNTRYSIDE HERITAGE** January 2011

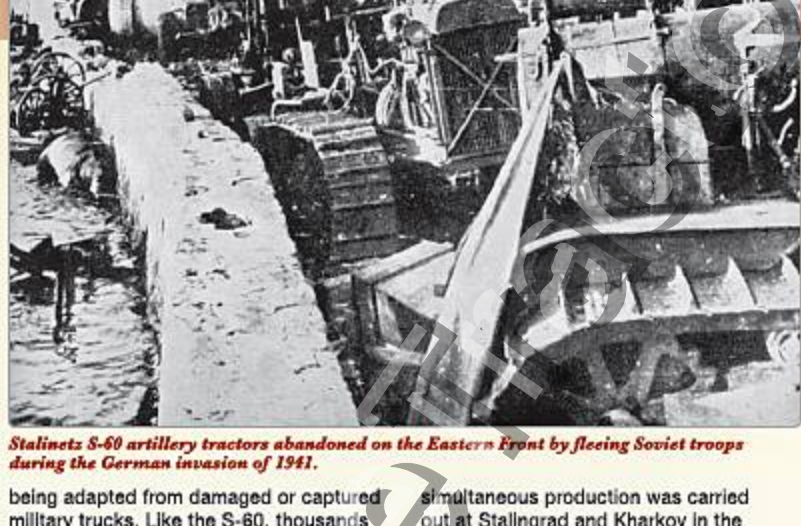
urgent need for agricultural machines saw a number of tractor factories erected across the Soviet Union.

These factories included the Chelyabinskii Traktorny Zavod imeni Stalina (ChTZ) just 7km east of the Russian city of Chelyabinsk. An industrial centre in the Urals, Chelyabinsk became known as Tankograd (Tank City) after Joseph Stalin decided to relocate a large part of Soviet military production there out of the way of the advancing German armies in late 1941.

The Stalinets (son of Stalin) ChTZ S-60 tractor was produced at Chelyabinsk from June 1933 to March 1937. The S-60 was a Russian copy of the Caterpillar 'Sixty' tractor with a four-cylinder petrol engine. Some 69,100 were built and many played an important military role as artillery tractors with the Red Army during the fighting on the Eastern Front. However, their low top speed (under 4 mph) made them an easy prey for the advancing German forces and a good number were captured and pressed into service with the Wehrmacht.

The successor to the S-60, the Stalinets S-65, was the most widely used Soviet artillery tractor. Built at Chelyabinsk from 1937-41, the ChTZ S-65 was based on the Caterpillar 'Sixty' with the Caterpillar 'Diesel Fifty' engine and some 37,626 were produced. Variants included the SG-65 powered by a petrol engine.

Many of the S-65 tractors in military service were fitted with cabs to offer some protection from the harsh Russian winters. The cabs, either wooden or steel, were often field improvisations,



Stalinets S-60 artillery tractors abandoned on the Eastern Front by fleeing Soviet troops during the German invasion of 1941.

being adapted from damaged or captured military trucks. Like the S-60, thousands of the S-65 tractors were annexed by the Germans during their lightning offensive in the summer of 1941.

Another Russian agricultural tractor

"The Soviet Union received some 7,500 military crawlers from the US via Lend-Lease during the Second World War"

used by the Red Army for military purposes was the STZ-NATI, a Soviet designed crawler that was introduced at the Stalingrad (now Volgograd) tractor factory in 1937. The military designation was Medium Tractor STZ-3 and

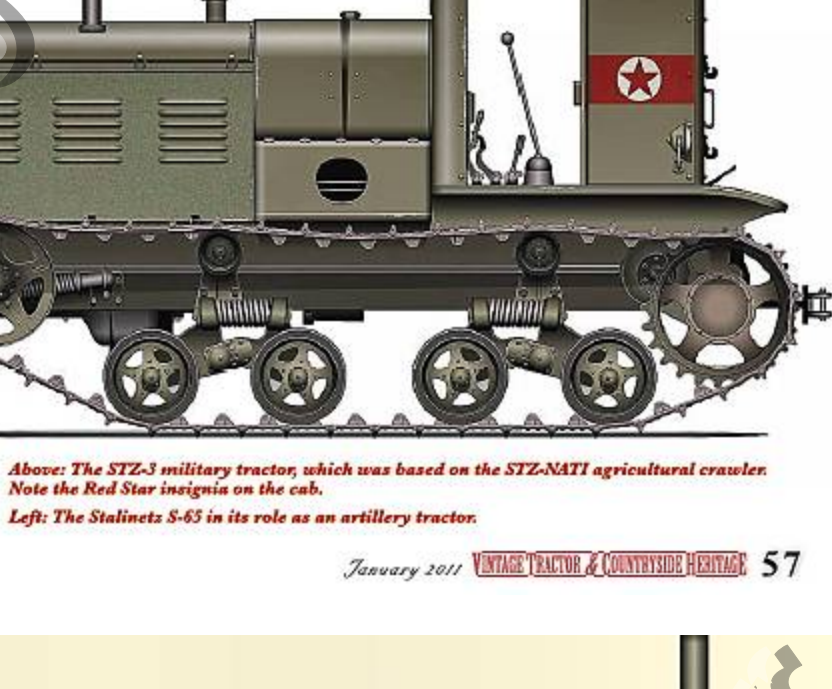
simultaneous production was carried out at Stalingrad and Kharkov in the Ukraine.

By 1941, some 16,000 examples had been built with some 4,000 supplied to the Red Army. Production of the

KhTZ-3 variant at Kharkov ended in the autumn of 1941 after the manufacturing facilities were captured by the

German forces. An ATZ-3 variant was later put into production at the new Altaiiskii Traktorny Zavod in Rubtsovsk in the Altai Krai region.

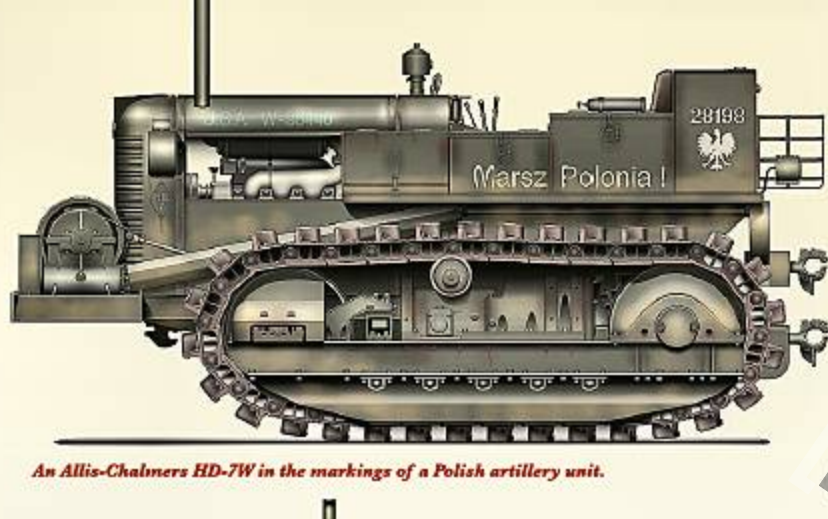
Other versions included the STZ-5, a tracked military truck, and the



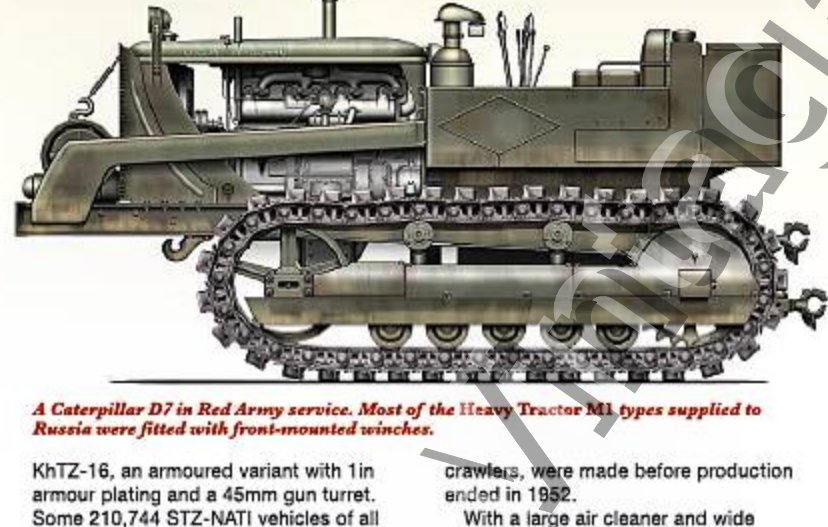
Above: The STZ-3 military tractor, which was based on the STZ-NATI agricultural crawler. Note the Red Star insignia on the cab.

Left: The Stalinets S-65 in its role as an artillery tractor.

January 2011 **VINTAGE TRACTOR & COUNTRYSIDE HERITAGE** 57



An Allis-Chalmers HD-7W in the markings of a Polish artillery unit.

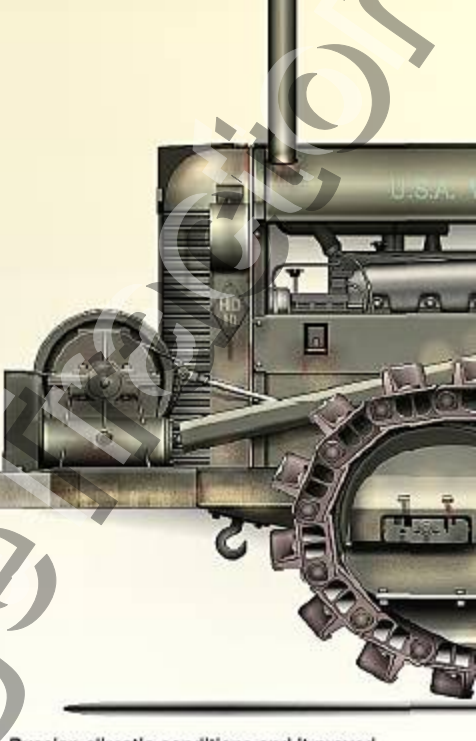


A Caterpillar D7 in Red Army service. Most of the Heavy Tractor M1 types supplied to Russia were fitted with front-mounted winches.

KhTZ-16, an armoured variant with 1in armour plating and a 45mm gun turret. Some 210,744 STZ-NATI vehicles of all types, the majority being agricultural

crawlers, were made before production ended in 1952.

With a large air cleaner and wide tracks, the STZ-3 was ideally suited to the



Russian climatic conditions and it proved highly capable of towing even the largest guns. Two types of cab, one with a slanted windscreen and open sides, and another with a vertical windscreen and side doors, were fitted to the military tractors and, again, many were commandeered by the German invaders.

AMERICAN CRAWLERS

It's not widely known that the Soviet Union received some 7,500 military crawlers from the USA via Lend-Lease during the Second World War. More than 8,000 were shipped, but around 500 were lost through attacks on Allied shipping. While the bulk of the tractors were of the light and medium type, over 1,100 heavy crawlers were sent with the predominate makes being Caterpillar, Allis-Chalmers and International.

Machines that came under the designation *Heavy Tractor M1* included 243 Caterpillar D7s (7M model) supplied to the Soviet Union between 1942 and 1943. More than half of the Allis-Chalmers HD-10W crawlers produced at Milwaukee in the same time scale, some 413 machines, were also diverted to Russia. The balance of the heavy tractors delivered to the Red Army was made up by 494 International TD-18s.

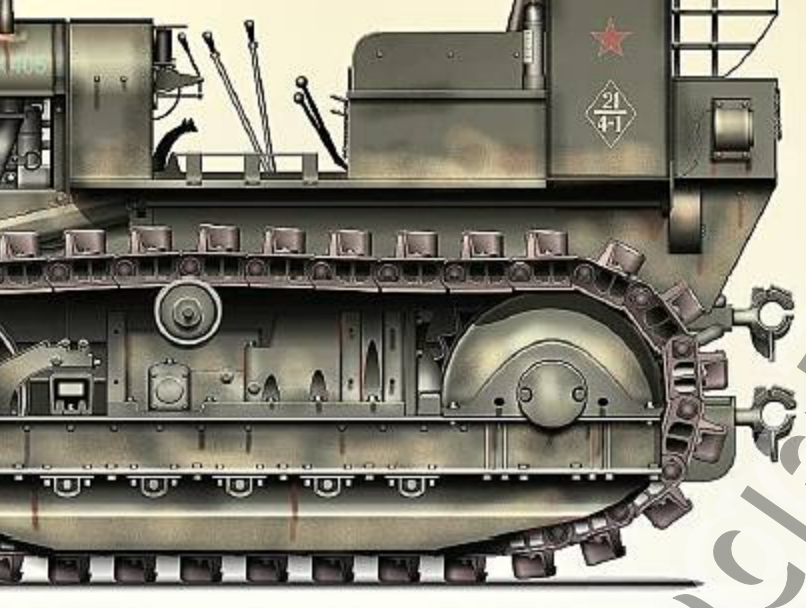
The D7, HD-10W and TD-18 crawlers were immediately deployed by the Red Army to its heavy artillery units. The American heavy tractors excelled as prime-movers on the difficult Russian terrain, also playing a prominent role in the fierce fighting of the Soviet offensive in the Carpathian Mountains in 1944.

The bulk of the American crawlers

An Allis-Chalmers HD-10W takes part in the 1945 Victory parade in Moscow.

58 **VINTAGE TRACTOR & COUNTRYSIDE HERITAGE** January 2011

Below: An Allis-Chalmers HD-10W wears the insignia of a Soviet artillery unit and was used to tow the 152mm ML-20 howitzer or the big 203mm B-4 tracked howitzer.



supplied to the Soviet Union after 1943 were of the *Medium Tractor M1* type. Roughly 5,000 of this type were sent, including 2,106 Allis-Chalmers HD-7Ws, 296 Caterpillar D6s (4R model) and 246 International TD-14s. Again, the Red Army readily deployed the crawlers to its own heavy artillery units as well as to its Polish allies.

The 63in-gauge Allis-Chalmers HD-7W,

powered by a 65hp three-cylinder General Motors 3-71 diesel engine, seems to have been a popular machine with the Red Army and was deployed with the Russian 122mm ML-30 howitzer. It's interesting to note that a Lend-Lease convoy setting sail from Seattle for Vladivostok in January 1944 was carrying no less than 2,000 Allis-Chalmers tractors for Russia.

Colour profiles of all these machines

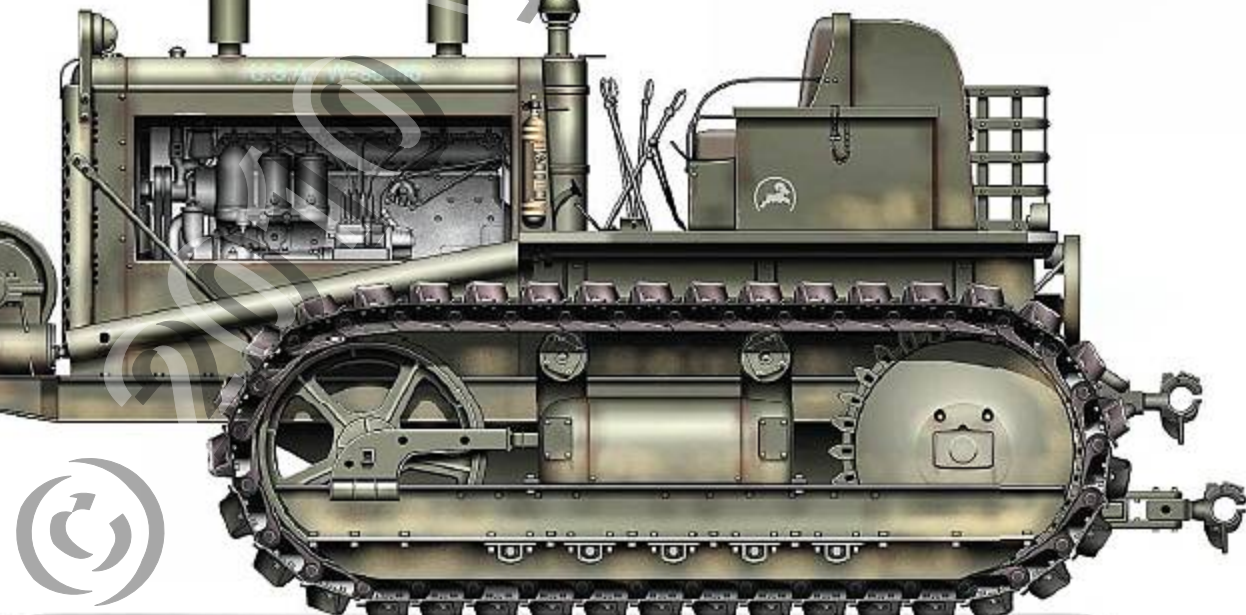
OLIVER MISSING



Oliver, who is 33 years old and married with two daughters, lives at Koblenz on the Rhine and works for the local financial administration. "After my family and friends, military history and vehicles are my life," he tells us. "My drawings are made exclusively by computer – I couldn't draw a straight line by hand! They were originally done using the *Paint Shop Pro* graphics program, but I'm currently working with *XARA Xtreme* – a beautiful British program!"

and more can be found on Oliver's website at www.o5m6.de. The site, which we highly recommend, also contains archive photographs, background information and historical and technical data on all aspects of the 'Engines of the Red Army'. Oliver has recently opened a second site, www.german.o5m6.de, which deals with the vehicles of the German Wehrmacht during the Second World War.

Below: The International TD-18 was used by the Red Army for towing various field guns.



January 2011 **VINTAGE TRACTOR & COUNTRYSIDE HERITAGE** 59