

= T48 Gun Motor Carriage =

The T48 57 mm Gun Motor Carriage was a self @-@ propelled anti @-@ tank gun produced by the Diamond T company in 1943 for the United States . The design incorporated a 57 mm gun M1 , a US production of the British Ordnance QF 6 pounder , mounted on an M3 Half @-@ track .

A total of 962 vehicles were produced from 1942 to 1943 . It had originally been planned that Britain would receive all of the examples produced through Lend @-@ Lease , intending to use them in the Western Desert , but by the time they arrived the campaign was over . Additionally , the purpose @-@ built M10 tank destroyer , armed with a 3 @-@ inch gun (and later a 17 @-@ pounder gun in British service) had begun to enter production . As a result , the British transferred 650 half @-@ tracks to the Soviet Union under the Soviet Aid Program . Britain retained 30 and the remainder were taken by the US ; these British and American vehicles were converted back to standard M3 Half @-@ tracks , except for one kept by the U.S. Army .

The Soviets called it the SU @-@ 57 (Samokhodnaya ustanovka 57) , and under this designation it served in Operation Bagration and other fighting on the Eastern Front during World War II .

= Specifications =

The T48 Gun Motor Carriage was 21 ft (6 @. @ 4 m) long , 7 ft 1 in (2 @. @ 16 m) wide , and 7 ft (2 @. @ 1 m) high . It had a wheelbase of 135 @. @ 5 in (3 @. @ 44 m) , and weighed 9 @. @ 45 tons (20 @, @ 800 lb) . The suspension consisted of a leaf spring for the wheels , while the front tread had vertical volute springs . The vehicle had a maximum speed of 45 mph (72 km / h) . With a fuel capacity of 60 US gallons (230 l) , it had a range of 150 miles (240 km) , and was powered by a 128 hp (95 kW) White 160AX , 386 in³ (6 @, @ 330 cc) , 6 @-@ cylinder gasoline engine with a compression ratio of 6 : 3 : 1 . The power @-@ to @-@ weight ratio was 15 @. @ 8 hp / ton . It also had 6 ? 12 mm of armor , and was armed with a single 57 mm Gun M1 with 99 rounds of ammunition . It had a crew of five (commander , gunner , driver , loader , and radio operator) .

= Development =

The T48 originated from an Anglo @-@ American requirement for a self @-@ propelled 6 @-@ pounder anti @-@ tank gun . The requirement was met by emplacing a 57 mm gun M1 ? the U.S. production version of the British Ordnance QF 6 @-@ pounder ? in the rear of an M3 Half @-@ track . The first production batch was ordered in April 1942 . The Americans dropped their requirements because of the design of another tank destroyer , the M10 . Afterwards it was intended solely to be supplied overseas under the terms of the Lend @-@ Lease Program ; the T48 was never officially type @-@ classified .

= Pilot model =

The pilot model was built at the Aberdeen Proving Ground in May 1942 . The 57 mm Gun M1 was mounted in the M12 recoil mechanism and installed on a tubular pedestal . The tubular pedestal was soon replaced with a conical structure that was designated the " 57 mm gun mount T5 " . The gun on the pilot model had a traverse of 27 @. @ 5 degrees either side of the centerline (total of 55 degrees) , while having an elevation of + 15 to -5 degrees . The short @-@ barrelled (43 caliber) British Mark III 6 @-@ pounder gun was installed in the pilot , but the longer @-@ barrelled (50 caliber) 57 mm Gun M1 was specified for the production models . The original travel lock ? to hold the gun in a fixed position when the vehicle was moving ? proved to be unsatisfactory , and was replaced by a travel lock on the front hood .

The original design used a gun shield taken from the T44 57 mm Gun Motor Carriage , but after the first tests were complete , a new shield was designed with 5 / 8 inch thick face @-@ hardened steel on the front and 1 / 4 inch thick on the sides and top . The shield extended over the crew with a relatively low silhouette of only 90 in (2 @. @ 3 m) . Experience with the M3 Gun Motor Carriage in

the Philippines Campaign , resulted in demountable headlights being used . The T48 was accepted for production in 1942 .

= = Service history = =

Deliveries of the T48 were made in 1942 and 1943 , with 50 arriving in 1942 followed by a further 912 in 1943 . The British ordered all of the T48s that were produced , intending to use them in the Western Desert Campaign . By the time the vehicles arrived in the theater in the summer of 1943 , the British had already won the war in the Western Desert . Meanwhile , the 57 mm gun was superseded by the 75 mm gun from the U.S. , and later the availability of the Ordnance QF 17 @-@ pounder gun , meant that the T48 became surplus to British requirements . As a result , the vehicles were almost immediately shipped to the Soviet Union under the terms of the Soviet Aid Program . Through this , the Soviets received 650 vehicles , which they designated the " SU @-@ 57 " (Samokhodnaya ustanovka 57) . A small number were later passed to the Polish People 's Army .

Of the remainder , Britain accepted 30 , all of which were converted back into carriers , and the US took 282 vehicles . Of those retained by the US , all but one were converted back to M3A1 standard carriers in 1944 . The conversion took place at the Chester Tank Depot . The Wehrmacht also operated a number of T48s as carriers , having captured several from Britain and the Soviet Union .

The Soviets employed the T48 along the Eastern Front , mainly in Operation Bagration . The Soviet 16th Separate Tank Destroyer Brigade used a large number of T48s in 1943 during the offensive across the Dnieper River , and with the 19th Brigade during the Baranow bridgehead battle in August 1944 . The T48 also served with the Soviet 22nd Self @-@ Propelled Artillery Brigade . Some of these units also took part in the Berlin and Prague offensives . The Polish People 's Army used T48s assigned to the 7th Self @-@ Propelled Artillery Battery to support Soviet attacks into Germany and Poland .

In Soviet service , the vehicles were allocated to brigades at a scale of 60 per brigade . During the attack , the vehicles were used to provide mobile fire support , being placed behind the infantry , usually in a hull @-@ down position behind a ridge or a hill , to fire across a broad front to take advantage of the long range of the 57 mm gun .

= = Operators = =

British Army accepted 30 vehicles , later rebuilt as carriers .

Polish Army in the East received 15 vehicles operated previously by the Red Army .

Red Army operated T48 GMC under the designation SU @-@ 57 .

U.S. Army used T48s rebuilt as M3A1 Half @-@ tracks , in 1944 . Most rebuilt by the Chester Tank Depot . One T48 was integrated into the U.S. Army .

Wehrmacht units operated a small number of T48s captured from UK and the Soviet Union .