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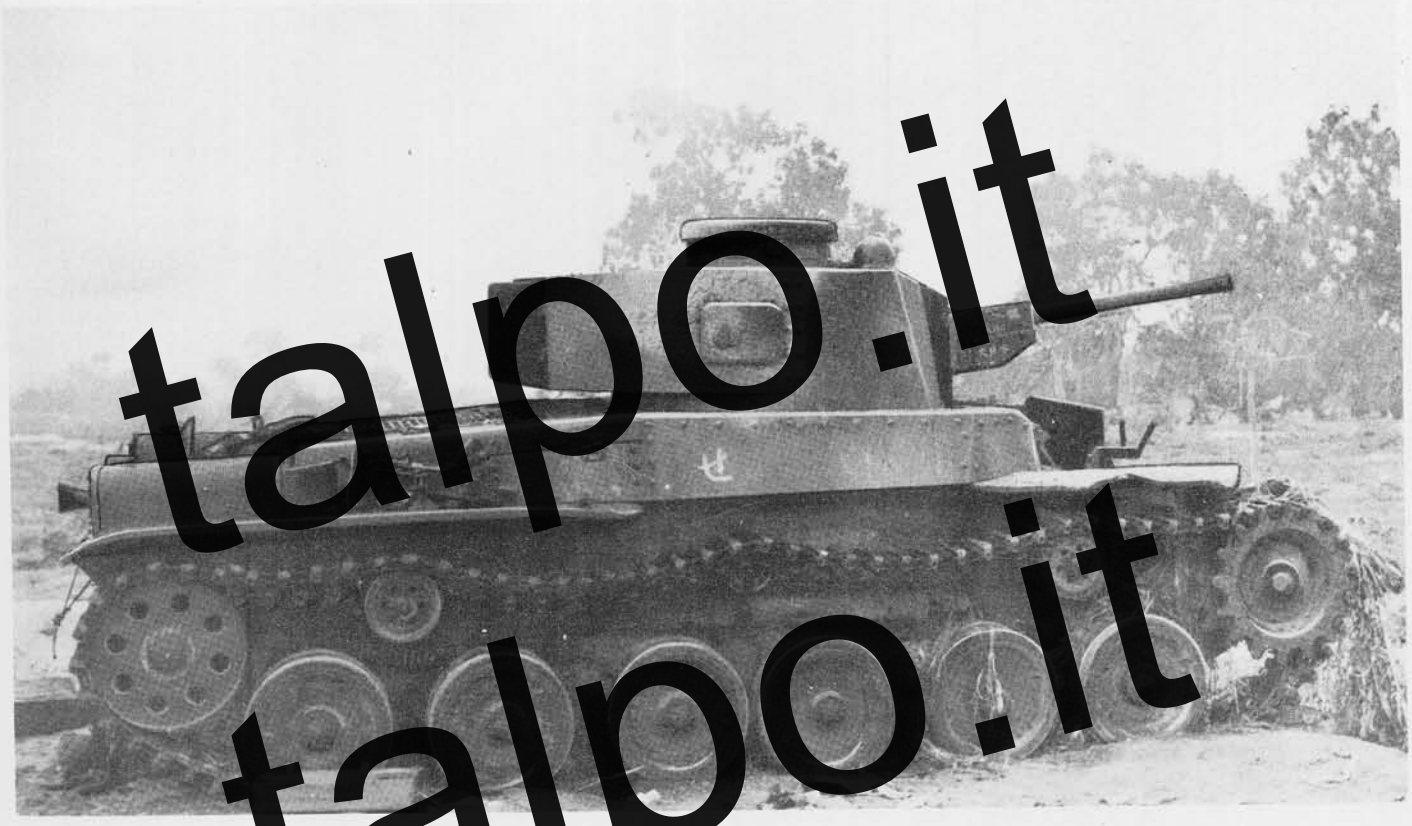
MEDIUM TANK MODEL 2597 (1937) (SPECIAL)

JAPANESE



The Model 97 Special Medium Tank was first placed in operation in the early spring of 1942. It is a modification of the Model 2597 Medium Tank (see page 9) with a modified turret to accommodate the 47 mm Model 1 (1941) tank gun instead of the normal short-barreled 57 mm gun.

The 47 mm tank gun conforms to the 47 mm Model 1 (1941) antitank gun (page 106) in the dimensions of chamber, caliber, and rifling and its performance is similar. The tank gun, however, has a vertical sliding breechblock, while the antitank gun has the horizontal type. The tank gun has a total traverse of 22° with an elevation from — 11° to + 17°. It is shoulder-controlled with geared elevation and depression. However, free movement can be obtained, if desired. Penetration tests of the antitank gun indicate a penetration of 2½ inches of homogeneous plate at normal at a range of 1,050 yards.

The Special Tank is readily recognized by its elongated turret, slightly offset to the right. This turret measures six feet from front to rear and three feet across the rear bulge. There is a door 19″ x 16″ in the turret back plate, an exit hatch 23″ x 16″ in the turret top plate, and an observation hatch 25″ in diameter in the cupola with a vision port 4″ in diameter in the cupola top plate. The gun mantlet of 30 mm thickness, sloped at 10° to the vertical, is bolted to the turret front. A 7.7 mm Model 97 L.M.G. is mounted at the turret rear. Another is mounted in the superstructure front plate at the left of the driver.

The armor plate thickness of the Special Tank is essentially the same as that of its predecessor except that the hull side plates of the former have been increased in thickness to 35 mm.

SPECIFICATIONS

Weight (approx.)	15 tons
Length	18 ft., 1 in.
Width	7 ft., 8 ins.
Height	7 ft., 11 ins.
Ground clearance	14 ins.
Tread centers	6 ft., 7 ins.
Ground contact	11 ft., 7 ins.
Width of track	13 ins.
Pitch of track	4¾ ins.
Track links	96
Fording depth	3 ft., 3 ins.
Theoretical radius of action	
Roads	100 miles
Cross country	
Armor	
Turret front	25 mm at 10° to vertical
Gun mantlet	30 mm cast at 10° to vertical
Front vertical plate	25 mm at 10° to vertical
Glacis plate	17 mm at 80° to vertical
Nose plate	15 mm at 62° to vertical
Side superstructure	20 mm at 40° to vertical
Side hull plates	35 mm
Top rear plate	17 mm
Armament	
One 47 mm model 1 (194) tank gun; two type 97 light machine guns.	
Ammunition (Rds.)	
104 rounds of 47 mm ammunition; 2,575 rounds of small arms ammunition.	
Engine	
Air-cooled, V-12 diesel.	
Transmission	
Main gear box—4 speeds forward, 1 reverse—high and low ratios.	
Steering	Clutch brake
Crew	5

150 mm SELF-PROPELLED HOWITZER

This weapon is the 38 year type (1905) 15 cm howitzer mounted on a medium tank chassis. The chassis resembles that of the Medium Tank Model 2597 (1937), Special, described on page 8.1. The armor is riveted in the characteristic Japanese fashion, and on the chassis is of the same thickness as on the corresponding tank chassis, with a maximum of approximately one inch. On the superstructure, the gun shield has one-inch frontal armor and one-half-inch side armor.

The vehicle uses the standard V12, air-cooled, diesel engine, and the type 97 medium tank suspension, consisting of six dual rubber-tired bogie wheels on each side. The weapon mounted on this vehicle is the type 38 (1905) 15 cm howitzer, a very short weapon. It has an interrupted screw breechblock opening to the right, and uses a percusssion primer. The rifling is 58 inches long and has increasing right hand twist. The maximum range of the Field Howitzer is reported as 6,500 yards. The maximum elevation is 30 degrees.

A self-propelled vehicle mounting a gun of 75 mm or 105 mm caliber, employing the same chassis and with a superstructure somewhat resembling the present vehicle has been reported.

SPECIFICATIONS

Weight	15 tons
Length	18 ft.
Width	7 ft., 6 ins.
Height (overall)	93 ins.
Height of chassis	47 ins.
Height of shield	61 ins.
Ground clearance	14 ins.
Tread centers	6 ft., 7 ins.
Ground contact (approx.)	160 ins.
Width of track	13 ins.
Pitch of track	5⅛ ins.
Track links	96
Fording depth	39 ins.
Theoretical radius of action:	
Roads	100 miles
Cross country	
Speed:	
Roads	25 m.p.h.
Cross country	
Armor: gun shield	
Front plate	1 in.
Sides	½ in.
Armament	15 cm Howitzer, Model 38 (1905)
Ammunition (Rds).	
Engine	V12, air-cooled, diesel
Transmission—4 speeds forward; 1 reverse (high and low range)	
Steering	clutch brake
Crew	probably 5

4-TON PRIME MOVER MODEL 94 (1934)

JAPANESE

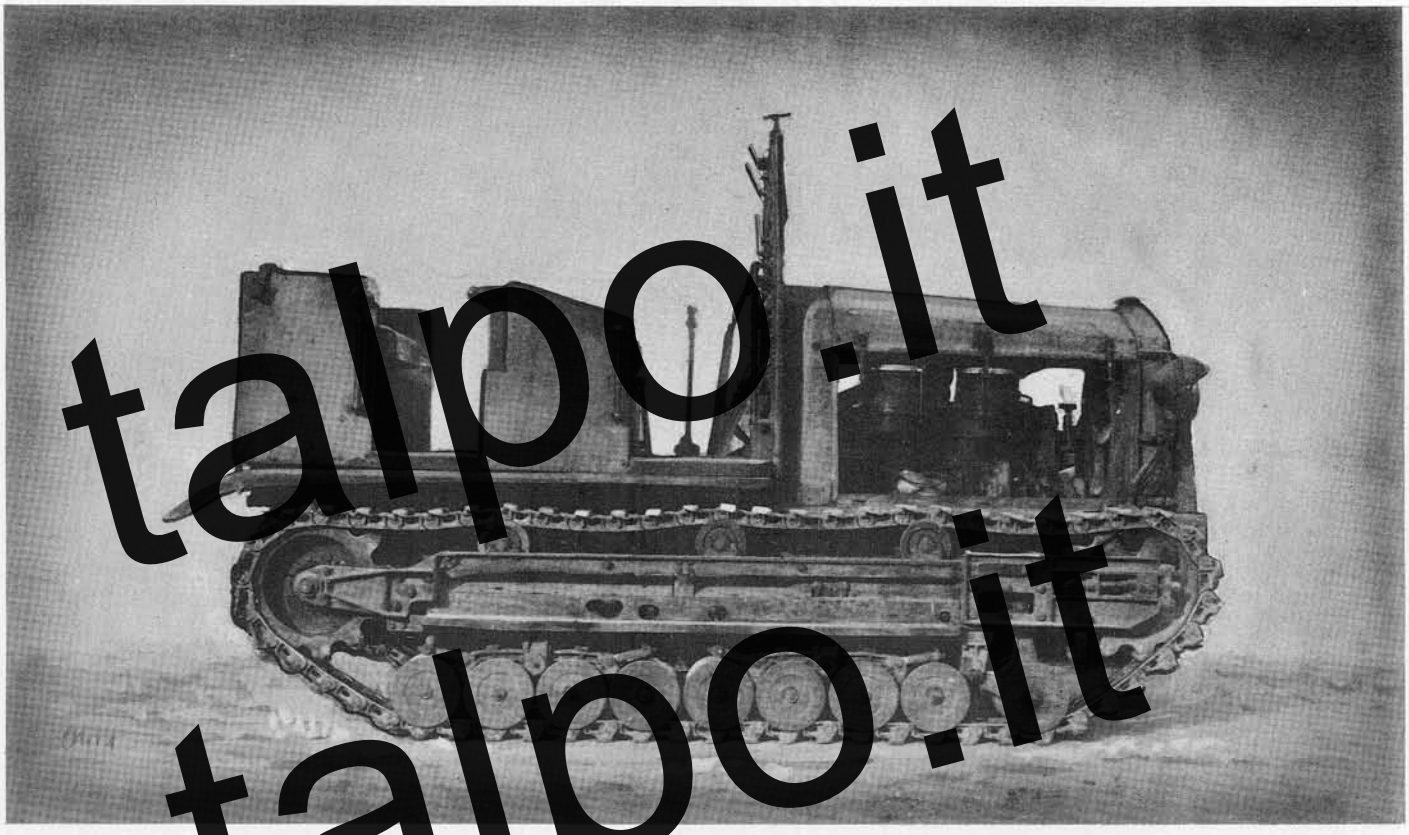
The 4-ton Prime Mover is powered by a 90° V-8 air-cooled gasoline engine with a cylinder bore of 90 mm and a piston stroke of 125 mm. The normal horsepower is 73 at 1,600 r.p.m.; maximum horsepower is 88. The firing order is 1-8-7-3-6-5-4-2. The electrical system includes a Bosch type magneto (Gesal model); a Bosch R.T.C. 900 LI model, 75-watt generator; a 12-v., 80 amp.-hr. storage battery, and a Bosch 2.5 hp. electric starting motor. The ratio of the final drive is 5.657:1. Clutch brake steering is used and both hand and foot operation applies the brakes. The transmission is the central selector type with 4 speeds forward and 1 reverse.

The vehicle is capable of towing its complement of artillery at 25 m.p.h. There is a main and auxiliary type of lubricating oil pump. Oil pressure is 4.4 to 6.6 lb. of gage pressure when warmed up. A Stromberg UR Z model carburetor is used. The main fuel storage tank has a capacity of 26.6 gals. In addition, there is an auxiliary tank having a capacity of 15.8 gals. A Sirocco type fan provides circulation for the air-cooled engine. A dry two-plate clutch is used. The grade-ascending ability is said to be 30° under the towing load. This vehicle can pivot turn. The winch capacity is 2.2 tons. The theoretical radius of action is 125 miles in 10 hours.

SPECIFICATIONS

Weight	4 tons
Trailer load capacity	
Winch capacity	over 2 tons
Length	12 ft., 5 ins.
Width	6 ft., 1 in.
Height	7 ft., 3 ins.
Ground clearance	11.5 ins.
Tread centers	5 ft., 4 ins.
Ground contact	7 ft., 8 ins.
Track width	10 ins.
Track links	5½ ins.
Fuel tank	Main, 26.6 gals.; aux., 15.8 gals.
Fuel consumption	
Fording depth	20 ins.
Speed	25 m.p.h.
Engine	V-8 cyl., air-cooled, gasoline
Bore and stroke	90 mm x 125 mm—3.54 ins. x 4.92 ins.
Horsepower	88 (max.)
Ignition	Magneto
Battery	12 v., 80 amp.-hr.
Transmission	Selector type 4 speeds forward, 1 reverse
Steering	Clutch brake
Crew	6

5-TON PRIME MOVER MODEL 92A (1932)



It is reported that there are two variations of this vehicle. Model A is powered by a 6-cylinder in-line L-head Sumida gasoline engine, and Model B by a 6-cylinder in-line air-cooled Isuzu Diesel. As far as may be ascertained, with exception of a modification in radiator design, the general appearance and suspension of these two models is similar.

The Model A engine is an L-head type with the valves on the side. The cylinder bore is 110-mm, the stroke 135 mm, and the compression ratio is 4.5:1. The normal hp. is 64 at 1,200 r.p.m.; the maximum hp. is 98. Ignition is provided by a Bosch high-tension magneto with 12-v. charging generator and two 12-v. 60 amp.-hr. vibration-proof batteries. The electric starting motor is 12-v. with a rating of 2.5 hp. Bevel spur pinion and ring gears have reduction ratios of 2.66 and 5.

The steering system is the clutch brake type with both hand- and foot-operated brakes. The transmission provides four speeds forward and one reverse. The maximum speed is 19 k.p.h. (11.8 m.p.h.). The lubricating oil is distributed by gear pump force-feed system. Oil pressure registers 1.0 kg. (2.2 lb.) at low speed and 2 kg. (4.4 lb.) at 1,100 r.p.m. The oil capacity measures 14.65 liters (3.7 gal.). A vacuum fuel system is used with Stromberg U.T. 4 model carburetor. The main fuel storage tank holds 125 liters (32 gal.), the auxiliary tank 55 liters (14.5 gal.). Fuel consumption is 17 liters (4.5 gal.) per hour, or 1.65 liters per km. (2.4 mi./gal.). The cooling liquid is circulated by a centrifugal pump from a radiator, which carries 39.5 liters (10.4 gal.). The grade ability of this vehicle pulling a fixed weight is 30°. The winch capacity is 2.5 metric tons (2.8 tons). The winch cable length is 20 meters (65½ ft.).

SPECIFICATIONS

Weight	4.8 Metric tons—5.28 tons
Trailer load capacity	4.5 Metric tons—4.9 tons
Winch capacity	2.5 Metric tons—2.75 tons
Length	3.55 m—11 ft., 8 ins.
Width	1.71 m— 5 ft., 11 ins.
Height	2.35 m— 7 ft., 8 ins.
Ground clearance	.295 m—11.75 ins.
Tread centers	5 ft., 11½ ins.
Ground contact	7 ft., 4½ ins.
Track width	9⅞ ins.
Track links	59
Fuel tank	Main, 32 gals.; aux., 14.5 gals.
Fuel consumption	2.4 m.p.g.
Fording depth	24 ins.
Speed	
Hard roads	18 m.p.h.
Cross-country	8 m.p.h.
Engine	Sumida, 6-cyl., gasoline
Bore and stroke	110 mm x 135 mm—4.33 ins. x 5.31 ins.
Horsepower	64 at 1,200 r.p.m. (normal)
Ignition	Bosch high-tension magneto
Battery	2 12-v., 60 amp.-hr.
Transmission	4 speeds forward, 1 reverse
Steering	Clutch brake
Crew	6

13-TON PRIME MOVER MODEL 95A (1935)

This vehicle is powered by a 6-cylinder, in-line, water-cooled gasoline engine with a cylinder bore of 135 mm and piston stroke of 150 mm and a compression ratio of 5.1:1. Normal horsepower is 130 at 1,300 r.p.m.; maximum horsepower, 160 at 1,900 r.p.m. The firing order is 1-5-3-6-2-4. Ignition for the vehicle is distributed by a high-tension type magneto. The electrical system includes charging generator; two 12-v., 80 amp.-hr. batteries, and a 24-v. electric starting motor of 8-hp. capacity.

The final drive has a reduction ratio of 2.93:1. A dry multiple plate clutch is used. Both foot- and hand-operated brakes are employed and the vehicle is steered by the clutch brake principle and is said to utilize a locking feature of the control brakes. The transmission is of the synchromesh type with 4 speeds forward and 1 reverse.

Lubricating oil is distributed by gear-type force-feed system through an oil-pressure regulator. The oil pressure gage registers 29-44 lb. and an oil-level stick is used for checking the crankcase, which has a capacity of 5¾ gals. It has been stated that the fuel feed equipment includes a fuel pump between the carburetor and storage tank and that the heavy-duty type of fuel is forced fed to a NIPPON B 45 model carburetor.

There are two models of fuel storage tanks manufactured for this vehicle—one is the Mitsubishi type with main tank holding 70 gals. and an auxiliary holding 13 gals., and the other is the NIIGATA type main tank holding 50 gals. and an auxiliary tank holding 38 gals. Fuel consumption is stated to be 7.5 gals. per hour. The radiator holds 11 gals., circulated by a pump to the engine block. The grade-ascending ability of this prime mover is quoted as 14 tons up a 15° incline, or 32 tons on a 7½° incline. The winch capacity is 11 tons.

SPECIFICATIONS

Weight	14.3 tons
Trailer load capacity	32 tons
Winch capacity	11.25 tons
Length	16 ft.
Width	7 ft., 6 ins.
Height	9 ft., 3 ins.
Ground clearance	1 ft.
Tread centers	5 ft., 11 ins.
Ground contact	9 ft., 9 ins.
Track width	16½ ins.
Track links	
Fuel tank	Main, 70 gals.; aux., 13 gals.
Fuel consumption	7.5 m.p.g.
Fording depth	
Speed	6.2 m.p.h.
Engine	6-cyl., water-cooled, gasoline
Bore and stroke	135 mm x 150 mm; 5.31 ins. x 5.91 ins.
Horsepower	130 at 1,300 r.p.m.
Ignition	High-tension magneto
Battery	2 12-v., 80 amp.
Transmission	Synchromesh 4 speeds forward, 1 reverse
Steering	Clutch brake
Crew	

13-TON PRIME MOVER MODEL 95B (1935)

This prime mover makes use of the same chassis as the Model 95A, the only difference being its accommodation of a 6-cylinder, in-line, water-cooled, valve-in-head Diesel engine. The cylinder diameter is 140 mm, the piston stroke 190 mm, and compression ratio 15.5:1. The normal horsepower is rated at 145 at 1,300 r.p.m. Maximum hp. is 165. The firing order is 1-5-3-6-2-4. There is a 24-v., 300-w. capacity charging generator, two 12-v., 80 amp.-hr. batteries, and two 24-v., 6-hp. electric starting motors.

Details are lacking on the reduction gear, which has a ratio of 2.92:1. The steering system is of the clutch brake type assisted on short turns by hand- and foot-operated control brakes, which include a locking feature. The transmission is said to be synchromesh with 4 speeds forward and 1 reverse. The maximum speed is 8.68 m.p.h. A gear-type forced-feed system is used for distributing lubricating oil in the crankcase. An oil pressure gage and oil-level stick are also fitted. Diesel oil fuel is supplied from a total storage capacity of 68 gals. Forty-four liters (11.6 gals.) of water are circulated from the radiator to the engine block with the normal type pump. This vehicle is said to be capable of ascending a 14° grade while towing a 14-ton load, or a 7½° grade pulling a 32-ton load. The winch capacity is 11 tons.

SPECIFICATIONS

Weight	15 tons
Trailer load capacity	32 tons
Winch capacity	11.25 tons
Length	16 ft.
Width	7 ft., 6 ins.
Height	9 ft., 3 ins.
Ground clearance	1 ft.
Tread centers	5 ft., 11 ins.
Ground contact	10 ft., 4 ins.
Track width	16½ ins.
Track links	
Fuel tank	68 gals.
Fuel consumption	
Fording depth	
Speed	8.6 m.p.h.
Engine	6-cyl., water-cooled, Diesel
Bore and stroke	140 mm x 190 mm— 5.51 ins. x 7.48 ins.
Horsepower	145 at 1,300 r.p.m.
Ignition	Diesel
Battery	2 12-v., 80 amp./hr.
Transmission	Synchromesh— 4 speeds forward, 1 reverse
Steering	Clutch brake
Crew	

ARMORED PRIME MOVER

The chassis of this Japanese armored prime mover incorporates the better design features of the tankette development shown on pages one to three. This vehicle is an important link in the chain of Japanese transportation of personnel and supply in the large mainland areas. Its construction proves that the Japanese attach considerable importance to the interchange and utilization of standard tank component parts on combat vehicles for greater simplification of their supply problem.

The hull provides for a layout of the engine and power train on the right, while the driver's compartment is located on the left side. A large load and stowage compartment at the rear extends over the tracks. Tubular bows are raised for protective covering and camouflage nets. Double doors open at the rear, below which a towing pintle is attached. There is no main armament; however, there is an observation turret built in the roof of the crew compartment behind the driver. Speaking tubes with ear phones are used for crew communication. Four hinged flap-covered openings provide additional vision for the crew and allow employment of small arms weapons.

The power train in this vehicle is made up of the engine, four-speed and reverse transmission, controlled differential with steering brakes and a final drive single reduction gear. The engine is a four-cylinder in-line diesel with Bosch type automatic fuel injection. A 12-volt ignition system is also provided with spark plugs located in the fuel injection ports. The electrical system utilizes parts standard and interchangeable with other vehicles. Two fuel tanks hold 38 gallons.

SPECIFICATIONS

Weight	5 tons
Length	12 ft., 8 ins.
Width	6 ft., 4 ins.
Height	5 ft., 2 ins.
Ground clearance	14 ins.
Tread centers	
Ground contact	124 ins.
Width of track	8 ins.
Pitch of track	3 ins.
Track links	88
Fording depth	31 ins.
Theoretical radius of action	
Roads	
Cross-country	
Speed	
Roads	28 m.p.h.
Cross-country	
Armor	
Front plate	mm
Sides	12 mm
Floor	12 mm
Armament	Small arms weapons
Ammunition (Rds.)	Unknown
Engine	4-cylinder air-cooled OHV Diesel
Transmission	4 speeds forward; 1 reverse
Steering	Controlled differential
Crew	2

COMBINATION PRIME MOVER AND WRECKER

JAPANESE

This vehicle, in addition to its function as a prime mover and wrecker, may have been used as a tank recovery vehicle. It has a total seating capacity of thirteeen men. Two front booms are provided, and a removable boom at the rear. The latter can be attached in such a manner as to act as a brace for the vehicle. The front booms, which are traversed by gears, are moved and operated independently by two different operators. There is a large towing winch behind the driver's seat, and two smaller winches near the front end.

The prime mover/wrecker has been derived in part from components of the Japanese Medium Tank. There are five bogies on each side, four of which are mounted in pairs. Each pair connects to a coil spring, and the front bogie wheel is independently sprung by a separate coil spring. The drive sprocket is smaller than that employed in the Medium Tank.

The vehicle is powered by a 6-cylinder, valve-in-head, air-cooled Diesel engine located in the rear. The engine head is made of aluminum. There are two fuel tanks which have a capacity of thirty gallons each. The clutch, a single plate type, is housed in an aluminum clutch housing. The transmission provides four speeds forward and one in reverse. The power takeoff for the winches is from the transmission. The final drive system is quite unusual in that there are two separate drive shafts, and each track is driven by an independent final drive mechanism. Removable track grousers are supplied for use in difficult terrain.

SPECIFICATIONS

Weight	
Trailer load capacity	
Winch capacity	
Length (overall)	20 ft., 8 ins.
Length (less arms)	17 ft.
Width	7 ft., 5½ ins.
Height	7 ft., 11 ins.
Ground clearance	16 ins.
Tread centers	6 ft., 4 ins.
Ground contact	9 ft., 11 ins.
Track width	12 ins.
Track links	
Fuel tanks	gals .each
Fuel consumption	
Fording depth	
Speed	
Engine	6 cyl. valve in head, air-cooled Diesel
Bore and stroke	5.5 ins. x 6.5 ins.
Horsepower	
Ignition	
Battery	2—12 v.
Transmission	4 speeds forward, 1 reverse
Steering	
Crew	13

ARMORED TRACKED PERSONNEL CARRIER

JAPANESE

This vehicle serves as an artillery prime mover and as a personnel carrier for 24 men. It appears to be of recent manufacture, and its first known appearance in combat was during the Leyte campaign in the Philippines.

It is a full-tracked vehicle armored with ¼-inch plate throughout. The engine which is located at the right front of the body is a 6-cylinder, in-line, valve-in-head, air-cooled diesel of a type similar to those used in the Model 2595 light tank and the combination prime mover and wrecker. Two fuel tanks provide an estimated total capacity of 50 to 60 gallons.

The tracks and suspension are of the conventional Japanese design, using dual bogie wheels and a steel center guide track. The four bogie wheels, apparently identical with those on the Model 2595 light tank, are mounted on bell cranks and are sprung by horizontal coil springs which are inclosed within the body armor with only the bogie arms exposed. There are two return rollers. The track is driven from the rear. A clutch and brake steering system is used. The transmission provides four speeds forward and one reverse. A high and low transfer case is also provided.

A mount for a 7.7 mm machine gun is located on the left front of the driver's compartment. The vehicle does not mount a winch, but is provided with a spring mounted towing pintle for use as a prime mover. It has a capacity of from 2 to 3 tons if used as a cargo carrier. Maximum speed is reported as approximately 35 miles per hour, with exceptionally good cross-country performance due to the amount of track area in contact with the ground in relation to the weight of the vehicle.

SPECIFICATIONS

Weight	
Length (overall)	15 ft., 9 ins.
Width (overall)	6 ft., 8 ins.
Height	
Ground clearance	
Tread centers	
Ground contact	9 ft., 10 ins.
Width of track	10 ins.
Pitch of track	3-13/16 ins.
Track links	125
Fording depth	
Theoretical radius of action	
Roads	
Cross-country	
Speed (maximum)	35 m.p.h.
Armor (reported)	¼ in.
Armament	7.7 mm machine gun
Ammunition (Rds.)	
Engine	6-cylinder, in-line, valve-in-head, diesel.
Transmission	4 speeds forward, 1 reverse; high and low range.
Steering	Clutch and brake system
Seating capacity	24

ARMORED TANK RECOVERY VEHICLE

JAPANESE

REAR VIEW

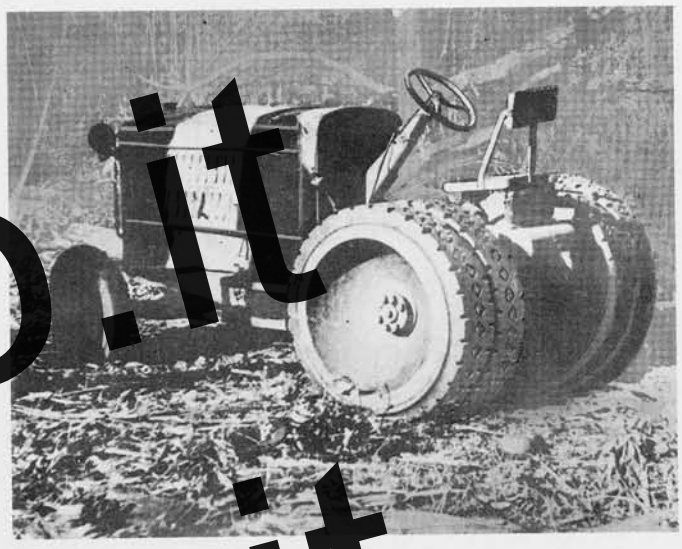
This is an armored, self-propelled crane designed to retrieve damaged A. F. V.'s up to a weight of about 12 tons. The manufacturing date of one recovered specimen is given as 1941. The crane is mounted towards the rear of the chassis on a platform traversing through 360° on an electrically powered turntable. The crane is prowered by the main engine through a drive shaft from the transmission to a gear box and thence through another box to the cable drums. The crane is controlled by three hand levers and three foot control clutches. When not in use, the boom which has a total length of 18 ft., 2 ins., rests on the top of the drive compartment and is held in place by two screw clamps. The conventional Japanese type of suspension is used. Four bell cranks are resisted by four armored compression springs per side. Eight-and-one-half-inch dual steel bogie wheels per side are mounted four inches apart and paired to each bogie. An 18 13/16-inch diameter double-tooth front drive sprocket, a rear idler, two 10¾-inch diameter rubber-covered return rollers, and the center guide steel track complete the suspension.

The driver's compartment measures 45½ x 59 inches, and is fitted with a door on the right side. The 6-cylinder, in-line, air-cooled, Ikegai gasoline engine delivers 60 horsepower. The steering system is of the clutch brake principle, a separate spring-loaded clutch being fitted to each track. Two pressed steel fuel tanks are located at the right rear of the hull, an additional one is utilized as the driver's seat. They have a combined estimated capacity of 40 gallons.

SPECIFICATIONS

Weight	8¼ tons
Trailer load capacity	
Length	14 ft., 4½ ins.
Width	8 ft., 7 ins.
Height (to top of vehicle)	5 ft., 3 ins.
(to top of jib)	6 ft., 9 ins.
Ground clearance	11 ins.
Tread centers	
Ground contact	11 ft., 4 ins.
Track width	9¾ ins.
Track links	
Fuel tank	40 gals. (est.)
Fuel consumption	
Fording depth	
Speed	21 m.p.h.
Engine	Ikegai, gasoline, 6-cylinder, in-line, air-cooled, 60 hp.
Transmission	
Steering	Clutch brake
Crew	2
Armor	
Front	¼ in.
Sides	5/16 in.
Length of cable drums	10¼ ins.
Diameter of cable drums	10½ ins.
Diameter of cables	¾ in. (approx.)
Overall length of boom	18 ft., 2 ins.

"KATO" GENERAL PURPOSE TRACTOR



This is a commercial type wheeled tractor used for general purpose work. The front wheels are 29 x 5 inches and the rear dual wheels are 40 x 10 inches, all fitted with solid rubber tires. The drive is from the rear wheels only, and steering is effected by a worm gear system operating the front wheels. Normal automotive controls are provided, save for a hand throttle. The transmission provides three speeds forward and two in reverse.

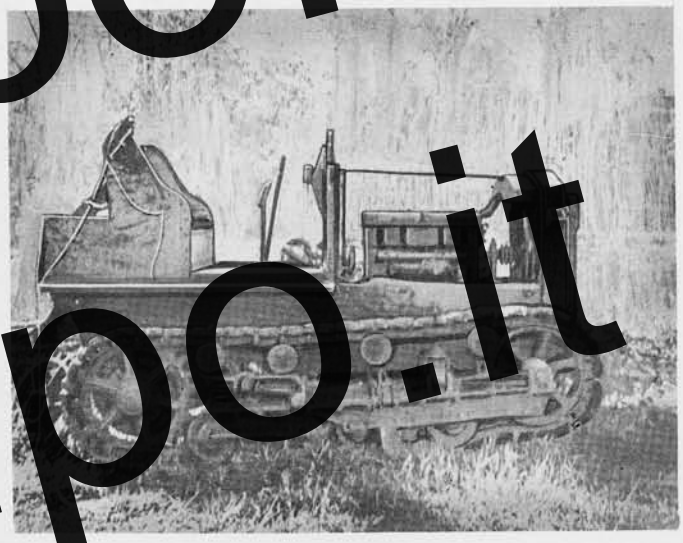
The K3 type engine is identical to that used in the "Kato" 70 tractor—a 4-cylinder valve-in-head gasoline type. There are two cylinder blocks of two cylinders each instead of a solid cylinder block. The generator, high-tension magneto, and water pump are all linked together with universal joints and driven from a single shaft extending from the timing gear on the right of the engine.

The tractor is fitted with front and rear towing pintles cast solid with the frame.

SPECIFICATIONS

Weight	
Winch capacity	
Length	
Wheel base	90 ins.
Overall width of tractor (rear)	74 ins.
Overall height of tractor	5 ft.
Capacity of fuel tank	30 gals.
Tread centers (front)	63 ins.
Ground clearance	8 ins.
Fuel capacity	(approx.) 30 gals.
Engine	60 h.p. at 1200 r.p.m.
Bore	121 mm
Stroke	152 mm

"KATO" 70 ARTILLERY TRACTOR



This is a slow speed tractor equipped with a towing hook and is believed to be the standard Japanese artillery prime mover. There are two bogies on each side, each bogie having three bogie wheels, two bearing on the outside and one on the middle of the tractor. Clutch and brake steering are provided. The power plant is a 4-cylinder, water-cooled, gasoline engine. The cylinder block is of two separate sections. Each section is joined into one piece at the top, but the base of each cylinder is separate from all other cylinders.

SPECIFICATIONS

Weight	
Winch capacity	
Length	
Wheel base	ins.
Diameter of drive sprocket	ins.
Width of track	13¾ ins.
Length of track in contact with ground	89 ins.
Width of tread (from outside edge of tracks)	ins.
Engine	Kato K3, 70 h.p.
Bore	4.75 ins.
Stroke	6 ins.