

RESTRICTED

FM 30-42

BASIC FIELD MANUAL



MILITARY INTELLIGENCE

**IDENTIFICATION OF
FOREIGN ARMORED VEHICLES,
GERMAN, JAPANESE, RUSSIAN,
AND ITALIAN**



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~~RESTRICTED~~

FM 30-42

BASIC FIELD MANUAL

MILITARY INTELLIGENCE

IDENTIFICATION OF FOREIGN ARMORED VEHICLES GERMAN, JAPANESE, RUSSIAN, AND ITALIAN

(This manual supersedes FM 30-42, June 20, 1941.)

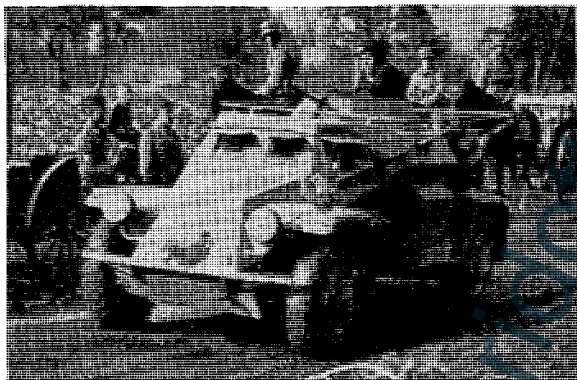
SECTION I

GENERAL

- 1. PURPOSE.—The purpose of this manual is to serve as a guide in the identification of foreign armored vehicles. The material has been secured from many sources. It is the best available but may be incomplete and, in some respects, inaccurate.
- 2. SCOPE.—This manual, containing illustrations with explanatory data relative to foreign armored vehicles, German, Japanese, Russian, and Italian, is published for limited distribution. When illustrations are not given, blank spaces have been left so that they may be added when provided. The manual will be used for instruction of officers and men in the appearance and general characteristics of armored vehicles and will be safeguarded as prescribed in AR 380-5.
- 3. METHOD OF IDENTIFICATION AND CLASSIFICATION OF ARMORED VEHICLES.—For method of identification and classification of foreign armored vehicles see FM 30-40.

SECTION II
ARMORED VEHICLES OF THE GERMAN ARMY

GERMAN
ARMY



HORCH LEICHTER PANZERSPAHWAGEN
(SD. KFZ. 222 4-WHEELED ARMOR CAR)

1. Crew: Three (gunner-commander, loader-W/T, operator and driver).
2. Armament: One 20-mm heavy machine gun and one 7.91-mm light machine gun coaxial in turret.
3. Ammunition: 100 rounds armor-piercing and 120 rounds high explosive for 20-mm heavy machine gun. Eight belts (probably 250 rounds each) for machine gun. Eight smoke candles, eight hand grenades, and red, white, and green signal cartridges.
4. Armor, thickness:
 - Front—8-mm (.31 in.).
 - Sides—8-mm (.31 in.).
 - Top—8-mm (.31 in.).
 - Visors—15-mm (.59 in.).
5. Turret: Open top to allow the 20-mm gun to be used as antiaircraft hand traverse.
6. Vision: Telescopic and antiaircraft sights.
7. Ventilation:
8. Communication: R/T transmitter and receiver of very small size and apparently limited range. (One source gives operational radius of set as about 4.4 miles.)
9. Dimension:
 - Length—15 feet 7 inches.
 - Width—6 feet 3½ inches.
 - Height—5 feet 11½ inches to 7 feet 4½ inches.
10. Weight:
 - Laden: 4.7 tons.
 - Empty: 3.7 tons.
11. Motor:
 - Type: V-8 auto union.
 - Cooling system: water.
 - Horsepower: 80.
12. Drive: Two- or four-wheel drive.
13. Speed:
 - Maximum: 30 mph.
 - Cruising: 25 mph.
14. Radius of action: 124 to 155 miles.
15. Gear speeds and ratios: Four forward and one reverse.
16. Turning radius:
17. Suspension, type: Normal automobile type.
18. Performance: Ground clearance: 7¾ inches.
19. Remarks: This is the standard German light armored car. The open top turret is protected by a grating. The Horch 4-wheeled light-armored car is produced in five models, all of which have the same chassis.
20. Crew:
 - 2—Sd. Kfz 221—Light machine gun in turret.
 - 3—Sd. Kfz 222—20-mm heavy machine gun and 7.91-mm light machine gun coaxially in turret.
 - 3—Sd. Kfz 223—Light machine gun in turret; railing type of radio aerial.
 - 4—Sd. Kfz 260—Wireless vehicles; have no turret and mount no machine guns.
 - 4—Sd. Kfz 261—Wireless vehicles; have no turret and mount no machine guns.

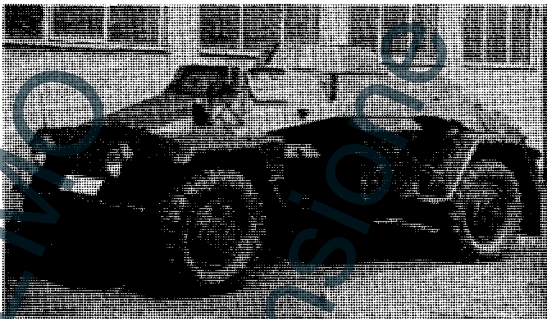
IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

HORCH LEICHTER PANZERSPAHWAGEN
SD KFZ 222-4 WHEEL ARMOR CAR

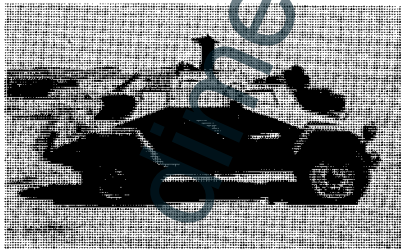


Top



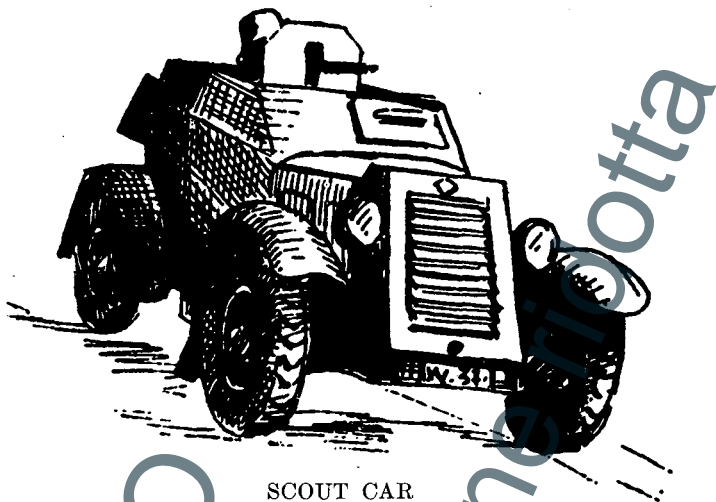
Rear

View



Side

GERMAN
ARMY



SCOUT CAR
LEICHTER PANZERSPAHWAGEN
(LIGHT ARMORED CAR)

MI

1. Crew: Two (driver and gunner) or three (if fitted with radio).
2. Armament: One light machine gun (mounted for ground or antiaircraft fire).
3. Ammunition:
4. Armor, thickness:
 - Upper structure: Less than 0.39 inch.
 - Front: 0.39 inch. Proof against armor-piercing small arms ammunition only in front.
 - Sides: Less than 0.39 inch.
5. Turret: No.
6. Vision:
7. Ventilation:
8. Communication: Some cars of this type possess radio.
9. Dimensions:
 - Length: 10 feet.
 - Width: 5 feet 7 inches.
 - Height: 5 feet 5 inches.
10. Weight: 1.77 tons (4 wheels).
11. Motor:
 - Type:
 - Cooling system:
 - Horsepower:
 - Horsepower per ton:
12. Drive:
13. Speed:
 - Cross-country:
 - Road: 50 miles per hour.
 - Maximum:
14. Cruising radius, at _____ speed _____ miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Normal automobile type.
19. Performance:
 - Ground clearance:
 - Climbs _____° slopes.
 - Negotiates vertical obstacle _____ high.
 - Crosses trenches _____ wide.
 - Fords streams _____ deep.
20. Remarks: This type is constructed for light scouting purposes. It possesses a completely open top. The machine gun is provided with a shield. Believed now to be an obsolescent type.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

SCOUT CAR
LEICHTER PANZERSPAHWAGEN
(LIGHT ARMORED CAR)
MI

Top



Front

Rear



Side

GERMAN ARMY



SCOUT CAR
8 RAD PANZERSPAHWAGEN
(8-WHEEL HEAVY ARMORED CAR)

1. Crew: Apparently four (two drivers, one gunner, one commander-radio operator).
2. Armament: One 20-mm automatic gun and a 7.92 machine gun coaxially mounted in a flat mantlet.
3. Ammunition: 20-mm—18 magazines of 10 rounds each. 7.92-mm—15 magazines of 75 rounds each.
4. Armor, thickness:
 Upper structure:
 Front: 15-mm.
 Sides: 8-mm.
 Turret: Sides, 9-mm, front 15-mm, top 5-mm.
5. Turret: 360° hand traverse, gunners' and commanders' seats suspended from turret.
6. Vision: Four large doors and many observation slits are fitted. Slits are about $\frac{3}{4}$ inch by 6 inches and are protected on the inside by laminated glass screens about $\frac{1}{2}$ inch thick.
7. Ventilation:
8. Communication: Certain cars of this type possess radio.
9. Dimensions:
 Length: 21 feet.
 Width: 7 feet.
 Height: 7 feet 6 inches.
10. Weight: 9 to 10 tons (8 wheels).
11. Motor:
 Type: G. S.
 Cooling system: Water.
 Horsepower: 155.
 Horsepower per ton:
12. Drive:
13. Speed:
 Cross-country:
 Road: Maximum: 90 kph (55 mph).
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill: Vehicle has small tank of about 10-gallon capacity and main tank of about 30 gallons.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Normal automobile type. Eight wheel steering and driving is employed.
19. Performance:
 Ground clearance: 9 inches.
 Climbs ----- slopes.
 Negotiates vertical obstacle ----- high.
 Crosses trenches ----- wide.
 Fords streams ----- deep.
20. Remarks: This information was obtained from examination of a car built in 1937 with an engine manufactured in 1936. The 8-wheeled armored car is produced in three models, all having identical chassis: Sd Kfz 231 described above. Sd Kfz 232 Grill type aerial supported on turret and rear of car. Other characteristics the same as Sd Kfz 231. Sd Kfz 263 fixed turret; mounts no gun. Grill type aerial supported on turret center and rear of car. Other characteristics same as Sd Kfz 231.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

SCOUT CAR
8 RAD PANZERSPAHWAGEN
(8-WHEEL HEAVY ARMORED CAR)

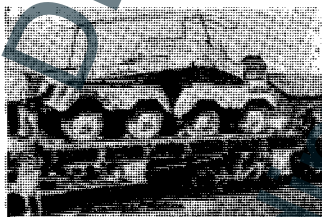


View

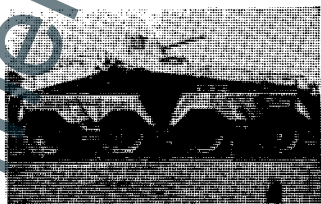


Front

Rear



Sd Kfz 232



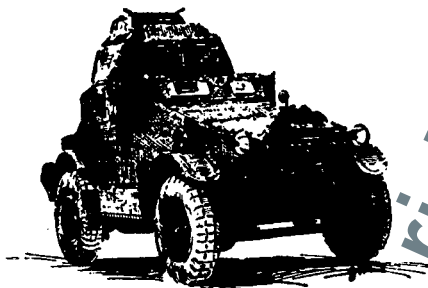
Sd Kfz 231

Side

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

FRENCH
ARMY

ARMORED CAR
AMD PANCHARD-TOE
FOUR-WHEELED



View



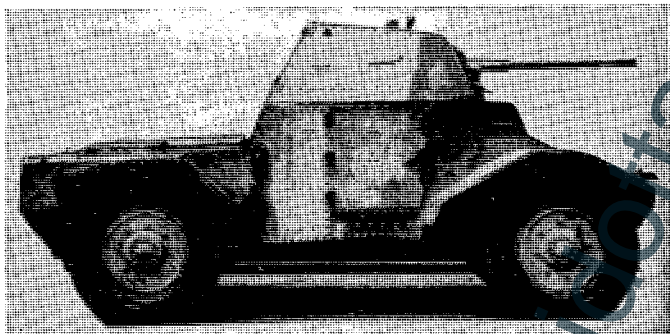
Front

Rear



Side

GERMAN
ARMY



PANHARD 178 A. M. D. 35
FOUR-WHEELED ARMORED CAR
(EX-FRENCH)

1. Crew: Four.
2. Armament: One 2.5-cm. Q. F. gun in turret and one machine gun.
3. Ammunition:
4. Armor, thickness:
 - Upper structure: 13-mm (.51 in.).
 - Front: 18-mm (.71 in.).
 - Sides: 18-mm (.71 in.).
 - Rolled plate bolted together.
5. Turret: One.
6. Vision: Two Gundlach type periscopes, 4 episcopes, bullet-proof glass blocks.
7. Ventilation:
8. Communication: R/T and internal voice tube.
9. Dimensions:
 - Length: 15 feet 6 inches.
 - Width: 6 feet 6 inches.
 - Height: 7 feet 6 inches.
10. Weight: 8 tons.
11. Motor: At rear.
 - Type: Petrol S. S., 4-cylinder.
 - Cooling system: Water.
 - Horsepower: 105.
 - Horsepower per ton: 13.
12. Drive: Four-wheel.
13. Speed:
 - Cross-country: 49 mph.
 - Road, maximum: 50 mph.
 - Cruising: 25 mph.
14. Cruising radius: 250 miles or 6 hours. Petrol carried, 30 gallons.
15. Operating distance without refill: 250.
16. Gear speeds and ratios: Five forward and a reverse.
17. Turning radius:
18. Suspension, type:
19. Performance: Ground clearance: 1 foot 2 inches.
20. Remarks: The dimensions of this vehicle are practically the same as those of the German armored car Sd Kfz 222. The protection is, however, greater, and the turret which is much higher, is covered. The Panhard armored car is being used by the Germans. It is considered a good vehicle, with no particularly vulnerable points.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

ARMORED CAR
AMD PANCHARD, 1935
FOUR-WHEELED
(EX-FRENCH)



View



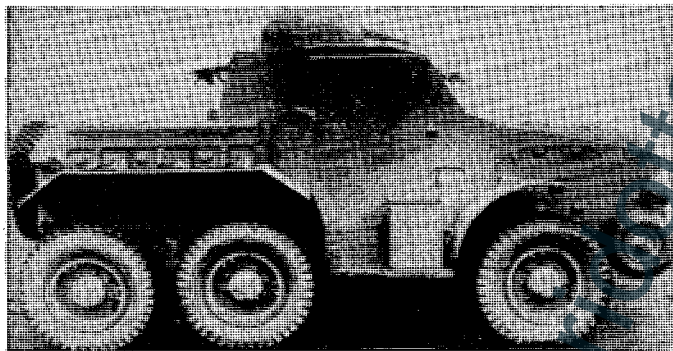
Front

Rear



Side

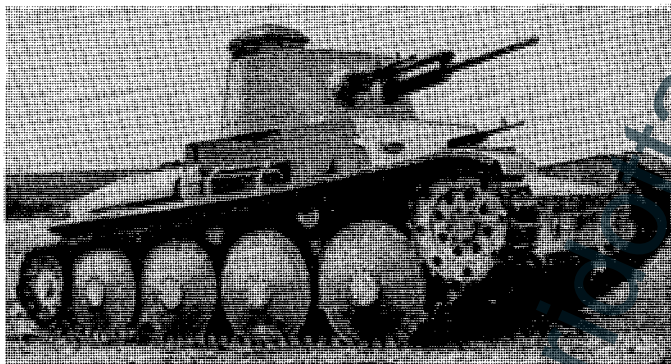
GERMAN
ARMY



A. M. D. LAFFLY
SIX-WHEELED ARMORED CAR
(EX-FRENCH)

1. Crew: Four.
2. Armament: One 13.2-mm and one light machine gun.
3. Ammunition: 2,000 rounds 13.2-mm; 2,000 rounds for light machine gun.
4. Armor, thickness: Welded.
Upper structure: 6-mm (.23 in.).
Front: 16-mm (.62 in.) 2-ply.
Sides: 8-mm (.31 in.).
5. Turret: Spherical.
6. Vision: Periscope.
7. Ventilation:
8. Communication:
9. Dimensions:
Length:
Width:
Height:
10. Weight: 7.5 tons.
11. Motor:
Type: Petrol.
Cooling system: Water.
Horsepower: 80.
Horsepower per ton: 8.
12. Drive: Two-wheel drive.
13. Speed:
Cross-country:
Maximum on roads 37 mph.
14. Cruising radius, at 250 miles or 600 miles with extra petrol carried.
15. Operating distance without refill:
16. Gear speeds and ratios: Four forward and reverse.
17. Turning radius:
18. Suspension, type:
19. Performance:
Ground clearance:
Climbs slopes.
Negotiates vertical obstacle high.
Crosses trenches wide.
Fords streams deep.
20. Remarks: Two small scaling wheels in front; can be driven in either direction.

GERMAN
ARMY



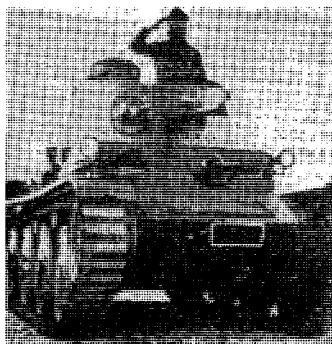
LIGHT TANK
T. N. H.
(EX-CZECH)

1. Crew: Three.
2. Armament: One 37-mm gun and one machine gun in turret; one machine gun in hull.
3. Ammunition: 2,700 rounds for machine guns; 90 rounds for 37-mm.
4. Armor, thickness:
 - Upper structure: .39 inch.
 - Front: .98 inch.
 - Sides: .59 inch.
5. Turret: Similar to the L. T. H.
6. Vision:
7. Ventilation:
8. Communication: Radio, lamp, and flag.
9. Dimensions:
 - Length: 14 feet 9 inches.
 - Width: 6 feet 10 inches.
 - Height: 7 feet 7 inches.
10. Weight: 7.8 tons.
11. Motor:
 - Type:
 - Cooling system: Water.
 - Horsepower: 100.
 - Horsepower per ton: 12.8.
12. Drive: Front sprocket.
13. Speed:
 - Cross-country:
 - Road:
 - Maximum: 23 mph.
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: four large Christie type wheels, leaf springs, similar to the L. T. H.
19. Performance:
 - Ground clearance: 1 foot 3 inches.
 - Negotiates vertical obstacle 2 feet 7½ inches.
 - Crosses trenches 7 feet wide.
 - Fords streams 3 feet deep.
20. Remarks: It is reported that this tank can be transported in modified Ju 90 and Focke-Wulf 200 airplanes.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

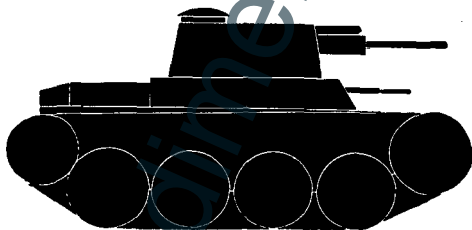
LIGHT TANK
T.N.H.
(EX-CZECH)



View

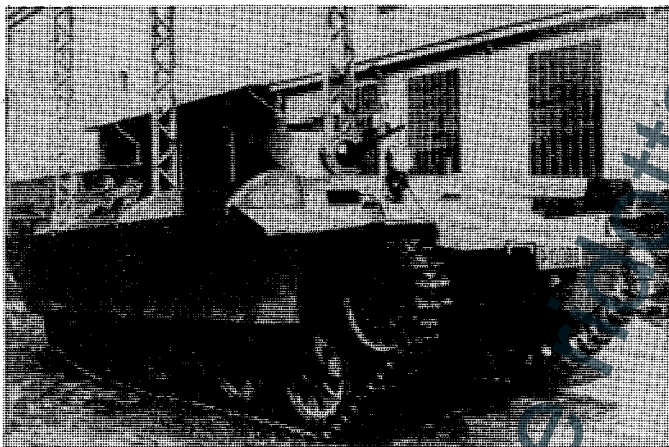
Front

Rear



Side

GERMAN
ARMY



LIGHT AMPHIBIAN
F. IV H. E.
(EX-CZECH)

1. Crew: Three (gunner, driver, and commander).
2. Armament: One heavy machine gun in turret.
3. Ammunition: 4,000 rounds.
4. Armor, thickness: 12-mm, basis .472 inch.
Upper structure:
Front:
Sides:
5. Turret: Small round turret with heavy machine gun on ball-mounting and round lookout cupola.
6. Vision: Bulletproof glass blocks and periscope.
7. Ventilation:
8. Communication: Radio, flag, and lamp.
9. Dimensions:
Length: 16 feet 9 inches.
Width: 8 feet 2 inches with floats.
Height: 6 feet 11 inches.
10. Weight: 6.2 tons.
11. Motor:
Type: 4-cylinder.
Cooling system: Water.
Horsepower: 120.
Horsepower per ton: 19.4.
12. Drive: Front sprocket.
13. Speed:
Cross-country:
Road: 28 mph.
Maximum:
Land: 28 mph.
In water: 3½ mph.
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill: 90 miles.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Four large bogie wheels. High front idler wheel. Float which comes down as far as the top of the bogie wheels. The vehicle has twin screws at the rear.
19. Performance:
Ground clearance: 1 foot.
Climbs 35° to 45° slopes.
Negotiates vertical obstacle 2 feet 8 inches high.
Crosses trenches 7 feet 1 inch wide.
Fords streams ----- deep.
20. Remarks: One hundred of these known to exist. An improved model may have been produced.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

LIGHT AMPHIBIAN
F 4 HE
(EX-CZECH)

Top

Front

Rear

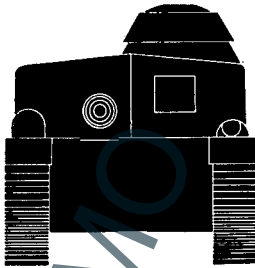


Side

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

MEDIUM TANK
S AU 40 GUN TANK OR
MOBILE ARTILLERY
(EX-FRENCH)



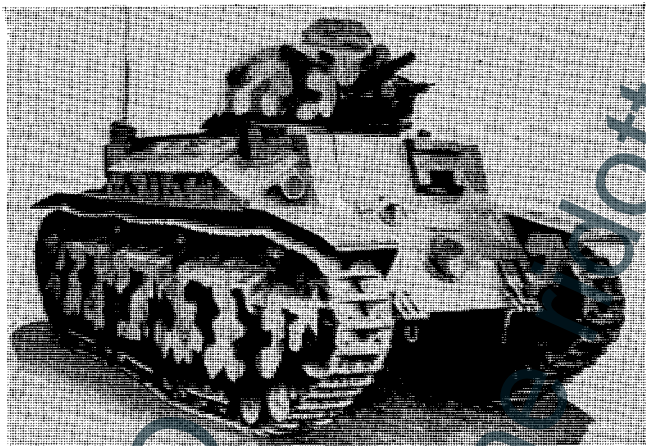
Top

Front

Rear

Side

GERMAN
ARMY



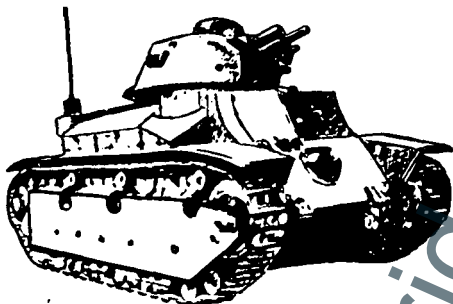
MEDIUM TANK
D-2
(EX-FRENCH)

1. Crew: Three (driver, commander-gunner, operator-loader).
2. Armament: One 47-mm gun; two light machine guns.
3. Ammunition: 110 rounds for gun; 5,000 rounds for light machine gun.
4. Armor, thickness: 1½-inch.
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication: Radio, flag.
9. Dimensions:
Length: 16 feet 7 inches.
Width: 7 feet 2 inches.
Height: 8 feet 9 inches.
10. Weight: 20 tons.
11. Motor:
Type: 6-cylinder.
Cooling system: Water.
Horsepower: 150.
Horsepower per ton:
12. Drive: Rear sprocket (?).
13. Speed:
Cross-country:
Road: 14 miles per hour.
Maximum:
14. Radius of action: 90 to 95 miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Twelve small bogie wheels; six bogies with coil springing; suspension protected by skirting.
19. Performance:
Ground clearance: 1 foot 4 inches.
Climbs 45° slopes.
Negotiates vertical obstacle 3 feet 3 inches high.
Crosses trenches 7 feet 10 inches wide.
Fords streams 3 feet 3 inches deep.
20. Remarks: Only a limited number of these vehicles were manufactured.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

MEDIUM TANK
D-2
(EX-FRENCH)



View



Front

Rear



Side

GERMAN
ARMY



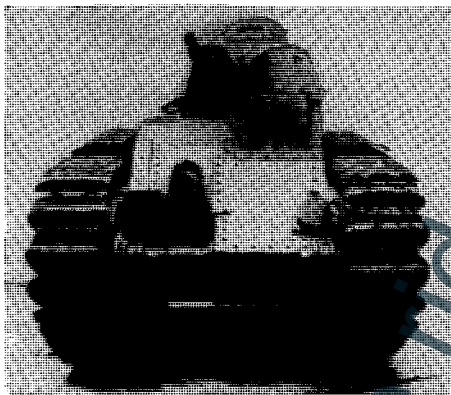
HEAVY TANK
CHAR B I
(EX-FRENCH)

1. Crew: Four (driver, commander-gunner, wireless telegraph operator, loader-mechanic).
2. Armament: One, 76-mm gun; one 47-mm gun; two light machine guns.
3. Ammunition: 72 rounds for 75-mm gun; 70 rounds for 47-mm gun.
4. Armor, thickness: $2\frac{1}{2}$ -inch.
Upper structure: 20-mm (.78 in.)
Front: 60-mm (2.36 in.)
Sides: 60-mm (2.36 in.).
5. Turret:
6. Vision:
7. Ventilation:
8. Communication: Radio, lamp, flag.
9. Dimensions:
Length: 20 feet 8 inches.
Width: 8 feet 2 inches.
Height: 9 feet.
10. Weight: 31 tons.
11. Motor:
Type: 6-cylinder.
Cooling system: Water.
Horsepower: 270.
Horsepower per ton:
12. Drive: Rear sprocket.
13. Speed:
Cross-country: 11 mph.
Cruising: 15 mph.
Maximum on roads: 17 mph.
14. Radius of action: 150 miles.
15. Operating distance without refill:
16. Gear speeds and ratios: five forward and reverse.
17. Turning radius:
18. Suspension, type: Sixteen small bogie wheels; three bogies or four wheels with leaf and coil springs; protected by skirting.
19. Performance:
Ground clearance: 1 foot 7 inches.
Climbs 40° slopes.
Negotiates vertical obstacle 3 feet 10 inches high.
Crosses trenches 9 feet wide.
Fords streams 4 feet 10 inches deep.
20. Remarks: Considerable numbers were in existence. The armor was to be increased to 75-mm and engine to 350-horsepower at Renault. A report of July 1941 stated that the Germans were fitting a 450-horsepower engine and mounting the 88-mm multipurpose gun on this tank.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

HEAVY TANK
CHAR B I
(EX-FRENCH)



View



Front



Rear



Side

GERMAN
ARMY



HEAVY TANK
B-BIS
(EX-FRENCH)

1. Crew: Four.
2. Armament: One 75-mm gun, one 47-mm gun, two machine guns.
3. Ammunition: 59 rounds for 75-mm gun; 60 rounds for 47-mm gun; 5,000 rounds for machine gun.
4. Armor, thickness: 2.75-mm.
Upper structure: .
Front: .
Sides: .
5. Turret: Yes.
6. Vision: One telescopic sight; one pair binoculars.
7. Ventilation: .
8. Communication: .
9. Dimensions:
Length: 20 feet 9 inch.
Width: 8 feet 2 inches.
Height: 10 feet.
10. Weight: 33.3 tons.
11. Motor:
Type: 6-cylinder.
Cooling system: .
Horsepower: 300.
Horsepower per ton: .
12. Drive: .
13. Speed:
Cross-country: .
Road:
Maximum: 18.6 miles per hour.
14. Cruising radius, at ----- speed
----- miles.
15. Operating distance without refill: 7 hours.
16. Gear speeds and ratios: 5 forward, 1 reverse.
17. Turning radius: .
18. Suspension, type: Forged steel links.
19. Performance:
Ground clearance: .
Climbs 42° slopes.
Negotiates vertical obstacle 3 feet 6 inches high.
Crosses trenches 9.02 feet wide.
Fords streams ----- deep.
20. Remarks: Similar to Tank B except for armor, ammunition, and horsepower.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

HEAVY TANK
B-BIS
(EX-FRENCH)

DEMO

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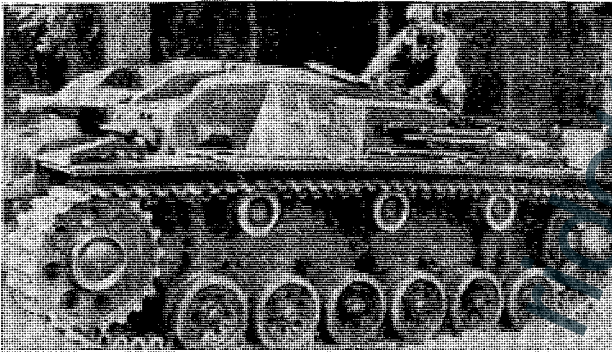
Front

Top

Rear

Side

GERMAN
ARMY



STURMGESCHÜTZ

7.5-CM STURMEGESCHÜTZ (ASSAULT GUN OR SELF-PROPELLED ARTILLERY)

1. Crew: Four.
2. Armament: One 75-mm gun; one machine gun coaxially mounted; one machine gun in ball mounting.
3. Ammunition: High explosive, armor piercing, or smoke.
4. Armor, thickness:
 - Upper structure: Turret 50-mm-30-mm (1.96-1.18 in.).
 - Front: 50-mm (1.96 in.).
 - Sides: 30-mm (1.18 in.).
5. Turret: Squat superstructure housing the gun. The gun compartment is roofed over but there is no rotating turret.
6. Vision:
7. Ventilation:
8. Communication:
9. Dimensions:
 - Length: 16 feet 5 inches.
 - Width: 7 feet 6 inches.
 - Height: 7 feet 6 inches.
10. Weight: 18 tons; 16 tons metric.
11. Motor:
 - Type:
 - Cooling system:
- Horsepower: 300.
- Horsepower per ton: 16.7.
12. Drive: Front sprocket.
13. Speed:
 - Cross-country:
 - Road: 28 miles per hour.
 - Maximum:
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type:
 - (1) Six small independent bogie wheels with heavy rubber tires.
 - (2) Eight small bogie wheels.
 - (3) Five large bogie wheels, Christie type; three track support wheels.
19. Performance:
 - Ground clearance:
 - Climbs -----° slopes.
 - Negotiates vertical obstacle ----- high.
 - Crosses trenches ----- wide.
 - Fords streams 2 feet 11 inches deep.
20. Remarks: This is standard German equipment.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

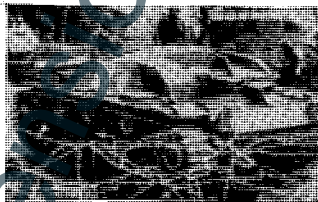
STURMGESCHUTZ



Top



Front

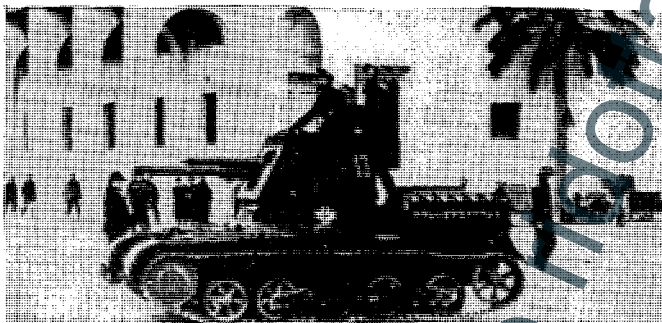


View



Side

GERMAN
ARMY



47-MM ANTITANK GUN ON
SELF-PROPELLED MOUNT

1. Crew: Three. (driver, loader-commander, and gun layer).
2. Armament: One 47-mm Skoda anti-tank gun.
3. Ammunition: 74 rounds armor piercing and armor piercing 40; 10 rounds high explosive (theoretical only; may vary in action).
4. Armor: The shield is made of 15-mm plates welded together.
5. Turret: Fixed three-sided shield. Gun has 30° traverse. Beside the opening in the shield the gun itself has a mantlet attached to it.
6. Vision: Unit magnification telescopic sight.
7. Ventilation:
8. Communication: Radio.
9. Dimensions:
 - Length: 14 feet 2 inches.
 - Width: 8 feet 7 inches.
 - Height: 7 feet.
 - Height of gun from ground: 5 feet 3 inches.
10. Weight: In action, 7 tons 10 hundredweight.
11. Motor:
 - Type: V-8.
 - Cooling system: Air.
 - Horsepower: 90 to 100.
 - Horsepower per ton: 12.
12. Drive: Front sprocket.
13. Speed:
 - Cross-country: 9 miles per hour.
 - Maximum road: 18 miles per hour.
14. Cruising radius:
 - On roads: 106 miles.
 - Cross-country: 80 miles.
15. Operating radius without refill: See 14.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Five-spoked bogie wheels, one independently sprung, and last four being connected by an outside girder bearer. Rear idler wheels almost on the ground. Four track-support wheels.
19. Performance:
 - Ground clearance: 1 foot.
 - Climbs 45° slopes.
 - Negotiates vertical obstacle. high.
 - Crosses trenches 4 feet 7 inches wide.
 - Fords streams 2 feet deep.
20. Remarks: The chassis is that of a standard Mk. I, model B tank. On this is mounted a 47-mm Skoda anti-tank gun in a fixed three-sided shield which is open at the top and back.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

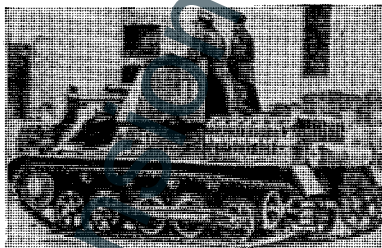
47-MM ANTITANK GUN
SELF-PROPELLED MOUNT



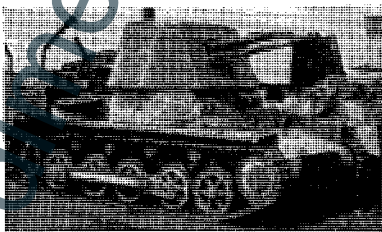
Top



Rear

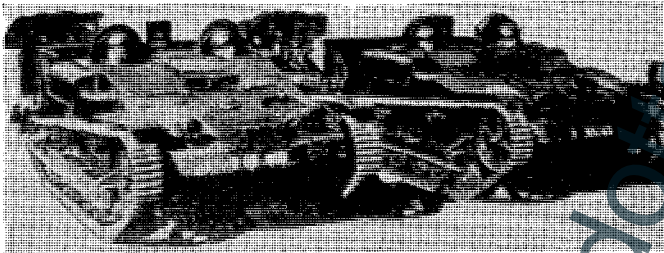


View



Side

GERMAN
ARMY



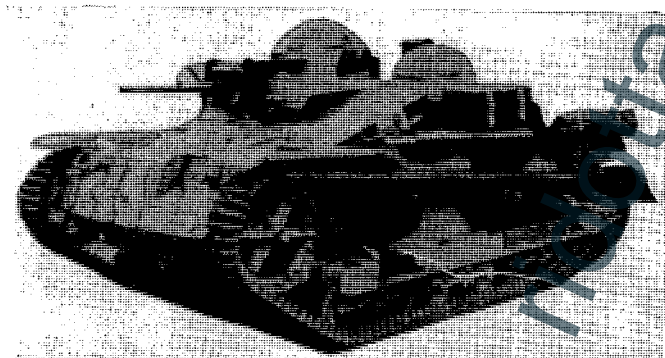
INFANTRY TRACTOR
RENAULT CHENILLETTE
(EX-FRENCH)

1. Crew: Two.
2. Armament: One Hotchkiss machine gun.
3. Ammunition:
4. Armor, thickness: 9-mm (.35 in.).
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication:
9. Dimensions:
Length: 9 feet 2 inches.
Width: 5 feet 6 inches.
Height: 4 feet 1 inch.
10. Weight: About 2½ tons, weight of trailer, 15 hundredweight. Load carried in tractor and trailer 2,000 pounds.
11. Motor:
Type:
Cooling system: Water.
Horsepower: 48.
Horsepower per ton:
12. Drive: Front sprocket.
13. Speed:
Cross-country: 5 miles per hour.
Road:
Maximum: 18 miles per hour.
14. Cruising radius: 62 miles.
15. Operating distance without refill: 62 miles.
16. Gear speeds and ratios: Three speeds and reduction.
17. Turning radius:
18. Suspension, type:
19. Performance:
Ground clearance:
Climbs° slopes.
Negotiates vertical obstacle high.
Crosses trenches 36 inches wide.
Fords streams deep.
20. Remarks: Provided with trailer and transport.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

INFANTRY TRACTOR
RENAULT CHENILLETTE
(EX-FRENCH)



View



Front



Rear



Side

GERMAN
ARMY

PERSONNEL CARRIER

1. Crew: One driver, one assistant driver, 10 passengers.

2. Armament: Two pictures of this vehicle show different types of armament. One carries a machine gun 34 mounted at the front of body with a small shield, the gun elevating sufficiently for antiaircraft defense. The other has a weapon which is almost certainly the 20-mm super heavy machine gun; also mounted at the front of the body but fitted with a shield big enough to cover a man standing up in the carrier.

3. Ammunition: 44 boxes.

4. Armor, thickness: 0.1 inch.

Upper structure: Very thin.

Front:

Sides:

5. Turret:

6. Vision:

7. Ventilation:

8. Communication:

9. Dimensions:

Length:

Width:

Height:

10. Weight:

11. Motor:

Type:

Cooling system:

Horsepower:

Horsepower per ton:

12. Drive:

13. Speed:

Cross-country:

Road:

Maximum:

14. Cruising radius, at ----- speed
----- miles.

15. Operating distance without refill:

16. Gear speeds and ratios:

17. Turning radius:

18. Suspension, type:

19. Performance:

Ground clearance:

Climbs ----- slopes.

Negotiates vertical obstacle -----
high.

Crosses trenches ----- wide.

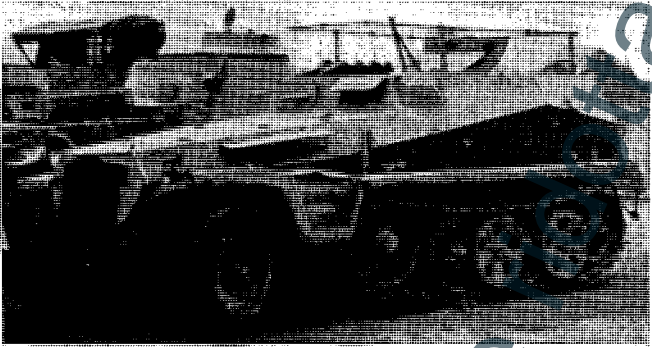
Fords streams ----- deep.

20. Remarks: Egress from these armored carriers is by a door in the back of the body.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

PERSONNEL CARRIER
(Personnel carrier; commanders'
car; antitank gun tractor)

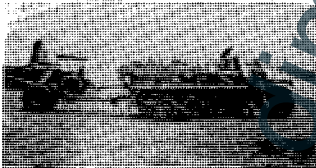


View



Rear

Front



① As antitank tractor.

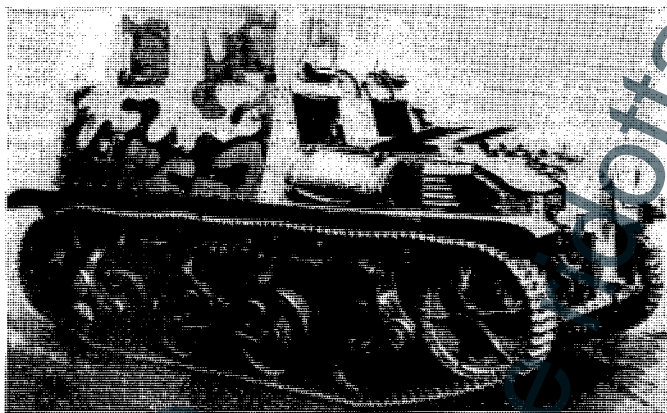


② Commanders' car.

Side

MILITARY INTELLIGENCE

GERMAN
ARMY



COMMANDERS' CAR
RENAULT
(EX-FRENCH)

1. Crew:
2. Armament:
3. Ammunition:
4. Armor, thickness:
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication:
9. Dimensions:
Length:
Width:
Height:
10. Weight:
11. Motor:
Type:
Cooling system:
Horsepower:
Horsepower per ton:
12. Drive:
13. Speed:
Cross-country:
Road:
Maximum:
14. Cruising radius, at _____ speed
_____ miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type:
19. Performance:
Ground clearance:
Climbs _____ ° slopes.
Negotiates vertical obstacle _____
high.
Crosses trenches _____ wide.
Fords streams _____ deep.
20. Remarks:

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN
ARMY

COMMANDERS' CAR
RENAULT
(EX-FRENCH)

Top



Front

Rear



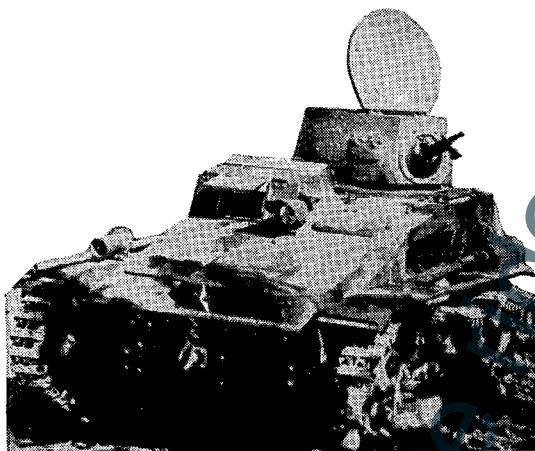
Side

DEMO

dimensione ridotta

SECTION III
ARMORED VEHICLES OF THE JAPANESE ARMY

JAPANESE
ARMY



TANKETTE, ISHIKAWAJIMA, M 2592 (1932)

1. Crew: Two (one driver and one gunner .
2. Armament: One machine gun in turret.
3. Ammunition:
4. Armor, thickness:
 - Upper structure: 0.31 to 0.55 inch.
 - Front:
 - Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication: Flag.
9. Dimensions:
 - Length: 10 feet 2 inches.
 - Width: 5 feet 9 inches.
 - Height: 5 feet 4 inches.
10. Weight: 3 tons.
11. Motor:
 - Type: 4-cylinder.
 - Cooling system: Air.
 - Horsepower: 45.
 - Horsepower per ton: 15.
12. Drive: Front sprocket.
13. Speed:
 - Cross-country:
 - Road:
 - Maximum: 30 miles per hour.
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: four bogie wheels; two bogies Carden-Lloyd system.
19. Performance:
 - Ground clearance: 1 foot 1 inch.
 - Climbs 34° slopes.
 - Negotiates vertical obstacle 2 feet high.
 - Crosses trenches 4 feet 6 inches wide.
 - Fords streams 2 feet 8 inches deep.
20. Remarks: Known as light-armored vehicle. Used with armored trailer for supply and intercommunication. Based on Carden-Lloyd.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

TANKETTE
ISHIKAWAJIMA
M 2592 (1932)

Top

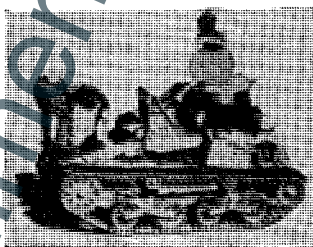


Front

Rear



Side



MILITARY INTELLIGENCE

JAPANESE
ARMY

TANKETTE, ISHIKAWAJIMA, M 2598 (1938)

1. Crew: Three (one driver, two gunners).
2. Armament: One machine gun in turret and one machine gun in hull fore.
3. Ammunition: 5,000 rounds small arms.
4. Armor, thickness: 0.55 inch.
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilaton:
8. Communication:
9. Dimensions:
Length: 10 feet 3 inches.
Width: 5 feet 9 inches.
Height: 5 feet 4 inches.
10. Weight: 3 tons.
11. Motor:
Type:
Cooling system: Water and air.
Horsepower: 55.
Horsepower per ton: 18.3.
12. Drive: Front sprocket.
13. Speed:
Cross-country:
Road:
Maximum: 33 miles per hour.
14. Cruising radius, at ----- speed 61 miles.
15. Operating distance without refill.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Four bogie wheels; two bogies.
19. Performance:
Ground clearance:
Climbs 34° slopes.
Negotiates vertical obstacle 2 feet 1 inch high.
Crosses trenches 4 feet 9 inches wide.
Fords streams 2 feet 9 inches deep.
20. Remarks: In use in Manchuria.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

TANKETTE
ISHIKAWAJIMA
M 2598 (1938)

Top

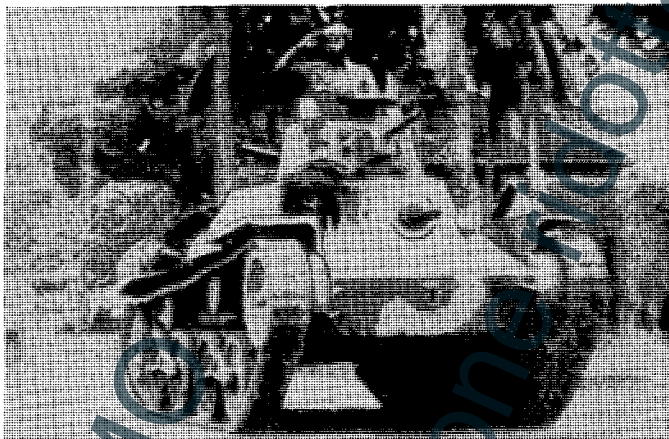
Front

Rear

Side

MILITARY INTELLIGENCE

JAPANESE
ARMY



TANKETTE

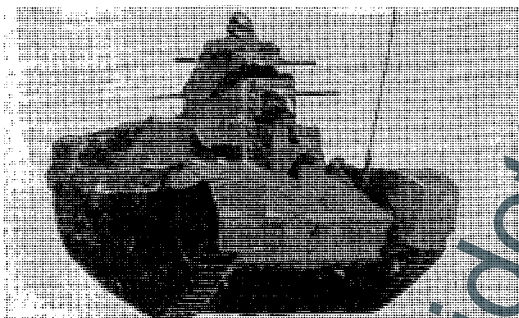
M 2595 (1935)

1. Crew: Three.
2. Armament: One 3.7-cm Hotchkiss; two Vickers machine guns (6.5-mm).
3. Ammunition: 120 rounds 3.7-cm; 1,350 rounds for machine guns.
4. Armor, thickness:
Upper structure: 6.8- and 10-mm (.32 to .31 and .39 in.).
Front: 12-mm (.47 in.).
Sides: 10- to 12-mm (.39 to .47 in.).
5. Turret: All round traverse.
6. Vision:
7. Ventilation:
8. Communication: Flag.
9. Dimension:
Length: 14 feet 6 inches.
Width: 6 feet 11 inches.
Height: 7 feet 2 inches.
10. Weight: 7 tons.
11. Motor:
Type: Diesel 110 horsepower.
Cooling: Unknown.
Horsepower per ton: 15.7.
12. Drive: Front sprocket.
13. Speed:
Cross-country:
Road:
Maximum: 22 miles per hour.
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill: 124 miles.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Four bogie wheels; two bogies.
19. Performance:
Ground clearance: 1 foot 2½ inches.
Climbs 40° slopes.
Negotiates vertical obstacle 2 feet 8 inches high.
Crosses trenches 6 feet 8 inches wide.
Fords streams 3 feet 3 inches deep.
20. Remarks:

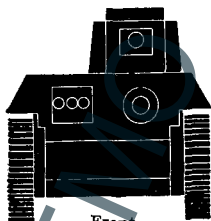
IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

TANKETTE
M 2595 (1935)



View



Front



Rear



Side

JAPANESE
ARMY

LIGHT TANK, M 2592 (1932)

1. Crew: Three (one driver, two gunners).
2. Armament: One machine gun in turret; one 13-mm machine gun in hull fore.
3. Ammunition:
4. Armor, thickness: 0.31 to 0.43 inch.
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication: Flag.
9. Dimensions:
Length: 12 feet 10 inches.
Width: 5 feet 4 inches..
Height: 6 feet 1 inch.
10. Weight: 5 tons.
11. Motor:
Type: 6-cylinder Mitsubishi.
Cooling system: Air.
Horsepower: 85.
Horsepower per ton: 17.
12. Drive: Front sprocket.
13. Speed:
Cross-country.
Road:
Maximum: 28 miles per hour.
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Six bogie wheels; three bogies.
19. Performance:
Ground clearance: 1 foot.
Climbs 34° slopes.
Negotiates vertical obstacle 1 foot 8 inches high.
Crosses trenches 4 feet 6 inches wide.
Fords streams 2 feet 6 inches deep.
20. Remarks: Known as heavy armored vehicle.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

LIGHT TANK
M 2592 (1932)

Front

Top

Rear

DEMO

dimensione ridotta

Side

JAPANESE
ARMY



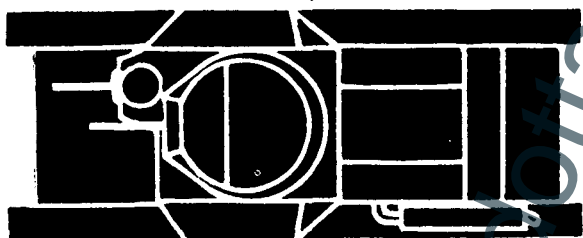
LIGHT TANK, M 2593 (1933)

1. Crew: Three (one driver and two gunners).
2. Armament: One machine gun in turret, one machine gun in hull fore.
3. Ammunition:
4. Armor, thickness: 0.86 inch.
Upper structure:
Front:
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communication: Flag.
9. Dimensions:
Length: 14 feet 8 inches.
Width: 5 feet 11 inches.
Height: 6 feet.
10. Weight: 7 tons.
11. Motor:
Type: 6-cylinder Mitsubishi.
Cooling system: Air.
Horsepower: 85.
Horsepower per ton: 12.1.
12. Drive: Front sprocket.
13. Speed:
Cross-country:
Road:
Maximum: 28 miles per hour.
14. Cruising radius, at ----- speed
----- miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Six bogie wheels;
three bogies.
19. Performance:
Ground clearance: 1 foot 3 inches.
Climbs 42° slopes.
Negotiates vertical obstacle 1 foot
8 inches high.
Crosses trenches 5 feet 8 inches wide.
Fords streams 2 feet 8 inches deep.
20. Remarks: Trials have been made
with experimental amphibious model of
this tank.

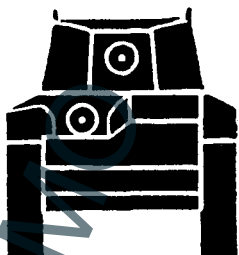
IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

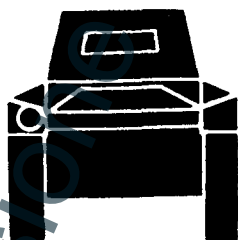
LIGHT TANK
M 2593 (1933)



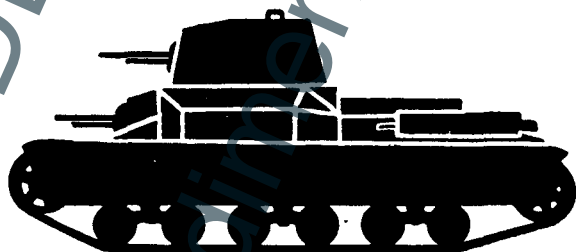
Top



Front



Rear



Side

JAPANESE
ARMY

LIGHT TANK, M 2599 (1939)

- | | |
|--|--|
| <p>1. Crew: Three (one driver and two gunners).</p> <p>2. Armament: One 37-mm gun and one machine gun.</p> <p>3. Ammunition: 2,500 rounds small arms and 250 rounds.</p> <p>4. Armor, thickness: 0.37 inch. Upper structure: 0.63-inch. Front: Sides:</p> <p>5. Turret:</p> <p>6. Vision:</p> <p>7. Ventilation:</p> <p>8. Communication: ~</p> <p>9. Dimensions: Length: 16 feet 6 inches. Width: 5 feet 8 inches. Height: 7 feet 4 inches.</p> <p>10. Weight: 7 tons.</p> <p>11. Motor: 4-cylinder. Type: Diesel. Cooling system: Horsepower: 45. Horsepower per ton: 6.5.</p> | <p>12. Drive:</p> <p>13. Speed: Cross-country: Road: Maximum: 12½ miles per hour.</p> <p>14. Cruising radius, at ----- speed 110 miles.</p> <p>15. Operating distance without refill:</p> <p>16. Gear speeds and ratios:</p> <p>17. Turning radius.</p> <p>18. Suspension, type: Nine bogie wheels; four bogies; one independent bogie wheel.</p> <p>19. Performance: Ground clearance: Climbs 38° slopes. Negotiates vertical obstacle ----- high. Crosses trenches 6 feet 4 inches wide. Fords streams 1 foot 8 inches deep.</p> <p>20. Remarks:</p> |
|--|--|

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

JAPANESE
ARMY

LIGHT TANK
M 2599 (1939)

Top

Front

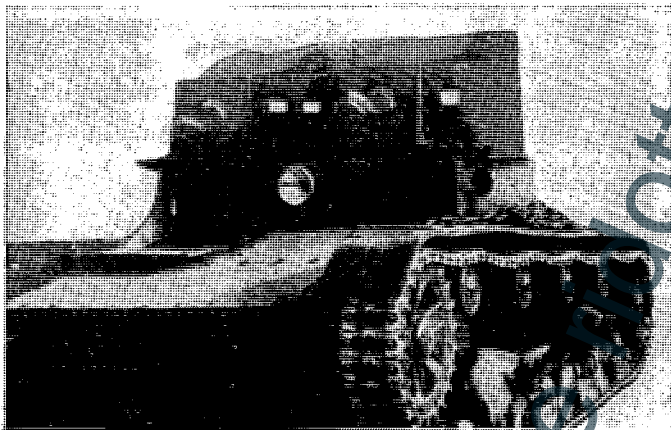
Rear

Side

DEMO

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JAPANESE
ARMY



LIGHT TANK

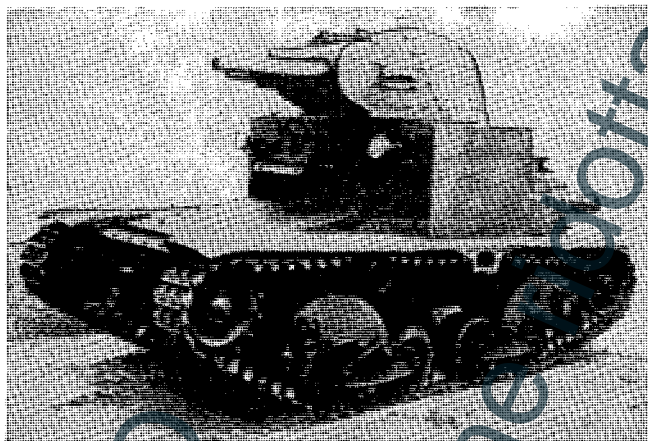
(Copy of Vickers-Armstrong 6-ton alternative A (1936))

- | | |
|--|---|
| <p>1. Crew: Three.</p> <p>2. Armament: Two machine guns.</p> <p>3. Ammunition: 6,000 rounds.</p> <p>4. Armor, thickness: Upper structure: 13-mm (.51 in.). Front: 13- to 16-mm (.51 to .62 in.). Sides: 13- to 16-mm (.51 to .62 in.).</p> <p>5. Turret: Double.</p> <p>6. Vision:</p> <p>7. Ventilation:</p> <p>8. Communication:</p> <p>9. Dimensions: Length: 16 feet 4 inches. Width: 8 feet. Height: 7 feet 2 inches.</p> <p>10. Weight: 8.5 tons.</p> <p>11. Motor: Type: Petrol 90 horsepower. Cooling system: Water. Horsepower: 90. Horsepower per ton: 10.5.</p> <p>12. Drive: Front sprocket.</p> | <p>13. Speed: Cross-country: Road: 22 miles per hour. Maximum:</p> <p>14. Cruising radius, at ---- speed ---- miles.</p> <p>15. Operating distance without refill: 96 miles.</p> <p>16. Gear speeds and ratios:</p> <p>17. Turning radius:</p> <p>18. Suspension, type: Leaf spring; pivoted bogies; rubber-tired rollers.</p> <p>19. Performance: Ground clearance: Climbs 45° slopes. Negotiates vertical obstacle 2 feet 5 inches high. Crosses treuchs 6 feet wide. Fords streams 3 feet deep.</p> <p>20. Remarks: This type is also used for training.</p> |
|--|---|

MILITARY INTELLIGENCE

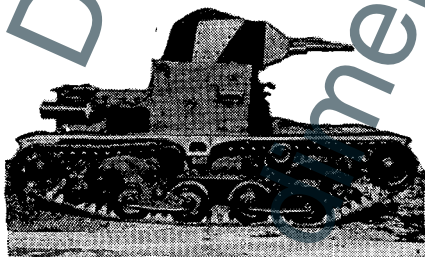
ITALIAN
ARMY

LIGHT TANK
FIAT-ANSALDO
L 6/40



View

Front

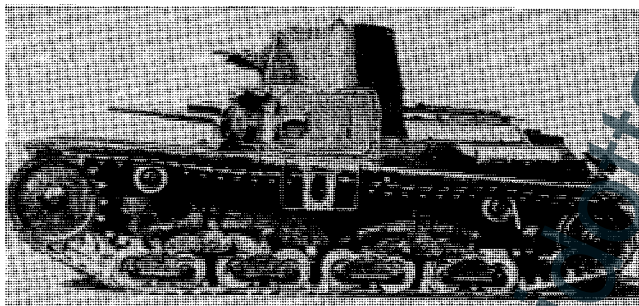


Rear



Side

ITALIAN
ARMY



MEDIUM TANK
CARRO D'ASSALTO
(M.11/39)

1. Crew: Three (driver, gunner, and commander).
2. Armament: One 37-mm gun in hull and two 8-mm machine guns in turret.
3. Ammunition: 84 rounds for 37/40 gun and 2,880 rounds for machine guns.
4. Armor, Thickness:
 - Upper structure: 10-mm (.4 in.).
 - Front: 30-mm (1.25 in.).
 - Sides: 15-mm (.6 in.).
5. Turret: All round traverse hand operated.
6. Vision: Revolving periscope.
7. Ventilation:
8. Communication: Flag.
9. Dimensions:
 - Length: 15 feet 6 inches.
 - Width: 7 feet 2-inches.
 - Height: 7 feet.
10. Weight: 11 tons.
11. Motor:
 - Type: Diesel.
 - Cooling system: Water.
 - Horsepower: 105
 - Horsepower per ton: 9.5.
12. Drive: Front sprocket.
13. Speed:
 - Cross-country: 18 mph.
 - Roads: 20 mph.
14. Cruising radius: 125 miles or 10 hours on roads. Petrol capacity: 40 gallons.
15. Operating distance without refill: 125 miles.
16. Gear speeds and ratio: six forward, one reverse.
17. Turning radius:
18. Suspension: four pair coupled bogies; rubber-covered wheels; three return rollers.
19. Performance:
 - Ground clearance: 1 foot 2 inches.
 - Climbs 40° to 45° slopes.
 - Negotiates vertical obstacle 2 feet 7½ inches high.
 - Crosses trenches 6 feet 7 inches wide.
 - Fords streams 3 feet 3½ inches deep.
20. Remarks: This tank has proved unsatisfactory and is being replaced by the M13/40. The 37/40 gun mounted in the full reduces its effectiveness.