

Reference

Statistics and Reference Div. FM 30-42

**BASIC FIELD MANUAL**

UNCLASSIFIED

**MILITARY INTELLIGENCE**

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

Prepared under direction of the  
Chief of Staff

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TABLE OF CONTENTS

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SECTION 1. General.	Paragraph	Page
Purpose -----	1	1
Scope -----	2	1
Method of identification and clas- sification of armored vehicles----	3	1
II. Armored vehicles of the German Army-----		3
III. Armored vehicles of the Japanese Army-----		55
IV. Armored vehicles of the Russian Army-----		87
V. Armored vehicles of the Italian Army-----		109
VI. Armored vehicles of the French Army-----		135

~~RESTRICTED~~

FM 30-42

## BASIC FIELD MANUAL

### MILITARY INTELLIGENCE

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

##### SECTION I

##### GENERAL

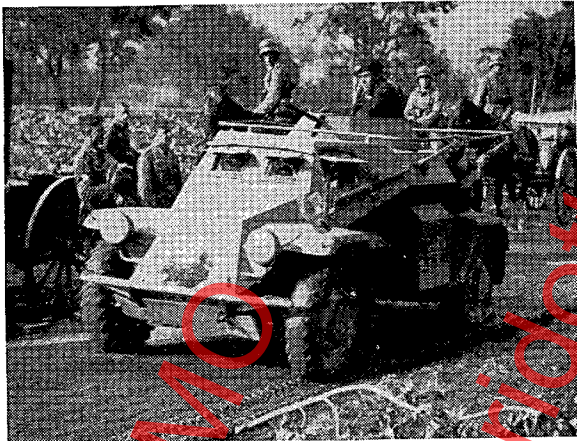
■ 1. PURPOSE.—The purpose of this manual is to serve as a guide in the identification of foreign armored vehicles. The material has been secured from many sources. It is the best available but may be incomplete and, in some respects, inaccurate.

■ 2. SCOPE.—This manual, containing illustrations with explanatory data relative to foreign armored vehicles, German, Japanese, Russian, Italian, and French, 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



SCOUT CAR

HORCH LEICHTER PANZERSPAHWAGEN I  
(HORCH LIGHT ARMORED CAR)

1. Crew: Two or three (gunner and driver; sometimes radio operator also).
2. Armament: One machine pistol and one machine gun mounted for ground or antiaircraft fire.
3. Ammunition:
4. Armor, thickness:
 

Upper structure:	}	(Plates all set at angle. Proof against armor-piercing small ammunition all around.)
Front:		
0.39-inch		
Sides:		
0.31-inch.		
5. Turret: No.
6. Vision:
7. Ventilation:
8. Communications: Some cars of this type possess radio.
9. Dimensions:
 

Length:	10 feet.
Width:	7 feet.
Height:	5 feet.
10. Weight: 4 tons (4 wheels).
11. Motor:
 

Type:	
Cooling system:	
- Horsepower:
- Horsepower per ton:
12. Drive:
13. Speed:
 

Cross country:	20 miles per hour.
Road:	53 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: Open top has grating to hold out grenades but is vulnerable to fire from above.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN  
ARMY

SCOUT CAR  
HORCH LEICHTER PANZERSPAHWAGEN I  
(HORCH LIGHT ARMORED CAR)



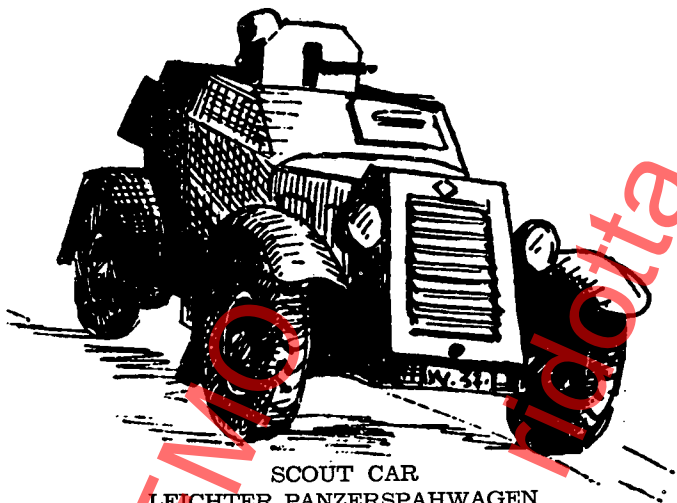
Top

Front

Rear



Side

GERMAN  
ARMY

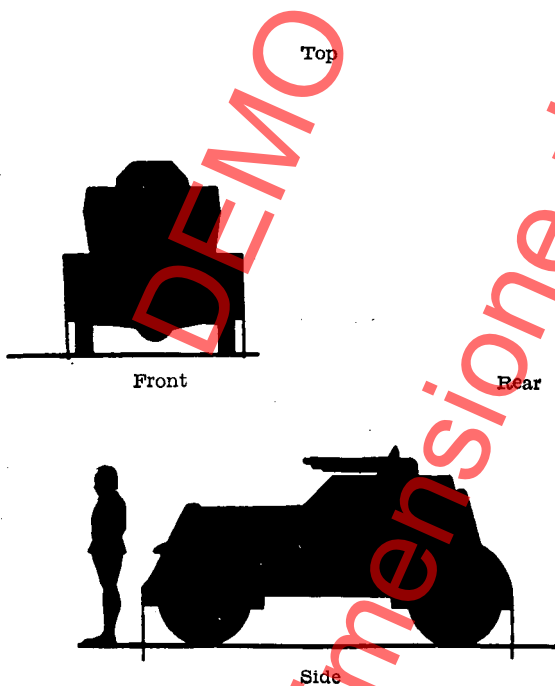
SCOUT CAR  
LEICHTER PANZERSPAHWAGEN  
(LIGHT ARMORED CAR)  
M-I

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. Communications: Some cars of this type possess radio.
9. Dimensions:
  - Length: 10 feet 0 inches.
  - Width: 5 feet 7 inches.
  - Height: 5 feet 5 inches.
10. Weight: 1.77 tons (4 wheels).
11. Motor:
  - Type:
  - Cooling system:
  - Horsepower:
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

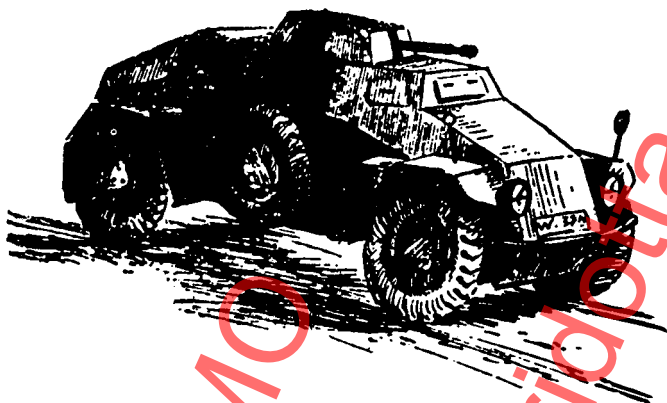
GERMAN  
ARMY

SCOUT CAR  
LEICHTER PANZERSPAHWAGEN  
(LIGHT ARMORED CAR)  
M-I





GERMAN  
ARMY



SCOUT CAR  
HORCH LEICHTER PANZERSPAHWAGEN II  
(HORCH LIGHT ARMORED CAR II)

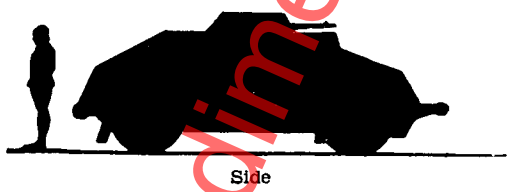
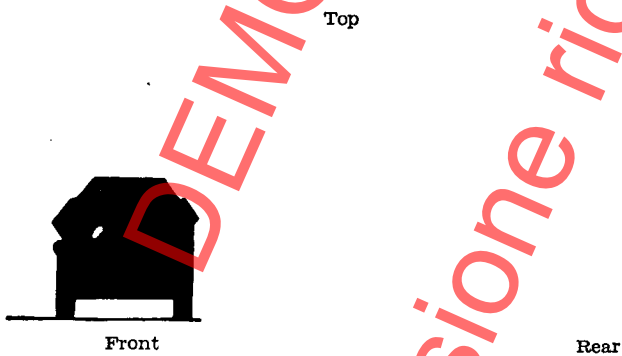
1. Crew: Two (driver and gunner-commander).
2. Armament: One 20-mm machine gun; one machine pistol.
3. Ammunition:
4. Armor, thickness:  
Upper structure:
 

Front:	}	Plates all set at angle. Proof against armor-piercing small arms ammunition all around.
Sides:		
0.31 inch.		
5. Turret: Yes.
6. Vision:
7. Ventilation:
8. Communications:
9. Dimensions:  
Length: 10 feet.  
Width: 7 feet.  
Height: 5 feet 2 inches.
10. Weight: 4.2 tons.
11. Motor:  
Type:  
Cooling system:  
Horsepower:  
Horsepower per ton:
12. Drive:
13. Speed:  
Cross country: 20 miles per hour.  
Road: 53 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: An alternative model of the Horch Panzerspahwagen I, with slightly larger turret. It has the same large opening on the top protected by a grating only.

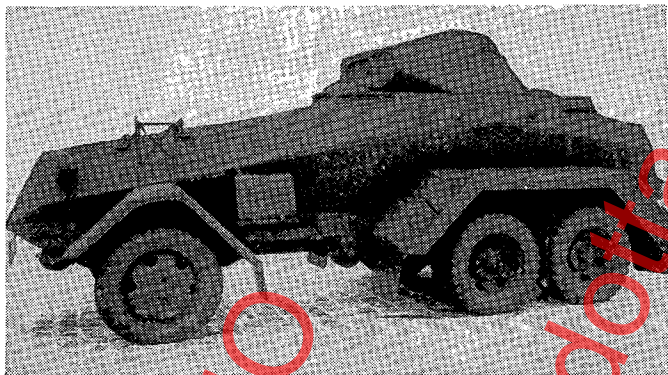
IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN  
ARMY

SCOUT CAR  
HORCH LEICHTER PANZERSPAHWAGEN II  
(HORCH LIGHT ARMORED CAR II)



GERMAN  
ARMY



SCOUT CAR  
SCHWERER PANZERSPAHWAGEN 36  
(HEAVY ARMORED CAR TYPE 1936)

1. Crew: Four (two drivers, one gunner-commander, one gunner) (one driver acts as radio operator).
2. Armament: One 20-mm machine gun; one machine pistol.
3. Ammunition: 1,800 rounds for light machine gun; 200 rounds for heavy gun.
4. Armor, thickness:
 

Upper structure: 0.39 inch.	}	All armor plates set at angle.
Front: 0.59 inch.		
Sides: 0.39 inch.		
Turret: 0.59 inch.		
5. Turret: Yes.
6. Vision:
7. Ventilation:
8. Communications: Some of this type have radio with rigid frame aerial which reduces traverse of turret guns to 150° and blocks antiaircraft fire.
9. Dimensions:
 

Length: 16 feet.
Width: 7 feet 4 inches.
Height: 8 feet.
10. Weight: 6½ tons (6 wheels).
11. Motor:
 

Type: V-8.
Cooling system: Water.
Horsepower:
Horsepower per ton:
12. Drive:
13. Speed:
 

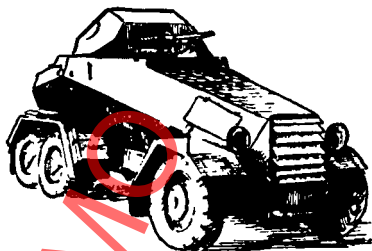
Cross country: 20 miles per hour.
Road: 40 miles per hour.
Maximum: 50 miles per hour.
Reverse: 30 miles per hour.
14. Cruising radius, at \_\_\_\_\_ speed \_\_\_\_\_ miles.
15. Operating distance without refill: 180 miles.
16. Gear speeds and ratios: 5 gear speeds.
17. Turning radius: 10 to 12 feet.
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 car carries a smoke-producing apparatus. Believed now to be an obsolescent type.

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

GERMAN  
ARMY

SCOUT CAR  
SCHWERER PANZERSPAHWAGEN 36  
(HEAVY ARMORED CAR TYPE 1936)



View

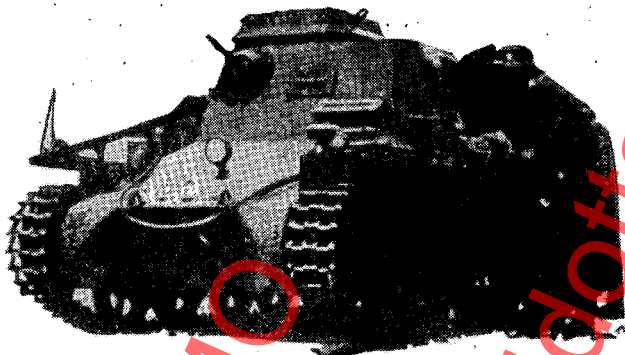


Front

Rear

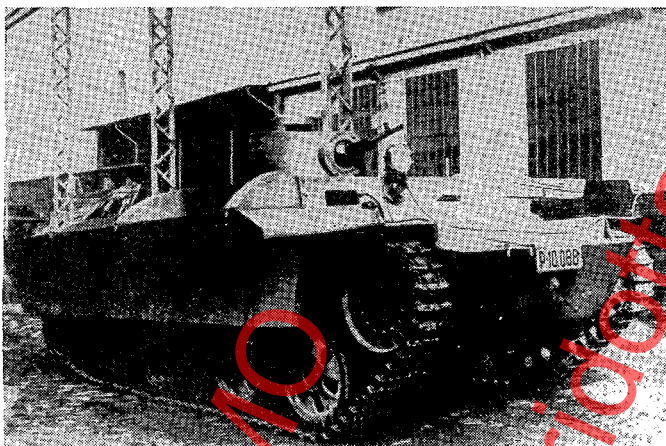


Side

GERMAN  
ARMYLIGHT TANK  
LIGHT COMMANDERS TANK

1. Crew: Three (driver, gunner, and commander).
2. Armament: One 7- to 9-mm machine gun in ball mounting.
3. Ammunition:
4. Armor, thickness: 0.55-inch.  
Upper structure:  
Front:  
Sides:
5. Turret: None. Hull built up to rigid square top with boxlike cupola.
6. Vision:
7. Ventilation:
8. Communications: Radio.
9. Dimensions:  
Length: 13 feet.  
Width: 6 feet 5 inches.  
Height: 5 feet 8 inches.
10. Weight: 5.7 tons.
11. Motor:  
Type: V-8.  
Cooling system: Air.  
Horsepower: 90 to 100.  
Horsepower per ton: 15.8.
12. Drive:
13. Speed:  
Cross country:  
Road: 32 miles per hour.  
Maximum:
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill: 95 miles.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Five spoked bogie wheels, 1 independently sprung and the last four 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: Armored office with fixed square turret.

**GERMAN  
ARMY**



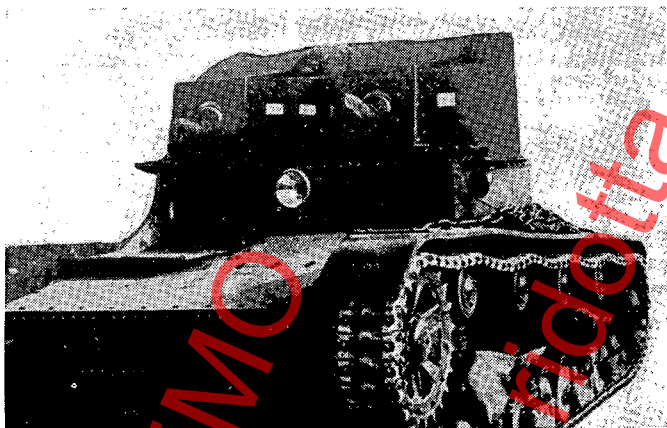
**LIGHT AMPHIBIAN**

**F 4 HE**

**(EX-CZECH)**

1. Crew: Three (gunner, driver, and commander).
2. Armament: One or two light machine guns.
3. Ammunition: 4,000 rounds.
4. Armor, thickness:  
Upper structure:  
Front:  
Sides:
5. Turret: Small round turret with light machine gun on ball mounting and round look-out cupola.
6. Vision:
7. Ventilation:
8. Communications: Radio, flag, and lamp.
9. Dimensions:  
Length: 17 feet 6 inches.  
Width: 7 feet 7 inches.  
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:
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 ----- high.  
Crosses trenches 7 feet 1 inch wide.  
Fords streams ----- deep.  
Amphibian.
20. Remarks: One hundred of these known to exist. An improved model may have been produced.

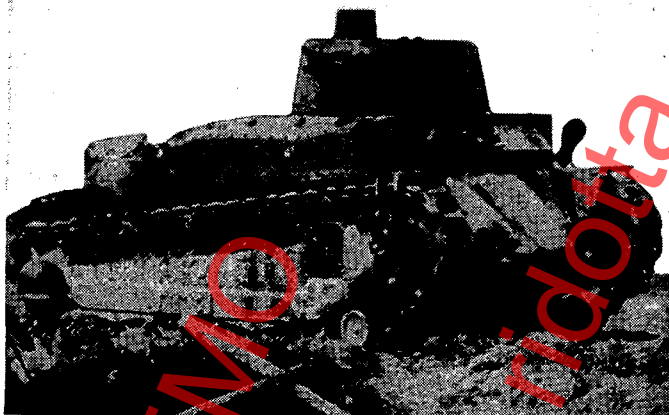
JAPANESE  
ARMY



LIGHT TANK  
COPY OF VICKERS-ARMSTRONG 6-TON  
ALTERNATIVE A (1936)

1. Crew: Three.
2. Armament: Two machine guns.
3. Ammunition:
4. Armor, thickness: 0.51-inch to 0.2-inch.  
Upper structure:  
Front:  
Sides:
5. Turret: Double.
6. Vision:
7. Ventilation:
8. Communications:
9. Dimensions:  
Length: 15 feet  $\frac{1}{2}$  inch.  
Width: 7 feet  $11\frac{1}{2}$  inches.  
Height: 6 feet  $9\frac{7}{8}$  inches.
10. Weight: 6.75 net; loaded, 8.1 tons.
11. Motor:  
Type:  
Cooling system:  
Horsepower:  
Horsepower per ton:
12. Drive:
13. Speed:  
Cross country:  
Road: 22 miles per hour.  
Maximum:
14. Cruising radius, at ----- speed ----- miles.
15. Operating distance without refill: 96 miles.
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Leaf spring; pivoted bogies; rubber-tired rollers.
19. Performance:  
Ground clearance:  
Climbs 45° slopes.  
Negotiates vertical obstacle 2 feet 5 inches high.  
Crosses trenches 6 feet wide.  
Fords streams 3 feet deep.
20. Remarks:

JAPANESE  
ARMY

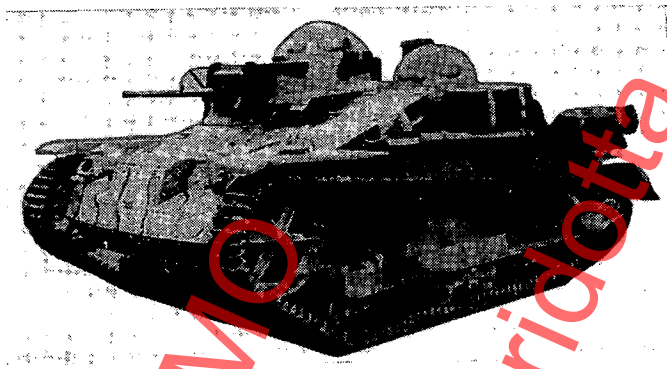


MEDIUM TANK, M 2589 (1929)

1. Crew: Five (one driver, one commander, and three gunners).
2. Armament: One 37-mm gun in turret, one machine gun (rear), one machine gun in hull fore.
3. Ammunition: 4,000 rounds small-arms and 200 rounds 37-mm.
4. Armor, thickness: 0.43-inch to 0.67-inch.  
Upper structure:  
Front:  
Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communications: Flag.
9. Dimensions:  
Length: 17 feet 6 inches.  
Width: 8 feet 4 inches.  
Height: 8 feet 6 inches.
10. Weight: 11.5 tons.
11. Motor:  
Type: Mitsubishi.  
Cooling system: Air or water.  
Horsepower: 100.  
Horsepower per ton: 8.7.
12. Drive: Front sprocket.
13. Speed:  
Cross country:  
Road:  
Maximum: 20 miles per hour.
14. Cruising radius, at ----- speed 150 miles.
15. Operating distance without refill:
16. Gear speeds and ratios:
17. Turning radius:
18. Suspension, type: Nine bogie wheels; four bogies; one independent bogie skirting.
19. Performance:  
Ground clearance: 1 foot 6 inches.  
Climbs 35° slopes.  
Negotiates vertical obstacle ----- high.  
Crosses trenches 8 feet 6 inches wide.  
Fords streams 3 feet deep.
20. Remarks: Based on Vickers Mark C. Several variants of this type. 57-mm gun may be alternative to 37-mm.



FRENCH  
ARMY



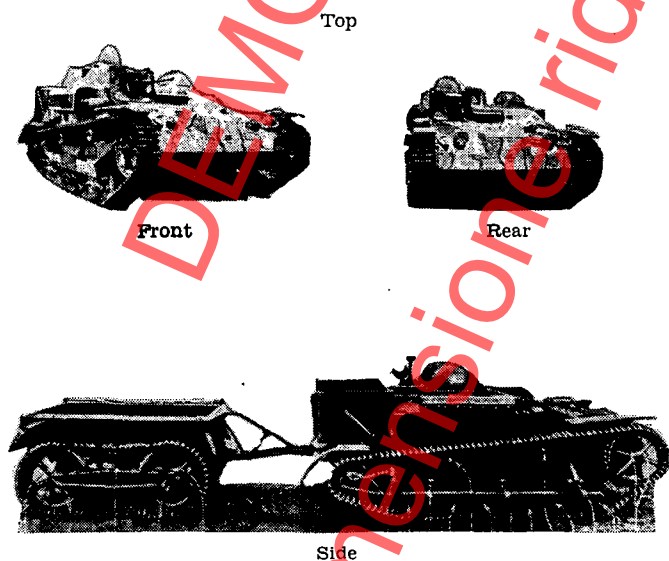
INFANTRY TRACTOR  
RENAULT CHENILLETTE

- |   |   |
|---|---|
| 1. Crew: Two.                           | 13. Speed:  |
| 2. Armament: One Hotchkiss machine gun. | Cross country: 5 miles per hour.                  |
| 3. Ammunition:                          | Road:   |
| 4. Armor, thickness:                    | Maximum: 18 miles per hour.                       |
| Upper structure:                        | 14. Cruising radius, at ----- speed ----- miles.  |
| Front:                                  | 15. Operating distance without refill:            |
| Sides:                                  | 16. Gear speeds and ratios:                       |
| 5. Turret:                              | 17. Turning radius:                               |
| 6. Vision:                              | 18. Suspension, type:                             |
| 7. Ventilation:                         | 19. Performance:                                  |
| 8. Communications:                      | Ground clearance:                                 |
| 9. Dimensions:                          | Climbs -----° slopes.                             |
| Length:                                 | Negotiates vertical obstacle ----- high.          |
| Width:                                  | Crosses trenches 36 inches wide.                  |
| Height:                                 | Fords streams ----- deep.                         |
| 10. Weight: About 1½ tons.              | 20. Remarks: Provided with trailer and transport. |
| 11. Motor:                              |   |
| Type:                                   |   |
| Cooling system:                         |   |
| Horsepower:                             |   |
| Horsepower per ton:                     |   |
| 12. Drive:                              |   |

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

FRENCH  
ARMY

INFANTRY TRACTOR  
RENAULT CHENILLETTE



MILITARY INTELLIGENCE

FRENCH  
ARMY



COMMANDERS' CAR  
RENAULT

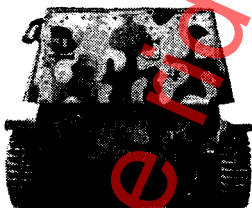
1. Crew:
2. Armament:
3. Ammunition:
4. Armor, thickness:
  - Upper structure:
  - Front:
  - Sides:
5. Turret:
6. Vision:
7. Ventilation:
8. Communications:
9. Dimensions:
  - Length:
  - Width:
  - Height:
10. Weight:
11. Motor:
  - Type:
  - Cooling system:
  - Horsepower:
  - Horsepower per ton:
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 obsta-  
cle ----- high.
  - Crosses trenches -----  
wide.
  - Fords streams ----- deep.
20. Remarks:

IDENTIFICATION OF FOREIGN ARMORED VEHICLES

FRENCH  
ARMY

COMMANDERS' CAR  
RENAULT

Top



Front

Rear



Side