

TM 9-732

WAR DEPARTMENT TECHNICAL MANUAL

Light Tanks M5 and M5A1

RESTRICTED

Dissemination of restricted matter—The information contained in restricted documents and the essential characteristics of restricted materiel may be given to any person known to be in the service of the United States and to persons of undoubted loyalty and discretion who are co-operating in Government work, but will not be communicated to the public or to the press except by authorized military public relations agencies. (See also paragraph 18b, AR 380-5, 28 September 1942.)

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WAR DEPARTMENT
Washington 25, D. C., 27 November 1943

TM 9-732, Light Tanks M5 and M5A1, is published for the information and guidance of all concerned.

[A.G. 300.7 (12 Feb 1943)
O.O.M. 461/(TM 9) Raritan Ars. (11-27-43) (27 Nov 43)]

BY ORDER OF THE SECRETARY OF WAR:

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The Adjutant General.*

DISTRIBUTION: D 17 (5); R 9 and 17 (4); Bn 9 (2); IBn 17 (3);
C 9 (8); IC 17 (3)

(For explanation of symbols, see FM 21-6)

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*This manual supersedes TM 9-727C, 22 Dec. 1942; TM 9-732, 18 Apr. 1942; TB 727C-1, 20 Nov. 1942; TB 727C-2, 14 Jan. 1943; TB 727C-3, 18 Mar. 1943; TB 727C-4, 6 Apr. 1943; TB 727C-5, 21 Apr. 1943; TB 727C-6, 23 Apr. 1943; TB 727C-8, 21 June 1943; TB 727C-9, 30 June 1943; TB 727C-11, 29 July 1943; TB 727C-13, 29 Nov. 1943; TB 727C-15, 30 Nov. 1943; TB 727C-17, 22 Nov. 1943; TB 732-1, 2 June 1942; TB 732-2, 20 Aug. 1942; TB 732-3, 20 Aug. 1942; TB 732-4, 2 Sept. 1942; TB 732-5, 26 Aug. 1942; TB 732-6, 17 Nov. 1942; TB 732-7, 20 Nov. 1942; TB 732-8, 24 Dec. 1942; TB 732-9, 3 Dec. 1942; TB 732-10, 14 Jan. 1943; TB 732-11, 17 Mar. 1943; TB 732-12, 18 Mar. 1943; TB 732-14, 6 Apr. 1943; TB 732-16, 15 Apr. 1943; TB 732-17, 21 Apr. 1943; TB 732-18, 23 Apr. 1943; TB 732-19, 14 May 1943; TB 732-20, 21 June 1943; TB 732-21, 30 June 1943; TB 732-23, 29 July 1943. It also includes all pertinent information from TC 44, 9 Apr. 1943; TB 700-1, 1 Jan. 1942; TB 700-15, 21 July 1942; TB 700-37, 4 Mar. 1943; TB 700-51, 8 May 1943; TB 700-62, 8 June 1943; TB 700-66, 11 June 1943; TB 700-73, 1 July 1943; TB 700-85, 28 July 1943; TB 700-90, 11 Aug. 1943; and TB 700-96, 28 Aug. 1943.

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PART ONE

VEHICLE OPERATING INSTRUCTIONS

Section I

INTRODUCTION

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Scope	1
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1. SCOPE.

a. This technical manual is published to give information and guidance to the personnel of the using arms charged with the operation, maintenance, and minor repairs of this materiel.

b. Repairs, modifications, and adjustments beyond the scope or facilities of using arms must be reported to responsible ordnance service.

2. CONTENTS AND ARRANGEMENT.

a. This manual contains descriptions of the major units and their function in relation to the other components of the vehicle, as well as instructions for operation, inspection, minor repair, and unit replacement. Sections I through IX contain information chiefly for the guidance of operating personnel. Sections X through XXVI contain information chiefly for the guidance of personnel of the using arms doing maintenance work on the vehicles. Section XXVII contains information on the armament.

Section II

DESCRIPTION AND TABULATED DATA

	Paragraph
Description	3
Differences between M5 and M5A1	4
Data	5

3. DESCRIPTION.

a. The Light Tanks M5 and M5A1 are armored, full track-laying combat vehicles carrying four-man crews, and equipped with dual driving controls.

b. Each vehicle is powered by two 8-cylinder, 90-degree, V-type, liquid-cooled engines, located in the rear of the hull. The flywheel end of each engine is connected to a Hydra-Matic transmission. The propeller shaft from each power plant runs forward, through the fighting compartment, to a transfer unit located at the right of the driver's seat. The transmissions, plus the two-speed transfer unit, provide six forward speeds and one reverse speed. Each vehicle is wired for radio installation and for an intraphone system within the vehicle.

LIGHT TANKS M5 AND M5A1

c. The basic hull armor plate is a completely welded structure, except for portions of front, top, and rear, which are removable for service operations. The armor on the front of the vehicle is 1 1/8 inches thick, with the exception of the nose casting, which is 1 1/2 inches thick; on the sides of the fighting compartment, it is 1 1/8 inches thick; on sides and rear of engine compartment, it is 1 inch thick, while the hull roof is 1/2-inch armor plate.

d. Each vehicle is equipped with an auxiliary power plant consisting of a generating set powered by a single-cylinder gasoline engine. This unit supplements the engine generators for charging the battery.

e. Entrance to and exit from vehicles are permitted by two drivers' doors located in the fighting compartment roof, and two turret doors located in the turret roof. Access to engine compartment is provided by two hinged double doors in the rear of the hull. An escape door is located in the hull floor behind the assistant driver (M5A1 vehicles only).

f. Turrets on both the M5 and M5A1 vehicles can be traversed 360 degrees either manually or hydraulically.

4. DIFFERENCES BETWEEN M5 AND M5A1.

a. The M5 and M5A1 vehicles are illustrated in figures 1, 2, 3, 4, and 5. Figure 1 shows the M5 vehicle, which is readily identified by the circular turret. Figure 2 shows the M5A1 vehicle which was not equipped with sand shields. These vehicles can be identified by the turret having a projection for the radio at the rear. Figure 3 shows the M5A1 vehicle equipped with sand shields. *NOTE: No serial number is given covering installation of sand shields as they can be installed in the field on all M5A1 vehicles.* Figures 4 and 5 show the M5A1 vehicles of the latest type with a guard for the anti-aircraft gun mount, and a stowage box mounted on the rear. Air cleaner doors on late M5A1 vehicles have paper gaskets to prevent sticking of rubber seals.

b. The serial numbers assigned to these vehicles are as follows:

M5 1 to 1470; 2268 to 2623; 3268 to 3517
 M5A1 1471 to 2267; 2624 to 3268; 3518 and up

5. DATA.

a. General.	M5	M5A1
Weight without armament, fuel, and crew:		
With steel tracks		32,305 lb
With rubber tracks	30,759 lb	31,105 lb
Weight, complete with armament, fuel and crew:		
With steel tracks		34,684 lb
With rubber tracks	33,138 lb	33,484 lb
Ground pressure at 1 1/2-in. penetration	10.62 psi	11.11 psi
Over-all width	88 1/4 in.	88 1/4 in.

DESCRIPTION AND TABULATED DATA

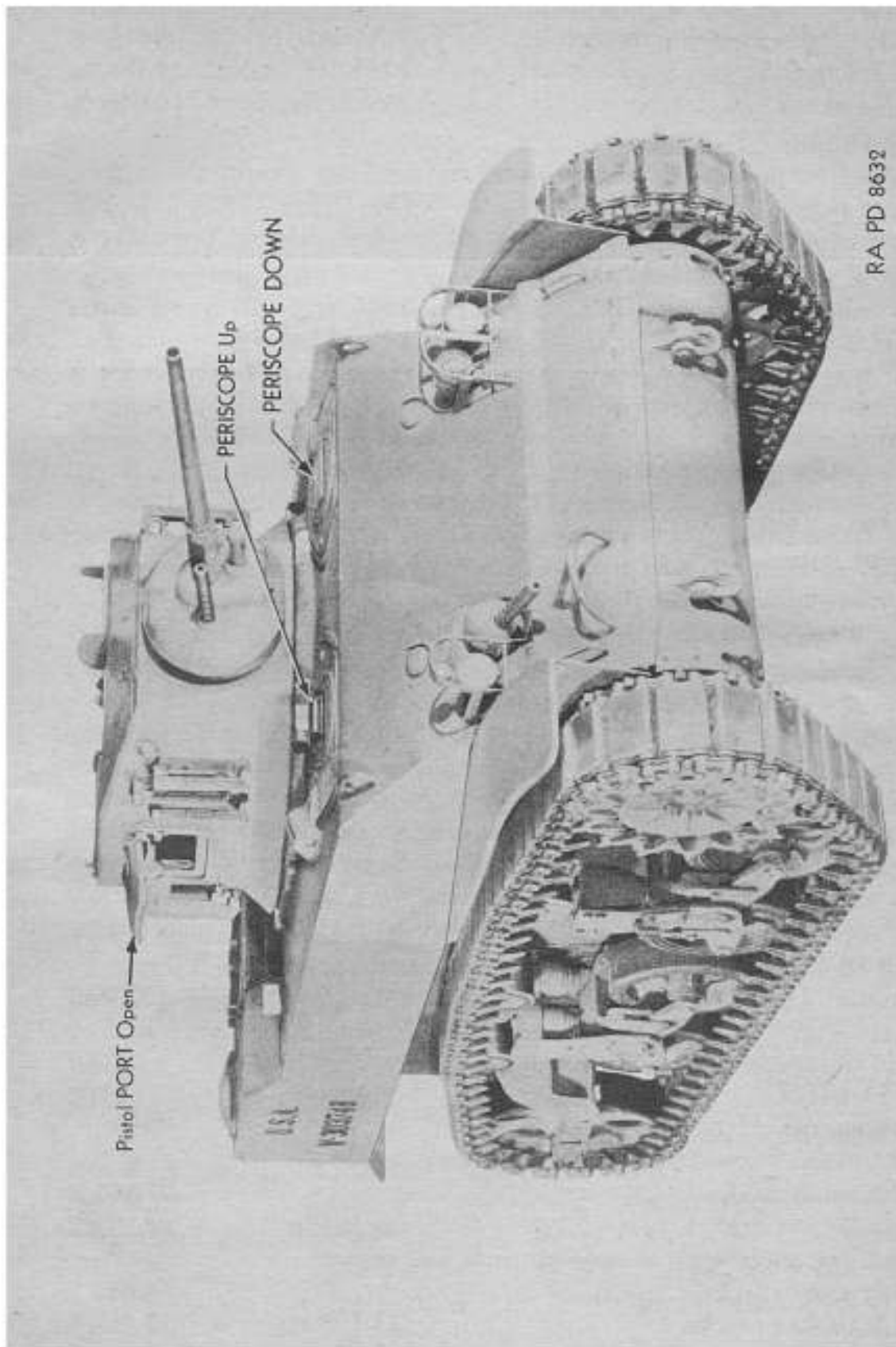


Figure 1 — Light Tank M5 — Three-quarter Right Front

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LIGHT TANKS M5 AND M5A1

	M5	M5A1
Ground clearance	16½ in.	16½ in.
Tread (center to center of tracks)	73 in.	73¼ in.
Over-all height, including turret	90½ in.	90½ in.
Over-all length	174¾ in.	174¾ in.
Pintle capacity	10,000 lb	10,000 lb

b. Engine.

Rated net horsepower at output shaft (each engine @ 3,400 rpm)	110	110
Number of cylinders (each engine)	8	8
Weight of engine w accesories and transmission (each engine)	1300 lb	1300 lb
Firing order	1-8-7-3-6-5-4-2	1-8-7-3-6-5-4-2

c. Armament (M5 and M5A1).

- 1 37-mm gun M6 and 1 cal. .30 machine gun M1919A5, fixed, mounted in combination gun mount M23 in turret.
- 1 cal. .30 machine gun M1919A4, flexible, in ball mount in bow.
- 1 cal. .30 machine gun M1919A4, flexible, antiaircraft, outside turret.
- 1 cal. .45 Thompson submachine gun M1928A1 carried on brackets within vehicle.
- 2 cal. .30 tripod machine gun mounts M2.

d. Ammunition Carried.

	M5	M5A1
Rounds of 37-mm ammunition, high explosive	39	39
Rounds of 37-mm ammunition, armor piercing	65	65
Rounds of 37-mm ammunition, cannister	19	19
Rounds of cal. .30 ammunition	6,250	6,000
	(plus 250)	(plus 750 in)
	(in guns)	(boxes on guns)
Rounds of cal. .45 ammunition in 30-round clips	480	540
or in 20-round clips	320	360
Hand grenades	12	12

e. Communication.

Radio	SCR508	SCR508
(In command vehicles)	SCR506	SCR506
Intra-tank	Telephone	Telephone

f. Armor Thickness.

Front (except nose casting)	1½ in.	1½ in.
Nose casting	1½ in.	1½ in.
Rear	1 in.	1 in.
Sides (fighting compartment)	1½ in.	1½ in.