TM 9-1313

WAR DEPARTMENT TECHNICAL MANUAL

ORDNANCE MAINTENANCE

75-MM GUN M6 AND COMBINATION GUN MOUNT M64 (TANK)

WAR DEPARTMENT • 19 FEBRUARY 1945

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This TM supersedes WDTB 9-1313-FE1, dated 19 Feb 45. This TM supersedes portions of WDTB ORD FE24, dated 3 Feb 45, which apply to the materiel covered in this TM; however, this TB remains in force until incorporated in all other affected TM's or specifically rescinded.

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WAR DEPARTMENT
Washington 25, D. C., 19 February 1945

TM 9-1313, Ordnance Maintenance: 75-mm Gun M6 and Combination Gun Mount M64 (Tank), is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

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

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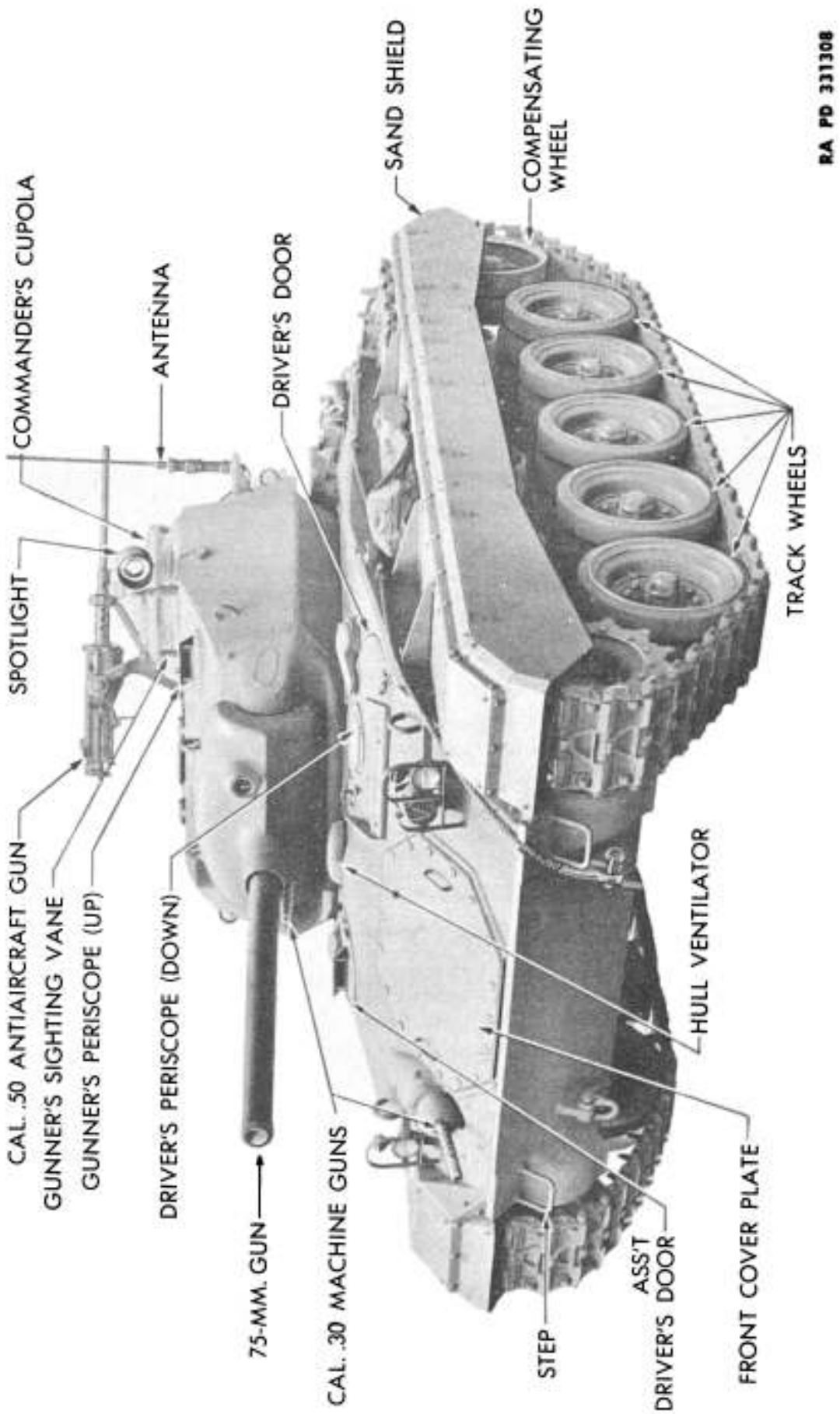

Figure 1—Light Tank M24

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Section I

INTRODUCTION

1. SCOPE.

a. This Technical Manual is published for the information and guidance of ordnance maintenance personnel. It contains detailed instructions for inspection, disassembly, assembly, maintenance, and repair of the 75-mm Gun M6 and the Combination Gun Mount M64 (figs. 1 and 2), supplementary to those in TM 9-313. This manual does not contain information intended primarily for the using arms, as such information is available to ordnance maintenance personnel in TM 9-313.

2. CHARACTERISTICS.

a. The 75-mm Gun M6 is a lightweight cannon that was originally designed for aircraft use. The tube does not have any noticeable taper and appears extremely thin. Due to its light manufacture, the tube heats up fast and is comparatively short-lived. The breechblock is of the horizontal, sliding-wedge type and is opened during counter-recoil by the action of the breech operating crank on the breech operating cam (fig. 2). The Firing Lock M15 is mounted in the breechblock and is a continuous-pull, self-cocking type of mechanism.

b. The Combination Gun Mount M64 (fig. 2) is designed to receive the 75-mm gun as its primary armament, and mounts the Cal. .30 Machine Gun M1919A4 (flexible) on the right side of the mount. The recoil mechanism is a concentric, hydrospring type. The cradle forms the outside recoil cylinder, and the gun tube slides in the center of the mechanism in the cylinder support (fig. 2).

3. DATA.

a. 75-mm Gun M6.

(1) GENERAL.

Weight of gun	410 lb
Length of gun (muzzle to rear face of breech ring)	116.375 in.
Length of bore	37.5 cal.
Life of tube (par. 9)	1,000 rounds
Chamber capacity	80.59 cu in.
Density of loading	0.67 cu in.

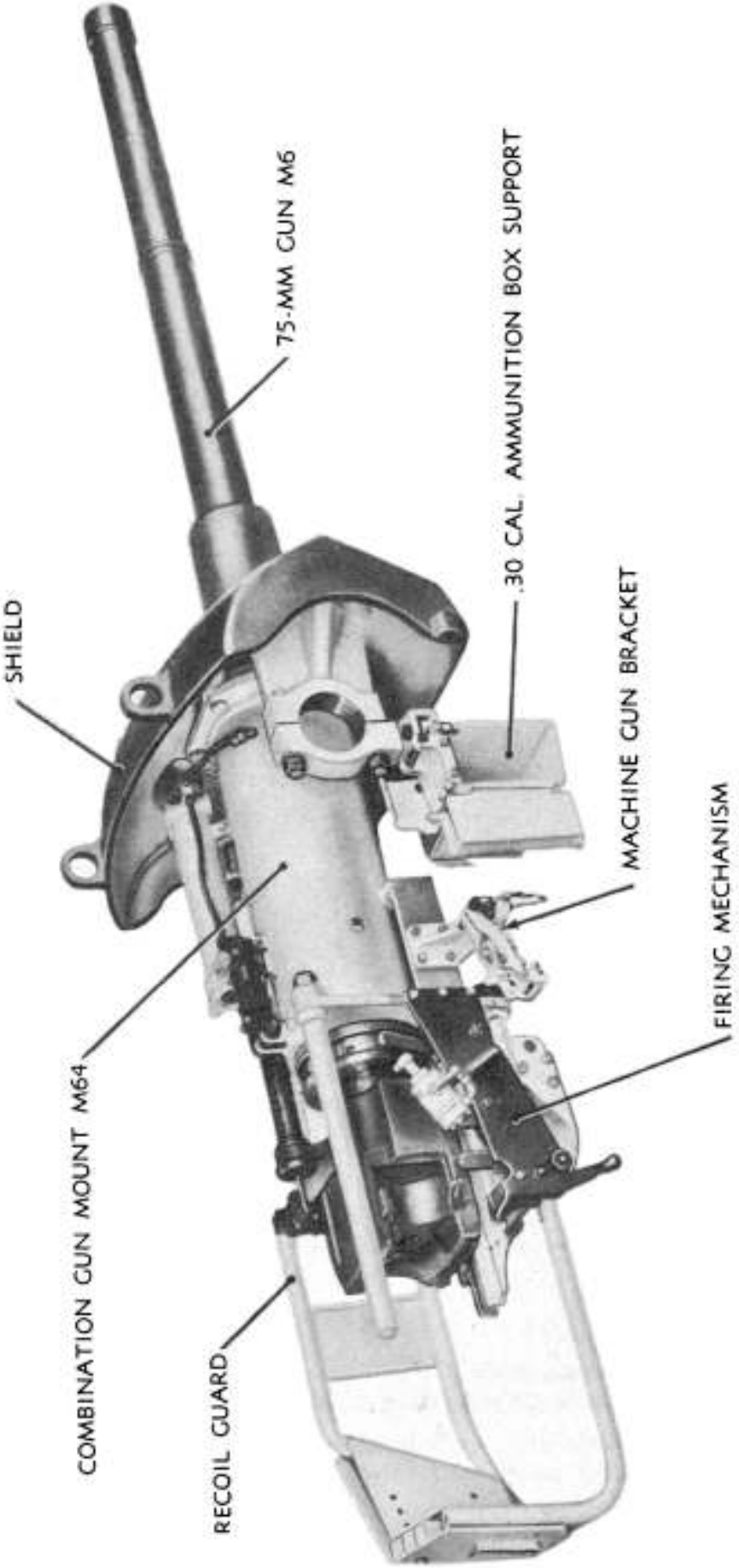

Figure 2—75-mm Gun M6 and Combination Gun Mount M64

INSPECTION

Rifling:
Length ..... 96.22 in.
Number of grooves 24
Twist ..... Uniform right-hand sloping 7 deg
Type of breechblock ..... Horizontal sliding wedge
Type of firing lock ..... Continuous-pull, self-cocking
Ammunition ..... For complete ammunition data, see TM 9-313.

(2) PERFORMANCE.

	Muzzle Velocity	Effective Range
PROJECTILE, APC, M61	2,030 fps	5,000 yd (104.5 mils)
SHELL, AP, M72	2,030 fps	3,500 yd (78.3 mils)
SHELL, HE, M48		
Super	1,980 fps	7,000 yd (183.2 mils)
Normal	1,515 fps	7,000 yd (284.2 mils)
SHELL, smoke, HC, BI, M89	850 fps	1,600 yd (261.4 mils)
SHELL, smoke, WP, M64	1,890 fps	7,000 yd (183.2 mils)

b. Combination Gun Mount M64.

Model of recoil mechanism T33E1
Normal recoil ..... 11½ in.
Maximum recoil (metal to metal) ..... 13 in.
Type of recoil mechanism ..... Concentric, hydrospring

Section II

INSPECTION

4. GENERAL.

a. This section covers specific instructions for inspection by ordnance maintenance personnel of the materiel in the hands of troops, as well as higher echelons. General inspection instructions are contained in TM 9-1100. The inspector should be well versed in maintenance procedures for the materiel and must have a working knowledge of the tools needed for its inspection.

5. PURPOSE.

a. Inspection, fundamentally, is for the purpose of determining whether the gun is serviceable, or the extent of its serviceability. Important but secondary purposes are the detection of incipient failure and determination of whether proper care is being taken of the gun and accessories. Serviceability, as interpreted in this section, is the ability of the gun to perform its intended functions completely.

b. In the event the gun is found unserviceable or incipient failure is disclosed, the cause and extent of unserviceability will be determined. Such deficiencies as are found will be corrected on the spot or corrective measures will be taken. If the gun must be "dead lined" and sent to a higher maintenance echelon for repair, it will be thoroughly and completely inspected, put into the best possible condition that time, materials, and tactical circumstances will allow, and returned to the using arm ready for immediate use.

6. REPORTS.

a. Suggested improvements in design, maintenance, safety, and efficiency of operation prompted by chronic failure or malfunction of the weapon, spare parts, accessories, or equipment should be forwarded to the Office of the Chief of Ordnance, Field Service, Maintenance Division, with all available pertinent information necessary to initiate corrective action. This information should be reported on WD AGO Form No. 468, Unsatisfactory Equipment Report. Such suggestions are encouraged so that other organizations may benefit.

b. Report to the responsible officer any persistent carelessness or negligence in the observance of preventive maintenance procedures and safety precautions. This report should be accompanied by recommendations for correcting the unsatisfactory conditions. NOTE: *The inspector's aim is not to find fault with the using troops, but to be helpful.*

c. Enter results of inspection in the Artillery Gun Book as indicated. The gun book should also be consulted for information on the number of rounds fired, previous repairs, seasonal change of lubricants, and completed Modification Work Orders.

7. GUN AND MOUNT.

a. Artillery Gun Book (O.O. Form 5825). At each inspection the inspector will examine the gun book to make sure that this record has been kept up-to-date and that all entries have been properly made.

b. Lubrication. Lubricating fittings should be properly identified with a red circle; bearings, sliding surfaces, hinge joints, latches, and other movable parts should be clean, well lubricated, and free from rust and other foreign matter. Materiel should be clean, and well lubricated with proper lubricants at proper intervals in accordance with WDLO 9-729 (formerly WDLO 153). Excess oil and grease should be wiped off the materiel.