

MCWP 3-14.1

LIGHT ARMORED VEHICLE -25 GUNNERY AND EMPLOYMENT



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FOREWORD

Marine Corps Warfighting Publication (MCWP) 3-14.1, *Light Armored Vehicle-25 Gunnery and Employment*, describes how the crew and section of the light armored vehicle-25 (LAV-25) conducts gunnery training for combat. MCWP 3-14.1 also provides the tactics, techniques, and procedures for use in engaging and destroying enemy targets with the LAV-25 weapons systems.

The target audience for this publication is LAV-25 crew members, vehicle commanders, unit master gunners, S-3 officers, and commanders of light armored reconnaissance units. MCWP 3-14.1 outlines a standardized way to train Marine LAV-25 gunners through the use of gunnery tables.

MCWP 3-14.1 supersedes FMFM 6-32, *Light Armored Vehicle Gunnery Employment*, dated 28 August 1992.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

J. E. RHODES
Lieutenant General, U.S. Marine Corps
Commanding General
Marine Corps Combat Development Command

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To Our Readers

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Unless otherwise stated, whenever the masculine or feminine gender is used, both men and women are included.

Light Armored Vehicle-25 Gunnery and Employment

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Chapter 1
Weapons Systems and Capabilities

Through its combination of lethal weapons systems, mobility, speed, and agility over rough and varied terrain, the light armored vehicle (LAV) gives its crew the means to survive as an effective fighting element.

The LAV-25 is a lightly armored, eight-wheeled, amphibious vehicle. It is equipped with a stabilized 25mm cannon, a pintle-mounted 7.62mm machine gun, and a coaxially mounted 7.62mm machine gun capable of engaging mechanized targets and personnel.

The LAV-25 also uses the LAV-25 Day/Night Sight to provide enhanced night/battlefield smoke fighting and thermal imaging/target acquisition. This fire control sighting system is capable of attaining a high percentage of first round, destructive target hits.

Manned and operated by a driver, a gunner, and a vehicle commander, the LAV-25 (fig. 1-1) is capable of carrying four infantry scouts in the

rear. A competent crew can bring accurate, high-volume firepower to bear against the enemy.

1001. M242 25mm Automatic Gun

The main armament of the LAV-25 is a 25mm, fully automatic, externally powered Bushmaster chain gun. (See fig. 1-2.) The M242 is turret-mounted with a 360-degree field of movement. The M242 is used to destroy lightly armored vehicles (BMPs, BRDMs, BTRs, etc.) and some aerial targets, such as helicopters and slow-flying aircraft. It is also used to suppress enemy positions such as troops in the open, in dug-in positions, or in built-up areas. See Technical Manual (TM) 08594A-10/1B, *LAV-25 Turret*, for detailed operator information.

a. Description

The dual-feed weapon system allows the crew to select and load two types of available service ammunition. The weapon system is externally

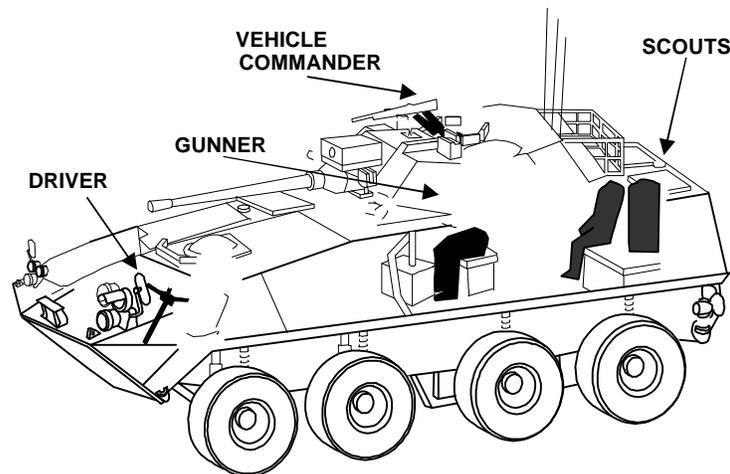


Figure 1-1. LAV-25.

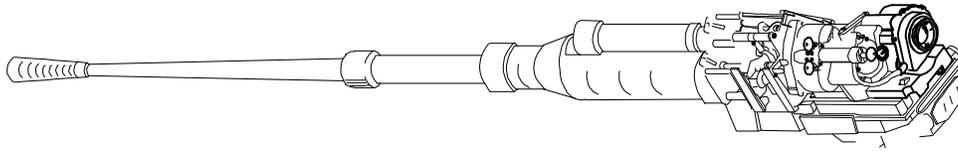


Figure 1-2. M242 25mm Automatic Gun.

WARNING

**25MM DISCARDED SABOT PETALS
MAY CAUSE DEATH OR SERIOUS
INJURY TO UNPROTECTED MARINES
LOCATED WITHIN THE WEAPON'S
DANGER ZONE THAT EXTENDS FROM
THE MUZZLE AT AN ANGLE OF 34
DEGREES ALONG THE LINE OF FIRE**

powered by a 1.5 horsepower direct current (DC) motor; this allows selection of three rates of fire.

Single shot (as fast as the commander or gunner can squeeze the trigger).

Low rate (100 rounds per minute, plus or minus 25 rounds/minute).

High rate (200 rounds per minute, plus or minus 25 rounds/minute).

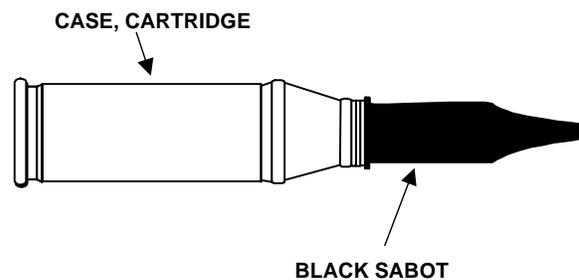
b. Ammunition

There are five basic types of rounds used with the 25mm gun. Each has its own unique characteristics and serves to fill a specific requirement for training and combat. Table 1-1 (page 1-6) presents each type of round, its capabilities, and uses. Appendix A provides details on proper procedures for cleaning, inspecting, and storing ammunition.

(1) M791 Armor-Piercing Discarding Sabot With Tracer (APDS-T). The M791 APDS-T cartridge (see fig. 1-3) penetrates lightly armored vehicles. Examples of lightly armored vehicles are BMPs, BMDs, BTRs, BRDMs, ZSUs, and self-propelled artillery.

The APDS-T is a fixed-type, percussion-primed round. It consists of a sabot-encapsulated projectile body crimped to a steel cartridge case. The projectile body consists of a solid tungsten alloy penetrator, pressed-on aluminum windshield, pressed-in tracer pellets, molded discarding-type nylon sabot, pressed-on polyethylene nose cap, and staked aluminum base.

Gases produced by the burning propellant discharge the projectile from the gun at 1,345 meters per second (plus or minus 20 meters per second) and ignite the tracer. Setback, centrifugal force, and air pressure cause the sabot to separate on leaving the gun barrel. The discarding sabot leaves the barrel at about a 34-degree angle along the gun-target line (17 degrees off each side) for 100 meters. The tungsten penetrator (core) is spin-stabilized and penetrates the target solely by kinetic energy.



Projectile:	Penetrator (core)-Tungsten alloy Sabot-Nylon, aluminum base Nose cap-Polyethylene
Color:	Black with white markings
Muzzle velocity:	1,345 meters per second

Figure 1-3. M791 Armor-Piercing Discarding