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2. NTRP 3-07.2.2 is effective upon receipt. Destroy superceded/cancelled material in accordance with SECNAVINST 5510.36.

3. NTRP 3-07.2.2 provides standardized weapons handling procedures that are essential for the safe and effective employment of these weapons. This publication should be used in conjunction with OPNAVINST 3591.1 series.

4. SECNAVINST 5510.31 provides procedures for disclosing this publication or portions thereof to foreign governments or international organizations.

Approved

A. H. KONEZNI, JR.
Deputy and Chief of Staff

1. NTRP 3-07.2.2 was reviewed for format and approved Joint and Navy Service Terminology. The contents of NTRP 3-07.2.2 support Navy Strategic and Operational Level doctrine.

R. A. ROUTE
Commander
Navy Warfare Development Command
1. NTRP 3-07.2.2 (AUG 2003), FORCE PROTECTION WEAPONS HANDLING STANDARD PROCEDURES AND GUIDELINES, is available in the Navy Warfare Library. It is effective upon receipt.

2. Summary: NTRP 3-07.2.2 provides standardized handling procedures that are essential for the safe and effective employment of the M9 and M11 service pistols, Mossberg 500 shotgun, M14 and M16 (series) rifles, M203 and M79 grenade launchers, M60 (series) and M240 (series) medium machine guns, M2HB (.50 caliber) heavy machine gun, MK19 (MOD 3) 40 mm grenade machine gun, MK 3A2 concussion grenade, nonlethal weapons, and simunitions.

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NTTP 3-07.3.2 (signature copy), NLW TACTICAL Employment of Nonlethal Weapons, December 2002.


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Simunitions, Manufacturer’s Technical Manual and Product Literature.
GLOSSARY

A

adapter kit, simunitions. Kit that changes the operating mode of a converted weapon from gas-operated to straight blowback.

administrative transport. A method of safely carrying a weapon without a holster with safety on, magazine removed, slide locked to the rear, chamber empty, and trigger finger along receiver.

ammunition. Consists of a casing, primer, propellent, and a projectile that can be fired from a weapon.

armorer. A person in charge of maintenance and repair of the small arms of a military unit.

armory. A building for storing military ordnance.

audible pop. A definitive sound during firing that indicates only a portion of the propellant has been ignited. Normally identifiable by reduced recoil, lower report, and the weapon’s failure to cycle.

B

balaclava. A hood covering the head and neck as protective clothing or to prohibit identification.

barrel. The cylindrical part or hollow shaft of a weapon through which ammunition travels.

barrel and receiver group. Serves as a support for all major components and controls the action of the weapon through the cycle of operation.

bayonet. A blade adapted to fit the muzzle end of a rifle and used as a weapon in close combat.

bipod. A stand having two legs for the support of a weapon.

bolt. The mechanism that contains the firing pin and the extractor.

bolt and carrier assembly. The mechanism that provides stripping, chambering, locking, firing, extraction, and ejection of cartridges using drive springs and propelling gases.

bore. The inside of a gun barrel containing lands and grooves.

breech. The part of a weapon behind the barrel.

buttstock. The portion of the weapon that rests firmly against the shoulder to provide basic firing control.

C

caliber. The inside diameter of the bore of a weapon, usually shown in hundredths of an inch or millimeters.

capsaicin. The active ingredient, derived from the pepper plant, used in Oleoresin Capsicum pepper spray.

carrying handle. Provides a means for hand-carrying a weapon.
cartridge. A cylindrical case of metal or plastic containing the charge, primer, and the projectile for a weapon.

cease fire. Cease engagement of the target.

chamber. An enclosed space in the bore of a gun that holds the charge.

chambering. The pushing of a round into the chamber.

charging handle. A mechanism that cocks a weapon.

clearing barrel. A receptacle that provides a safe direction in which to point a weapon when performing the load, make ready, unload or unload, show clear procedures.

cocking. Sets the hammer of a weapon in a position ready for firing.

compensator. A device that prevents a gun muzzle from rising.

concussion grenade. An offensive weapon designed to counter and repel threats, produce enemy casualties, and minimize fragmentation hazards to friendly troops.

condition one load. The action of inserting ammunition and chambering it in a weapon with the safety on.

cook-off. The unintentional discharge of a round by the heat of a very hot chamber and not by the firing system.

crew-served weapons. Weapons that require more than one person to operate.

D
decocking/safety lever. A built-in safety feature on a pistol that rotates the firing pin striker from any contact with the hammer and out of the path of the firing pin.

detonator assembly. The device that explodes the TNT filler on the MK 3A2 concussion grenade.

disassembly lever. A mechanism that rotates down, unlocking the slide from the receiver for disassembly.

disconnector. An internal safety feature that prevents a weapon from firing fully automatic.

double feed. A stoppage caused by two rounds becoming lodged in the receiver.

driving spring rod assembly. Provides energy for returning the bolt and opening the rod assembly to the firing position on a machine gun.

dud-fired grenade. A grenade that has not detonated as designed, but is still capable of detonating.

E
ejector. A device in a gun that ejects the empty shell after each firing.

elevation knob. A mechanism that adjusts the elevation of the aperture on the rear sight.

extracting/extractor. Withdrawal of the cartridge case from the chamber by means of an extractor claw.

F
feeding. The process of a round of ammunition leaving the magazine to be chambered.
fire. The action of taking a weapon off safe and pulling the trigger.

flash suppressor. A mechanism that reduces muzzle flash and helps reduce climb and recoil by venting gas to all sides of the muzzle.

fore-end. Used to open and close the bolt assembly of a shotgun, permitting loading and firing of the weapon and ejection of the spent cartridge.

front sight. A device located on the top of a gun barrel used to assist aim by guiding the eye to the target.

fuze. A mechanical or electrical mechanism used to detonate an explosive charge or device such as a bomb or grenade.

G

grenade. A small bomb or explosive missile that is detonated by a fuze and thrown by hand or launcher.

guard mount. Standardized weapons transfer and inspection procedures between personnel watches.

H

hammer. The part of a gunlock that strikes the firing pin.

hangfire. A dangerous situation in which the propellent has not fully ignited in the cartridge case but still has the potential to fire.

holster. A case of leather or similar material into which a pistol fits snugly and attaches to a belt or strap for carriage or transport of the weapon.

I

indexing the magazine. Removal of a filled magazine from the ammunition pouch and the subsequent movement of the index finger along the forward edge of the magazine until the finger is touching the tip of the round to ensure the magazine is filled.

L

lanyard. A cord attached to a pistol to maintain physical contact with the weapon.

load. The action of inserting ammunition into a weapon.

load and make ready. The action of loading and chambering a weapon with the safety on.

loading port. The area of a machine gun in which live rounds are inserted.

M

magazine. A removable supply chamber in some types of weapons in which cartridges are held to be fed into the firing chamber.

magazine tube. The cylinder on a shotgun located beneath the barrel that stores live rounds to be fed into the firing chamber.

make ready. The action of chambering ammunition in a weapon with the safety on.
malfunction. The failure of a weapon to fire satisfactorily or perform as designed.

marking cartridge. Reduced-energy cartridges, loaded with a soap-based marking compound (nonlethal) for use in simunitions training, that leaves a red or blue mark on the target.

maximum effective range. The greatest distance anticipated for accurate target engagement.

maximum range. The greatest distance anticipated for ammunition to travel.

misfire. Failure of a weapon to fire as anticipated.

muzzle. The forward, discharging end of the barrel of a weapon.

nonlethal weapons. Weapons not capable of causing death.

Oleoresin Capsicum (OC) spray. A skin and mucous membrane irritant that is used as a nonlethal weapon.

operating rod handle. A device that cocks a weapon.

pepper spray. Common name for Oleoresin Capsicum (OC) spray.

pistol grip. A handle that is designed to be grasped and held.

primer. A cap or tube containing a small amount of explosive used to detonate the main explosive charge of a weapon.

projectile. An object that is fired, thrown, or otherwise propelled forward such as a bullet, charge of shot, or grenade.

pump. On some shotguns, the method of operation that ejects spent shell casings and loads the ammunition.

range. The maximum effective horizontal distance that a weapon can deliver a projectile.

rear sight. Focuses the eye on target and is adjustable for windage and elevation.

recoil. The backward action of a weapon upon firing.

remedial action. Action taken to assess an interruption in a weapon’s cycle of operation or expected performance and the steps necessary to correct the problem.

riot baton. A nonlethal impact weapon utilized for crowd control and self-defense.

runaway gun. When a weapon continues to fire after the trigger is released. Also called uncontrolled fire.

sabot. A lightweight carrier in which a projectile of a smaller caliber is centered so as to permit firing the projectile within a larger-caliber weapon.
safety. The mechanism that allows a weapon to fire when in the off position and prevents firing in the on position.

sear. The catch in a gunlock that keeps the hammer half-cocked or fully cocked.

selector. A mechanism that selects the mode of firing. Also called the selector lever.

serrated sides. The section of a pistol slide provided for establishing a firm grip to chamber a round or lock slide to rear.

show clear transfer. Safe procedure for transferring a weapon from one person to another with ammunition removed, chamber empty, and safety on.

sight. A device on a weapon used to assist aim by guiding the eye.

simunitions. A nonlethal, small-arms training system developed for the M16 series of weapons and for the M9 pistol.

single action trigger pull. On pistols, the hammer is cocked and the weight of the pull is reduced.

sling. A strap used to carry a weapon over the shoulder.

stock. The rear wooden, metal, or plastic handle or support of a rifle or automatic weapon to which the receiver is attached.

stoppage. An unintentional interruption in the cycle of operation usually discovered when the weapon will not fire.

swivel. The device that secures the sling to the weapon.

T

target. In weapons training, an object that is shot at to test accuracy. In combat, an object or opponent shot at in order to secure an objective.

target range. A place equipped for practice in shooting at targets.

transports. Procedures for safely carrying a weapon while concurrently staying prepared to engage a threat.

trigger. The lever pressed by the finger to discharge a weapon.

trigger guard. A mechanism that protects the trigger from being accidentally depressed.

trigger pull. Characteristic weight or distance of the trigger mechanism while firing.

tritium sights. Radioactive material sealed in Pyrex tubes providing self-luminous front and rear sights.

U

uncontrolled fire. Occurs when a machine gun continues to fire after the trigger is released. Also called runaway gun.

unload. The act of removing ammunition from a weapon with the safety on.

unload, show clear. The action of checking the weapon to verify that no ammunition is present and the weapon is on safe.
**weapon condition codes.** Defines a weapon’s readiness to fire and its corresponding safety status, designated by Condition 1, 2, 3, or 4, as applicable.

**weapon handling commands.** Specified steps in the loading and unloading process of a weapon to change the readiness condition.

**weapons carries.** Methods of carrying weapons that keep personnel in a state of increased readiness as threat levels increase.

**weapons transfer.** Any voluntary exchange of a weapon between individuals.

**windage knob.** A mechanism located on the side of the sight assembly of a rifle that adjusts the lateral movement of the rear sights.
NTRP 3-07.2.2, FORCE PROTECTION WEAPONS HANDLING STANDARD PROCEDURES AND GUIDELINES (AUG 2003), is designed as a guide to provide standardized weapons handling procedures that are essential for the safe and effective employment of these weapons. The target audiences for NTRP 3-07.2.2 include all Navy personnel assigned duties involving the use of weapons covered in this publication. This publication should be used in conjunction with OPNAVINST 3591.1 series.

Throughout this publication, references to other publications imply the effective edition.

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SUBMITTED BY: _____________________________ _____________________________
(ORIGINATING COMMAND) (ORIGINATOR SEQUENCE NO.)

______________________________ _____________________________
(POINT OF CONTACT) (PHONE - IDENTIFY DSN OR COMM)

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CONFERENCE DATE: ________________ CONFERENCE AGENDA ITEM NO.: ________

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(CLASSIFICATION)
SUBJ/URGENT CHANGE RECOMMENDATION FOR NTRP 3-07.2.2 (AUG 2003)
URGENT CHANGE RECOMMENDATIONS

When items for changes are considered to be urgent (as defined in NTTP 1-01, and including matters of safety), this information shall be sent by message (see accompanying sample message format) to Commander, Fleet Forces Command, with information copies to Navy Warfare Development Command, and all other commands concerned, clearly explaining the proposed change. Information addresses should comment as appropriate. See NTTP 1-01.

CHANGE SYMBOLS

Revised text in changes is indicated by a black vertical line in the outside margin of the page, like the one printed next to this paragraph. The change symbol shows where there has been a change. The change might be material added or information restated. A change symbol in the outside margin by the chapter number and title indicates a new or completely revised chapter.

WARNINGS, CAUTIONS, AND NOTES

The following definitions apply to “WARNINGs,” “CAUTIONs,” and “Notes” found throughout the manual.

![WARNING]

An operation procedure, practice, or condition that may result in injury or death if not carefully observed or followed.

![CAUTION]

An operating procedure, practice, or condition that may result in damage to equipment if not carefully observed or followed.

Note

An operating procedure, practice, or condition that is essential to emphasize.

WORDING

The concept of word usage and intended meaning which has been adhered to in preparing this publication is as follows:

“Shall” has been used only when application of a procedure is mandatory.

“Should” has been used only when application of a procedure is recommended.

“May” and “need not” have been used only when application of a procedure is optional.

“Will” has been used only to indicate futurity, never to indicate any degree of requirement for application of a procedure.
CHAPTER 1

Introduction to Weapons Safety, Procedures, and Controls

1.1 SCOPE

This publication contains safety information, authorized procedures, and proper control guidance for Navy small arms, grenade launchers, crew-served weapons, and nonlethal weapons. Chapter 1 addresses safety procedures and controls applicable to all weapons. Chapters 2 through 13 present individual weapons data. Chapter 14 covers approved nonlethal weapons. Chapter 15 describes how to use simunitions as a nonlethal, small-arms, tactical training tool.

The target audiences for NTRP 3-07.2.2 include all Navy personnel assigned duties involving the use of weapons covered in this publication.

1.2 WEAPONS SAFETY

The most prevalent factor in accidents involving firearms is the assumption that the weapon is not loaded. Observing four safety rules (see Figure 1-1) will ensure safe and effective weapon handling both on the range and in combat.

Treat every weapon as if it were loaded.

Proper weapons handling is the responsibility of the person in control of the weapon. Pointing or aiming a functional weapon at any person or thing is unlawful except when required in the performance of duty. When armed with any weapon for which chambering a round has been authorized, personnel must ensure that the safety remains in the safe position until immediately prior to firing.

1.2.1 Universal Weapons Safety Rules

Responsible weapon handling comes as a result of following specific safety rules. The safety rules set forth in Figure 1-1 must be observed at all times for all weapons.

Never insert finger inside trigger guard until prepared to discharge weapon.

Note

Be sure of the target, what is beyond the target, and the maximum range and capabilities of the weapon being used.
1.2.2 General Weapon Condition Codes

A weapon’s readiness to fire and its corresponding safety status are described using one of four numbered condition codes. General weapon condition codes are defined in Figure 1-2. Weapon-specific condition codes are detailed in individual chapters of this publication.

1.2.3 Weapon Handling Commands

The steps in the loading and unloading process provide safe, standard procedures to change a weapon’s readiness to fire from one condition to another. Standard weapon handling commands are defined in Figure 1-3.

1.3 GUARD MOUNT PROCEDURES

Guard mount procedures standardize watch turnover between oncoming and offgoing personnel. The supervisor must be thoroughly familiar with all matters directly related to the watch and ensure all personnel are briefed and fully prepared to assume duties. The actions listed in Figure 1-4 are procedures to be completed during guard mount. Supervisors familiar with weapons inspections conducted while in formation should note that these steps have not been included for safety reasons. Should a supervisor wish to inspect cleanliness or functioning of weapons, he or she should do so prior to weapons being loaded (during the clearing barrel procedures). Once clearing barrel procedures have been completed and weapons are loaded, security personnel should not change the condition of their weapon unless it appears that the use of deadly force may be necessary. Command-specific guard mount procedures may amplify the basic list. Guard mount procedures are delineated in this publication to ensure that the safe handling procedures for firearms and ammunition discussed herein are effectively integrated in all guard mounts.

1.4 GENERAL CLEARING BARREL PROCEDURES

The supervisor initiates clearing barrel procedures during guard mount (see item 2 of Figure 1-4). Each person shall repeat all commands from the supervisor during clearing procedures. Weapon-specific clearing barrel procedures are defined in individual weapon chapters of this publication.

1.5 PROCEDURES AND CONTROLS

The operational risk management (ORM) process is a decision-making tool used to increase operational effectiveness by anticipating hazards, reducing the potential for loss, and increasing the probability of a successful mission.

---

<table>
<thead>
<tr>
<th>RULE #</th>
<th>SAFETY RULE</th>
<th>RATIONALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Treat every weapon as if it were loaded.</td>
<td>This rule will prevent unintentional injury to personnel or damage to property that could occur when handling or transferring possession of a weapon. Every firearm should be considered loaded until it has been examined and proven otherwise. Upon receipt of the weapon, the chamber should be checked to ensure it is not loaded.</td>
</tr>
<tr>
<td>2</td>
<td>Never point a weapon at anything you do not intend to shoot.</td>
<td>This rule enforces the importance of maintaining awareness of the direction the muzzle is aimed and reinforces positive identification of the target.</td>
</tr>
<tr>
<td>3</td>
<td>Keep your finger straight and off the trigger until ready to fire.</td>
<td>This rule also minimizes the risk of firing any weapon negligently and also reinforces positive identification of the target.</td>
</tr>
<tr>
<td>4</td>
<td>Keep the weapon on safe until you intend to fire.</td>
<td>This rule enforces the use of the weapons safety feature(s) and reinforces positive identification of the target.</td>
</tr>
</tbody>
</table>

Figure 1-1. Safety Rules for Responsible Weapons Handling
ORM seeks to minimize risk to a level commensurate with mission accomplishment. The amount of risk acceptable during an armed conflict is much greater than that during peacetime. Applying the ORM process in both instances reduces mishaps, lowers costs, and provides for more efficient use of resources.

ORM administrative and engineering controls are incorporated into the weapons standard operating procedures and guidelines presented in the following chapters. Loading and unloading procedures, barrel clearing procedures, drawing procedures, presenting procedures, and remedial action procedures are set forth in a format that facilitates training of personnel to safely and effectively employ Navy weapons. Standardization of these procedures limits the exposure of personnel to hazards inherent in weapons handling and ensures that personnel throughout the Navy handle weapons in a consistent manner.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ammunition is in a position to be fired. Safety is on.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable for weapons in this reference.</td>
</tr>
<tr>
<td>3</td>
<td>Ammunition is in position to be chambered. Chamber is empty. Action is closed. Safety is on.</td>
</tr>
<tr>
<td>4</td>
<td>All ammunition is removed. Chamber is empty. Action is closed. Safety is on.</td>
</tr>
</tbody>
</table>

Figure 1-2. General Weapon Condition Codes

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load</td>
<td>Take the weapon from Condition 4 to Condition 3.</td>
</tr>
<tr>
<td>Make Ready</td>
<td>Take the weapon from Condition 3 to Condition 1.</td>
</tr>
<tr>
<td>Load and Make Ready</td>
<td>Take the weapon from Condition 4 to Condition 1.</td>
</tr>
<tr>
<td>Fire</td>
<td>Engage the target.</td>
</tr>
<tr>
<td>Cease Fire</td>
<td>Cease engagement of the target.</td>
</tr>
<tr>
<td>Unload</td>
<td>Take the weapon from Condition 1 or 3 to Condition 4.</td>
</tr>
<tr>
<td>Unload, Show Clear</td>
<td>With a supervisor, check the weapon to verify that no ammunition is present before the weapon is put in Condition 4.</td>
</tr>
</tbody>
</table>

Figure 1-3. Standard Weapons Handling Commands

ORM seeks to minimize risk to a level commensurate with mission accomplishment. The amount of risk acceptable during an armed conflict is much greater than that during peacetime. Applying the ORM process in both instances reduces mishaps, lowers costs, and provides for more efficient use of resources.

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<table>
<thead>
<tr>
<th></th>
<th>Guard Mount Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Issue firearms and ammunition.</td>
</tr>
<tr>
<td>2</td>
<td>Conduct supervised clearing barrel procedures.</td>
</tr>
<tr>
<td>3</td>
<td>Formation.</td>
</tr>
<tr>
<td>4</td>
<td>Conduct muster.</td>
</tr>
<tr>
<td>5</td>
<td>Inspect personnel for neatness, clean uniforms, proper equipment, and fitness for duty.</td>
</tr>
<tr>
<td>6</td>
<td>Brief personnel on applicable status of forces agreement (SOFA).</td>
</tr>
<tr>
<td>7</td>
<td>Brief personnel on prevailing rules of engagement (ROE).</td>
</tr>
<tr>
<td>8</td>
<td>Brief personnel on use of force.</td>
</tr>
<tr>
<td>9</td>
<td>Brief personnel on prevailing force protection condition (FPCON).</td>
</tr>
<tr>
<td>10</td>
<td>Brief personnel on current intelligence.</td>
</tr>
<tr>
<td>11</td>
<td>Brief personnel on previous watch events.</td>
</tr>
<tr>
<td>12</td>
<td>Brief personnel on special orders, events, and expected VIP visits.</td>
</tr>
<tr>
<td>13</td>
<td>Resolve personnel issues and concerns.</td>
</tr>
<tr>
<td>14</td>
<td>Post personnel to watch stations for turnover.</td>
</tr>
</tbody>
</table>

Figure 1-4. Guard Mount Procedures
CHAPTER 2

M9 Service Pistol

2.1 M9 SERVICE PISTOL DESCRIPTION AND FUNCTION

This section provides the description of the M9 service pistol and information necessary to understand the M9’s technical characteristics, major components, cycle of operation, safety features, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

2.1.1 Description of the M9 Service Pistol

The M9, shown in Figures 2-1 and 2-2, is the standard sidearm for the U.S. Navy. It is a magazine-fed, recoil-operated, semiautomatic, hand-held weapon. It is chambered for the 9mm ball, NATO M882 round, and can be fired in both double- and single-action modes. It has a thumb safety mounted on the slide that acts as the decocking lever. The magazine has a 15-round capacity. The M9 is a defensive weapon that is typically used at ranges of less than 50 yards.

2.1.2 M9 Service Pistol Technical Characteristics

Technical characteristics of the M9 are listed in Figure 2-3.

![M9 Service Pistol Diagram](image)

Figure 2-1. M9 Service Pistol Left Side
2.1.3 M9 Service Pistol Major Components

The M9 has three major component groups:

1. Receiver assembly (Figure 2-4)
2. Slide and barrel assembly (Figure 2-5)

2.1.3.1 Receiver Assembly

The receiver assembly serves as a support for all major components and controls the action of the pistol through major component functions.

2.1.3.2 Slide and Barrel Assembly

The slide and barrel assembly houses the firing pin and extractor and cocks the hammer during the recoil cycle. The barrel houses the cartridge for firing and directs the projectile.

2.1.3.3 Magazine Assembly

The magazine assembly holds 15 cartridges in place for feeding and chambering of ammunition. As the last round is fired, the magazine spring exerts upward pressure on the magazine follower. This process exerts upward pressure on the slide stop and locks the slide in the rear position, indicating that the magazine is empty.
<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>AMMUNITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>M9</td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-118-2640</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Beretta, USA</td>
</tr>
<tr>
<td>Caliber</td>
<td>0.35 caliber (9 mm)</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Double-action semiauto</td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Double-stacked box</td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>15 + 1 rounds</td>
</tr>
<tr>
<td>Weight (Empty)</td>
<td>34 ounces (0.97 kg)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>8.54 in (217 mm)</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>4.92 in (125 mm)</td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>1,230 fps (375 mps)</td>
</tr>
<tr>
<td>Chamber Pressure</td>
<td>30,000 PSI (206,843 kPa)</td>
</tr>
<tr>
<td>Single-Action Trigger Pull</td>
<td>4.0 to 6.4 lb (1.8 to 2.9 kg)</td>
</tr>
<tr>
<td>Double-Action Trigger Pull</td>
<td>9.9 to 16.1 lb (4.5 to 7.3 kg)</td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>165 ft (50 m)</td>
</tr>
<tr>
<td>Maximum Range</td>
<td>5,900 ft (1,800 m)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>LOGISTICS</td>
<td></td>
</tr>
<tr>
<td>In-service date</td>
<td>1994</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>15,000 rounds</td>
</tr>
<tr>
<td>Technical manual #</td>
<td>TM 9-1005-317-23&amp;P</td>
</tr>
<tr>
<td>Operator manual #</td>
<td>TM 9-1005-317-10</td>
</tr>
<tr>
<td>SAFETIES</td>
<td></td>
</tr>
<tr>
<td>Decocking/safety lever</td>
<td></td>
</tr>
<tr>
<td>Firing pin block</td>
<td></td>
</tr>
<tr>
<td>Half-cock notch</td>
<td></td>
</tr>
<tr>
<td>WARNING</td>
<td></td>
</tr>
<tr>
<td>Never mix live ammunition and dummy ammunition.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2-3. M9 Service Pistol Specifications, Ammunition, Logistics, and Safeties
2.1.4 M9 Service Pistol Associated Components

The holster and lanyard are associated components of the M9. The holster provides a common, safe method of carrying the M9. The lanyard prevents loss of physical control of the pistol.

2.1.5 Cycle of Operation for the M9 Service Pistol

It is important to understand the routine cycle of operation of the M9 to ensure it is readily available for action. The eight steps in the cycle of operation of the M9 are listed in Figure 2-6.

2.1.6 Inherent Safety Features of the M9 Service Pistol

The M9 has three safety features (the disconnector serves as an additional internal safety):

1. Decocking/safety lever
2. Firing pin block

2.1.6.1 Decocking/Safety Lever

The safety permits safe operation of the pistol by both right- and left-handed shooters. As the safety is moved to the

---

**Table: Receiver Assembly**

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger Guard</td>
<td>Protects trigger.</td>
</tr>
<tr>
<td>Magazine Well</td>
<td>Magazine insertion area.</td>
</tr>
<tr>
<td>Pistol Grip</td>
<td>Provides handhold.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Initiates firing sequence.</td>
</tr>
<tr>
<td>Hammer</td>
<td>Cocked by double-action trigger squeeze or by rearward movement of the slide.</td>
</tr>
<tr>
<td>Magazine Catch</td>
<td>1. Reversible for left- or right-handed shooters.</td>
</tr>
<tr>
<td></td>
<td>2. Retains/releases magazine.</td>
</tr>
<tr>
<td>Slide Stop</td>
<td>1. Locks slide rearward (open).</td>
</tr>
<tr>
<td></td>
<td>2. Operates manually or automatically by follower when magazine is empty.</td>
</tr>
<tr>
<td>Disassembly Button</td>
<td>1. Right side of receiver.</td>
</tr>
<tr>
<td></td>
<td>2. Allows rotation of disassembly lever.</td>
</tr>
<tr>
<td>Disassembly Lever</td>
<td>Rotates down, unlocking slide from receiver for disassembly.</td>
</tr>
<tr>
<td>Ejector</td>
<td>1. Fixed.</td>
</tr>
<tr>
<td></td>
<td>2. Ejects empty shell casings from ejection port.</td>
</tr>
</tbody>
</table>

Figure 2-4. M9 Service Pistol Receiver Assembly
<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
</table>
| Slide                       | 1. Serrated for manual retraction.  
2. Cocks hammer during rearward movement.                                                              |
| Firing Pin Assembly         | 1. Striker.                                                                                               |
|                             | 2. Firing pin.                                                                                           |
| Extractor (loaded chamber   | 1. Hooks over cartridge case extraction groove.  
2. Pulls round rearward.  
4. Red top edge.  
5. Protrudes on right side of slide and can be felt.                                               |
| indicator)                  |                                                                                                           |
| Decocking/Safety Lever      | 1. Up position (red dot shows) FIRE.  
2. Down position DECOCK/SAFE.  
3. Moving to DECOCK/SAFE drops hammer without discharging weapon.  
4. Rotates firing pin striker from any contact with hammer and out of path of firing pin.          |
| Fixed Sights                | 1. Front: blade type.  
2. Rear: notched bar dovetail type.                                                                       |
| Firing Pin Block            | 1. Sits in firing pin notch to prevent forward movement of firing pin.  
2. Prevents firing pin from moving forward until trigger is squeezed.                                    |
| Barrel (rear of barrel is   | The barrel assembly houses the round for firing, directs the projectile, and locks the barrel in position  |
| chamber/loading ramp)       | during firing.                                                                                            |
| Recoil Spring               | 1. Absorbs recoil.                                                                                       |
|                             | 2. Returns slide forward.                                                                               |
| Recoil Spring Guide         | Keeps recoil spring straight and properly positioned.                                                    |
| Locking Block               | Locks barrel in position during firing.                                                                  |
| Locking Block Plunger       | Releases barrel assembly from slide assembly.                                                            |

Figure 2-5. M9 Service Pistol Slide and Barrel Assembly
### 2.1.6.2 Firing Pin Block

The firing pin block rests in the firing pin notch and prevents movement of the firing pin until the trigger is pulled. As the trigger is pulled, the firing pin block moves up and out of the firing pin notch. This movement allows a round to be fired when the hammer strikes the firing pin.

### 2.1.6.3 Half-Cock Safety Notch

The half-cock notch interrupts forward movement of the hammer during a mechanical failure. This feature prevents the hammer from following the slide forward in the event of a mechanical failure or if the trigger finger is stopped or slips off the trigger during trigger squeeze. Should one of these conditions occur, the hammer stops its forward movement at the half-cock notch and prevents the weapon from firing.

#### Note

The weapon can be fired from the half-cock position by squeezing the trigger.

### 2.1.6.4 Disconnector

The disconnector is an internal, additional safety that prevents the weapon from firing fully automatic. If the slide does not return to the full battery position due to a pistol, magazine, or ammunition malfunction, the internal link is not made between the sear and the hammer. After firing the weapon, the trigger must be released to reset the trigger and the link between the sear and hammer.

---

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>Stripping of a round from the magazine by the face of the slide.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Pushing of the round into the chamber by the face of the slide.</td>
</tr>
<tr>
<td>Locking</td>
<td>Locking block lugs move into locking block recesses on the right and left side of the slide.</td>
</tr>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within the cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>As slide assembly moves to the rear, the locking block rotates out of the notches in the slide, allowing the slide to continue rearward.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Withdrawal of the cartridge case from the chamber by the extractor claw.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Cartridge case contacts the ejector and is knocked up and out of the slide’s ejection port.</td>
</tr>
<tr>
<td>Cocking</td>
<td>Rearward movement of the slide overrides the hammer and forces the hammer into its most rearward position.</td>
</tr>
</tbody>
</table>

Figure 2-6. M9 Service Pistol Cycle of Operation

safe (down) position, the firing pin striker moves out of alignment with the firing pin. This movement prevents the pistol from firing as the hammer moves forward.

#### Note

In the fire (up) position, a red dot is visible, indicating the pistol is ready to fire.
2.1.7 Introduction to Remedial Action

The M9 service pistol is an effective and extremely reliable weapon. Proper care and preventive maintenance will usually ensure pistol serviceability. Although infrequent, both malfunctions and stoppages do occur.

2.1.7.1 Malfunctions

A malfunction is a failure of the pistol to fire satisfactorily or to perform as designed. However, a malfunction does not necessarily cause an interruption in the cycle of operation. An example of a malfunction is a broken front sight. Although the front sight is an important component of the M9, it does not affect the firing function of the pistol. When a malfunction occurs, the pistol must be repaired by an armorer.

2.1.7.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the pistol will not fire. Many stoppages of the M9 pistol occur as a result of shooter error. Some shooter-induced stoppages are listed in Figure 2-7.

It is important to understand that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur with the M9 service pistol. Therefore, personnel must be trained to quickly assess the cause of the stoppage and take appropriate remedial action to clear it. Procedures to be used to clear stoppages that occur while on the range and in tactical situations are discussed in the following two sections.

2.1.7.3 Clearing Stoppages on the Range

Because of safety procedures in place on the range, stoppages are handled differently than when in a tactical environment. Learning how to clear stoppages should be accomplished through repetitious training in a sterile training environment where there is no live ammunition present. Trainers should set up drills that encourage personnel to repetitiously practice clearing different types of stoppages.

2.1.7.3.1 Clearing a Stoppage During a Navy Handgun Qualification Course

When a shooter experiences a stoppage during a Navy handgun qualification course, the following steps shall be immediately followed:

1. Remove finger from trigger and place it straight alongside the receiver.
2. Raise the nonfiring hand while maintaining muzzle awareness and discipline, with muzzle pointed straight downrange.
3. Wait for the line coach.
4. Upon completion of the stage of fire, the range safety officer will direct the line coach to make an assessment.
5. The line coach will assess the problem that created the stoppage.
6. If the possibility of an audible pop/reduced recoil (defined in paragraph 2.1.7.3.2) exists, the line coach will take control of the weapon and check for a bore obstruction.
7. If there is a bore obstruction, the weapon will be removed from the firing line, tagged, boxed, and shipped to Crane Division, Naval Surface Warfare Center.
8. If the stoppage is shooter-induced, the line coach will take the ammunition for that stage of fire.
2.1.7.3.2 Clearing a Stoppage During a Practical Weapons Course

When a shooter experiences a stoppage during a practical weapons course, the following steps shall be immediately followed:

1. Remove finger from trigger and place it straight alongside the receiver.

2. Engage decocking/safety lever.

3. Get behind cover.

4. Assess what caused the stoppage:

   a. Audible pop/reduced recoil. An audible pop occurs when only a portion of the propellant is ignited. It is normally identifiable by reduced recoil and a lower report. The pistol will not cycle, leaving the slide and hammer forward. This stoppage is sometimes accompanied by excessive smoke escaping from the chamber area. This can create a dangerous situation where the projectile becomes lodged in the bore. Before actions are initiated, wait a minimum of 10 seconds to ensure this is not a delay in the primer igniting the propellant (hangfire).

   ![WARNING]

   When not sure why a stoppage has occurred, personnel should err on the side of safety; check for a bore obstruction only after waiting a minimum of 10 seconds to ensure a hangfire did not occur.

   b. Slide not forward in battery. Dirty ammunition or a dirty pistol can cause the slide to not move completely forward. When the slide is not forward in the battery, it can also be referred to as not fully seated.
c. Stovepipe. A stovepipe occurs when the weapon fails to eject the casing, causing the brass to be caught between the chamber and the slide.

d. Double feed. A double feed occurs when two rounds become lodged in the receiver.

### 2.1.7.4 Clearing Stoppages in Tactical Situations (Only)

Remedial action includes investigating the cause of the stoppage, clearing the stoppage, and returning the weapon to operation. When performing remedial action in tactical situations (only), the first step should be to seek cover (if available). Once a weapon ceases firing, the shooter should make a quick assessment to determine the cause of the stoppage before attempting to clear it. This assessment will determine what steps should be taken to clear the stoppage:

1. Remove finger from trigger and place it straight alongside the receiver.

2. Bring the weapon to a position close to the body while maintaining muzzle awareness. Visually inspect the weapon.

3. Quickly assess cause of stoppage:

   a. Audible pop/reduced recoil creating an obstructed bore. It is advisable to wait 10 seconds before checking to see if there is an obstructed bore. In a hostile situation, however, there may not be enough time to permit the shooter to wait 10 seconds. This is a decision the shooter must make.

   **Note**

   When an obstructed bore is identified in a tactical situation (only), the shooter should use some type of field expedient (e.g., a cleaning rod) to attempt to clear the obstruction.

   b. Slide not forward in battery.

   c. Stovepipe.

   d. Double feed.

   e. Magazine not seated.

4. Take appropriate action to reduce stoppage, based on cause.

### 2.1.8 Weapon Condition Codes for the M9 Service Pistol

The M9 safety status is defined by one of four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M9 are defined in Figure 2-8.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Magazine inserted, round in chamber, slide forward, safety on.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Magazine inserted, chamber empty, slide forward, safety on.</td>
</tr>
<tr>
<td>4</td>
<td>Magazine removed, chamber empty, slide forward, safety on.</td>
</tr>
</tbody>
</table>

Figure 2-8. M9 Service Pistol Weapon Condition Codes
2.1.9 Weapon Handling Commands for the M9 Service Pistol

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 2-9, when consistently and properly used, will result in safe and proficient handling of the M9.

2.2 SAFE WEAPON HANDLING PROCEDURES FOR THE M9 SERVICE PISTOL ON THE RANGE

This section provides the information necessary to understand the conditions of readiness and operation specific to the M9 service pistol. The standardized procedures included in this section, when consistently applied, will maximize safety during weapon handling and promote the effective employment of the M9.

The weapon handling commands defined in Figure 2-9 are executed as set forth in the following paragraphs.

Note

Before loading the M9, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

2.2.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the pistol from Condition 4 to Condition 3:

1. Ensure the pistol is in Condition 4.

2. With the firing hand firmly gripping the pistol and the pistol pointed in a safe direction, rotate the pistol so the magazine well is inboard and clearly visible. Draw the firing elbow in to facilitate control of the pistol, keeping the muzzle pointed in a safe direction.

3. With the nonfiring hand, remove a filled magazine from the ammunition pouch. To ensure the magazine is filled, slide the index finger along the forward edge of the magazine until the finger is touching the tip of the round. This step is referred to as indexing the magazine. The extended finger can also act as a guide in lining the magazine up with the magazine well.

4. Insert the filled magazine into the magazine well, verifying orientation of magazine with index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated. The weapon is now in Condition 3.

Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.

Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

2.2.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the pistol from Condition 3 to Condition 1:

! CAUTION

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.

- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.
1. Firmly grip the pistol with the firing hand. Ensure the pistol is pointed in a safe direction, with the slide in the forward position.

2. To facilitate pulling the slide to the rear, rotate the magazine well outboard. With the fingers and thumb of the nonfiring hand, grasp the serrated sides of the slide just forward of the safety.

3. Pull the slide to its rearmost position by pushing forward with the firing hand while pulling back on the slide with the nonfiring hand.

4. Release the slide. This action will strip a round from the magazine and chamber it as the slide moves forward.

5. Check to ensure a round has been properly chambered by checking the extractor/loaded chamber indicator on the right side of the pistol.

**Note**

When there is a round in the chamber, the upper surface of the extractor protrudes from the right side of the slide. The protrusion can be felt by sliding a finger or thumb of the nonfiring hand over the top of the slide and across the extractor. This check is effective during both daylight and darkness.

### 2.2.3 Procedures to LOAD AND MAKE READY

On the command LOAD AND MAKE READY, personnel shall perform the following steps to take the pistol from Condition 4 to Condition 1:

1. Ensure the pistol is in Condition 4, with the slide locked to the rear.

2. Visually and physically verify that the pistol is clear and safe.

3. With the firing hand firmly gripping the pistol and the pistol pointed in a safe direction, rotate the pistol so the magazine well is inboard and clearly visible. Draw the firing elbow in to facilitate control of the pistol, keeping the muzzle pointed in a safe direction.

4. With the nonfiring hand, remove a filled magazine from the ammunition pouch. To ensure the magazine is filled, slide the index finger along the forward edge of the magazine until the finger is touching the tip of the
round. This step is referred to as indexing the magazine. The extended finger can also act as a guide in lining the magazine up with the magazine well.

5. Insert the filled magazine into the magazine well, verifying orientation of magazine with the index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated.

![CAUTION]

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.

- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

6. Visually and physically ensure that the firearm is on safe.

7. With the trigger finger extended straight along the receiver, release the slide to chamber a round. Visually and physically verify the slide is fully forward. Ensure a round is chambered by physically checking the loaded chamber indicator.

**Note**

When there is a round in the chamber, the upper surface of the extractor protrudes from the right side of the slide. The protrusion can be felt by sliding a finger or thumb of the nonfiring hand over the top of the slide and across the extractor. This check is effective during both daylight and darkness.

8. Ensure that the safety is on and that the hammer is forward. Assume a carry or transport, further described in paragraph 2.4.2.

**2.2.4 Procedures to FIRE**

On the command FIRE, personnel shall perform the following steps:

1. With a straight trigger finger, use the nonfiring thumb to take the pistol off safe by releasing the decocking/safety lever.

   **Note**

   The safety is disengaged and the finger goes on the trigger only when the sights and muzzle are on target.

2. Place the trigger finger on the trigger and apply pressure to the trigger until the shot is fired.

**2.2.5 Procedures to CEASE FIRE**

On the command CEASE FIRE, personnel shall perform the following steps:

1. Remove the finger from the trigger and place it straight along the receiver.
2. Place the pistol on safe by pressing the decocking/safety lever down.

3. Assume a carry or transport, further described in paragraph 2.4.2.

2.2.6 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. With the firing hand firmly gripping the pistol, ensure the pistol is on safe by pressing the decocking/safety lever down.

2. Rotate the pistol so the magazine well is pointed inboard and angled down.

3. Depress the magazine catch to remove the magazine from the pistol. Catch the magazine with the nonfiring hand and stow on person.

4. Push upward on the slide stop with the firing thumb while maintaining pressure. Rotate the pistol so the chamber is outboard.

5. Reach over the top of the pistol with the nonfiring hand and grasp the slide serrations. The nonfiring hand should partially cover the ejection port, positioned to catch an ejected round.

6. With the pistol pointed in a safe direction, fully retract the slide and lock it to the rear. At the same time, catch the ejected round with the nonfiring hand.

7. Rotate the pistol so the inside of the chamber is visible. Visually inspect the magazine well and chamber to ensure they are empty.

8. Press the slide stop to release the slide. Visually ensure the slide moves forward over an empty chamber.

9. Using the thumb of the nonfiring hand, check to ensure decocking/safety lever is down in the safe position.

2.2.7 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. With the firing hand firmly gripping the pistol, ensure the pistol is on safe by pressing the decocking/safety lever down.

2. Rotate the pistol so the magazine well is pointed inboard and angled down.

3. Depress the magazine catch to remove the magazine from the pistol. Catch the magazine with the nonfiring hand and stow on person.

4. Push upward on the slide stop with the firing thumb, while maintaining pressure on the stop. Rotate the pistol so the chamber is outboard.

5. Reach over the top of the pistol with the nonfiring hand and grasp the slide serrations. The nonfiring hand should partially cover the ejection port, positioned to catch an ejected round.

6. With the pistol pointed in a safe direction, fully retract the slide and lock it to the rear. At the same time, catch the ejected round with the nonfiring hand.
7. Rotate the pistol so the inside of the chamber is visible. Inspect the magazine well and chamber visually to ensure they are empty.

8. Take the pistol to administrative transport. Have a supervisor inspect the chamber to ensure no ammunition is present. The second party will:
   a. Ensure the pistol is on safe.
   b. Visually inspect the pistol’s chamber to ensure it is empty, no ammunition is present, and the magazine is removed.
   c. Acknowledge the pistol is clear.
   d. Press the slide stop to release the slide; visually ensure the slide moves forward over an empty chamber.

### 2.3 SAFE WEAPON HANDLING PROCEDURES FOR THE M9 SERVICE PISTOL AT THE CLEARING BARREL

The sole purpose of a clearing barrel is to provide a safe direction in which to point a weapon when performing any or all of the following functions:

1. Load and Make Ready
2. Unload
3. Unload, Show Clear.

At every duty station, written clearing barrel procedures shall be posted near the clearing barrel. The clearing barrel supervisor shall read each command slowly and clearly, while closely monitoring the process. The following procedures should always be followed prior to using a clearing barrel:

1. Inspect general condition of clearing barrel.
2. Inspect behind/adjacent to clearing barrel.
3. Clear unnecessary personnel away from clearing barrel.

Personnel line up at the clearing barrel and, one at a time, follow the directions described below.

#### 2.3.1 LOAD AND MAKE READY Clearing Barrel Procedures for the M9 Service Pistol

On the supervisor’s command LOAD AND MAKE READY, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 4 to Condition 1:

1. Ensure the pistol is in Condition 4, with the slide locked to the rear.
2. Visually and physically verify that the firearm is clear and safe.
3. With the firing hand firmly gripping the pistol and the pistol pointed in the clearing barrel, rotate the pistol so the magazine well is inboard and clearly visible, while drawing the firing elbow in to facilitate control of the pistol.
4. With the nonfiring hand, remove a filled magazine from the ammunition pouch. Slide the index finger along the forward edge of the magazine until the finger is touching the tip of the round to ensure the magazine is filled.
5. Insert the filled magazine into the magazine well, verifying orientation of magazine with the index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated.

**CAUTION**

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.

- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

6. Visually and physically ensure that the firearm is on safe.

7. With the trigger finger extended straight along the receiver, release the slide to chamber a round. Visually and physically verify the slide is fully forward. Ensure a round is chambered by physically checking the loaded chamber indicator.

**Note**

When there is a round in the chamber, the upper surface of the extractor protrudes from the right side of the slide. The protrusion can be felt by sliding a finger or thumb of the nonfiring hand over the top of the slide and across the extractor. This check is effective during both daylight and darkness.

8. Ensure the safety is on and the hammer is forward. Assume a transport, further described in paragraph 2.4.2.1.

### 2.3.2 UNLOAD Clearing Barrel Procedures for the M9 Service Pistol

On the supervisor’s command UNLOAD, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. Visually and physically ensure the pistol is on safe.

2. With the nonfiring thumb, depress the magazine catch, remove the magazine, and hand it to the clearing barrel supervisor.

3. With the muzzle pointed into the clearing barrel, hold the firearm at a 45-degree angle. With the nonfiring hand grabbing the slide and cupped over the ejection port, lock the slide to the rear, ejecting the chambered round into the cupped hand. Hand the round to the clearing barrel supervisor. (A safe-eject device may be used for this step, if present.)

4. Visually and physically check the firearm to ensure it is clear and safe, making sure the magazine well and chamber are empty.

5. Bring firearm to administrative transport position. Turn the firearm over to relief personnel or return it to the armory.
Note
Whenever an M9 service pistol is transferred or returned to the armory it should be in Condition 4, with the slide locked to the rear.

2.3.3 UNLOAD, SHOW CLEAR Clearing Barrel Procedures for the M9 Service Pistol

On the supervisor’s command UNLOAD, SHOW CLEAR, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. Visually and physically ensure the pistol is on safe.
2. With the nonfiring thumb, depress the magazine catch and remove the magazine. Hand it to the clearing barrel supervisor.
3. With the muzzle pointed into the clearing barrel, hold the firearm at a 45-degree angle. With the nonfiring hand grabbing the slide and cupped over the ejection port, lock the slide to the rear, ejecting the chambered round into the cupped hand. Hand the round to the clearing barrel supervisor. (A safe-eject device may be used for this step, if present.)
4. Visually and physically check the firearm to ensure it is clear and safe, making sure the magazine well and chamber are empty.
5. Allow for a secondary inspection by the supervisor.
6. Bring firearm to administrative transport position. Turn the firearm over to relief personnel or return it to the armory.

Note
Whenever an M9 service pistol is transferred or returned to the armory it should be in Condition 4, with the slide locked to the rear.

2.4 M9 SERVICE PISTOL SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific procedures that, when consistently applied, will promote the safe handling of the M9 between personnel and during movement with the weapon.

2.4.1 Show Clear Transfer for the M9 Service Pistol

A show clear transfer is usually conducted at guard mount when weapons are issued. To transfer the pistol using the show clear method, the following procedures shall be observed.

2.4.1.1 Personnel Transferring the Weapon

Personnel transferring the weapon shall:

1. Grasp the pistol firmly in the firing hand, ensuring the pistol is on safe.
2. Remove the magazine.
3. Lock the slide to the rear and catch the round (if there is a round in the chamber).
4. Visually inspect the magazine well and chamber to ensure they are empty. Leave the slide locked to the rear.
5. Cradle the trigger guard in the palm of the nonfiring hand and wrap the fingers of the nonfiring hand around the slide.

6. Keep the muzzle pointed at an upward 45-degree angle and in a safe direction. With the chamber exposed, hand the pistol — grip first — to the receiving person.

**2.4.1.2 Personnel Receiving the Weapon**

Personnel receiving the weapon shall:

1. Ensure the pistol is on safe.

2. Grasp the pistol grip, ensuring the trigger finger is straight along the receiver.

3. Visually inspect the magazine well and chamber to ensure they are empty.

**2.4.2 Safe Movement (Transports/Carries) for the M9 Service Pistol**

Specific instruction governing the movement of the M9 will ensure personnel move safely with the weapon, while concurrently staying prepared to engage a threat. The procedures for transporting and carrying the M9 follow.

**2.4.2.1 M9 Service Pistol Transports**

The M9 can be transported using one of two methods: the holster transport or the administrative transport.

**2.4.2.1.1 Holster Transport**

The holster transport is the most common method of carrying the M9 because the pistol can be transported safely in the holster. The holster transport is used when there is no immediate threat (i.e., enemy contact is remote). To place the pistol in the holster:

1. Ensure the safety is on, the slide is forward, and the trigger finger is straight along the receiver.

2. With the firing hand firmly gripping the pistol grip, place the pistol in the holster using the following steps:
   a. If using a holster with a flap, lift the flap of the holster with the nonfiring hand.
   b. Bring the pistol to a position above the holster and rotate the muzzle down into the holster.
   c. Push the pistol snugly into the holster and, if equipped with a flap, fasten the flap with the firing hand.

**2.4.2.1.2 Administrative Transport**

The administrative transport method is used when personnel do not have a holster. To transport the pistol:

1. With the firing hand, establish a firm grip around the pistol grip.

2. Ensure the pistol is on safe, the magazine is removed, the slide is locked to the rear, the chamber is empty, and the trigger finger is straight along the receiver.

3. Bend the elbow to approximately an upward 45-degree angle so the pistol is positioned near shoulder level. The wrist should be straight so the muzzle of the pistol is pointing in an upward direction.
2.4.2.2 M9 Service Pistol Carries

Weapons carries are designed to place personnel in a state of increased readiness as the threat level increases. There are two carries for the M9: the alert and the ready. Both carries permit quick engagement when necessary.

2.4.2.2.1 Alert Carry

The alert carry is used when enemy contact is likely (i.e., probable). To perform the alert carry:

1. Ensure the pistol is on safe.
2. Grasp the pistol grip firmly with two hands.
3. Extend the arms downward at approximately a 45-degree angle to the body. The elbows can be bent during the alert carry.

Note

Bending the elbows is advantageous in close-quarter environments (e.g., indoors, around cover, in or around a vehicle) and for additional control when moving.

4. Keep the muzzle pointed in a safe direction and the trigger finger straight along the receiver.

2.4.2.2.2 Ready Carry

The ready carry is used when there is no target but contact with the enemy is imminent. To perform the ready carry:

1. Ensure the pistol is on safe.
2. Grasp the pistol grip firmly with two hands. Extend the arms and raise the pistol to just below eye level so a clear field of view is maintained.
3. Keep the trigger finger straight along the receiver.

2.5 DRAWING, HOLSTERING, AND RELOADING THE M9 SERVICE PISTOL

Specific instruction in drawing and reloading the M9 will ensure quick and sustainable engagement of a target. The consistent use of correct holstering techniques will ensure the return of the pistol to a safe carry. The procedures for drawing, holstering, and reloading the M9 follow.

2.5.1 Drawing

In order to engage a target quickly from the holster, the shooter must find the shortest and quickest method of getting the firearm from the holster to the target. If practiced repeatedly, the following drawing technique will allow the shooter to acquire the target, line up the sights, remove the slack from the trigger, and begin the trigger squeeze within 1 second. Proper technique must first be learned. Technique is taught in stages for clarity. Speed will naturally follow. Drawing techniques are listed as follows:

1. Do not attempt to draw fast when first learning this technique.
2. Concentrate on a smooth, safe-flowing motion.
3. Avoid wasted motion, which is time consuming.

Four drawing technique stages are outlined in Figure 2-10.
### 2.5.2 Holstering

A weapon should be drawn quickly and returned slowly. To maintain situational awareness, the user should be able to return the weapon without looking at the holster.

1. Remove finger from trigger.
2. Engage decocking/safety lever.
3. Cover hammer with thumb.
4. Just prior to holstering, review the following procedures to ensure weapon is in safe configuration:
   a. Finger is outside of trigger guard and straight along the receiver.
   b. Safety is engaged, if applicable.
   c. Hammer is forward and covered by thumb.
5. If utilizing a holster with a flap, reach over to holster with the nonfiring hand and lift flap.
6. Use the firing hand to holster while keeping flap secured against the body with the nonfiring hand. If holster does not have a flap, the nonfiring hand is free.

<table>
<thead>
<tr>
<th>DRAW</th>
<th>TECHNIQUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAB</td>
<td>1. Firing hand grips pistol while it is in holster.</td>
</tr>
<tr>
<td></td>
<td>2. Holstered grip is grip to shoot with. No time for adjustments after the pistol is drawn.</td>
</tr>
<tr>
<td></td>
<td>3. Move the nonfiring hand toward firing side, in front of firing hip.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> If utilizing a flapped holster, use the nonfiring hand to hold flap of holster against the side of the body.</td>
</tr>
<tr>
<td></td>
<td>4. Eye focus is center of mass on target.</td>
</tr>
<tr>
<td>DRAW</td>
<td>1. Lift pistol up until muzzle cleanly clears holster.</td>
</tr>
<tr>
<td></td>
<td>2. Keep trigger finger out of trigger guard.</td>
</tr>
<tr>
<td></td>
<td>3. Rotate muzzle toward target by dropping firing side elbow until muzzle is downrange toward target.</td>
</tr>
<tr>
<td>SMACK</td>
<td>1. Both hands come together (SMACK) while leaving the nonfiring thumb in a position to sweep safety off. Ensure the nonfiring hand is not muzzled during this step.</td>
</tr>
<tr>
<td></td>
<td>2. Thrust weapon forward toward target.</td>
</tr>
<tr>
<td></td>
<td>3. As the front sight approaches center of mass, on target, sweep safety off with nonfiring thumb while maintaining a proper grip. Place finger on trigger.</td>
</tr>
<tr>
<td>LOOK AND SQUEEZE</td>
<td>1. Change eye focus from target to front sight.</td>
</tr>
<tr>
<td></td>
<td>2. Take up slack.</td>
</tr>
</tbody>
</table>

Figure 2-10. M9 Service Pistol Drawing Technique Stages
2.5.3 Unload/Reload

The objective in a tactical situation is to quickly unload/reload and reengage the target. A smooth, safe-flowing motion improves the speed of unloading/reloading. The user should maintain 25 percent of vision on the weapon and 75 percent on the target. Use of the following procedure will ensure a smooth and safe unload/reload technique.

1. Remove trigger finger to the outside of trigger guard, straight along the receiver.
2. Depress magazine catch.
   a. Bend firing arm to facilitate reloading.
   b. Reach for a new magazine with the nonfiring hand, palm down.
   c. Keep knife edge of hand away from the body.
   d. Keep thumb on flat portion.
   e. Keep index finger on round portion.
3. Allow empty magazine to fall to deck.
4. Rotate weapon slightly toward the nonfiring side to see into magazine well.
5. Insert magazine into magazine well.
   a. Extend nonfiring index finger and place along round portion of magazine and projectile.
   b. Feel for rounded portion of front of grip with tip of finger, which allows a quick reload in darkness or by feel in low light situations.
   c. Ensure magazine is fully seated.
6. Reestablish two-handed grip.
   a. Release slide stop as weapon is coming up on target.
   b. Shift 100 percent of vision to front sight.
   c. Ensure object sight alignment, sight picture, and trigger squeeze occur simultaneously.
7. Use the FAST/SLOW/FAST reload concept (seen in Figure 2-11) in a tactical (only) situation.

<table>
<thead>
<tr>
<th>SPEED</th>
<th>PROCEDURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAST</td>
<td>Release old magazine, obtain new magazine.</td>
</tr>
<tr>
<td>SLOW</td>
<td>Align and place magazine into magazine well.</td>
</tr>
<tr>
<td>FAST</td>
<td>Fully seat magazine.</td>
</tr>
</tbody>
</table>

Figure 2-11. M9 Service Pistol Reload
2.6 M9 SERVICE PISTOL ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M9 (with slide locked to the rear) is issued from and returned to the armory.

2.7 M9 SERVICE PISTOL DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly, assembly, and function check of the M9 service pistol, refer to the applicable Maintenance Requirements Card or Operators Manual, SW 370-AA-OPI-010/9mm.

2.8 M9 SERVICE PISTOL SHOOTING FUNDAMENTALS

For guidance on pistol marksmanship refer to MCRP 301B.
CHAPTER 3

M11 Service Pistol

3.1 M11 SERVICE PISTOL DESCRIPTION AND FUNCTION

This section provides the description of the M11 service pistol and information necessary to understand the M11’s technical characteristics, major components, cycle of operation, safety features, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

3.1.1 Description of the M11 Service Pistol

The M11 (see Figures 3-1 and 3-2) is the standard concealable sidearm for U.S. Navy forces. It is a magazine-fed, recoil-operated, semiautomatic, hand-held weapon that is chambered for the 9mm ball, NATO M882 round. It can be fired in both double- and single-action modes. The weapon has no external safety and will only fire when the trigger is squeezed. Therefore, with a round in the chamber, the pistol will fire with the hammer in either the down or the cocked position. The double-action trigger and the absence of a manual safety provide immediate first-shot potential. The M11, with a 13-round magazine capacity, is a defensive weapon typically used at ranges of less than 50 yards.

![M11 Service Pistol Left Side Diagram]

Figure 3-1. M11 Service Pistol Left Side
3.1.2 M11 Service Pistol Technical Characteristics

Technical characteristics specific to the M11 are listed in Figure 3-3.

![M11 Service Pistol Right Side](image)

Figure 3-2. M11 Service Pistol Right Side

**WARNING**

Never mix live ammunition and dummy ammunition.

3.1.3 M11 Service Pistol Major Components

The M11 has three major component groups:

1. The receiver assembly (see Figure 3-4)
2. The slide and barrel assembly (see Figure 3-5)
3. The magazine assembly.

3.1.3.1 Receiver Assembly

The receiver assembly serves as a support for all major components and controls the action of the pistol through the major components.
3.1.3.2 Slide and Barrel Assembly

The slide and barrel assembly houses the firing pin and extractor and cocks the hammer during the recoil cycle. The barrel houses the cartridge for firing and directs the projectile.

The radioactive material used in the M11 9mm pistol sights is tritium gas (H3) sealed in Pyrex tubes. Radioactive self-luminous sources are identified by means of a letter “T.” A check for illumination of the M11 pistol sights is to be made on a daily basis prior to use.

If not illuminated, the pistol and the surrounding air may be contaminated with tritium. Do not attempt to remove, replace, or fix the sights. Notify the local radiation protection officer or local safety office.

### Table: M11 Service Pistol Specifications, Ammunition, Logistics, and Safeties

<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>AMMUNITION</th>
<th>LOGISTICS</th>
<th>SAFETIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>M11</td>
<td>In-service date</td>
<td>Firing pin safety lock</td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-336-8265 Tritium</td>
<td>Life expectancy</td>
<td>Safety intercept notch</td>
</tr>
<tr>
<td>NSN w/ Tritium Sights</td>
<td>1005-01-340-0096</td>
<td>Technical manual #</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td>SigArms, USA</td>
<td>Operator manual #</td>
<td></td>
</tr>
<tr>
<td>Caliber</td>
<td>0.355 (9 mm)</td>
<td>TM 9-1005-325-23&amp;P</td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Double-stacked box</td>
<td>TM 9-1005-325-10</td>
<td></td>
</tr>
<tr>
<td>Ammunition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>A363 M882 Ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSN</td>
<td>(only authorized ammunition)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-336-8265 Tritium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caliber</td>
<td>0.355 (9 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Double-action semiauto</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Double-stacked box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammunition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>A359 Dummy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSN</td>
<td>(training purposes only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSN w/ Tritium Sights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caliber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanism Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammunition</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3-3. M11 Service Pistol Specifications, Ammunition, Logistics, and Safeties
3.1.3.3 Magazine Assembly

The magazine assembly holds 13 cartridges in place for feeding and chambering of ammunition. As the last round is fired, the magazine spring exerts upward pressure on the magazine follower. This process exerts upward pressure on the slide stop and locks the slide in the rear position, indicating that the magazine is empty.

3.1.4 M11 Service Pistol Associated Components

The holster is an associated component of the M11. The holster provides a common, safe method of carrying the M11.

3.1.5 Cycle of Operation for the M11 Service Pistol

It is important to understand the routine cycle of operation to ensure the M11 pistol is readily available for action. The eight steps in the cycle of operation of the M11 are listed in Figure 3-6.

3.1.6 Inherent Safety Features of the M11 Service Pistol

The M11 has two safety features: the decocking lever and the firing pin safety lock. The disconnector, outlined in paragraph 3.1.6.3, serves as an additional internal safety.

3.1.6.1 Decocking Lever, Safety Intercept Notch, and Hammer Reset Spring

The decocking lever allows thecocked hammer to be safely lowered into the safety intercept notch. The safety intercept notch is the rest position of the hammer in the double-action position. Thumbing down the decocking lever moves the sear out of register with the hammer’s single-action notch. The hammer then drops forward and the decocking lever returns to its original position. The hammer is held by the sear engaging in the safety intercept notch. During this
operation, the safety lever remains in its rest position and does not lift the safety lock. The hammer reset spring maintains contact with the hammer, ensuring constant engagement of the safety intercept notch (except when firing).

### 3.1.6.2 Firing Pin Safety Lock

The automatic firing pin lock provides optimal safety with the hammer in either the cocked or decocked position. The firing pin is locked in the slide by the safety lock. When the trigger is pulled, the trigger bar pivots the safety lever to raise the safety lock and free the firing pin immediately prior to releasing the hammer. When the trigger is pulled in the single-action mode, the trigger bar is drawn forward. This pivots the safety lever, lifts the safety lock to free the firing pin, and moves the sear to release the hammer. After each shot, the firing pin spring retracts the firing pin. This allows engagement of the safety lock during each cycle of operation.

### 3.1.6.3 Disconnector Operation

Upon firing, the blowback action forces the slide and barrel assembly rearward. The slide disconnects the trigger bar from the safety lever, allowing the firing pin and firing pin safety lock to reset to the locked position, as well as releasing the sear. The sear returns to its initial position and holds the hammer as the slide goes forward.

### 3.1.7 Introduction to Remedial Action

The M11 service pistol is an effective and extremely reliable weapon. Proper care and preventive maintenance will usually ensure the pistol’s serviceability. Although infrequent, both malfunctions and stoppages do occur.
3.1.7.1 Malfunctions

A malfunction is a failure of the pistol to fire satisfactorily or to perform as designed. However, a malfunction does not necessarily cause an interruption in the cycle of operation. An example of a malfunction is a broken front sight. Although it is an important component of the M11, it does not affect the firing function of the pistol. When a malfunction occurs, the pistol must be repaired by an armorer.

3.1.7.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the pistol will not fire. Many stoppages of the M11 pistol occur as a result of shooter error. Common shooter-induced stoppages are listed in Figure 3-7.

There is no single set of procedures that can be performed to clear all or even most of the stoppages that can occur with the M11 service pistol. Therefore, personnel must be trained to quickly assess the cause of the stoppage and take appropriate remedial action to clear it. Procedures to be used to clear stoppages that occur while on the range and in tactical situations are discussed in the following two sections.

3.1.7.3 Clearing Stoppages on the Range

Because of safety procedures in place on the range, personnel shall handle stoppages differently than when in tactical situations. Learning how to clear stoppages should be accomplished through repetitious training in a sterile training environment where there is no live ammunition present. Trainers should set up drills that encourage personnel to repeatedly practice clearing different types of stoppages.

3.1.7.3.1 Clearing a Stoppage During a Navy Handgun Qualification Course

When a shooter experiences a stoppage during a Navy handgun qualification course, the following steps shall be followed immediately:

1. Remove finger from the trigger and place it straight alongside the receiver.
TYPICAL SHOOTER-INDUCED STOPPAGES

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failing to make ready.</td>
</tr>
<tr>
<td>Engaging the magazine catch while firing.</td>
</tr>
<tr>
<td>Failing to reset the trigger.</td>
</tr>
<tr>
<td>Failing to recognize the pistol has run dry, causing the slide to lock to</td>
</tr>
<tr>
<td>the rear.</td>
</tr>
</tbody>
</table>

Figure 3-7. Examples of Shooter-Induced Stoppages

2. Raise the nonfiring hand while maintaining muzzle awareness and discipline. Keep the muzzle pointed straight downrange.

3. Wait for a line coach.

4. Upon completion of the stage of fire, the range safety officer will direct the line coach to make an assessment.

5. The line coach will assess the problem that created the stoppage.

6. If the possibility of an audible pop/reduced recoil (see paragraph 3.1.7.3.2) exists, the line coach will take control of the weapon and check for a bore obstruction.

7. If there is a bore obstruction, the weapon will be removed from the firing line, tagged, boxed, and shipped to Crane Division, Naval Surface Warfare Center.

8. If the stoppage is shooter-induced, the line coach will take the ammunition for that stage of fire.

9. If the stoppage is the result of the weapon not properly feeding, or if a stovepipe (brass caught between the chamber and the slide) has occurred, the student shooter, under the close supervision of a line coach, will clear the stoppage and continue to finish the stage of fire. (Clearing the stoppage and firing the remaining rounds will take place off the clock within a reasonable amount of time to alleviate additional student/shooter stress.)

3.1.7.3.2 Clearing a Stoppage During a Practical Weapons Course

When a shooter experiences a stoppage during a practical weapons course, the following steps shall be followed immediately:

1. Remove finger from the trigger and place it straight alongside the receiver.

2. Engage decocking lever.

3. Get behind cover.

4. Assess what caused the stoppage.
a. Audible pop/reduced recoil. An audible pop occurs when only a portion of the propellant is ignited. It is normally identifiable by reduced recoil and a lower report. The pistol will not cycle, leaving the slide and hammer forward. This stoppage is sometimes accompanied by excessive smoke escaping from the chamber area. This can create a dangerous situation where the projectile becomes lodged in the bore. Before actions are initiated, wait a minimum of 10 seconds to ensure there is not a delay in the primer igniting the propellant (hangfire).

When not sure why a stoppage has occurred, personnel should err on the side of safety. Check for a bore obstruction only after waiting a minimum of 10 seconds to ensure a hangfire did not occur.

b. Slide not forward in battery. Dirty ammunition or a dirty pistol can cause the slide to not move completely forward. When the slide is not forward in the battery, it can also be referred to as not fully seated.

c. Stovepipe. A stovepipe occurs when the weapon fails to eject the casing, causing the brass to be caught between the chamber and the slide.

d. Double feed. A double feed occurs when two rounds become lodged in the receiver.

3.1.7.4 Clearing Stoppages in Tactical Situations (Only)

Remedial action includes investigating the cause of the stoppage, clearing the stoppage, and returning the weapon to operation. When performing remedial action in tactical situations (only), the first step should be to seek cover (if available). Once a weapon ceases firing, the shooter should make a quick assessment to determine the cause of the stoppage before attempting to clear it. This assessment will determine what steps should be taken to clear the stoppage:

1. Remove finger from trigger and place it straight alongside the receiver.

2. Bring weapon to a position close to body while maintaining muzzle awareness. Visually inspect the weapon.

3. Quickly assess cause of stoppage:
   a. Audible pop/reduced recoil, creating an obstructed bore. It is advisable to wait 10 seconds before checking to see if there is an obstructed bore. In a hostile situation, however, there may not be enough time to permit the shooter to wait 10 seconds. This is a decision the shooter must make.

      Note

      When an obstructed bore is identified in a tactical situation (only), the shooter should use some type of field expedient (e.g., a cleaning rod) to attempt to clear the obstruction.

   b. Slide not forward in battery.

   c. Stovepipe.

   d. Double feed.

   e. Magazine not seated.

4. Take appropriate action to reduce stoppage, based on cause.
3.1.8 Weapon Condition Codes for the M11 Service Pistol

The M11 safety status is defined by one of four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M11 are defined in Figure 3-8.

3.1.9 Weapon Handling Commands for the M11 Service Pistol

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 3-9, when consistently and properly used, will result in safe and proficient handling of the M11.

3.2 SAFE WEAPON HANDLING PROCEDURES FOR THE M11 SERVICE PISTOL ON THE RANGE

This section provides the information necessary to understand the conditions of readiness and operation specific to the M11 service pistol. The standardized procedures included in this section, when consistently applied, will maximize safety during weapon handling and promote the effective employment of this weapon.

The weapon handling commands defined in Figure 3-9 are executed as set forth in the following paragraphs.

**Note**

Before loading the M11, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

3.2.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the pistol from Condition 4 to Condition 3:

1. Ensure the pistol is in Condition 4.

2. With the firing hand firmly gripping the pistol and the pistol pointed in a safe direction, rotate the pistol so the magazine well is inboard and clearly visible. Draw the firing elbow in to facilitate control of the pistol.

3. With the nonfiring hand, remove a filled magazine from the ammunition pouch. Slide the index finger along the forward edge of the magazine until the finger is touching the tip of the round to ensure the magazine is filled. This step is referred to as indexing the magazine. The extended finger can also act as a guide in lining the magazine up with the magazine well.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Magazine inserted, round in chamber, slide forward, and hammer forward.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Magazine inserted, chamber empty, slide forward, and hammer forward.</td>
</tr>
<tr>
<td>4</td>
<td>Magazine removed, chamber empty, slide forward, and hammer forward.</td>
</tr>
</tbody>
</table>

Figure 3-8. M11 Service Pistol Weapon Condition Codes
4. Insert the filled magazine into the magazine well, verifying orientation of magazine with the index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated. The weapon is now in Condition 3.

! IMPORTANT

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.
- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

### 3.2.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the pistol from Condition 3 to Condition 1:

1. Firmly grip the pistol with the firing hand. Ensure the pistol is pointed in a safe direction and the slide is in the forward position.

2. Grasp the serrated sides of the slide with the fingers and thumb of the nonfiring hand.

3. Pull the slide to its rearmost position by pushing forward with the firing hand and pulling back on the slide with the nonfiring hand.

4. Release the slide. This action will strip a round from the magazine and chamber it as the slide moves forward.

**Note**

Ensure the weapon is decocked at this time by pressing the decocking lever down. Ensure the trigger finger is outside of the trigger guard and straight along the receiver.
3.2.3 Procedures to LOAD AND MAKE READY

On the command LOAD AND MAKE READY, personnel shall perform the following steps to take the pistol from Condition 4 to Condition 1:

1. Ensure the pistol is in Condition 4 with the slide locked to the rear.

2. Visually and physically verify that the pistol is clear and safe.

3. With the firing hand firmly gripping the pistol and the pistol pointed in a safe direction, rotate the pistol so the magazine well is inboard and clearly visible. Draw the firing elbow in to facilitate control of the pistol. Keep the muzzle pointed in a safe direction.

4. With the nonfiring hand, remove a filled magazine from the ammunition pouch. Slide the index finger along the forward edge of the magazine until the finger is touching the tip of the round to ensure the magazine is filled. This step is referred to as indexing the magazine. The extended finger can also act as a guide in lining the magazine up with the magazine well.

5. Insert the filled magazine into the magazine well, verifying orientation of magazine with the index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated.

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.

- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

6. Release the slide, chambering a round. Visually and physically verify the slide is fully forward.

   Note

   Ensure the weapon is decocked at this time by pressing the decocking lever down. Ensure the trigger finger is outside of the trigger guard and straight along the receiver.

7. Ensure the trigger finger is outside the trigger guard, straight along the receiver. Depress the decocking lever, which will decock the hammer.

8. Ensure hammer is forward and assume a carry or transport (see paragraph 3.4.2).

3.2.4 Procedures to FIRE

On the command FIRE, personnel shall perform the following steps:

1. Keeping the trigger finger straight, draw the weapon. When the muzzle and sights are on the target, place the trigger finger on the trigger.

2. Apply pressure to the trigger until the shot is fired. The first round will be fired double-action, and remaining rounds will be fired single-action.
3.2.5 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall perform the following steps:

1. Remove the finger from the trigger and place it straight along the receiver.
2. Press the decocking lever down with the nonfiring thumb.
3. Assume a carry or transport (see paragraph 3.4.2).

3.2.6 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. With the firing hand firmly gripping the pistol, ensure the pistol is decocked.
2. Rotate the pistol so the magazine well is pointed inboard and angled down.
3. Depress the magazine catch to remove the magazine from the pistol. Catch the magazine with the nonfiring hand and stow on person.
4. Push upward on the slide stop with the firing thumb and maintain pressure. Rotate the pistol so the chamber is outboard.
5. Reach over the top of the pistol with the nonfiring hand and grasp the slide serrations. The nonfiring hand should partially cover the ejection port, positioned to catch an ejected round.
6. With the pistol pointed in a safe direction, fully retract the slide and lock it to the rear. At the same time, catch the ejected round with the nonfiring hand.
7. Rotate the pistol so the inside of the chamber is visible. Inspect the magazine well and chamber visually to ensure they are empty.
8. Press the slide stop to release the slide. Visually ensure the slide moves forward over an empty chamber.
9. Depress the decocking lever to decock the weapon and lower the hammer.

3.2.7 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. With the firing hand firmly gripping the pistol, ensure the hammer is forward.
2. Rotate the pistol so the magazine well is pointed inboard and angled down.
3. Depress the magazine catch to remove the magazine from the pistol. Catch the magazine with the nonfiring hand and stow on person.
4. Push upward on the slide stop with the firing thumb and maintain pressure. Rotate the pistol so the chamber is outboard.
5. Reach over the top of the pistol with the nonfiring hand and grasp the slide serrations. The nonfiring hand should partially cover the ejection port, positioned to catch an ejected round.
6. With the pistol pointed in a safe direction, fully retract the slide and lock it to the rear. At the same time, catch the ejected round with the nonfiring hand.

7. Rotate the pistol so the inside of the chamber is visible. Inspect the magazine well and chamber visually to ensure they are empty.

8. Take the pistol to administrative transport. Have a supervisor inspect the chamber to ensure no ammunition is present. The supervisor will:
   a. Visually inspect the chamber to ensure it is empty, no ammunition is present, and the magazine is removed.
   b. Acknowledge the pistol is clear.
   c. Press the slide stop to release the slide. Visually ensure the slide moves forward over an empty chamber and decock the weapon by pressing the decocking lever down, lowering the hammer.

### 3.3 SAFE WEAPON HANDLING PROCEDURES FOR THE M11 SERVICE PISTOL AT THE CLEARING BARREL

The sole purpose of a clearing barrel is to provide a safe direction in which to point a weapon when performing any or all of the following functions: load and make ready; unload; or unload, show clear. At every duty station, written clearing barrel procedures shall be posted near the clearing barrel. The clearing barrel supervisor will read each command slowly and clearly, while closely monitoring the process. The following procedures should always be followed prior to using a clearing barrel:

1. Inspect general condition of clearing barrel.
2. Inspect behind/adjacent to clearing barrel.
3. Clear unnecessary personnel away from clearing barrel.

Personnel line up at the clearing barrel and, one at a time, follow the directions described below.

#### 3.3.1 LOAD AND MAKE READY Clearing Barrel Procedures for the M11 Service Pistol

On the supervisor’s command LOAD AND MAKE READY, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 4 to Condition 1:

1. Ensure the pistol is in Condition 4, with the slide locked to the rear.
2. Visually and physically verify that the pistol is clear and safe.
3. With the firing hand firmly gripping the pistol and the pistol pointed in the clearing barrel, rotate the pistol so the magazine well is inboard and clearly visible. Draw the firing elbow in to facilitate control of the pistol.
4. With the nonfiring hand, remove a filled magazine from the ammunition pouch. Slide the index finger along the forward edge of the magazine until the finger is touching the tip of the round to ensure the magazine is filled.
5. Insert the filled magazine into the magazine well, verifying orientation of the magazine with the index finger. With fingers extended, push the magazine with the heel of the hand until it is fully seated. Do not relinquish control of the magazine until it is fully seated.

**CAUTION**

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.
- Slapping the bottom of the magazine can dislodge rounds which, in turn, may cause a stoppage.

6. Release the slide to chamber a round. Visually and physically verify the slide is fully forward.

7. Ensure the trigger finger is outside the trigger guard, straight along the receiver. Depress the decocking lever, which will decock the hammer.

8. Ensure hammer is forward and assume a transport (see paragraph 3.4.2.1).

### 3.3.2 UNLOAD Clearing Barrel Procedures for the M11 Service Pistol

On the supervisor’s command UNLOAD, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is decocked.
2. Remove the magazine and stow on person.
3. Lock the slide to the rear and catch the ejected round.
4. Visually inspect the magazine well and chamber to ensure both are empty.
5. Release the slide and observe it going forward on an empty chamber.
6. Decock weapon by pressing decocking lever down and lowering the hammer.
7. Holster the weapon or return it to the armory in Condition 4 with the slide locked to the rear.

### 3.3.3 UNLOAD, SHOW CLEAR Clearing Barrel Procedures for the M11 Service Pistol

On the supervisor’s command UNLOAD, SHOW CLEAR, personnel will place their trigger finger straight along the receiver, keep the pistol pointed in the clearing barrel, and perform the following steps to take the pistol from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is decocked.
2. Remove the magazine and stow on person.
3. Lock the slide to the rear and catch the ejected round.
4. Visually inspect the magazine well and chamber to ensure they are empty.
5. Allow for a secondary inspection by a supervisor.

6. Bring the firearm to administrative transport position. Turn it over to relief personnel or return it to the armory.

**Note**

Whenever an M11 pistol is transferred or returned to the armory it should be in Condition 4, with the slide locked to the rear.

### 3.4 M11 SERVICE PISTOL SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific procedures that, when consistently applied, will promote safe handling, transfer, and movement with the M11.

#### 3.4.1 Show Clear Transfer for the M11 Service Pistol

A show clear transfer is usually conducted at guard mount when weapons are issued. To transfer the pistol using the show clear method, the following procedures shall be observed.

##### 3.4.1.1 Personnel Transferring the Weapon

Personnel transferring the weapon shall:

1. Grasp the pistol firmly in the firing hand. Ensure the pistol is decocked.

2. Remove the magazine.

3. Lock the slide to the rear and catch the round (if there is a round in the chamber).

4. Visually inspect the chamber to ensure it is empty. Leave the slide locked to the rear.

5. Cradle the trigger guard in the palm of the nonfiring hand and wrap the fingers of the nonfiring hand around the slide.

6. Keep the muzzle pointed at an upward 45-degree angle and in a safe direction. With the chamber exposed, hand the pistol — grip first — to the receiving person.

##### 3.4.1.2 Personnel Receiving the Weapon

Personnel receiving the weapon shall:

1. Grasp the pistol grip, ensuring the trigger finger is straight along the receiver.

2. Visually inspect the magazine well and chamber to ensure they are empty.

#### 3.4.2 Safe Movement (Transports/Carries) for the M11 Service Pistol

Specific instructions governing the movement of the M11 will ensure personnel move safely with the weapon while staying prepared to engage a threat. The procedures for transporting and carrying the M11 follow.

##### 3.4.2.1 M11 Service Pistol Transports

The M11 can be transported using one of two methods: the holster transport or the administrative transport.
3.4.2.1.1 Holster Transport

The holster transport is the most common and safest method of carrying the M11. The holster transport is used when there is no immediate threat (i.e., enemy contact is remote). To place the pistol in the holster:

1. Decock the pistol. Ensure the slide is forward and the trigger finger is straight along the receiver.
2. With the firing hand firmly gripping the pistol grip, place the pistol in the holster using the following steps:
   a. Lift the flap of the holster with the nonfiring hand (if using a holster with a flap).
   b. Bring the pistol to a position above the holster and rotate the muzzle down into the holster.
   c. Push the pistol snugly into the holster and fasten the flap with the firing hand.

Note

Prior to holstering the M11, ensure that the decocking lever is depressed to lower the hammer into the safety intercept notch. During this procedure the firing pin remains automatically locked.

WARNING

Never holster the weapon with the hammer cocked to the rear.

3.4.2.1.2 Administrative Transport

The administrative transport method is used when personnel do not have a holster. To transport the pistol:

1. With the firing hand, establish a firm grip around the pistol grip.
2. Decock the pistol. Ensure the magazine is removed, the slide is locked to the rear, the chamber is empty, and the trigger finger is straight along the receiver.
3. Bend the elbow to approximately an upward 45-degree angle so the pistol is positioned near shoulder level. The wrist should be straight so that the muzzle of the pistol is pointing in an upward direction.

3.4.2.2 M11 Service Pistol Carries

Weapons carries are designed to place personnel in a state of increased readiness as the threat level increases. There are two carries for the M11 pistol: the alert and the ready. Both carries permit quick engagement when necessary.

3.4.2.2.1 Alert Carry

The alert carry is used when enemy contact is likely (i.e., probable). To perform the alert carry:

1. Grasp the pistol grip firmly with two hands. Ensure the hammer is forward.
2. Extend the arms downward at approximately a 45-degree angle to the body. The elbows can be bent during the alert carry.
Note

Bending the elbows is advantageous in close-quarter environments (e.g., indoors, around cover, in or around a vehicle) and for additional control when moving.

3. Keep the muzzle pointed in a safe direction and keep the trigger finger straight along the receiver.

3.4.2.2.2 Ready Carry

The ready carry is used when there is no target but contact with the enemy is imminent. To perform the ready carry:

1. Grasp the pistol grip firmly with two hands. Ensure the hammer is forward. Extend the arms and raise the pistol to just below eye level so a clear field of view is maintained.

2. Keep the trigger finger straight along the receiver.

3.5 DRAWING, HOLSTERING, AND RELOADING THE M11 SERVICE PISTOL

Specific instruction in drawing and reloading the M11 pistol will ensure quick and sustainable engagement of a target. The consistent use of correct holstering techniques will ensure the return of the pistol to a safe carry. The procedures for drawing, holstering, and reloading the M11 follow.

3.5.1 Drawing

In order to engage a target quickly from the holster, the shooter must find the shortest and quickest method of getting the firearm from the holster to the target. If practiced repeatedly, the following drawing technique will allow the shooter to acquire the target, line up the sights, remove the slack from the trigger, and begin the trigger squeeze within 1 second. Proper technique must first be learned. Technique is taught in stages for clarity. Speed will naturally follow. Drawing techniques are listed as follows:

1. Do not attempt to draw fast when first learning this technique.

2. Concentrate on a smooth, safe-flowing motion.

3. Avoid wasted motion, which is time consuming.

Four drawing technique stages are outlined in Figure 3-10.

3.5.2 Holstering

A pistol should be drawn quickly and returned slowly. To maintain situational awareness, the user should be able to return the pistol without looking at holster.

1. Remove finger from trigger.

2. Engage decocking lever.

3. Cover hammer with thumb.

4. Just prior to holstering, review the following procedures to ensure the pistol is in safe configuration:
   a. Finger is outside of trigger guard and straight along the receiver.
   b. Hammer is forward and covered by thumb.
5. If utilizing a holster with a flap, reach over to holster with the nonfiring hand and lift flap.

6. Use the firing hand to holster while keeping flap secured against the body with the nonfiring hand. If holster does not have a flap, the nonfiring hand is free.

### 3.5.3 Unload/Reload

The objective in a tactical situation is to quickly unload/reload and reengage the target. A smooth, safe-flowing motion improves the speed of unloading/reloading. The user should maintain 25 percent of vision on the weapon and 75 percent on the target. Use of the following procedure will ensure a smooth and safe unload/reload technique.

1. Remove the trigger finger to the outside of trigger guard and place it straight along the receiver.

2. Depress the magazine catch.
   a. Bend the firing arm to facilitate reloading.
   b. Reach for a new magazine with the nonfiring hand, palm down.
   c. Keep knife edge of hand away from the body.
   d. Keep thumb on flat portion.
   e. Keep index finger on round portion.
3. Allow empty magazine to fall to the deck.

4. Rotate weapon slightly toward nonfiring side to see into the magazine well.

5. Insert magazine into magazine well.
   a. Extend nonfiring index finger and place along round portion of magazine and projectile.
   b. Feel for rounded portion of front of grip with tip of finger, which allows a quick reload in darkness or by feel in low light situations.
   c. Ensure magazine is fully seated.

6. Reestablish two-handed grip.
   a. Release slide stop as weapon is coming up on target.
   b. Shift 100 percent of vision to front sight.
   c. Ensure object sight alignment, sight picture, and trigger squeeze come together at one time.

7. Use the FAST/SLOW/FAST reload concept (see Figure 3-11) in a tactical situation.

3.6 M11 SERVICE PISTOL ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures dictate that only a Condition 4 M11 (with slide locked to the rear) is issued from and returned to the armory.

3.7 M11 SERVICE PISTOL DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly, assembly, and function check of the M11 service pistol, refer to the applicable Maintenance Requirements Card or Operators Manual, TM 9-1005-325-10.

3.8 M11 SERVICE PISTOL SHOOTING FUNDAMENTALS

For guidance on pistol marksmanship, refer to MCRP 301B.

<table>
<thead>
<tr>
<th>SPEED</th>
<th>PROCEDURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAST</td>
<td>Release old magazine, obtain new magazine.</td>
</tr>
<tr>
<td>SLOW</td>
<td>Align and place magazine into magazine well.</td>
</tr>
<tr>
<td>FAST</td>
<td>Fully seat magazine.</td>
</tr>
</tbody>
</table>

Figure 3-11. M11 Service Pistol Reload
4.1 MOSSBERG 500 SHOTGUN DESCRIPTION AND FUNCTION

This section provides the description of the Mossberg 500 shotgun and information necessary to understand the Mossberg’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

4.1.1 Description of the Mossberg 500 Shotgun

The Mossberg 500 shotgun (see Figures 4-1 and 4-2) is the basic shotgun for U.S. Navy forces. It is a 12-gauge, manually operated, pump-action, repeating, tubular-magazine-fed, shoulder-fired weapon. The Mossberg 500 has a 5-round magazine capacity and is both an offensive and defensive weapon. It has a thumb slide safety mounted on the top rear of the receiver. It is typically used at ranges of up to 50 yards (46 m) with a shot load, and up to 100 yards (91 m) with a slug load.

4.1.2 Mossberg 500 Shotgun Technical Characteristics

Technical characteristics specific to the Mossberg 500 shotgun are listed in Figure 4-3.
4.1.3 Mossberg 500 Shotgun Major Components

The Mossberg 500 shotgun has four major component groups:

1. Stock group (Figure 4-4)
2. Receiver group (Figure 4-5)
3. Barrel group (Figure 4-6)
4. Trigger group (Figure 4-7).

4.1.3.1 Stock Group

The stock group is an extension of the receiver group and provides a support to shoulder-fire the shotgun.

4.1.3.2 Receiver Group

The receiver group houses the cartridge ejector and serves as support for all major groups and assemblies of the weapon.

4.1.3.3 Barrel Group

The barrel group houses cartridges for firing. The front sight serves as an aiming device.

4.1.3.4 Trigger Group

The trigger group houses the components required to fire the shotgun.
TABLE 4-3. Mossberg 500 Shotgun Specifications, Ammunition, Logistics, and Safeties

<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>AMMUNITION</th>
<th>LOGISTICS</th>
<th>SAFETIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>MIL-S 500</td>
<td>12 gauge</td>
<td>N/A</td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-371-4462</td>
<td>2-3/4 inch shot shells</td>
<td>Life expectancy 10,000 rounds</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Mossberg</td>
<td>12 gauge</td>
<td>Technical manual # N/A</td>
</tr>
<tr>
<td>Caliber</td>
<td>12 gauge (18.52 mm)</td>
<td>2-3/4 inch buckshot</td>
<td>Operator manual # SW370-BB-OPI-010</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Pump slide action</td>
<td>12 gauge</td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Tube</td>
<td>2-3/4 inch slug</td>
<td></td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>5 + 1 rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (Empty)</td>
<td>6.9 lb (3.13 kg)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Length</td>
<td>37.5 in (953 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrel Length</td>
<td>17 or 20 in (432 or 508 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>#00 Buck — 1,375 fps (419 mps) Slug — 1,590 fps (485 mps)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>#00 Buck — 150 ft (46 m) Slug — 300 ft (91 m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Range</td>
<td>#00 Buck — 1,980 ft (604 m) Slug — 3,540 ft (1,079 m)</td>
<td>Safety button</td>
<td></td>
</tr>
</tbody>
</table>

WARNING

Read the specifications on the shotgun barrel to ensure round length matches chamber size.

Figure 4-3. Mossberg 500 Shotgun Specifications, Ammunition, Logistics, and Safeties

TABLE 4-4. Mossberg 500 Shotgun Stock Group

<table>
<thead>
<tr>
<th>STOCK GROUP</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buttplate</td>
<td>May be recoil pad or hard plastic.</td>
</tr>
<tr>
<td>Stock</td>
<td>Wood or synthetic.</td>
</tr>
</tbody>
</table>
## RECEIVER GROUP

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Locks weapon.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Initiates firing sequence.</td>
</tr>
<tr>
<td>Bolt</td>
<td>Contains firing pin and extractor.</td>
</tr>
<tr>
<td>Loading Port</td>
<td>Area in which shells are inserted.</td>
</tr>
<tr>
<td>Ejection Port</td>
<td>Area from which spent casings are ejected.</td>
</tr>
<tr>
<td>Trigger Guard</td>
<td>Protects trigger.</td>
</tr>
<tr>
<td>Bolt Lock</td>
<td>When the bolt is moved forward, the top front end of the bolt lock is cammed up, locking into the barrel extension.</td>
</tr>
<tr>
<td>Action Lock Lever</td>
<td>Allows action to be moved to the rear. Located rear of the trigger guard on right side.</td>
</tr>
<tr>
<td>Alignment Grooves</td>
<td>On top rear of receiver, used in conjunction with front sight bead when aiming.</td>
</tr>
<tr>
<td>Fore-end</td>
<td>Used to open and close bolt assembly, permitting loading and firing of weapon and ejection of spent cartridge.</td>
</tr>
<tr>
<td>Magazine Tube</td>
<td>Below the barrel.</td>
</tr>
</tbody>
</table>

Figure 4-5. Mossberg 500 Shotgun Receiver Group

## BARREL GROUP

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel Type</td>
<td>Smoothbore.</td>
</tr>
<tr>
<td>Length</td>
<td>17 or 20 in.</td>
</tr>
<tr>
<td>Front Sight</td>
<td>Fixed bead.</td>
</tr>
<tr>
<td>Muzzle</td>
<td>Cylinder bore or &quot;open choke.&quot;</td>
</tr>
<tr>
<td>Magazine Cap</td>
<td>Holds barrel in receiver.</td>
</tr>
</tbody>
</table>

Figure 4-6. Mossberg 500 Shotgun Barrel Group
4.1.4 Cycle of Operation for the Mossberg 500 Shotgun

The eight steps in the cycle of operation for the Mossberg 500 are listed in Figure 4-8.

4.1.5 Introduction to Remedial Action

An unintentional interruption in the cycle of operation is referred to as a stoppage. There is no single set of procedures that can clear all (or even most) of the stoppages that can occur with the Mossberg 500 shotgun. Therefore, any stoppage must be investigated and remedial action must be performed to clear the stoppage.

4.1.5.1 Identifying Stoppages

Remedial action requires investigating the cause of the stoppage, clearing the stoppage, and returning the shotgun to operation. Personnel shall perform the following steps to identify a stoppage:

1. Remove the shotgun from the shoulder.
2. Pull the fore-end to the rear.
3. Observe the ejection port and chamber.

The steps to clear the shotgun and return the weapon to action are selected based on the indicators described in the following section.

Note

Seek cover before performing remedial action procedures in a tactical environment (if the situation permits).

4.1.5.2 Common Stoppages/Corrective Actions

The most common stoppages to the Mossberg 500 and the actions used to clear them are described below.

4.1.5.2.1 New Round on Elevator

If a new round is on the elevator, perform the following steps to return the shotgun to action.

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger</td>
<td>Moves disconnector forward.</td>
</tr>
<tr>
<td>Disconnector</td>
<td>Disengages sear from hammer.</td>
</tr>
<tr>
<td>Sear</td>
<td>Releases the hammer.</td>
</tr>
<tr>
<td>Hammer</td>
<td>Rotates and strikes firing pin.</td>
</tr>
<tr>
<td>Mainspring</td>
<td>Drives hammer.</td>
</tr>
</tbody>
</table>

Figure 4-7. Mossberg 500 Shotgun Trigger Group
1. Push the fore-end fully forward to chamber the round.

2. Aim the weapon in a safe direction and attempt to fire.

4.1.5.2.2 Weapon Out of Ammunition

If a new round is not on the elevator, the weapon has run dry and must be reloaded.

4.1.5.2.3 Failure to Extract

A failure to extract occurs when an empty round case remains in the chamber. To clear a failure to extract, perform the following steps:

1. With the fore-end to the rear, remove the round from the elevator.

2. Using force, push the fore-end fully forward.

3. Depress the action lock lever and pull the fore-end to the rear. Observe for extraction of a round.

4. If a round is not extracted, remove the round from the elevator and push the fore-end fully forward.

5. With the thumb of the firing hand, push in on the front edge of the extractor and maintain pressure. At the same time, pull the fore-end to the rear. Observe for the extraction of a round.

6. If step 5 does not extract an empty round case, pry the case out of the chamber using any suitable instrument at hand.

4.1.5.2.4 Double Feed

A double feed is most often caused when the shooter fails to pull the action completely to the rear (called short stroking) or when a damaged shell latch exists. The method used to clear a double feed will depend on the severity of the stoppage. The following double-feed clearing method is recommended.
1. Push the bottom round into the magazine tube so the elevator can be depressed. The topmost round in the breech may have to be pried out (using any suitable instrument at hand) before the bottom round can be chambered.

2. Attempt to pull the fore-end back and push it forward to chamber a round.

### 4.1.5.2.5 Fore-end Fails to Pull to the Rear

If the fore-end cannot be pulled to the rear after attempting to fire or after depressing the action lock lever, perform the following steps:

1. Grasp the shotgun with the nonfiring hand on the fore-end and the firing hand on the small of the stock. Place the trigger finger on the action lock lever, out of the trigger guard.

2. Depress the action lock lever and, with the muzzle pointed up in a safe direction, strike the stock of the shotgun on a hard surface (e.g., the ground) while pulling the fore-end to the rear.

![WARNING](image)

Shotgun may discharge when struck on hard surface.

**Note**

Once the fore-end is pulled to the rear, the ejection port and chamber must be observed to investigate the cause of the stoppage and determine the proper procedure required to return the weapon to action.

### 4.1.5.2.6 Audible Pop/Reduced Recoil

An audible pop occurs when only a portion of the propellant is ignited. It is normally identifiable by lower report and a reduced recoil. This is sometimes accompanied by excessive smoke escaping from the chamber area.

![WARNING](image)

When not sure why a stoppage has occurred, personnel should err on the side of safety. Check for a bore obstruction only after waiting a minimum of 10 seconds to ensure a hangfire did not occur.

1. Training environment. If an audible pop/reduced recoil is experienced during firing, immediately cease fire and perform the following steps:
   
a. Point the shotgun downrange.

b. Place the shotgun on safe.

c. Raise the nonfiring hand for assistance from range personnel.

d. The range personnel will take control of the weapon and check for a bore obstruction.
e. If there is a bore obstruction, the weapon will be removed from the firing line, tagged, boxed, and shipped to Crane Division, Naval Surface Warfare Center.

2. Combat environment. The tactical situation may dictate that correction of an audible pop/reduced recoil is necessary. To clear the shotgun, perform the following steps:

   a. Place the shotgun in Condition 4 (see Figure 4-9).
   b. Pull the fore-end to the rear.
   c. Inspect the bore for an obstruction from the chamber end.
   d. Insert a cleaning rod or other field expedient into the bore and clear the obstruction from the chamber end, if necessary.

4.2 MOSSBERG 500 SHOTGUN SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the safety features, operation, and conditions of readiness specific to the Mossberg 500. The standardized procedures included in this chapter, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this shotgun.

4.2.1 Weapon Condition Codes for the Mossberg 500 Shotgun

The Mossberg 500 safety status is defined by four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes specific to the Mossberg 500 are defined in Figure 4-9.

4.2.2 Weapon Handling Commands for the Mossberg 500 Shotgun

Weapon handling commands are issued by a supervisor to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 4-10, when consistently and properly used, will result in safe and proficient handling of the Mossberg 500.

4.2.3 Safe Handling Procedures for the Mossberg 500 Shotgun on the Range

The weapon handling commands defined in Figure 4-10 are executed as set forth in the following paragraphs.

Note

Before loading the Mossberg 500, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions.

4.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the shotgun from Condition 4 to Condition 3:

1. With the muzzle pointed in a safe direction, ensure the weapon is in Condition 4.
2. Rotate the weapon inward until the magazine tube is visible.
3. Tuck the stock of the shotgun under the firing arm against the rib cage. Cradle the weapon with the firing hand forward of the receiver.

Note

Maintain muzzle awareness and control of the weapon at all times.
4. Remove a round from the ammunition pouch with the nonfiring hand.

5. Press the round down into the receiver through the loading port with the thumb of the nonfiring hand until the crimped end of the round rests against the magazine tube follower.

6. With the thumb of the nonfiring hand, push the round into the magazine tube until the brass rim of the round base snaps into place past the cartridge stop. This prevents the round from sliding back out of the magazine tube. An audible click should be heard when the round is fully inserted.

7. After the first round has been loaded, repeat steps 4 through 6 until the desired number of rounds has been loaded into the magazine tube.

### 4.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the shotgun from Condition 3 to Condition 1:

1. With the muzzle pointed in a safe direction, depress the action lock lever with the trigger finger and pull the fore-end firmly and quickly all the way to the rear.
2. Push the fore-end fully forward. This action chambers the round.

3. Ensure the shotgun is on safe.

### 4.2.3.3 Procedures to FIRE

On the command FIRE, personnel shall perform the following steps:

1. Aim the shotgun. Take the shotgun off safe and squeeze the trigger.

2. Pull the fore-end quickly to the rear to eject the empty round case. Push the fore-end fully forward to chamber a new round. The process of pulling the fore-end to the rear and pushing the fore-end forward is referred to as cycling the action.

### 4.2.3.4 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall perform the following steps:

1. Place the trigger finger straight along the receiver.

2. Place the shotgun on safe with the thumb of the firing hand.

### 4.2.3.5 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps:

1. With the muzzle pointed in a safe direction, ensure the shotgun is on safe.

2. Rotate the shotgun until the magazine tube is facing upward and the shotgun stock is under the firing arm.

3. With the forefinger of the nonfiring hand or the thumb of the firing hand, depress the cartridge stop and release a round from the magazine tube with either hand. Remove the round from the magazine tube and place it in an ammunition pouch.

4. Repeat step 3 until the magazine tube is empty.

5. Rotate the shotgun to the upright position. Place the stock of the shotgun on the firing-side hip or under the firing-side arm. Depress the action lock lever with the trigger finger of the firing hand and slowly pull the fore-end to the rear with the nonfiring hand. As soon as the fore-end moves slightly rearward, release the action lock lever and cover the ejection port with the palm of the firing hand.

6. Remove the round from the ejection port with the firing hand.

7. Visually inspect the magazine and chamber to ensure no ammunition is present.

8. Push the fore-end fully forward and observe the bolt going forward on an empty chamber.

### 4.2.3.6 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the weapon from Condition 1 or 3 to Condition 4:

1. With the muzzle pointed in a safe direction, ensure the shotgun is on safe.

2. Rotate the shotgun until the magazine tube is facing upward and the shotgun stock is under the firing-side arm.
3. With the forefinger of the firing hand or the thumb of the nonfiring hand, depress the cartridge stop and release a round from the magazine tube. Remove the round from the magazine tube and place it in an ammunition pouch.

4. Repeat step 3 until the magazine tube is empty.

5. Rotate the shotgun to the upright position. Place the stock of the shotgun on the firing-side hip or under the firing-side arm. Depress the action lock lever with the forefinger of the firing hand and slowly pull the fore-end to the rear with the nonfiring hand. As soon as the fore-end moves slightly rearward, release the action lock lever and cover the ejection port with the palm of the firing hand.

6. Remove the round from the ejection port with the firing hand.

7. Visually inspect the magazine and chamber to ensure no ammunition is present.

8. Have a designated supervisor inspect the shotgun to ensure no ammunition is present in the chamber area. The supervisor shall:
   a. Ensure the weapon is on safe.
   b. Visually inspect the ejection port and chamber to ensure no ammunition is present.
   c. Acknowledge that the ejection port and chamber area are clear.

9. Push the forearm fully forward and observe the bolt going forward on an empty chamber.

10. Rotate the shotgun until the magazine tube is facing upward.

11. Have a supervisor again inspect the shotgun to ensure no ammunition is present in the magazine tube. The supervisor shall:
   a. Ensure no ammunition remains in the magazine tube.
   b. Acknowledge that the magazine tube is clear.

4.3 SAFE WEAPON HANDLING PROCEDURES FOR THE MOSSBERG 500 SHOTGUN AT THE CLEARING BARREL

The sole purpose of a clearing barrel is to provide a safe direction in which to point a weapon when performing any or all of the following functions: load and make ready; unload; or unload, show clear. At every duty station, written clearing barrel procedures shall be posted near the clearing barrel. The clearing barrel supervisor will read each command slowly and clearly, while closely monitoring the process. The following procedures should always be followed prior to using a clearing barrel:

1. Inspect general condition of clearing barrel.

2. Inspect behind/adjacent to clearing barrel.

3. Clear unnecessary personnel away from clearing barrel.

Personnel line up at the clearing barrel and, one at a time, follow the directions described below.

4.3.1 LOAD Clearing Barrel Procedures for the Mossberg 500 Shotgun

On the supervisor's command LOAD, personnel will place their trigger finger straight along the receiver, keep the weapon pointed in the clearing barrel, and perform the following steps to take the shotgun from Condition 4 to Condition 3:
1. Ensure the weapon is in Condition 4.

2. Rotate the shotgun so the magazine tube is facing upward.

3. Push the round into the magazine tube.

4. Repeat until all rounds are loaded.

4.3.2 UNLOAD Clearing Barrel Procedures for the Mossberg 500 Shotgun

On the supervisor’s command UNLOAD, personnel will place their trigger finger straight along the receiver, keep the weapon pointed in the clearing barrel, and perform the following steps to take the shotgun from Condition 1 or 3 to Condition 4:

1. Ensure the shotgun is on safe.

2. Remove the rounds from the magazine tube.

3. Pull the fore-end to the rear and catch the ejected round.

4. Visually inspect the magazine and chamber to ensure they are empty.

5. Push the fore-end forward and observe the bolt going forward on an empty chamber.

4.3.3 UNLOAD, SHOW CLEAR Clearing Barrel Procedures for the Mossberg 500 Shotgun

On the supervisor’s command UNLOAD, SHOW CLEAR, personnel will place their trigger finger straight along the receiver, keep the weapon pointed in the clearing barrel, and perform the following steps to take the shotgun from Condition 1 or 3 to Condition 4:

1. Ensure the shotgun is on safe.

2. Remove the rounds from the magazine tube.

3. Pull the fore-end to the rear.

4. Visually inspect the magazine and chamber to ensure they are empty.

5. Allow for a secondary inspection of the magazine tube and chamber.

6. Push the fore-end forward and observe the bolt going forward on an empty chamber.

4.4 MOSSBERG 500 SHOTGUN SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific instructions that, when consistently applied, will promote the safe handling of the Mossberg 500, transfer of the weapon between personnel, and movement with the weapon.

4.4.1 Show Clear Transfer

A show clear transfer is usually conducted at guard mount when weapons are issued. To transfer the shotgun using the show clear method, the following procedures shall be observed.
4.4.1.1 Personnel Transferring the Weapon

Personnel transferring the weapon shall:

1. Ensure the shotgun is in Condition 4.
2. Pull the fore-end to the rear. Ensure that bolt is all the way to the rear.
3. Visually inspect the magazine and chamber to ensure there is no ammunition present.
4. Leave the fore-end to the rear and hand the shotgun, with the muzzle pointed in a safe direction, to the person receiving the weapon.

4.4.1.2 Personnel Receiving the Weapon

Personnel receiving the weapon shall:

1. Ensure the shotgun is on safe.
2. Visually inspect the magazine and chamber to ensure there is no ammunition present.
3. Push the fore-end fully forward. Observe the bolt going forward on an empty chamber.

4.4.2 Safe Movement (Transports/Carries) for the Mossberg 500 Shotgun

Specific instruction governing the movement of the Mossberg 500 will ensure that personnel move safely with the weapon while concurrently staying prepared to engage a threat. The procedures for transporting and carrying the Mossberg 500 follow.

4.4.2.1 Mossberg 500 Shotgun Transports

Transports are used when no immediate threat is present and are especially useful when moving for long periods. Transports are also used whenever both hands are needed for other work. There are three transports for the Mossberg 500 shotgun:

1. Strong side sling arms (muzzle up)
2. Weak side sling arms (muzzle down)
3. Cross body sling arms (muzzle up/down).

4.4.2.1.1 Strong Side Sling Arms (Muzzle Up)

This transport may be used when no immediate threat is present and enemy contact is unlikely. The weapon is slung over the strong shoulder with the muzzle pointed in an upward direction.

4.4.2.1.2 Weak Side Sling Arms (Muzzle Down)

This transport may be used when no immediate threat is present and enemy contact is unlikely. This transport is used primarily during periods of inclement weather in order to keep moisture out of the bore of the weapon. The weapon is slung over the weak shoulder with the muzzle pointed in a downward direction.
4.4.2.1.3 Cross Body Sling Arms (Muzzle Up/Down)

This transport may be used when both hands are required for work. The weapon is slung across the back with the muzzle in an upward or downward direction. Unless the situation dictates otherwise, the weapon is normally slung with the muzzle down in order to prevent pointing the muzzle in an unsafe direction.

4.4.2.2 Mossberg 500 Shotgun Carries

When carrying the shotgun, the shooting hand is placed firmly around the small of the stock. There are three weapon carries for the Mossberg 500 shotgun:

1. Tactical carry
2. Alert carry
3. Ready carry.

4.4.2.2.1 Tactical Carry

The tactical carry is used when there is no immediate threat.

1. Place the nonfiring hand on the fore-end, the firing hand around the small of the stock, and the trigger finger straight along the receiver.
2. Place the stock of the shotgun along the firing side of the body at approximately hip-level.
3. Angle the muzzle of the weapon upward at approximately 45 degrees and pointed in the general direction of the threat.
4. Position the muzzle in front of the eyes, slightly below eye level.

4.4.2.2.2 Alert Carry

The alert carry is used when contact is likely.

1. Place the nonfiring hand on the fore-end, the firing hand around the small of the stock, and the trigger finger straight along the receiver.
2. Place the stock of the weapon in the firing shoulder with the muzzle angled down at approximately 45 degrees and pointed in the direction of the threat.

4.4.2.2.3 Ready Carry

The ready carry is used when contact is imminent.

1. Place the nonfiring hand on the fore-end, the firing hand around the small of the stock, and the trigger finger straight along the receiver.
2. Place the stock of the weapon in the firing shoulder with the muzzle pointed in the direction of the threat and the shotgun sights just below eye level.

4.4.3 Procedures to Present the Mossberg 500 Shotgun

The procedures that follow provide two methods to efficiently take the Mossberg 500 from a transport to a firing stance.
4.4.3.1 Presenting From Strong Side Sling Arms Transport (Muzzle Up)

1. While looking at the target, lean forward slightly to facilitate removal of the shotgun from the shoulder.

2. Reach under the strong arm with the nonfiring hand between the sling and the body and grasp the fore-end. At the same time, pull down on the sling and raise the strong elbow out and parallel to the deck.

3. Roll the strong shoulder forward and release the sling from the firing hand once the fore-end has cleared the elbow. At the same time, pull shotgun forward off the shoulder with the nonfiring hand. Continue pulling the shotgun forward with the nonfiring hand while rotating the shotgun parallel to the deck. When the strong arm is free of the sling and the shotgun clears all personal gear, establish the firing position. Depress the action lock lever with the firing hand, pull the fore-end to the rear, and push forward with the nonfiring hand to chamber a round.

4. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver.

5. Take the shotgun off safe and place the trigger finger on the trigger.

6. Level the shotgun while pulling it firmly into the pocket of the shoulder, which will assist in attaining proper stock-to-cheek weld.

7. As the sights become level with the aiming eye, visually locate the target. Shift the focus back to the front sight bead to obtain sight alignment. Center the front sight bead on the alignment grooves of the receiver. Attain sight picture by placing the front sight bead just below the target center of mass. Shotguns tend to have a slightly higher impact point on the target due to the length of the barrel and recoil.

4.4.3.2 Presenting From Weak Side Sling Arms Transport (Muzzle Down)

1. While looking at the target, lean forward slightly to facilitate removal of shotgun from the shoulder.

2. Grasp the sling with the firing hand to prevent the shotgun from falling off the shoulder.

3. Grasp fore-end with the nonfiring hand (the index finger points toward the muzzle).

4. Rotate the shotgun counterclockwise while extending the muzzle toward the target (clockwise for left-handed shooters).

5. Continue extending the shotgun toward the target to ensure the shotgun clears all personal gear. Establish firing position.

6. Depress the action lock lever with the firing hand and pull the fore-end to the rear and push forward with the nonfiring hand to chamber a round.

7. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver. Take the shotgun off safe and place the trigger finger on the trigger.

8. Level the shotgun while pulling it firmly into the pocket of the shoulder, which will assist in attaining proper stock to cheek weld.

9. As the sights become level with the aiming eye, visually locate the target. Shift the focus back to the front sight bead to obtain sight alignment. Center the front sight bead on the alignment grooves of the receiver. Attain the sight picture by placing the front sight bead just below the target center of mass. Shotguns tend to have a slightly higher impact point on the target due to the length of the barrel and recoil.
4.5 MOSSBERG 500 SHOTGUN ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4, fore-end to the rear, Mossberg 500 is issued from and returned to the armory.

4.6 MOSSBERG 500 SHOTGUN DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the Mossberg 500 shotgun, refer to the applicable Maintenance Requirements Card or Operators Manual, SWB370-BB-OPI-010.

4.7 MOSSBERG 500 SHOTGUN SHOOTING FUNDAMENTALS

The shotgun is primarily a point-and-shoot weapon designed to fire buckshot or field loads. However, if time permits, it is recommended that when aiming the weapon, procedures should be conducted as specified above under paragraph 4.4.3. Breath control and trigger control should be taught the same as with the pistol and rifle, described in more detail in MCRP 301B and MCRP 3-01A.
CHAPTER 5

M14 Rifle

5.1 M14 RIFLE DESCRIPTION AND FUNCTION

This section provides the description of the M14 rifle and information necessary to understand the M14’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

5.1.1 Description of the M14 Rifle

The M14, shown in Figures 5-1 and 5-2, is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder-fired weapon designed primarily for semiautomatic fire. It has a magazine capacity of 20 rounds. It has a maximum range of 3,725 meters and a maximum effective range of between 460 and 700 meters (depending on use of bipod and rate of fire in automatic or semiautomatic mode). It has an automatic rate of fire of 100 to 150 rounds per minute and a semiautomatic rate of fire of 40 rounds per minute.

Figure 5-1. M14 Rifle Left Side
5.1.2 M14 Rifle Technical Characteristics

Technical characteristics specific to the M14 rifle are listed in Figure 5-3.

5.1.3 M14 Rifle Major Components

The M14 has three major component groups:

1. Trigger housing group (Figure 5-4)
2. Stock group (Figure 5-5)
3. Barrel and receiver group assembly (Figure 5-6).

5.1.3.1 Trigger Group

The trigger group houses the components required to fire the rifle.

5.1.3.2 Stock Group

The stock group is an extension of the receiver assembly and provides a support to shoulder-fire the rifle.

5.1.3.3 Barrel and Receiver Groups

The barrel and receiver group assembly serves as a support for all major components and controls the action of the rifle through the major components.
5.1.4 Cycle of Operation for the M14 Rifle

It is important to understand the routine cycle of operation to ensure the M14 is readily available for action. The eight steps in the cycle of operation for the M14 are listed in Figure 5-7.

5.1.5 Introduction to Remedial Action

The M14 rifle is an effective and reliable weapon. Proper care and preventive maintenance will help ensure the rifle’s serviceability. It is important to understand, however, that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur. Therefore, the appropriate remedial action will be based on the cause of the malfunction or stoppage. Both malfunctions and stoppages are discussed in the next two sections.
5.1.5.1 Malfunctions

A malfunction is a failure of the rifle to fire satisfactorily or to perform as designed. However, a malfunction does not necessarily cause an interruption in the cycle of operation. When a malfunction occurs, the rifle must be repaired by an armorer.

5.1.5.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the rifle will not fire. Many stoppages can be prevented by properly caring for the M14. Proper care includes keeping the weapon clean and well-lubricated. To keep the M14 in action, it is important to clear any stoppage as quickly as possible. Remedial actions to ensure weapon firing integrity follow.

5.1.5.3 Performing Remedial Action

To perform remedial action, use the procedures described in Figure 5-8. It may be helpful to remember the acronym SPORS.

5.1.5.4 Common Stoppages/Corrective Actions

The steps taken to clear the M14 are based on observation of the following three visual and one audible indicators.
5.1.5.4.1 Bolt Is Forward

To return the weapon to operation, follow the procedures defined in Figure 5-8.

5.1.5.4.2 Bolt Is Locked to the Rear

To return the weapon to operation, conduct a dry reload:

1. Press the magazine release paddle, remove the empty magazine, and stow it on person if time permits.
2. Insert a filled magazine into the magazine well and tug downward on the magazine to ensure it is properly seated.
3. Pull the operating rod handle to the rear, then release it to allow the bolt to move forward and chamber a round.
4. Sight in and attempt to fire.
5.1.5.4.3 Brass Is Obstructing the Chamber Area

Brass obstructing the chamber area usually indicates a double feed or a failure to eject. A double feed occurs when two rounds are stuck in the receiver. To return the weapon to operation:

1. Attempt to lock the bolt to the rear.
2. Attempt to remove the magazine.
3. If the bolt will not lock to the rear:
   a. Rotate the rifle so the top of the chamber is facing down.
   b. Hold the operating rod handle to the rear and shake the rifle to free the round(s).
   c. If the round(s) do not shake free, hold the operating rod handle to the rear to manually clear the round(s).
4. Conduct a dry reload.
5. Sight in and attempt to fire.
5.1.5.4 Audible Pop/Reduced Recoil

An audible pop occurs when only a portion of the propellant is ignited. It is normally identifiable by reduced recoil and a lower report. This is sometimes accompanied by excessive smoke escaping from the chamber area.

WARNING

When not sure why a stoppage has occurred, personnel should err on the side of safety; check for a bore obstruction only after waiting a minimum of 10 seconds to ensure a hangfire did not occur.

1. Training environment. If an audible pop/reduced recoil is experienced during firing, immediately cease fire and perform the following steps:

a. Point the rifle downrange.

b. Place the rifle on safe.

c. Raise the nonfiring hand for assistance from range personnel.

d. The range personnel will take control of the weapon and check for a bore obstruction.

e. If there is a bore obstruction, the weapon will be removed from the firing line, tagged, boxed, and shipped to Crane Division, Naval Surface Warfare Center.

2. Combat environment. The tactical situation may dictate that correction of an audible pop/reduced recoil is necessary. To clear the rifle, perform the following steps:

a. Place the rifle in Condition 4 (see Figure 5-9).

b. Lock the bolt to the rear.

c. Inspect the bore for an obstruction from the muzzle end.

d. Insert a cleaning rod into the bore and clear the obstruction.

e. Conduct a dry reload.

f. Sight in and attempt to fire.

5.2 M14 Rifle Safe Operation Procedures

This section provides the information necessary to understand the conditions of readiness, operation, and safety features specific to the M14 rifle. The standardized procedures included in this section, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this weapon.

5.2.1 Weapon Condition Codes for the M14 Rifle

The M14’s safety status is defined by four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes specific to the M14 are defined in Figure 5-9.
5.2.2 Weapon Handling Commands for the M14 Rifle

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 5-10, when consistently and properly used, will result in safe and proficient handling of the M14.

5.2.3 Safe Weapon Handling Procedures for the M14 Rifle on the Range

The weapons handling commands defined in Figure 5-10 are executed as set forth in the following paragraphs.

**Note**

Before loading the M14, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

### 5.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the rifle from Condition 4 to Condition 3:

1. Attempt to place the safety in the safe position.
2. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
3. Maintaining the muzzle in a safe direction, release the bolt forward. Do not walk the bolt forward. Ensure the bolt is fully forward.
4. Ensure the safety is in the safe position.
5. While pointing the muzzle of the rifle in a safe direction, insert a magazine into the magazine well. Ensure the magazine is fully seated.

**CAUTION**

- Due to the weight of a fully filled magazine, releasing control of the magazine prior to proper seating can cause it to fall out of the magazine well.
- Slapping the bottom of the magazine can dislodge rounds, which can, in turn, cause a stoppage.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safety on, magazine inserted, round in chamber, bolt forward.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Safety on, magazine inserted, chamber empty, bolt forward.</td>
</tr>
<tr>
<td>4</td>
<td>Safety on, magazine removed, chamber empty, bolt forward.</td>
</tr>
</tbody>
</table>

Figure 5-9. M14 Rifle Weapon Condition Codes
5.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the rifle from Condition 3 to Condition 1:

1. While pointing the muzzle in a safe direction, pull the operating rod handle fully to the rear and release.
2. Ensure safety lever is in safe position.

5.2.3.3 Procedures to LOAD AND MAKE READY

On the command LOAD AND MAKE READY, personnel shall perform the following steps to take the rifle from Condition 4 to Condition 1:

1. Attempt to place the safety in the safe position.
2. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
3. Ensure the safety is in the safe position.
4. While pointing the muzzle of the rifle in a safe direction, insert a magazine into the magazine well. Ensure the magazine is fully seated.

Due to the weight of a fully filled magazine, releasing control of the magazine prior to proper seating can cause it to fall out of the magazine well.

Slapping the bottom of the magazine can dislodge rounds, which can, in turn, cause a stoppage.

5. While maintaining the muzzle in a safe direction, release the bolt forward. Do not walk the bolt forward.
5.2.3.4 Procedures to FIRE

On the command FIRE, personnel shall perform the following steps:

1. Aim the rifle.
2. Take the rifle off safe.
3. Squeeze the trigger to engage the target.

5.2.3.5 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall perform the following steps:

1. Place the trigger finger straight along the receiver.
2. Place the weapon on safe.

5.2.3.6 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. While pointing the muzzle in a safe direction, ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
4. Ensure the chamber is empty and no ammunition is present.
5. Release the operating rod handle and observe the bolt going forward on an empty chamber.
6. Recover, inspect, and return any ejected ammunition to the magazine.
7. Return the magazine to the magazine pouch and fasten the pouch.

5.2.3.7 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. While pointing the muzzle in a safe direction, ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
4. Ensure the chamber is empty and no ammunition is present.
5. Have another person inspect the rifle to ensure no ammunition is present.
6. After receiving acknowledgment that the rifle is clear, release the bolt and observe the bolt going forward on an empty chamber.
7. Recover, inspect and return any ejected ammunition to the magazine.

8. Return the magazine to the magazine pouch and fasten the pouch.

5.3 SAFE WEAPON HANDLING PROCEDURES FOR THE M14 RIFLE AT THE CLEARING BARREL

The sole purpose of a clearing barrel is to provide a safe direction in which to point a weapon when performing any or all of the following functions: LOAD, UNLOAD or UNLOAD, SHOW CLEAR. At every duty station, written clearing barrel procedures shall be posted near the clearing barrel. The clearing barrel supervisor will read each command slowly and clearly while closely monitoring the process. The following procedures should always be followed prior to using a clearing barrel:

1. Inspect general condition of clearing barrel.
2. Inspect behind/adjacent to clearing barrel.
3. Clear unnecessary personnel away from clearing barrel.

Personnel line up at the clearing barrel and, one at a time, follow the directions described below.

5.3.1 LOAD Clearing Barrel Procedures for the M14 Rifle

On the supervisor’s command LOAD, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 4 to Condition 3:

1. Attempt to place the safety in the safe position.
2. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
3. Maintaining the muzzle in a safe direction, release the bolt forward. Do not walk the bolt forward. Ensure the bolt is fully forward.
4. Ensure the safety is in the safe position.
5. While pointing the muzzle of the rifle in a safe direction, insert a magazine into the magazine well. Ensure the magazine is fully seated.

5.3.2 UNLOAD Clearing Barrel Procedures for the M14 Rifle

On the supervisor’s command UNLOAD, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
4. Ensure the chamber is empty and no ammunition is present.
5. Release the operating rod handle and observe the bolt going forward on an empty chamber.
6. Recover, inspect, and return any ejected ammunition to the magazine.
7. Return the magazine to the magazine pouch and fasten the pouch.
5.3.3 UNLOAD, SHOW CLEAR Clearing Barrel Procedures for the M14 Rifle

On the supervisor’s command UNLOAD, SHOW CLEAR, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Lock the bolt to the rear. Visually and physically verify that the rifle is clear and safe.
4. Ensure the chamber is empty and no ammunition is present.
5. Have another person inspect the rifle to ensure no ammunition is present.
6. After receiving acknowledgment that the rifle is clear, release the bolt and observe the bolt going forward on an empty chamber.
7. Recover, inspect, and return any ejected ammunition to the magazine.
8. Return the magazine to the magazine pouch and fasten the pouch.

5.4 M14 RIFLE SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific instructions that, when consistently applied, will promote the safe handling of the M14 between personnel and during movement with the weapon.

5.4.1 Weapon Transfer From One Person to Another

Proper weapon handling is required every time a person passes a weapon to another person or receives a weapon from another person. This everyday occurrence must take place with the same safety considerations expected on a live fire range. To properly pass a weapon between personnel, perform the following procedures:

5.4.1.1 Personnel Transferring the Weapon

Personnel handing off the weapon shall:

1. Ensure the rifle is on safe.
2. Remove the magazine if it is present.
3. Lock the bolt to the rear.
4. Visually inspect the chamber to ensure there is no ammunition present.
5. Leave the bolt locked to the rear and hand the weapon to the person receiving the weapon.

5.4.1.2 Personnel Receiving the Weapon

Personnel receiving the weapon shall:

1. Ensure the rifle is on safe.
2. Visually inspect the chamber to ensure there is no ammunition present.
3. Draw operating rod to the rear and release, observing the bolt going forward on an empty chamber.

5.4.2 Safe Movement (Transports/Carries) for the M14 Rifle

Specific instructions governing movement of the M14 will ensure personnel move safely with the weapon while, concurrently, staying prepared to engage a threat. The procedures for transporting and carrying the M14 follow.

5.4.2.1 M14 Rifle Transports

Transports, in which the rifle is slung over the back or shoulder, are used when no immediate threat is present and are especially useful when moving for long periods. They are also used whenever both hands are needed for other work. There are three weapons transports.

5.4.2.1.1 Strong Side Sling Arms (Muzzle Up)

This transport may be used when no immediate threat is present and enemy contact is unlikely. The weapon is slung over the strong shoulder with the muzzle pointed up.

5.4.2.1.2 Weak Side Sling Arms (Muzzle Down)

This transport may be used when no immediate threat is present and contact with the enemy is unlikely. This transport is used primarily during periods of inclement weather to keep moisture out of the bore of the rifle. The weapon is slung over the weak shoulder with the muzzle pointed down.

5.4.2.1.3 Cross Body Sling Arms (Muzzle Up or Down)

This transport may be used when both hands are required for work. The weapon is slung across the back with the muzzle up or down. Unless the situation dictates otherwise, the weapon is slung with the muzzle down to prevent pointing the muzzle in an unsafe direction.

5.4.2.2 M14 Rifle Carries

Weapon carries are designed to place personnel in a state of increased readiness as the threat level increases. There are three carries for the M14: the tactical, the alert, and the ready. All three carries permit quick engagement when necessary; each is described below.

5.4.2.2.1 Tactical Carry

The tactical carry is used when no immediate threat is present. It permits control of the rifle while moving and still allows quick engagement of the enemy, if necessary. To perform this carry:

1. Place the nonfiring hand on the forward portion of the stock, the firing hand around the small of the stock, and trigger finger straight along the receiver.

2. Angle the barrel of the rifle upward about 45 degrees in the general direction of the enemy.

3. Position the muzzle slightly below eye level. Ensure wherever the eyes move, the muzzle also moves (eyes, muzzle, target).

5.4.2.2.2 Alert Carry

The alert carry is used when enemy contact is likely (probable). Engagement of the enemy is faster from the alert than from the tactical carry. To perform this carry:
1. Place the nonfiring hand on the forward portion of stock, the firing hand around the small of the stock, and trigger finger straight along the receiver.

2. Place the buttstock of the rifle in shoulder with the muzzle angled down about 45 degrees and pointed in the likely direction of the enemy.

5.4.2.2.3 Ready Carry

The ready carry is used when contact with the enemy is imminent. The ready allows immediate target engagement. To perform this carry:

1. Place the nonfiring hand on the forward portion of stock, the firing hand around the small of the stock, and trigger finger straight along the receiver.

2. Place the buttstock of the rifle in shoulder with the muzzle of the rifle pointed in the direction of enemy contact. Lower the rifle sights to just below eye level so a clear field of view is maintained until a target has been identified.

5.4.3 Procedures to Present the M14 Rifle

The procedures that follow provide two methods to efficiently take the M14 rifle from a transport to a firing stance:

5.4.3.1 Presenting From Strong Side Sling Arms Transport (Muzzle Up)

1. While looking at target, lean forward slightly to facilitate removal of rifle from shoulder.

2. Reach under strong arm with the nonfiring hand between the sling and the body and grasp the forward portion of stock. At the same time, pull down on the sling and raise strong elbow out and parallel to the deck.

3. Roll the strong shoulder forward and release the sling from the firing hand once the forward portion of the stock has cleared the elbow. At the same time, pull rifle forward off the shoulder with the nonfiring hand. Continue pulling rifle forward with the nonfiring hand while rotating rifle parallel to the deck. When the strong arm is free of the sling and rifle clears all personal gear, establish the firing position and grasp the operating rod handle with the firing hand, pull it to its rearmost position, and release.

4. Establish a firing grip with the firing hand while keeping trigger finger straight along the receiver.

5. Take rifle off safe and place trigger finger on trigger.

6. Level rifle while pulling it firmly into pocket of shoulder to obtain proper stock weld. Do not move head down to meet stock of rifle.

7. As sights become level with the aiming eye, visually locate target through the rear sight aperture. As rifle sights settle, shift the focus back to the front sight post to obtain sight alignment and place the tip of the post center mass on the target to obtain sight picture.

5.4.3.2 Presenting From Weak Side Sling Arms Transport (Muzzle Down)

1. While looking at target, lean forward slightly to facilitate removal of rifle from shoulder.

2. Grasp the sling with the firing hand to prevent rifle from falling off shoulder.

3. Grasp the forward portion of the stock with the nonfiring hand (the index finger points toward the muzzle).

4. Rotate rifle counterclockwise while extending muzzle toward target (clockwise for left-handed shooters).
5. Continue extending rifle toward target to ensure rifle clears all personal gear. Establish firing position.

6. Grasp operating rod handle with the firing hand and pull it to its rearmost position and release.

7. Establish firing grip with the firing hand while keeping trigger finger straight along the receiver. Take rifle off safe and place trigger finger on trigger.

8. Level rifle while pulling it firmly into pocket of shoulder to obtain proper stock weld. Do not move head down to meet stock of rifle.

9. As sights become level with the aiming eye, visually locate target through the rear sight aperture. As rifle sights settle, shift the focus back to the front sight post to obtain sight alignment and place the tip of the post center mass on the target to obtain sight picture.

5.5 M14 RIFLE ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M14 is issued from and returned to the armory.

5.6 M14 RIFLE DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly, assembly, and function check of the M14 rifle, refer to the applicable Maintenance Requirements Card or Operators Manual, TM 9-1005-223-90.

5.7 M14 RIFLE SHOOTING FUNDAMENTALS

For guidance on rifle marksmanship refer to Field Manual, FM 23-8.
CHAPTER 6

M16 (Series) Rifle

6.1 M16 (SERIES) RIFLE DESCRIPTION AND FUNCTION

This section provides the description of the M16 (series) rifle and information necessary to understand the M16’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

6.1.1 Description of the M16A3 Rifle

The M16A3 rifle, shown in Figures 6-1 and 6-2, is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder-fired weapon designed for either automatic or semiautomatic fire through the use of a selector lever. It has two available magazine capacities of 20 or 30 rounds and a cyclic rate of fire of 700 to 900 rounds per minute.

6.1.2 M16 (Series) Rifle Technical Characteristics

Technical characteristics specific to the M16 (series) rifle are defined in Figure 6-3.
6.1.3 M16 (Series) Rifle Major Components

The M16 (series) rifle has four major component groups; the upper receiver assembly (see Figure 6-4), the lower receiver assembly (see Figure 6-5), the bolt and bolt carrier assembly, and the magazine group assembly.

6.1.3.1 Upper Receiver

The upper receiver assembly is attached to the barrel and contains the bolt carrier group.

6.1.3.2 Lower Receiver

The lower receiver assembly is attached to the buttstock and contains the trigger housing group.

6.1.3.3 Bolt, Bolt Carrier Group, and Magazine Group Assembly

In addition to the parts of the M16 (series) rifle described in Figures 6-4 and 6-5, the remaining parts of the weapon include:

1. Bolt and Bolt Carrier Assembly. Provides stripping, chambering, locking, firing, extraction, and ejection of cartridges, using the drive springs and projectile propelling gases for power.

<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>MODEL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M16A3</td>
<td>M4A1</td>
<td></td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-357-5112</td>
<td>1005-01-382-0953</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Colt Firearms</td>
<td>Colt Firearms</td>
<td></td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Gas operated</td>
<td>Gas operated</td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Double-stacked box</td>
<td>Double-stacked box</td>
<td></td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>20 or 30 rounds</td>
<td>20 or 30 rounds</td>
<td></td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>7.4 lb (3.4 kg)</td>
<td>6.4 lb (2.9 kg)</td>
<td></td>
</tr>
<tr>
<td>Overall Length</td>
<td>40 in (1,016 mm) (with suppressor)</td>
<td>33.0 in (838 mm), buttstock open 29.75 in (756 mm), buttstock closed</td>
<td></td>
</tr>
<tr>
<td>Barrel Length</td>
<td>21 in (533 mm)</td>
<td>14.5 in (368 mm)</td>
<td></td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>3,100 fps (945 mps)</td>
<td>2,970 fps (905 mps)</td>
<td></td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>1,804 ft (550 m)</td>
<td>1,640 ft (500 m)</td>
<td></td>
</tr>
<tr>
<td>Maximum Range</td>
<td>11,811 ft (3,600 m)</td>
<td>11,811 ft (3,600 m)</td>
<td></td>
</tr>
<tr>
<td>Caliber</td>
<td>5.56 mm</td>
<td>5.56 mm</td>
<td></td>
</tr>
<tr>
<td>Cyclic Rate of Fire (automatic)</td>
<td>90 rounds per minute</td>
<td>90 rounds per minute</td>
<td></td>
</tr>
<tr>
<td>Cyclic Rate of Fire (semiauto)</td>
<td>45 rounds per minute</td>
<td>45 rounds per minute</td>
<td></td>
</tr>
<tr>
<td>Sustained Rate of Fire</td>
<td>12 to 15 rounds per minute</td>
<td>12 to 15 rounds per minute</td>
<td></td>
</tr>
</tbody>
</table>

**LOGISTICS**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Service Date</td>
<td>1992</td>
<td>1994</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>25,000 rounds</td>
<td>25,000 rounds</td>
</tr>
<tr>
<td>Operator Manual #</td>
<td>SW370-BUJ-OPI-010</td>
<td>SW370-BUJ-OPI-010</td>
</tr>
</tbody>
</table>

**SAFETIES**

<table>
<thead>
<tr>
<th></th>
<th>Selector Lever</th>
<th>Selector Lever</th>
</tr>
</thead>
</table>

**AMMUNITION**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ball (M855 and M193)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tracer (M856 and M196)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Blank (M200) Dummy (M199)</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Figure 6-3. M16 (Series) Rifle Specifications, Ammunition, Logistics, and Safeties
M16 (series) rifles vary in performance and design from model to model. Figure 6-6 summarizes the specific differences by model.

### WARNING

Never mix live ammunition and dummy ammunition.

### 6.1.4 Cycle of Operation for the M16 (Series) Rifle

It is important to understand the routine cycle of operation to ensure the M16 (series) rifle is readily available for action. The eight steps in the cycle of operation for the M16 (series) rifle are listed in Figure 6-7.

### 6.1.5 Introduction to Remedial Action

The M16 (series) rifle is an effective and reliable weapon. Proper care and preventive maintenance will help ensure the rifle’s serviceability. It is important to understand, however, that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur. Therefore, the appropriate remedial action will be based on the cause of the malfunction or stoppage. Both malfunctions and stoppages are discussed in the next two sections.

---

**Table: UPPER RECEIVER ASSEMBLY**

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Guard</td>
<td>Contains heat-resisting inner shields.</td>
</tr>
<tr>
<td>Front Sight Assembly</td>
<td>Adjustable for elevation.</td>
</tr>
<tr>
<td>Compensator</td>
<td>Prevents muzzle rise.</td>
</tr>
<tr>
<td>Carrying Handle</td>
<td>Provides means for hand-carrying the weapon.</td>
</tr>
<tr>
<td>Charging Handle</td>
<td>Cocks weapon.</td>
</tr>
<tr>
<td>Slip Ring</td>
<td>Retains the hand guard.</td>
</tr>
<tr>
<td>Forward Assist Assembly</td>
<td>Ensures bolt is fully forward and locked.</td>
</tr>
<tr>
<td>Rear Sight Assembly</td>
<td>Zeros weapon.</td>
</tr>
<tr>
<td>Ejection Port</td>
<td>Area from which spent casing is ejected.</td>
</tr>
<tr>
<td>Upper Level Swivel</td>
<td>Secures small arms sling.</td>
</tr>
<tr>
<td>Bayonet Stud</td>
<td>Secures bayonet.</td>
</tr>
<tr>
<td>Ejection Port Cover</td>
<td>Protects upper receiver from foreign matter when weapon is not in use.</td>
</tr>
<tr>
<td>Barrel</td>
<td>Chambers the cartridge for firing and directs the projectile.</td>
</tr>
</tbody>
</table>

Figure 6-4. M16 (Series) Rifle Upper Receiver Assembly
6.1.5.1 Malfunctions

A malfunction is a failure of the rifle to fire satisfactorily or to perform as designed. However, a malfunction does not necessarily cause an interruption in the cycle of operation. When a malfunction occurs, the rifle must be repaired by an armorer.

6.1.5.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the rifle will not fire. Many stoppages can be prevented by properly caring for the M16 (series) rifle. Proper care includes keeping the weapon clean and well lubricated. To keep the M16 (series) rifle in action, it is important to clear any stoppage as quickly as possible. Remedial actions to ensure weapon firing integrity follow.

6.1.5.3 Introduction to Remedial Action

To perform remedial action, use the procedures described in Figure 6-8. It may be helpful to remember the acronym “SPORTS.”

6.1.5.4 Common Stoppages/Corrective Actions

The steps taken to clear the M16 (series) rifle are based on observation of the following three visual and one audible indicators.

6.1.5.4.1 Bolt Is Forward

To return the weapon to operation, follow the procedures described in Figure 6-7.

---

**Figure 6-5. M16 (Series) Rifle Lower Receiver Assembly**

<table>
<thead>
<tr>
<th>PART</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pistol Grip</td>
<td>Provides positive handhold.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Initiates firing sequence.</td>
</tr>
<tr>
<td>Trigger Guard</td>
<td>Protects trigger.</td>
</tr>
<tr>
<td>Magazine Catch</td>
<td>Retains magazine and allows operator to release magazine.</td>
</tr>
<tr>
<td>Selector Lever</td>
<td>Selects firing mode.</td>
</tr>
<tr>
<td>Bolt Catch</td>
<td>Holds bolt to rear after last round is fired.</td>
</tr>
<tr>
<td>Takedown Pin</td>
<td>Used to disassemble weapon.</td>
</tr>
<tr>
<td>Receiver Pivot Pin</td>
<td>Aids in disassembly.</td>
</tr>
<tr>
<td></td>
<td>3. Lower level swivel.</td>
</tr>
<tr>
<td></td>
<td>4. Provides firing control and storage for basic cleaning gear.</td>
</tr>
</tbody>
</table>
### Differences Between Models

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>M16A1</th>
<th>M16A2</th>
<th>M16A3</th>
<th>M4A1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (loaded)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8.79 lb (4 kg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5 lb (3.4 kg)</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Buttstock</td>
<td>Fixed</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Collapsible</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3,100 fps (945 m/s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,970 fps (905 m/s)</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>21.0 in (533 mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.5 in (368 mm)</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Firing Modes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Semiautomatic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burst (3 round)</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Maximum Effective Range (point target)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,509 ft (460 m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,640 ft (500 m)</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>1,804 ft (550 m)</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6-6. M16 (Series) Rifle Differences Between Models

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>Expansion of action spring sends buffer assembly and bolt carrier group forward with enough force to strip new round from magazine.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Pushing of the round into the chamber by the face of the bolt.</td>
</tr>
<tr>
<td>Locking</td>
<td>Alignment of the locking lugs on the bolt with the lugs on the barrel extension.</td>
</tr>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within the cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>Rotation of the bolt until the locking lugs no longer align with the lugs on the barrel extension.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Withdrawal of the cartridge case from the chamber by the extractor.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Expulsion of the cartridge case by the ejector and spring.</td>
</tr>
<tr>
<td>Cocking</td>
<td>Rearward movement of bolt carrier overrides hammer, forcing hammer down into receiver and compressing hammer spring, cocking hammer in firing position.</td>
</tr>
</tbody>
</table>

Figure 6-7. M16 (Series) Rifle Cycle of Operation
6.1.5.4.2 Bolt Is Locked to the Rear

To return the weapon to operation, conduct a dry reload:

1. Press the magazine catch releasing the magazine, remove the empty magazine, and stow it on person if time permits.
2. Insert a filled magazine into the magazine well and tug downward on the magazine to ensure it is properly seated.
3. Pull the charging handle to the rear and then release it to allow the bolt to move forward and chamber a round.
4. Sight in and attempt to fire.

6.1.5.4.3 Brass Is Obstructing the Chamber Area

Brass obstructing the chamber area usually indicates a double feed or a failure to eject. A double feed occurs when two rounds are stuck in the receiver. To return the weapon to operation:

1. Rotate selector lever to safe.
2. Attempt to lock the bolt to the rear.
3. Attempt to remove the magazine.
4. If the bolt will not lock to the rear:
   a. Rotate the rifle so the top of the chamber is facing down.
   b. Hold the charging handle to the rear and shake the rifle to free the round(s).
   c. If the round(s) do not shake free, hold the charging handle to the rear to manually clear the round(s).
5. Conduct a dry reload.
6. Rotate selector lever to fire.
7. Sight in and attempt to fire.
6.1.5.4.4 Audible Pop/Reduced Recoil

An audible pop occurs when only a portion of the propellant is ignited. It is normally identifiable by a lower report and reduced recoil. This is sometimes accompanied by excessive smoke escaping from the chamber area.

![WARNING]

When not sure why a stoppage has occurred, personnel should err on the side of safety; check for a bore obstruction only after waiting a minimum of 10 seconds to ensure a hangfire did not occur.

1. Training environment. If an audible pop/reduced recoil is experienced during firing, immediately cease fire and perform the following steps:

   a. Point the rifle downrange.

   b. Place the rifle on safe.

   c. Raise the nonfiring hand for assistance from range personnel.

   d. The range personnel will take control of the weapon and check for a bore obstruction.

   e. If there is a bore obstruction, the weapon will be removed from the firing line, tagged, boxed, and shipped to Crane Division Naval Surface Warfare Center.

2. Combat environment. The tactical situation may dictate that correction of an audible pop/reduced recoil is necessary. To clear the rifle, perform the following steps:

   a. Place the rifle in Condition 4.

   b. Lock the bolt to the rear.

   c. Inspect the bore for an obstruction from the muzzle end.

   d. Insert a cleaning rod or another field expedient into the bore and clear the obstruction.

   e. Conduct a dry reload.

   f. Sight in and attempt to fire.

6.2 M16 (SERIES) RIFLE SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the conditions of readiness, operation, and safety features specific to the M16 (series) rifle. The standardized procedures included in this section, when consistently applied, will maximize safety during weapon handling and promote the effective employment of this weapon.

6.2.1 Weapon Condition Codes for the M16 (Series) Rifle

The M16 (series) rifle’s safety status is defined, like other Navy weapons, by four weapon condition codes. General weapon condition codes are listed in Chapter 1, Figure 1-2. Weapon condition codes applicable to the M16 (series) rifle are defined in Figure 6-9.
6.2.2 Weapon Handling Commands for the M16 (Series) Rifle

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 6-10, when consistently and properly used, will result in safe and proficient handling of the M16 (series) rifle.

6.2.3 Safe Weapon Handling Procedures for the M16 (Series) Rifle on the Range

The weapon handling commands defined in Figure 6-10 are executed as set forth in the following paragraphs.

**Note**

Before loading the M16 (series) rifle, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

### 6.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the rifle from Condition 4 to Condition 3:

1. Attempt to place the selector lever in the safe position (weapon must be cocked before safety can be engaged).
2. Lock the bolt to the rear. Visually and physically verify that the firearm is clear and safe.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safety on, magazine inserted, round in chamber, bolt forward.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Safety on, magazine inserted, chamber empty, bolt forward, ejection port cover closed.</td>
</tr>
<tr>
<td>4</td>
<td>Safety on, magazine removed, chamber empty, bolt forward, ejection port cover closed.</td>
</tr>
</tbody>
</table>

Figure 6-9. M16 (Series) Rifle Weapon Condition Codes

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load</td>
<td>Take the weapon from Condition 4 to Condition 3.</td>
</tr>
<tr>
<td>Make Ready</td>
<td>Take the weapon from Condition 3 to Condition 1.</td>
</tr>
<tr>
<td>Load and Make Ready</td>
<td>Take the weapon from Condition 4 to Condition 1.</td>
</tr>
<tr>
<td>Fire</td>
<td>Engage the target.</td>
</tr>
<tr>
<td>Cease Fire</td>
<td>Stop target engagement.</td>
</tr>
<tr>
<td>Unload</td>
<td>Take the weapon from Condition 1 or 3 to Condition 4.</td>
</tr>
<tr>
<td>Unload, Show Clear</td>
<td>With a supervisor, check the weapon to verify that no ammunition is present before the weapon is put in Condition 4.</td>
</tr>
</tbody>
</table>

Figure 6-10. M16 (Series) Rifle Weapon Handling Commands
3. While maintaining the muzzle in a safe direction, release the bolt forward. Do not walk the bolt forward. Ensure the bolt is fully forward and that the magazine is filled.

4. Ensure the selector lever is in the safe position.

5. While pointing the muzzle of the firearm in a safe direction, insert a magazine into the magazine well. Ensure the magazine is fully seated.

6. Ensure the ejection port cover is closed.

**CAUTION**

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.
- Slapping the bottom of the magazine can dislodge rounds, which can, in turn, cause a stoppage.

### 6.2.3.2 Procedures to MAKE READY

On the command MAKE READY, perform the following steps to take the rifle from Condition 3 to Condition 1:

1. While pointing the muzzle in a safe direction, pull the charging handle fully to the rear and release. There are two methods of doing this:
   a. Grip the pistol grip firmly with the firing hand, pull the charging handle with the nonfiring hand to its rearmost position, and release.
   b. Grip the hand guard firmly with the nonfiring hand, pull the charging handle with the firing hand to its rearmost position, and release.

   **Note**

   To ensure ammunition has been chambered, pull the charging handle slightly to the rear and visually inspect the chamber.

2. Ensure selector lever is in the safe position.

3. Check the sights to ensure proper battle sight zero, known distance, correct rear sight aperture, and general serviceability.

4. Close the ejection port cover (if time and the situation permit).

### 6.2.3.3 Procedures to LOAD AND MAKE READY

On the command LOAD AND MAKE READY, personnel shall perform the following steps to take the rifle from Condition 4 to Condition 1:

1. Attempt to place the selector lever in the safe position (weapon must be cocked before safety can be engaged).

2. Lock the bolt to the rear. Visually and physically verify that the firearm is clear and safe.
3. While pointing the muzzle of the firearm in a safe direction, insert a magazine into the magazine well. Ensure the magazine is fully seated.

**CAUTION**

- Due to the weight of a fully filled magazine, releasing control of the magazine early can cause it to fall out of the magazine well.
- Slapping the bottom of the magazine can dislodge rounds, which can, in turn, cause a stoppage.

4. While maintaining the muzzle in a safe direction, release the bolt forward. Do not walk the bolt forward. Ensure the bolt is fully forward and that the magazine is filled.

   **Note**

   To ensure ammunition has been chambered, pull the charging handle slightly to the rear and visually inspect the chamber.

5. Check the sights to ensure proper battle sight zero, known distance, correct rear sight aperture, and general serviceability.

6. Close the ejection port cover (if time and situation permit).

### 6.2.3.4 Procedures to FIRE

On the command FIRE, personnel shall perform the following steps:

1. Aim the rifle.
2. Take the rifle off safe.
3. Squeeze the trigger to engage the target.

### 6.2.3.5 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall perform the following steps:

1. Place the trigger finger straight along the receiver.
2. Place the weapon on safe.

### 6.2.3.6 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. While pointing the muzzle in a safe direction, ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Rotate the rifle so the ejection port is facing the deck.
4. Lock the bolt to the rear.

5. Put the rifle on safe now if it would not go on safe earlier.

6. Ensure the magazine well and chamber are empty and no ammunition is present.

7. Release the charging handle and observe the bolt moving forward on an empty chamber.

8. Close the ejection port cover.

9. Check the sights.

10. Recover, inspect, and return any ejected ammunition to the magazine. (Omit this step at night.)

11. Return the magazine to the magazine pouch and fasten the pouch.

6.2.3.7 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. While pointing the muzzle in a safe direction, ensure the weapon is on safe.

2. Remove the magazine from the rifle and stow it on person.

3. Rotate the rifle so the ejection port is facing the deck.

4. Lock the bolt to the rear.

5. Put the rifle on safe now if it would not go on safe earlier.

6. Ensure the magazine well and chamber are empty and no ammunition is present.

7. Have another person inspect the rifle to ensure no ammunition is present.

8. After receiving acknowledgment that the rifle is clear, release the charging handle and observe the bolt moving forward on an empty chamber.

9. Close the ejection port cover.

10. Check the sights.

11. Recover, inspect, and return any ejected ammunition to the magazine. (Omit this step at night.)

12. Return the magazine to the magazine pouch and fasten the pouch.

6.3 SAFE WEAPON HANDLING PROCEDURES FOR THE M16 (SERIES) RIFLE AT THE CLEARING BARREL

The sole purpose of a clearing barrel is to provide a safe direction in which to point a weapon when performing any or all of the following functions: Load, Unload or Unload, Show Clear. At every duty station, written clearing barrel procedures shall be posted near the clearing barrel. The clearing barrel supervisor will read each command slowly and clearly while closely monitoring the process. The following procedures should always be followed prior to using a clearing barrel:
1. Inspect general condition of clearing barrel.
2. Know what is behind/adjacent to clearing barrel.
3. Clear unnecessary personnel away from clearing barrel.

Personnel line up at the clearing barrel and, one at a time, follow the directions described below.

### 6.3.1 LOAD Clearing Barrel Procedures for the M16 (Series) Rifle

On the supervisor’s command LOAD, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 4 to Condition 3:

1. Attempt to place the selector lever in the safe position (weapon must be cocked before safety can be engaged).
2. Lock the bolt to the rear. Visually and physically verify that the firearm is safe and clear.
3. While maintaining the muzzle in the clearing barrel, release the bolt forward. Do not walk the bolt forward. Ensure the bolt is fully forward.
4. Ensure the selector lever is in the safe position.
5. Insert a magazine into the magazine well. Ensure the magazine is fully seated.
6. Close the ejection port cover.

### 6.3.2 UNLOAD Clearing Barrel Procedures for the M16 (Series) Rifle

On the supervisor’s command UNLOAD, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. Ensure the rifle is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Rotate the rifle so the ejection port is facing the deck.
4. Pull the charging handle and lock the bolt to the rear.
5. Put the rifle on safe if it would not go on safe earlier.
6. Ensure the magazine well and chamber are empty and no ammunition is present.
7. Release the charging handle and observe the bolt going forward on an empty chamber.
8. Close the ejection port cover.
9. Check the sights.
10. Recover, inspect, and return any ejected ammunition to the magazine. (Omit this step at night.)
11. Return the magazine to the magazine pouch and fasten the pouch.
6.3.3 UNLOAD, SHOW CLEAR Clearing Barrel Procedures for the M16 (Series) Rifle

On the supervisor’s command UNLOAD, SHOW CLEAR, personnel will, with trigger finger straight along the receiver and with the rifle pointed in the clearing barrel, perform the following steps to take the rifle from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is on safe.
2. Remove the magazine from the rifle and stow it on person.
3. Rotate the rifle so the ejection port is facing the deck.
4. Lock the bolt to the rear.
5. Put the rifle on safe now if it would not go on safe earlier.
6. Ensure the magazine well and chamber are empty and no ammunition is present.
7. Have another person inspect the rifle to ensure no ammunition is present.
8. After receiving acknowledgment that the rifle is clear, release the charging handle and observe the bolt moving forward on an empty chamber.
9. Close the ejection port cover.
10. Check the sights.
11. Recover, inspect, and return any ejected ammunition to the magazine. (Omit this step at night.)
12. Return the magazine to the magazine pouch and fasten the pouch.

6.4 M16 (SERIES) RIFLE SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific instruction that, when consistently applied, will promote the safe handling of the M16 (series) rifle between personnel and during movement with the weapon.

6.4.1 Weapon Transfer From One Person to Another

Proper weapon handling is required every time a person passes a weapon to another person or receives a weapon from another person. This everyday occurrence must take place with the same safety considerations expected on a live fire range. To properly pass a weapon between personnel, perform the following procedures.

6.4.1.1 Personnel Transferring the Weapon

Personnel transferring the weapon shall:

1. Ensure the rifle is on safe.
2. Remove the magazine if it is present.
3. Lock the bolt to the rear.
4. Visually inspect the magazine well and chamber to ensure they are empty and no ammunition is present.
5. Leave the bolt locked to the rear and hand the weapon to the person receiving the weapon.
6.4.1.2 Personnel Receiving the Weapon

Personnel receiving the weapon shall:

1. Ensure the rifle is on safe.
2. Visually inspect the magazine well and chamber to ensure they are empty and no ammunition is present.
3. Release the bolt catch and observe the bolt going forward on an empty chamber.
4. Close the ejection port cover.

6.4.2 Safe Movement (Transports/Carries) for the M16 (Series) Rifle

Specific instruction governing movement of the M16 (series) rifle will ensure personnel move safely with the weapon while, concurrently, staying prepared to engage a threat. The procedures for transporting and carrying the M16 (series) rifle follow.

6.4.2.1 M16 (Series) Rifle Transports

Transports, in which the rifle is slung over the back or shoulder, are used when no immediate threat is present and are especially useful when moving for long periods. They are also used whenever both hands are needed for other work. There are three weapons transports.

6.4.2.1.1 Strong Side Sling Arms (Muzzle Up)

This transport may be used when no immediate threat is present and enemy contact is unlikely. The weapon is slung over the strong shoulder with the muzzle pointed up.

6.4.2.1.2 Weak Side Sling Arms (Muzzle Down)

This transport may be used when no immediate threat is present and contact with the enemy is unlikely. This transport is used primarily during periods of inclement weather to keep moisture out of the bore of the rifle. The weapon is slung over the weak shoulder with the muzzle pointed down.

6.4.2.1.3 Cross Body Sling Arms (Muzzle Up or Down)

This transport may be used when both hands are required for work. The weapon is slung across the back with the muzzle up or down. Unless the situation dictates otherwise, the weapon is slung with the muzzle down to prevent pointing the muzzle in an unsafe direction.

6.4.2.2 M16 (Series) Rifle Carries

Weapons carries are designed to place personnel in a state of increased readiness as the threat level increases. There are three carries for the M16 (series) rifle: the tactical, the alert, and the ready. All three carries permit quick engagement when necessary; each is described below.

6.4.2.2.1 Tactical Carry

The tactical carry is used when no immediate threat is present. It permits control of the rifle while moving and still allows quick engagement of the enemy, if necessary. To perform this carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.
2. Place the buttstock of the rifle (if extended) along the body’s firing side at approximately hip level.

3. Angle the barrel of the rifle upward about 45 degrees in the general direction of the enemy.

4. Position the muzzle slightly below eye level. Ensure wherever the eyes move, the muzzle also moves (eyes, muzzle, target).

6.4.2.2.2 Alert Carry

The alert carry is used when enemy contact is likely (probable). Engagement of the enemy is faster from the alert than from the tactical carry. To perform this carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.

2. Place the buttstock of the rifle in shoulder, with the muzzle angled down about 45 degrees and pointed in the likely direction of the enemy.

6.4.2.2.3 Ready Carry

The ready carry is used when contact with the enemy is imminent. The ready allows immediate target engagement. To perform this carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.

2. Place the buttstock of the rifle in shoulder, with the muzzle of the rifle pointed in the direction of enemy contact. Lower the rifle sights to just below eye level so a clear field of view is maintained until a target has been identified.

6.4.3 Procedures to Present the M16 (Series) Rifle

The procedures that follow provide two methods to efficiently take the M16 (series) rifle from a transport to a firing stance.

6.4.3.1 Presenting From Strong Side Sling Arms Transport (Muzzle Up)

1. While looking at the target, lean forward slightly to facilitate removal of the rifle from the shoulder.

2. Reach under the strong arm with the nonfiring hand between the sling and the body and grasp the hand guard. At the same time, pull down on the sling and raise the strong elbow out and parallel to the deck.

3. Roll the strong shoulder forward and release the sling from the firing hand once the hand guard has cleared the elbow. At the same time, pull the rifle forward off the shoulder with the nonfiring hand. Continue pulling the rifle forward with the nonfiring hand while rotating the rifle parallel to the deck; when the strong arm is free of the sling and the rifle clears all personal gear, establish the firing position, grasp the charging handle with the firing hand, pull it to its rearmost position, and release.

4. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver.

5. Take rifle off safe and place the trigger finger on the trigger.

6. Level the rifle while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move the head down to meet the stock of the rifle.
7. As the sights become level with the aiming eye, visually locate the target through the rear sight aperture. As
the rifle sights settle, shift the focus back to the front sight post to obtain sight alignment and place the tip of
the front sight post center mass on the target to obtain sight picture.

6.4.3.2 Presenting From Weak Side Sling Arms Transport (Muzzle Down)

1. While looking at the target, lean forward slightly to facilitate removal of the rifle from the shoulder.
2. Grasp the sling with the firing hand to prevent the rifle from falling off the shoulder.
3. Grasp the hand guard with the nonfiring hand (the index finger points toward the muzzle).
4. Rotate the rifle counterclockwise while extending the muzzle toward the target (clockwise for left-handed
shooters).
5. Continue extending the rifle toward the target to ensure the rifle clears all personal gear. Establish firing
position.
6. Grasp the charging handle with the firing hand, pull it to its rearmost position, and release.
7. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver. Take the
rifle off safe and place the trigger finger on the trigger.
8. Level the rifle while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move
the head down to meet the stock of the rifle.
9. As the sights become level with the aiming eye, visually locate the target through the rear sight aperture. As
the rifle sights settle, shift the focus back to the front sight post to obtain sight alignment and place the tip of
the front sight post center mass on the target to obtain sight picture.

6.5 M16 (SERIES) RIFLE ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4, bolt locked to the rear, M16 (series) rifle is issued
from and returned to the armory.

6.6 M16 (SERIES) RIFLE DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M16 (series) rifle, refer to the applicable Main-
tenance Requirements Card or Operators Manual, SW370-BUJ-OPI-010.

6.7 M16 (SERIES) RIFLE SHOOTING FUNDAMENTALS

For guidance on rifle marksmanship refer to MCRP 3-01A.
CHAPTER 7

M203 Grenade Launcher

7.1 M203 GRENADE LAUNCHER DESCRIPTION AND FUNCTION

This section provides the description of the M203 grenade launcher and information necessary to understand the M203’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

7.1.1 Description of the M203 Grenade Launcher

The M203 grenade launcher, shown mounted in Figure 7-1 and shown separate in Figure 7-2, is a single-shot weapon designed for use with the M16A3 rifle and fires a 40mm grenade. It is a lightweight, compact, breech-loading, pump-action, single-shot launcher. The launcher consists of a hand guard and sight assembly with an adjustable metallic folding blade sight assembly, a plastic hand guard, and a receiver assembly housing the barrel latch, barrel stop, and firing mechanism. Figure 7-2 displays the M203 trigger and safety mechanism in detail.
7.1.2 M203 Grenade Launcher Technical Characteristics

Technical characteristics specific to the M203 are listed in Figure 7-3.

7.1.3 M203 Grenade Launcher Major Components

The M203 has five major components, as described in Figure 7-4.

7.1.4 Cycle of Operation, Malfunctions, and Stoppages for the M203 Grenade Launcher

To keep the M203 in action, it is important to understand the routine cycle of operation and be prepared to recognize and correct stoppages and malfunctions.

7.1.4.1 Cycle of Operation

The eight steps in the cycle of operation for the M203 are listed in Figure 7-5.

7.1.4.2 Malfunctions

A malfunction is a failure of the M203 to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation. When a malfunction occurs, the weapon may have to be repaired by an armorer.

7.1.4.3 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the M203 will not fire. Due to the possibility of a misfire (a failure to fire) or hangfire (a delay in propellant charge ignition), the following precautions must be observed until the round has been removed from the weapon and the cause of the failure has been determined:
## WEAPON SPECIFICATIONS

<table>
<thead>
<tr>
<th>Component</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>M203</td>
</tr>
<tr>
<td>NSN</td>
<td>1010-00-179-6447</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Colt Manufacturing Company</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Single Shot</td>
</tr>
<tr>
<td>Magazine Type</td>
<td>N/A</td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>1 round</td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>3 lb (1.4 kg)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>16 in (406 mm)</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>12 in (305 mm)</td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>246 fps (75 mps)</td>
</tr>
</tbody>
</table>
| Maximum Effective Range | Area target: 1,148 ft (350 m)  
Point target: 492 ft (150 m) |
| Maximum Range   | 1,312 ft (400 m)                                                        |
| Minimum Safe Range | Combat situation: 102 ft (31 m)  
Training situation: 427 ft (130 m) |
| Caliber         | 40mm, low velocity                                                      |

## AMMUNITION

<table>
<thead>
<tr>
<th>Type</th>
<th>NSN</th>
<th>Manufacturer</th>
<th>Mechanism Type</th>
<th>Magazine Type</th>
<th>Ammo Capacity</th>
<th>Weight (empty)</th>
<th>Overall Length</th>
<th>Barrel Length</th>
<th>Muzzle Velocity</th>
<th>Maximum Effective Range</th>
<th>Maximum Range</th>
<th>Minimum Safe Range</th>
<th>Caliber</th>
</tr>
</thead>
</table>
| B504 Green Star  | B505 Red Star        | Colt         | Single Shot    | N/A           | 1 round       | 3 lb (1.4 kg)  | 16 in         | 12 in        | 246 fps         | Area target: 1,148 ft (350 m)  
Point target: 492 ft (150 m) | 1,312 ft (400 m) | Combat situation: 102 ft (31 m)  
Training situation: 427 ft (130 m) | 40mm, low velocity |

## LOGISTICS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-service date</td>
<td>1971</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>10,000 rounds</td>
</tr>
<tr>
<td>Technical manual #</td>
<td>SW370-AE-MMI-010</td>
</tr>
<tr>
<td>Operator manual #</td>
<td>TM 9-1010-221-10</td>
</tr>
</tbody>
</table>

## SAFETIES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combat situation: minimum safe range</td>
<td>102 ft (31 m)</td>
</tr>
<tr>
<td>Training situation: minimum safe range</td>
<td>427 ft (130 m)</td>
</tr>
</tbody>
</table>

## MAJOR COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Guard Assembly</td>
<td>Fits over the barrel of the M16A3 rifle. Made of molded plastic.</td>
</tr>
<tr>
<td>Quadrant Sight Assembly</td>
<td>Provides range selection from 50 to 400 meters in 25-meter increments. Attached to the carrying handle of the M16A3 rifle.</td>
</tr>
<tr>
<td>Receiver Assembly</td>
<td>Houses the firing mechanism and ejection system and supports the barrel assembly. Mounts to the underside of the M16A3 rifle.</td>
</tr>
<tr>
<td>Barrel Assembly</td>
<td>Chambered for special 40mm grenade launcher ammunition. The assembly slides forward and backward under the receiver assembly in the sliding tracks. Consists of a specially treated aluminum barrel and plastic handgrip assembly.</td>
</tr>
<tr>
<td>Leaf Sight Assembly</td>
<td>Located on top of the hand guard assembly. Provides range selection from 50 to 250 meters in 50-meter increments.</td>
</tr>
</tbody>
</table>

---

Figure 7-3. M203 Grenade Launcher Specifications, Ammunition, Logistics, and Safeties

Figure 7-4. M203 Grenade Launcher Major Components
1. In training situations, shout “misfire,” and keep the weapon trained on the target and all personnel clear of the muzzle. Before attempting to remove the round from the launcher, personnel not required for the operation must move from the vicinity.

2. Wait 30 seconds from the time of failure to fire before opening the breech for unloading purposes.


4. After the round has been removed (either by unloading and catching the round or by unloading close to the ground for a short fall), determine whether the round or the firing mechanism is defective. Examine the primer to see if it has been dented. If the primer has not been dented, then the firing mechanism is faulty. See the armorer, who will determine the cause. The round may be reloaded and fired after the cause for the failure to fire has been corrected.

5. If the primer has been dented (a hangfire), keep the round separate from other ammunition until it can be properly disposed of. In a tactical situation, carry the round back to friendly lines so the enemy cannot use it.

6. In a combat situation, the weapon should be cleared rapidly, using common sense and staying within the safety parameters as much as the tactical situation permits.

7.2 M203 GRENADE LAUNCHER SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the conditions of readiness, operation, and safety features specific to the M203 grenade launcher. The standardized procedures included in this section, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this weapon.

7.2.1 Weapon Condition Codes for the M203 Grenade Launcher and M16A3 Rifle

The M203’s safety status is defined, like other Navy weapons, by four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M203 are defined in Figure 7-6.

7.2.2 Weapon Handling Commands for the M203 Grenade Launcher

Weapon handling commands are issued by the supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 7-7, when consistently and properly used, will result in the safe and proficient handling of the M203 grenade launcher and the M16A3 rifle.
<table>
<thead>
<tr>
<th><strong>STEP</strong></th>
<th><strong>ACTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within the cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>Depressing the barrel latch and sliding the barrel assembly forward.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Extraction and cocking take place at the same time. As the barrel assembly is opened, a spring-loaded extractor keeps the spent cartridge seated against the receiver until the barrel is clear of the cartridge case.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Spring-loaded ejector pushes the expended cartridge case or live round from the barrel assembly.</td>
</tr>
<tr>
<td>Cocking</td>
<td>The weapon is cocked when the barrel assembly is opened. The barrel latch, when depressed, unlocks the barrel assembly so that it can be moved forward along the receiver assembly.</td>
</tr>
<tr>
<td>Feeding</td>
<td>When the barrel assembly is in the open position, the cartridge is inserted into the breech end of the barrel.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Chambering takes place during closing of the barrel assembly. As the breech end of the barrel assembly closes, the extractor contacts the rim of the cartridge and the round is firmly seated in the chamber.</td>
</tr>
<tr>
<td>Locking</td>
<td>As the barrel assembly closes, the barrel latch becomes engaged to the barrel assembly and the cocking lever engages the barrel extension so that it cannot be moved forward along the receiver assembly.</td>
</tr>
</tbody>
</table>

Figure 7-5. M203 Grenade Launcher Cycle of Operation

<table>
<thead>
<tr>
<th><strong>CONDITION</strong></th>
<th><strong>ACTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Round inserted, barrel latched down, safety is on.</td>
</tr>
<tr>
<td>2</td>
<td>Not Applicable. There is no Condition 2 for the M203.</td>
</tr>
<tr>
<td>3</td>
<td>Not Applicable. There is no Condition 3 for the M203.</td>
</tr>
<tr>
<td>4</td>
<td>Weapon is free of ammunition, barrel latched down, safety is on.</td>
</tr>
</tbody>
</table>

Figure 7-6. M203 Grenade Launcher Weapon Condition Codes

<table>
<thead>
<tr>
<th><strong>COMMAND</strong></th>
<th><strong>ACTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Load</td>
<td>Take the weapon from Condition 4 to Condition 1.</td>
</tr>
<tr>
<td>Fire</td>
<td>Engage the target.</td>
</tr>
<tr>
<td>Cease Fire</td>
<td>Stop target engagement.</td>
</tr>
<tr>
<td>Unload</td>
<td>Take the M203 from Condition 1 to Condition 4.</td>
</tr>
<tr>
<td>Unload, Show Clear</td>
<td>Requires a second person to check the weapon to verify that no ammunition is present in either the M203 or the M16A3 before it is placed in Condition 4.</td>
</tr>
</tbody>
</table>

Figure 7-7. M203 Grenade Launcher and M16A3 Rifle Weapon Handling Commands
7.2.3 Safe Handling Safety Considerations

The warnings listed below in Figure 7-8, when followed, will assist personnel with safely handling the M203 grenade launcher.

7.2.4 Safe Handling Procedures for the M203 Grenade Launcher on the Range

The weapon handling commands defined in Figure 7-7 are executed as set forth in the following paragraphs.

7.2.4.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the M203 from Condition 4 to Condition 1.

1. Ensure the M203 is in Condition 4.
2. Press the barrel latch and slide the barrel forward.
3. With the barrel assembly open, place a round into the breech, taking care to ensure it is snug in place and will not fall out.
4. Slide the barrel down until it locks in place.
5. Physically inspect the weapon to be sure the round is seated correctly by pushing forward on the barrel.

7.2.4.2 Procedures to FIRE

On the command FIRE, personnel shall aim the M203, take the weapon off safe, and pull the trigger to engage the target.

7.2.4.3 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall place the trigger finger straight along the receiver and place the weapon on safe.

7.2.4.4 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the M203 from Condition 1 to Condition 4.

1. Place the M203 and the M16A3 on safe.
2. Depress the barrel latch and slide the barrel forward.
3. Place the hand under the breech to catch the round as it is ejected.
4. Elevate the weapon and visually and physically ensure that the chamber is clear.
5. Clear the M16A3.
6. Close the breech, place the M203 on safe (if not already on safe), recover, inspect, and retain any live rounds ejected.
7.2.4.5 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the M203 from Condition 1 to Condition 4:

1. Place the M203 and the M16A3 on safe.
2. Depress the barrel latch and slide the barrel forward.
3. Place the hand under the breech to catch the round as it is ejected.
4. Elevate the weapon and visually and physically ensure that the chamber is clear.
5. Clear the M16A3.
6. Have another person inspect the M203 and the M16A3 to ensure no ammunition is present.
7. After receiving acknowledgment that the M203 and the M16A3 are clear, place the M16A3 in Condition 4.
8. After closing the breech on the M203, recover, inspect, and retain any ejected ammunition.

SAFETY CONSIDERATIONS AND WARNINGS

| Do not point muzzle in direction of personnel when loading, clearing, zeroing, or firing grenade launcher. Such action will result in injury to, or death of, personnel. |
| Do not carry weapon in open position. Weapon must be carried in a closed and locked position with safety on. |
| Be sure safety is in safe position after loading grenade launcher. |
| Do not squeeze trigger and remove safety at the same time. |
| Be in a protected position when firing the grenades at targets within 130 meters (427 ft). Do not engage targets within 130-meter (427 ft) radius of unprotected friendly troops. |
| Note |
| Danger radius of the practice grenade is 20 meters (66 ft). |
| Do not fire canopy smoke cartridges so that a falling ignited projectile could descend upon friendly troops, causing injury to personnel and/or damage to material. |
| Use only authorized rounds. Do not use or fire cartridges other than those authorized for the 40mm M203 grenade launcher. Use of unauthorized high-explosive 40mm cartridges can result in injury or death. |
| Projectiles assembled with M552 (T333) fuzes will arm within 3 meters (10 ft) of weapon. Clear line of fire of all obstructions that will endanger personnel when weapon is fired. |
| Do not interchange barrel assemblies or components from one weapon to another. Doing so can result in injury to, or death of, personnel. |

Figure 7-8. Safe Handling Warnings for the M203 Grenade Launcher

7.2.4.5 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the M203 from Condition 1 to Condition 4:

1. Place the M203 and the M16A3 on safe.
2. Depress the barrel latch and slide the barrel forward.
3. Place the hand under the breech to catch the round as it is ejected.
4. Elevate the weapon and visually and physically ensure that the chamber is clear.
5. Clear the M16A3.
6. Have another person inspect the M203 and the M16A3 to ensure no ammunition is present.
7. After receiving acknowledgment that the M203 and the M16A3 are clear, place the M16A3 in Condition 4.
8. After closing the breech on the M203, recover, inspect, and retain any ejected ammunition.
7.3 M203 GRENADE LAUNCHER SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific instructions that, when consistently applied, will promote the safe handling of the M203 between personnel and during movement with the weapon.

7.3.1 Weapons Transfers From One Person to Another

Proper weapon handling is required every time a person passes a weapon to another person or receives a weapon from another person. This everyday occurrence must take place with the same safety considerations expected on a live fire range. To properly pass a weapon between personnel, the following procedures must be performed.

7.3.1.1 Personnel Transferring the Weapon

The person handing off the weapon shall:

1. Ensure the M203 is on safe.
2. Open the breech of the M203 and visually inspect the chamber to ensure no ammunition is present.
3. Ensure the M16A3 is on safe.
4. Remove the magazine if it is present.
5. Lock the bolt to the rear.
6. Visually inspect the chamber on the M16A3 to ensure that no ammunition is present.
7. Leave the bolt locked to the rear and hand the weapon to the person receiving the weapon.

7.3.1.2 Personnel Receiving the Weapon

The person receiving the weapon shall:

1. Ensure that the M16A3 is on safe.
2. Visually inspect the chamber on the M16A3 to ensure there is no ammunition present.
3. Release the bolt catch and observe the bolt going forward on an empty chamber.
4. Close the ejection port cover.
5. Ensure that the M203 is on safe.
6. Visually inspect the chamber on the M203 to ensure there is no ammunition present.
7. Close the breech on the M203 and ensure it is latched in place.

7.3.2 Safe Movement (Transports/Carries) for the M203 Grenade Launcher

Specific instruction governing movement of the M203 will ensure personnel move safely with the weapon while, concurrently, staying prepared to engage a threat. The procedures for transporting and carrying the M203 follow.
7.3.2.1 M203 Grenade Launcher Transports

The weapon transports for the M203 are the same as for the M16A3 rifle. The transports, in which the rifle is slung over the back or shoulder, are used when no immediate threat is present and are especially useful when moving for long periods. They are also used whenever both hands are needed for other work. There are three weapons transports.

7.3.2.1.1 Strong Side Sling Arms (Muzzle Up)

This transport may be used when no immediate threat is present and enemy contact is unlikely. The weapon is slung over the strong shoulder with the muzzle pointed up.

7.3.2.1.2 Weak Side Sling Arms (Muzzle Down)

This transport may be used when no immediate threat is present and contact with the enemy is unlikely. This transport is mainly used during periods of inclement weather to keep moisture out of the bore of the rifle. The weapon is slung over the weak shoulder with the muzzle pointed down.

7.3.2.1.3 Cross Body Sling Arms (Muzzle Up or Down)

This transport may be used when both hands are required for work. The weapon is slung across the back with the muzzle up or down. Normally, the weapon is slung with the muzzle down to prevent pointing the muzzle in an unsafe direction, unless the situation dictates otherwise.

7.3.2.2 M203 Grenade Launcher Carries

Weapons carries are designed to place personnel in a state of increased readiness as the threat level increases. The weapon carries for the M203 are the same as for the M16A3 rifle: the tactical, the alert, and the ready. All three carries permit quick engagement when necessary.

7.3.2.2.1 Tactical Carry

The tactical carry is used when no immediate threat is present. The tactical permits control of the rifle while moving and still allows quick engagement of the enemy, if necessary. To perform the tactical carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.
2. Place the buttstock of the rifle (if extended) along the side of the body at approximately hip level.
3. Angle the barrel of the rifle upward about 45 degrees in the general direction of the enemy.
4. Position the muzzle slightly below eye level. Ensure wherever the eyes move, the muzzle moves (eyes, muzzle, target).

7.3.2.2.2 Alert Carry

The alert carry is used when enemy contact is likely (probable). Engagement of the enemy is faster from the alert than from the tactical carry. To perform the alert carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.
2. Place the buttstock of the rifle in the shoulder, with the muzzle angled down about 45 degrees and pointed in the likely direction of the enemy.
7.3.2.2.3 Ready Carry

The ready carry is used when contact with the enemy is imminent. The ready allows immediate target engagement. To perform the ready carry:

1. Place the nonfiring hand on the hand guard, the firing hand around the pistol grip, and the trigger finger straight along the receiver.

2. Place the buttstock of the rifle in the shoulder, with the muzzle of the rifle pointed in the direction of enemy contact. Lower the rifle sights to just below eye level so a clear field of view is maintained until a target has been identified.

7.3.3 Procedures to Present the M203 Grenade Launcher

The procedures that follow provide two methods to efficiently take the M203 from a transport to a firing stance. These procedures assume the M203 is in Condition 4.

7.3.3.1 Presenting From Strong Side Sling Arms Transport (Muzzle Up)

1. While looking at the target, lean forward slightly to facilitate removal of the rifle from the shoulder.

2. Reach under the strong arm with the nonfiring hand between the sling and the body and grasp the hand guard. At the same time, pull down on the sling and raise the strong elbow out and parallel to the deck.

3. Roll the strong shoulder forward and release the sling from the firing hand once the hand guard has cleared the elbow. At the same time, pull the rifle forward off the shoulder with the nonfiring hand. Continue pulling the rifle forward with the nonfiring hand while rotating the rifle parallel to the deck. When the strong arm is free of the sling and the rifle clears all personal gear, establish the firing position.

4. Load the M203, bringing it to Condition 1.

5. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver.

6. Take the M203 off safe and place the trigger finger on the trigger.

7. Level the rifle while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move the head down to meet the stock of the rifle.

8. Position the sight of the M203 as appropriate for the range to the target. For targets within 50 meters, place leaf sight down and use rifle sights. Estimate the distance and aim head high on the target. For targets between 50 meters to 250 meters, raise leaf sight and use with rifle front sight. For targets between 250 to 400 meters, use front and rear sight of the quadrant sight only.

7.3.3.2 Presenting From Weak Side Sling Arms Transport (Muzzle Down)

1. While looking at the target, lean forward slightly to facilitate removal of rifle from the shoulder.

2. Grasp the sling with the firing hand to prevent the rifle from falling off the shoulder.

3. Grasp the hand guard with the nonfiring hand (the index finger points toward the muzzle).

4. Rotate the rifle counterclockwise while extending the muzzle toward the target (clockwise for left-handed shooters).
5. Continue extending the rifle toward the target to ensure the rifle clears all personal gear. Establish firing position.

6. Load the M203, bringing it to Condition 1.

7. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver. Take the rifle off safe and place the trigger finger on the trigger.

8. Level the rifle while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move the head down to meet the stock of the rifle.

9. Position the sight the M203 as appropriate for the range to the target. For targets within 50 meters, place leaf sight down and use rifle sights. Estimate the distance and aim head high on the target. For targets between 50 to 250 meters, raise leaf sight and use with rifle front sight. For targets between 250 to 400 meters, use front and rear sight of the quadrant sight only.

7.4 M203 GRENADE LAUNCHER ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M203 grenade launcher is issued from and returned to the armory.

7.5 M203 GRENADE LAUNCHER DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M203 grenade launcher, refer to the applicable Maintenance Requirements Card or Technical Manual, SW 370-AE-MMI-010.

7.6 M203 GRENADE LAUNCHER SHOOTING FUNDAMENTALS

For guidance on grenade launcher marksmanship, refer to Operator’s Manual, TM 9-1010-221-10.
CHAPTER 8

M79 Grenade Launcher

8.1 M79 GRENADE LAUNCHER DESCRIPTION AND FUNCTION

This section provides the description of the M79 grenade launcher and information necessary to understand the M79’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

8.1.1 Description of the M79 Grenade Launcher

The M79 grenade launcher, shown in Figures 8-1 and 8-2, is a single-shot, break-open, shoulder-fired weapon. It is breech-loading and fires a 40mm grenade. The M79 has an open, fixed front sight and an open, adjustable rear sight.

8.1.2 M79 Grenade Launcher Technical Characteristics

Technical characteristics specific to the M79 are listed in Figure 8-3.

Figure 8-1. M79 Grenade Launcher Left Side
8.1.3 M79 Grenade Launcher Major Components

The M79 has five major components, as described in Figure 8-4.

8.1.4 Cycle of Operation, Malfunctions, and Stoppages for the M79 Grenade Launcher

To keep the M79 in action, it is important to understand the routine cycle of operation and be prepared to recognize and correct stoppages and malfunctions.

8.1.4.1 Cycle of Operation

The eight steps in the cycle of operation for the M79 are listed in Figure 8-5.

8.1.4.2 Malfunctions

A malfunction is a failure of the M79 to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation. When a malfunction occurs, the weapon may have to be repaired by an armorer.

8.1.4.3 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the M79 will not fire. Due to the possibility of a misfire (a failure to fire) or hangfire (a delay in propellant charge ignition), the following precautions must be observed until the round has been removed from the weapon and the cause of the failure has been determined:

1. In training situations, shout “misfire,” and keep the weapon trained on the target and all personnel clear of the muzzle. Before attempting to remove the round from the launcher, personnel not required for the operation must move from the vicinity.
### WEAPON SPECIFICATIONS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>M79</td>
</tr>
<tr>
<td>NSN</td>
<td>1010-00-691-1382</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Various</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Single-shot break-open</td>
</tr>
<tr>
<td>Magazine Type</td>
<td>N/A</td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>1 round</td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>5.91 lb (2.7 kg)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>28.8 in (732 mm)</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>14 in (356 mm)</td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>249 fps (76 mps)</td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>Area target: 1,148 ft (350 m)  Point target: 492 ft (150 m)</td>
</tr>
<tr>
<td>Maximum Range</td>
<td>1,312 ft (400 m)</td>
</tr>
<tr>
<td>Minimum Safe Range</td>
<td>Combat situation: 102 ft (31 m)  Training situation: 427 ft (130 m)</td>
</tr>
<tr>
<td>Caliber</td>
<td>40mm, low velocity</td>
</tr>
</tbody>
</table>

### AMMUNITION

<table>
<thead>
<tr>
<th>B504 Green Star</th>
<th>B505 Red Star</th>
</tr>
</thead>
<tbody>
<tr>
<td>B506 Red Smoke</td>
<td>B508 Green Smoke</td>
</tr>
<tr>
<td>B509 Yellow Smoke</td>
<td>B519 Practice</td>
</tr>
<tr>
<td>B534 MP</td>
<td>B535 White Star</td>
</tr>
<tr>
<td>B566 White Star Cluster</td>
<td>B546 HEDP</td>
</tr>
<tr>
<td>B567 and BA05 CS</td>
<td>B568 HE</td>
</tr>
<tr>
<td>B569 HE</td>
<td>B577 TP</td>
</tr>
</tbody>
</table>

### LOGISTICS

- In-service date: 1960
- Life expectancy: 10,000 rounds
- Technical manual #: SW370-BD-OPI-24
- Operator manual #: TM 9-1010-205-10

### SAFETIES

- Manual switch

---

**Figure 8-3.** M79 Grenade Launcher Specifications, Ammunition, Logistics, and Safeties

---

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fore-end Assembly</td>
<td>Used to open and close barrel, permitting loading and firing of weapon and ejection of spent cartridge.</td>
</tr>
<tr>
<td>Barrel</td>
<td>Chambered for special 40mm grenade launcher ammunition.</td>
</tr>
<tr>
<td>Receiver</td>
<td>Houses firing mechanism and supports barrel assembly.</td>
</tr>
<tr>
<td>Stock</td>
<td>Made of fiberglass or wood and is attached to receiver.</td>
</tr>
<tr>
<td>Sling</td>
<td>Used for carrying grenade launcher.</td>
</tr>
</tbody>
</table>

**Figure 8-4.** M79 Grenade Launcher Major Components
2. Wait 30 seconds from the time of failure to fire before opening the breech for unloading purposes.


![WARNING]

Keep muzzle on target and clear all personnel from the area (at least 80 meters or 264 feet). Wait 30 seconds before removing round. See the armorer.

4. After the round has been removed (either by unloading and catching the round or by unloading close to the ground for a short fall), determine whether the round or the firing mechanism is defective. Examine the primer to see if it has been dented. If the primer has not been dented, then the firing mechanism is faulty. See the armorer, who will determine the cause. The round may be reloaded and fired after the cause for the failure to fire has been corrected.

![WARNING]

Store the round at a safe distance away from serviceable ammunition until it is determined whether the round or the weapon is defective. A dented primer is a hangfire. Handle accordingly.
5. If the primer has been dented (a hangfire), keep the round separate from other ammunition until it can be properly disposed of. In a tactical situation, carry the round back to friendly lines so the enemy cannot use it.

6. In a combat situation, the weapon should be cleared rapidly, using common sense and staying within the safety parameters as much as the tactical situation permits.

8.2 M79 GRENADE LAUNCHER SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the conditions of readiness, operation, and safety features specific to the M79 grenade launcher. The standardized procedures included in this section, when consistently applied, will maximize safety during weapon handling and promote the effective employment of this weapon.

8.2.1 Weapon Condition Codes for the M79 Grenade Launcher

The M79’s safety status is defined, like other Navy weapons, by four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M79 are defined in Figure 8-6.

8.2.2 Weapon Handling Commands for the M79 Grenade Launcher

Weapon handling commands are issued by the supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 8-7, when consistently and properly used, will result in the safe and proficient handling of the weapon.

8.2.3 Safe Handling Safety Considerations

The warnings listed below in Figure 8-8, when followed, will assist personnel with safely handling the M79 grenade launcher.

8.2.4 Safe Handling Procedures for the M79 Grenade Launcher on the Range

The weapon handling commands defined in Figure 8-7 are executed as set forth in the following paragraphs.

8.2.4.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the M79 from Condition 4 to Condition 1.

1. Ensure the M79 is on safe.
2. Point muzzle of launcher at an area clear of personnel.
3. Move barrel-locking latch as far to the right as possible.
4. With the barrel assembly open, place a round into the breech. Ensure the extractor contacts the cartridge case rim.
5. Close breech.

8.2.4.2 Procedures to FIRE

On the command FIRE, aim the M79, take the weapon off safe, and pull the trigger to engage the target.

8.2.4.3 Procedures to CEASE FIRE

On the command CEASE FIRE, place trigger finger straight along the receiver and place the weapon on safe.
8.2.4.4 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the M79 from Condition 1 to Condition 4:

1. Ensure the M79 is on safe.
2. Move barrel-locking latch as far right as possible.
3. Grasp and remove the partially extracted cartridge case.

8.2.4.5 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the M79 from any condition to Condition 4:

1. Ensure the M79 is on safe.
2. Move barrel-locking latch as far right as possible.
3. Grasp and remove partially extracted cartridge case.
4. Have another person inspect the M79 to ensure no ammunition is present.
5. After receiving acknowledgment that the M79 is clear, place the weapon in Condition 4.


8.3 M79 GRENADE LAUNCHER SAFE WEAPON MOVEMENT PROCEDURES

This section provides specific instructions that, when consistently applied, will promote the safe handling of the M79 between personnel and during movement with the weapon.

8.3.1 Weapon Transfer From One Person to Another

Proper weapon handling is required every time a person passes a weapon to another person or receives a weapon from another person. This everyday occurrence must take place with the same safety considerations expected on a live fire range. To properly pass a weapon between personnel, perform the following procedures.

8.3.1.1 Personnel Transferring the Weapon

The person handing off the weapon shall:

1. Ensure the M79 is on safe.

2. Open breech of the M79 and visually inspect the chamber to ensure no ammunition is present.
8.3.1.2 Personnel Receiving the Weapon

The person receiving the weapon shall:

1. Ensure that the M79 is on safe.
2. Visually inspect the chamber on the M79 to ensure there is no ammunition present.
3. Close breech.

8.3.2 Safe Movement (Transports/Carries) for the M79 Grenade Launcher

Specific instruction governing movement of the M79 will ensure personnel move safely with the weapon while, concurrently, staying prepared to engage a threat. The procedures for transporting and carrying the M79 follow.

8.3.2.1 M79 Grenade Launcher Transports

The transports, in which the launcher is slung over the back or shoulder, are used when no immediate threat is present and are especially useful when moving for long periods. They are also used whenever both hands are needed for other work. There are three weapons transports.

8.3.2.1.1 Strong Side Sling Arms (Muzzle Up)

This transport may be used when no immediate threat is present and enemy contact is unlikely. The weapon is slung over the strong shoulder with the muzzle pointed up.

8.3.2.1.2 Weak Side Sling Arms (Muzzle Down)

This transport may be used when no immediate threat is present and enemy contact is unlikely. This transport is mainly used during periods of inclement weather to keep moisture out of the bore of the launcher. The weapon is slung over the weak shoulder with the muzzle pointed down.

8.3.2.1.3 Cross Body Sling Arms (Muzzle Up or Down)

This transport may be used when both hands are required for work. The weapon is slung across the back with the muzzle up or down. Normally, the weapon is slung with the muzzle down to prevent pointing the muzzle in an unsafe direction, unless the situation dictates otherwise.

8.3.2.2 M79 Grenade Launcher Carries

Weapon carries are designed to place personnel in a state of increased readiness as the threat level increases. The three weapon carries for the M79 are the tactical carry, the alert carry, and the ready carry. All three carries permit quick engagement when necessary.

8.3.2.2.1 Tactical Carry

The tactical carry is used when no immediate threat is present. It permits control of the launcher while moving and still allows quick engagement of the enemy, if necessary. To perform the tactical carry:

1. Place the nonfiring hand on the fore-end, the firing hand around the pistol grip, and the trigger finger straight along the receiver.
2. Place the stock of the launcher along the side of the body at approximately hip level.
3. Angle the barrel of the launcher upward about 45 degrees in the general direction of the enemy.
4. Position the muzzle slightly below eye level. Ensure wherever the eyes move, the muzzle moves (eyes, muzzle, target).

8.3.2.2.2 Alert Carry

The alert carry is used when enemy contact is probable. Engagement of the enemy is faster from the alert carry than from the tactical carry. To perform the alert carry:

1. Place the nonfiring hand on the fore-end, the firing hand around the pistol grip, and the trigger finger straight along the receiver.

2. Place the stock of the launcher in the shoulder, with the muzzle angled down 45 degrees and pointed in the likely direction of the enemy.

8.3.2.2.3 Ready Carry

The ready carry is used when contact with the enemy is imminent. It allows immediate target engagement. To perform the ready carry:

1. Place the nonfiring hand on the fore-end, the firing hand around the pistol grip, and the trigger finger straight along the receiver.

2. Place the stock of the launcher in the shoulder, with the muzzle pointed in the direction of enemy contact. Lower the launcher sights to just below eye level to maintain a clear field of view until a target is identified.

8.3.3 Procedures to Present the M79 Grenade Launcher

The procedures that follow provide two methods to efficiently take the M79 from a transport to a firing stance. These procedures assume the M79 is in Condition 4.

8.3.3.1 Presenting From Strong Side Sling Arms Transport (Muzzle Up)

1. While looking at the target, lean forward slightly to facilitate removal of the launcher from the shoulder.

2. Reach under the strong arm with the nonfiring hand between the sling and the body, and grasp the fore-end. At the same time, pull down on the sling and raise the strong elbow out and parallel to the deck.

3. Roll the strong shoulder forward and release the sling from the firing hand once the fore-end has cleared the elbow. At the same time, pull the launcher forward off the shoulder with the nonfiring hand. Continue pulling the launcher forward with the nonfiring hand while rotating the launcher parallel to the deck. When the strong arm is free of the sling and the launcher clears all personal gear, establish the firing position.

4. Load the M79 bringing it to Condition 1.

5. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver.

6. Take the M79 off safe and place the trigger finger on the trigger.

7. Level the launcher while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move the head down to meet the stock of the launcher.

8. Position the sight of the M79 as appropriate for the range to the target. For targets within 50 meters, place leaf sight down, estimate the distance to the target, and aim head high on the target. For targets between 50 and 80 meters, place the leaf sight in the down position. For targets between 80 and 365 meters, use rear sight in the raised position.
8.3.3.2 Presenting From Weak Wide Sling Arms Transport (Muzzle Down)

1. While looking at the target, lean forward slightly to facilitate removal of the launcher from the shoulder.

2. Grasp the sling with the firing hand to prevent the launcher from falling off the shoulder.

3. Grasp fore-end with the nonfiring hand, the index finger pointed toward the muzzle.

4. Rotate the launcher counterclockwise while extending the muzzle toward the target (clockwise for left-handed shooters).

5. Continue extending the launcher toward the target to ensure the launcher clears all personal gear. Establish firing position.

6. Load the M79 bringing it to Condition 1.

7. Establish a firing grip with the firing hand while keeping the trigger finger straight along the receiver. Take the launcher off safe and place the trigger finger on the trigger.

8. Level the launcher while pulling it firmly into the pocket of the shoulder to obtain proper stock weld. Do not move the head down to meet the stock of the launcher.

9. Position the sight of the M79 as appropriate for the range to the target. For targets within 50 meters, place leaf sight down, estimate the distance to the target and aim head high on the target. For targets between 50 and 80 meters, place leaf sight in the down position. For targets between 80 and 365 meters, use the rear sight in the raised position.

8.4 M79 GRENADE LAUNCHER ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M79 is issued from and returned to the armory.

8.5 M79 GRENADE LAUNCHER DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M79 grenade launcher, refer to the applicable Maintenance Requirements Card or Technical Manual, TM 9-1010-205-10.

8.6 M79 GRENADE LAUNCHER SHOOTING FUNDAMENTALS

For guidance on grenade launcher marksmanship, refer to Operator’s Manual, TM 9-1010-205-10.
CHAPTER 9

M60 (Series) Medium Machine Gun

9.1 M60 (SERIES) MEDIUM MACHINE GUN DESCRIPTION AND FUNCTION

This section provides the description of the M60 (series) medium machine gun and information necessary to understand the M60’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

9.1.1 Description of the M60 (Series) Medium Machine Gun

The M60 (series) machine gun, shown in Figures 9-1 and 9-2, is an automatic, air-cooled, link belt-fed, gas-operated weapon with fixed headspace. A general-purpose weapon, the M60 (series) machine gun is capable of being fired from hand-held positions or from several types of mounts. The M60 and M60E3 are primarily used for ground operations. The Navy configuration of the M60E3 has both long and short barrels and a V-notch rear sight. The M60D is primarily used for support of ground operations and is an aircraft door-mounted or vehicle-mounted machine gun. The M60 (series) machine gun fires from an open bolt position.

Figure 9-1. M60 (Series) Medium Machine Gun Left Side
9.1.2 M60 (Series) Medium Machine Gun Technical Characteristics

Technical characteristics specific to the M60 (Series) machine gun are listed in Figure 9-3.

9.1.3 M60 (Series) Medium Machine Gun Major Components

The M60, M60D, and M60E3 have five common major components (or assemblies), as described in Figure 9-4. In addition to the common major components (or assemblies) described in Figure 9-4, the M60 and M60E3 have six model-specific major components in common, as described in Figure 9-5. The M60D also has four model-specific major components, as described in Figure 9-6. The differences between M60, M60D, and M60E3 model components are summarized in Figure 9-7.

9.1.4 Cycle of Operation for the M60 (Series) Medium Machine Gun

It is important to understand the routine cycle of operation to ensure the M60 is readily available for action. The eight steps in the cycle of operation for the M60 are listed in Figure 9-8.

9.1.5 Remedial Actions for the M60 (Series) Medium Machine Gun

The M60 (series) medium machine gun is an effective and reliable weapon. Proper care and preventive maintenance will help ensure its serviceability. It is important to understand, however, that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur. Therefore, the appropriate remedial action will be based on the cause of the malfunction or stoppage. Both malfunctions and stoppages are discussed in the next two sections.
<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>MODEL</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M60 BASIC</td>
<td>M60C</td>
<td>M60E3</td>
<td></td>
</tr>
<tr>
<td>NSN</td>
<td>1005-00-0605-7710</td>
<td>1005-00-909-3002</td>
<td>1005-01-08-6259</td>
<td></td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Saco Def. Corp.</td>
<td>Saco Def. Corp.</td>
<td>Saco Def. Corp.</td>
<td></td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
<td></td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Bandoleer</td>
<td>Bandoleer</td>
<td>Bandoleer</td>
<td></td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>100 rounds</td>
<td>100 rounds</td>
<td>100 rounds</td>
<td></td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>23 lb (10.4 kg)</td>
<td>25 lb (11.3 kg)</td>
<td>18.5 lb (8.4 kg)</td>
<td></td>
</tr>
<tr>
<td>Overall Length</td>
<td>43.5 in (1,105 mm)</td>
<td>43.5 in (1,105 mm)</td>
<td>42.4 in (1,077 mm)</td>
<td></td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>2,800 fps (853 m)</td>
<td>2,800 fps (853 m)</td>
<td>2,800 fps (853 m)</td>
<td></td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>3,609 ft (1,100 m)</td>
<td>3,609 ft (1,100 m)</td>
<td>3,609 ft (1,100 m)</td>
<td></td>
</tr>
<tr>
<td>Maximum Range</td>
<td>12,221 ft (3,725 m)</td>
<td>12,221 ft (3,725 m)</td>
<td>12,221 ft (3,725 m)</td>
<td></td>
</tr>
<tr>
<td>Caliber</td>
<td>7.62mm NATO</td>
<td>7.62mm NATO</td>
<td>7.62mm NATO</td>
<td></td>
</tr>
<tr>
<td>Cyclic Rate of Fire (automatic)</td>
<td>550 rounds per minute</td>
<td>550 rounds per minute</td>
<td>550 rounds per minute</td>
<td></td>
</tr>
<tr>
<td>Rifling</td>
<td>4 lands, one turn in 12 inches, right hand twist</td>
<td>4 lands, one turn in 12 inches, right hand twist</td>
<td>4 lands, one turn in 12 inches, right hand twist</td>
<td></td>
</tr>
</tbody>
</table>

LOGISTICS

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Service Date</td>
<td>1960</td>
<td>1966</td>
<td>1985</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>25,000 rounds</td>
<td>25,000 rounds</td>
<td>25,000 rounds</td>
</tr>
<tr>
<td>Operator Manual #</td>
<td>TM 9-1005-224-10</td>
<td>TM 9-1005-224-10</td>
<td>TM 02705E-10/1</td>
</tr>
</tbody>
</table>

SAFETIES

|                                |        |        |        |
| Safety lever                   |        |        |        |
| Safety push button             |        |        |        |
| Safety lever                   |        |        |        |

WARNING

Never mix live ammunition and dummy ammunition.

Figure 9-3. M60 (Series) Medium Machine Gun Specifications, Ammunition, Logistics, and Safeties (Sheet 1 of 2)
<table>
<thead>
<tr>
<th>AMMUNITION</th>
<th>MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M60 BASIC</td>
</tr>
<tr>
<td>Individual Rounds</td>
<td>X</td>
</tr>
<tr>
<td>M62, Tracer</td>
<td>X</td>
</tr>
<tr>
<td>M63, Dummy</td>
<td>X</td>
</tr>
<tr>
<td>M80, Ball</td>
<td>X</td>
</tr>
<tr>
<td>M80E1, Low-flash ball</td>
<td>X</td>
</tr>
<tr>
<td>M82, Blank</td>
<td>X</td>
</tr>
<tr>
<td>M993, Armor piercing</td>
<td>X</td>
</tr>
<tr>
<td>AA04</td>
<td>X</td>
</tr>
<tr>
<td>AA35</td>
<td>X</td>
</tr>
</tbody>
</table>

**WARNING**

Never mix live ammunition and dummy ammunition.

Figure 9-3. M60 (Series) Medium Machine Gun Specifications, Ammunition, Logistics, and Safeties (Sheet 2 of 2)

**COMMON MAJOR COMPONENTS**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Assembly</td>
<td>Positions and holds cartridge in place for stripping, feeding link belt, and chambering rounds.</td>
</tr>
<tr>
<td>Cocking Handle Assembly</td>
<td>Provides a means to manually move bolt assembly to the rear.</td>
</tr>
<tr>
<td>Barrel and Bipod Assembly</td>
<td>Houses cartridges for firing. The bipod assembly provides a semistable platform when the machine gun is fired from the prone position.</td>
</tr>
<tr>
<td>Carrying Handle Assembly</td>
<td>Provides a means to carry the machine gun with one hand. The carrying handle assembly folds down when rear sight is used and the machine gun is fired.</td>
</tr>
<tr>
<td>Receiver Assembly</td>
<td>Supports all major components. Houses internal parts and controls operation of weapon through a series of cam ways.</td>
</tr>
</tbody>
</table>

Figure 9-4. M60 (Series) Medium Machine Gun Common Major Components
9.1.5.1 Malfunctions

A malfunction is a failure of the M60 (series) to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation. Three of the most common malfunctions of the M60 (series) are sluggish operation, uncontrolled fire (runaway gun), and cook-offs.

9.1.5.1.1 Sluggish Operation

This is normally caused by excessive friction from dirt, carbon, burrs, or lack of lubrication. Corrective action includes:

1. Clean, inspect, and lubricate the weapon.
2. Notify unit maintenance of any burrs.

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger Mechanism and Grip Assembly</td>
<td>Controls the firing of the machine gun.</td>
</tr>
<tr>
<td>Shoulder Gun Stock</td>
<td>Provides a suitable surface to stabilize the weapon against the shoulder while firing the machine gun from any position except from the hip.</td>
</tr>
<tr>
<td>Cartridge Feed Tray and Hanger Assembly</td>
<td>Guides cartridges for positioning and feeding. The hanger assembly supports the bandoleer.</td>
</tr>
<tr>
<td>Rear Sight Assembly</td>
<td>Provides a means to aim the machine gun at the target with accuracy. The sight adjusts horizontally as well as vertically.</td>
</tr>
<tr>
<td>Forearm Assembly</td>
<td>Provides a handhold when firing from the hip or from a standing or kneeling position.</td>
</tr>
<tr>
<td>Small Arms Sling</td>
<td>Used for support during assault firing and for transport.</td>
</tr>
</tbody>
</table>

Figure 9-5. M60/M60E3 Medium Machine Gun Specific Major Components

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sear and Safety Housing</td>
<td>Controls the firing of the machine gun.</td>
</tr>
<tr>
<td>Grip and Trigger Assembly</td>
<td>Provides handles to move machine gun and houses the machine gun trigger.</td>
</tr>
<tr>
<td>Cartridge Tray Assembly</td>
<td>Guides cartridge for positioning and feeding.</td>
</tr>
<tr>
<td>Rear Sight Assembly</td>
<td>Provides a means to aim the machine gun in the general area of the target. The rear sight is nonadjustable.</td>
</tr>
</tbody>
</table>

Figure 9-6. M60D Medium Machine Gun Major Components
9.1.5.1.2 Uncontrolled Fire (Runaway Gun) (M60)

Uncontrolled fire occurs when the weapon continues to fire after the trigger is released. Common causes include a worn sear, worn operating rod sear notch, broken sear plunger, and broken or missing sear spring. The following are the actions taken for uncontrolled fire:

1. If there are 20 rounds or less on the belt, hold the weapon on target and fire the remaining ammunition.
2. If there are 20 rounds or more on the belt, break the ammunition belt by twisting it quickly in either direction.
3. When weapon stops firing, pull cocking handle all the way back and hold. Place the weapon on safe and remove link belt.
4. Clear the weapon and check to find the cause of the malfunction.

WARNING

Never reload a runaway gun until it has been repaired.

9.1.5.1.3 Uncontrolled Fire (Runaway Gun) (M60D)

Uncontrolled fire occurs when the weapon continues to fire after the trigger is released. Common causes include a worn sear, worn operating rod sear notch, broken sear plunger, and broken or missing sear spring. The following are the actions taken for uncontrolled fire:

1. If there are 20 rounds or less on the belt, hold the weapon on target and fire the remaining ammunition.
2. If there are 20 rounds or more on the belt, break the ammunition belt by twisting it quickly in either direction.
3. When the weapon stops firing, put it on safe, rotate cover latch, and open cover.
4. In the field, clear the weapon and check to find the cause of the malfunction.
5. On the range, return weapon to armory for inspection and repair.

9.1.5.1.5 Cook-offs

A cook-off is the firing of a round by the heat of a very hot barrel and not by the firing system. Let the weapon cool for 15 minutes before further firing occurs. If nothing is ejected from a hot gun, do not open the cover. Instead, place weapon on safe and keep it pointed downrange. Remain away from the machine gun for 15 minutes. After 15 minutes, clear the machine gun. A hot gun typically occurs after 200 rounds have been fired within 2 minutes. However, the ambient temperature in different regions will make a difference in the time required to reach a hot gun state. For example, when there is a hot, sunny day and both the weapon and ammunition are in the sun, a cook-off can occur within 50 rounds.

WARNING

An open-cover cook-off could result in injury or death.
9.1.5.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the machine gun will not fire. When a stoppage does occur, prepared personnel must quickly identify and remedy problems to get the machine gun back into action.

**Note**

Many stoppages can be prevented by properly caring for the M60. Proper care includes keeping the weapon clean and well-lubricated.

9.1.5.3 General Remedial Action

Remedial action includes attempting to determine the cause of the malfunction or stoppage. General remedial action steps are as follows:

1. Wait 10 seconds for a possible hangfire.

<table>
<thead>
<tr>
<th>DIFFERENCES BETWEEN MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSEMBLY/COMPONENT</td>
</tr>
<tr>
<td>Forward Grip Assembly</td>
</tr>
<tr>
<td>Tray and Hanger Assembly</td>
</tr>
<tr>
<td>Cartridge Feed Tray and Hanger Assembly</td>
</tr>
<tr>
<td>Cartridge Tray Assembly</td>
</tr>
<tr>
<td>Dust and Moisture Seal Boot</td>
</tr>
<tr>
<td>Forearm Assembly</td>
</tr>
<tr>
<td>Grip and Trigger Assembly</td>
</tr>
<tr>
<td>Gun Adapter</td>
</tr>
<tr>
<td>Magazine Hanger Assembly</td>
</tr>
<tr>
<td>Rear Sight (adjustable)</td>
</tr>
<tr>
<td>Rear Sight (nonadjustable)</td>
</tr>
<tr>
<td>Sear and Safety Housing Assembly</td>
</tr>
<tr>
<td>Sear Assembly Link and Spring</td>
</tr>
<tr>
<td>Shoulder Gun Stock</td>
</tr>
<tr>
<td>Small Arms Sling</td>
</tr>
<tr>
<td>Trigger Mechanism Grip Assembly</td>
</tr>
<tr>
<td>Quick Release Pin</td>
</tr>
</tbody>
</table>

Figure 9-7. Differences between M60, M60D, and M60E3 Medium Machine Gun Model Components
2. Pull cocking handle rearward (M60). Unzip ejection control bag and pull cocking handle rearward (M60D). Lock bolt to the rear. Return cocking handle to forward locked position.

3. For the M60 only, check ejection port to see if cartridge case, belt link, or round has been ejected.

4. If a cartridge case, belt link, or round is ejected, return the cocking handle to its forward position, take aim on target, and attempt to fire. If the weapon still fails to fire, unload and clear it, then inspect the ammunition and weapon to determine the cause of stoppage.

5. If a round is not ejected, place safety on safe (M60) or press in on safety (M60D).

6. Open cover, remove ammunition link belt, and raise feed tray.

   **WARNING**

   As a safety precaution, when the cover is first opened to unload or clear the gun, the gunner (the person directly behind the chamber) should always keep head downward, and then, while keeping head in downward position, sweep the gun with the hand to ensure the gun is clear of brass and links.

7. Inspect receiver, chamber, ejector, and ammunition.

8. If a round is in chamber, lower feed tray, close cover, and attempt to fire. If there is no round in the chamber, reload and attempt to fire. If the weapon still does not fire, reapply remedial action as necessary. Inspect the weapon and ammunition.
9.2 M60 (SERIES) MEDIUM MACHINE GUN SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the conditions of safety, readiness, and operation specific to the M60 (series) medium machine gun. The standardized procedures included in this section, when consistently applied, will maximize safety during weapon handling and promote the effective employment of this weapon.

9.2.1 Weapon Condition Codes for the M60 (Series) Medium Machine Gun

The safety status of the M60 (series) is defined, like other Navy weapons, by one of four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M60 (series) are defined in Figure 9-9.

9.2.2 Weapon Handling Commands for the M60 (Series) Medium Machine Gun

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 9-10, when consistently and properly used, will result in safe and proficient handling of the M60 (series).

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ammunition on feed tray, bolt locked to the rear, weapon on safe, and cover closed.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Ammunition on feed tray, bolt forward on empty chamber, weapon on fire, and cover closed.</td>
</tr>
<tr>
<td>4</td>
<td>Feed tray clear, bolt forward on empty chamber, weapon on fire, and cover closed.</td>
</tr>
</tbody>
</table>

Figure 9-9. M60 (Series) Medium Machine Gun Weapon Condition Codes

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load</td>
<td>Take the weapon from Condition 4 to Condition 3.</td>
</tr>
<tr>
<td>Make Ready</td>
<td>Take the weapon from Condition 3 to Condition 1.</td>
</tr>
<tr>
<td>Condition One Load</td>
<td>Take the weapon from Condition 4 to Condition 1.</td>
</tr>
<tr>
<td>Fire</td>
<td>Engage the target.</td>
</tr>
<tr>
<td>Cease Fire</td>
<td>Cease engagement of the target.</td>
</tr>
<tr>
<td>Unload</td>
<td>Take the weapon from Condition 1 or 3 to Condition 4.</td>
</tr>
<tr>
<td>Unload, Show Clear</td>
<td>With a second individual, check the weapon to verify that no ammunition is present before the weapon is put in Condition 4.</td>
</tr>
</tbody>
</table>

Figure 9-10. M60 (Series) Medium Machine Gun Weapon Handling Commands
9.2.3 Safe Weapon Handling Procedures for the M60 (Series) Medium Machine Gun on the Range

The weapon handling commands defined in Figure 9-10 are executed as set forth in the following paragraphs.

Note

Before loading the M60 (series), check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

9.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the weapon from Condition 4 to Condition 3:

1. Ensure the weapon is in Condition 4.

2. The gunner ensures that the bolt is forward, the weapon is on fire, and the feed tray cover remains closed.

3. The assistant gunner either places the bandoleer on the bandoleer hanger for the M60/M60E3 or attaches the ammunition chute to the magazine bracket for the M60D. The assistant gunner then ensures that the open end of the link is down and forces the first round into the feedway until a distinct click is heard. The click indicates that the first round has passed to the right and the holding pawls have engaged it.

9.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the machine gun from Condition 3 to Condition 1:

1. Ensure the weapon is on fire, grasp the cocking lever palm up, and lock the bolt to the rear.

2. Manually return the cocking lever forward.

3. Place the weapon on safe (if the situation allows).

4. Check the sight setting.

9.2.3.3 Procedures to CONDITION ONE LOAD

On the command CONDITION ONE LOAD, personnel shall perform the following steps to take the weapon from Condition 4 to Condition 1:

1. Ensure the weapon is in Condition 4.

2. The gunner locks the bolt to the rear and places the weapon on safe.

3. The gunner raises the feed tray cover.

4. The assistant gunner either places the bandoleer on the bandoleer hanger for the M60/M60E3 or attaches the ammunition chute to the magazine bracket for the M60D. The assistant gunner then places the first round directly over the feed aperture of the feed tray, with the open side of the link down.

5. The gunner then closes the feed tray cover.
9.2.3.4 Procedures to FIRE

On the command FIRE, personnel shall take the weapon off safe and pull the trigger to engage the target.

9.2.3.5 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall place the trigger finger straight along the trigger guard and place the weapon on safe.

9.2.3.6 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the M60 (series) from any condition to Condition 4:

1. The gunner points the weapon downrange.
2. The gunner ensures the weapon is on fire, pulls the cocking handle to the rear (palm up), and locks the bolt to the rear. The cocking handle is then pushed forward and the weapon is placed on safe.
3. The gunner raises the feed tray cover.
4. The assistant gunner removes the ammunition and links from the feed tray.
5. The gunner raises the feed tray and inspects the chamber to ensure that all ammunition has been ejected.
6. The gunner closes the feed tray cover once the chamber and receiver are clear.
7. The gunner places the weapon on fire, holds the cocking handle to the rear, squeezes the trigger, and rides the bolt all the way forward.

9.2.3.7 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the M60 (series) from Condition 1 or 3 to Condition 4.

9.2.3.7.1 From Condition 1

1. The gunner points the weapon downrange.
2. The gunner ensures the weapon is on fire, pulls the cocking handle to the rear (palm up), and locks the bolt to the rear. The cocking handle is then pushed forward and the weapon is placed on safe.
3. The gunner raises the feed tray cover.
4. The assistant gunner removes the ammunition and links from the feed tray.
5. The gunner raises the feed tray and inspects the chamber to ensure that all ammunition has been ejected.
6. The assistant gunner performs a secondary check to ensure that no ammunition is present in the feed tray or chamber.
7. The gunner closes the feed tray cover once the chamber and receiver are clear.
8. The gunner places the weapon on fire, holds the cocking handle to the rear, squeezes the trigger, and rides the bolt all the way forward.
9.2.3.7.2 From Condition 3

1. The gunner points the weapon downrange.
2. The gunner raises feed tray cover.
3. The assistant gunner removes ammunition and links from the feed tray.
4. The gunner pulls cocking handle to the rear, locking the bolt to the rear, and pushes the cocking handle forward until it clicks. The gunner then places the weapon on safe.
5. The gunner inspects chamber to ensure no rounds or links remain.
6. The assistant gunner performs secondary check to ensure that no ammunition is present in the feed tray or chamber.
7. The gunner closes feed tray cover.
8. The gunner pulls cocking handle to the rear and places the weapon on fire. The gunner squeezes trigger to release bolt and slowly rides bolt all the way forward.

9.3 M60 (SERIES) MEDIUM MACHINE GUN ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M60 (series) is issued from and returned to the armory.

9.4 M60 (SERIES) MEDIUM MACHINE GUN DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M60 machine gun, refer to the applicable Maintenance Requirements Card or Operator’s Manual, TM 9-1005-224-10.

9.5 M60 (SERIES) MEDIUM MACHINE GUN SHOOTING FUNDAMENTALS

CHAPTER 10
M240 (Series) Medium Machine Gun

10.1 M240 (SERIES) MEDIUM MACHINE GUN DESCRIPTION AND FUNCTION

This section provides the description of the M240 (series) medium machine gun and information necessary to understand the M240’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling. The information presented in this chapter is common to all models except where noted.

10.1.1 Description of the M240 (Series) Medium Machine Gun

The M240 (series) medium machine gun, shown in Figures 10-1 and 10-2, is an automatic, air-cooled, link belt-fed, gas-operated weapon that fires from an open bolt position. The M240 (series) is capable of being fired from handheld positions or from several types of mounts. The M240B/M240G models are designed as tripod-mounted or bipod-supported machine guns for use by ground forces. The M240N model is designed with front and rear sights and is configured for mounting on watercraft.

Figure 10-1. M240 (Series) Medium Machine Gun Left Side
10.1.2 M240 (Series) Medium Machine Gun Technical Characteristics

Technical characteristics specific to the M240 (series) machine gun are listed in Figure 10-3. The specifications listed are for the M240 machine gun and apply to all models except where noted.

WARNING

Never mix live ammunition and dummy ammunition.

10.1.3 M240 (Series) Medium Machine Gun Major Components

The M240 (series) medium machine gun has eight major common components, as described in Figure 10-4. Receiver, barrel, and buttstock and buffer assemblies differ between M240 models. Figure 10-5 summarizes the specific differences by model.

10.1.4 Cycle of Operation for the M240 (Series) Medium Machine Gun

It is important to understand the routine cycle of operation to ensure the M240 (series) is readily available for action. The eight steps in the cycle of operation of the M240 (series) are listed in Figure 10-6.
<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M240B</td>
</tr>
<tr>
<td>NSN</td>
<td>1005-01-412-31210</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>FN Manufacturing</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Gas operated, automatic</td>
</tr>
<tr>
<td>Magazine Type</td>
<td>M13 disintegrating link belt</td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>100-round linked belt</td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>27.1 lb (12.3 kg)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>48 in (1,219 mm)</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>24.7 in (627 mm)</td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>2,800 fps (853 mps)</td>
</tr>
<tr>
<td>Maximum Effective Range:</td>
<td></td>
</tr>
<tr>
<td>Point Target</td>
<td>2,625 ft (800 m)</td>
</tr>
<tr>
<td>Area Target (with mount)</td>
<td>5,906 ft (1,800 m)</td>
</tr>
<tr>
<td>Maximum Range</td>
<td>12,221 ft (3,725 m)</td>
</tr>
<tr>
<td>Caliber</td>
<td>7.62 x 51mm NATO</td>
</tr>
<tr>
<td>Cyclic Rate of Fire (automatic)</td>
<td>650 to 1,050 rounds/min</td>
</tr>
<tr>
<td>Cyclic Rate of Fire with Hydraulic Buffer</td>
<td>650 to 1,050 rounds/min</td>
</tr>
</tbody>
</table>

| LOGISTICS                           |       |       |       |
| In-Service Date                     | 1997  | 1995  | 2002  |
| Life Expectancy                     | 30,000 rounds | 30,000 rounds | 30,000 rounds |
| Operator Manual #                   | TM 10-1005-313-10 | TM 10-1005-313-10 | TM 10-1005-313-10 |

| AMMUNITION                           |       |       |       |
| Linked 100-round belts               | X     | X     | X     |
| A131 (4 M80 ball and 1 M62 tracer)   | X     | X     | X     |
| A143 (M80 ball)                      | X     | X     | X     |
| A145 (M63 dummy)                     | X     | X     | X     |
| M82 blank                            | X     | X     | X     |

Figure 10-3. M240 (Series) Medium Machine Gun Specifications, Ammunition, Logistics, and Safeties
### COMMON MAJOR COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel Assembly</td>
<td>Houses round for firing and directs projectile.</td>
</tr>
<tr>
<td>Buffer Assembly</td>
<td>Absorbs recoil of bolt and operating rod assembly at end of recoil movement.</td>
</tr>
<tr>
<td>Driving Spring Rod Assembly</td>
<td>Provides energy for returning bolt and operating rod assembly to firing position.</td>
</tr>
<tr>
<td>Bolt and Operating Rod Assembly</td>
<td>Controls feeding, stripping, chambering, firing, extraction, and ejection of rounds using the projectile propelling gas for power.</td>
</tr>
<tr>
<td>Trigger Housing Assembly</td>
<td>Controls the firing of the machine gun.</td>
</tr>
<tr>
<td>Cover Assembly</td>
<td>Feeds linked belt and holds rounds in position for stripping, feeding, and chambering. The cover assembly has an optical rail sight.</td>
</tr>
<tr>
<td>Feed Tray</td>
<td>Serves as a guide for positioning rounds to assist in chambering.</td>
</tr>
<tr>
<td>Receiver Assembly</td>
<td>Serves as a support for all major components. Houses action of weapon and controls functioning of the weapon through a series of cam ways.</td>
</tr>
</tbody>
</table>

---

### DIFFERENCES BETWEEN MODELS

<table>
<thead>
<tr>
<th>ASSEMBLY AND PART NUMBER</th>
<th>M240B</th>
<th>M240G</th>
<th>M240N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver Assembly (121076834)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiver Assembly (1210107566)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Receiver Assembly (121010101710)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Barrel Assembly (121076817)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrel Assembly (121076818)</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Buttstock and Buffer Assembly (121076851)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Buttstock and Buffer Assembly (1210881086)</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

---

Figure 10-4. M240 (Series) Medium Machine Gun Common Major Components

Figure 10-5. M240 (Series) Medium Machine Gun Differences Between Models
10.1.5 Remedial Actions for the M240 (Series) Medium Machine Gun

The M240 (series) medium machine gun is an effective and reliable weapon. Proper care and preventive maintenance will help ensure its serviceability. It is important to understand, however, that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur. Therefore, the appropriate remedial action will be based on the cause of the malfunction or stoppage. Both malfunctions and stoppages are discussed in the next two sections.

10.1.5.1 Malfunctions

A malfunction is a failure of the M240 (series) to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation. Three of the most common malfunctions of the M240 (series) are sluggish operation, uncontrolled fire (runaway gun) and cook-offs.

10.1.5.1.1 Sluggish Operation

This is normally caused by excessive friction or excessive loss of gas.

1. Check the gas setting on the gas regulator located on the barrel.
2. Clean, inspect, and lubricate the weapon.

10.1.5.1.2 Uncontrolled Fire (Runaway Gun)

Uncontrolled fire occurs when the weapon continues to fire after the trigger is released. Common causes include a worn sear, worn operating rod sear notch, broken sear plunger, and broken or missing sear spring. The following are the actions taken for uncontrolled fire:

1. If there are 20 rounds or less on the belt, hold the weapon on target and fire the remaining ammunition.
2. If there are 20 rounds or more on the belt, break the ammunition belt by twisting it quickly in either direction.

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>Placement of a round in the path of the bolt.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Pushing of the round into the chamber by the bolt.</td>
</tr>
<tr>
<td>Locking</td>
<td>Forward movement of the driving spring rod assembly returns the bolt and operating rod to assembly firing position.</td>
</tr>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within the cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>Rearward movement of the bolt and operating rod assembly provides extraction and ejection using the projectile propelling gas for power.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Withdrawal of the cartridge case from the chamber by the extractor.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Expulsion of the cartridge case by the ejector.</td>
</tr>
<tr>
<td>Cocking</td>
<td>Compression of the driving spring rod assembly.</td>
</tr>
</tbody>
</table>

Figure 10-6. M240 (Series) Medium Machine Gun Cycle of Operation
3. When the weapon stops firing, pull cocking handle all the way back and hold. Ensure the weapon is on safe and remove link belt.

4. Clear the weapon and check to find the cause of the malfunction.

![WARNING]

Never reload a runaway gun until it has been repaired.

10.1.5.1.3 Cook-offs

A cook-off is the firing of a round by the heat of a very hot barrel and not by the firing system. Let the weapon cool for 15 minutes before further firing occurs. If nothing is ejected from a hot gun, do not open the cover. Instead, place weapon on safe and keep it pointed downrange. Remain away from the machine gun for 15 minutes. After 15 minutes, clear machine gun. A hot gun typically occurs after 200 rounds have been fired within 2 minutes. However, the ambient temperature in different regions will make a difference in the time required to reach a hot gun state. For example, when there is a hot, sunny day and both the weapon and ammunition are in the sun, a cook-off can occur within 50 rounds.

![WARNING]

An open-cover cook-off could result in injury or death.

10.1.5.2 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the machine gun will not fire. When a stoppage does occur, prepared personnel must quickly identify and remedy problems to get the machine gun back into action.

**Note**

Many stoppages can be prevented by properly caring for the M240. Proper care includes keeping the weapon clean and well-lubricated.

10.1.5.3 General Remedial Action

Remedial action includes attempting to determine the cause of the malfunction or stoppage. General remedial action steps are as follows:

1. Wait 10 seconds for a possible hangfire.
2. Pull cocking handle rearward, locking bolt to the rear. Return cocking handle to forward locked position.
3. Check ejection port to see if a cartridge case, belt link, or round has been ejected.
4. If a cartridge case, belt link, or round is ejected, return the cocking handle to its forward position, take aim on target, and attempt to fire. If the weapon still fails to fire, unload and clear it, and then inspect the ammunition and the weapon to determine the cause of the stoppage.

\[\text{WARNING}\]

If nothing is ejected and the gun is hot (150 rounds fired within a 2-minute period), do not open the cover. Place safety to safe, keep machine gun pointed downrange, and remain away from machine gun for 15 minutes. After 15 minutes, clear the weapon.

5. If a round is not ejected, place safety to safe or press in on safety.

6. Open cover, remove ammunition link belt, and raise feed tray.

7. Inspect receiver, chamber, ejector, and ammunition.

8. If a round is in the chamber, lower feed tray and close cover and attempt to fire. If there is no round in the chamber, reload and attempt to fire. If the weapon fires, continue to fire. If it does not fire, reapply remedial action as necessary. Inspect the weapon and ammunition.

10.2 M240 (SERIES) MEDIUM MACHINE GUN SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the safety features, operation, and conditions of readiness specific to the M240 (series) machine gun. The standardized procedures included in this section, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this weapon.

10.2.1 Weapon Condition Codes for the M240 (Series) Medium Machine Gun

The safety status of the M240 (series) is defined, like other Navy weapons, by one of four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M240 (series) are listed in Figure 10-7.

10.2.2 Weapon Handling Commands for the M240 (Series) Medium Machine Gun

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 10-8, when consistently and properly used, will result in safe and proficient handling of the M240.

10.2.3 Safe Weapon Handling Procedures for the M240 (Series) Medium Machine Gun on the Range

The weapon handling commands defined in Figure 10-8 are executed as set forth in the following paragraphs:

\[\text{Note}\]

Before loading the M240, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.
10.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the weapon from Condition 4 to Condition 3:

1. Ensure the weapon is in Condition 4.
2. Pull cocking handle assembly to rear. Return cocking handle to forward position.
3. Place weapon on safe.
4. Push in on latches to open cover assembly.
5. Raise feed tray.
6. Check chamber.
7. Lower feed tray.
8. Place weapon on fire.
9. Hold cocking handle to rear, squeeze trigger ride bolt forward to close, and lock.
10. Place link belt in feed tray, with first round against cartridge stop.

**CAUTION**

Make sure round does not move away from cartridge stop during closing and latching of cover.

10.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the machine gun from Condition 3 to Condition 1:

1. Ensure the weapon is on fire, and pull cocking handle to the rear. Return cocking handle to forward position.
2. Place weapon on safe (if situation permits).
3. Check sight setting.
10.2.3.3 Procedures to CONDITION ONE LOAD

On the command CONDITION ONE LOAD, personnel shall perform the following steps to take the weapon from Condition 4 to Condition 1:

1. Ensure the weapon is in Condition 4.
2. Pull cocking handle assembly to rear. Return cocking handle to forward position.
3. Place weapon on safe.
4. Push in on latches to open cover assembly.
5. Raise feed tray.
6. Check chamber.
7. Lower feed tray.
8. Place weapon on fire.
9. Hold cocking handle to rear, squeeze trigger ride bolt forward to close, and lock.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ammunition on feed tray, bolt locked to the rear, weapon on safe.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Ammunition on feed tray, bolt forward on empty chamber, weapon on fire.</td>
</tr>
<tr>
<td>4</td>
<td>Feed tray clear, bolt forward on empty chamber, weapon on fire.</td>
</tr>
</tbody>
</table>

Figure 10-7. M240 (Series) Medium Machine Gun Weapon Condition Codes

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load</td>
<td>Take the weapon from Condition 4 to Condition 3.</td>
</tr>
<tr>
<td>Make Ready</td>
<td>Take the weapon from Condition 3 to Condition 1.</td>
</tr>
<tr>
<td>Condition One Load</td>
<td>Take the weapon from Condition 4 to Condition 1.</td>
</tr>
<tr>
<td>Fire</td>
<td>Engage the target.</td>
</tr>
<tr>
<td>Cease Fire</td>
<td>Cease engagement of the target.</td>
</tr>
<tr>
<td>Unload</td>
<td>Take the weapon from Condition 1 or 3 to Condition 4.</td>
</tr>
<tr>
<td>Unload, Show Clear</td>
<td>With a second individual, check the weapon to verify that no ammunition is present before the weapon is put in Condition 4.</td>
</tr>
</tbody>
</table>

Figure 10-8. M240 (Series) Medium Machine Gun Weapon Handling Commands

10.2.3.3 Procedures to CONDITION ONE LOAD
10. Place link belt in feed tray, with first round against cartridge stop.


![CAUTION]

Make sure round does not move away from cartridge stop during closing and latching of cover.

12. Ensure the weapon is on fire, and pull cocking handle to the rear. Return cocking handle to forward position.

13. Place weapon on safe (if situation permits).

14. Check sight setting.

**10.2.3.4 Procedures to FIRE**

On the command FIRE, personnel shall take the weapon off safe and pull the trigger to engage the target.

**10.2.3.5 Procedures to CEASE FIRE**

On the command CEASE FIRE, personnel shall place the trigger finger straight along the trigger guard and place the weapon on safe.

**10.2.3.6 Procedures to UNLOAD**

On the command UNLOAD, personnel shall perform the following steps to take the weapon from any condition to Condition 4:

1. The gunner points the weapon downrange.

2. The gunner ensures the weapon is on fire, pulls the cocking handle to the rear (palm up), and locks the bolt to the rear. The cocking handle is then pushed forward and the weapon placed on safe.

3. The gunner raises the feed tray cover.

4. The assistant gunner removes the ammunition and links from the feed tray.

5. The gunner raises the feed tray and inspects the chamber to ensure that all ammunition has been ejected.

6. Once the chamber and receiver are clear, the gunner closes the feed tray cover.

7. The gunner places the weapon on fire, holds the cocking handle to the rear, squeezes the trigger, and rides the bolt all the way forward.

**10.2.3.7 Procedures to UNLOAD, SHOW CLEAR**

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the weapon from Condition 1 or 3 to Condition 4:
10.2.3.7.1 From Condition 1

1. The gunner points the weapon downrange.

2. The gunner ensures the weapon is on fire, pulls the cocking handle to the rear (palm up), and locks the bolt to the rear. The cocking handle is then pushed forward and the weapon is placed on safe.

3. The gunner raises the feed tray cover.

4. The assistant gunner removes the ammunition and links from the feed tray.

5. The gunner raises the feed tray and inspects the chamber to ensure that all ammunition has been ejected.

6. The assistant gunner performs a secondary check to ensure that no ammunition is present in feed tray or chamber.

7. The gunner closes the feed tray cover once the chamber and receiver are clear.

8. The gunner places the weapon on fire, holds the cocking handle to the rear, squeezes the trigger, and rides the bolt all the way forward.

10.2.3.7.2 From Condition 3

1. The gunner points the weapon downrange.

2. The gunner raises the feed tray cover.

3. The assistant gunner removes the ammunition and links from the feed tray.

4. The gunner pulls the cocking handle to the rear, locking the bolt to the rear, and pushes the cocking handle forward until it clicks. The gunner then places the weapon on safe.

5. The gunner inspects the chamber to ensure no rounds or links remain.

6. The assistant gunner performs secondary check to ensure that no ammunition is present in feed tray or chamber.

7. The gunner closes the feed tray cover.

8. The gunner pulls the cocking handle to the rear and places the weapon on fire. The gunner squeezes trigger with the firing hand to release bolt and slowly rides bolt all the way forward.

10.3 M240 (SERIES) MEDIUM MACHINE GUN ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M240 (series) machine gun is issued from and returned to the armory.

10.4 M240 (SERIES) MEDIUM MACHINE GUN DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M240 (series) machine gun, refer to the applicable Maintenance Requirements Card or Operator’s Manual, TM 10-1005-313-23&P.

10.5 M240 (SERIES) MEDIUM MACHINE GUN SHOOTING FUNDAMENTALS

For guidance on machine gun marksmanship, refer to Operator’s Manual, TM 10-1005-313-23&P.
CHAPTER 11

M2 .50 Caliber Heavy Machine Gun

11.1 M2 .50 CALIBER HEAVY MACHINE GUN DESCRIPTION AND FUNCTION

This section provides the description of the M2 .50 caliber heavy barrel machine gun and information necessary to understand the M2’s technical characteristics, major components, cycle of operation, rates of fire, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

11.1.1 Description of the M2 .50 Caliber Heavy Machine Gun

The M2 .50 caliber heavy barrel, flexible machine gun, shown in Figures 11-1 and 11-2, is an automatic, recoil-operated, disintegrating metallic link belt-fed, air-cooled, crew-served machine gun with adjustable head space. It fires from a closed bolt position and is capable of right- or left-hand feed. The M2 is used to provide automatic weapon suppression fire for offensive and defensive purposes. This weapon can be used effectively against personnel, light armored vehicles, and low, slow flying aircraft. This weapon is used as a ground gun on the M3 tripod mount.

Figure 11-1. M2 .50 Caliber Heavy Machine Gun Left Side
11.1.2 M2 .50 Caliber Heavy Machine Gun Technical Characteristics

Technical characteristics specific to the M2 are listed in Figure 11-3.

![Warning]

Never mix live ammunition and dummy ammunition.

11.1.3 M2 .50 Caliber Heavy Machine Gun Major Components

The M2 has eight major components, as described in Figure 11-4.

11.1.4 M2 .50 Caliber Heavy Machine Gun Associated Components

The M3 tripod mount is a lightweight, portable folding mount. The mount steadies the weapon, which improves accuracy and control of fire.

11.1.5 Cycle of Operation for the M2 .50 Caliber Heavy Machine Gun

It is important to understand the routine cycle of operation to ensure the M2 is readily available for action. The eight steps in the cycle of operation for the M2 are listed in Figure 11-5.
11.1.6 Rates of Fire for the M2 .50 Caliber Heavy Machine Gun

The M2 has four rates of fire, as listed below.

11.1.6.1 Single Shot

In the single-shot mode, the M2 is used to engage a target with well-aimed shots. The M2 is extremely accurate and can effectively engage targets out to 2,000 yards.

11.1.6.2 Slow Fire

In automatic mode, slow fire is less than 40 rounds per minute, fired in bursts of six to nine rounds, at 10- to 15-second intervals.

11.1.6.3 Rapid Fire

In automatic mode, rapid fire is greater than 40 rounds per minute, fired in bursts of six to nine rounds at 5- to 10-second intervals.
MAJOR COMPONENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel Group</td>
<td>Houses cartridges for firing and directs the projectile.</td>
</tr>
<tr>
<td>Backplate Group</td>
<td>Houses the trigger, bolt latch release, buffer tube sleeve, and the left- and right-hand spade grips.</td>
</tr>
<tr>
<td>Driving Spring Rod Assembly</td>
<td>Drives the bolt forward when the bolt latch release is depressed.</td>
</tr>
<tr>
<td>Bolt Group</td>
<td>Provides feeding, chambering, firing, and extracting, using the propellant gases and recoil spring for power.</td>
</tr>
<tr>
<td>Barrel Buffer Body</td>
<td>Assists in recoil and counter-recoil of the bolt group.</td>
</tr>
<tr>
<td>Barrel Extension Group</td>
<td>Secures the barrel to the recoiling parts.</td>
</tr>
<tr>
<td>Cover Group</td>
<td>Feeds linked belt ammunition; positions and holds cartridges in position for extracting, feeding, and chambering.</td>
</tr>
<tr>
<td>Receiver Group</td>
<td>Serves as a support for all major components; houses the action of the weapon, which controls functioning of the weapon.</td>
</tr>
</tbody>
</table>

Figure 11-4. M2 .50 Caliber Heavy Machine Gun Major Components

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>Positioning of round in feed tray groove ready for chambering.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Pushing of the round into chamber by the bolt.</td>
</tr>
<tr>
<td>Locking</td>
<td>Bolt is locked to barrel and barrel extension.</td>
</tr>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>Bolt is unlocked from the barrel and barrel extension.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Withdrawal of the cartridge case from the chamber by the extractor claw.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Expulsion of cartridge case strikes the ejector, and case is thrown out of the ejection port.</td>
</tr>
<tr>
<td>Cocking</td>
<td>Firing pin is withdrawn into cocked position.</td>
</tr>
</tbody>
</table>

Figure 11-5. M2 .50 Caliber Heavy Machine Gun Cycle of Operation
11.1.6.4 Cyclic Fire

The cyclic rate of the M2 is 450 to 600 rounds per minute. This represents the maximum amount of ammunition that can be expended by the weapon without a break in firing.

11.1.7 Remedial Actions for the M2 .50 Caliber Heavy Machine Gun

The M2 .50 caliber heavy machine gun is an effective and reliable weapon. Proper care and preventive maintenance will help ensure its serviceability. It is important to understand, however, that there is no one set of procedures that can be performed to clear all or even most of the stoppages that can occur. Therefore the appropriate remedial action will be based on the cause of the malfunction or stoppage. Both malfunctions and stoppages are discussed in the next two sections.

11.1.7.1 Malfunctions

A malfunction is a failure of the M2 to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation. The descriptions of nine common malfunctions and their corrective measures follow.

11.1.7.1.1 Bolt Will Not Lock

1. Check to see if bolt returns to forward position.
2. Adjust headspace.

11.1.7.1.2 Round Will Not Chamber

1. Check for corroded or damaged ammunition. Remove defective ammunition.
2. Check chamber and T-slot for obstruction. Clear and clean chamber. If obstruction was ruptured cartridge, check headspace.
3. Check for tight headspace. Adjust headspace.
4. Check driving spring rod assembly for crack(s), weak or broken springs, or cracked/bent rod. Notify unit maintenance.

11.1.7.1.3 Sluggish Operation

1. Check for dirt, carbon, burrs, and lack of lubrication.
2. Clean and lubricate.

11.1.7.1.4 Weapon Will Not Cock

1. Check notch on sear, sear slide, and firing pin extension.
2. Check retracting slide lever for wear and proper installation.
3. Check sear spring and bolt switch for proper installation.
4. Determine if left- or right-hand feed. Weapon will not be easily pulled to the rear if set up incorrectly (left- or right-hand feed).
5. Notify unit maintenance.
11.1.7.1.5 Weapon Will Not Eject

1. Check bolt space for enlarged firing pin hole and deformed firing pin. These can cause the spent brass to bind in the T-slot, preventing ejection.

2. Notify unit maintenance.

11.1.7.1.6 Weapon Will Not Extract

1. Check headspace; tight headspace will cause binding and excessive friction between the moving parts during recoil. Adjust headspace.


11.1.7.1.7 Weapon Will Not Feed

1. Check if cover is completely down and latched.

2. Check ammunition belt for short round or misfired link. Open cover and remove short round or align link.

3. Check for early timing if weapon repeatedly fires two rounds and then fails to feed. Adjust timing.

4. Check for weak or broken belt holding pawl assembly or belt feed pawl springs. Notify unit maintenance.

5. Check for correct cartridge stop. Cartridge stop for blank ammunition is not the same as for live ammunition. Notify unit maintenance.

6. Check for improper lubrication. Lubricate as necessary.

11.1.7.1.8 Weapon Will Not Fire

1. Check for defective ammunition. Remove defective ammunition.

2. Check for incorrectly installed sear slide. Install sear slide from left side.

3. Check for broken or damaged firing pin. Notify unit maintenance.

4. Check firing pin well inside bolt for obstruction. Clean the interior of the bolt with a swab saturated with RBC solvent. Lubricate by applying light coat of lubricating oil to interior of bolt.

5. Inspect firing pin and firing pin extension for burrs or broken firing pin spring. Notify maintenance.

6. Check for bent/cracked driving spring rod or weak or broken rod springs. Notify maintenance.

7. Check for incorrect timing. Adjust timing.

**Note**

If weapon still will not fire, refer to TM 9-2350-255-10 or TM 9-2350-264-10.
11.1.7.1.9 Weapon Will Not Unlock

1. Check for incorrect timing.
2. Adjust timing.

11.1.7.2 Stoppages

A stoppage is an unintentional interruption in the cycle of operation. Stoppages are normally discovered when the machine gun will not fire. Many stoppages of the M2 occur as a result of shooter error. When a stoppage does occur, prepared personnel must quickly identify and remedy problems to get the weapon back into action.

Note

Many stoppages can be prevented by properly caring for the M2 .50 caliber heavy machine gun. Proper care includes keeping the weapon clean and well-lubricated.

11.1.7.3 General Remedial Action to Clear Stoppages

To keep the M2 in action, it is important to clear any stoppage as quickly as possible. Remedial actions for both cold and hot weapons follow.

11.1.7.3.1 Cold Weapon

For purposes of this publication, a cold weapon is one that has fired less than 150 rounds in a 2-minute period.

1. Wait 5 seconds for a possible hangfire. Pull the bolt to the rear, raise the cover assembly, and remove the belt of ammunition. Inspect the chamber and the T-slot.
2. If there is no round in the chamber, reload and attempt to fire. If the weapon still does not fire, reapply remedial action as necessary. Inspect the weapon and ammunition.
3. If there is a round in the chamber, close the cover assembly and attempt to fire. If the weapon fires, reload and continue to fire. If it does not fire, clear and inspect the weapon and ammunition.

11.1.7.3.2 Hot Weapon

For purposes of this publication, a hot weapon is one that has fired 150 or more rounds in a 2-minute period.

1. During training, if the stoppage occurs with a hot weapon, wait 5 seconds for a possible hangfire, apply remedial action, then let the weapon cool for 15 minutes. After waiting 15 minutes, carefully raise the cover, remove the ammunition, and inspect the chamber and T-slot.
2. If there is no round in the chamber, reload and attempt to fire. If the weapon still does not fire, wait 5 seconds for a possible hangfire; reapply remedial action as necessary. Inspect the weapon and ammunition.
3. If there is a round in the chamber, close the cover assembly and attempt to fire. If the weapon fires, reload and continue to fire. If it does not fire during training, wait another 15 minutes, clear the weapon, and investigate the cause.
4. Whenever performing remedial action, the muzzle should always be pointed in a safe direction.
11.2 M2 .50 CALIBER HEAVY MACHINE GUN SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the safety features, operation, and conditions of readiness specific to the M2. The standardized procedures that follow, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this weapon.

11.2.1 Weapon Condition Codes for the M2 .50 Caliber Heavy Machine Gun

The M2’s safety status is defined, like other Navy weapons, by four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the M2 are defined in Figure 11-6.

11.2.2 Weapon Handling Commands for the M2 .50 Caliber Heavy Machine Gun

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 11-7, when consistently and properly used, will result in safe and proficient handling of the M2.

11.2.3 Safe Weapon Handling Procedures for the M2 .50 Caliber Heavy Machine Gun on the Range

The weapon handling commands as defined in Figure 11-7 are executed as set forth in the following paragraphs.

WARNING

The M2 .50 has no manual safety. When the bolt latch and trigger are both held down, the machine gun will fire automatically.

Note

Before loading the M2, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions. Check the magazine spring for proper tension and to ensure there are no defects.

11.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the M2 from Condition 4 to Condition 3:

1. Ensure the weapon is in Condition 4. The gunner ensures that the bolt is forward and the feed tray cover remains closed.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ammunition on feed tray, bolt forward, round in the chamber, cover assembly closed.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Ammunition on feed tray, bolt forward on empty chamber, cover assembly closed.</td>
</tr>
<tr>
<td>4</td>
<td>No ammunition present on the feed tray, bolt forward on an empty chamber, cover assembly closed.</td>
</tr>
</tbody>
</table>

Figure 11-6. M2 .50 Caliber Heavy Machine Gun Weapon Condition Codes
2. The assistant gunner inserts the double-loop end of the ammunition belt into the feed tray until the first round is engaged by the holding pawl.

3. The gunner pulls the bolt to the rear (palms up) and returns the retracting slide handle fully forward.

4. If the bolt latch release is up, the gunner depresses the bolt latch release and allows the bolt to carry itself forward (half load — round is on top of bolt, engaged by extractor).

### 11.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the M2 from Condition 3 to Condition 1.

1. The gunner pulls the bolt to the rear (palms up) and returns the retracting slide handle fully forward.

2. If the bolt latch release is up, the gunner depresses the bolt latch release and allows the bolt to carry itself forward, chambering a round (full load — round is in chamber).

### 11.2.3.3 Procedures to FIRE

On the command FIRE, the gunner shall hold down the trigger and bolt latch to engage the target.

### 11.2.3.4 Procedures to CEASE FIRE

On the command CEASE FIRE, the gunner shall place the trigger finger straight along the trigger guard and stop engaging the target area.

### 11.2.3.5 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the M2 from Condition 1 or 3 to Condition 4:

1. The gunner unlocks the bolt latch release (if applicable).

2. The gunner raises the cover assembly.

3. The assistant gunner removes the ammunition and links from the feed tray.

---

**Figure 11-7. M2 .50 Caliber Heavy Machine Gun Weapon Handling Commands**
4. The gunner pulls and locks the bolt to the rear and examines the chamber and T-slot in the face of the bolt to ensure no ammunition is present.

5. Once the chamber and receiver are clear, the gunner depresses the bolt latch release to send the bolt forward and closes the feed tray cover.

11.2.3.6 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the M2 from Condition 1 or 3 to Condition 4.

1. The gunner unlocks the bolt latch release (if applicable).

2. The gunner raises the cover assembly.

3. The assistant gunner removes the ammunition and links from the feed tray.

4. The gunner pulls and locks the bolt to the rear and examines the chamber and T-slot in the face of the bolt to ensure no ammunition is present.

5. The gunner has another person inspect the weapon to ensure no ammunition is present.

6. After receiving acknowledgment that the weapon is clear, the gunner depresses the bolt latch release to send the bolt forward and closes the feed tray cover.

11.3 M2 .50 CALIBER HEAVY MACHINE GUN ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 M2 is issued from and returned to the armory.

11.4 M2 .50 CALIBER HEAVY MACHINE GUN DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the M2, refer to the applicable Maintenance Requirements Card or Operator’s Manual, SW 361-AB-MMO-010.

11.5 M2 .50 CALIBER HEAVY MACHINE GUN RANGE CARD

A range card is a rough sketch of the terrain that a weapon has been assigned to cover by fire. The sketch on the card includes roads, bridges, buildings, streams, hills, woods, and any other significant physical feature within the sector of fire. The card provides azimuth and range to the features, which permits quick and accurate engagement of targets within the assigned sector of fire.
CHAPTER 12

MK19 MOD 3 40MM Grenade Machine Gun

12.1 MK19 MOD 3 40MM GRENADE MACHINE GUN DESCRIPTION AND FUNCTION

This section provides the description of the MK19 MOD 3 40mm grenade machine gun and information necessary to understand the MK19’s technical characteristics, major components, cycle of operation, and remedial actions. This information is essential to promote effective employment of the weapon and maximize safety during handling.

12.1.1 Description of MK19 MOD 3 40mm Grenade Machine Gun

The MK19, shown in Figures 12-1 and 12-2, is an air-cooled, disintegrating metallic link belt-fed, blowback-operated, fully automatic weapon that can be a vehicle or ground-mounted machine gun and is crew transportable. It fires a variety of 40mm grenades with antipersonnel fragmentation and light antiarmor capability from the open bolt position and is left-hand feed only. It fires 40mm grenades at the rate of 325 to 375 rounds per minute.

Figure 12-1. MK19 MOD 3 40mm Grenade Machine Gun
12.1.2 MK19 MOD 3 40mm Grenade Machine Gun Technical Characteristics

Technical characteristics specific to the MK19 grenade machine gun are listed in Figure 12-3.

![Figure 12-2. MK19 MOD 3 40mm Grenade Machine Gun Side View](image)

12.1.3 Major Components of the MK19 MOD 3 40mm Grenade Machine Gun

The MK19 has six major component groups, as described in Figure 12-4.

12.1.4 Cycle of Operation, Malfunctions, and Stoppages for the MK19 MOD 3 40mm Grenade Machine Gun

To ensure the MK19 is readily available for action, it is important to understand the routine cycle of operation. Personnel must be prepared to recognize and correct any malfunctions or stoppages.

12.1.4.1 MK19 MOD 3 40mm Grenade Machine Gun Cycle of Operation

The eight steps in the cycle of operation for the MK19 are listed in Figure 12-5.

12.1.4.2 Malfunctions

A malfunction is a failure of the MK19 to function satisfactorily or to perform as designed. A malfunction does not necessarily cause an interruption in the cycle of operation.

Seven common malfunctions of the MK19 and the associated immediate actions are shown below.
12.1.4.2.1 Bolt Jammed

1. Place weapon on safe.

2. Press charger handle locks and rotate charger handles down.

3. Pull charger handles to the rear as far as possible. Maintain rearward pressure on charger handles while assistant gunner lifts top cover.

![WARNING]

The following procedures/steps must be performed in sequence to open top cover. Bolt could spring forward suddenly and fire a round, causing severe injury. Be prepared to catch ejected round.

4. Pull charger handles to rear, without stopping or pausing, until bolt locks, and ensure bolt stays to the rear when releasing charger handles.

5. Insert cleaning rod section through slot in side of receiver. Prepare to catch ejected live round.

Figure 12-3. MK19 MOD 3 40mm Grenade Machine Gun Specifications, Ammunition, Logistics, and Safeties

<table>
<thead>
<tr>
<th>WEAPON SPECIFICATIONS</th>
<th>AMMUNITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>MK19 MOD 3</td>
</tr>
<tr>
<td>NSN</td>
<td>1010-01-126-9063</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Saco Inc.</td>
</tr>
<tr>
<td>Mechanism Type</td>
<td>Full-auto blowback</td>
</tr>
<tr>
<td>Magazine Type</td>
<td>Ammo can</td>
</tr>
<tr>
<td>Ammo Capacity</td>
<td>48 or 32 rounds linked</td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>77.6 lb (35.2 kg)</td>
</tr>
<tr>
<td>Overall Length</td>
<td>43.1 in (1,095 mm)</td>
</tr>
<tr>
<td>Barrel Length</td>
<td>16.25 in (413 mm)</td>
</tr>
<tr>
<td>Muzzle Velocity</td>
<td>244 fps (74 mps)</td>
</tr>
<tr>
<td>Maximum Effective Range</td>
<td>4,921 ft (1,500 m)</td>
</tr>
<tr>
<td>Point Target</td>
<td>7,257 ft (2,212 m)</td>
</tr>
<tr>
<td>Area Target</td>
<td></td>
</tr>
<tr>
<td>Cyclic rate of fire</td>
<td>325 to 375 rounds/min</td>
</tr>
<tr>
<td>Caliber</td>
<td>40mm, high-velocity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOGISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-service date</td>
</tr>
<tr>
<td>Life expectancy</td>
</tr>
<tr>
<td>Technical manual #</td>
</tr>
<tr>
<td>Operator manual #</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<td>Area Target</td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Ammo Capacity</td>
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</tr>
<tr>
<td>Overall Length</td>
</tr>
<tr>
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</tr>
<tr>
<td>Muzzle Velocity</td>
</tr>
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<tr>
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</tr>
<tr>
<td>Area Target</td>
</tr>
<tr>
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<td>Area Target</td>
</tr>
<tr>
<td>Cyclic rate of fire</td>
</tr>
<tr>
<td>Caliber</td>
</tr>
</tbody>
</table>
### MAJOR COMPONENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver Assembly</td>
<td>Serves as a support for all major components. Ammunition is fed into left side of receiver through feed throat assembly.</td>
</tr>
<tr>
<td>Feed Slide Assembly and Tray</td>
<td>Holds rounds in feeder and indexes ammunition into position for delinking.</td>
</tr>
<tr>
<td>Top Cover Assembly</td>
<td>Holds feed slide assembly and tray. Opened by latch (left side) for loading or to clean and inspect feeder area.</td>
</tr>
<tr>
<td>Sear Assembly</td>
<td>Holds receiver sear. Trigger action releases sear and allows bolt to go forward. Safety is attached to sear assembly.</td>
</tr>
<tr>
<td>Bolt and Backplate Assembly</td>
<td>Fires round when sear is depressed by trigger action. Recoil springs drive bolt forward on receiver rails. Guide rods hold springs in position. Trigger and handgrips are located on backplate assembly.</td>
</tr>
<tr>
<td>Feed Throat Assembly</td>
<td>Provides smooth feeding of 40mm ammunition. Attaches to forward (left side) of receiver by two sets of spring-loaded retaining pins. Without feed throat, machine gun stoppages may occur because of twisted or misaligned rounds.</td>
</tr>
</tbody>
</table>

Figure 12-4. MK19 MOD 3 40mm Grenade Machine Gun Major Components

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>Placement of a round in the path of the bolt.</td>
</tr>
<tr>
<td>Chambering</td>
<td>Pushing of the round into the chamber by the bolt.</td>
</tr>
<tr>
<td>Locking</td>
<td>Locking occurs as the bolt closes. The mass of the bolt holds the breech momentarily closed.</td>
</tr>
<tr>
<td>Firing</td>
<td>Ignition of the propellant within the cartridge case, which forces the projectile out of the barrel.</td>
</tr>
<tr>
<td>Unlocking</td>
<td>Unlocking of the bolt occurs after the round leaves the barrel and propellant gases force the bolt to the rear, allowing for extraction.</td>
</tr>
<tr>
<td>Extracting</td>
<td>Withdrawal of the spent round from the chamber.</td>
</tr>
<tr>
<td>Ejecting</td>
<td>Expulsion of the spent cartridge case out of and away from the receiver.</td>
</tr>
<tr>
<td>Cocking</td>
<td>Compression of firing pin spring.</td>
</tr>
</tbody>
</table>

Figure 12-5. MK19 MOD 3 40mm Grenade Machine Gun Cycle of Operation
6. Raise cleaning rod to force live round down. Catch live round as it is ejected.

7. Remove ammunition belt from feeder.

![WARNING]

Do not relink any ammunition that has been cycled through the weapon.

8. Reposition ammunition belt in feeder.

9. Place weapon on fire.

10. Ride the bolt forward by grasping one charger handle and depressing the trigger.

11. Ensure feed slide assembly is to the left.

12. Ensure secondary drive lever is engaged with the feed slide pin. If not, engage forked end with feed slide pin.

13. Close top cover gently.

14. Charge weapon and attempt to fire.

15. If bolt jams, repeat steps a through g. Put weapon on safe and send to armorer.

12.1.4.2.2 Bore Obstruction

1. Place weapon on safe. During training, notify the range safety officer immediately.

2. Depress feed pawls, release the ammunition belt, and clear the feed area. Move the ammunition belt and can to a safe area.

3. Remove the empty case catch bag.

4. Charge gun and hold the bolt to rear.

5. Hold bolt to the rear and insert cleaning rod through receiver rail to top of the shell casing as close to the face of the bolt as possible.

6. Place hand underneath as close to the round as possible. Raise cleaning rod upward, forcing the round off the bolt face into the hand. Remove the round to designated area for explosive ordnance disposal.

7. Place selector lever on fire. Ease the bolt forward. Remove the backplate pin, bolt and backplate assembly, vertical cam assembly, and primary drive lever. Check for any type of obstruction.

8. Check for and remove any case or round from the bolt face.

9. Insert bore obstruction detector into bore to check for a live round.

10. Remove obstruction per round removal procedures.
12.1.4.2.3 Gun Fires Too Soon

1. Cease fire.
2. Place weapon on safe.
3. Clear area of personnel and ammunition.

**WARNING**
- Do not attempt to clear the weapon if the weapon fires too soon (out-of-battery).
- Do not attempt to clear or fire the weapon until it is fixed. Follow procedures as given below.

4. Notify range safety officer.
5. Check barrel for lodged round using bore obstruction detector.
6. After weapon has been cleared by proper personnel, send it to armorer.

12.1.4.2.4 Runaway Gun (Uncontrolled Automatic Fire)

1. Keep gun pointed downrange and slightly elevated.
2. Press charger handle locks and lower charger handles, and gun will stop.

**WARNING**
Never try to break the ammunition belt by hand, as serious injury could result. Lower one charger handle to stop gun from firing.

3. Place weapon on safe. Clear weapon.
4. Report the condition to armorer.

12.1.4.2.5 Short Recoil

1. Place weapon on safe.
2. Clear area of personnel and ammunition.
3. Notify range safety officer.
4. Pull charger handles to the rear, without stopping or pausing, as far as possible. Maintain rearward pressure on charger handles.
5. Pull charger handles to the rear, without stopping or pausing, until bolt locks. Ensure bolt stays to the rear when releasing charger handles.
6. Insert cleaning rod section through slot in side of receiver. Prepare to catch ejected live round.

7. Raise cleaning rod to force live round down. Catch live round as it is ejected.

8. Raise top cover.

9. Remove ammunition belt from feeder.

10. Check for bore obstruction using bore obstruction detector.

![WARNING]

When firing HE or TP ammunition, be alert to these three danger signals: (1) a muffled report from the gun, (2) smoke and debris from the bottom of the receiver, or (3) failure of the projectile to leave the muzzle. Gunner should observe downrange and attempt to determine if the round left the barrel. Any of these three signals means a bore obstruction.

11. If bore is obstructed, refer to WP 0014 00 for round removal procedures.

12. If there is no obstruction, reposition belt in feeder.

13. Ensure feed slide assembly is to the left.

14. Charge weapon and attempt to fire.

15. If bolt jams, repeat steps a through g. Put weapon on safe and send to armorer.

**12.1.4.2.6 Sluggish or Erratic Firing**

This may be caused by one of the following three problems. Actions to correct each problem are listed below:

1. For dirty bore or chamber, clean bore and chamber.

2. For defective recoil springs or guide rods:
   a. Remove bolt and backplate assembly from weapon. Push against recoil springs to test for weakness.
   b. Report defects to armorer.

![WARNING]

Be sure bolt is forward before removing backplate pin assembly, or serious injury could result.

3. For bolt sear timing adjustment, send to armorer.
12.1.4.2.7 Top Cover Will Not Close

This may be caused by one of the following three problems. Actions to correct each problem are listed below:

1. For improper position of feed slide assembly, move feed slide assembly all the way left. Spring should touch cover.

2. For bolt to rear, ride the bolt forward.

3. For misaligned ammunition, ensure rounds are straight and firmly seated in the feeder. Ensure links are evenly aligned in the link guide and on rounds. Clean any dirt from feeder.

12.1.4.3 Stoppages

An unintentional interruption in the cycle of operation is referred to as a stoppage. Stoppages are normally discovered when the machine gun will not fire. Stoppages of the MK19 may be caused by faulty ammunition, improper function of the weapon, or shooter error. When a stoppage does occur, prepared personnel must quickly identify and remedy problems to get the machine gun back into action. The four procedures that follow provide specific actions necessary to effectively respond to common stoppages.

12.1.4.3.1 Misfire

1. During peacetime and training, attempt to determine the cause of the stoppage using the following procedures:

   a. Clear the area of personnel.

   b. Wait 10 seconds for hangfire.

   c. Place weapon on safe.

   d. Clear the weapon.

   e. Catch any live round as it is ejected.

   f. Put weapon on safe and check for bore obstruction. If bore is clear, move safe to fire position and attempt to fire.

   g. If weapon does not fire, repeat steps (2) through (6) and have weapon inspected by an armorer.

2. In combat situations only, use the following procedures:

   a. Press charger handle locks and rotate charger handles down.

   b. Pull charger handles to the rear until the bolt sears.

   c. Push charger handles forward and rotate charger handles up until they lock.

Note

Both charger handles must be forward and up for firing. If either handle is down, the weapon will not fire.
d. Aim weapon on target and fire.

e. Turn in live round as instructed by current directives.

![WARNING]

- Do not use combat misfire procedures during peacetime or training. Serious injury can result if precautions are not observed.
- Do not relink or fire ammunition that has been cycled through the weapon.

12.1.4.3.2 Bad Ammunition

1. If the primer is indented but round did not fire, dispose of round as authorized.

2. If the primer is not indented, check the firing pin.

3. If the round is on the bolt face, remove from bolt face. If the round is not on bolt face, leave the bolt in rear position and the gun on safe. Follow the procedures listed in paragraph 12.1.4.3.3.

12.1.4.3.3 Ammunition Jammed in Feeder

1. Put gun on safe. Check for proper attachment of feed throat. If charging is not possible, follow the procedures listed in paragraph 12.1.4.2.1.

2. If the rounds are crooked or not seated firmly, remove linked ammunition from feeder, ensure link band is even and adjacent to copper band for all ammunition, and reload.

3. For a broken link:
   a. If within weapon, remove link.
   b. On ammunition, remove round and dispose of as authorized.
   c. If the link is off the rotating band, remove round from belt, dispose of round as authorized, and reload.
   d. Ensure female link is first.

12.1.4.3.4 Bad Firing Pin

1. If the primer on the ejected round is not indented, check the firing pin/spring.

2. If the firing pin tip fails to spring forward, report the defect to the armorer.

12.2 MK19 MOD 3 40MM GRENADE MACHINE GUN SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the conditions of safety, readiness, and operation specific to the MK19 MOD 3 40mm grenade machine gun. The standardized procedures included in this section, when consistently applied, will maximize safety during weapons handling and promote the effective employment of this weapon.
12.2.1 Weapon Condition Codes for the MK19 MOD 3 40mm Grenade Machine Gun

The MK19’s safety status is defined, like other Navy weapons, by one of four weapon condition codes. General weapon condition codes are listed in Figure 1-2. Weapon condition codes applicable to the MK19 are defined in Figure 12-6. The MK19 will be kept in Condition 1 during normal security operations.

12.2.2 Weapon Handling Commands for the MK19 MOD 3 40mm Grenade Machine Gun

Weapon handling commands are issued by a supervisor in the chain of command to direct the loading, unloading, and employment of any weapon. The commands set forth in Figure 12-7, when consistently and properly used, will result in safe and proficient handling of the MK19.

12.2.3 Safe Weapon Handling Procedures for the MK19 MOD 3 40mm Grenade Machine Gun on the Range

The weapon handling commands, as defined in Figure 12-7, are executed as set forth in the following paragraphs.

12.2.3.1 Procedures to LOAD

On the command LOAD, personnel shall perform the following steps to take the MK19 from Condition 4 to Condition 3:

1. Ensure the weapon is in Condition 4.
2. Open the feed tray cover.
3. With the cover open, insert the first round, female link first, into the feeder. Push/slide the round across the first pawl until it clicks.
4. Ensure that the rounds are straight and firmly seated against the side of the bolt.
5. Move the feed slide assembly to the left.
6. Close the top cover.
7. Pull the bolt to the rear, palms down.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bolt locked to the rear, no round in the chamber, ammunition in the feeder, round on the bolt face, cover assembly closed and latched, weapon on safe.</td>
</tr>
<tr>
<td>2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>3</td>
<td>Bolt locked to the rear, no round in the chamber, ammunition in the feeder, no round on the bolt face, cover assembly closed and latched, weapon on safe.</td>
</tr>
<tr>
<td>4</td>
<td>No round in the chamber, no ammunition in the feeder, bolt forward, cover assembly closed and latched, weapon on safe.</td>
</tr>
</tbody>
</table>

Figure 12-6. MK19 MOD 3 40mm Grenade Machine Gun Weapon Condition Codes
8. Push the charger handles forward.

9. Rotate the handles up and place the weapon on safe.

Note

Before loading the MK19, check the weapon for dirt, excess oil, and grease. Check the bore to ensure it is free of foreign matter and obstructions.

12.2.3.2 Procedures to MAKE READY

On the command MAKE READY, personnel shall perform the following steps to take the MK19 from Condition 3 to Condition 1:

1. Place the weapon on fire.

2. Press the trigger while holding onto one of the charger handles. Ride the bolt home. The first round is now loaded on the bolt face.

3. Pull the charger handles to the rear. This pulls the bolt with the loaded round into position for firing.

4. Push the charger handles back to the forward position.

5. Rotate the charger handles up.

6. Place the weapon on safe if the situation permits.

12.2.3.3 Procedures to FIRE

On the command FIRE, personnel shall take the weapon off safe and pull the trigger to engage the target.

12.2.3.4 Procedures to CEASE FIRE

On the command CEASE FIRE, personnel shall place the trigger finger straight along the trigger guard and stop engaging the target area.
12.2.3.5 Procedures to UNLOAD

On the command UNLOAD, personnel shall perform the following steps to take the MK19 from Condition 1 or 3 to Condition 4:

1. Ensure the weapon is on fire, lock the bolt to the rear, and place the weapon on safe.

2. Insert a cleaning rod through the right side receiver rail and push down on the round on the bolt face. The cleaning rod should be as close as possible to the bolt face, while the free hand should be positioned underneath the weapon to catch the round as it falls.

3. Open the top cover, press the primary pawl and the secondary pawl, and slide the rounds out of the feeder.

4. Inspect the chamber and the face of the bolt to ensure no ammunition is present.

5. Once the chamber and receiver are clear, place the weapon on fire, ride the bolt home, close the cover, and place the weapon on safe.

12.2.3.6 Procedures to UNLOAD, SHOW CLEAR

On the command UNLOAD, SHOW CLEAR, personnel shall perform the following steps to take the MK19 from Condition 1 or 3 to Condition 4.

1. Ensure the weapon is on fire, lock the bolt to the rear, and place the weapon on safe.

2. Insert a cleaning rod through the right side receiver rail and push down on the round on the bolt face. The cleaning rod should be as close as possible to the bolt face, while the free hand should be positioned underneath the weapon to catch the round as it falls.

3. Open the top cover, press the primary pawl and the secondary pawl, and slide the rounds out of the feeder.

4. Inspect the chamber and the face of the bolt to ensure no ammunition is present.

5. Have another person inspect the weapon to ensure no ammunition is present.

6. After receiving acknowledgment that the weapon is clear, depress the bolt latch release to send the bolt forward and close the feed tray cover.

7. Once the chamber and receiver are clear, place the weapon on fire, ride the bolt home, close the cover, and place the weapon on safe.

12.3 MK19 MOD 3 40MM GRENADE MACHINE GUN ISSUE TO/RECOVERY FROM THE ARMORY

Standardized armory procedures ensure that only a Condition 4 MK19 is issued from and returned to the armory.

12.4 MK19 MOD 40MM GRENADE MACHINE GUN DISASSEMBLY/ASSEMBLY AND FUNCTION CHECK PROCEDURES

For guidance on the disassembly/assembly and function check of the MK19 MOD 3 40mm grenade machine gun, refer to the applicable Maintenance Requirements Card or Operators Manual, SW363-C3-MMM-010.

12.5 MK19 MOD 3 40MM GRENADE MACHINE GUN SHOOTING FUNDAMENTALS

For guidance on machine gun marksmanship, refer to SW363-C3-MMM-010.
CHAPTER 13

MK 3A2 Concussion Grenade

13.1 MK 3A2 CONCUSSION GRENADE DESCRIPTION AND FUNCTION

The MK 3A2 concussion grenade is an offensive weapon designed to counter and repel threats, produce enemy casualties during close combat, and minimize fragmentation hazards to friendly troops. Concussion grenade blasts are effective against enemy personnel located in bunkers, buildings, and fortified areas, and against hostile underwater swimmers.

The MK 3A2 produces a large shock wave on the ground and in the air. An even greater shock wave is produced under water. An underwater shock wave has a velocity of 4,192 feet per second and causes internal damage and bleeding as it passes through open air voids in the body of a swimmer (ear drum, lungs, stomach). Internal injuries force the swimmer to surface, thereby neutralizing a potential threat and permitting apprehension by security personnel.

13.1.1 Description of the MK 3A2 Concussion Grenade

The MK 3A2 concussion grenade (Figure 13-1) has a black and yellow cylindrical body made of pressed fiber that contains high-explosive TNT.

Figure 13-1. MK 3A2 Concussion Grenade
13.1.2 MK 3A2 Concussion Grenade Technical Characteristics

Technical characteristics specific to the MK 3A2 concussion grenade are listed in Figure 13-2.

13.1.3 MK 3A2 Concussion Grenade Major Components

Major components of the MK 3A2 concussion grenade are described in Figure 13-3.

13.2 MK 3A2 CONCUSSION GRENADE SAFE OPERATION PROCEDURES

This section provides the information necessary to understand the safety features and proper operation of the MK 3A2. The standardized procedures included in this section, when consistently applied, will maximize safety during handling and promote the effective employment of this weapon.

<table>
<thead>
<tr>
<th>MK 3A2 CONCUSSION GRENADE TECHNICAL CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PART</strong></td>
</tr>
<tr>
<td>Grenade (with fuze)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Explosive Filler</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Fuze</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Safety Devices</td>
</tr>
<tr>
<td>Range</td>
</tr>
<tr>
<td>Effective Casualty Radius</td>
</tr>
</tbody>
</table>

Figure 13-2. MK 3A2 Concussion Grenade Technical Characteristics
13.2.1 MK 3A2 Concussion Grenade Handling and Deployment Procedures

The six-step procedure to handle and deploy the MK 3A2 follows.

13.2.1.1 Remove From Shipping Canister

1. Remove tape from storage canister.
2. Remove canister lid.
3. Remove cardboard cap.
4. Remove grenade from canister.

Note

MK 3A2 concussion grenades are to be issued to personnel in an unopened, taped-up shipping canister. Personnel should only open the canister when a clear and present threat warrants immediate usage of the MK 3A2.

13.2.1.2 Observe Target

After the MK 3A2 is removed from the shipping canister, quickly observe the target to establish the distance between the throwing position and the target area.

13.2.1.3 Remove Safety Clip

Properly grip the MK 3A2 in the throwing hand with the safety lever secured under the thumb between the knuckle and the base of the thumb and remove the safety clip that fits around the fuze and over the safety lever. Left-handed personnel should hold the grenade upside down in the left hand, so that the safety lever is secured under the thumb between the knuckle and the base of the thumb and the safety pin pull ring is visible and easily accessible to the right hand.

WARNING

Ensure that there is a safety clip attached to the fuze. Do not carry the MK 3A2 without a safety clip in place.

13.2.1.4 Remove Safety Pin

1. Hold the MK 3A2 in the throwing hand and grasp the safety pin pull ring with the index or middle finger of the nonthrowing hand.
2. Remove the safety pin with a pulling, twisting motion.
3. Visually observe removal of the safety pin.

Note

No hand grenades shall be attached to any equipment by the pull ring or the safety lever. Under no circumstances shall any hand grenade be carried in the uniform pocket. Extra hand grenades should be carried inside a rucksack or a utility bag.
13.2.1.5 Look at Target

Look at the target to estimate the distance between the throwing position and the target area and to confirm target position.

13.2.1.6 Throw

Throw the MK 3A2 using the overhand method so that the grenade arcs, landing on or near the target. Allow the motion of the throwing arm to continue naturally once the MK 3A2 is released, to improve distance and accuracy and relieve throwing arm strain.

![WARNING]

After throwing the grenade, get behind available cover to reduce exposure to fragmentation and direct enemy fire.

13.2.2 Throwing Positions for Employment of the MK 3A2 Concussion Grenade

The four throwing positions used to train users with proper employment of MK 3A2 concussion grenades are described in Figure 13-4.
13.2.2.1 Standing Position

Place feet shoulder-width apart, forward foot pointed at the target. Align hips and shoulders on an axis pointed at the target. Raise the nonthrowing hand shoulder high, with the arm extended and pointed at the target. Hold the throwing hand shoulder high and cocked behind the head.

13.2.2.2 Kneeling Position

Kneel on forward knee (knee closest to target) and fully extend aft leg behind the body. Raise the nonthrowing hand shoulder high, with the arm extended and pointed at the target. Hold the throwing hand shoulder high and cocked behind the head.

13.2.2.3 Prone Position

Lie flat on back with body pointed headfirst at the target. Raise the nonthrowing hand above the head, with the arm fully extended and pointed at the target. Extend the throwing hand downward along the leg.

13.2.2.4 Pull and Drop

Face the target with both hands extended forward, shoulder high. After pulling the safety pin, lower the nonthrowing arm to the side and bend the throwing elbow 90 degrees. Toss the grenade forward toward the target. Follow through until the throwing arm is again fully extended toward the target.

Explosive safety experts recommend dropping the grenade no closer than 10 feet to the hull of a ship. Shock waves can be heard and felt by personnel in the ship below the waterline.

Figure 13-4. MK 3A2 Concussion Grenade Throwing Positions

<table>
<thead>
<tr>
<th>POSITION</th>
<th>RATIONALE FOR POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing</td>
<td>The most desirable and natural form of deployment. Provides maximum distance.</td>
</tr>
<tr>
<td>Kneeling</td>
<td>Reduces distance. Used primarily when cover from a low wall, shallow ditch, or similar cover is required.</td>
</tr>
<tr>
<td>Prone</td>
<td>Reduces distance and accuracy. Used only when an individual is pinned down by hostile fire and is unable to rise to engage target.</td>
</tr>
<tr>
<td>Pull and Drop</td>
<td>Used by shipboard and pier sentries to engage enemy swimmers and combat divers along a quay wall or ship hull.</td>
</tr>
</tbody>
</table>
13.2.3 Nondetonated MK 3A2 Concussion Grenade Precautions

An MK 3A2 that has not detonated as designed (dud-fired) may function at any time. A random delay may be caused by deterioration or dampness that prolongs the burning time of the pyrotechnic delay, or by a mechanical obstruction such as a hung cocked striker.

**WARNING**

- Do not approach a MK 3A2 that has not detonated as designed. Contact explosive ordnance disposal specialists to investigate and handle a dud-fired MK 3A2.

- Do not attempt to replace the safety pin in a dud-fired MK 3A2. A dud-fired MK 3A2 could still function at any time.
CHAPTER 14

Nonlethal Weapons

14.1 DEFINITION OF NONLETHAL WEAPONS

Nonlethal weapons are explicitly designed and employed to discourage and incapacitate personnel while minimizing fatalities and undesired damage to property and the environment.

The term nonlethal is used within a context of intent. No fatal injury to personnel or permanent damage to property are goals, not guarantees, of these weapons. Nonlethal weapons add flexibility to combat operations and enhance force protection, consistent with prevailing rules of engagement, by allowing friendly troops to engage threatening targets with limited risk of noncombatant casualties and collateral damage.

Note

Use of deadly force must always remain an option of individuals in instances when they, their fellow servicemen, or personnel in their charge are threatened with death or serious bodily harm.

Two nonlethal weapons will be discussed in this chapter: the riot baton and Oleoresin Capsicum (OC) spray.

14.2 RIOT BATON

The riot baton, seen in Figure 14-1, is an impact weapon that, when used correctly, plays an important part in the continuum of force model.

Figure 14-1. Riot Baton
14.2.1 Description of the Riot Baton

The four basic components of the riot baton displayed in Figure 14-1 are described in Figure 14-2 below.

14.2.2 Riot Baton Carries, Grips, and Draws

Correct carrying, gripping, and drawing techniques maximize control and effective use of the baton. This section describes four carries, two grips, and four draws associated with proper use of the baton.

14.2.2.1 Riot Baton Carries

The four basic methods used to carry the baton are described in detail in the following paragraphs.

14.2.2.1.1 Vertical Carry

The baton is held in the strong hand with the long end pointed toward the ground. The weak hand remains up and ready to enhance blocking. The baton is held either down to the side of the strong leg for high visibility or behind the strong leg for low profile. This carry is used when there is an open area to land strong, fluid strikes. The vertical carry is used after executing the cross draw or strong side draw. (Refer to paragraph 14.2.2.3.)

14.2.2.1.2 Outside Arm Carry

The baton is held outside of the strong arm at a 45-degree angle to the ground with the long portion against the upper arm between the strong elbow and the strong shoulder. The short portion of the baton serves as a simulated muzzle. The long end must not be placed on top of the shoulder, which will cause incorrect execution of the forward strike. The outside arm carry is used for all forward and reverse strikes. (Refer to paragraph 14.2.3.2.) This technique is also used as a high-profile carry.

14.2.2.1.3 Two-Handed Carry

The baton is carried with both the strong and weak hands. The grip portion is held with the strong hand while grasping the long portion of the baton with the weak hand, palm down, approximately 2 to 4 inches from the long end of the baton. The strong hand is pulled in close against the strong side hip. The long portion of the baton serves as the muzzle. When executing a strike, the baton will strike or jab the particular area where the long portion is pointed. The baton must be pointed at a 45-degree angle toward the ground. The two-handed carry is used with all blocks and two-handed jabs and strikes.

<table>
<thead>
<tr>
<th>RIOT BATON BASIC COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Long End</td>
</tr>
<tr>
<td>Long Portion</td>
</tr>
<tr>
<td>Grip End</td>
</tr>
<tr>
<td>Grip Portion</td>
</tr>
</tbody>
</table>

Figure 14-2. Riot Baton Basic Components
14.2.2.1.4 Extended Carry

This carry is similar to the two-handed carry in that both hands are on the baton. The weak hand remains palm down to provide better stability and strength. The baton is carried at a 45-degree angle with the long end pointing up. The hands are spread to 36-inch length for better reach. This carry is primarily used to give better reach when striking and blocking in a riot control formation. Most blocks and strikes can be executed from the extended carry.

14.2.2.2 Riot Baton Grips

Correct grip techniques on the baton are essential to the execution of proper drawing techniques. The two types of grips are described in the following paragraphs.

14.2.2.2.1 One-Hand Grip

The grip portion of the straight baton is grasped with the strong hand one to two inches from the grip end. The thumb and index finger of the strong hand should always be touching each other. This is essential to maintaining control of the one-hand grip.

14.2.2.2.2 Two-Hand/Long Grip

The grip portion of the straight baton is grasped with the strong hand one to two inches from the grip end. The long portion is grasped with the weak hand (palm down) about two inches from the long end of the straight baton. The thumb and index finger on the strong hand are essential to maintaining control of the two-hand/long grip while the thumb and the index finger of the weak hand support the long portion of the top of the baton. The weak hand remains palm down on the long portion when in the two-hand carry position.

14.2.2.3 Riot Baton Draws

The four basic methods used to draw the riot baton from a holder are described in detail in the following paragraphs.

14.2.2.3.1 Cross Draw

This draw is used to bring the straight baton into a one-hand/vertical carry, one-hand/outside arm carry or other appropriate carry. With the baton in the holder on the weak-side, grasp the long portion of the straight baton with the weak hand. Push the baton up and forward of the holder while reaching across in front of the body with the strong hand. Grasp the grip portion with the strong hand (one-hand grip) and complete the drawing motion by bringing the baton across the body to the strong side. Assume a carry position and stance. Do not attempt to strike with a full arm extension of the strong arm. The cross draw is considered a high-profile drawing technique.

14.2.2.3.2 Strong Side Draw

This draw is used to bring a baton into a one-hand/outside arm carry, one-hand/vertical carry, or other appropriate carry position. With the baton in the holder on the strong side, grasp the grip portion of the straight baton with the strong hand (one-hand grip or reverse grip, palm facing outward), then pull the baton out of the holder with the strong hand. Assume a carry position and stance based on the grip used.

14.2.2.3.3 Power Draw

This draw is used when the baton is in the holder on the weak side and there is a need to strike a subject or create instantaneous distance without enough time to take the baton out using the cross draw or another draw. With the baton on the weak side, reach down with the weak hand and grasp the long portion of the baton, rotating it with the grip portion toward the ground. Simultaneously, grasp the grip portion with the strong hand ensuring proper grip and strike with the long portion of the baton using a reverse strike while pulling the baton out of the holder. (Refer to paragraph 14.2.3.2.)
14.2.3.4 Rear Draw

This draw is used to achieve an element of surprise. With the baton on the weak side, reach down with the weak hand and grasp the long portion of the baton. Rotate the baton toward the rear with the short end pushed toward the rear of the weak side. Simultaneously, place the strong hand in the small of the back. The short portion of the baton should be pushed toward the strong hand, then pull the baton out of the holder and come to the vertical carry. After conducting the rear draw, come to the low-profile vertical carry.

14.2.3 Riot Baton Employment Techniques

The riot baton is used defensively to block an aggressor or offensively to strike an aggressor. This section describes blocking and striking techniques in detail.

14.2.3.1 Riot Baton Blocks

Blocking counters an intended blow or attack. The five basic types of blocks executed from the extended carry are described in the following paragraphs.

**Note**

All blocks are executed from the two-hand carry position.

14.2.3.1.1 High Block

This block is effective in countering a downward, vertical threat directed at the top of the head and shoulders, typically from a club, pipe, or other similar object. Using the two-hand carry position, raise the baton up in front of the body until the long portion is in front of the forehead. The baton should be in a horizontal position above the head to absorb the shock of the blow. The fingers of the weak hand should be open and behind the long portion of the straight baton as the object is blocked.

14.2.3.1.2 Low Block

This block is effective in countering an upward, vertical threat directed at the groin, lower abdomen, chest, or chin, typically from a foot, knee, or fist. Using the two-hand carry position, move the straight baton in a horizontal manner down in front of the body, just below the groin. The baton should remain in a horizontal position. The fingers of the weak hand should be open and behind the long portion of the baton as the object is blocked.

14.2.3.1.3 Strong Side Block

This block is effective in countering a horizontal threat directed at the strong side of the head or neck, chest, or hip area, typically from a foot, fist, elbow, or knee. Using the two-hand carry, move the baton in a vertical position toward the strong side. Keep the grip portion pointing straight down and the long portion pointing straight up. The fingers of the weak hand should be open and behind the long portion of the baton as the object is blocked. At the moment of contact with the striking object or threat, the long portion’s blocking surface should be at a right angle to the object or threat.

14.2.3.1.4 Weak Side Block

This block is effective in countering a horizontal threat directed at the weak side of the head, neck, chest, or hip area, typically from a foot, fist, elbow, or knee. Using the two-hand carry position, move the baton in a vertical position toward the weak side. Keep the grip portion pointing straight down and the long portion pointing straight up. The fingers of the weak hand should be open and behind the long portion of the baton as the object is blocked. At the moment of contact with the striking object or threat, the long portion’s blocking surface should be at a right angle to the object or threat.
14.2.3.1.5 Middle Block

This block is effective in countering a frontal, horizontal threat directed at the face, throat, chest, or abdomen. The frontal, horizontal threat may be from an attempted frontal or waist tackle, shove, or facial blow. Using the two-hand carry position, move the baton toward the middle of the body in a 45-degree angle. Keep the long portion pointing up and slightly forward of the downward pointing grip portion. The fingers of the weak hand should be open and behind the long portion of the straight baton as the object is blocked. However, the weak hand may have to grip the long portion while pushing a subject away or forcing a subject down to the ground during an attempted tackle.

14.2.3.2 Riot Baton Strikes

A strike is an attempt to hit an opponent. There are eight types of baton strikes. Strikes originate from two types of carries, as listed in Figure 14-3. A detailed description of each strike is found in the following paragraphs.

14.2.3.2.1 Forward Strike

The one-hand grip/forward strike is a quick and effective strike that can be employed in three ways as a counter-strike to stop a hostile act:

1. In a horizontal motion.
2. In a downward diagonal motion intended to destabilize an opponent.
3. In a vertical motion in front of the body to clear an opponent’s hand.

Using the vertical or outside arm carry, quickly move the baton across the body from the strong to the weak side. When the one-hand/forward strike is used in a vertical manner, keep the long portion straight up, not angled forward.

<table>
<thead>
<tr>
<th>TYPE OF STRIKE</th>
<th>ONE-HAND CARRY (OUTSIDE ARM OR VERTICAL CARRY)</th>
<th>TWO-HAND CARRY (LONG GRIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Strike</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Reverse Strike</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Strong Side Horizontal Strike</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Weak Side Horizontal Strike</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Front Jab Strike</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rear Jab Strike</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Middle Strike</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Extended Strike</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Figure 14-3. Riot Baton Strikes and Origination Carries
This significantly reduces the chance of striking the opponent’s face or head. In a horizontal or downward diagonal strike delivery, the palm is face up. In a vertical delivery, the palm is toward the chest.

Note

- For the counter-strike to be effective, follow through with the technique when it makes contact with the threat or is used to destabilize the person. A pattern of movement such as a forward shuffle, forward pivot, strong side step, or rear pivot may enhance this technique.

- This strike will not be executed from the extended carry.

14.2.3.2.2 Reverse Strike

The one-hand grip/reverse strike is a quick and effective strike that can be employed in three ways as a counter-strike to stop a hostile act:

1. In a horizontal motion.
2. In a downward diagonal motion to destabilize an opponent.
3. Vertical motion in front of the body to clear an opponent’s hand.

When the one-hand/reverse strike is used in a vertical manner, keep the long portion of the baton straight up, not angled forward. This significantly reduces the chance of striking an opponent’s face or head.

Note

- For the counter-strike to be effective, follow through with the technique when it makes contact with the threat or is used to destabilize the person. A pattern of movement such as a forward shuffle, forward pivot, strong side step, or rear pivot may enhance this technique.

- This strike will not be executed from the extended carry.

14.2.3.2.3 Strong Side Horizontal Strike

The two-hand/long grip, strong side/horizontal strike is a quick and effective follow-up technique to a two-hand/long grip/middle block or a weak side block and is used as a counter-strike to stop a hostile act. Use a two-hand/long grip carry to rotate the baton in a horizontal motion. Pull back with the weak hand as the strong hand drives the grip portion or grip end forward toward the target. The driving thrust of the grip end or grip portion should be horizontal. Use both hands and the strong side hip to generate power.

Note

- A pattern of movement such as a forward shuffle or pivot may enhance this technique.

- This strike may be executed from the extended carry; however, freedom of movement and space is limited in a riot control formation.

14.2.3.2.4 Weak Side Horizontal Strike

The two-hand/long grip, weak side/horizontal strike is a quick and effective follow-up technique to a two-hand/long grip/middle block or weak side block and is used as a counter-strike to stop a hostile act. Use a two-hand/long grip carry to rotate the straight baton in a horizontal motion. Pull back with the strong hand as the weak hand drives the
grip portion or grip end forward toward the target. The driving thrust of the grip end or grip portion should be horizontal. Use both hands and the weak side hip to generate power.

Note

- A pattern of movement such as a forward shuffle or pivot may enhance this technique.
- This strike may be executed from the extended carry; however, freedom of movement and space is limited in a riot control formation.

14.2.3.2.5 Front Jab Strike

The two-hand/long grip/front jab strike is quick and effective in stopping a frontal attack. Use a two-hand/long grip carry to thrust the long end of the straight baton forward, using both the strong and weak hands. The thrust should be horizontal or slightly downward.

Note

A pattern of movement such as a forward shuffle may enhance this technique.

14.2.3.2.6 Rear Jab Strike

The two-hand/long grip/rear jab strike is a quick and effective technique to counter a bear hug from the rear, whether the arms are free or pinned. Use a two-hand/long grip carry to thrust the grip end of the straight baton to the rear using both the strong and weak hands. The thrust should be horizontal or slightly downward. Look behind as the technique is delivered in order to properly select a target.

Note

A pattern of movement such as a rear shuffle may enhance this technique.

14.2.3.2.7 Middle Strike

The two-hand/long grip/middle strike is a quick and effective follow-up technique to a two-hand/long grip/weak side block, middle or strong side block, or as a means to destabilize an opponent by pushing them back and away. Use a two-hand/long grip carry to thrust the long portion of the straight baton forward in a horizontal motion. Extend both arms at the end of the movement. The thrust should be horizontal, using the entire body to generate the power.

Note

A pattern of movement such as a forward shuffle or pivot may enhance this technique.

14.2.3.2.8 Extended Strike

The extended strike is used in a riot control formation when space and movement are restricted due to spacing between control forces. The strong hand remains in place while the weak arm provides the momentum and driving force. To execute the strike, thrust the weak hand down in a slashing motion, keeping the strong hand next to the body. The intent is to strike with the underside of the baton on a vertical surface to dislodge hands on top of or on the side of a shield.

14.2.4 Riot Baton Retention

The subject of a strike will possibly attempt to take the baton with one or two hands. It is essential that the striker retain the baton at all times. Instructions for retaining the baton during a strike are found in the following paragraphs.
14.2.4.1 One- or Two-Hand Grab Defense for One-Hand Carry Grip

This position is used whenever an opponent places one or both hands on the long portion of the baton. This technique is quick and effective when used in combination with strength, smooth body techniques, and body weight.

14.2.4.1.1 One-Hand Technique

Using the one-hand carry grip, as the opponent grips the long portion of the baton with one hand, quickly grab the long end with the weak hand. Using both hands, rotate the baton in a circular motion to the outside of the gripping hand or wrist. Simultaneously, take a step to the outside of the attacker. If the opponent’s hand is on the long end of the baton, place the weak hand on the opponent’s hand as though it was the long end of the baton and continue the movement. Once the long end is above the opponent’s hand or wrist, drive the straight baton in a strong downward motion to completely separate their hold on the baton, using strength and body weight. Following the release, create distance, assess the situation, and take appropriate follow-up action as needed.

14.2.4.1.2 Two-Hand Technique

Using the one-hand carry grip, as the opponent grips the long portion of the baton with both hands, quickly grab the long end with the weak hand. Using both hands, rotate the baton in a circular motion to the outside of the gripping hands or wrists. Simultaneously, take a step to the outside of the attacker. If the opponent’s hands are on the long end of the baton, place the weak hand on the subject’s hands as though they were the long end of the baton and continue the movement. Once the long end is above the opponent’s hands or wrists, drive the straight baton in a strong downward motion to completely separate their hold on the baton using strength and body weight. Following the release, create distance, assess the situation, and take appropriate follow-up action as needed.

Note

Be alert to any attempt to grab control of the baton held in the strong hand, especially in a crowd.

14.2.4.2 One- or Two-Hand Grab Defense for Two-Hand Long Grip Carry

This position is used whenever an opponent places one or both hands on the long portion of the straight baton. This technique is quick and effective when used in combination with strength, smooth body techniques, and body weight.

14.2.4.2.1 One-Hand Technique

Using a two-hand/long grip carry, quickly rotate the baton in a circular motion to the outside of the gripping hand or wrist. Simultaneously, take a step to the outside of the attacker. Once the long portion is above the opponent’s hand or wrist, drive the straight baton in a strong downward motion to completely separate their hold on the baton, using strength and body weight. Following the release, create distance, assess the situation, and take appropriate follow-up action as needed.

14.2.4.2.2 Two-Hand Technique

Using a two-hand/long grip carry, quickly rotate the baton in a circular motion to the outside of the gripping hand or wrist. Simultaneously, take a step to the outside of the attacker. Once the long portion is above the opponent’s hand or wrist, drive the straight baton in a strong downward motion to completely separate their hold on the baton, using strength and body weight. Following the release, create distance, assess the situation, and take appropriate follow-up action as needed.
14.2.5 Riot Baton Physiological Considerations

This section provides information regarding target areas of the body and potential injuries that may result from particular striking techniques. Understanding how to properly strike an individual is important in justifying varying levels of force.

14.2.5.1 Target Areas of the Human Body

The human body is divided into green, yellow, and red target areas. Figure 14-4 describes each target area and the potential injuries resulting from impact.

![WARNING]

- If the yellow portions of the body are struck with a baton, serious injury could occur. However, when some yellow areas are used for controlling holds or restraint, the injury sustained will not be as great.

- If any of the red areas are struck with a baton, death or serious injury will occur. However, there are some red areas that, when used for restraining only, will not cause death or serious bodily harm.

Note

Color area assignments of the body will also vary according to whether or not the controlling force is restraining the individual or striking the individual with the baton.

14.2.5.2 Six Hinges of the Human Body

The joints or hinges of the human body can be manipulated for more effective control of an aggressive opponent. When restraining the body, emphasis must be placed on locking out two of the three hinges on the upper body or two of the three hinges on the lower body. When joints are anatomically locked, an opponent is forced to comply, as any pain or undue pressure results from the resisting efforts. Results of controlling these joints are described in Figure 14-5.

<table>
<thead>
<tr>
<th>TARGET AREAS OF THE HUMAN BODY AND IMPACT RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLOR ASSIGNMENT</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Green</td>
</tr>
<tr>
<td>Yellow</td>
</tr>
<tr>
<td>Red</td>
</tr>
</tbody>
</table>

Figure 14-4. Target Areas of the Human Body and Impact Results
14.3 OLEORESIN CAPSICUM SPRAY

Oleoresin Capsicum (OC) (also called capsaicin, OC spray, or pepper spray) is a skin and mucous membrane irritant. This section provides information about the handling and use of OC spray.

14.3.1 Definition of OC Spray

Oleoresin is a mixture of resin and an essential oil occurring naturally in various plants. Capsicum is extracted from the pepper plant, whose fruit and seeds range in pungency from mild to hot. Oleoresin Capsicum is a mixture of the two. OC spray is packaged in a hand-held canister, as seen in Figure 14-6. The canister is pressurized by a gas or liquid propellant that allows long-range delivery of the agent to a target.

14.3.2 Components of the OC Spray Canister

Most OC spray canisters are typically divided into seven different components, depending on the manufacturer. The seven components are listed in Figure 14-7.

---

### SIX HINGES OF THE HUMAN BODY

<table>
<thead>
<tr>
<th>AREA</th>
<th>PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoulder</td>
<td>Lock the shoulder to prevent the opponent from freely moving the upper portion of the body.</td>
</tr>
<tr>
<td>Elbow</td>
<td>Apply pressure on the elbow or just above the elbow on the ulnar nerve to cause pain if the opponent resists.</td>
</tr>
<tr>
<td>Wrist</td>
<td>Apply pressure by twisting or locking out the wrist. Lock out the hand by applying pressure at the break of the wrist and pushing the opponent’s thumb toward a stationary object (wall or the ground).</td>
</tr>
<tr>
<td>Hip</td>
<td>Apply pressure to knock an opponent off-balance or alter center of gravity.</td>
</tr>
<tr>
<td>Knee</td>
<td>Apply pressure by pushing outward on the knee, placing an opponent off-balance. The knee can also be used as a hinge for pain compliance.</td>
</tr>
<tr>
<td>Ankle</td>
<td>Apply pressure by grasping the ankle and turning it in a counterclockwise motion to lock the hinge out.</td>
</tr>
</tbody>
</table>

Figure 14-5. Six Hinges of the Human Body

14.3.3 Grip, Drawing, and Stance Methods of the OC Spray Canister

To effectively use OC spray against an opponent, it is essential that personnel understand how to correctly hold the canister and draw it from the holster. Correct methods of gripping and drawing, combined with correct stance, maximize the effective use of OC spray and minimize the risk of self-exposure.

14.3.3.1 Grip Methods for Proper Control of OC Spray Canister

The two gripping methods for proper handling of OC spray canisters are described in the following paragraphs.
**PART** | **FUNCTION**
--- | ---
Nozzle | Dispenses the product from the canister according to the prescribed pattern.
Canister | Holds the product.
Safety Cover | Plastic latch located on top of the actuator button.
Actuator Button | Mechanism that activates the product.
Valve Stem | Regulates the amount of product delivered to the nozzle.
Valve Assembly | Connects the tube to the valve stem.
Tube | Delivery system to the valve assembly.
14.3.3.1.1 Hand-Held OC Canister Grip

Grip the canister by making a “C-clamp” with the hand. Extend the fingers firmly around the canister and keep them snugly together with the thumb over the safety cover until ready to dispense. Place the index finger under the nozzle guard. The spray can be activated by either the thumb or index finger. The thumb is usually favored as it allows direct pressure downward on the actuator for quick and smooth release of the OC spray. Thumb actuation increases control of the spray unit by permitting rapid closure of the flip-top safety. The thumb is easily lifted from the actuator and placed back over the flip-top safety. Thumb actuation also allows the use of defensive and offensive hand-to-hand techniques. The fit of the thumb with the actuator is a key consideration in deciding to use the thumb actuation method.

14.3.3.1.2 MK-9 OC Canister Grip

The canister is held in the weak hand. Wrap the fingers securely around the canister and hold tightly against the strong side of the body. The strong hand grips the handle while the thumb is used to actuate the OC spray. A disadvantage to this hold is that the aggressor may be able to grab the canister and detach it from the handle. Handle detachment results in release of the canister contents and contamination of the user as well as the attacker.

WARNING

Improper grip of the MK-9 canister could result in injury to the user.

14.3.3.2 Drawing Methods When Employing OC Spray Canister

There are three basic ways of drawing the OC spray canister from the holster. Each method is acceptable; however, practice is recommended on each.

14.3.3.2.1 Strong Side Draw

The canister is worn on the strong side of the body. With the strong hand, the user opens the top of the holster, removes the canister, and assumes a ready position.

14.3.3.2.2 Cross Draw

The canister is worn on the weak side of the body. With the strong hand, the user opens the top of the holster, removes the canister, and assumes a ready position.

14.3.3.2.3 Tactical Assist Draw

The canister is worn on the strong or weak side of the body. The user opens the holster with the weak hand, simultaneously draws the canister with the strong hand, and assumes a ready position.

Note

As with a firearm or side handle baton, it is impractical to draw the OC spray canister with the weak hand. A weak side draw should not be used.

14.3.3.3 Stance Methods When Employing OC Spray Canister

Correct stance is essential to proper execution of grips and draws. Two stances are described in the following paragraphs.
14.3.3.3.1 Two-Handed Stance

The canister is held by the strong hand with the bottom over the user’s forward foot. The arm holding the canister should not be fully extended. The weak hand is palm-down on top of the strong wrist. This stance presents a dominant and authoritative appearance and alerts others that OC spray is being used. Do not extend the canister any further than 3 to 6 inches from the chest.

14.3.3.3.2 One-Handed Stance

The canister is held by the strong hand with the bottom over the user’s front foot. The arm holding the canister should not be fully extended. The weak hand is positioned with the fingertips lower than the cheekbone and either forward of or behind the nozzle. This stance presents a dominant and authoritative appearance allowing for easy transitions between weapons and provides a clearing or checking hand. Do not extend the canister any further than 3 to 6 inches from the chest.

14.3.3.4 Carries When Employing OC Spray

The two carries described in the following paragraphs provide professional and low-profile methods to prepare to use OC spray.

14.3.3.4.1 Two-Hand Conceal Carry/Front Position

The user assumes a stable position with the strong leg back. The strong hand holds the canister in front of and close to the body. Both elbows remain above the user’s duty belt. The weak hand is placed over the unit to conceal it from view. This carry presents a professional appearance and a low-profile approach and does not alert bystanders that OC spray is ready to be employed. The thumb or forefinger is positioned above the flip-top safety to prevent accidental discharge.

14.3.3.4.2 Low-Profile Carry

The user assumes a stable position with the strong leg back. The canister is held in the strong hand, which is extended down the strong side, keeping the thumb on the safety cap and the knuckles of the strong hand to the center of the buttocks. This carry is used to approach a subject from a concealed area. This carry presents a professional, low-profile approach for the user and does not alert bystanders that OC spray is ready to be employed. The thumb or forefinger is positioned above the flip-top safety to prevent accidental discharge.

14.3.4 OC Canister Spray Patterns

The manner in which OC spray disperses after leaving the nozzle of the canister defines the spray pattern. There are three basic spray patterns used by all manufacturers. The type of canister, nozzle design, and environment in which OC spray will be employed are determining factors for spray patterns. Figure 14-8 lists three spray patterns and the associated particulate size.

14.3.4.1 Hand-Held Fog/Cone OC Spray Patterns

Hand-held fog/cone OC spray patterns disperse a large volume of microscopic droplets over a wide area making it easy to acquire the target. Properly used, the spray covers the entire area around the subject’s eyes, nose, and face. The volume dispersed by full cone patterns limits the number of spray bursts per canister. The wide coverage limits the effective range to between 3 to 8 feet. The minimum spraying distance is 36 inches. Environmental conditions such as wind are a limiting factor.

14.3.4.2 Hand-Held Ballistic OC Stream Pattern

Hand-held ballistic OC stream pattern is a powerful, concentrated stream that allows greater range in delivery. The stream pattern focuses the contamination in a concentrated area. The ballistic stream is used for accuracy and to
reduce contamination of unintended targets. This pattern hits the subject with a splash or splatter effect, depending on
distance, giving it an effective range of 3 to 12 feet. The minimum spraying distance is 36 inches.

14.3.4.3 Jet Foam Patterns of OC Spray

Jet foam OC spray pattern is a powerful, fast-acting, foaming surfactant that coats the face upon contact. It is de-
dsigned for climate-controlled environments such as courtrooms, hospitals, schools, and holding facilities. Jet foam
hits with greater impact, has better surface adhesion, reduces cross-contamination, and is easier to see during low
light conditions. It has an effective range of 3 to 5 feet and a minimum spraying distance of 36 inches. The residual
product may become slippery on smooth surfaces.

14.3.5 Delivery Techniques and Tactical Applications of OC Spray

Delivery techniques are directional and define how OC spray is applied to the subject. Spray patterns determine the
delivery technique. The three most effective ways to deliver OC spray are listed in Figure 14-9.

The following paragraphs describe four tactical application methods for OC spray.

14.3.5.1 MK-9 Fog Delivery

The MK-9 fog delivery is a full cone spray dispersal system designed to distribute a large quantity of OC spray into a
vast area. The MK-9 contains one pound of OC spray and offers extended ranges (6 to 15 feet) and multiple bursts,
making it excellent for crowd control. The minimum spraying distance is 6 feet. The recommended method of deliv-
ery is an isolated controlled motion from nose to mouth.

14.3.5.2 MK-9 Stream Delivery

The MK-9 stream delivery is a stream dispersal system capable of delivering large quantities of OC spray in a more
controlled fashion than fog systems, minimizing cross-contamination and respiratory effects. The OC particulate
will not remain airborne as long as in a fog delivery and is designed to visually impair numerous subjects at distances
of 6 to 15 feet. Containment should be in place to control multiple subjects who are visually impaired. The minimum
spraying distance is 6 feet. The recommended method of delivery is an isolated controlled motion from ear to ear.

14.3.5.3 MK-9 Foam Delivery

The MK-9 foam delivery is a full cone spray dispersal system designed to distribute a large quantity of OC spray into a
vast area. It contains one pound of OC spray with an effective range of 6 to 9 feet (in climate-controlled conditions)
and is capable of multiple bursts. It is designed for high-volume applications in sensitive ventilated enclosed envi-
ronments such as hospitals and courtrooms. The minimum spraying distance is 6 feet. The recommended method of
delivery is an isolated controlled motion in a circular pattern.

**OC Canister Spray Patterns and Particulate Size**

<table>
<thead>
<tr>
<th>Spray Pattern</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fog (Cone/Mist)</td>
<td>Smallest particulate size</td>
</tr>
<tr>
<td>Stream</td>
<td>Larger particulate size</td>
</tr>
<tr>
<td>Foam</td>
<td>Most concentrated particulate size</td>
</tr>
</tbody>
</table>

Figure 14-8. OC Canister Spray Patterns and Particulate Size
14.3.5.4 MK-21/MK46 Riot Extinguishers

The MK-21/MK46 riot extinguishers are dispersal systems capable of delivering large quantities of OC spray in a more controlled fashion than fog systems, minimizing cross-contamination and respiratory effects. The OC particulate will not remain airborne as long as it is in a fog delivery and is designed to visually impair numerous subjects at distances of 12 to 30 feet. A secure perimeter should be in place to control multiple subjects whose vision is impaired. The minimum spraying distance is 12 feet. The recommended method of delivery is an isolated controlled motion from ear to ear, above the head. Saturation of clothing may affect the respiratory system of the subjects without impairing their vision.

Caution must be exercised when using these delivery systems in small confined areas as they could possibly displace the oxygen supply.

14.3.6 Employment Considerations of OC Spray

Employing OC spray requires instruction in product handling and delivery, cross-contamination, carcinogenic and inflammatory properties, awareness of surroundings, awareness of the target, amount of product to use, and the process of employing OC spray from impact to recovery. The following paragraphs address these considerations in detail.

14.3.6.1 General Employment Considerations of OC Spray

Cross-contamination or transfer hazards are minimized with OC spray as the formulation is heavier than air and the vapor rate of OC spray is very low. Vaporization occurs when a substance changes from a liquid to a gas state and should not be confused with very small droplets or particulate, which may remain airborne, such as with a fogger. These airborne particulates may move across rooms or through ventilation systems and are most prevalent in fog delivery systems and spray nozzles that utilize conical spray patterns. Environmental factors such as wind and rain, fans or ventilation, heat and humidity also affect contamination hazards.

14.3.6.2 Hydraulic Needle Effect of OC Spray

The hydraulic needle effect is the consequence of the OC particulate penetrating the soft tissue of the eye. It is an important factor to consider when employing OC spray and is due to the correlation between the distance and the amount of pressure (size of the canister) used in delivery. Concerns have been raised about the possibility of soft tissue injury, prolonged irritation, or possible infection. The possibility of the hydraulic needle effect has resulted in the establishment of minimum safe distances for each delivery system. Instances of hydraulic needle effect are rare, but should still be taken into consideration. Safety of the individual employing OC spray should never be compromised.
by delaying the use of OC spray in tactical situations for the concern of a hydraulic needle effect. Tactical situations determine the tactical responses.

### 14.3.6.3 Flammability and Carcinogenic Considerations

Depending on whether a product is oil or water based, there is a specific requirement for solvents and emulsifiers to ensure even suspension of the capsaicin. These ingredients make up the majority of the formulation and should be closely evaluated for their safety.

### 14.3.6.4 Awareness

Increased aggression prompts the use of nonlethal weapons. It is essential that an OC spray user remain aware of escalating aggression indicators in a hostile environment. The following guidelines are helpful in maintaining situational awareness when the decision to employ OC spray is made.

1. Use the spray early with the element of surprise and prior to escalation of physical contact.
2. Communicate with fellow troops when spraying a subject who is in the proximity of or in physical contact with other subjects.
3. Use code words for team communication that are not usually recognizable to the general public, such as “OC.”

### 14.3.6.5 Target Area/Spray Volume of OC Spray

The primary target when employing OC spray is the facial area, which assures coverage of the eye zone (eyes, forehead, and brow). The secondary target is the nose and mouth. Discharge OC spray into the facial area using as much as required and considering the following:

1. Use a one-half to one second burst on the open eye.
2. In situations where the subject is hit in the facial area, employ an ample amount of OC spray to ensure enough fluids are present to contaminate the eyes.
3. For multiple opponents, use as much agent as necessary to control the situation based upon the threat.

### 14.3.6.6 Employment Procedure of OC Spray

The following steps are required for effective and safe control of a subject during and after the use of OC spray.

1. Spray the subject until contamination is achieved or it is evident that the OC spray is ineffective and other measures are necessary.
2. Command the subject to get on the ground. End every command with “Do it now.”
3. Evaluate opponent response.
4. Repeat steps 1 through 3 as required.
5. Physically control the opponent. Avoid pressure or weight on the back, which can impair breathing.
6. Medically check the opponent and start decontamination if the situation allows.
14.3.7 Training

Training will include the techniques for application of proper restraint (handcuffing or flexi-cuffing) of subjects exposed to OC spray to prevent possible positional asphyxiation. Positional asphyxiation of subjects exposed to OC spray can occur if they are placed in confined spaces or on their stomach with handsuffed behind their back. The consumption of alcohol and/or cocaine may also contribute to positional asphyxiation of subjects sprayed with OC spray. The constricted position could result in respiratory distress/failure while under the effects of OC spray. Training regarding the restraint of combative subjects will emphasize placing subjects in a sitting position or on their backs. Instructors will conduct restraint training separate from OC spray exposure. Instructors will emphasize that all subjects sprayed with OC will be kept under constant supervision to ensure their breathing is not impaired.

14.3.8 Three Levels of Contamination

There are three levels of contamination when handling or using any type of chemical. Each level will affect an individual differently.

14.3.8.1 Level 1

Level 1 contamination results from direct physical contact with OC spray.

14.3.8.2 Level 2

Level 2 contamination results from indirect or secondary contact with OC spray. A Level 2 contamination is the result of attempting to control or physically touch another person or item with a Level 1 contamination. Moving in to control an aggressor who has just received a Level 1 contamination may result in a Level 2 contamination to the individual employing the OC spray.

14.3.8.3 Level 3

Level 3 contamination results from contact with an area contaminated with OC spray. Usually, a Level 3 contamination will occur when entering a contaminated zone or area.

14.3.9 Physical and Psychological Symptoms and Effectiveness of OC Spray

The physical effects of OC spray contamination will be obvious to the user. Psychological effects are of equal importance, but not as obvious. It is essential that the OC spray user recognize and understand both. Physical and psychological effects are listed below:

14.3.9.1 Physical Effects

1. Involuntary closure of the eyes resulting in temporary visual impairment.
2. Eyes remain closed due to the drying of the natural protective fluid of the eyes.
3. Involuntary extension of the hands to the facial area.
4. Burning sensation and inflammation of the eyes, mucous membranes, contaminated skin and tissues.
5. Secretion of excessive mucus from the nose.
7. Allergic reaction.
   a. While most allergic reactions are not life threatening, it is necessary to provide medical treatment to any subject believed to be having an allergic reaction.
   b. Any subject who has been contaminated by an OC spray product who complains of itching, hives, difficulty in swallowing, or facial swelling should be evaluated by medical personnel without delay.

14.3.9.2 Psychological Effects

1. It is normal for an individual to experience increased anxiety when contaminated by OC spray for the first time.
2. Some individuals may have an anxiety attack, which can affect normal breathing rhythms.
3. Any one who has never been contaminated with OC spray may display anxiety prior to contamination based on fear or knowledge of its effects.
4. It is normal for an individual to experience fear before, during, and after any physical confrontation.
5. Some individuals may panic and flee without thought for obstructions or trip hazards.

Note

Personnel who have never been contaminated by OC spray may panic if they are accidentally contaminated during the employment of the OC spray. Because of this reason, all military personnel required to carry OC spray must receive a Level 1 contamination exposure during training.

14.3.9.3 Effectiveness

1. The failure rate of OC spray is difficult to quantify, but does exist. OC spray has a varied reaction time between 1 and 5 seconds.
   a. Some people have a very high threshold for pain, especially subjects who are emotionally disturbed or prone to substance and/or alcohol abuse.
   b. Mind set may influence effectiveness. Goal-oriented and mentally focused individuals may still accomplish their goal even though they cannot see and are experiencing significant discomfort.
2. Many failures are due to operator errors because of the lack of training or the improper use of an OC product.

14.3.10 Procedures and Techniques in the Contaminated Environment of OC Spray

Responsibilities of the OC spray users continue after the spray is delivered. Procedures to secure and handle subjects in a contaminated environment are essential for maximum control and safety and are described in the following paragraphs.

1. Verbally order the subject to the prone position with arms out to the side, palms up, face away, and feet crossed. End each set of instructions with the command “Do it now.”
2. Handcuff or flexi-cuff the subject.
3. Assure the subject that the effects will dissipate shortly.

4. Do not press down on the subject’s back. Doing so will further restrict breathing that is already difficult due to OC spray contamination.

5. In-custody handling requires the following restraint and transport considerations:
   a. Restraint. After the subject is restrained, begin decontamination as soon as practical. If available, use a decontamination aide to show initiative and compassion. The effectiveness of decontamination aids is considered to be minimal.
   b. Transport. During transport, periodically remind the subject to stay calm. Monitor the subject for medical distress, coherence, and respiration.

6. Detention of the subject requires the following considerations:
   a. Medical personnel should remove contact lenses. Hard lenses may be thoroughly cleansed. Soft lenses should never be reused.

   **WARNING**

   Sudden cessation of aggressive or agitated behavior by individuals under the influence of drugs or alcohol could signify the onset of medical distress.

   b. The three major causes of sudden death while the subject is detained because of preexisting medical conditions or the enhanced effects of drugs are:
      1. Lack of supervision.
      2. Failing to provide immediate physical relief.
      3. Improper and inaccurate written documentation.

   c. OC spray users should be familiar with Sudden In-Custody Death Syndrome and potential risk factors.

**14.3.10.1 General Personnel Decontamination, Recovery, and First Aid from OC Spray**

It is important for the OC spray user to be aware of decontamination and subject recovery procedures, including first aid assistance.

**14.3.10.1.1 General Decontamination Procedures for Personnel**

1. Remove the subject from the contaminated area and establish a verbal rapport.

2. Face the subject into the wind for exposure to fresh air. Fans or air conditioning units may be used.

3. Tell the subject to breathe in through the mouth and out through the nose.
4. Tell the subject to rapidly open and close the eyes (strobing).

5. If possible, before transport, apply immediate first aid decontamination.

Do not allow the subject to rub eyes.

6. Use of a wet paper towel pressed on the face followed by a dry paper towel has proven to be the most effective way to remove the resin from the skin. Numerous applications may be required.

7. Unqualified (nonmedical) personnel should not remove contact lenses.
   a. Do not allow the subject to remove the lenses, especially hard contact lenses.
   b. Difficulty removing contact lenses may cause abrasions to the cornea or sclera (the white part of the eye).

8. When a viable water source is available, have the subject flush the eyes with copious amounts of cool water. Encourage the subject to force open the eyes in order to flush out the OC product.

9. Have subjects remove contaminated clothing (mission dictating).

10. Do not use any creams, salves, or oils.

11. Do not use any commercial eyewash during the decontamination process.

**14.3.10.1.2 Recovery Time for Personnel**

1. Usually an individual will recover within one hour with vast improvements. The eyes should be able to open within 20 to 30 minutes.

2. Anyone not exhibiting significant improvement after one hour should be closely monitored to ensure continued recovery.

**14.3.10.1.3 First Aid for Personnel**

1. OC formulations, which exceed 0.60 percent capsaicin, increase the potential for burns, particularly in fair-skinned persons who sunburn easily. Any person who exhibits sunburn-like redness more than one hour after being decontaminated or who shows any evidence of blistering (second-degree burns) after being sprayed should receive medical treatment for burns.

2. Avoid salves and ointments until affected area has been completely decontaminated.

3. Once a subject has been restrained after being sprayed, the user should conduct a primary medical survey: airway, breathing, and circulation.
   a. Open the airway.
   b. Check for signs of obstruction in the mouth.
   c. Check for signs of responsiveness.
4. No person who has been contaminated by OC spray or any other chemical agent should be left unsupervised for at least two hours after contamination.

5. Medical personnel should evaluate any person who admits to being under the influence of any drugs or alcohol immediately.

6. Medical personnel should evaluate any person who admits a history of heart problems, lung problems, diabetes, high blood pressure, or any other potentially serious medical condition.

14.3.10.2 General Area Decontamination

OC spray is biodegradable and does not require special equipment or processes for decontamination. With normal ventilation or by using high-speed fans, buildings, rooms, and vehicles can be decontaminated in approximately 1 hour. Three methods for removal of the contaminant are:

1. Wash ingredient down drains.

2. Blot exposed surfaces clean with damp rag and non-oil-based soap.

3. Launder clothing as normal with other clothing.
CHAPTER 15

Simunitions

15.1 DESCRIPTION

Simunitions refers to a nonlethal, small-arms training system developed for the M16 (series) of weapons and for the M9 pistol. The simunition system consists of reduced-energy marking cartridges and adapter kits that, when installed on the standard weapon, permit the safe and reliable firing of the marking cartridge. The adapter kits change the operating mode of the converted weapon from gas-operated to straight blowback.

Marking cartridges, either red or blue in marking color, when used with the adapter kit, make up an effective close-range, force-on-force training system. Hits, which are nonlethal, are denoted by red or blue marks. The simunition system enhances the realism and training value of interactive tactical training and allows trainees to use their service weapons in a representative manner in exercises simulating a variety of scenarios including counterterrorism, close-quarters combat, urban fighting, protection of dignitaries, trench clearing and fighting in wooded areas.

15.1.1 Description of Marking Cartridge

Once adapted for training, the weapon can fire marking cartridges. These cartridges consist of a modified 9mm case, a plastic sabot, and a 7.62mm thin-walled plastic projectile containing marking compound.

WARNING

Do not fire standard rounds with the adapter kit installed. Visually inspect all ammunition prior to loading weapon to make sure that only subcaliber 9mm marking cartridges are loaded.

The marking cartridge is powered by a standard, small pistol primer in combination with approximately one third of a grain of propellant. This small amount of propellant ensures a reduced-energy charge in the cartridge. Weapon cycling occurs because the brass cartridge case is free to slide rearwards over the sabot during firing, resulting in a straight blowback action.

15.1.2 Description of Barrel Assembly

The training barrel is uniquely designed to chamber and fire the marking cartridge. After the adapter kit is installed, the appearance of the weapon is very similar to that of the service weapon. In order to identify a converted M16 (series) rifle, the training barrel is colored blue between the front sight and the flash suppressor. On the converted M9, the entire barrel is colored blue. In addition to coloring the training barrel, the identification statement “9mm Marking CTG Only. No STD Ammo” is etched on every training barrel such that it can be seen at all times.

15.1.3 Performance Characteristics

Descriptive and ballistic data for the M16 (series) rifle adapter kit are summarized in Figure 15-1. Descriptive and ballistic data for the M9 marking cartridge are summarized in Figure 15-2.
### ADAPTER KIT SPECIFICATIONS FOR M16 (SERIES) RIFLE

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<td>Magazine Capacity</td>
<td>20 rounds per training magazine</td>
</tr>
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<td>Operational Temperature Range (conditioned cartridges)</td>
<td>32 °F to 105 °F</td>
</tr>
<tr>
<td>Cyclic Rate of Fire at 70 °F</td>
<td>Greater than 700 rounds/min (full automatic)</td>
</tr>
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<td>Velocity at 15 Feet (70 °F)</td>
<td>Less than 550 feet/sec</td>
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<tr>
<td>Accuracy at 15 Feet (indoors)</td>
<td>Mean radius no more than 3.0 inches (10-round group)</td>
</tr>
<tr>
<td>Terminal Effects</td>
<td>Bruises or welts on unprotected skin</td>
</tr>
<tr>
<td>Maximum Range</td>
<td>Greater than 100 yards — accuracy not assured due to sensitivity to cross winds</td>
</tr>
<tr>
<td>Projectile Weight</td>
<td>0.5 gram</td>
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Figure 15-1. Adapter Kit Specifications for M16 (Series) Rifle

### ADAPTER KIT SPECIFICATIONS FOR M9 SERVICE PISTOL

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<tr>
<td>Accuracy at 15 Feet (indoors)</td>
<td>Mean radius no more than 3.0 inches (10-round group)</td>
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<tr>
<td>Maximum Range</td>
<td>Greater than 80 yards — accuracy not assured due to sensitivity to cross winds</td>
</tr>
<tr>
<td>Projectile Weight</td>
<td>0.5 gram</td>
</tr>
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Figure 15-2. Adapter Kit Specifications for M9 Service Pistol
15.2 SAFETY

The design of the adapter kit helps preclude the inadvertent chambering of live ammunition, providing users with an additional safeguard in training environments.

Force-on-force simunitions training at temperatures below 38 °F is prohibited. The plastic of the protective mask becomes brittle in cold temperatures and could crack or break. Additionally, the plastic projectile that houses the soap-based dye begins to harden at temperatures below 38 °F resulting in the round losing the “marking effect.”

A 150-meter safety zone should be established and strictly enforced during training evolutions. This protection zone shall remain clear of unprotected personnel and have controlled access. Also ensure that a minimum safe engagement distance of five feet from the muzzle is established and maintained.

A safety officer must inspect the training area and all participants to ensure there is no live ammunition in the training area prior to the commencement of training exercises or scenarios.

Ensure all personnel within the 150-meter safety distance (zone) wear, at a minimum, the following protective equipment and clothing:

1. Head, face, and neck protection.

2. Neck protection. A balaclava, towel, or neck scarf will be worn so as not to expose any portion of the neck and throat.


- Only face masks approved by the Navy Weapon System Explosive Safety Review Board are authorized for use.

- When training, full-face protection is mandatory. Throat and groin protection are also strongly recommended.

15.3 M16 (SERIES) RIFLE APPLICATION

The simunition adapter kit for 5.56mm weapons includes the M16 (series) rifle and the M4A1 carbine.

15.3.1 M16 (Series) Rifle Adapter Kit Major Components

The major components of the M16 adapter kit are described in Figure 15-3. The three subcomponents of the training upper receiver barrel assembly are further described in Figure 15-4.
15.3.2 Converted M16 (Series) Rifle Loading

It is important to carefully handle marking cartridges to ensure the projectile does not fracture or become skewed in the sabot. Consistent application of the following procedure will improve the performance of the marking cartridge by minimizing misfires related to marking cartridge defects.

15.3.2.1 Loading of Magazines

1. Examine marking cartridges and ensure each projectile is unfractured and secure in the sabot.

2. Load 20 marking cartridges into the training magazine. Ensure that no pressure is put on the projectile portion of previously loaded cartridges.

![CAUTION]

When loading, be careful that the metal case of the cartridge being loaded does not seat on the sabot portion of the previous cartridge. The projectile of the previous cartridge may become fractured, skewed, or loosened.

3. Carefully slide the cartridge being loaded to the rear of the magazine.

![CAUTION]

Fractured, skewed, or loosened projectiles are the primary causes of weapon stoppages.
15.3.2.2 Magazine Insertion

After inserting a magazine loaded with marking cartridges into the magazine well of the lower receiver, the adapted weapon is ready for firing. All appropriate range and training rules and regulations for shooting must be observed.

Shooting should not begin until all relevant safety measures for training with marking cartridges have been observed and the training exercise or scenario has been fully explained by the instructor and completely understood by the trainees.

15.4 M9 PISTOL

The simunition adapter kit for the M9 pistol permits the safe and reliable firing of marking cartridges for training purposes.

15.4.1 M9 Pistol Adapter Kit Components

The M9 pistol adapter kit includes one training barrel. The training barrel is blue and weighs 0.5 lbs. The barrel bore is off-center at the muzzle. Due to the small amount of propellant in a marking cartridge, the barrel and slide are unlocked to ensure reliable functioning of the weapon. To compensate for this, in combination with the low muzzle velocity of the projectile, the barrel bore is canted upwards from the chamber to the muzzle to maintain aiming accuracy.

15.4.2 Converted M9 Pistol Loading

The standard M9 magazine is used with the converted M9 pistol. It is important to carefully handle marking cartridges to ensure the projectile does not fracture, loosen, or become skewed in the sabot. Consistent application of the following procedure will improve the performance of the marking cartridge by minimizing misfires related to marking cartridge defects.
15.4.2.1 Loading of Magazines

1. Examine marking cartridges and ensure each projectile is unfractured and secure in the sabot.

2. Load 15 or fewer marking cartridges into the magazine.

\[\text{CAUTION}\]

When loading, be careful that the metal case of the cartridge being loaded does not seat on the sabot portion of the previous cartridge. The projectile of the previous cartridge may become fractured, skewed, or loosened.

3. Carefully slide the cartridge being loaded to the rear of the magazine.

\[\text{CAUTION}\]

Fractured, skewed, or loosened projectiles are the primary causes of weapon stoppages.

15.4.2.2 Magazine Insertion

After inserting a magazine loaded with marking cartridges into the magazine well of the pistol grip, the converted M9 pistol is ready for firing. All appropriate range and training rules and regulations for shooting must be observed.

\[\text{WARNING}\]

Shooting should not begin until all relevant safety measures for training with marking cartridges have been observed and the training exercise or scenario has been fully explained by the instructor and completely understood by the trainees.

15.5 GENERAL OPERATING INSTRUCTIONS

Operating instructions for adapted weapons are generally the same when firing marking cartridges as when firing standard live service ammunition. These instructions are described in Chapter 2, M9 service pistol and Chapter 6, M16 (series) rifle. Differences due to installation of the adapter kit and the use of marking cartridges are described below.

15.5.1 Temperature Limitations

After a weapon has been adapted to fire a marking cartridge, it should not be used under conditions of extreme cold or extreme heat. The recommended operating temperature range is from 32 °F to 105 °F.

15.5.2 Dusty and Sandy Areas (M16 (Series) Rifle Only)

When firing the converted M16 (series) rifle in dusty or sandy areas, the standard protective barrel cap must be removed. There is not enough energy in the marking cartridges to penetrate the cap and then perform according to specifications. No protective barrel cap is provided with the adapter kit.
15.5.3 Barrel Cleaning

It is recommended that the M16 (series) rifle barrel be cleaned after firing 80 rounds and the M9 barrel be cleaned after firing 70 rounds.

WARNING

Always keep the muzzle pointed in a safe direction.

15.6 KIT REMOVAL

Prior to kit removal, place the weapon on safe, remove the magazine (if installed), and inspect the chamber to ensure no ammunition is chambered. Follow standard disassembly procedures, remove the adapter kit components, and reinstall the standard components.

WARNING

When removing the adapter kit components from the M16 (series) rifle, ensure the training buffer assembly is removed from the lower receiver buttstock assembly.
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