TECHNICAL MANUAL

OPERATOR'S MANUAL

FOR

RIFLE, 7.62-MM, M14, W/E
(1005589-1 271)

RIFLE, 7.62-MM, M14A1, W/E
(1005-072-501 1)

BIPOD, RIFLE, M2
(1005-711-6202)

This copy is reprint which includes current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1972

WARNING

Under no circumstances will a blank cartridge be altered by inclusion of additional propellant in an attempt to obtain automatic action without the blank firing attachment (BFA). Additional propellant will not increase gas port pressure enough to operate the rifle automatically, but may increase chamber pressure enough to cause extensive rifle damage and possible injury to personnel.

WARNING

Do not use a bullet-type cartridge to project a grenade or ground signal from a launcher under any circumstances.

WARNING

Do not fire ammunition which has been stored or exposed to direct rays of the sun or other types of extreme heat. Make sure to store ammunition under protective cover and from excess heat and extreme temperatures.

Changes in force: C 1 and C 2

Change No. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *8 May 1973*

Operator's Manual
for
RIFLE, 7.62-MM, M14, W/E
(1005-589-1271)
RIFLE, 7.62-MM, M14A1, W/E
(1005-072-5011)
BIPOD, RIFLE, M2
(1005-71 1-6202)

TM 9-1005-223-10, 21 March 1972, is changed as follows:

Page 1-1 paragraph 1-3. Change address to: "Commander, US Army Weapons Command, ATTN: AMSWE-MAS-SP, Rock Island, IL, 61201."

Page 1-2. Add the following statement at end of paragraph 1-4a: "One cartridge magazine, 7790183 (fig B-1), and one small arms sling, 6544058 (7, fig B-2), are furnished with each weapon as component items."

B-2. General

This basic issue items and items troop installed or authorized list is divided into the following sections:

a. Basic Issue Items List-Section II. A list, in alphabetical sequence, of items absolutely essential for operation of the end item, which are furnished with and must be turned in with the end item.

b. Items Troop Installed or Authorized List-Section III. A list, in alphabetical sequence, of items required by the operator for sustained operation of the end item. These discretionary items will be requisitioned by the unit in accordance with its mission requirements. They may accompany the end item, but are not subject to be turned in with it.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings.

a. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

b. Description. Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element

in item identification to designate manufacturer or distributor or Government agency, etc., and is identified in SB 708-42.

c. Unit of Measure (U/M). Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in., pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns.

d. Quantity Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the item furnished with the equipment.

e. Quantity Authorized (Items Troop Installed or Authorized Only). Indicates the quantity of the item authorized to be used with the equipment.

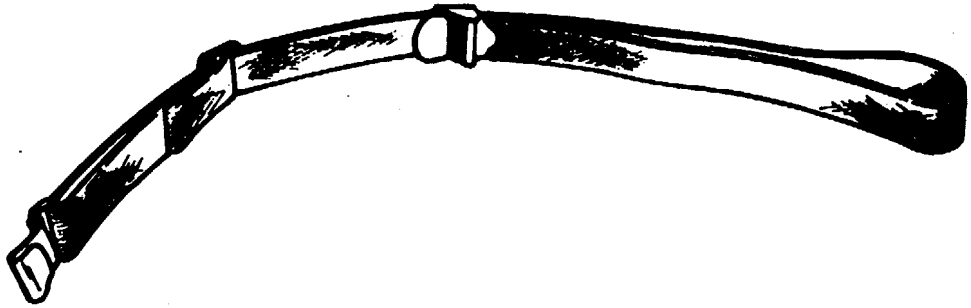
f. Illustration (Basic Issue Items Only). This column is divided as follows:

(1) *Figure number*. Indicates the figure number of the illustration on which the item is shown.

(2) *Item number.* Indicates the callout number used to reference the item on the illustration.

Section II. BASIC ISSUE ITEMS LIST

(1) Federal stock No.	(2) Description *Reference number & mfr. Code* *Usable on code*	(3) Unit of meas.	(4) Qty. furn. with equip	(5) Illustration	
				(a) Fig. No.	(b) Item No.
1005-654-4058	SLING, SMALL ARMS: MI, WEBBING (M14 ONLY) 6544058 (19204).	EA	1	B-1	



WE 72136

Figure B-1. Basic issue item.

By Order d the Secretary of the Army:

BRUCE PALMER, Jr.
General, U.S. Army
Acting Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-40 (qty rqr block no. 139), Operator and Crew requirements for Rifle, 762-MM, M14.

Section III. ITEMS TROOP INSTALLED ON AUTHORIZED LIST

(1) Federal stock No.	(2) Description Reference number & mfr. Code Usable on code	(3) Unit of meas.	(4) Qty. auth.
1005-556-4174	BRUSH, CLEANING, SMALL ARMS: BORE 5564174 (19204)	EA	1
1005-690-8441	BRUSH, CLEANING, SMALL ARMS: CHAMBER 7790463 (19204)	EA	1
1005-791-3377	CASE, LUBRICANT: 7790995 (19204)	EA	1
1005-650-4510	CASE, SMALL ARMS CLEANING ROD: 7267754 (19204)	EA	1
4933-768-0211	COMBINATION TOOL: 7790769 (19204)	EA	1
1005-628-9048	MAGAZINE, CARTRIDGE: (20 CARTRIDGES) 7790183 (19204)	EA	4
1005-726-6109	ROD SECTION, CLEANING, SMALL ARMS: 7266109 (19204)	EA	4
1005-726-6110	SWAB HOLDER SECTION, SMALL ARMS CLEANING ROD: 7266110 (19204)	EA	1

Change No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *6 October 1972*

OPERATOR'S MANUAL
FOR
RIFLE, 7.62-MM, M14, W/E
(1005589-1 271)
RIFLE, 7.62-MM, M14A1, W/E
(1005-072-501 1)
BIPOD, RIFLE, M2
(1005-711-6202)

TM 9-1005-223-10, 21 March 1972, is changed as follows:

Page B-1. Appendix B is superseded as follows:

APPENDIX B

BASIC ISSUE ITEMS LIST
AND
ITEMS TROOP INSTALLED OR AUTHORIZED
LIST

Section I. INTRODUCTION

B-1 Scope

This appendix lists basic issue items and items troop installed or authorized required by the crew/operator for operation of -the 7.62-mm Rifles, M14 and M14A1.

Page B-8. Section II was changed by change 1 and further changed as follows: Delete FSN 1005-654-4058, small arms sling, and all information pertaining to it. There are no basic issue items for these weapons.

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-40 (qty rqr block No. 139) operator and crew maintenance requirements for 7.62MM Rifles, M14 and M14A1.

.

Technical Manual
No. 9-1005-223-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *21 March 1972*

OPERATOR'S MANUAL
RIFLE, 7.62-MM, M14
RIFLE, 7.62-MM, M14A1
BIPOD, RIFLE, M2

		Paragraphs	Pages
CHAPTER 1.	INTRODUCTION		
Section I.	General	1-1	1-1
II.	Description and data	1-4	1-2
CHAPTER 2.	OPERATING INSTRUCTIONS		
Section I.	Controls	2-1	2-1
II.	Operation under usual conditions	2-4	2-5
III.	Operation of materiel used in conjunction with major items	2-14	2-26
IV.	Operation under unusual conditions	2-15	2-31

*This manual supersedes only that portion pertaining to the operator of TM 9-1005-223-20, 19 May 1967 including all changes.

		Paragraphs	Pages
CHAPTER 3.	MAINTENANCE INSTRUCTIONS		
Section I.	Basic issue items, items troop installed or authorized	3-1	3-1
II.	Lubrication instructions	3-3	3-3
III.	Preventive maintenance checks and services	3-5	3-4
IV.	Troubleshooting	3-6	3-10
V.	Maintenance of major groups	3-8	3-20
VI.	Maintenance of magazine	3-9	3-24
CHAPTER 4.	MAINTENANCE OF MATERIAL USED IN CONJUNCTION WITH MAJOR ITEMS	4-1	4-1
CHAPTER 5.	AMMUNITION	5-1	5-1
APPENDIX A.	REFERENCES	A-1	A-1
B.	BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST		
Section I.	Introduction	B-1	B-1
II.	Basic issue items		
	Repair parts	B-1	
	Tools and equipment	B-2	

LIST OF ILLUSTRATIONS

Number	Title	Pages
1-1	7.62-MM Rifle M14-left front view	1-3
1-2	7.62-MM Rifle M14-right front view	1-4
1-3	7.62-MM Rifle M14 and Rifle Bipod M2-right front view	1-5
1-4	7.62-MM Rifle M14 and Bayonet-Knife, M6	1-6
1-5	7.62-MM Rifle M14 with Grenade Launcher M76 and Grenade Launcher Sight M15	1-9
1-6	7.62-MM Rifle M14, Blank Ammunition Firing Attachment M12 and Breech Shield M3	1-10
1-7	7.62-MM Rifle M14 with winter trigger kit installed	1-11
1-8	7.62-MM Rifle M14Al-left rear view	1-12
1-9	7.62-MM Rifle M14A1-right front view	1-13
1-10	Rifle Bipod M2	1-14
1-11	Bayonet-Knife M6 and Bayonet-Knife Scabbard M8A	1-15
2-1	Selector set for automatic (A) and semiautomatic (B) fire	2-2
2-2	Loading magazine	2-6
2-3	Loading magazine with filler and clip	2-7
2-4	Loading magazine with clip	2-8
2-5	Loading magazine into rifle	2-10
2-6	Chambering the cartridge	2-13
2-7	Bolt locking and unlocking	2-14
2-8	Firing rifle	2-16
2-9	Extracting cartridge case from chamber	2-17
2-10	Ejecting cartridge case from chamber	2-19
2-11	Showing bolt in open position	2-20
2-12	Removing magazine from rifle	2-24
2-13	ON-OFF position of spindle	2-25
2-14	Adjusting bipod legs	2-27

Number	Title	Pages
2-15	Installation/removal grenade launcher	2-28
2-16	Installation/removal of blank ammunition firing attatchment	2-29
2-17	Installation/removal of bayonet-knife	2-30
3-1	Weapon field stripped (M14)	3-21
3-2	Weapon field stripped (M14A1)	3-23
3-3	Disassembly/assembly of magazine	3-25
5-1	7.62-MM (NATO) cartridges	5-2
5-2	7.62-MM grenade cartridge	5-3
B-1	Magazine-exploded view	B-10
B-2	Tools and equipment	B-11

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual contains information and instructions for the operator responsible for performing maintenance on 7.62-MM Rifle, M14, M14A1 and Rifle Bipod, M2, (figs. 1-1 through 1-10) as allocated by the Maintenance Allocation Chart (MAC).

1-2. Forms and Records

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

1-3. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to: Commanding General, U.S. Army Weapons Command, ATTN: AMSWE-MAP, Rock Island, Il. 61201.

Section II. DESCRIPTION AND DATA

1-4. Description

a. The 7.62-MM Rifle, M14 or M14A1 (figs. 1-1 through 1-9) is a lightweight, air-cooled, gas operated, magazine fed, shoulder weapon, used primarily for semiautomatic or full automatic fire.

b. The blank ammunition firing attachment (fig. 1-6) consists of the M12 Attachment and the M3 Breech Shield. It is used to fire blank ammunition. The tubular portion of the blank firing attachment is inserted into the muzzle opening of the flash suppressor. The firing attachment is secured by the bayonet lug and a spring clip latch. The shield is secured to the cartridge guide by a guide lug with a spring plunger.

c. The Winter Trigger Kit M5 (fig. 1-7) is used in cold weather or arctic operation of Rifle M14. The kit consists of a winter safety and winter trigger assembly. It is installed to the pistol grip portion of the stock with screws.

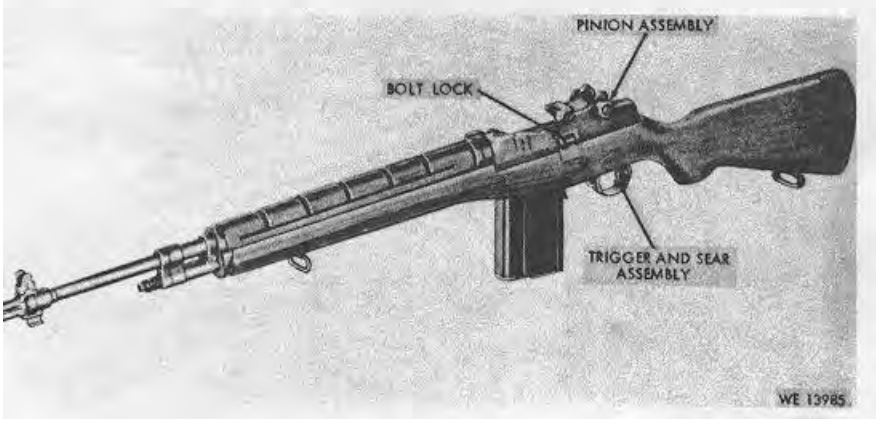


Figure 1-1. 7.62-MM Rifle M14-left front view.

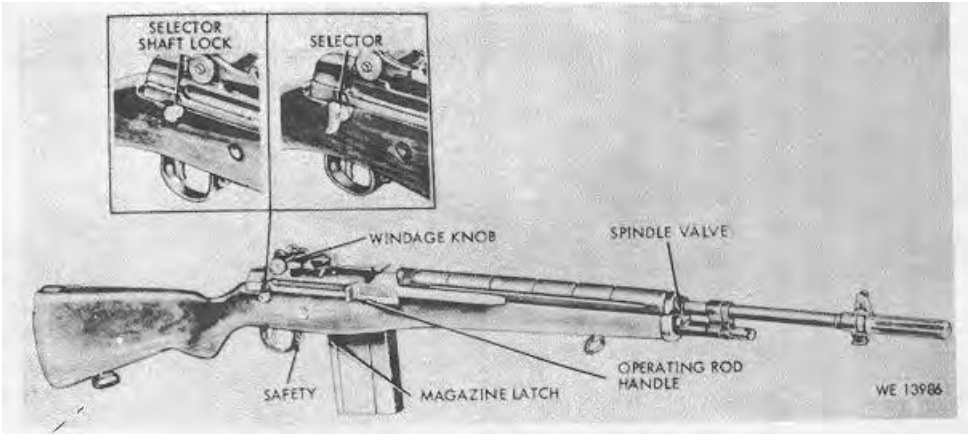


Figure 1-2. 7.62-MM Rifle M14-right front view.

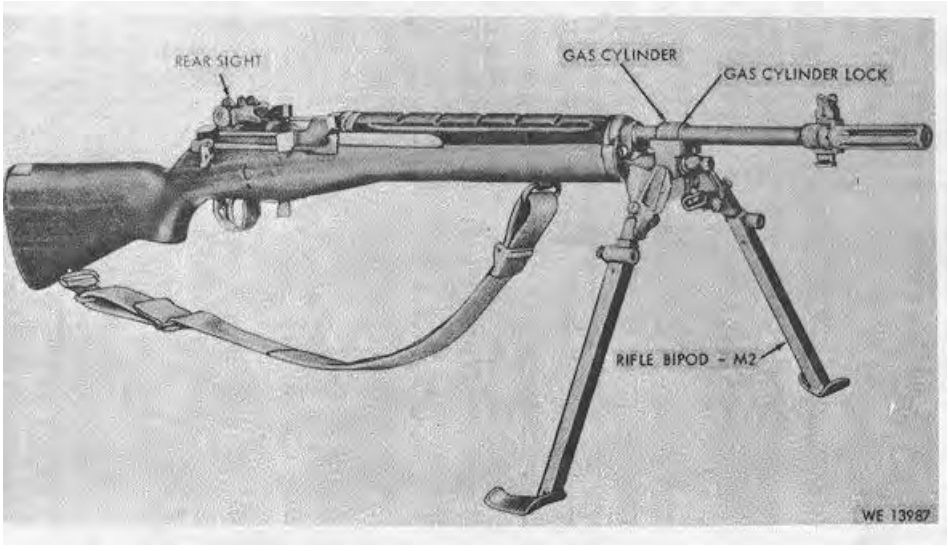


Figure 1-3. 7.62-MM Rifle M14 and Rifle Bipod M2-right front view.

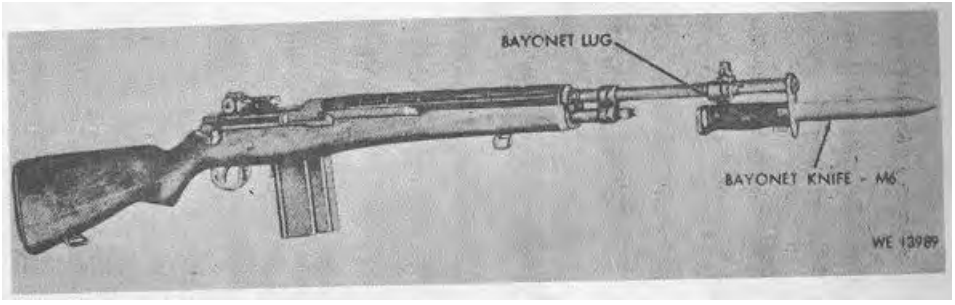


Figure 1-4. 7.62-MM Rifle M14 and Bayonet-knife M6.

1-5. Differences Between Models

The Rifle M14A1 (figs. 1-8 and 1-9) differs from the Rifle M14 (figs. 1-1 through 1-7) in that it has a cushioned type butt plate to reduce the recoil force, a modified in-line pistol grip-type stock assembly with a folding shoulder rest, hand grip assembly, selector, and a stabilizer assembly. The stabilizer provides for muzzle compensation and reduces recoil action. The stabilizer fits over the flash suppressor and locks to the bayonet lug.

1-6. Tabulated Data

a. 7.62-MM Rifle M14.

Weight w/equipment .....9.1 lb
Length w/flash suppressor.....44.3 in
Length of barrel.....22 in
Magazine cartridge capacity..... 20 rd, 7.62-mm ammunition
Rate of fire semi-auto/automatic) ..... 1-750 rpm
Method of operation ..... gas operated
Cooling .....air-cooled

b. 7.62-MM Rifle M14A1.

Weight w/equipment .....12.12 lb
Length w/stabilizer .....44.3 in
Length of barrel.....22 in
Magazine cartridge capacity..... 20 rd, 7.62-MM ammunition
Rate of fire (semi-auto/automatic) ..... 1-750 rpm
Method of operation ..... gas operated
Cooling .....air-cooled

c. Bipod.

Weight ..... 1.75 lbs

d. Grenade Launcher M76 and Grenade Launcher Sight M15.

(1) *Grenade launcher.*
Weight .....7 oz
(2) *Grenade launcher sight.*
Weight .....5 oz

e. Bayonet-Knife M6.
Weight .....12 oz

f. Bayonet-Knife Scabbard M8AI.
Weight .....4 oz

g. Blank Ammunition Firing Attachment M12 with Breech Shield M3 (M14 only).
Weight .....4 oz

h. Kit, Winter Trigger with Winter Safety.
Weight .....3 to 5 oz

1-7. Identification Plates

a. Each rifle has the name of the manufacturer and a serial number stamped on the receiver for identification purposes.

b. Parts, such as the magazine, bipod, grenade launcher, and bayonet-knife may have a nomenclature, model

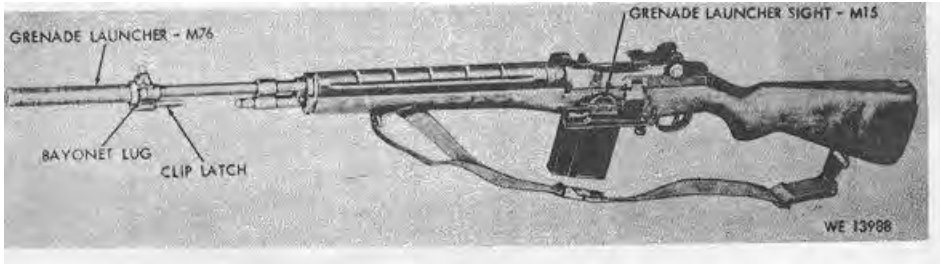


Figure 1-5. 7.62-MM Rifle M14 with Grenade Launcher M76 and Grenade Launcher Sight M15.

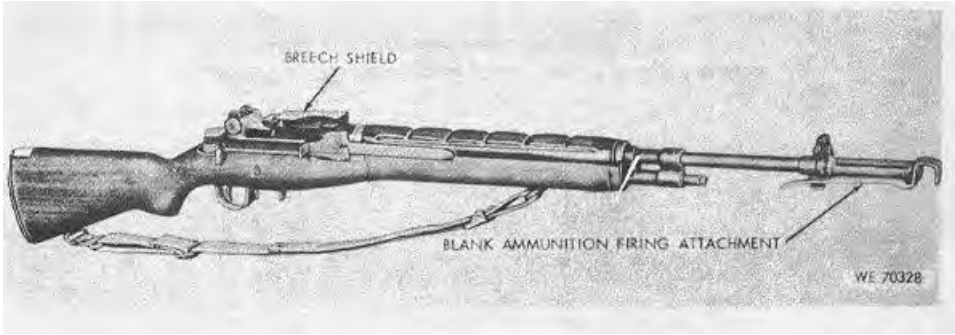


Figure 1-6. 7.62-MM Rifle M14, Blank Ammunition Firing Attachment M12 and Breech Shield M3.

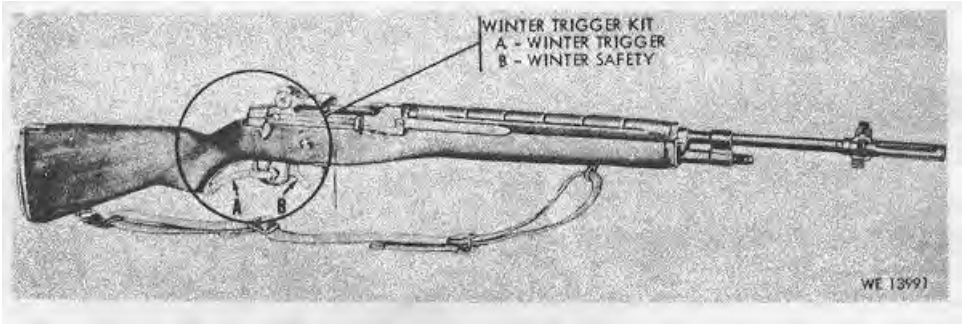


Figure 1-7. 7.62-MM Rifle M14 with winter trigger kit installed.

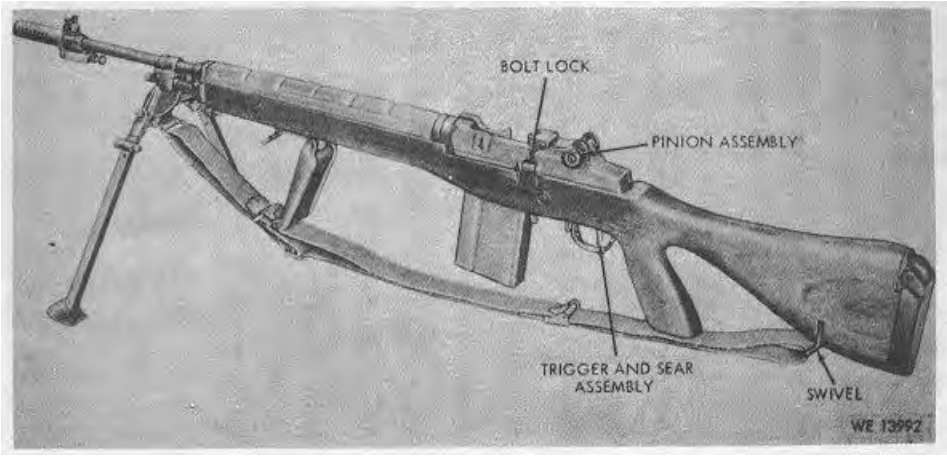


Figure 1-8. 7.62-MM Rifle M14A1-left rear view.

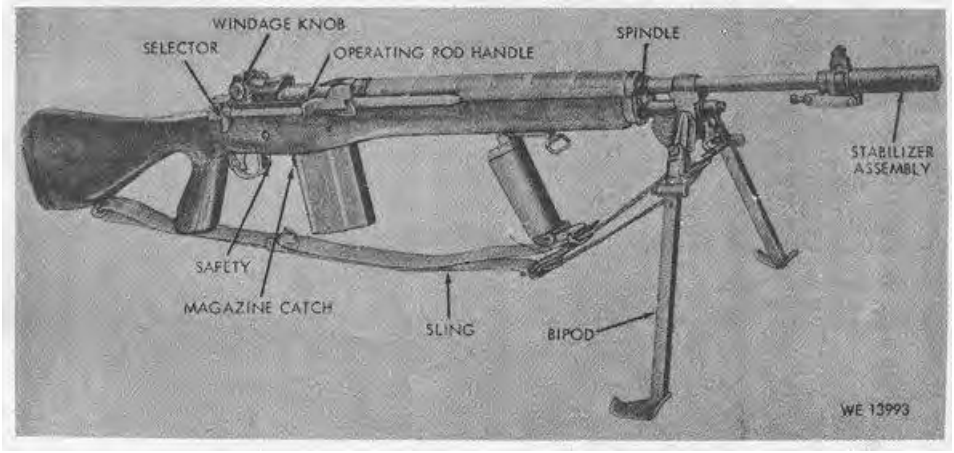


Figure 1-9. 7.62-MM Rifle M14A1-right front view.

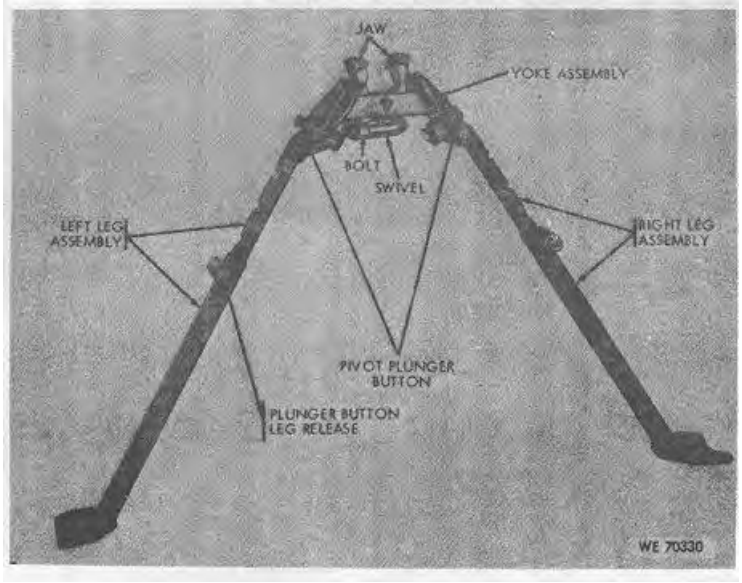


Figure 1-10. Rifle Bipod M2.

designation, part number, or manufacture series number stampings on the outer surfaces.

c. The rifle bipod (fig. 1-10) is a light weight portable, folding mount which clamps to the gas cylinder of the rifle.

d. The Bayonet-Knife M6 (fig. 1-11) is used in conjunction with Rifle, M14 for close combat. It connects to the bayonet lug of the flash suppressor and a closed loop in the handle encircles the flash suppressor (-fig. 1-4).

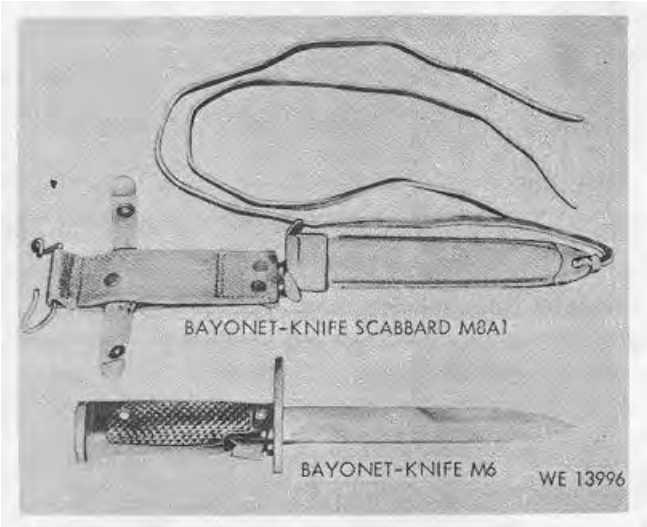


Figure 1-11. Bayonet-Knife M6 and Bayonet-Knife Scabbard M8A1.

e. The bayonet-knife scabbard (fig. 1-11) serves as a carrier for the bayonet when it is not assembled to the rifle.

f. The Grenade Launcher Sight M15 (fig. 1-5) is used in conjunction with the Grenade Launcher M76 when launching grenades from Rifle M14. It consists of mounting scale plate and sight bar assembly. The mounting scale plate is attached to the left side of the stock by two screws. The sight bar assembly is attached to the mounting plate.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. CONTROL

2-1. General

This section describes the various controls and provides the operator/crew sufficient information to insure the proper operation of 7.62-MM Rifles, M14, M14A1 and accessories.

2-2. Controls

a. Selector.

(1) Selector (fig. 2-1) regulates the rate of fire of the rifle. It is located on the right rear side of the receiver.

(2) The letter A stamped on the selector is placed in the 12 o'clock position and facing the operator when set for automatic fire. The void side of selector is facing the operator when set for semiautomatic fire.

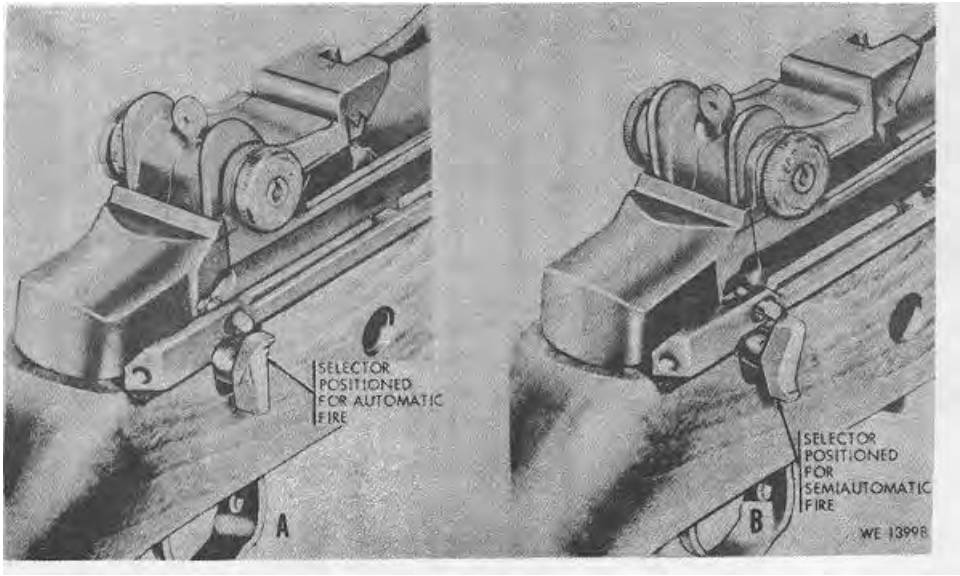


Figure 2-1. Selector set for automatic (A) and semi-automatic (B) fire.

b. Trigger and Sear Assembly.

(1) The integral trigger and sear assembly (fig. 1-8) is part of the firing mechanism. When the trigger is squeezed it initiates the fire train, causing forward movement of the hammer. As the hammer goes forward, the firing pin strikes the primer in the head of the cartridge case causing it to ignite, thus initiating the main propellant in the body of the chambered cartridge. The pressure which is built up from the burning propellant causes the bullet to be propelled out the barrel of the weapon into flight.

(2) The trigger and sear assembly is located inside of the receiver assembly.

c. Safety.

(1) The safety (figs. 1-2 and 1-9) prevents the rifle from being accidentally fired.

(2) The safety mechanism is located just forward of the trigger.

(3) The weapon will not fire when *safety* is in rear position.

(4) weapon will fire when *safety* is set in forward position.

d. Spindle Valve. The spindle valve controls gas flow. When the slot of the spindle is in the 12 o'clock position (ON), sufficient gas pressure is released to cause the rifle to function. However, when the slot of the spindle is in the 3 o'clock position (OFF), maximum gas pressure is built up to propel the rifle grenades. The spindle (figs. 1-2 and 1-9) further prevents the by-pass of gas into the gas cylinder.

e. Rear Sight. The rear sight (fig. 1-3) is used for the alignment of firer's line-of-fire with target (FM 23-71) to be fired upon. The lateral movement of the sight is regulated by the windage knob (fig. 1-2), whereas the sight elevation of the apperture is adjusted by the pinion, which is calibrated in meters. Turn pinion (fig. 1-1) clockwise to elevate.

f. Operating Rod Handle. The handle of the operating rod (fig. 1-2) must be used to manually operate the bolt for feeding, chambering, locking, and ejecting of cartridges. When the rifle is fired, gas pressure builds up in the gas cylinder (fig. 1-3) which forces the operating rod to the rear, thus initiating bolt action.

g. Winter Trigger Kit. Refer to figure 1-7 as a replacement for the regular trigger assembly during cold or arctic weather.

2-3. Bipod Controls

The bipod (fig. 1-10) is used as an adjustable support for the rifle when it is being fired. The bipod legs are adjustable.

Depress the plunger and move up or move down on the sliding base portion to position leg assemblies. When the plunger button is released and positioned properly, it will seat in the slot locking the legs at the desired height. The jaws are placed around the front end of the gas cylinder and held in that manner by tightening a bolt with the combination tool.

Section II. OPERATION UNDER USUAL CONDITIONS

2-4. General

This section contains instructions for the operation of the rifles and bipod under conditions of moderate temperatures and humidity. Instructions for operation under unusual conditions are covered in section IV.

2-5. Preparation, for Firing

a. Examine rifle to make certain it is clean and free of obstructions in the bore.

b. Make sure the rifle is properly lubricated.

c. Check rifle for correct assembly and for proper operation.

d. Check ammunition for grade, identification marking and for serviceability.

Figure 2-2. Loading magazine.

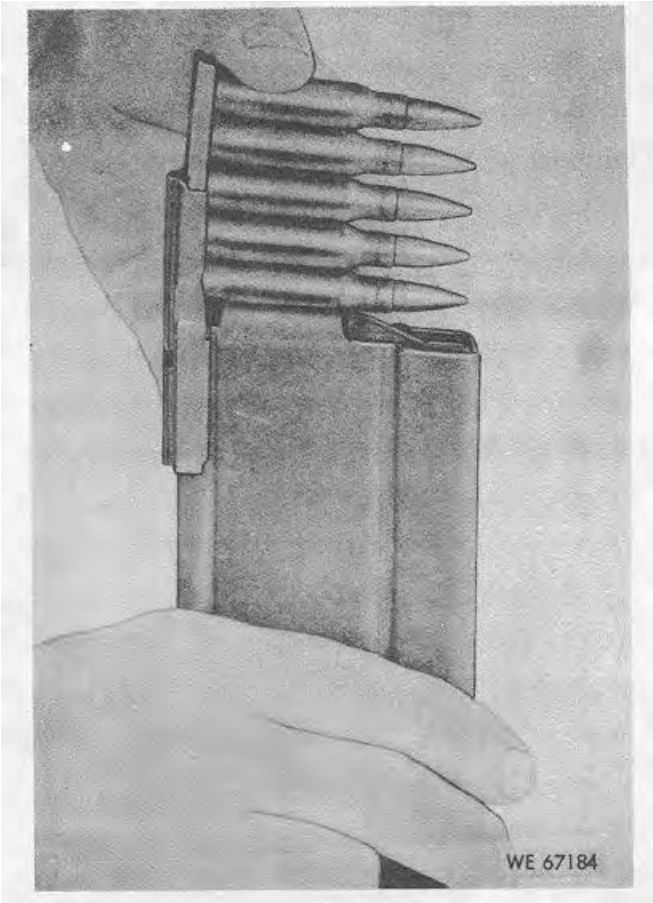


Figure 2-3. Loading magazine with filler and clip.

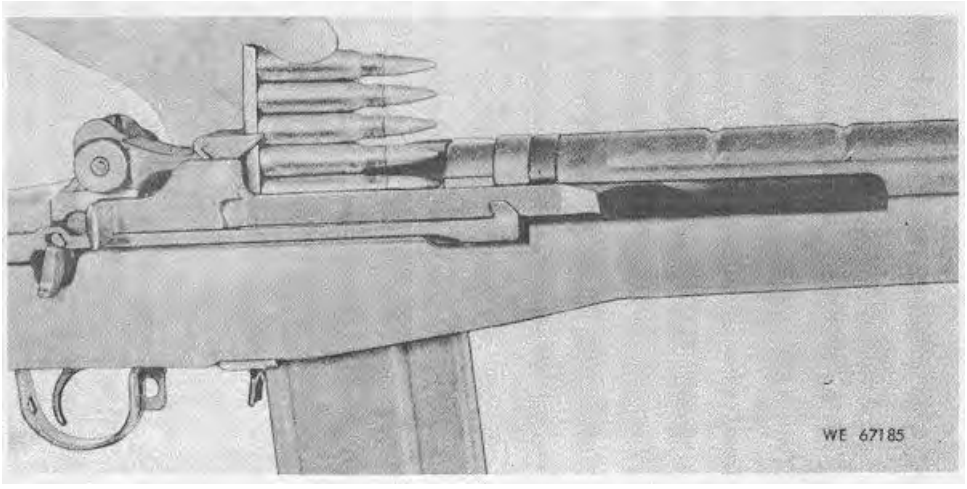


Figure 2-4. Loading magazine with clip.

e. Operate and inspect controls for satisfactory functioning.

2-6. Loading Magazine

a. Hold magazine as shown in figure 2-2. Insert each cartridge with the bullet toward the front of the magazine.

b. When loading the magazine with a filler (fig. 2-3) slide the filler over the top rear portion of the magazine. Insert the loaded clip (fig. 2-4) and push the 5 rounds into the magazine. Remove the clip and repeat the process until 20 rounds have been loaded into the magazine. Remove clip and magazine filler.

2-7. Loading the Rifle

a. Single Round (Magazine Removed).

(1) Move SAFETY to safe position.

(2) Pull operating rod fully to rear and press in the bolt lock while holding the muzzle end of the weapon pointing slightly down. Place a cartridge into the chamber and seat it with the thumb. Pull back on operating rod handle and release it to permit bolt to move forward.

b. Single Round (Magazine Installed). When loading a cartridge with the magazine installed, first set SAFETY to safe position and place

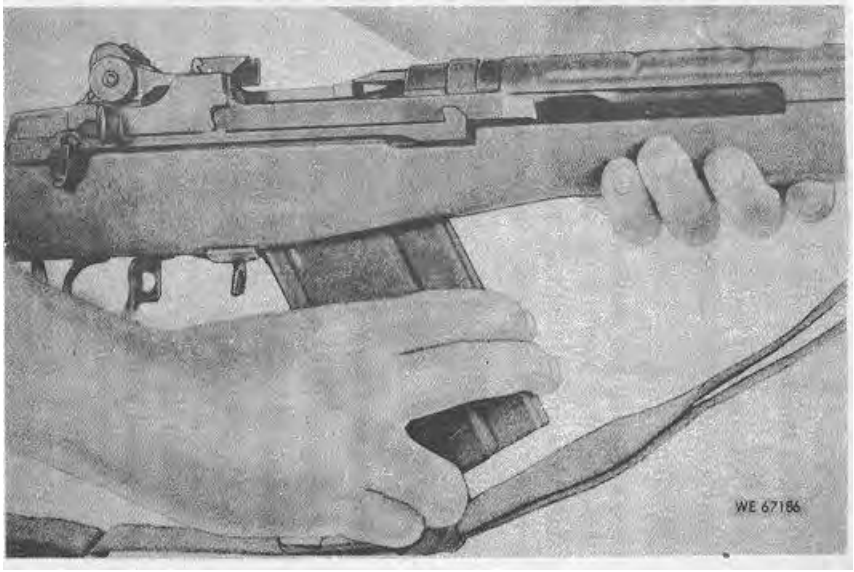


Figure 2-5. Loading magazine into rifle.

a cartridge into the chamber. Next depress the magazine follower with the right thumb and at the same time press back-on the operating rod handle and release it. This allows the bolt to move forward.

c. Loaded Magazine.

(1) Move SAFETY to safe position.

(2) Insert a loaded magazine into the magazine well until the operating rod spring guide engages the magazine (fig. 2-5).

(3) Pull backward and upward until the magazine latch snaps into position. A click will be heard to indicate that the magazine is fully seated.

(4) Pull back and release the operating rod handle to allow the bolt to strip the top cartridge from the magazine for chambering.

2-8. Top Loading (Installed Magazine)

An empty magazine in the weapon can be loaded through the top of the receiver using a 5-round magazine loading clip. First place the clip in the magazine stripper guide. Next place the thumb of one hand on top of the ammunition while grasping the side and bottom of the receiver with the other hand and then apply pressure on the top cartridge. This exerted

pressure forces the 5-rounds into the magazine (fig. 2-4). Finally pull up to remove the cartridge clip.

2-9. Semiautomatic

a. Each time a cartridge is fired from the rifle, many parts inside of it work in a given order. This is known as the *cycle of operation.* The cycle is similar in all small arms. A knowledge of what happens during the cycle of operation will help you to understand the cause of and remedy for various stoppages.

b. The cycle of operation is broken down into eight steps. These steps are listed below, together with a brief description of what occurs inside the rifle during each step. With the selector set for semiautomatic fire (fig. 2-1) assume that a full magazine has been loaded in the rifle, that the first cartridge has been fired; and the bolt is to the rear.

(1) *Feeding.* Feeding takes place when a cartridge is forced into the path of the bolt. The top cartridge is forced into the path of the bolt by the magazine follower. The follower is under pressure of the magazine spring.

(2) *Chambering.* Chambering occurs when a cartridge is driven into the chamber. This takes place as the bolt goes forward under pressure of the expanding operating rod spring. The bolt picks up the top

cartridge in the magazine and drives it forward into the chamber (fig. 2-6). Chambering is complete when the extractor snaps into the extracting

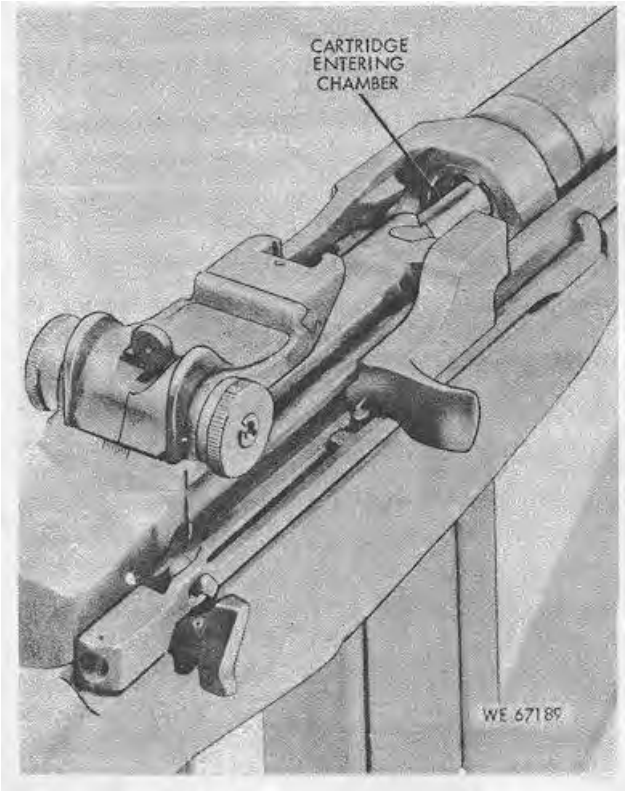


Figure 2-6. Chambering the cartridge.

groove on the cartridge and the ejector is forced into the face of the bolt.

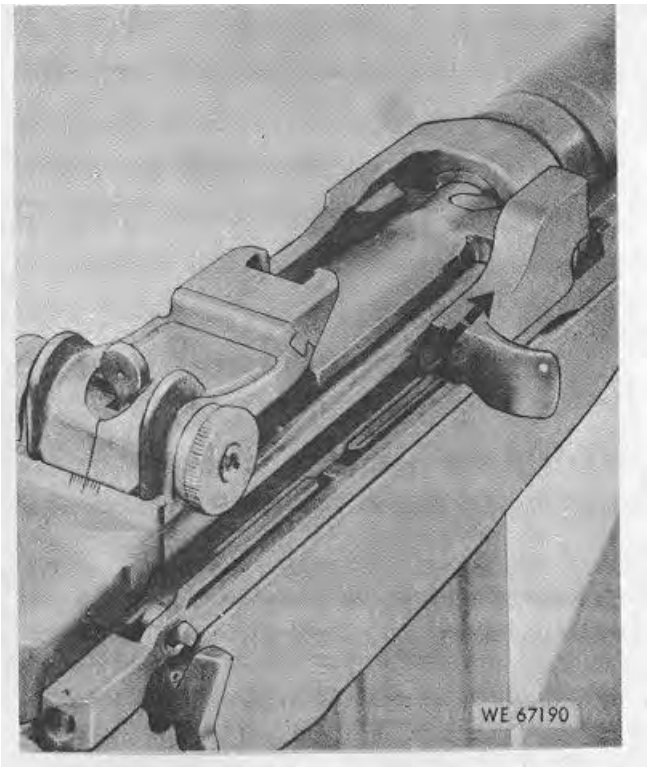


Figure 2-7. Bolt locking and unlocking.

(3) *Locking.* Locking occurs when the bolt is fully closed. The closed bolt prevents the loss of gas pressure until the bullet has left the muzzle. The bolt is locked by the rear camming surface in the hump of the operating rod forcing the bolt roller down. This engages the locking lugs on the bolt with the locking recesses in the receiver (.fig. 2-7).

(4) *Firing.* Firing occurs when the firing pin strikes the primer in the head of the cartridge. When the trigger is pressed (fig. 2-4) the trigger lugs are disengaged from the hammer hooks and the hammer is released. The hammer moves forward under pressure of the hammer spring and strikes the tang of the firing pin. This drives the firing pin against the sensitive primer, which in turn causes the propellant in the body of the cartridge case to ignite and propel the bullet into its trajectory.

(5) *Unlocking.* Unlocking occurs after the firing of a cartridge. As the bullet is forced through the barrel by expanding gases, a small amount of gas enters through the gas port into the hollow gas piston and the inside of the gas cylinder plug. The gas inside the piston and plug expands and, when it builds up adequate pressure to overcome the operating rod spring tension, the piston moves rearward driving the operating rod and bolt with it. After the piston has traveled slightly less than five thirty-seconds of an inch, the gas ports are no longer alined and

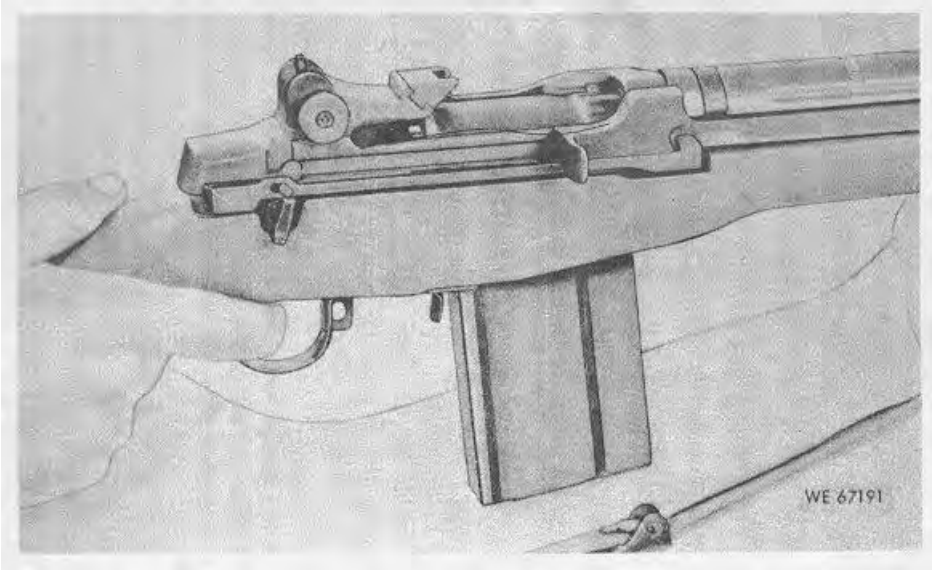


Figure 2-8. Firing rifle.

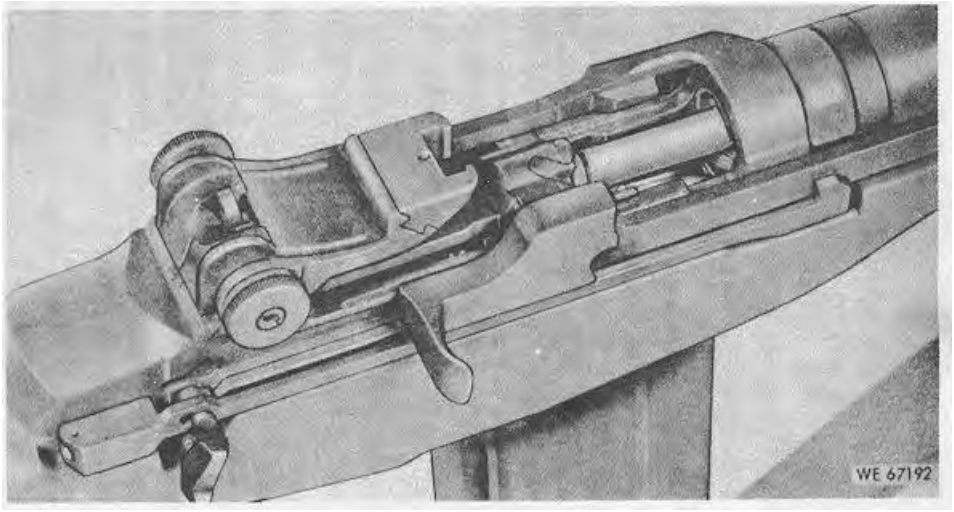


Figure 2-9. Extracting cartridge case from chamber.

no more gas can enter the piston. The remaining gas in the barrel follows the bullet out of the muzzle. There is about three-eighths of an inch rearward movement of the operating rod before unlocking begins. This is a safety feature to insure that all the unneeded gas has escaped through the barrel before unlocking begins. After the operating rod has moved this short distance, the camming surface inside its hump forces the bolt roller upward, disengaging the locking lugs on the bolt from the locking recessed in the receiver. The unlocked bolt is now ready to move forward (fig. 2-9). Any gas that is left in the gas cylinder or piston after the bolt is fully to the rear escapes through the lower gas port in the cylinder.

(6) *Extracting.* Extracting is pulling the empty cartridge case from the chamber. As the bolt unlocks, slow initial extraction takes place. As the bolt moves to the rear, it pulls the cartridge case with it (fig.2-9).

(7) *Ejecting.* Ejecting is throwing the empty cartridge case out of and away from the receiver (fig. 2-10). As soon as the bolt has withdrawn the cartridge case clear of the chamber, the force of the ejector spring and plunger pushes the cartridge case head away from the bolt face. This causes the forward end of the cartridge case to move upwards and to the right. The rapid rearward movement of the bolt causes the cartridge case to strike the angle on the lower right

corner of the magazine stripper as the cartridge case is turned sideways. The rapid forward movement of the operating rod handle causes the leading edge of the "camming hump" to strike

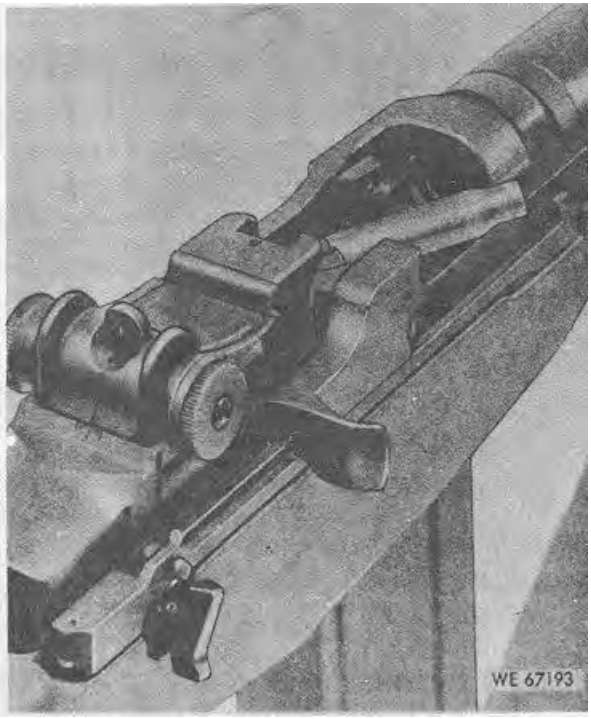


Figure 2-10. Ejecting cartridge case from chamber.

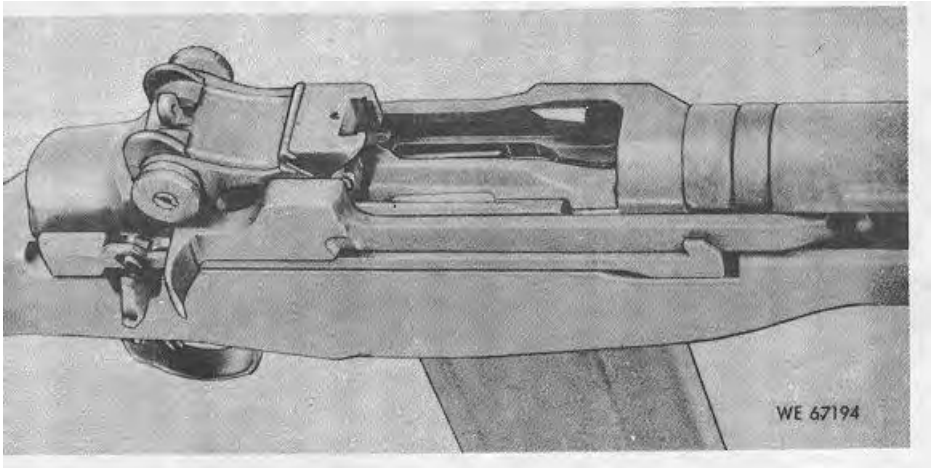


Figure 2-11. Showing bolt in open position.

the cartridge case with the angle on the outer edge of this "hump" continuing the movement of the cartridge case to the right front. When the last cartridge has been fired and the bolt is held in a rearward position by the bolt lock, the ejector propels the last case out and away from the receiver (fig. 2-11).

(8) *Cocking.* Cocking occurs when the hammer is forced into position for firing the next cartridge. This happens as the bolt travels toward the rear. The rear end of the bolt forces the hammer back and rides over it. The hammer is caught by the sear, if the trigger is still held to the rear, and by the trigger lugs if the trigger has been released (fig. 2-10).

2-10. Automatic

a. The selector must be set for automatic fire (letter A facing the firer). Setting the selector to automatic rotates the sear release until it is in a position to make contact with the sear.

b. After the first cartridge has been fired (and with the trigger held to the rear), the operating rod starts its rearward movement under pressure of expanding gases. As it moves to the rear, the connector assembly moves rearward one-eighth of an inch under pressure of the connector assembly spring. The movement of the connector assembly rotates the sear release on the selector shaft so that the flange on the sear release allows the sear to move forward into a position

where it can engage the rear hammer hooks. Then, when the bolt drives the hammer to the rear, the sear engages the rear hammer hooks and holds the hammer in the cocked position.

c. After the bolt moves forward and locks, the shoulder on the operating rod engages the hook of the connector assembly and forces it forward. This rotates the sear release on the selector shaft, causing the flange on the sear release to push the sear to the rear; disengaging it from the rear hammer hooks. The hammer will then go forward if the trigger is held to the rear. If the trigger is released at any time, prior to firing of the last cartridge, the hammer will be held in the cocked position by the trigger lugs. The automatic actuation of the sear release by the connector assembly will not release the hammer to fire the chambered cartridge.

2-11. Hangfire, Misfire, and Cook-off

a. Hangfire and misfire are malfunctions caused by defective ammunition. If it is determined there is a hangfire or misfire, do the following:

(1) Remove the magazine.

(2) Place SAFETY to safe position.

(3) Wait 10 seconds;

(4) Refer to troubleshooting, table 3-3.

b. Cook-off normally will occur when the rifle has been fired excessively to cause abnormal heat to develop in the barrel and receiver. Likewise, ammunition having been exposed to extreme heat will also cause a cook-off.

WARNING

Do not fire ammunition which has been stored or exposed to direct rays of the sun or other types of extreme heat.

2-12. Unloading and Safing Rifle

a. Place SAFETY in safe position.

b. Remove the magazine by pressing magazine latch (fig. 2-12).

c. Pull the operating rod fully rearward to extract and eject a cartridge from the chamber.

2-13. Firing the Rifle

a. Press trigger to fire each cartridge when SELECTOR is set for semiautomatic fire.

b. When the last cartridge in the magazine is fired, the magazine follower pushes up on the bolt lock holding the bolt in the rear position.

c. Set rifle for automatic fire.

Figure 2-12. Removing magazine from rifle.

d. Press trigger and hold down firmly.

e. Rifle will continue to fire while trigger is held down firmly with the finger.

f. When the last cartridge is fired, the bolt is held to the rear by the bolt lock.

g. The spindle must remain in the ON (12 o'clock)

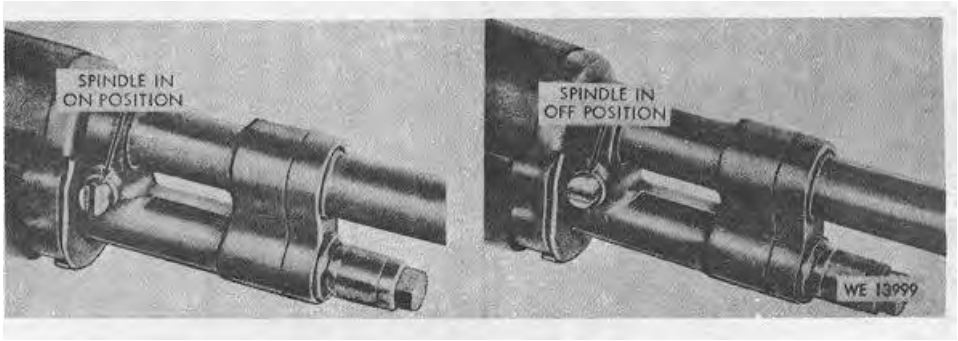


Figure 2-13. ON-OFF position of spindle valve.

position (fig. 2-13) during all firing, except when using a grenade launcher.

NOTE

Prior to storing weapons in arms room for an extended period, the following procedures must be performed: (a) clean weapon, (b) release bolt and (c) squeeze trigger to release hammer.

h. When the trigger is pressed, a cartridge is fired; the spent cartridge case is ejected; the hammer is cocked; a new cartridge is chambered, and the rifle is ready to fire again--all in about one eight hundredth of a minute. The rapidity of the mechanical action allows the rifleman to aim and fire an infinite quantity of cartridges within a short time.

Section III. OPERATION OF MATERIEL USED IN CONJUNCTION WITH MAJOR ITEMS

2-14. General

This section contains instructions for the operation, installation and removal instructions for auxiliary items which are supplied for use with the rifles.

a. Bipod, M2. The bipod is attached to the rifle gas cylinder. The bipod is secured to the rifle by a

Figure 2-14. Adjusting bipod legs.

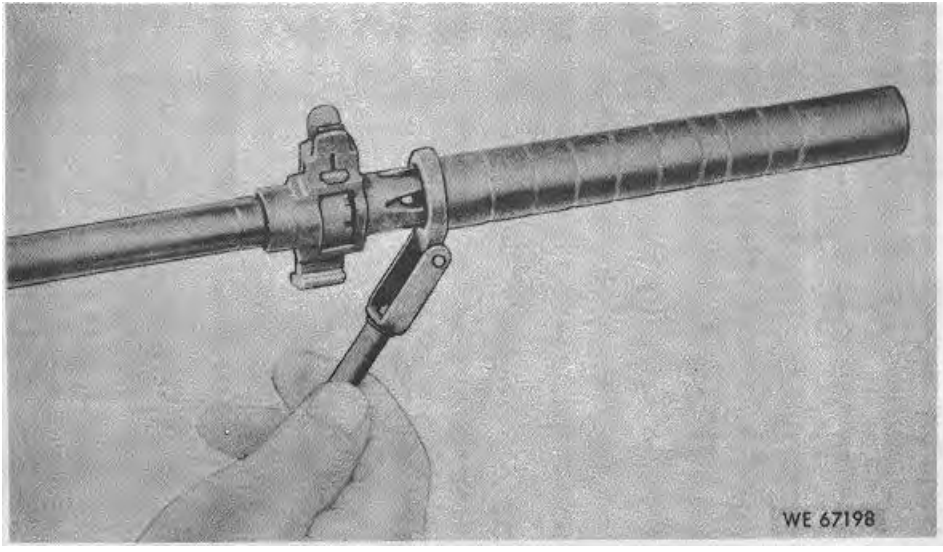


Figure 2-15. Installation/removal of grenade launcher.

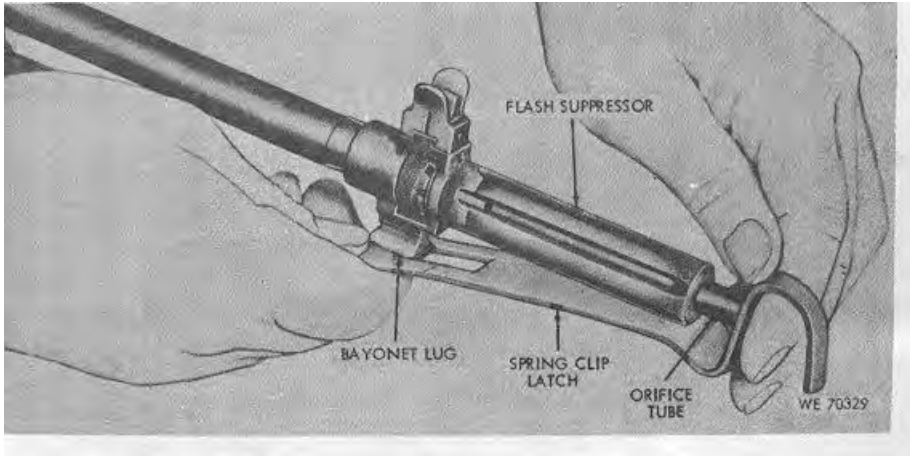


Figure 2-16. Installation/removal of blank ammunition firing attachment.

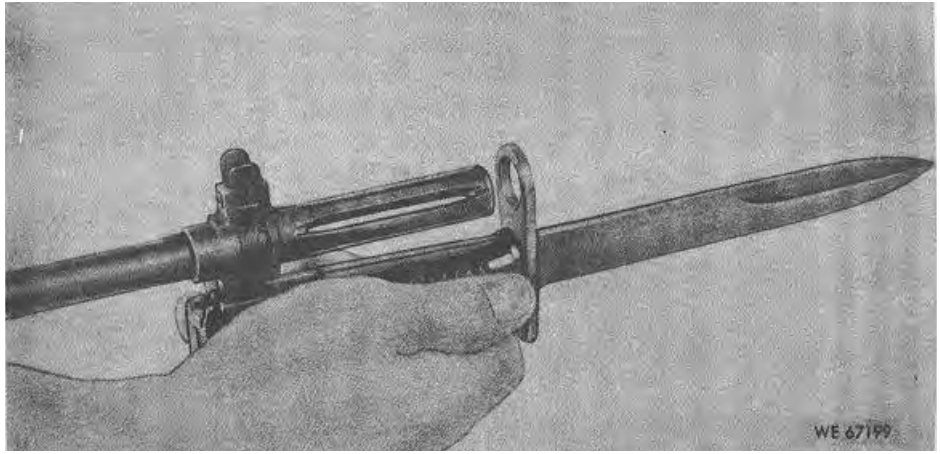


Figure 2-17. Installation/removal of bayonet-knife.

set of jaws and held in place by a self-locking bolt. The adjustable legs of the bipod are kept in their desired positions by seating of pivot plunger buttons (fig. 2-14).

b. Grenade Launcher (fig. 2-15), Blank Ammunition Firing Attachment (fig. 2-16), and Bayonet-knife (fig. 2-17). These components are made in such a manner that each may be quickly installed to the rifles (figs. 1-4 through 1-7). Each component is equipped with locking mechanisms for easy installation and removal.

c. Stabilizer Assembly. This assembly is placed over the flash suppressor of Rifle M14A1 (fig. 1-9). The yoke is fitted on the bayonet lug, after which the retaining screw is tightened with the combination tool. The stabilizer assembly is now assembled to the barrel.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-15. General

This section covers atmospheric conditions likely to be encountered. It further provides necessary operating and safety instructions to enable the equipment to render satisfactory performance and yield the anticipated reliability built into the equipment.

a. Operation in Extreme Cold or Heat.

(1) When the equipment is employed in 0°F temperature, it must be kept cleaned and lubricated (para 3-3) with a suitable grade of lubricant (table 3-1).

(2) Operate the various controls regularly to prevent them from freezing. One situation contributing to difficulty of operation is frozen contaminants.

(3) Protect the equipment with a proper cover, when exposed to the weather, regardless of prevailing temperature.

(4) Refer to FM 31-70 for additional information on operations in the arctic.

(5) When the equipment is operated in extreme heat or at a high temperature, make sure that the equipment is kept cleaned, and lubricated more often than under more favorable conditions.

(6) During cleaning operation in hot weather, the hands are likely to perspire (sweat) therefore, wipe dry, and apply a light coat of lubricant to the equipment to prevent rust formation.

b. Operation in High Humidity. When the equipment is operated in high humidity, the equipment must be kept dry, clean and well lubricated to retard rust formation.

c. Operation in Sand, Snow, or Mud.

(1) When the equipment is operated under sandy, muddy or snowy conditions, wipe these elements off the equipment regularly. An application of lubricants to surfaces and moving parts will protect the equipment from abnormal wear and rust formation.

(2) When the equipment is inactive it must be stored under adequate protective cover, such as tarpaulins, storage shelters, metal containers, etc., to protect it from being damaged and attacked by rust formation.

(3) Clean, wipe dry, and lubricate the equipment regularly to prevent equipment failures.

d. Operation in Salt Water Areas.

(1) Salty atmosphere causes metal to rust or corrode rapidly. Oil and grease deteriorate when exposed to salty atmospheres.

(2) Frequently clean rust and corrosion from components. Lubricate all components more frequently than under usual conditions.

e. Operation at High Altitudes. Not applicable.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

Section I. BASIC ISSUE ITEMS, ITEMS TROOP INSTALLED OR AUTHORIZED

3-1. General

Repair parts, tools, and accessories issued with or authorized for use by the operator for the 7.62-MM Rifles M14 and M14A1 are listed in appendix B.

3-2. Maintenance Supplies and Materials

Table 3-1 lists lubricating, cleaning, maintenance materials and their stock numbers that are authorized for maintenance of the rifles and equipment by the operator. Pertinent authorized documents are the proper requisitioning authority for these maintenance expendable supplies and materials.

Table 3-1. Operator's Maintenance Materials

Federal Stock No.	Description
9150-754-0063	GREASE, RIFLE: (FISKE BROS, REFINING CO.) (LUBRICATE 130-A OR EQUAL) (1 LB CAN) (AVAILABLE FROM YOUR ARMORER.)
9150-273-2389	LUBRICATING OIL, GENERAL PURPOSE: (PL SPECIAL) (4 OZ CAN) LUBRICATING OIL, WEAPONS: (LAW) FOR BELOW ZERO OPERATIONS
9150-664-0038	4 OZ CAN
9150-292-9689	1 QT CAN
7920-205-1711	RAG, WIPING: COTTON, FOR GENERAL PURPOSE USE (50 LB BALE) CLEANING COMPOUND, RIFLE BORE: (RBC)
6850-224-6656	2 OZ BOTTLE
6850-224-6657	8 OZ CAN

Section II. LUBRICATION INSTRUCTIONS

3-3. General

This section contains general lubricating instructions for the proper maintenance of the 7.62-MM Rifles, M14, M14AI and auxiliary equipment.

a. Keep all lubricants in closed containers and store them in a clean, dry place away from external heat. Allow no dust, dirt, or other foreign material to mix with the lubricants.

b. Keep all external parts, not requiring lubrication, clean of all lubricants.

c. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. Wipe all excessive lubrication from moving parts to prevent accumulation of foreign matter.

3-4. Specific

a. Use rifle bore cleaning compound (RBC) to clean metal parts.

b. Dry parts and apply a light coat of general purpose lubricating oil (PL special).

c. Next apply a light coat of rifle grease to the surfaces of the following parts:

(1) Locking lugs of bolt operating lug and recesses.

(2) Bolt guide.

(3) Anti-friction roller on bolt.

(4) Operating rod guide groove on side of receiver.

CAUTION

Always clean, wipe dry and lubricate the equipment immediately after exposure to adverse weather conditions or firing, to prevent damage and malfunctions.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-5. General

a. This section contains instructions for performing the periodic preventive maintenance checks and services required to maintain the 7.62-MM Rifles, M14, M14A1 and auxiliary equipment.

b. To insure that a rifle is ready for operation at

all times, it must be systematically inspected so that defects may be found and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services to be performed are listed in table 3-2.

Table 3-2. Preventive Maintenance Checks and Services

B-Before Operation **D-During Operation** **A-After Operation**

Interval and sequence No.			Item to be Inspected Procedure	Work Time (M / H)
B	**D**	**A**		
			RIFLES, M14 AND M14A1 (OVERALL)	
1		2	a. Inspect rifle for dents, cracks, burs, fouling, foreign matter, looseness and for defective components.	.005 Min
3			b. Hand function operating rod and bolt assembly. They should not bind.	.002 Min
	4		c. Check to see that moving parts function smoothly.	.002 Min
5		6	d. Inspect for proper installation.	.003 Min
7		8	e. Clean, wipe dry to remove oil, dirt and other foreign matter.	.005 Min
9		10	f. Lubricate.	.005 Min
			BOLT GROUP	
11			a. Remove and inspect for excessive wear, cracks or breaks.	.005 Min

12		13	b. Clean and lubricate.	.002 Min
			BARREL AND RECEIVER GROUP	
14		15	a. Inspect barrel bore and chamber for presence of carbon and foreign material.	.003 Min
16		17	b. Clean, wipe dry, and lubricate.	.002 Min
			FIRING MECHANISM	
18		19	Hand function mechanism for proper operations. Actuate safety. Safety will not engage when hammer is forward.	.003 Min
			GAS CYLINDER	
20		21	Check gas cylinder plug for proper installation.	.003 Min
			NOTE **Do not lubricate or adjust while weapon is hot.**	
			STABILIZER ASSEMBLY (M14A1 ONLY)	
22		23	Check for damage and for proper installation.	.003 Min
			REAR SIGHT	
24			Accurate windage knob and elevating pinion assembly of rear sight. Make certain they do not bind.	.004 Min

Table 3-2. Preventive Maintenance Checks and Services-Continued

B-Before Operation **D-During Operation** **A-After Operation**

Interval and sequence No.			Item to be Inspected Procedure	Work Time (M / H)
B	D	A		
			MAGAZINE	
25		26	a. Inspect magazine for damage.	.003 Min
27			b. Check to see that magazine assembles to rifle properly.	.001 Min
			STOCK ASSEMBLY	
28			Inspect for damage and for missing parts.	.003 Min
			BIPOD	
29	30	31	a. Check bipod for operation and for proper installation to rifle. Yoke jaws must hold bipod securely to rifle.	.003 Min
32			b. Check legs and pivot plunger button for extension and locking action.	.002 Min

			GRENADE LAUNCHER	
33		34	a. Inspect launcher for cleanliness, damage and for proper installation to rifle.	.004 Min
		35	b. Clean, lubricate, and wipe dry.	.002 Min
			BLANK FIRING ATTACHMENT	
36	37		a. Inspect blank firing attachment for cleanliness, damage and for proper installation to rifle.	.004 Min
38		39	b. Check for missing parts.	.002 Min
40		41	c. Clean, lubricate, and wipe dry.	.002 Min
			BAYONET-KNIFE	
42			a. Check for damage, loose hardware, rust, and proper installation to rifle.	.004 Min
43		44	b. Clean bayonet-knife of dirt, oil, or other foreign matter.	.003 Min

Section IV. TROUBLESHOOTING

3-6. General

This section contains troubleshooting information for locating and correcting malfunctions which may develop in Rifle, M14 or M14A1.

3-7. Troubleshooting

Table 3-3 is intended as a guide for troubleshooting. The tables does not cover all possible malfunctions that may occur, However, it includes only the more common malfunctions. Additional data on trouble-shooting of these rifles is contained in TM 9-1005-223-20. Malfunctions which are not corrected by actions listed will be referred to organizational maintenance for remedial action.

Table 33. Troubleshooting

Malfunction	Probable cause	Corrective action
1. Failure to load	a. Dirty or deformed ammunition.	a. Clean or replace.
	b. Damaged magazine tube.	b. Replace magazine.
	c. Dirty magazine.	c. Clean.
	d. Damaged or broken spring.	d. Replace magazine.
	e. Damaged or broken follower.	e. Replace magazine.
	f. Loose or damaged floor plate.	f. Replace magazine.
2. Magazine inserts with Difficulty	a. Bent or deformed magazine.	a. Replace magazine.
	b. Excessive dirt in receiver well or on magazine.	b. Clean and lubricate.
	c. Ammunition not fully seated in magazine.	c. Remove ammunition and reload properly.
	d. Deformed or damaged operating rod spring guide.	d. Refer to organizational maintenance.
	e. Deformed or damaged magazine latch.	e. Refer to organizational maintenance.

nec-	f. Magazine latch movement restricted.	f. Check movement. Clean if essary. If bent or damaged, refer to organizational maintenance.
3. Magazine cannot be retained in weapon	a. Magazine latch damaged or deformed.	a. Refer to organizational maintenance.
	b. Magazine latch spring damaged or broken.	b. Refer to organizational maintenance
	c. Magazine latch plate (magazine) damaged or missing.	c. Replace magazine.
	d. Locking recess at top front of magazine deformed.	d. Replace magazine.
	e. Magazine not fully installed.	e. Remove and install properly. Make certain latch clicks.
4. Failure to feed	a. Damaged or dirty ammunition.	a. Clean or replace ammunition.
	b. Weak or broken magazine spring.	b. Replace magazine.
	c. Damaged or deformed magazine.	c. Replace magazine.
	d. Damaged or deformed stripping lug on bolt.	d. Refer to organizational maintenance.
	e. Short recoil.	e. Refer to organizational maintenance.

Table 3-3. Troubleshooting-Continued

Malfunction	Probable cause	Corrective action
4. Failure to feed-continued	f. Weak or broken operating rod spring.	f. Refer to organizational maintenance.
5. Failure to chamber	a. Dirty, damaged or corroded ammunition. b. Dirty chamber. c. Weak or broken operating rod spring.	a. Clean with dry cloth or replace ammunition. b. Clean barrel and chamber. c. Refer to organizational maintenance.
6. Bolt fails to lock	a Cartridge case holding bolt out of battery. b. Dirty chamber. c. Extractor does not snap over rim of cartridge base.	a. Pull bolt to rear and remove deformed cartridge case. Clean ammunition and/or barrel chamber. b. Clean barrel and chamber. c. Clean bolt assembly and extractor recess in breech face of barrel, or refer to organizational maintenance.

	d. Frozen or blocked ejector spring and plunger.	d. Refer to organizational maintenance.
	e. Restricted movement of, or damaged operating rod, or operating rod spring.	e. Refer to organizational maintenance.
	f. Bolt not fully rotated and locked in receiver.	f. Refer to organizational maintenance.
	g. Damaged receiver.	g. Refer to organizational maintenance.
7. Failure to fire	a. Emptied magazine.	a. Load magazine.
	b. Bolt not fully forward and locked.	b. Refer to "Bolt fails to lock."
	c. Defective ammunition.	c. Replace ammunition.
	d. Firing pin worn, damaged or movement restricted.	d. Clean bolt or refer to organizational maintenance.
	e. Broken hammer.	e. Refer to organizational maintenance.
	f. Weak or broken hammer spring.	f. Refer to organizational maintenance.

Table 3-3. Troubleshooting-Continued

Malfunction	Probable cause	Corrective action
7. Failure to fire--continued	g. Hammer lugs, trigger lugs, or sear worn or broken sufficiently to cause hammer to ride the bolt forward.	g. Refer to organizational maintenance.
8. Short recoil	a. Gas plug loose or missing.	a. Tighten plug or refer to organizational maintenance.
	b. Restricted movement of operating rod assembly.	b. Refer to organizational maintenance.
	c. Bolt binding.	c. Clean receiver or refer to organizational maintenance.
	d. Cylinder not fully installed (blocks gas port).	d. Remove gas cylinder plug. Loosen gas cylinder lock. Push gas cylinder down as far as it will go, using hand pressure only. Tighten gas cylinder lock as far as it will go then back off lock one half' turn to aline

		gas cylinder plug with cylinder. Install gas cylinder plug and tighten with light pull.
	e. Gas piston restricted.	e. Clean gas cylinder and piston. Refer to organizational maintenance, if damaged.
	f. Damaged connector assembly.	f. Refer to organizational maintenance.
	g. Partially closed spindle valve.	g. Turn valve to correct position.
	h. Improper lubrication in cold weather.	h. Clean and lubricate properly.
9. Failure to unlock	Defective ammunition.	Replace ammunition.
	Dirty or burred bolt.	Clean and lubricate or refer to organizational maintenance.
10. Failure to Extract	a. Spindle valve closed.	a. Open spindle valve.
	b. Cartridge seized in chamber (sheared rim). Clean chamber.	b. Remove cartridge.
	c. Short recoil.	c. Refer to "short recoil."
	d. Damaged or deformed extractor.	d. Refer to organizational maintenance.

Table 3-3. Troubleshooting-Continued

Malfunction	Probable cause	Corrective action
10. Failure to extract-continued	e. Weak, deformed or frozen extractor plunger, and spring assembly.	e. Refer to organizational maintenance.
	f. Ruptured or separated cartridge case in chamber.	f. Remove cartridge case or refer to organizational maintenance.
11. Failure to eject	a. Short recoil.	a. Refer to "short recoil."
	b. Weak, deformed or frozen ejector spring and plunger.	b. Refer to organizational maintenance.
12. Failure to hard bolt rearward	a. Damaged or deformed magazine follower.	a. Replace magazine.
	b. Damaged or deformed bolt lock.	b. Refer to organizational maintenance.
	c. Bolt lock movement restricted.	c. Clean bolt lock recess. If not corrected, refer to organizational maintenance.
	d. Weak or broken magazine spring.	d. Replace magazine.

	RIFLE BIPOD, M2	
13. Fails to clamp or lock securely	a. Heavy accumulation of foreign material.	a. Clean and lubricate.
	b. Locking bolt not secure.	b. Tighten bolt as required.
14. Failure of legs to remain in extended position	a. Pivot plunger button not seated in leg detent.	a. Position button portion of leg until it is seated in detent.
	b. Damaged or bent leg assembly.	b. Refer to organizational maintenance.
	BAYONET KNIFE, M6, (Rifle M14 only)	
15. Bayonet does not remain firmly attached to rifle	Damaged latch.	Refer to organizational maintenance.

Section V. MAINTENANCE OF MAJOR GROUPS

3-8. General

The operator is authorized to disassemble and assemble his rifle to the extent called field stripping (figs. 3-1 and 3-2). The amount of disassembly the operator is allowed to perform without supervision is adequate for normal maintenance.

KEY to fig 3-1:

1. Bolt
2. Barrel and receiver group
3. Operating rod

3A. Connector group

4. Stock and butt plate assembly
5. Firing mechanism
6. Sling
7. Magazine

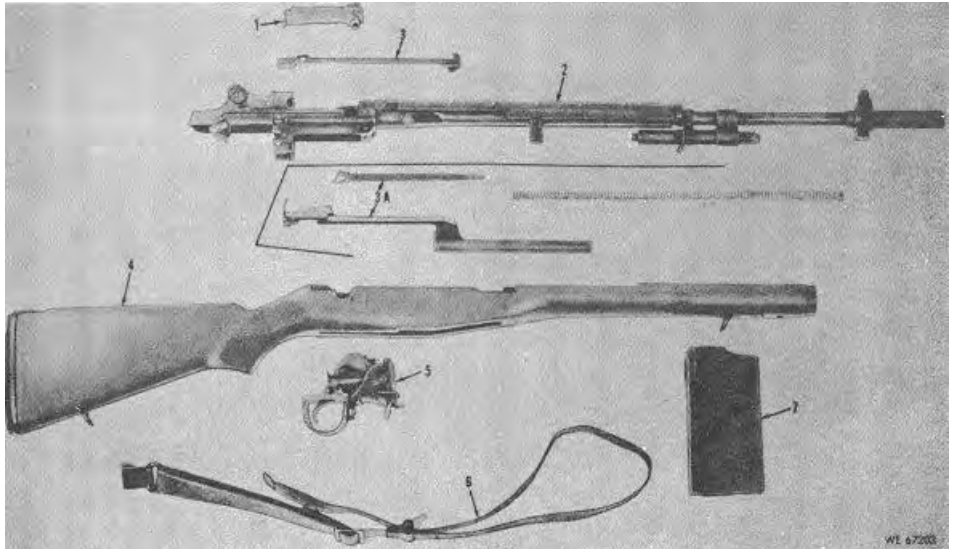


Figure 3-1. Weapon field stripped (M14).

KEY to fig 3-2:

1. Sling
2. Magazine
3. Firing mechanism
4. Stock and butt plate assembly
5. Hand guard assembly
6. Operating rod and connector group
7. Bolt assembly
8. Stabilizer assembly
9. Barrel and receiver group

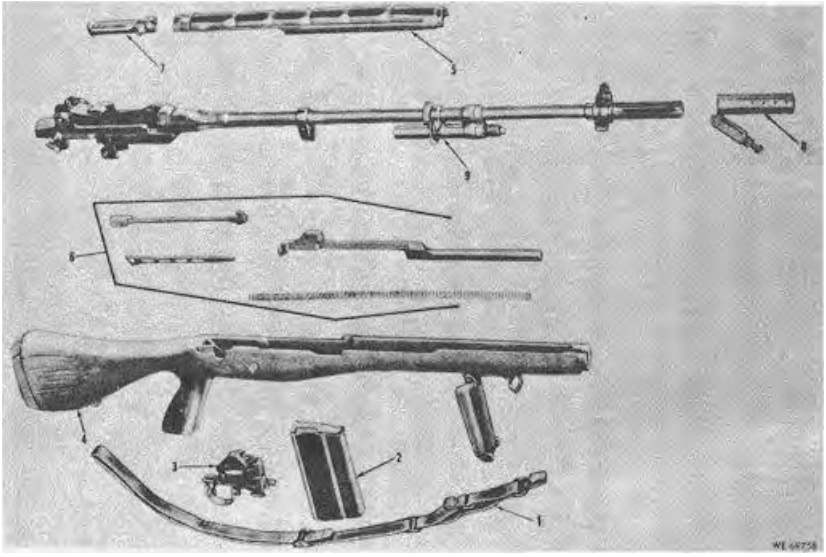


Figure 3-2. Weapon field stripped (M14A1).

Section VI. MAINTENANCE OF MAGAZINE

3-9. General

This section contains operator maintenance instructions for the magazine as allocated in the MAC.

3-10. Disassembly/Assembly

Refer to figures 3-3 and B-1 for assembly/disassembly instructions.

NOTE

The order of disassembly is in accordance with illustration item number sequence. Assembly is in the reverse order of disassembly.

3-11. Cleaning, Inspection and Repair

a. Cleaning. Remove dirt, grit or other foreign matter with a clean wiping cloth.

b. Inspection. Inspect magazine for dents, dirt, rust, and spring for weakness.

c. Repair. Replace damaged magazine.

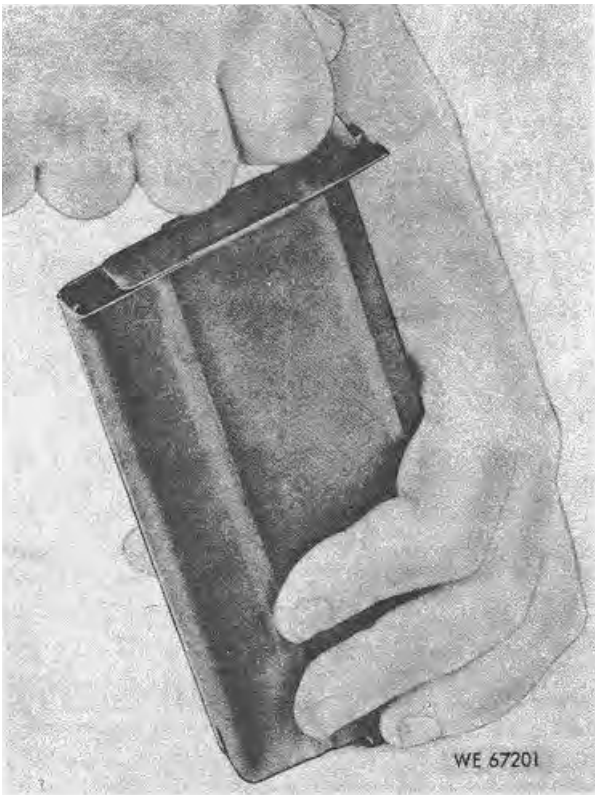


Figure 3-3. Disassembly/assembly of magazine.

CHAPTER 4

MAINTENANCE OF MATERIEL USED IN CONJUNCTION WITH MAJOR ITEMS

4-1. General

a. The MAC should be referred to by the operator prior to performing maintenance functions on the 7.62-MM Rifles, the accessories, attachments, or auxiliary equipment used therewith.

b. Refer to TM 9-1005-223-20 for organizational maintenance instructions.

c. Coordinate with organizational maintenance personnel for information regarding maintenance allocation.

4-2. Maintenance Allocation Chart

Refer to TM 9-1005-223-20.

CHAPTER 5

AMMUNITION

5-1. General

Ammunition (figs. 5-1 and 5-2) for 7.62-mm weapons was developed with the intended purpose of replacing the caliber .30 carbine and caliber .30 weapon-ammunition-system with a family of cartridges adopted and standardized for interchangeable use by the North Atlantic Treaty Organization (NATO) countries. Ammunition intended for this standardized (NATO) use is identified by means of the symbol (-) stamped on the head of each service type cartridge. Ammunition lots qualified for interchangeable use in the M14, M14A1 Rifles; the M60 Machine Gun, as well as rifles and machine guns adopted by other NATO countries, shall be identified by means of a clover leaf symbol stamped on outer shipping containers. Ammunition of foreign manufacture bearing both symbols is equally usable in U.S. Weapons.

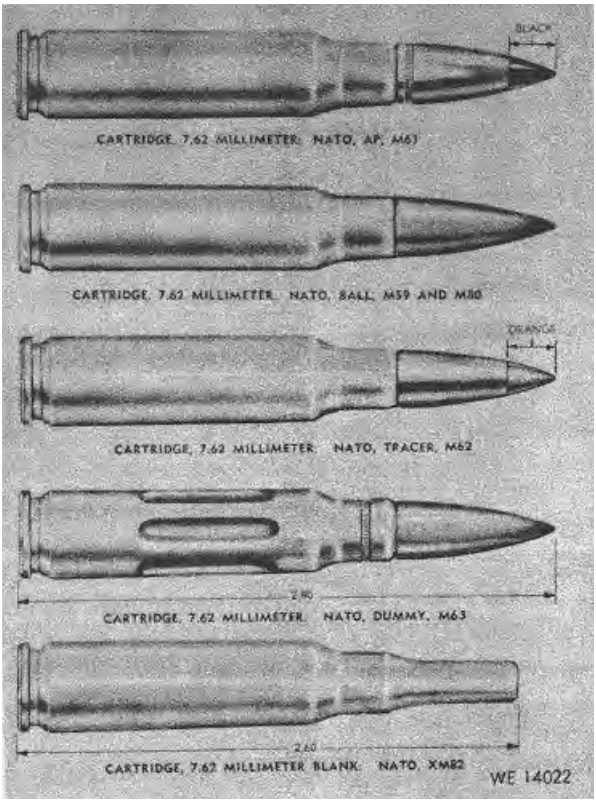


Figure 5-1. 7.62-MM (NATO) cartridges.

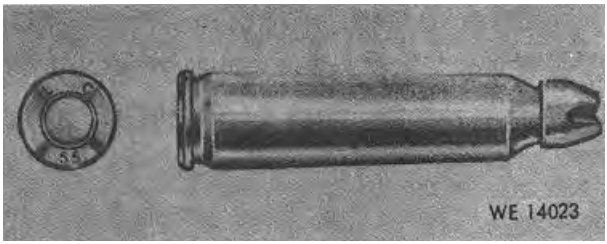


Figure 5-2. 7.62-MM grenade cartridge.

5-2. Classification

7.62-mm ammunition is classified as armor-piercing, ball, blank, dummy, tracer and grenade cartridges. Refer to TM 9-1305-200 for purpose of each cartridge.

5-3. Identification

Refer to paragraph 5-1 and TM 9-1305-200.

5-4. Care, Handling, Preservation

a. Ammunition for the 7.62-mm rifles (small arms); as compared with other types of ammunition, is not dangerous to handle.

b. Ammunition is packed to withstand conditions ordinarily encountered in the field. Care must be exercised to keep packings from becoming broken or

otherwise damaged. All broken packings must be repaired immediately and all markings must be transferred to the new parts. Ammunition may be packed in metal-lined wooden boxes or metal boxes. Damaged boxes containing metal liners should be air tested and sealed, if equipment for this work is available.

c. When it is necessary to leave ammunition in the open, raise it on dunnage at least six inches from the ground and cover it with tarpaulins. Whenever possible, dunnage will be used between each row to permit full air circulation. Suitable trenches will be dug to prevent water from running under the stack. Tarpaulins will be arranged to permit free circulation of air through the stack and will be kept at least six inches from the top, ends, and sides of the stack.

d. Since ammunition and explosives are adversely affected by moisture and high temperature, due consideration will be given to (1) and (2) below.

WARNING

Make sure to store ammunition under protective cover and away from excess heat and extreme temperatures.

(1) Keep boxes closed until ammunition is to be used. Ammunition removed from airtight con-

tainers, particularly in damp climates is apt to corrode and become unserviceable.

(2) Protect ammunition from high temperature and prolonged exposure to direct rays of the sun. Such exposure is likely to affect the ballistic performance of the cartridges. The combination of high temperature and humid atmosphere is particularly detrimental to stability of propellant and to tracer mixture in tracer ammunition.

e. Do not attempt to disassemble a cartridge or any of its components.

f. The use of oil or grease on cartridges is prohibited.

g. Ammunition will be protected from sand, mud, moisture, frost, snow, ice, grease, and other foreign matter. Wipe off wet or dirty ammunition at once. If verdigris or light corrosion forms on cartridges, it will be wiped off with a clean dry cloth. However, brass components of cartridges are NOT to be polished.

h. Brass cartridge cases are easily dented and must be protected from hard knocks or blows.

i. In storing ammunition, segregate by caliber, type, and ammunition lot number. See TM 9-1300-206.

j. Ammunition remaining in a box from which

part of the contents has been removed will be protected against unauthorized handling and use by firmly fastening the box cover in place.

5-5. Authorized Rounds

Ammunition authorized for use in the 7.62-MM Rifles M14 and M14A1 is listed in table 5-1. Standard nomenclature used in the listing completely identifies each item, except for ammunition lot number. Only authorized cartridges will be used in these weapons. Unauthorized assembly and use of cartridges are extremely dangerous. To avoid substitution of unauthorized rounds in the field, ammunition is issued in the necessary quantities by type, to meet tactical requirements.

5-6. Preparation for Firing

After removal from packing materials, cartridges for these weapons are ready for firing. Cartridges prepared for firing but not fired, will be returned to their original packings or packed in suitable packing boxes. Such cartridges will be used first in subsequent firings, so as to reduce stocks of opened containers. Packing containers will be appropriately marked with the nomenclature of the cartridges, the quality of cartridges therein and the appropriate ammunition lot number.

Table 5-1. Authorized Rounds

Standard nomenclature	Complete round		Projectile	
	Length (in.)	**Weight (grains) (approx.)**	**Length (in.)**	**Weight (grains) (approx)**
CARTRIDGE, 7.62-MILLIMETER: NATO, AP, M61	2.80	387	1.28	150
CARTRIDGE, 7.62-MILLIMETER: NATO, ball, M59	2.80	388	1.28	150.5
CARTRIDGE, 7.62-MILLIMETER: NATO, ball, M80	2.80	388	1.40 (approx)	149
CARTRIDGE, 7.62-MILLIMETER, BLANK: NATO, XM82	2.61	225		
CARTRIDGE, 7.62-MILLIMETER, DUMMY: NATO, M63	2.80	253	1.35	68
CARTRIDGE, 7.62-MILLIMETER: NATO, tracer, M62	2.80	382	1.35	141
CARTRIDGE, GRENADE: rifle, 7.62-millimeter, NATO, M64	2.0	231		

5-7. Precautions in Firing

The precautions listed below will be closely observed in order to prevent injury to personnel or damage to materiel.

a. Cartridges, especially those to be loaded into the magazine, will be free of sand, mud, moisture, frost, snow, ice, grease, or other foreign matter.

b. Corroded ammunition will not be fired.

c. Brass cartridge cases are easily dented and must be protected from hard knocks and blows. Dented cartridge cases may cause incomplete obturation, jamming in the chamber, and difficulty in extraction.

d. Cartridges having loose bullets, or otherwise damaged, will not be used.

e. Blank cartridges will be visually inspected before firing for evidence of any foreign matter within the cartridge case mouth. Such foreign matter would be expelled as a projectile in firing. For semiautomatic or automatic firing, weapons must be equipped with firing attachments and breech shields.

WARNING

Under no circumstances will a blank cartridge be altered by inclusion of additional propellant in an attempt to obtain automatic action without the blank firing attachment (BFA). Additional propellant will not increase gas port pressure enough to operate the rifle automatically, but may increase chamber pressure enough to cause extensive rifle damage and possible injury to personnel.

f. Blank cartridges will not be fired at a representative enemy at distances less than 20 feet, as the disk may fail to break up. The intact disk and/or unburned propellant grains may cause personnel injury within this distance.

g. Ammunition will not be fired unless it has been identified by an ammunition lot number and its grade.

h. Do not fire cartridges overheated by exposure to the direct rays of the sun or other sources of high temperature. In firing such cartridges, hazardous chamber pressures may develop.

i. A cartridge in the chamber of a hot weapon, when firing is interrupted, should be removed promptly to prevent a cook-off.

j. Misfires, hangfires, and cook-offs will be handled as indicated in FM 23-8 and AR 385-63.

k. Only the grenade cartridge M64 may be used to launch rifle grenades or adapted hand grenades.

WARNING

Do not use a bullet type cartridge to project a grenade or ground signal from a launcher under any circumstances.

l. Refer to FM 23-30 and AR 385-63 for more detailed information concerning safety precautions to be observed in firing grenades.

APPENDIX A

REFERENCES

A-1. Publication Indexes

Consult each new issue of the following for the latest changes or revisions to publications listed in this appendix or for new publications on the material covered in this manual.

Military Publications:

Index of Administrative Publications	DA Pam 310-1
Index of Army Motion Pictures and Related Audio-Visual Aids	DA Pam 108-1
Index of Blank Forms	DA Pam 310-2
Index of Doctrinal, Training, and Organizational Publications	DA Pam 310-3
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders	DA Pam 310-4

Index of Supply Catalogs and Supply Manuals (excluding Types 7, 8, and 9)	DA Pam 310-6

A-2. Identification List

The following identification listings pertain to this materiel:

Ammunition and Explosives	SC 1340/98-IL
Ammunition and Explosives (Class 1305 Ammunition through 30-mm)	SC 1305/30-IL

A-3. Forms

The following forms pertain to this materiel:

DA Form 9-79, Parts Requisition

DA Form 1296, Stock Accounting Record

DA Form 2028, Recommended Changes to Publications

DA Form 2407, Maintenance Request

DD Form 6, Report of Packaging and Handling Deficiencies

A-4. Other Publications

a. Ammunition.

Ammunition, General	TM 9-1300-200

Care, Handling, Preservation and Destruction of Ammunition	TM 9-1300-206
Grenade and Pyrotechnic Signals	FM 23-30
Identification of Inert Ammunition and Ammunition Components	AR 385-65
Small Arms Ammunition	TM 9-1305-200

b. General.

Logistics (General):

Malfunctions Involving Ammunition and Explosives Reports Control Symbol AMC-132	AR 75-1
Logistics Management: Army Maintenance Management Systems (TAMMS)	TM 38-750

Maintenance of Supplies and Equipment:

Maintenance Support Planning	AR 750-6
Organization, Policies, and Responsibilities for Maintenance Operations	AR 750-5
Military Symbols	FM 21-30

Military Terms, Abbreviations, and Symbols:	
Authorized Abbreviations and Brevity Codes	AR 310-50
Dictionary of United States Army Terms	AR 310-25
Organizational Maintenance Manual Including Repair Parts and Special Tools Lists: Rifles 7.62-MM: M14, M14A1 and Bipod, Rifle: M2	TM 9-1005-223-20
Safety:	
Accident Reporting and Records	AR 385-40
Regulations for Firing Ammunition for Training, Target Practice, and Combat	AR 385-63
Special Operations:	
Basic Cold Weather Manual	FM 31-70
Rifle Marksmanship	FM 23-71
Techniques of Military Instructions	FM 21-6
U.S. Rifle, 7.62-MM, M14, and M14A1	FM 23-8

c. Packaging and Shipping of Materiel.

Issue of Supplies and Equipment: Requisitioning, Receipt, and Issue System	AR 725-50

d. Property Accountability.

Material Management for Using Support Units and Installations	AR 710-2

APPENDIX B

BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists basic issue items, items troop installed or authorized list required by the crew/ operator for operation of the Rifles.

B-2. General

This Basic Issue Items, Items Troop Installed or Authorized List is as follows:

a. Basic Issue Items List--Section II. A list in alphabetical sequence, of items which are furnished with, and which must be turned in with the end item.

b. Items Troop Installed or Authorized List. Not applicable.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings.

a. Source, Maintenance, and Recoverability Codes (SMR).

(1) *Source Code*. Indicate the source for the listed items. Source codes are:

Code	Explanation
P	Repair parts, special tools and test equipment supplied from the GSA/DSA, or Army Supply System, and authorized for use at indicated maintenance categories.
P2	Repair parts, special tools and test equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P9	Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring and diagnostic equipment, which are stocked and supplied by the Army COMSEC Logistic System and which are not subject to the provisions of AR 380-41.
P10	Assigned to items which are NSA design controlled: special tools, test, measuring and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR 380-41, and which are stocked and supplied by the Army COMSEC Logistic System.

Code	Explanation
M	Repair parts, special tools and test equipment which are not procured or stocked as such in the supply system but are to be manufactured at indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies that are not procured or stocked because the failure rate is normally below that of the applicable end item of component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by the next higher assembly or component.
X2	Repair parts, special tools, and test equipment which are not stocked and have no foreseen mortality. The indicated maintenance category requiring such repair parts will attempt to obtain the parts through cannibalization or salvage. The item may be requisitioned, with exception data, from the end item manager for immediate use.
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DS and GS level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded X1 and aircraft support items as restricted by AR 700-42.

(2) *Maintenance Code.* Indicates the lowest category of maintenance authorized to install the repair part and/or use the special tool or test equipment for each application. Capabilities of higher maintenance categories are considered equal or better. Maintenance codes are:

Code	Explanation
C	Operator/crew

(3) *Recoverability Code.* Indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are nonrecoverable. Recoverability codes are:

Code	Explanation
R	Repair Parts (assemblies and components), special tools and test equipment which are considered economically reparable at direct and general support maintenance levels. When the item is no longer economically reparable, it is normally disposed of at the GS level. When supply considerations dictate, some of these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710-1. When so listed, they will be replaced by supply on an exchange basis.

Code	Explanation
S	Repair parts, special tools and test equipment, and assemblies which are economically reparable at DS and GS activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High dollar value recoverable repair parts, special tools and test equipment which are subject to special handling and are issued on an exchange basis. Such items will be repaired or overhauled at depot maintenance activities only. No repair may be accomplished at lower levels.
U	Repair parts, special tools and test equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value or reusable casings or castings.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency, etc., and is identified in SB 708-42. Items that are included in kits and sets are listed below the

name of the kit or set with quantity of each item in the kit or set indicated in front of the item name.

d. Unit of Measure (U/M). Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in, pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e. Quantity Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the item furnished with the equipment.

f. Quantity Authorized (Items Troop Installed or Authorized Only). Indicates the quantity of the item authorized to be used with the equipment.

g. Illustration. This column is divided as follows:

(1) *Figure Number*. Indicates the figure number of the illustration on which the item is shown.

(2) *Item Number*. Indicates the callout number used to reference the item on the illustration.

B-4. Special Information

Action change codes indicated in the left-hand margin of the listing page denote the following:

N--Indicates an added item.
C--Indicates a change in data.
R--Indicates a change in FSN only.

B-5. Abbreviations

Not applicable.

Section II. BASIC ISSUE ITEMS LIST

(1) Source main and Recov code			(2)	(3) Description		(4)	(5)	(6)	(7) Illustration	
(a) Source	(b) Maint	(c) Recov	Federal Stock No.	Reference Number & Mfr Code	Usable on Code	Unit of Meas	Qty Inc in Unit	Qty Furn With Equip	(a) Fig No.	(b) Item No.
				REPAIR PARTS FOR: RIFLE 7.62-MM, M14 AND M14A1						
P	C		1005-628-9048	MAGAZINE, CARTRIDGE: 20 CARTRIDGE CAPACITY 7790183 (19205)		EA	1	1	B-1	
				TOOLS AND EQUIPMENT						
P	C		1005-556-4174	BRUSH, CLEANING, SMALL ARMS: BORE 5564174 (19205)		EA		1	B-2	1
P	C		1005-690-8441	BRUSH, CLEANING, SMALL ARMS: CHAMBER 7790463 (19205)		EA		1	B-2	2
P	C		1005-791-3377	CASE, LUBRICANT: 7790995 (19205)		EA		1	B-2	3

P	C	1005-650-4510	CASE, SMALL ARMS CLEANING ROD: 7267754 (19205)	EA		1	B-2	4
P	C	4933-768-0211	COMBINATION TOOL: 7790769 (19205)	EA		1	B-2	5
P	C	1005-726-6109	ROD SECTION, CLEANING, SMALL ARMS: 7266109 (19205)	EA		4	B-2	6
P	C	1005-654-4058	SLING, SMALL ARMS: M1, WEBBING 6544058 (19205)	EA		1	B-2	7
P	C	1005-726-6110	SWAB HOLDER SECTION, SMALL ARMS CLEANING ROD: 7266110 (19205)	EA		1	B-2	8

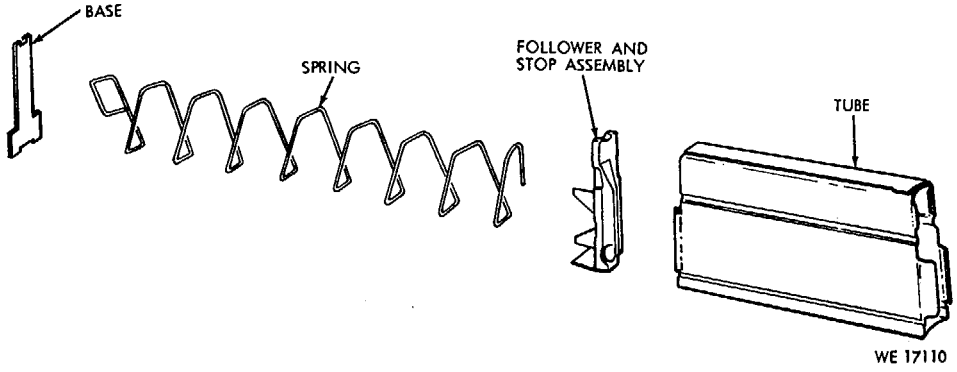


Figure B-1. Magazine-exploded view.

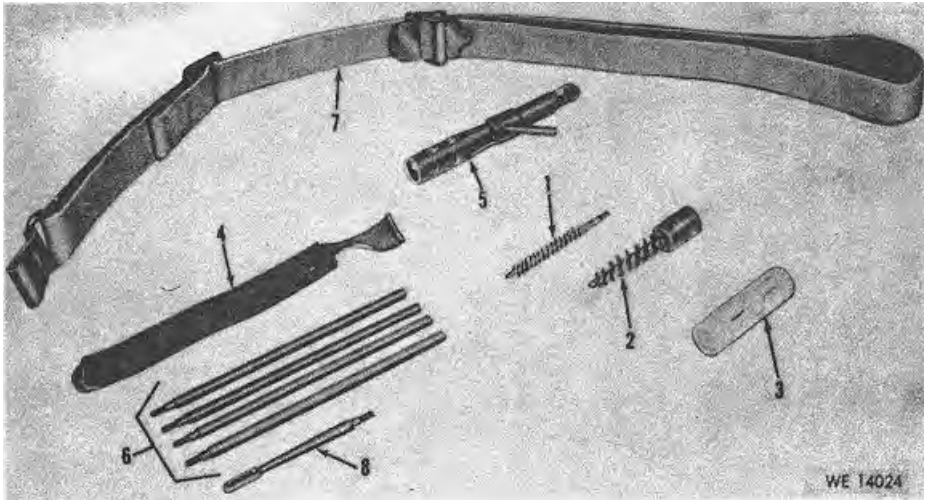


Figure B-2. Tools and equipment.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

VERNE L.. BOWERS,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-40, (qty rqr block No. 139) Operator and Crew maintenance requirements for 7.62-MM Rifles, M14, and M14A1.

☆U.S. GOVERNMENT PRINTING OFFICE: 1996-406-648/52269

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

PIN: 026378-000