ARMY TM 9-1010-221-10
AIR FORCE TO 11W3-9-4-1
MARINE CORPS TM 07700B-10
NAVY SW370-AE-OPI-010

TECHNICAL MANUAL

OPERATOR'S MANUAL
GRENADE LAUNCHER, 40-MM: M203
(1010-00-179-6447)
GRENADE LAUNCHER, 40-MM: M203A1
(1010-01-434-9028)

HEADQUARTERS, DEPARTMENTS OF THE ARMY, AIR FORCE, MARINE CORPS, AND NAVY

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

1 AUGUST 2001

WARNING SUMMARY

Do not point muzzle in direction of personnel when loading, clearing, zeroing, or firing grenade launcher as this 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.

WARNING SUMMARY (Cont)

The grenade launcher could fire without squeezing the trigger if the sear does not function properly.

When firing High Explosive (HE) grenades at targets within 165 meters (541 ft) (minimum safe), be in a protected position. Do not engage targets within 165 meter (541 ft) radius of unprotected friendly troops. The 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 materiel.

WARNING SUMMARY (Cont)

Do not use cartridges other than those authorized for the 40-mm grenade launcher M203. Use of unauthorized high explosive 40-mm cartridges will result in death or injury. Use only authorized rounds.

The danger radius of practice grenades is 20 meters (66 ft).

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.

The M407A1 practice round fuze arms between 14 to 27 meters (46 to 89 ft).

Do not fire ammunition not made for use in the M203 grenade launcher. Doing so will result in injury to, or death of, personnel.

Hearing protection is required for the user and all adjacent personnel on firing range, when using M585 cartridge.

Non-lethal rounds for the 40-mm grenade launcher M203/M203A1 have the potential to cause lethal injuries if operator instructions are not precisely followed. Operator instructions for non-lethal rounds are over-packed in the appropriate ammunition containers.

Before inspection, be sure weapon is NOT loaded.

FIRST AID

For additional first aid data, see FM 21-11.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: The portion of text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages/work packages are:

Original..... 0 ..... 1 August 2001

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 36 AND TOTAL NUMBER OF WORK PACKAGES IS 38 CONSISTING OF THE FOLLOWING:

Page/WP No.	*Change No.	Page/WP No.	*Change No.
Title	0	xii blank	0
a - d	0	WP 0001 00 - WP 0038 00	0
A - B	0	Index 1 - Index 13	0
i - xi	0	Index 14 blank	0

*Zero in this column indicates an original page or work package.

TM 9-1010-221-10

HEADQUARTERS, DEPARTMENTS OF THE ARMY,
AIR FORCE, MARINE CORPS, AND NAVY
WASHINGTON, D.C., *1 August 2001*

TECHNICAL MANUAL

OPERATOR'S MANUAL
GRENADE LAUNCHER, 40-MM: M203
(1010-00-179-6447)
GRENADE LAUNCHER, 40-MM: M203A1
(1010-01-434-9028)

This manual supersedes TM 9-1010-221-10, dated 17 December 1984, including all changes.

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or email your letter or DA Form 2028 direct to: AMSTA-LC-CI / TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

TABLE OF CONTENTS

HOW TO USE THIS MANUAL

The safest, easiest, and best way to operate the M203 40-mm Grenade Launcher is to use this manual. Learning to use this TM is as easy as reading through this section. Knowing what is in this manual and how to use it will save you time and work and will help you to avoid exposing yourself to unnecessary hazards while performing your job.

So where do you start?

Right here, if this is the first time you are using this TM. Be sure to completely read this section on how to use this manual first. There's a lot of information here that you need to know.

Organization

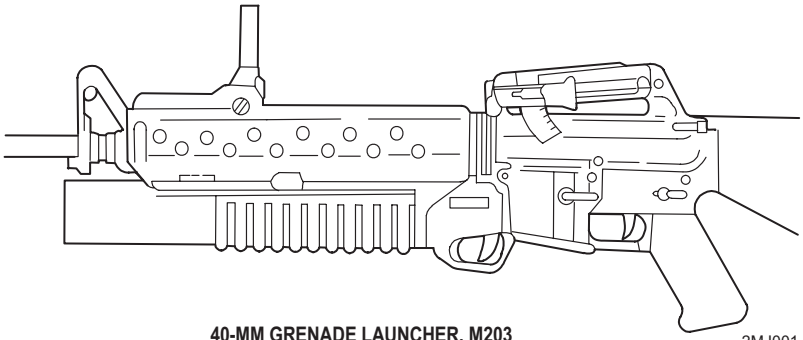
This manual covers the operation of the M203 and M203A1 40-mm Grenade Launchers. The manual itself is divided into five chapters. Chapters are divided into Work Packages. The five chapters, and what they contain, are found in the Table of Contents in the front of this manual. For example, to learn about operating the grenade launcher, you would look in the table of contents and discover that Chapter 2 provides all pertinent information about the operation of the grenade launcher. Since Chapter 2 covers a great deal of information, you will have to scan the chapter to find the specific information you will need.

Organization (Cont)

In the final chapter of this manual, you will find supporting information. Each work package provides specific information that will assist you in performing the various operational tasks. The work packages provide such information as additional references (i.e., other TMs or FMs), as in WP 0035 00, and Basic Issue Items (BII), as in WP 0036 00. Others provide information unique to the needs of the grenade launcher. Become familiar with all supporting information before beginning any operational or maintenance task.

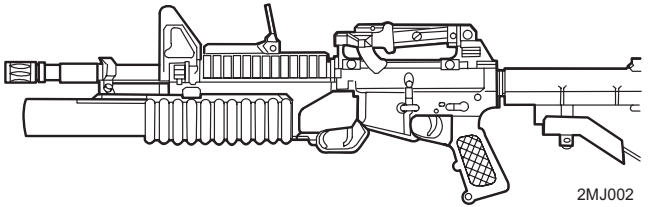
Am I ready to use this TM?

If you've taken the time necessary to read this section, and are sure of the location and arrangement of the different sections of this TM, you are ready to begin. Remember, this TM has been arranged with you, the user, in mind. Your safety and ability to perform the operational and maintenance tasks in the most efficient manner hinge on your ability to perform and understand the information contained in this manual. If you fully understand the arrangement and purpose of this TM, and have taken the time to read through this section, you will have no trouble operating and maintaining the grenade launcher in the manner for which it was designed.

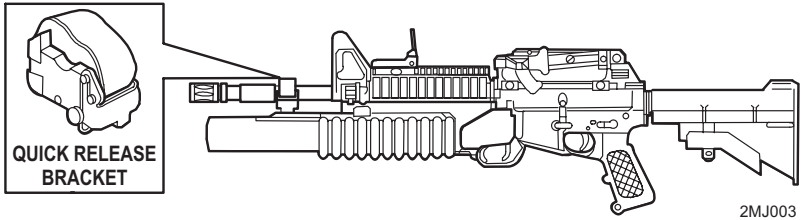


40-MM GRENADE LAUNCHER, M203

2MJ001



40-MM GRENADE LAUNCHER, M203A1



40-MM GRENADE LAUNCHER, M203, WITH ADAPTER RAIL AND QUICK RELEASE BRACKET

SCOPE

Type of Manual. Operator's manual, including operator maintenance.

Model Number and Equipment Name. M203 and M203A1 Grenade Launchers.

Purpose of Equipment. The grenade launcher M203 was designed to be used with the M16 series rifles, can be field-stripped in a hurry without special tools, and fires a 40-mm grenade.

The grenade launcher M203A1 was designed to be used with the M4 series carbines. It is functionally identical to the M203.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, Functional Users Manual for the Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your grenade launcher needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to the address specified in DA PAM 738-750, Functional Users Manual for the Army Maintenance Management System (TAMMS), or as specified by the acquiring activity. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using SF 368, Product Quality Deficiency Report. Use of key words such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 738-750, Functional Users Manual for the Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

For procedures to destroy this equipment to prevent its use by the enemy, refer to TM 750-244-7.

PREPARATION FOR STORAGE OR SHIPMENT

The operator has no responsibility for preparation for storage or shipment.

END OF WORK PACKAGE

CHAPTER 1

DESCRIPTION AND THEORY OF OPERATION

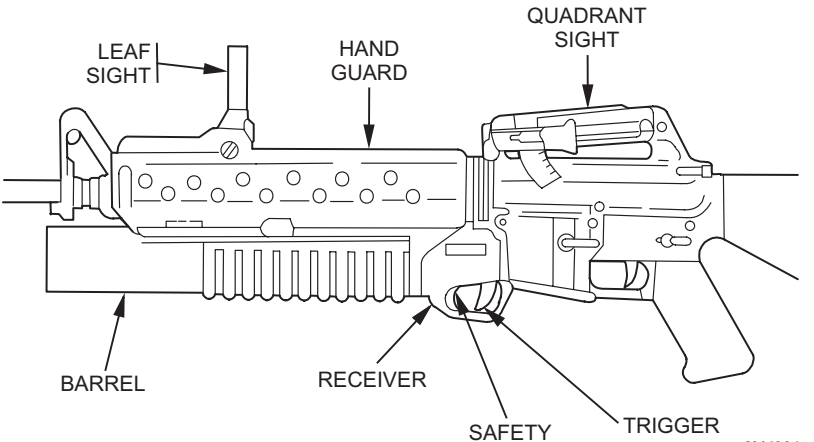
EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The grenade launcher M203 is a single shot weapon designed for use with the M16 series rifles and fires a 40-mm grenade. It has a leaf sight and a quadrant sight. The grenade launcher M203A1 is a single shot weapon designed for use with the M4 series carbines.

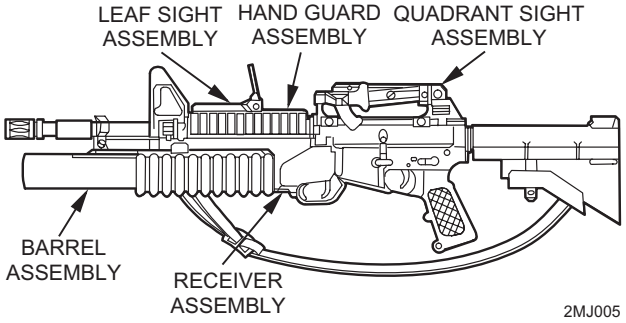
The quick release bracket is used on M4 and M4A1 carbines equipped with the M4 Adapter Rail System and on M16A4 rifles equipped with the M5 Adapter Rail System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

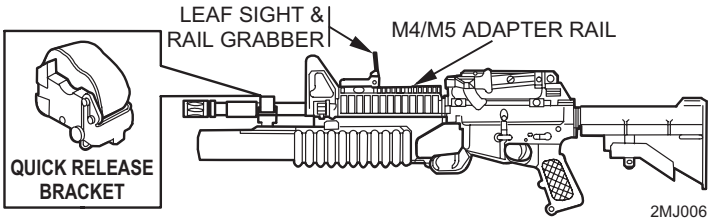
The grenade launcher is composed of the following: barrel, receiver, hand guard, leaf sight, and quadrant sight.


LEAF SIGHT
HAND GUARD
QUADRANT SIGHT
BARREL
RECEIVER
SAFETY
TRIGGER
2MJ004

M203


LEAF SIGHT ASSEMBLY
HAND GUARD ASSEMBLY
QUADRANT SIGHT ASSEMBLY
BARREL ASSEMBLY
RECEIVER ASSEMBLY
2MJ005

M203A1



M203, WITH ADAPTER RAIL AND QUICK RELEASE BRACKET

EQUIPMENT DATA

Weight:		Maximum effective range:	
Launcher	1.35 kg (3 lb)	Area Target	350 meters (1,155 ft)
Rifle M16A1	2.93 kg (6.5 lb)	Point Target	150 meters (495 ft)
Total	4.28 kg (9.5 lb)		

Maximum range:	Minimum safe range:	
400 meters (1,320 ft)	Combat situation	31 meters (102 ft)
	Training situation	165 meters (541 ft)

WARNING

When firing High Explosive (HE) grenades at targets within 130 meters (427 ft), be in a protected position. When training, do not fire at targets within 165 meters (541 ft). When in combat, do not fire at targets closer than 31 meters (102 ft).

END OF WORK PACKAGE

1. Open the launcher barrel, place the weapon on safe, insert a round, and close the launcher barrel.

2. Place the launcher to shoulder. Keep muzzle pointed at target and move the safety from the safe to the fire position.

3. Align the front and rear sight with the target and squeeze the trigger.

4. Squeezing the trigger releases the firing pin and allows it to impact the primer on the round.

5. The primer ignites the propellant in the round.

6. Gas from the burning propellant pushes the projectile along the barrel of the launcher.

7. The rifling in the barrel causes the projectile to rotate, which provides stability during flight to the target.

END OF WORK PACKAGE

CHAPTER 2

OPERATOR INSTRUCTIONS

WARNING

The 50 meter (165 ft) mark on the leaf sight blade is marked in red to emphasize that this range is not to be used in zeroing procedures.

Leaf Sight: Aligns with front sight post of the M16A1 rifle.

Windage Adjustment Screw: Turns clockwise to move leaf sight to left for wind from the left; turns counterclockwise to adjust for wind from the right.

Elevation Adjustment Screw: Loosens and allows operator to raise leaf sight blade to increase range, or to lower leaf sight blade to decrease range.

END OF WORK PACKAGE

Quadrant Sight: Attaches to rifle handle/sight. To use, unfold front sight post and rear aperture.

Latch: Release of latch allows range quadrant adjustment.

Front Sight Post: Turns right for less elevation and left for more elevation. It compensates for headwind or rear wind.

Retainer: Depression of retainer allows rear aperture to slide in or out.

Rear Aperture: Compensates for wind from the right or the left.

END OF WORK PACKAGE

Barrel Latch: Locks barrel in the closed position. Press latch and slide barrel forward to load the weapon.

END OF WORK PACKAGE

Trigger: Squeezing the trigger fires the launcher.

Safety: The safety has two positions — safe and fire. Keep safety on safe position until ready to fire. Safety is used to safe the launcher.

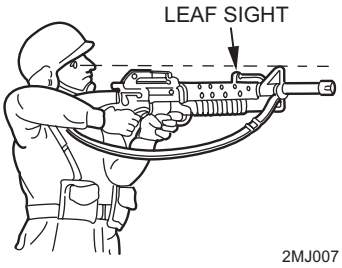
END OF WORK PACKAGE

NOTE

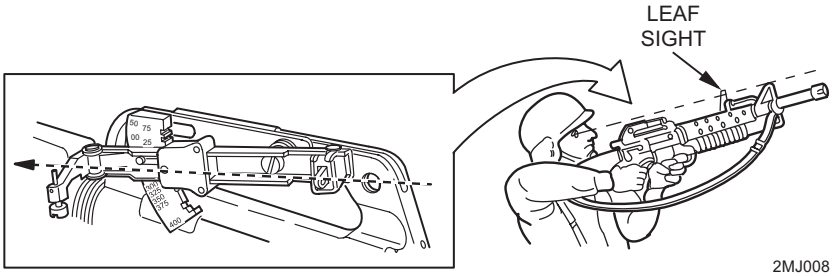
Perform the Before Operation (B) Preventive Maintenance Checks and Services (PMCS). Refer to WP 0021 00.

END OF WORK PACKAGE

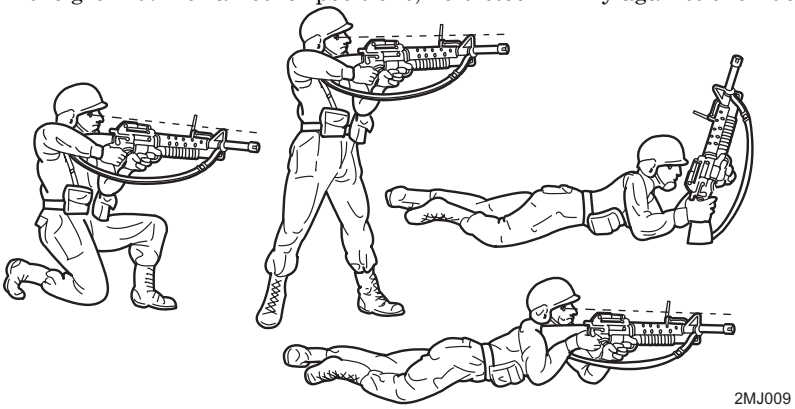
1. For short range targets (31 meters (102 ft) or less), place leaf sight down and use rifle sights. Estimate distance to target and be sure to aim at the foot of the target (M576 round).



2. For targets from 50 to 250 meters (165 to 820 ft), raise leaf sight and use with rifle front sight. For targets from 50 to 400 meters (165 to 1320 ft), use front and rear sight of the quadrant sight only.



3. Launcher may be fired from standing, kneeling, or prone position. When firing long range from prone position, place stock of weapon on the ground. For all other positions, hold stock firmly against shoulder.



2MJ009

4. LEAF SIGHT

Range

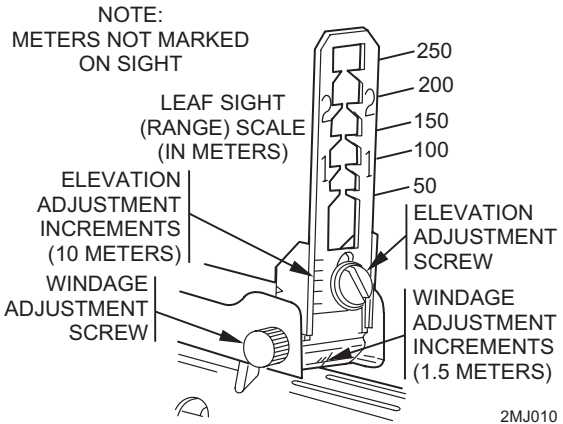
- Leaf sight scale marked in 50 meter (165 ft) increments for targets from 50 to 250 meters (165 to 820 ft).

Headwind and Rear Wind

- Loosen the elevation adjustment screw to move the leaf sight up to increase range for headwind. Lower it to decrease range for rear wind.

- Use the rim of a used 40-mm cartridge to turn the elevation adjustment screw.

- 1 increment = 10 meters (33 ft) at 200 meter (660 ft) range.


NOTE:
METERS NOT MARKED
ON SIGHT
LEAF SIGHT
(RANGE) SCALE
(IN METERS)
ELEVATION
ADJUSTMENT
INCREMENTS
(10 METERS)
WINDAGE
ADJUSTMENT
SCREW
250
200
150
100
50
ELEVATION
ADJUSTMENT
SCREW
WINDAGE
ADJUSTMENT
INCREMENTS
(1.5 METERS)
2MJ010

Left Wind and Right Wind

- Turn windage adjustment screw clockwise to adjust for wind from the left. Turn counterclockwise to adjust for wind from the right.

- 1 increment = 1.5 meters (5 ft) at 200 meter (660 ft) range.

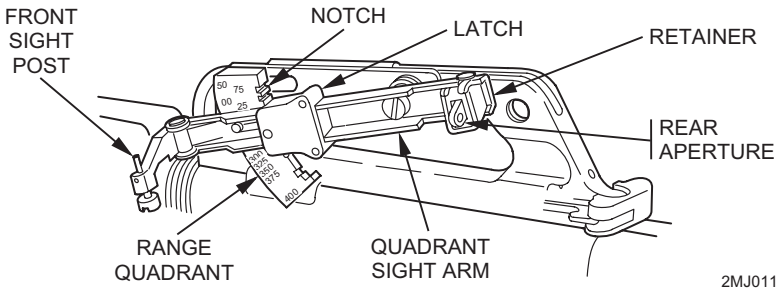
5. QUADRANT SIGHT

Range

- Range quadrant is marked in 25 meter (83 ft) increments for targets from 50 to 400 meters (165 to 1320 ft).

- Pull latch toward the user to release quadrant sight arm. Select elevation.

- Elevation adjustment: 1 notch = 5 meters (17 ft) at 200 meter (660 ft) range.



Headwind and Rear Wind

- Turn front sight post to increase range for headwind.
- Turn front post sight right to decrease range for rear wind.

Left Wind and Right Wind

- Depress retainer and slide rear aperture in to adjust for wind from the right.

- Slide rear aperture out to adjust for wind from the left.

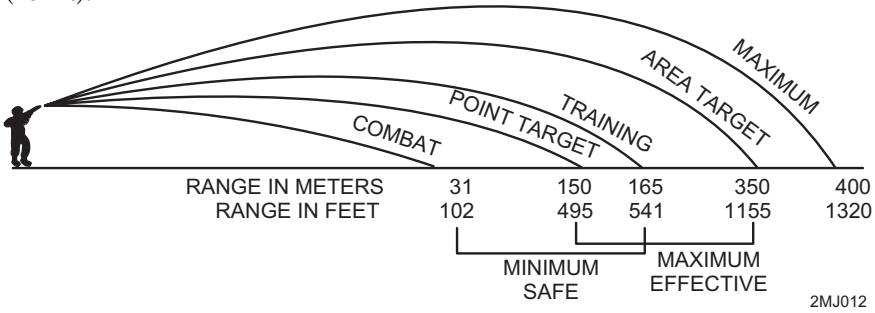
- Vertical line marks center. 1 notch = 1.5 meters (5 ft) at 200 meter (660 ft) range.

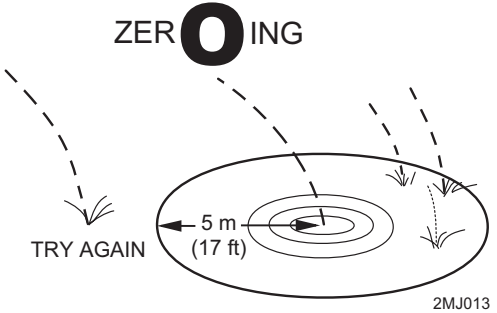
6. If a first round hit is not made, determine where grenade landed in relation to target (sensing) and adjust to bring next round on target.

END OF WORK PACKAGE

WARNING

When firing High Explosive (HE) grenades at targets within 165 meters (541 ft) (minimum safe), be in a protected position. When training (minimum safe), do not fire at targets within 165 meters (541 ft). When in combat, do not fire at targets closer than 31 meters (102 ft).





WARNING

Do not zero in under 100 meters (330 ft).

NOTE

Hitting the target depends upon the user's ability to determine range.

1. Select a target at 200 meters (660 ft) and fire a round. If the round does not fall within 5 meters (17 ft) of target, zero the weapon as follows.

   a. Adjust sight for more or less elevation.

   b. Adjust windage for each firing.

   c. After each round is fired, adjust until three consecutive rounds land within 5 meters (17 ft) of aiming point.

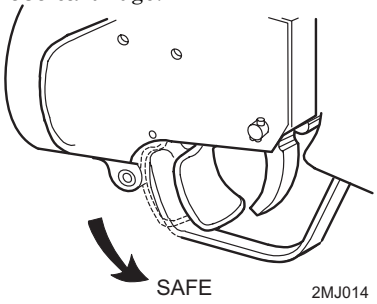
END OF WORK PACKAGE

WARNING

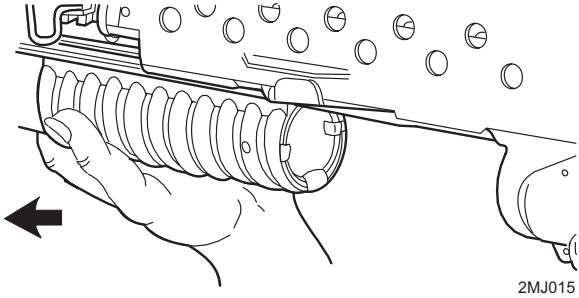
Keep muzzle down range and clear of all troops.

Hearing protection is required for the user and all adjacent personnel on firing range, when using M585 cartridge.

1. Keep safety in safe position until ready to fire.



2. Press latch and slide barrel forward.



WARNING

Do not fire pyrotechnic ammunition made for the AN-M8 Pyrotechnic Pistol in the Grenade Launcher M203. It is very dangerous.

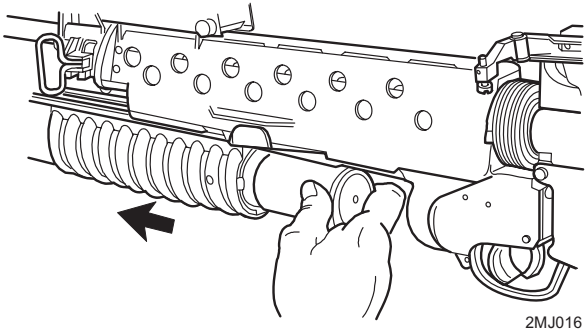
To avoid personnel injury or death, make sure the right ammunition is being loaded. Never load aircraft ammunition M384 (HE) or M385 (practice) ammunition.

CAUTION

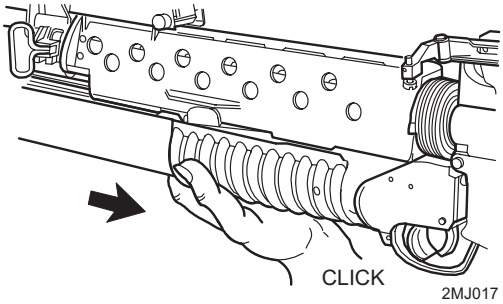
Before loading, make sure bore and chamber are clean and dry.

Excessive dry firing of this weapon may result in damage to the breech insert or receiver. Only dry fire the grenade launcher to perform checks and services listed in the technical manuals or to remove spring tension prior to storing the weapon in an arms rack.

3. Insert ammunition into chamber.


2MJ016

4. Slide barrel closed until it locks (clicks).



WARNING

To avoid personnel injury or death, be sure there are no obstacles (sling, branches, etc.) in line of fire.

5. Determine target distance and select range.

6. Move safety to fire position.

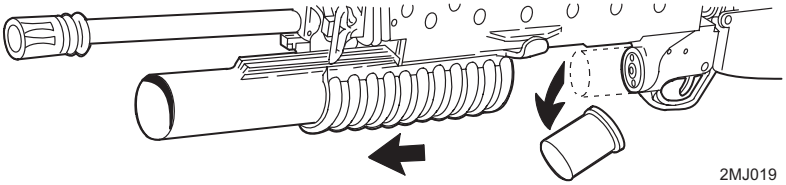
7. Aim and squeeze the trigger to fire.

NOTE

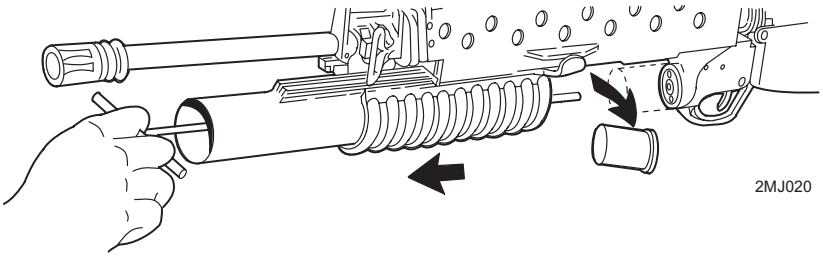
Practice breath control when firing the rifle.

END OF WORK PACKAGE

1. Press the latch and move barrel forward. The casing automatically extracts and ejects.



2. Stuck casings need a little help. Remove by tapping with rifle cleaning rod.



END OF WORK PACKAGE

Hangfire: A delay in the ignition of propellant charge.

WARNING

Keep muzzle on target and clear all personnel from the area (at least 80 meters or 284 feet). Wait 30 seconds before removing round.

1. Unload the round and catch it, or unload close to ground for a short fall.

2. Store the round at a safe distance away from serviceable ammunition until it is determined whether the round or the weapon is defective.

3. A dented primer is a hangfire. Handle accordingly.

END OF WORK PACKAGE

Misfire: A failure to fire.

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.

1. Unload the round and catch it, or unload close to ground for a short fall.

2. Store the round at a safe distance away from serviceable ammunition until it is determined whether the round or the weapon is defective.

3. If the primer is not dented, the firing mechanism is faulty. A dented primer is a hangfire. Handle accordingly.

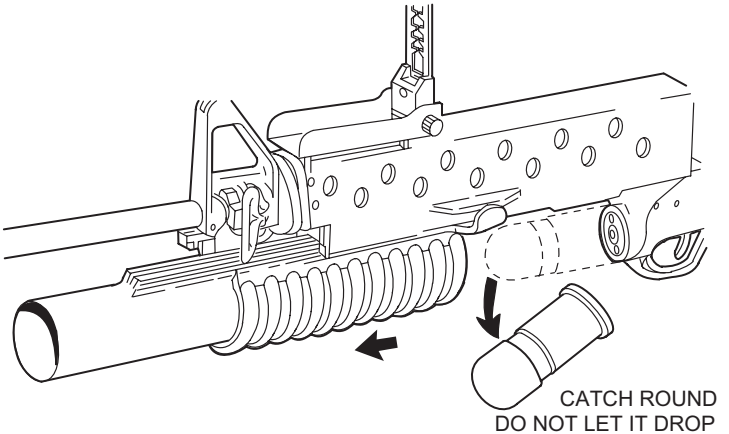
4. If the mechanism is repaired, the round may be reloaded and fired.

5. Notify the NCO or unit armorer.

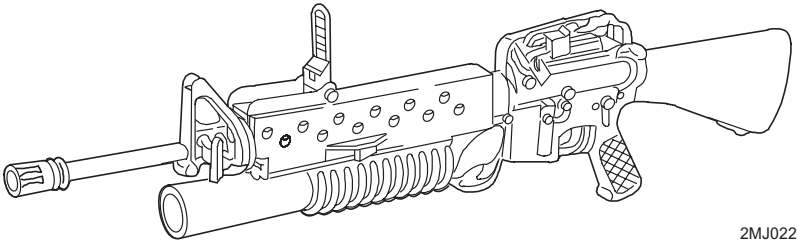
END OF WORK PACKAGE

1. Press the latch and move barrel forward.

2. The round automatically extracts and ejects.



END OF WORK PACKAGE



HOT, DUSTY, AND SANDY AREAS. Clean often. Oil frequently because heat dissolves the oil rapidly. Wipe oil from exposed surfaces. Cover weapon as much as possible. Keep sand out of parts.

RAINY, HUMID, AND SALTY AIR. Rainy, humid, and salty air contaminate the lubrication and cause corrosion. Inspect grenade launcher daily. Dry, clean, and lubricate as necessary.

BELOW FREEZING TEMPERATURES. Keep weapon wrapped in a parka or blanket when it is brought from a cold area to a warm area. Allow it to reach room temperature gradually. If condensation forms, dry and lubricate at room temperature before taking it out again into cold weather; otherwise, ice will form in the mechanism. Keep ice and snow out of operating parts.

IMMERSION IN WATER. After immersion in water, disassemble, clean, oil, and reassemble as soon as possible. Make sure grenade launcher is dry.

NOTE

Keep the weapon clean and lubricated with CLP (item 2, WP 0038 00).

END OF WORK PACKAGE

General procedures can be found in FM 3-87, FM 21-40, and TM 3-220.

END OF WORK PACKAGE

CHAPTER 3

TROUBLESHOOTING PROCEDURES

INTRODUCTION

The troubleshooting table in WP 0019 00 lists the common malfunctions you may find when you operate or maintain the grenade launcher or its components. Perform the test/inspections and corrective actions in the order listed.

The troubleshooting table cannot list all possible malfunctions or corrective actions. See your supervisor for any problems not in the table.

MALFUNCTION/SYMPTOM INDEX

END OF WORK PACKAGE

Table 1. Troubleshooting Procedures.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. FAILURE TO FIRE.	1. Check for too much oil or water in back of breech insert.	Point weapon up for 10 to 15 seconds and hand function. Refer to WP 0028 00.
	2. Check for dirt and/or residue in firing pin hole.	Clean thoroughly. Refer to WP 0025 00.

Table 1. Troubleshooting Procedures (Cont).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. FAILURE TO FIRE (Cont).	3. Check for dirt in locator slot.	Clean thoroughly. Refer to WP 0025 00.
	4. Check for faulty ammunition.	Replace ammunition. Refer to WP 0011 00.
2. FAILURE TO EXTRACT.	Check for casing stuck in barrel.	Remove with rifle cleaning rod. Refer to WP 0012 00.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
3. FAILURE TO CHAMBER.	Check for faulty ammunition or dirty chamber.	Replace ammunition or clean bore and chamber. Refer to WP 0011 00 or WP 0025 00.
4. FAILURE TO LOCK.	Check for dirty follower or receiver cavity.	Notify NCO or unit armorer.

END OF WORK PACKAGE

CHAPTER 4

MAINTENANCE INSTRUCTIONS

INITIAL SETUP:

References

DA Form 2404
DA PAM 738-750
WP 0021 00

GENERAL

a. Before Operation. Perform the Before PMCS.

b. During Operation. Perform the During PMCS.

c. After Operation. Perform the After PMCS.

d. If the Equipment Fails to Operate. Troubleshoot with proper equipment. Report any deficiencies using the proper form; see DA PAM 738-750. If deficiencies cannot be corrected, notify unit armorer.

PMCS PROCEDURES

WP 0021 00 lists required checks and services to be performed by personnel who use the M68 Reflex Sight w/Quick Release and Mount. The table is divided as follows:

a. Item No. Column. Checks and services are numbered in disassembly sequence. This column shall be used as a source of item numbers for the "TM Number" column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS.

b. Interval Column. This column gives the designated interval when each check is to be performed.

c. Man-Hour Column. This column gives the amount of time required for the procedure.

d. Item To Be Checked or Serviced Column. This column lists the items to be checked or serviced.

e. Procedure Column. This column contains a brief description of the procedure by which the check is to be performed. It contains all of the information required to accomplish the checks and services.

f. Equipment Not Ready/Available If: Column. This column contains a brief statement of the condition (e.g., malfunction, shortage) that would cause the covered equipment to be less than fully ready to perform its assigned mission.

END OF WORK PACKAGE

INITIAL SETUP:

References

WP 0009 00
WP 0012 00
WP 0024 00
WP 0025 00
WP 0036 00
WP 0037 00

Table 1. Preventive Maintenance Checks and Services.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
			NOTE Do not interchange barrel assemblies or components from one weapon to another.		
1	Before		Grenade Launcher and Rifle	a. Open barrel, clear weapon (WP 0012 00). Make an overall visual inspection for missing or damaged components. Check to make sure that launcher is firmly attached to weapon. Report any deficiencies to the unit armorer.	Parts are missing or damaged. M203/M203A1 is not firmly attached to weapon.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				b. Ensure M203/M203A1 is safety wired.	Weapon is not safety wired.

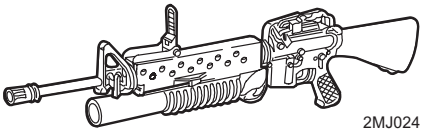


Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Authorized Equipment	Check authorized equipment for serviceability and completeness (WP 0036 00 and WP 0037 00).	
3	Before		Barrel Assembly	a. Wipe oil and debris from barrel bore and chamber (WP 0025 00).	Barrel is dented, cartridge retainers are broken/bent, or cartridge locator is damaged.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				b. Check barrel for cracks. Check if barrel is dented and/or damaged.	Barrel is cracked, dented, or damaged.
				c. Check for loose, cracked, or missing barrel grip.	Barrel grip is loose, missing, or has crack longer than one inch.

Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3 (Cont)	Before (Cont)		Barrel Assembly (Cont)	d. Check for broken and/or damaged cartridge locator and cartridge retainers.	Cartridge locator and cartridge retainers are broken and/or damaged.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		Receiver Assembly		
				WARNING The grenade launcher could fire without squeezing the trigger if the sear does not function properly.	
				a. Check for proper operation of sear. Make sure weapon is cleared. Cock the launcher and squeeze trigger. Firing pin	Sear does not function properly.

Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4 (Cont)	Before (Cont)		Receiver Assembly (Cont)	should release. Hold trigger to rear; cock the launcher. Release trigger, then squeeze. Firing pin should release.	

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					

Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4 (Cont)	Before (Cont)		Receiver Assembly (Cont)	b. Check safety in both SAFE and FIRE positions with trigger. Place launcher in SAFE position. Move barrel forward and back to check barrel stop and barrel latch function. Report all deficiencies to unit armorer.	Safety does not function properly. Barrel stop or latch does not function.

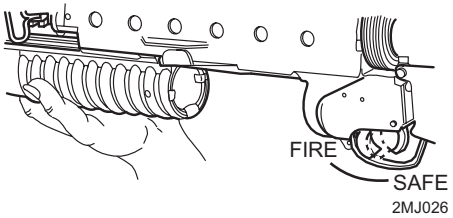
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					

Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4 (Cont)	Before (Cont)		Receiver Assembly (Cont)	c. Visually examine the breech insert. It must be flush or below the breech face. If the breech insert is protruding above the breech face, report deficiency to unit armorer.	Breech insert protrudes above breech face.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before		Hand Guard and Leaf Sight	Check hand guard and leaf sight for damage. Check sight functioning (WP 0009 00). If defective, report to unit armorer.	Hand guard or leaf sight is damaged.

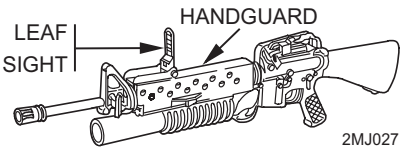


Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Quadrant Sight	Check quadrant sight for damage. Check the sight functioning (WP 0009 00). Report deficiencies to the unit armorer.	Parts are broken, missing, or not functioning properly.

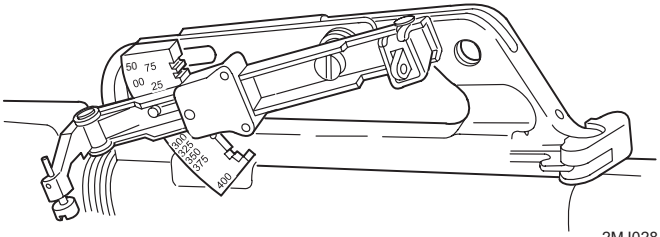
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
					

Table 1. Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	During		Grenade Launcher	Observe operation and functioning for component failure. Report failures to unit armorer. Check bore frequently for debris. Clean bore if dirty (WP 0025 00).	Grenade launcher does not function properly.

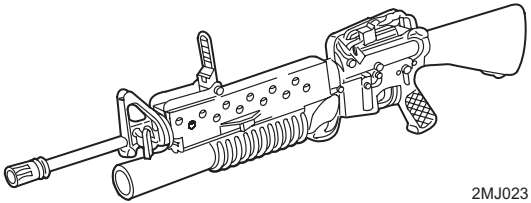
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	After		Grenade Launcher	Field strip (WP 0024 00). Inspect for damaged or missing components (WP 0024 00). Report deficiencies to unit armorer. Clean and lubricate in accordance with WP 0025 00.	Parts are missing or damaged.

END OF WORK PACKAGE

INITIAL SETUP:

Materials/Parts

Cleaner, lubricant, and preservative (CLP) (item 2, WP 0038 00)
Dry cleaning solvent (SD) (item 7, WP 0038 00)
Rifle bore cleaning compound (RBC) (item 3, WP 0038 00)
Weapons lubricating oil (LAW) (item 4, WP 0038 00)
Weapons lubricating oil (LSA) (item 5, WP 0038 00)



1. Periodic lubrication can be performed without disassembling. Keep the weapon clean and lubricated even when it is not used for a while.

2. Perform required lubrication during maintenance procedures.

3. CLP (item 2, WP 0038 00) is the authorized lubricant. It has a temperature range of -65 °F (-54 °C) to 150 °F (66 °C).

4. When operating, clean and lubricate grenade launcher daily after operation.

5. When in inactive storage, clean and lubricate grenade launcher quarterly or when corrosion appears.

Whenever the term Cleaner, Lubricant, and Preservative (CLP) or the words lubricant, LSA, or LAW are cited in this technical manual, it is to be interpreted to mean CLP, LSA, or LAW can be utilized as applicable. The listed constraints must be followed:

1. Under all but the coldest arctic conditions, LSA (item 5, WP 0038 00) or CLP (item 2, WP 0038 00) are the lubricants to use on the weapon. Either may be used at -10 °F (-23 °C) and above. However, do not use both on the same weapon at the same time.

2. LAW (item 4, WP 0038 00) is the lubricant to use during cold arctic conditions, +10 °F (-12 °C) and below.

3. Any of the lubricants may be used from -10 °F (-23 °C) to +10 °F (-12 °C).

4. Do not mix lubricants on the same weapon. The weapon must be thoroughly cleaned during change from one lubricant to another. Dry cleaning solvent (SD) (item 7, WP 0038 00) is recommended for cleaning during change from one lubricant to another.

5. Rifle bore cleaning compound (RBC) (item 3, WP 0038 00) may be used to remove carbon buildup in the bore and other portions of the weapon.

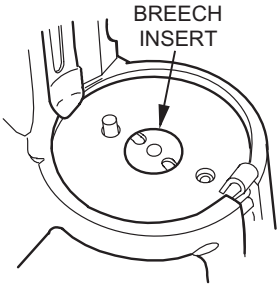
6. Dry cleaning solvent (SD) (item 7, WP 0038 00) may be utilized for cleaning weapons. However, SD must not be used on rubber or plastic.

WARNING

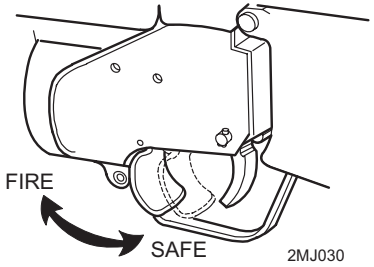
Be sure weapon is NOT loaded.

1. Check your grenade launcher for cracks, burrs, wear, dents, rust, dirt, and corrosion. Inspect bore for dirt, water, oil, and foreign matter.

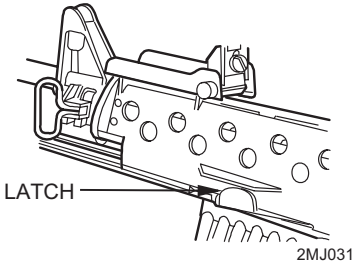
2. Check for loose or protruding breech insert.



3. Check safe and fire positions.



4. Check barrel latch.



5. Check for missing or broken parts. See the NCO or unit armorer for repairs.

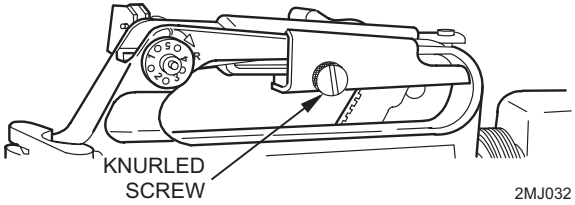
6. Make sure M203/M203A1 is safety wired.

NOTE

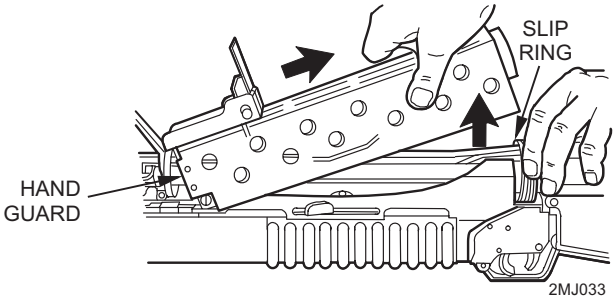
The Quick Release Bracket does not require the use of safety wire.

END OF WORK PACKAGE

1. Remove the quadrant sight (if used) by loosening the knurled screw on the right side of the weapon.



2. Pull back slip ring. Lift up on hand guard and pull to rear to remove.



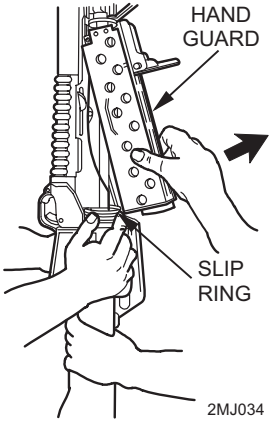
CAUTION

Do not use a screwdriver or any other tool when removing the hand guard. Doing so may damage the hand guard and/or slip ring.

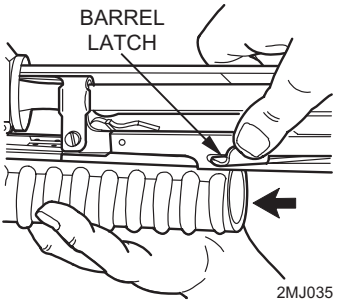
NOTE

If removing the hand guard is difficult, use buddy system.

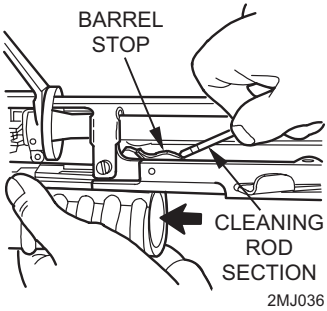
3. Stand the weapon on the buttstock. Grip the stock with one hand and the lower end of hand guard with the other hand. Have a buddy press down with both hands on the slip ring. Pull hand guard free.


HAND
GUARD
SLIP
RING
2MJ034

4. Press barrel latch and move barrel forward to stop.



5. Press barrel stop to release barrel from receiver. Remove barrel.



6. Do not interchange barrels from one weapon to another.

END OF WORK PACKAGE

INITIAL SETUP:

Tools and Special Tools

Bore brush thong (WP 0037 00)
Bore cleaning brush (WP 0037 00)

Materials/Parts

Cleaner, lubricant, and preservative (CLP) (item 2, WP 0038 00)
Wiping rag (item 6, WP 0038 00)

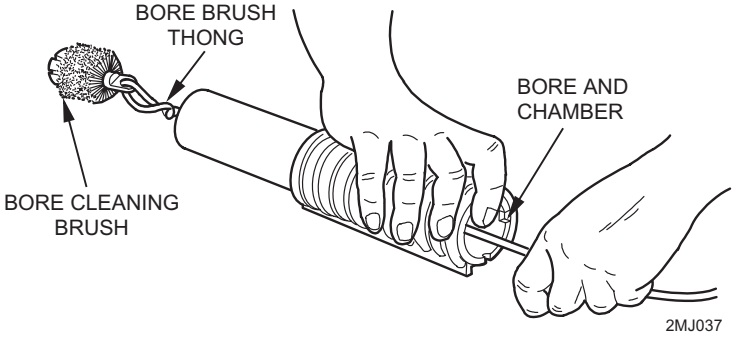
NOTE

Caring for your grenade launcher is simply good insurance. A little preventive maintenance will prevent malfunctions.

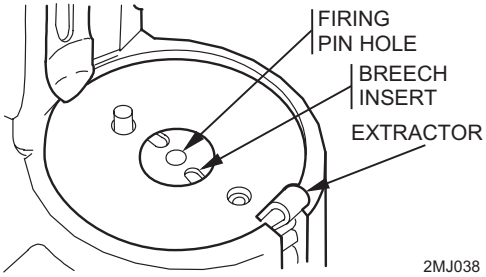
1. Clean bore and chamber with bore cleaning brush (WP 0037 00), bore brush thong (WP 0037 00), and CLP (item 2, WP 0038 00).

NOTE

If the M203/M203A1 has been used to fire non-lethal ammunition, refer to any special cleaning procedures contained in the over-packed operator instructions.


BORE BRUSH
THONG
BORE AND
CHAMBER
BORE CLEANING
BRUSH
2MJ037

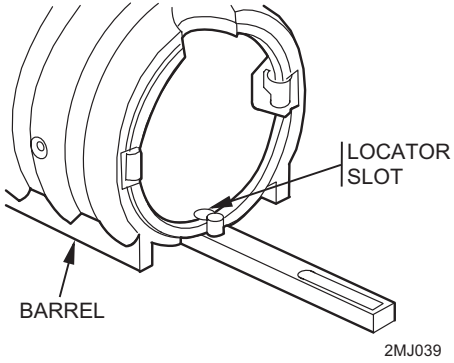
2. Clean area around breech insert and firing pin hole using CLP (item 2, WP 0038 00).



3. Clean all the dust and dirt from weapon using CLP (item 2, WP 0038 00) and wiping rag (item 6, WP 0038 00).

4. Keep locator slot clean.

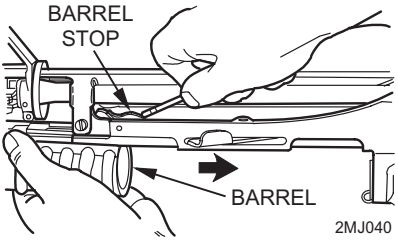
5. Wipe inside of barrel with wiping rag (item 6, WP 0038 00) soaked in CLP (item 2, WP 0038 00).



END OF WORK PACKAGE

1. Press barrel stop. Slide barrel onto receiver.

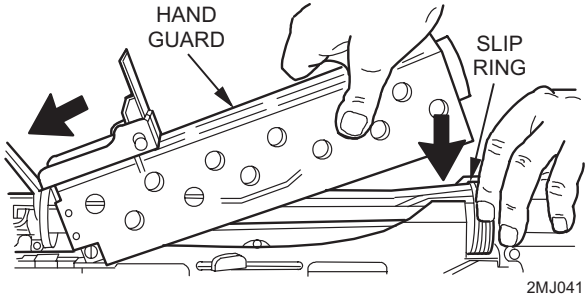
2. Move barrel rearward to close.



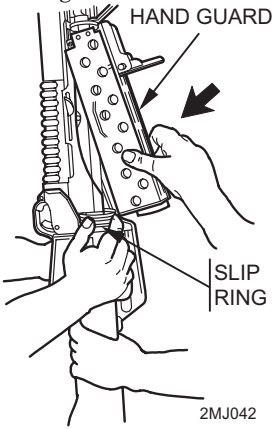
3. Install hand guard and secure with slip ring.

NOTE

If installing the hand guard is difficult, use buddy system.

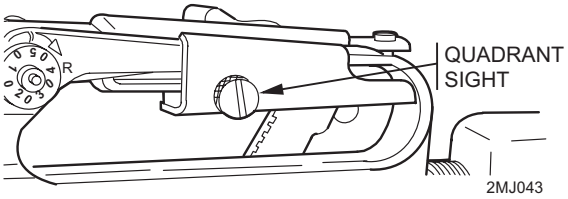


4. Stand weapon on buttstock. Grip stock with one hand and lower end of hand guard with other hand. Have buddy press down with both hands on slip ring. Install hand guard.



0026 00-3

5. Install quadrant sight and tighten knurled screw on right side.



END OF WORK PACKAGE

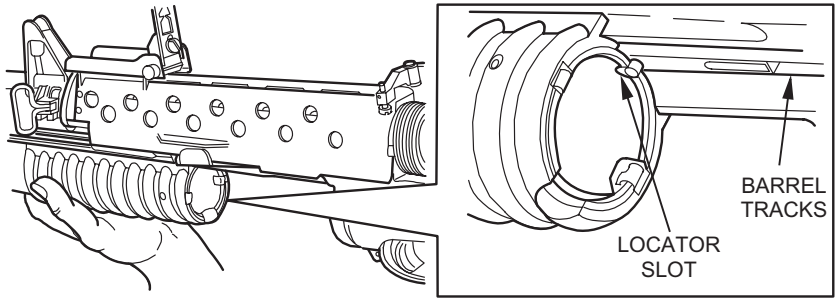
INITIAL SETUP:

Materials/Parts

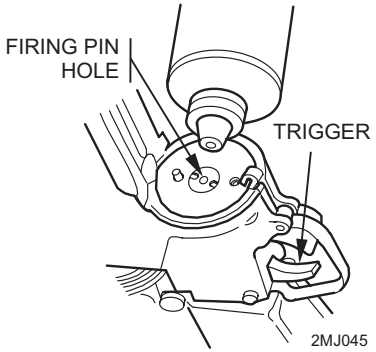
Cleaner, lubricant, and preservative (CLP) (item 2, WP 0038 00)

1. Move barrel forward and lubricate locator slot and barrel tracks with CLP (item 2, WP 0038 00).

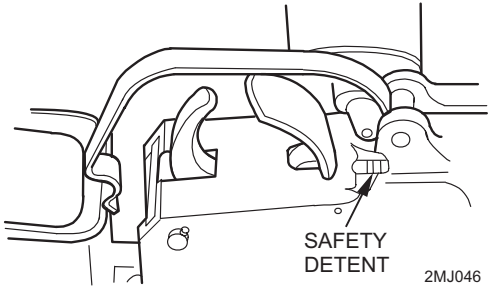
2. Lubricate all metal surfaces with a light coat of CLP (item 2, WP 0038 00).



3. With barrel installed, apply a few drops of CLP (item 2, WP 0038 00) through firing pin hole. Keep weapon pointed up 10 - 15 seconds. Cycle weapon and squeeze trigger to spread the oil.



4. Turn grenade launcher upside down and lubricate safety detent with CLP (item 2, WP 0038 00). It is in the receiver in front of the safety.

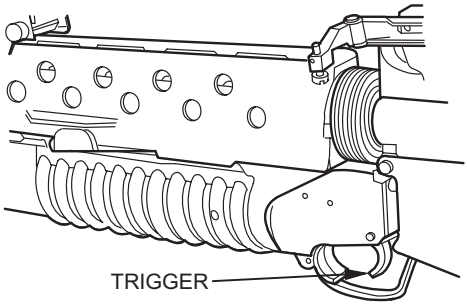


END OF WORK PACKAGE

WARNING

Be sure weapon is NOT loaded.

1. Cock grenade launcher and squeeze the trigger. Firing pin should release.

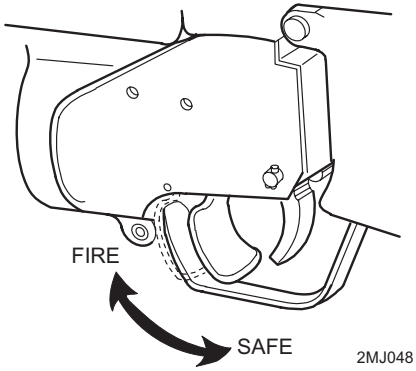


2. Hold trigger to rear and cock grenade launcher. Release trigger and then squeeze trigger. Firing pin should release.

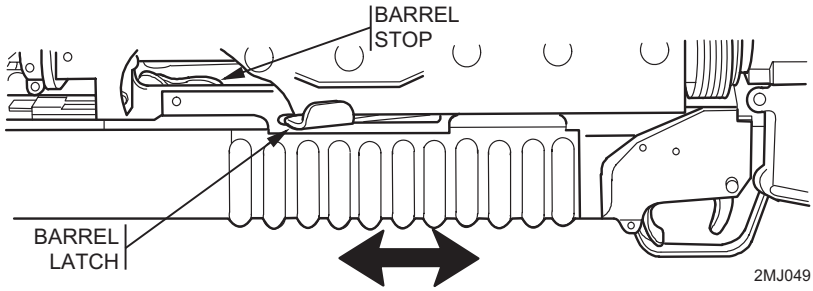
WARNING

The grenade launcher could fire without squeezing the trigger if the sear does not function properly.

3. Check safety in both safe and fire positions with trigger. Launcher must be cocked before safety can be placed in safe position.



4. Move barrel forward and back to be sure barrel stop and barrel latch function.



END OF WORK PACKAGE

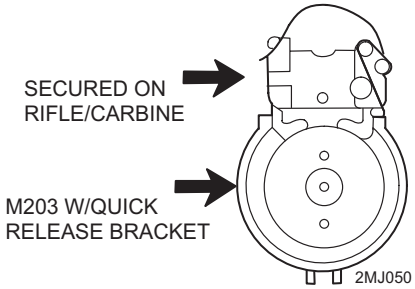
INITIAL SETUP:

Materials/Parts

Cleaner, lubricant, and preservative (CLP) (item 2, WP 0038 00)
Wiping rag (item 6, WP 0038 00)

CLEANING/LUBRICATION

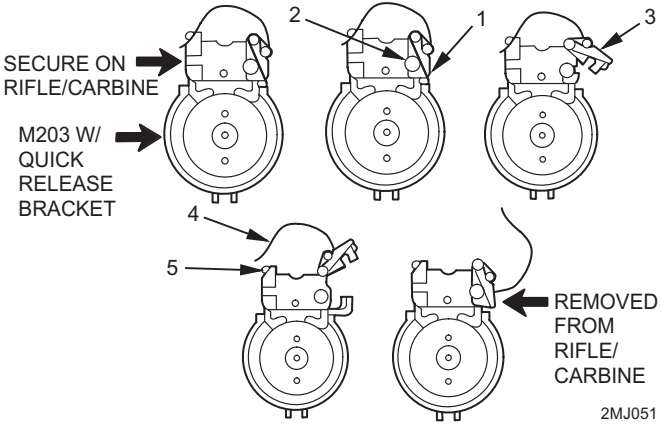
The quick release bracket will be cleaned and lubricated as needed. Clean all the dust and dirt from the quick release bracket using CLP (item 2, WP 0038 00) and wiping rag (item 6, WP 0038 00). Lightly lubricate all external surfaces of the bracket.


SECURED ON
RIFLE/CARBINE
M203 W/QUICK
RELEASE BRACKET
2MJ050

NOTE

If the M203 w/quick release bracket is dismounted from the rifle or carbine, operator MUST re-zero the rifle or carbine. When the M203 w/quick release bracket is mounted to the rifle or carbine, operator MUST re-zero the rifle or carbine.

1. Hold retaining spring (1) away from plunger (2).
2. Depress plunger (2).
3. Rotate latch lever (3) upward.
4. Disengage latch arm (4) from hook (5).


SECURE ON RIFLE/CARBINE
M203 W/ QUICK RELEASE BRACKET
1
2
3
4
5
REMOVED FROM RIFLE/ CARBINE
2MJ051

NOTE

Failure to successfully perform step 5 may result in the loss of the quick release bracket's internal shim plate. If the shim plate is lost or damaged, contact the unit armorer.

5. Press latch lever (3) fully downward until it engages plunger (2). It will be necessary to hold retaining spring (1) away from plunger to allow latch lever to engage plunger. There will be an audible click when latch lever has engaged plunger and plunger will snap forward toward muzzle.

6. Rotate latch arm (4) up and out of the way to its fully open position. When performing this step on the rifle, carefully pull latch arm from position between gas tube and barrel.

7. Disengage trigger guard from magazine well.

END OF WORK PACKAGE

Principle of the Five-Position Shim Plate

The basic overall length between the barrel nut roll pin at the rear of the M203 receiver and the starting position shim plate cutout surface at the front is approximately 11 in. (28 cm). As noted in step 4, some sliding motion may be detectable between the carbine barrel shoulder and the front of the five-position shim plate at the starting, or minimum, overall length cutout position.

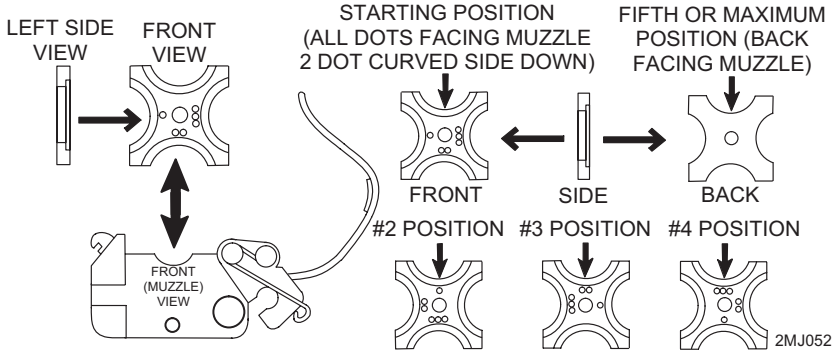
Subsequent re-insertion of the five-position shim plate to its #2, #3, #4, or maximum (fifth) length position (see step 1) will slightly increase the overall length of the assembly beyond the basic 11 in. (28 cm), and therefore tend to minimize or eliminate any sliding motion between the barrel shoulder and the five-position shim plate.

At some point, the unit armorer will note that the shim plate will not fit into the cutout of the carbine barrel shoulder (see step 4). At this point, go back to the next lower position and secure, close, and lock the bracket around the carbine.

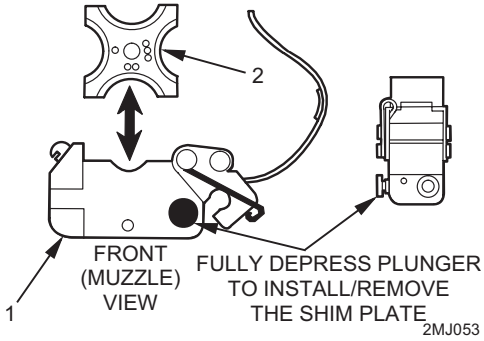
The following steps describe checking for sliding motion with the #2 notch up, and against the carbine barrel shoulder. If the #2 position does not minimize the sliding motion, repeat the procedure with the #3 notch up and so on. If the fifth or maximum position is desired, note that the "back" or smooth face of the shim plate is oriented towards the muzzle. Do not be concerned if only a small amount of sliding motion is still detectable with the shim plate in its apparently optimum setting, because the latch arm will compensate for this when it is closed and locked.

Mounting Procedure

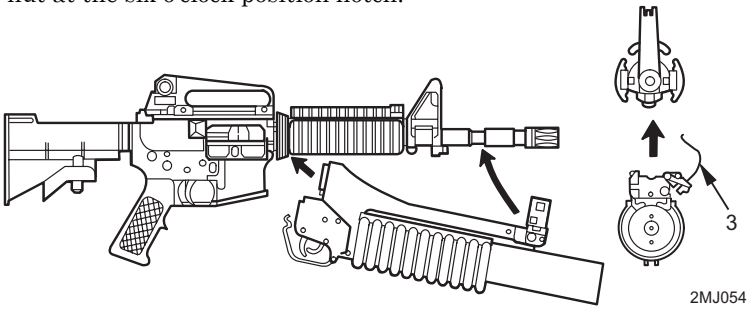
1. Compare the following illustration with the quick release bracket (1) to become familiar with all positions of the five-position shim plate (2).



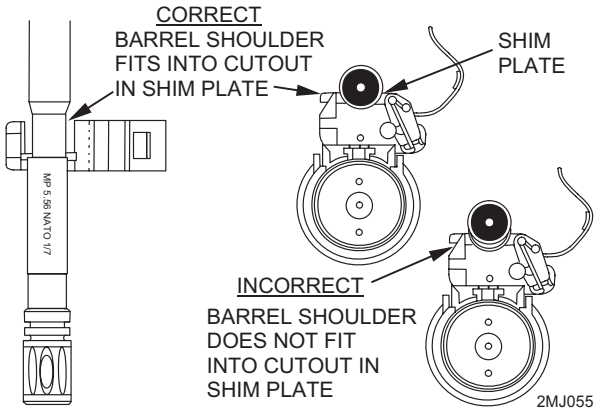
2. Set the five-position shim plate in the bracket to the minimum position as illustrated, with the 2 dots down and facing the muzzle.



3. If present, remove the lower rail of the M4 Adapter Rail System from the M4 carbine. Move the rear of the M203 receiver into position around the carbine barrel. Confirm that latch arm (3) of the bracket is fully open. Rotate the muzzle end of the M203 towards the carbine barrel while sliding the M203 firmly to the rear. Visually confirm that the roll pin in the rear of the M203 receiver engages the carbine barrel nut at the six o'clock position notch.



4. Firmly hold the M203 in position/back against the carbine barrel nut of the carbine, while also holding the muzzle end of the M203 against the carbine's barrel. Inspect the five-position shim plate, looking from the top of the carbine barrel, and also from the front, as illustrated on the next page. The inner notch of the shim plate should rest behind the shoulder of the barrel. Try to slide the M203 back and forth if possible, and note the distance of any sliding motion. Some motion will be detectable with most carbine barrels with the shim plate in its starting position. If during this step the cutout in the shim plate does not fit behind the barrel shoulder, it is probably inserted at its maximum thickness (no dots facing the muzzle), or position #2, #3, or #4 (see step 1).


CORRECT
BARREL SHOULDER
FITS INTO CUTOUT
IN SHIM PLATE
SHIM
PLATE
MP 5.56 NATO 1/7
INCORRECT
BARREL SHOULDER
DOES NOT FIT
INTO CUTOUT IN
SHIM PLATE
2MJ055

NOTE

Endurance testing indicated that it may be necessary to switch to another position of the shim plate (2) after several thousand rounds have been fired. The unit armorer should check for excessive sliding motion each time the shim plate is removed for cleaning/lubrication and the M203 is remounted to the carbine.

5. Remove the M203 w/quick release bracket from the carbine. Depress plunger (4), withdraw the shim plate and re-insert it in the #2 position (see step 1). Note that the #2 position is indicated by a single dot stamped on its shim plate cutout, and that this side of the shim plate faces the muzzle.

6. Re-mount the M203 w/quick release bracket to the carbine's barrel nut and barrel shoulder. Attempt to slide the M203 from front to rear.

7. If forward and back motion is detected, repeat step 6 with the shim plate in the #3 position. If the assembly is now too long (it will not engage behind the barrel shoulder, but rides up onto the barrel's major diameter), go back to the last position tried with the shim plate, and complete the M203 attachment.

8. When the optimum position of the shim plate is established:

   a. If necessary, hold the retaining spring out of the way and depress plunger (4) to unlock latch lever (5).

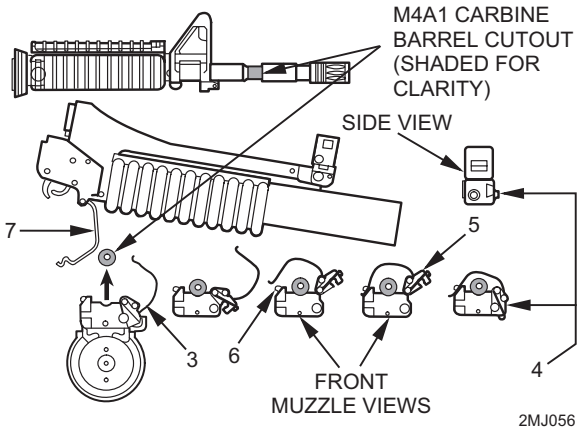
   b. Rotate latch arm (3) over the carbine barrel.

c. Catch hook (6) in the hole of latch arm (3).

d. Rotate latch lever (5) down.

e. Depress plunger (4). Make sure the retaining spring does not engage the plunger during this step.

f. Squeeze latch lever (5) fully closed (which allows plunger (4) to be released and snap forward). This will hold latch lever in the fully closed/locked position.

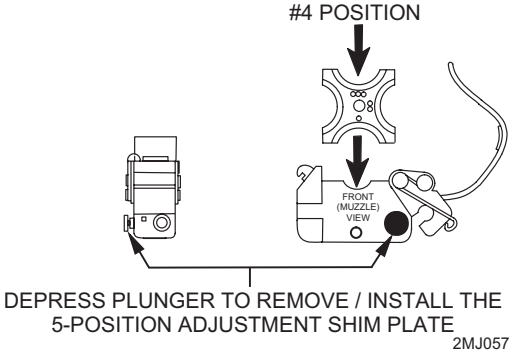

M4A1 CARBINE
BARREL CUTOUT
(SHADED FOR
CLARITY)
SIDE VIEW
7
5
3
6
4
FRONT
MUZZLE VIEWS
2MJ056

NOTE

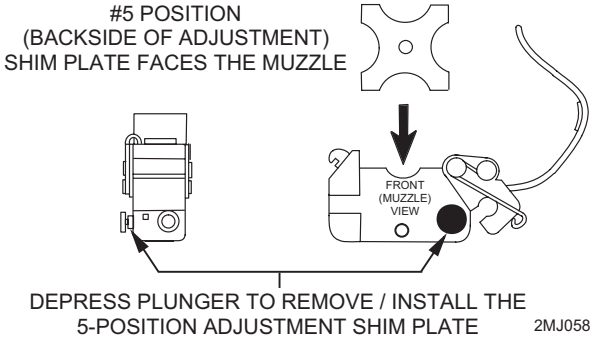
In its final motion, the latch lever may require very firm pressure against the bracket to allow the plunger to snap back into place, locking the latch lever closed. In some instances, finger pressure alone against the latch lever will not be sufficient to fully close it. When this occurs, use the side of the bayonet stud for extra leverage against the latch lever.

g. Rotate the M203 trigger guard (7) to engage the lip of the magazine well.

9. If forward and back motion is detected with the shim plate set to its #3 notch, remove the M203 from the carbine. Remove and re-insert the shim plate with its #4 position up. Note that the #4 position is indicated by three dots stamped adjacent to its shim plate cutout, and that this side of the shim plate faces the muzzle.



10. If the #5 or maximum position is required, insert the shim plate as illustrated below.



CAUTION

When detaching the M203 for cleaning, inspection, or lubrication, check and note the position of the shim plate for ease of re-attachment.

END OF WORK PACKAGE

Principle of the Five-Position Shim Plate

The basic overall length between the barrel nut roll pin at the rear of the M203 receiver and the starting position shim plate cutout surface at the front is approximately 11 in. (28 cm). As noted in step 4, some sliding motion may be detectable between the rifle barrel stop and the front of the five-position shim plate at the starting, or minimum, overall length cutout position.

Subsequent re-insertion of the five-position shim plate to its #2, #3, #4, or maximum (fifth) length position (see step 1) will slightly increase the overall length of the assembly beyond the basic 11 in. (28 cm), and therefore tend to minimize or eliminate any sliding motion between the barrel stop and the five-position shim plate.

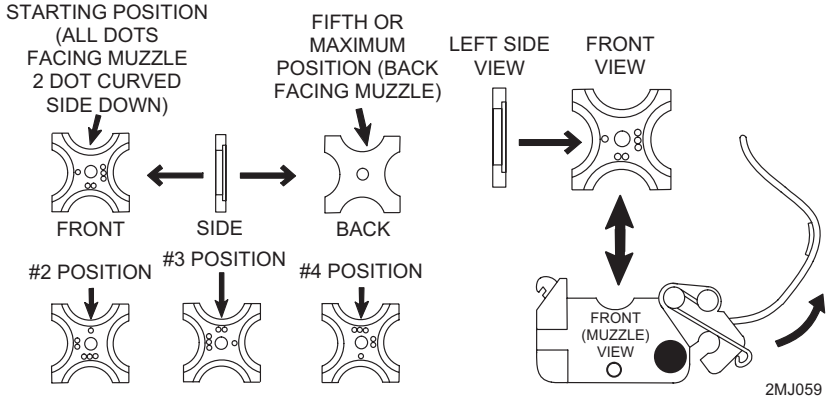
The following steps describe checking for sliding motion with the #2 notch up, and against the rifle barrel stop. If the #2 position does not minimize the sliding motion, repeat the procedure with the #3 notch up and so on. If the fifth or maximum position is desired, note that the "back" or smooth face of the shim plate is oriented towards the muzzle. Do not be concerned if only a small amount of sliding motion is still detectable with the shim plate in its apparently optimum setting, because the latch arm will compensate for this when it is closed and locked.

NOTE

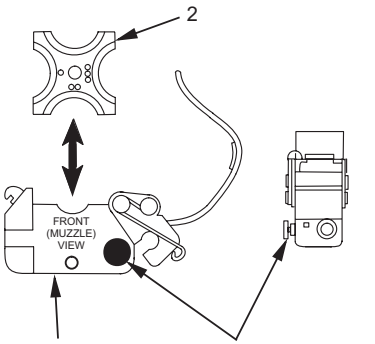
Endurance testing indicated that it may be necessary to switch to another shim plate position after several thousand rounds have been fired. The unit armorer should check for excessive sliding motion each time the shim plate is removed for cleaning/lubrication and the M203 is remounted to the carbine.

Mounting Procedure

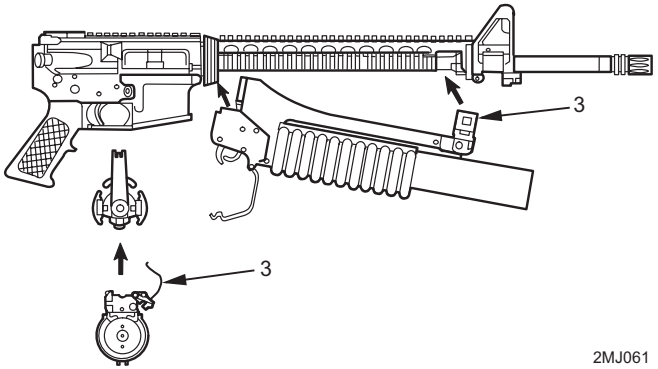
1. Compare the following illustration with the quick release bracket (1) to become familiar with all positions of the five-position shim plate (2).



2. Set the five-position shim plate in the bracket to the minimum position as illustrated, with the 2 dots down and facing the muzzle.


2
FRONT
(MUZZLE)
VIEW
1
FULLY DEPRESS PLUNGER
TO INSTALL / REMOVE
THE SHIM PLATE
2MJ060

3. If present, remove the lower rail of the M5 Adapter Rail System from the M16A4 rifle. Confirm that the barrel stop is installed inside the handguard cap. Move the rear of the M203 receiver into position around the rifle barrel. Confirm that latch arm (3) of the bracket is fully open. Rotate the muzzle end of the M203 towards the rifle barrel while sliding the M203 firmly to the rear. Visually confirm that the roll pin in the rear of the M203 receiver engages the rifle barrel nut at the six o'clock position notch.


3
3
2MJ061

4. Firmly hold the M203 in position/back against the rifle barrel nut, while also holding the muzzle end of the M203 against the rifle's barrel stop. Try to slide the M203 back and forth if possible, and note the distance of any sliding motion. Some motion may be detectable with the shim plate in its starting position.

5. Remove the M203 w/quick release bracket from the rifle. Depress plunger (4), withdraw the shim plate and re-insert it in the #2 position (see step 1). Note that the #2 position is indicated by a single dot stamped on its shim plate cutout, and that this side of the shim plate faces the muzzle.

6. Re-mount the M203 w/quick release bracket to the rifle's barrel nut and barrel stop. Attempt to slide the M203 from front to rear.

7. If forward and back motion is detected, repeat step 6 with the #3 notch against the rifle barrel stop. If the assembly is now too long (it will not engage behind the barrel stop), go back to the last position tried with the shim plate, and complete the M203 attachment process.

8. When the optimum position of the shim plate is established:

   a. Carefully work latch arm (3) between the rifle barrel and the gas tube.

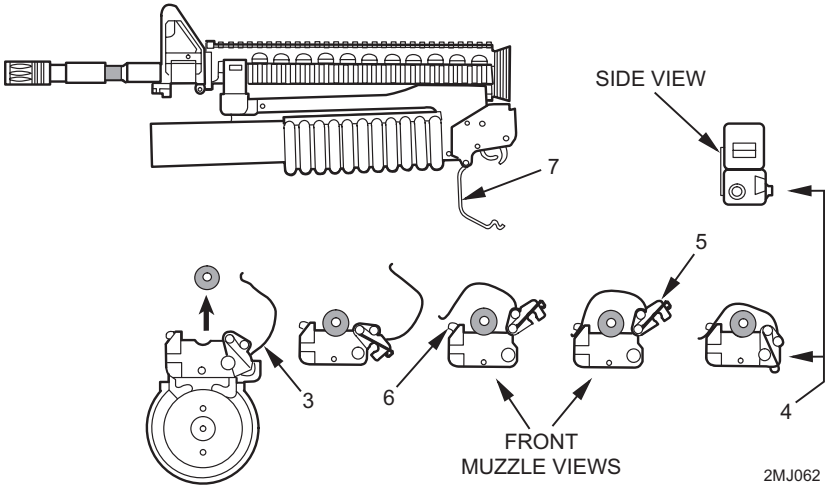
   b. Hold the retaining spring away from plunger (4) and depress plunger to unlock latch lever (5).

   c. Catch hook (6) in the hole of latch arm (3).

   d. Rotate latch lever (5) down.

e. Depress plunger (4). Make sure the retaining spring does not engage the plunger during this step.

f. Squeeze latch lever (5) fully closed (which allows the plunger (4) to be released and snap forward). This will hold latch lever in the fully closed/locked position.



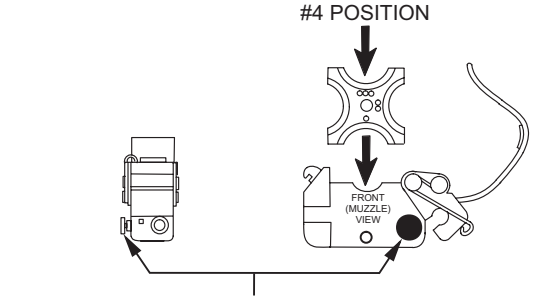
0032 00-11

NOTE

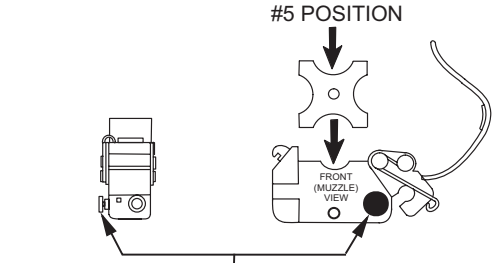
In its final motion, the latch lever may require very firm pressure against the bracket to allow the plunger to snap back into place, locking the latch lever closed. In some instances, finger pressure alone against the latch lever will not be sufficient to fully close it. When this occurs, use the side of the bayonet stud for extra leverage against the latch lever.

g. Rotate M203 trigger guard (7) to engage the lip of the magazine well.

9. If forward and back motion is detected with the shim plate set to its #3 notch, remove the M203 from the rifle. Remove and re-insert the shim plate with its #4 position up. Note that the #4 position is indicated by three dots stamped adjacent to its shim plate cutout, and that this side of the shim plate faces the muzzle.



10. If the #5 maximum position is required, insert the shim plate as illustrated.



CAUTION

When detaching the M203 for cleaning, inspection, or lubrication, check and note the position of the shim plate for ease of re-attachment.

END OF WORK PACKAGE

NOTE

When mounted to the carbine, the recoil lug of the rail grabber will be located in slot "T24" on the M4 Adapter Rail.

When mounted to the rifle, the recoil lug of the rail grabber will be located in slot "T38" on the M5 Adapter Rail.

1. Turn the torque limiting knob of the rail grabber counterclockwise until it stops.

2. Align the recoil lug of the rail grabber with the appropriate recoil slot.

3. Make sure the rail grabber is flush with the rail; then turn the torque limiting knob clockwise until it clicks twice.

END OF WORK PACKAGE

GENERAL INFORMATION

WARNING

Do not fire ammunition not made for use in the M203 grenade launcher. Doing so will result in injury to, or death of, personnel.

Hearing protection is required for the user and all adjacent personnel on firing range, when using M585 cartridge.

The only types of ammunition authorized for use in the grenade launcher are contained in this work package. If ammunition is shown, it is authorized.

The authorized types of ammunition are listed by their color coding, classes, arming ranges, and special information where required.

If ammunition fails to fire in the weapon, turn it in to unit armorer for disposition.

TYPES OF AMMUNITION

40-mm Ammunition Training Practice Rounds

WARNING

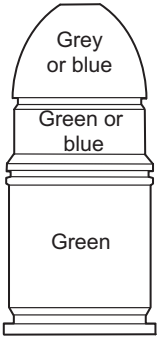
The M407A1 practice round fuze arms between 14 to 27 meters (46 to 89 ft).

The danger radius of practice grenades is 20 meters (66 ft).

NOTE

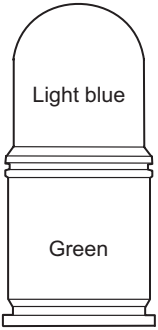
The M781 practice round has an inert projectile; however, it does contain a propelling charge.

No DUMMY ammunition is supplied for this weapon.



M407A1

2MJ065



M781

2MJ066

40-MM AMMUNITION MULTIPLE PROJECTILE ROUND AND CHEMICAL ROUNDS

Chemical Round (Tactical CS)

WARNING

The M651 arms between 10 to 30 meters (33 to 99 ft).

M651

2MJ067

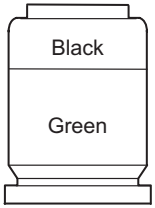
Multiple Projectile Round (Buckshot)

WARNING

When firing M576 cartridge from the M203 grenade launcher, be sure to aim at the foot of the target.

NOTE

The multiple projectile round contains no mechanical-type fuze.



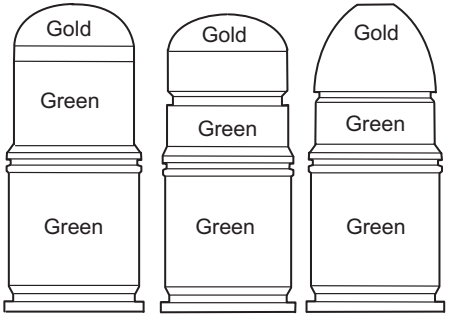
M576

2MJ068

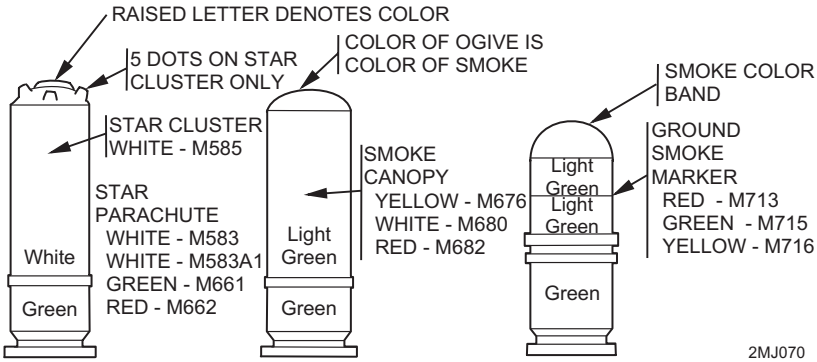
40-mm Ammunition High Explosive (HE) Service

WARNING

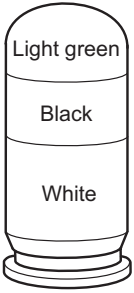
The danger radius of the High Explosive (HE) grenades is 165 meters (541 ft). The M386, M397, M397A1, M406, and M433 rounds arm within 14 to 27 meters (46 to 89 ft). The M381 and M441 rounds arm within 2.4 to 3 meters (8 to 10 ft).


Gold
Green
Green
Gold
Green
Green
Gold
Green
Green
JUMP UP
FRAGMENTATION
M397
M397A1
HEDP
DUAL
PURPOSE
M433
HE
M381, M406
M386, M441
2MJ069

40-mm Ammunition Pyrotechnic Signal and Spotting Rounds



40-mm M1006 Non-Lethal Cartridge



WARNING

Failure to precisely follow the operator instructions over-packed with the M1006 Non-Lethal Cartridge may result in target fatalities and operator injuries.

0034 00-11

CARE AND HANDLING

Aluminum cases are easily dented and may be hard to chamber and extract. Be careful! None of these rounds contain a mechanical-type fuze. Keep ammunition dry, clean, and free of grease, sand, mud, snow, and ice.

END OF WORK PACKAGE

CHAPTER 5

SUPPORTING INFORMATION

SCOPE

This work package lists all field manuals, technical manuals, and Army regulations referenced in this manual.

FIELD MANUALS

FM 3-87	Nuclear, Biological, and Chemical (NBC) Reconnaissance and Decontamination Operations (How To Fight)
FM 21-11	First Aid for Soldiers
FM 21-40	NBC (Nuclear, Biological, and Chemical) Defense

MISCELLANEOUS PUBLICATIONS

CTA 8-100	Army Medical Department Expendable/Durable Items
CTA 50-970	Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System (TAMMS)
SF 368	Product Quality Deficiency Report

TECHNICAL MANUALS

TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination
TM 750-244-7	Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use

END OF WORK PACKAGE

INTRODUCTION

Scope

This work package lists COEI and BII for the M203 grenade launcher to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the M203 grenade launcher. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the M203 grenade launcher in operation, to operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the M203 grenade launcher during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1) - Illus Number. Gives you the number of the item illustrated.

Column (2) - National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) - Description, CAGEC, and Part Number. Identifies the Federal item name (in all capital letters) followed by a minimum description. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (Commercial and Government Entity Code) (in parentheses) and the part number.

Column (4) - Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (5) - Unit of Measure (U/M). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) - Qty Rqr. Indicates the quantity required.

COMPONENTS OF END ITEM (COEI) LIST

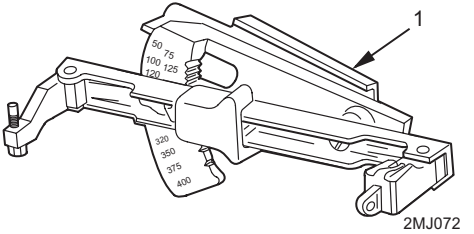


Table 1. Components of End Item.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
1	1010-01-442-2313	SIGHT, RIFLE GRENADE LAUNCHER: Quadrant (19200) 12598114		EA	1

BASIC ISSUE ITEMS (BII) LIST

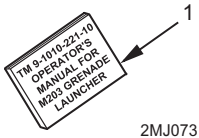


Table 2. Basic Issue Items List.

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY RQR
1		OPERATOR'S MANUAL FOR M203 GRENADE LAUNCHER: TM 9-1010-221-10		EA	1

END OF WORK PACKAGE

INTRODUCTION

Scope

This work package lists additional items you are authorized for the support of the M203 grenade launcher.

General

This list identifies items that do not have to accompany the M203 grenade launcher and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

Explanation of Columns in the AAL

Column (1) - National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) - Description, Commercial and Government Entity Code (CAGEC), and Part Number (P/N). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (in parentheses) and the part number.

Column (3) - Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (4) - Unit of Measure (U/M). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) - Qty Recm. Indicates the quantity recommended.

Table 1. Additional Authorization List.

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY RECM
	ASSEMBLY, LEAF SIGHT AND RAIL GRABBER: (19200) 12598117		EA	1
	BRACKET, QUICK RELEASE: (19200) 12973116		EA	1

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ON CODE	(4) U/M	(5) QTY RECM
1010-00-474-5466	BRUSH, BORE CLEANING: (19204) 7790665		EA	1
1010-00-474-5462	CASE, SMALL ARMS: (19205) 7790630		EA	1
1010-00-474-5465	THONG, BORE BRUSH: (19204) 7790631		EA	1

END OF WORK PACKAGE

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the M203 grenade launcher. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable/Durable Items List

Column (1) - Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., "Use CLP (item 2, WP 0038 00).").

Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item (C - Operator/Crew, O - Unit/AVUM).

Column (3) - National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) - Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number (P/N). This column provides the other information you need to identify the item.

Column (5) - Unit of Measure (U/M). This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/M
1	C	1005-00-242-5687	BOTTLE ASSEMBLY, CYLINDRICAL: (19204) 8448444	EA
2	C		CLEANER, LUBRICANT, AND PRESERVATIVE: (CLP)	
		9150-01-102-1473	1/2 oz bottle (81349) MIL-L-63460	OZ

Table 1. Expendable and Durable Items List (Cont).

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/M
3			CLEANING COMPOUND, RIFLE BORE: small arms bore cleaning solution (RBC)	
	C	6850-00-224-6656	2-oz (59.15-ml) bottle	OZ
	O	6850-00-224-6657	8-oz (236.59-ml) can	OZ
	O	6850-00-224-6663	1-gal. (3.79-l) can	GL
			(81349) MIL-PRF-372	

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/M
4	O	9150-00-292-9689	LUBRICATING OIL, WEAPONS: (LAW) 1-qt (0.95-l) can (81349) MIL-L-14107	QT
5			LUBRICATING OIL, WEAPONS: (LSA), semifluid	
	C	9150-00-935-6597	2-oz (59.15-ml) plastic bottle	OZ
	C	9150-00-889-3522	4-oz (118.30-ml) bottle	OZ
	O	9150-00-687-4241	1-qt (0.95-l) can	QT
	O	9150-00-753-4686	1-gal. (3.79-l) can (81349) MIL-L-46000	GL

Table 1. Expendable and Durable Items List (Cont).

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/M
6	C	7920-00-205-1711	RAG, WIPING: cotton 50 lb bdl (58536) AA-531	EA

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/M
7	O	 6850-01-474-2319 6850-01-474-2317 6850-01-474-2316	SOLVENT, DRY CLEANING (SD): 1-gal. (3.78-l) can 5-gal. (18.93-l) can 55-gal. (208.18-l) barrel (81349) MIL-PRF-680 TYPE II	GL

END OF WORK PACKAGE

ALPHABETICAL INDEX

Subject **WP Sequence No. - Page No.**

A

B

Subject **WP Sequence No. - Page No.**

C

Subject **WP Sequence No. - Page No.**

L

Subject **WP Sequence No. - Page No.**

O

O (Cont)

Subject **WP Sequence No. - Page No.**

T

13/14 blank

By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0114102

Distribution: To be distributed in accordance with the Initial Distribution Number (IDN) 400544 requirements for TM 9-1010-221-10.

ARMY TM 9-1010-221-10
AIR FORCE TO 11W3-9-4-1
MARINE CORPS TM 07700B-10
NAVY SW370-AE-OPI-010

PIN: 026103-000