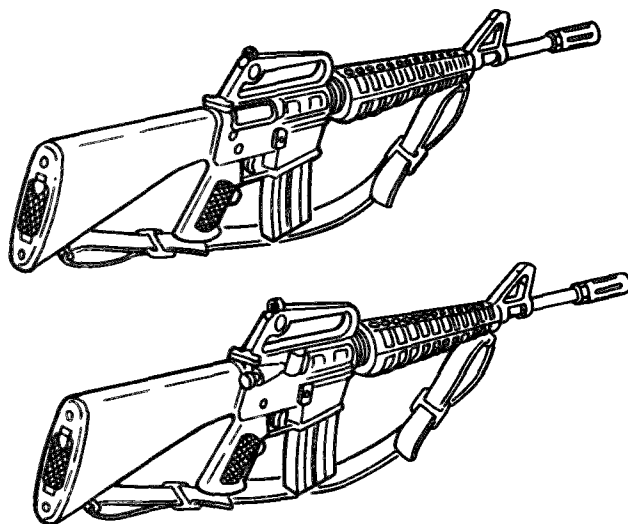


ARMY TM 9-1005-249-23&P
AIR FORCE TO 11W3-5-5-24
COAST GUARD COMDTINST M8370.9

Supersedes Copy Dated November 1983

TECHNICAL MANUAL

UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
RIFLE, 5.56MM, M16 (1005-00-856-6885) (EIC:4F7)
RIFLE, 5.56 MM, M16A1 (1005-00-073-9421) (EIC:4FC)



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HEADQUARTERS, DEPARTMENTS OF THE ARMY AND
AIR FORCE, COMMANDANT, COAST GUARD

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JUNE 1991

HEADQUARTERS, DEPARTMENTS OF THE ARMY
AND AIR FORCE
COMMANDANT, COAST GUARD
Washington, DC 19 June 1991

Unit and Direct Support Maintenance Manual
(Including Repair Parts and Special Tools List)
RIFLE, 5.56MM, M16
(1005-00-856-6885)
RIFLE, 5.56MM, M16AI
(1005-00-073-9421)

Current as of 7 January 1991

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know.

Army users mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000.

Air Force users submit AFTO Form 22, Technical Order System Publications Improvement Report and Reply to: WR-ALC/MMDET, Robins AFB, GA 31098-5609.

Coast Guard users submit Publications Correction/Change Report form CG 4394 to: Commandant, U.S. Coast Guard (G-ODO-2), Washington, DC 20593-0001.

A reply will be furnished to you.

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*This manual supersedes TM 9-1005-249-24&P, dated 25 November 1983, including all changes and TO 11W3-5-5-24 dated 10 February 1972.

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HOW TO USE THIS MANUAL

Read this manual carefully before performing required maintenance. This manual will be referred to for Inspection/Maintenance and Repair procedures.

GENERAL

There are several things you need to know to use this manual efficiently.

1. All references in the manual are to pages only. Reference to maintenance procedures is to the page where the respective initial setup appears.
2. Illustrations for the maintenance procedures show only those parts affected by the operation being performed.
3. Whenever the male gender is mentioned in the manual (i.e., crewman, repairman), it also pertains to females.
4. When the term "evacuate to support maintenance" is used, the entire rifle must be evacuated.

INDEXES

This manual is organized to help you find the information you need quickly. There are several useful indexes.

1. Front Cover Index. Lists the most important areas of the manual. It is keyed to areas with bleed-to-edge indicators.
2. Table of Contents. Lists in order all chapters, sections, and appendixes. Gives page references.
3. Nomenclature Cross-References List.
4. Chapter Overviews. Summarize material covered in the chapter. Are located at the beginning of each chapter.
5. Symptom Index. Located just before the troubleshooting table in each maintenance chapter. Lists, in alphabetical order, parts of the rifle with possible malfunctions. References pages of the troubleshooting table.
6. Alphabetical Index. Located at the end of the manual. An extensive subject index for everything in the manual. Gives page references.

MAINTENANCE PROCEDURES

There are two maintenance chapters:

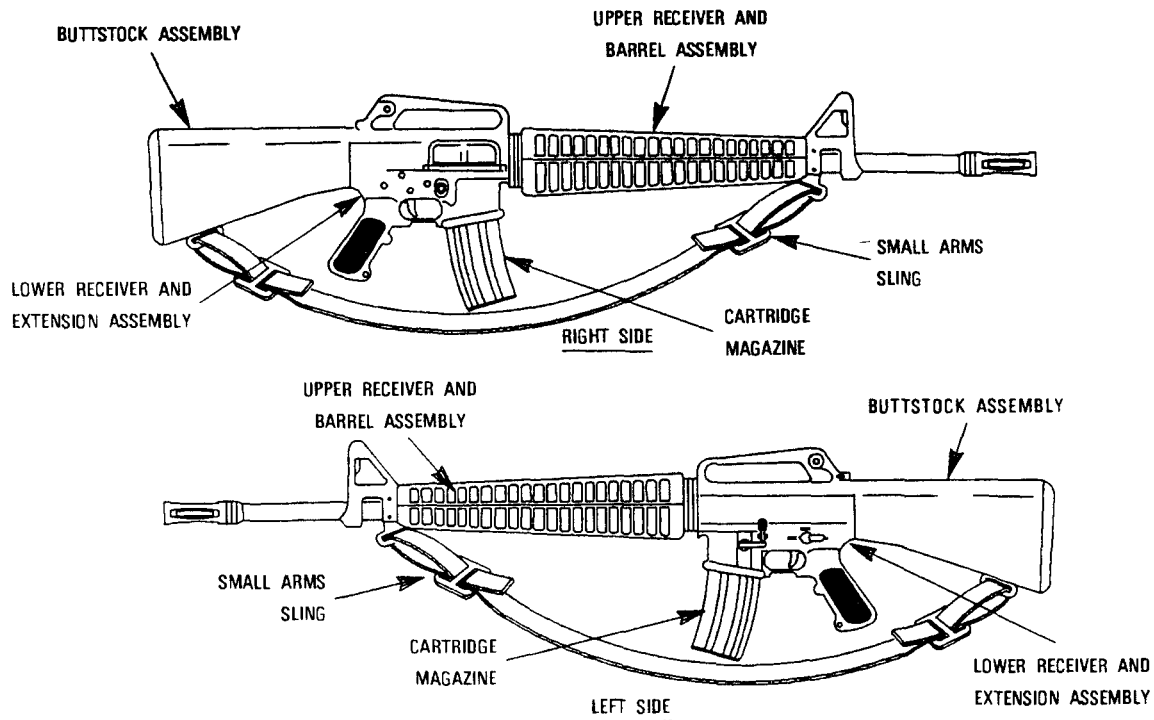
Army personnel use chapter two for unit maintenance procedures and chapter three for direct support maintenance procedures.

Air Force personnel: Only Air Force Specialty Code 753XX Combat Arms Training and Maintenance (CATM) specialists, technicians, and gunsmiths are authorized to perform maintenance procedures contained in this manual.

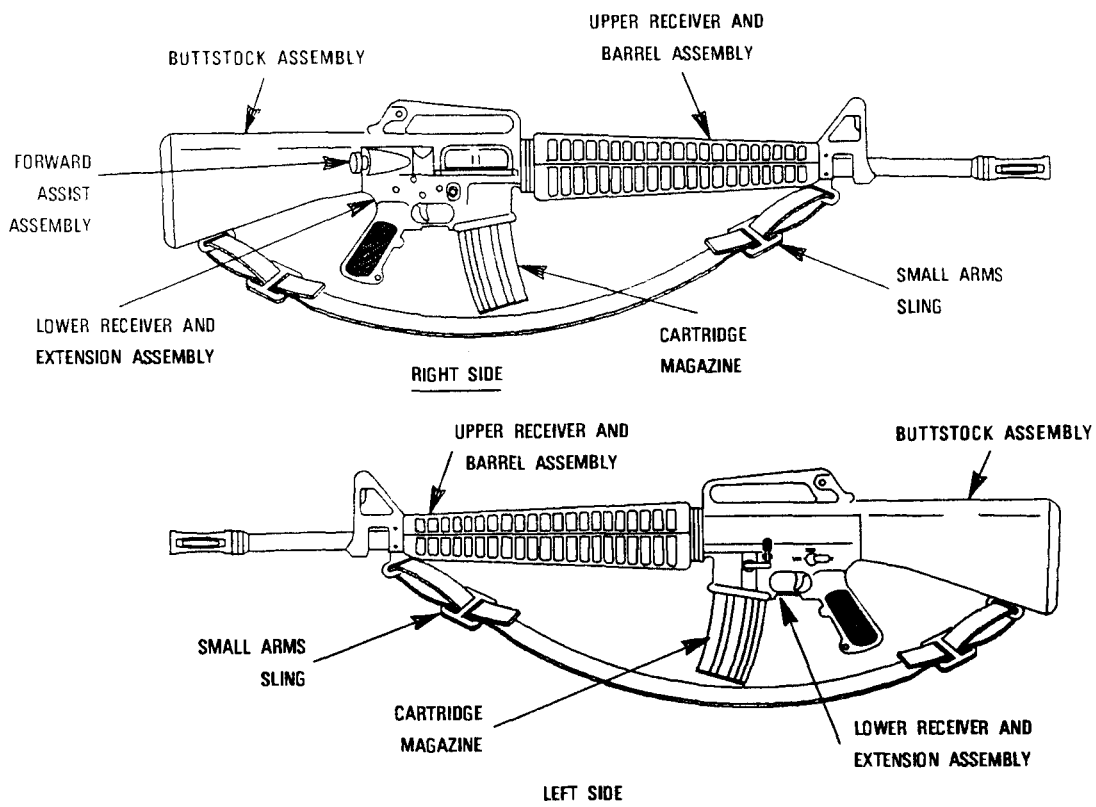
Each maintenance task has an initial setup containing a list of the following things you will need in order to do your maintenance task:

1. Tools and Special Tools. For standard and special tools, see appendixes B and C. Army uses the Tool Set, Gage Set and/or Shop Set listed in the initial setup.
2. Materials/Parts. Lists expendable materials and 100 percent replaceable parts. Each material or part is followed by a part number or appendix reference.
3. References. Lists other publications containing necessary information.
4. Equipment Condition. Lists conditions to be met before starting the procedure. The reference on the left of the condition is a page reference to instructions for setting up the condition.
5. General Safety Instructions. Lists safety instructions to follow before performing maintenance procedures.

EXTERNAL VIEW OF 5.56MM RIFLE M16



EXTERNAL VIEW OF 5.56MM RIFLE M16A1



CHAPTER 1

INTRODUCTION

CHAPTER OVERVIEW

This chapter contains general information equipment description and data and principles of operation for your weapon.

Section I. GENERAL INFORMATION

1-1. SCOPE.

- a. **Type of Manual:** Unit and Direct Support Maintenance.
- b. **Model Number and Equipment Name:** 5.56mm Rifle M 16 and M16A1.
- c. **Purpose of Equipment.** Provides personnel an offensive/defensive capability to engage targets for field use.

1-2. 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, The Army Maintenance Management System.

Air Force users refer to TO 11 W 1-10 for applicable forms and records.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. See TM 750-244-7.

1-4. PREPARATION FOR STORAGE OR SHIPMENT. Refer to chapter 4, paragraph 4-7. Air Force users refer to Special Packaging Instructions (SPI) 00-856-6885.

1-5. OFFICIAL NOMENCLATURE, NAMES AND DESIGNATIONS.

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
Action Spring	Helical Compression Spring (8448629)
Bolt Catch Spring	Helical Compression Spring (8448633)
Carrier	Key and Bolt Carrier Assembly (8448505)
Disconnecter Spring	Helical Compression Spring (8448594)
Ejector Spring	Helical Spring (8448516)
Extractor Spring Assembly	Spring Assembly (8448755)
Hammer Spring	Helical Torsion Spring (8448611)
Magazine Catch Spring	Helical Compression Spring (8448637)
Pistol Grip	Rifle Grip (9349127)
Pivot Pin Detent	Takedown Detent (8448585)
Trigger Spring	Helical Torsion Spring (8448593)
Weapon	5.56mm Rifle M 16 (8448600) or M 16A1 (8448500)

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). If your rifle 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. Put it on SF 368 (Product Quality Deficiency Report). Mail it to us at Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD-I, Rock Island, IL 61299-6000. We'll send you a reply.

Air Force users submit Materiel Deficiency Report (MDR) to: DIR MAT MGT ROBINS AFB GA//MMIBTC// and Product Quality Deficiency Report to: DIR MAT MGT ROBINS AFB GA//MMQA// IAW Technical Order 00-35D-54.

Coast Guard users submit PQDRs (SF 368) in accordance with COMDTINST M4855.1 to: Commandant, U.S. Coast Guard (G-ODO-2), Washington, DC 20593-0001.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. Characteristics.

- | | |
|------------------|----------------------------|
| (1) Lightweight | (4) Magazine-fed |
| (2) Air-cooled | (5) Semi or automatic fire |
| (3) Gas-operated | |

b. **Capabilities.** Provides personnel an offensive/defensive capability to engage targets while in the field role.

c. Features.

(1) Receivers are made of light-weight aluminum alloys; however, the safety, durability, and function of the rifles are in no way reduced. The portability and logistical values are greatly increased, particularly when air transport is used.

(2) The bolt locking action is one of the mechanical features of the weapon. The bolt and barrel extension contains locking lugs which engage and lock the bolt firmly in the barrel extension. The initial force of the explosion of the cartridge propellant is absorbed by the barrel, barrel extension, and bolt.

(3) The trigger guard is easily adaptable to winter operations. A spring-loaded retaining pin is depressed to allow ready access to the trigger when wearing arctic mittens.

(4) The ejection port cover prevents dirt or sand from getting into the ejection port. The cover must be closed during periods when firing is not anticipated. It opens automatically by the forward or rearward movement of the bolt carrier.

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

- (A) **CHARGING HANDLE ASSEMBLY.** Provides a means of charging the weapon.
- (B) **BOLT CARRIER ASSEMBLY.** Carries bolt to chamber and fires the weapon. Contains the firing pin, extractor, bolt, ejector, and cam pin.
- (C) **UPPER RECEIVER AND BARREL ASSEMBLY.** Rifle barrel assembly is air-cooled, contains flash suppressor and front sight assembly, and holds the two hand guards and the sling swivel. Upper receiver contains rear sight, ejection port and cover, and a housing for the bolt carrier and bolt assembly. A forward assist assembly is used on the M16A1 weapon.
- (D) **LOWER RECEIVER AND EXTENSION ASSEMBLY.** Lower receiver contains the trigger assembly, sear hammer assembly, selector lever, rifle grip, bolt catch, and buttstock assembly. The buttstock assembly houses the action spring, buffer assembly, and extension assembly.
- (E) **CARTRIDGE MAGAZINE.** 30 round cartridge capacity.
- (F) **SMALL ARMS SLING.** The small arms sling is adjustable and provides a means to carry the weapon.

