

TM 9-1005-212-25

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL, DS, GS AND DEPOT MAINTENANCE
MANUAL INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LISTS

MACHINE GUN, CALIBER .30: BROWNING, M1919A4,
FLEXIBLE W/E (1005-672-1643)

MACHINE GUN, CALIBER .30: BROWNING,
M1919A6 W/E (1005-611-6005)

MACHINE GUN, CALIBER .30: M37
(1005-716-2946)

MOUNT, TRIPOD, MACHINE GUN: CALIBER .30, M2, W/E
(1005-322-9718)



HEADQUARTERS, DEPARTMENT OF THE ARMY

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CALIBER .30, M2, W/E

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This manual is current as of 28 May 1969.

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*This manual supersedes TM 9-1005-212-12P, 22 July 1964, including changes, TM 9-1005-212-35, 7 September 1965, including changes and TM 9-1005-241-35, 25 October 1965, including changes.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual contains instructions for organizational, direct support, general support and depot maintenance. They apply to the Caliber .30 Machine Guns, M1919A4, M1919A6 and M37 (with and without sights); and Machine Gun Tripod Mount, M2.

1-2. Forms and Records

a. General. DA Forms and procedures used for equipment maintenance will be only those prescribed in TM 38-750, Army Equipment Record Procedures.

b. Recommendations for Equipment Publications Improvements. Report of errors, omis-

sions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to:

Commanding General
Headquarters
U. S. Army Weapons Command
ATTN: AMSWE-SMM-P
Rock Island, Illinois 61201

1-3. Administrative Storage

Requirements for administrative storage of this equipment are contained in TM 740-90-1.

Section II. DESCRIPTION AND DATA

1-4. Description

a. Caliber .30 Machine Guns, M1919A4 and M1919A6. For the description and over-all views of the machine guns refer to TM 9-1005-212-10.

b. Caliber .30 Machine Gun, M37 (with and without sights). The machine gun (figure 1-1) is an automatic and air-cooled weapon. It is designed mainly for the secondary armament on combat vehicles (fixed application without sights); or as a tripod mounted ground machine gun (flexible application with sights) by the Marine Corps.

c. Machine Gun Tripod Mount, M2. For the description and over-all view of the mount refer to TM 9-1005-212-10.

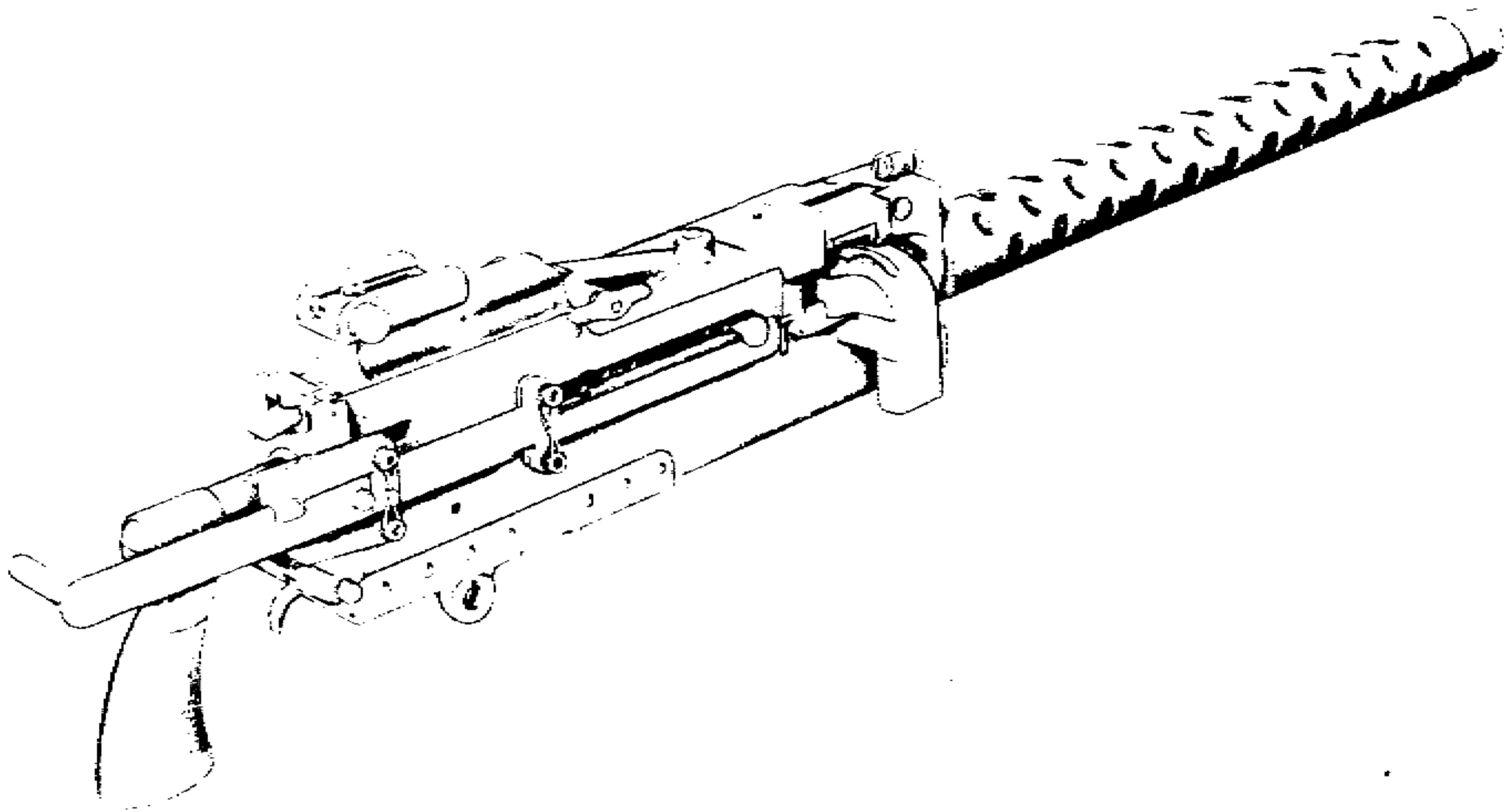
1-5. Tabulated Data

a. Caliber .30 Machine Guns, M1919A4 and M1919A6. For tabulated data on the machine guns refer to TM 9-1005-212-10.

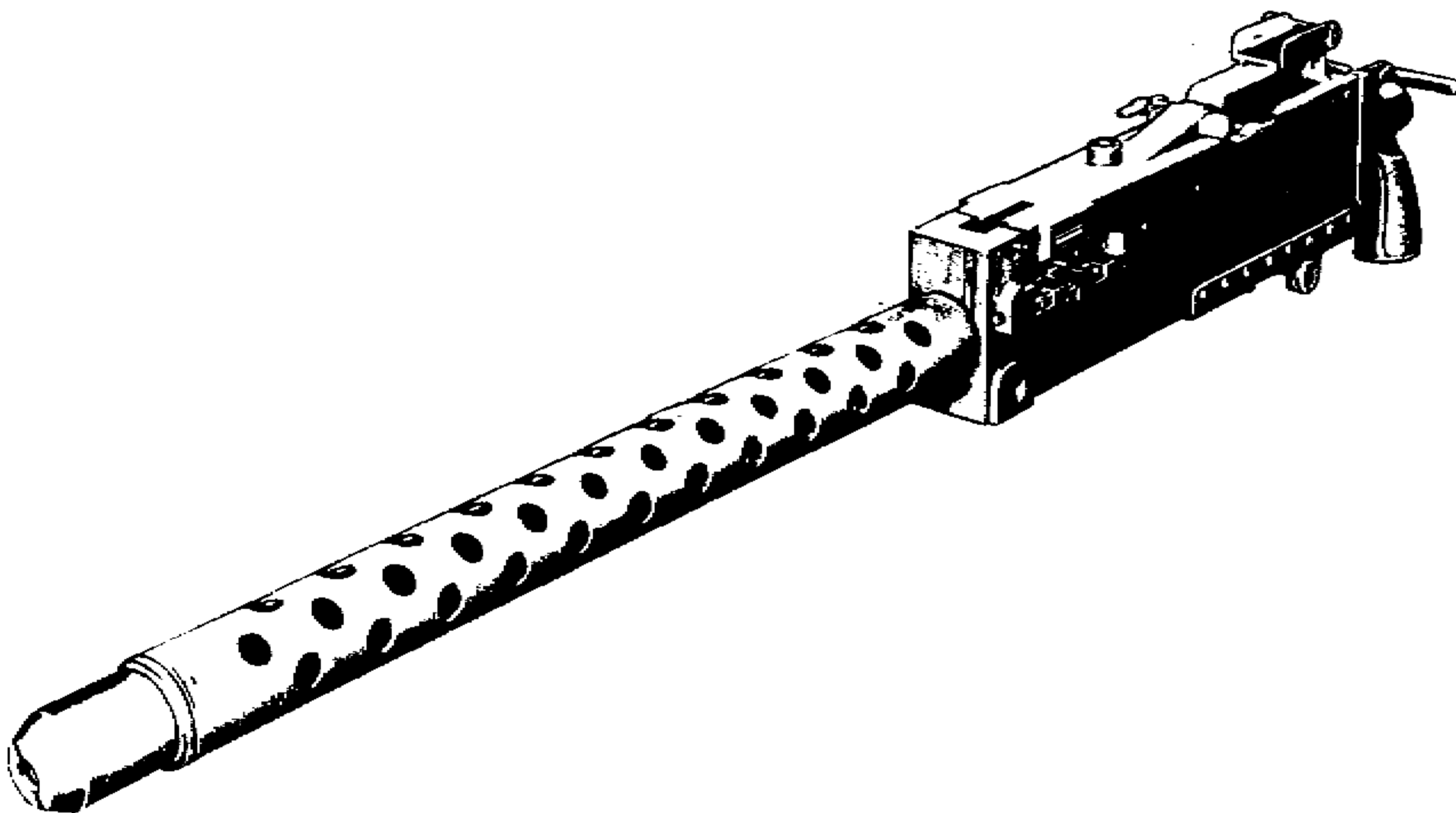
b. Caliber .30 Machine Gun, M37.

Weight	31 lbs approx
Length of weapon	41 3/4 in
Length of barrel	24 in
Feed	metallic link belt
Rate of fire	400 to 550 rds per min
Type of operation	recoil
Trigger pull:	
Maximum	12 lbs
Minimum	7 lbs

c. Machine Gun Tripod Mount, M2. For tabulated data on the mount refer to TM 9-1005-212-10.



A - RIGHT REAR VIEW WITH SIGHTS



B - LEFT FRONT VIEW W/O SIGHTS

WE G250

Figure 1-1. Caliber .30 Machine Gun, M37.

CHAPTER 2

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

2-1. General

The procedures contained in table 2-1 will be observed by organizational maintenance when receiving new or rebuilt weapons and mounts before issuance to using troops.

Table 2-1. Service Upon Receipt of Materiel

Step	Action	Reference
1	Remove machine gun or tripod mount, and items from containers.	
2	Check for missing items. <i>Note.</i> Items must agree with Basic Issue Items List.	TM 9-1005-212-10 or pertinent vehicle operator's manual

Table 2-1. Service Upon Receipt of Materiel—Continued

Step	Action	Reference
3	Remove VCI bore tube from barrels.	
4	Field strip machine gun and inspect for: Missing parts Proper assembly	TM 9-1005-212-10 or pertinent vehicle operator's manual
5	Clean and lubricate, if necessary.	TM 9-1005-212-10 or pertinent vehicle operator's manual
6	Re-assemble <i>Note.</i> Install spare barrel assembly to make certain it locks securely.	
7	Adjust headspace.	TM 9-1005-212-10
8	Function, using dummy cartridges.	or pertinent vehicle operator's manual

Section II. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

2-2. Special Tools and Equipment

Refer to appendix B, section IV, for special tools and equipment that are required by organizational maintenance to maintain the machine gun and mount.

Note. Spare parts box 7148549 is issued only when the

Machine Gun, M1919A4 is used as vehicle armament. Spare parts box 7148550 is issued only with the Machine Gun, M37.

2-3. Maintenance Repair Parts

Organizational repair parts are listed and illustrated in appendix B, section III.

Section III. LUBRICATION

2-4. General

Refer to TM 9-1005-212-10 for lubrication of Machine Guns, M1919A4 and M1919A6 and

Tripod Mount, M2 and pertinent vehicle operator's manual for lubrication of Machine Gun, M37.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

2-5. General

Refer to table 2-2 for preventive maintenance

checks and services to be performed by organizational maintenance.

Table 2-2. Preventive Maintenance Checks and Services

Organizational Maintenance Category		Monthly Schedule (or quarterly)	
Sequence number	Item to be inspected	Procedure	Reference
	General condition	<p><i>Note.</i> During periods of inactivity perform preventive maintenance every 90 days unless inspection reveals more frequent servicing is necessary.</p> <p>Inspect protective coatings for effectiveness. Check for missing, loose, or damaged parts, tools, or equipment. Check to insure compliance with cleaning and lubrication instructions.</p>	TM 9-1005-212-10 or pertinent vehicle operator's manual

Section V. TROUBLESHOOTING

2-6. General

a. Refer to table 2-3 for information useful in diagnosing and correcting unsatisfactory operation or failure of the machine gun and mount. Each malfunction stated is followed by a list of

probable causes. The corrective action recommended is described opposite the probable cause.

b. Malfunctions which may occur for operator and crew are listed in TM 9-1005-212-10 or pertinent vehicle operator's manual.

Table 2-3 Organizational Troubleshooting

Malfunction	Probable cause	Corrective action
	Machine Gun	
1. Failure to feed	<ul style="list-style-type: none"> a. Defective belt feed lever b. Defective extractor assembly c. Defective belt feed pawl spring d. Defective belt feed pawl e. Defective belt feed slide f. Defective belt holding pawl g. Defective belt holding pawl spring h. Defective cover latch spring i. Defective belt feed lever pin j. Defective extractor plunger or spring k. Defective extractor cam l. Defective cover latch m. Defective feed pawl 	<p><i>Note.</i> For malfunctions encountered but not listed, or if corrective action does not remedy condition, notify direct support maintenance.</p> <ul style="list-style-type: none"> a. Replace b. Replace c. Replace d. Replace e. Replace f. Replace g. Replace h. Replace i. Replace j. Evacuate to direct support maintenance k. Evacuate to direct support maintenance l. Evacuate to direct support maintenance m. Replace
2. Failure to chamber	<ul style="list-style-type: none"> a. Defective T-slot b. Defective recoil plate c. Defective extractor feed cam 	<ul style="list-style-type: none"> a. Replace bolt b. Replace bolt c. Evacuate to direct support maintenance
3. Failure to lock	<ul style="list-style-type: none"> a. Defective breech lock b. Defective breech lock cam c. Defective accelerator d. Defective T-lug stud 	<ul style="list-style-type: none"> a. Evacuate to direct support maintenance b. Evacuate to direct support maintenance c. Evacuate to direct support maintenance d. Evacuate to direct support maintenance

Table 2-3. Organizational Troubleshooting—Continued

Malfunction	Probable cause	Corrective action
4. Failure to fire	a. Defective firing pin b. Defective trigger c. Sear spring weak or broken d. Faulty engagement of firing pin and sear notch e. Defective firing pin spring f. Improper timing g. Defective barrel extension	a. Replace b. Replace c. Replace d. Replace e. Evacuate to direct support maintenance f. Evacuate to direct support maintenance g. Evacuate to direct support maintenance
5. Failure to unlock	a. Defective breech lock b. Faulty breech lock cam clearance	a. Evacuate to direct support maintenance b. Evacuate to direct support maintenance
6. Failure to extract	a. Defective T-slot b. Defective extractor	a. Replace breechbolt b. Replace
7. Failure to eject	a. Defective firing pin b. Defective ejector c. Defective ejector spring	a. Replace b. Evacuate to direct support maintenance c. Evacuate to direct support maintenance
8. Failure to cock	a. Defective cocking lever b. Defective firing pin sear notch c. Defective cocking lever pin d. Defective sear e. Defective sear spring	a. Replace b. Replace c. Replace d. Replace e. Replace
9. Uncontrolled automatic fire	a. Defective sear b. Defective trigger c. Defective firing pin	a. Replace b. Replace c. Replace
10. Failure to load	a. Defective belt holding pawl or spring b. Defective feed pawl or spring c. Defective belt feed lever	a. Replace b. Replace c. Replace
11. Ruptured primers	Elongated firing pin hole	Replace breechbolt
12. Sluggish operation	a. Improper timing b. Burred parts Tripod Mount	a. Evacuate to direct support maintenance b. Remove burrs
1. Failure to traverse	a. Defective traversing handwheel b. Defective traversing and elevating mechanism assembly	a. Evacuate to direct support maintenance b. Evacuate to direct support maintenance
2. Machine gun not secured to mount	a. Defective quick release pin b. Defective pintle lock c. Defective traversing and elevating mechanism assembly d. Defective tripod mount pintle	a. Evacuate to direct support maintenance b. Evacuate to direct support maintenance c. Evacuate to direct support maintenance d. Evacuate to direct support maintenance
3. Legs fail to stay open or locked	a. Defective sleeve latch b. Defective sleeve lock spring	a. Evacuate to direct support maintenance b. Evacuate to direct support maintenance

Section VI. ORGANIZATIONAL MAINTENANCE PROCEDURES

2-7. General

Inspect components for rust, corrosion, burrs, scored areas or foreign matter and remove. Inspect springs for deformation and replace if necessary. Inspect for damage to threads of screws, bolts, and other components. Inspect for appearance, proper assembly and functioning. Repair or replace unserviceable parts as authorized.

Note. Maintenance of some groups and assemblies are not authorized by the maintenance allocation chart (app C) to organizational maintenance. Insure that no work is being accomplished beyond the scope authorized to organizational maintenance. Evacuate to direct and general support maintenance for repairs when necessary.

2-8. Removal/Installation of Major Groups and Assemblies

Refer to TM 9-1005-212-10 for procedures on removal and installation of major groups and assemblies of Caliber .30 Machine Guns, M1919A4 and M1919A6 and Tripod Mount, M2. Instructions for Caliber .30 Machine Gun, M37 are contained in the pertinent vehicle operator's manuals.

2-9. Disassembly/Assembly of Major Groups and Assemblies

Disassemble/assemble in accordance with illustrations in appendix B. Refer to figure 2-1 for use of socket wrench 6147277 to remove barrel bearing from Machine Guns, M1919A6 and M37.

2-10. Cleaning, Inspection and Repair*a. Cleaning.*

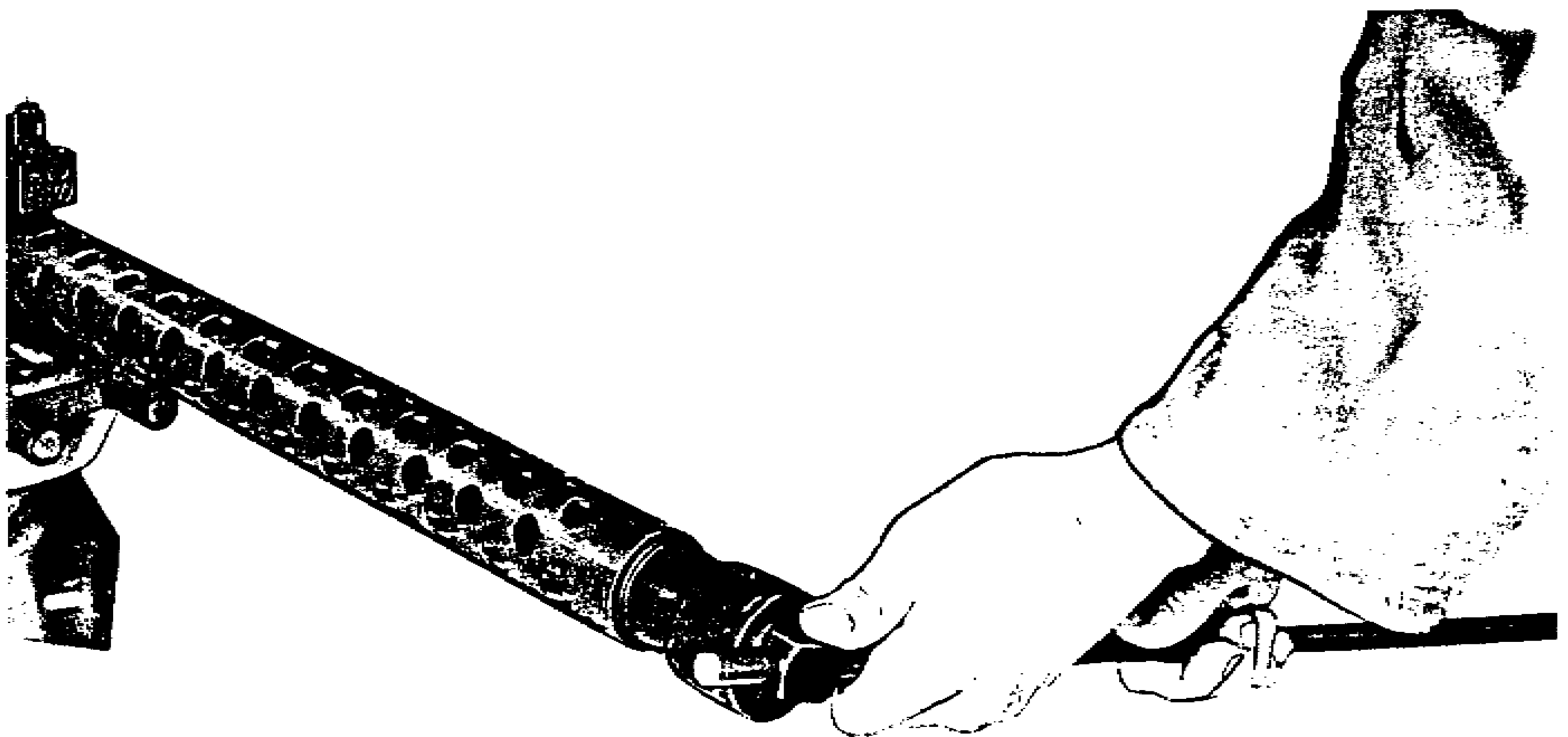
Note. During periods of inactivity, clean and lubricate every 90 days unless inspection reveals more frequent servicing is necessary.

(1) Refer to TM 9-1005-212-10 for a list of cleaning materials used in conjunction but not issued with this equipment.

(2) For specific cleaning instructions on Machine Guns, M1919A4 and M1919A6, and Tripod Mount, M2, refer to TM 9-1005-212-10.

(3) Refer to the pertinent vehicle operator's manual for instructions on cleaning Machine Gun, M37.

(4) On component parts which contain a hard carbon residue it may be necessary to clean



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Figure 2-1. Use of socket wrench.