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TM 9-1005-224-50

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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DEPOT MAINTENANCE MANUAL

7.62-MM MACHINEGUN M60

AND

MACHINEGUN TRIPOD

MOUNT M122



HEADQUARTERS, DEPARTMENT OF THE ARMY
AUGUST 1962

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7.62-MM MACHINEGUN M60 AND MACHINEGUN TRIPOD MOUNT M122

		Paragraph	Page
CHAPTER	1. INTRODUCTION		
Section	I. General	1-4	8
	II. Description	5,6	6-10
CHAPTER	2. TOOLS AND EQUIPMENT	7-10	11
CHAPTER	3. INSPECTION	11-13	18
CHAPTER	4. GENERAL OVERHAUL PROCEDURES	14-21	19,20
CHAPTER	5. OVERHAUL OF THE MACHINEGUN		
Section	I. General	22,23	21
	II. Barrel assembly with bipod assembly	24-28	21-24
	III. Trigger mechanism group	29-33	24,25
	IV. Butt stock assembly	34-36	26
	V. Forearm assembly	37-39	26,27
	VI. Cover assembly and tray assembly groups	40-44	27-30
	VII. Buffer and operating rod group	45-49	30-32
	VIII. Bolt assembly	50-52	32,33
	IX. Receiver group	53-55	33-35
CHAPTER	6. OVERHAUL OF MACHINEGUN TRIPOD MOUNT M122		
Section	I. General	56,57	37
	II. Elevating and traversing mechanism	58-61	37,38
	III. Platform and pintle group	62-64	38,39
	IV. Tripod group	65-67	40-42
CHAPTER	7. PROOF- AND FUNCTION-FIRING OF THE GUN		
Section	I. General	68	43
	II. Boresighting and inspection prior to firing	69-71	43
	III. Function-firing	72,73	44
CHAPTER	8. FINAL INSPECTION	74-76	45
CHAPTER	9. PREPARATION FOR STORAGE	77-79	47
APPENDIX	I. REFERENCES		48
APPENDIX	II. MAINTENANCE ALLOCATION CHARTS		51
INDEX		52

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This technical manual contains instructions for depot maintenance of the 7.62-mm machinegun M60 and machinegun tripod mount M122. It contains descriptions of and procedures for removal, disassembly, inspection, overhaul, assembly, and installation of the gun and mount groups or assemblies.

b. Appendix I contains a list of current references, including supply manuals, forms, technical manuals, and other available publications applicable to the depot maintenance of the gun and mount. Appendix II contains a reference to appendix II of TM 9-1005-224-12, which contains maintenance allocation charts.

c. TM 9-1005-224-12 contains instructions for operation and organizational maintenance and TM 9-1005-224-34 contains instructions for field maintenance of the gun and mount.

d. This first edition is being published in advance of complete technical review. Any errors or omissions will be forwarded on DA Form 2028 direct to the Commanding Officer, Raritan Arsenal, Metuchen, New Jersey, ATTN: SSMRA-OPRA.

2. Depot Maintenance Allocation and Parts

a. The depot maintenance allocation is indicated in the maintenance allocation chart contained in TM 9-1005-224-12.

b. Repair parts are listed in TM 9-1005-224-34P. Additional depot maintenance repair parts will be listed in TM 9-1005-224-35P, when published. Parts not listed in TM 9-1005-224-35P, but required by depot shops in overhaul operations, may be requisitioned and will be supplied, if available. Requisitions for these parts will contain a complete justification of requirements. When feasible, local fabri-

cation and/or local purchase may be resorted to for those parts unable to be supplied.

3. Forms, Records, and Reports

a. *General.* Responsibility for the proper execution of forms, records, and reports rests upon the officers of all units maintaining this equipment. However, the value of accurate records must be fully appreciated by all persons responsible for their compilation, maintenance, and use. Records, reports, and authorized forms are normally utilized to indicate the type, quantity, and condition of materiel to be inspected, to be repaired, or to be used in repair. Properly executed forms convey authorization and serve as records for overhaul of materiel in Ordnance shops. The forms, records, and reports establish the work required, the progress of the work within the shops, and the status of the materiel upon completion of overhaul.

b. *Authorized Forms.* The forms generally applicable to depot maintenance shops overhauling this equipment are listed in appendix I. For instructions when to use these forms, refer to FM 9-4 and TM 38-750. For a listing of all forms, refer to DA Pam 310-2.

c. *Report of Unsatisfactory Equipment or Materials.* Any deficiencies detected in the equipment covered herein, which occur under the circumstances indicated in AR 700-38, should be immediately reported in accordance with applicable instructions in cited regulations.

4. Overhaul Flow Chart and Operations Route Sheet

a. *Overhaul Flow Chart.* The overhaul flow chart, shown in figure 1, is to be used by depot maintenance organizations to assist in establishing a proper flow of work

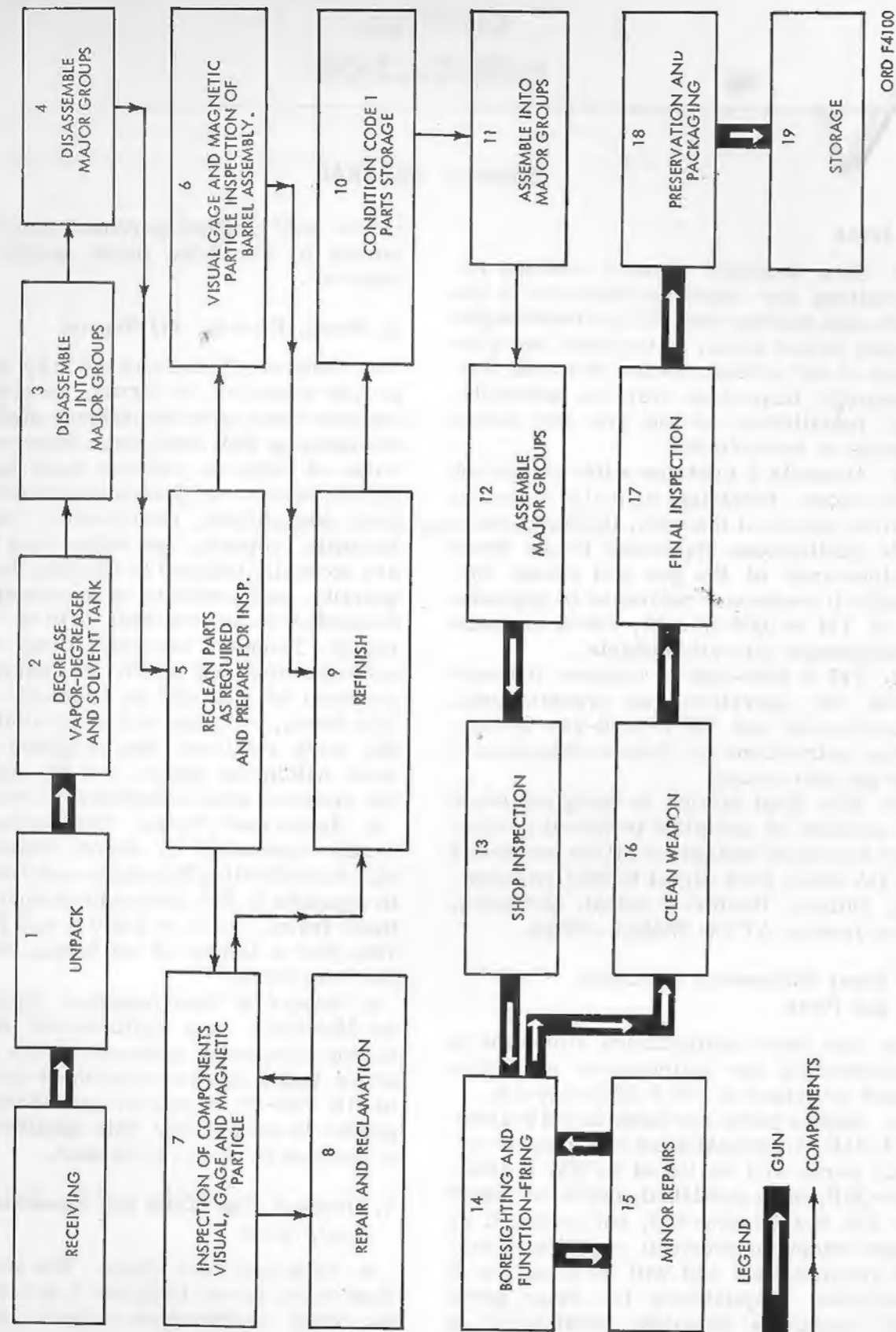


Figure 1. Overhaul flow chart for gun and mount.

to assure most expeditious and economical shop operation.

b. *Operations Route Sheet.* The operations route sheet, table I, supplements the overhaul flow chart (fig. 1). The operation numbers correspond to the numbers on the

chart. Special and fabricated tools, equipment, gages, fixtures, and machines required for an operation are indicated opposite the operation. Detailed instructions for each of the operations are contained in pertinent sections covering the specific operation.

Table I. Operations Route Sheet for Gun and Mount

Operation No.	Operation	Special and fabricated tools, gages, fixtures, and equipment
1	Unpack	
2	Degrease	Vapor degreaser for metal parts. Solvent tank, process C-3 of MIL-P-116, for rubber coated parts
3	Disassemble into major groups	
4	Disassemble major groups	Assembling Tool, Buffer: (7269361) or fixture, bolt buffer assembly (fabricated)
5	Reclean parts as required and prepare for inspection.	Vapor degreaser for metal parts. Solvent tank, process C-3 of MIL-P-116, for rubber coated parts
6	Inspect (barrel assembly)	Fluorescent magnetic particle inspection equipment. Bolt, Field Test: (7799699) Gage, Headspace: 1.636 (7274744)
7	Inspect (remaining component)	Fluorescent magnetic particle inspection equipment. Gage, Plug, Plain Cylindrical: firing pin hole, 0.108 (7458598)
8	Repair	Fixture, sear notch, operating rod. Dispose of un-serviceable parts
9	Refinish	
10	Parts storage	Maintenance record
11	Assemble into major groups	Assembling Tool, Buffer: (7269361) or fixture, bolt buffer assembly (fabricated) Fixture Assembly, gasket (fabricated) Gage, Firing Pin Protrusion (7274754)
12	Assemble major groups	Fixture, Measuring, Trigger Pull: (7274758) Reamer, finishing (fabricated)
13	Shop inspection	Same as 12 above Gage, Plug, Plain Cylindrical: firing pin hole, 0.108 (7458598) Gage, Firing Pin Protrusion: (7274754)
14	Boresighting and function-firing	Test firing fixture 7273925 or approved equal Modified cal. .30 borescope
15	Minor repair	
16	Clean	
17	Final inspection	Kit, Barrel Erosion Gage: M8 (5910297) Bolt, Field Test: (7799699) Gage, Headspace: 1.636 (7274744) Gage, Plug, Plain Cylindrical: firing pin hole, 0.108 (7458598) Gage, Firing Pin Protrusion: (7274754) Fixture, Measuring, Trigger Pull: (7274758)
18	Preservation and packaging	
19	Storage	

Section II. DESCRIPTION

5. Description

a. *7.62-mm Machinegun M60.* The machinegun (figs. 2 through 4) is a belt-fed, gas-operated, automatic weapon. For a complete overall description and tabulated data, refer to TM 9-1005-224-12 and TM 9-1005-224-34. The description outlined in (1) through (8) below is of value to depot maintenance personnel.

Note: The key numbers shown in parentheses in (1) through (8) below refer to figure 4.

(1) *Barrel assembly with bipod assembly (1).* The barrel assembly with bipod assembly consists of a barrel with gas cylinder attached, front sight, flash suppressor, bipod assembly, gas cylinder nut, gas cylinder extension, piston, and washers. The barrel is a seamless, rifled, stellite lined cylindrical tube with the gas cylinder as an integral part. The muzzle end has two slots milled to position the front

sight and is threaded to secure the flash suppressor. A small hole is drilled in the center of the barrel and gas cylinder which serves as a gas port. The breech end of the tube is chambered to receive a 7.62-mm cartridge. The socket portion of the barrel cams and locks the bolt when the weapon is fired. Directly above the gas port are two leveling pads for positioning a clinometer. The bipod assembly consists of a yoke, two screws, retainers, springs, plungers, and two telescoping leg assemblies which can be released from horizontal position and secured in a vertical position in order to support the gun when firing in the prone position.

(2) *Trigger mechanism group (2).* The trigger mechanism group consists of a retaining pin, sear, sear

plunger, trigger mechanism safety, safety plunger, trigger assembly, trigger housing, and two helical compression springs. The trigger mechanism is designed to control the firing of the gun.

(3) *Butt stock assembly (3).* The butt stock assembly is of aluminum and steel construction riveted together and bonded with rubber coating. The butt stock assembly contains a shoulder rest to help support the gun when firing from an upright, sitting, or prone position. It has a latch device that engages the buffer to secure the butt stock to the gun. A sling swivel is provided on the lower front area to accommodate the sling.

(4) *Forearm assembly (4).* The forearm assembly is a ventilated cover, for protection against a hot barrel, with a swivel provided to fasten the sling. It is of aluminum and steel

construction riveted together with the aluminum portion bonded with rubber coating.

(5) *Cover assembly and tray assembly groups (5).*

(a) *Cover assembly.* The cover assembly consists of the following components: feed cam assembly, feed lever assembly, front and rear cartridge guides, feed pawl assembly, headless grooved pin, snap ring latch assembly, and cover housing assembly.

1. The feed cam assembly provides the means for the bolt actuator to transmit movement to the feed lever assembly.

2. The feed lever assembly controls the action of the feed cam assembly.

3. The front and rear cartridge guides hold the ammunition in position to allow the bolt to strip a round from the link.



Figure 2. 7.62-mm machinegun M60 on machinegun tripod mount M122 - right side view.



Figure 3. 7.62-mm machinegun M60 - left front view.

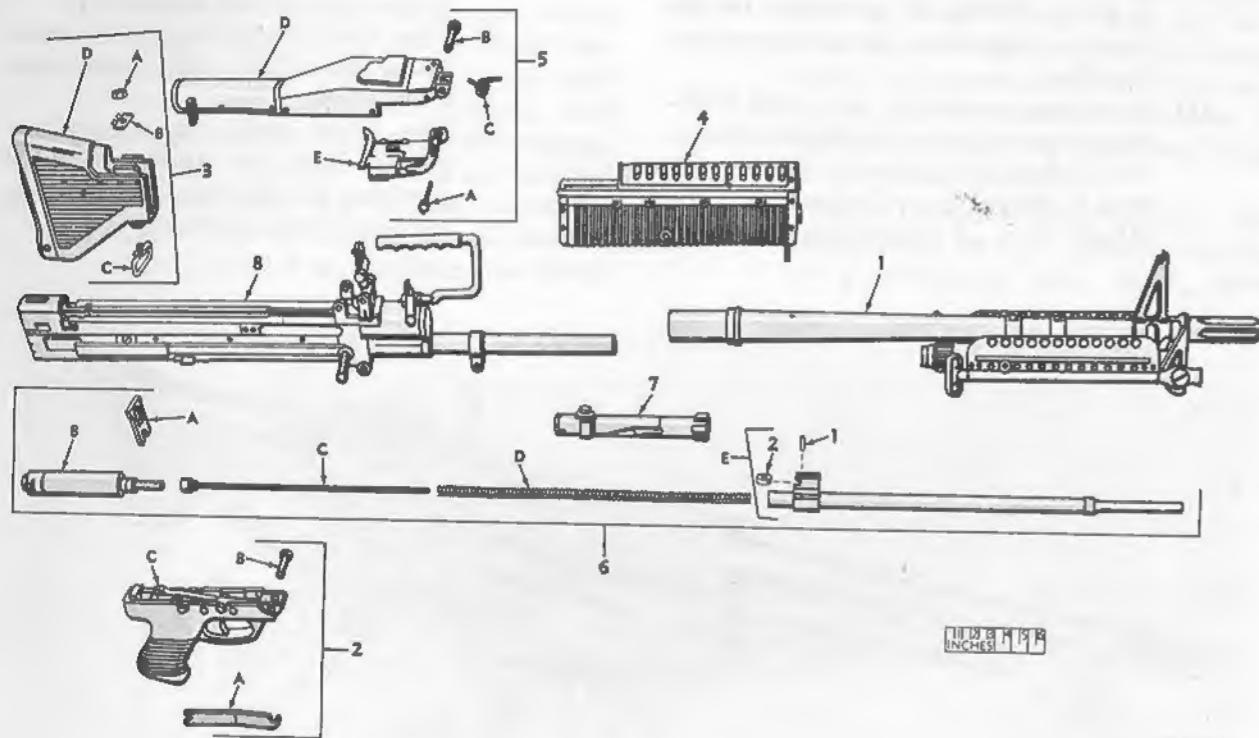
4. The feed pawl assembly moves the cartridge into position for chambering.
5. The headless grooved pin is used to secure the guides in place on the cover housing.
6. The latch assembly secures the cover assembly when in the closed position.
7. The cover housing assembly houses all components of the cover assembly.

(b) *Tray assembly.* The tray assembly guides the cartridge and belt into the proper position and

assists the cover assembly to position the cartridge for chambering. It consists of a pawl cartridge shaft, two feed cartridge rollers, a cartridge retainer pawl, torsion helical spring, and cartridge tray frame.

(6) *Buffer and operating rod group (6).*

(a) The buffer group consists of the following components: buffer lock, cap in, cover, four springs, cap, packing, four cap pads, plunger, preformed packing gasket, and housing. The buffer lock is not a component of the buffer



ORD F820

- 1 - Barrel assembly with bipod assembly 7269027
- 2 - Trigger mechanism group
 - A - Spring 7269245
 - B - Pin 7269205
 - C - Trigger mechanism grip assembly 7269202
- 3 - Butt stock assembly 7269304
 - A - Nut MS35650-103
 - B - Washer 7269189
 - C - Swivel 7269188
 - D - Frame 7269305
- 4 - Forearm assembly 7269168
- 5 - Cover assembly and tray assembly groups
 - A - Latch 7269243
 - B - Pin 7269247

- C - Spring 7269301
- D - Cover assembly 7269114
- E - Tray assembly 7269308
- 6 - Buffer and operating rod group
 - A - Yoke 7269344
 - B - Buffer assembly 7269096
 - C - Guide assembly 7269199
 - D - Spring 7269303
 - E - Operating rod assembly 7790943
 - 1 - Pin 7790941
 - 2 - Roller 7790942
- 7 - Bolt assembly 7269064
- 8 - Receiver group

Figure 4. Major groups or assemblies of the machinegun.

assembly. The buffer acts to dampen the recoil shock of the gun during firing.

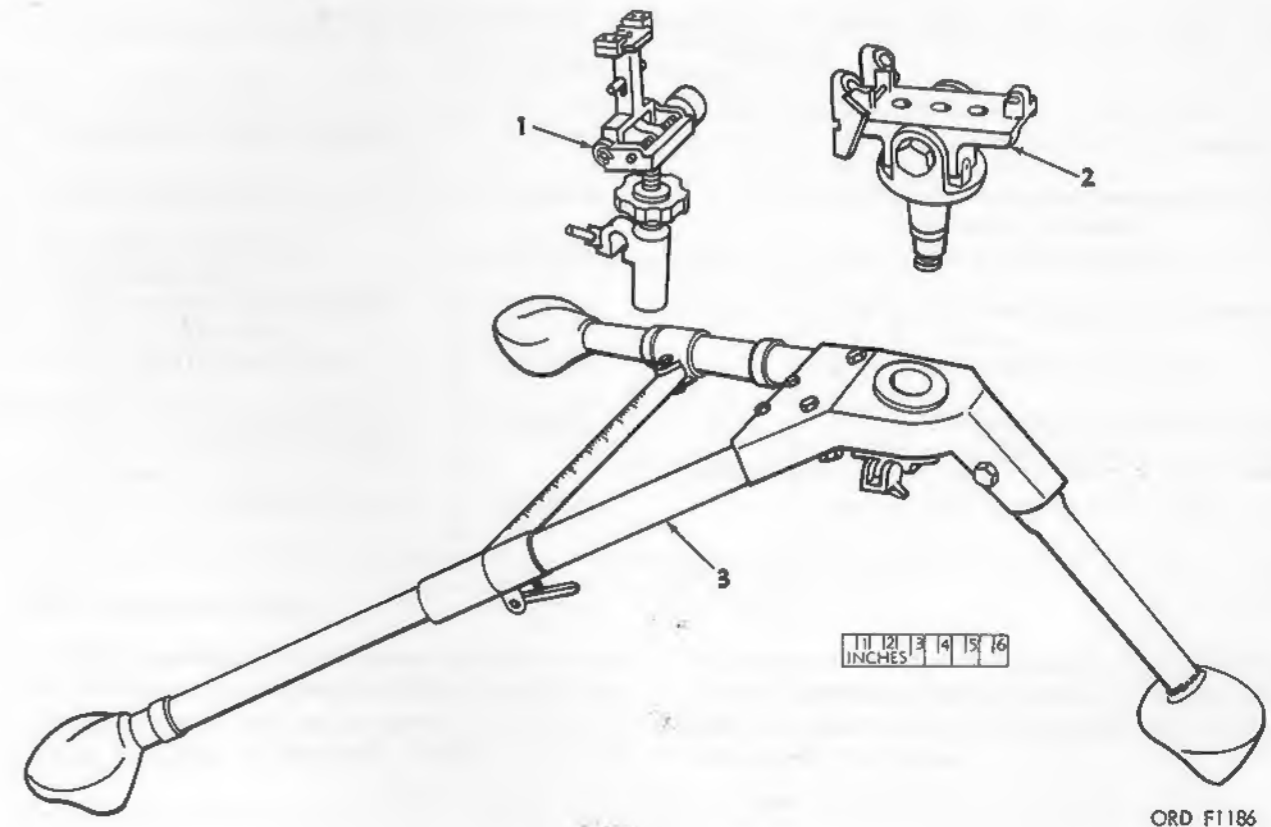
(b) The operating rod group consists of the following components: a headless straight pin, yoke roller, body, driving spring, and guide. The operating rod assembly does not include the spring and guide.

(7) *Bolt assembly (7).* The bolt assembly consists primarily of the firing pin, two retaining pins, three springs, an extractor, plunger, ejector, plug, bearing, actuator assembly, and bolt.

(8) *Receiver group (8).* The receiver group consists primarily of the receiver, rear sight, barrel locking lever, carrying handle, cocking

handle, and magazine bracket group. The receiver has guides that hold the bolt and operating rod in position. The receiver also houses the buffer assembly. The rear sight is held in position by a dovetail slot at the forward end of the receiver. The carrying handle and barrel locking lever are located at the top and forward end of the receiver. The receiver also has an oriface to install the barrel. The cocking handle is located on the right side of the receiver and is attached by means of a removable guide.

b. *Machinegun Tripod Mount M122.* The machinegun tripod mount M122 (figs. 2 and 5) is a portable, folding-type mount used



ORD F1186

- 1 - Elevating and traversing mechanism 7791119
- 2 - Platform and pintle group
- 3 - Tripod group

Figure 5. Major groups of mount.

in conjunction with the 7.62-mm machine-gun M60, when desired. The mount consists of an elevating and traversing mechanism, a platform and pintle group, and a tripod group.

6. Groups, Mechanisms, or Assemblies

a. The groups or assemblies listed in table II constitute the major groups or assemblies of the machinegun.

b. The groups listed in table III constitute the major groups of the mount.

Table II. Major Groups or Assemblies of the Machinegun

Identifying No.	Description	Figure Reference
7269027	Barrel assembly with bipod assembly	1, fig. 4

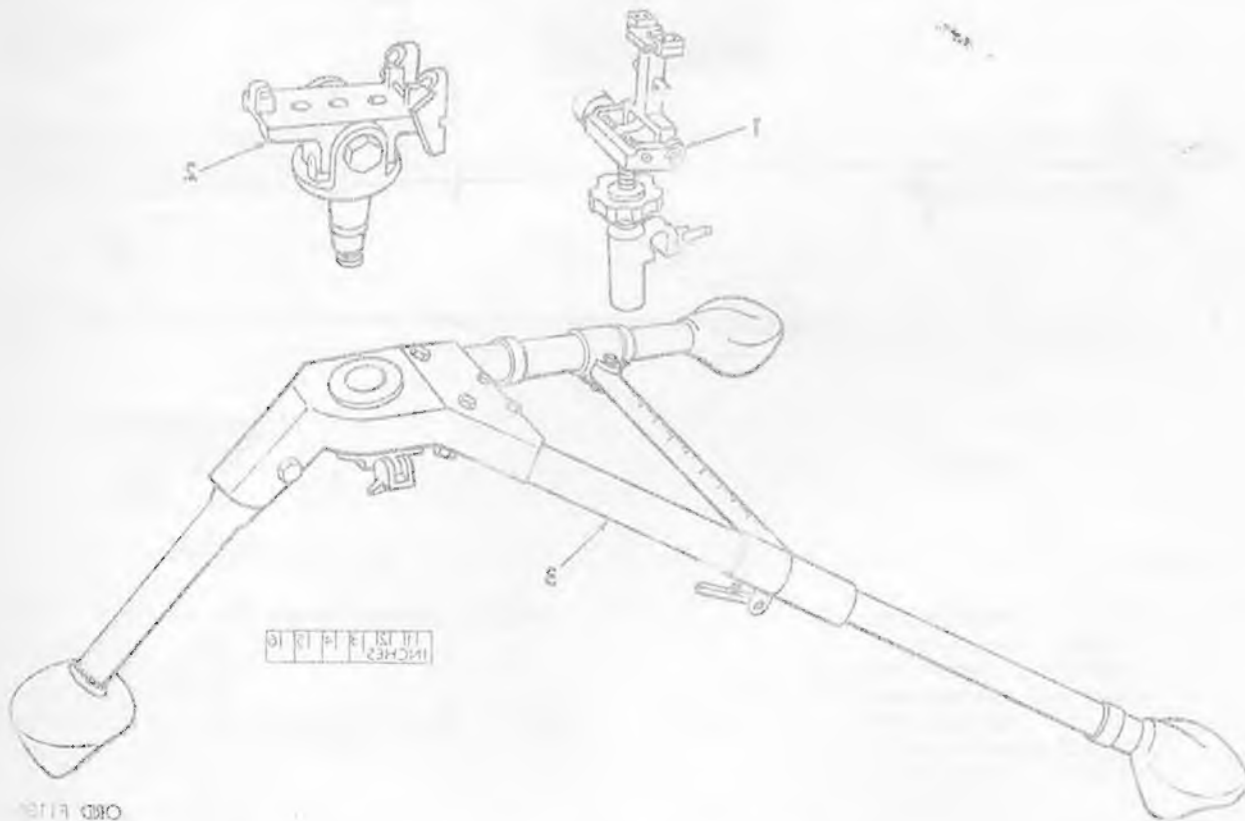


Figure 6. Major groups of mount.
1 - Elevating and traversing mechanism 7781118
2 - Platform and pintle group
3 - Tripod group

Identifying No.	Description	Figure Reference
No number	Trigger mechanism group	2, fig. 4
7269304	Butt stock assembly	3, fig. 4
7269168	Forearm assembly	4, fig. 4
No number	Cover assembly and tray assembly groups	5, fig. 4
No number	Buffer and operating rod group	6, fig. 4
7269064	Bolt assembly	7, fig. 4
No number	Receiver group	8, fig. 4

Table III. Major Groups of Mount

Identifying No.	Description	Figure Reference
7791119	Elevating and traversing mechanism	1, fig. 5
No number	Platform and pintle group	2, fig. 5
No number	Tripod group	3, fig. 5

CHAPTER 2 TOOLS AND EQUIPMENT

7. General

Tools and equipment over and above those available to the using organization and Ordnance field maintenance units are supplied to depot shops for overhauling the materiel.

8. Common Tools and Equipment

Standard and commonly used tools and equipment having general application to this materiel are listed in SM 9-4-5180 and SM 9-4-4933 series manuals and are authorized for issue by tables of allowances and tables of organization and equipment.

9. Special Tools and Equipment

Special tools and equipment are listed in table IV. They are listed in TM 9-1005-224-34P which is the authority for requisitioning replacements. Additional depot maintenance special tools and equipment will be listed in TM 9-1005-224-35P, when published. This tabulation, containing those special tools and equipment necessary to perform the operation described in this technical manual, is included for information only and is not to be used as a basis for requisitions.

Table IV. Special Tools and Equipment for Depot Maintenance

Item	Identifying No.	References		Use
		Fig.	Par.	
ASSEMBLING TOOL BUFFER:	7267361	-----	46	To assemble and disassemble buffer.
			48	
BOLT, FIELD TEST -----	7799699	9	26	For checking head-space of barrel assembly.
FIXTURE, MEASURING, TRIGGER PULL:	7274758	8	71c	To check trigger pull.
GAGE, FIRING PIN PROTRUSION: 0.035 - 0.043.	7274754	6	71b	For checking firing pin protrusion.
GAGE, HEADSPACE: max. 1.636.	7274744	6	26	For checking headspace.
GAGE, PLUG, PLAIN CYLINDRICAL: single end, not go, 0.108 od.	7458598	6	51	For checking diameter of firing pin hole in bolt.
KIT, BARREL EROSION GAGE: M8.	5910297	7	26	For checking barrel bore wear.

10. Fabricated Tools

The fabricated tools listed in table V and the dimensioned detailed illustrations included herein are to be used to fabricate tools locally, if desired. These tools are

of chief value in overhauling a large number of identical components; however, they are not essential for overhaul and are not available for issue.

Table V. Fabricated Tools for Depot Maintenance

Item	References		Use
	Fig.	Par.	
Borescope, modified, cal. .30 -----	-----	70	To boresight the gun
Fixture assembly, gasket -----	10	48	To assemble gasket in buffer housing.
Fixture, bolt buffer assembly -----	11	46, 48	To assemble and disassemble bolt buffer assembly.

Item	References		Use
	Fig.	Par.	
Fixture, test firing - - - - -	81	73	To hold gun when function-firing. To ream tapered hole in pintle bushing of mount.
Reamer, finishing - - - - -	12	72k	

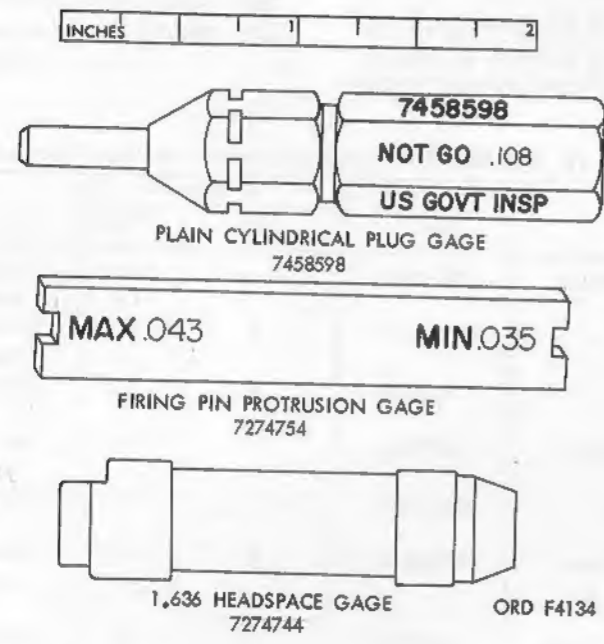


Figure 6. Firing pin protrusion gage 7274754, plain cylindrical plug gage 7458598, and headspace gage 7274744.

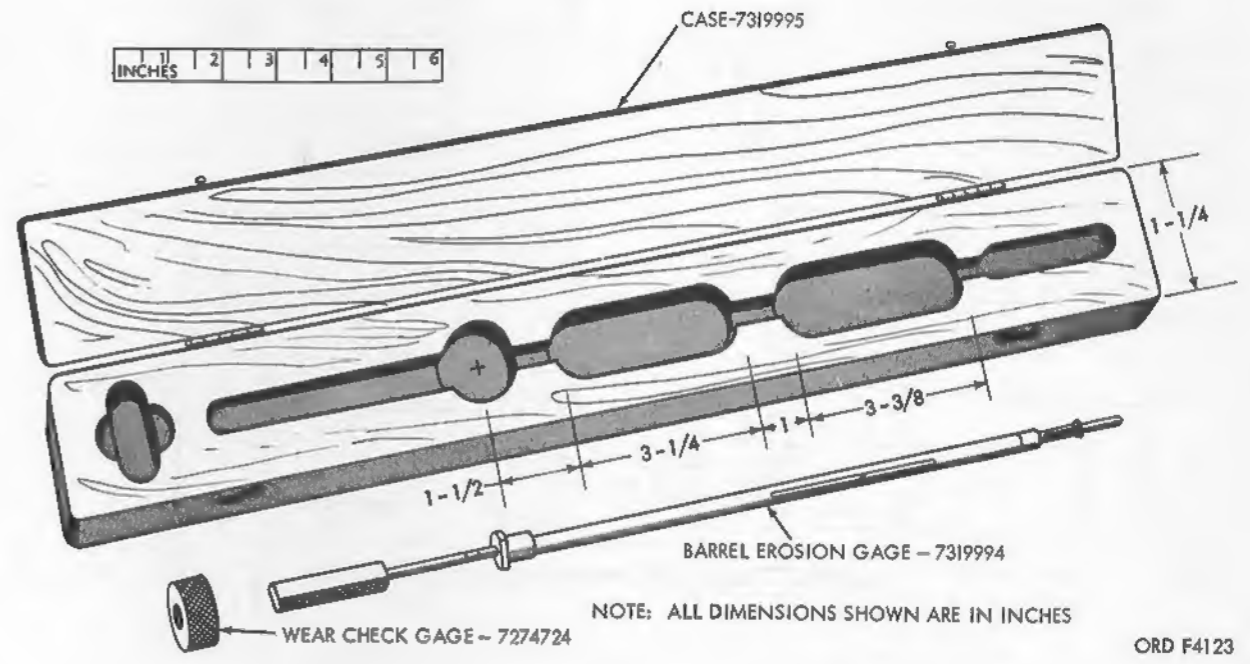


Figure 7. Barrel erosion gage kit M8 5910897.

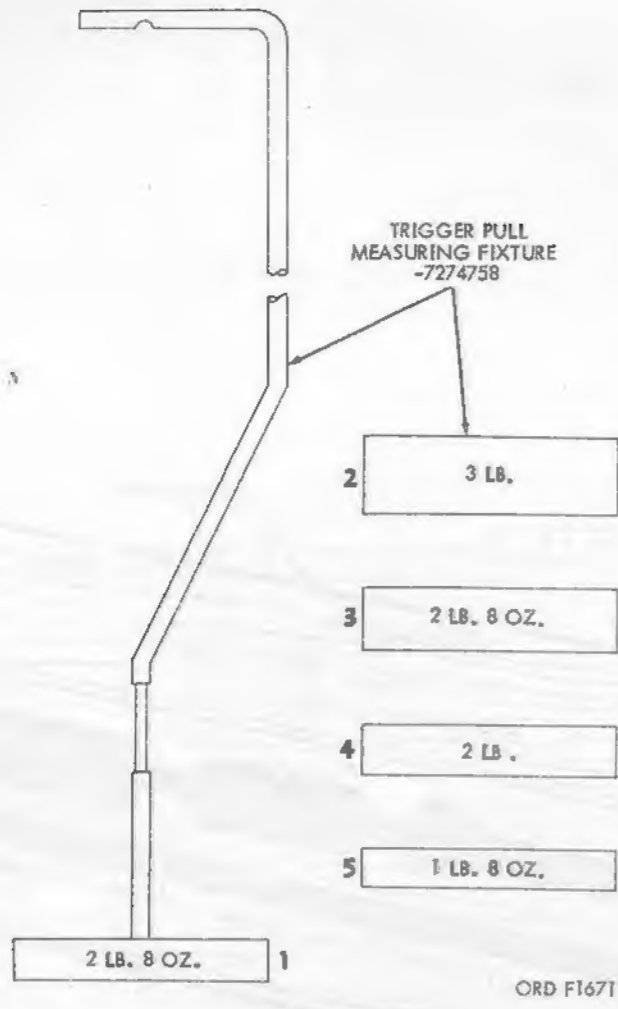
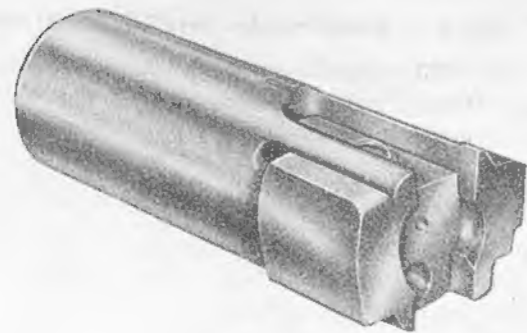


Figure 8. Trigger pull measuring fixture 7274758.



ORD F4396

Figure 9. Field test bolt 7799699.

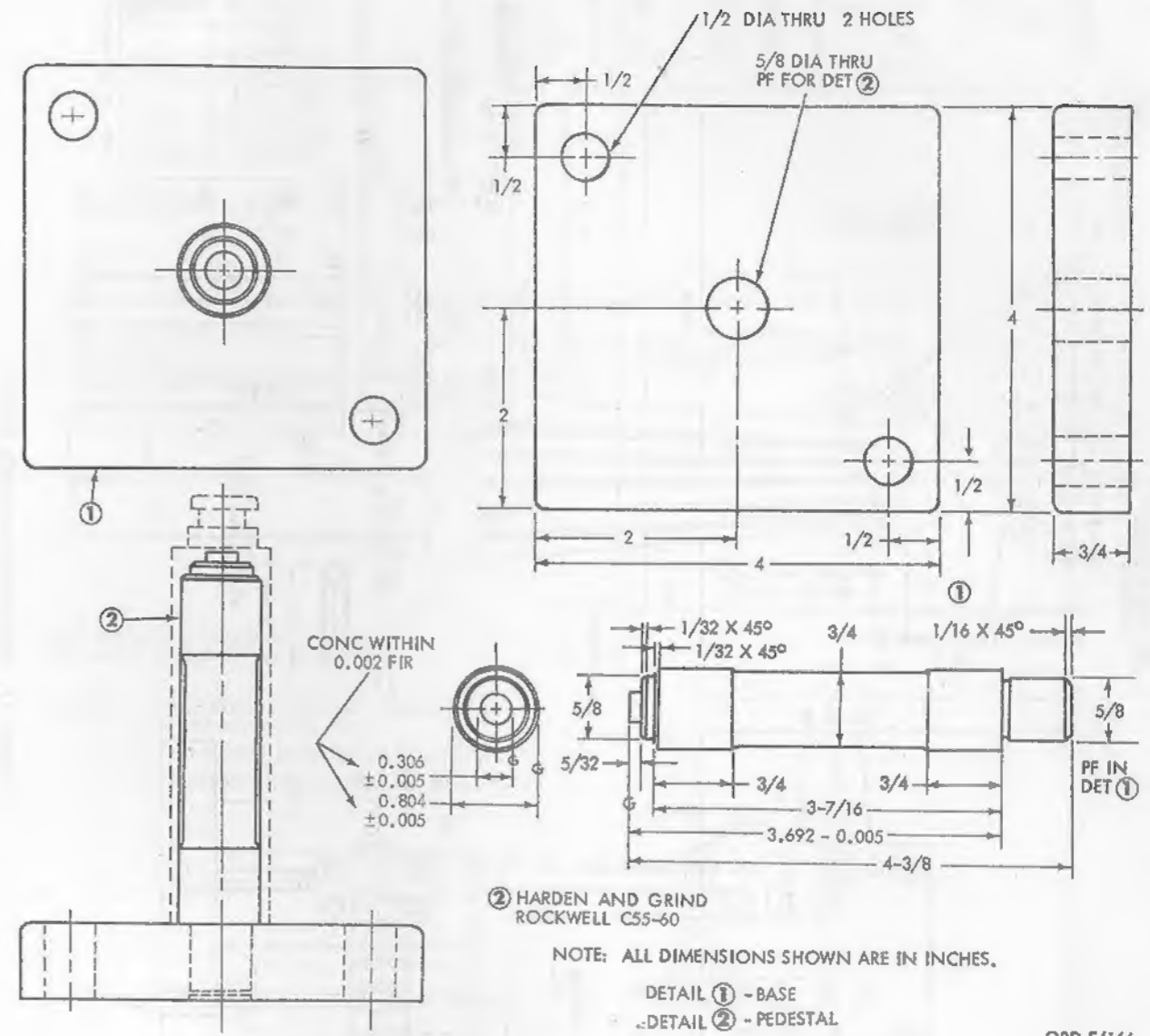


Figure 10. Gasket fixture assembly.

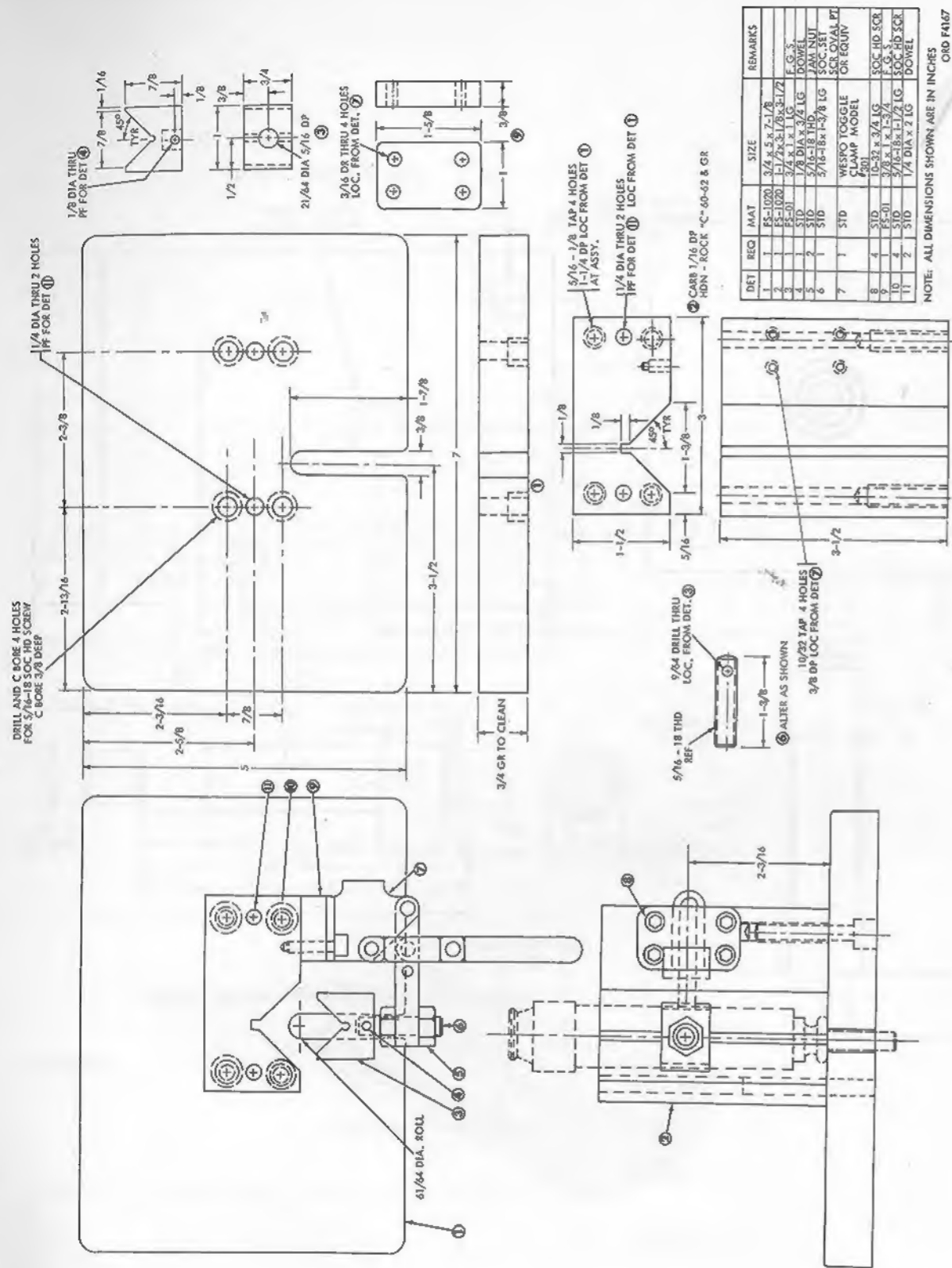
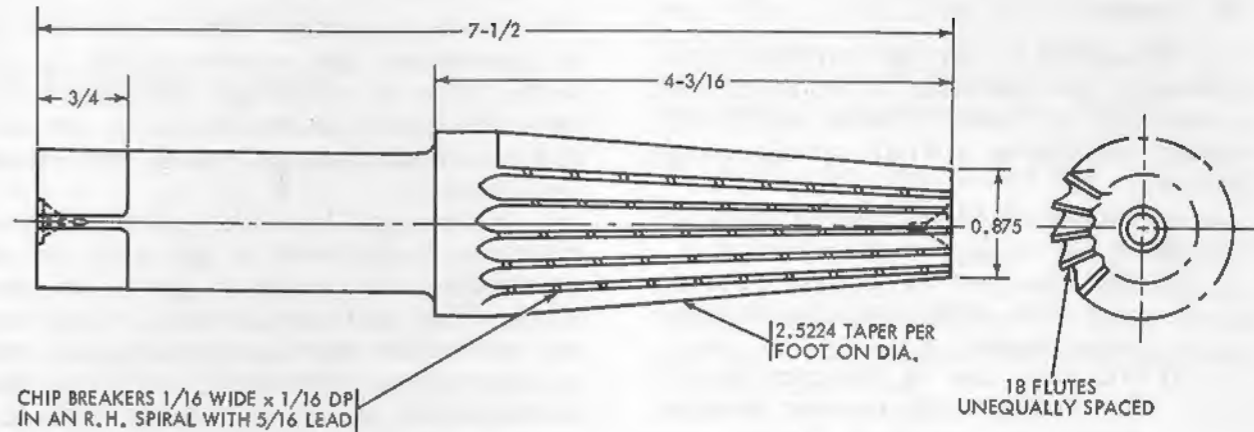


Figure 11. Bolt buffer assembly fixture.



- NOTES: 1. HIGH SPEED STL FIN. H'D'N & GR. NITRIDE AFTER FIN. GR.
2. FRACTIONAL DIMENSIONS ARE NOT MANDATORY.
3. ALL DIMENSIONS SHOWN ARE IN INCHES.

Figure 12. Finishing reamer.

CHAPTER 3 INSPECTION

11. Scope

This chapter briefly describes the purposes of inspection by depot maintenance personnel. It defines the parts inspection and in-process inspection of the materiel during overhaul and also the final inspection after overhaul has been completed.

12. Purpose

a. Inspection is for the purpose of determining the condition of an item, i.e., serviceable or unserviceable and recognizing conditions which would cause failure.

b. Inspection of doubtful parts should be considered as in (1) through (4) below.

- (1) Will the use of the part permit operation without damage to other components?
- (2) Will the use of the part permit functioning in the manner intended within the accuracy limits prescribed?
- (3) Will the part avoid breakdown and continue to operate in a satisfactory manner?
- (4) Can the parts be restored by reclamation processes?

c. If these questions can be answered in the affirmative, the parts will be used. Extreme care will be taken to prevent the discarding of reusable materiel.

Warning: In all cases, the manner of the use of the part in the completed item must be considered.

13. Types

a. *Parts Inspection.* This inspection is to determine the serviceability of all parts prior to finishing. This is to insure that parts which are unserviceable and not repairable will not be processed and finished.

b. *In-Process Inspection.* These are inspections performed in the process of overhauling the major groups or assemblies. This is to insure that all groups and assemblies function properly, conform to prescribed standards, and that the workmanship is in accordance with approved methods and procedures.

c. *Final Inspection.* This is an acceptance inspection by a final inspector after overhaul has been completed, to insure that the weapon is acceptable to the standards established. Detailed requirements are contained in paragraphs 14 through 67.

CHAPTER 4 GENERAL OVERHAUL PROCEDURES

14. General

Only general maintenance procedures are furnished in this chapter because depot maintenance personnel performing repairs should be sufficiently familiar with general maintenance practices to enable them to make repairs without detailed instructions. Detailed overhaul procedures which pertain to the gun and mount are found in paragraphs 22 through 67.

15. Replacement of Parts

a. If a screw will not back out when normal pressure is applied with the screwdriver, do not force it. It may have been staked at assembly. If so, unstake and again insert the screwdriver and exert a slight back and forth pressure. Repeat this process until the screw can be removed by normal pressure.

b. If screws, bolts, washers, or nuts are damaged beyond repair they will be replaced.

c. If a required new part is not available, a reconditioned used part may be substituted. Such reconditioned used parts should be examined carefully to determine their suitability.

16. Finish of Metal

a. Ferrous metal components will be phosphated in accordance with specification MIL-P-16232, type M or type Z, class II, except that the preservative oil used will have water displacing properties, such as MIL-L-644B.

Note: MIL-L-644A oil is not suitable.

b. No "touch-up" techniques will be acceptable except where staking or riveting after assembly is required.

c. Exterior aluminum surfaces shall be coated with black lusterless enamel conforming to Specification TT-E-527a or equal.

d. All metal parts will be free of corrosion. Particular attention will be given

to blind holes and pockets to assure that no evidence of rust, sand, sludge, and other foreign matter is present.

17. Repair of Damaged, Machined, and Polished Surfaces

Rough spots, scores, burs, galling, and gouges will be smoothed so that the part will efficiently perform its normal function. The finish of the repaired part will approximate that of the original finish. In performing any of these operations, critical dimensions will not be altered.

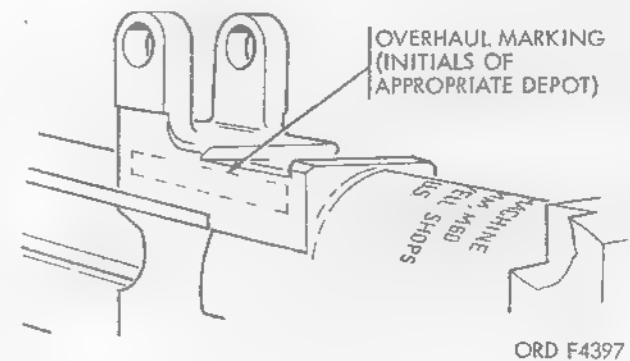
18. Modification Work Orders and Technical Bulletins

The materiel will conform to all MWO's and TB's applicable to the gun and mount. Refer to DA Pam 310-4 for listing of all pertinent modification work orders and technical bulletins.

19. Marking

a. *General.* Each gun and mount will be stamped, in capital letters, with the initials of the appropriate depot EACH TIME it is overhauled.

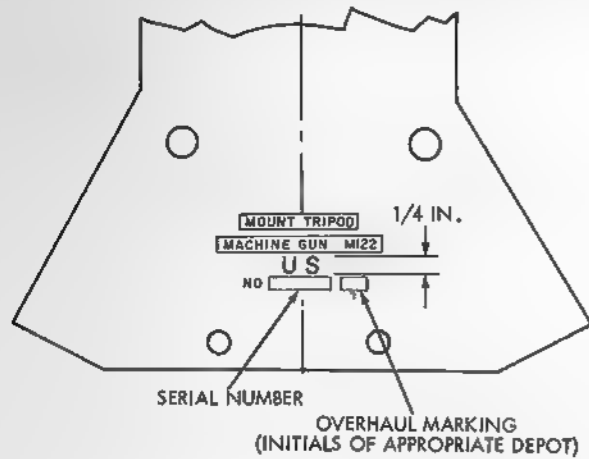
b. *Gun.* The marking for the gun will be located on the right-hand side of the receiver, opposite the serial number as shown in figure 13.



ORD F4397

Figure 13. Marking of gun.

c. *Mount.* The marking for the mount will be located on the tripod head, adjacent to the serial number as shown in figure 14.



NOTE: ALL LETTERING 1/8 IN. HIGH EXCEPT AS NOTED.

ORD F4395

Figure 14. Marking and stamping of mount.

20. Cleaning

a. Any special cleaning instructions required for specific components or parts are contained in pertinent chapters.

b. Vapor degreasing method may be used for cleaning metal parts only.

c. Clean rubber coated parts with process C-3 of MIL-P-116. After cleaning, the parts shall be thoroughly dried.

Caution: Do not vapor degrease rubber coated components.

21. Lubrication

Refer to LO 9-1005-224-10 and TM 9-1005-224-12 for lubrication instructions.

CHAPTER 5 OVERHAUL OF THE MACHINEGUN

Section I. GENERAL

22. Scope

a. Information and instructions contained herein are supplementary to instructions contained in TM 9-1005-224-12 and TM 9-1005-224-34.

b. This chapter contains general and specific maintenance instructions for the repair and overhaul of each major compo-

nent of the gun. In the following sections repairs and overhaul procedures are described in order to restore each major component to a serviceable condition.

23. Direct Labor Man-Hour Time

The average time required to overhaul the complete gun is 3.25 hours.

Section II. BARREL ASSEMBLY WITH BIPOD ASSEMBLY

24. Removal

Remove the barrel assembly with bipod assembly in accordance with instructions contained in TM 9-1005-224-34.

25. Disassembly

Note. The key numbers shown in parentheses in a below refer to figure 15.

a. *Barrel Assembly with Bipod Assembly.*

(1) Remove pin (1) from flash suppressor (2) and unscrew suppressor from barrel assembly (9).

Note. Pin may be removed by driving out with drift or drilling, using a No. 31 drill.

(2) Remove bipod assembly (3).

(3) Remove nut (4) and extension (5) from gas cylinder. Remove the two washers (6) from nut and extension.

(4) Remove piston (7) from gas cylinder.

(5) Remove plug (8) from gas cylinder.

Note. The key numbers shown in parentheses in b below refer to figure 16.

b. *Bipod Assembly.*

(1) Remove screw (1) securing right-hand leg assembly (2) to pivot assembly (8).

(2) Remove two rivets (2A) and key (2B) from right-hand leg assembly (2). Separate foot assembly (2C) from housing assembly (2D).

(3) Remove pin (4), retainer (5), spring (6), and plunger (7) from housing assembly (2D).

(4) Disassemble left-hand leg assembly (3) in accordance with (1) through (3) above.

26. Cleaning, Inspection, and Repair

a. *Cleaning.*

(1) *Barrel assembly.* Refer to paragraph 20 for general cleaning procedures.

(a) Clean the barrel assembly, plug, extension, piston, nut, and suppressor in accordance with process C-11 of MIL-P-116.

(b) Thoroughly clean the bore and chamber of the barrel assembly.

(2) *Bipod assembly.* Refer to paragraph 20 for general cleaning procedures.

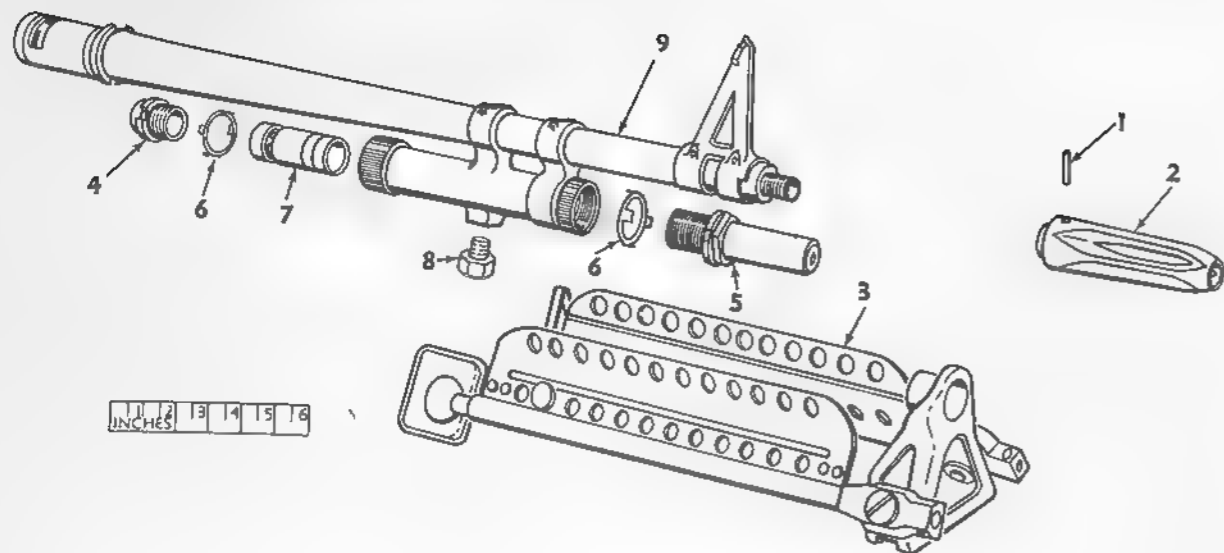
Note. The key numbers shown in parentheses in b below refer to figure 15.

b. *Inspection and Repair.*

(1) *Barrel assembly.*

(a) The flash suppressor (2) will be free of burrs and the threads shall not be visibly damaged.

(b) Each used flash suppressor shall be subjected to fluorescent magnetic particle inspection. The flash suppressor shall be placed



ORD F4101

- 1 - Pin MS 39086-108
- 2 - Flash suppressor 7269034
- 3 - Bipod assembly 7793009
- 4 - Nut 7269031
- 5 - Extension 7269080

- 6 - Washer 7269035
- 7 - Piston 7791247
- 8 - Plug 7790454
- 9 - Barrel assembly 7269028

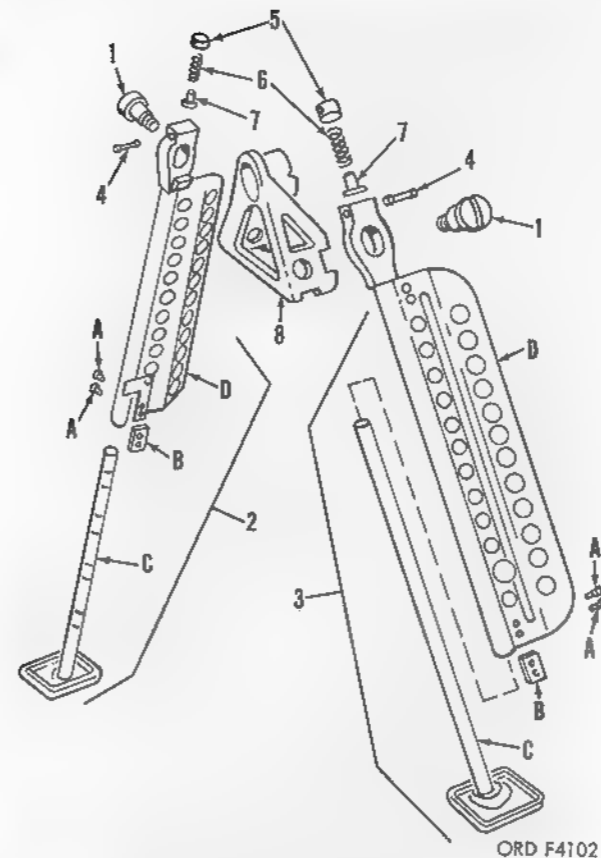
Figure 15. Barrel assembly with bipod assembly - exploded view.

on a 3/8-inch diameter non-ferrous conductor rod, mounted between the contact plates, and magnetized with dc current of 300 to 400 amperes if the continuous wet residual method is used. If the interrupted wet residual method is followed, 600 to 700 amperage shall be used. Any visible crack shall be cause for rejection.

- (c) The nut (4) will be free of visible damage. Threads and wrench flats shall be free of burs.
- (d) The threads and wrench flats of the extension (5) shall be free of burs and visible damage. The $0.40 + 0.003$ diameter bleeder hole shall not be obstructed.
- (e) The two lockwashers (6) shall be free of visible damage or distortion. The locking and ratchet tabs shall be in good physical condition and function as intended.
- (f) The piston (7) shall be free of burs, carbon, chipping or flaking of chrome plating, and visible damage. The minimum piston di-

ameter will not be less than 0.870 inch.

- (g) The threads and wrench flats of the gas cylinder plug (8) shall be free of burs and visible damage. Use only plug 7790454. It can be identified by the 5/8-inch hexagon head.
- (h) The front sight shall not be bent, distorted, or loose on the barrel as determined by visual and manual test. The blade portion shall be free of burs and visible damage. The bipod pivot stop shoulders on the sight shall be free of chipping and cracks.
- (i) The serrations on both ends of the gas cylinder shall not be worn to the degree that will adversely affect retention of the plug and extension. The threads shall not be stripped or visibly damaged. No visible dents shall be allowed on the inside diameter of the piston hole. The cylinder shall not be loose on the barrel, as determined by hand test.
- (j) The barrel bore and chamber



ORD F4102

- 1 - Screw 7269051
- 2 - Right-hand leg assembly 7269047
 - A - Rivet 7269058
 - B - Key 7269057
 - C - Foot assembly 7269061
 - D - Housing assembly 7269062
- 3 - Left-hand leg assembly 7269046
 - A - Rivet 7269058
 - B - Key 7269057
 - C - Foot assembly 7269061
 - D - Housing assembly 7269056
- 4 - Pin 7269048
- 5 - Retainer 7269053
- 6 - Spring 7269052
- 7 - Plunger 7269050
- 8 - Pivot assembly 7790310

Figure 16. Bipod assembly - exploded view.

shall conform to the requirements contained in TB ORD 437. Barrel shall be straight as determined visually. Bore wear shall be checked with barrel erosion gage M8 5910297 (fig. 7). Wear shall not EXCEED the "half life" line on gaging rod. See TB

ORD 644-3 for instructions in the use of above gage.

- (k) Headspace limits shall not exceed 1:636 inch as checked with field test bolt 7799699 (fig. 9) and headspace gage 7274744 (fig. 6). When checking headspace, care must be exercised so as to insert the field test bolt directly in line with the axis of the bore.
 - (l) Any chipping on the functional surfaces of the bolt lug cams or locking shoulders in the socket shall be cause for rejection. Burs will be removed by carefully stoning so as not to adversely alter the original contours.
 - (m) Socket shall be tight on the barrel as determined by visual and manual test.
 - (n) Flash suppressor threads shall not be visibly damaged.
 - (o) Each used barrel shall be subjected to fluorescent magnetic particle inspection with particular attention given to the socket and breech portion. Prior to magnetizing, both the front and rear faces shall be thoroughly cleaned to remove the phosphate coating, corrosion and/or caked carbon, to prevent arcing during the magnetizing operations. The barrels shall be mounted between contact plates and magnetized with 1500 amp dc current. The wet residual method shall be used for examination. Any evidence of cracks shall be cause for rejection.
- (2) Bipod assembly.
- (a) Brazed joints shall be tight. Loose bushings on the pivot assembly or a loose shoe on the foot assembly may be repaired by welding.
 - (b) All parts shall be free of detrimental wear and distortion. The positioning notches in the foot assembly shall be in good visible condition.
 - (c) The threads in the two pivot bushings shall not be visibly damaged.

- (d) The two stop shoulders on the pivot shall not be chipped or cracked.
- (e) Plungers, springs, and pins shall not be visibly damaged and shall function as intended.
- (f) Use *only* the forged pivot (7793010), if available.
- (g) Each used yoke shall be subjected to fluorescent magnetic particle inspection. A standard magnetizing coil with a current of 400 to 600 amperes and the wet residual method shall be used. Particular attention shall be given to the yoke/front sight stop shoulders. Any detectable crack shall be cause for rejection.

27. Assembly

Note. The key numbers shown in parentheses in *a* below refer to figure 16.

a. Bipod Assembly.

- (1) Insert the foot assembly (2C) into the housing assembly (2D) of the right-hand leg assembly (2).
- (2) Position key (2B) in housing assembly.
- (3) Install the two rivets (2A) through the holes in the housing, key, and foot retainer springs and rivet securely.
- (4) Assemble the plunger (7), spring (6), retainer (5), and pin (4).
- (5) Assemble right-hand leg assembly

to pivot assembly (8) with screw (1) and stake securely.

- (6) Assemble left-hand leg assembly (3) in accordance with (1) through (5) above.

Note. The key numbers shown in parentheses in *b* below refer to figure 15.

b. Barrel Assembly.

- (1) Assemble plug (8) into the gas cylinder with a torque of 30 to 35 foot-pounds.
- (2) Assemble washer (6) to extension (5) and screw into front end of gas cylinder.
- (3) Insert piston (7) into gas cylinder.
- (4) Assemble washer (6) to nut (4) and screw into rear end of gas cylinder.
- (5) Install bipod assembly (3) on barrel assembly (9). Screw flash suppressor (2) on barrel until the bipod yoke binds. Unscrew flash suppressor until bipod assembly pivots freely and one prong is at the 6 o'clock position. The gap between the bipod yoke and flash suppressor shall not exceed 0.020 inch. Using a No. 31 drill and the flash suppressor holes as a guide, drill through and install pin (1). Stake securely on both ends.

28. Installation

Install the barrel assembly with bipod assembly in accordance with instructions contained in TM 9-1005-224-34.

Section III. TRIGGER MECHANISM GROUP

29. Removal

Refer to TM 9-1005-224-34 for removal of trigger mechanism group.

30. Disassembly

Note. The key numbers shown below in parentheses refer to figure 17.

- a. Remove pin (1), sear (2), plunger (3), and spring (4).
- b. Remove safety (5), plunger (6), and spring (7).
- c. Remove pin (8) and trigger assembly (9) from housing assembly (10).

d. Drill out stake and remove pin (9A) from trigger assembly.

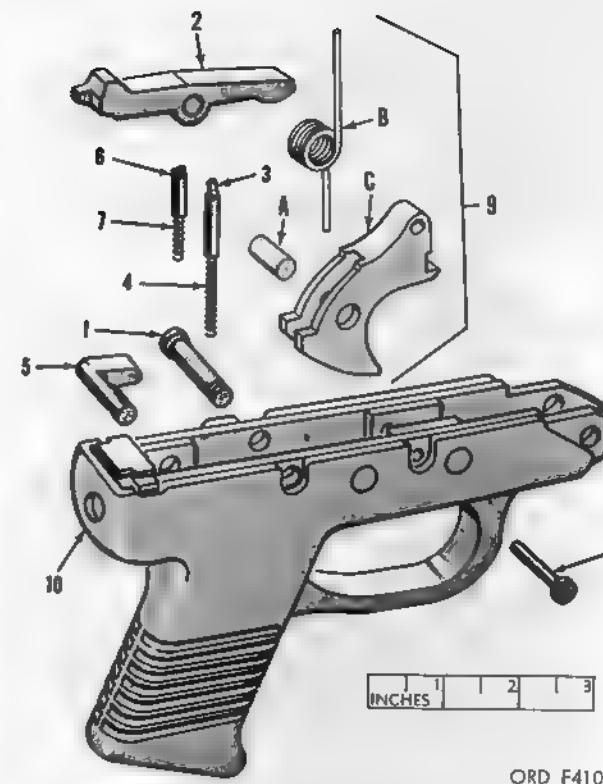
e. Remove spring (9B) from trigger (9C).

31. Cleaning, Inspection, and Repair

a. *Cleaning.* Refer to paragraph 20 for general cleaning instructions.

b. Inspection and Repair.

- (1) The sear pin shall be free of burs and visible damage.
- (2) The sear shall be free of noticeable damage. Particular attention shall

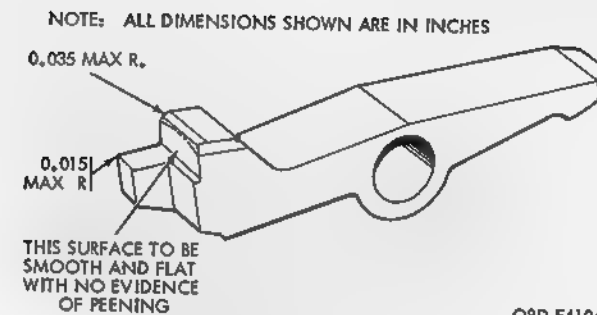


- 1 - Pin 7269205
- 2 - Sear 7269209
- 3 - Plunger 7269207
- 4 - Spring 7269211
- 5 - Safety 7269170
- 6 - Plunger 7269206
- 7 - Spring 7269210
- 8 - Pin 7269204
- 9 - Trigger assembly 7269212
 - A - Pin 7269229
 - B - Spring 7269230
 - C - Trigger 7269228
- 10 - Housing assembly 7269203

Figure 17. Trigger mechanism group - exploded view.

be given to the condition of the safety lug and the cocking notch engaging portion (fig. 18).

- (3) The cocking notch engaging portion shall be free of chipping, deformation, and show no signs of wear beyond original contour as determined visually.
- (4) The safety lug shall be free of burs



ORD F4104

Figure 18. Inspection points for sear.

- and the top rear corner shall be sharp to 0.015 radius (maximum).
- (5) The sear and safety plungers shall be free of visible damage or distortion.
- (6) The sear and safety springs shall be free of pits, corrosion, and distortion.
- (7) Safety shall not be visibly damaged or distorted. The two positioning flats on the shaft portion shall not be worn.
- (8) Trigger pin shall be straight, free of burs, and visible damage.
- (9) Trigger shall not be damaged or distorted.
- (10) Trigger spring shall be free of pits, corrosion, and distortion.

32. Assembly

Note. The key numbers shown below in parentheses refer to figure 17.

a. Assemble spring (9B) and pin (9A) to trigger (9C) and rivet securely. Both ends of pin must be flush or below sides of trigger.

b. Assemble trigger assembly (9), pin (8), spring (7), plunger (6), safety (5), spring (4), plunger (3), sear (2), and pin (1) into housing assembly (10).

33. Installation

Refer to TM 9-1005-224-34 for installation of trigger mechanism group.

Section IV. BUTT STOCK ASSEMBLY

34. Removal and Disassembly

- a. Refer to TM 9-1005-224-34 for instructions on removal and disassembly of the butt stock assembly.
- b. Further disassembly is not necessary except for cannibalization purposes.

35. Cleaning, Inspection, and Repair

- a. *Cleaning.* Refer to paragraph 20 for general cleaning procedures.
- b. *Inspection and Repair.*
 - (1) Butt stock shall be free of dents, distortion, or other visible damage which will restrict normal removal or installation.
 - (2) Shoulder rest shall not be visibly bent or distorted. It shall positively position in both the closed and ex-spring and plunger.
 - (3) All rivets shall exhibit good retention qualities. Loose rivets may be tightened, using an appropriate rivet setting tool.
 - (4) Swivel loop shall not be deformed

and will swivel freely in the screw portion. Threads shall not be stripped.

- (5) Locking tabs on washer shall not be cracked. Nut shall not be visibly damaged.
- (6) Rubber coating shall be free of tears and breaks. Surface mars not exceeding 1/32 inch in depth and one inch in length are acceptable. Other surface scratches or scuffing will be acceptable.

Caution: Do not sand, grit, or vapor blast. Following phosphatizing, dip the assembly in water displacing oil MIL-L-644B. DO NOT USE MIL-L-644A, as this oil does not have water displacing properties and will not displace water that may be trapped in the shoulder rest plunger and spring recess.

36. Assembly and Installation

Refer to TM 9-1005-224-34 for instructions on installation of butt stock assembly.

Section V. FOREARM ASSEMBLY

37. Removal and Disassembly

Refer to TM 9-1005-224-34 for instructions on removal and disassembly of forearm assembly.

38. Cleaning, Inspection, and Repair

- a. *Cleaning.* Refer to paragraph 20 for general cleaning procedures.
- b. *Inspection and Repair.*
 - (1) Rivets shall not be loose. Tighten as required, using improvised rivet sets and anvils.
 - (2) Forearm catch and catch spring shall be free of pits, corrosion, and distortion. After assembly they should positively retain the forearm assembly to the weapon.
 - (3) Catch pin shall not be visibly damaged.
 - (4) Swivel loop shall not be deformed and will swivel freely in the screw

portion. Threads shall not be stripped.

- (5) Locking tabs on washer shall not be cracked. Nut shall not be visibly damaged.
- (6) Distortion or dents on the forearm assembly that affect the fit, retention qualities or cause assembly/disassembly difficulties will be corrected or the assembly will be replaced.
- (7) Rubber coating shall be free of tears and breaks. Surface mars not exceeding 1/32 inch in depth and one inch in length are acceptable. Other surface scratches or scuffing will be acceptable.
- (8) Forearm assemblies of early manufacture contain two slots on the bottom for tripod mounting purposes. Assemblies of this con-

figuration are NOT usable. Modify by removing the web between the two slots and file the opening to 0.865 ± 0.010 inch in length by $0.760 + 0.020$ inch in width. The front side of the opening shall be flush with the baf-

file located inside the assembly.

39. Assembly and Installation

Refer to TM 9-1005-224-34 for instructions on assembly and installation of forearm assembly.

Section VI. COVER ASSEMBLY AND TRAY ASSEMBLY GROUPS

40. Removal

Refer to TM 9-1005-224-34 for instructions on removal of cover assembly and tray assembly groups.

41. Disassembly

Note. The key numbers shown in parentheses in a below refer to figure 19.

a. Cover Assembly.

- (1) Press retainer (1A) away from pivot and remove feed cam assembly (1) from cover assembly. With plunger (1B) compressed, remove retainer, plunger, and spring (1C) from channel (1D).
- (2) To remove lever assembly (2) push clip (2A) away from the pivot and lift up. Separate clip from feed lever (2B).
- (3) Remove snap ring (3) from pin (4) and remove pin. Press down on front and rear cartridge guides (5) and (6) and slide towards the center and lift up.
- (4) Pivot pawl assembly (7) into T-slot of housing assembly and remove. Press shaft (7A) from chassis (7D) and separate pawl (7B) and spring (7C) from chassis.

Note. The key numbers shown in parentheses in (5) and (6) below refer to item 8, figure 19.

- (5) Remove stake from end of shaft portion of lever (A) and remove lever, latch (B), spring (C), and pin (D) from housing assembly (8). Lever will be disposed of as scrap.
- (6) Remove the two rivets (E) and bumper assembly (F). Remove the nine rivets (G), pad assembly (H), and shield (J). Remove the two studs (K), springs (L), and washer (M) from frame assembly (N). All

above rivets and the two studs will be disposed of as scrap.

b. *Tray Assembly.* Refer to TM 9-1005-224-34 for disassembly of the tray assembly.

42. Cleaning, Inspection, and Repair

a. Cleaning.

- (1) *Cover assembly.* Vapor degrease metal parts. Use process C-3 of MIL-P-116 for rubber components and dry.
- (2) *Tray assembly.* Refer to paragraph 20 for general cleaning procedures.

b. Inspection and Repair.

(1) Cover Assembly.

- (a) Feed cam assembly shall not be visibly distorted. Rivets and brazed components shall be tight, as determined manually. Spring shall be free of pits and distortion. Feed cam retainer and plunger shall not be burred and will function as intended.
- (b) Feed lever shall not be visibly damaged or distorted. See figure 20. The lever clip spring shall not be distorted and will be capable of retaining the lever in assembled position.
- (c) Snap ring on cartridge guide shaft shall be replaced 100 percent. Cartridge guide shaft shall be straight and the snap ring groove shall be in good visible condition.
- (d) The front cartridge guide shall not be visibly distorted. See figure 20 for critical inspection points.
- (e) The rear cartridge guide shall not be visibly distorted.

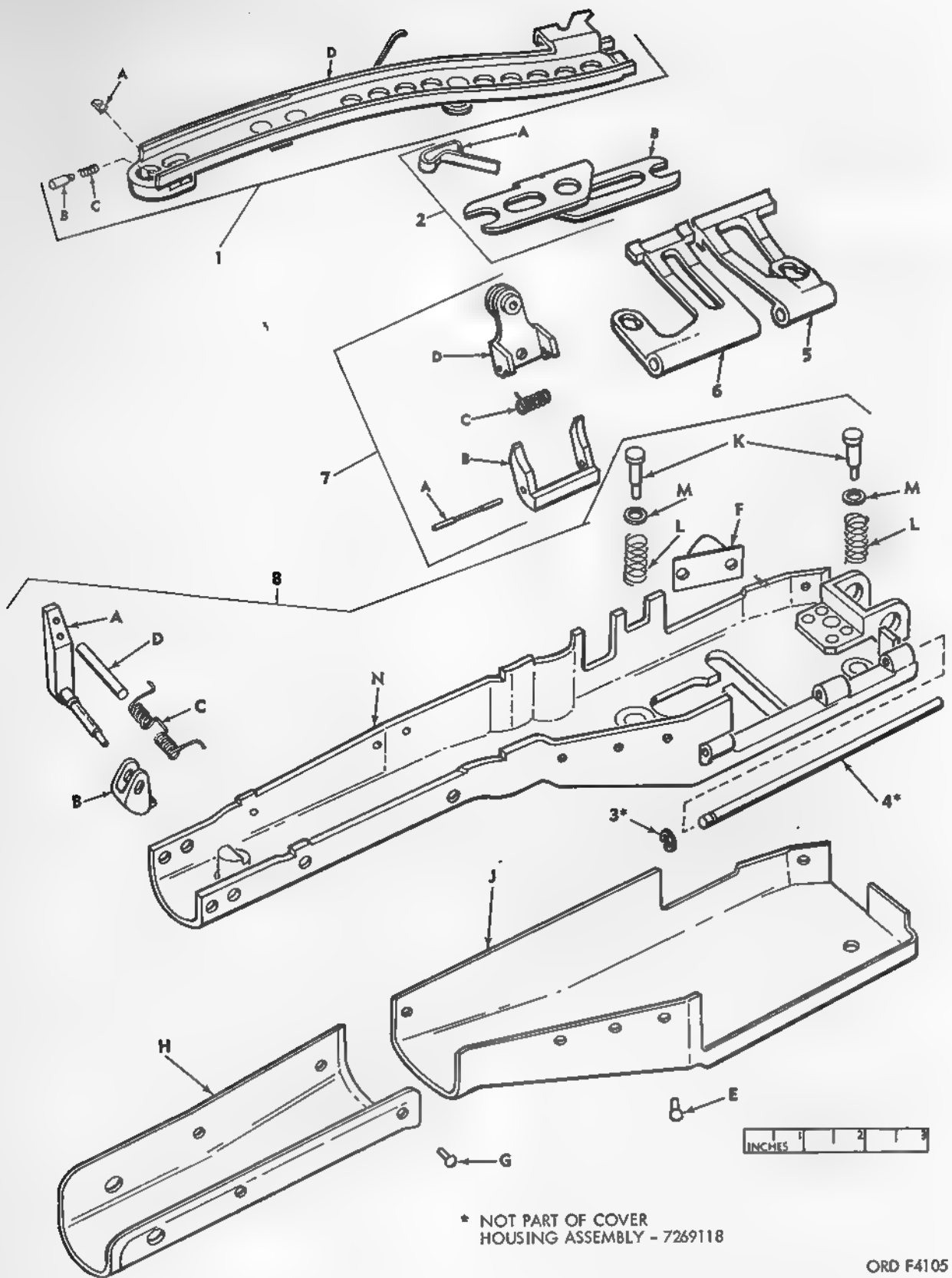


Figure 19. Cover assembly—exploded view.

- 1 - Feed cam assembly 7269115
 - A - Retainer 7269124
 - B - Plunger 7269123
 - C - Spring 7269125
 - D - Channel 7269122
- 2 - Lever assembly 7269119
 - A - Clip 7269146
 - B - Feed lever 7269145
- 3 - Snap ring 7790800
- 4 - Pin 7269121
- 5 - Front cartridge guide 7269116
- 6 - Rear cartridge guide 7269117
- 7 - Pawl assembly 7269120
 - A - Shaft 7269151
 - B - Pawl 7269150
 - C - Spring 7269152

- D - Chassis 7269149
- 8 - Housing assembly 7269118
 - A - Lever 7269137
 - B - Latch 7269136
 - C - Spring 7791271
 - D - Pin 7791270
 - E - Rivet 7269139
 - F - Bumper assembly 7269126
 - G - Rivet 7269112
 - H - Pad assembly 7269138
 - J - Shield 7269140
 - K - Stud 7269143
 - L - Spring 7269141
 - M - Washer 7269144
 - N - Frame assembly 7269128

Figure 19 - Continued.

- (f) The chassis of the pawl assembly shall not be visibly damaged. The two rivets securing the rollers shall be tight. The rollers shall rotate freely. The pawl spring shall be free of pits and visible distortion. See figure 20 for critical inspection points on pawl.
- (g) Replace all latch levers. The latch shall not be burred or visibly damaged. MWO 9-1005-224-20/1 will be applied.
- (h) Cover housing assembly shall be free of damage or distortion. Hinge shall be tight on housing. Hinges attached with three rivets and five rivets are both usable.
- (i) Rubber pad on bumper assembly shall not be deteriorated.
- (j) Rubber cheek pad shall be free of tears and breaks. Surface mars not exceeding 1/32 inch in depth and one inch in length are acceptable. Other surface scratches or scuffing will be acceptable.
- (k) Cover shield shall be free of tears, dents, or other physical damages. Shields that are otherwise serviceable, and the anodic coating has not been removed, will be painted with black lusterless enamel conforming to Specification TT-E-527a or equal, or be replaced.

(2) Tray assembly.

- (a) Shaft shall be straight. Only the

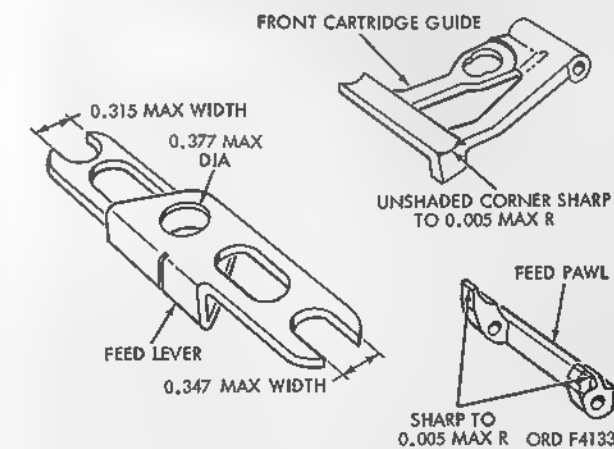


Figure 20. Inspection points for cover assembly.

shaft with the 0.460-inch long undercut on the center portion shall be used.

- (b) Roller shall be free of burrs and noticeable wear.
- (c) Pawl shall be free of burrs. The radius on the link holding corner shall not exceed 0.020 inch.
- (d) Spring shall be free of pits, corrosion, and visible distortion.
- (e) Frame assembly shall not be visibly distorted and shall be free of chips and noticeable wear on the cartridge slot surfaces. No cracks are permitted. Particular attention shall be given to the rear surface contacted by the bolt actuator. Spot welds shall not

exhibit any evidence of failure. Rivets shall be tight.

- (f) Hinge pin and latch pin securing cover and tray to receiver shall not be visibly damaged. The latch pin hook shall be in good condition. Spring shall not be visibly distorted and shall be free of pits and corrosion.

43. Assembly

a. *Tray Assembly.* Refer to TM 9-1005-224-34 for instructions on assembly.

b. *Cover Assembly.*

Note. The key letters shown in parentheses in (1) and (2) below refer to item 8, figure 19.

- (1) Place washer (M), spring (L) on stud (K) and rivet securely to frame assembly (N). Repeat for other stud.
- (2) Position shield (J) and pad assembly (H) on frame assembly and rivet in place with nine rivets (G). Position bumper assembly (F) and rivet in place with the two rivets (E).

Caution: The rivet adjacent to the rear of the ejection port shall be flush on the inside. The inside surface of shield and outside surface of frame assembly shall be flush after riveting.

- (3) Assembly pin (D), spring (C), latch

(B), and lever (A) to housing assembly (8). Spin over securely the hollowed out portion of the shaft to the housing assembly. Shaft must rotate freely after assembly.

Note. The key numbers shown in parentheses in (4) through (7) below refer to figure 19.

- (4) Assemble spring (7C), pawl (7B), and shaft (7A) to chassis (7D). Position pawl assembly (7) into T-slot of housing assembly (8).
- (5) Position front cartridge guide (5) and rear cartridge guide (6) on top of washer on their respective studs, press down and slide into assembled position. Insert pin (4) (grooved end first) and secure with snap ring (3).
- (6) Assemble clip (2A) to feed lever (2B). Position lever assembly (2) on pivot and lock in position with clip.
- (7) Assemble spring (1C) and plunger (1B) to channel (1D). Place channel on pivot, depress plunger, position channel on pivot and insert retainer (1A).

44. Installation

Refer to TM 9-1005-224-34 for instructions and installation of cover assembly and tray assembly.

Section VII. BUFFER AND OPERATING ROD GROUP

45. Removal

Refer to TM 9-1005-224-34 for instructions on removal of buffer assembly, operating rod assembly, guide assembly and spring.

46. Disassembly

a. *Buffer Assembly.* Refer to TM 9-1005-224-34 for disassembly of buffer assembly.

Note. Bolt buffer assembly fixture, figure 11, may be used in lieu of the one referenced in technical manual.

b. *Operating Rod Assembly.* Refer to

TM 9-1005-224-34 for disassembly of operating rod assembly.

Note. Unless either the pin or roller are unserviceable, removal is not required. Further disassembly is not authorized.

c. *Guide Assembly and Spring.* No disassembly is required for the guide assembly and spring.

47. Cleaning, Inspection, and Repair

a. *Cleaning.*

- (1) *Buffer assembly.* Refer to paragraph 20 for general cleaning procedures.
- (2) *Operating rod assembly.* Refer to

paragraph 20 for general cleaning procedures. Assure that driving spring hole is free of corrosion and other foreign matter.

- (3) *Guide assembly and spring.* Refer to paragraph 20 for general cleaning procedures.

b. *Inspection and Repair.*

(1) *Buffer assembly.*

- (a) Pin shall not be visibly damaged or cracked.
- (b) Cover shall not be visibly damaged. Yoke engaging surface shall not be worn or mutilated. The L shaped slot and pinhole shall be free of detrimental wear.
- (c) The springs shall be free of corrosion and distortion.
- (d) Cap shall be free of burs. Packing groove must be free of deformation.

(e) Packing, gasket, and the pad assemblies will be replaced 100 percent.

(f) Plunger will be free of burs. The outside diameter of the shaft portion will be free of pits, scratches, or burs. The end of the shaft will not be peened over.

(g) Housing will not be dented or otherwise damaged. The L shaped slot and pinholes will not be noticeably enlarged or mutilated.

(2) *Operating rod assembly.*

- (a) Operating rod shall not be bent.
- (b) Burs or raised metal on the yoke portion shall be removed, exercising caution so as not to alter the original configuration.
- (c) Sear notches that exhibit

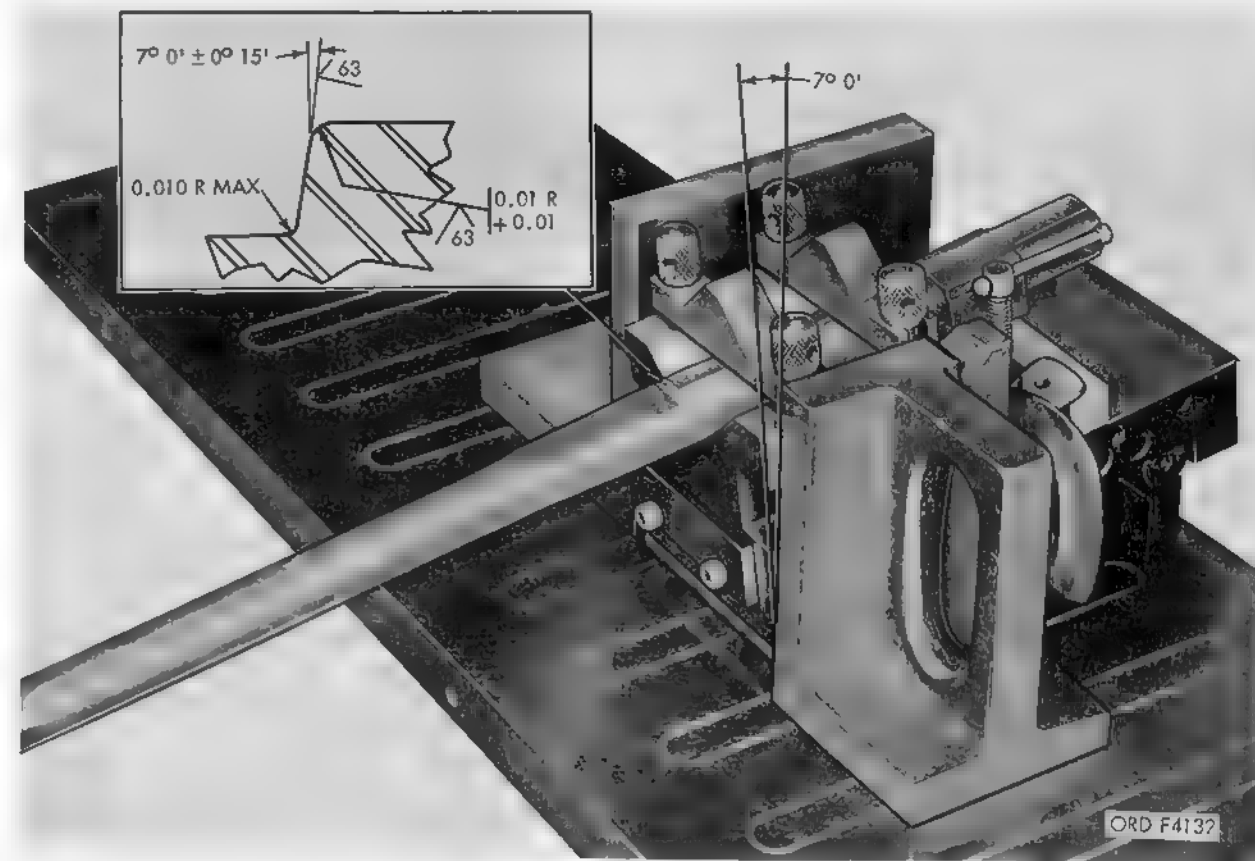


Figure 21. Method of grinding sear notch on operating rod.

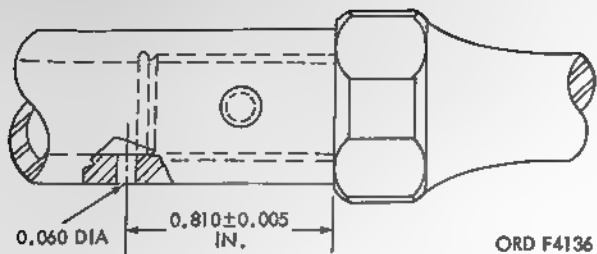


Figure 22. Location of drain hole in operating rod.

evidence of wear will be reworked to original configuration. See figure 21 for suggested grinding method.

- (d) Drill a 0.060-inch diameter drain hole through the bottom (6 o'clock position) of the tube portion, as shown in figure 22, if not present.
 - (e) Rivets shall be tight.
 - (f) Roller must rotate freely and be free of burrs and gouges.
- (3) *Guide assembly and spring.*
- (a) Guide shall be straight and free of visible damage.
 - (b) Spring shall be free of corrosion. The weld or braze on either end of the spring will not be cracked (which will permit fraying of the individual strands). Individual strands will not be broken. Load

at 20.42 inches shall not be less than eight pounds.

48. Assembly

a. Buffer Assembly.

- (1) Refer to TM 9-1005-224-34 for instructions on assembly of buffer assembly.

Caution: When assembling buffer assembly do NOT allow any oil to enter the housing as this will tend to weaken the recoil and shock action of the pads during firing operations.

- (2) Gasket fixture assembly (fig. 10) will be used to assemble gasket in buffer housing.
- (3) Bolt buffer assembly fixture (fig. 11) will be used in lieu of the one referenced in technical manual.

b. *Operating Rod Assembly.* Refer to TM 9-1005-224-34 for assembly of operating rod assembly.

c. *Guide Assembly and Spring.* No assembly is required for the guide assembly and spring.

49. Installation

Refer to TM 9-1005-224-34 for installation of the buffer assembly, operating rod assembly, guide assembly and spring.

Section VIII. BOLT ASSEMBLY

50. Removal and Disassembly

See TM 9-1005-224-34 for instructions on removal and disassembly of bolt assembly.

51. Cleaning, Inspection, and Repair

a. *Cleaning.* See paragraph 20 for general cleaning instructions.

b. *Inspection and Repair.*

- (1) Each bolt shall be subjected to fluorescent magnetic particle inspection using a standard magnetizing coil with a current of 600 to 800 amperes. Any bolts found to contain cracks shall be rejected

- except that magnetic indications in the fillet radius at the rear of one bolt locking lug that does extend to within 1/16 inch of the corners shall not be cause for rejection.
- (2) Visually examine the locking lugs. Chipping on the front left-hand corners of both lugs is permissible providing that at least 50 percent of the original surface area of the radius is present.
- (3) Sharp corners shall be smoothed by stoning (figure 23). No chipping on the rear corners of the locking lugs shall be permitted. Smooth any rough edges on the cam portion of bolt by stoning.

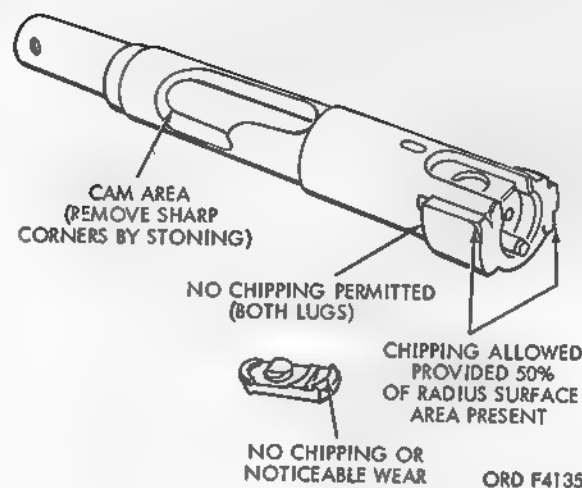


Figure 23. Inspection points for bolt and extractor.

- (4) Bolt plug pinhole shall not be visibly elongated.
- (5) Firing pinhole shall not be visibly elongated and the 0.108 plain cylindrical plug gage (figure 6) shall not enter. Cartridge seat shall be free of pits.
- (6) Bolt plug threads shall not be burred or otherwise damaged. Ring stake on rear end shall not show evidence of failure. There shall be sufficient tension on the bolt plug

- pin to assure retention. Bolt plug pins with a circumferential groove shall not be used.
- (7) Firing pin springs shall be replaced.
- (8) Firing pin spring bearing shall not be visibly damaged or distorted.
- (9) Firing pins shall be subjected to fluorescent magnetic particle inspection with particular attention given to the fillet radii on both sides of the spools. The striker point shall be smooth and free of pits or flat spots.
- (10) Replace all ejector and extractor plunger springs. Ejector shall be free of burrs.
- (11) Any visible evidence of chipping or noticeable wear on the hook portion of the extractor shall be cause for rejection (figure 23).
- (12) Ejector plunger retaining pins shall be replaced.
- (13) Actuator assembly shall be free of burrs and visible damage. Roller shall rotate freely.

52. Assembly and Installation

Refer to TM 9-1005-224-34 for assembly and installation of the bolt assembly.

Section IX. RECEIVER GROUP

53. Disassembly

Note. The key numbers shown in parentheses in a below refer to figure 24.

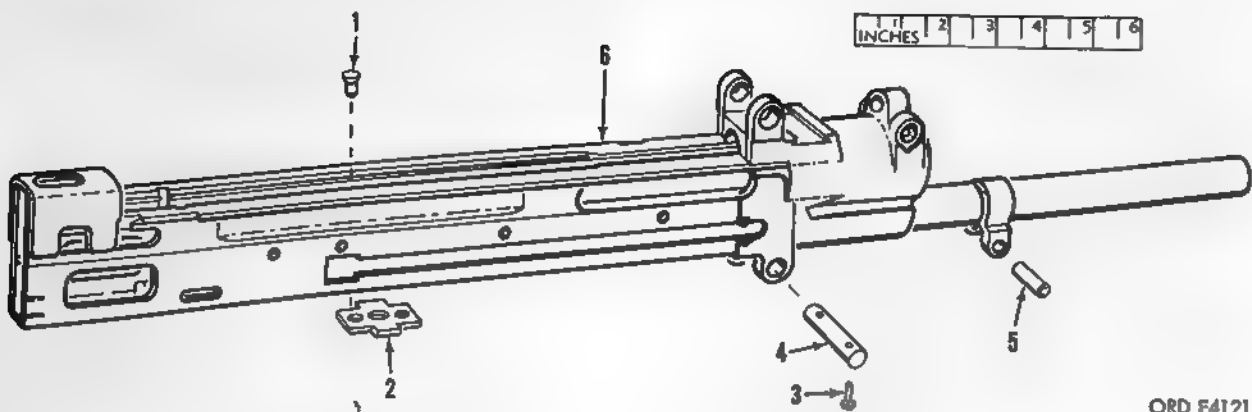
a. Receiver Assembly.

- (1) Refer to TM 9-1005-224-34 for instructions on disassembly of the receiver assembly.
- (2) In addition, the following disassembly may be necessary:
 - (a) Remove the two rivets (1) and plate (2) from receiver assembly (6).
 - (b) Remove the two retaining pins (3) and rear mounting pin (4) from receiver.
 - (c) Remove front mounting pin (5) from receiver.

Note. The key numbers shown in parentheses in b below refer to figure 25 and the letters refer to item 4, figure 25.

b. Rear Sight Assembly.

- (1) Remove rivet (1), screw (2), and slide (3). Separate leaf assembly (4) from base and lateral knob assembly (5) and remove the two balls (6) and two springs (7).
- (2) Remove the two rivets (A) and (B) and cap (C) from leaf (P).
- (3) Remove release assembly (D) and separate spring (E) from slide (F).
- (4) Remove screw (G), knob (H), ball (J), and the two springs (K) and (L) from leaf.
- (5) Remove screw (M) and scale (N).
- (6) Drill out stake on sleeve (5A) and



1 - Rivet 7792972
2 - Plate 7792974
3 - Pin 7792971

4 - Pin 7792975
5 - Pin 7792976
6 - Receiver assembly 7269251

Figure 24. Receiver assembly - partial exploded view.

ORD F4121

remove knob (5B), ball (5C), and springs (5D) from base (5E).

c. Magazine Bracket Assembly. Refer to TM 9-1005-224-34 for instructions on disassembly of the magazine bracket assembly.

54. Cleaning, Inspection, and Repair

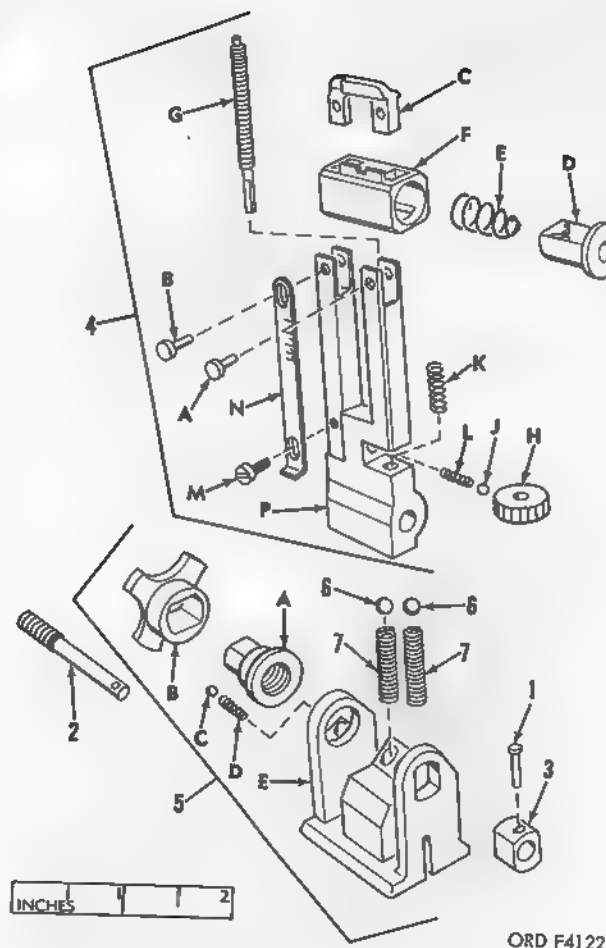
a. Cleaning.

- (1) Receiver assembly. Refer to paragraph 20 for general cleaning procedures. In addition, process C11 of MIL-P-116 should be used to assure complete removal of carbon deposits.
- (2) Magazine bracket assembly. Refer to paragraph 20 for general cleaning procedures.
- (3) Rear sight assembly. Refer to paragraph 20 for general cleaning procedures.

b. Inspection and Repair.

- (1) Receiver assembly.
 - (a) All rivets shall be tight.
 - (b) Receiver shall be free of burrs and visible distortion.
 - (c) Brazed joints shall not be loose.
 - (d) Carrying handle shall not be bent or otherwise damaged. Rubber covering shall be free of tears and breaks. Surface mars not exceeding 1/32 inch in depth and one inch in length are acceptable.

- Other surface scratches or scuffing will be acceptable.
- (e) Barrel lock assembly shall be free of burrs, distortion, and noticeable wear on barrel engaging portion.
 - (f) All plungers, springs, pins, and retainers shall be free of corrosion, pits, burrs, and visible damage. Plungers and springs shall function as intended.
 - (g) Cocking handle assembly shall be straight and free of burrs or visible damage. The brazed joint between the grip and slide shall not be loose or exhibit other evidence of failure as determined by hand and visual test.
 - (h) The cocking handle guide shall not be bent or visibly distorted.
 - (i) The tripod mounting plate shall be tight on the receiver and free of noticeable damage or distortion.
 - (j) Each receiver shall be subjected to fluorescent magnetic particle inspection with particular attention given to the base of the trigger mechanism mounting lug. A nonferrous conductor bar approximately 5/8 inch in diameter shall be passed through the receiver and mounted between contact plates and magnetized with



1 - Rivet 7269280
2 - Screw 7269281
3 - Slide 7269282
4 - Leaf assembly 7269279
A - Rivet 7269294
B - Rivet 7269293
C - Cap 7269288
D - Release assembly 7269292
E - Spring 7269299
F - Slide 7269289
G - Screw 7269295
H - Knob 7269291
J - Ball 147481
K - Spring 7269298
L - Spring 7269287
M - Screw 7269296
N - Scale 7269297
P - Leaf 7269290
5 - Base and lateral knob assembly 7269278
A - Sleeve 7269286
B - Knob 7269285
C - Ball 147481
D - Spring 7269287
E - Base 7269284
6 - Ball 147483
7 - Spring 7269283

ORD F4122

Figure 25. Rear sight assembly - exploded view.

1500 to 2000 amperes dc current. The wet residual method shall be used for examination. Any true evidence of cracks shall be cause for rejection.

(2) Rear sight assembly.

- (a) The two rivets securing the cap to the leaf shall be replaced 100 percent.
 - (b) The rivet securing the slide to the windage screw shall be replaced 100 percent.
 - (c) Windage knob sleeve shall be replaced 100 percent.
 - (d) All screws shall be free of visible damage. Windage and elevating screws shall be straight and function as intended.
 - (e) Springs shall be free of corrosion and distortion.
 - (f) Ball bearings shall not have flat or worn spots.
 - (g) Graduations and markings on the elevating scale shall be well defined and clearly legible.
 - (h) Leaf shall not be bent or visibly damaged.
 - (i) Slide and release assembly shall not be visibly damaged and will move freely on the leaf.
 - (j) Base shall not be distorted. Dovetail portion shall be straight and free of staking marks that will affect fit or retention to the receiver.
- ##### (3) Magazine bracket assembly.
- (a) Latches shall be free of burrs and visible damage. The latching surfaces shall be smooth and flat.
 - (b) Springs shall be free of pits and distortion.
 - (c) Pins shall be free of visible damage.

55. Assembly

a. Receiver Assembly. Refer to TM 9-1005-224-34 for instructions on assembly of receiver assembly in conjunction with the procedures outlined below.

Note. The key numbers shown in parentheses in (1) through (4) below refer to figure 24.

- (1) Install the front mounting pin (5) on receiver (6) and stake securely at both ends. After staking, the pin shall withstand a minimum force of 400 pounds applied to each end individually.


- (2) Install the rear mounting pin (4).
- (3) Install the two retaining pins (3) in rear mounting pin and stake securely.
- (4) Install plate (2) on receiver with the two rivets (1).

Note. The key numbers shown in parentheses in b below refer to figure 25, and the letters refer to item 4, figure 25.

b. Rear Sight Assembly.

- (1) Place the spring (5D) into base (5E) and position ball (5C) on top of spring. Assemble knob (5B) and sleeve (5A) to base making sure that the detent ball and spring are in place. See figure 26 for proper assembly requirements.
- (2) Position scale (N) and secure with screw (M) on leaf (P).
- (3) Position the two springs (L) and (K) in their respective recesses and install ball (J), knob (H), and screw (G).
- (4) Assemble slide (F), spring (E), release assembly (D), and install on leaf.
- (5) Place cap (C) on top of leaf, and insert rivets (B) and (A). Upset ends of the two rivets on the front side of leaf (as installed on gun).
- (6) Position the two springs (7) and the two balls (6) on the end coils and place the leaf assembly directly on top of the base (5). With slide (3) in place, position the leaf assembly on the base and insert screw (2) through the sleeve, leaf, and slide.

- (7) If a new windage screw is installed, position leaf assembly and slide tightly against end of thread on windage screw. Drill a 0.078 + 0.002-inch diameter hole through the windage screw, using the hole in the slide as a guide. Insert rivet (1) and stake in place.

SPIN SLEEVE OVER KNOB ALL AROUND OR CHISEL STAKE 4 PLACES MIN. JOINT SHALL WITHSTAND AN AXIAL LOAD OF 100 LBS MIN. APPLIED IN DIRECTION . INSIDE DIAMETER OF THE SLEEVE SHALL NOT BE DECREASED. KNOB SHALL ROTATE WITHOUT BINDING AFTER ASSEMBLY, WITH DISTINCT CLICKS.

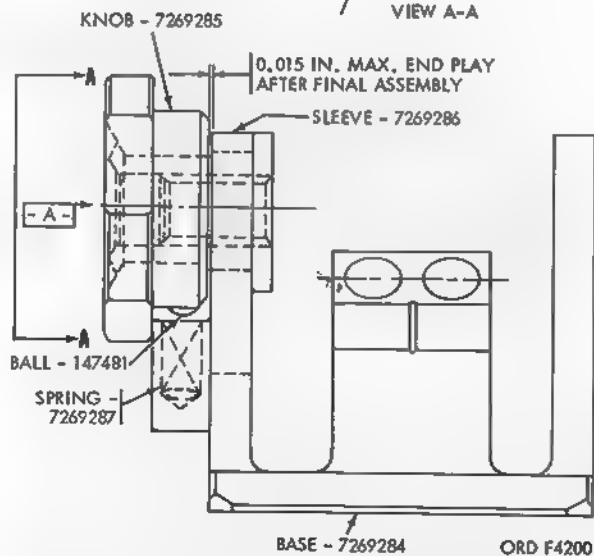
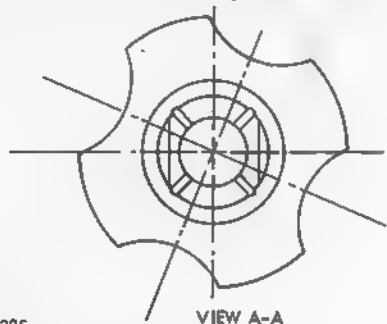


Figure 26. Assembly of rear sight base assembly.

- (8) If a used windage screw is used, selective assembly may be resorted to in order to control the amount of lateral movement of leaf assembly within the base assembly. Maximum lateral movement permitted after assembly shall not exceed 0.015 inch.

Note. Check gap (fig. 26) between base and knob with feeler gage.

- (9) After assembly, the elevating and windage components shall function freely and with distinct clicks.

c. Magazine Bracket Assembly. Refer to TM 9-1005-224-34 for instructions on assembly of magazine bracket assembly.

CHAPTER 6

OVERHAUL OF MACHINEGUN TRIPOD MOUNT M122

Section I. GENERAL

56. Scope

a. Information contained herein is supplementary to instructions contained in TM 9-1005-224-12 and TM 9-1005-224-34.

b. This chapter contains general and specific instructions for the repair and overhaul of each major group of the tripod

mount. In the following sections, repair and overhaul procedures are described in order to restore each major group to a serviceable condition.

57. Direct Labor Man-Hour Time

The average time required to overhaul the complete mount is 1.5 hours.

Section II. ELEVATING AND TRAVERSING MECHANISM

58. Removal and Disassembly

Refer to TM 9-1005-224-34 for removal of the elevating and traversing mechanism.

Note. If the sleeve, upper and lower elevating screws and the traversing screw appear to be serviceable, do not mix with similar components as they are matched sets and are not 100 percent interchangeable.

59. Cleaning, Inspection, and Repair

a. **Cleaning.** Refer to paragraph 20 for general cleaning instructions.

b. **Inspection and Repair.**

- (1) MWO 9-1005-224-40/1 will be applied unless previously accomplished.
- (2) The two retaining rings shall not be set or distorted. Replace if retention qualities are adversely affected.
- (3) Pin shall be free of visible damage. The retaining ring grooves shall be in good visible condition.
- (4) Adapter assembly shall be free of burrs and distortion. The T cut on top end shall be free of visible damage and stop pin shall be secure. The positioning stud assembly and plunger shall function freely within the adapter. Maximum diameter of the two mounting holes shall not exceed 0.455 inch.
- (5) Plunger spring shall be free

of corrosion and distortion.

- (6) Slide lock lever, screw, and washer shall not be visibly damaged.

- (7) Slide lock spring shall not be distorted or set. Use only spring 7793003 as shown in figure 27.



Figure 27. Slide lock spring 7793003.

- (8) Slide locking screw shall be free of visible damage.
- (9) Elevating screw stop assembly shall be free of noticeable distortion. The stop pin (lug) shall not be loose and functional surface

- shall not be worn (1/32-inch maximum radius on leading corner).
- (10) Sleeve shall not be visibly distorted. Elevating screw stop lugs shall be capable of securely retaining the stop assembly. Threads shall not be damaged. Both the one piece forged type or the two piece assembled type are acceptable.
 - (11) Use only elevating screw stop assembly 8408768. This stop has the one piece pin.
 - (12) Spanner wrench holes in the ring shall not be worn. Threads shall not be damaged.
 - (13) Both the steel and aluminum handwheels as well as the one piece and laminated types are acceptable. Graduations and markings shall be distinct and clearly legible. Graduation filler is not required. Counterbores and screw threads shall not be stripped or visibly damaged.
 - (14) Elevating and traversing scales shall not be distorted. Graduations and markings shall be well defined and clearly legible.
 - (15) The upper and lower elevating screws shall be free of burrs and other visible damage. With the upper and lower elevating screws and sleeve fully assembled, extend to zero elevation (approx 1-7/16-inches). Total lateral side play shall not exceed 0.020 inch.

Section III. PLATFORM AND PINTLE GROUP

62. Removal and Disassembly

Refer to TM 9-1005-224-34 for removal and disassembly of the platform and pintle group.

63. Cleaning, Inspection, and Repair

a. *Cleaning.* Refer to paragraph 20 for general cleaning procedures.

b. *Inspection and Repair.*

- (1) Threads on pintle bolt and nut shall not be visibly damaged. Minimum diameter of bolt shall not be less

- (16) Traversing screw shall be straight and threads shall not be burred or visibly damaged.
- (17) Yoke shall not be visibly damaged or distorted. Maximum diameter of mounting pinhole shall not exceed 0.445 inch.
- (18) The two traversing screw safety nuts will have "like new" retention qualities. Wrench flats shall not be burred or have rounded corners.
- (19) Traversing knob and scale locking nut shall not be visibly damaged. Threads shall not be stripped or visibly damaged. Either the steel, bronze, or aluminum knobs are usable.
- (20) Replace all click plungers and springs unless in a "like new" condition.
- (21) Click ring serrations shall not be worn to the extent that normal functioning of the click mechanism is affected.

60. Assembly

Refer to TM 9-1005-224-34 for assembly of elevating and traversing mechanism.

61. Installation

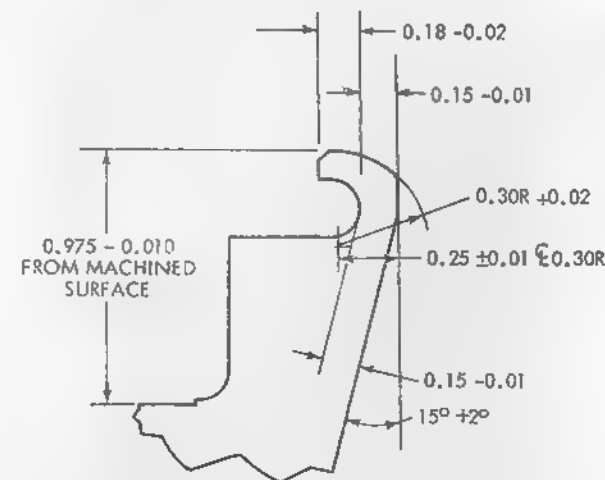
Refer to TM 9-1005-224-34 for installation of the elevating and traversing mechanism.

than 0.560 inch. Replace the cotter pin 100 percent.

- (2) Latch pin shall be straight and free of visible damage. Use only pin with the reduced diameter on the center portion.
- (3) Latch spring shall be free of pits and visible distortion.
- (4) Latch shall be free of burrs and distortion. Either the cast or the formed type are usable.
- (5) Platform lock shaft shall be straight. Both ends shall be capable

of being flared so as to secure the shaft in the platform.

- (6) Shaft plunger and spring shall not be visibly damaged and will be capable of positively positioning the lock in both positions.
- (7) Platform shall be free of cracks and visible distortion. The diameter of the pintle bolt holes shall not exceed 0.565 inch. Front mounting hook configuration shall not exceed the maximum dimensions shown on figure 28.



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES.

ORD F4180

Figure 28. Maximum dimensions for mounting hook of platform 7792983.

- (8) Use only pintle 5559332 (fig. 29). Inside dimensions between the ears are 2.362 inches minimum and 2.365 inches maximum. The lower side of the pintle lock engaging grooves will be beveled approximately 15 degrees and will be free of burrs. There will be no play between the pintle and the pintle bushing when the pintle is locked in place with the pintle lock. Slight wear on the bearing area is permissible providing a minimum

clearance of 0.010 inch is maintained between the underside of the pintle flange and the top of the pintle bushing. Minimum diameter of the pintle bolt is 0.560 inch.



Figure 29. Tripod mount pintle 5559332.

64. Assembly and Installation

Refer to TM 9-1005-224-34 for assembly and installation of the platform and pintle group.

Note. After assembly, both hollow ends of the platform lock shaft will be expanded against the countersunk portions of the hole in the lock to prevent loss.

Section IV. TRIPOD GROUP

65. Disassembly

Note. The key numbers shown below in parentheses refer to figure 30.

- a. Remove the two nuts (1) and bolts (2) and separate the bar assembly (3) from the rear legs.
- b. Remove screw (3A) and nut (3B) from bar (3C).
- c. Remove nut (4), bolt (5), and left rear leg (6) from head (17).
- d. Repeat c above for right rear leg assembly.
- e. Remove spring (7A) from right rear leg assembly. If latch (7C) is unserviceable, remove pin (7B) and separate latch from the leg assembly.
- f. Remove nut (4), bolt (8), and front leg (9).
- g. Remove the two nuts (1), bolts (10), and spacers (11) from the head (17).
- h. Remove the two screws (12) and washers (13). Separate the lock group assembly (14) from the head. Separate the housing (14A) from the body (14B) and cam (14E). Remove the two springs (14C). If the cam (14E) is unserviceable, remove pin (14D) and separate the cam from the body.
- i. If the bushing (16) is unserviceable, remove the setscrew (15) and press out bushing from the head (17).

66. Cleaning, Inspection, and Repair

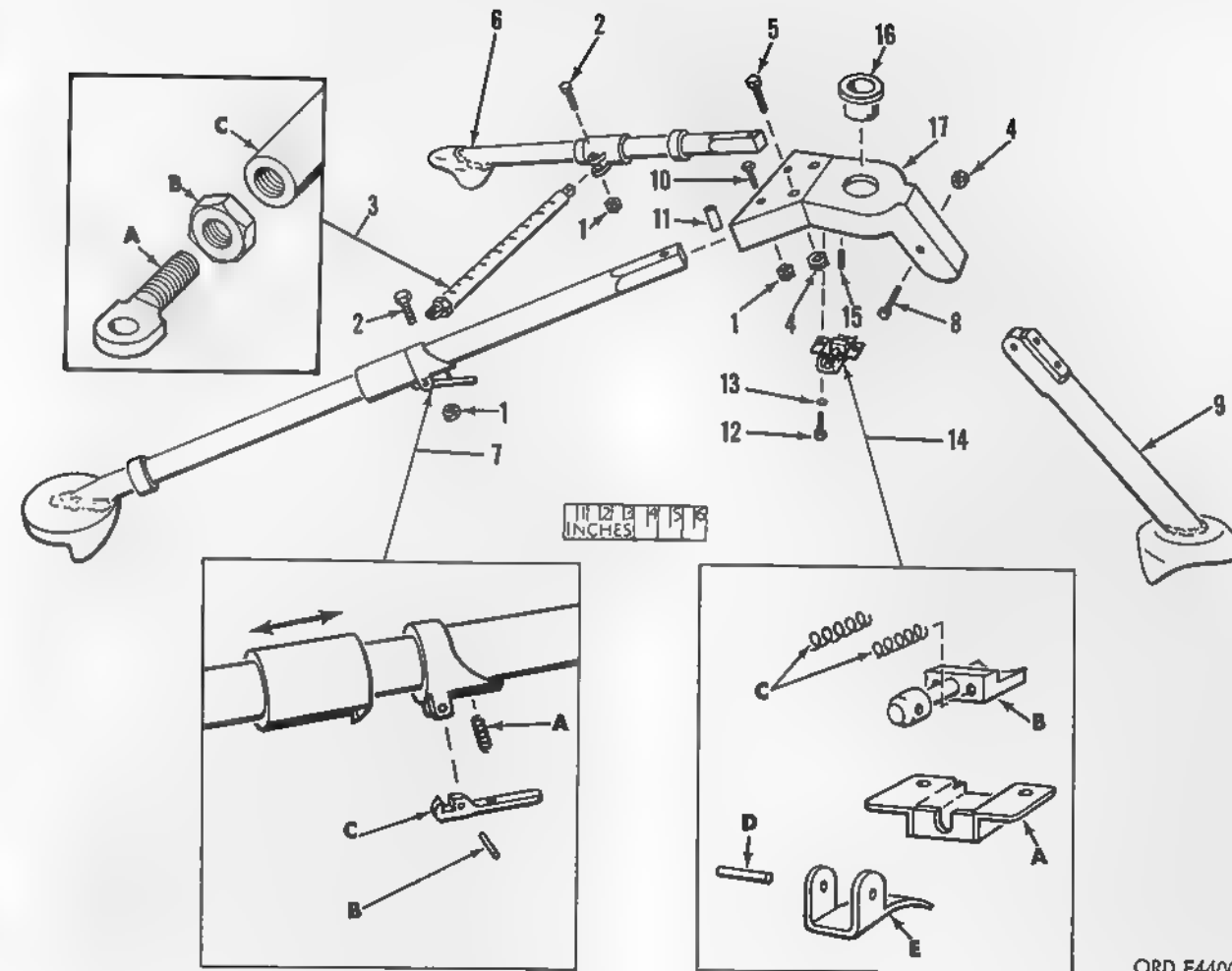
a. *Cleaning.* Refer to paragraph 20 for general cleaning procedures.

b. *Inspection and Repair.*

- (1) All bolts, nuts, and screw threads shall not be stripped or adversely damaged. Wrench flats shall not be burred and the corners shall not be detrimentally rounded.
- (2) Only the three piece traversing bar assembly is usable as outlined in SB 9-89. Graduations and figures shall be well defined and clearly legible. Bar shall be straight and free of dents or pits which will adversely affect locking or positioning of the elevating mechanism sleeve to the bar. Use of graduation filler is not required.

- (3) The two rear and the front leg assemblies shall be straight. All welds shall be free of cracks as determined visually. Minor dents are acceptable except on functional surfaces. Functional surfaces will be smooth and free of burrs. Maximum diameter of the hinge holes is 0.379 inch. If in excess of the dimension, ream hinge holes to approximately 0.500-inch diameter. Press in (or copper braze in place) a locally fabricated mild steel bushing and ream to $0.374 + 0.003$ inch diameter. Any loose hinges, feet or stops may be welded or brazed if the legs are otherwise serviceable. A 1/8-inch drain hole will be drilled at the 9 o'clock position on both ends of each leg. The lower holes shall be located adjacent to the feet and the upper holes adjacent to the hinge hole in bushing if the hinge is hollow, or immediately below the hinge, if solid.

- (4) Both sliding sleeves shall move freely on their respective leg assemblies and shall be free of detrimental damage as determined visually. The latch engaging surface on the right hand sleeve shall be smooth and have approximately a 5 degrees reverse angle. The top corner shall be sharp to 0.015 radius. A worn latch engaging surface may be corrected by grinding.
- (5) The contacting surface of the engaging notch on the latch will be smooth and free of noticeable wear. The top corner shall be sharp to 0.010 maximum radius. A worn engaging surface may be corrected by grinding.
- (6) Latch springs will be free of pits, corrosion, and visible distortion. Replace all springs having 11 coils with springs having approximately 8-1/2 coils.
- (7) The pintle lock will be free of burrs and visible damage. The portion of



- 1 - Nut MS 35690-423
- 2 - Bolt 5169880
- 3 - Bar assembly 5559333
 - A - Screw 7115349
 - B - Nut 7118389
 - C - Bar 7115350
- 4 - Nut MS 35690-623
- 5 - Bolt 5169882
- 6 - Leg 5559338
- 7 - Leg assembly 5559337
 - A - Spring 5139997
 - B - Pin 5140004
 - C - Latch 5139959
- 8 - Bolt 5169879

- 9 - Leg 6108195
- 10 - Bolt 5169881
- 11 - Spacer 5139962
- 12 - Screw 5141950
- 13 - Washer MS 35333-57
- 14 - Lock group assembly 6108986
 - A - Housing 6140648
 - B - Body 5141121
 - C - Spring 5142877
 - D - Pin 505490
 - E - Cam 5141080
- 15 - Setscrew 540896
- 16 - Bushing 6108201
- 17 - Head 5559331

Figure 30. Tripod group - exploded view.

- (8) The inside diameter of pintle bushing will be smooth, free of scoring,

- and will be tight in the tripod head.
- (9) Tripod head will be free of cracks, dents, and visible distortion. The maximum diameter of the leg hinge holes shall not exceed 0.379 inch. If oversize, swage and line ream

ORD F4400

to 0.374—0.377 inch diameter. Remove nameplates (if present) and stamp nomenclature, serial number, and installation marking directly on the head as shown in figure 14. Original markings, not applicable, will be removed by grinding, peening, or similar methods. Nameplates will be disposed of in accordance with AR 735-11.

67. Assembly

Note. The key numbers shown below in parentheses refer to figure 30.

a. If bushing (16) has been removed, press in place in head (17), drill a 5/16-inch deep hole and thread with a No. 10 (0.190)-32NF-3B tap. Install screw (15).

b. Position cam (14E) on body (14B) of lock group assembly (14). Insert pin (14D) and rivet securely. Insert the two springs (14C) in body and assemble into housing (14A). Position lock group assembly (14) on head (17) and secure with the two washers (13) and screws (12).

c. Position the two spacers (11) and install the two bolts (10) and nuts (1). Stake securely in three places.

d. Position front leg (9) and secure with bolt (8) and nut (4); stake in three places.

e. If latch (7C) has been removed from right rear leg assembly (7), insert pin (7B) and rivet securely. Install spring (7A). After assembly, latch will function freely under the spring tension.

f. Position right rear leg assembly (7) in head and install bolt (5) and nut (4). Stake securely in three places.

g. Repeat *f* above for left rear leg (6).

h. Assemble bar (3C), nut (3B), and screw (3A) of bar assembly (3).

i. Position bar assembly (3) on the right and left rear legs. Install the two bolts (2). Before installing the two nuts (1) adjust, as necessary, the length of the traversing bar so as to obtain a tension gap of 1/4 to 3/8 inch between the right hand sliding sleeve and stop collar on the right rear leg assembly. Tighten the two nuts and stake securely in three places. Stake bar (3C) to nut (3B) after final adjustment. Denting the sides of the head to obtain proper leg tension is not permitted.

j. With the pintle positioned in the bushing, the 15 degree beveled surface on the pintle lock will bear against the corresponding 15 degree bevel on the pintle groove. The curved portion of the pintle lock will not contact the bottom of the mating groove in the pintle. A clearance of not less than 1/32 inch will be maintained. Selective assembly of pintle and/or lock assembly to obtain the above fit is permitted. If necessary, the bushing may be removed and a locally fabricated shim stock washer, 0.010 to 0.015-inch thick, as required, may be placed between the bushing and tripod head. A minimum clearance of 0.010 inch between the underside of the pintle flange and top of bushing is required. Facing off the top of the bushing to obtain the proper clearance is permitted.

k. When a new bushing has been installed, reaming of the tapered hole may be necessary. If so, a locally fabricated finishing reamer with a 2.5224-inch taper per foot on the diameter will be used (figure 12). Pintle shall have at least a 75 percent bearing in the bushing.

CHAPTER 7

PROOF- AND FUNCTION-FIRING OF THE GUN

Section I. GENERAL

68. Scope

a. This chapter provides instructions for proof- and function-firing of the weapon.

b. Proof-firing of the gun is not required.

c. Guns which fail to meet the function-firing test are corrected by component replacement or repair, as required.

Section II. BORESIGHTING AND INSPECTION PRIOR TO FIRING

69. General

This section provides instructions for boresighting and pre-fire inspection to insure that the weapon is safe to fire and conforms to specific requirements.

70. Boresighting

a. After final assembly, all guns with spare barrel assemblies shall be boresighted.

b. The following equipment will be required:

- (1) Standard caliber .30 borescope 7138422 modified by grinding the outside diameter of the bore mandrel to 0.2945—0.0005 inch.

Note: Drawings for local fabrication may be requisitioned, on request, from Commanding General, Ordnance Weapons Command, ATTN: ORDOW-FM-W, Rock Island Arsenal, Rock Island, Illinois.

- (2) Tripod mount M122 or improvised mount with lateral adjustment.
- (3) Boresighting target (or image) consisting of a black vertical stripe or line, 12 to 18 inches long by 1/8-inch wide, superimposed on a suitable light colored background.

c. The following general procedures for boresighting will be followed:

- (1) Place weapon in mount.
- (2) Insert borescope into muzzle end of barrel.
- (3) Aline vertical centerline of borescope directly on centerline of vertical line on boresighting target

located 50 feet from the muzzle of the gun.

- (4) Set the rear sight at zero windage. Shift the rear sight assembly to the right or left in the dovetail slot on the receiver until the line of sight (as viewed through the rear sight aperture across the top of the front sight) coincides with the view through the borescope. Scribe an index line on rear sight base and receiver with a suitable pencil.
- (5) Repeat (1) through (4) above, with spare barrel assembly assigned to the specific major item.
- (6) Position the rear sight assembly midway between the two scribed lines on the receiver and stake in four places to retain the rear sight assembly securely in place on the receiver. It is not necessary to adjust for elevation variation.

Caution: Both barrels will be kept mated to the specific gun during all future operations.

71. Inspection

a. Visually examine for missing parts, obstructed bore and/or chamber, unauthorized assembly practices, workmanship, and general appearance.

b. Check firing pin protrusion using firing pin protrusion gage (fig. 6).

c. Check trigger pull using trigger pull measuring fixture 7274758. Weapon shall not fire with 6 pounds load and will fire

with a 11-1/2 pounds load. Safety will be in fire position.

d. Check headspace of both barrels using service bolt and headspace gage (fig. 6). Bolt shall not completely lock with 1.636 plug gage.

e. Check functioning of safety. With the

safety in the ON or SAFE position, the weapon will not fire. With the safety in the OFF or FIRE position, the weapon will fire.

f. Hand function weapon with ten linked dummy rounds to check functioning of the feeding and ejection components.

Section III. FUNCTION-FIRING

72. Test Firing Fixture

The machinegun will be tested using the test firing fixture (fig. 31). The fixture will conform to drawing 7273925 or equivalent design. The drawings may be requisitioned, when required; from Commanding General, Ordnance Weapons Command, ATTN: ORDOW-FM-W, Rock Island Arsenal, Rock Island, Illinois.

73. Function-Firing

a. Using the test firing fixture, the gun will be tested with both its assigned and spare barrel assembly with bipod.

b. Twenty rounds of ball ammunition in bursts of four to five rounds will be fired from one barrel.

c. Twenty rounds of ammunition will be fired in one continuous burst from the spare barrel.

d. No stoppages or malfunctions attributed to the weapon will be permitted. Malfunctions attributed to ammunition and links will be disregarded.

e. Cyclic rate shall be between 500 and 650 rounds per minute. Weapon shall function smoothly and rhythmically without any discernible hesitation between individual rounds.

f. After function-firing, the weapon must be thoroughly cleaned to remove powder residue and carbon in accordance with LO 9-1005-224-10 and instructions contained in TM 9-1005-224-12.

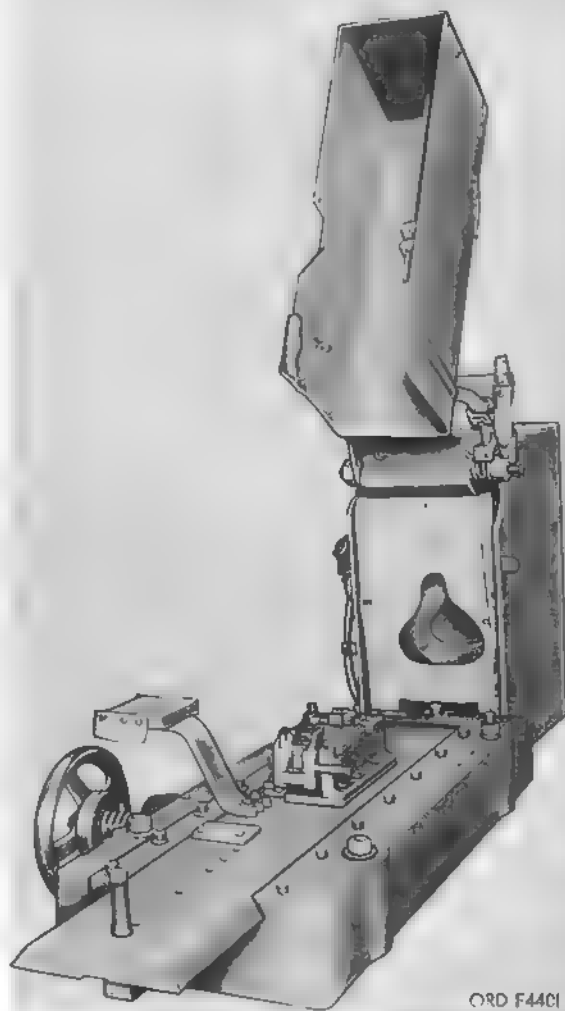


Figure 31. Test firing fixture.

CHAPTER 8 FINAL INSPECTION

74. General

Final inspection of the gun is performed, after firing and cleaning has been completed, and of the mount after all assembly operations have been completed, to insure that the materiel is serviceable and conforms to the requirements specified herein.

75. Visual Inspection

Visual inspection is primarily a comparison of a worn or chipped surface with the adjacent surface or the corresponding portion of a new part. Overall appearance will approximate that of a new weapon. All exposed metal surfaces are to have a dull, rust-resistant finish with no burs, deep scratches, or tool marks. Guns and mounts must be complete with no missing parts. All applicable modifications must be applied. The serial number must be legible. All metal parts must be free of rust.

76. Final Acceptance Inspection

a. *Gun.* Each completed gun shall conform to the requirements contained in paragraphs 22 through 55.

(1) *Barrel assembly with bipod assembly.*

(a) Each barrel assembly with bipod assembly shall conform to the requirements contained in paragraph 26.

(b) Piston shall slide freely within the gas cylinder.

(c) Powder burns, exterior irregularities, and deformations not affecting functioning are acceptable.

(d) The leg assemblies shall telescope freely and positively lock in each extended position.

(e) Springs and detents shall be positive in operation and function as intended.

(2) *Trigger mechanism group.* Each trigger mechanism group shall conform to the requirements contained in paragraph 31.

(3) *Butt stock assembly.* Each butt stock assembly shall conform to the requirements contained in paragraph 35.

(4) *Forearm assembly.* Each forearm assembly shall conform to the requirements contained in paragraph 38.

(5) *Cover assembly and tray assembly.* Cover assembly and tray assembly shall conform to the requirements contained in paragraph 42.

(6) *Buffer and operating rod group.* Each buffer assembly, operating rod assembly, guide and spring shall conform to the requirements contained in paragraph 47.

(7) *Bolt assembly.* Each bolt assembly shall conform to the requirements contained in paragraph 51.

(8) *Receiver assembly.* Each receiver assembly shall conform to the requirements contained in paragraph 54.

b. *Mount.* Each completed mount shall conform to the requirements contained in paragraphs 56 through 67.

(1) Head markings, graduations, and figures shall be well defined and clearly legible.

(2) The tension gap of 1/4 to 3/8 inch between the sliding sleeve and stop on the right hand leg assembly will be assured.

(3) With the pintle installed, check to assure that 0.010-inch minimum clearance between the top of the bushing and the pintle flange has been maintained (use thickness gage).

(4) Check to assure that at least 1/32 inch remaining locking movement

of the pintle lock is present. (Use thickness gage between cam and housing.)

- (5) With the mount in the open or firing position, assure full and positive engagement between the latch and latch lug on the stop.
- (6) With the elevating and traversing mechanism extended to zero, elevation total side play between the sleeve and top of the upper elevat-

ing screw shall not exceed 0.020 inch.

- (7) Elevating and traversing mechanisms shall function with distinct clicks. Stops shall be positive in action.
- (8) Check adequacy of all staking operations and that the resultant bright surfaces have been touched up with suitable paint.
- (9) Assure that MWO9-1005-224-40/1 has been applied.

CHAPTER 9 PREPARATION FOR STORAGE

77. General

This chapter provides instructions for cleaning, preserving, packaging, and packing machineguns M60 and tripod mounts M122.

78. Gun

Unless otherwise specified, all overhauled machineguns M60 will be packaged Level A in accordance with the procedures and processes outlined in Packaging Data Sheets MIL-G-45013, P7269100 using the materials specified therein. Any proposed deviation from the above must be submitted to Commanding General, Ordnance Weapons Command, ATTN: ORDOW-FM-

Rock Island Arsenal, Rock Island, Illinois, prior to adoption.

79. Mount

Unless otherwise specified, all overhauled mounts M122 will be packaged Level A in accordance with the procedures and processes outlined in Packaging Data Sheet P7790723 using the materials specified therein. Any proposed deviation from the above must be submitted to Commanding General, Ordnance Weapons Command, ATTN: ORDOW-FM-W, Rock Island Arsenal, Rock Island, Illinois, prior to adoption.

APPENDIX I

REFERENCES

1. Publication Indexes

The following indexes should be consulted frequently for latest changes or revisions of references given in this appendix and for new publications relating to materiel covered in this technical manual.

Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings.	DA PAM 108-1
Military Publications:	
Index of Administrative Publications	DA Pam 310-1
Index of Blank Forms	DA Pam 310-2
Index of Graphic Training Aids and Devices	DA Pam 310-5
Index of Supply Manuals — Ordnance Corps	DA Pam 310-29
Index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders.	DA Pam 310-4
Index of Training Publications	DA Pam 310-3

2. Supply Manuals

The following supply manuals of the Department of the Army Supply Manuals pertain to this materiel.

<i>a. General.</i>	
Introduction	ORD 1
<i>b. Repair and Supply.</i>	
Field Maintenance Repair Parts and Special Tool Lists for 7.62-mm Machine Gun M60 and Machine Gun Tripod Mount M122.	TM 9-1005-224-34P
Organizational Maintenance Repair Parts and Special Tool Lists for 7.62-mm Machine Gun M60 and Machine Gun Tripod Mount M122.	TM 9-1005-224-20P
Shop Set, Small Arms: Field Maintenance	SM 9-4-5180-A18
Tool Kit, Field Maintenance, Basic Small Arms (4933-755-0366) .	SM 9-4-4933-E04
Tool Kit, Small Arms Repairman's (5180-357-7770) (Line Item 453995).	SM 9-4-5180-A57
Tool Set, Depot Maintenance: All Caliber .30/7.62-mm Machine-guns and Mounts (4933-714-2807).	SM 9-4-4933-E05
Tool Set, Field Maintenance: All Caliber .30 Machineguns and Mounts (4933-856-3733).	SM 9-4-4933-E06

3. Forms

The following forms pertain to this materiel:

DA Form 9-79, Parts Requisition
DA Form 9-80, Job Order File
DA Form 9-81, Exchange Part or Unit Identification Tag
DA Form 468, Unsatisfactory Equipment Report
DA Form 828, Job Time Ticket — Individual
DA Form 829, Rejection Memorandum
DA Form 2028, Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9
DD Form 6, Report of Damaged or Improper Shipment

4. Other Publications

<i>a. Chemical Attacks and Decontamination.</i>	
Chemical, Biological, and Radiological (CBR) Decontamination . .	TM 3-220
Small Unit Procedures in Nuclear, Biological, and Chemical Warfare.	FM 21-40
<i>b. General.</i>	
Accounting for Lost, Damaged, and Destroyed Property	AR 735-11
Demilitarization of Supplies and Foreign Excess Army Materiel .	TB ORD 412
Dictionary of United States Army Terms	AR 320-5
Equipment Records System; Operation TAPER	TM 38-750
Logistics (General):	
Malfunctions Involving Ammunition and Explosives (Reports Control Symbol (ORD-43).	AR 700-1300-8
Unsatisfactory Equipment Report	AR 700-38
Military Symbols	FM 21-30
Military Terms, Abbreviations, and Symbols:	
Authorized Abbreviations and Brevity Codes	AR 320-50
Military Training	FM 21-5
Ordnance Direct Support Service	FM 9-3
Ordnance General and Depot Support Service	FM 9-4
Safety: Accident Reporting and Records	AR 385-40
Techniques of Military Instruction	FM 21-6
<i>c. Inspection and Maintenance.</i>	
Field Inspection and Serviceability Standards for Small Arms Materiel.	TB ORD 587
Field Maintenance Manual: 7.62-mm Machine Gun M60 and Machine Gun Tripod Mount M122.	TM 9-1005-224-34
Kit, Barrel Erosion Gage, M8: Use and Care of Gage	TB ORD 644-3
Lubrication of Ordnance Materiel	TM 9-273
Lubricating Oil, Preservative, Special	MIL-L-644
Machine Gun, 7.62-mm, M60 and Mount, Tripod, M122	LO 9-1005-224-10
Maintenance of Supplies and Equipment:	
Command Maintenance Inspections	AR 750-8
Spot Check Inspection and Reports, Ordnance Corps Materiel.	AR 750-925
Operator's and Organizational Maintenance Manual: 7.62-mm Machine Gun M60 and Machine Gun Tripod Mount M122.	TM 9-1005-224-12
Ordnance Maintenance:	
Cleaning, Drying, and Abrading Equipment for Cleaning Ordnance Materiel.	TM 9-208-2
Cleaning of Ordnance Materiel	TM 9-208-1
Materials used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel; and Related Materials Including Chemicals.	TM 9-247
Phosphate Coatings, Heavy, Manganese or Zinc Base (For Ferrous Metals).	MIL-P-16232
Rebuild Standards for Small Arms Materiel	TB ORD 366
Segregation and Replacement of 1-Piece Traversing Bar C59333 for Cal. .30 Machine Gun Tripod Mount M2.	SB 9-89
Small Arms Weapons, Standards for Visual Inspection of Barrels.	TB ORD 437
Vapor-degreasing Equipment; Operation and Maintenance	TB ORD 584

d. Shipment and Standby or Long-Term Storage.
 General Packaging Instructions for Ordnance General Supplies . . TM 9-200 .
 Issue of Supplies and Equipment:
 Preparation, Processing, and Documentation for Requisition- AR 725-5
 ing, Shipping, and Receiving.
 Logistics (General): Report of Damaged or Improper Shipment . . AR 700-58
 Packaging Data Sheet: Gun, Machine, 7.62-mm, M60, w/Equip- MIL-G-45013
 ment.
 Packaging Data Sheet: Mount, Tripod, M122 P7790723
 Packaging of Small Arms Materiel with Volatile Corrosion TB ORD 623
 Inhibitor (VCI).
 Preservation, Methods of MIL-P-116

APPENDIX II
MAINTENANCE ALLOCATION CHARTS

See TM 9-1005-224-12 (app. ID) for maintenance allocation charts.

INDEX

	Paragraph	Page		Paragraph	Page
Allocation and parts, depot maintenance (See Depot maintenance allocation and parts)			Elevating and traversing mechanism:		
Authorized forms	3b	3	Assembly	60	38
Barrel assembly with bipod assembly:			Cleaning	59a	37
Assembly	27	24	Inspection and repair	59b	37
Cleaning	26a	21	Installation	61	38
Description	5a(1)	6	Removal and disassembly	58	37
Disassembly	25	21	Fabricated tools (See Tools and equipment)		
Final inspection	76a(1)	45	Feed tray assembly (See Cover assembly and tray assembly groups)		
Inspection and repair	26b	21	Final inspection:		
Installation	28	24	Final acceptance inspection (gun)	76a	45
Removal	24	21	Final acceptance inspection (mount)	76b	45
Bipod assembly (See Barrel assembly with bipod assembly)			Final inspection	13c	18
Bolt assembly:			General	74	45
Assembly and installation	52	33	Visual inspection	75	45
Cleaning	51a	32	Finish of metal	16	19
Description	5a(7)	9	Forearm assembly:		
Final inspection	76a(7)	45	Assembly and installation	39	27
Inspection and repair	51b	32	Cleaning	38a	26
Removal and disassembly	50	32	Description	5a(4)	7
Boresighting (See Boresighting and inspection prior to firing)			Final inspection	76a(4)	45
Boresighting and inspection prior to firing:			Inspection and repair	38b	26
Boresighting	70	43	Removal and disassembly	37	26
General	69	43	Forms, records, and reports	3	3
Inspection	71	43	Function-firing	73	44
Buffer and operating rod group:			General overhaul procedures:		
Assembly	48	32	Cleaning	20	20
Cleaning	47a	30	Finish of metal	16	19
Description	5a(6)	8	General	14	19
Disassembly	46	30	Lubrication	21	20
Final inspection	76a(6)	45	Marking	19	19
Inspection and repair	47b	31	Modification work orders and technical bulletins	18	19
Installation	49	32	Repair of damaged, machined, and polished surfaces	17	19
Removal	45	30	Replacement of parts	15	19
Butt stock assembly:			Groups, mechanisms or assemblies:		
Assembly and installation	36	26	Gun (table II)	6a	10
Cleaning	35a	26	Mount (table III)	6b	10
Description	5a(3)	7	Gun, description of (See description)		
Final inspection	76a(3)	45	In-process inspection	13b	18
Inspection and repair	35b	26	Inspection:		
Removal and disassembly	34	26	Purpose	12	18
Cleaning	20	20	Scope	11	18
Common tools and equipment (See Tools and equipment)			Types	13	18
Cover assembly and tray assembly groups:			Lubrication	21	20
Assembly	43	30	Machinegun tripod mount M122:		
Cleaning	42a	27	Description	5b	9
Description	5a(5)	7	Final inspection	76b	45
Disassembly	41	27	Overhaul	56-67	37-42
Final inspection	76a(5)	45	Marking	19	19
Inspection and repair	42b	27	Modification work orders and technical bulletins	18	19
Installation	44	30	Mount (See Machinegun tripod mount M122)		
Removal	40	27	Operating rod (See Buffer and operating rod group)		
Depot maintenance allocation	2a	3	Operations route sheet (table I)	4b	5
Depot maintenance allocation and parts Description:	2	3	Overhaul flow chart	4a	3
Gun	5a	6	Overhaul of the machinegun:		
Mount	5b	9	Direct labor man-hour time	23	21
Direct labor man-hour time:			Scope	22	21
Machinegun	23	21	Overhaul of tripod mount:		
Tripod mount	57	37	Direct labor man-hour time	57	37
			Scope	56	37

	Paragraph	Page		Paragraph	Page
Parts, depot maintenance (See Depot maintenance parts)			Special tools (See Tools and equipment)		
Parts inspection	13a	18	Storage (See Preparation for storage)		
Platform and pintle group:			Tables:		
Assembly and installation	64	39	Fabricated tools for depot maintenance (table V)	10	11
Cleaning	63a	38	Major groups of mount (table III)	6b	10
Inspection and repair	63b	38	Major groups or assemblies of the machinegun (table II)	6a	10
Removal and disassembly	62	38	Operations route sheet for gun and mount (table I)	4b	5
Preparation for storage:			Special tools and equipment for depot maintenance (table IV)	9	11
General	77	47	Tools and equipment:		
Gun	78	47	Common tools and equipment	8	11
Mount	79	47	Fabricated tools (table V)	10	11
Proof- and function-firing of the gun:			General	7	11
Boresighting	70	43	Special tools (table IV)	9	11
Function-firing	73	44	Trigger mechanism group:		
General	69	43	Assembly	32	25
Inspection	71	43	Cleaning	31a	24
Scope	68	43	Description	5a(2)	6
Test firing fixture	72	44	Disassembly	30	24
Proof-firing (See Proof- and function-firing of the gun)			Final inspection	76a(2)	45
Receiver group:			Inspection and repair	31b	24
Assembly	55	35	Installation	33	25
Cleaning	54a	34	Removal	29	24
Description	5a(8)	9	Tripod group:		
Disassembly	53	33	Assembly	67	42
Final inspection	76a(8)	45	Cleaning	66a	40
Inspection and repair	54b	34	Disassembly	65	40
Repair of damaged, machined, and polished surfaces	17	19	Inspection and repair	66b	40
Replacement of parts	15	19	Unsatisfactory equipment or materials (See Report of unsatisfactory equipment or materials)		
Report of unsatisfactory equipment or materials	3c	3			
Scope	1	3			

By Order of Secretary of the Army:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

DCSLOG (2)
Tech Stf, DA (1) except
CofT (none)
Ord Bd (2)
USCONARC (3)
MDW (2)
Armies (3) except
Sixth US Army (1)

Corps (2)
Ord Dep (5)
Ord Arsenals (5) except
Raritan (10)
Springfield Armory (5)
Ord Comd (2) except
OWC (ORDOW-FM-W) (10)

NG: None.

USAR: None.

For explanation of abbreviations used, see AR 320-50.

3369

TM 9-1005-224-50

TM 9-1005-224-50 7.62-MM MACHINEGUN M60 AND MACHINEGUN TRIPOD MOUNT M122 - 1962

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