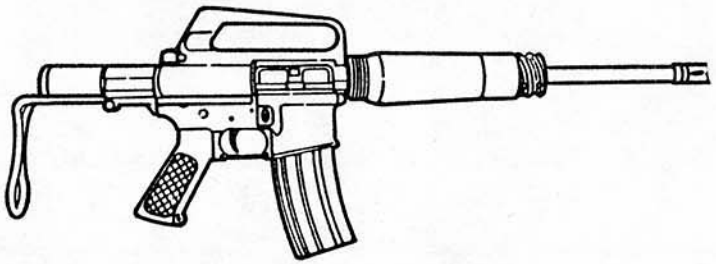
TM 9-1005-309-23&P

TECHNICAL MANUAL

AC 106

ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR SUBMACHINE GUN, 5.56-MM: PORT, FIRING, M231 (1005-01-081-4582)

This manual was verified, but it still contains errors.



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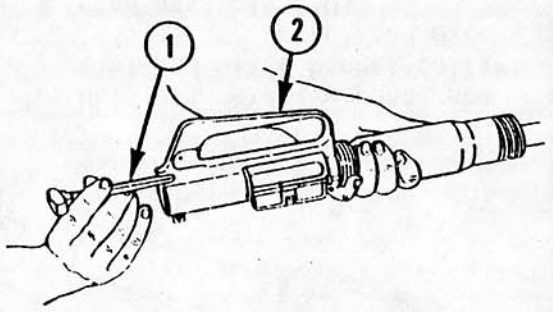
HEADQUARTERS, DEPARTMENT OF THE ARMY



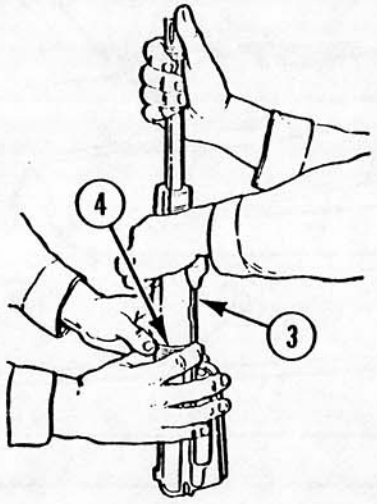
1 CHARGING HANDLE ASSEMBLY (1). Pull back and push down to remove from upper receiver assembly (2).

2 TWO HANDGUARDS (3).

NOTE
Two soldiers may be required to remove handguards.

a. Point barrel upward and have helper push down on barrel nut assembly (4).

b. Repairer pivots each handguard (3) outward to remove.



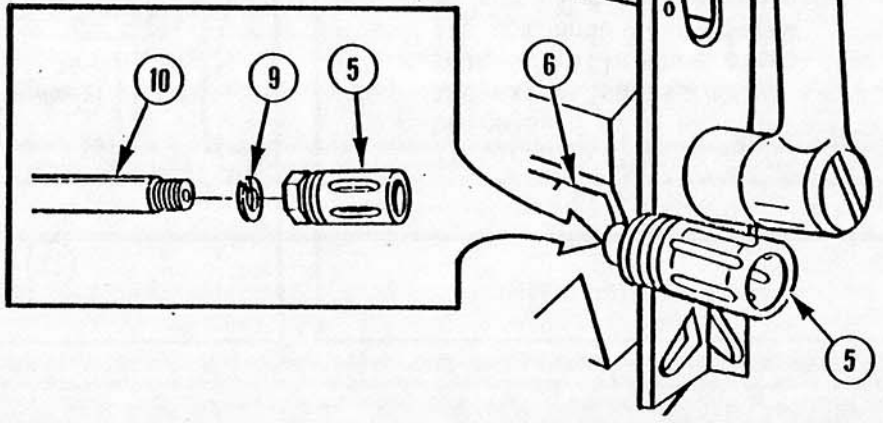
3 FLASH SUPPRESSOR (5).

a. Place barrel remover fixture (6) in vise.

b. Position upper receiver and barrel assembly in barrel remover fixture (6) with flash suppressor (5) close to barrel remover fixture and tighten vise.

c. Loosen flash suppressor (5) using combination barrel nut and flash suppressor wrench (7) and 1/2-inch drive handle (8). Turn counterclockwise to loosen.

d. Remove flash suppressor (5) and flash suppressor lockwasher (9) from barrel and extension assembly (10).



3-8. UPPER RECEIVER AND BARREL ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

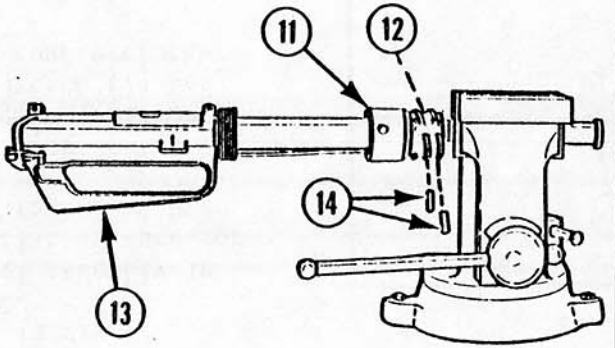
DISASSEMBLY (cont)

4 BARREL COLLAR (11).

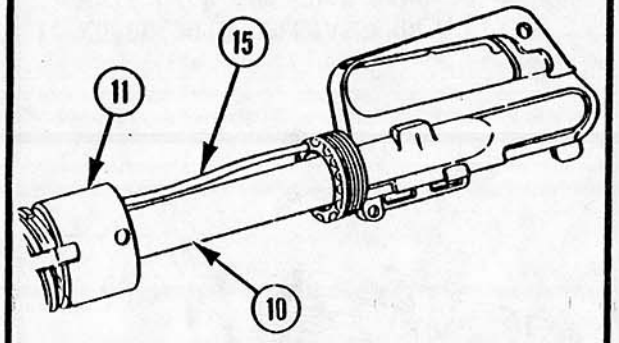
a. Remove setscrew (12).

b. With carrying handle (13) in position illustrated, drive out two plain tapered pins (14) using 1/8-inch punch.

c. Remove from vise.



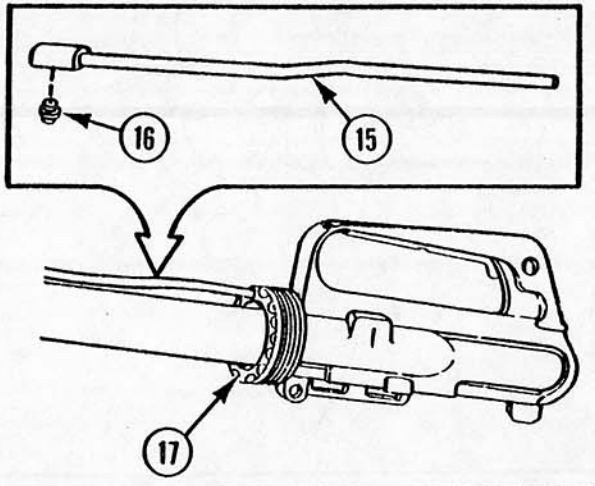
NOTE
If barrel collar cannot be removed from barrel and extension assembly, soak in rifle bore cleaning compound (RBC) (item 8, app D) for a period of 2 to 8 hours.



d. Hold gas metallic bent tube (15) and slide barrel collar (11) off of barrel and extension assembly (10).

NOTE
Be careful not to lose gas seal.

5 GAS METALLIC BENT TUBE (15) AND GAS SEAL (16). Lift up slightly and remove by pulling out of barrel nut assembly (17).



6 BARREL NUT ASSEMBLY (17).

a. Place barrel remover fixture (6) in vise.

b. Position barrel and extension assembly in fixture and tighten vise.

c. Push the combination barrel nut and flash suppressor wrench (7) down to compress the slip ring spring. Be sure the three drive pins on the combination barrel nut and flash suppressor wrench are fully engaged with barrel nut assembly (17).

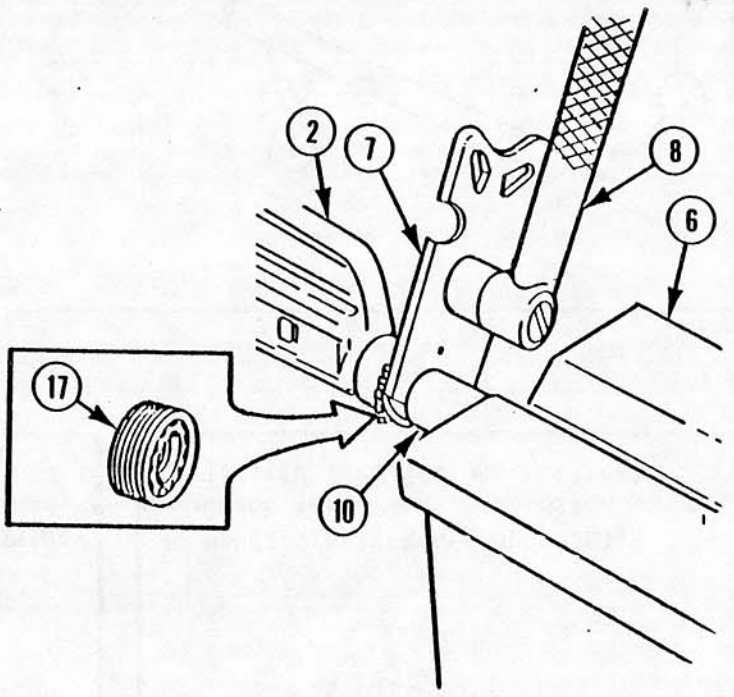
d. Use combination barrel nut and flash suppressor wrench (7) and 1/2-inch drive handle (8) to loosen barrel nut assembly (17).

7 UPPER RECEIVER ASSEMBLY (2). Separate and remove from barrel and extension assembly (10).

8 BARREL AND EXTENSION ASSEMBLY (10).

a. Remove from vise.

b. Remove barrel nut assembly (17).



3-8. UPPER RECEIVER AND BARREL ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/CLEANING

1 ALL PARTS.

a. Wipe off with wiping rag (item 18, app D).

b. Remove carbon with rifle bore cleaning compound (RBC) (item 8, app D) and small arms cleaning brush.

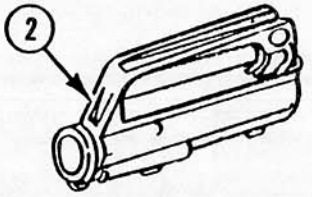
c. Inspect for wear, damage, and burrs.

d. If present, remove burrs with a stone or file.

2 GAS METALLIC BENT TUBE (1).

a. Check for carbon deposits on exterior.

b. If present, remove carbon with small arms cleaning brush and rifle bore cleaning compound (RBC) (item 8, app D).



3 UPPER RECEIVER ASSEMBLY (2). Check for cracks, corrosion, damaged threads, and mutilation.

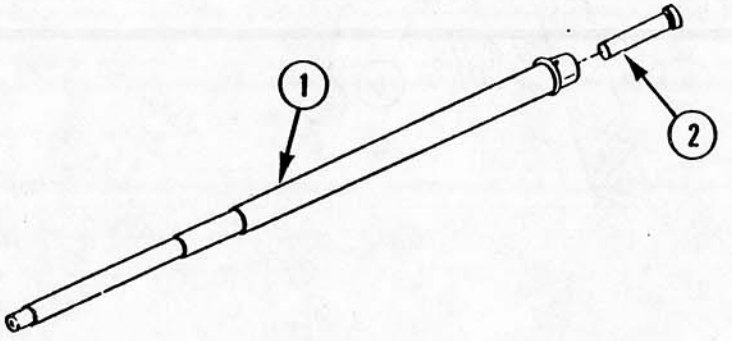
CHAMBER TEST

BARREL AND EXTENSION ASSEMBLY (1).

a. Insert chamber reflector tool (2) in chamber.

b. Rotate to allow light to shine into chamber. Use flashlight if necessary.

c. Inspect for presence of pits 1/8 inch (0.318 cm) in length and large enough to extend from the body of the chamber into the shoulder stop area and forcing cone area. If present, replace barrel and barrel collar assembly. (P3-28)



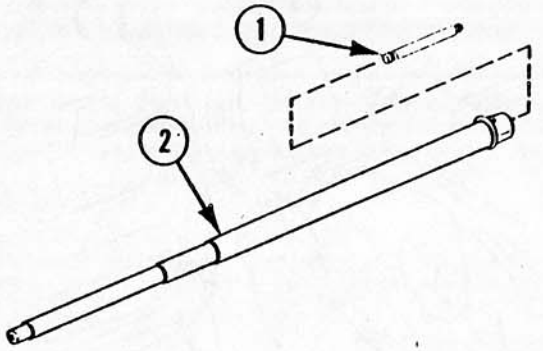
BARREL STRAIGHTNESS TEST

1 STRAIGHTNESS GAGE (1). Insert in barrel and extension assembly (2).

2 BARREL AND EXTENSION ASSEMBLY (2). Tilt to allow straightness gage (1) to slide through. Catch straightness gage.

NOTE

Straightness gage (1) must pass freely through barrel and extension assembly. If not, the barrel and extension assembly is unserviceable.



REPAIR

Repair is by replacement of authorized parts (app C) as required.

NOTE

For repair of the upper receiver assembly, refer to page 3-39. For repair of the barrel nut assembly, refer to page 3-41. For repair of the barrel and barrel collar assembly, refer to page 3-43.

REASSEMBLY

1 BARREL NUT ASSEMBLY (1). Slide on barrel and extension assembly (2) with retaining ring side toward alinement pin (3).

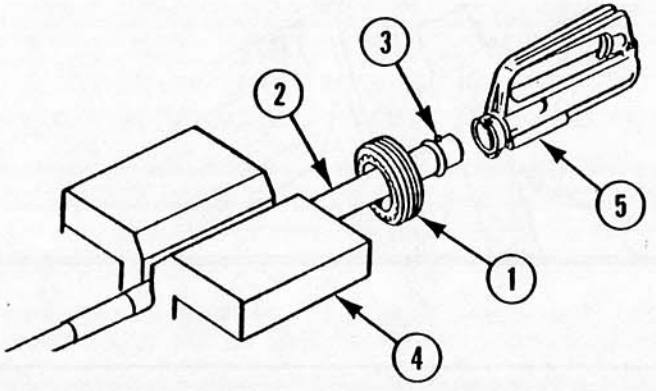
2 BARREL AND EXTENSION ASSEMBLY (2). Place in barrel remover fixture (4) with alinement pin (3) up and tighten vise to hold securely.

3 UPPER RECEIVER ASSEMBLY (5). Using alinement pin (3) and slot in upper receiver assembly, aline and install over end of barrel and extension assembly (2).

4 BARREL NUT ASSEMBLY (1).

a. Apply light coat of molybdenum disulfide grease (item 11, app D) to the threads.

b. Engage threads with upper receiver assembly (5).



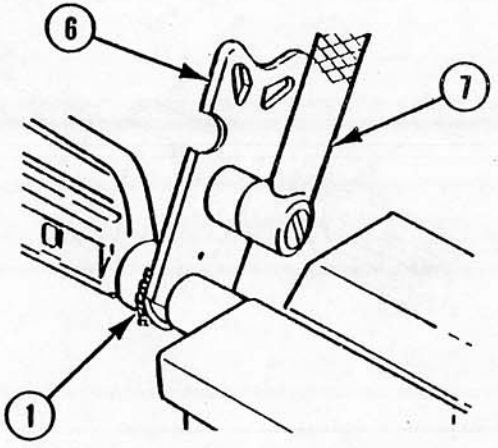
3-8. UPPER RECEIVER AND BARREL ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

4 BARREL NUT ASSEMBLY (1). (cont)

NOTE
Loosen and repeat torque operation three times when working with a new barrel and extension assembly.

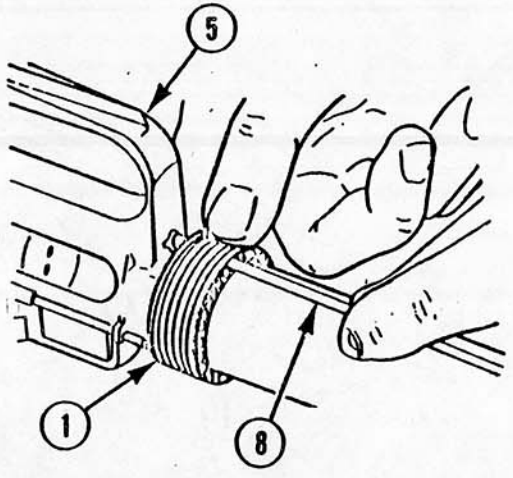
c. Use combination barrel nut and flash suppressor wrench (6) and torque wrench (7) to torque barrel nut assembly (1) to minimum of 35 ft-lb (47.46 N-m).

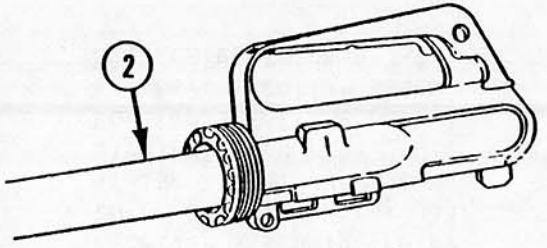


d. Aline barrel nut assembly hole with hole in upper receiver assembly.

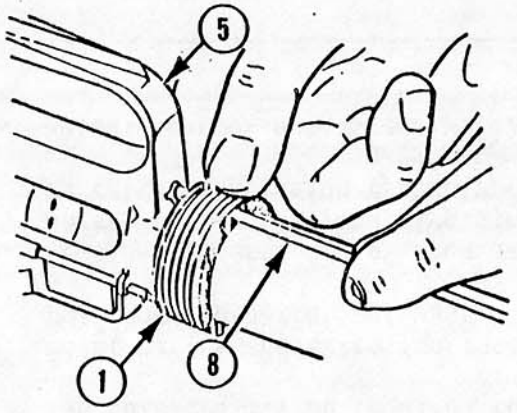
e. Aline barrel nut assembly (1) with upper receiver assembly (5) using gas metallic bent tube (8) as a guide.

f. Tighten barrel nut assembly (1) to next hole to allow proper alinement with gas metallic bent tube.





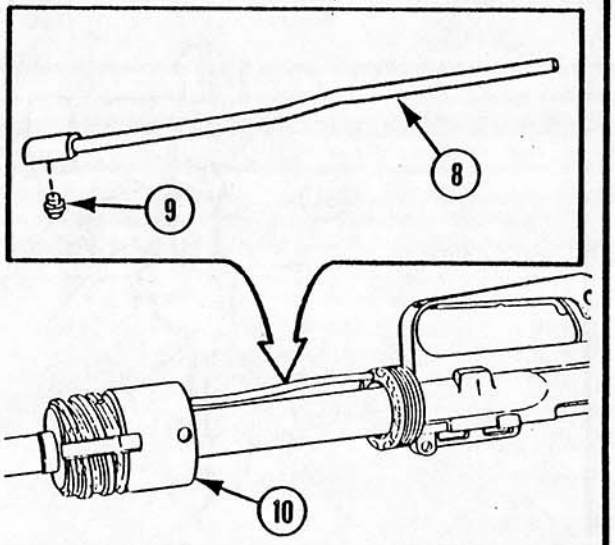
5 BARREL AND EXTENSION ASSEMBLY (2) WITH ATTACHED PARTS. Remove from barrel remover fixture.

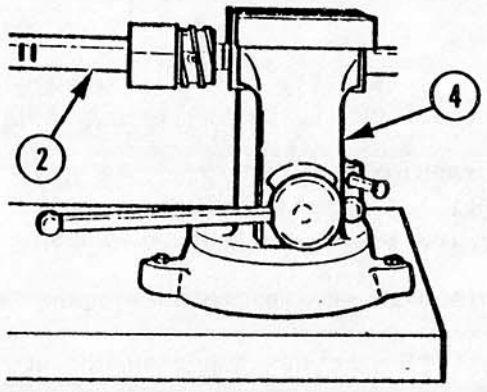


6 GAS METALLIC BENT TUBE (8). Install through barrel nut assembly (1) into upper receiver assembly (5).

7 GAS SEAL (9). Install in barrel and extension assembly recess and gas metallic bent tube (8).

8 BARREL COLLAR (10). Slide over barrel and extension assembly alining with gas metallic bent tube (8) and alining holes in barrel collar (10) with groove in barrel and extension assembly.





9 BARREL AND EXTENSION ASSEMBLY (2) WITH ATTACHED PARTS. Place in barrel remover fixture (4) and tighten in vise.

10 SETSCREW (11). Install and tighten just enough to secure.

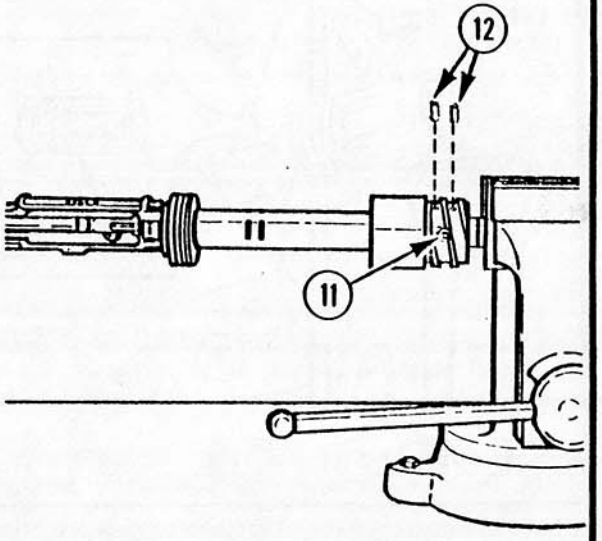
11 TWO PLAIN TAPERED PINS (12).

NOTE
Insert small ends of plain tapered pins first in holes.

a. With carrying handle in down position, install plain tapered pins (12).

b. Seat plain tapered pins using a 3/32-inch punch.

12 SETSCREW (11). Tighten to 150- to 170-in.-lb (16.95- to 19.21-N-m) torque using 3/16-inch sockethead screw socket wrench.



3-8. UPPER RECEIVER AND BARREL ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

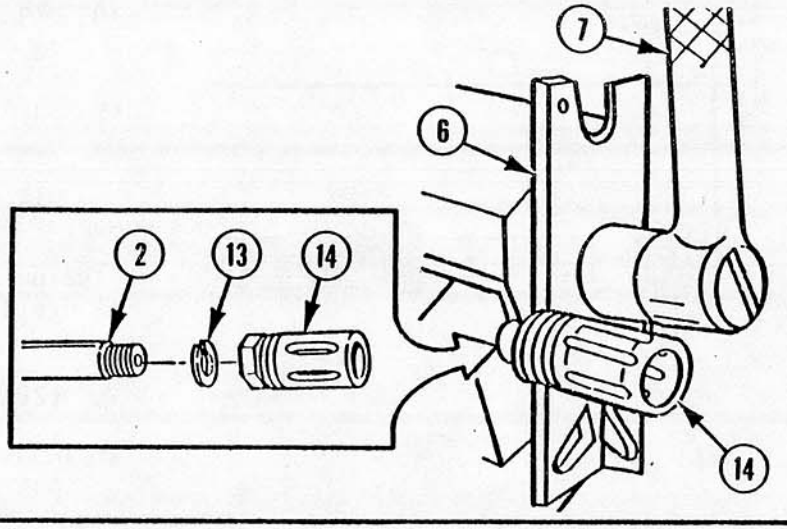
REASSEMBLY (cont)

13 FLASH SUPPRESSOR LOCKWASHER (13) AND FLASH SUPPRESSOR (14).

a. Install on barrel and extension assembly (2).

b. Using combination barrel nut and flash suppressor wrench (6) and torque wrench (7), tighten to 15- to 20-ft-lb (20.34- to 27.12-N-m) torque.

14 BARREL AND EXTENSION ASSEMBLY (2) WITH ATTACHED PARTS. Remove from barrel remover fixture.



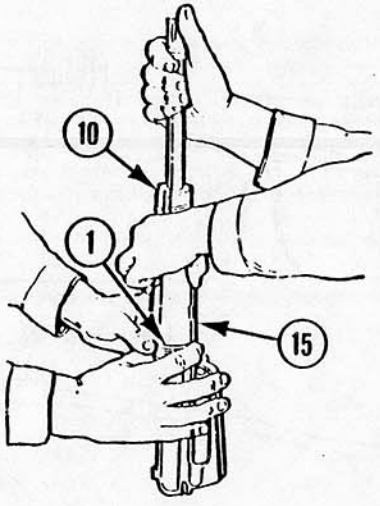
15 TWO HANDGUARDS (15).

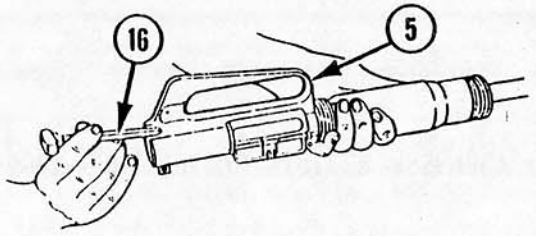
NOTE
Two soldiers may be required to install handguards.

a. Point barrel and extension assembly upward and have helper pull down on barrel nut assembly (1).

b. Repairer inserts top of each handguard (15) into upper barrel collar (10) and pivots handguard downward against barrel and extension assembly.

c. Release barrel nut assembly (1).





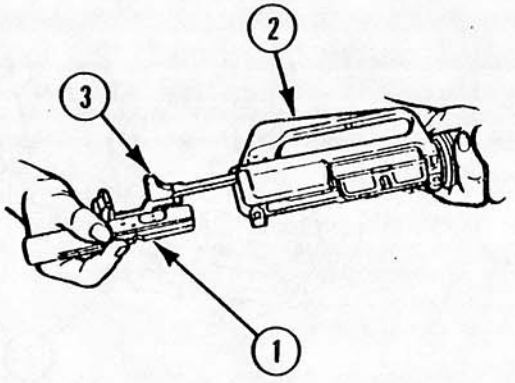
16 CHARGING HANDLE ASSEMBLY (16).

a. Aline detents on charging handle assembly with slots in upper receiver assembly (5).

b. Lift up and push forward to install.

1 BOLT CARRIER AND KEY ASSEMBLY (1). Aline key with charging handle assembly and insert into upper receiver and barrel assembly (2).

2 BOLT CARRIER AND KEY ASSEMBLY (1) AND CHARGING HANDLE ASSEMBLY (3). Press forward using light finger pressure.



3 BARREL EROSION GAGE (4).

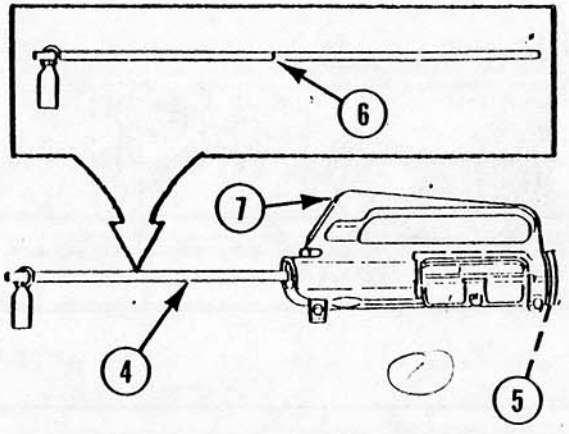
a. Insert into breech end of barrel and extension assembly (5) and through bolt carrier and key assembly.

b. Check that barrel erosion gage (4) does not go beyond rejection mark (6), when sighting across rear flats of upper receiver (7).

NOTE

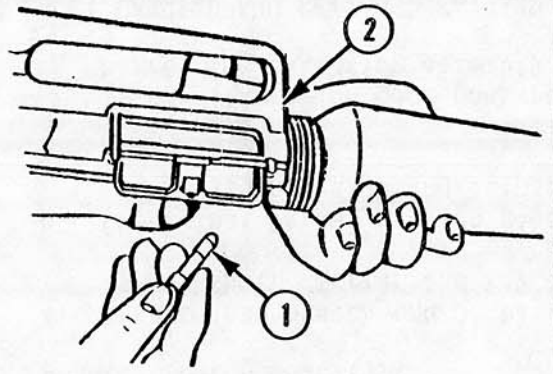
If barrel erosion gage goes past the rejection mark, the barrel and extension assembly is unserviceable.

4 BOLT CARRIER AND KEY ASSEMBLY (1) AND BARREL EROSION GAGE (4). Remove.



3-8. UPPER RECEIVER AND BARREL ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

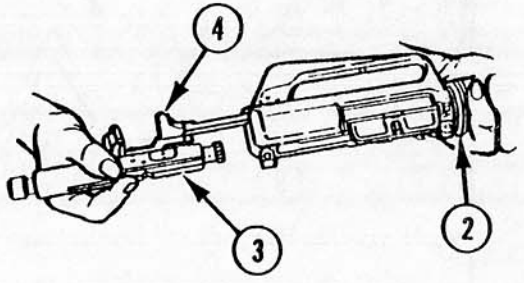
HEADSPACE TEST



1 HEADSPACE GAGE (1). Insert in chamber of upper receiver and barrel assembly (2).

2 BOLT CARRIER AND STRIKER ASSEMBLY (3). Insert into upper receiver and barrel assembly (2).

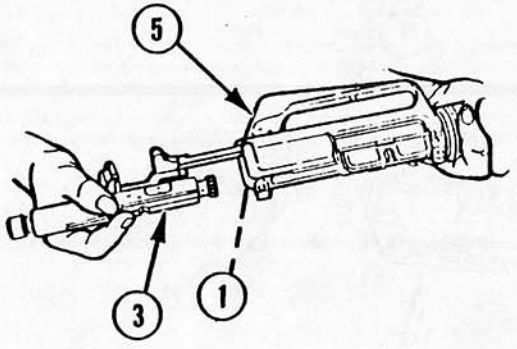
3 BOLT CARRIER AND STRIKER ASSEMBLY (3) AND CHARGING HANDLE ASSEMBLY (4). Press forward using light finger pressure.



NOTE

If firing hammer is flush with rear of upper receiver (5) and/or the bolt carrier and striker assembly closes and locks, the barrel and extension assembly or breech bolt is unserviceable.

4 BOLT CARRIER AND STRIKER ASSEMBLY (3) AND HEADSPACE GAGE (1). Remove.



3-9. UPPER RECEIVER ASSEMBLY--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Disassembly
b. Inspection/cleaning
c. Repair
d. Reassembly

INITIAL SETUP

Tools and Special Tools
Small arms repairman tool kit (SC 5180-95-CL-A07)

Materials/Parts
Abrasive cloth (item 9, app D)
Dry cleaning solvent (item 10, app D)
Solid film lubricant (item 13, app D)
Wiping rag (item 18, app D)

Personnel Required
MOS 45B-10 Small arms repairer

References
Appendix C
Appendix D

Equipment Conditions
3-28 Upper receiver assembly removed from upper receiver and barrel assembly

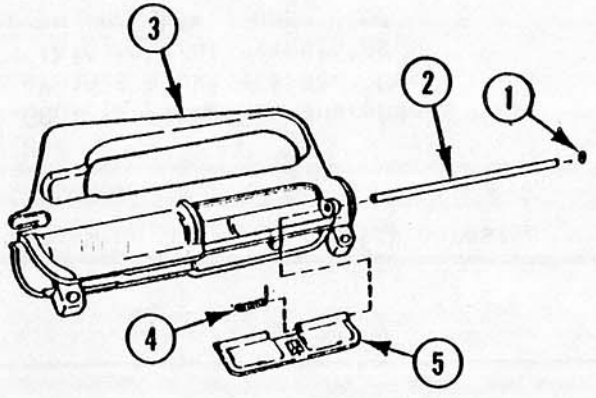
DISASSEMBLY

1 RETAINING RING (1). Remove from ejection port cover pin (2) using small screwdriver.

WARNING
Be careful when removing spring loaded parts. Carelessness could result in injury.

2 EJECTION PORT COVER PIN (2). Pull out of upper receiver (3).

3 HELICAL TORSION SPRING (4) AND EJECTION PORT COVER (5). Remove.



INSPECTION/CLEANING

1 ALL PARTS.

a. Wipe off with wiping rag (item 18, app D).

b. Inspect for wear, damage, and burrs.

c. If present, remove burrs with a stone or file.

2 UPPER RECEIVER. Check for cracks, corrosion, damaged threads, and mutilation.

3-9. UPPER RECEIVER ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

REPAIR

1 UPPER RECEIVER.

a. Sand corroded external surfaces and small gouge areas with abrasive cloth (item 9, app D).

WARNING
Dry cleaning solvent (SD) (P-D-680) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves it may cause cracks in the skin and in some cases mild irritation or inflammation.

b. Clean with dry cleaning solvent (item 10, app D).

WARNING
When using solid film lubricant be sure area is well ventilated.

CAUTION
Be sure upper receiver is thoroughly cleaned and dried prior to application of solid film lubricant.

CAUTION
Solid film lubricant is to be used only as an exterior surface protective finish and touchup. If solid film lubricant comes in contact with recoiling parts or functional surfaces of the M231 submachine gun, remove immediately by cleaning with dry cleaning solvent (item 10, app D).

c. Spray a coat of solid film lubricant (item 13, app D) to all shiny external surfaces.

d. Allow solid film lubricant to dry 24 hours before reassembly.

2 ALL PARTS. Repair is by replacement of authorized parts (app C) as required.

REASSEMBLY

1 EJECTION PORT COVER (1). Position on upper receiver (2) and hold in place.

2 EJECTION PORT COVER PIN (3). Install through upper receiver (2) and ejection port cover (1) up to spring opening.

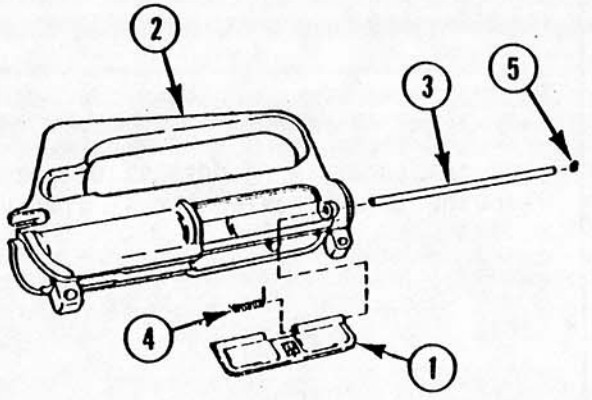
3 HELICAL TORSION SPRING (4). Install with ends pointed in opposite direction.

NOTE

Long end of helical torsion spring rests against inside of ejection port cover on forward side of opening with short end to the rear.

4 EJECTION PORT COVER PIN (3). Insert all the way.

5 RETAINING RING (5). Install on ejection port cover pin (3) using small screwdriver.



3-10. BARREL NUT ASSEMBLY--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Disassembly
b. Cleaning
c. Inspection
d. Repair
e. Reassembly

INITIAL SETUP

Tools and Special Tools
Small arms repairman tool kit (SC 5180-95-CL-A07)

Materials/Parts
Dry cleaning solvent (item 10, app D)

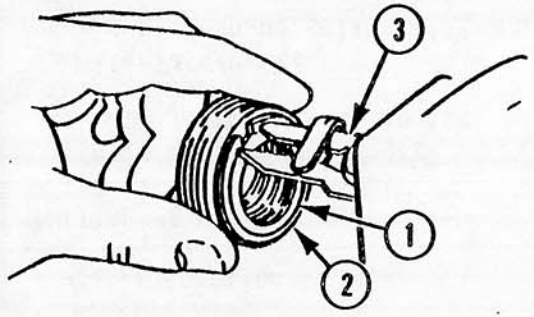
Personnel Required
MOS 45B-10 Small arms repairer

References
Appendix C
Appendix D

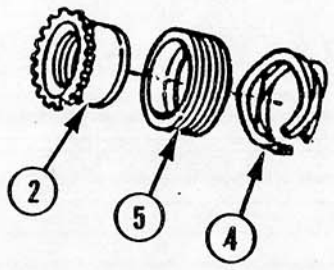
Equipment Conditions
3-28 Barrel nut assembly removed from upper receiver and barrel assembly

3-10. BARREL NUT ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY



1 RETAINING RING (1). Remove from barrel nut (2) using retaining ring pliers (3).



2 SLIP RING SPRING (4) AND HAND-GUARD SLIP RING (5). Remove from barrel nut (2).

CLEANING

WARNING

Dry cleaning solvent (SD) (P-D-680) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves it may cause cracks in the skin and in some cases mild irritation or inflammation.

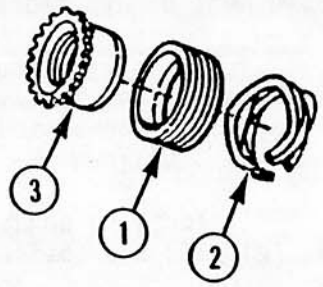
ALL PARTS. Clean with dry cleaning solvent (item 10, app D).

INSPECTION

BARREL NUT ASSEMBLY. Check for broken spring or damaged parts.

REPAIR

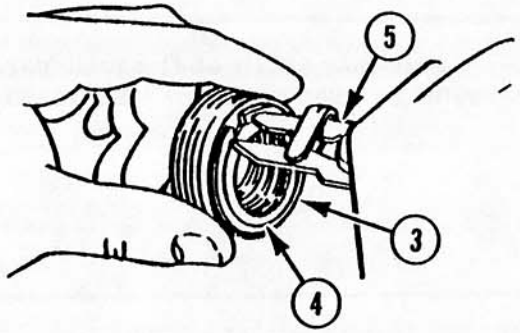
Repair is by replacement of authorized parts (app C) as required.



1 HANDGUARD SLIP RING (1) AND SLIP RING SPRING (2). Slide onto barrel nut (3).

NOTE
Seat retaining ring on groove of barrel nut.

2 RETAINING RING (4). Lock in place on barrel nut (3) using retaining ring pliers (5).



3-11. BARREL AND BARREL COLLAR ASSEMBLY--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Inspection
b. Repair/replacement
c. Reassembly/installation
d. Test

INITIAL SETUP

Tools and Special Tools
Small arms repairman tool kit (SC 5180-95-CL-A07)

Personnel Required
MOS 45B-10 Small arms repairer

References
3-33 Reassembly of upper receiver and barrel assembly
3-32 Chamber test
3-33 Barrel straightness test
3-37 Barrel erosion test
3-38 Headspace test
Appendix C

Equipment Conditions
2-15 Upper receiver and barrel assembly removed
3-28 Barrel and barrel collar assembly disassembled and removed

3-11. BARREL AND BARREL COLLAR ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

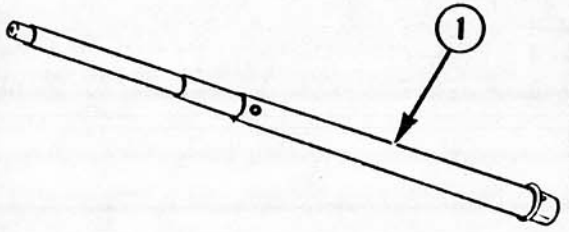
INSPECTION

1 ALL PARTS.

a. Inspect for wear and damage.

b. Inspect for burrs, paying particular attention to locking lug area of barrel and extension assembly.

c. If present, remove burrs with a stone or file.



2 BARREL AND EXTENSION ASSEMBLY (1).

a. Inspect bore for cracks, rust, bulges, and pits.

NOTE

Pits in bore, no wider than a land or groove and no longer than 3/8 inch (0.953 cm), are allowed. Lands that appear dark due to coating of gilding metal from projectiles are allowable. Definitely ringed bores or bores ringed sufficiently to bulge the outside surface of the barrel and extension assembly are cause for rejection.

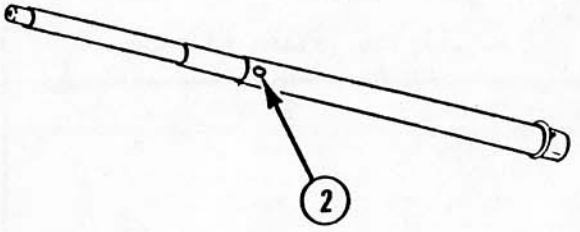
REPAIR/REPLACEMENT

b. Inspect gas port (2) for carbon buildup.

CAUTION

Do not remove steel from gas port when removing carbon buildup.

c. Remove carbon from gas port with a hand held no. 51, 0.067-in. drill bit.



Repair is by replacement of authorized parts (app C) as required.

REASSEMBLY/INSTALLATION

NOTE
For reassembly/installation procedures of the barrel and barrel collar assembly, refer to the reassembly of the upper receiver and barrel assembly (p 3-33).

TEST

Perform four tests on the barrel and extension assembly to determine if it is serviceable or not. The tests are chamber test (p 3-32), barrel straightness test (p 3-33), barrel erosion test (p 3-37), and headspace test (p 3-38).

3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Disassembly
b. Inspection
c. Test
d. Repair
e. Reassembly
f. Test

INITIAL SETUP

Tools and Special Tools
- Lower receiver gage (fig. 3, app E)
- Small arms repairman tool kit (SC 5180-95-CL-A07)
- Small arms shop set (SC 4933-95-CL-A11)
  - 1-inch socket handle
  - 1/2-inch drive socket wrench
- Tool and gage set (fig. 11, app C)

Materials/Parts
- Abrasive cloth (item 9, app D)
- Dry cleaning solvent (item 10, app D)
- Lubricating oil (LSA) (item 16, app D)
- Molybdenum disulfide grease (item 11, app D)
- Solid film lubricant (item 13, app D)

Personnel Required
- MOS 45B-10 Small arms repairer
- Helper

References
- Appendix C
- Appendix D
- Appendix E

Equipment Conditions
- 2-15 Lower receiver and receiver extension removed

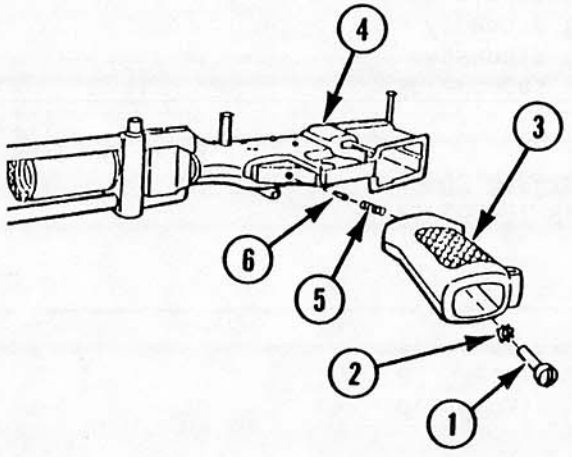
3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

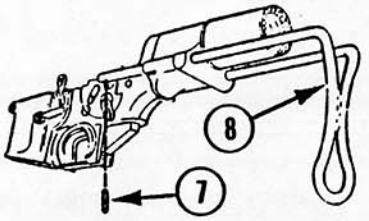
DISASSEMBLY

1 MACHINE SCREW (1), LOCKWASHER (2), AND RIFLE GRIP (3). Remove from lower receiver (4).

NOTE
Catch small parts to prevent loss.

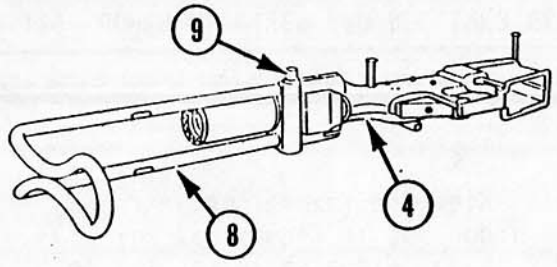
2 HELICAL COMPRESSION SPRING (5) AND SAFETY DETENT (6). Remove.





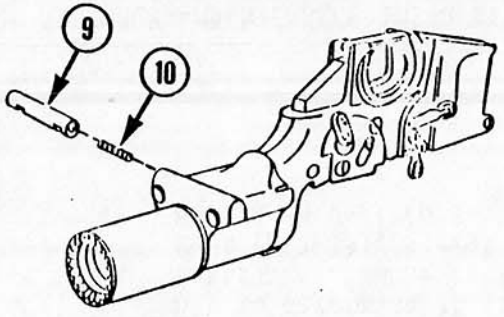
CAUTION
Support buttstock to prevent damage when removing spring pin.

3 SPRING PIN (7). Remove from buttstock (8) using 1/16-inch punch.



4 BUTTSTOCK LATCH (9). Depress.

5 BUTTSTOCK (8). Remove from lower receiver (4).



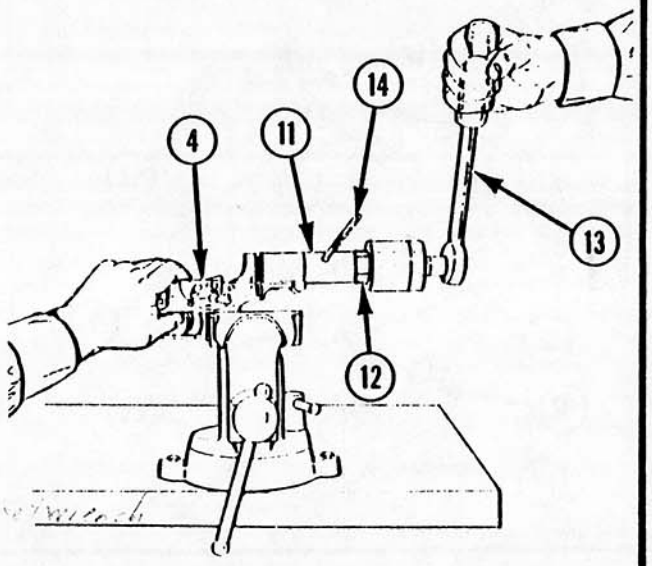
6 BUTTSTOCK LATCH (9) AND HELICAL COMPRESSION SPRING (10). Remove, catch in cupped hand to prevent loss.

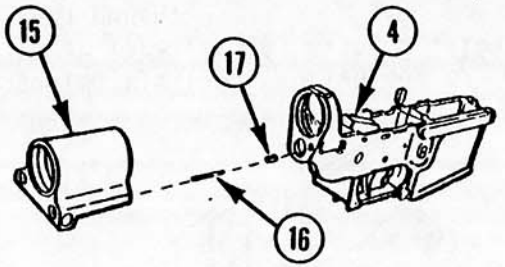
CAUTION
Secure solid portion of lower receiver in vise to prevent damage.

7 LOWER RECEIVER (4) WITH ATTACHED PARTS. Place in vise with vise jaw caps as shown.

NOTE
Two soldiers are required to perform removal of receiver extension. A helper to steady lower receiver and a repairer to remove receiver extension.

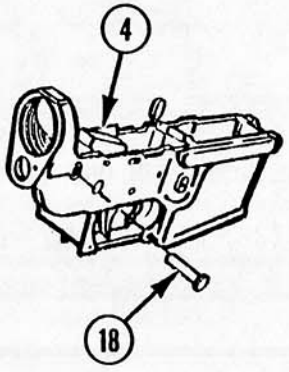
8 RECEIVER EXTENSION (11). Remove from lower receiver (4) using receiver extension wrench (12), 1-inch socket and socket handle (13), and 3/16-inch punch (14).





NOTE
Catch small parts to prevent loss.

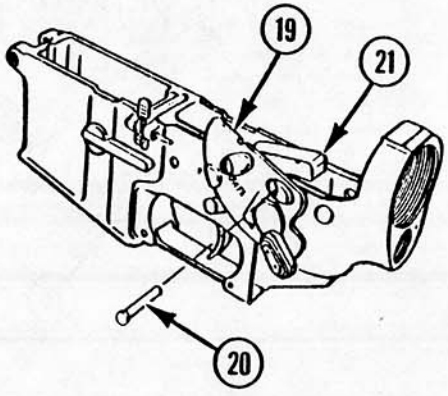
9 BUTTSTOCK BRACKET (15), HELICAL COMPRESSION SPRING (16), AND TAKEDOWN PIN DETENT (17). Remove from lower receiver (4).



10 TAKEDOWN PIN (18). Remove from lower receiver (4).

11 PIN RETAINER (19). Pivot upward.

12 HEADED STRAIGHT PIN (20). Remove by holding down on sear (21).

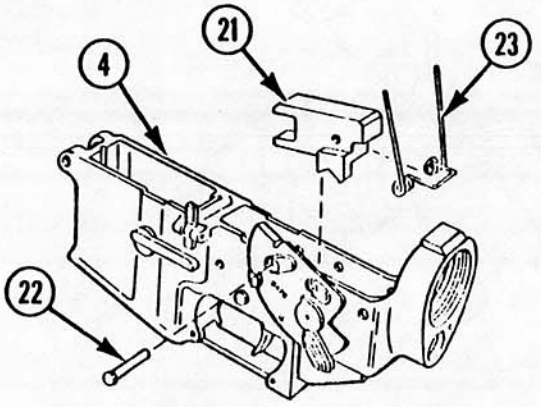


3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

13 HEADED STRAIGHT PIN (22). Remove.

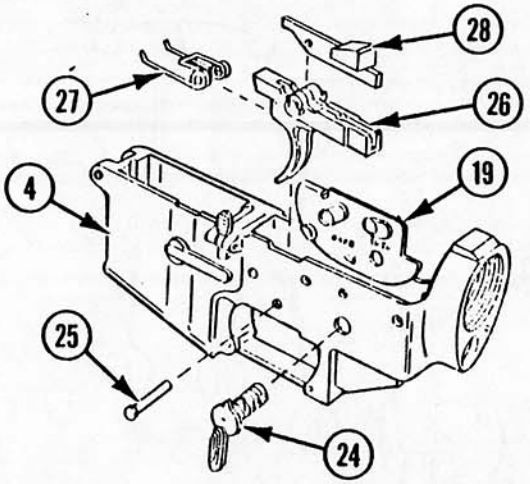
14 SEAR (21) AND HELICAL SEAR SPRING (23). Remove from lower receiver (4).

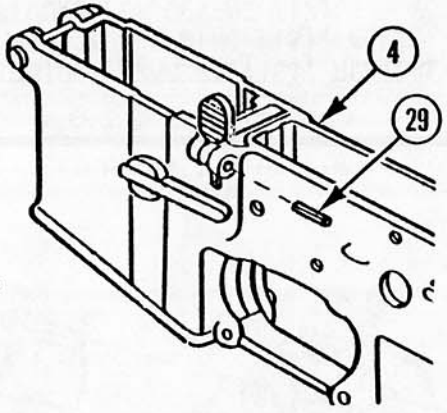


15 SELECTOR LEVER (24) AND PIN RETAINER (19). Pull to remove from lower receiver (4).

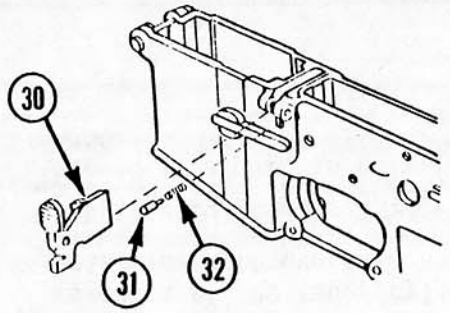
16 HEADED STRAIGHT PIN (25). Push out of lower receiver (4) using 1/16-inch punch.

17 TRIGGER (26), HELICAL TORSION SPRING (27), AND TRIGGER EXTENSION (28). Remove and separate.





18 SPRING PIN (29). Drive out of lower receiver (4) using a 1/16-inch punch.



NOTE
Catch small parts to prevent loss.

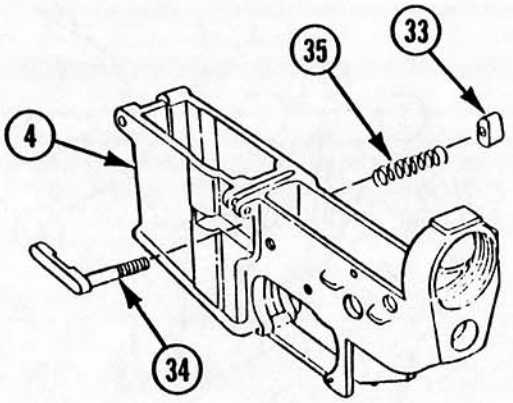
19 BOLT CATCH (30), BOLT CATCH PLUNGER (31), AND HELICAL COMPRESSION SPRING (32). Remove.

20 MAGAZINE CATCH BUTTON (33). Press with a 1/8-inch punch to expose magazine catch (34).

21 MAGAZINE CATCH (34). Unscrew to remove from lower receiver (4).

NOTE
Catch small parts to prevent loss.

22 MAGAZINE CATCH BUTTON (33) AND HELICAL COMPRESSION SPRING (35). Remove.

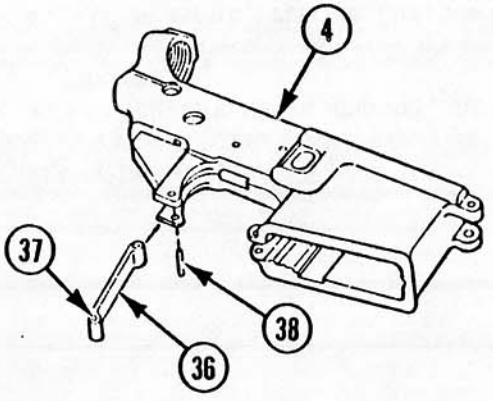


INSPECTION

23 TRIGGER GUARD (36). Depress pin (37) using 1/16-inch punch and swing down.

24 SPRING PIN (38). Remove using a 1/8-inch punch.

25 TRIGGER GUARD (36). Remove.



1 BUTTSTOCK. Inspect for bends and broken or cracked weld.

2 BUTTSTOCK LATCH. Inspect for burrs or damage. If burrs are present remove with stone or file.

3 ALL SPRINGS AND SPRING PINS. Inspect for rust, breaks, and deformation.

3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

INSPECTION (cont)

4 LOWER RECEIVER.

NOTE
Extensive corrosion in pivot pin area is cause for replacement.

a. Check for cracks, corrosion, and mutilation.

b. Inspect threads for damage.

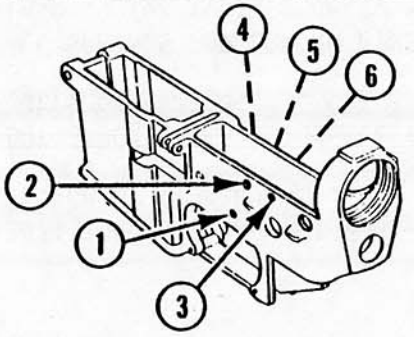
c. Inspect for burrs, remove with a stone or file if present.

5 ALL REMAINING PARTS.

a. Check for wear, damage, and burrs.

b. If present, remove burrs with a stone or file.

TEST

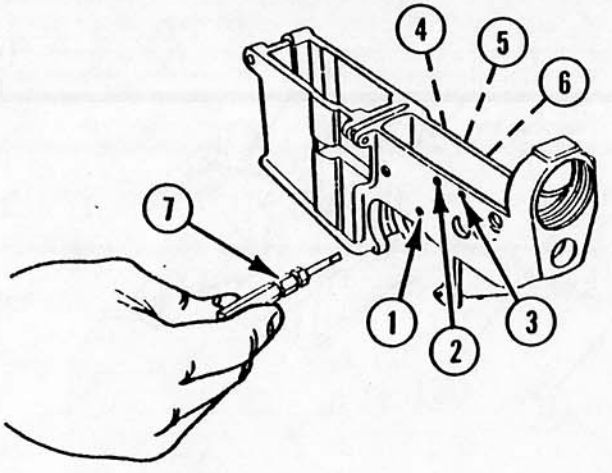


SIX HEADED STRAIGHT PIN HOLES (1 THRU 6). Check for oversize or out-of-round holes by performing the following procedures:

a. Attempt to insert taper cylindrical (NOT GO) plug gage (7) (12006472) by gage weight only, do not press.

b. Rotate taper cylindrical (NOT GO) plug gage (7), rotational movement of the taper cylindrical (NOT GO) plug gage will determine both oversize and out-of-round holes.

c. Entry of taper cylindrical (NOT GO) plug gage (7) in any headed straight pin hole (1 thru 6) is cause for replacement.



1 LOWER RECEIVER.

WARNING
Dry cleaning solvent (SD) (P-D-680) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves it may cause cracks in the skin and in some cases mild irritation or inflammation.

a. Clean with dry cleaning solvent (item 10, app D).

b. Sand corroded areas with abrasive cloth (item 9, app D).

WARNING
When using solid film lubricant, be sure area is well ventilated.

CAUTION
Be sure lower receiver is thoroughly cleaned and dried prior to application of solid film lubricant.

WARNING
Dry cleaning solvent (SD) (P-D-680) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves it may cause cracks in the skin and in some cases mild irritation or inflammation.

CAUTION
Solid film lubricant is to be used only as an exterior surface protective finish and touchup. If solid film lubricant comes in contact with recoiling parts or functional surfaces of the weapon, remove immediately by washing with dry cleaning solvent (item 10, app D).

c. Spray a coat of solid film lubricant (item 13, app D) on all shiny external surfaces.

d. Allow solid film lubricant to dry 24 hours before reassembly.

2 ALL PARTS. Repair is by replacement of authorized parts (app C) as required.

3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

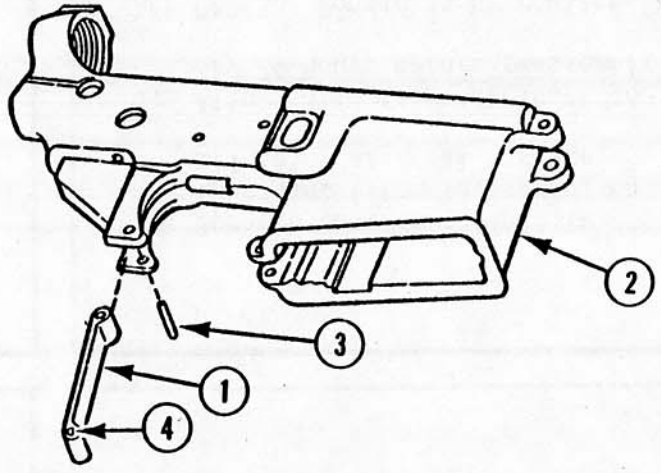
REASSEMBLY

1 TRIGGER GUARD (1).

a. Position in lower receiver (2).

b. Drive in spring pin (3) flush with surface of lower receiver (2).

c. Swing trigger guard up, press pin (4) and lock in closed position.

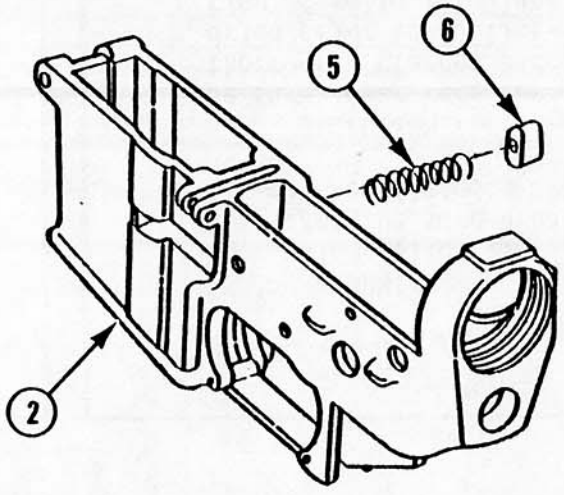


2 HELICAL COMPRESSION SPRING (5) AND MAGAZINE CATCH BUTTON (6).

a. Generously lubricate helical compression spring (5) with lubricating oil (LSA) (item 16, app D).

b. Position helical compression spring (5) and magazine catch button (6) in lower receiver (2) with ribbed side of magazine catch button (6) to outside.

c. Compress magazine catch button (6) and helical compression spring with your thumb.

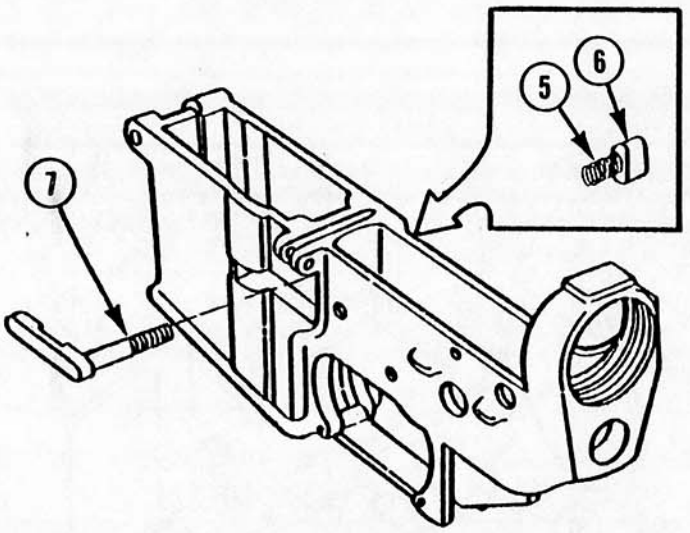


3 MAGAZINE CATCH (7).

a. Start magazine catch (7) on to magazine catch button (6).

b. Compress magazine catch button (6) and helical compression spring (5) using a punch.

c. Continue screwing magazine catch (7) on to magazine catch button (6) until threads are flush with magazine catch button (6).



4 HELICAL COMPRESSION SPRING (8), BOLT CATCH PLUNGER (9), AND BOLT CATCH (10).

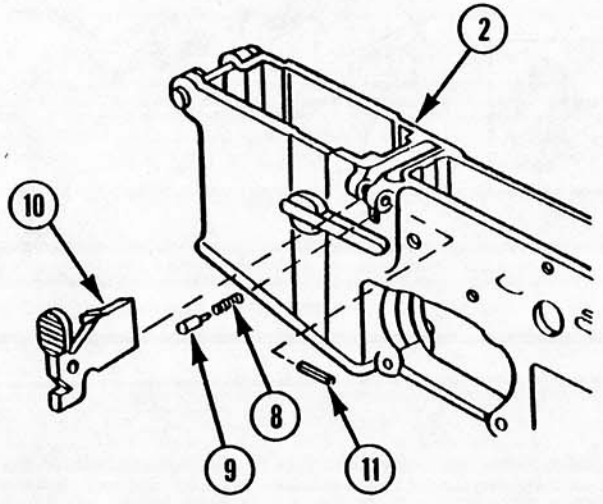
a. Generously lubricate helical compression spring (8) with lubricating oil (LSA) (item 16, app D).

b. Install helical compression spring (8) and bolt catch plunger (9) in lower receiver (2) and hold in place with finger.

c. Aline bolt catch (10) with groove in lower receiver (2) and press into place.

d. Line up pin holes in bolt catch (10) and lower receiver.

5 SPRING PIN (11). Drive in flush with surface.



3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

6 TRIGGER EXTENSION (12), HELICAL TORSION SPRING (13), AND TRIGGER (14).

a. Assemble together as illustrated, making sure helical torsion spring tails are in the direction shown.

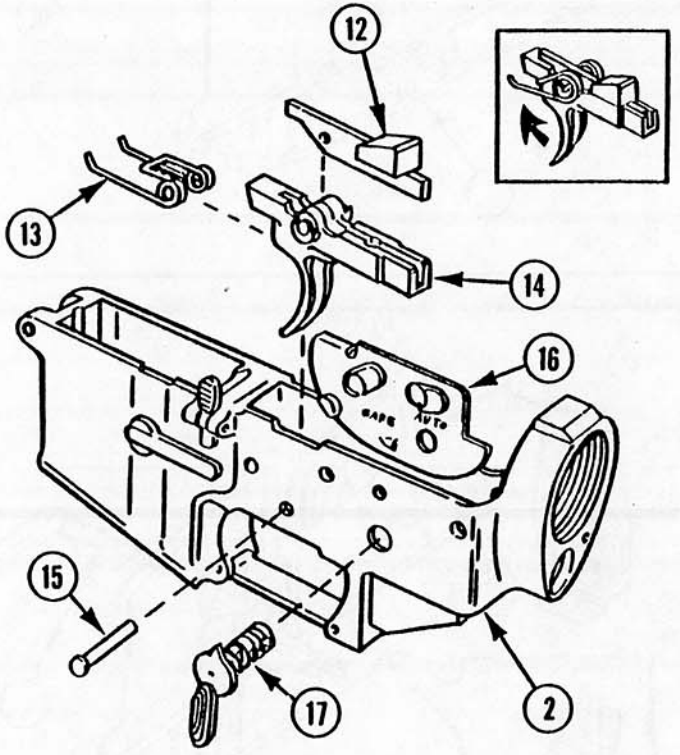
b. Place inside lower receiver, alining holes with holes in lower receiver (2).

c. Hold in place.

7 HEADED STRAIGHT PIN (15). Install.

8 PIN RETAINER (16). Position on outside of lower receiver (2).

9 SELECTOR LEVER (17). Install through pin retainer (16) into lower receiver (2).



10 HELICAL SEAR SPRING (18) AND SEAR (19).

a. Aline sear (19) with holes in helical sear spring (18), tails of helical sear spring will be extending up from lower receiver (2).

b. Install in lower receiver.

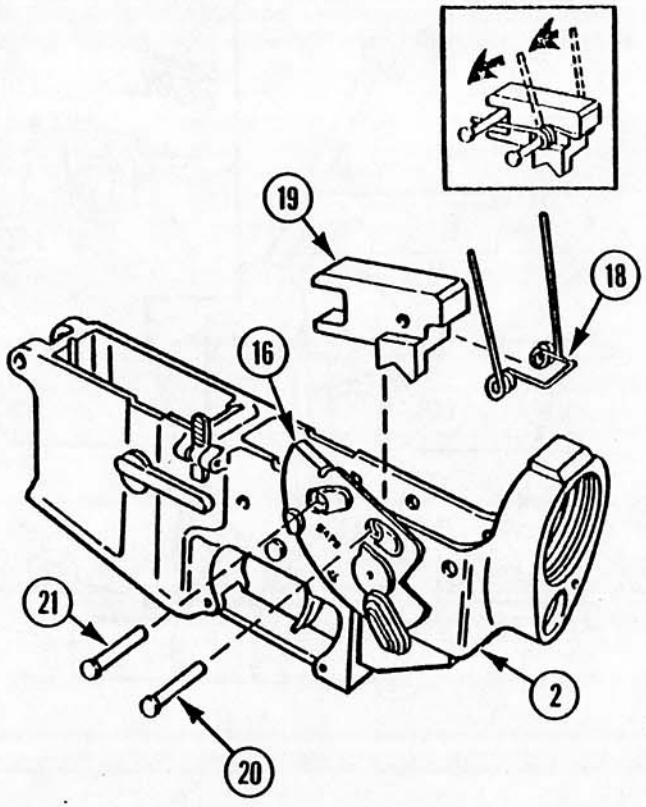
11 HEADED STRAIGHT PIN (20). Pivot pin retainer (16) upward and install through side of lower receiver (2) and holes in helical sear spring (18).

12 HELICAL SEAR SPRING (18). Push tails down and hold in place by installing headed straight pin (21) over tails and through end of sear (19).

13 PIN RETAINER (16).

a. Pivot down to lock headed straight pins in place.

b. Put selector lever to SAFE.



3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

14 LOWER RECEIVER (2) WITH ATTACHED PARTS. Place in vise jaw caps.

15 TAKEDOWN PIN (22). Install.

NOTE
Insure that the groove of the takedown pin faces to the rear.

16 TAKEDOWN PIN DETENT (23) AND HELICAL COMPRESSION SPRING (24). Generously lubricate with lubricating oil (LSA) (item 16, app D) and install in lower receiver (2).

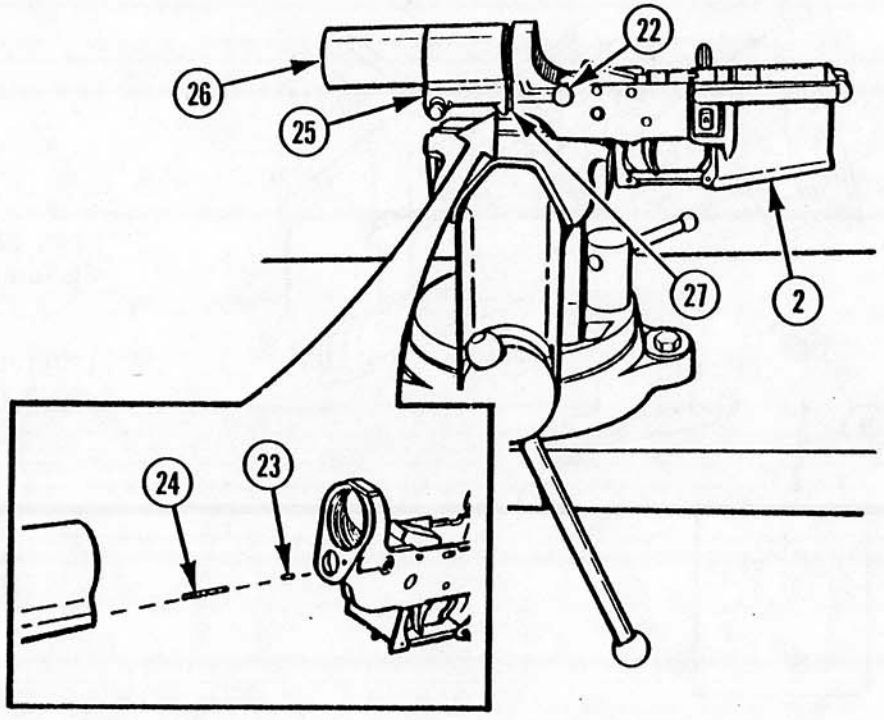
17 BUTTSTOCK BRACKET (25) AND RECEIVER EXTENSION (26).

a. Apply molybdenum disulfide grease (item 11, app D) to threads of receiver extension (26).

CAUTION
Compress helical compression spring with buttstock bracket to prevent damage.

b. Install buttstock bracket (25) by alining raised portion (27) with hole in lower receiver (2).

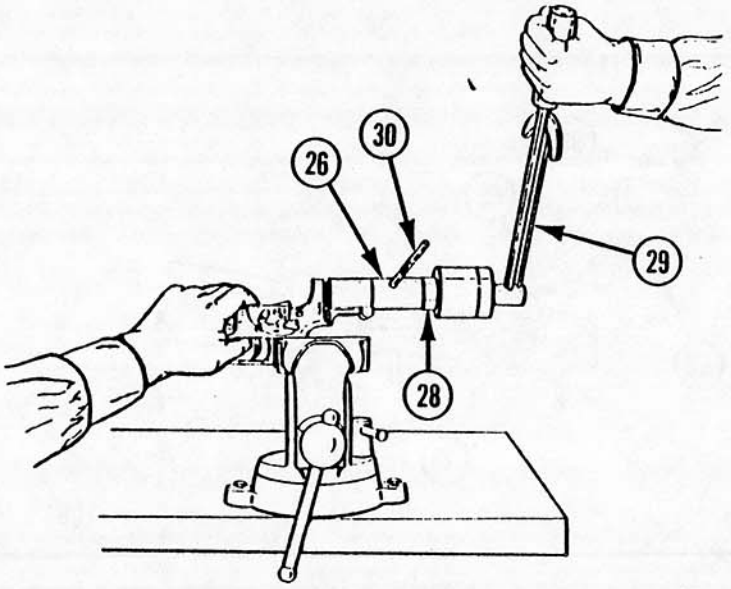
c. While holding buttstock bracket (25) in place, install receiver extension (26) through buttstock bracket (25) and screw into lower receiver (2).



NOTE

Two soldiers are required to torque the receiver extension. A helper to steady lower receiver and a repairer to use the socket and torque wrench.

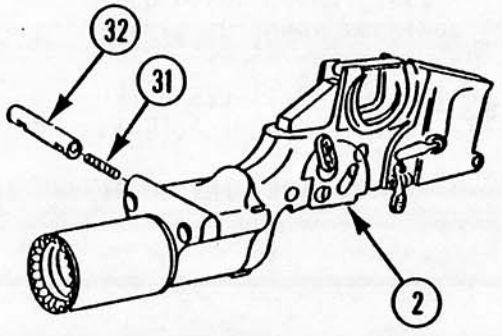
18 RECEIVER EXTENSION (26). Tighten to 40 ft-lb (54.24 N-m) using receiver extension wrench (28), socket and torque wrench (29), and 3/16-inch punch (30).

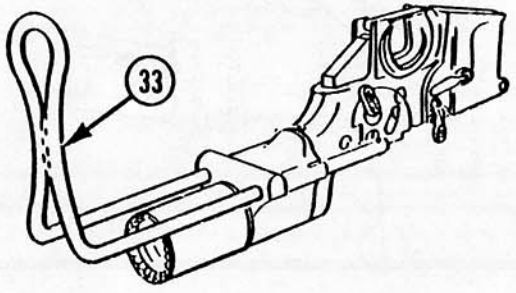


19 HELICAL COMPRESSION SPRING (31) AND BUTTSTOCK LATCH (32).

a. Generously lubricate with lubricating oil (LSA) (item 16, app D) and install in lower receiver (2).

b. Compress helical compression spring (31) with buttstock latch (32), alining grooves in buttstock latch with holes in lower receiver (2).

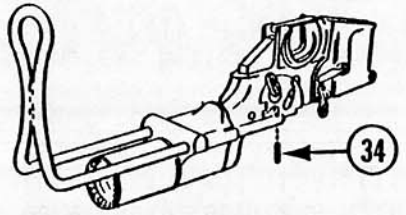




20 BUTTSTOCK (33). Slide in place.

3-12. LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY--MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)



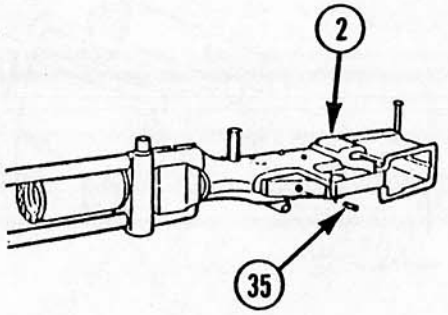
CAUTION
Support buttstock to prevent damage when installing spring pin.

21 SPRING PIN (34). Drive in until flush with top of buttstock.

22 SAFETY DETENT (35).

a. Lightly lube with lubricating oil (LSA) (item 16, app D).

b. Insert in lower receiver (2) with pointed end first.



23 LOCKWASHER (36) AND MACHINE SCREW (37). Install in rifle grip (38).

24 HELICAL COMPRESSION SPRING (39).

CAUTION
Be careful not to damage helical compression spring.

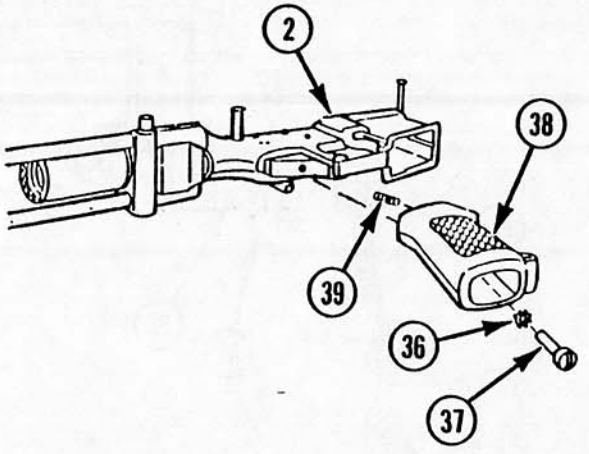
NOTE
Turn rifle grip sideways for ease in installation.

a. Install in rifle grip.

b. Aline with lower receiver (2).

25 RIFLE GRIP (38). Install on lower receiver (2).

26 MACHINE SCREW (37). Tighten handtight.



NOTE
Test the lower receiver pivot pin lug clearance using the following procedures.

1 PIVOT PIN (1). Pull out as far as it will go.

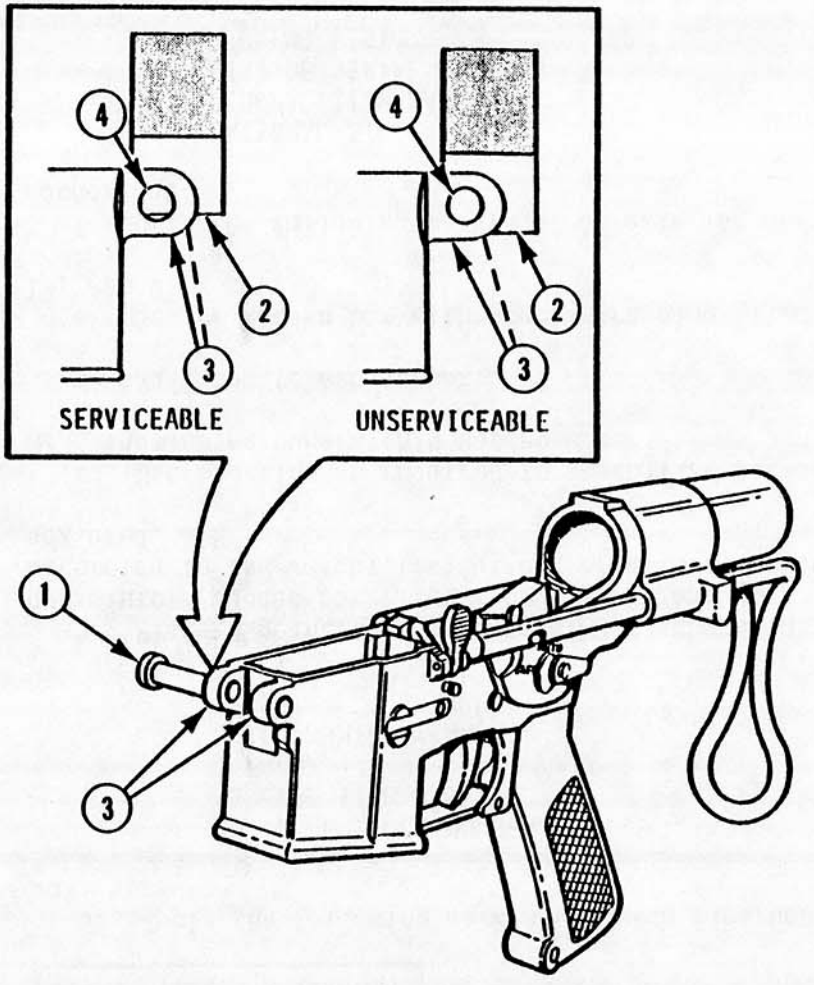
2 LOWER RECEIVER GAGE (2).

NOTE
Do not force lower receiver gage to fit between pivot pin lugs. Use slight pressure only.

a. Insert between pivot pin lugs (3).

b. If lower receiver gage enters far enough to pass or cover the entire pivot pin hole (4), the weapon is unserviceable and will be turned in for replacement.

c. If lower receiver gage enters but does not pass or cover the entire pivot pin hole (4), the lower receiver is still serviceable in this condition.



Section III. PREPARATION FOR STORAGE OR SHIPMENT

3-13. CLEANING, PRESERVATION, PACKING, AND MARKING

Disassemble, clean, dry, preserve, and pack the M231 submachine gun as follows:

a. Disassemble the M231 submachine gun as necessary to accomplish the cleaning.

b. Clean all metallic surfaces with rifle bore cleaning compound (RBC) (item 8, app D) and dry with clean, dry wiping rags (item 18, app D). Clean nonmetallic surfaces with clean, dry wiping rags (item 18, app D).

c. Preserve all metallic surfaces of the M231 submachine gun with general purpose lubricating oil (item 14, app D).

3-14. UNIT PACK

a. Remove cartridge magazine and insert into a bag. Close bag by heat sealing, stapling, or taping.

b. Overwrap the M231 submachine gun with VCI treated material (item 17, app D). If VCI treated material is not available, use barrier material (item 1, app D). Secure wrap with tape (item 21, app D).

c. Place wrapped M231 submachine gun into fiberboard box (item 4, app D). Use cushioning material as required to immobilize items within container.

d. Place cartridge magazine into the Void area of fiberboard box. Seal fiberboard box with pressure sensitive tape (item 22, app D). Seal all seams and joints.

3-15. APPLYING MARKING

a. Apply the following marking on each fiberboard box:

NATIONAL STOCK NUMBER
FEDERAL ITEM NAME
1 EACH
DATE (MONTH, YEAR)
WEIGHT: CUBE:

b. Place a quantity of packaged M231 submachine guns into a wooden box (item 2 or item 3, app D) according to the weight limitations of either wooden box used.

c. Use blocking as required to immobilize packaged M231 submachine guns within wooden box.

d. Nail top to wooden box.

e. Secure wooden box with steel strapping (item 19, app D).

f. Omit the following marking from exterior of wooden box:

NATIONAL STOCK NUMBER
FEDERAL ITEM NAME
LIST OF SERIAL NUMBERS
PACKING LIST

g. Apply only the following markings by stencil or label to exterior of wooden box:

ADDRESS OF DESTINATION
WEIGHT AND CUBE

Section IV. PREEMBARKATION INSPECTION OF MATERIEL IN UNITS ALERTED FOR OVERSEAS MOVEMENT

3-16. GENERAL

This inspection is conducted on materiel in units alerted for overseas duty to be sure that such materiel will not become unserviceable in a relatively short time. It prescribes a higher percentage of remaining usable life in serviceable materiel to meet the specific need beyond minimum serviceability.

3-17. PREINSPECTION POINTS

WARNING

Before starting an inspection, be sure to clear M231 submachine gun. Live ammunition should not be near the work area.

a. Before inspection, the materiel must be thoroughly cleaned of all grease, dirt, and other foreign matter that might interfere with its proper function or the use of gages and tools during inspection (TM 9-1005-309-10).

b. Materiel must be free of burrs, rust, and corrosion on functional surfaces.

c. Parts must not be cracked, bent, distorted, or damaged and must not be worn or loose.

d. Minor defects in metal parts do not normally affect their use. For example, scratches and tool marks are ordinarily of no importance.

e. Inspect finish on metal surfaces. Satisfactory metal surfaces for weapons range from black to light gray. A shiny metal surface is objectionable when it is capable of reflecting light. Weapons will be rejected when exterior parts are shiny.

3-18. INSPECTION POINTS

a. Springs must be free of distortion and broken coils. Springs must have sufficient tension to perform their intended function.

b. Check barrel and extension assembly for the following:

(1) Must be clean and free of rust and corrosion.

(2) Must not be bulged.

(3) May have small amounts of flaking or small cracks in the chrome plating in the chamber and bore.

(4) Pits in the chamber are allowable if they do not cause extraction difficulties.

(5) Scattered or uniformly fine pits, or fine pits in a densely pitted area, are allowable.

(6) Tool marks are acceptable, regardless of length.

(7) Lands that appear dark, due to coating of gilding metal from projectiles, will not be cause for rejection.

c. Flash suppressor must not be dented.

3-18. INSPECTION POINTS (cont)

d. Each weapon must be hand functioned to check for no binding, positive cocking action, and general operation. Dummy ammunition may be used to be sure of positive chambering, extraction, and ejection action (TM 9-1005-309-10).

e. Screws must be tight.

f. All markings must be legible.

3-19. SPECIFIC STANDARDS

Table 3-2. STANDARDS FOR PREEMBARKATION INSPECTION IN UNITS ALERTED FOR OVERSEAS MOVEMENT

ITEM	STANDARD
	NOTE Stripping of lands and grooves shall not be cause for rejection unless determined by barrel erosion gage.
Barrel and extension assembly	Check barrel erosion (p 3-37).
	NOTE Pits 1/8 inch (0.318 cm) in length and those pits large enough to extend from the body of the chamber into the shoulder stop area and forcing cone area are cause for rejection. Large pits are defined as those 1/8 inch (0.318 cm) or more in diameter and approximately 1/64 inch (0.041 cm) in depth, as determined by visual inspection.
	Visually inspect chamber using chamber reflector tool (p 3-32).
Gas metallic bent tube	Inspect for cracks.
Bolt carrier and striker assembly	Inspect for elongated firing pin hole (p 3-27).

NOTE

Bolts that contain pits extending into the firing pin hole will not be rejected. Bolts that contain small, individual pits of a scattered pattern or group clusters of small pits shall not be cause for rejection. Refer to bolt inspection data (p 3-26).

Inspect each locking lug periodically for cracks, particular attention must be given to the area where the locking lug meets the bolt body.

Bolt rings must not be broken. Bolt ring gaps must be spaced and not in line.

Firing pin protrusion must be not less than 0.028 inch (0.071 cm) or more than 0.036 inch (0.091 cm). Refer to test procedure on page 3-24.

Headspace ..... Check for headspace, refer to page 3-13.

Trigger pull ..... Test trigger pull, refer to page 3-16.

Lower receiver and receiver extension assembly ..... Inspect for cracks, corrosion, and mutilation which would affect functioning. Small dents or gouges will not be cause for rejection.

Inspect lower receiver for corrosion in the lobes of the pivot or takedown pin area.

Inspect lower receiver for breakthrough of metal.

Inspect lower receiver for loss of protective coating.

Inspect for oversize or out-of-round headed straight pin holes (p 3-50).

Drive spring and guide assembly ..... Free length of helical compression springs must not be less than 9 inches (22.86 cm).

3-19. SPECIFIC STANDARDS (cont)

Table 3-2. STANDARDS FOR PREEMBARKATION INSPECTION IN UNITS ALERTED FOR OVERSEAS MOVEMENT (cont)

ITEM	STANDARD
Handguards	Inspect for cracks, breaks, separations of material, and loose liner rivets. Inspect for broken vent tabs. If two tabs are missing from either handguard, handguard is unserviceable.
Buttstock	Inspect for cracks. Check if bent or inoperable.
Buttstock latch	Check if weak or inoperable.

APPENDIX A
REFERENCES

A-1. TECHNICAL MANUALS (TM)

TM 38-750 ..... The Army Maintenance Management System (TAMMS)

TM 750-244-7 ..... Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090 and 1095 to Prevent Enemy Use

TM 9-1005-309-10 ..... Operator's Manual, Submachine Gun, 5.56-mm: Port, Firing, M231 (1005-01-081-4582)

A-2. DEPARTMENT OF THE ARMY FORMS (DA Form)

DA Form 2028 ..... Recommended Changes to Publications and Blank Forms

DA Form 2028-2 ..... Recommended Changes to Equipment Technical Manuals

DA Form 2404 ..... Equipment Inspection and Maintenance Worksheet

A-3. SUPPLY CATALOGS (SC)

SC 4933-95-CL-A11 ..... Shop Set, Small Arms: Field Maintenance, Basic Less Power

SC 5180-95-CL-A07 ..... Tool Kit, Small Arms Repairman

A-4. OTHER

AR 190-11 ..... Physical Security of Weapons, Ammunition, and Explosives

CTA 50-970 ..... Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)

SF Form 364 ..... Report of Discrepancy (ROD)

FM 21-11 ..... First Aid for Soldiers

SB 708-42 ..... Federal Supply Code for Manufacturers: United States and Canada--Name to Code and Code to Name

SF 368 ..... Quality Deficiency Report

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows: (except for ammunition MAC[1]).

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

[1]Exception is authorized for ammunition MAC to permit the redesignation/redefinition of maintenance function headings to more adequately identify ammunition maintenance functions. The heading designations and definitions will be included in the appropriate technical manual for each category of ammunition.

B-2. MAINTENANCE FUNCTIONS (cont)

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services[2] or other maintenance actions[3] to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipments/components.

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[2]Services--inspect, test, service, adjust, aline, calibrate, or replace.

[3]Actions--welding, grinding, riveting, straightening, facing, remachining, or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

C ..... Operator or crew
O ..... Organizational maintenance
F ..... Direct support maintenance
H ..... General support maintenance
D ..... Depot maintenance

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III

a. Column 1, Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, section II, Column 5.

b. Column 2, Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National stock number of the tool or test equipment.

e. Column 5, Tool Number. The manufacturer's part number.

Section II. MAINTENANCE ALLOCATION CHART FOR M231 SUBMACHINE GUN

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQPT	(6) REMARKS
00	SUBMACHINE GUN, 5.56-MM: PORT, FIRING, M231	Inspect	0.1	0.1	0.1			1, 2	
		Test	0.1		0.1			2, 3	
		Service	0.1						
		Install	0.1						
		Replace		0.1					
		Repair		0.1				1	
01	DRIVE SPRING AND GUIDE ASSEMBLY	Inspect	0.1	0.1	0.1			1, 2	
		Service	0.1						
		Repair		0.1	0.1			1, 2	
0101	RETAINER ASSEMBLY	Inspect	0.1	0.1	0.1			1, 2	
		Service	0.1						
		Replace			0.1				
		Repair		0.1	0.1			1, 2	
02	BOLT CARRIER AND STRIKER ASSEMBLY	Inspect	0.1	0.1	0.1			1, 2	
		Test			0.1			3	
		Service	0.1						
		Repair		0.1	0.2			1, 2	
0201	BREECH BOLT	Inspect	0.1	0.1	0.1			1, 2	
		Test			0.1			3	
		Service	0.1	0.1					
		Replace			0.1			2	
		Repair		0.2	0.2			1, 2	

03	UPPER RECEIVER AND BARREL ASSEMBLY	Inspect	0.1	0.2	0.1			1, 2	
		Test			0.2			3	
		Service	0.2						
		Repair		0.4	0.5			2, 3	
0301	CHARGING HANDLE ASSEMBLY	Inspect	0.1	0.1				1	
		Service	0.1						
		Replace		0.1					
		Repair		0.1				1	
0302	UPPER RECEIVER ASSEMBLY	Inspect	0.1	0.1	0.1			1, 2	
		Repair		0.2	0.3			1, 2	
0303	BARREL NUT ASSEMBLY	Inspect			0.1			2	
		Repair			0.1			2	
0304	BARREL AND BARREL COLLAR ASSEMBLY	Inspect	0.1		0.1			2	
		Test			0.1			3	
		Replace			0.3			2, 3	
		Repair			0.1			2, 3	
04	LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY	Inspect	0.1	0.1	0.1			1, 2	
		Test			0.1			3	
		Service	0.1	0.1					
		Repair		0.3	0.5			1, 2, 3	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR M231 SUBMACHINE GUN

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/ NATO STOCK NUMBER	TOOL NUMBER
1	O	TOOL KIT, SMALL ARMS REPAIRMAN	4933-00-357-7770	SC 5180-95-CL-A07
2	F	SHOP SET, SMALL ARMS: Field Maintenance, Basic Less Power	4933-00-754-0664	SC 4933-95-CL-A11
3	F	TOOL AND GAGE SET	4933-00-056-7106	8426685

APPENDIX C
ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. SCOPE

This manual lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational and direct support maintenance of the M231 submachine gun. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in NSN sequence.

b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designators to figure and item numbers.

C-3. EXPLANATION OF COLUMNS

a. Illustration. This column is divided as follows:

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

(2) Item Number. The number used to identify item called out in the illustration.

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

(1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

C-3. EXPLANATION OF COLUMNS (cont)

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system.
PC	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	Support equipment which will not be stocked but which will be centrally procured on demand.
PG	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	Item included in both a depot overhaul/repair kit and a maintenance kit.

Code	Definition
MO	Item to be manufactured or fabricated at organizational level.
MF	Item to be manufactured or fabricated at the direct support maintenance level.
MH	Item to be manufactured or fabricated at the general support maintenance level.
MD	Item to be manufactured or fabricated at the depot maintenance level.
AO	Item to be assembled at organizational level.
AF	Item to be assembled at direct support maintenance level.
AH	Item to be assembled at general support maintenance level.
AD	Item to be assembled at depot maintenance level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition.
XC	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD	A support item that is not stocked. When required, item will be procured through normal supply channels.

NOTE

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

C-3. EXPLANATION OF COLUMNS (cont)

Code	Application/Explanation
C	Crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, used at the organizational level.
F	Support item is removed, replaced, used at the direct support level.
H	Support item is removed, replaced, used at the general support level.
D	Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	The lowest maintenance level capable of complete repair of the support item is the general support level.
D	The lowest maintenance level capable of complete repair of the support item is the depot level.
L	Repair restricted to a specialized repair activity.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Codes	Definition
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F	Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H	Reparable item. When uneconomically reparable, condemn and dispose at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.
A	Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

C-3. EXPLANATION OF COLUMNS (cont)

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item. Items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column. When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description. In the special tools list, the initial basis of issue (BOI) appears as the last line in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased accordingly.

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

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

C-4. SPECIAL INFORMATION

a. Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in appendix E of this manual. Bulk materials required to manufacture items are listed in the bulk material listing of this manual.

b. Detailed assembly instructions for items source coded to be assembled are found in the appropriate maintenance paragraph of this manual.

C-5. HOW TO LOCATE REPAIR PARTS

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the repair parts list, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. ABBREVIATIONS

Not applicable.

Section II. REPAIR PARTS LIST

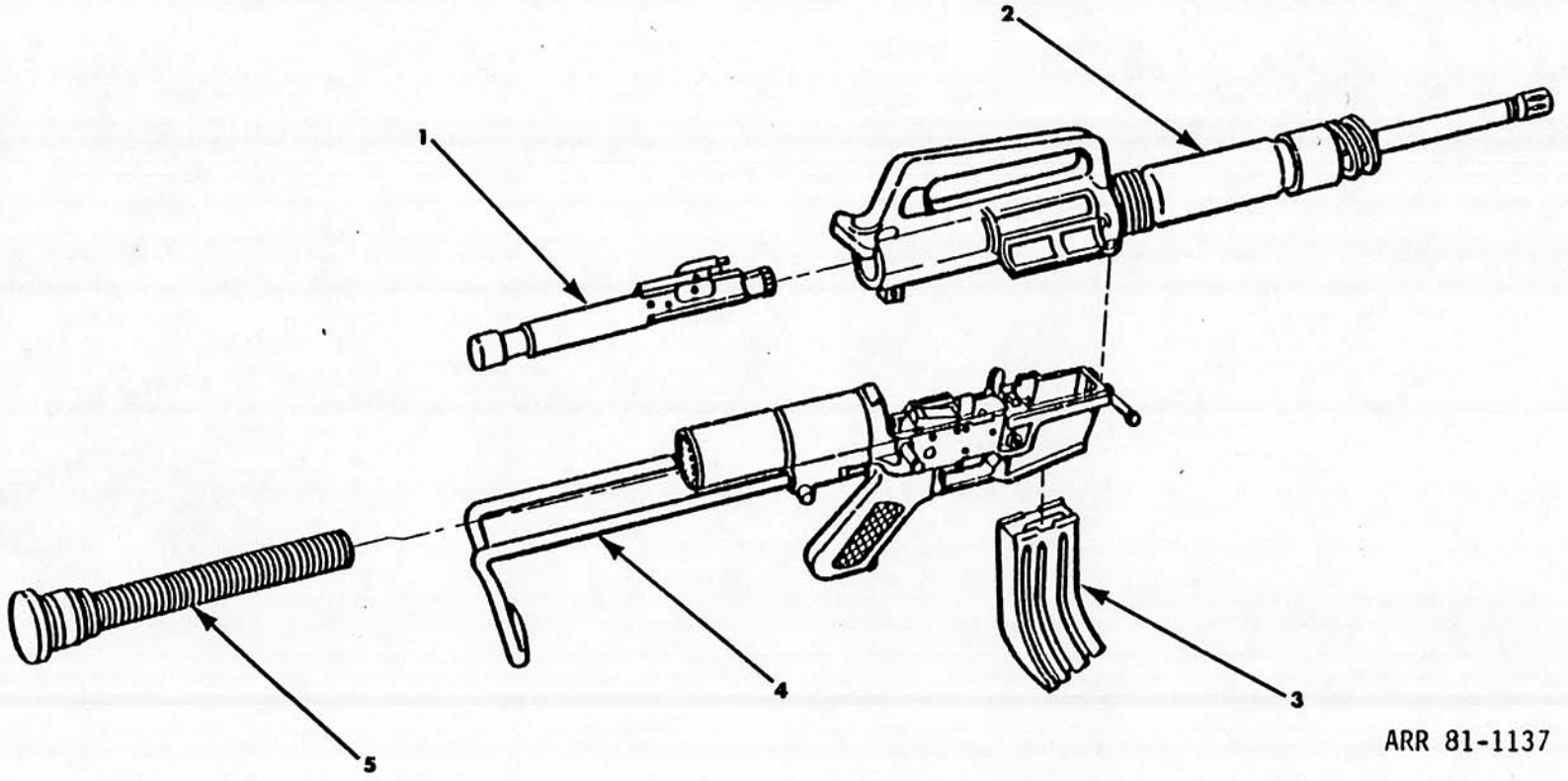

Figure 1. Submachine gun, 5.56-mm: port, firing, M231 9327045.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 SUBMACHINE GUN, 5.56-MM: PORT, FIRING, M231 9327045		
1	1	AFFFF		19200	9327072	BOLT CARRIER AND STRIKER ASSEMBLY.....	EA	1
1	2	AFFFF		19200	9327227	UPPER RECEIVER AND BARREL ASSEMBLY.....	EA	1
1	3	PAOZZ	1005-00-921-5004	19204	8448670	MAGAZINE, CARTRIDGE.....	EA	1
1	4	XAFFA		19200	9327230	LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY.....	EA	1
1	5	AFFFF		19200	11828593	DRIVE SPRING AND GUIDE ASSEMBLY.....	EA	1

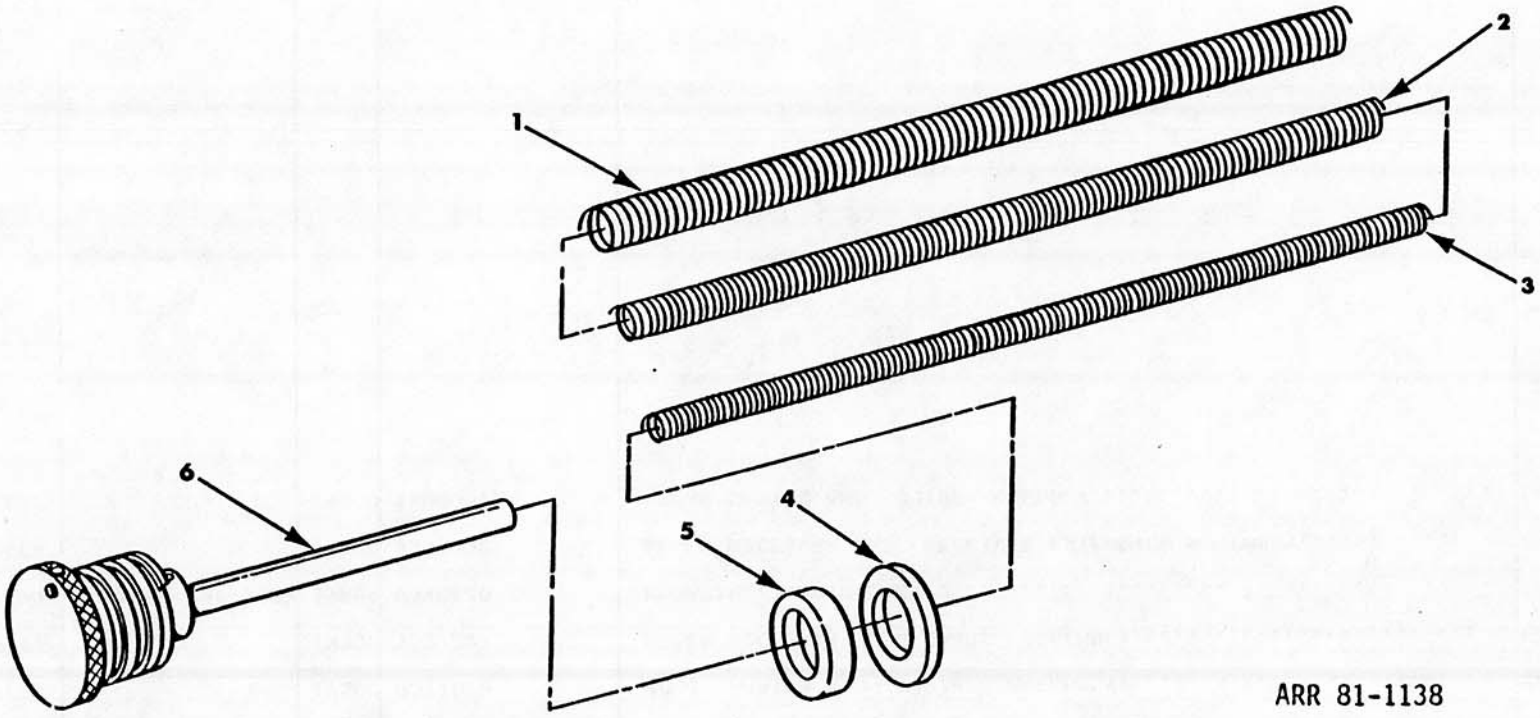

Figure 2. Drive spring and guide assembly 11828593.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 01 DRIVE SPRING AND GUIDE		
						ASSEMBLY 11828393		
2	1	PAOZZ	5360-01-085-0720	19200	9326121	SPRING, HELICAL COMPRESSION.....	EA	1
2	2	PAOZZ	5360-01-081-4904	19200	9326122	SPRING, HELICAL COMPRESSION.....	EA	1
2	3	PAOZZ	5360-01-081-4905	19200	9326123	SPRING, HELICAL COMPRESSION.....	EA	1
2	4	PAOZZ	5310-01-081-4700	19200	9327060	WASHER, FLAT.....	EA	1
2	5	PAOZZ	1005-01-081-5624	19200	9327058	BUFFER, RECOIL MECHANISM	EA	1
2	6	PAFFF	1005-01-081-4278	19200	9327063	RETAINER ASSEMBLY.....	EA	1

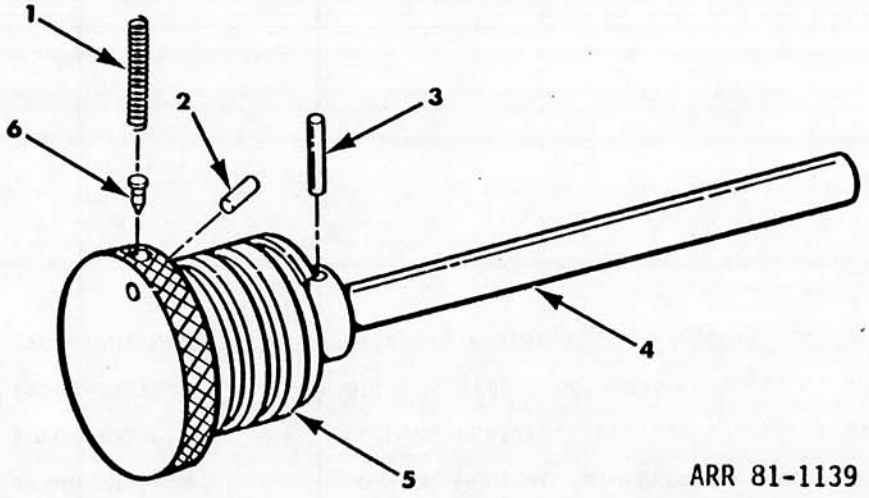

Figure 3. Retainer assembly 9327063.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0101 RETAINER ASSEMBLY 9327063		
3	1	PAOZZ	5360-00-992-7292	19204	8448516	SPRING, HELICAL COMPRESSION.....	EA	1
3	2	PAOZZ	5315-00-058-6044	96906	MS16562-106	PIN, SPRING.....	EA	1
3	3	PAFZZ	5315-00-058-6063	96906	MS16562-118	PIN, SPRING.....	EA	1
3	4	XAFZZ		19200	9327065	ROD, RETAINER.....	EA	1
3	5	XAFZZ		19200	9327064	RETAINER, SPRING.....	EA	1
3	6	PAOZZ	1005-00-992-6667	19204	8448631	DETENT, SAFETY.....	EA	1

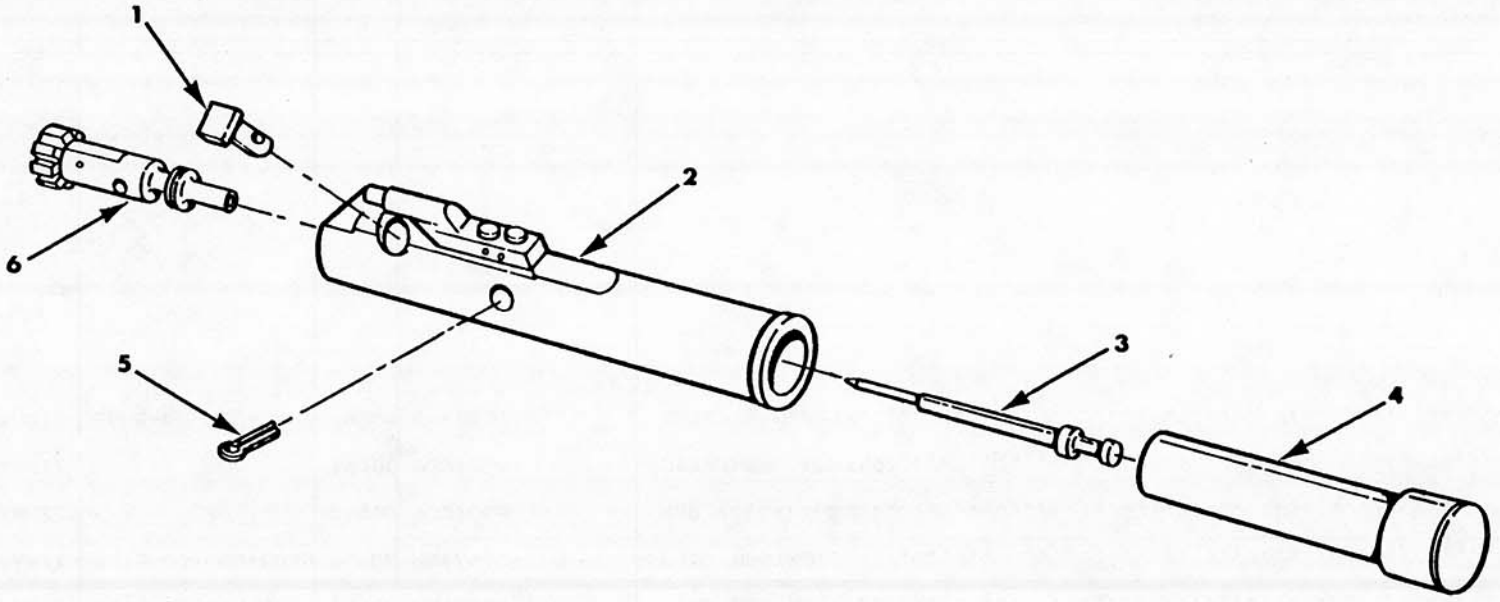

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Figure 4. Bolt carrier and striker assembly 9327072.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 02 BOLT CARRIER AND STRIKER		
						ASSEMBLY 9327072		
4	1	PAOZZ	1005-00-992-7294	19204	8448502	PIN, BOLT CAM.....	EA	1
4	2	PAFBZ	1005-01-081-4279	19200	9327071	BOLT CARRIER AND KEY ASSEMBLY.....	EA	1
4	3	PAFZZ	1005-00-017-9547	19204	8448503	PIN, FIRING.....	EA	1
4	4	PAFZZ	1005-01-085-5163	19200	9327043	HAMMER, FIRING, SMALL.....	EA	1
4	5	PAOZZ	1005-00-999-1509	19204	8448504	PIN, FIRING PIN RETAINING.....	EA	1
4	6	PAFFF	1005-01-081-4579	19200	9327073	BOLT, BREECH.....	EA	1

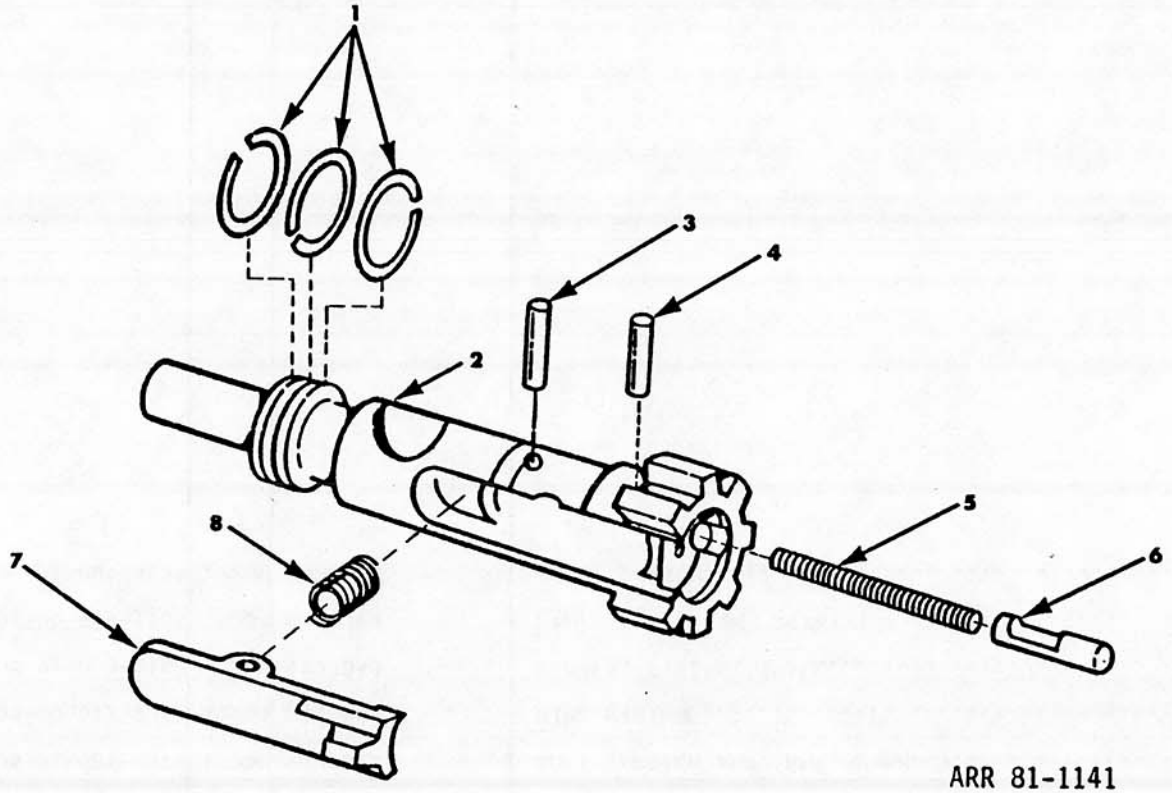

Figure 5. Bolt, breech 9327073.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0201 BOLT, BREECH 9327073		
5	1	PAFZZ	1005-00-992-7287	19204	8448511	RING, BOLT	EA	3
5	2	XAFZZ		19204	8448510	BOLT	EA	1
5	3	PAOZZ	1005-00-992-7290	19204	8448513	PIN, EXTRACTOR	EA	1
5	4	PAOZZ	5315-00-597-5086	96906	MS16562-98	PIN, SPRING	EA	1
5	5	PAOZZ	5360-00-992-7292	19204	8448516	SPRING, HELICAL COMPRESSION	EA	1
5	6	PAOZZ	1005-00-992-7291	19204	8448515	EJECTOR, CARTRIDGE	EA	1
5	7	PAOZZ	1005-00-992-7288	19204	8448512	EXTRACTOR, CARTRIDGE	EA	1
5	8	PAOZZ	1005-01-084-9844	19200	11828591	SPRING ASSEMBLY, EXTRACTOR	EA	1

REPAIR PARTS LIST (cont)

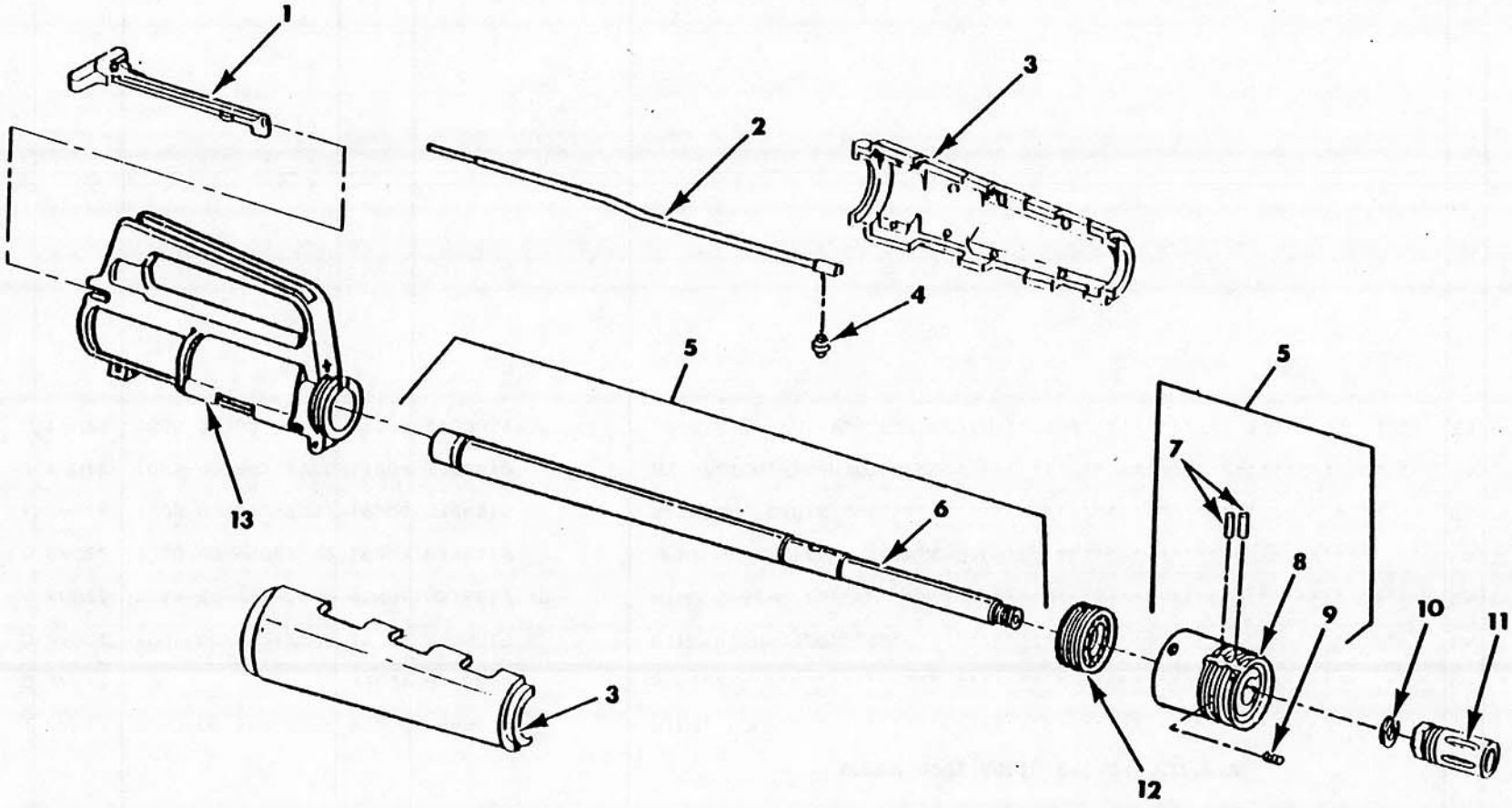

Figure 6. Upper receiver and barrel assembly 9327227 and barrel and barrel collar assembly 11828592.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 03 UPPER RECEIVER AND BARREL		
						ASSEMBLY 9327227 AND GROUP 0304		
						BARREL AND BARREL COLLAR ASSEMBLY		
						11828592		
6	1	PA000	1005-00-017-9546	19204	8448517	HANDLE ASSEMBLY, CHARGING	EA	1
6	2	PAFZZ	4710-01-081-4664	19200	9327068	TUBE, BENT, METALLIC	EA	1
6	3	PA0ZZ	1005-01-081-4166	19200	9327076	HANDGUARD	EA	2
6	4	PAFZZ	1005-01-081-4829	19200	9327090	SEAL, GAS	EA	1
6	5	PAFFF	1005-01-084-1413	19200	11828592	BARREL AND BARREL COLLAR ASSEMBLY	EA	1
6	6	XAFZZ		19200	9327056	..BARREL AND EXTENSION ASSEMBLY	EA	1
6	7	PAFZZ	5315-00-054-5610	96906	MS24692-210	..PIN, TAPERED, PLAIN	EA	2
6	8	XAFZZ		19200	9327061	..COLLAR, BARREL	EA	1
6	9	PAFZZ	5305-00-059-2494	96906	MS51976-62	..SETSCREW	EA	1
6	10	PAFZZ	1005-00-992-7280	19204	8448577	WASHER, LOCK, FLASH SUPPRESSOR	EA	1
6	11	PAFZZ	1005-00-933-8089	19204	8448576	SUPPRESSOR, FLASH	EA	1
6	12	AFFFF		19204	8448552	BARREL NUT ASSEMBLY	EA	1
6	13	AFFFF		19200	9327228	UPPER RECEIVER ASSEMBLY	EA	1

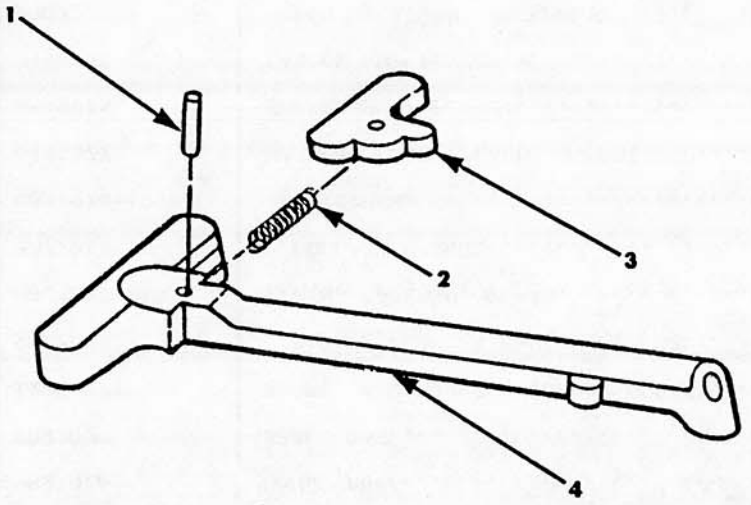

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Figure 7. Handle assembly, charging 8448517.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0301 HANDLE ASSEMBLY, CHARGING 8448517		
7	1	PAOZZ	5315-00-017-9552	13629	95113	PIN, SPRING.....	EA	1
7	2	PAOZZ	5360-00-999-0404	19204	8448520	SPRING, HELICAL COMPRESSION.....	EA	1
7	3	PAOZZ	1005-00-999-0405	19204	8448519	LATCH, CHARGING HANDLE.....	EA	1
7	4	XAOZZ		19204	8448518	HANDLE, CHARGING.....	EA	1

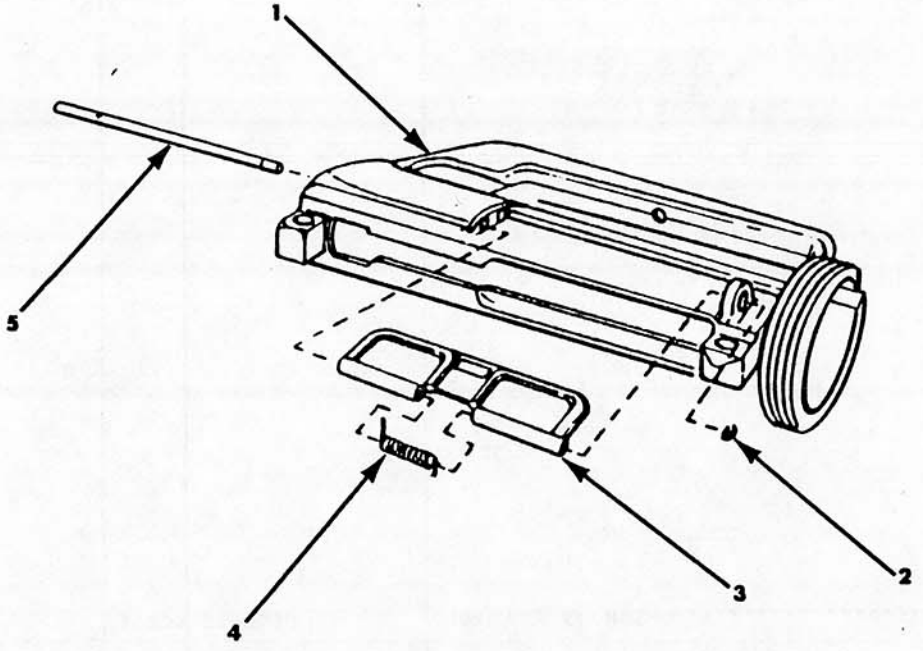

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Figure 8. Upper receiver assembly 9327228.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0302 UPPER RECEIVER ASSEMBLY		
						9327228		
8	1	PAFBZ	1005-01-081-4832	19200	9325003	RECEIVER, UPPER.....	EA	1
8	2	PAOZZ	5365-00-064-2652	96906	MS16632-1012	RING, RETAINING.....	EA	1
8	3	PAOZZ	1005-00-978-1022	19204	8448525	COVER, EJECTION PORT.....	EA	1
8	4	PAOZZ	5360-00-978-1025	19204	8448532	SPRING, HELICAL TORSION.....	EA	1
8	5	PAOZZ	1005-00-978-1023	19204	8448533	PIN, EJECTION PORT COVER.....	EA	1

REPAIR PARTS LIST (cont)

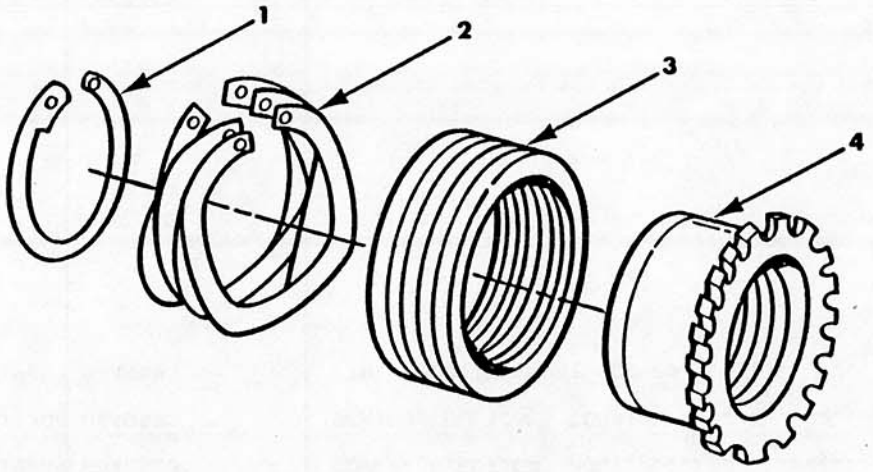

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Figure 9. Barrel nut assembly 8448552.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0303 BARREL NUT ASSEMBLY 8448552		
9	1	PAFZZ	5365-00-252-6853	96906	MS16626-1137	RING, RETAINING.....	EA	1
9	2	PAFZZ	1005-00-978-1036	19204	8448555	SPRING, SLIP RING.....	EA	1
9	3	PAFZZ	1005-00-978-1035	19204	8448554	RING, SLIP, HANDGUARD.....	EA	1
9	4	PAFZZ	1005-00-978-1034	19204	8448553	NUT, BARREL.....	EA	1

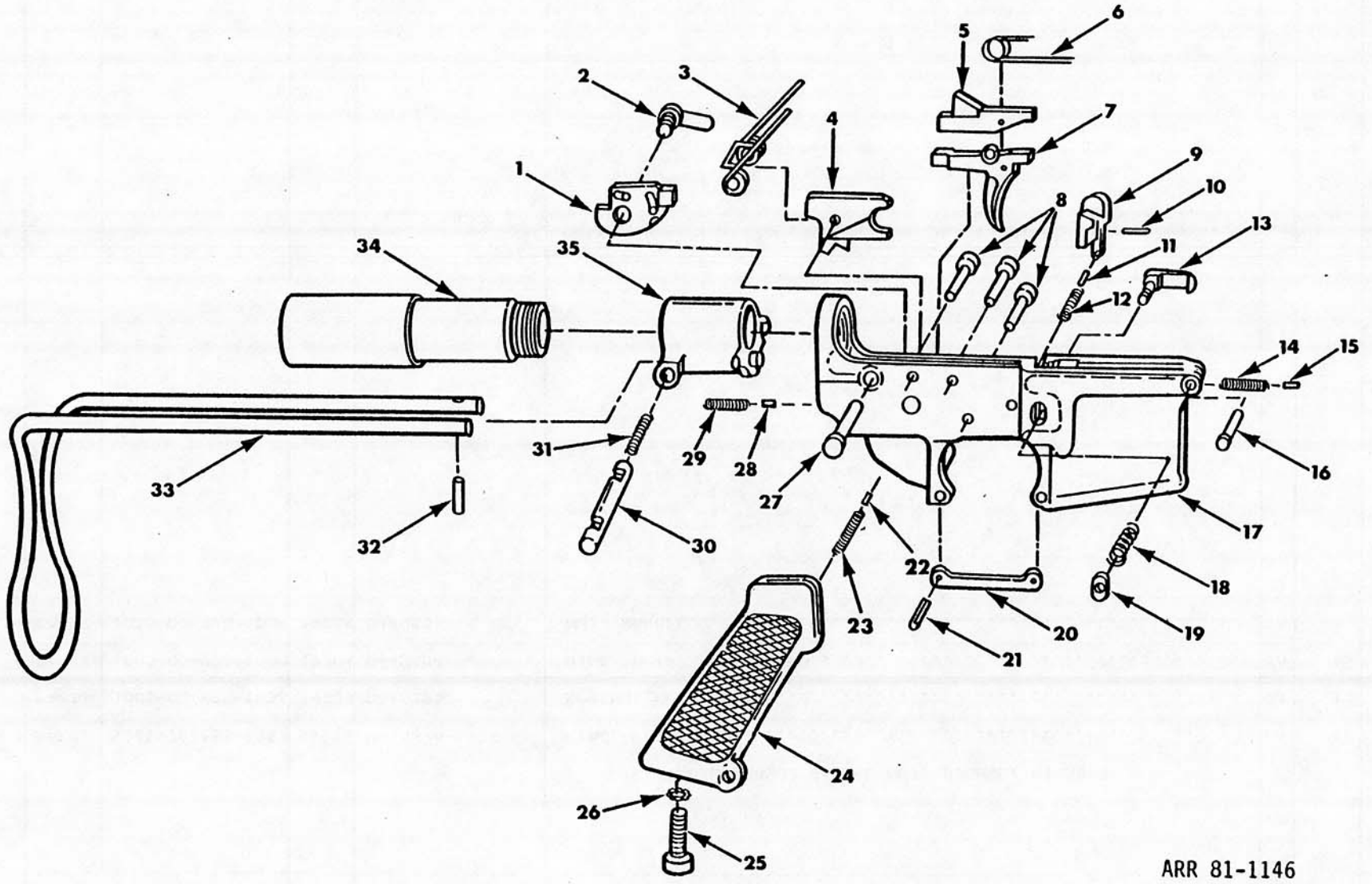


Figure 10. Lower receiver and receiver extension assembly 9327230.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 04 LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY 9327230		
10	1	PAFZZ	1005-01-083-4881	19200	9327074	RETAINER, PIN.....	EA	1
10	2	PAFZZ	1005-00-992-6666	19204	8448630	LEVER, SELECTOR.....	EA	1
10	3	PAFZZ	5360-01-081-4906	19200	9327052	SPRING, HELICAL TORSION.....	EA	1
10	4	PAFZZ	1005-01-082-4840	19200	9327051	SEAR.....	EA	1
10	5	PAFZZ	1005-01-083-3680	19200	9327055	EXTENSION, TRIGGER.....	EA	1
10	6	PAFZZ	5360-00-992-7308	19204	8448593	SPRING, HELICAL TORSION.....	EA	1
10	7	PAFZZ	1005-00-992-7307	19204	8448592	TRIGGER.....	EA	1
10	8	PAFZZ	5315-01-083-7893	19200	9327044	PIN, STRAIGHT, HEADED.....	EA	3
10	9	PAFZZ	1005-01-081-5568	19200	9327059	CATCH, BOLT.....	EA	1
10	10	PAFZZ	5315-00-812-3312	96906	MS16562-119	PIN, SPRING.....	EA	1
10	11	PAFZZ	1005-00-056-2247	19204	8448634	PLUNGER, BOLT CATCH.....	EA	1
10	12	PAFZZ	5360-00-056-2246	19204	8448633	SPRING, HELICAL COMPRESSION.....	EA	1
10	13	PAFZZ	1005-00-056-2201	19204	8448638	CATCH, MAGAZINE.....	EA	1
10	14	PAOZZ	5360-00-992-6655	19204	8448586	SPRING, HELICAL COMPRESSION.....	EA	1
10	15	PAOZZ	1005-00-992-6654	19204	8448585	DETENT, TAKEDOWN PIN.....	EA	1
10	16	PAOZZ	1005-00-017-9537	19204	8448621	PIN, PIVOT.....	EA	1
10	17	XAFBA		19200	9327037	RECEIVER, LOWER.....	EA	1

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 04 LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY 9327230 (cont)		
10	18	PAFZZ	5360-00-992-7301	19204	8448637	SPRING, HELICAL COMPRESSION.....	EA	1
10	19	PAFZZ	1005-00-992-7302	19204	8448636	BUTTON, MAGAZINE CATCH.....	EA	1
10	20	PAFZZ	1005-00-992-7299	19204	8448587	GUARD, TRIGGER.....	EA	1
10	21	PAFZZ	5315-00-814-3530	96906	MS16562-35	PIN, SPRING.....	EA	1
10	22	PAOZZ	1005-00-992-6667	19204	8448631	DETENT, SAFETY.....	EA	1
10	23	PAOZZ	5360-00-992-7292	19204	8448516	SPRING, HELICAL COMPRESSION.....	EA	1
10	24	PAOZZ	1005-00-056-2250	19204	8448632	GRIP, RIFLE.....	EA	1
10	25	PAOZZ	5305-00-912-7296	96906	MS35276-284	SCREW, MACHINE.....	EA	1
10	26	PAOZZ	5310-00-527-3634	96906	MS35335-61	WASHER, LOCK.....	EA	1
10	27	PAFZZ	1005-00-992-6653	19204	8448584	PIN, TAKEDOWN.....	EA	1
10	28	PAFZZ	1005-00-992-6654	19204	8448585	DETENT, TAKEDOWN PIN.....	EA	1
10	29	PAFZZ	5360-00-992-6655	19204	8448586	SPRING, HELICAL COMPRESSION.....	EA	1
10	30	PAFZZ	1005-01-081-4831	19200	9327050	LATCH, BUTTSTOCK.....	EA	1
10	31	PAFZZ	5360-00-992-7292	19204	8448516	SPRING, HELICAL COMPRESSION.....	EA	1
10	32	PAFZZ	5315-00-058-6062	96906	MS16562-117	PIN, SPRING.....	EA	1
10	33	PAFZZ	1005-01-081-4830	19200	9327049	BUTTSTOCK.....	EA	1
10	34	PAFZZ	1005-01-081-4833	19200	9327062	EXTENSION, RECEIVER.....	EA	1
10	35	PAFZZ	1005-01-081-4834	19200	9327048	BRACKET, BUTTSTOCK.....	EA	1

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						Group 9999 BULK MATERIAL		
BULK	1	PAOZZ	5120-00-198-5398	81348	GGGK00275	KEY, SOCKET HEAD SCREW.....	EA	
BULK	2	PAOZZ	9510-00-231-2076	81348	ASTM A108	METAL BAR, STEEL, ROUND, 10 FT MIN AND 12 MAX, 0.375 O.D.....	FT	
BULK	3	PAOZZ	9510-00-640-4407	81348	QQT560	METAL BAR, SQUARE, 3 FT L, 0.750 IN. W	EA	

Section III. SPECIAL TOOLS LIST

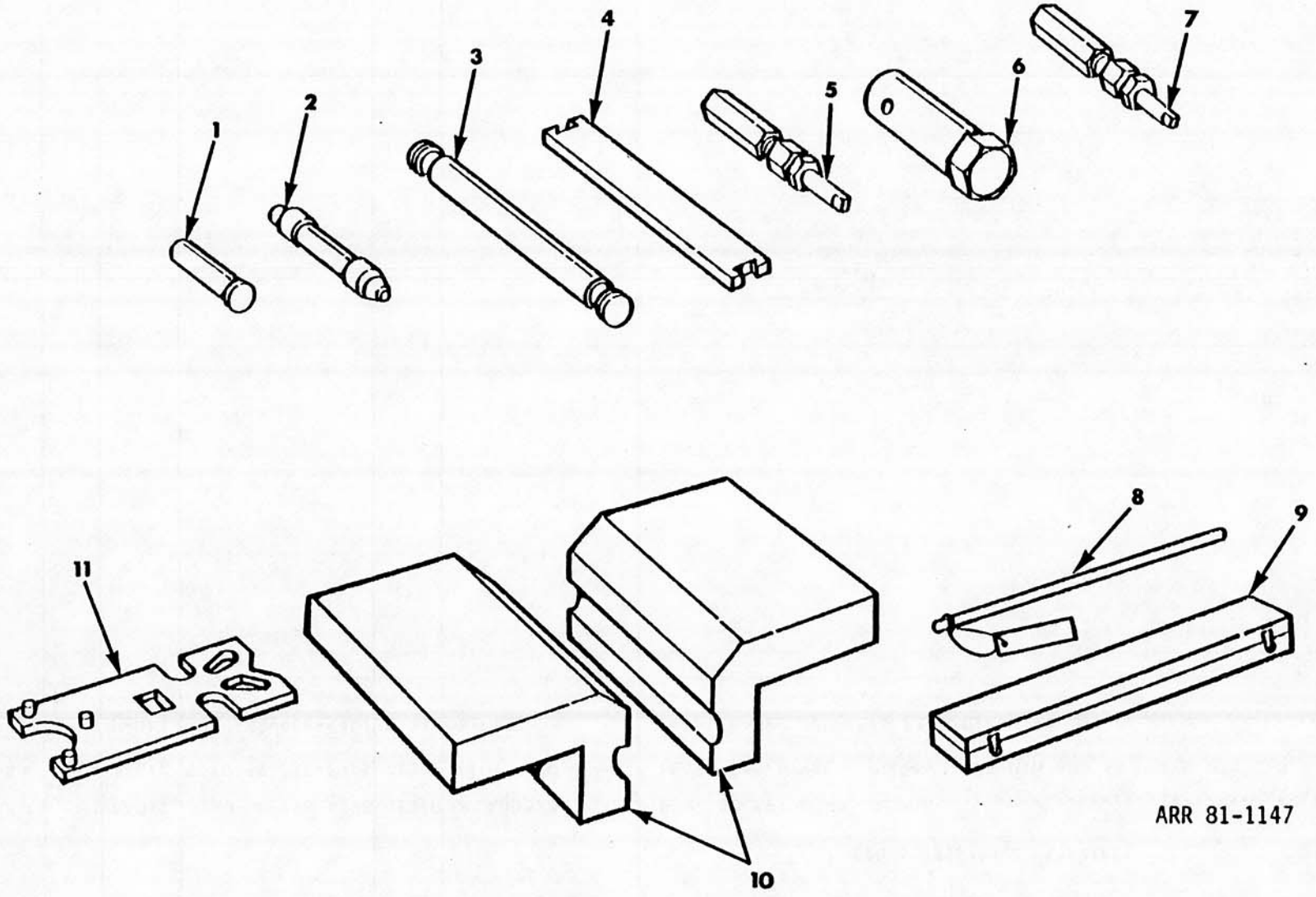


Figure 11. Special tools.

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION / USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 9500 SPECIAL TOOLS		
11		ADFFA		19204	8426685	TOOL AND GAGE SET		
11	1	PAFZZ	4933-00-800-7508	19204	8448201	REFLECTOR TOOL, CHAMBER	EA	1
11	2	PAFZZ	4933-00-070-7814	19204	7799734	GAGE, HEADSPACE	EA	1
11	3	PAFZZ	4933-00-221-9391	19204	8448202	GAGE, STRAIGHTNESS	EA	1
11	4	PAFZZ	4933-00-070-7815	19204	7799735	GAGE, FIRING PIN PROTRUSION	EA	1
11	5	PAFZZ	5220-01-043-9473	19204	12006472	GAGE, PLUG, TAPER CYLINDRICAL (NOT GO)	EA	1
11	6	PAFZZ	1005-01-081-4835	19200	11828589	WRENCH, EXTENSION, RECEIVER	EA	1
11	7	PAFZZ	5220-01-075-5004	19200	12620101	GAGE, PLUG, PLAIN CYLINDRICAL	EA	1
11	8	PAFZZ	5220-01-014-8183	19204	8448496	GAGE, BARREL EROSION	EA	1
11	9	PAFZZ	4933-01-035-5607	19204	12006359	CASE, BORE GAGE (BORE EROSION GAGE)	EA	1
11	10	PAFZZ	4933-00-070-9151	19204	11010032	FIXTURE, BARREL REMOVER	EA	1
11	11	PAFZZ	4933-00-070-9152	19204	11010033	WRENCH, COMBINATION BARREL NUT AND FLASH SUPPRESSOR	EA	1

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
1005-00-017-9537	10	16
1005-00-017-9546	6	1
1005-00-017-9547	4	3
5315-00-017-9552	7	1
5315-00-054-5610	6	7
1005-00-056-2201	10	13
5360-00-056-2246	10	12
1005-00-056-2247	10	11
1005-00-056-2250	10	24
5315-00-058-6044	3	2
5315-00-058-6062	10	32
5315-00-058-6063	3	3
5305-00-059-2494	6	9
5365-00-064-2652	8	2
4933-00-070-7814	11	2
4933-00-070-7815	11	4
4933-00-070-9151	11	10
4933-00-070-9152	11	11
5120-00-198-5378	BULK	1
4933-00-221-9391	11	3
9510-00-231-2076	BULK	2
5365-00-252-6853	9	1
5310-00-527-3634	10	26
5315-00-597-5086	5	4
9510-00-640-4407	BULK	3
4933-00-800-7508	11	1
5315-00-812-3312	10	10
5315-00-814-3530	10	21
5305-00-912-7296	10	25
1005-00-921-5004	1	3
1005-00-933-8089	6	11
1005-00-978-1022	8	3
1005-00-978-1023	8	5
5360-00-978-1025	8	4
1005-00-978-1034	9	4
1005-00-978-1035	9	3
1005-00-978-1036	9	2
1005-00-992-6653	10	27
1005-00-992-6654	10	15
1005-00-992-6654	10	28
5360-00-992-6655	10	14
5360-00-992-6655	10	29
1005-00-992-6666	10	2
1005-00-992-6667	3	6
1005-00-992-6667	10	22
1005-00-992-7280	6	10
1005-00-992-7287	5	1
1005-00-992-7288	5	7
1005-00-992-7290	5	3
1005-00-992-7291	5	6
5360-00-992-7292	3	1
5360-00-992-7292	5	5
5360-00-992-7292	10	23
5360-00-992-7292	10	31
1005-00-992-7294	4	1
1005-00-992-7299	10	20
5360-00-992-7301	10	18
1005-00-992-7302	10	19
1005-00-992-7307	10	7
5360-00-992-7308	10	6
5360-00-999-0404	7	2
1005-00-999-0405	7	3
1005-00-999-1509	4	5
5220-01-014-8183	11	8
4933-01-035-5607	11	9
5220-01-043-9473	11	5
5220-01-075-5004	11	7
1005-01-081-4166	6	3
1005-01-081-4278	2	6
1005-01-081-4279	4	2
1005-01-081-4579	4	6
4710-01-081-4664	6	2
5310-01-081-4700	2	4
1005-01-081-4829	6	4
1005-01-081-4830	10	33
1005-01-081-4831	10	30
1005-01-081-4832	8	1
1005-01-081-4833	10	34
1005-01-081-4834	10	35
1005-01-081-4835	11	6
5360-01-081-4904	2	2
5360-01-081-4905	2	3
5360-01-081-4906	10	3
1005-01-081-5568	10	7
1005-01-081-5624	2	5
1005-01-082-4840	10	4
1005-01-083-3680	10	5
1005-01-083-4881	10	1
5315-01-083-7893	10	8
1005-01-084-1413	6	5
1005-01-084-7844	5	8
5360-01-085-0720	2	1
1005-01-085-5163	4	4

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
81346	ASTM A108	BULK	2
81348	GGGK00275	BULK	1
96906	MS16562-106	3	2
96906	MS16562-117	10	32
96906	MS16562-118	3	3
96906	MS16562-119	10	10
96906	MS16562-35	10	21
96906	MS16562-98	5	4
96906	MS16626-1137	9	1
96906	MS16632-1012	8	2
96906	MS24692-210	6	7
96906	MS35276-284	10	25
96906	MS35335-61	10	26
96906	MS51976-62	6	9
81348	QQT580	BULK	3
19204	11010032	11	10
19204	11010033	11	11
19200	11828589	11	6
19200	11828591	5	8
19200	11828592	6	5
19200	11828593	1	5
19204	12006359	11	9
19204	12006472	11	5
19200	12620101	11	7
19204	7799734	11	2
19204	7799735	11	4
19204	8426685	11	
19204	8448201	11	1
19204	8448202	11	3
19204	8448496	11	8
19204	8448502	4	1
19204	8448503	4	3
19204	8448504	4	5
19204	8448510	5	2
19204	8448511	5	1
19204	8448512	5	7
19204	8448513	5	3
19204	8448515	5	6
19204	8448516	3	1
19204	8448516	5	5
19204	8448516	10	23
19204	8448516	10	31
19204	8448517	6	1
19204	8448518	7	4
19204	8448519	7	3
19204	8448520	7	2
19204	8448525	8	3
19204	8448532	8	1
19204	8448533	8	5
19204	8448552	6	12
19204	8448553	9	4
19204	8448554	9	3
19204	8448555	9	2
19204	8448576	6	11
19204	8448577	6	10
19204	8448584	10	27
19204	8448585	10	15
19204	8448585	10	28

NATIONAL STOCK NUMBER AND PART NUMBER INDEX (cont)

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
19204	8448586	10	14
19204	8448586	10	29
19204	8448587	10	20
19204	8448592	10	7
19204	8448593	10	6
19204	8448621	10	16
19204	8448630	10	2
19204	8448631	3	6
19204	8448631	10	22
19204	8448632	10	24
19204	8448633	10	12
19204	8448634	10	11
19204	8448636	10	19
19204	8448637	10	18
19204	8448638	10	13
19204	8448670	1	3
19200	9325003	8	1
19200	9326121	2	1
19200	9326122	2	2
19200	9326123	2	3
19200	9327037	10	17
19200	9327043	4	4
19200	9327044	10	8
19200	9327048	10	35
19200	9327049	10	33
19200	9327050	10	30
19200	9327051	10	4
19200	9327052	10	3
19200	9327055	10	5
19200	9327056	6	6
19200	9327058	2	5
19200	9327059	10	9
19200	9327060	2	4
19200	9327061	6	8
19200	9327062	10	34
19200	9327063	2	6
19200	9327064	3	5
19200	9327065	3	4
19200	9327068	6	2
19200	9327071	4	2
19200	9327072	1	1
19200	9327073	4	6
19200	9327074	10	1
19200	9327076	6	3
19200	9327090	6	4
19200	9327227	1	2
19200	9327228	6	13
19200	9327230	1	4
13629	95113	7	1

APPENDIX D
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the M231 submachine gun. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. EXPLANATION OF COLUMNS

a. Column 1--Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, app D.").

b. Column 2--Level. This column identifies the lowest level of maintenance that requires the listed item.

C ..... Operator/Crew
O ..... Organizational Maintenance
F ..... Direct Support Maintenance

c. Column 3--National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column 4--Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5--Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	F	8135-00-222-4027	BARRIER MATERIAL, GREASEPROOFED-WATERPROOFED: flexible 300-ft (91.44-m) roll MIL-B-121 (81349)	FT
2	F	...	BOX, SHIPPING: class 1, style 2 PPP-B-621 (81348)	EA
3	F	...	BOX, SHIPPING: cleated-plywood PPP-B-601 (81348)	EA
4	F	8115-00-190-4858	BOX, SHIPPING: fiberboard, weather resistant PPP-B-636 (81348)	EA
5	O	8020-00-244-0153	BRUSH, ARTIST'S: H-B-241 (81348)	EA
6	O	7920-00-205-2401	BRUSH, CLEANING, TOOLS AND PARTS: MS16746-29 (96906)	EA
7	C	9920-00-292-9946	CLEANER, TOBACCO PIPE: cotton tuft, wire core (32 per pg) 840507 (19203)	EA

8	O		CLEANING COMPOUND, RIFLE BORE: small arms bore cleaning solution (RBC)	
		6850-00-224-6663	5-gal. (18.95-l) cn	GL
		6850-00-753-4806	55-gal. (208.20-l) dr	GL
			MILC372 (81349)	
9	O		CLOTH, ABRASIVE: crocus cloth, jean cloth backing	
		5350-00-221-0872	50-sh pg	SH
			P-C-458 (81349)	
10	O		DRY CLEANING SOLVENT: (SD)	
		6850-00-281-1985	1-gal. (3.79-l) cn	GL
			P-D-680 (81348)	
11	F		GREASE, MOLYBDENUM DISULFIDE: liquid	
		9150-00-754-2595	1.75-lb (0.79-kg) cn	LB
			MIL-G-21164 (81349)	
12	F		INSPECTION PENETRANT KIT:	
		6850-00-826-0981	MIL-I-25135 (81349)	KT
13	O		LUBRICANT, SOLID FILM:	
		9150-00-168-2000	16-oz (0.47-l) cn	OZ
			MILL46147 (81349)	
14	F		LUBRICATING OIL, GENERAL PURPOSE:	
		9150-00-281-2007	55-gal. (208.20-l) dr	GL
			WL800 (81348)	
15	C		LUBRICATING OIL, WEAPONS: (LAW)	
		9150-00-292-9689	1-qt (0.95-l) cn	QT
			MIL-L-14107 (81349)	

EXPENDABLE SUPPLIES AND MATERIALS LIST (cont)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
16	O	9150-00-687-4241	LUBRICATING OIL, WEAPONS: (LSA), semifluid 1-qt (0.95-l) cn MILL46000 (81349)	QT
17	F	8135-00-664-4012	PAPER, VOLATILE CORROSION INHIBITOR TREATED: medium duty 600-ft (182.88-m) roll MILP3420 (81349)	FT
18	C	7920-00-205-1711	RAG, WIPING: cotton 50-lb (22.68-kg) be. DDD-R-30 (81348)	LB
19	F	8135-00-286-8565	STRAPPING: flat 5/8-in. (1.59-cm) w coil QQ-S-781 (81348)	IN
20	C	1005-00-912-4248	SWAB, SMALL ARMS CLEANING: cotton 1 pg (1000 per pg) 11686408 (19204)	EA
21	F	7510-00-266-6712	TAPE, PRESSURE SENSITIVE ADHESIVE: paper basic PPP-T-42 (81348)	YD
22	F	7510-00-297-6655	TAPE, PRESSURE SENSITIVE ADHESIVE: paper basic PPP-T-76 (81348)	YD

APPENDIX E
ILLUSTRATED LIST OF MANUFACTURED ITEMS

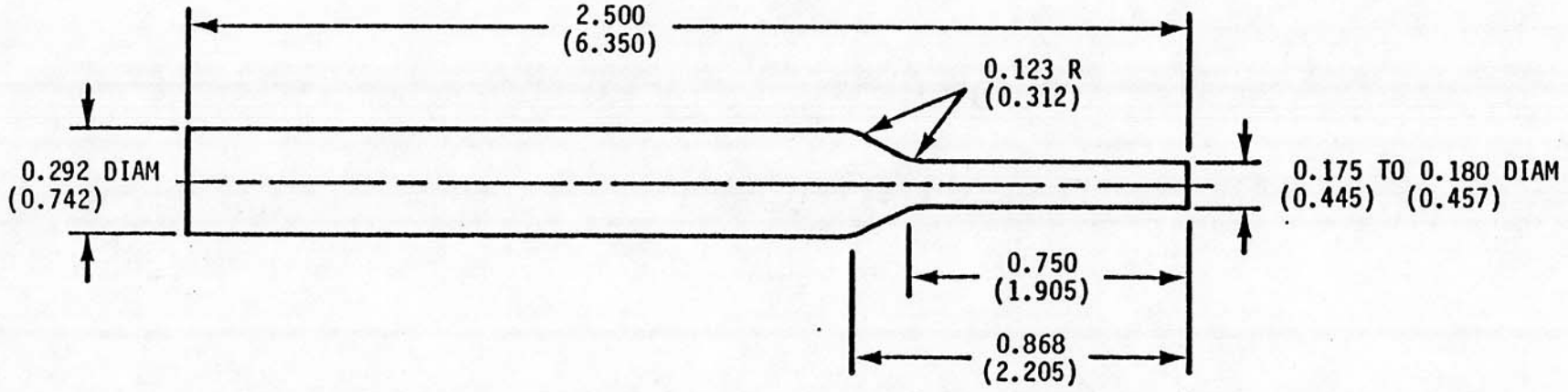
E-1. INTRODUCTION

a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at organizational or direct support maintenance levels.

b. A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

c. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list with the illustration.

E-2. MANUFACTURED ITEMS INSTRUCTIONS

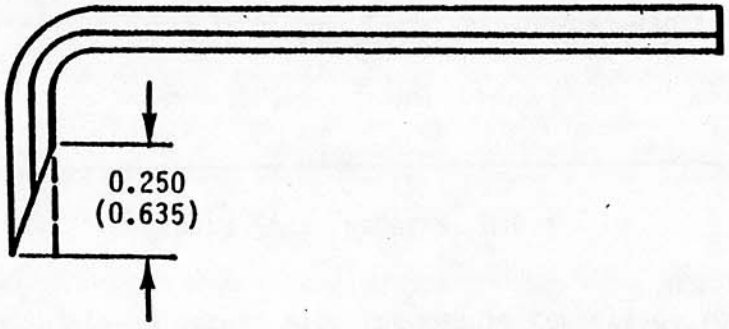


All dimensions shown are in inches with the metric conversion to centimeters in parenthesis.

Figure 1. Key tool.

NOTES:

1. Fabricate from round steel metal bar, NSN 9510-00-231-2076.
2. Tolerance on 0.175 in. (0.445 cm) to 0.180 in. (0.457 cm) diameter is +0.005 in. (+0.013 cm). Tolerance for all remaining dimensions is ±0.005 in. (±0.013 cm).



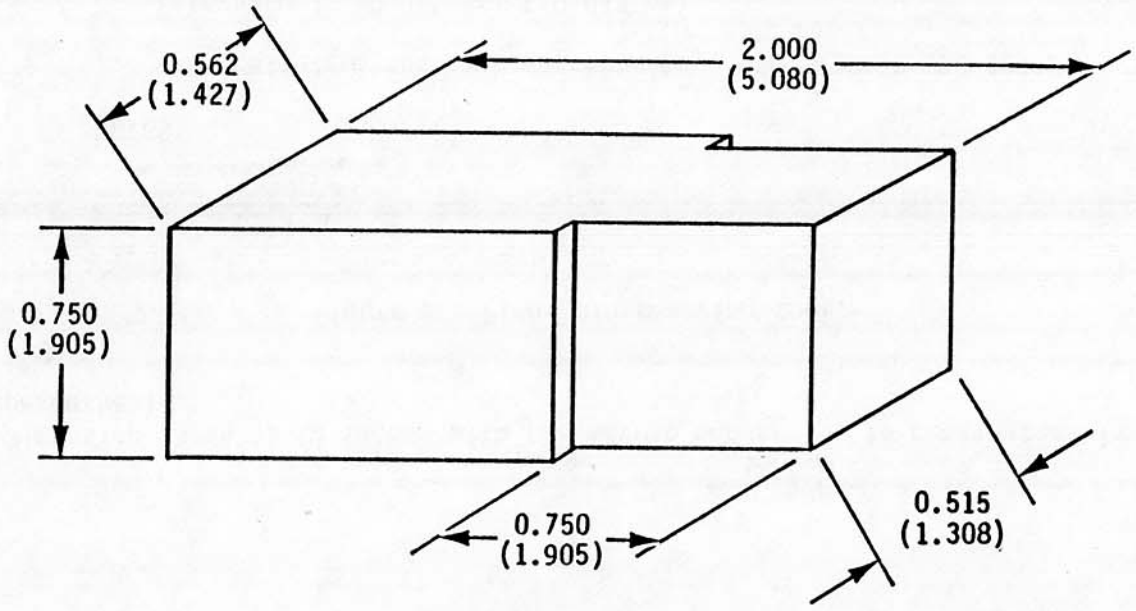
Dimension shown is in inches with the metric conversion to centimeters in parenthesis.

Figure 2. Pivot pin removing tool.

NOTES:

1. Fabricate from socket head screw key, NSN 5120-00-198-5398.
2. Tolerance is ±0.005 in. (±0.013 cm).

E-2. MANUFACTURED ITEMS INSTRUCTIONS (cont)



All dimensions shown are in inches with the metric conversion to centimeters in parenthesis.

Figure 3. Receiver gage.

NOTES:

1. Fabricate from square steel metal bar, NSN 9510-00-640-4407.
2. Chamfer all edges 0.030 in. (0.076 cm) x 45°.
3. Tolerance on 0.515 in. (1.308 cm) dimension is -0.002 in. (-0.005 cm). Tolerance for all remaining dimensions is ± 0.005 in. (±0.013 cm).

ALPHABETICAL INDEX

*O--Organizational
**DS--Direct Support

*O--Organizational
**DS--Direct Support

*O--Organizational
**DS--Direct support

*O--Organizational
**DS--Direct Support

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PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO
2-25	2-11		
3-4	3-1		

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

Callouts 5 and 4 should be reversed.

Performed all steps for malfunction 5, weapon still does not cock.

SAMPLE

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METRIC CHART

UNITS OF MEASURE

When units of length, distance, temperature, weight, torque, or volume are used in this manual, both US customary and metric units are shown. US customary units are shown first with the equal metric units shown in parentheses. Units of time and angle are the same for US customary and metric systems. No equal units are shown for seconds, minutes, hours, degrees of angle, or mils. When units identify weapons or ammunition, they stand alone. Also, when units describe tools or parts which are not interchangeable, only one kind of unit is used. The list below shows the difference between US customary and metric units. It also shows the symbols used for the units.

US CUSTOMARY		METRIC	
LENGTH AND DISTANCE			
inch: 1 in.		2.54 cm:	centimeters
foot: 1 ft		0.3048 m:	meter
yard: 1 yd		0.9144 m:	meter
TEMPERATURE			
degree Fahrenheit: °F		(F°-32°) x 5/9= °C:	degree Celsius
WEIGHT			
pound: 1 lb		0.4536 kg:	kilogram
TORQUE			
inch-pound: 1 in.-lb		0.113 N-m:	Newton/meter
foot-pound: 1 ft-lb		1.356 N-m:	Newton/meters
VOLUME			
ounce: 1 oz		0.02957 l:	liter
pint: 1 pt		0.4732 l:	liter
quart: 1 qt		0.9463 l:	liter
gallon: 1 gal.		3.785 l:	liters

METRIC CHART

UNITS OF MEASURE

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US CUSTOMARY	METRIC
LENGTH AND DISTANCE	
inch: 1 in.	2.54 cm: centimeters
foot: 1 ft	0.3048 m: meter
yard: 1 yd	0.9144 m: meter
TEMPERATURE	
degree Fahrenheit: °F	(F°-32°) x 5/9= °C: degree Celsius
WEIGHT	
pound: 1 lb	0.4536 kg: kilogram
TORQUE	
inch-pound: 1 in.-lb	0.113 N-m: Newton/meter
foot-pound: 1 ft-lb	1.356 N-m: Newton/meters
VOLUME	
ounce: 1 oz	0.02957 l: liter
pint: 1 pt	0.4732 l: liter
quart: 1 qt	0.9463 l: liter
gallon: 1 gal.	3.785 l: liters