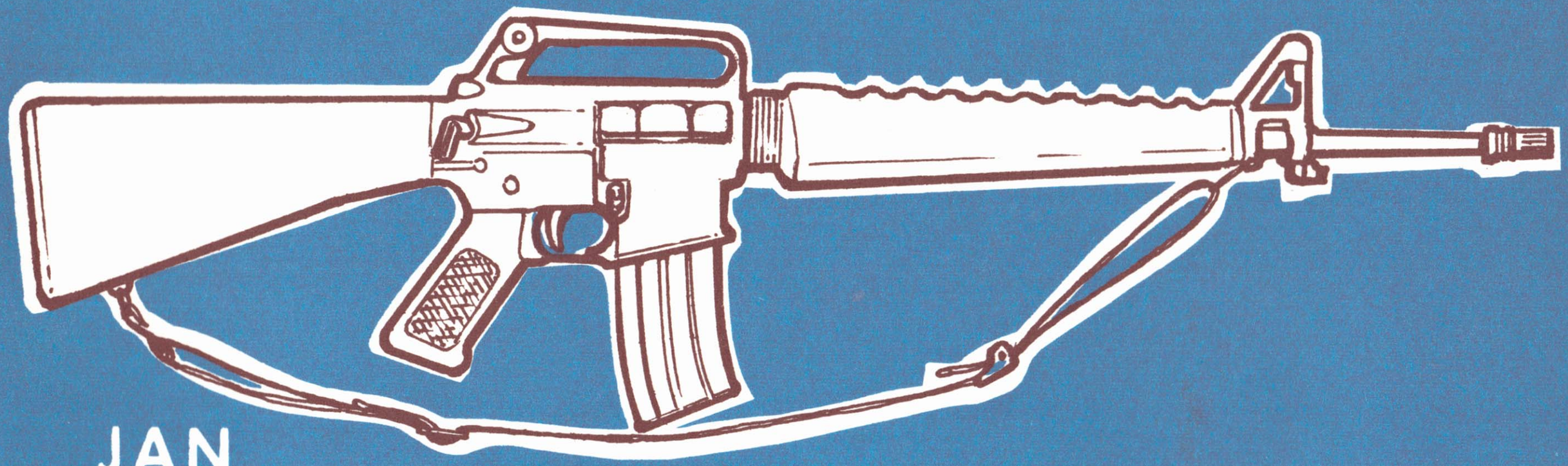
OPERATOR'S MANUAL



JAN
1972

M16A1
RIFLE

TM9-1005-249-10

WARNING



DANGEROUS PROCEDURES

* Be sure the cam pin is installed in the bolt group. If it isn't your rifle can still fire, but it could just blow up, causing you much pain.

* If you're using the blank ammo attachment don't use any other ammo except the blank round, M200.

* If your rifle stops firing with a live round in the chamber of a hot barrel, remove the round fast or else wait 15 minutes. This way you won't get hurt by a possible cook-off which could happen 10 seconds after contact with the hot barrel.

* Clear the weapon, then eyeball that barrel bore for any obstruction before you start firing.

* If there's water in the barrel don't fire the rifle. It could blow up.

* If your bolt fails to unlock and you try to free it by banging the butt on the ground, keep yourself clear of the muzzle.

* If a noticeable difference in sound or recoil is experienced, STOP FIRING. Check for bullet in bore. Could result in blown up barrel.

FOLLOW CLOSELY all the instructions in this book and your M16A1 will operate smoothly. If something GOES WRONG with the rifle - go to your sergeant - he has the answers.

QUESTIONS ??? Ask your NCO or try the company headquarters for more detailed manuals. TM 9-1005-249-20 the organizational M16A1 manual has a complete listing of pubs.

FACTS ABOUT YOUR RIFLE. . . . . .

It is a light weight, air-cooled, magazine fed, shoulder or hip weapon that can fire either automatic or semi-automatic.

Other added features:

- The barrel assembly has an adjustable sight and a flash suppressor.
- The handguards contain inner heat shields.
- Upper and lower receivers are designed to be easily opened for cleaning and inspection.
- Bolt group and barrel extension designed with locking lugs that lock bolt group to barrel extension.
- An aluminum receiver reduces the weight of the rifle.

Weight. . . . . .6.5 lbs.

Mag. Cap. . . . 30 rds.

Max effective rate of fire:

Semi: 45 - 65 rd per min.

Auto: 150 - 200 rd per min.

Max effective range 460 meters

Cyclic rate of fire 700/800 rds per min.

TO ZERO THE RIFLE YOU MUST HAVE THE FRONT SIGHT (ELEVATION) AND THE REAR SIGHT (WINDAGE) ADJUSTED SO THAT IT CAN HIT YOUR POINT OF AIM AT A GIVEN RANGE.

NOTE: IN ORDER TO BATTLE SIGHT ZERO YOU ADJUST YOUR SIGHTS SO YOU CAN HIT AN AIMING POINT AT 250 METERS.



FIRING

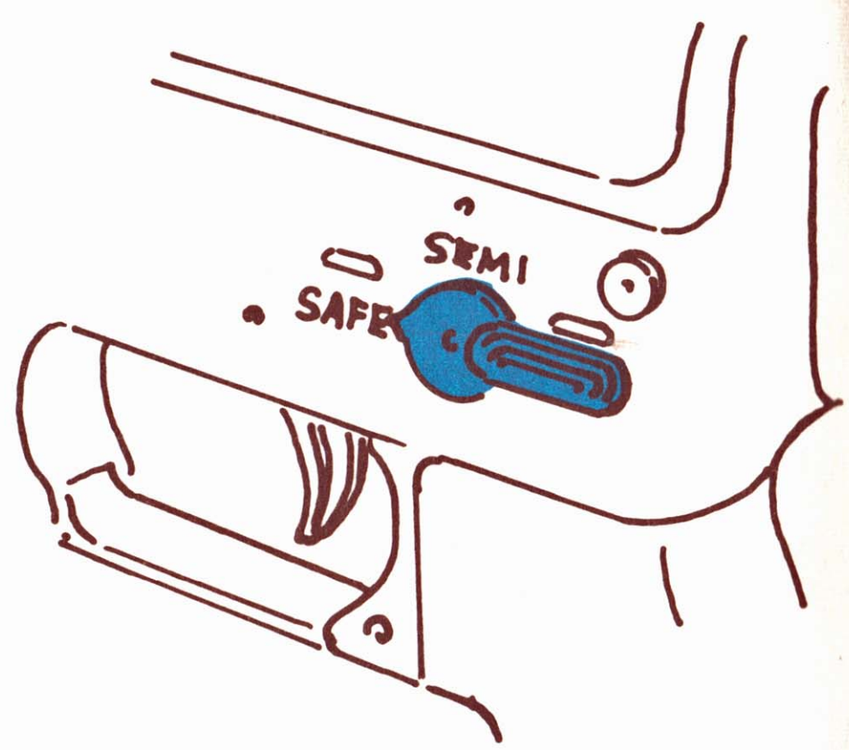


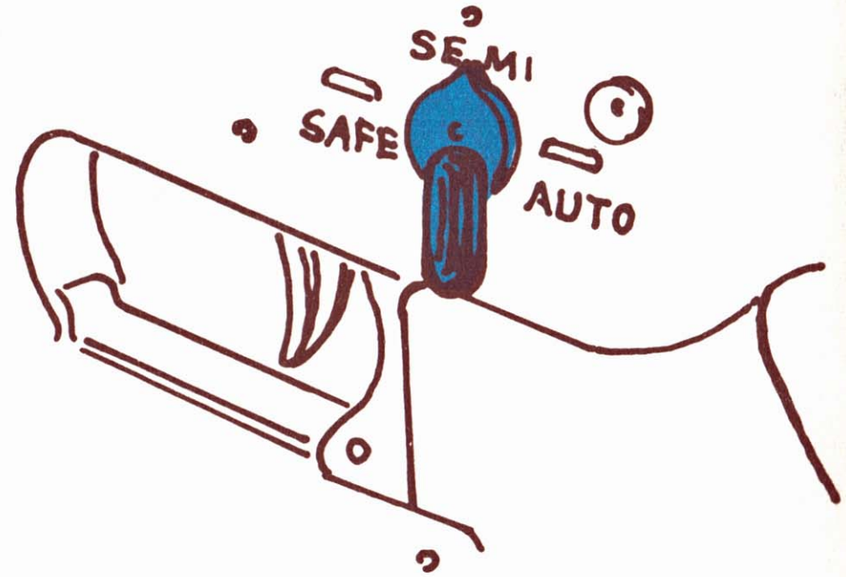
SELECTOR LEVER ON:

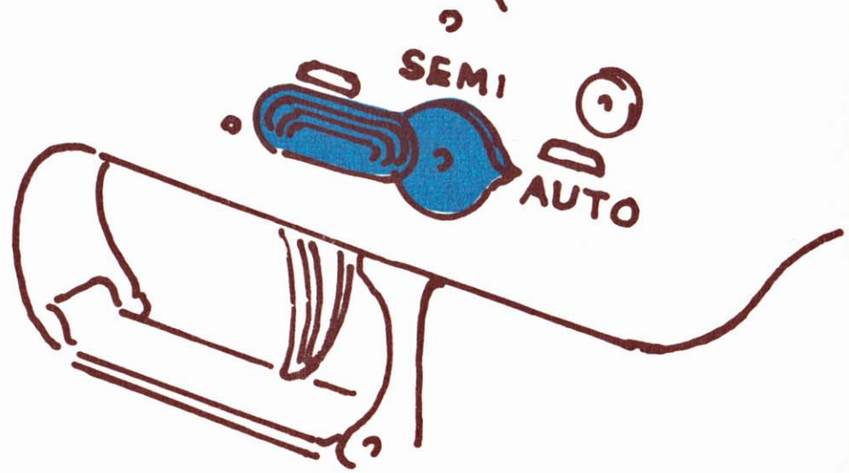
★ SAFE - Rifle will not fire

★ Semi-Automatic - Rifle will fire one round each time the trigger is pulled

★ Automatic - Rifle will continue to fire until the magazine is empty or the trigger is released



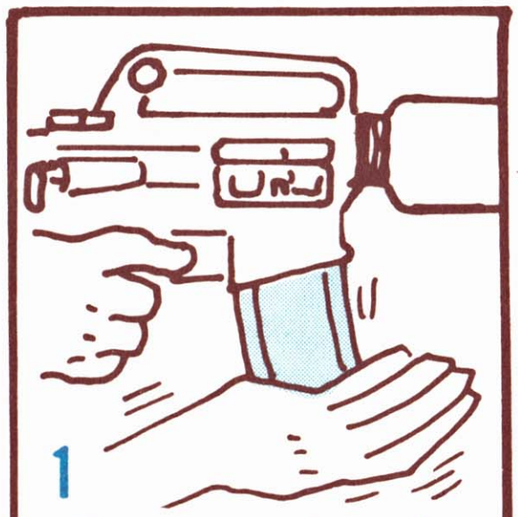






IMMEDIATE ACTION

IF your rifle refuses to fire...



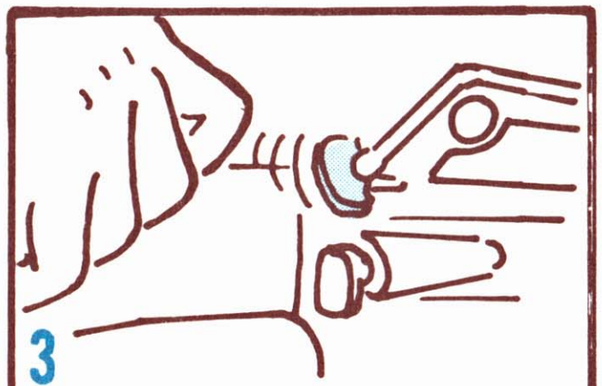
1

Tap upward on the magazine to make sure its properly seated.



2

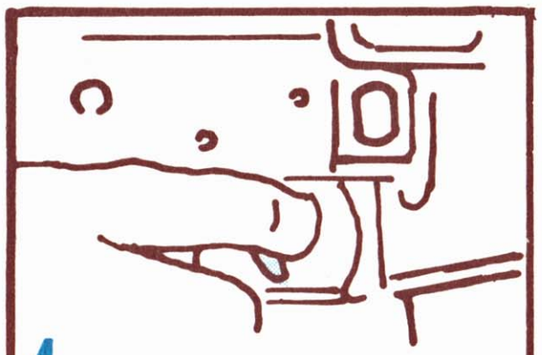
Pull charging handle all the way back. Watch for ejection of whole cartridge or case.



3

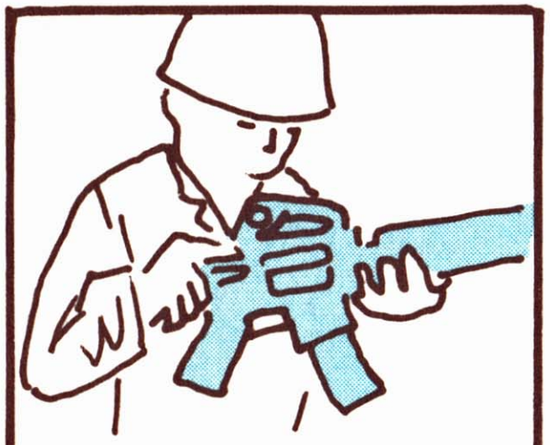
If cartridge or case is ejected – release charging handle to feed new round (Don't ride the charging handle).

Strike Forward Assist to assure bolt closure (M16A1 only)



4

Now pull trigger. If it won't fire, look for trouble and take immediate action....



5

If your rifle fails to fire after performing step 1 thru 4, check again for jammed cartridge case.

6

WARNING

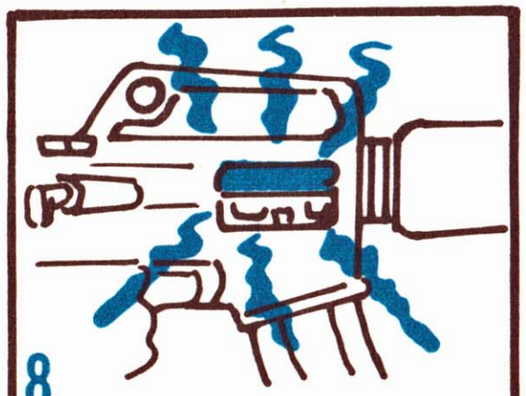
A COOKOFF CAN OCCUR 10 SECONDS AFTER CONTACT IN CHAMBER OF HOT BARREL. REMOVE CARTRIDGE WITHIN 10 SECONDS OR... IF CARTRIDGE CAN'T BE REMOVED, ONLY OPERATOR WILL STAY WITH THE RIFLE FOR 15 MIN.. KEEP THE RIFLE AIMED IN A SAFE DIRECTION.



7

MISFIRE –

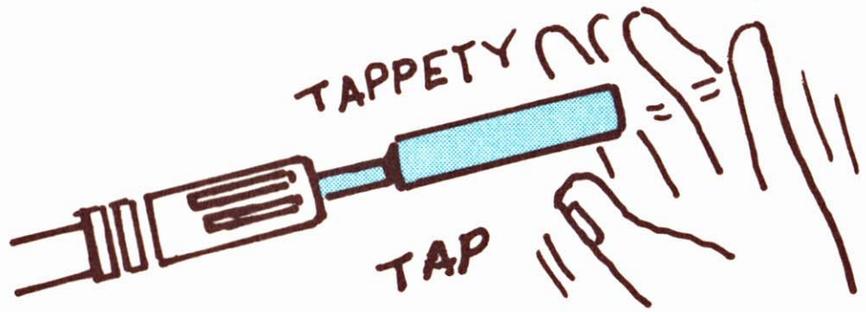
May be due to faulty ammo or firing mech.



8

COOKOFF –
A cartridge in chamber of very hot weapon.

OBSERVE WARNING



9

Insert cleaning rod into muzzle end and tap cartridge for removal.

LSA - MINUS 35 degrees and above
LAW - 0 degrees and below

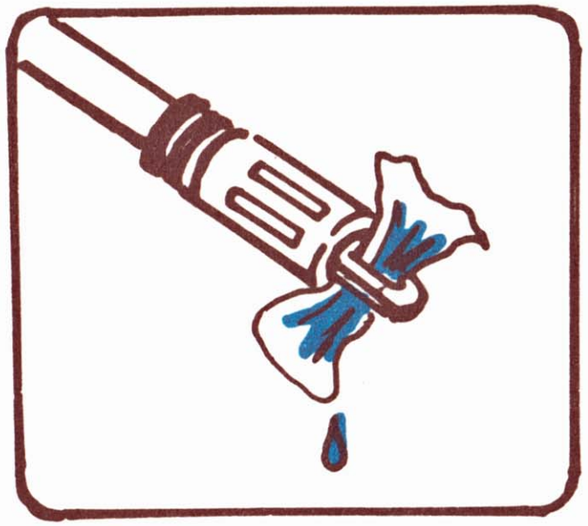
NOTE - Either can be used from 0 to minus 35 degrees

LUBE GUIDE

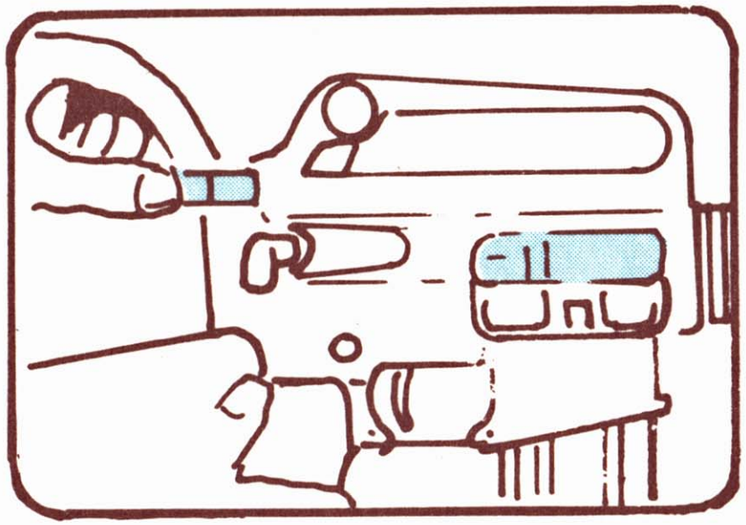
LSA

LAW

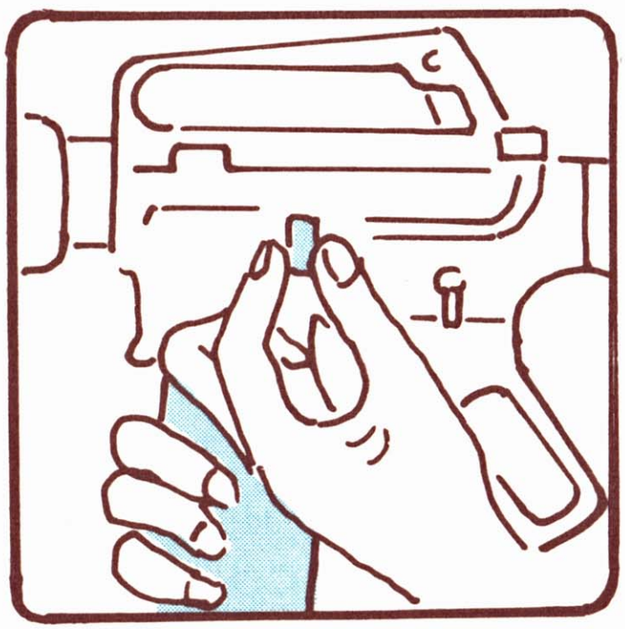
AND **PM**



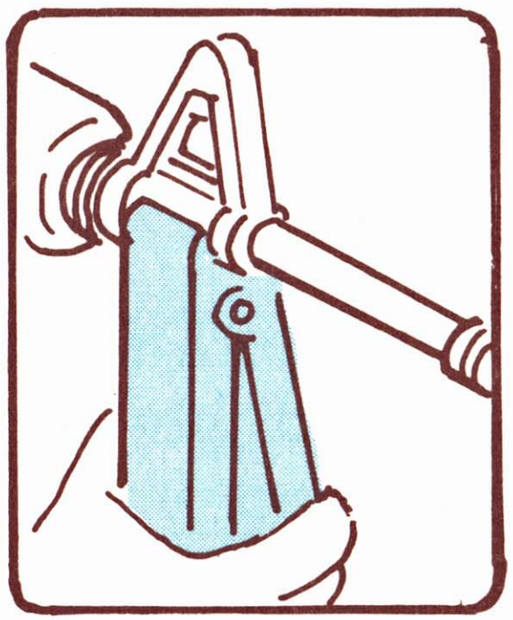
EXCESS OIL



FREE MOVEMENT



MAG. SECURE?



PROPER TENSION?

MAKE SURE ALL CONTROLS WORK PROPERLY

UNUSUAL CONDITIONS

EXTREME COLD -

a. Clean and lubricate rifle with LAW.
b. Operate controls thru their entire range, at intervals, to keep them from freezing up.
c. When your rifle is not being used and kept outside, protect it with a proper cover.

HOT CLIMATES -

a. Inspect rifle and bipod more frequently, especially the hidden surfaces of bolt carrier group, forward assist assembly (M16A1) and lower receiver components. Make certain they are lubricated using LSA.
b. When handling, make certain to wipe dry, as sweat could cause corrosion. After drying lubricate with LSA.

HOT, DRY CLIMATES -

a. Clean and oil rifle bore more frequently with LSA.

DUSTY AND SANDY AREAS -

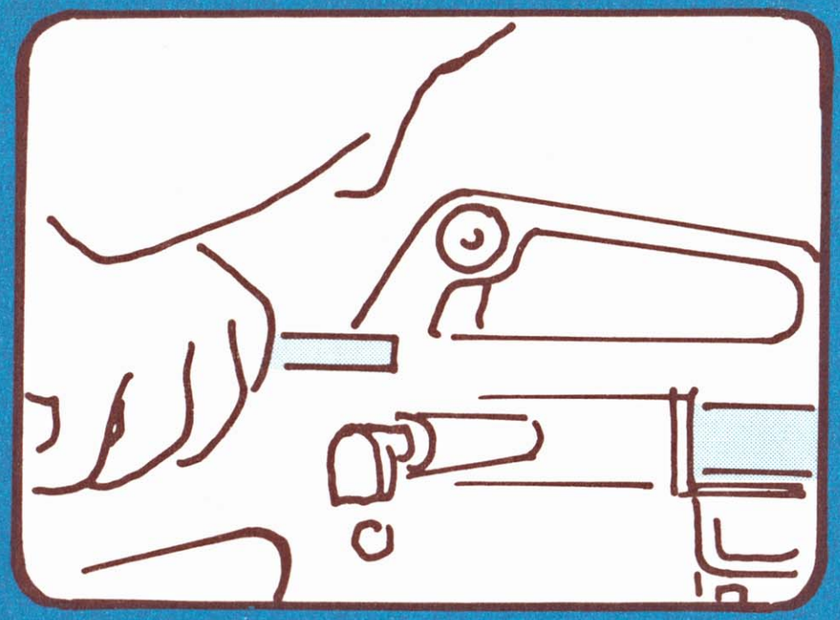
a. Clean and lubricate your rifle more frequently.
b. Make certain to keep sand out of parts when inspecting and lubricating the rifles. Shield components from sand during breakdown of rifle.
c. Use magazine bag to protect the mag. and protective cap for muzzle.

NOTE: Magazine bag and cap should not be used on stored rifles.

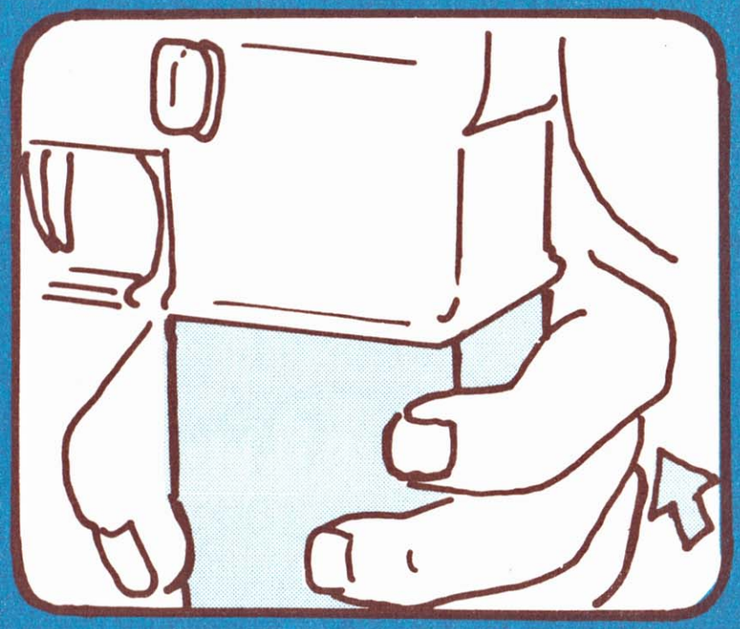
LOAD



LOAD MAG.

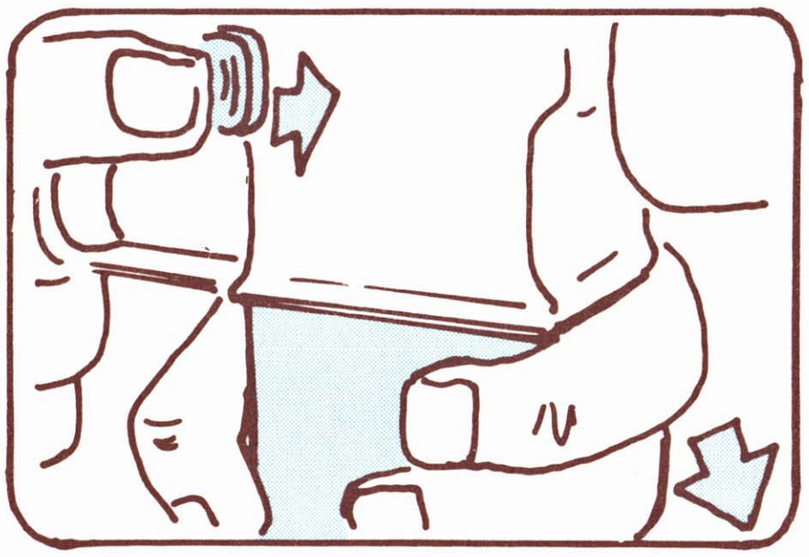


CLEAR RIFLE

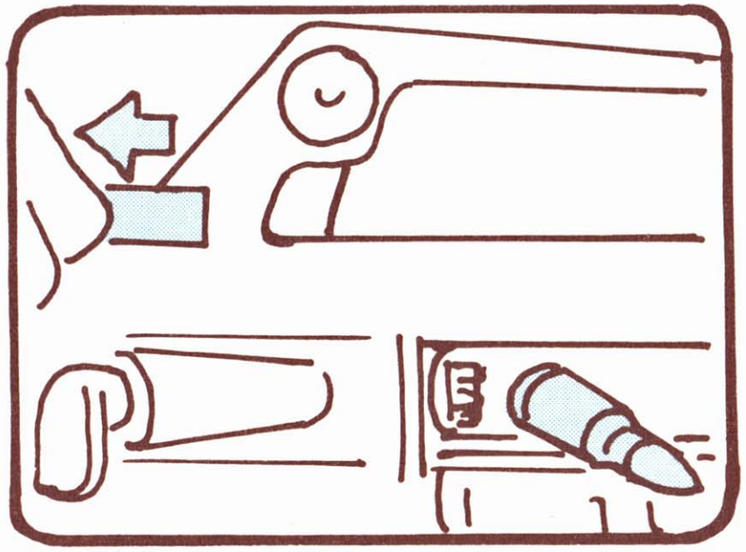


LOAD RIFLE

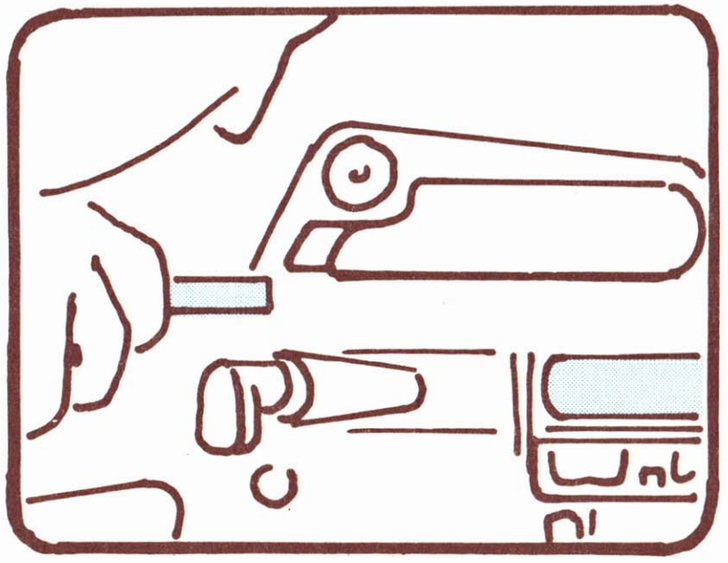
UNLOAD



REMOVE MAG.



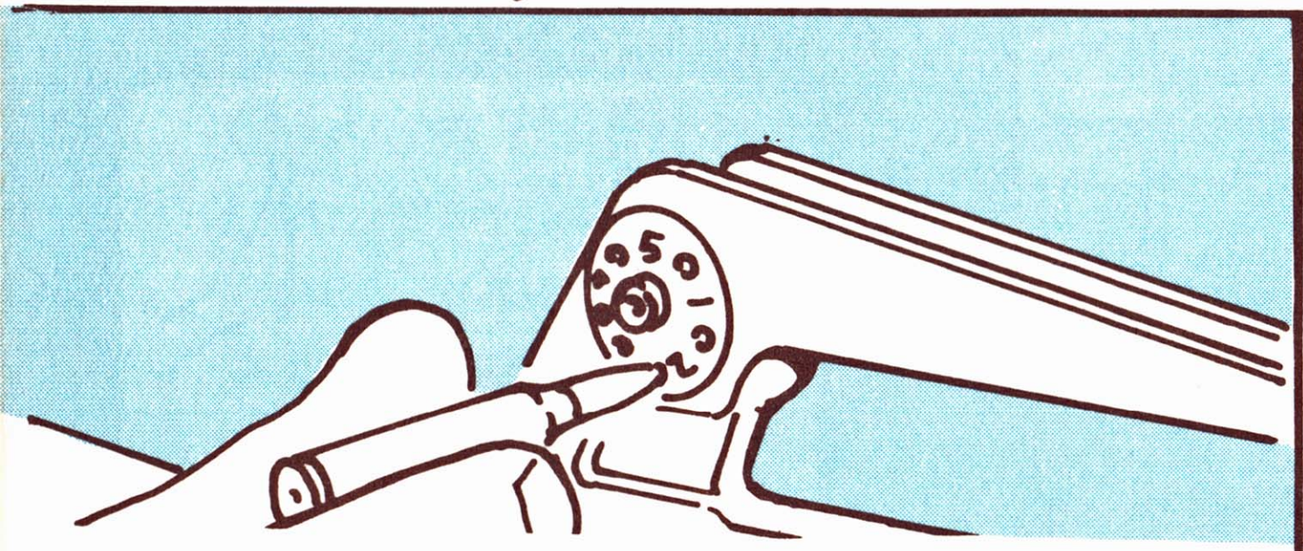
REMOVE CARTRIDGE



CLEAR RIFLE



SIGHT ADJUSTMENT



REAR SIGHT - Has two apertures for range. Unmarked aperture - short 0-300 meters (328 yds) range. L under aperture - long 300-500 meters (546 yds) range. To adjust windage-depress detent and rotate drum to desired direction. To move point of impact to right, turn drum clockwise in direction of arrow and letter R. To move left, move drum counterclockwise. Amount of correction same as front sight.



FRONT SIGHT - To adjust elevation; depress detent and rotate post. Each graduation (notch) moves the point of impact of bullet as indicated.

IMPACT	DISTANCE
0.7cm (17/64in)	25 meters
2.8cm (1-3/32in)	100 meters
5.6cm (2-13/64in)	200 meters

"UP" marked on sight is direction to turn post to raise line of fire.

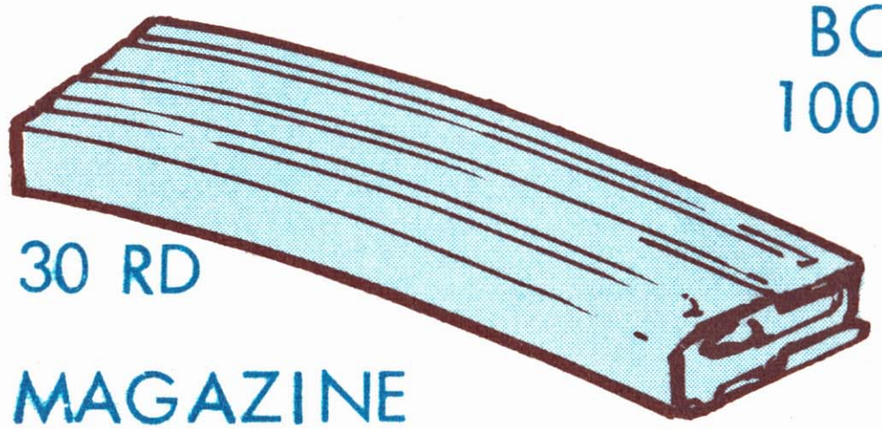
BASIC ISSUE ITEMS



BRUSH (TOOTH)
1005-494-6602



BORE BRUSH
1005-903-1296

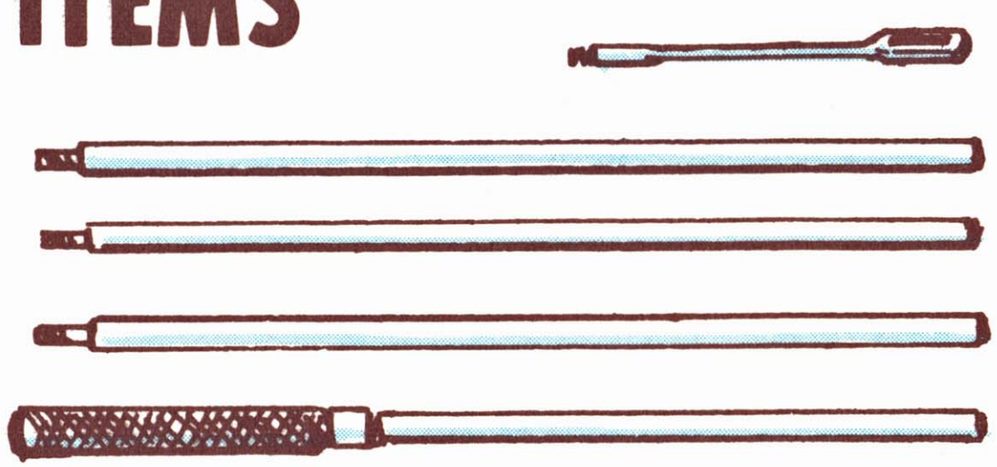


30 RD

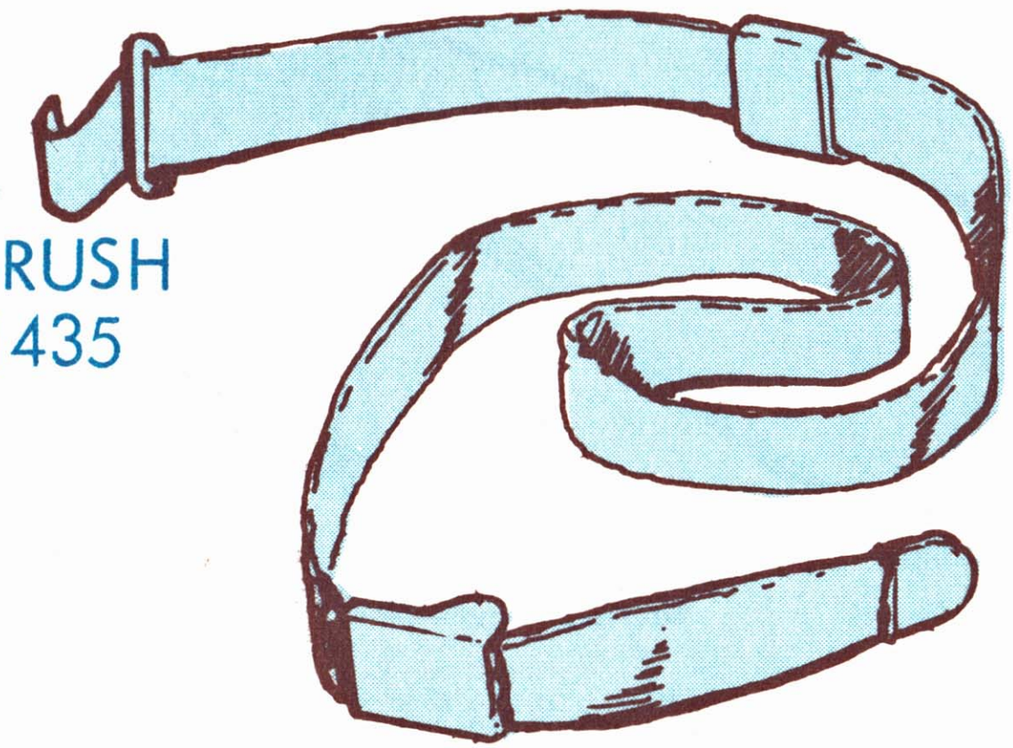
MAGAZINE
ASSEMBLIES - 1005-921-5004
(YOU GOTTA HAVE 4)



CHAMBER BRUSH
1005-999-1435



SMALL ARMS CLEANING ROD
M11E3 - 1005-089-3994



SLING M1 -
1005-654-4058



SMALL ARMS ACCESSORIES CASE -
1005-403-5804

CONTROLS

FRONT SIGHT

REAR SIGHT WINDAGE DRUM

CHARGING HANDLE

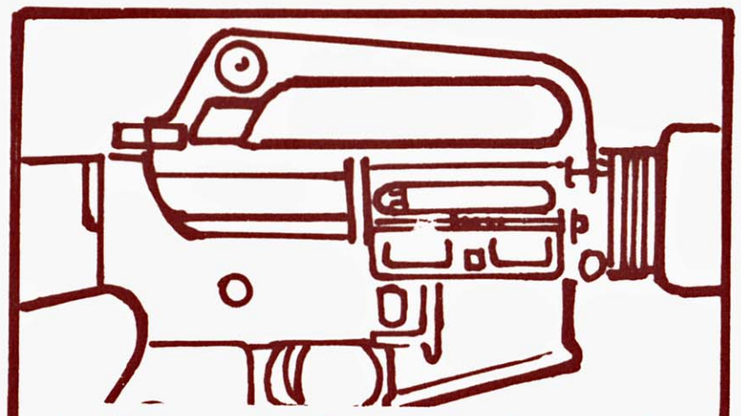
BAYONET STUD

EJECTION PORT COVER

MAGAZINE RELEASE BUTTON

TRIGGER

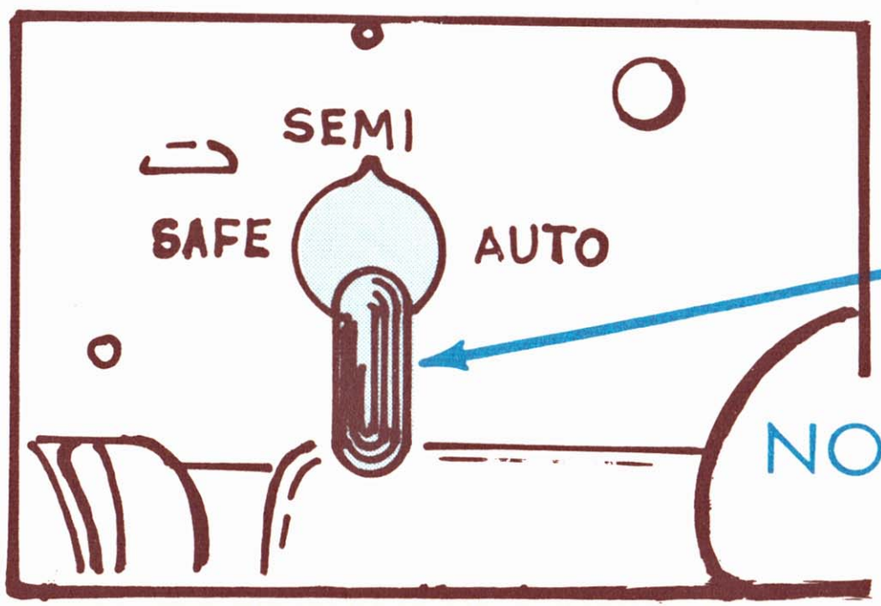
FORWARD ASSIST (M16A1 ONLY)



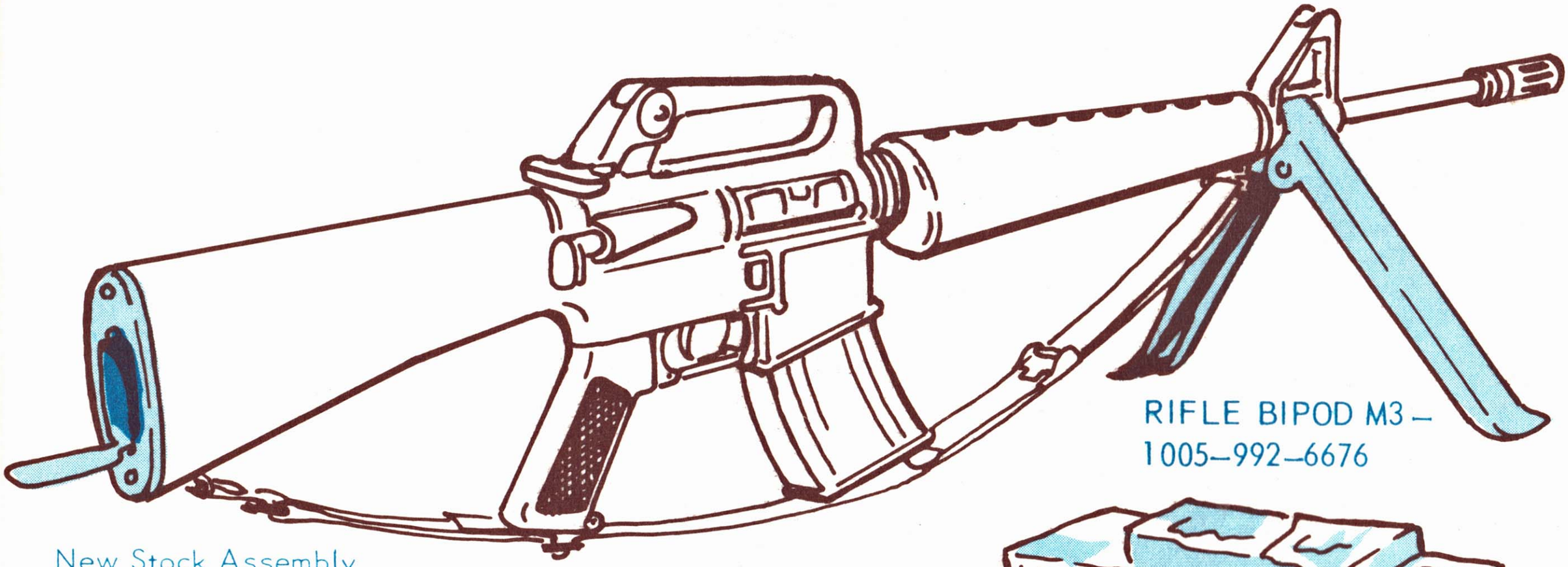
M16 no foward assist

WHERE TO FIND 'EM





NOTE: COCK RIFLE BEFORE PLACING IN "SAFE" POSITION.



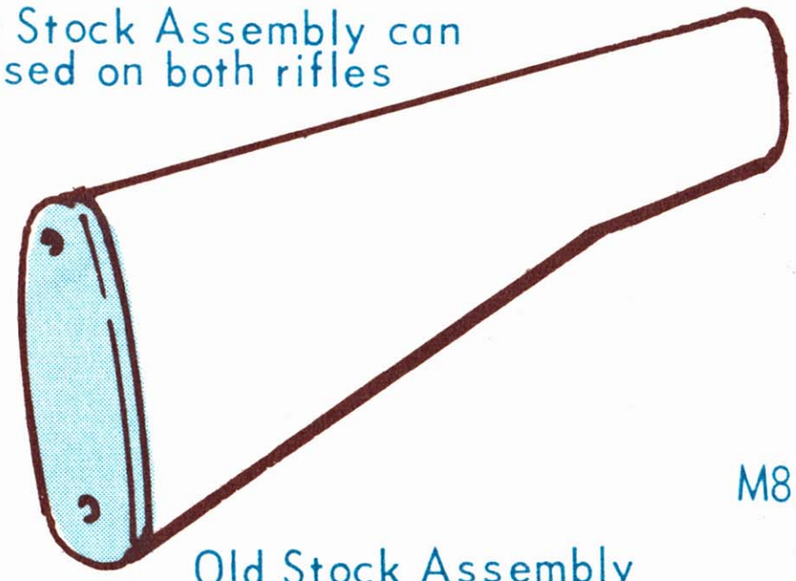
New Stock Assembly
(Stowage for Cleaning Gear)

RIFLE BIPOD M3 –
1005–992–6676



CARRYING
CASE –
1005–999–2430

NOTE
New Stock Assembly can
be used on both rifles



Old Stock Assembly
(No Stowage)

Get your
MUZZLE CAP
and
MAG. BAG
from your
ARMORER

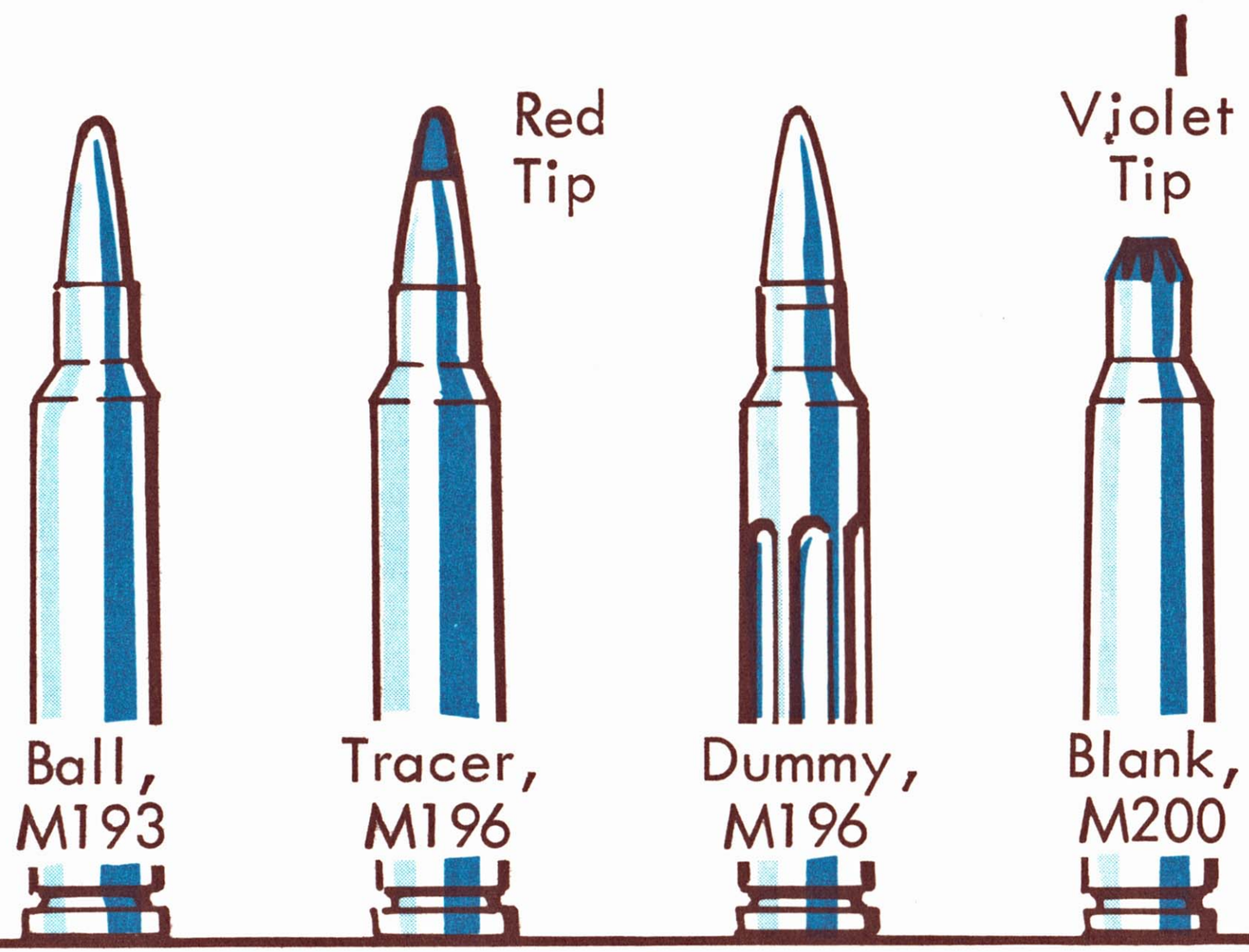


SCABBARD –
M8A1–1095–508–0339

M7 BAYONET –
1005–073–9238

Auxiliary Equipment

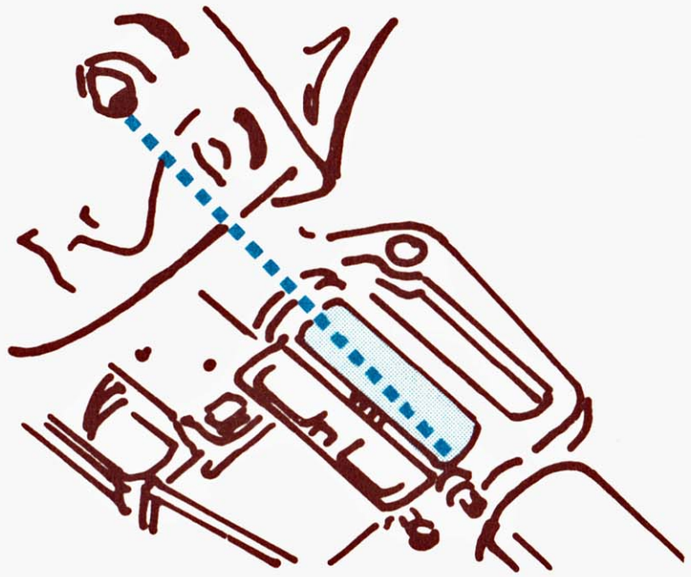
AMMUNITION



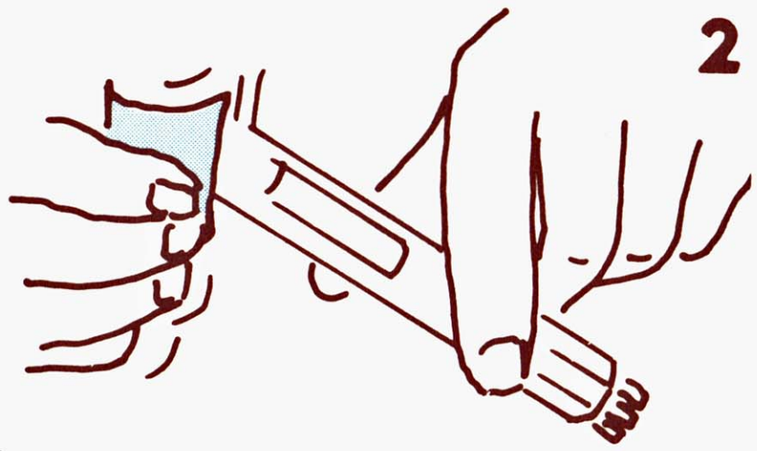
DO NOT FIRE...

- Seriously corroded ammunition.
- Dented cartridges.
- Cartridges with loose bullets.
- Cartridges exposed to extreme heat (135°) until they have cooled.

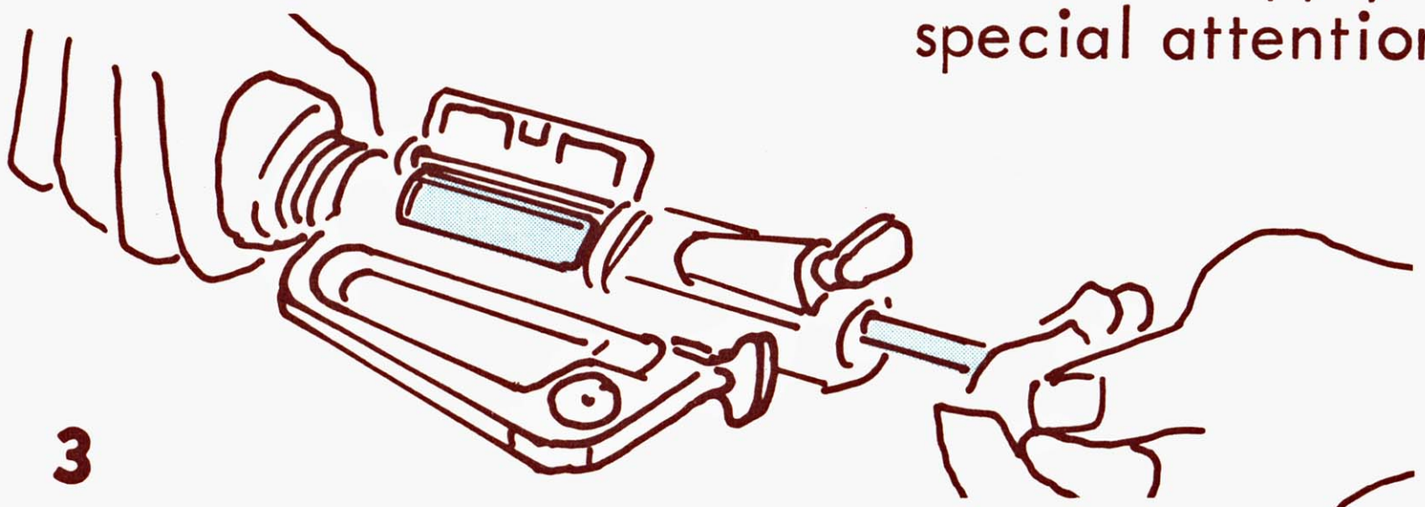
BEFORE OPERATION



1 Look for crud in bore and chamber



2 Remove bolt carrier group and clean dirt and oil from firing pin and all surfaces of bolt/bolt carrier with dry swabs. Clean firing pin hole and bolt carrier key with pipe cleaner. Apply light coating of LSA paying special attention to slide and cam pin area.

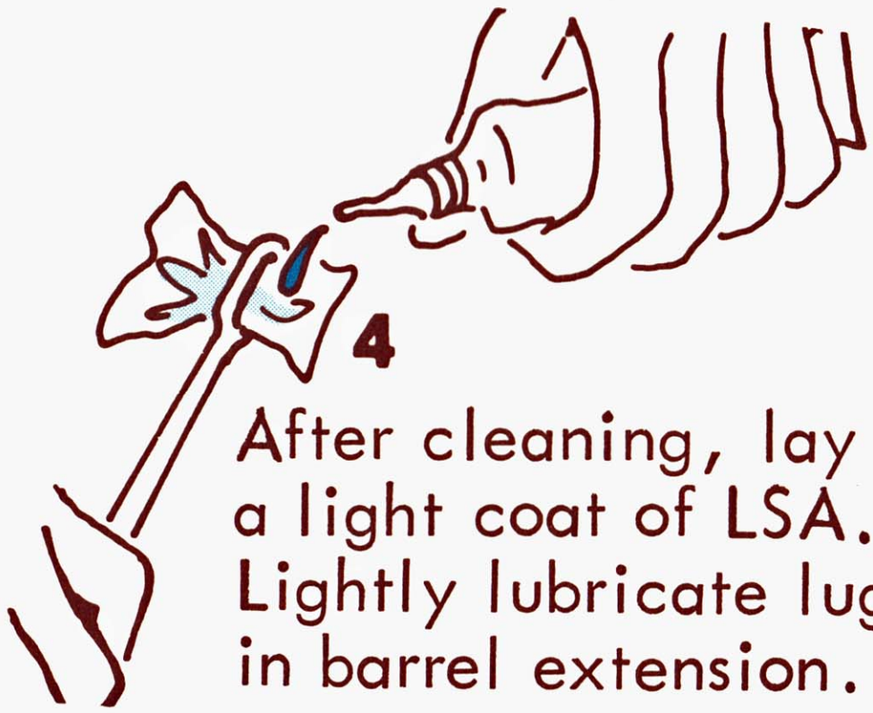


3

"Swab out" (from chamber to muzzle)

CAUTION: Don't bend or flex cleaning rod

Oh yeah, make sure swab goes clear through flash suppressor.



4

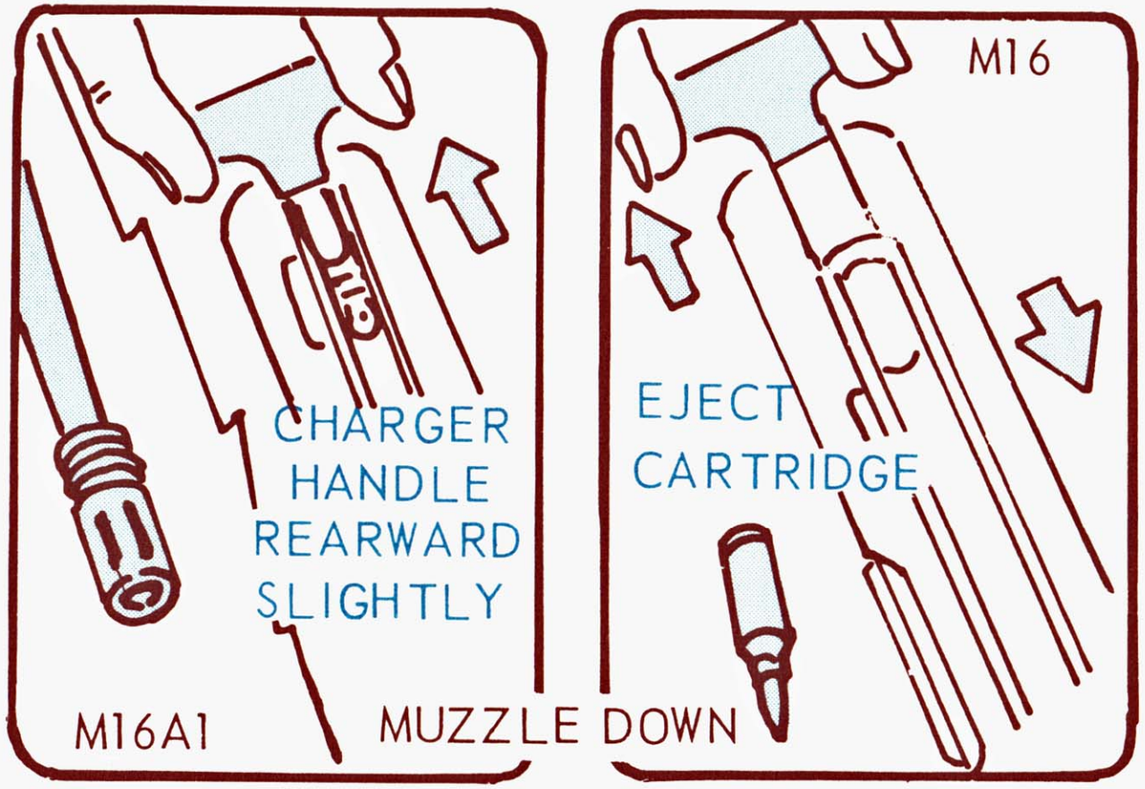
After cleaning, lay on a light coat of LSA. Lightly lubricate lugs in barrel extension.

AFTER

FORDING

WARNING DO NOT FIRE RIFLE IF WATER IS PRESENT IN BARREL.



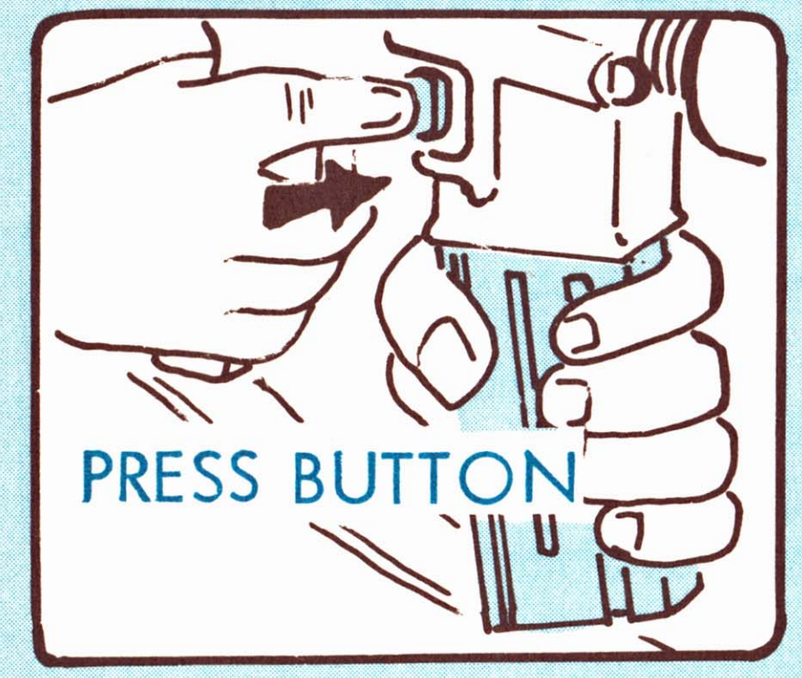


TO DRAIN

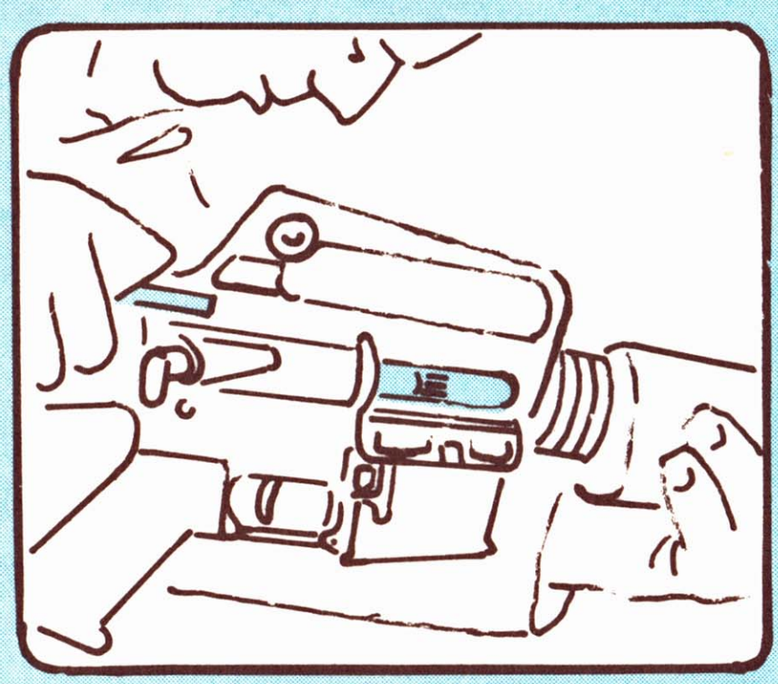
PRESS FORWARD ASSIST TO SEAT ROUND IN CHAMBER

FIELD STRIP

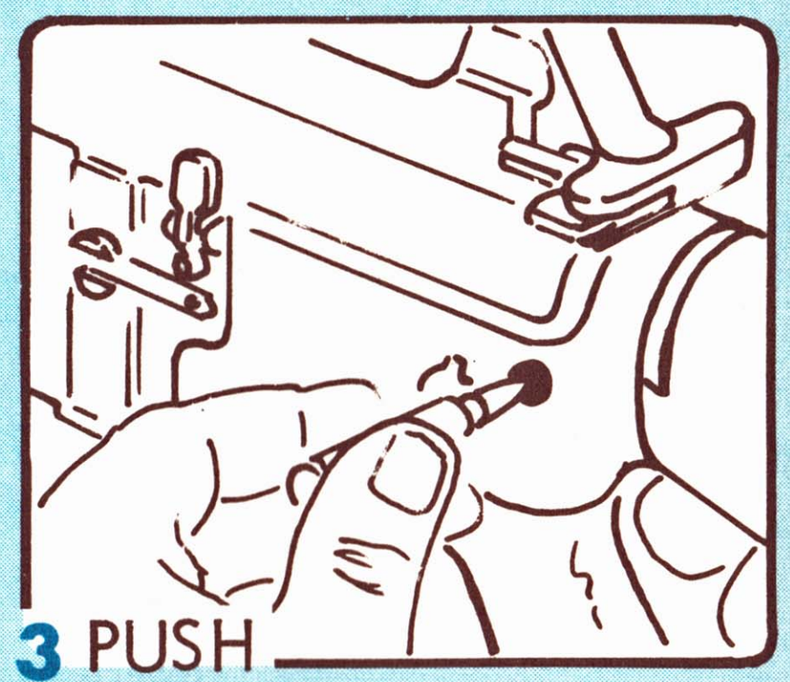
START



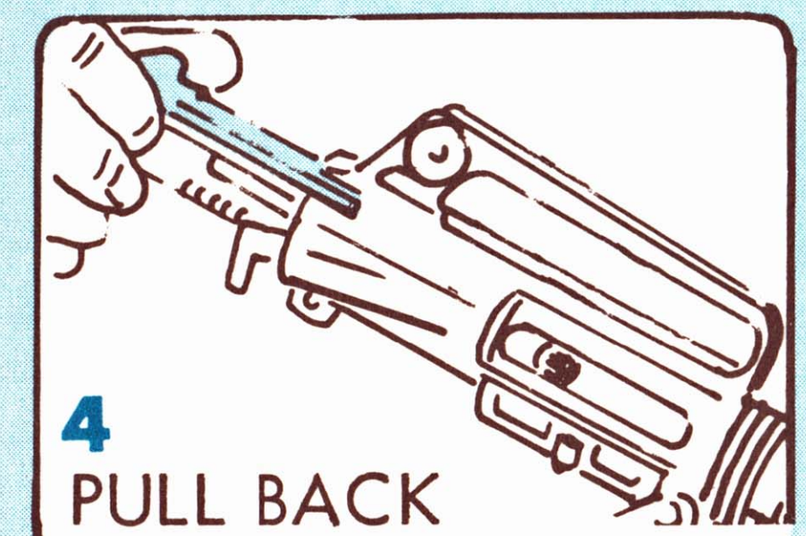
1 REMOVE MAGAZINE



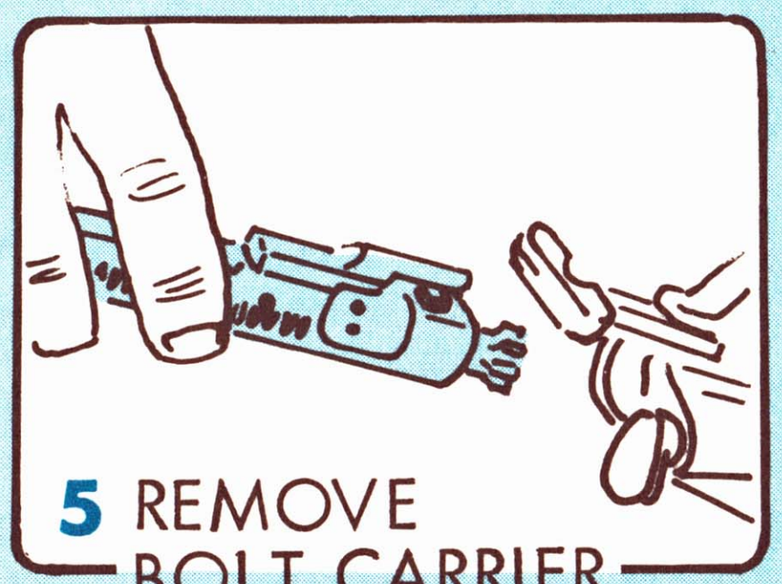
2 OPEN BOLT AND EYEBALL CHAMBER



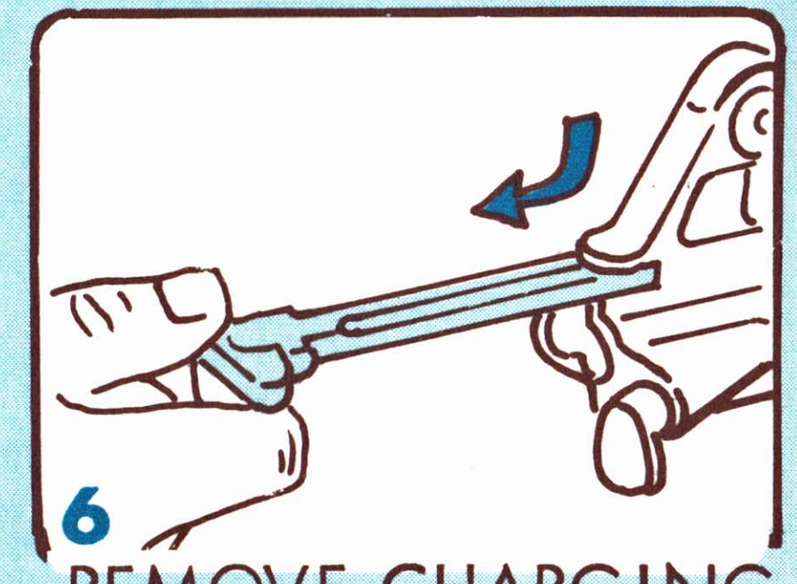
3 PUSH TAKE-DOWN PIN AS FAR AS IT GOES



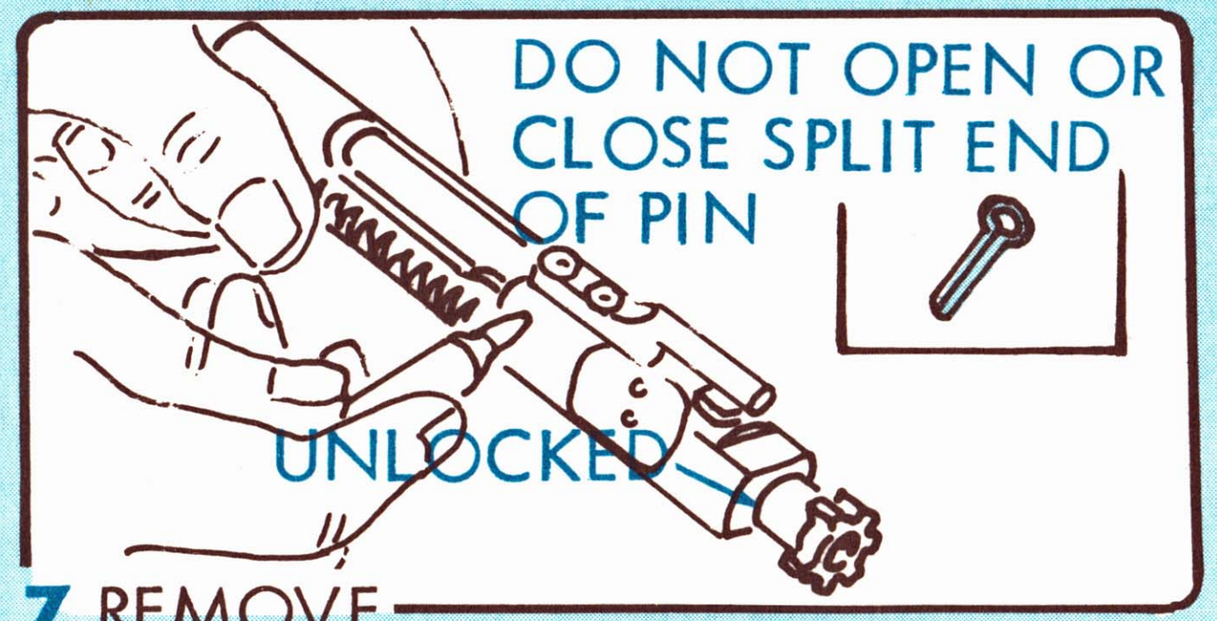
4 PULL BACK CHARGING HANDLE AND BOLT CARRIER



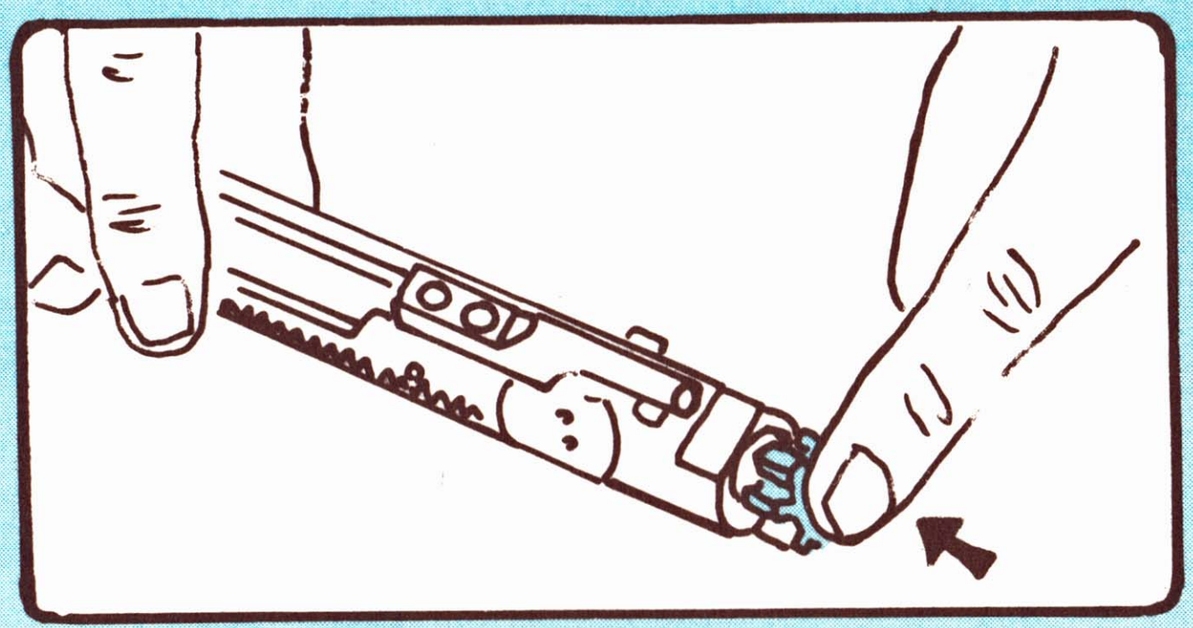
5 REMOVE BOLT CARRIER AND BOLT



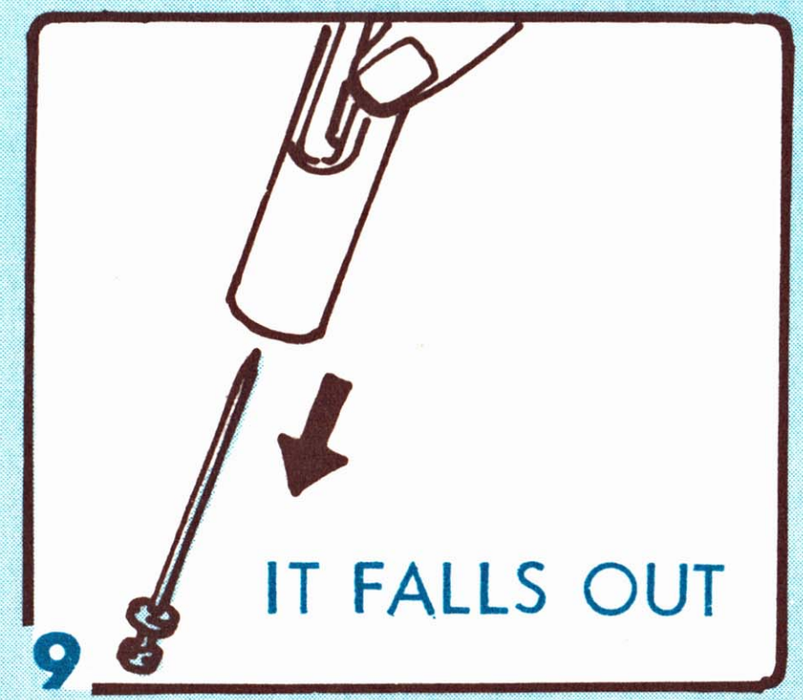
6 REMOVE CHARGING HANDLE



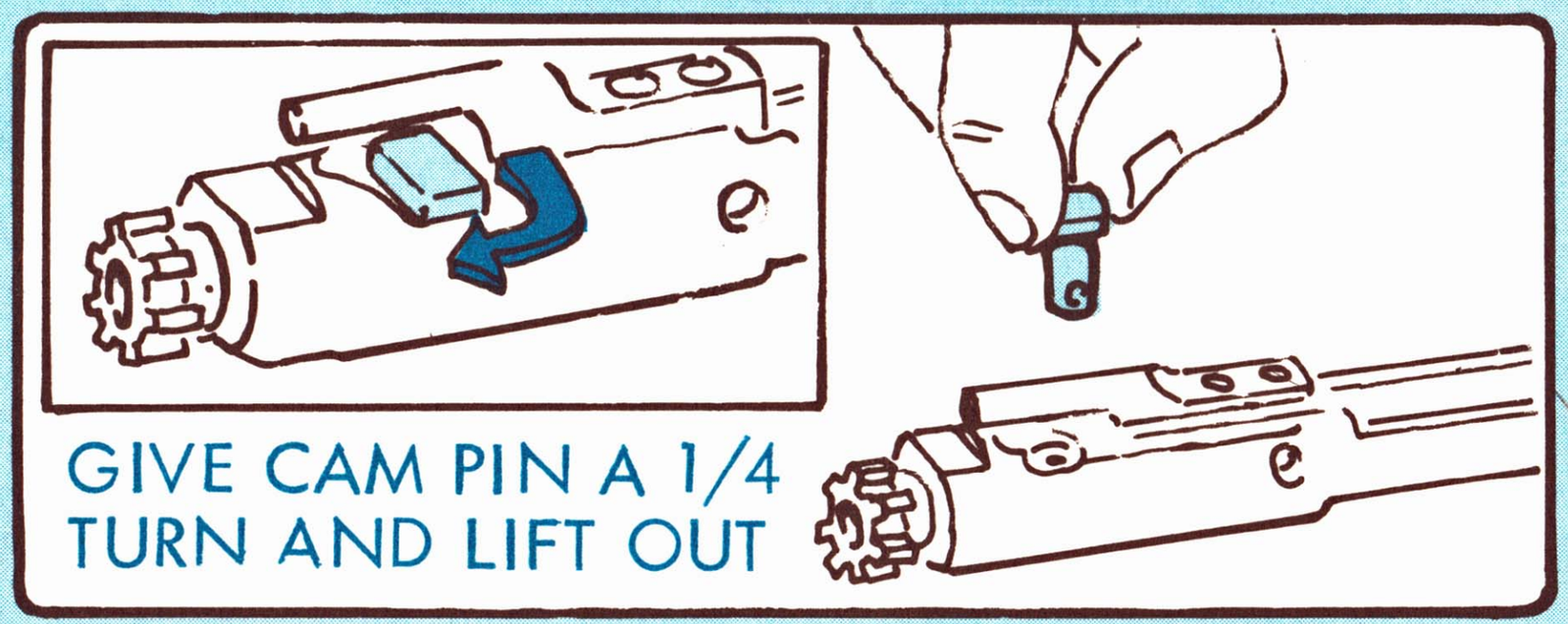
7 REMOVE
FIRING PIN RETAINING PIN



8 PUT BOLT ASSEMBLY IN LOCK
POSITION

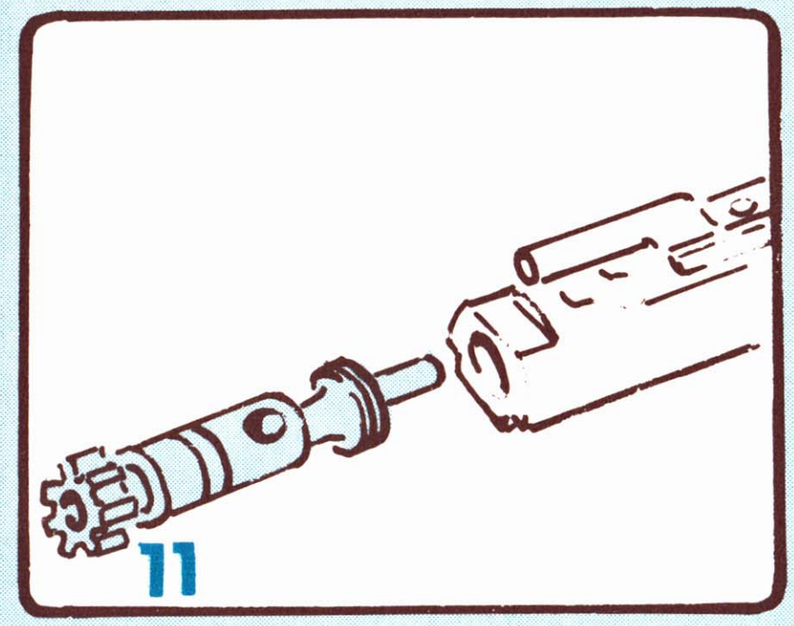


9
REMOVE FIRING PIN

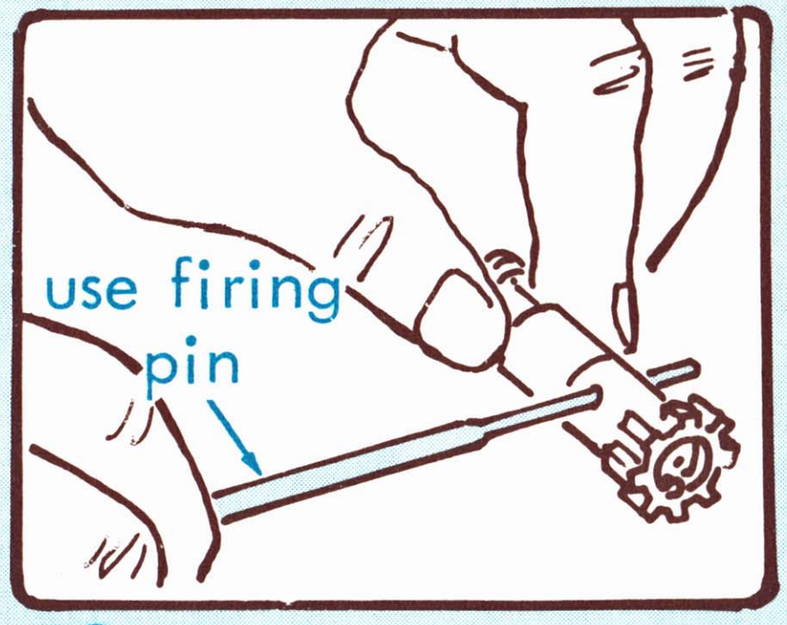


10 REMOVE BOLT CAM PIN

MORE FIELD STRIP



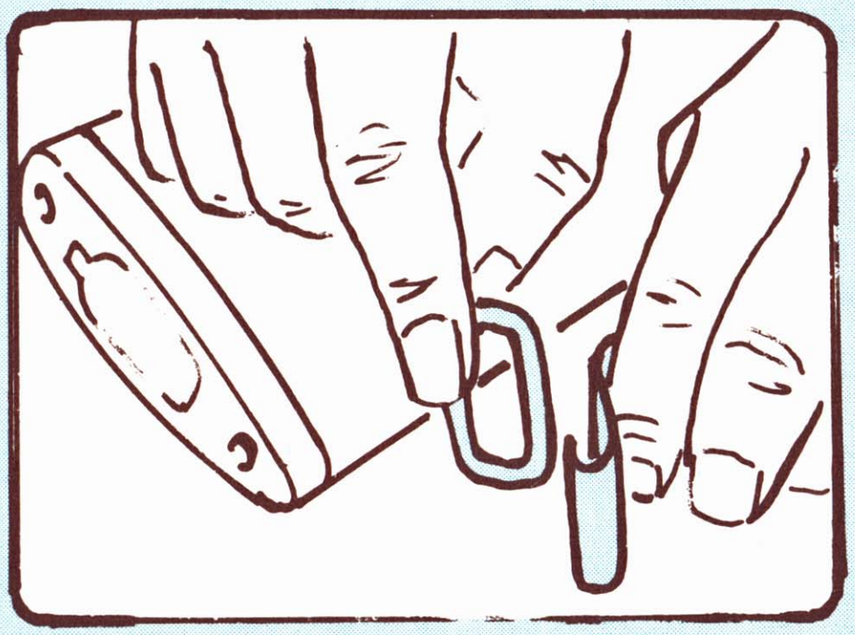
11 REMOVE BOLT ASSEMBLY FROM CARRIER



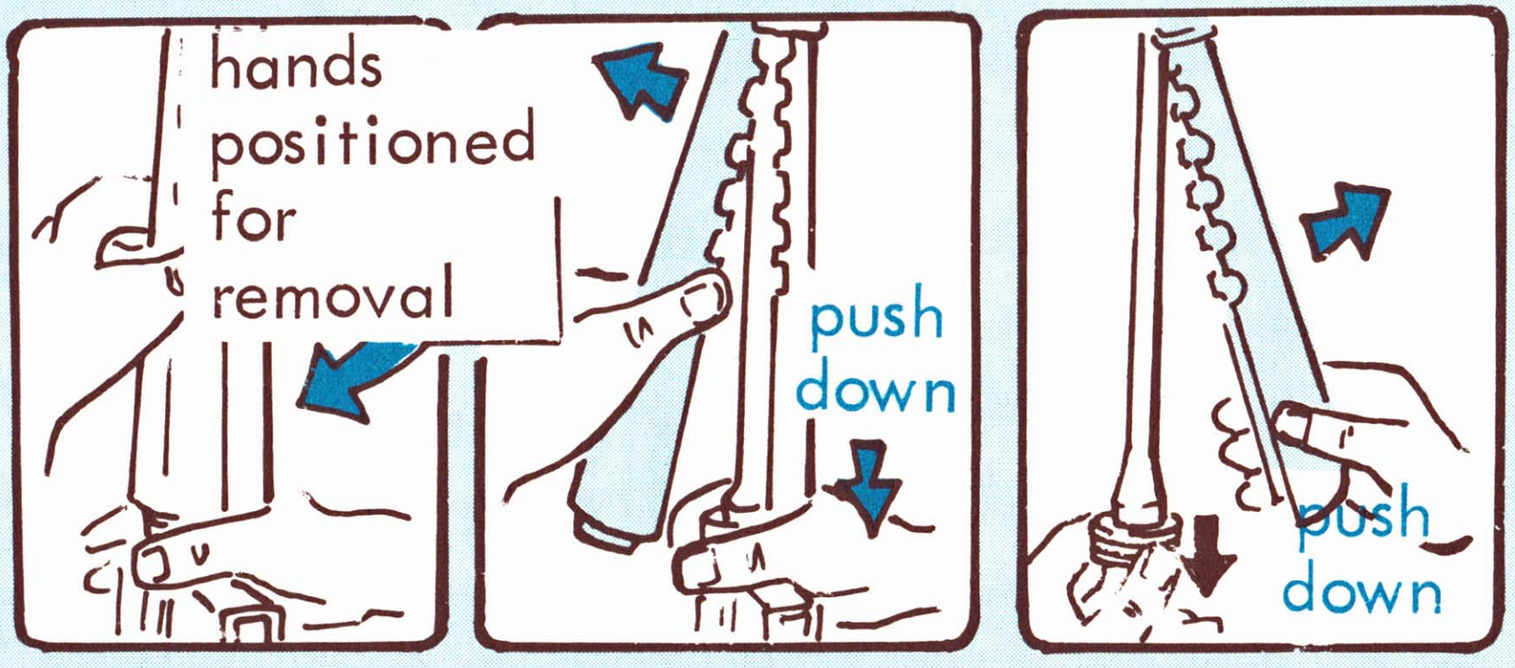
12 REMOVE EXTRACTOR PIN



13 REMOVE EXTRACTOR AND SPRING



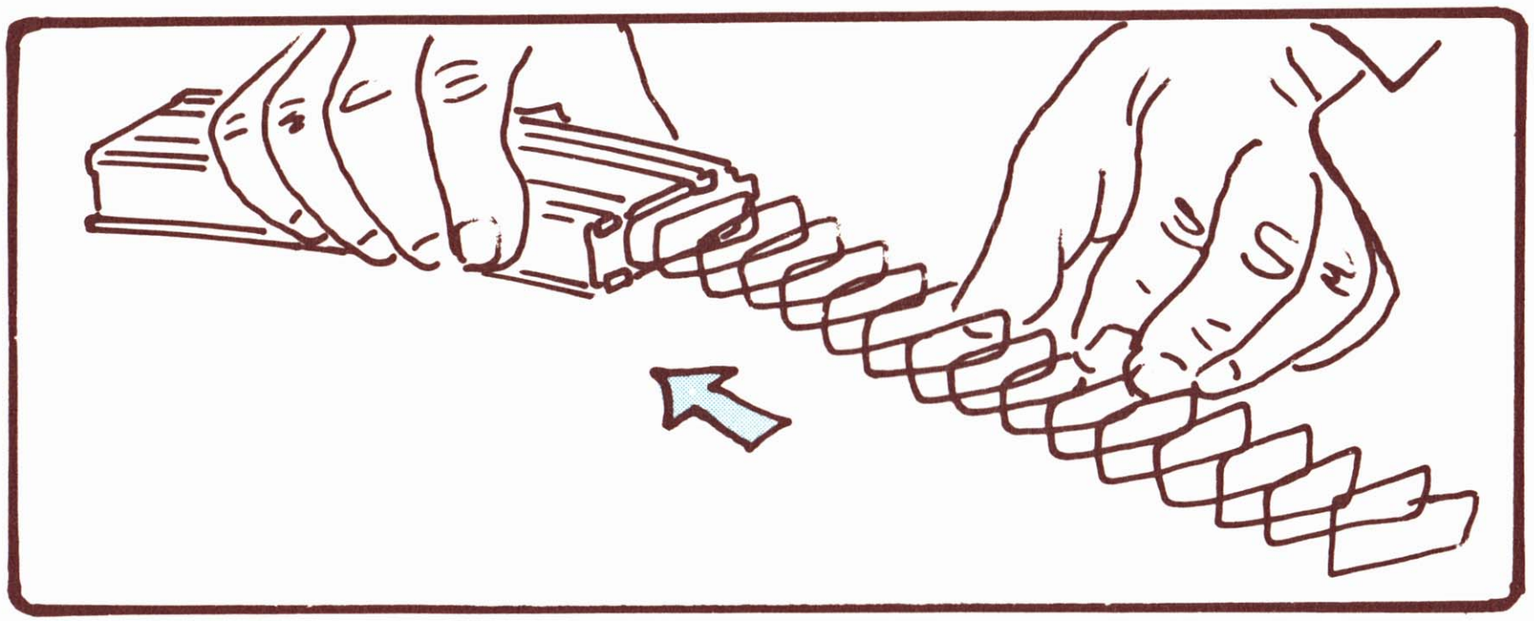
14 REMOVE SLING



15 REMOVE HANDGUARDS

PUTTING YOUR MAGAZINE BACK TOGETHER

IF THE SPRING COMES LOOSE FROM THE FOLLOWER, TURN IN THE PIECES. DON'T TRY TO FIX IT YOURSELF.

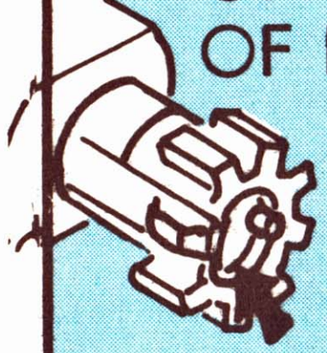


1 JIGGLE SPRING AND FOLLOWER TO INSTALL



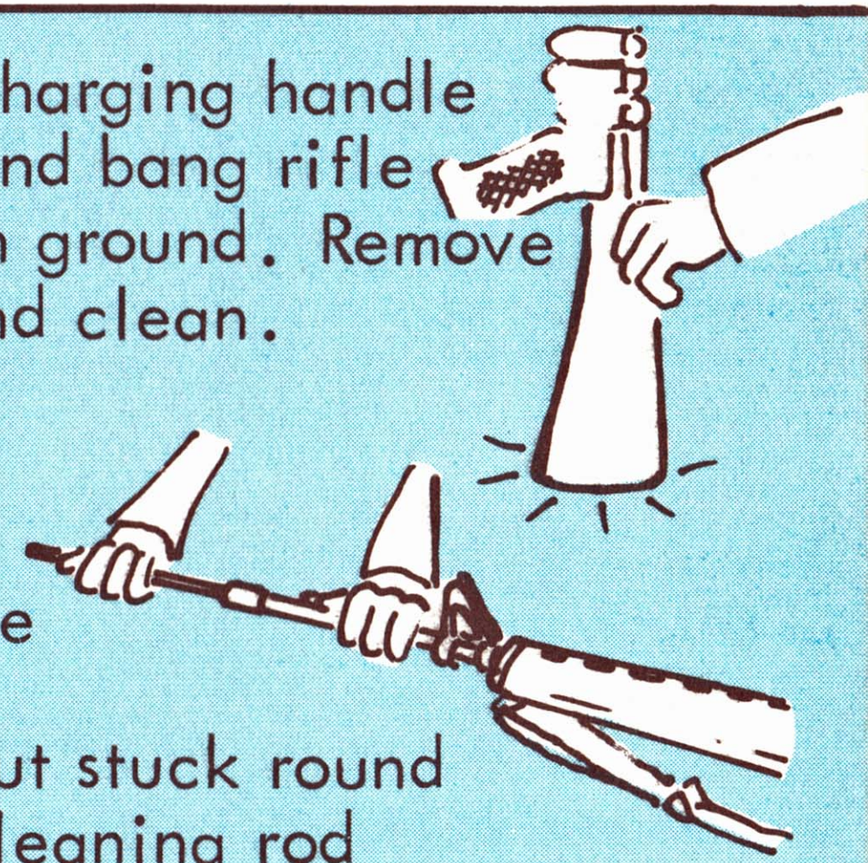
2 SLIDE THE BASE UNDER ALL FOUR TABS

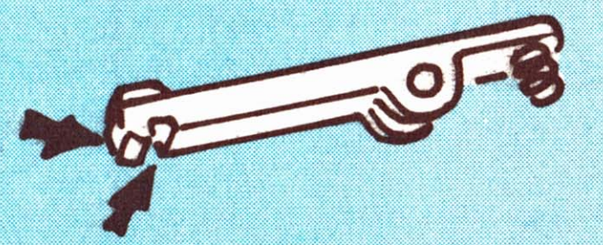
TROUBLE SHOOTING: 1

PROBLEM	CHECK FOR	HOW TO FIX IT
Won't fire	Selector lever on safe	Put it on semi or auto
	Improper assembly of firing pin	Assemble correctly  RETAINING PIN GOES IN BACK OF LARGE SHOULDER OF FIRING PIN
	Too much oil in firing pin recess	 Wipe off
	Defective ammo	Remove and discard
	Too much carbon on firing pin	Clean

TROUBLE SHOOTING: 2

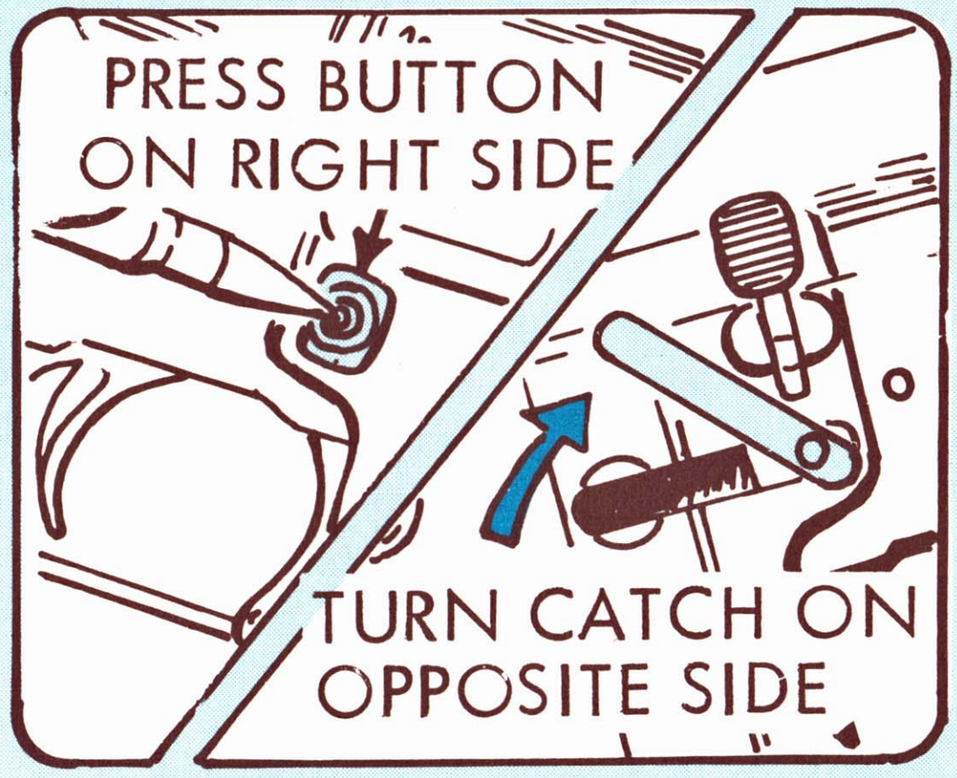
PROBLEM	CHECK FOR	HOW TO FIX IT
Bolt won't unlock	Dirty or burred bolt	Hold charging handle back and bang rifle butt on ground. Remove bolt and clean.
Won't extract	Dirty or corroded ammo	Remove Push out stuck round with cleaning rod
	Carbon in chamber	Clean chamber
	Crud or carbon in extractor recess or lip	Clean





TROUBLE SHOOTING: 3

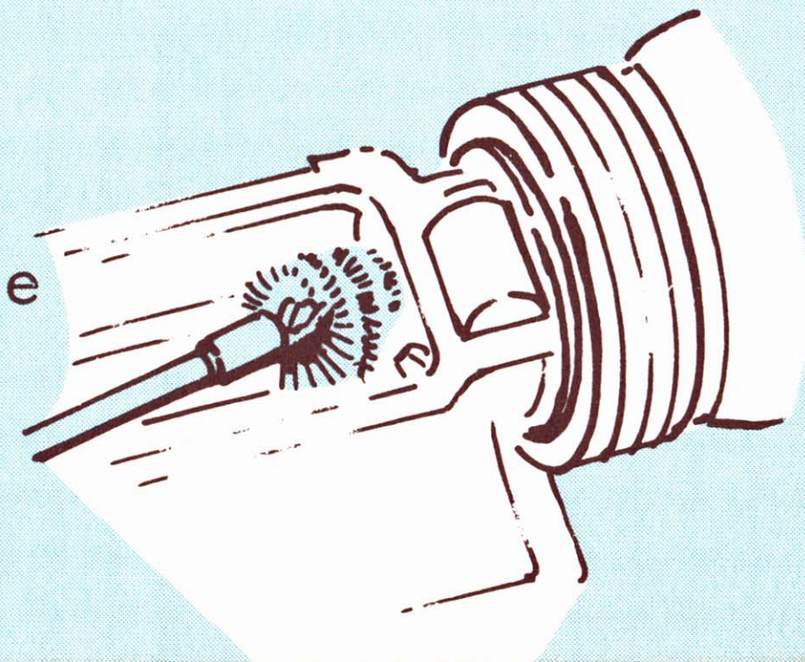
PROBLEM	CHECK FOR	HOW TO FIX IT
Won't feed	Magazine not fully seated	Adjust magazine catch



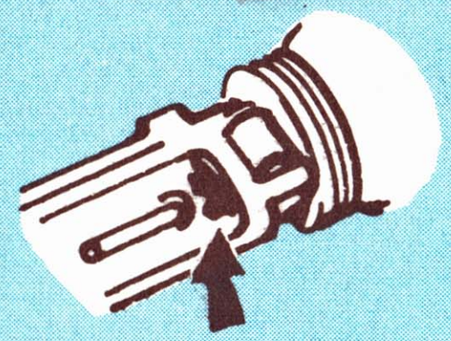
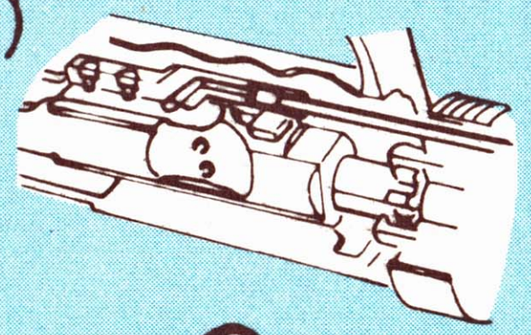
TURN CATCH CLOCKWISE TO TIGHTEN AND COUNTERCLOCKWISE TO LOOSEN.

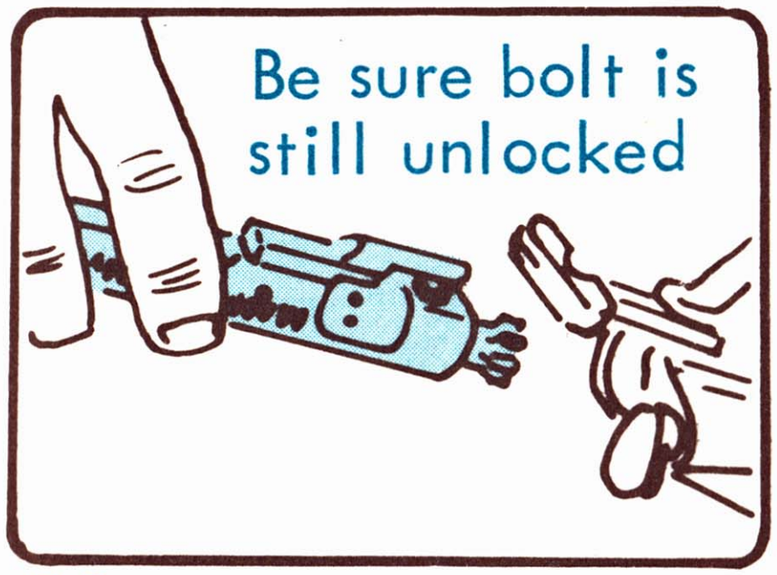
TROUBLE SHOOTING: 4

PROBLEM	CHECK FOR	HOW TO FIX IT
Won't feed	Dirty or corroded ammo	Clean
	Dirty magazine	Clean
	Defective magazine	Replace
	Too many rounds in magazine	Take out excess
	Restricted buffer assembly action	Take out the buffer and spring, and clean
Won't chamber	Dirty or corroded ammo	Clean
	Damaged ammo	Replace
	Carbon in chamber	Clean

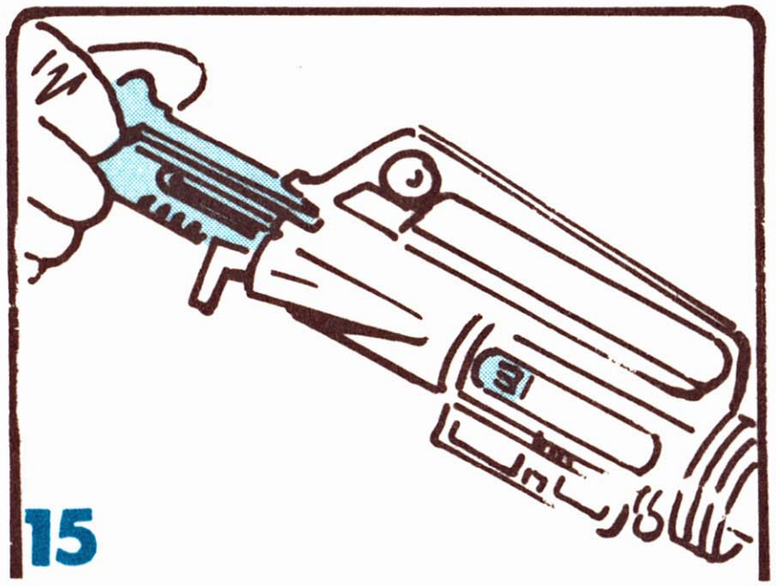


TROUBLE SHOOTING: 5

PROBLEM	CHECK FOR	HOW TO FIX IT
Double feed	Defective magazine	Replace
Won't lock	Dirt, corrosion or carbon build up in barrel locking lugs	Clean lugs 
	Frozen extractor	Remove and clean
	Restricted buffer assembly	Remove and clean
	Restricted movement of bolt carrier group	Remove, clean and lube (When putting bolt back in, make sure gas tube fits into carrier key and moves freely) 
	Improper assembly of extractor spring	Assemble correctly 



14 SLIDE IN BOLT CARRIER



SHOVE IN CHARGING HANDLE AND BOLT CARRIER TOGETHER



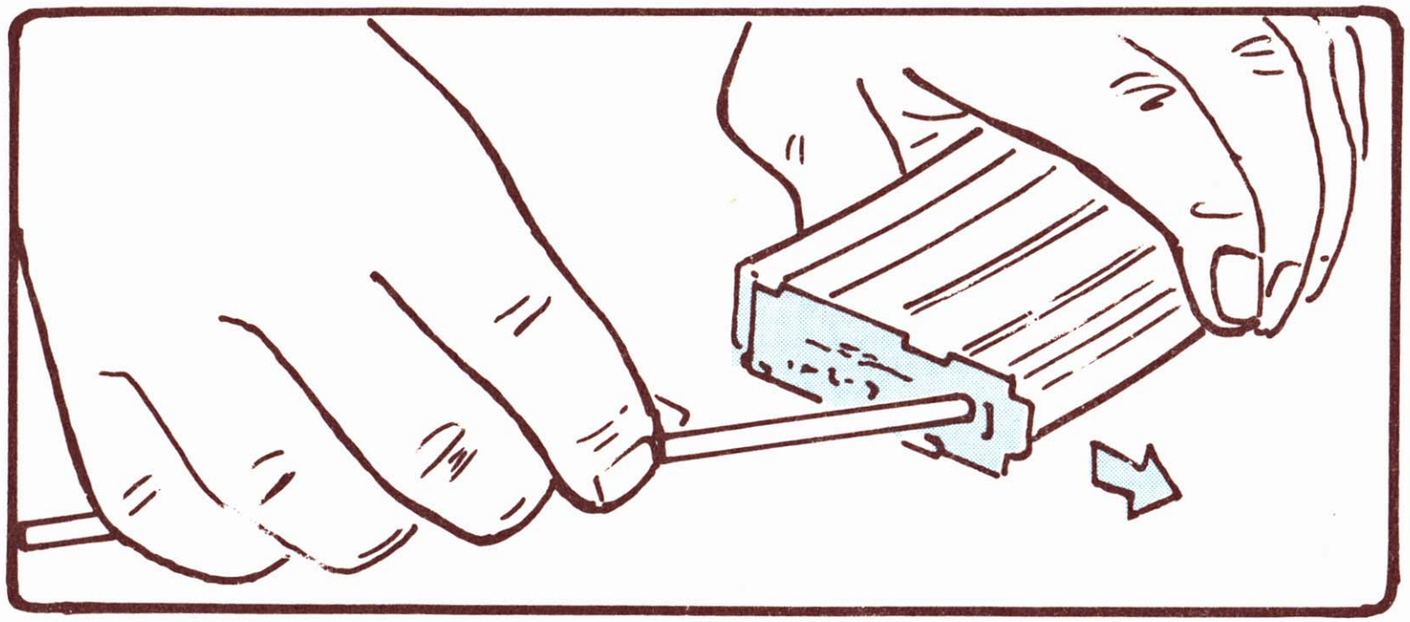
16 PUSH IN TAKE-DOWN PIN

FUNCTIONAL CHECK
(REMOVE MAG.. CHECK CHAMBER)

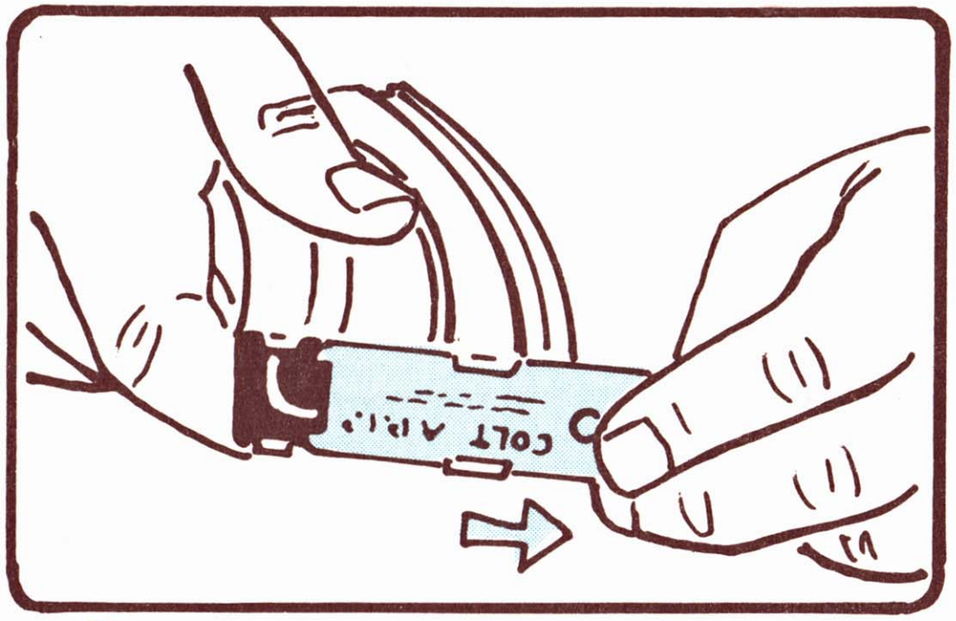
SELECTOR LEVER ON

SAFE	SEMI	AUTO
Pull charging handle to rear and release. Pull trigger. Hammer should not fall.	Pull trigger and hold to rear. Hammer should not fall; Release and squeeze, hammer should fall.	Pull trigger and hold to rear. Hammer should not fall. Recock, pull trigger, hammer should fall.

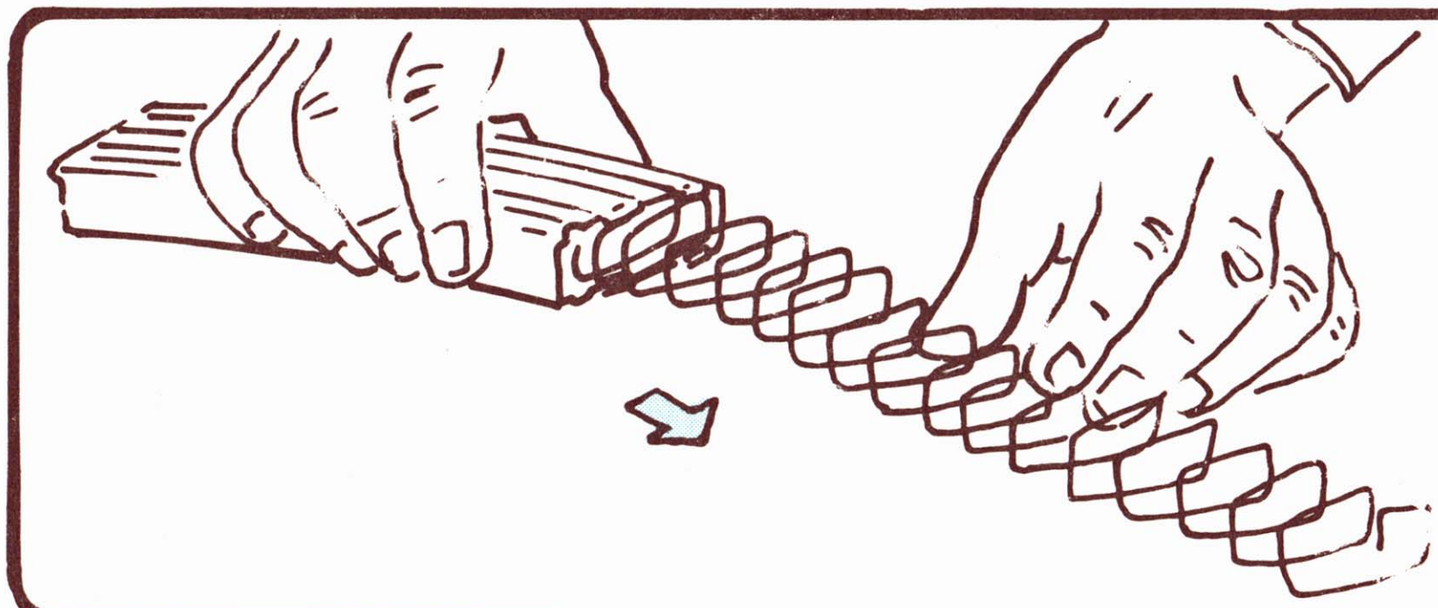
TAKING YOUR MAGAZINE APART



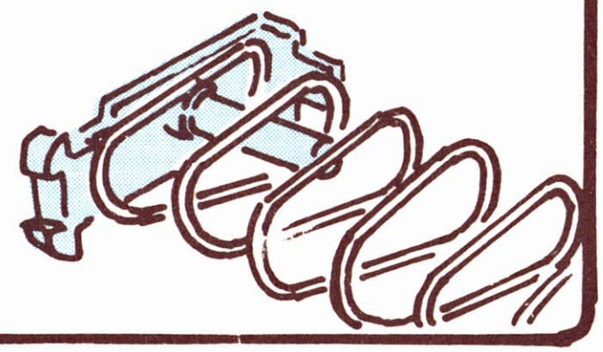
1 RELEASE BASE CATCH WITH ROD



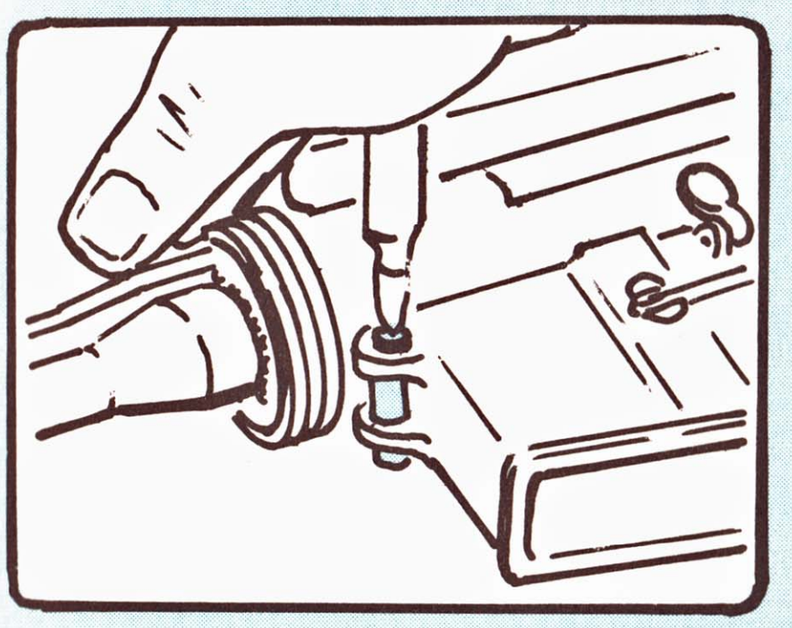
2 REMOVE BASE

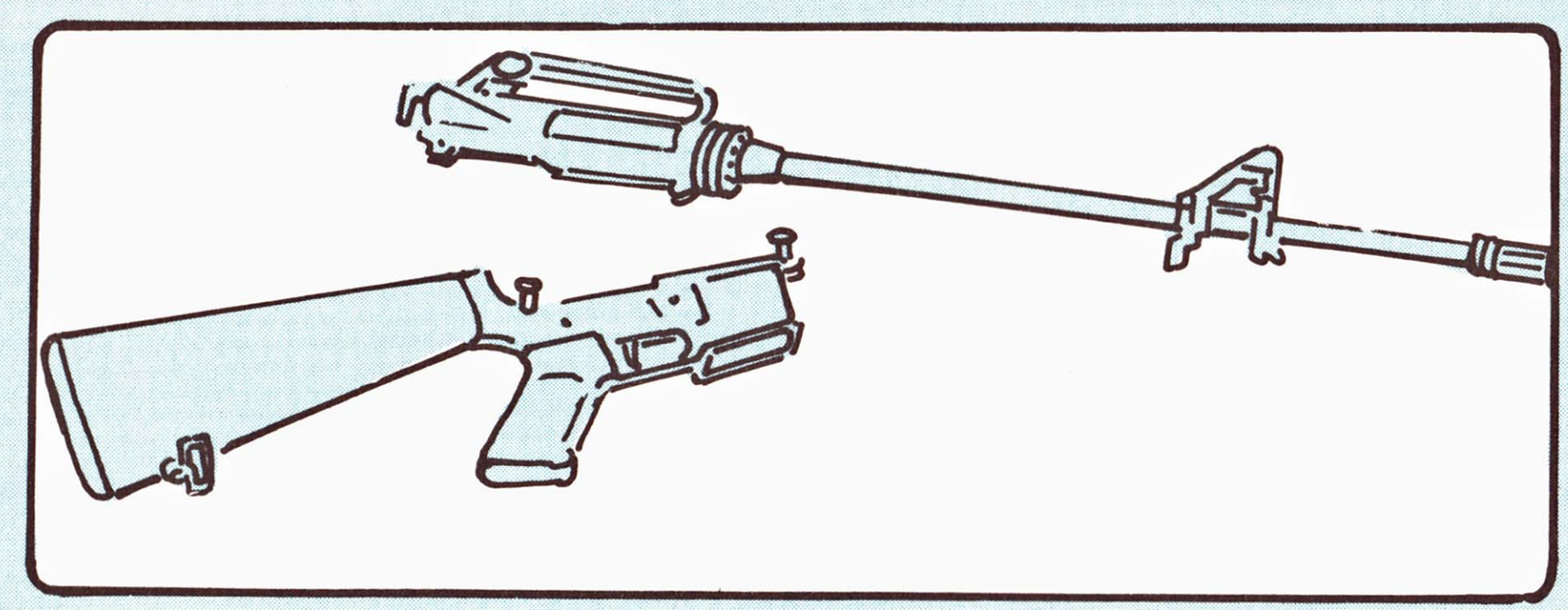


NOTE: DO NOT REMOVE FOLLOWER FROM SPRING



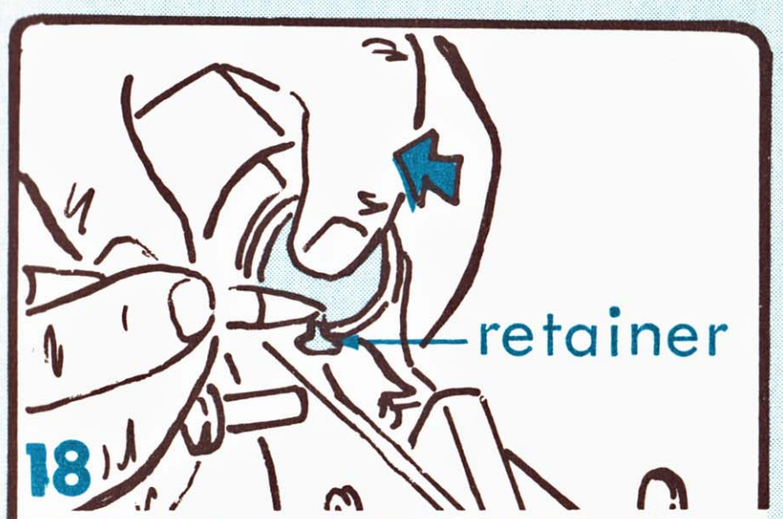
3 JIGGLE SPRING AND FOLLOWER TO REMOVE



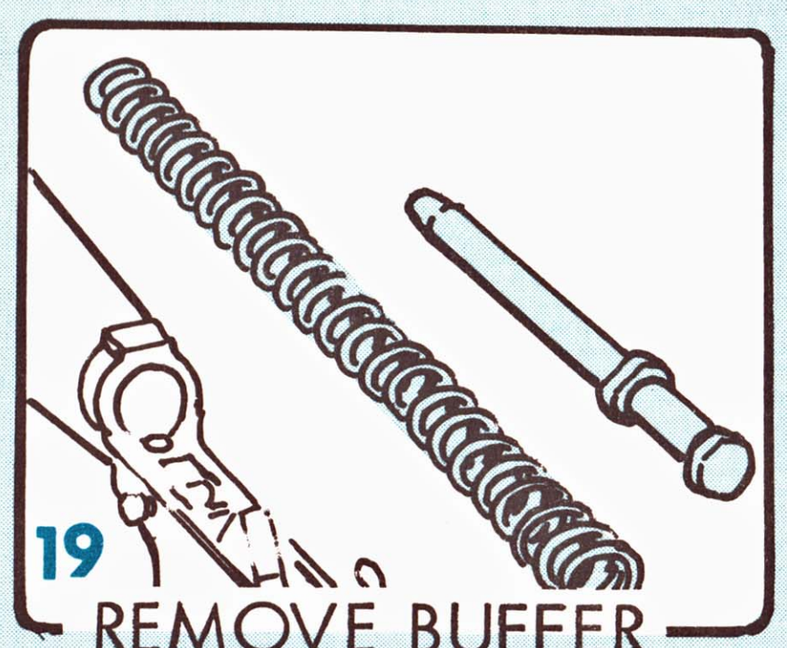


16 PUSH RECEIVER PIVOT PIN

17 SEPARATE UPPER AND LOWER RECEIVERS



18 PRESS IN BUFFER DEPRESS RETAINER AND RELEASE BUFFER



19 REMOVE BUFFER AND SPRING

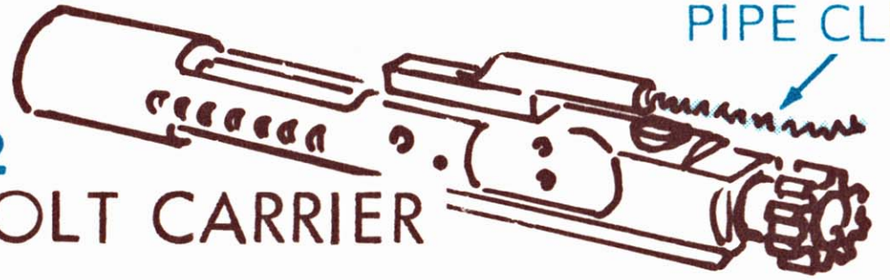
STOP

CLEAN WITH RBC, LUBE WITH LSA



1
BORE & CHAMBER

Clean, lightly lube with LSA the lugs in barrel extension, bore and chamber.



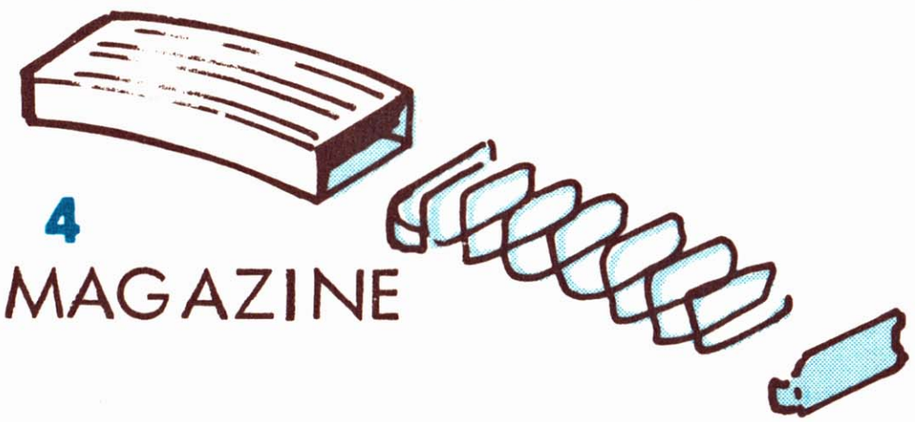
2
BOLT CARRIER

Clean and lightly lube the bolt carrier. Lube slide cam pin area, piston rings, outside bolt body and in bolt carrier key.

CAUTION Apply only a light coat of LSA to firing pin and firing pin recess.



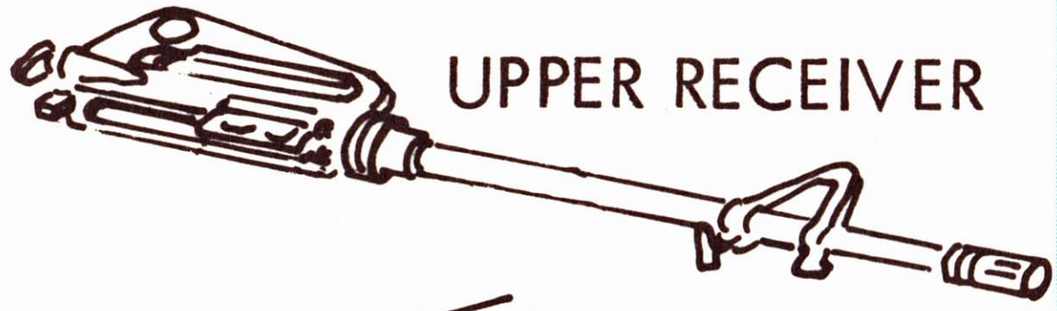
3 BOLT ASSEMBLY



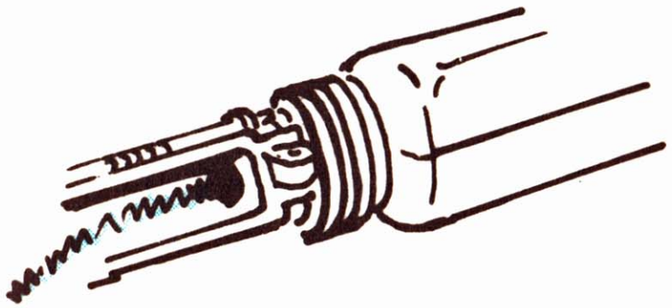
4
MAGAZINE

Disassemble the mag and wipe the dirt from tube, spring and follower, then, lightly lube the spring.

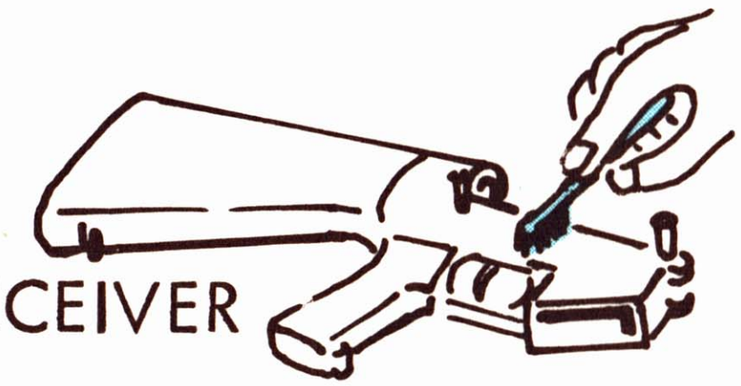
5 UPPER RECEIVER



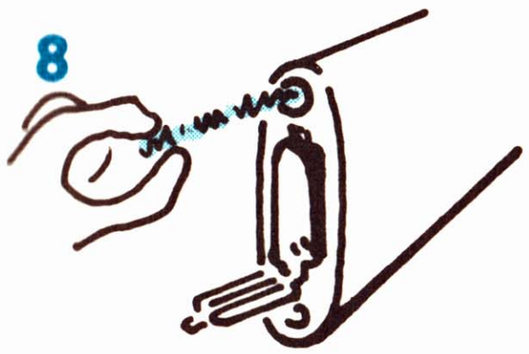
6



7 LOWER RECEIVER



8



9



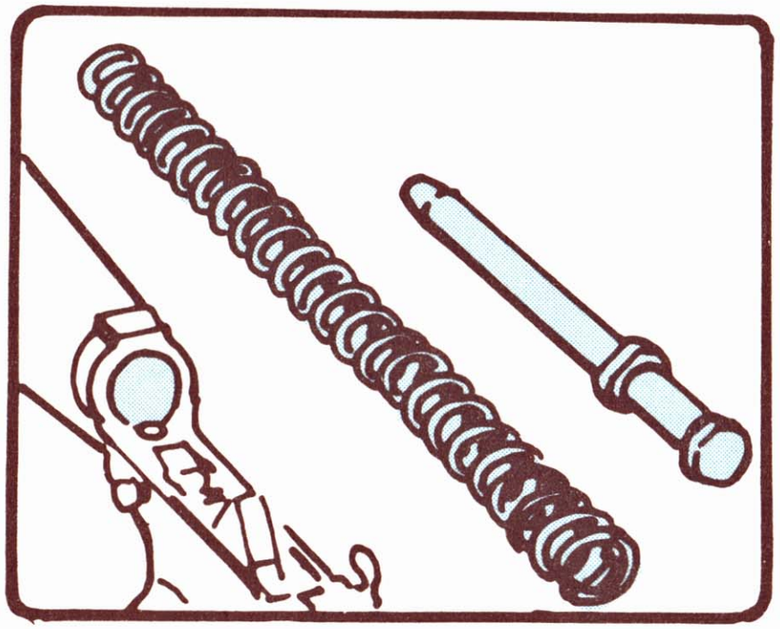
Use rifle bore cleaner (RBC) to clean powder fouling.

Clean outside surface of the protruding gas tube with a worn bore brush. Clean sides and bottom of gas tube from bottom of the receiver. Coat all other surfaces with lubricant.

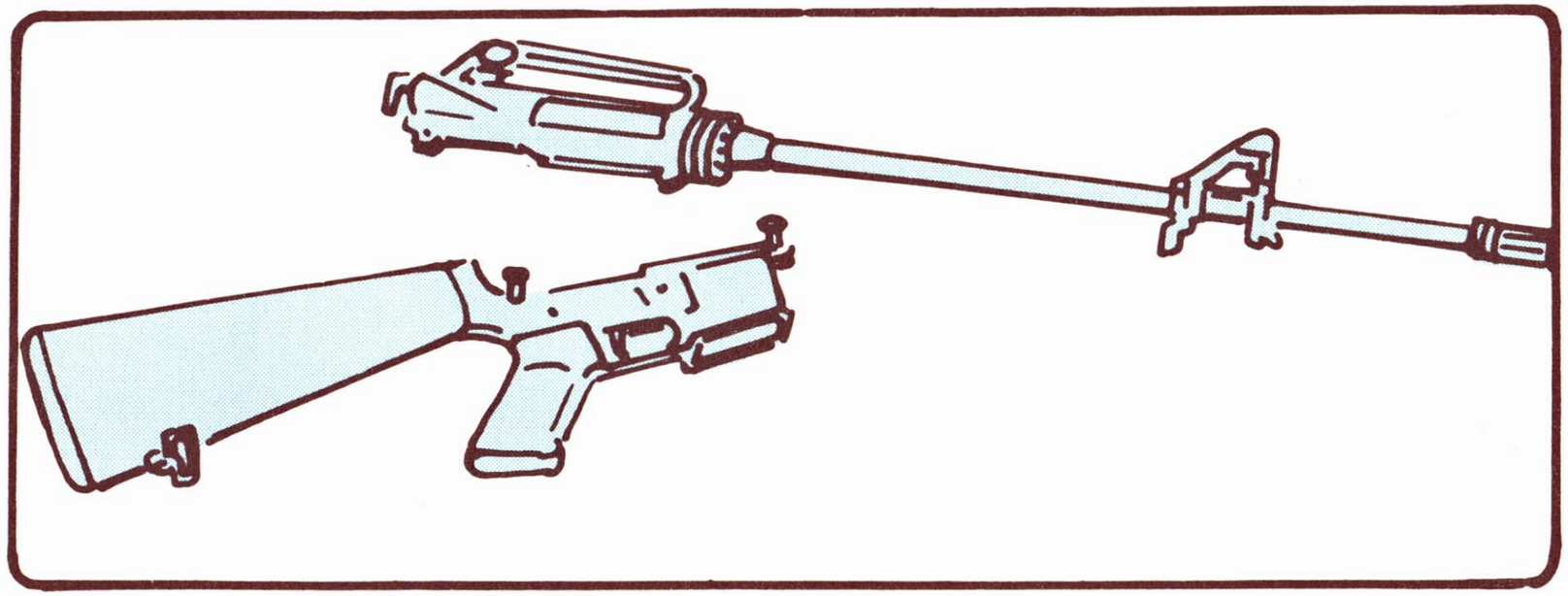
Clean drain in the butt cap screw with pipe cleaner.

Apply a light coat of LSA to buffer, action spring and inner surfaces of lower receiver extension. Use generous amount inside lower receiver and on all components.

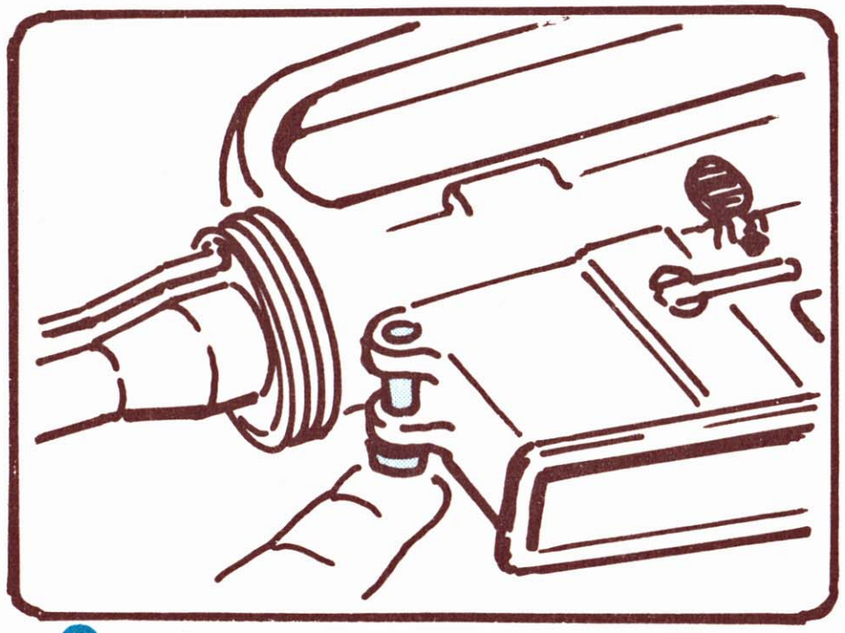
HOW TO PUT IT TOGETHER



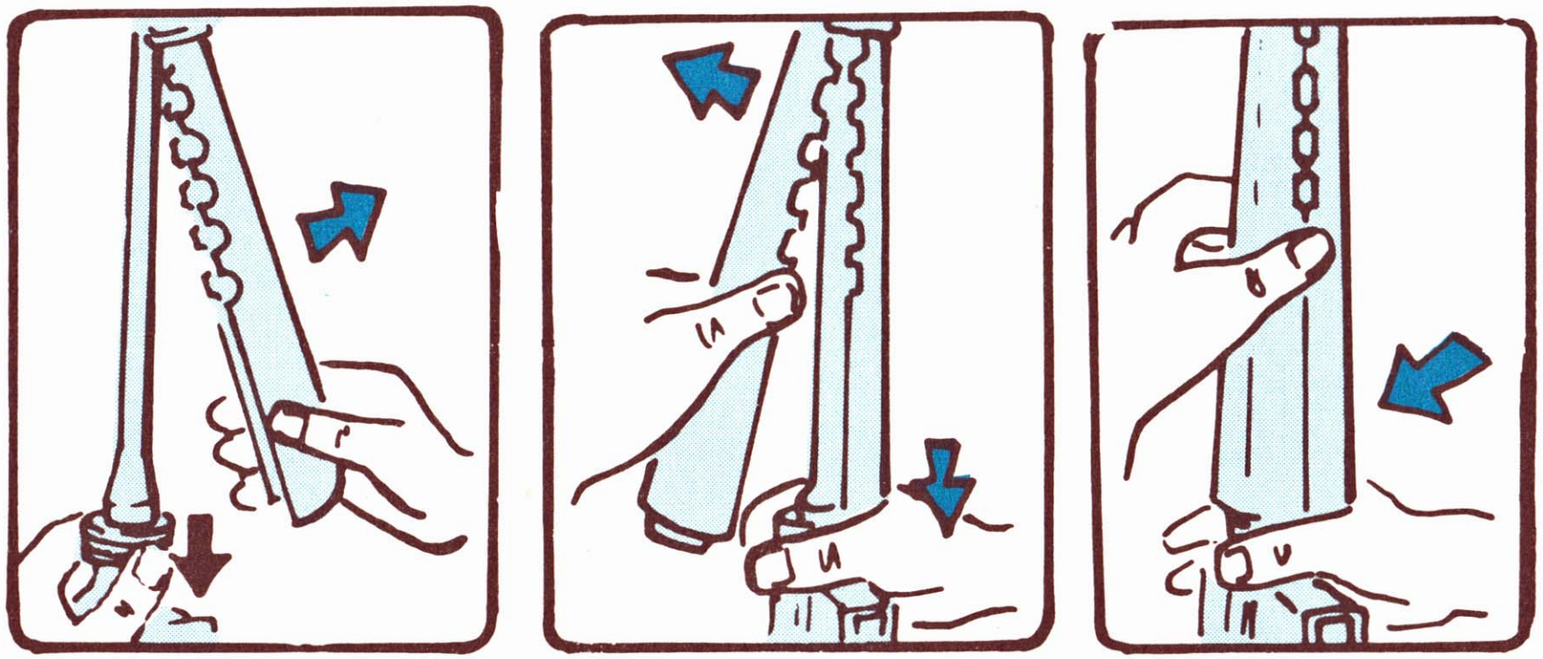
1 INSERT BUFFER AND SPRING



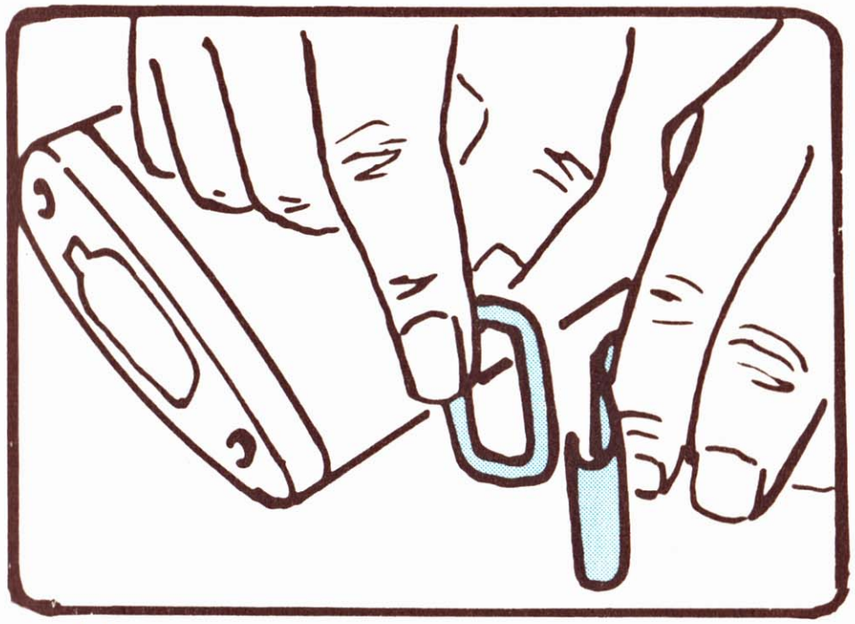
2 JOIN UPPER AND LOWER RECEIVERS



3 ENGAGE RECEIVER PIVOT PIN

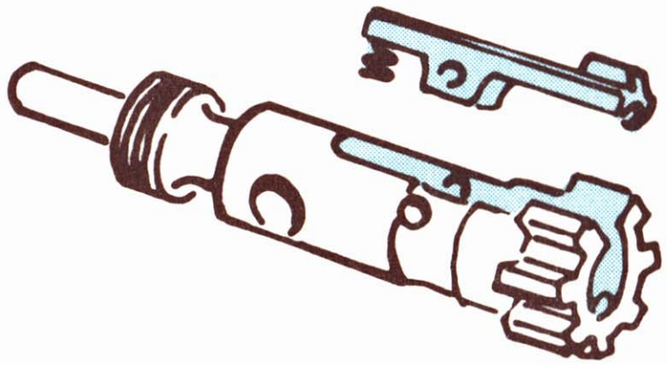


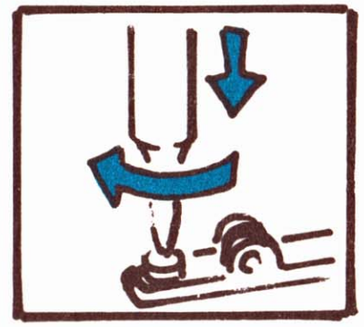
4 PUT ON HANDGUARDS



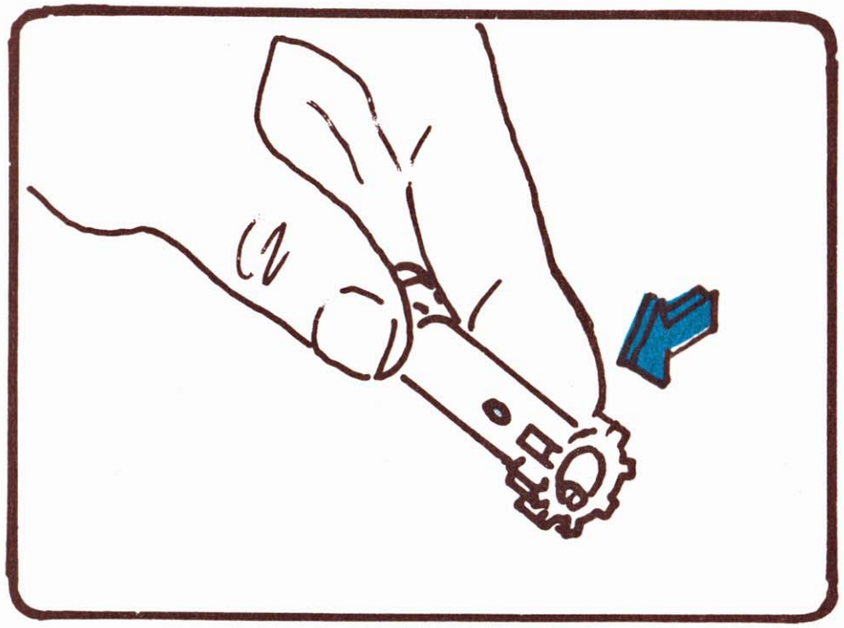
5 SNAP ON SLING

If the spring comes loose, put the large end of spring in the extractor and seat.

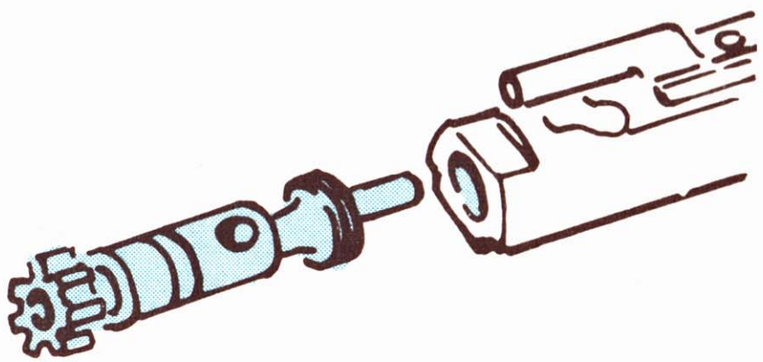


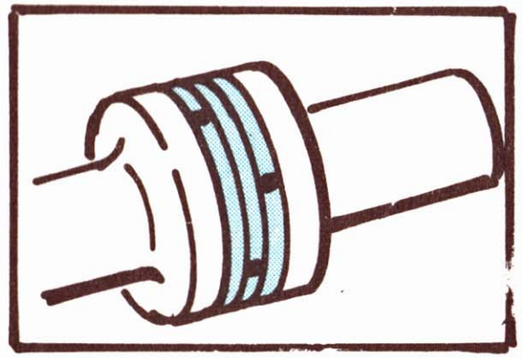


6 INSERT EXTRACTOR AND SPRING



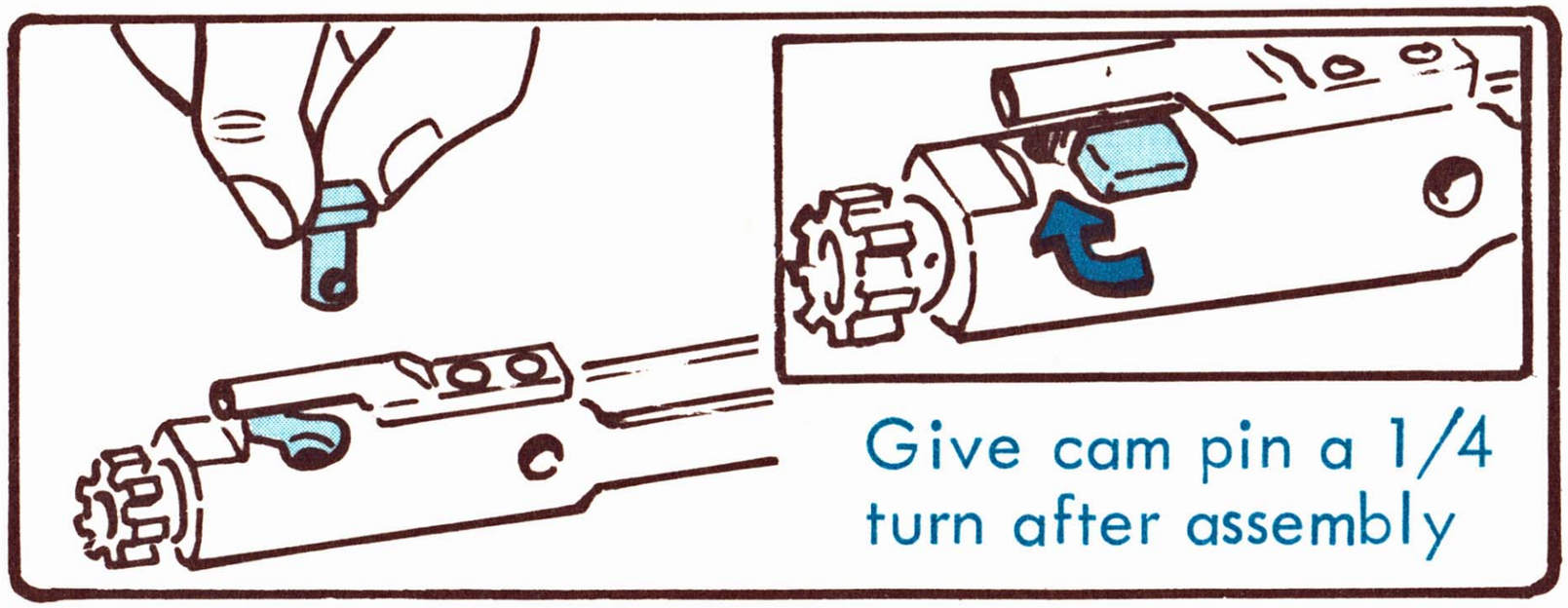
7 PUSH IN EXTRACTOR PIN



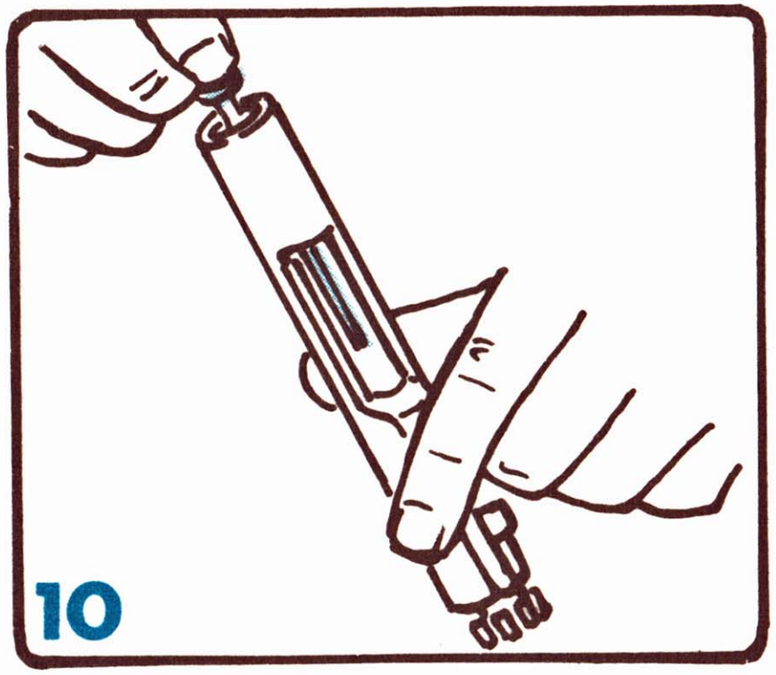


STAGGER GAPS

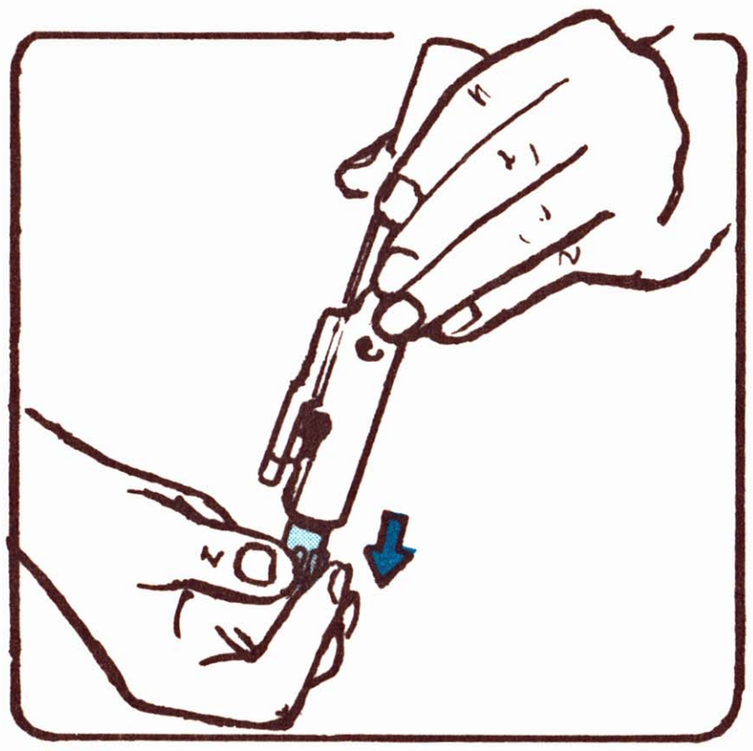
8 SLIDE BOLT INTO CARRIER



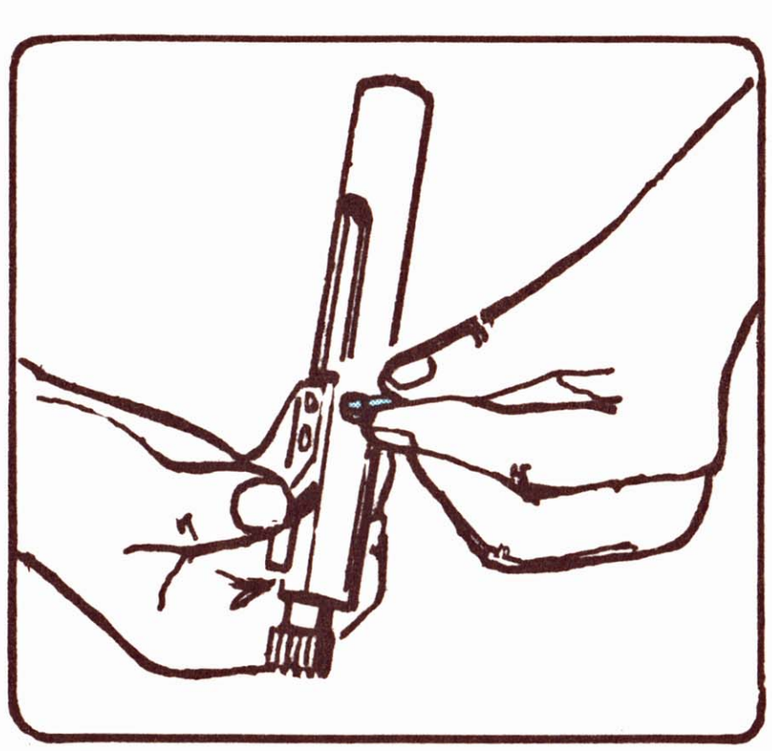
9 PUT IN BOLT CAM PIN



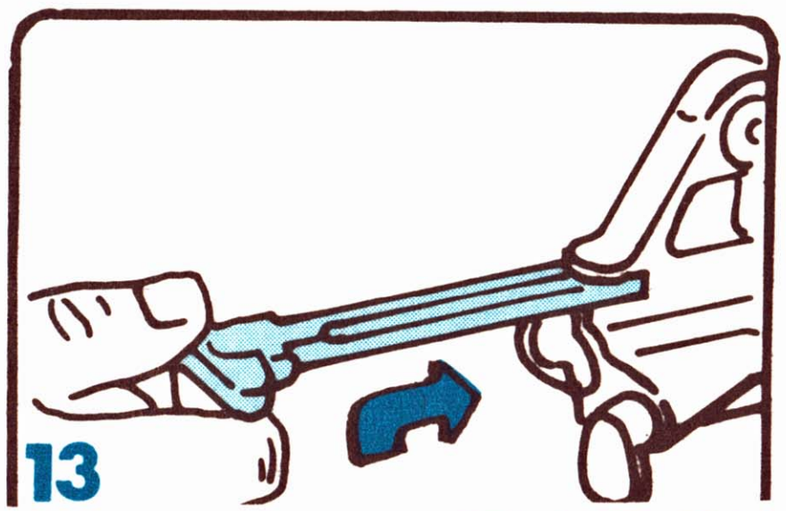
DROP IN AND SEAT



11 PULL BOLT

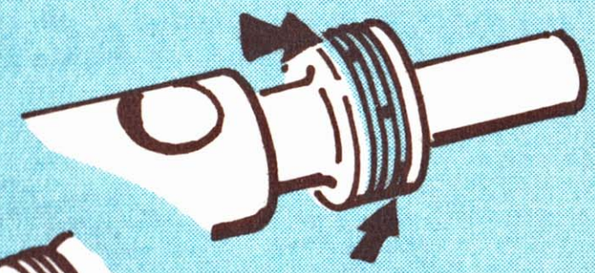
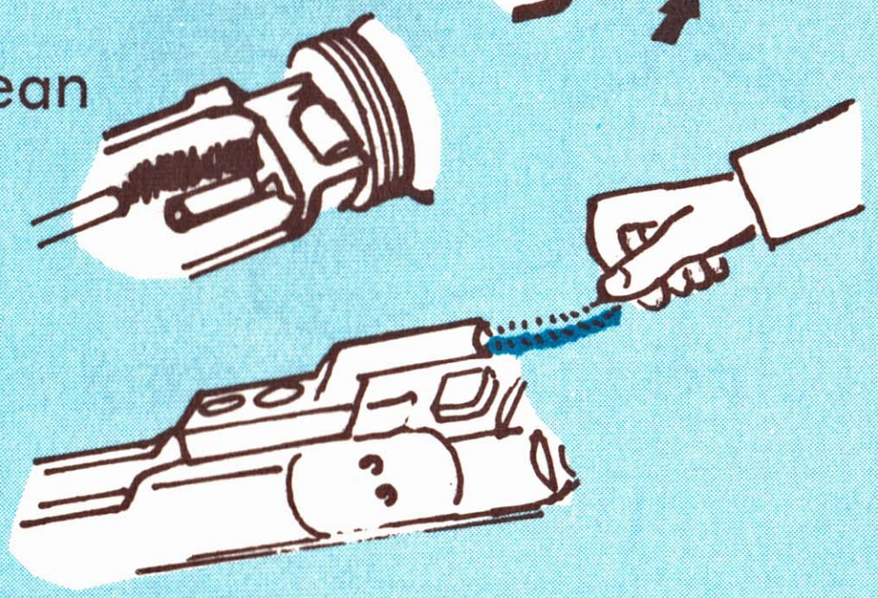


12 PUT IN PIN



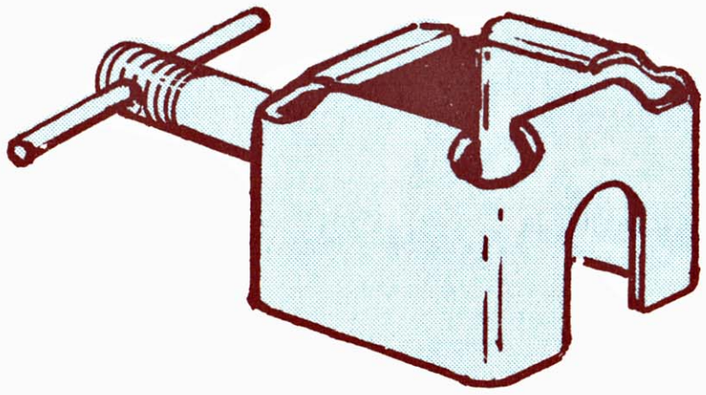
HOOK IN THEN PUSH
CHARGING HANDLE
PART WAY

TROUBLE SHOOTING: 6

PROBLEM	CHECK FOR	HOW TO FIX IT
Short recoil	Gaps in bolt rings (not staggered)	Stagger 
	Carbon or dirt in carrier key or on outside of gas tube	Clean 
Bolt fails to lock after last round	Dirty or corroded bolt latch	Clean
	Faulty magazine	Replace
Selector lever binds	Needs oil	Lubricate with LSA

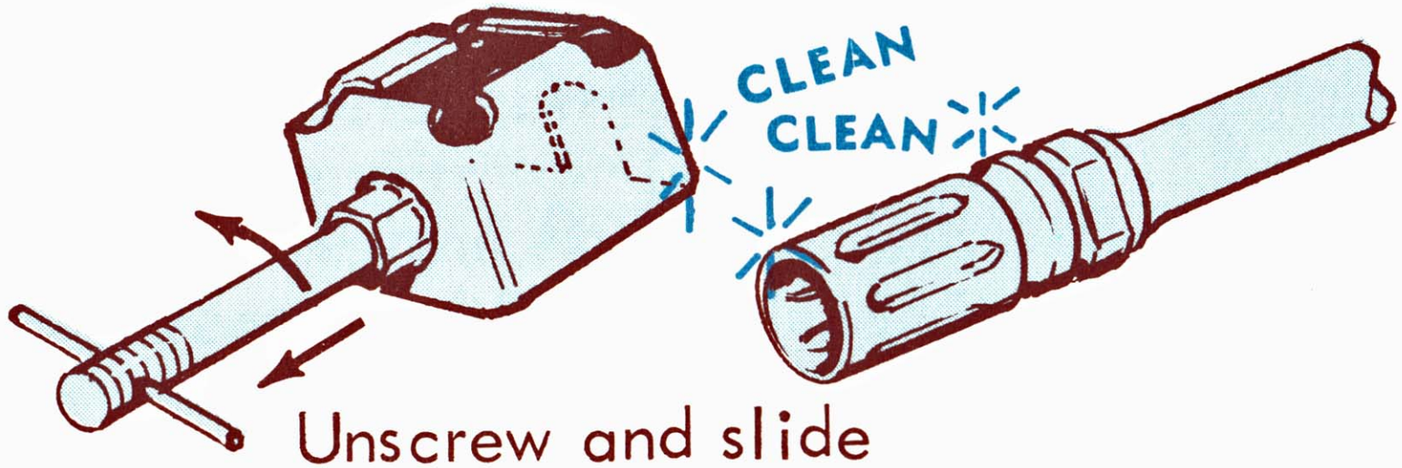
BLANK

FIRING ATTACHMENT

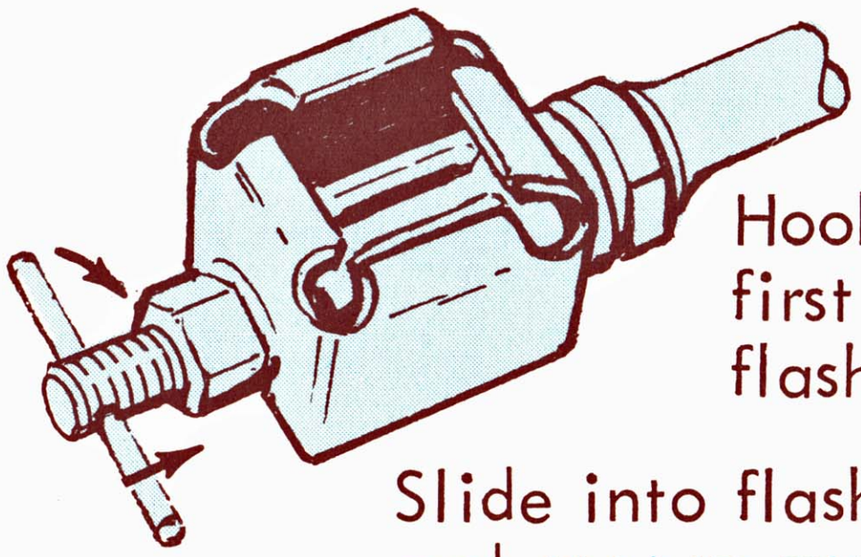


FSN 1005-152-2782

WARNING: Use ONLY blank M200 with the B.F.A.



Unscrew and slide all the way back



Hook behind first groove of flash suppressor

Slide into flash suppressor and HAND TIGHTEN!

CAUTION: Do not use tools, to tighten attachment, HANDS ONLY

NOTE: After 50 rounds check to see if it is still tight.

GPO ; 1972 O - 451-913

ANY CHANGES, COMMENTS, or IDEAS

Write to us ———.

RECOMMENDED CHANGES TO PUBLICATIONS

For use of this form, see AR 310-1; the proponent agency is The Adjutant General's Office.

Use Part II (reverse side) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).

TO: (Forward to proponent of publication) (Include ZIP Code)

FROM: (Activity and location) (Include ZIP Code)

DATE

PUBLICATION NUMBER

PART I - ALL PUBLICATIONS EXCEPT RPSTL AND SC/SM

DATE

TITLE

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO.	FIGURE NO.	TABLE NO.

RECOMMENDED CHANGES AND REASON

(Blank spacing of recommended change must be given)

DA FORM 2028

OR WHATEVER YOU HAVE HANDY!

COMMANDING GENERAL
U.S. ARMY WEAPONS COMMAND
ATTN: AMSWE - MAP
ROCK ISLAND, IL 61201

TM9-1005-249-10

Supersedes TM9-1005-249-12, 2 Aug 68

By Order of the Secretary of the Army:

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General, United States Army,
Chief of Staff.

Official:

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