# OWNER'S MANUAL FOR OA SERIES FIREARMS



# **OLYMPIC ARMS, INC.**

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## WARNING

To avoid accidental firing, **BE SURE WEAPON IS CLEAR.** Failure to do so could result in serious injury or death.

Be sure the cam pin is installed in the bolt group. If it isn't, your OA-93/OA-96 can still fire and will explode, causing injury or death.

**DO NOT** exchange or switch bolt assemblies from one OA-93/OA-96 to another. It could cause damage to both you and your weapon. **DO NOT** attempt to install a standard AR-15 or M-16 bolt or bolt carrier in your OA-93/OA-96. Any attempt to do so will cause damage to both you and it.

**DON'T OVERHEAT YOUR OA-93/OA-96's BARREL.** Sustained firing of the OA-93/OA-96 will rapidly raise the temperature of the barrel to a critical point.

Firing 140 rounds, rapidly and continuously will raise the temperature of the barrel to the COOKOFF POINT. At this temperature, any live round remaining in the chamber for any reason may cookoff (detonate) in as short a period as 10 seconds.

If the cookoff point is felt to be possible, **CLEAR YOUR WEAPON AND ALLOW IT TO COOL.** 

Sustained rate of fire for the OA-93/OA-96 is 12-15 rounds per minute. This is the actual rate of fire that this weapon can continue to deliver for an indefinite length of time without seriously overheating.

Sustained rate of fire should never be exceeded except under circumstances of extreme urgency.

If your bolt fails to unlock and you try to free it by banging the receiver assembly, keep clear of the muzzle.

If there's water in the barrel, don't fire the weapon. It could explode.

If you experience a noticeable difference in sound or recoil, STOP FIRING. Either condition could indicate an incomplete propellant burn and a bullet still in the bore. Retract bolt slowly and remove fired cartridge case. Clear weapon and check for unburned powder grains in the receiver or bore, and for a bullet in the bore. Remove unburned propellant or bullet from bore before resuming firing or barrel could explode. If bullet is lodged in bore, take your carbine to a qualified gunsmith.

If your OA-93/OA-96 stops firing with a live round in the chamber of a hot barrel, remove the round quickly. If you cannot remove the round within 10 seconds, point the OA-93/OA-96 in a safe direction and wait 15 minutes. In this way, you won't be injured by a possible ammunition cookoff, which could happen within 10 seconds after contact with a hot chamber. Clear your OA-93/OA-96.

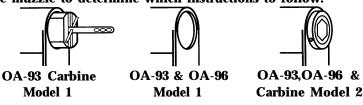
Use only authorized brass case ammunition that is manufactured in the U.S.A., to U.S. specifications. Do not use re-manufactured or imported ammunition.

# Please read this manual carefully before attempting to use your OA-93/OA-96.

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THIS MANUAL covers all variants of the OA-93/OA-96 series, with separate instructions for all three models. Look at the end of the recoil rod above the muzzle to determine which instructions to follow.

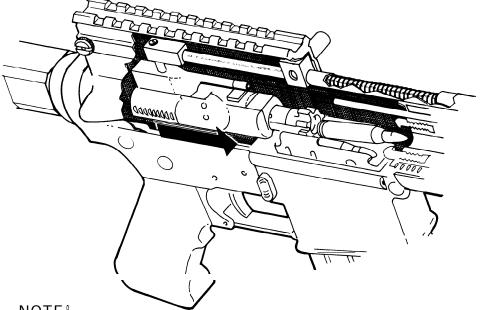


## NOTE:

The OA-93 series is an amorphous firearm, available in a variety of barrel lengths and (depending upon federal restrictions) available with or without a folding stock. For these reasons, the terms pistol and carbine are sometimes used interchangeably in this manual.

The OA-96 is a distinct sub-species of the OA-93 family. While it shares many parts and procedures with the OA-93 series, it is not available with a folding stock, it has no magazine release sub-assembly, and the magazine is pinned and welded in place. All items referring exclusively to the OA-96 are marked with a star (\*) and boxed with a double rule.

## **Technical Principles of Operation**



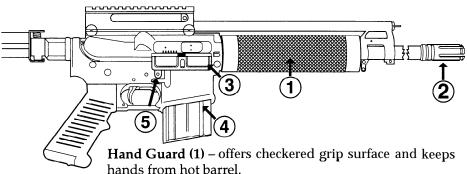
#### NOTE 8

Magazine may be loaded with bolt assembly open or closed.

- 1. Place selector on SAFE.
- 2. Insert loaded cartridge magazine in magazine well (\*OA-96: see page 5 for loading instructions).
- 3. Face the target, move the selector lever from SAFE to FIRE and bring your weapon up to firing position.
- 4. Aim your weapon at the target and squeeze the trigger.
- 5. Squeezing the trigger releases the hammer, allowing it to impact the firing pin, which strikes the primer in the round.
- 6. The primer ignites the propellant in the round.
- 7. Gas from the burning propellant pushes the projectile (bullet) along the barrel of the weapon.
- 8. The rifling in the barrel causes the projectile to rotate, which provides stability during flight to the target.
- 9 When the round reaches the approximate end of the barrel, expanding gases from burning propellant pass out through the gas port and into the gas tube. Gas goes into the bolt carrier assembly, ejects the old car-tridge, and chambers a new round.

# Operating instructions

Description and Use of Operator's Controls and Indicators



**Flash Suppressor (2)** - reduces the amount of flash from muzzle when weapon is fired.

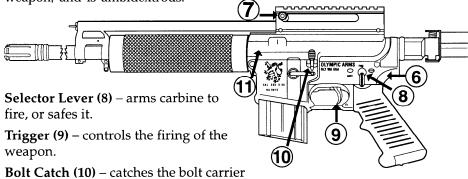
**Ejection Port Cover (3)** – protects upper receiver from foreign matter when weapon is not in use. Keep port cover closed when not in use.

Cartridge Magazine (4) - supplies ammunition to weapon.

\*Magazine Catch Button (5) - releases cartridge magazine (4) from weapon when pushed (not present on OA-96).

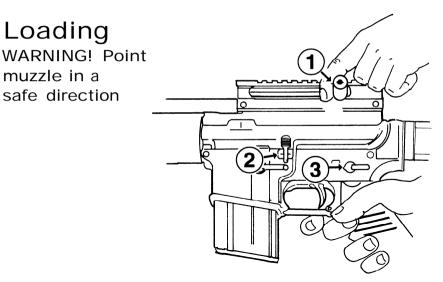
**Lower Receiver (6)** - provides firing control for the weapon.

**Charging Lever (7)** - cocks weapon when preparing to fire or clearing weapon, and is ambidextrous.

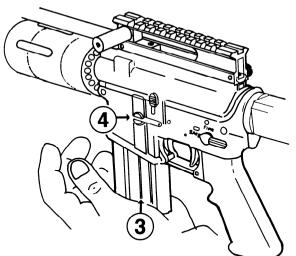


when the last round is fired.

**Upper Receiver and Barrel Assembly (11)** - directs the projectile upon firing. Houses bolt carrier and recoil assembly.



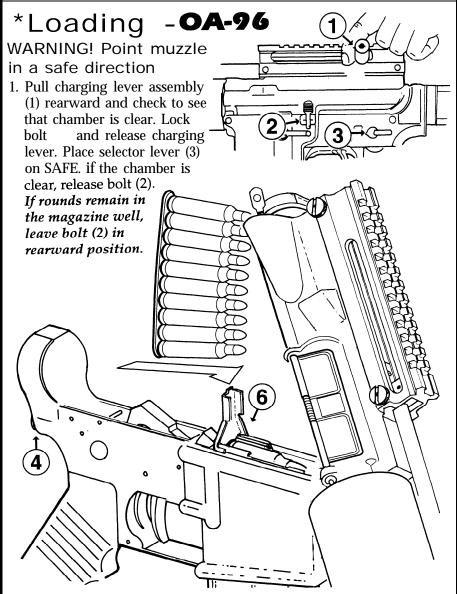
- 1. Pull charging lever assembly (1) rearward, lock bolt (2), and release charging lever. Place selector lever (3) on SAFE.
- 2. Pull charging lever assembly (1) rearward and check to see that chamber is clear. Release charging handle assembly.



#### NOTE:

Magazine may be loaded with bolt assembly open or closed.

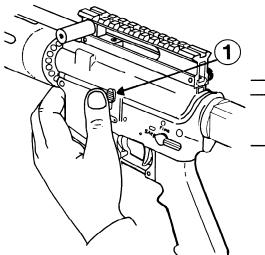
- 3. Push upward on cartridge magazine (3) until magazine catch (4) engages and holds cartridge magazine.
- 4. Tap upward to make certain cartridge magazine is correctly seated.



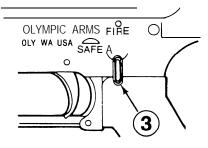
2. Hold on to upper receiver, press release catch (4) and pivot upper receiver up and forward. Cartridges may be inserted singly into magazine well, or in groups of ten by using a stripper clip (5). Insert stripper clip guide (6) into slot behind mag well and press stripper clip down until top cartridge is below lip of magazine well. Remove stripper clip guide.

# **Operating Procedure**

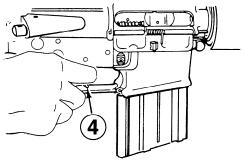
Chambering and Firing a Round **BOLT ASSEMBLY OPEN** 



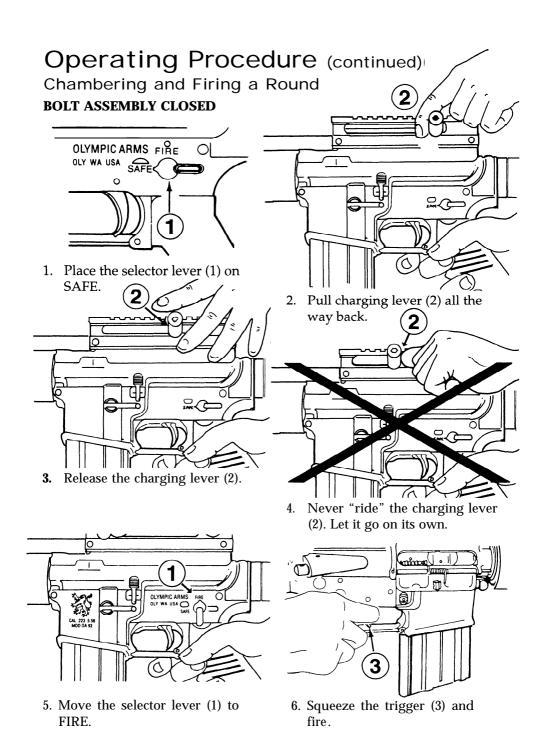
- 1. Depress upper portion of bolt catch (1) to release the bolt.
- **2.** Check charging lever (2) to ensure that bolt is fully forward.



3. Move selector lever (3) to FIRE.



4. Squeeze the trigger (4) and fire.



## Operating Procedure Clearing Your OA-93 (OA-96 Model - Page 12)

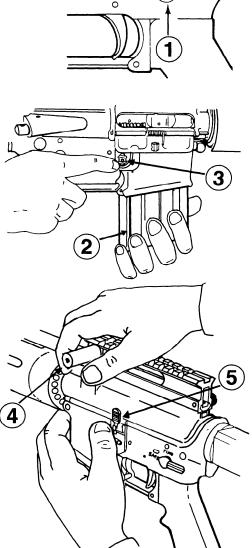
WARNING

To avoid accidental firing, always look into chamber after clearing your weapon to make sure it does not contain a round.

1. Place selector lever (1) on SAFE.

NOTE: If weapon is not cocked, lever cannot be pointed toward SAFE.

- Remove cartridge magazine (2) by depressing magazine catch button (3) and pulling cartridge magazine (2) down.
- To lock bolt open, pull charging lever (4) rearward, press bottom of bolt catch (5) and allow bolt to move forward until it engages bolt catch. Return charging lever (4) forward.



OLYMPIC ARMS FIRE

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## Operating Procedure Clearing Your OA-93 (OA-96 Model - Page 12)

#### NOTE:

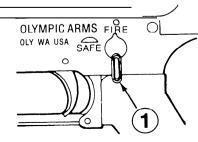
**Ensure that selector lever is pointed toward SAFE**.

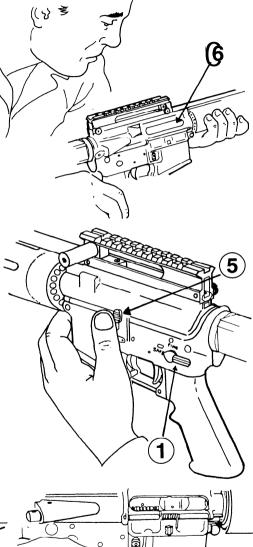
- 4. Check receiver and chamber(6) to ensure these areas contain no ammunition.
- With selector lever (1) pointing toward SAFE, allow bolt to go forward by pressing upper portion of bolt catch (5)

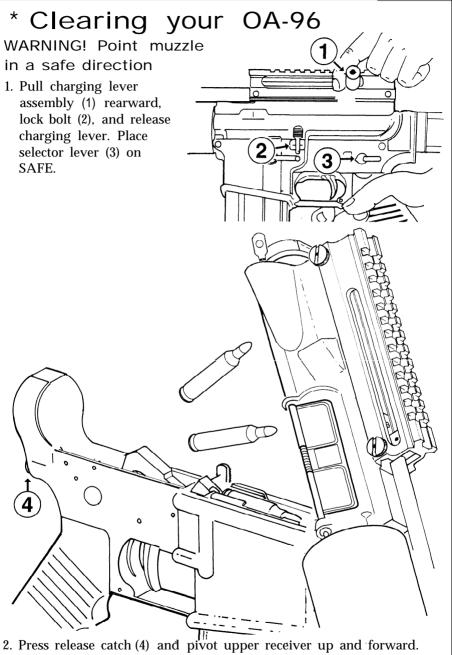
#### NOTE

If weapon is to be stored, it should be dry-fired to release tension on hammer spring.

**6.** Place selector lever (1) on FIRE and squeeze trigger to release tension on hammer spring (make sure muzzle is pointed in a safe direction).







Cartridges may be stripped out of the magazine well with your thumb.

# Operation Under Unusual Conditions

## NOTE

Unusual conditions are defined as any climatic condition requiring special maintenance of this weapon.

Perform the maintenance outlined for the climate that most applies to your operational area.

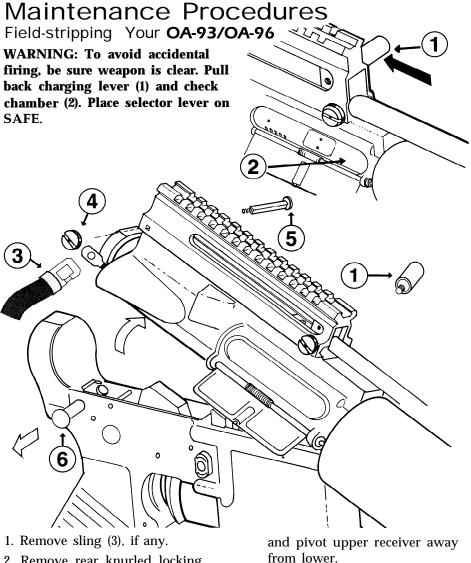
## HOT, DRY CLIMATES

Hot, dry climates are usually dusty and sandy areas. They are hot during daylight hours and cool during the night hours.

- A. Dust and sand will get into the weapon and will cause malfunctions and excessive wear on component working surfaces through abrasive action during the firing operations.
- B. Corrosion is less likely to form on metal parts in a dry climate; therefore, lubricate internal working surfaces only with a small application of cleaner, lubricant and preservative (always shake CLP prior to use). Do not lubricate external parts of the weapon. Doing so will only collect dust and sand, making it more difficult to keep the OA-93/OA-96 clean. Do not lubricate internal components of the magazines, or the magazine well on the OA-96.
- C. Using additional equipment i.e., protective cap and spare magazine protective bags and overall protective cover will help keep dust and sand from getting into the OA-93/OA-96. Use these items as the situation warrants. As a minimum precaution to keep dust and sand out of your weapon, keep the ejection port cover closed, a cartridge magazine installed, and a muzzle cap on your OA-93/OA-96.

#### NOTE: Before firing, remove the protective cap and keep for later use. However, it is not dangerous to fire the weapon with the protective cap in place; the cap will blow off when the first round is fired and may be lost. HEAVY RAIN

Perform maintenance according to the appropriate climatic condition. Use additional equipment – protective cap and spare magazine, protective bags and over-all protective cover as the situation warrants. Always keep the OA-93/OA-96 dry. Using the protective cap will help keep water out of the barrel. Always drain any water from the barrel before firing. Dry the bore with a swab and cleaning rod, if necessary



- 2. Remove rear knurled locking nut (4), using a large standard screwdriver.
- 3. Push out rear locking pin (5).
- 4. OA-93 series: Push out takedown pin (6) as far as it will go

from lower.

\*OA-96: press release button on the butt of the lower receiver to pivot upper receiver away from the lower.

OA-93 Carbine Model 1: continued next page • OA-93/OA-96 Model 1: go to page 16 · OA-93/OA-96 and Carbine Model 2: go to page 17

PLEASE NOTE: The recoil assembly on the OA-93 Carbine Model 1 differs from the assembly on the OA-93/OA-96 Model 1. Look at the recoil rod end above the muzzle to determine which instructions to follow.





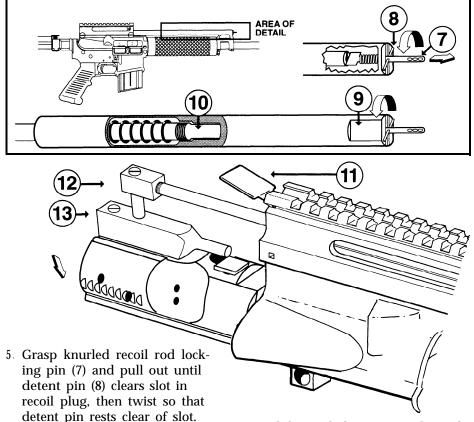


OA-93 Carbine Model 1

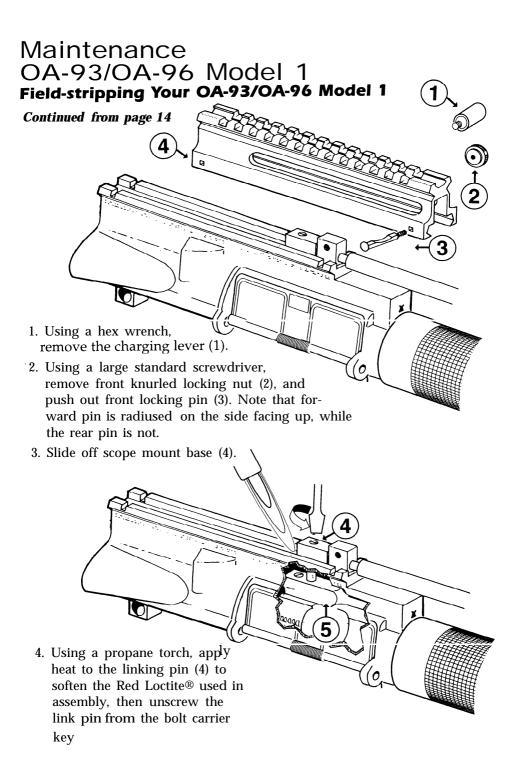
OA-93 & OA-96 Model 1

OA-93/OA-96 & Carbine Model 2

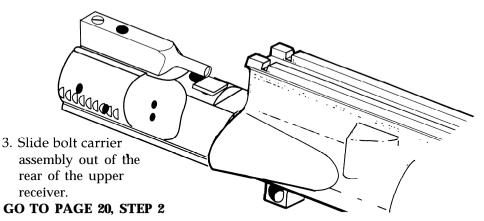
Maintenance Procedures Field-stripping Your OA-93 Carbine Model 1



- 6. Grasp recoil plug (9) by the flat edges and unscrew from recoil rod (10).
- 7. Lift access hatch (11) at rear of scope mount.
- 8 Slide out bolt carrier and recoil assembly (12).
- 9 Drop bolt carrier, carrier key and linking pin (13) free of recoil assembly.

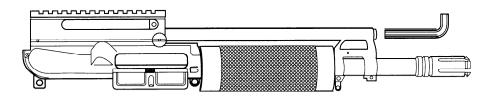


## Maintenance Procedures OA-93/OA-96 Model 1 Field-stripping Your OA-93/OA-96 Model 1



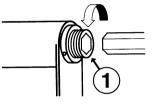
NOTE: the recoil assembly is under constant tension. Do not attempt to remove the recoil rod link. If you must remove it, be aware that the spring and recoil rod will shoot out violently when the block is removed.

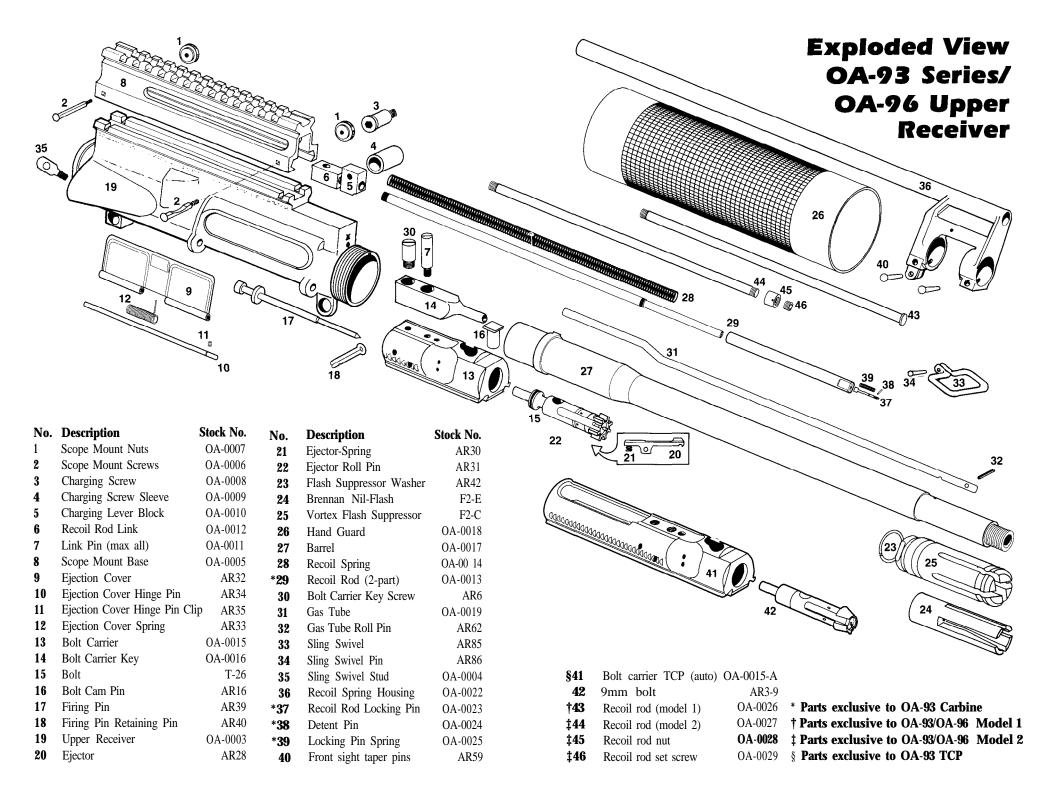
Maintenance Procedures OA-93/OA-96 and Carbine Model 2 Field-stripping Your OA-93/OA-96 & Carbine Model 2



#### Continued from page 14

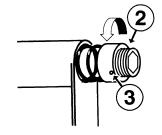
1. Using a hex head wrench, back off the recoil rod set screw (1) a couple of turns.

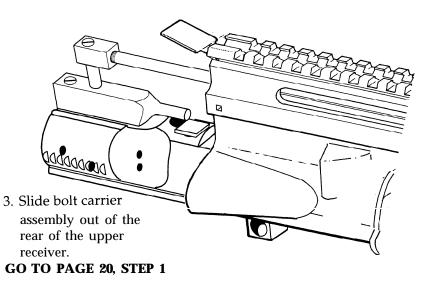




## Maintenance Procedures OA-93/OA-96 and Carbine Model 2 Field-stripping Your OA-93/OA-96 & Carbine Model 2

2. Remove the recoil rod locking nut (2). If you have difficulty gripping the nut, insert a small hex wrench into the takedown hole (3). **BE CAREFUL.** The recoil spring will shoot out the end of the housing as soon as the nut is removed. Maintain pressure and ease the spring tension gradually.





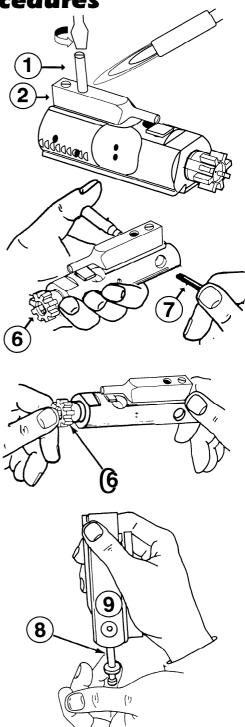
### Bolt Carrier Disassembly

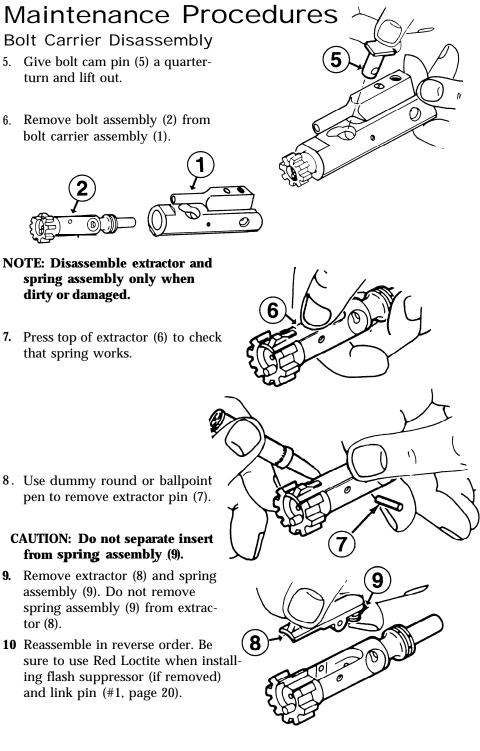
**NOTE:** The following illustrations show the link pin removed from the bolt carrier key. If you are disassembling an OA-93/OA-96 Model 1, the link pin must be removed. *It is not necessary to remove it on the OA-93/OA-96 Model 2, or the OA-93 Carbine.* The only time you must remove the link pin on these models is when you wish to remove the bolt

carrier key from the bolt carrier. To remove the link pin: use a propane torch to apply heat to the base of the link pin (1) to soften

base of the link pin (1) to soften the Red Loctite used in assembly. Use a standard screwdriver to unscrew link pin from bolt carrier key. BE CAREFUL NOT TO BURN YOURSELF ON THE HOT LINK PIN – use a pair of heavy gloves for this step.

- 2. Move bolt assembly (6) forward to unlocked position and remove firing pin retaining pin (7). Do not open or close split end of firing pin retaining pin (7).
- 3. Push in on bolt assembly (6) to put in locked position.
- Catch firing pin (8) as it drops out of rear of bolt carrier assembly (9).





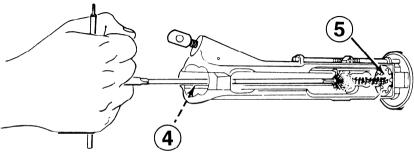
Cleaning and Lubricating Upper Receiver and Barrel Assembly

#### NOTE: Do not reverse direction of the bore brush while it is in the bore.

Use cleaner, lubricant and preservative (CLP) on the following areas:

- A. All areas of powder fouling, corrosion, dirt and rust.
- B. Bore and chamber.
- C. Upper receiver and barrel assembly locking lugs.
- D. Gas tube.

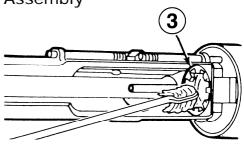
1 Use cleaning rod, bore brush and CLP. Run rod through chamber, barrel (1) and flash suppressor (2).



Install chamber brush on cleaning rod, dip in CLP, and insert in chamber
(4) and locking lugs (5). Clean by pushing and twisting cleaning rod.

Cleaning and Lubricating Upper Receiver and Barrel Assembly

3. Lightly lubricate bore and chamber, outer surface of barrel and recoil spring tube, and surfaces under hand guards.

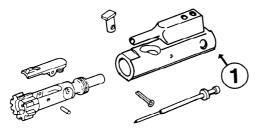


4. Lubricate locking lugs (3).

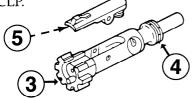
NOTE: Do not over-lubricate your OA-93/OA-96. Excess oil will attract dirt and grit, and lead to excessive wear. Wipe off excess before reassembling.

## Maintenance Procedures Cleaning and Lubricating Bolt Carrier Assembly

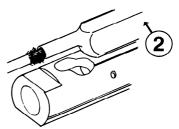
**CAUTION:** Do not use firing pin to clean inner surfaces of bolt or bolt carrier assembly.



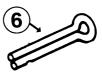
 Clean all parts and outer surfaces of the bolt carrier assembly (1) with a swab saturated with CLP.



- Remove carbon deposits and dirt from locking lugs (3) with bore brush dipped in CLP.
- **4.** Clean areas behind bolt rings (4) and under lip of extractor (5).



 Clean the bolt carrier key (2) with a worn bore brush dipped in CLP. Dry with a pipe cleaner. Use a pipe cleaner to apply a light coating of CLP to carrier key



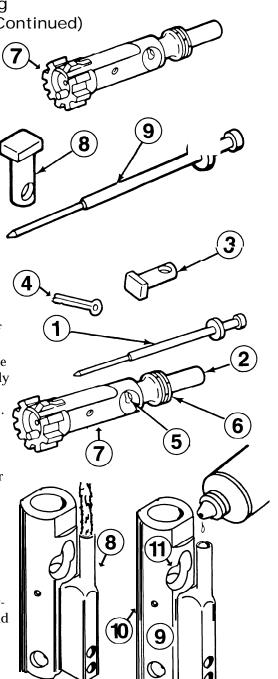
 Inspect firing pin retaining pin (6) for bends, breaks, or dents.

#### Cleaning and Lubricating Bolt Carrier Assembly (Continued)

- 6. Inspect bolt assembly (7) for cracks and fractures, especially in the cam pin hole area.
- 7. Inspect bolt cam pin (8) for cracks or chips.
- 8. Inspect firing pin (9) for bends, cracks, or blunted tip.

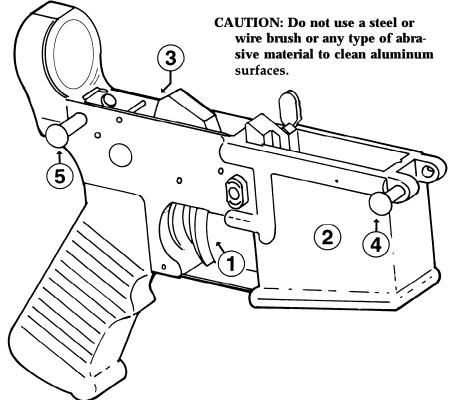
#### LUBRICATION

- 1. Lightly lubricate firing pin (1) and firing pin recess (2) in bolt assembly.
- 2. Generously lubricate outside of bolt cam pin (3) and firing pin retaining pin (4) with CLP. Make certain to lubricate bolt assembly cam pin hole (5), bolt rings (6), and outside of bolt assembly (7).
- Dry the inside of the bolt carrier key (8) with a pipe cleaner, and place one drop of CLP inside key.
- 4 Lightly lubricate with CLP the inner and outer surfaces of the bolt carrier assembly (9). Generously lubricate the slide (10) and cam pin area (11) of bolt carrier assembly.



## Maintenance Procedures Cleaning and Lubricating the Lower Receiver

NOTE: The lower receiver should only be disassembled by a qualified gunsmith. If you need to do repairs on your lower receiver, write to Olympic Arms and request part number H-7, U.S. Marine Corps Technical Manual (TM 05538C-23&P/2).



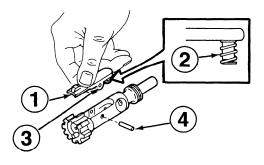
- 1. Wipe dirt from trigger (1) with a swab.
- 2. Use a swab dipped in CLP and a cleaning brush to clean powder fouling, corrosion and dirt from outside parts of lower receiver.
- 3. Clean the inside of the lower receiver (2) with a swab dipped in CLP. Wipe dry.
- 4. Examine lower receiver for corrosion or damage. Also check for broken or bent trigger (l), bent or damaged selector lever (3), or any cracks, dents, or breaks. If you think the parts are bad, see a reputable gunsmith.
- Lightly lubricate inside of lower receiver with CLP. Generously lubricate takedown (5) and pivot pins (4) with CLP.

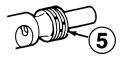
Bolt Carrier Assembly

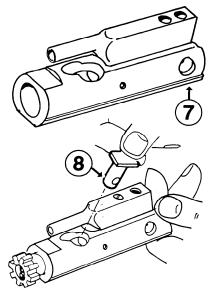
#### NOTE: New extractor has silicone insert with spring. Be careful not to lose it.

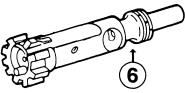
- 1. If the spring comes loose, seat the large end of spring in the extractor.
- 2. Insert extractor (1) and spring assembly (2) into bolt.
- Push extractor (1) and spring assembly (2) down. Align hole (3) with hole in bolt and insert extractor pin (4).
- 4. Stagger gaps in bolt rings (5) to stop gas loss. (Pistol caliber bolts have no gas rings).

# WARNING: Don't switch bolt assemblies between weapons.









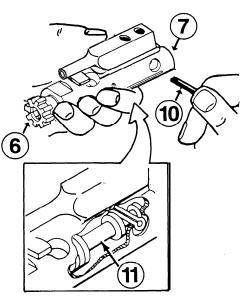
- 5. Slide bolt assembly (6) into bolt carrier assembly (7).
- 6. Insert bolt cam pin (8) and give it a 1/4 turn.

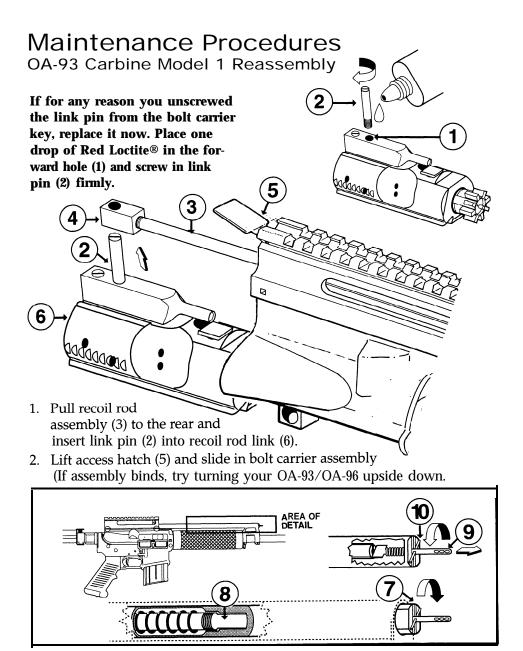
# 

7. Drop firing pin (9) into opening and seat.

Bolt Carrier Assembly

- 8. Push bolt assembly (6) back and replace firing pin retaining pin (10).
- NOTE: Firing pin (11) should not fall out when bolt carrier assembly is turned upside down.
- **9.** Turn bolt carrier assembly (7) over and try to shake out the firing pin.



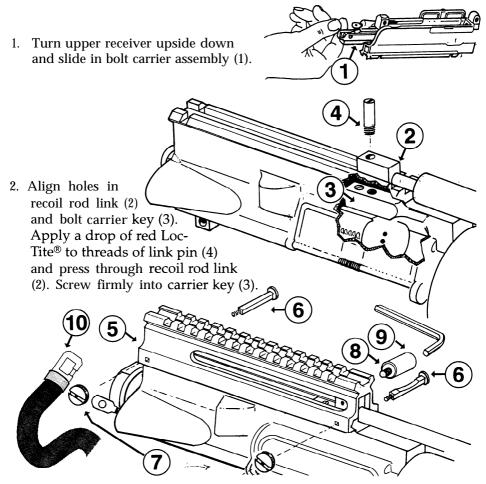


- 3. Screw forward part of recoil rod (7) firmly onto rear part of recoil rod (8).
- 4. Pull out and turn detent pin(9) until you feel the paddle of

the pin drop into the slot on the end of the rear recoil rod.

5. Turn locking pin (10) until it snaps into the groove on the end of the recoil rod.

## Maintenance Procedures OA-93/OA-96 Model 1 Reassembly



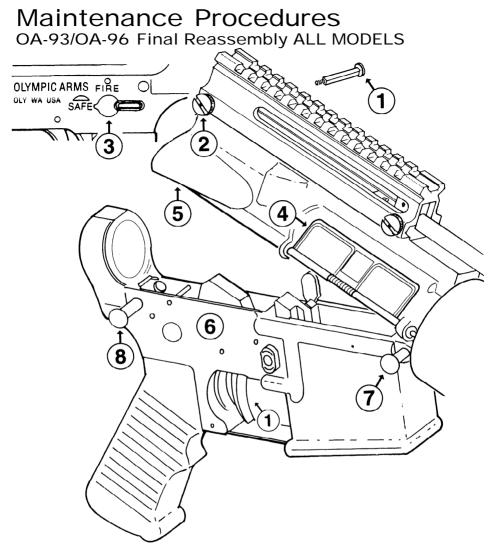
- Slide on scope mount base (5). Push in scope mount screws (6), making sure that the forward screw has radiused side facing upward. Tighten down scope mount nuts (7) with large standard screwdriver. NOTE: These screws are ambidextrous, and can be inserted from either side.
- 4. Slide charging screw (8) into

charging screw sleeve (9). Apply blue Loctite® to the threads of the charging screw and fasten assembly to charging lever block with a 5/32" hex head wrench. **NOTE: This assembly is ambidextrous, and can be attached to either side of the charging lever block.** 

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5. Re-attach sling if any.
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## Maintenance Procedures OA-93/OA-96 & Carbine Model 2 Reassembly If for any reason you unscrewed the link pin from the bolt carrier key, replace it now. Place one drop of Red Loctite® in the forward hole (1) and screw in link pin (2) firmly. 1 6 Jaaaaaaa 1 Pull recoil rod assembly (3) to the rear and insert link pin (2) into recoil rod link (4). 2. Lift access hatch (5) and slide in bolt carrier assembly (6). (If assembly binds, try turning your OA-93/OA-96 upside down). 000000 3. Use the recoil rod nut (7) to compress the spring into the recoil spring housing and screw it down. If you have difficulty gripping the nut, insert a small hex wrench into the takedown hole (8). BE **CAREFUL.** The recoil spring will shoot out the end of the housing if pressure is removed.

**4.** Tighten down the recoil rod set screw (9).



1.OA-93/OA-96 Model 2 and OA-93 Carbine only: Insert

rear scope mount screw (1) and tighten down scope mount nut (2) with large standard screwdriver.

2.Move selector lever (3) to SAFE, and close ejection port cover (4) before closing upper receiver.

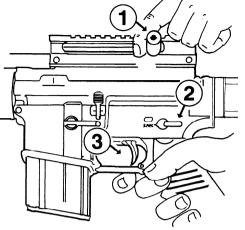
#### \*OA-96: Close upper receiver on lower receiver.

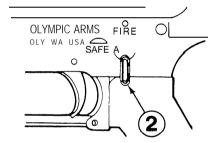
- OA-93 All Models: Join upper receiver (5) and lower receiver (6). Align the pivot pin holes and push pivot pin (7) in.
- Close upper receiver and lower receiver. Push in takedown pin (8).

#### Function Check

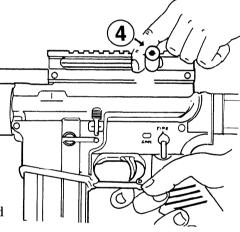
#### WARNING: To avoid accidental firing, be sure cartridge magazine is removed and chamber is clear.

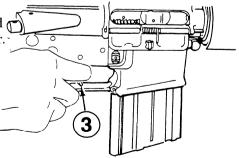
1. Pull charging screw (1) to rear and release. Place selector lever (2) on SAFE. Squeeze trigger (3). Hammer should not fall.





 Place selector lever (2) on FIRE. Squeeze trigger (3). Hammer should fall. Hold trigger to the rear. Pull charging screw (4) to rear and release. Release trigger (3). You should of hear a click as you release the trigger.
Squeeze again; hammer should fall.





<b>Exploded View</b>					
OA-93 Series/OA-96 Lower					
(Contractigation of the second				ceiver	
33					
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		$\frown$		$\neg$	
			$\langle \rangle$		
34			$\setminus$ $\setminus$		
	35		$\langle \rangle$		
	ock No.		$\langle \rangle$		
<b>2</b> Pistol Grip Screw	A-0001 AR72		$\langle \rangle$		
<b>3</b> Grip Screw Washer	AR72 AR73		$\langle \rangle$	$\setminus$	
	AR71A		$\backslash$		
5 Safety Spring	AR84			$\vee$	
6 Safety Detent	AR83				
7 Trigger	AR91				
8 Trigger Spring	AR94	#	Description	Stock No.	
9 Trigger Pin 10 Hammer Pin	AR64 AR64		Hammer	AR63	
<b>11</b> Trigger Guard	AR04 AR92		Hammer Spring	AR65	
<b>12</b> Trigger Guard Roll Pir			Takedown Pin, Rea		
13 Disconnector	AR26	‡ <b>29</b>	Takedown Pin Det	ent, Rear	
14 Disconnector Spring	AR27			AR89	
<b>15</b> Takedown Pin	AR88	<b>‡30</b>	Takedown Pin Det		
<b>16</b> Takedown Pin Detent	AR89	<b>±31</b>	5x40 Set Screw	AR90 OA-0002	
<b>17</b> Takedown Pin Detent S	AR90	+31 †32	Folding Stock Bol		
<b>‡18</b> Magazine Catch Buttor		<b>†33</b>	Folding Stock	OA-0031	
<b>‡19</b> Magazine Catch Spring		† <b>34</b>	Folding Stock Space	cer OA-0032	
<b>‡20</b> Magazine Catch	AR68		Locking Ring	OA-0033	
<b>21</b> Bolt Catch	AR7	4 <b>P</b>			
<b>22</b> Bolt Catch Plunger	AR8	† Parts exclusive to OA-93			
<b>23</b> Bolt Catch Roll Pin <b>24</b> Bolt Catch Spring	AR9		urbine only nts evolusive to OA	02 nistal anl-	
<b>24</b> Bolt Catch Spring <b>25</b> Safety Selector	AR10 AR82		rts exclusive to OA ot applicable to OA		
as survey belettor	ANOL	u)	or applicable to OF	1-00)	

