Colt Manual No. CM118

OPERATION AND UNIT MAINTENANCE MANUAL

For the Colt M16A2/M16A4 and LE Rifle, Colt M4 Carbine, AR-15 Sporter, Sporter, Match Target Series and Colt 9mm SMG

First Edition REV 3

Information contained in this publication is free of "ITAR" restricted data

⚠ WARNINGS AND CAUTIONS

Throughout this Operator's Manual, you will find WARNINGS and CAUTIONS in bold print. All WARNINGS and CAUTIONS must be read carefully and followed completely. WARNINGS discuss issues that could result in damage to your firearm, or serious injury or death to you or a bystander. CAUTIONS discuss issues that could result in damage or malfunction of your firearm or cause injury. Read and understand all the WARNINGS and CAUTIONS before removing the firearm from its package.

⚠ WARNING: IF THIS FIREARM IS CARELESSLY OR IMPROPERLY HANDLED, UNINTENTIONAL DISCHARGE COULD RESULT AND COULD CAUSE INJURY, DEATH, OR DAMAGE TO PROPERTY.

⚠ WARNING: IF THE BARREL IS VERY HOT FROM FIRING THERE IS A RISK OF COOK-OFF (That is, a cartridge in the chamber discharging by absorbing heat from the barrel). A cook-off can occur any time after chambering a cartridge in a very hot barrel. When this condition is suspected, the chamber must be cleared immediately after firing.

⚠ WARNING: ALWAYS BE AWARE OF POSSIBLE RISK FROM DROPPING YOUR FIREARM. SOME PARTS OF THE MECHANISM COULD BE DAMAGED. You might not see the damage, but if it is severe, the firearm may discharge and cause injury, death or damage to property. If your firearm has been dropped, have it checked by the unit armorer.

⚠ WARNING: KEEP CLEAR AND KEEP OTHERS CLEAR OF THE EJECTION PORT. Spent cartridge cases are ejected with enough force to cause injury, and the ejection port must be unobstructed by your hand to insure safe ejection. Never place fingers in the ejection port; they could be burned by hot metal or injured by the bolt moving forward.

⚠ WARNING: NEVER DRY FIRE YOUR FIREARM WHEN THE RECEIVERS ARE OPEN AND DO NOT ALTER PARTS AS THE LEVEL OF SAFETY COULD BE REDUCED.

⚠ WARNING: USE ONLY HIGH QUALTY, ORIGINAL, FACTOR-MANUFACTURED AMMUNITION. Do not use cartridges that are reloaded, remanufactured, hand-loaded, or that are dirty, wet, corroded, bent or damaged. Use only ammunition of the caliber for which your firearm is chambered. The proper caliber is permanently engraved on your firearm; never attempt to use ammunition of any other caliber. Otherwise, severe damage to the firearm and serious injury or death to the shooter may result.

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Detail Disassembly of 5.56mm Family of Weapons

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INTRODUCTION

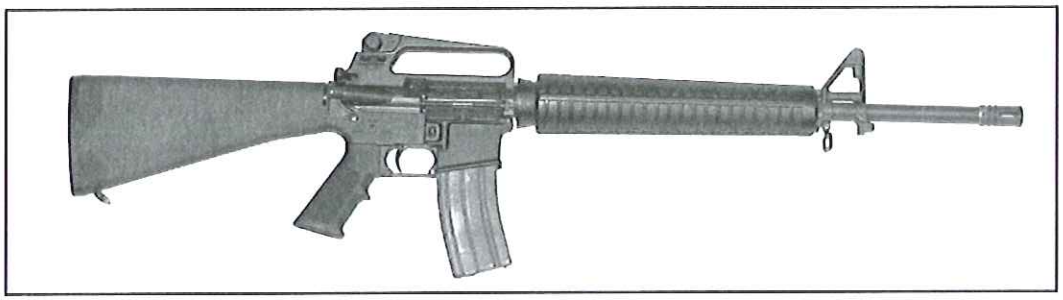
SCOPE OF MANUAL

This manual describes the operation of 5.56x45mm NATO and 9mm NATO caliber semi-automatic only as well as selective fire models of the Colt M16 and Colt M4 families of weapons. This includes the semi-automatic only Colt AR-15 Sporter, AR-15A2 Sporter, Sporter and Match Target families as well.

It also provides operator and unit level maintenance instructions for these weapons and their accessories. This includes routine maintenance as well as gauging to determine serviceability. In addition, this manual includes numerous part number legends.

Pages 6 through 13 show some of Colt's basic models along with their technical descriptions. The scope of this manual encompasses the entire Colt line of 5.56mm/.223 Rem, 222 Rem, 7.62x39mm and 9mm NATO caliber weapons.

M16A2 RIFLE (COLT MODEL R0645)



This M16A2 Rifle fires both semi-automatic and 3-round burst, and has fully adjustable rearsight and thick contour barrel.

Weight:

M16A2 Weapon (no sling and Magazine	7.50 lb.	3.40 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (30 rd)	0.25 lb	113 g
Loaded Magazine (30 rd)	1.00 lb	454 g
M16A2 Weapon Loaded		
30 rd magazine and sling	8.90 lb	4.04 kg
Trigger Pull		
Burst	5.5 to 9.5 lb	2.49 to 4.31 kg
Length:		
Overall with Compensator	39.63 in.	1.0 meter
Barrel	20 in.	51 cm
Barrel with Compensator	21 in.	53 cm

Mechanical:

Mode of Fire	Semi and Burst
Rifling, R.H., 6 grooves	
1 turn in ….7 in. 18 cm	
Method of Operation:	Gas
Type of Breech Mechanism:	Rotating Bolt
Method of Feeding	Magazine
Cooling:	Air

Firing Characteristics		
Mode of Fire	Semi and Burst	
	M855 Ball	
Muzzle Velocity (approx)	3110 ft/sec	948 m/s
Muzzle Energy	1302 ft lb	1765 J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar
Cyclic Rate of Fire	700 to 950 rounds per minute	
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Automatic/Burst	150 – 200 rounds per minute	
Sustained Rate of Fire	12 – 15 rounds per minute	
Maximum Range	3935 yd	3600 m

M16A4 RIFLE (COLT MODEL R0945)

This M16A4 Rifle fires both semi-automatic and 3-round burst, and has Mil-Std-1913 flattop upper receiver and thick Contour barrel.

Weight:		
M16A4 Weapon (no sling and Magazine	7.50 lb.	3.40 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (30 rd)	0.25 lb	113 g
Loaded Magazine (30 rd)	1.00 lb	454 g
Trigger Pull		
Burst	5.5 to 9.5 lb	2.49 to 4.31 kg
M16A4 Weapon Loaded		
30 rd magazine and sling	8.90 lb	4.04 kg
Length:		
Overall with Compensator	39.63 in.	1.0 meter
Barrel	20 in.	51 cm
Barrel with Compensator	21 in.	53 cm
Mechanical:		
Rifling, R.H., 6 grooves		
1 turn in ….7 in. 18 cm		
Method of Operation:	Gas	
Type of Breech Mechanism:	Rotating Bolt	
Method of Feeding	Magazine	
Cooling:	Air	
Firing Characteristics		
Mode of Fire	Semi and Burst	
	M855 Ball	
Muzzle Velocity (approx)	3110 ft/sec	948 m/s
Muzzle Energy	1302 ft lb	1765 J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar
Cyclic Rate of Fire	700 to 950 rounds per minute	
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Automatic/Burst	150 – 200 rounds per minute	
Sustained Rate of Fire	12 – 15 rounds per minute	
Maximum Range	3935 yd	3600 m

M4 CARBINE (COLT MODEL 920)

This M4 Carbine fires both semi-automatic and 3-round burst, and has Mil-Std-1913 flattop upper receiver and thick Contour barrel.

Weight:

M4 Carbine (no sling and Magazine	5.90 lb.	2.68 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (30 rd)	0.25 lb	113 g
Loaded Magazine (30 rd)	1.00 lb	454 g
M4 Carbine Loaded		
30 rd magazine and sling	6.90 lb	4.04 kg
Trigger Pull		
Burst	5.5 to 9.5 lb	2.49 to 4.31 kg
Length:		
Overall with Compensator		
Stock Extended	33.0 in.	84 cm
Stock Contracted	29.8 in.	76 cm
Barrel	14.4 in.	37 cm
Barrel with Compensator	15.75 in.	40 cm

Mechanical:		
Rifling, R.H., 6 grooves		
1 turn in ….7 in. 18 cm		
Method of Operation:	Gas	
Type of Breech Mechanism:	Rotating Bolt	
Method of Feeding	Magazine	
Cooling:	Air	
Firing Characteristics		
Mode of Fire	Semi and Burst	
	M855 Ball	
Muzzle Velocity (approx)	2900 ft/sec	884 m/s
Muzzle Energy	1157 ft lb	1569J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar
Cyclic Rate of Fire	700 to 950 rounds per minute	
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Automatic/Burst	150 – 200 rounds per minute	
Sustained Rate of Fire	12 – 15 rounds per minute	
Maximum Range	3484 yd	3186 m

M4 COMMANDO (COLT MODEL R0933)

This M4 COMMANDO fires both semi-automatic and fully automatic, and has Mil-Std-1913 flattop upper receiver and thin Contour barrel.

Weight:

M4 COMMANDO (no sling and Mag)	5.38 lb.	2.44 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (30 rd)	0.25 lb	113 g
Loaded Magazine (30 rd)	1.00 lb	454 g
M4 COMMANDO Loaded		
30 rd magazine and sling	6.78 lb	3.07 kg
Trigger Pull		
Semi/Auto	5.5 to 8.5 lb	2.49 to 3.86 kg
Length:		
Overall with Compensator		
Stock Extended	30.7 in.	78 cm
Stock Contracted	27.5 in.	70 cm
Barrel	11.5 in.	29 cm
Barrel with Compensator	12.80 in.	32 cm

Mechanical:

Rifling, R.H., 6 grooves		
1 turn in ….7 in. 18 cm		
Method of Operation:	Gas	
Type of Breech Mechanism:	Rotating Bolt	
Method of Feeding	Magazine	
Cooling:	Air	
Firing Characteristics		
Mode of Fire	Semi and Auto	
	M855 Ball	
Muzzle Velocity (approx)	2610 ft/sec	796 m/s
Muzzle Energy	937 ft lb	1270J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar
Cyclic Rate of Fire	700 to 950 rounds per minute	
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Automatic/Burst	150 – 200 rounds per minute	
Sustained Rate of Fire	12-15 rounds per minute	
Maximum Range	3200 yd	2926 m

COLT 9mm SMG (COLT MODEL R0635)

This 9mm NATO caliber SMG fires both semi-automatic and fully automatic, and has a fixed rear sight adjustable for windage only and a thin contour barrel.

Weight:

Colt 9mm SMG (no sling and mag)	5.75 lb.	2.61 kg
Sling (Silent)	0.40 lb.	181 g
Trigger Pull		
Semi/Auto	5.5 to 8.5 lb	2.49 to 3.86 kg
Length:		
Overall with Compensator		
Stock Extended	28.9 in.	73 cm
Stock Contracted	25.6 in.	65 cm
Barrel	10.5 in.	26.7 cm
Barrel with Compensator	11.5 in.	29 cm

Mechanical:

Rifling, R.H., 6 grooves		
1 turn in ….10 in.25.4 cm		
Method of Operation:	Blowback	
Type of Breech Mechanism:	Closed Bolt	
Method of Feeding	Magazine	
Cooling:	Air	
Firing Characteristics		
Mode of Fire	Semi and Auto	
	M882 Ball	
Muzzle Velocity (approx)	1210 ft/sec	368 m/s
Muzzle Energy	403 ft lb	546J (joule)
Chamber Pressure (max)	32000 psi	2206 bar
Cyclic Rate of Fire	700 to 1000 rounds per minute	
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Automatic/Burst	150 – 200 rounds per minute	
Sustained Rate of Fire	15 –18 rounds per minute	

LAW ENFORCEMENT CARBINE (Colt Model LE6920)

This Law Enforcement Carbine fires semi-automatic only, and has Mil-Std-1913 flattop upper receiver and thick M4 Contour barrel.

Weight:		
Law Enforcement Carbine (no sling / Mag)	5.95 lb.	2.67 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (20 rd)	0.17lb	79 g
Empty Magazine (30 rd)	0.25 lb	113 g
LE Carbine Loaded		
30 rd magazine and sling	7.35 lb	3.30 kg
Trigger Pull		
Semi Only	5.5 to 8.5 lb	2.49 to 3.86 kg
Length:		
Overall with Compensator		
Stock Extended	34.6 in.	88 cm
Stock Contracted	30.4 in.	77 cm
Barrel	16.1 in.	37 cm
Barrel with Compensator	17.1 in.	43.4 cm
Mechanical:		
Rifling, R.H., 6 grooves		
1 turn in ….7 in. 18 cm		
Method of Operation:	Gas	
Type of Breech Mechanism:	Rotating Bolt	
Method of Feeding	Magazine	
Cooling:	Air	
Firing Characteristics		
Mode of Fire	Semi Only	
	M855 Ball	
Muzzle Velocity (approx)	2920 ft/sec	890 m/s
Muzzle Energy	1172 ft lb	1592J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar
Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Maximum Range	3484 yd	3186 m

ADVANCED LAW ENFORCEMENT CARBINE (Colt Model LE6940)

This Advanced Law Enforcement Carbine fires semi-automatic only, and has proprietary 1-piece (monolithic) upper receiver providing a free floated barrel and quad MIL-STD-1913 rails and folding front sight.

Weight:

Law Enforcement Carbine (no sling / Mag)	6.81 lb.	3.09 kg
Sling (Silent)	0.40 lb.	181 g
Empty Magazine (20 rd)	0.17lb	79 g
Empty Magazine (30 rd)	0.25 lb	113 g
LE Carbine Loaded		
30 rd magazine and sling	7.88 lb	3.57 kg
Trigger Pull		
Semi Only	5.5 to 8.5 lb	2.49 to 3.86 kg

Length:

Overall with Compensator		
Stock Extended	35.2 in.	89 cm
Stock Contracted	32.0 in.	81 cm
Barrel	16.1 in.	37 cm
Barrel with Compensator	17.1 in.	43.4 cm

Mechanical:

Rifling, R.H., 6 grooves		
1 turn in ….7 in. 18 cm		
Method of Operation:	Gas	
Type of Breech Mechanism:	Rotating Bolt	
Method of Feeding	Magazine	
Cooling:	Air	

Firing Characteristics		
Mode of Fire	Semi Only	
	M855 Ball	
Muzzle Velocity (approx)	2920 ft/sec	890 m/s
Muzzle Energy	1172 ft lb	1592J (joule)
Chamber Pressure (max)	50,750 psi	3499 bar

Max Rate of Fire		
Semi-Automatic	45-65 rounds per minute	
Maximum Range	3484 yd	3186 m

SECTION 1 Description

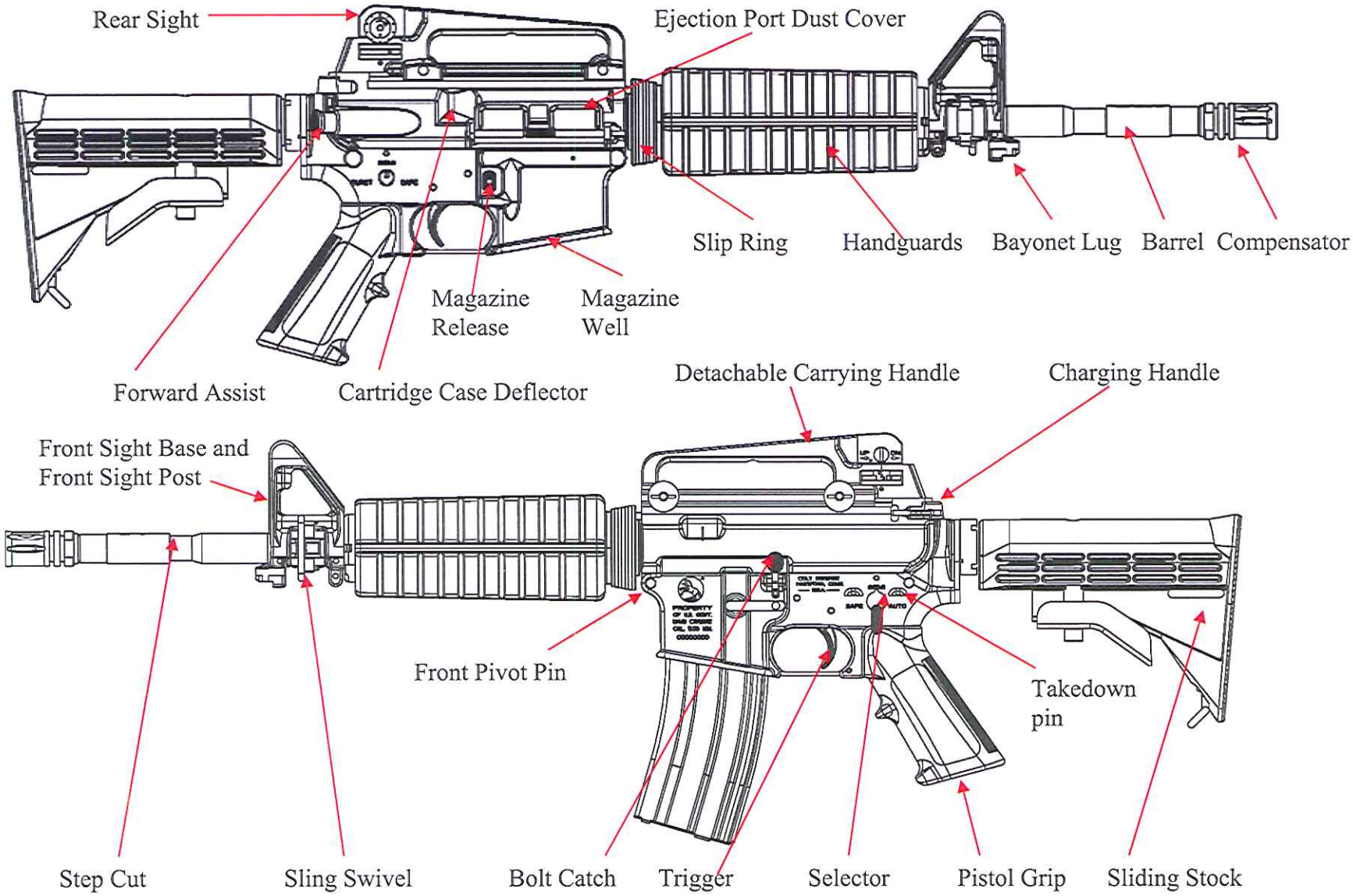
The Colt M16 and Colt M4 families of weapons are the most thoroughly tested and fielded 5.56x45 mm caliber police and military rifles in the world. These are extremely durable, lightweight, air-cooled, gas operated and magazine fed service rifles. They may be fired from the shoulder or hip. Due to the versatility of these weapon systems the weapon can be tailored to the specific needs of the end user whether it be stock type, barrel length and configuration as well as a fire control group that can be provided in either semi-automatic only or selective fire. Colt offers both a 9mm carbine and submachine gun, which fire from a blowback operation.

A number of features are combined in different ways to satisfy various operational requirements as follows:

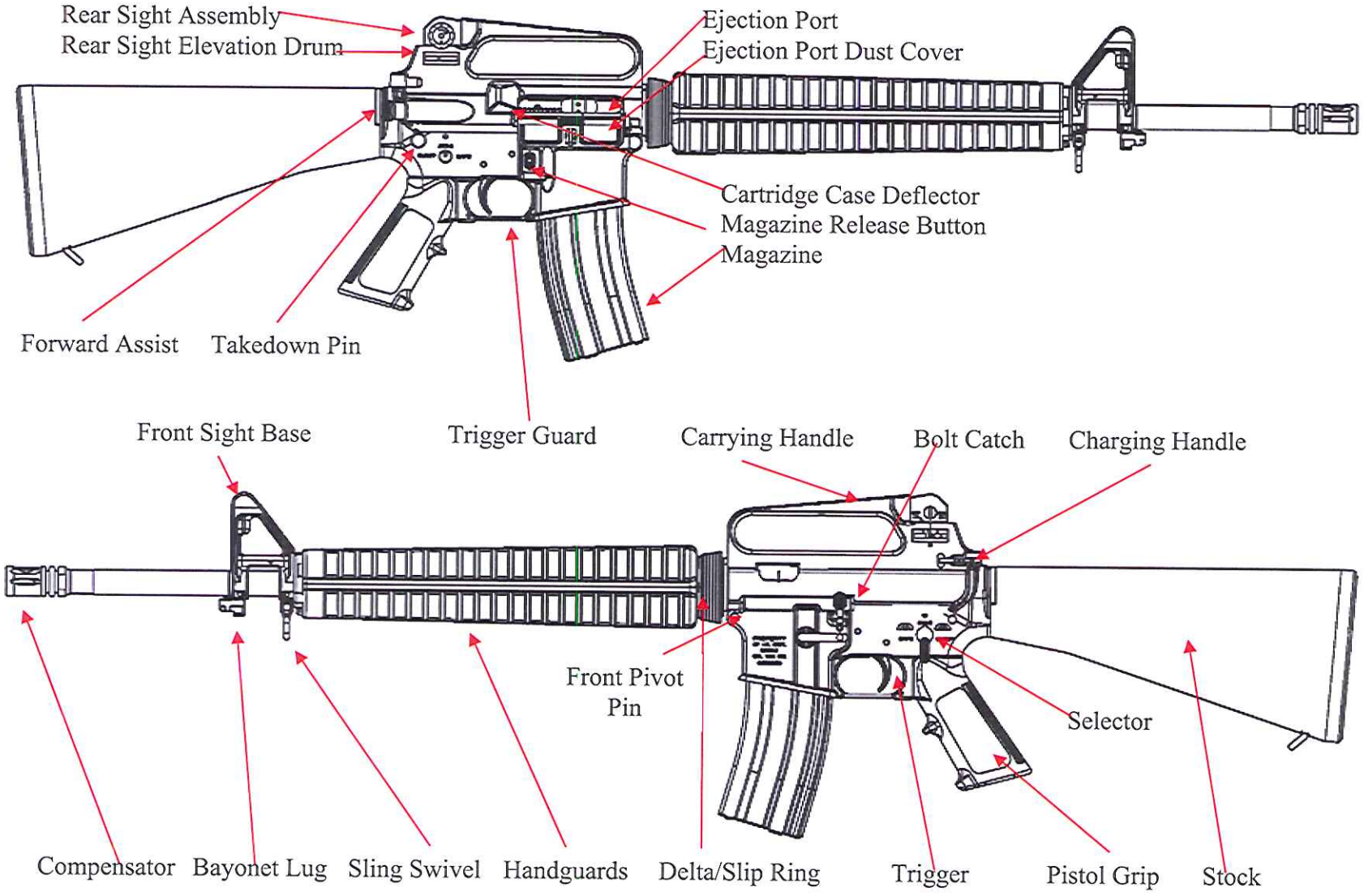
- M16A4 Rifle (R0945), which is the basic model rifle, combines 3 round burst fire control mechanism with a Mil-Std-1913 rail for mounting optics and a barrel with a 1 turn in 7 inches to accommodate up to 80-grain 5.56mm ammunition.
- M4A1 Carbine (R0921), which is a standard carbine, combines the compactness and lightweight of a carbine with the heavy hitting selective fire automatic firepower.
- 9mm SMG (R0635) offers military and law enforcement with a 9mm NATO caliber alternative to the 5.56mm cartridge. This weapon features the same operating characteristics of its 5.56mm counterparts allowing officers the ability to transition between the 9mm SMG and carbine/rifle with little or no additional training.
- Law Enforcement Carbine (LE6920) provides police officers with a lightweight patrol rifle. Identical to the standard M4 carbine but with a longer barrel and semi-automatic only, this weapon permits officers to handle and contain situations, which they may not be able to with their sidearm and shotgun.
- Advanced Law Enforcement Carbine (LE6940) provides police officers with a lightweight patrol rifle with Colt's proprietary monolithic upper receiver. This weapon offers a free floated barrel, 100% zero retention of optics and a continuous 12:00 rail from the charging handle to front sight base. The rifle has incorporated the Colt designed folding front sight. The monolithic upper receiver is offered in numerous barrel and fire control variations for both military and police applications.

The Colt M16 and Colt M4 families of weapons all fire semi-automatically and can be had to fire automatic as well as burst fire. They are easily disassembled for cleaning and inspection. All rifles and carbines (LE and Military Rifles) are equipped with bayonet lugs. The Commando (semi-auto only and selective fire) models as well as the Sporter and Match Target rifles do not have bayonet lugs.

M4 Carbine



M16A2 Rifle



Upper Receiver and Barrel Assembly Group

Barrel Group

The barrel group consists of a:

1. Barrel and barrel extension assembly.
2. Handguard cap.
3. Compensator, barrel nut and slip ring assembly
4. Handguards.

The front sight group is made up of the:

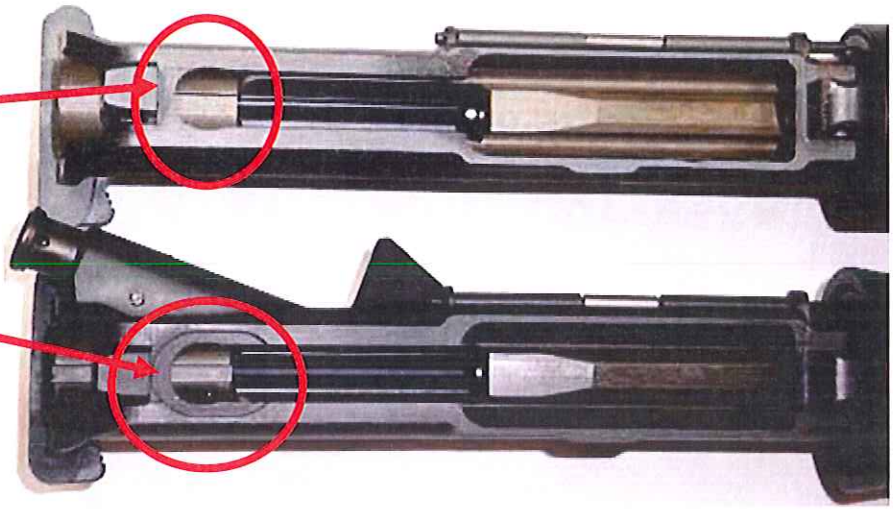
1. Forward sling swivel assembly.
2. Front sight/gas block assembly.
3. Gas tube assembly and the front sight post assembly.

NOTE: Front sight /gas block assembly can be found as just a gas block with no front sight or a folding front sight/gas block.

Upper Receiver Group

AR15 Semi-Auto only upper receiver.

Military/Selective Fire "Horse Shoe" upper receiver with cut-out for the automatic sear.



The upper receiver group consists of:

1. Charging handle assembly.
2. Upper receiver with a forward assist assembly and ejection port dust cover. The upper receiver currently is offered with a fixed carrying handle or a Mil-Std-1913 flattop upper receiver. The fixed carrying handles come in two models. The first utilizes the standard field sight that is adjustable for windage only. The second is the A2-style fully adjustable rear sight, which is adjustable, for windage as well as elevation. Attention needs to be paid when working with upper receivers to be sure they are the proper ones for the lower receiver, which it is to be installed. All selective fire receivers utilized the standard mil-spec (.250 in) front pivot pin. However, when working with semi-automatic only rifles, early production AR-15 Sporter rifles utilized a proprietary large pivot pin (.315 in) screw and collet

design. This continued until the adoption of the Colt Sporter series rifles. Colt Sporter rifles can be found with three different pivot pins. The rifles used the large diameter and two standard diameters. The first standard dimensioned pivot pin consisted of a pin and screw. This was used prior to the lower receivers being manufactured to accept the front pivot pin and detent. The later Colt Sporter as well as current Match Target –series rifles use the standard captive front pivot pin. All current production upper receivers utilize a fired cartridge case deflector machined into the receiver.

There are two different types of upper receivers. One specifically designed for use in selective fire and the other in semi-automatic only. Original semi-automatic only AR-15 rifles and Sporter-series rifles utilized a receiver, which did not have a cut on the bottom rear to accommodate the automatic sear. Later Match Target and LE series utilized the standard military specification upper receivers.

Barrels have been chambered in 5.56x45mm (.223 Rem), .222 Rem, 7.62x39mm and 9x19mm calibers. A very limited (1000) number of rifles (TE6700) were chambered for .223 Rem only. These are the only .223 Rem chambers ever produced by Colt, all others are 5.56mm. When replacing components great attention must be given to the caliber and configuration of the weapon to ensure the proper parts are installed.

Lower Receiver and Buttstock Assembly

The lower receiver and buttstock consist of the;

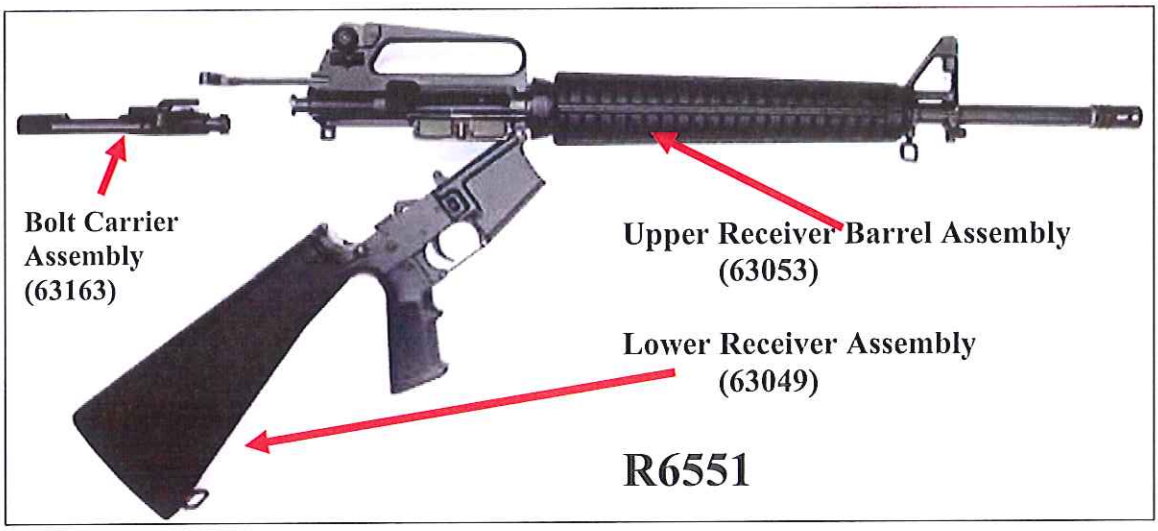
1. Lower receiver. The receivers are made from high quality aircraft aluminum, durable and light in weight. Be sure you are familiar and understand which model lower receiver you have in regards to semi-automatic only rifles. This will determine the size hammer/trigger pins, pivot pin fire control group and upper receiver you use.
2. Pistol grip
3. Lower receiver extension and buttstock. The receiver extension, which is the mounting devise for the buttstock, contains the buffer assembly and action spring.

The lower receiver houses the:

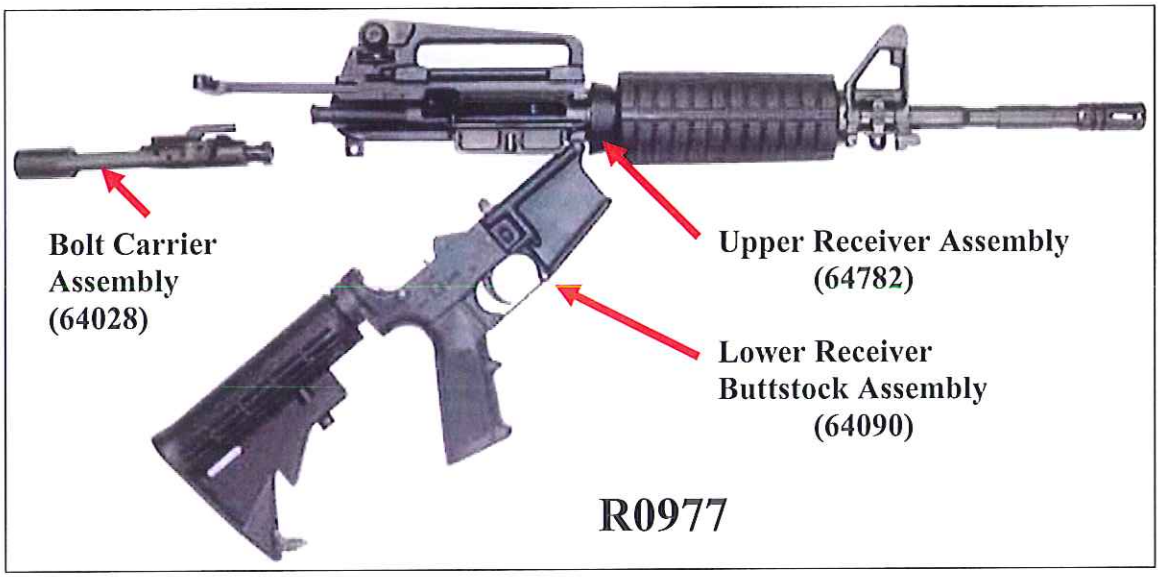
1. Hammer, trigger, fire control selector, bolt catch, disconnector, automatic sear (selective fire models) and magazine catch.

NOTE: Rifle and carbine stocks and pistol grips are manufactured from high impact polymer that is designed to take extremely hard impact. The strength of the rifle stocks is increase by being reinforced with glass fiber. The carbine and commando stocks are manufactured with a heavy impact resistant polymer.

MAJOR GROUPS OF RIFLES



MAJOR GROUPS OF CARBINE/COMMANDO



Bolt Carrier Assembly

The bolt carrier assembly consists of:

1. Bolt carrier.
2. Carrier key.
3. Bolt assembly
4. Firing pin and firing pin retaining pin.
5. Cam pin.
6. Extractor assembly.
7. Ejector.

The rotary bolt locking is one of the mechanical features of the rifle. The bolt and barrel extension contain locking lugs, which engage and lock the bolt firmly into the barrel extension. The piston/ expansion chamber is created in the rear of the bolt and carrier, which gives a hammer like blow to the rear of the carrier causing it to move rearward.

Due to variations in bolt carriers one should be aware of which applies to the model in question. The selective fire bolt carrier can be used in all 5.56mm models except the Sporter Series utilizing the automatic sear block. The block will cause the receivers to not close with this bolt carrier. Also, be aware that a semi-automatic only bolt carrier with the sear trip area either cut back or removed will not function properly in a selective fire weapon which is being fired in the Auto or Burst mode. You must have a proper selective fire bolt carrier in a selective fire weapon.

The 9mm SMG and Carbine utilize a 1-piece bolt. There are two variations. The first is the selective fire model, which as of this writing, is the only 9mm bolt in use. It is identified by the sear trip area, which actuates the auto sear. The semi-automatic only bolt carrier has a sear trip area extended forward not allowing actuation of the automatic sear. This model was discontinued in the early 1990's.

Bolt Assembly Variation

5.56x45mm/.223 Rem	(64027)
.222 Rem	(64027)
7.62x39mm	(66808)

Extractor Variations

5.56x45mm/.223 Rem	(61562)
.222 Rem	(61562)
7.62x39mm	(66810)
9x19mm	(62808)

CONTROLS

General

This section assists in identifying the controls on the M16 and M4 families of weapons. Photos depict their location on the weapon and describe how they should be used.

CONTROLS

1. Forward Assist Assembly — If the bolt fails to close and lock, press the forward assist until the bolt is moved into the locked position. If the bolt fails to lock this is a sign of either a dirty weapon or a damaged cartridge.

2. Charging Handle — Retracts bolt carrier and bolt. Has a thumb latch on the left side to lock it in the forward position.

3. Bolt Catch & Fire Control Selector

Holds the bolt and bolt carrier in the open position. Press the lower tang of catch to engage the bolt, upper tang to release.

Depending upon model, it selects the mode of fire. (SAFE, SEMI, AUTO or SAFE, SEMI and BURST. If the rifle fires semi-automatic only, it will be SAFE and FIRE.)

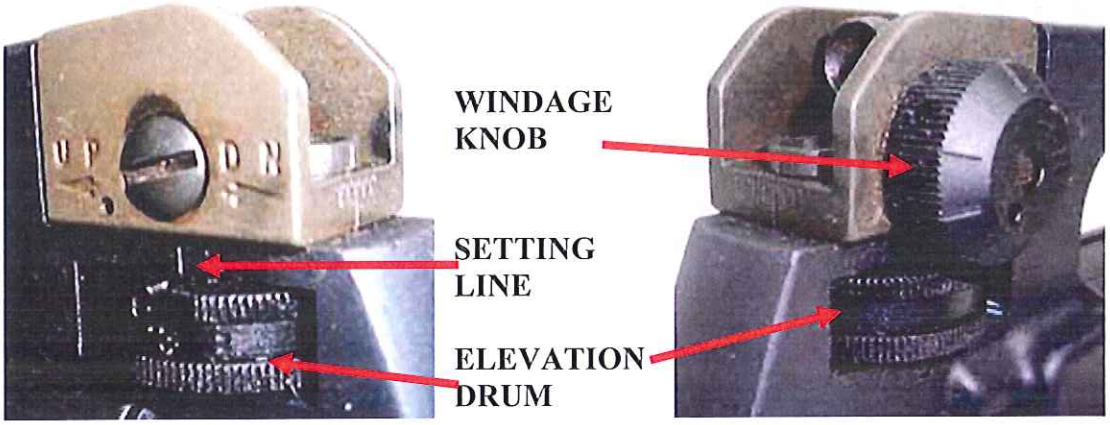
4. Magazine Catch

Retains the magazine in the rifle. Push inward to release magazine.

5. Front Sight

There are two different front sight posts: 4 position square blade front sight found on most M16A2/M16A3/M16A4 and M4 carbines. The second is the 5 position round front sight found on pre-M16A2 rifle and carbine models. The 4 position front sight is to be used with a rifle when combined with a fully adjustable rear sight or back up iron sight (BUIS). To adjust the front sight post, depress the front sight detent and rotate the desired direction.

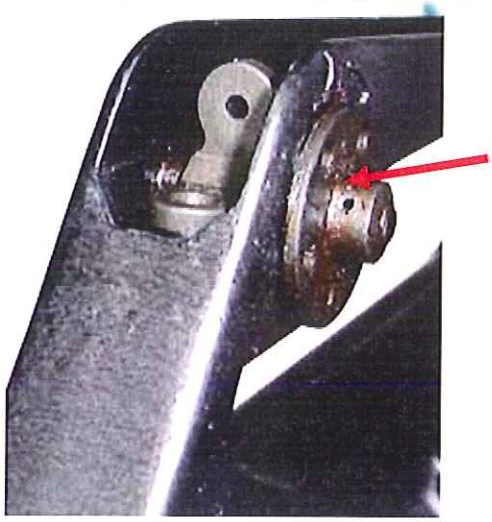
Front Sight Post	
Round	(61706)
Square Standard	(64507)
Square. AR6520-family and 9mm family.	(62447)
Square and tapered for 9mm SMG.	(64665)



6. Rear Sight-Fully Adjustable

The fully adjustable rear sight may be found both integrated into the upper receiver (M16A2 and M16A3) or be part of a removable carrying handle (M16A4 and M4). The fully adjustable rear sight is combined with a flip-type peep sight. When flipped forward, the large aperture marked 0-2 is up. It is

used when the elevation knob set to 8/3 low for ranges between 0 to 200 meters. The setting line is above the knob on the left side. When the large aperture is flipped back down, the small aperture is up. This is used for ranges of 300 to 800 meters (fixed carrying handle) to 300 to 600 meters (detachable carrying handle).



7. Field Sight-Adjustable Windage Only The rear sight is adjustable for windage only as it is used in the older rifles (M16 and M16A1) with fixed carrying candles and the 9mm Carbine and SMG. The sight has two apertures for range. The unmarked or forward life is for ranges up to 300 meters and the lief marked "L" is for ranges 300 to 500 meters. To adjust, push in the rear sight detent pin with a cartridge tip or suitable tool and rotate the windage drum. To move the impact to the right rotate drum clockwise, to move the impact left rotate the drum counter clockwise. With a carbine or Commando rifle the point of impact will be 1.38 inches (3.8 cm) at 100 yards. With a rifle the impact will be 1.10 in (2.8 CM) at 100 meters.

Rear Sight Aperture	
Fully adjustable A2/M4	(64524)
Field Sight Windage Only	(61700)
9mm SMG and Carbine	(62816)

Sliding Stock Assembly Part Numbers	
Aluminum	(62489)
Polymer	(64679)
Polymer (M4)	(64243)

8.Telescoping Buttstock Lock

To extend or retract the sliding buttstock, compress the rear of the release lever up against the buttstock. The buttstock can then be slid to various positions (early receiver extensions had two positions, while current production receiver extensions have four), which will lock in that position when released.

Fixed Stock Assembly Part Numbers	
Early No Storage	(62303)
A1 With Storage	(62727)
A2 5/8" Longer	(64571)

9. Buttstock On Rifle

The buttstock on the rifle has a stowage compartment for cleaning materials.

10. Gas Deflector (62851)

Used on the 9mm SMG and carbine to deflect un-burnt propellant gasses from the shooters face.

SECTION 2 Field Stripping, Cleaning and Maintenance

Disassembly (Field Stripping)

The extent of disassembly required for the performance of maintenance by the operator is as follows:

1. Clear weapon.
2. Separate receivers.
3. Remove bolt carrier assembly and charging handle.
4. Disassemble bolt carrier assembly but do NOT disassemble ejector.
5. Remove handguards. (Buttstock should also be removed from M4 Carbine/Commando and 9mm SMG/Carbine)
6. Remove buttstock buffer assembly and action spring.
7. Disassemble magazine

Cleaning

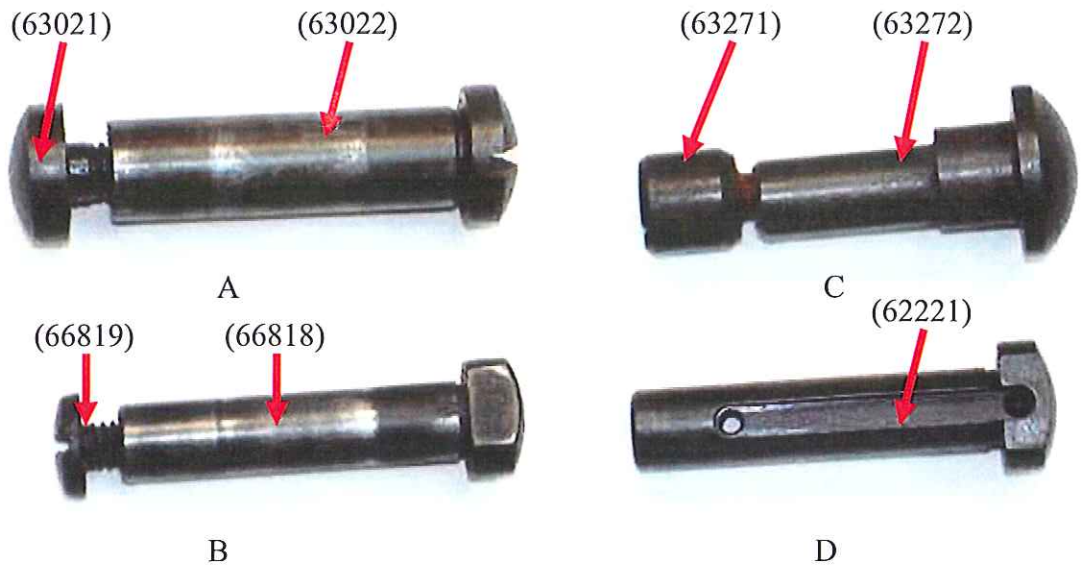
After the weapon has been field stripped, clean it as follows:

Attach the small; bore cleaning brush to the cleaning rod an insert it in the bolt carrier key. Rotate brush clockwise to remove carbon and powder residue. Do NOT use any cleaning compound on the brush when cleaning out the key.

Receiver Separation Procedure

STEP 1. Push takedown pin from the left and pull until stop from the right.

STEP 2.Push the front pivot pin from the left and pull until stop from the right.

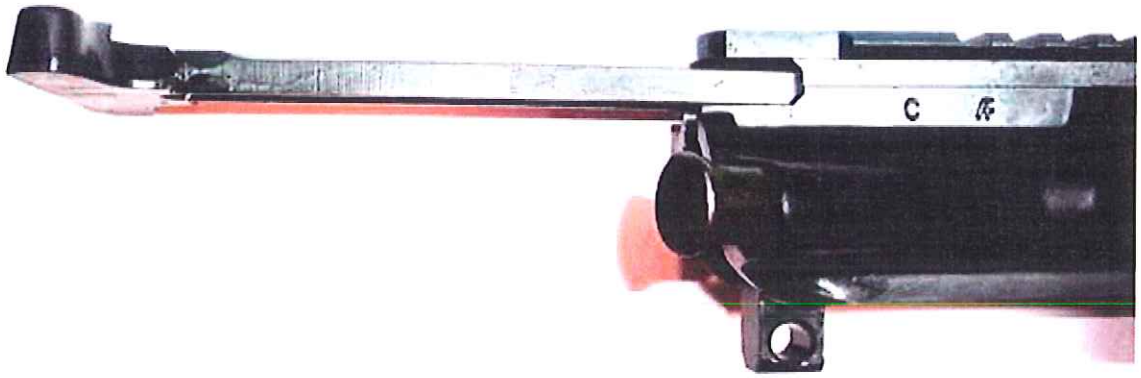


NOTE: Depending on the model, the pivot pin may remove differently. All selective fire models have a captive .250 in pivot pin (D). Also post Sporter series and Law Enforcement weapons will use these (D). Early Colt Sporter rifles will use this pin but it is not captive (B). A screw holds the pin in place from the left side. The original AR-15 Sporter, Sporter II and AR-15A2 series rifles utilize a larger .315 inch screw and collet (A). Variations can be found with transition from AR-15 to Sporter series. A conversion pivot pin is available to allow standard size hole upper receivers to fit on large pin lower receivers (C).

STEP 3. Receivers are separated.

Bolt Carrier Group and Charging Handle Removal

STEP 1. Pull the charging handle to the rear.



STEP 2. Remove the bolt carrier assembly.

STEP 3. Remove the charging handle.

Bolt Carrier Group Disassembly

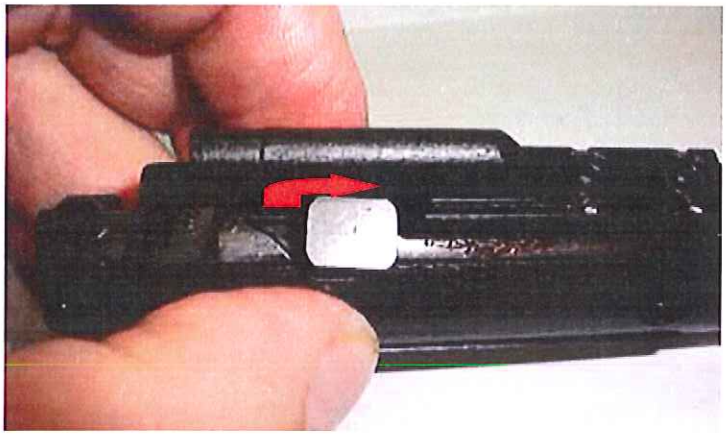
STEP 1. Start removal of the firing pin retainer pin.

STEP 2. Withdraw the firing pin retainer pin (62335).

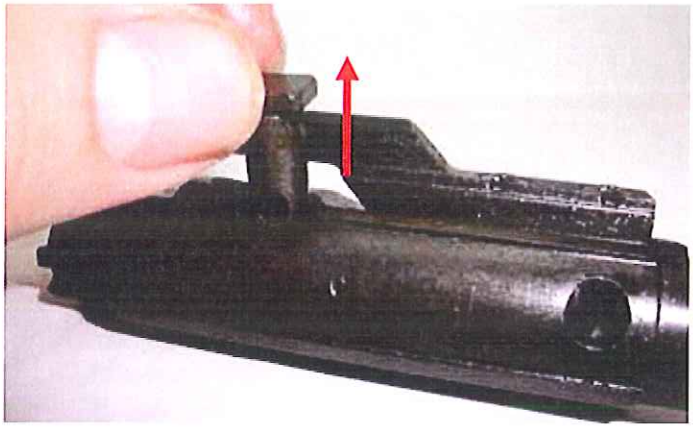
STEP 3. Remove the firing pin.

STEP 4. Push bolt into the locked position.

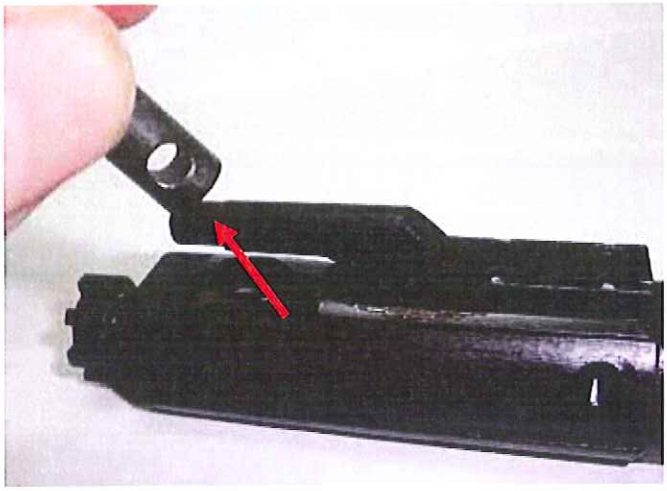
STEP 5. Bolt in the locked position.



STEP 6. Rotate bolt cam pin (61704) turned 90°.

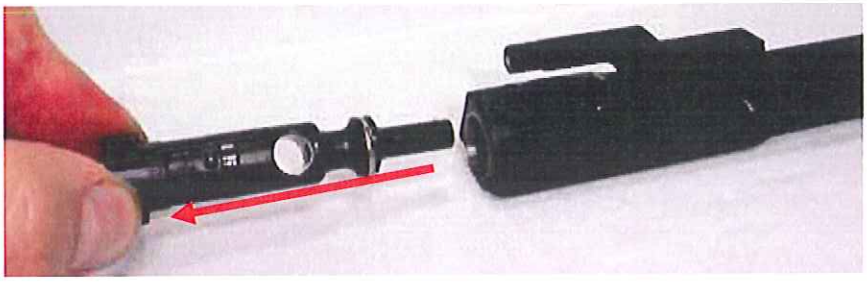


STEP 7. Remove the cam pin (61704).

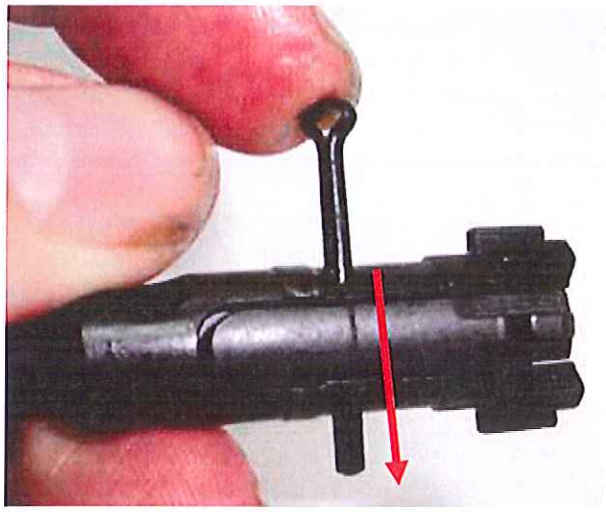


STEP 8. Cam pin (61704) removed.

STEP 9. Remove the bolt assembly.

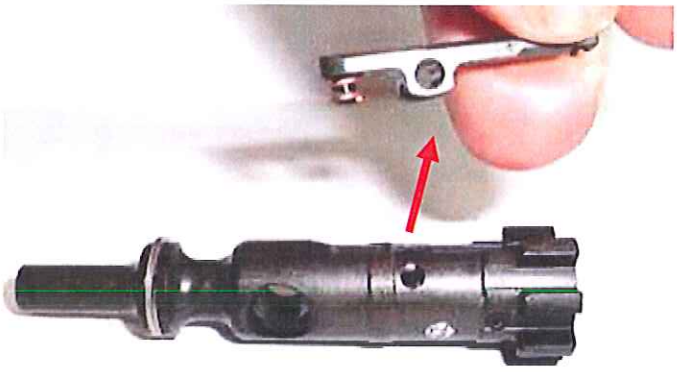


STEP 10. Bolt assembly removed.

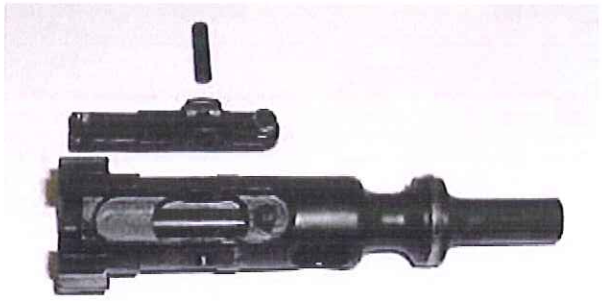


STEP 11. Remove the extractor pin.

NOTE: The firing pin retaining pin may be used to remove the extractor pin. DO NOT use the firing pin due to potential to damage the nose that may cause misfires.



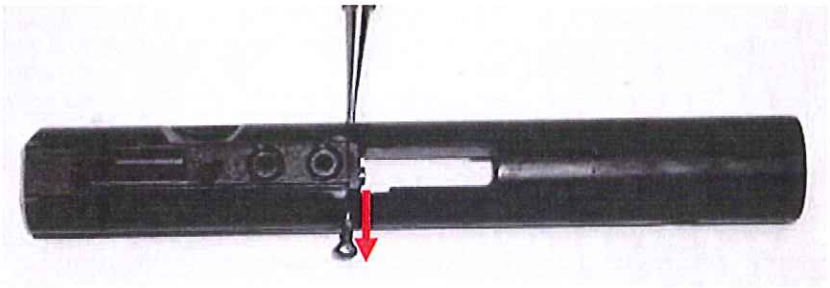
STEP 12. Extractor pin is removed and extractor removed from the bolt.



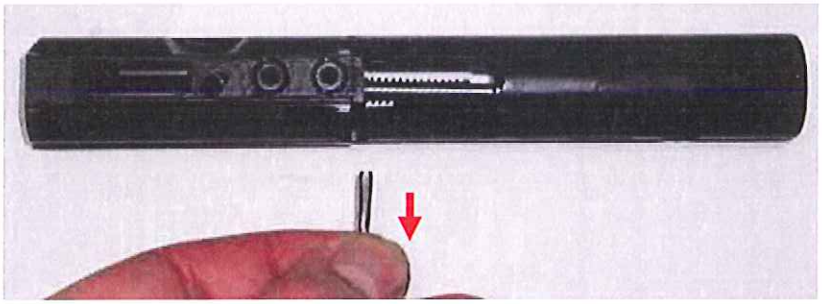
STEP 13. Extractor assembly removed.

Field stripping of the 9mm SMG/Carbine Bolt Group

NOTE: The 9x19mm SMG and carbine bolt only requires removal of the firing pin retainer pin, firing pin and firing pin spring.



STEP 1. Start removal of the firing pin retainer pin.



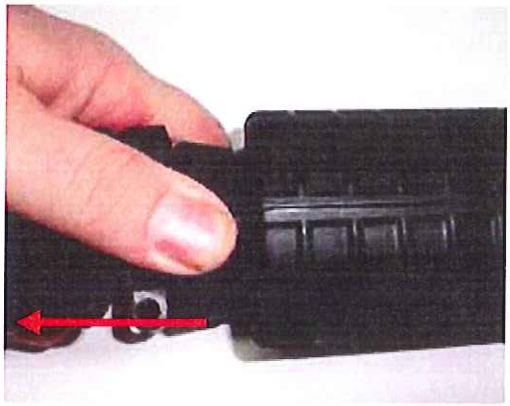
STEP 1. Remove the firing pin retainer pin (62335).

STEP 2. Remove the firing pin and spring.

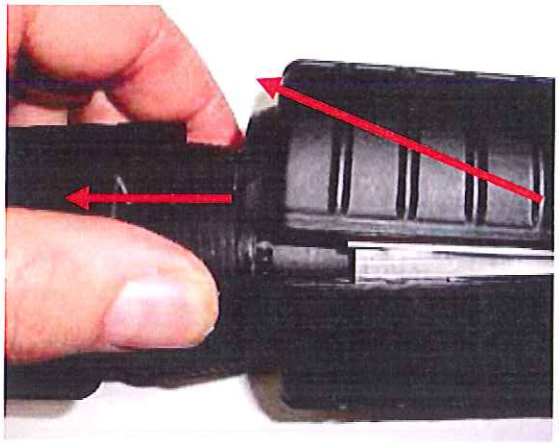
NOTICE THE 9mm SMG/CARBINE WEAPONS UTILISE A FIRING PIN SPRING.

DO NOT ASSEMBLE THE 9MM BOLT ASSEMBLY WITHOUT THE FIRING PIN SPRING.

Handguard Removal and Buttstock Removal (Carbine/Commando)



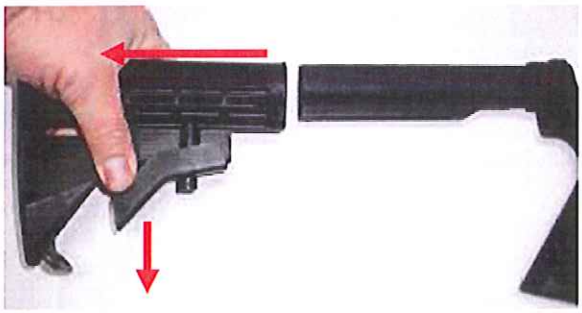
STEP 1. Pull back on the handguard slipring.



Handguards	
Rifle:	
Triangular Left	(62196)
Triangular Right	(62198)
Round Universal	(64508)
Carbine:	
Single Heat Shield	(62381)
Double Heat Shield	(64673)

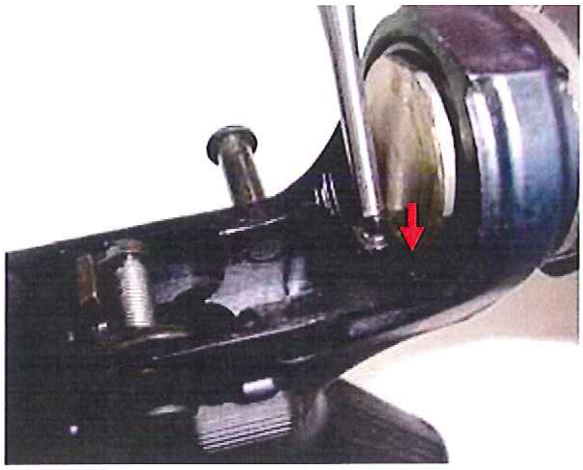
STEP 2. Pull upward on the handguard releasing the handguard from the slipring.

STEP 3. Extend buttstock by compressing upward on the stock latch and pulling the stock rearward.



STEP 4. Remove/install the buttstock.

Buffer and Action Spring Removal



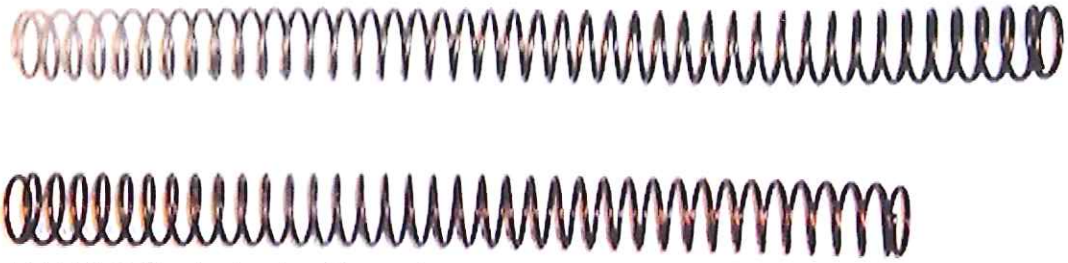
STEP 1. Buffer retainer depressed to start the removal of the buffer assembly.

STEP 2. Depress the hammer and pull buffer and action spring out of the receiver extension.

STEP 3. BUFFER AND ACTION SPRING REMOVED.

Buffer Assemblies

Rifle:	
Early Spring Guide **OBSOLETE**	(61576)
Standard Buffer Assembly	(62339)
9mm Fixed Stock Buffer Assembly	(62877)
.222 Rem Buffer Assembly X 2	(63093)
Polymer Match Target *Semi-Only*	(64016)
Carbine:	
Standard Carbine **OBSOLETE**	(62382)
H Buffer *Use With Standard Barrel*	(64688)
H2 Buffer *Use With Heavy Barrel*	(65068)
H3 Buffer *Use With IAR6940*	(4000032)
9mm:	
9mm SMG	(62913)
9mm Semi-Auto Carbine	(62849)

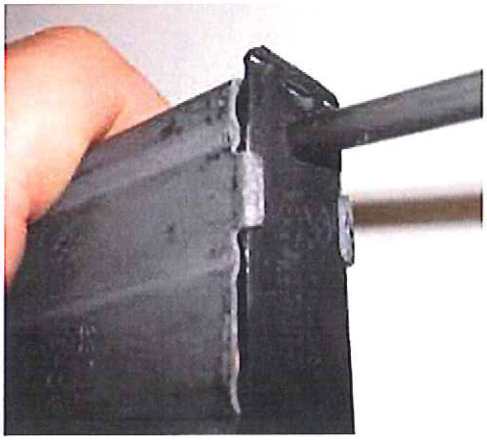


(61581) Rifle Action/Buffer Spring (top) 11 ¾-inch minimum with a 13-½ inch maximum. Shiny steel color. Total of 44 coils.

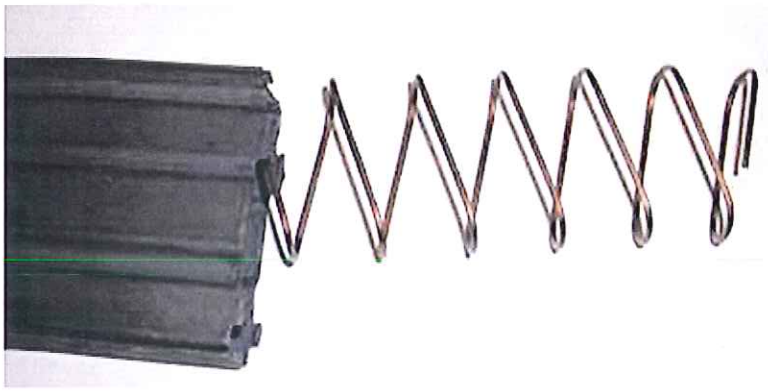
(62373) Carbine Action/Buffer Spring (bottom) 10 1/16-inch minimum with an 11-¼ maximum. Copper in color. Total of 38 coils.

Magazine Disassembly

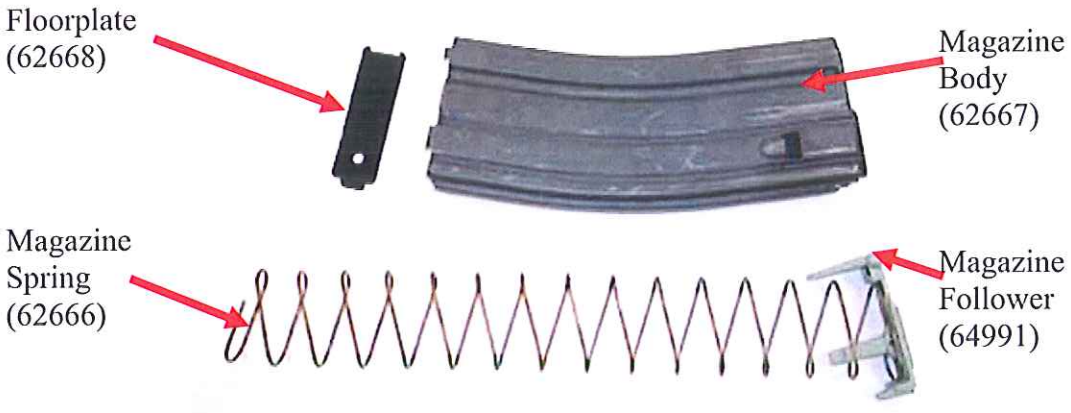
30-Round 5.56mm Magazine (62328)



STEP 1. Floor plate removal.

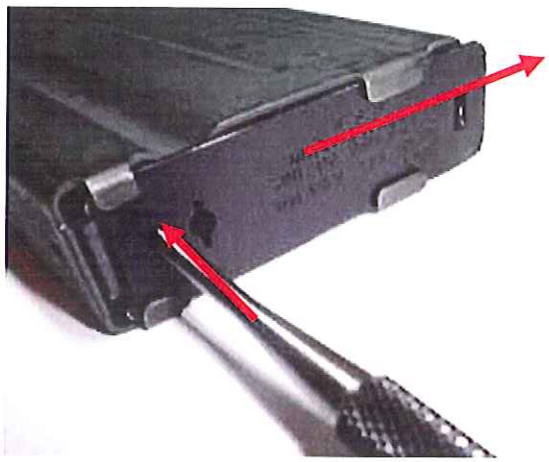


STEP 2. Magazine spring removal.



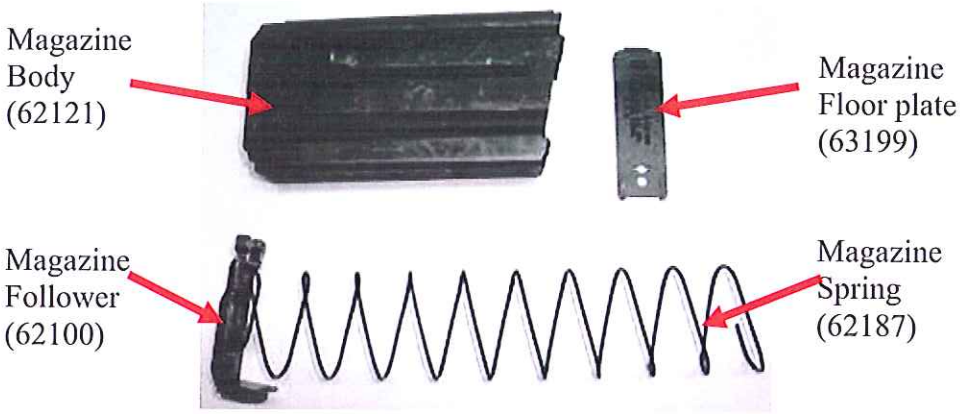
STEP 3. Magazine spring and follower removed.

20 Round 5.56mm Magazine (62103)



STEP 1. Depress locking tab and slide the floor plate to the right.

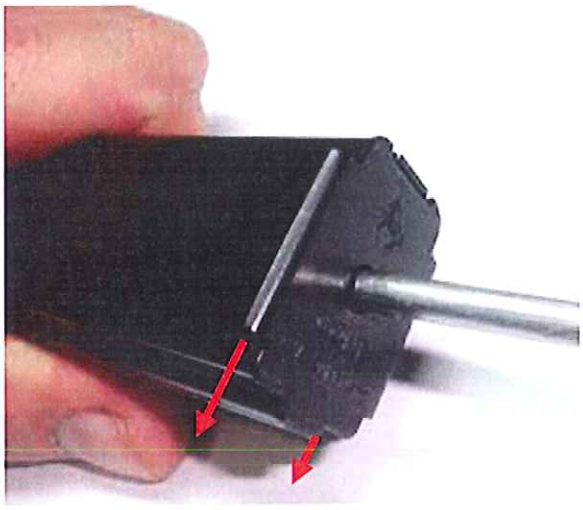
STEP 2. Remove the floor plate and pull out the magazine spring and follower.



Completely disassembled 20 round magazine.

To reassemble magazine, insert the magazine follower and spring. Slide floor plate in. Depress locking tab to allow the floor plate to clear and slide all the way forward until the locking tab engages the floor plate.

9mm SMG 20 (62857) and 32 Round (62858) Magazine Disassembly



Step 1. With a cleaning rod or suitable instrument, depress the magazine lock plate and slide the floor plate rearward.

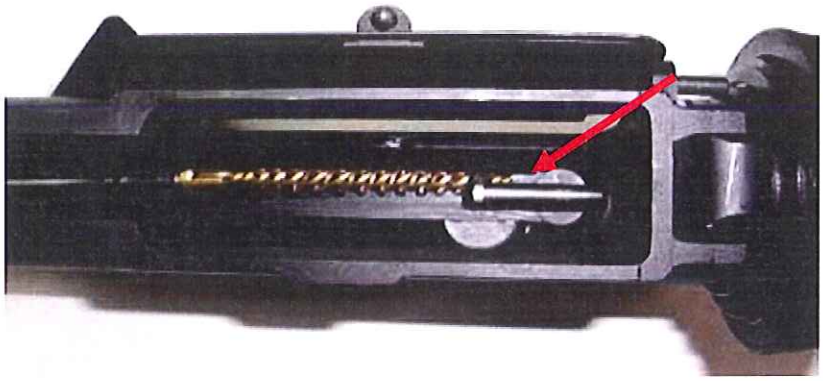
Step 2. Remove the lock plate spring and follower.

Step 3. Fully disassembled 9mm SMG magazine.

To clean the magazine after disassembled, utilize a cleaning brush and remove all debris and dirt from the feed lips and inside and outside surfaces of the magazine. DO NOT LUBRICATE THE INSDE OF THE MAGAZINE NOR THE AMMUNITION!!!

Cleaning with Bore Brush

STEP 1. Run a solvent soaked bore brush down the bore three times. Do not switch directions inside of the barrel.

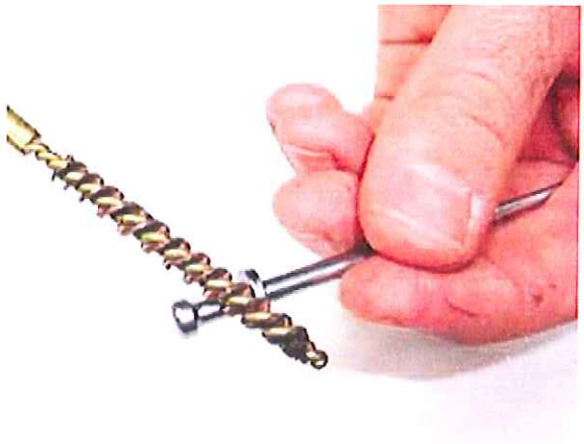


STEP 2. Scrub the inside of the lower receiver and the gas tube. Remove any fouling.

******BE CAREFULL NOT TO BEND/DISRUPT THE GAS TUBE. ******

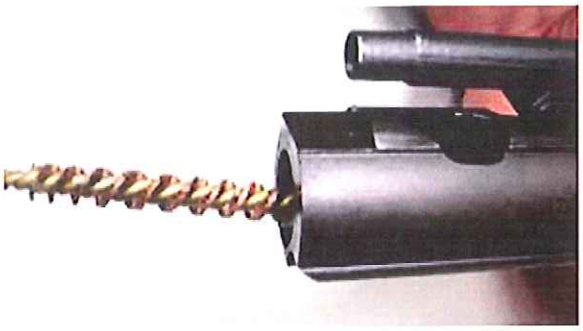
STEP 3. Scrub the locking lugs on the bolt and remove any fouling.

STEP 4. Scrub the rear of the bolt to get any fouling off.

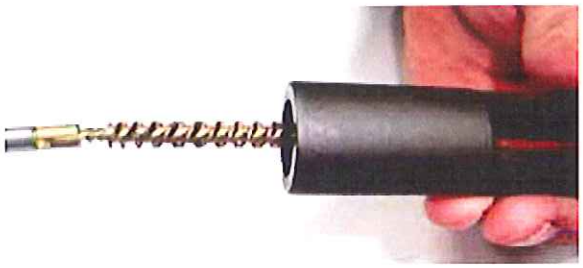


STEP 5. Scrub any fouling off of the firing pin.

STEP 6. Scrub any fouling on the cam pin.

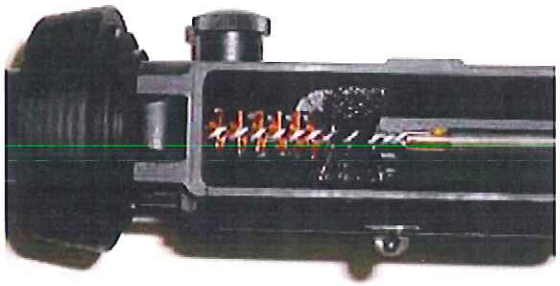


STEP 7. Scrub the inside of the mouth of the bolt carrier. Remove any carbon deposits.

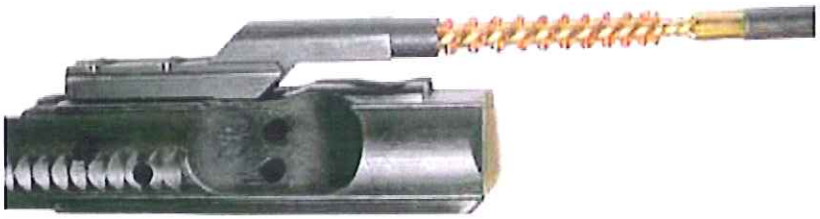


STEP 8. Scrub inside the rear of the bolt carrier.

Cleaning Chamber and Carrier Key

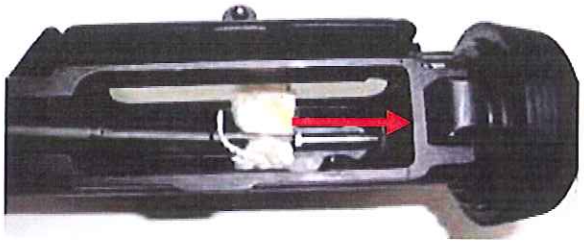


STEP 1. With the chamber brush, scrub the receiver extension and chamber. Rotate the brush to scrub.

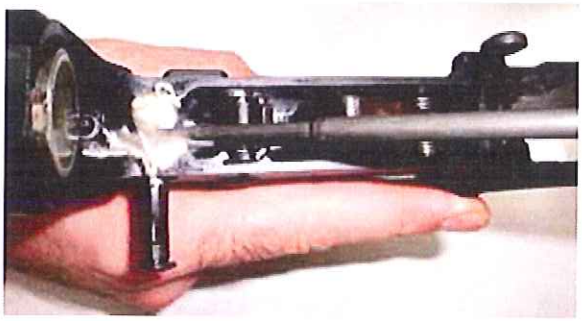


STEP 2. With the bore brush, scrub the inside of the carrier key.

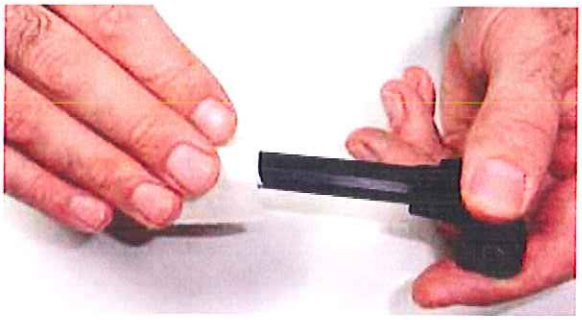
Wiping Parts Clean and Dry. Cleaning Buttstock Drain Hole



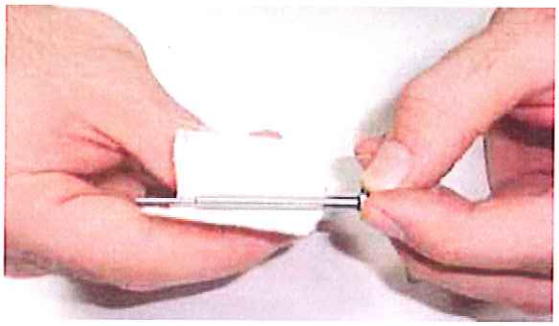
STEP 1. With a clean patch, run it through the barrel. Repeat until the patch comes out clean.



STEP 2. Wipe the inside of the lower receiver, the firing mechanism as well as the magazine well.

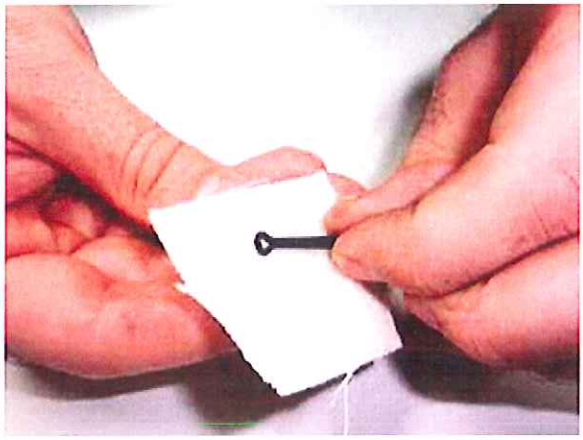


STEP 3. Wipe the inside and outside of the charging handle.

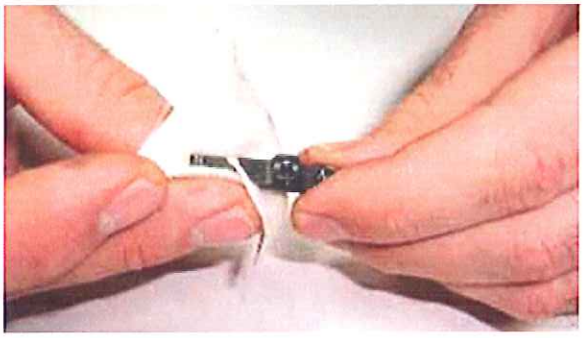


STEP 4. Wipe the firing pin.

STEP 5. With a pipe cleaner, clean the firing pin hole in the cam pin.

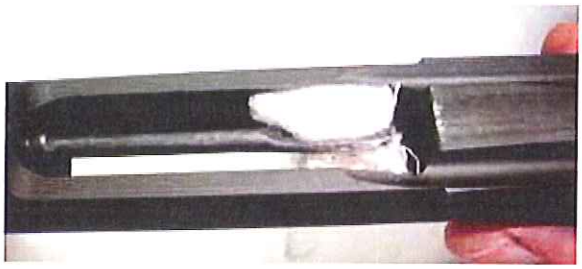


STEP 6. Wipe the firing pin retainer pin.

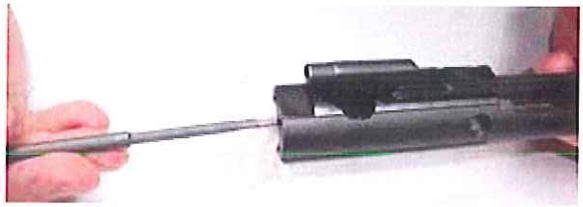


STEP 7. Wipe the extractor. Be sure fouling is cleaned from the extractor groove/hook.

STEP 8. With a pipe cleaner, clean the inside of the bolt carrier key.

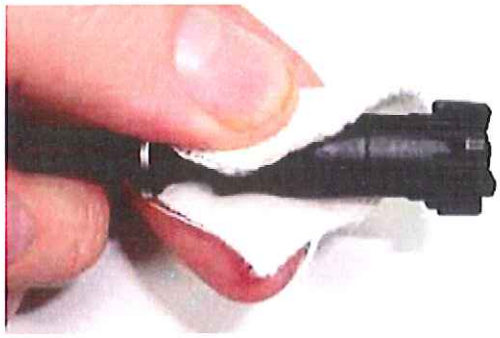


STEP 9. Wipe the inside of the rear of the bolt carrier and remove any dirt or fouling.

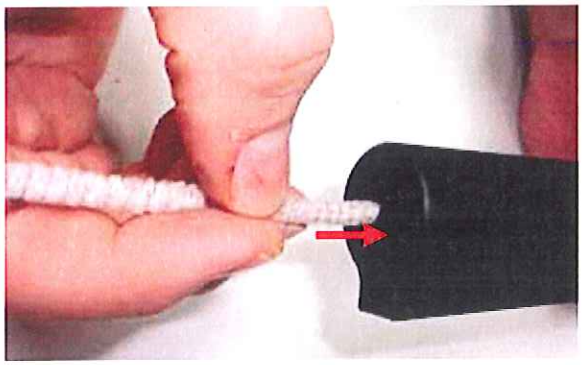


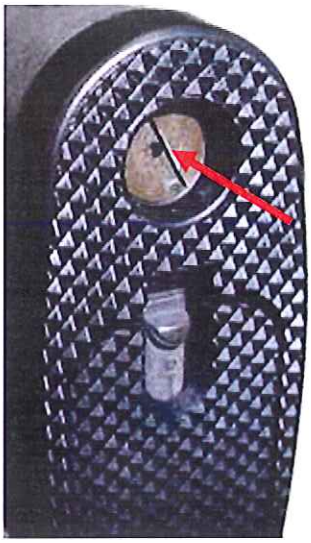
STEP 10. Wipe the inside of the mouth of the bolt carrier. Ensure no carbon buildup.

STEP 11. With a pipe cleaner, wipe the firing pin channel inside the bolt.



STEP 12. Wipe the outside of the bolt.





STEP 13. With a pipe cleaner, clean the drain hole on the rear of the receiver extension of both the carbine and rifle receiver extensions.

STEP 14. Wipe the outside and inside of the rifle buttstock as well as the inside and outside of the sliding carbine buttstock.

Using a fiber or nylon brush and dry-cleaning solvent, clean the remaining parts of weapon and magazine.

WARNING: MOST CLEANING CHEMICALS ARE TOXIC AND MAY BE VERY HARMFUL IF THEIR VAPORS ARE INHALED FOR EXTENDED PERIODS. THEREFORE, THESE CHEMICALS SHOULD ALWAYS BE USED SPARINGLY AND ONLY IN A WELL VENTILATED AREA.

Wipe all parts of the weapon clean and dry with a clean, dry, cotton wiping rag; pipe cleaners, and cleaning swabs. When wiping out the barrel bore use a new swab inserted in the cleaning rod swab holder for each pass through the barrel. Continue this process until a swab comes out of the barrel clean and dry.

Clean out drain hole in rifle butt cap screw and in Carbine/Commando receiver extension tube using a pipe cleaner or similar item.

Inspection

After cleaning inspect all parts for excessive wear, corrosion, or mechanical damage. If any of these faults are discovered the weapon should be turned in for repair. Also inspect magazine components for cracks, distortion, or excess wear. If any of these conditions are found the magazine should be replaced.

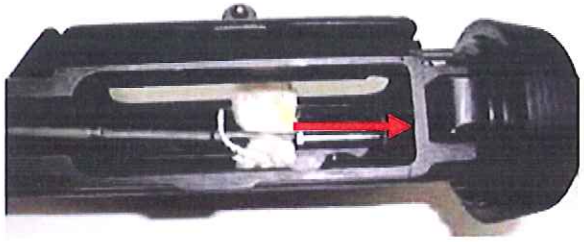
Lubrication

After the parts have been cleaned and inspected, all metal parts shall be wiped with cotton wiping cloth or cleaning swabs, which have been lightly oiled with LSA or equivalent lubricant. A lightly oiled swab installed in the cleaning rod swab holder shall be run through the barrel bore once.

IMPORTANT: The chamber must be lubricated but it is important that only a thin film of lubricant be applied. Then apply one drop of LSA or equivalent lubricant to each of the places shown. An exception to the above is the magazine. The only part to be wiped and oiled is the magazine spring.

Internal Lubrication of Barrel Bore

STEP 1. Apply lubricant to a patch.



STEP 2. Lubricate the bore and chamber lightly.

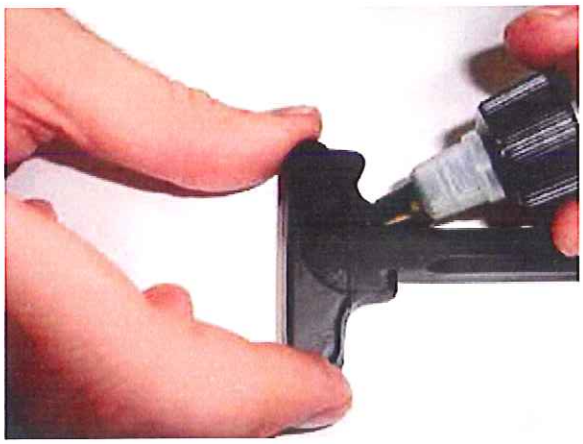
Application of CLP Lubricant (Or Equivalent)

STEP 1. Lightly lubricate all springs, detents, moving parts and pins.

STEP 2. Lubricate the forward assist.

STEP 3. Lubricate the ejection port cover latch.

STEP 4. Lubricate the ejection port cover spring.



STEP 5. Lubricate the charging handle latch.

STEP 6. Lubricate the charging handle latch spring.

STEP 7. Place three drops of lubricant in the inside of the bolt.

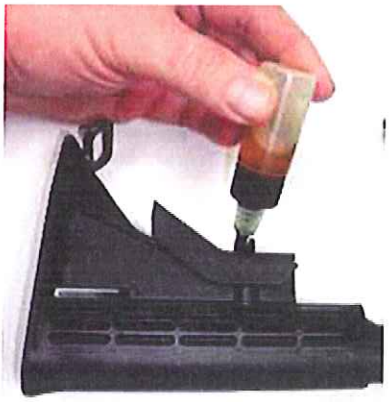
STEP 8. Place three drops of lubricant inside of the bolt carrier key.

STEP 9. Apply one drop of lubricant to each gas exhaust ports on the bolt carrier.

STEP 10. Apply one drop of lubricant to the front sight detent pin.

STEP 11. Apply one drop of oil to the rear sight windage knob and shaft.

STEP 12. Apply one drop of lubricant the rear sight detent and spring (On models with standard windage adjustable only field sights).

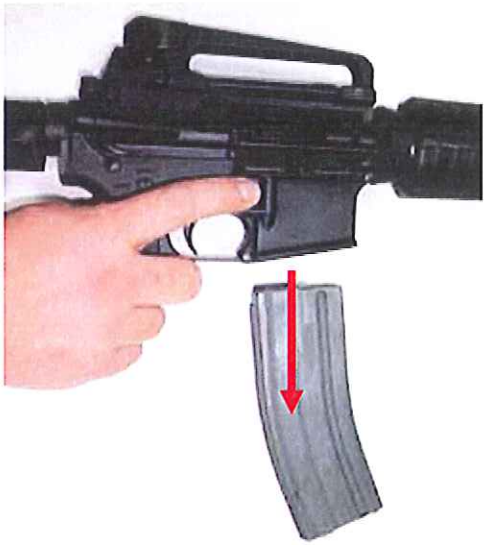


STEP 13. Release lever pin (after assembly) on carbine and Commando models.

SECTION 3 Operation in Usual and Unusual Conditions

This section tells you how to operate the M16A2/A4, M4, commercial and law enforcement weapons under usual conditions. Usual conditions mean moderate temperatures and moderate humidity.

Clearing



STEP 1. Remove the magazine. Press the magazine release button and drop the magazine from the rifle into your hand.

STEP 2. Pull the charging handle/bolt to the rear and ensure there is no cartridge in the chamber.

STEP 3. Set the selector lever into the safe position.

Loading

Loading the Magazine

Some 20 round 5.56/9x19mm magazines may still be in use, however the standard magazine has a capacity of 30 rounds of 5.56mm and 32 rounds of 9x19mm which may be loaded with any number of rounds up to that capacity. The magazine follower has a raised portion resembling the outline of a cartridge. Cartridges are loaded into the magazine so that the tips of the bullets point in the same direction as the smaller end of the raised portion of the follower.

Loading from Stripper Clips

Ammunition may be dispersed in standard 10 round stripper clips. Insert the stripper clip loader on the rear top portion of the magazine until it seats. Drop one end of the stripper clip in the slot on the stripper clip loader. Push the top cartridge rear directly down until all 10 rounds load into the magazine. Remove the empty stripper clip from the stripper clip loader and repeat this process until the magazine is full to capacity.

WARNING: TO REDUCE RISK OF ACCIDENTAL DISCHARGE SET THE FIRE CONTROL SELECTOR TO THE SAFE POSITION BEFORE LOADING THE RIFLE. (THE RIFLE CAN ONLY BE PLACED IN THE SAFE POSITION IF THE HAMMER IS COCKED.)

Loading the Weapon The magazine may be inserted with the bolt in the open or closed position. Grasp the pistol grip, point the muzzle in a safe direction and insert the magazine into the magazine well of the rifle. Push upward with sufficient force to ensure the magazine catch has engaged and is holding the magazine. If the bolt carrier is locked to the rear (preferred) push inward on the upper portion of the bolt catch and release the bolt carrier group to chamber a round from the magazine. If the bolt carrier is in the forward position, grasp the charging handle pulling the bolt carrier group fully to the rear and release it to chamber a round.

NOTE: Do not "ride" the charging handle forward with the hand. If the charging handle is eased forward from the open position, the bolt may fail to fully close and lock. If the bolt fails to lock, tap on the forward assist assembly.

The weapon is now loaded and can be fired when the fire control selector is in the SEMI (FIRE), AUTO or BURST position and the trigger is pulled.

WARNING: IF NOT READY TO FIRE, SET THE FIRE CONTROL SELECTOR TO "SAFE" TO REDUCE RISK OF A NEGLIGENT DISCHARGE.

PRECAUTIONS FOR AMMUNITION

Ammunition that is corroded should not be fired.

Ammunition that has been reloaded should be avoided.

Cartridge cases are easily dented and should be protected from hard knocks and blows. Dented cartridge cases may be difficult to chamber. The mechanism may jam and be difficult to lock and extract.

Cartridges which have been seriously damaged, or those having loose bullets or bullets pushed into the cartridge case should not be used.

Cartridges should be kept clean. While operating in sandy environments, the cartridges should be removed from the magazine and have any sand or debris cleaned off and reloaded into the magazine.

Cartridges whose temperature has been raised to 55°C (130°F), (uncomfortable to hold) or more, due to exposure to the sun, or other sources of heat, should not be fired as

dangerously high chamber pressures may result. When returned to lower temperatures, these cartridges should be safe to fire.

If a cartridge remains in the chamber of a very hot weapon at any time firing is interrupted, the cartridge should be removed immediately or there should be a 15-minute wait to prevent the possibility of injury to personnel in the event of a cartridge cook-off.

Bullet in Barrel

If a noticeable difference in sound or recoil is experienced or if there is any reason to suspect that a bullet is stuck in the barrel, immediately unload the firearm and look through the bore, not just in the chamber. A bullet may be lodged down the barrel that cannot be easily seen. If a bullet is stuck in the barrel, bring the firearm to a competent gunsmith to dislodge the bullet.

WARNING: IF A BULLET IS STUCK IN THE BARREL, DO NOT ATTEMPT TO SHOOT IT OUT BY USING ANOTHER CARTRIDGE, OR BY BLOWING IT OUT WITH A BLANK, AS DOING SO COULD GENERATE EXCESS PRESSURE, CAUSE DAMAGE TO THE FIREARM, OR CAUSE SERIOUS PERSONAL INJURY OR DEATH.

Firing

Fire Control Selector- Depending on the model of the rifle, the rifle may have a SAFE or FIRE settings. FIRE would be semi-automatic only. Selective fire models may have SAFE, SEMI, AUTO or BURST.

Semi-Automatic/Fire Position- When the fire control selector is set to SEMI or FIRE, the weapon will fire one round each time the trigger is pulled until the magazine is empty.

Auto Position- With the fire control selector set to AUTO and the trigger pulled the weapon will continue to fire until the trigger is released or the magazine is empty.

Burst Position- When the fire control selector set to BURST and the trigger is pulled the weapon will fire three rounds of automatic fire until the trigger is released or the magazine is empty.

NOTE: Colt offered an "Enhanced" model that has a 4-way selector. The weapon will fire in SEMI, AUTO and 3-round BURST. The selector lever rotates 360°.

NOTE: When the last round is fired the bolt will lock in the open position.

Stoppage and Immediate Action

Stoppage. A stoppage is any unintentional interruption of operation of the firearm due to a malfunction. Immediate action must be taken to clear stoppages.

Immediate Action. Immediate action is that taken to clear a stoppage without analyzing the cause. Immediate action is as follows:

Strike the forward assist assembly to ensure that the extractor has engaged the rim of the cartridge case. Tap upward on the magazine to be sure the magazine is fully seated. Pull the charging handle fully to the rear. Watch for the ejection of a complete cartridge or cartridge case.

If cartridge case is ejected, release the charging handle to feed a new round (do not ride the charging handle forward). Strike the forward assist assembly to assure bolt is closed. Attempt to fire the weapon. If the weapon fails to fire, inspect to determine the cause of malfunction and take appropriate action as indicated in Trouble Shooting. Page 184.

If cartridge case is not ejected, check for a round in the chamber. If the chamber is clear, release the charging handle to feed a round, strike the forward assist assembly, and attempt to fire. If the weapon still fails to fire, inspect to determine cause of malfunction and take appropriate actions as indicated in Trouble Shooting.

If a cartridge case is seen in the chamber, it must be removed before attempting to reload or recycle. A stuck cartridge or case can usually be removed when inserting a cleaning rod into the bore from the muzzle end and tapping lightly until the chamber is clear. Be sure to stay clear of both ends of the barrel while clearing it.

Misfires and Cook-Offs

General. The malfunctions described in the following paragraphs are rarely encountered when properly maintained ammunition of the correct type is fired in properly maintained and operated weapons. However, all personnel concerned with the weapon must understand the nature of each kind of malfunction as well as the proper preventative and corrective procedures in order to maintain firepower and avoid injury to personnel or damage to property.

Misfires. A misfire is a complete failure to fire, which may be due to a faulty firing mechanism in the weapon or a faulty element in the propelling charge explosive train of the cartridge.

Cook-Off. A cook-off is a functioning of any or all of the explosive components of a cartridge chambered in a very hot weapon because of heat from the weapon.

Precautions After failure to fire, take the following general precautions as they apply.

WARNING: A COOK-OFF COULD OCCUR ANY TIME AFTER CHAMBERING A ROUND IN A VERY HOT BARREL.

Immediate Action- To prevent damage of injury from cook-off when barrel is very hot, complete the following actions immediately:

Remove magazine.

Pull the charging handle fully rearward. If chamber is empty, lock the bolt carrier open by depressing the bolt catch.

Allow barrel to cool for 15 minutes.

If a round remains in chamber, release the charging handle, allow bolt to move forward and strike the forward bolt assist.

Fire round if safe to do so.

If not safe to fire-lay weapon on the ground pointing in a safe direction with ejection port towards the ground, and step back.

Stand clear, keep others clear, and wait 15 minutes for barrel to cool.

WARNING: COOK-OFF COULD OCCUR DURING THIS COOLING PERIOD.

After the barrel is cool, remove round from chamber. Have the weapon checked by the unit armorer before it is fired again.

Water in the Barrel

WARNING: DO NOT ATTEMPT TO FIRE THE WEAPON IF WATER IS PRESENT IN THE BARREL. IMMERSION DURING WADING, HEAVY RAIN, OR FOG CAN CAUSE WATER TO BE PRESENT IN THE BARREL.

Observe the following procedures to empty water from the barrel.

NOTE: Make certain the muzzle cap is removed before performing the following procedure.

Point muzzle down.

Pull charging handle slightly rearward to vent the barrel, and shake the weapon vigorously to allow water to drain from the muzzle.

Push the forward assist to make sure the round is seated in the chamber and the bolt is locked. The weapon can now be fired.

NOTE: Clean and lubricate as soon as possible after the weapon gets wet.

Unloading - Perform the same steps as clearing the weapon on page 54-55.

OPERATING INSTRUCTIONS-UNUSUAL CONDITIONS

General

This section provides operational information for the M16A2/M16A4 rifles, M4 carbines, commercial and Law Enforcement weapons in UNUSUAL conditions where there are extremes of heat, cold or humidity.

Operation in Extreme Cold

In climates where the temperature is consistently below 0°F, (-18°C), it is necessary to prepare the weapon for cold-weather operation. The weapon should be cleaned. It should be lubricated with Lubricant Automatic Weapons (LAW) or its equivalent should be used rather than CLP.

Exercise the various controls through their entire range at intervals to keep them from freezing in place and to reduce the effort required to operate them.

Weapons not in use and stored outside must be protected with an appropriate cover.

Hot Climates

When operating in hot climates the coating of oil necessary for operation and preservation will dissipate quickly. Inspect the weapon frequently, paying particular attention to all hidden surfaces of the bolt carrier group, forward assist assembly and lower receiver components.

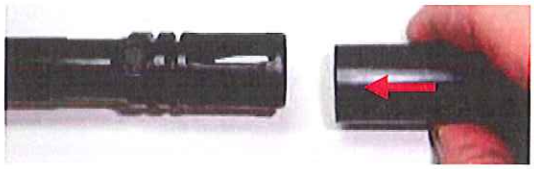
Perspiration contributes to corrosion because it contains acids and salts. After handling the rifle should be cleaned, wipe dry, and oiled using CLP or equivalent.

Hot, Dry Climates

Clean and oil the bore of the weapon more frequently when operating in hot, dry climates.

Operating in Dusty and Sandy Areas

Clean and lubricate the weapon more frequently. Take care to keep sand out of the mechanism when inspecting and lubricating the weapon. If necessary, use a tarpaulin to shield parts from flying sand and dust during disassembly and assembly. Clean and lubricate after operating the weapon. Cover the muzzle with a protective cap (91182) and keep the ejection port cover closed.



Installing Protective Muzzle Cap (91182)

Protective Muzzle Cap (91182) Installed

Protective Cap (91182) Features

The cap should be removed before firing the weapon. However, the cap is designed so that a bullet will pass through the end without affecting accuracy and without causing a safety hazard to the user.

Do not place the cap on a hot muzzle. The plastic will become soft and form into the grooves of the compensator making the cap ineffective and difficult to remove.

Operations Under Hot, Rainy or Very Humid Conditions and in Salt Water Areas

Inspect the weapon more frequently when operating in hot, moist areas.

When the weapon is not in use, clean and lubricate the bore, chamber, and exposed metal surfaces more frequently than that prescribed for normal service. Put a very **thin** film of oil on the chamber and bore.

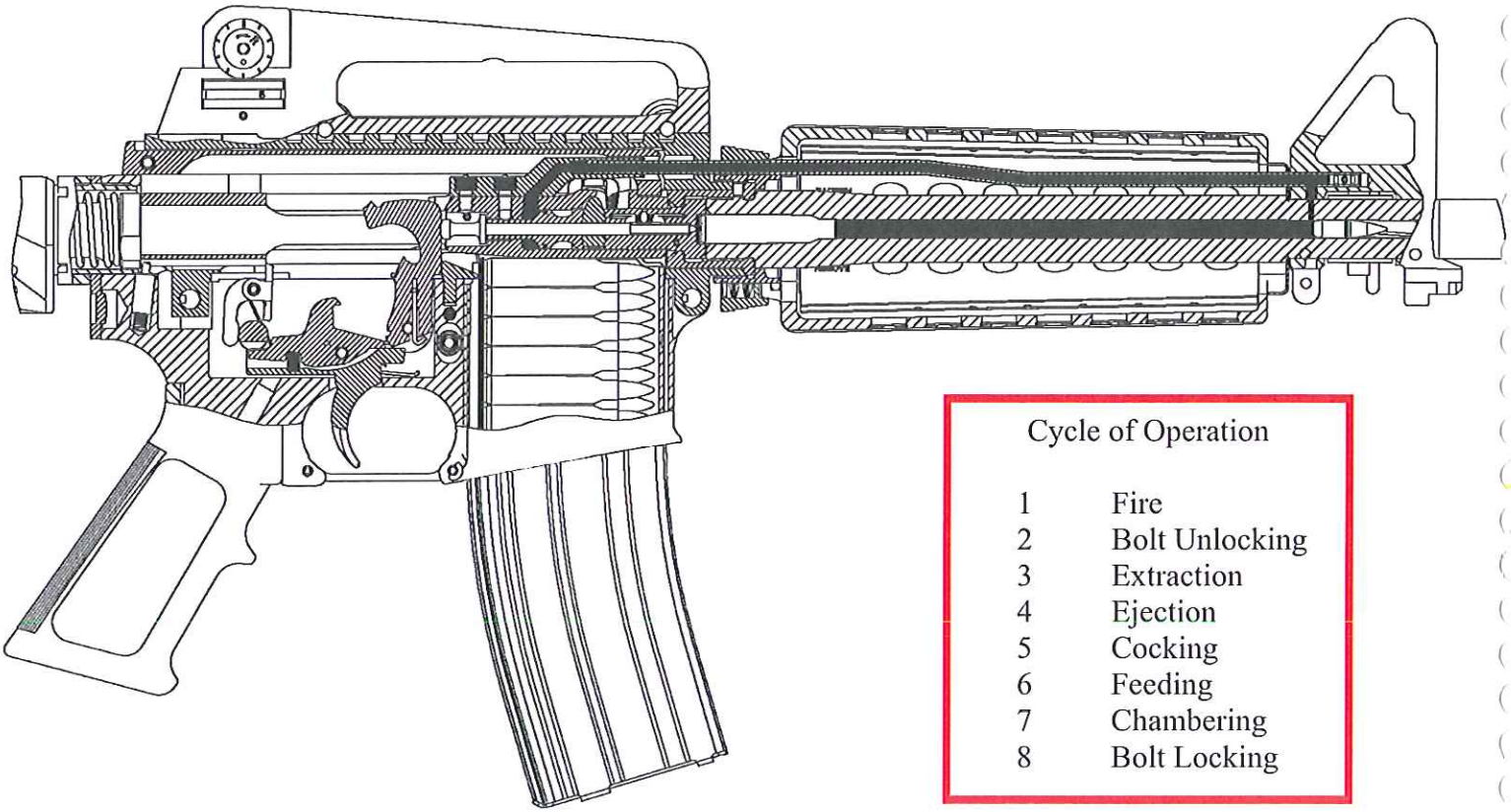
Moist and salty atmospheres have a tendency to mix with oil and grease and destroy their rust preventative qualities. Inspect all parts frequently for rust or corrosion.

When the weapon is not in use or to be placed in storage, cover all metal surfaces with a film of CLP oil or equivalent.

SECTION 4 Cycle of Operation

Cycle of Operation (5.56x45mm Weapons)

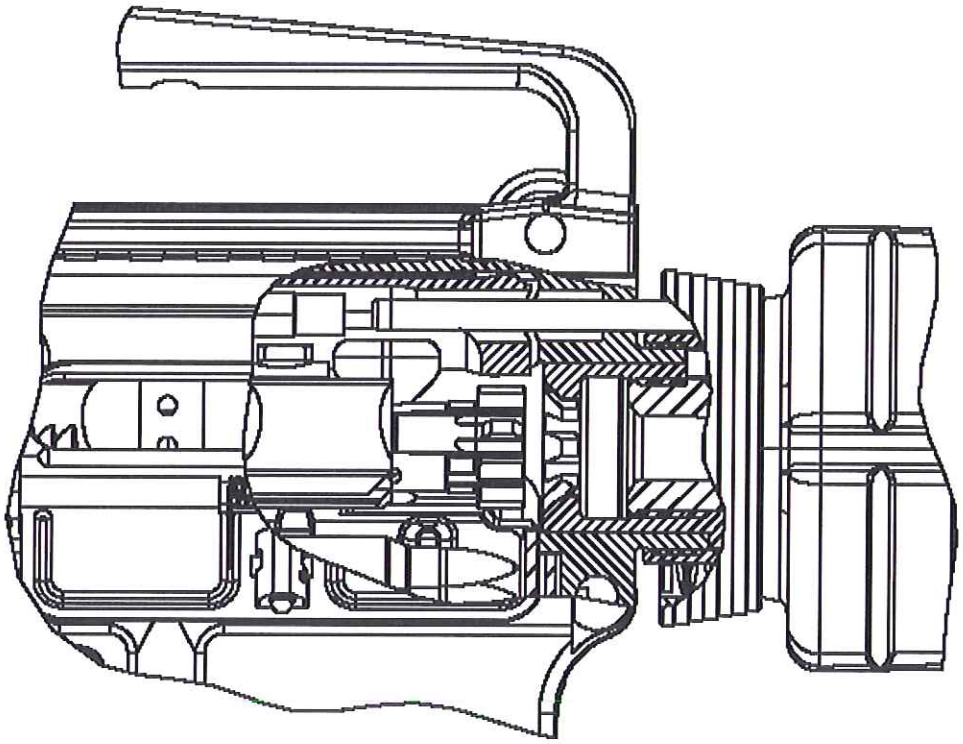
The cycle of operations remains the same regardless of the fire control group type. The cycle of operations of the M16 and M4-family of weapons is described as follows:



Cycle of Operation	
1	Fire
2	Bolt Unlocking
3	Extraction
4	Ejection
5	Cocking
6	Feeding
7	Chambering
8	Bolt Locking

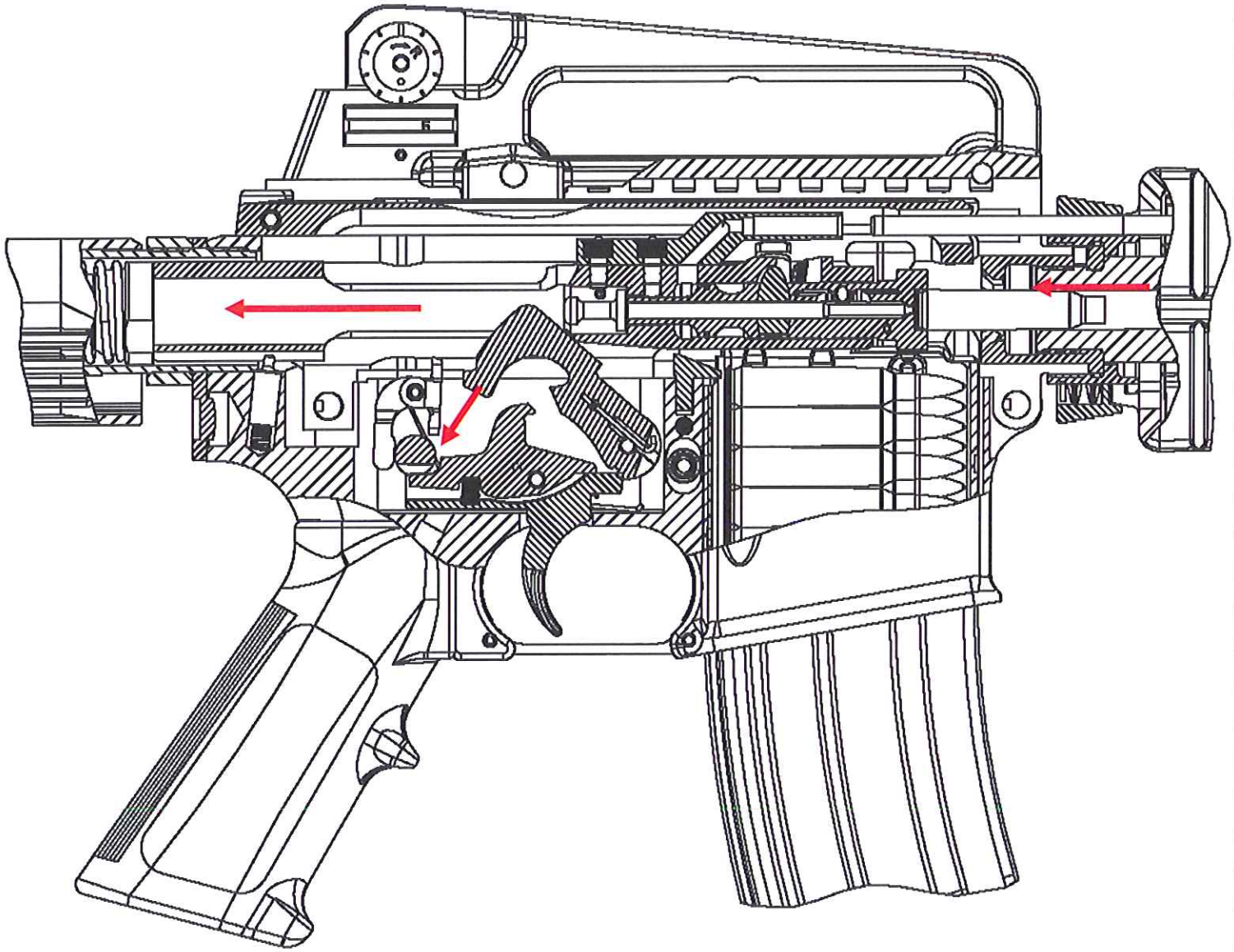
1-Firing

With the fire control selector, located on the left side of the lower receiver set in either AUTO/BURST or SEMI, the weapon is fired by pulling the trigger. When the trigger is pulled, the hammer is released. The hammer strikes the firing pin, which strikes the primer on the back of the cartridge. A spark is created igniting the propellant in the cartridge. As the gases inside the cartridge rapidly expand, the bullet is driven out of the cartridge case and engages the rifling. The compensator directs the rest of the propellant gases and flames out the muzzle and upward. This helps keep the muzzle down, reduces the flash, and minimizes the amount of dust and dirt raised when fired close to the ground.



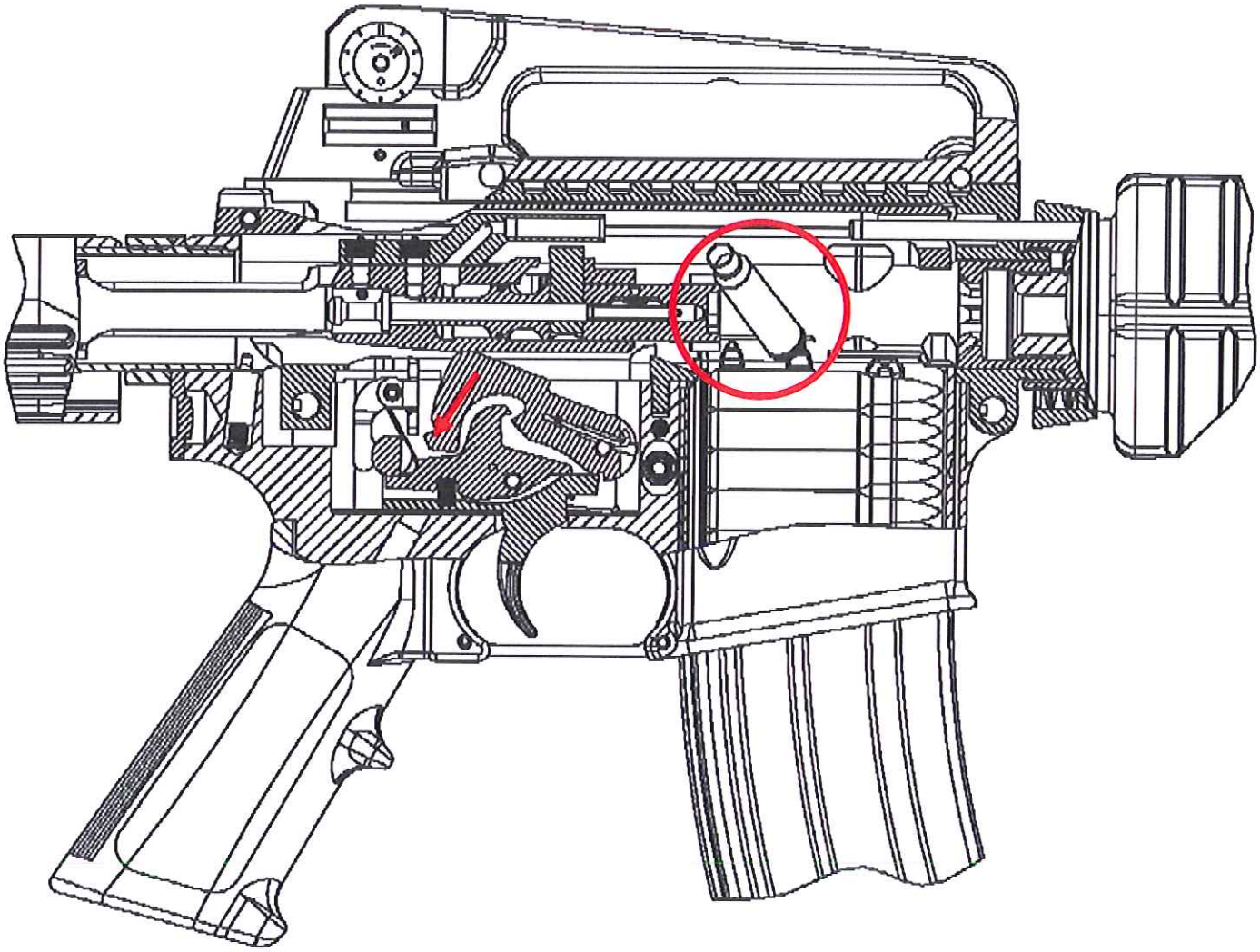
2-Unlocking

The pressure of the gas generated by the burning propellant drives the projectile down the barrel and past the gas port. A small quantity of the gas is bled off. It passes through the gas port located under the front sight assembly and rearward into the gas tube. The gas now enters the carrier key on top of the bolt carrier into the expansion chamber created between the back of the bolt and carrier. Here the gas expands evenly against the back of the bolt carrier and begins to drive the carrier rearward. This movement causes the cam pin to be moved along the cam track to unlock the bolt locking lugs from the barrel extension.



3-Extraction

As the bolt carrier group moves rearward, the extractor that is engaged to the extractor groove on the rim of the cartridge case, pull the fired cartridge case from the chamber of the rifle



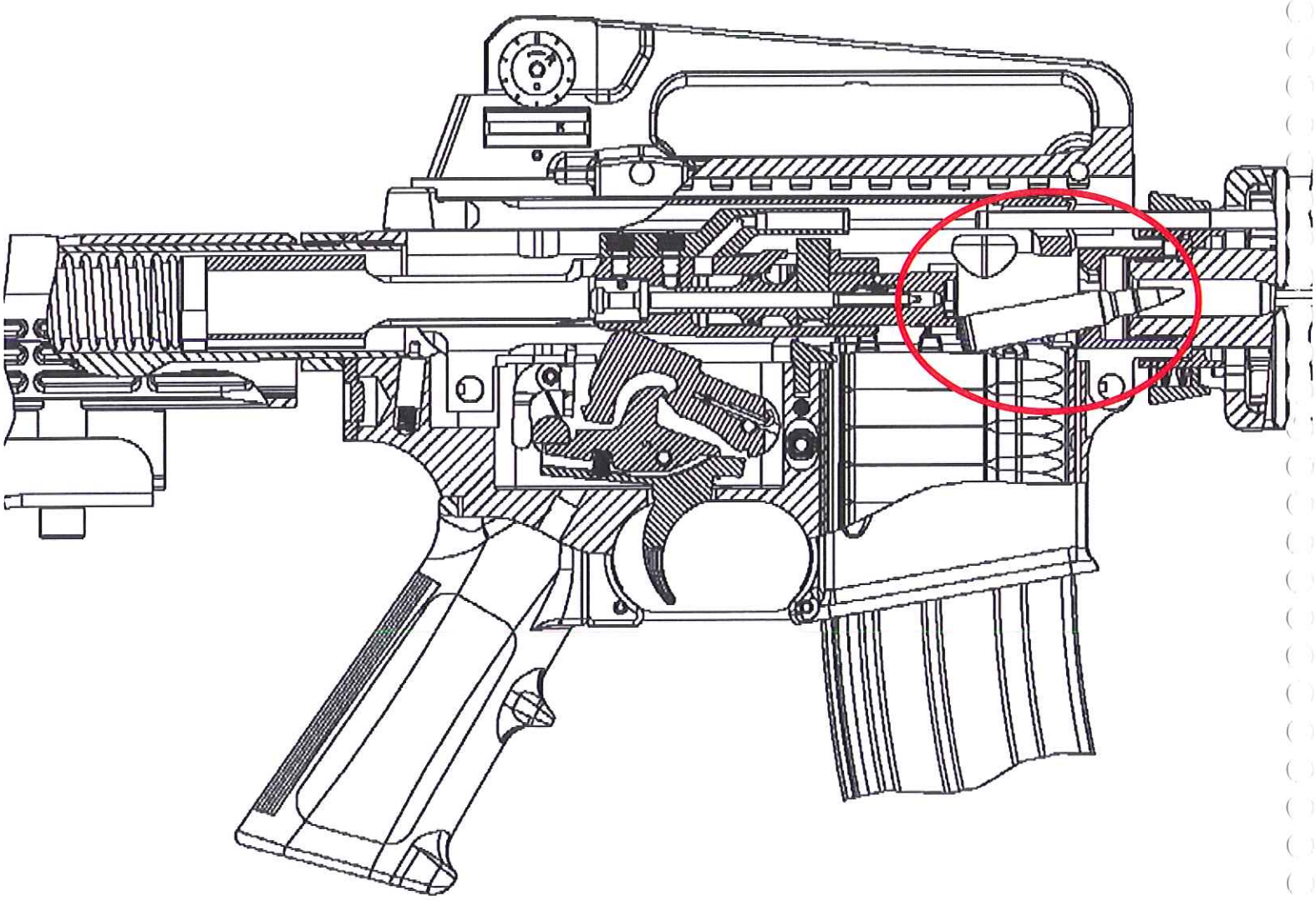
4-Ejection and 5-Cock

When the fired cartridge case clears the chamber the spring-loaded ejector, acting against the left side of the case head, pushes the fired cartridge case out of the ejection port.

Cocking (after firing)
As the carrier group continues rearward in recoil, it compresses the action spring and cocks the hammer.

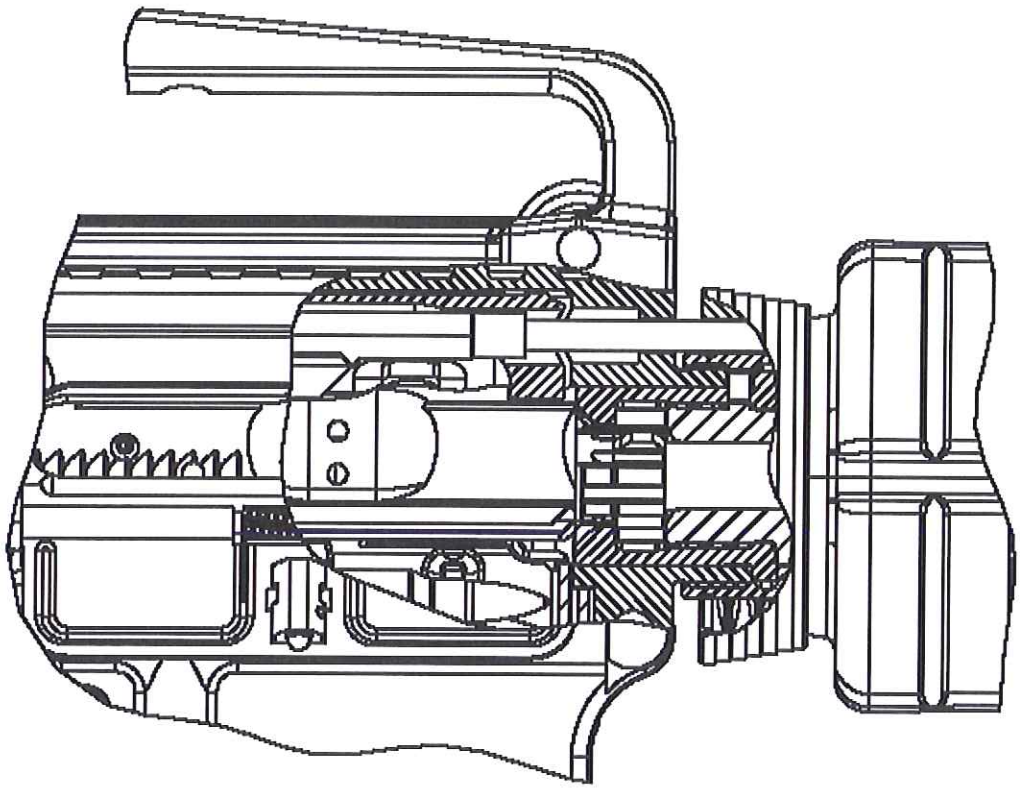
Buffering
The rearward or recoil movement of the carrier group is arrested by the buffer assembly acting against the rear of the receiver extension.

Counter-Recoil
After buffering, the action spring forces the carrier forward toward the chamber.



6-Feeding and 7-Chambering

By the spring force of the action spring the bolt carrier group moves forward and the bottom two lugs on the bolt pick up a cartridge from the magazine and feeds the cartridge from the magazine into the chamber.



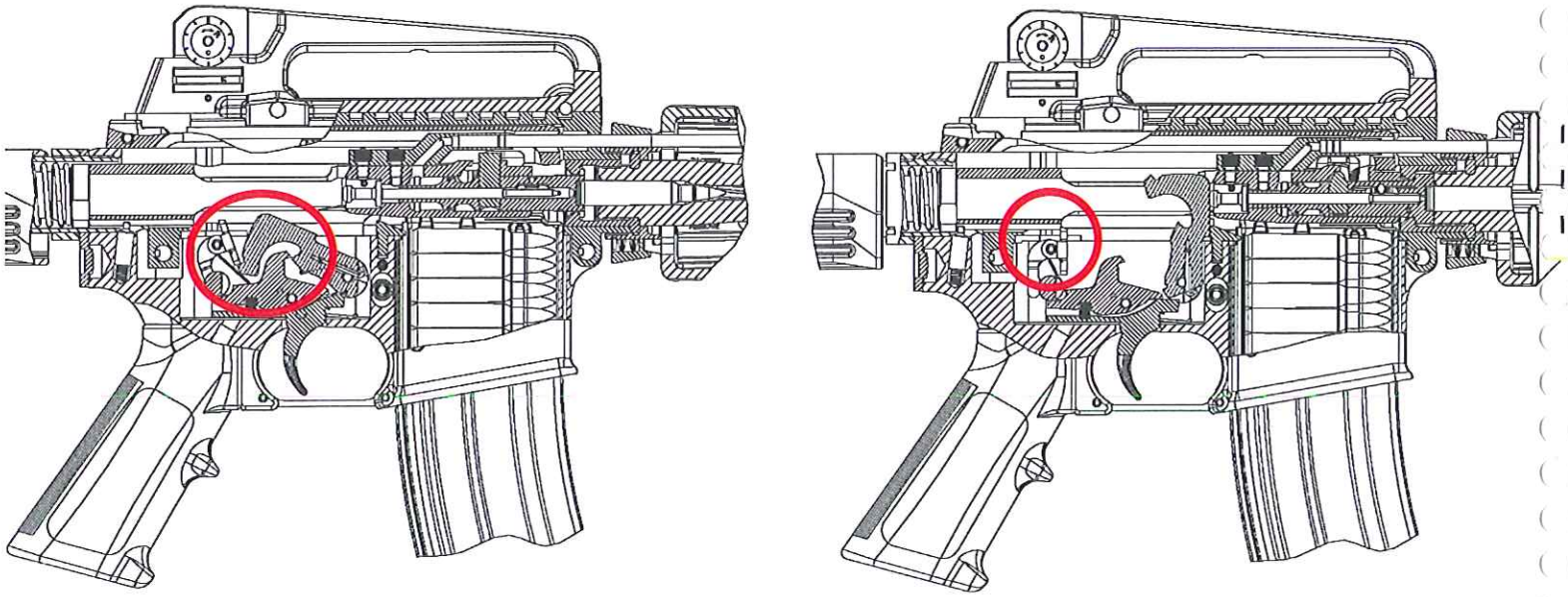
8-Locking

When the chamber halts the forward motion of the bolt, the bolt carrier continues to move forward until it is stopped by contact with the rear face of the barrel extension. The final part of its travel of the carrier rotates the bolt through the action of the cam slot in the upper receiver rotating the cam pin in the bolt. This engages the bolt lugs with the barrel extension lugs to lock it into battery. The bolt, when locked is said to be "closed".

NOTE: Different actions now take place dependent upon weather the fire control selector is set on SEMI (semiautomatic), AUTO (fully-automatic) or BURST. AUTO gives full automatic fire up to magazine capacity. BURST gives three shots of automatic fire every time the trigger is pulled (initial number of shots on BURST are dependant upon the location of the burst disconnector claw on the cam). SEMI gives one shot for each time the trigger is pulled.

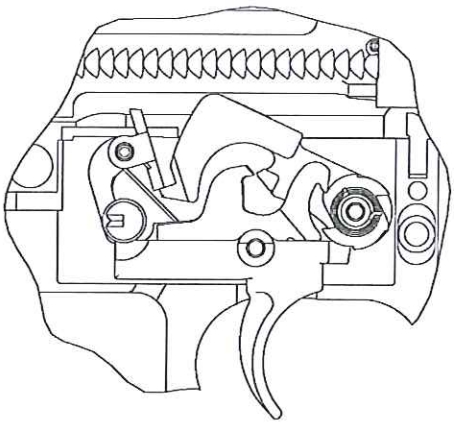
SEMI (semiautomatic)

SEMI is selected when only one round is to be fired with each pull of the trigger. When the trigger is pulled, the firing action of the weapon is so much faster than human reaction that it would be extremely difficult to release the trigger quickly enough to prevent several shots being fired. For this reason a disconnector is used to catch and hold the hammer until the trigger is released and pulled a second time. When the trigger is pulled, the disconnector is rotated forward. As the hammer is cocked by the recoil action of the carrier group, the hook of the disconnector engages the upper inside notch of the hammer catching it and holding it to the rear. When the trigger is released, the trigger spring returns the trigger to its normal position rotating the disconnector back with it. This action releases the disconnectors hold on the hammer thus releasing it to the trigger sear surface which has moved in front of its hammer notch so that the hammer drops from the disconnect sear to the trigger sear. Now the weapon is ready for the next shot.

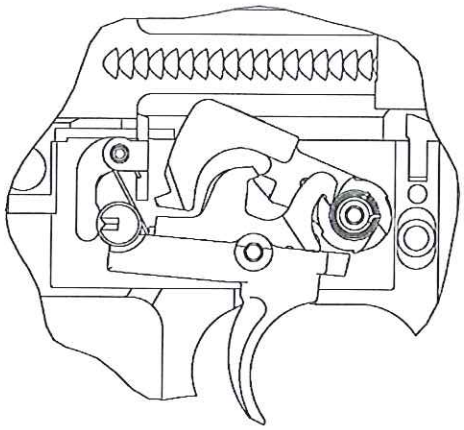


AUTO – Full Automatic

AUTO is selected when a number of rounds are to be fired successively each time the trigger is pulled. Pulling the trigger releases the hammer. The disconnector is prevented from engaging the hammer by a cam on the selector. After the first shot, as the hammer is being cocked by the recoil action of the bolt carrier group, the notch on the top outside edge of the hammer is engaged by the automatic sear. The hammer is held in the cocked position by the automatic sear until the bolt carrier strikes the upper edge of the automatic sear during counter-recoil. This causes it to release the hammer near the end of the forward travel of the carrier. The hammer then falls to fire the next round. This cycle repeats until either the trigger is released or the magazine is empty.



Beginning of Burst



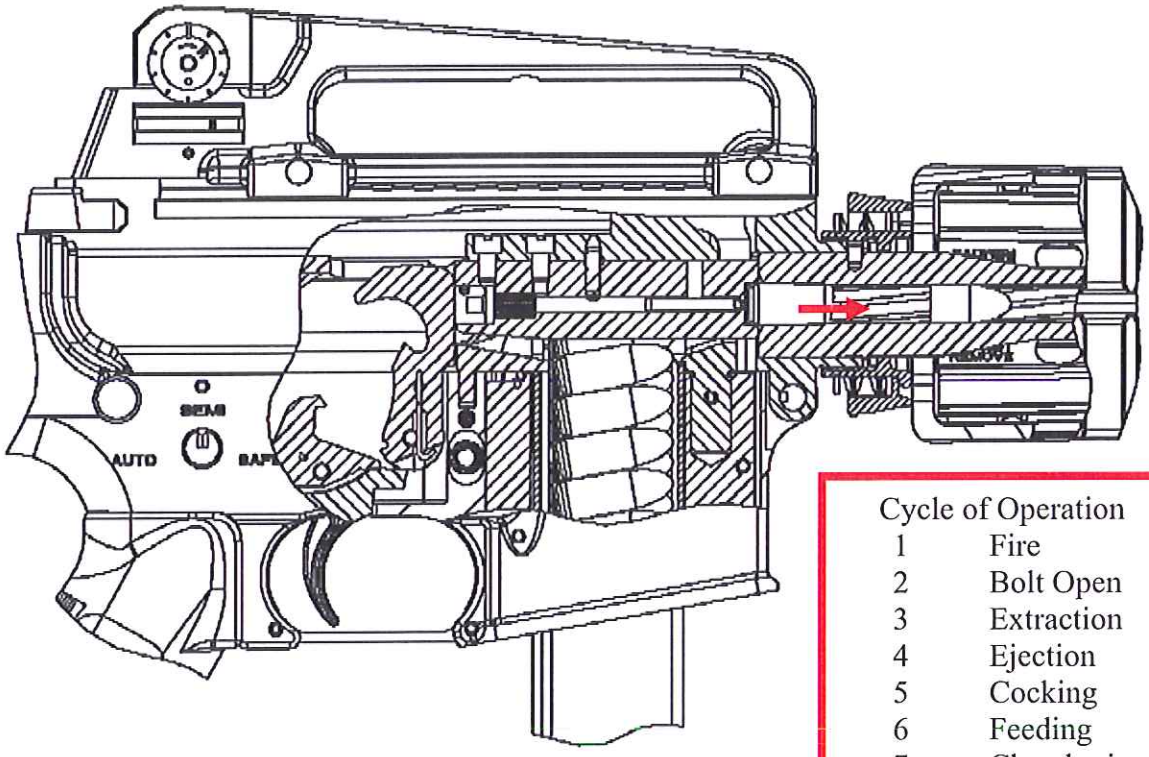
End of Burst

BURST – 3 Round BURST

BURST is selected when three rounds of automatic fire are to be fired successively each time the trigger is pulled. Beginning the BURST cycle, the front hook of the burst lever is in a stop notch. Pulling the trigger releases the hammer. The disconnector is prevented from engaging the hammer by a cam on the selector. The trigger is pulled and the hammer falls firing the first round. The front hook of the burst disconnector holds the burst cam in place as the hammer falls. The hammer is cocked during the recoil action of the bolt carrier group. The clutch spring on the burst cam clutches the burst cam and causes it to rotate one notch as the hammer is forced back. When the hammer is fully to the rear, it is engaged by the automatic sear. The front hook of the burst disconnector is in the second notch. During counter-recoil, the hammer is released by the bolt carrier striking the top of the automatic sear firing the second shot. The hammer is cocked during counter-recoil once more. The clutch spring of the burst cam clutches against the burst cam and causes it to rotate one notch as the hammer is forced back and caught by the automatic sear. The hammer is released to fire the third shot by the automatic sear being struck by the bolt carrier. The hammer is cocked back during counter-recoil of the bolt carrier group. The clutch spring of the burst cam clutches against the burst cam and causes it to rotate one notch. When the hammer is fully to the rear, it is initially caught by the automatic sear. However, the front hook of the first disconnector is now fully in the next stop notch which is deeper than the others. Due to this notch being deeper, it allows the burst disconnector to catch the rear of the hammer, holding the hammer. Once the trigger is released, the trigger nose comes up and holds the hammer back. This completes the BURST cycle.

Cycle of Operation (9x19mm SMG and Carbine)

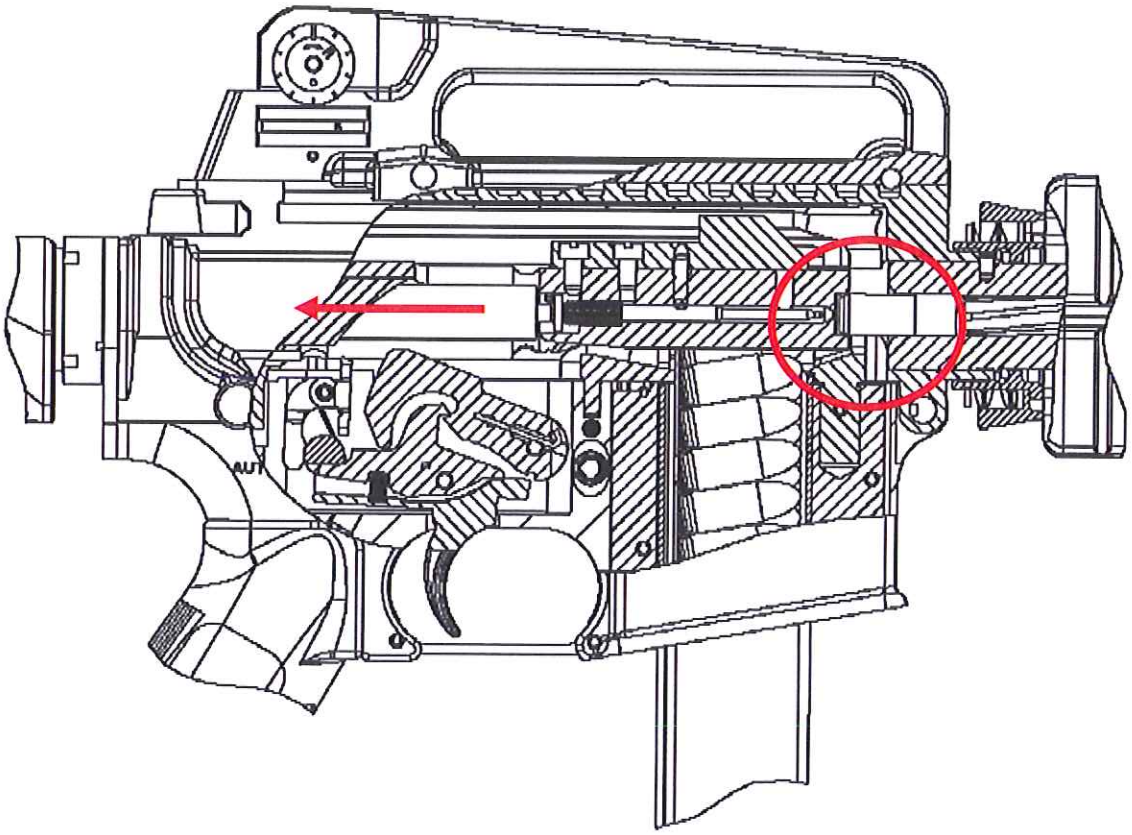
The cycle of operations of the **blow-back** operated 9mm caliber SMG and Carbine family of weapons is described as follows:



Cycle of Operation	
1	Fire
2	Bolt Open
3	Extraction
4	Ejection
5	Cocking
6	Feeding
7	Chambering
8	Bolt Close

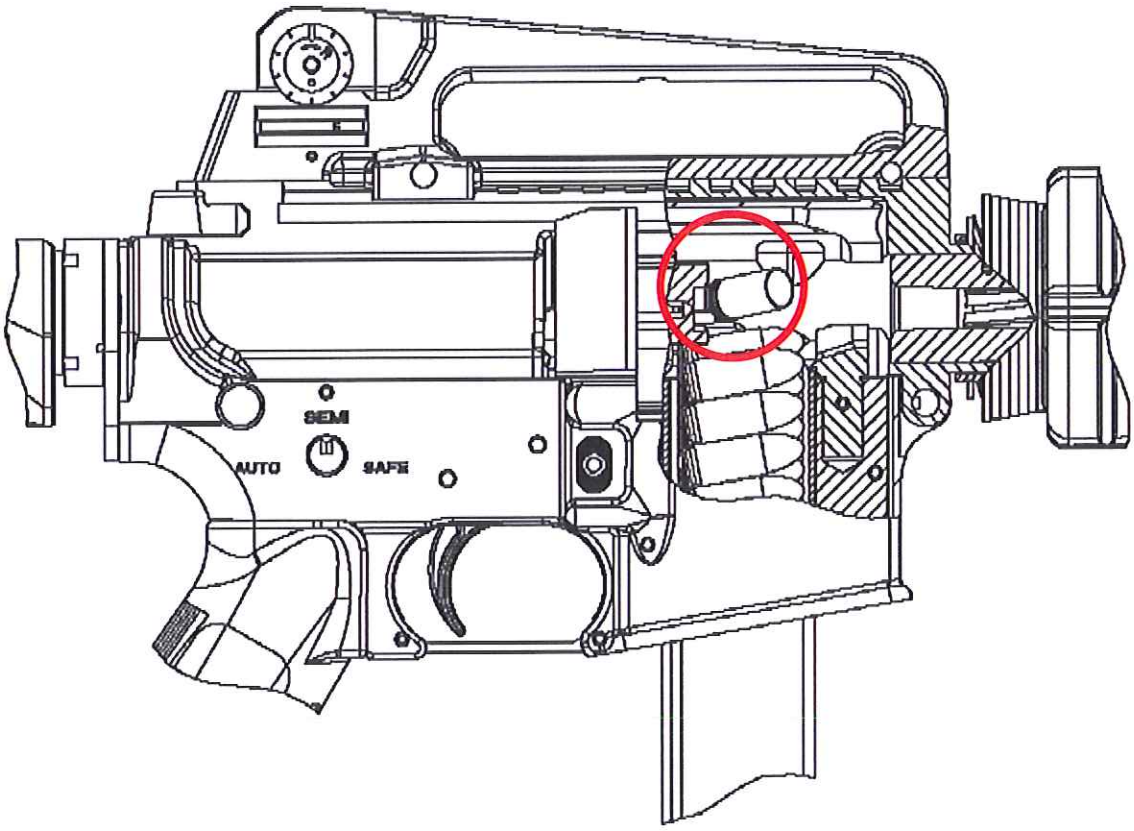
1-Firing

With the fire control selector, located on the left side of the lower receiver set in either AUTO/BURST or SEMI, the weapon is fired by pulling the trigger. When the trigger is pulled, the hammer is released. The hammer strikes the firing pin, which strikes the primer on the back of the cartridge. A spark is created igniting the propellant in the cartridge. As the gases inside the cartridge rapidly expand, the bullet is driven out of the cartridge case and engages the rifling.



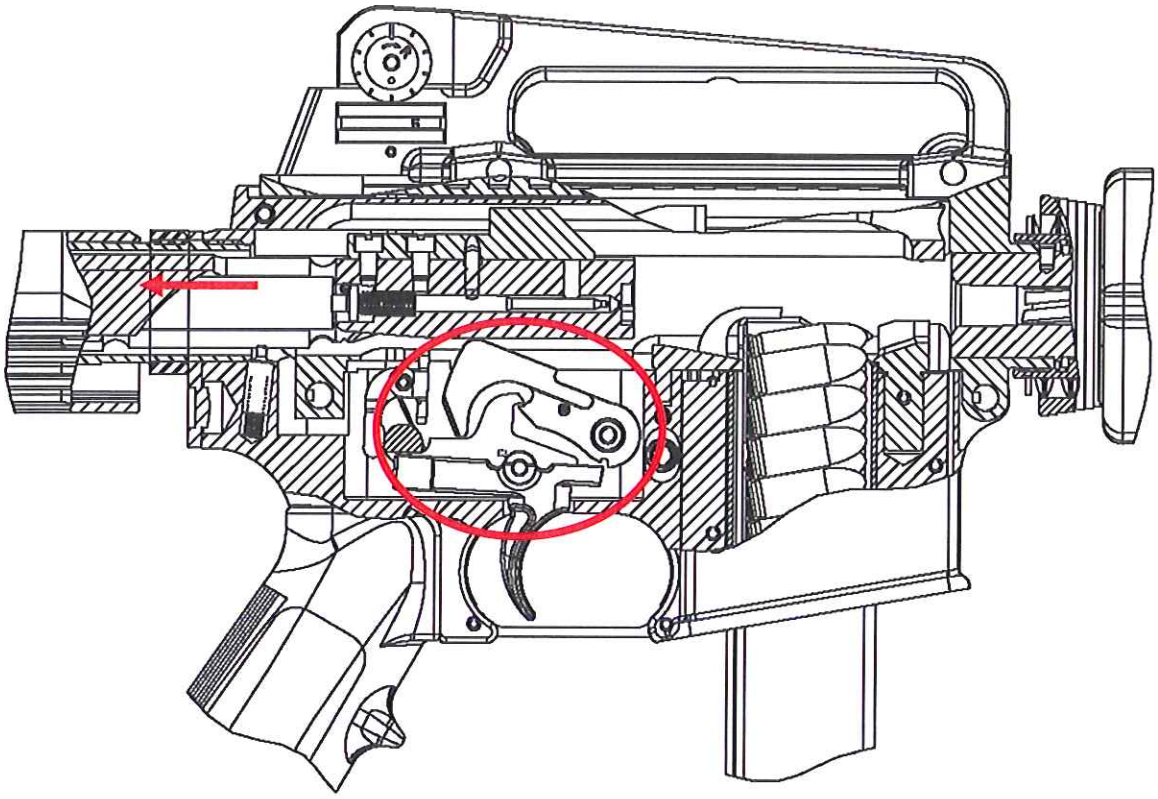
2-Bolt Group Opening
The pressure of the gas generated by the burning propellant drives the projectile down the barrel. The mass of the bolt group, recoil spring and hammer spring hold the bolt group closed until the projectile has left the barrel and the residual pressure has dropped low enough for the bolt group to safely open and begin the extraction process.

3-Extraction
As the bolt carrier group moves rearward, the extractor, which is engaged to the extractor groove on the rim of the cartridge case pulls the fired cartridge case from the chamber of the rifle



4-Ejection

When the cartridge case is pulled far enough out of the chamber that it will clear the inside of the ejection port of the upper receiver, the fixed ejector, acting against the left side of the case head, pushes the fired cartridge case out of the ejection port.

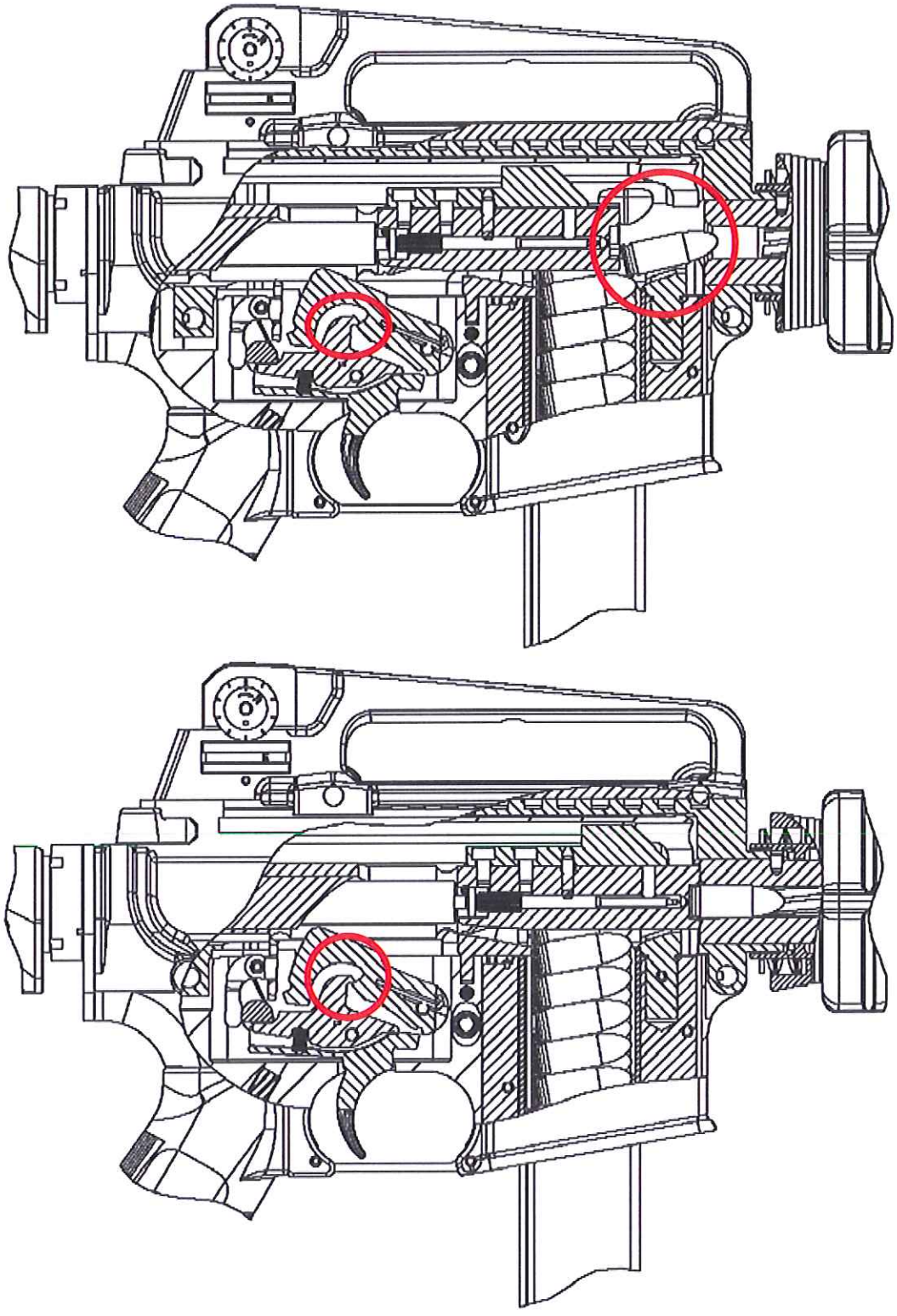


Buffering
The rearward or recoil movement of the carrier group is arrested by the buffer assembly acting against the rear of the receiver extension.

Counter-Recoil
After buffering, the action spring forces the carrier forward toward the chamber.

5-Cocking (after firing)
As the carrier group continues rearward in recoil, it compresses the action spring and cocks the hammer.

NOTE: Different actions now take place dependent upon weather the fire control selector is set on SEMI (semiautomatic), AUTO (fully-automatic) or BURST. AUTO gives full automatic fire up to magazine capacity. BURST gives three shots of automatic fire every time the trigger is pulled (first burst number of shots is dependant of the location the burst disconnector is on the cam). SEMI gives one shot for each time the trigger is pulled.



6-Feeding, 7-Chambering and 8-Bolt Closing

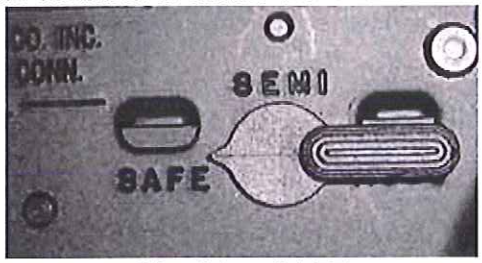
With the bolt group held to the rear, a loaded magazine is inserted into the magazine well of the rifle. By either pressing on the upper portion of the bolt catch or by pulling the charging handle fully to the rear the bolt is released forward. By the spring force of the action spring the lug on the bolt group picks up a cartridge from the magazine and feeds the cartridge from the magazine into the chamber. The bolt group is held closed by force of the recoil spring.

SECTION 5 FUNCTION CHECK

General

A complete function check of M16A2/M16A4 rifles, M4 carbines, commercial and Law Enforcement rifles consists of checking their operations with the fire control selector in SAFE, SEMI/FIRE, AUTO and/or BURST positions. The semi-auto only patrol carbines will have a FIRE position instead of SEMI. The following is a rapid, complete check. Any portion of the check may be used separately to determine the operational condition of any specific selector position. The functional check should always be done after cleaning and assembling the weapon.

Remove magazine and clear chamber to ensure the rifle is not loaded.



Checking SAFE

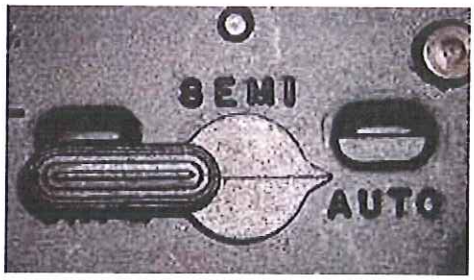
1. Pull the charging handle to the rear and release it.
2. Set fire control selector to SAFE.
3. Pull the trigger. You should hear nothing, as the hammer should not fall. Release the trigger.

Selective Fire

Semi-Auto Only

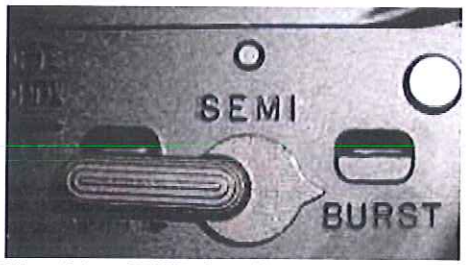
Checking SEMI/FIRE

1. Set the fire control to SEMI/FIRE position.
2. Pull the charging handle to the rear and release it.
3. Pull the trigger. You should hear a loud click as the hammer falls. Keep the trigger pulled.
4. Pull the charging handle to the rear and release it while keeping the trigger pulled. The hammer should not fall but be held by the disconnector.
5. Release the trigger. You should hear a light audible click as the hammer is released from the disconnector and drops part way to engage the trigger.
6. Pull the trigger. You should hear a loud click as the hammer falls.



Checking AUTO (Full Automatic)

1. Set fire control lever to AUTO.
2. Pull and release charging handle.
3. Pull the trigger. You should hear a loud click as the hammer falls. Keep the trigger pulled.
4. Keep the trigger pulled, pull the charging handle fully back and ease it slowly forward. A loud click should be heard at the end of its travel.
5. Release the trigger-no audible click should be heard.
6. Pull the trigger-no click should be heard.
7. Release the trigger.

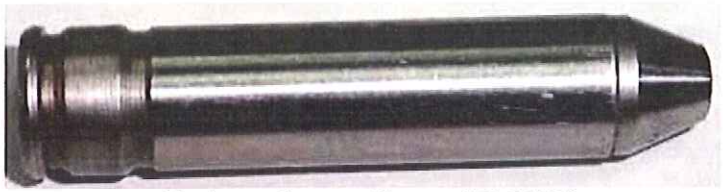


Checking BURST (3 Round Burst)

1. Set fire control to BURST.
2. While holding the trigger to the rear, pull and release the charging handle **four** times.
3. Release the trigger.
4. Pull the trigger. You should hear a loud click as the hammer falls. Keep the trigger pulled.
5. Keep the trigger pulled and pull the charging handle fully back and ease the trigger forward slowly. A loud click should be heard at the end of its travel.
6. Pull the trigger. You should hear a loud click as the hammer falls. Keep the trigger pulled.
7. Keep the trigger pulled, pull charging handle fully back and release. Release the trigger. You should hear a light audible click as the hammer is released from the disconnector and drops part way to engage the trigger

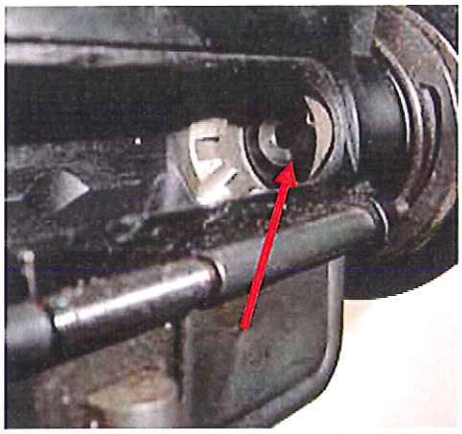
SECTION 6 Gageing

HEADSPACE CHECK



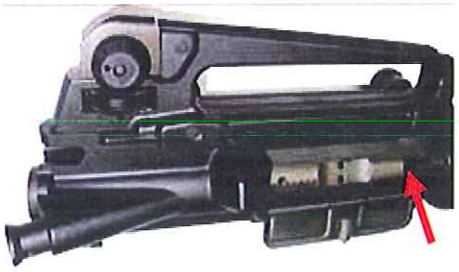
Filed Headspace Gauge (T27921)

Step1. Install the Headspace Gauge in Chamber.



Step 2. Headspace Gauge Installed.

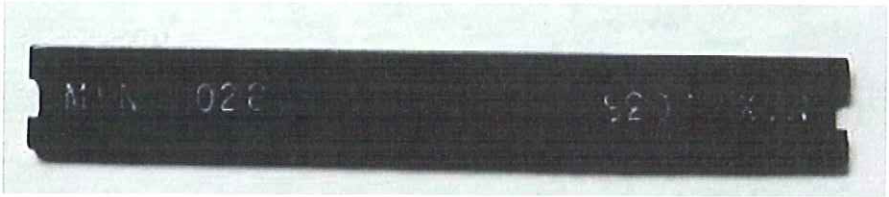
Step 3. Install Bolt Carrier Group.



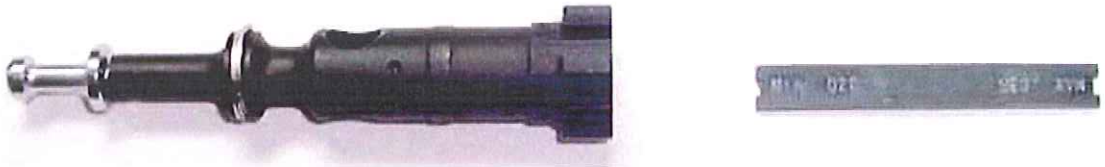
Step 4. Proper Headspace Indication
Bolt Will NOT Lock

Three 5.56mm Headspace Gauges	
Go Headspace Gauge	Bolt should completely close and lock
NO-GO Headspace Gauge	Bolt shall **NOT** close and lock.
FIELD Headspace Gauge	Bolt shall **NOT** close and lock.

FIRING PIN PROTRUSION CHECK



Firing Pin Protrusion Gauge (62679)



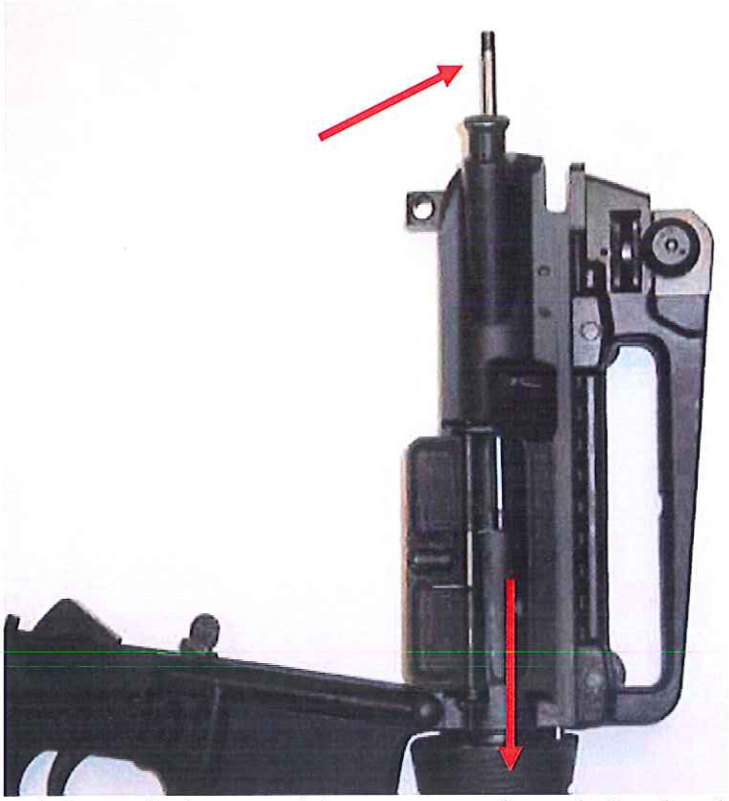
Step 1. With Firing Pin Installed in the Bolt, Set Firing Pin Protrusion Gauge Over The Firing Pin Hole on the Face of the Bolt.

Step 2. Firing Pin Protrusion Check

NOTE: With the firing pin head held firmly forward in the bolt, the end of the firing pin protrusion gauge marked "MAX" ("GO"-.036 in, 0.91mm) should pass over the end of the (See photo marked Step 2.) firing pin without touching it, and the end marked "MIN" ("NO GO"-.028 in, 0.71mm) should hit the end of the firing pin and not pass over it.

BORE STRAIGHTNESS

Bore Straightness Gauge (T-32571)



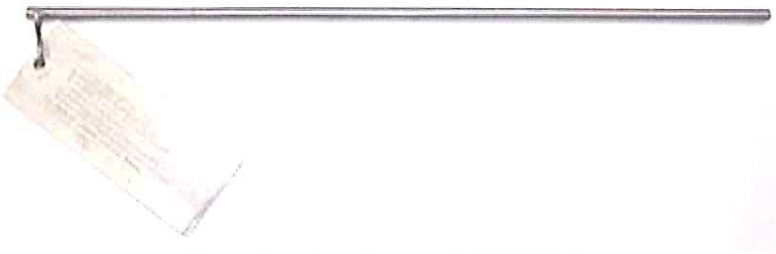
Step 1. Drop the bore straightness gauge through the chamber.

To test the bore straightness, break open the rifle and remove the bolt carrier group. Thoroughly clean the bore of the rifle and the straightness gauge. Insert the bore straightness gauge through the chamber and let in drop into the barrel. If the gauge drops out of the muzzle, the bore has passed the straightness test.

Do not confuse a bent bore with a bore with a burr or piece of jacket in the gas port. If the gauge stops at the gas port, clean bore with a bore brush and recheck.

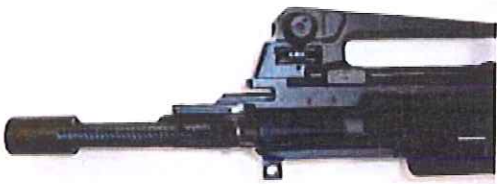
Note: **DO NOT** allow the gauge to fall onto a hard surface. The gauge could be damaged and give false readings.

BORE ERROSION



Bore Erosion Gauge (8448496)

Step 1



Step 2

Step 3

Step 1. Disassemble the bolt carrier group. Clean bore and chamber. Retrieve the bolt carrier.

Step 2. Insert the bolt carrier into the upper receiver.

Step 3. With the barrel in the horizontal position insert the gauge into the center of the bolt carrier into the breech end until it stops. Do not force it. Determine barrel life by reading the gauge marking that is in line with the rear face of the bolt carrier.

Bore wear is gauged by using the barrel erosion gauge. To determine the serviceability of the barrel observe the reject gage marking. The bore is out of specification if the reject line extends forward into the bolt carrier. The bore is in specification if it extends behind the bolt carrier.

CHAMBER REFLECTOR TOOL

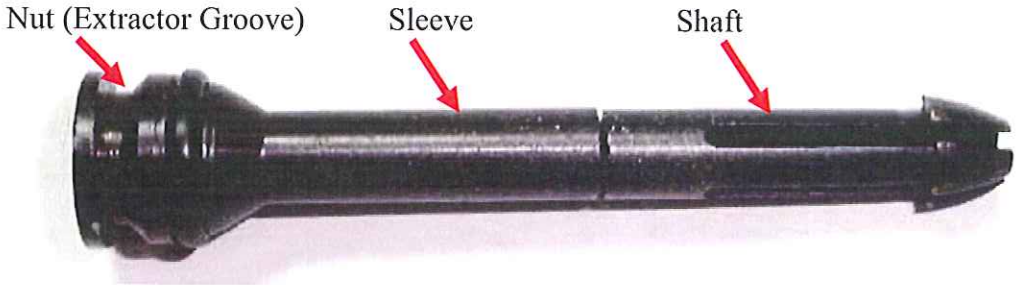
Chamber Reflector Tool (62694)

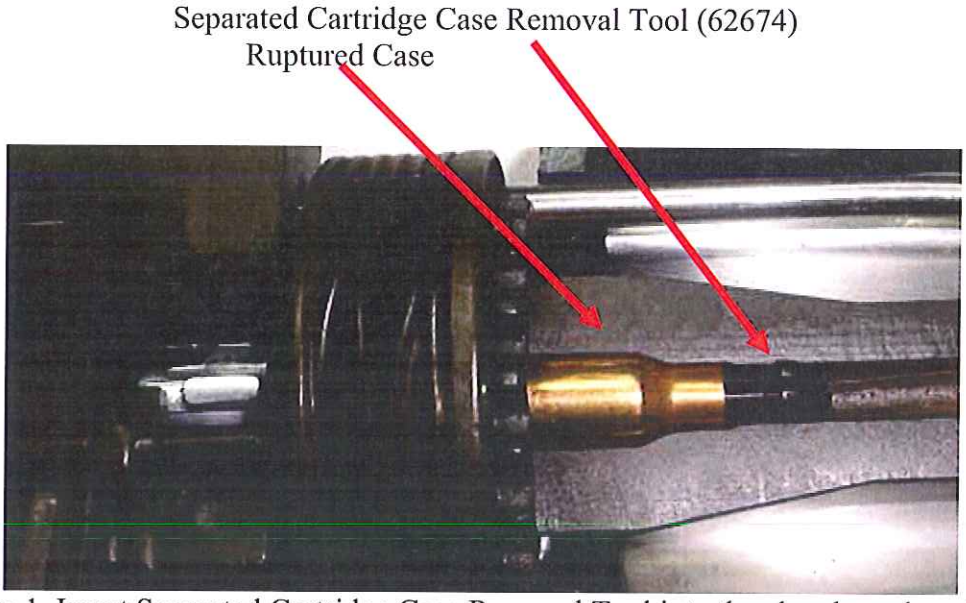
Step 1. Remove the bolt carrier group from the upper receiver.

Step 2. Insert the Chamber Reflector too into the chamber with the larger end to the rear of the chamber.

Step 3. With a flashlight, perform a visible inspection of the chamber of the weapon. Look for any signs of corrosion, pitting or ruff surfaces. If any defect is found, remove the weapon from service. Damaged chambers can cause severe failures to extract.

SEPARATED CARTRIDGE CASE REMOVAL





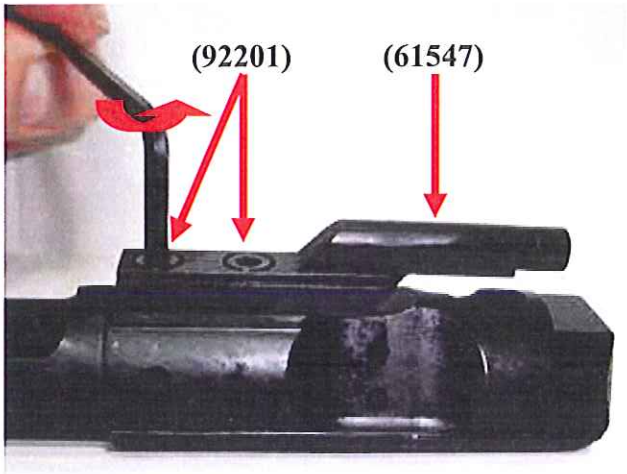
Step 1. Insert Separated Cartridge Case Removal Tool into the chamber, close the bolt and insure the bolt locks. Pull the charging handle to the rear and the separated cartridge case removal tool and the separated case should eject out the ejection port.

SECTION 7 Detail Disassembly of 5.56mm Family of Weapons

The Bolt Carrier Group

The Bolt Carrier

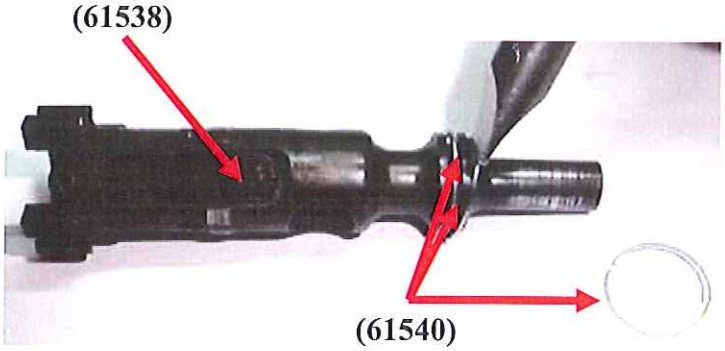
NOTE: The bolt carrier key should NOT be removed unless damaged.



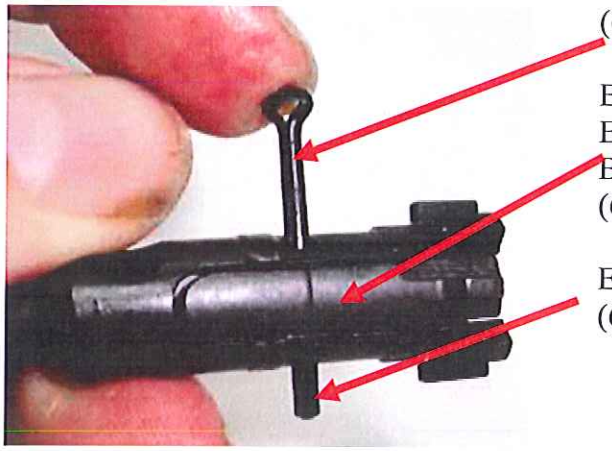
Step 1. With a 1/8-inch Allen Key wrench, rotate counter clockwise and remove the two screws (92201). This may be difficult due to the staking process done at the factory.

Step 2. Remove the carrier key (61547) from the bolt carrier. Dispose of the carrier key and screws. DO NOT REUSE.

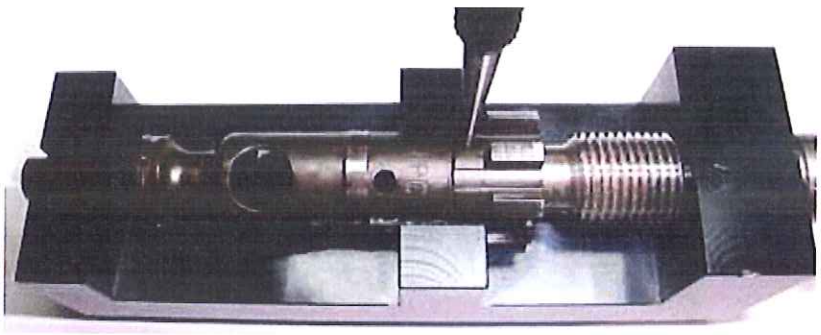
The Bolt



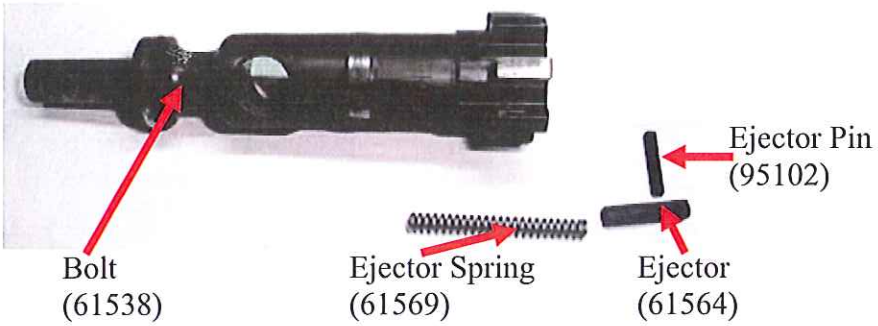
Step 1. Remove the gas rings by prying one leg of the gas ring over the rear of the bolt and pull the ring off. Repeat for all three gas rings. If rings are removed, replace with three NEW rings.



Step 2. To remove the extractor utilize a 3/32-inch drift punch or firing pin retaining pin and push the extractor pin out of the bolt. DO NOT REMOVE EXTRACTOR BUFFER AND SPRING.

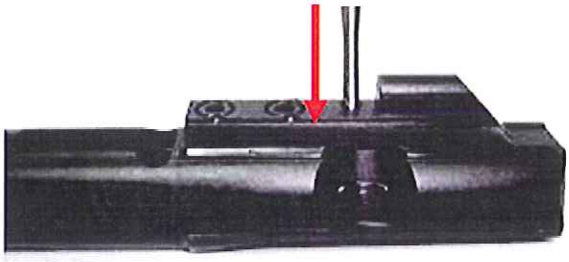


Step 3. To remove the ejector, place bolt in ejector removal tool and slightly depress ejector. With a 1/16-inch drift punch, push out the ejector pin (95102). Slowly remove the drift punch with the face of the bolt in a safe direction. The ejector is under spring tension.

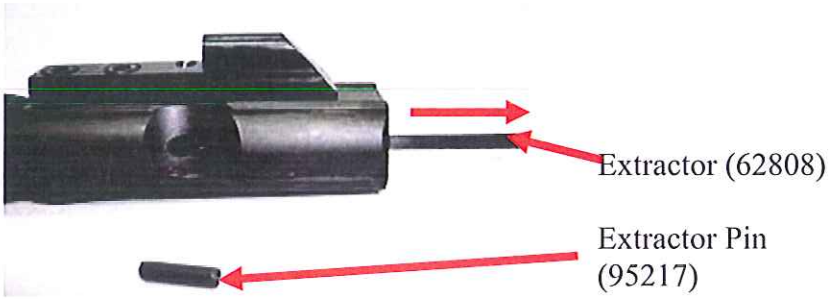


Step 4. Completely disassembled bolt.

9mm SMG/Carbine Disassembly



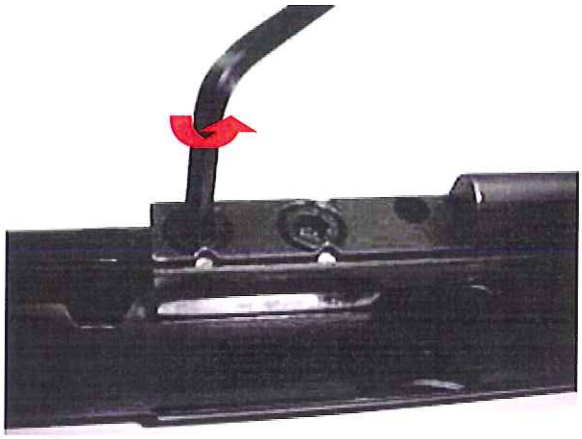
Step 1. With a 5/32 inch drift punch, drive out the extractor roll pin (95217).



Step 2. Remove the extractor from the face of the bolt.

Step 3. **DO NOT REMOVE UNLESS NECCESARY FOR REPAIR!!** With a 3/16-inch drift punch, remove the spirol pin (95222).

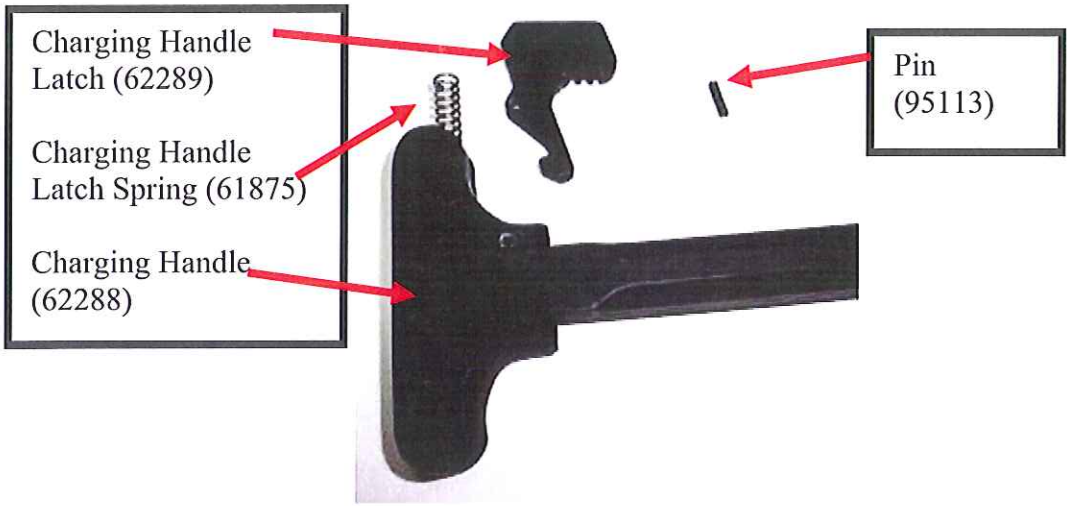
Step 4. Remove the plug (62807)



Step 5. With a 1/8-inch Allen Key wrench, rotate counter clockwise and remove the two screws (92201). This may be difficult due to the staking process done at the factory.

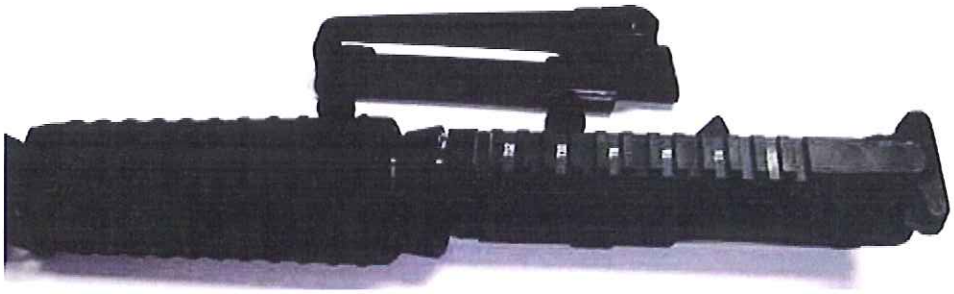
The Charging Handle Assembly

Step 1. With a 1/16th inch punch, drive out the charging handle latch pin.

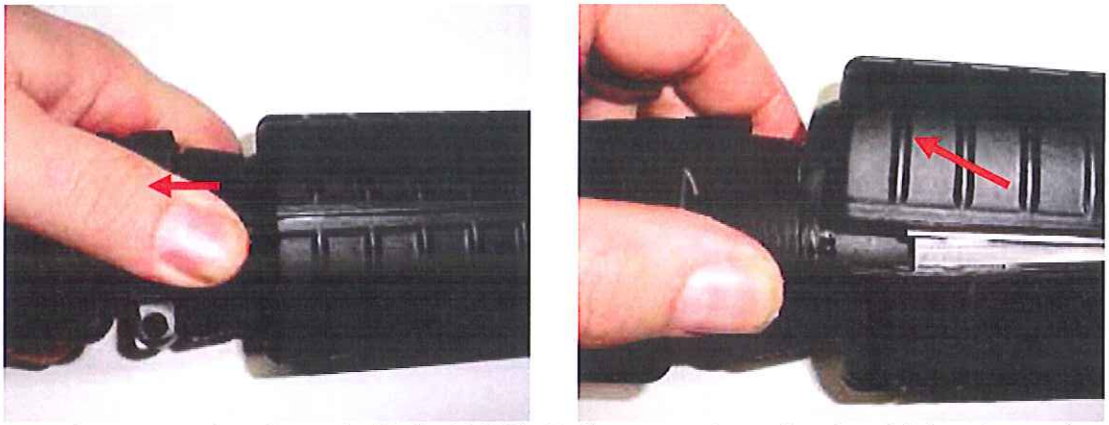


Step 2. Remove the charging handle latch and spring.

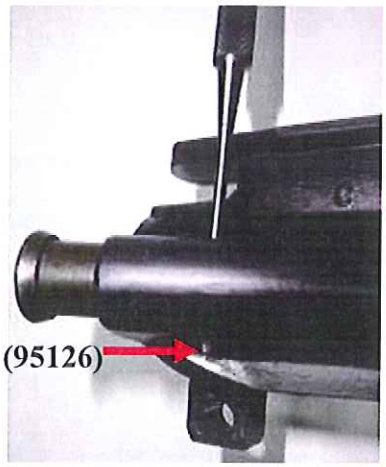
The Upper Receiver Group

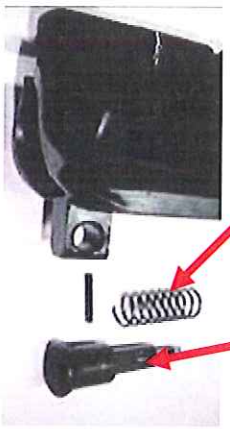


Step 1.Remove Carrying Handle Assembly (64987) if the rifle has a flat top upper receiver.



Step 2. Remove handguards (2 @ 64673). Pull rearward on slip ring / delta ring and pull handguard out.

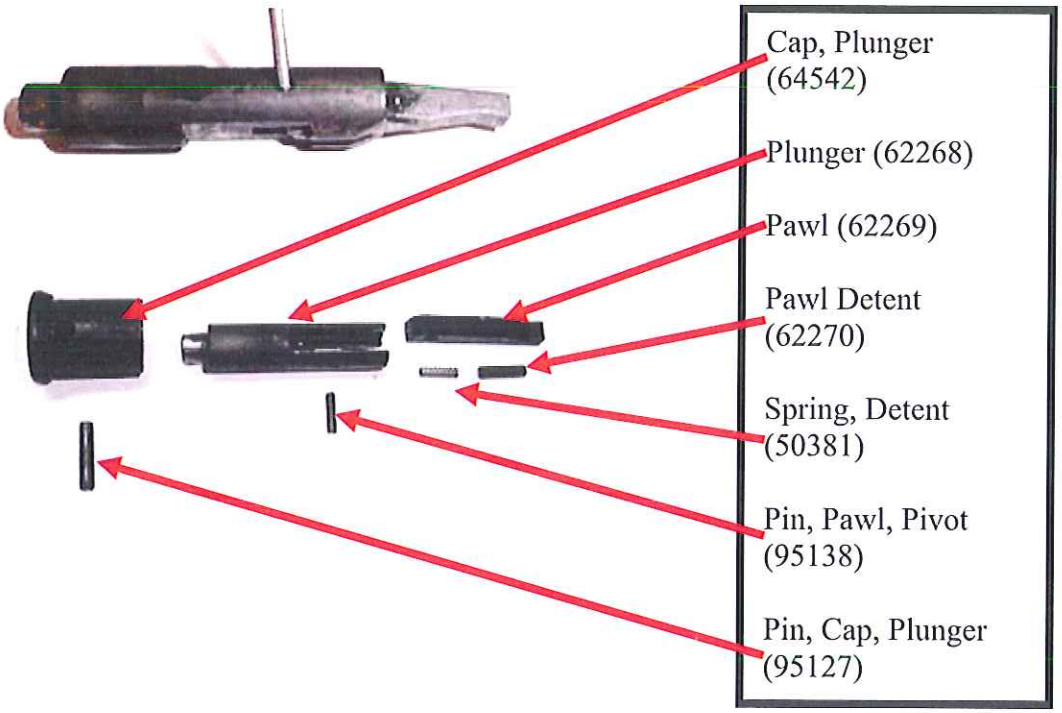




Step 3. Remove the forward assist assembly. With a 3/32-drift punch, drive out the retainer pin (95126). Remove the forward assist and spring.

Forward Assist Assemblies	
Tear Drop	(62265)
Round with Flat	(64529)
Round Button	(64543)

Step 4. With a 3/32-drift punch remove the pin and remove the plunger.



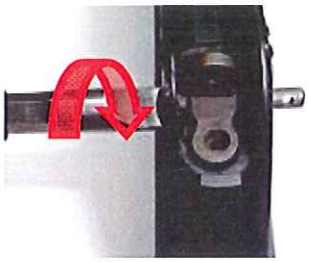
Step 5. With a 1/16-drift punch remove the pawl roll pin and separate the spring, detent and pawl.

REAR SIGHT REMOVAL

Standard Field Sight

Step 1.

Step 2.



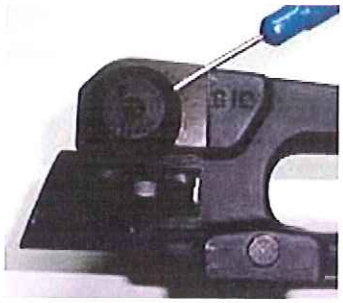
Step 3.

Step 4.

Step 5.

Step.6

Step 1. With a 1/16-inch drift punch, drive out the roll pin (95101).
Step 2. Remove windage drum (61703), detent (61755) and spring (61754).
Step 3. With a straight blade screwdriver, rotate the rear sight windage screw (61702) counter-clock-wise until it is removed from the receiver.
Step 4. Remove aperture (5.56mm (61700), 9mm (62816)).
Step 5. Remove the leaf spring (61708).
Step 6. Rear sight is fully disassembled.

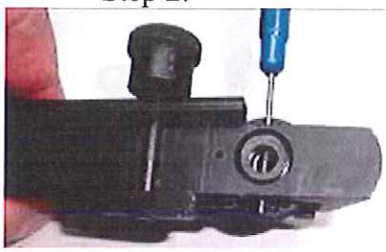


Step 1.

Step 2.

Step 3.

Step 4.



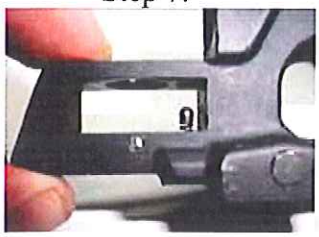
Step 5.

Step 6.

Step 7.

Step 8.

Step 9.



Step 10.

Step 11.

Step 12

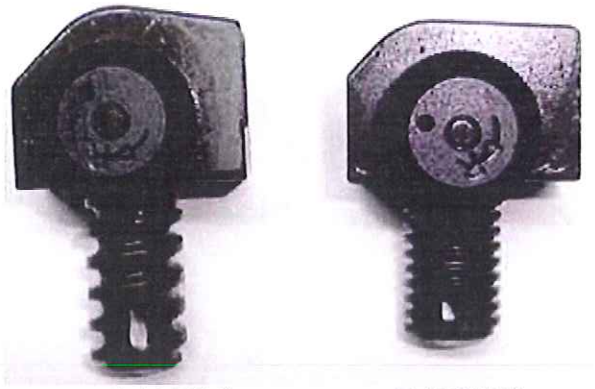
Fully Adjustable Rear Sight (fixed and detachable)

Step 1.With a 1/16 inch drift punch remove the windage knob pin (64522)
Step 2.Remove the windage knob (64526), ball (64517) and spring (64518).
Step 3. With a straight blade screwdriver, rotate the rear sight windage screw (64525) counter-clock-wise until it is removed from the receiver.
Step 4. Remove aperture (64524) and leaf spring (64781).
Step 5. With a 3/32-inch drift punch remove the elevation knob pin (95126). Should depress elevation knob spring with tool (64685)
Step 6. Remove the elevation knob spring (64519).

Step 7. Rotate elevation knob clockwise until the rear sight base (64521(Fixed Carrying Handle) or 64985 (Detachable Carrying Handle)) can be removed from the receiver.

NOTE: There is a ball (64517) and spring (64518) on the left side face of the rear sight base. It may fall out or it may be pressed in.

Step 8. Remove the rear sight base.
Step 9. Slide out elevation knob from either side of the upper receiver.
Step 10.Remove ball (64517) and spring (64518).
Step11.Separate the index elevation (Fixed Handle 64515, Detachable Carrying Handle 64980) and the Knob Elevation (Fixed Handle 64516, Detachable Carrying Handle 64981) and remove the index screw (64514) with the allen key.
Step 12. Completely disassembled fully adjustable rear sight.



A (64521) B (64985)

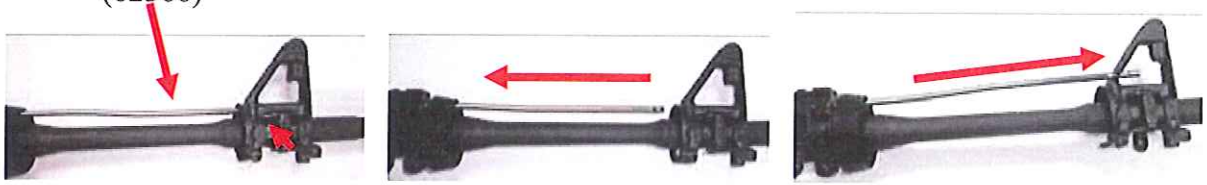
There are two different front sight bases for the weapon system. The first (A) is for the fixed carrying handle and is adjustable up to 800 meters (64521). The second (B) is for the detachable carrying handle and is adjustable to 600 meters (64985).

These are NOT interchangeable.

Removal of the Barrel
Standard Upper Receiver

NOTE: DO NOT REMOVE THE FRONT SIGHT BASE UNLESS ABSOLUTLY NECCESARY!!

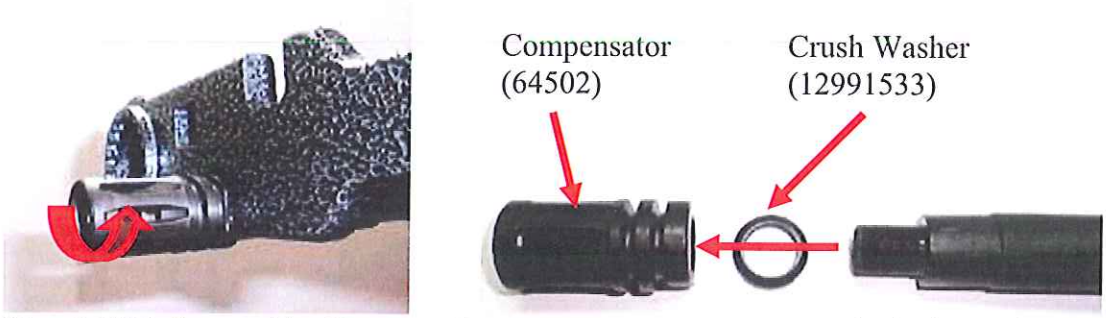
(62366)



Step 1. Step 2. Step 3.

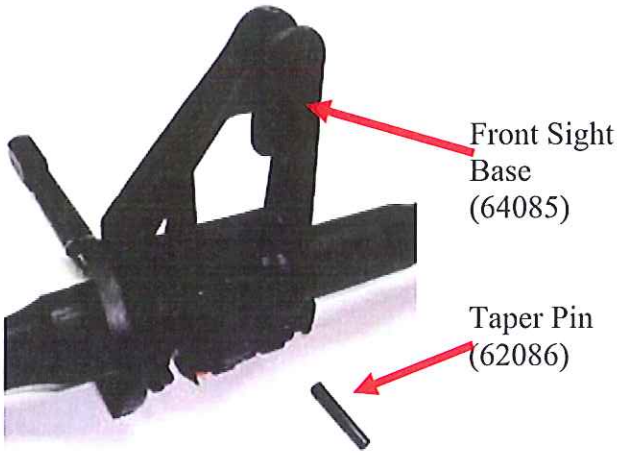
Step 1. Remove the gas tube roll pin (95108) with a 1/16-inch roll pin punch.
Step 2. Pull rearward on the gas tube (62366) until it comes free from the front sight base.
Step 3. Rotate gas tube ¼ turn and pull out of the upper receiver.

Step 4. Place barrel in vice block (62695) or upper receiver in action block to secure the upper receiver group.



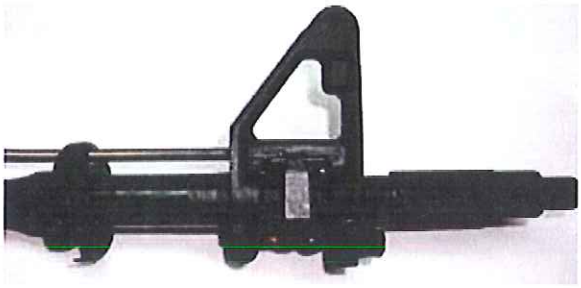
Step 5. With the combination wrench, rotate compensator counterclockwise and remove compensator and crush washer.

NOTE: DO NOT REUSE CRUSH WASHER (12991533).



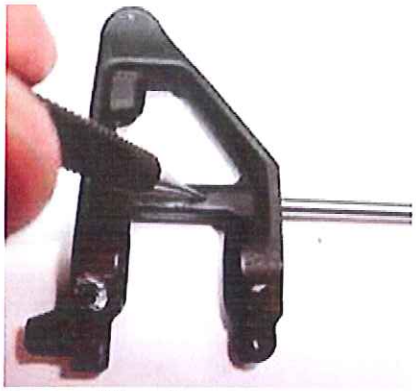
Step 6. Remove the front sight taper pins with the intermediate punch from the LEFT side of the front sight base.

NOTE: If Front Sight Base is to be removed, the gas tube may be left in place and removed from the front sight base after it has been removed from the barrel. If the front sight is NOT to be removed, remove the gas tube roll pin; pull rearward on the gas tube until it breaks free of the front sight base. Pull it out one side of the front sight base.

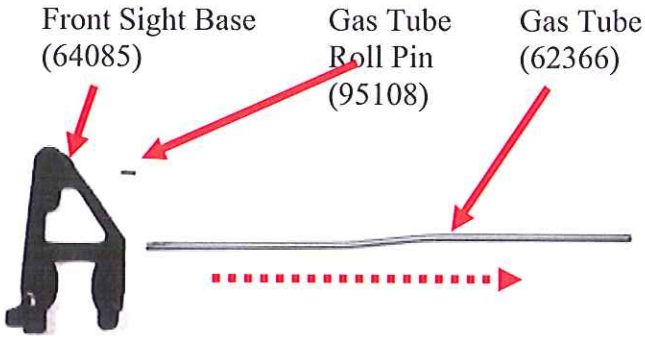


Step 7. Remove the front sight base from the barrel by pulling it towards the muzzle. You may have to tap the front sight base with a rubber mallet to free it.

Step 8. Front sight base removed.

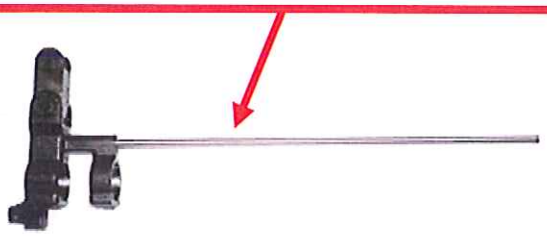


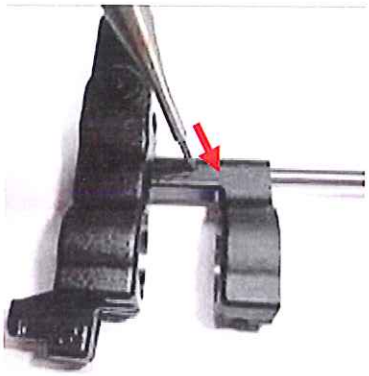
Step 9.



Step 10.

NOTE: The straight gas tube (65712) must be used with the Colt folding front sight ONLY. Do NOT use bent standard carbine gas tubes.

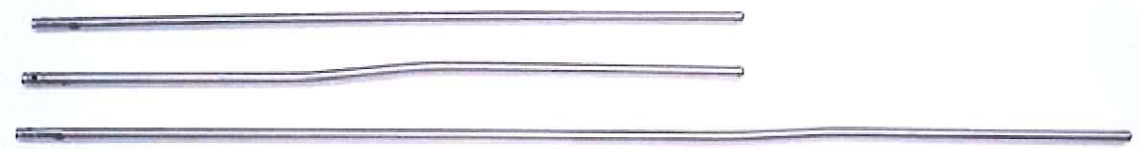




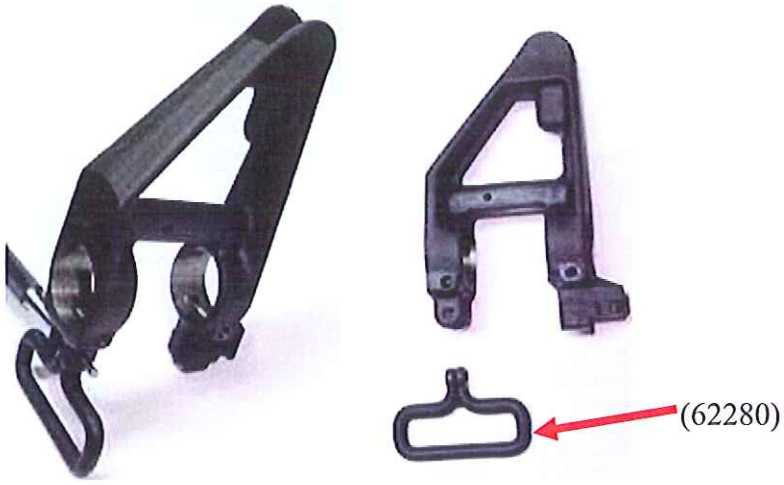
NOTE: The gas tube is NOT removed prior to removal of the barrel on the monolithic upper receiver. After the barrel is removed the gas tube roll pin is removed and gas tube removed from the front sight base.

Step 11. To remove the gas tube, with a 5/64-inch drift punch, drive out gas tube retainer pin.

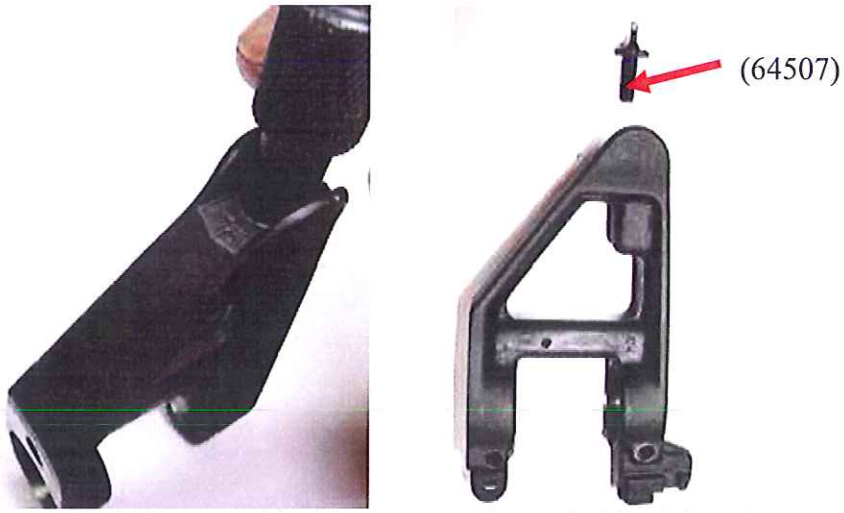
Step 12. Pull rearward on gas tube and remove it from the front sight base. This may be difficult if a significant amount of carbon fouling.



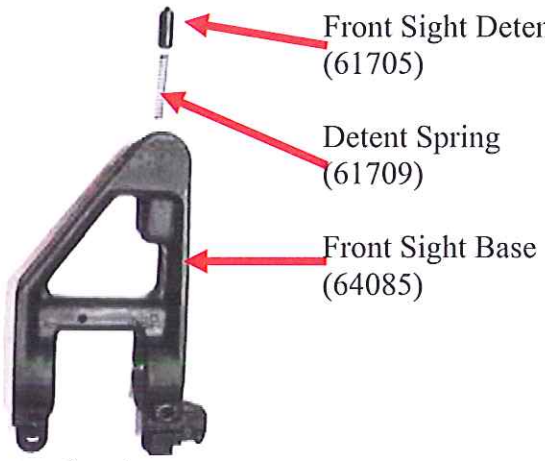
NOTE: There are three different gas tubes. The short straight tube (65712) is for the monolithic (top) carbines. The standard short tube (62366) is for the carbine (middle) and the long tube (61645) is for the rifle (bottom).



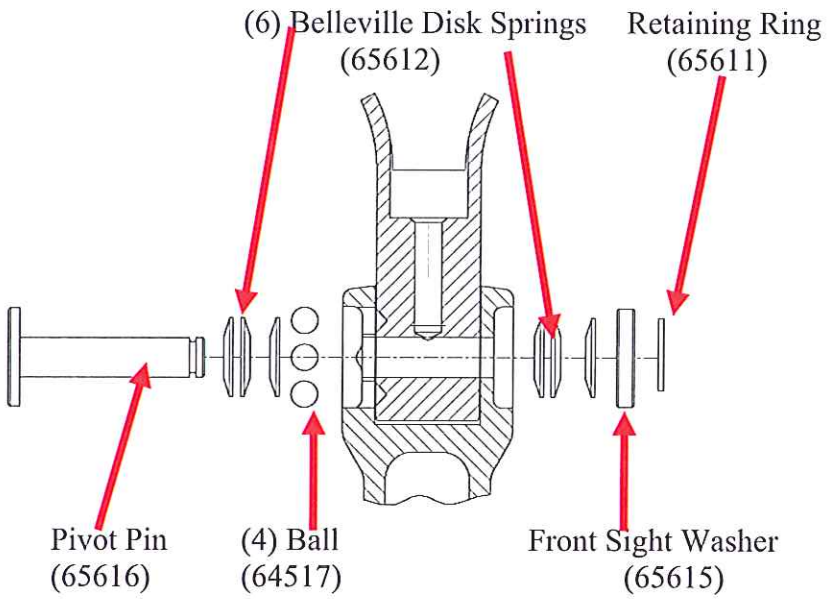
Step 13.The sling swivel (62280) on applicable models is held in place by a rivet (91209). The rivet can be drilled or punched out.



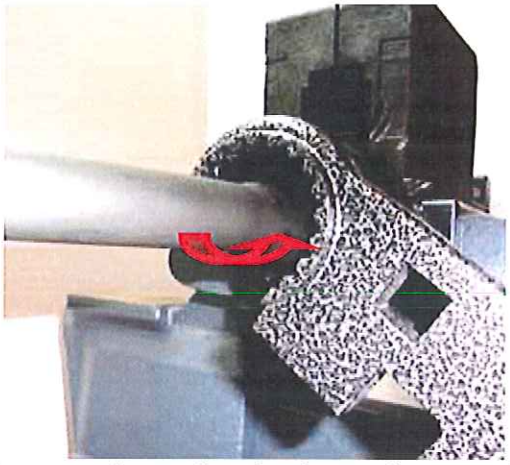
Step 14. Remove the front sight post with either a wrench or suitable sight adjustment tool.



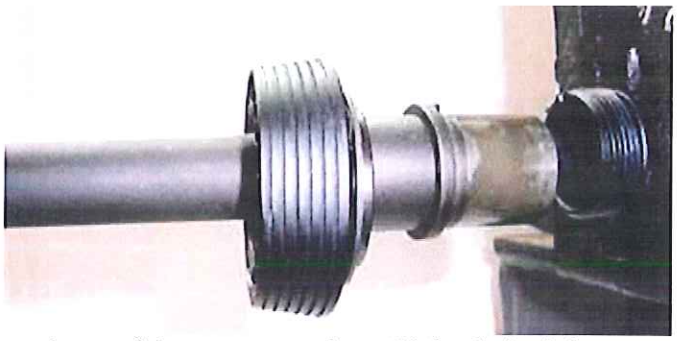
Step 15.Remove the front sight detent and spring.



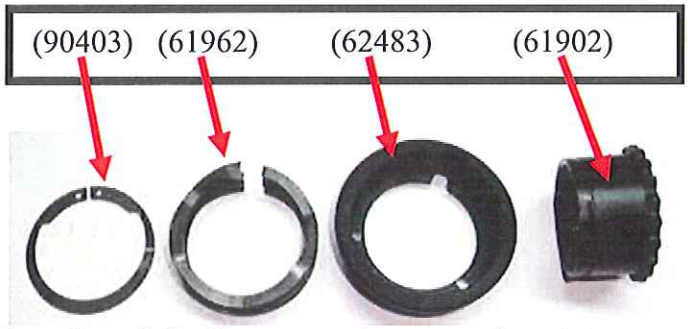
Disassembly of the folding front sight base.



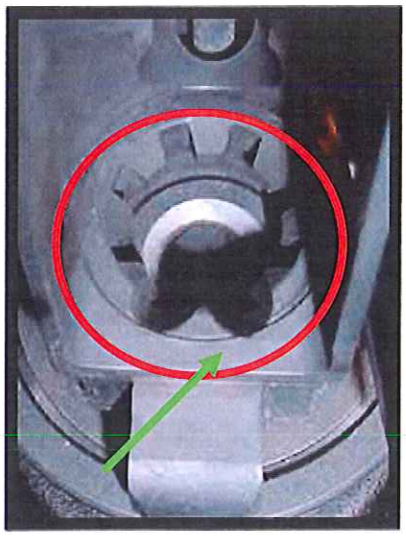
Step 16. Place combination wrench on a breaker bar and ensure all pins of the combination wrench are fully engaged with the barrel nut. Rotate the barrel counter clockwise until the barrel nut is off of the receiver.



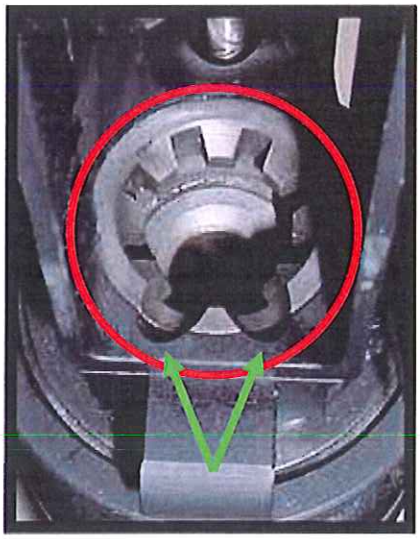
Step 17. Pull the barrel out of the upper receiver. If the fit is tight, tap on front sight with a rubber mallet to remove.



Step 18. With the external retaining ring pliers (94151), remove the external retaining ring. Remove the spring weld and slip ring.



Rifle Barrel Extension Without Extended Feed Ramps. (61575)



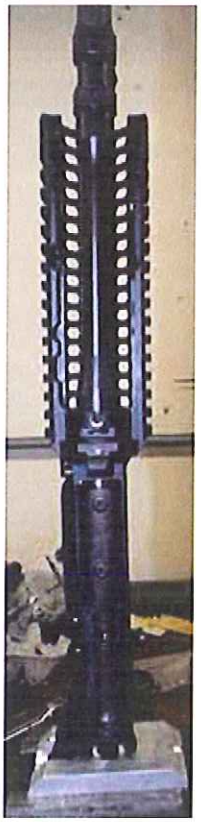
Carbine Barrel Extension With Extended Feed Ramps. (64691)

Notice the extended feed ramp cuts in the upper receiver

Early SlipRing M16/A1 (61901)

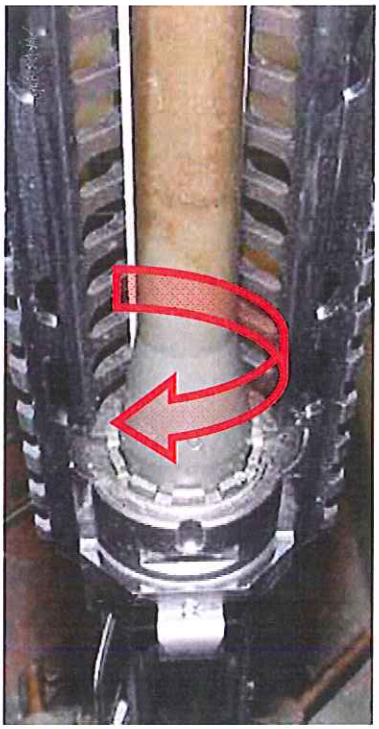
Standard Delta Ring M16A2/M4 (Canted) (62483)

Removal of the Barrel of the Monolithic Upper Receiver

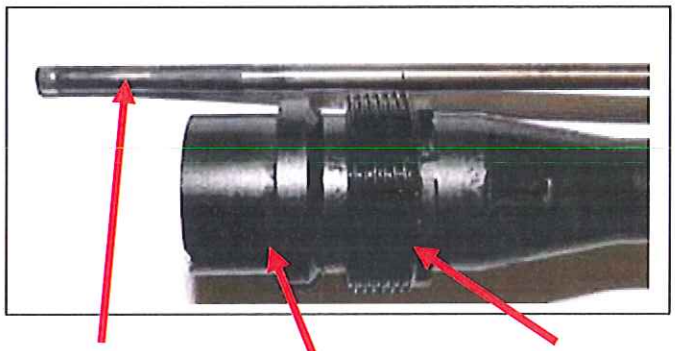


Step 1. Mount the upper receiver assembly in the vertical position with the lower handguard removed.

Step 2. With the barrel wrench and breaker bar, loosen (rotate counter clock-wise) the barrel nut.



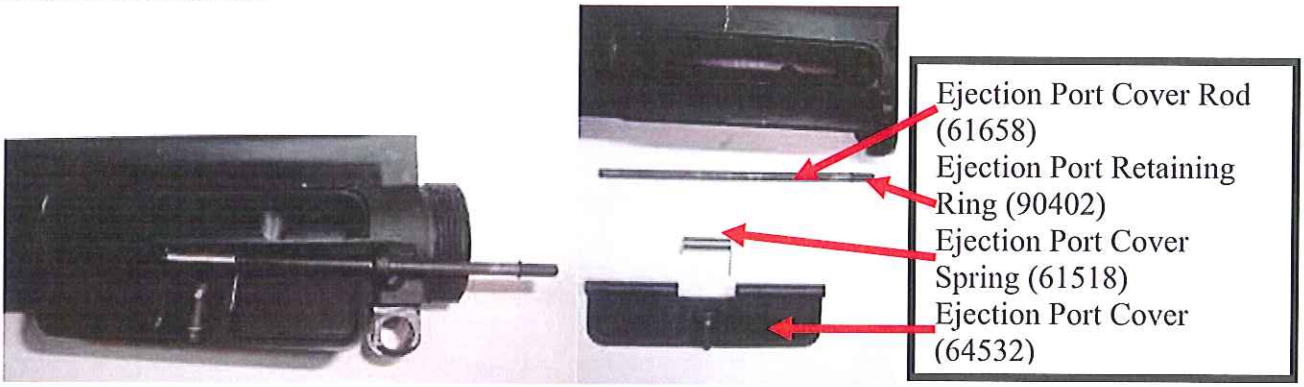
Step 3. Loosen barrel nut until it disengages the threads on the upper receiver assembly.



Gas Tube (65712) Receiver Extension (65632) Barrel Nut (65604)

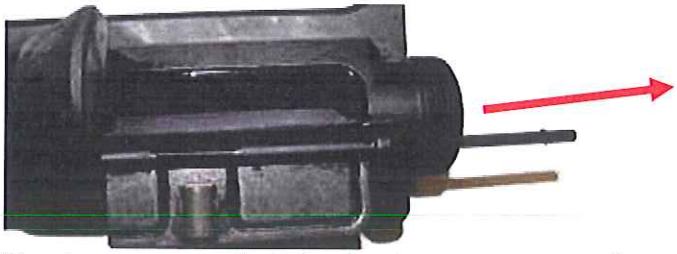
Step 4. Pull the front sight and barrel assembly out of the upper receiver.

Removal of Ejection Port Dust Cover
Standard Receiver.

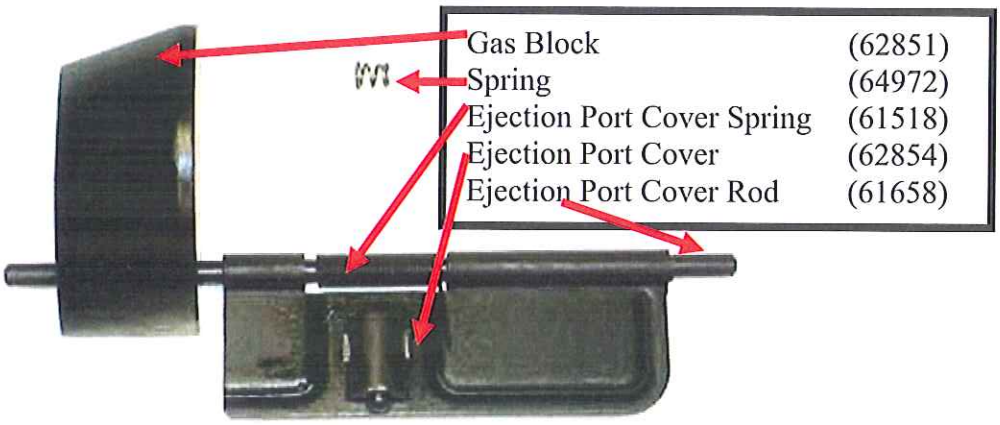


Step 14 After the barrel has been removed, slide ejection port cover rod out of the front of the receiver. The ejection port cover and spring will fall free.

Removal of Gas Block and Ejection Port Dust Cover of 9mm SMG/Carbine



Step 1. After the barrel has been removed, slide ejection port cover rod out of the front of the receiver. The ejection port cover, spring, gas block and spring will fall free.



The Lower Receiver Group

The most efficient way to disassemble the lower receiver is to start at the front and work to the rear.

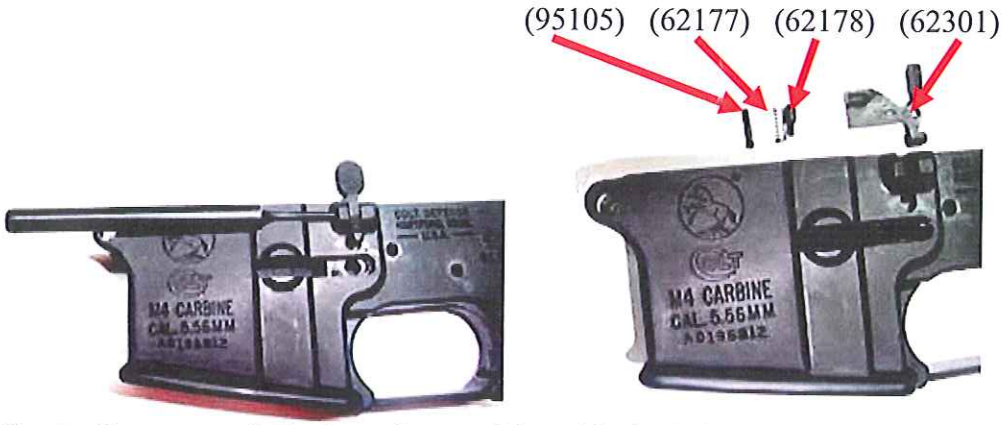
Step 1. Be sure the front pivot pin is pulled out to the rear as far as it will go. With a 1/16-inch drift punch, push through the hole on the face of the pivot pin and depress the detent and rotate the pivot pin ¼ turn. Slowly remove the pivot pin with the front of the receiver pointed in a safe direction. The front pivot pin and detent are under spring tension.

NOTE: Depending on the model the front pivot pin may vary. Early AR-15 Sporter, AR-15 A2 Sporter II and AR-15A2 rifles utilized a larger .315 inch screw and collet requiring two screw drivers to remove. Early Colt Sporter rifles utilized a standard pivot pin but the pin was not captive. A screw on the left side holds this version of the pivot pin. See page 25 for front pivot pin variations.

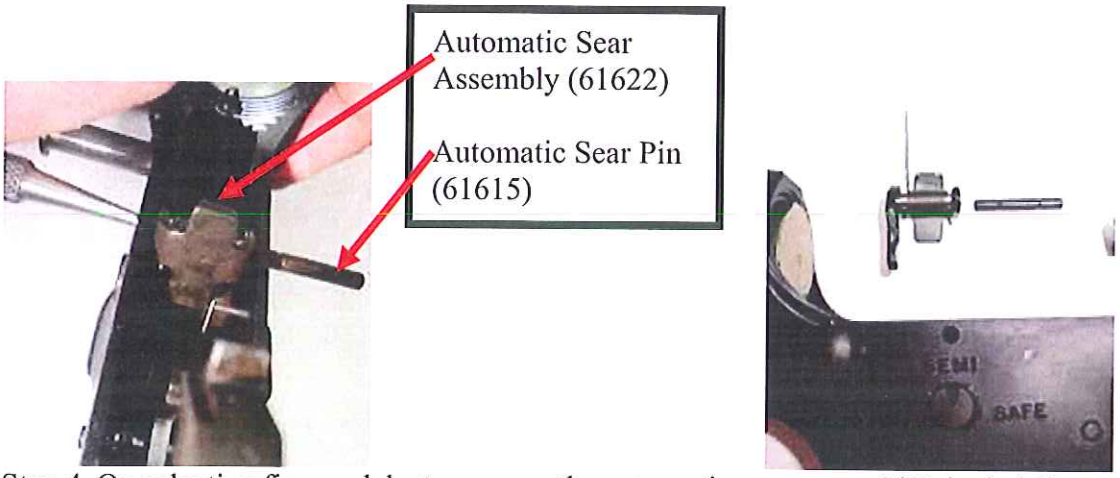
Magazine Release Button (62032)

Magazine Catch Assembly (61604)

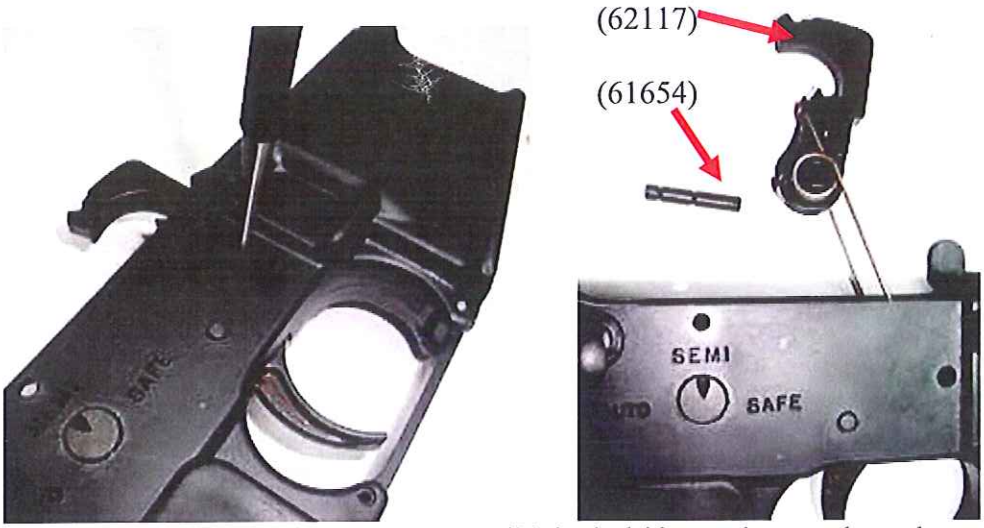
Step 2. To remove the magazine catch, depress the magazine release button (62032) until it bottoms out. Rotate the magazine catch assembly (61604) counter clockwise and remove. Release button and remove magazine release button (62032) and spring (61759).



Step3. To remove the bolt catch assembly, with the bolt catch removal punch (62680), drift the bolt catch pin from left to right and remove pin. Remove the bolt catch, plunger and spring.

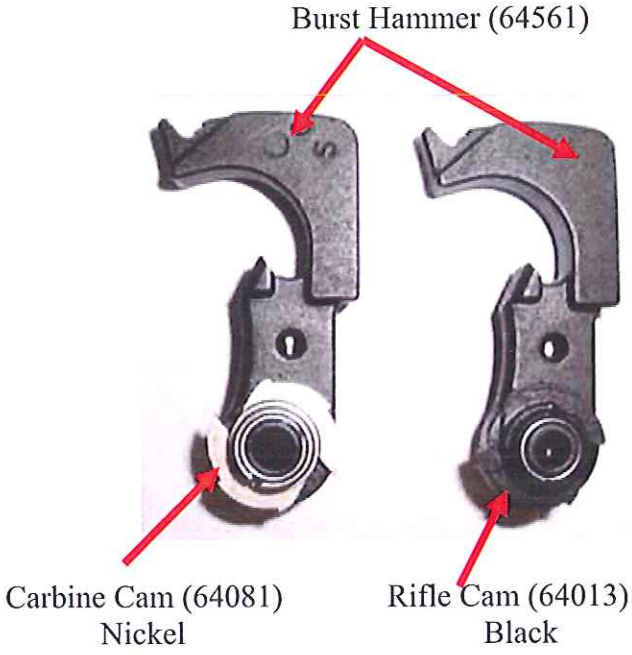


Step 4. On selective fire models, to remove the automatic sear, use a 3/32-inch drift punch to remove the automatic sear pin. Lift automatic sear from the receiver.

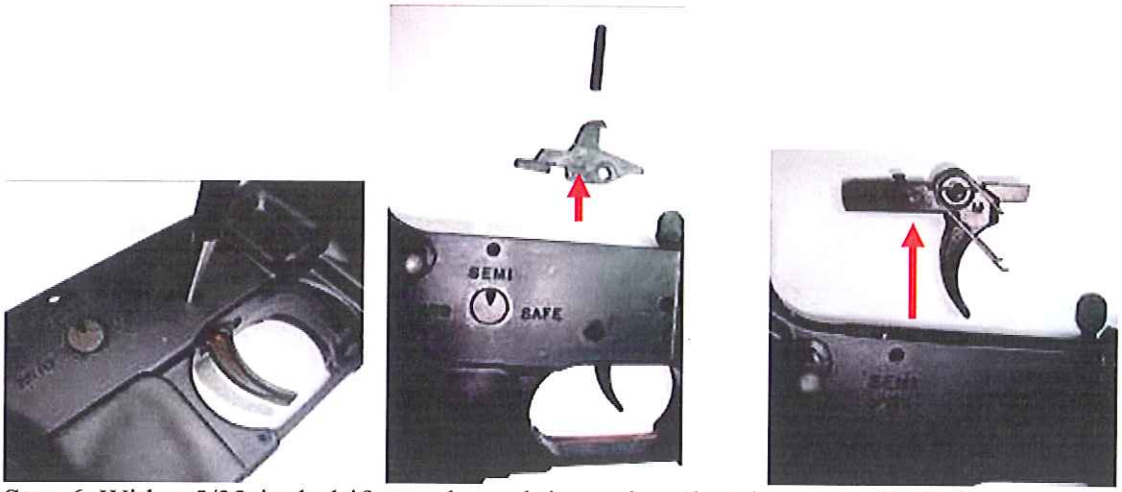


Step 5. To remove the hammer, use a 5/32-inch drift punch to push out hammer pin. DO NOT POUND WITH A HAMMER. Lift the hammer assembly out of the receiver.

NOTE: Colt Sporter, Match Target and Law Enforcement semi-automatic weapons utilize a larger .170-inch diameter pin instead of the standard .154-inch hammer and trigger pins. It should be noted in February of 2009, Colt Defense converted all LE and commercial weapon hammer/trigger pins to .154-inch. Be sure to use the proper diameter hammer and trigger pins.



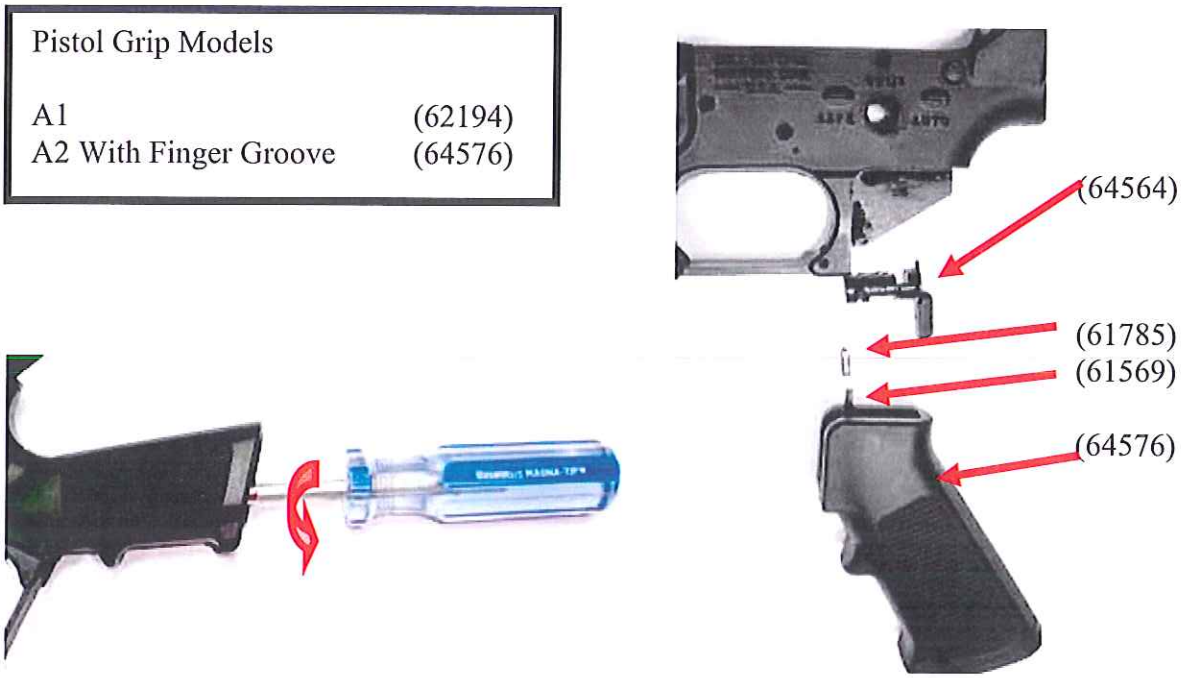
Burst Hammer will include a burst cam (carbine=nickel plated, rifle=black) and cam clutch spring.



Step 6. With a 5/32-inch drift punch, push inward on the trigger pin (61654).
Step 7. Remove disconnector and lift trigger out of the receiver.

NOTE: The Burst and 4-Way trigger groups will use two disconnectors.

Pistol Grip Models	
A1	(62194)
A2 With Finger Groove	(64576)

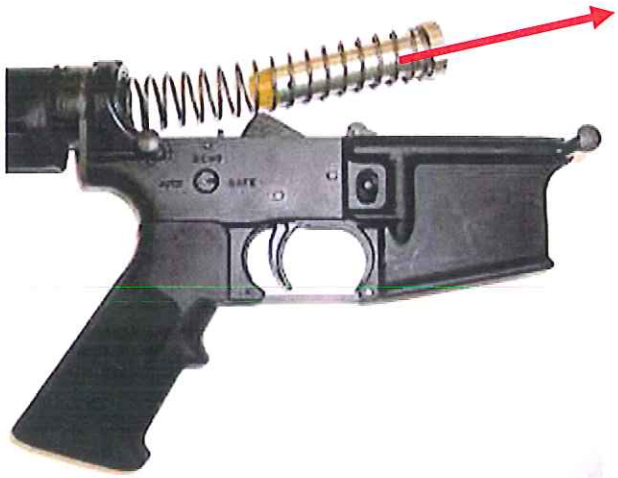


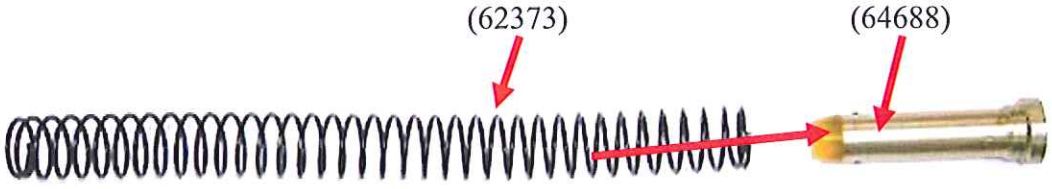
Step 8. To remove the pistol grip (64576), utilize a straight blade screwdriver and remove the pistol grip screw and lock washer. When the pistol grip is removed, remove the selector lever spring from the pistol grip.
Step 9. Wiggle the selector lever and allow the selector detent to fall out of the receiver.
Step10. Remove the selector lever from the left side of the receiver.

NOTE: Bothe selective fire and semi-automatic only selectors are in use. Semi-auto only selectors are identified by their lack of an automatic sear slot and only two detent stops.

NOTE: It should also be noted that if it is desirable to convert selective fire weapons to semi-auto only, simply remove the automatic sear and replace the selector with a semi-auto only selector.

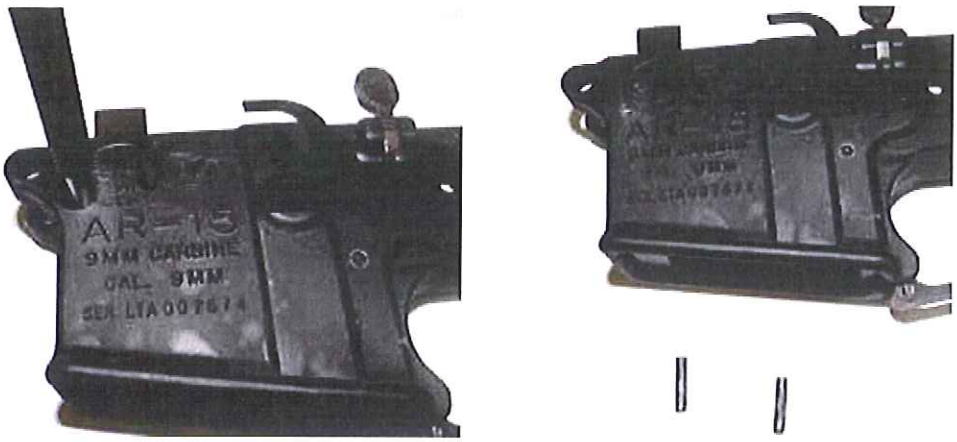
Step11. To remove the buffer and action spring; depress the buffer retainer pin and pull the buffer and action spring out of the receiver extension.





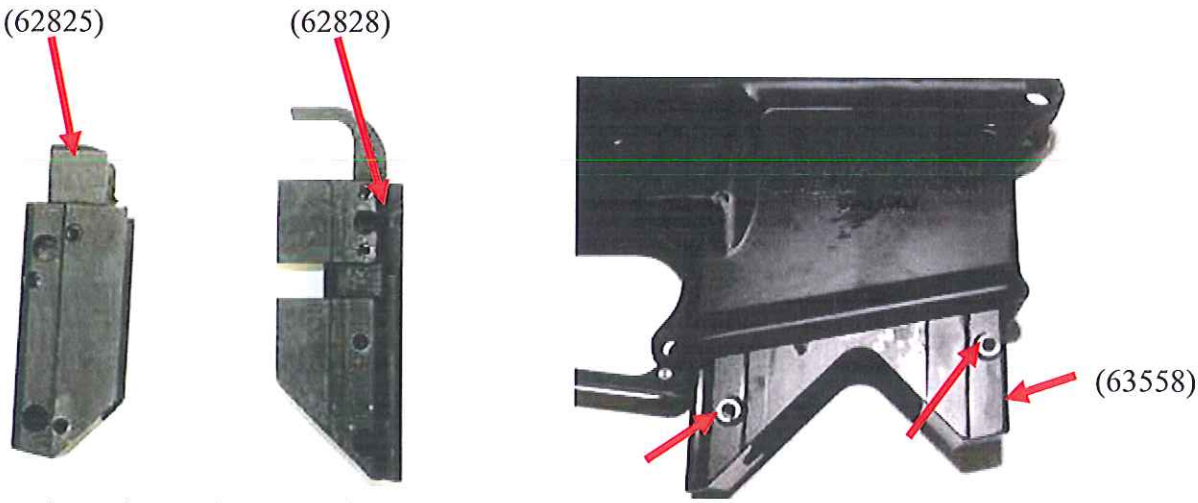
Step12. Separate the buffer from the action spring.

Removal of the Magazine Well Adapter of the 9mm SMG/Carbine



Step 1.

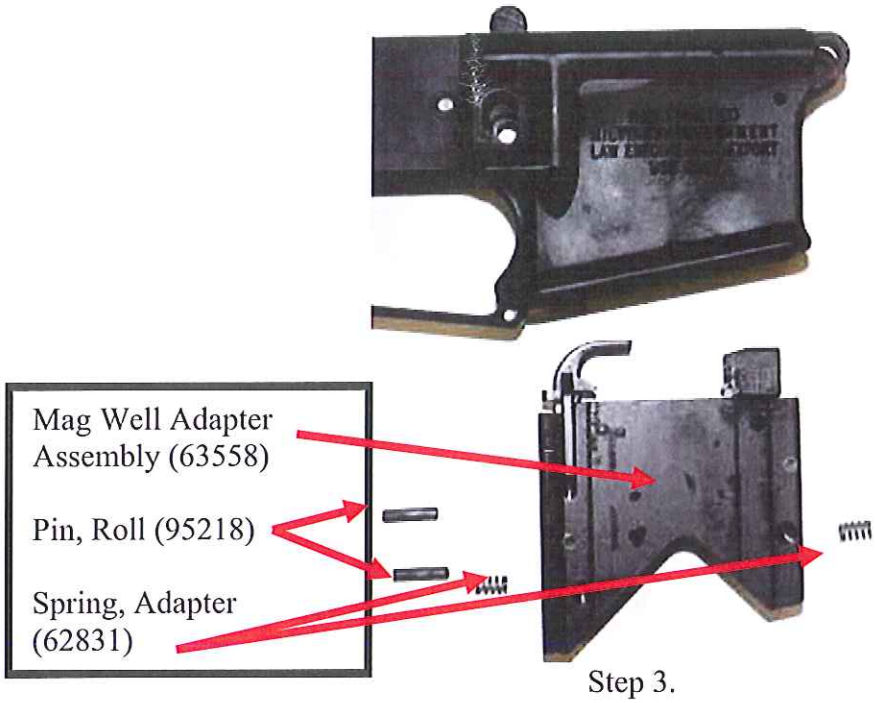
Step 1. With a drift punch, remove the two or three (depending on type) roll pins (95218).



Early 2-Piece Adapter (3-Pins)

Current 1-Piece Adapter (2-Pins)

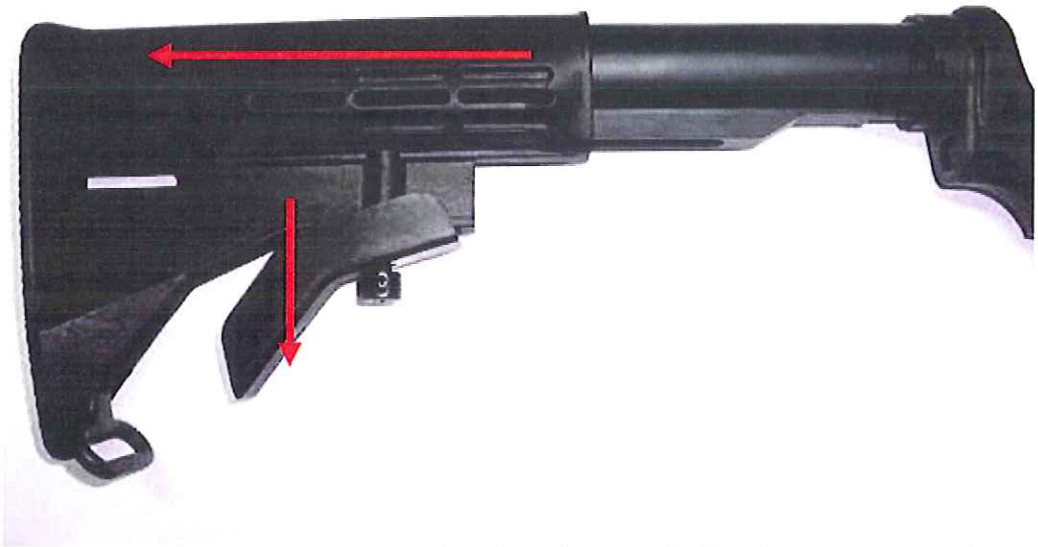
Step 2. If magazine catch is in the magazine well, depress it, push downward on the adapter. Notice there are 2 springs present and will cause resistance.



Step 3.

Step 3. Remove the Magazine Well Adapter from lower receiver.
NOTE: If you have an earlier model, there will be two pieces to the adapter. Remove in the same manner.

Removal of the Telescopic Buttstock



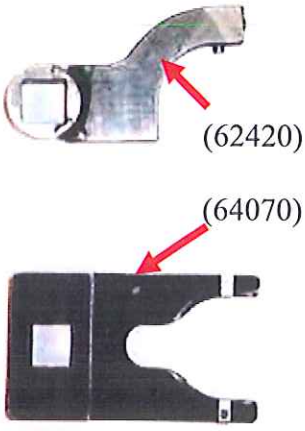
Step 1. Pull downward on the stock release lever and slide the stock off of the receiver extension.

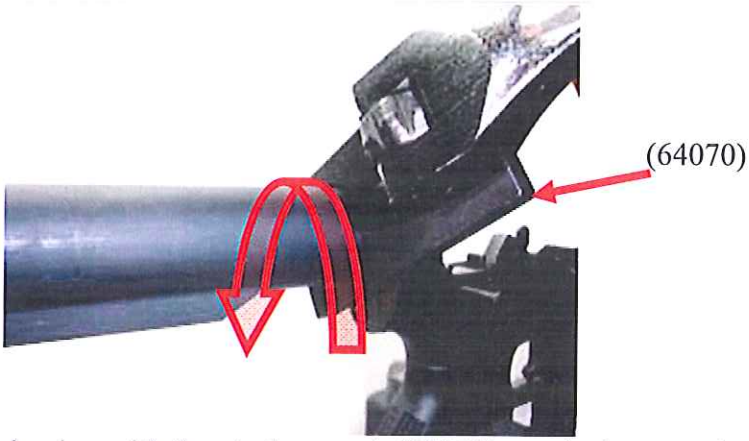
Step 2. Secure the lower receiver in a receiver block.

NOTE: When removing the receiver extension nut (castle nut), you must be sure as to which nut you are working with. From the 1960's through the early 1990's, the carbines used the pre-M4 receiver extension nut (62357), which utilized a spanner wrench (62420). This nut had a single round pinhole for the spanner wrench to engage.

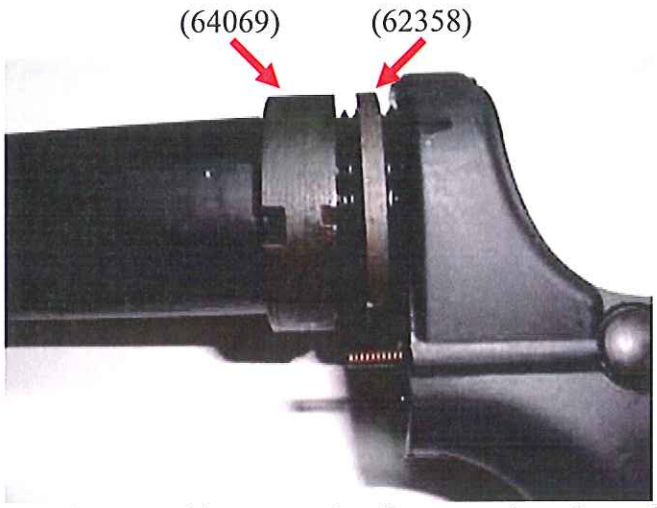
From the mid-1990's to present, the M4 carbines utilize an improved receiver castle nut (64069), which uses a different spanner wrench (64070). This has two square slots for the new tool to engage getting better hold for torquing.

If the old receiver extension nut is found, it can be removed by tapping forward on the nut with a 3/32-inch punch through the hole for the spanner wrench. Once removed, replace with the newer style receiver extension nut.

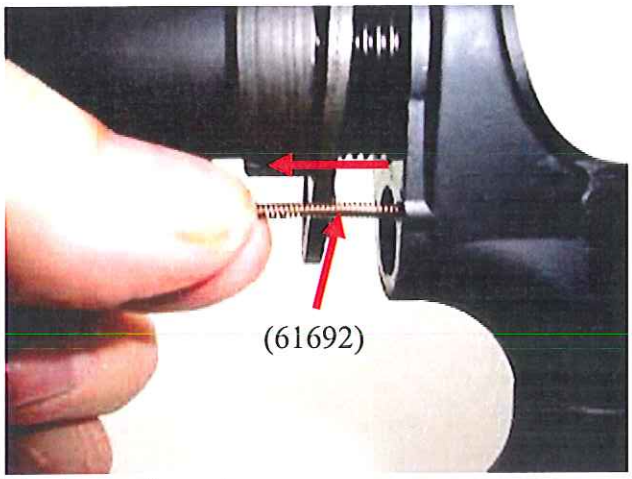




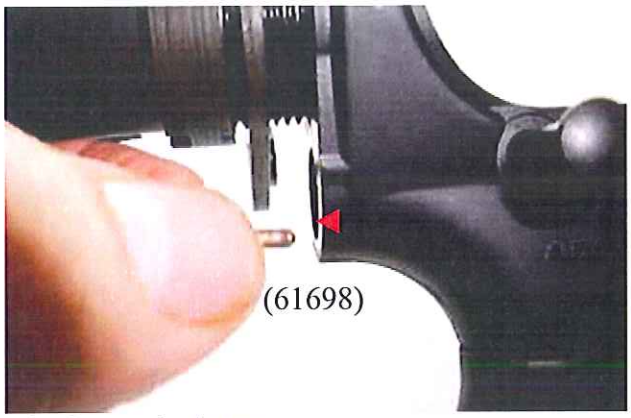
Step 3. Utilizing a breaker bar with the stock wrench (64070) attached, rotate the receiver extension nut counter clockwise until it comes fire. This could be difficult due to the staking of the receiver extension nut.



Step 4. Unscrew the castle nut and loosen and pull rearward on the endplate.

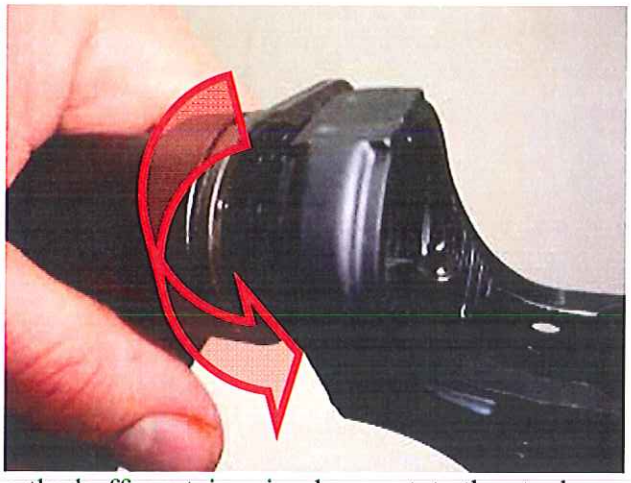


Step 5. Remove the takedown pin spring.

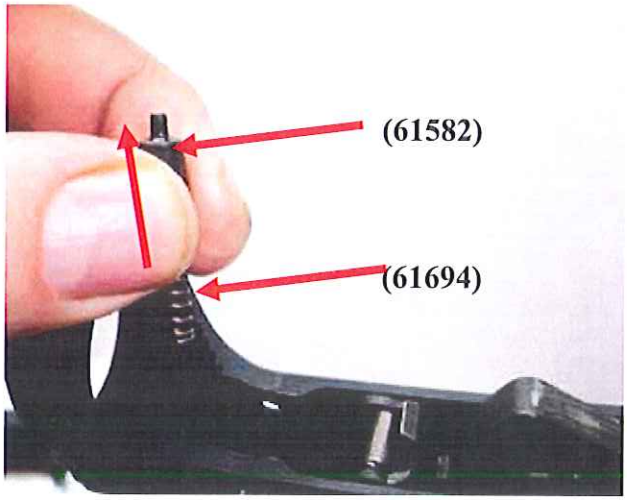


Step 6. Remove the takedown pin detent.

Step 7. Remove the rear takedown pin (61655) from the receiver.

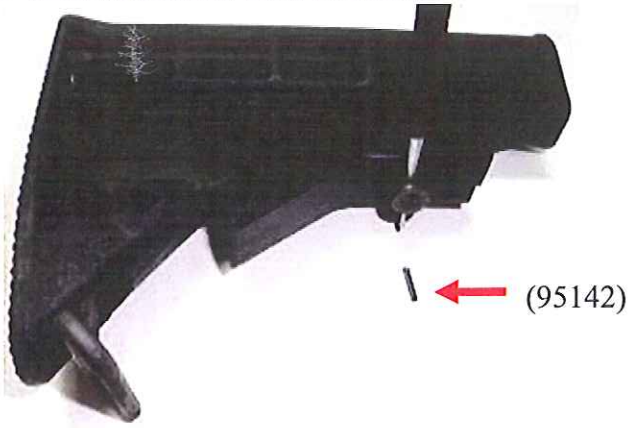


Step 8. While holding the buffer retainer in place, rotate the stock counter clockwise until it comes free of the receiver.

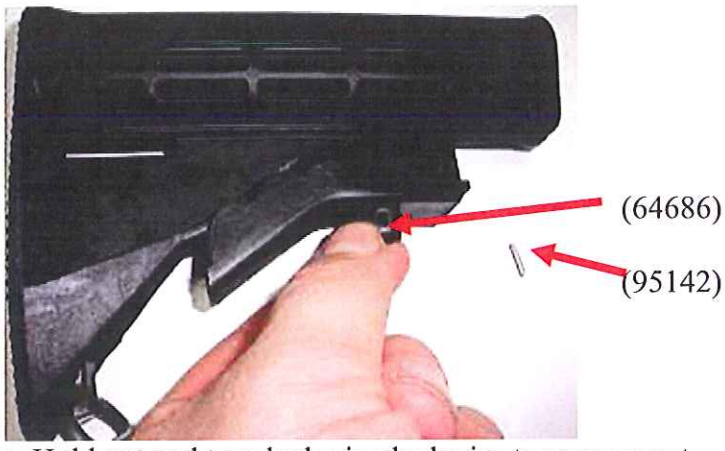


Step 9. Remove the buffer retainer and buffer retainer spring.

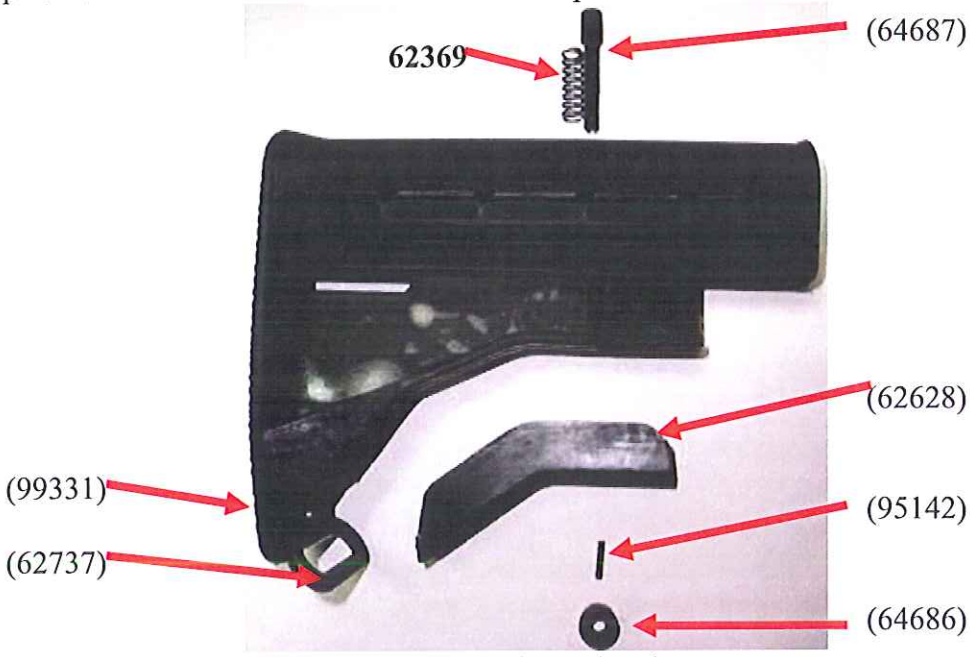
DISSASSEMBLY OF THE SLIDING BUTTSTOCK



Step 1. Remove/Install Spring Pin.



Step 2. Remove the nut. Hold nut and turn lock pin clockwise to remove nut.

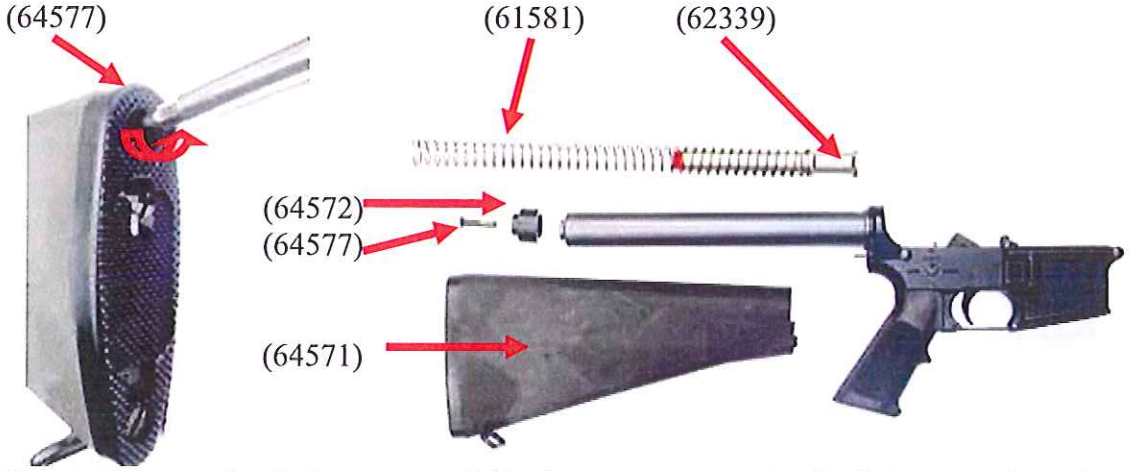


Step 3. Remove/Install release lever, lock pin, and spring.

REMOVAL OF THE FIXED BUTTSTOCK

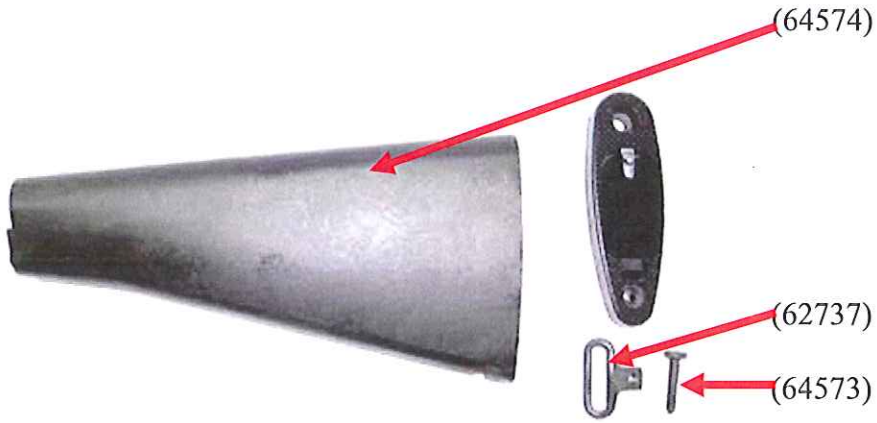
NOTE: There are two different fixed buttstocks found on Colt rifles. The first is the original M16/M16A1 stock and the second is the A2/A4 stock. The difference is the A2/A4 stock is 5/8 of an inch longer and utilizes a spacer between the end of the receiver extension and the Buttplate of the stock. Also a longer Buttcap screw is used for the longer stock.

If the longer Buttcap screw is used on the standard M16/M16A1 stock, the weapon may not hold open on the last shot. Be sure to have the proper Buttcap screw.

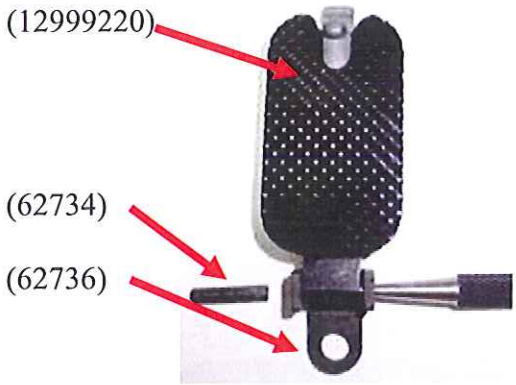


Step 1. Unscrew the Buttcap screw. Slide the stock rearward and off the extension tube.

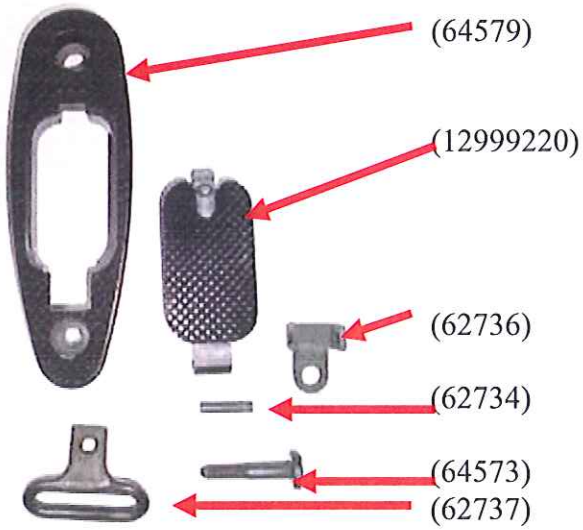
Step 2 Unscrew the Buttplate screw.



Step 3. Remove buttplate assembly from the rear of the stock.

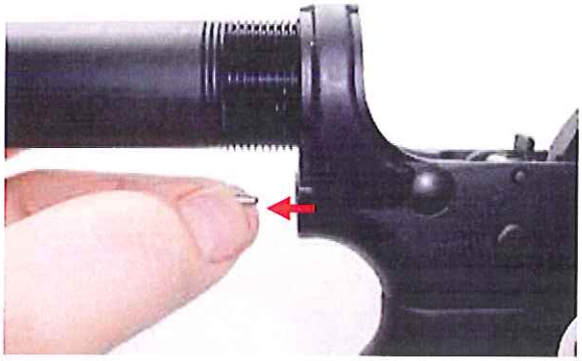


Step 4. With a drift punch, slide out the hinge pin and remove door from the hinge.



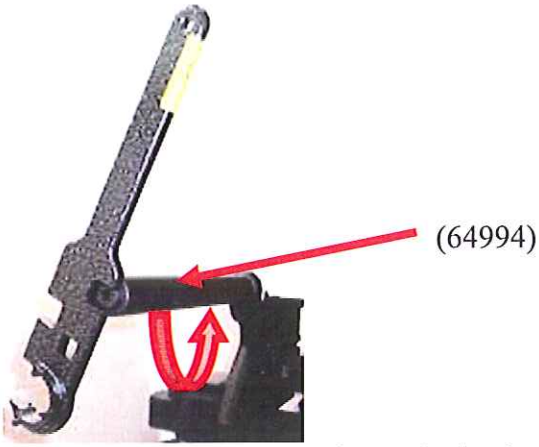
Step 5. The buttplate assembly is disassembled.

Step 6. Remove the takedown pin spring (61692).

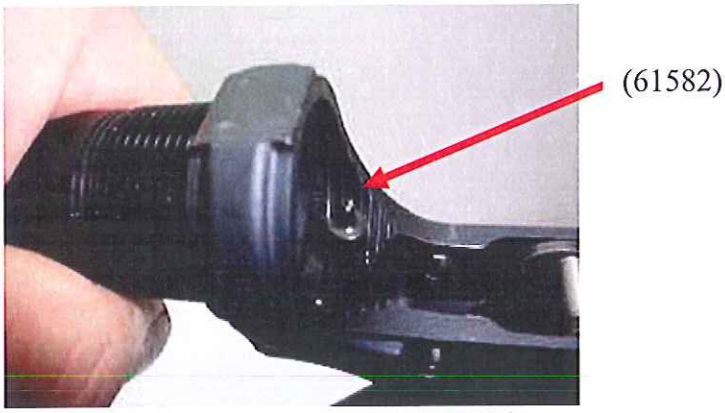


Step 7. Remove takedown pin detent (61698).

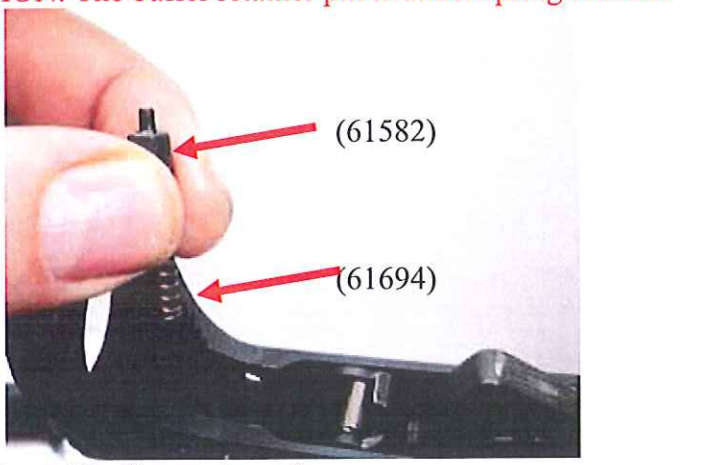
Step 8. Remove takedown pin (61655).



Step9. With lower receiver secured, use the armorer wrench attached to breaker bar, grab receiver extension on the rear and rotate counter clockwise while securing the buffer retainer so it will not launch out of the rifle. The buffer retainer is under heavy spring tension.



Step 10. Remove receiver extension from receiver slowly.
CAUTION: The buffer retainer pin is under spring tension.



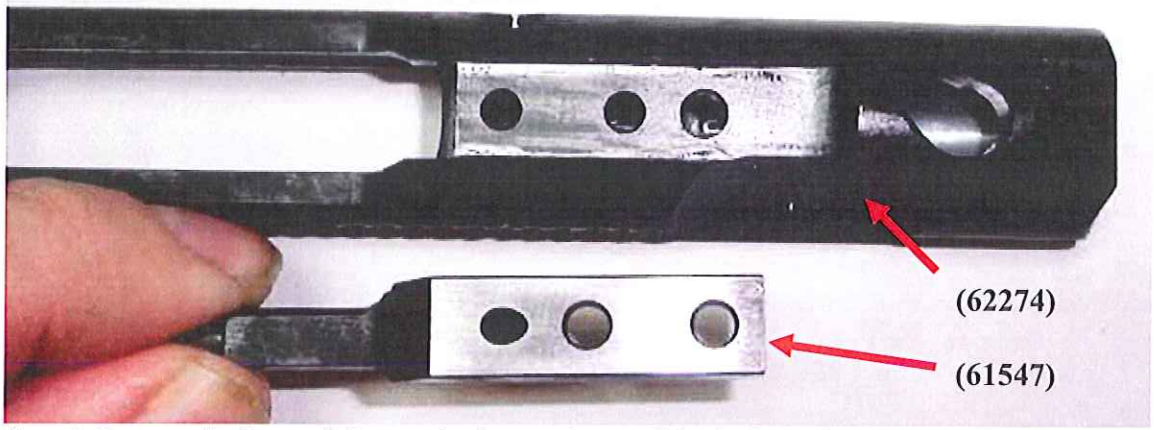
Step 11. Remove buffer and buffer retainer pin.

SECTION 8 Reassembly of 5.56mm Family of Weapons

The Bolt Carrier Group

The Bolt Carrier

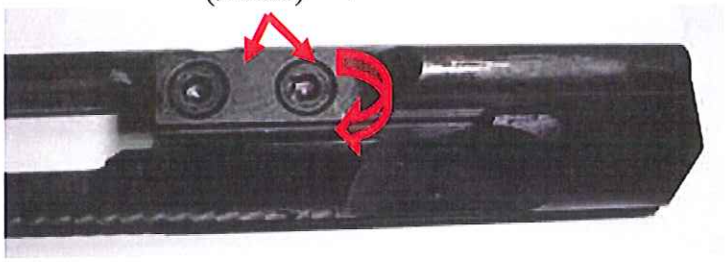
NOTE: If the carrier key is removed, replace carrier key and locking screws.



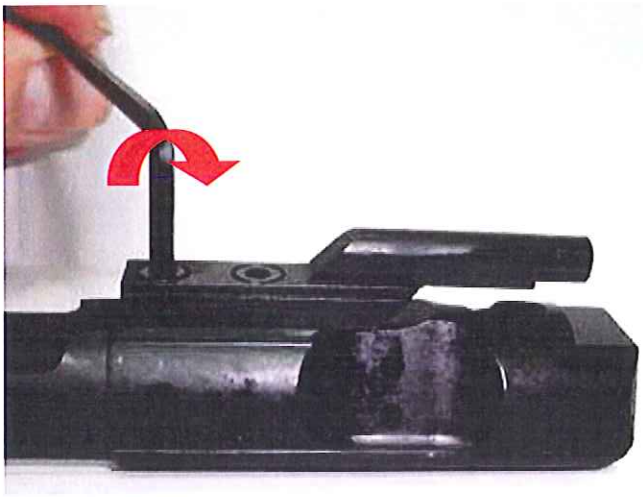
Step 1. Ensure the base of the carrier key and top of the bolt carrier surfaces are clean.

Step 2. Apply a small amount of gasket sealer around the gas port hole on the top of the bolt carrier. DO NOT COVER THE GAS PORT!

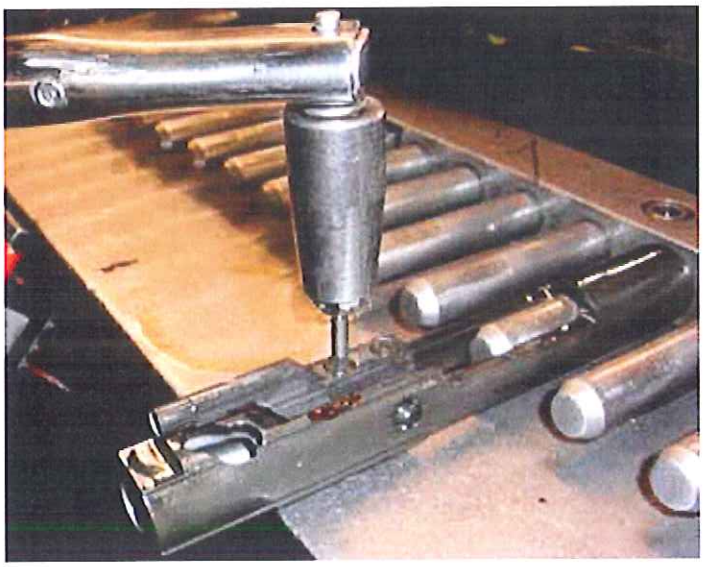
(92201)



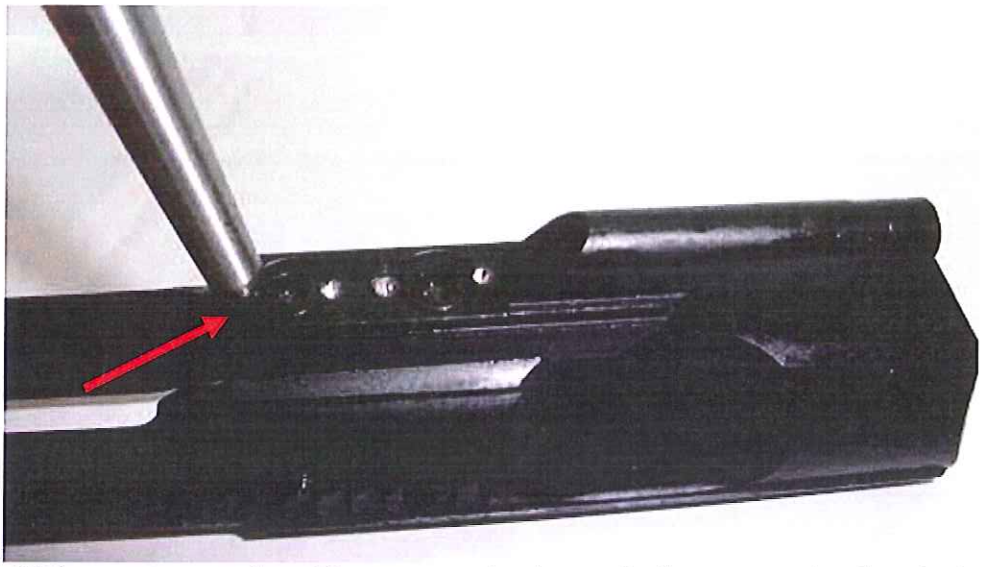
Step 3. Place carrier key on top of the bolt carrier and insert both carrier key screws.



Step 4. With a 1/8th inch Allen wrench, tighten the carrier key screws.

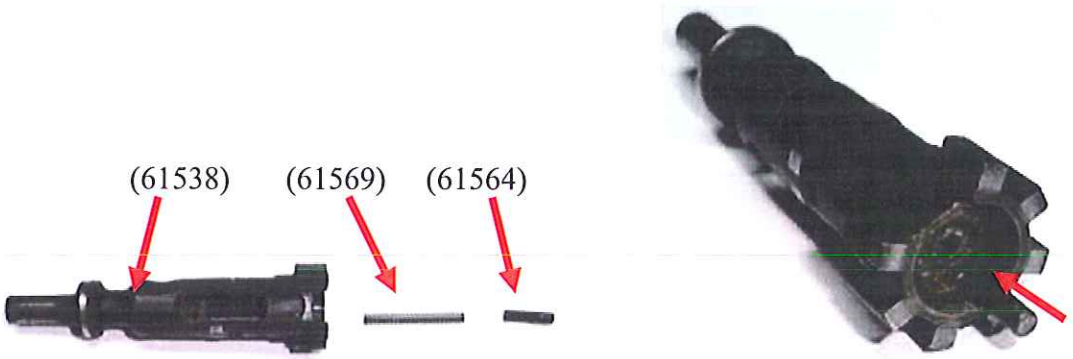


Step 5. With an inch pound torque wrench, tighten carrier key screws to 50 to 58 inch pounds.

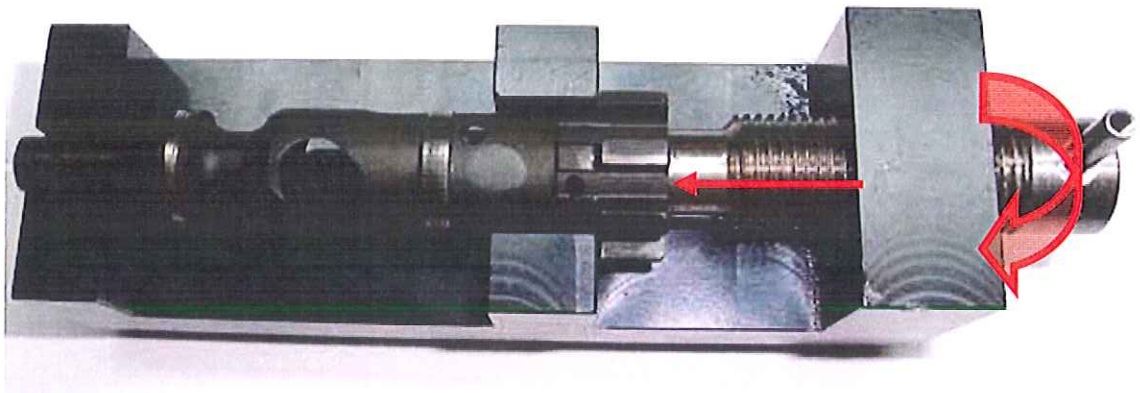


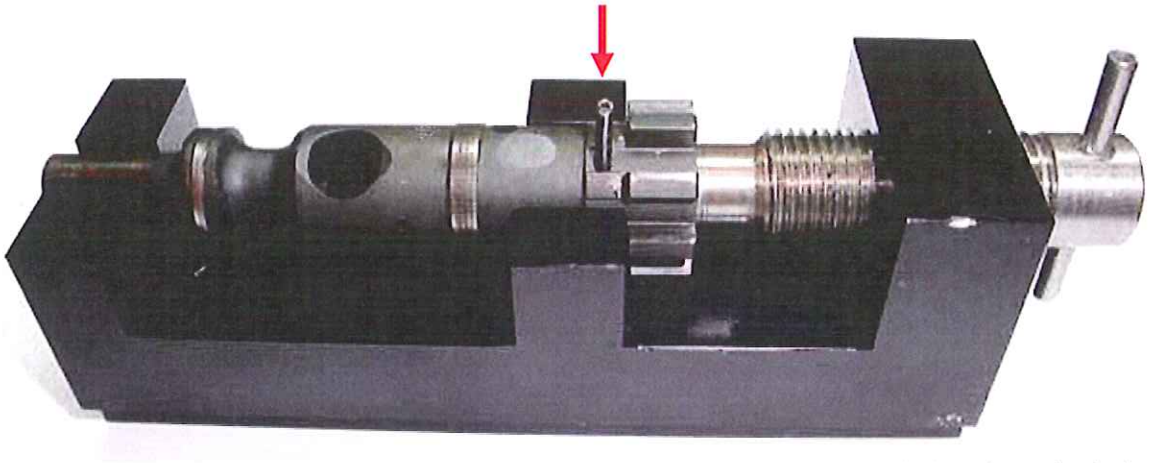
Step 6. With a center punch and hammer, stake the carrier key screws in place in 2 places for each screw.

The Bolt

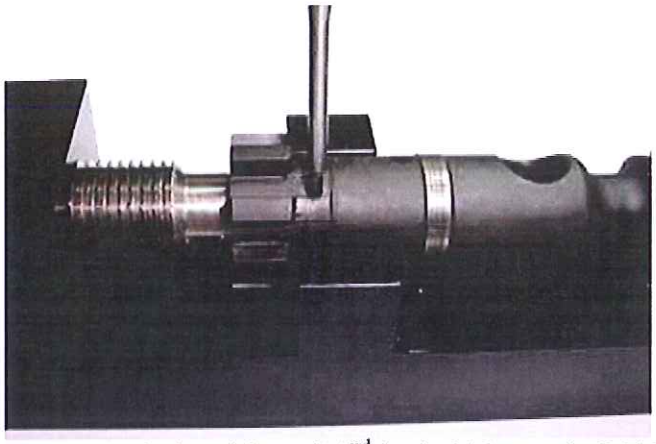


Step 1. Insert the ejector spring and the ejector into the face of the bolt with the small end on the ejector first.





Step 2. With the groove of the ejector facing towards the center of the bolt, place the bolt in an ejector install/removal tool and tighten slightly only to slightly depress the ejector.



Step 3. Drive the ejector roll pin in with a 3/32nd inch drift punch. BE SURE TO USE A NEW PIN.

Step 4. Install three (3) gas rings (61540). Slide one leg into the groove at the rear of the bolt and slide the ring into the groove. Repeat three times. REPLACE ALL RINGS IF ANY REMOVED.

Gold Heavy Extractor Spring	(64972)
Standard Extractor Spring	(62769)

NOTE: DO NOT REMOVE THE EXTRACTOR BUFFER AND SPRING.

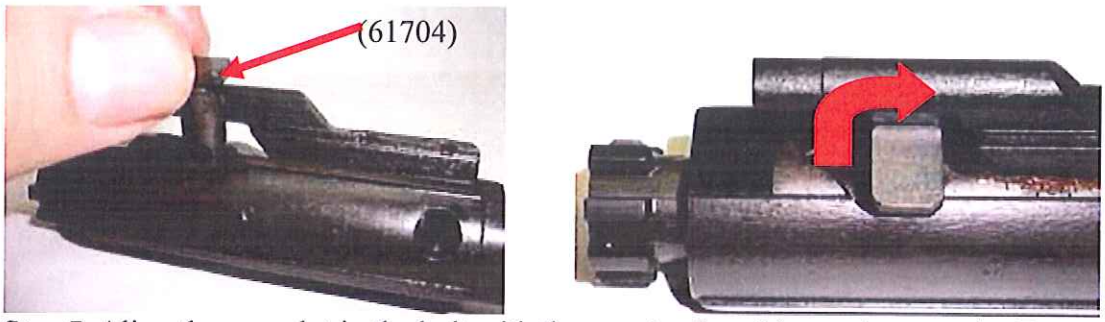
If the buffer and spring assembly needs to be inserted into the extractor, take the spring and insert the buffer into the widest end. Place the wide end on top of the extractor spring recess on the extractor. Take a bullet tip or comparable drift punch and push the tip of the spring and buffer downward until the spring seats.

Step 5. Insert the extractor into the extractor groove on the bolt. Depress the rear of the extractor and insert extractor pin.

NOTE: There are two basic firing pins. One designed for use with the selective fire bolt carrier. The forward flange on this firing pin is the standard 0.37-inch diameter. The second is for use with the semi-automatic only bolt carrier, which leaves both flanges of the firing pin exposed. The forward head has a diameter of 0.33 inches.

If the selective fire firing pin is used in a semi-auto only rifle, the safety notch on the hammer may engage the larger head causing failure to lock or bending the firing pin retainer pin.

Step 6. Insert the bolt into the carrier and align with the extractor to the right side.



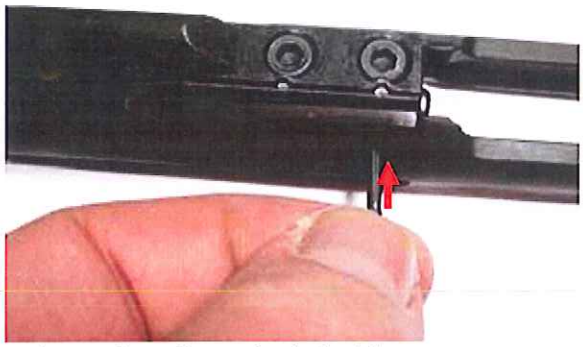
Step 7. Align the cam slot in the bolt with the cam track and insert the cam pin. Rotate ¼-turn.

NOTE: To check serviceability of gas rings:
Remove the firing pin retainer pin, firing pin and cam pin. Hold the bolt carrier group in the vertical position with the bolt facing upward. Grasp the bolt with one hand and release the carrier with the other. If the bolt carrier falls free of the bolt by its own weight it is time to replace ALL three gas rings. If the bolt carrier group stays together the gas rings are serviceable.

Step 8. Place the bolt in the unlocked position.

Step 9. Insert firing pin (62294) from the rear.

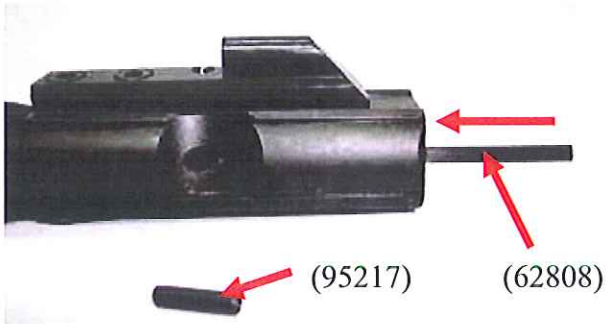
NOTE: ENSURE PROPER FIRING PIN IS USED WITH PROPER BOLT CARRIER! Bolt Carrier Assy 63008 and 63163 require the semi-auto firing pin (63039).



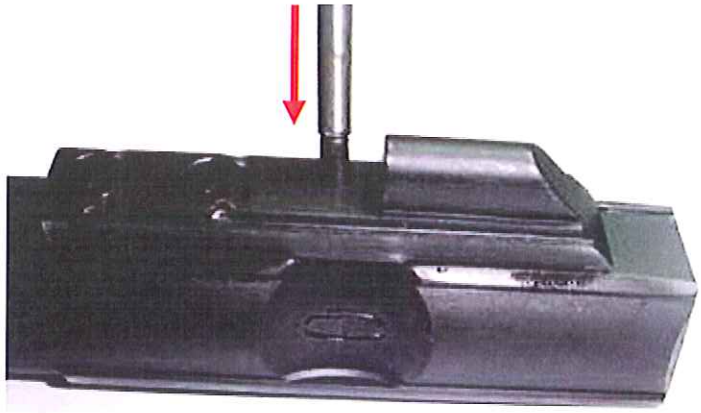
Step10.Insert the firing pin retainer from the left side.

Reassembly of the 9mm SMG/Carbine Bolt Assembly

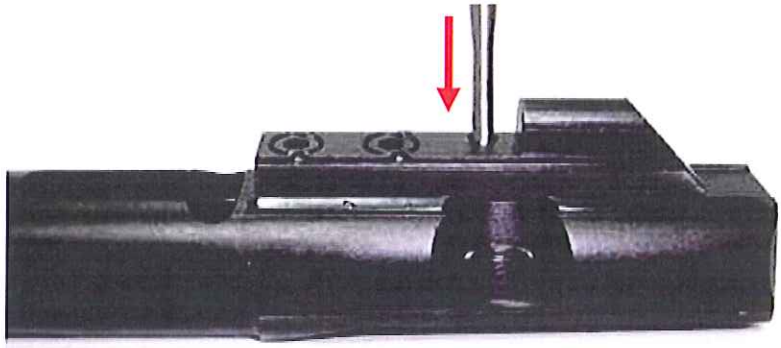
Step 1. Assembly of the carrier key on the 9mm bolt assembly is identical to that of the standard carrier with the exception of no gasket sealer. See carrier key installation instructions.



Step 2. Insert the extractor into the face of the bolt assembly with the hook facing inward.

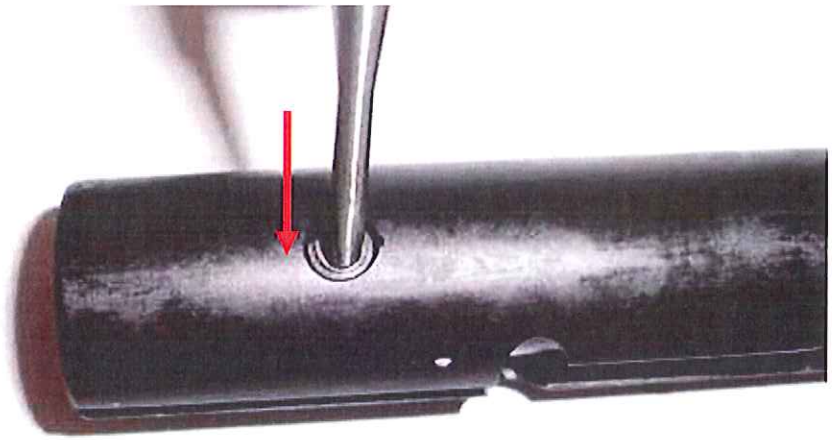


Step 3. Insert the extractor pin (95217) from the top pf the bolt assembly. With a 3/32 inch drift punch, drive in extractor roll pin.

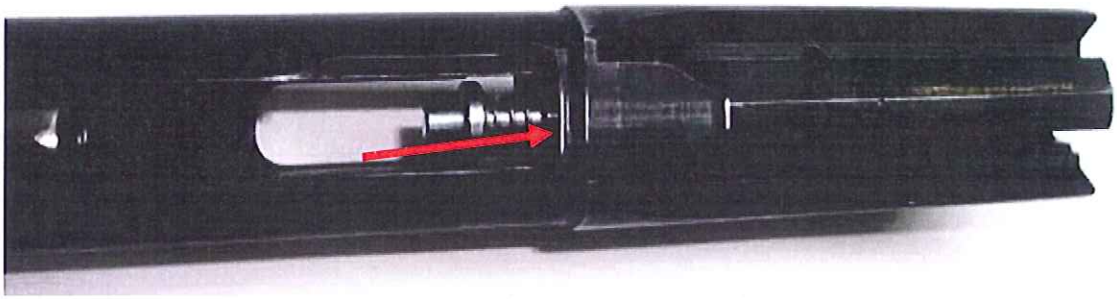


Step 4. Ensure extractor pin top is flush with the bolt assembly, not the key.

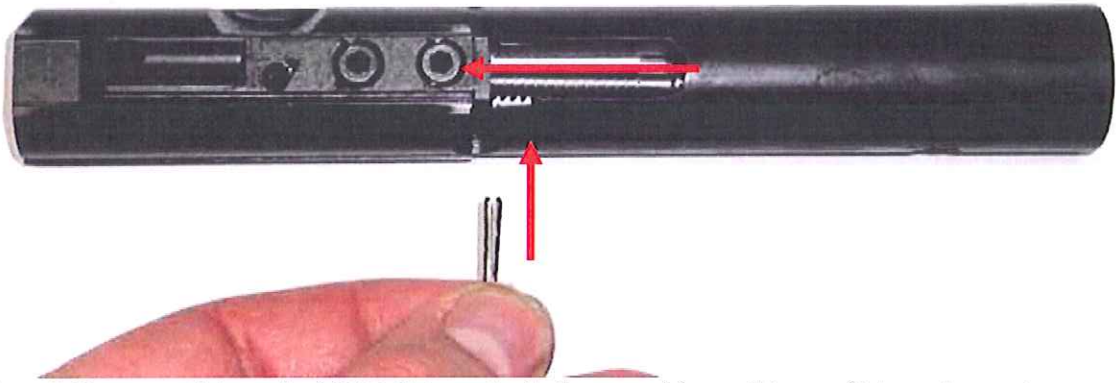
Step 5. Insert the plug into the rear of the bolt assembly. Ensure hole in the plug lines up with the assembly.



Step 6. Insert the spiral pin (95222) and drive it into place. **The plug and spiral pin SHOULD NOT be removed unless needed for repair.**

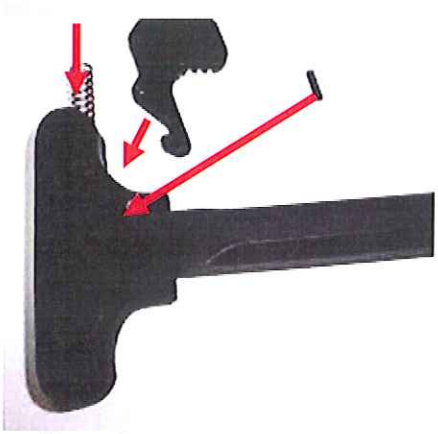


Step 7. Insert firing pin (62805) and spring (62806) into the bolt assembly from the bottom.

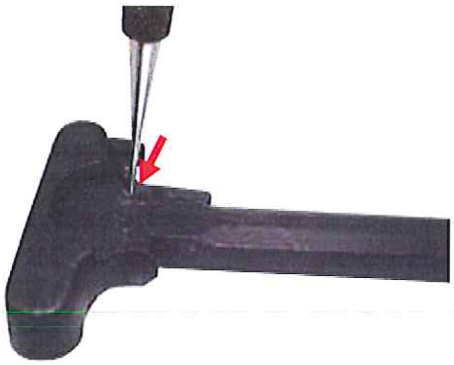


Step 8. Depress firing pin (62335) into the bolt assembly and insert firing pin retainer. Ensure firing pin is held in place by retainer.

Reassembly of the Charging Handle

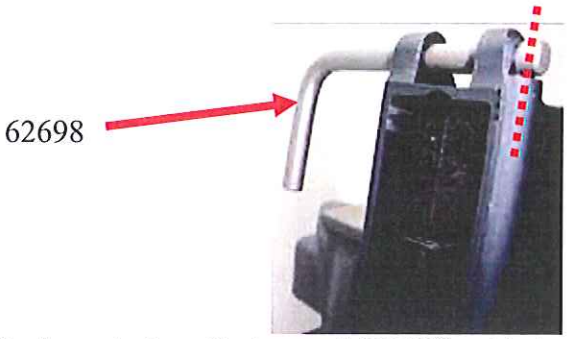


Step 1 Insert the charging handle spring (61875) and slide the latch (62289) into place.

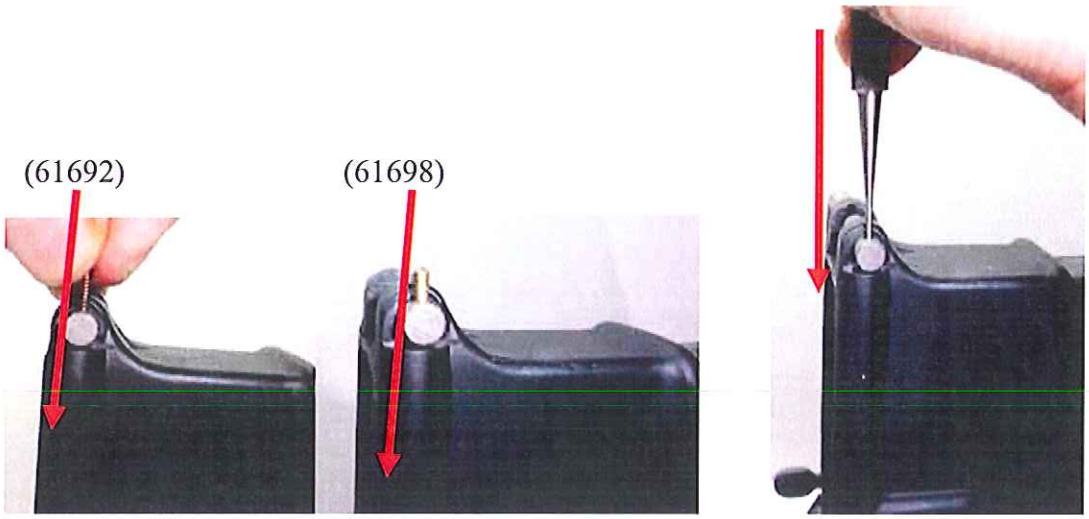


Step 2 With a 1/16th – inch drift punch, insert retainer pin (95113).

Reassembly of the Lower Receiver

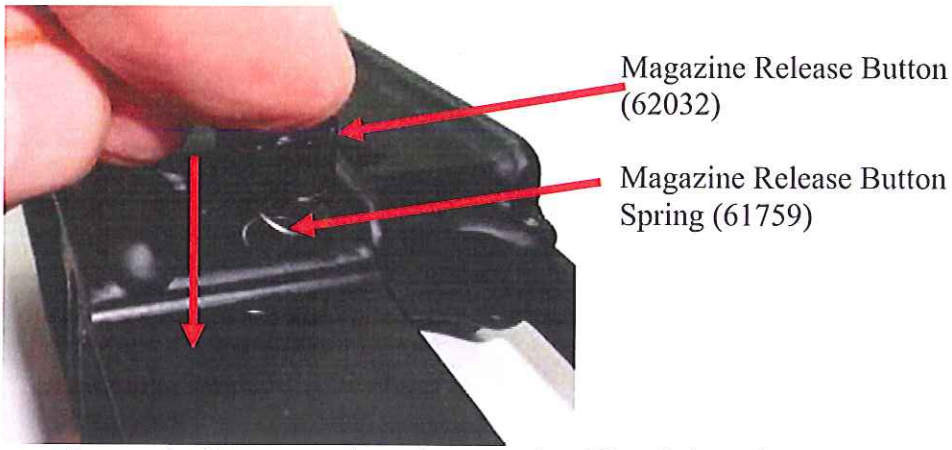


Step 1. Install pivot pin installation tool (62698) with the hole lining up with hole in the receiver.

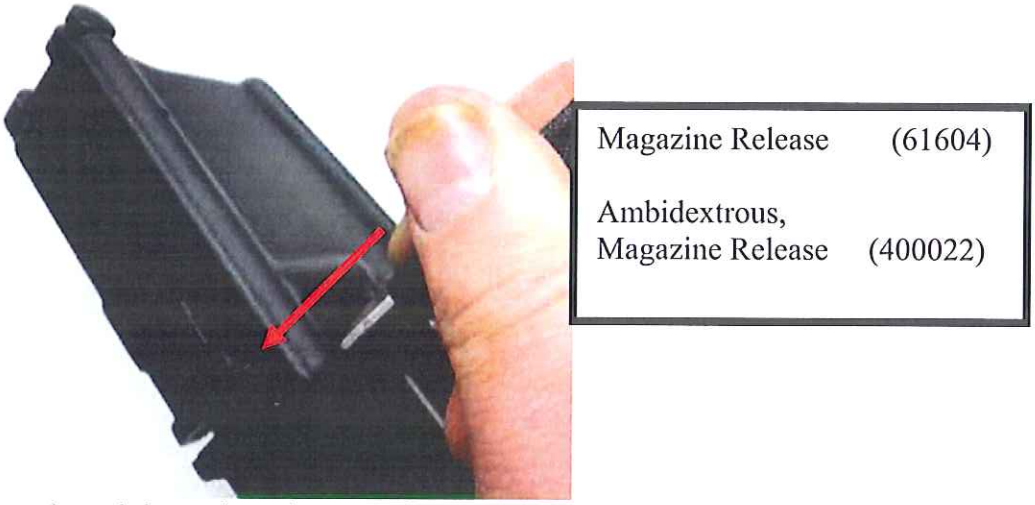


Step 2. Insert spring (61692) and detent (61698). Compress detent with 3/32nd inch drift punch and rotate tool.

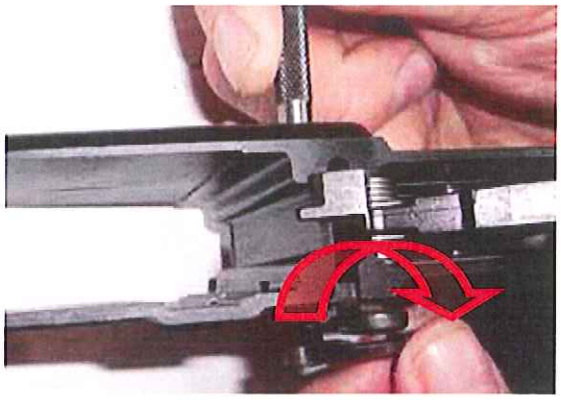
Step 3. Position the pivot pin (62221) and removing the pivot pin installation tool while maintaining pressure, slide the pivot pin into the hole. Rotate pivot pin to receive pivot pin detent.



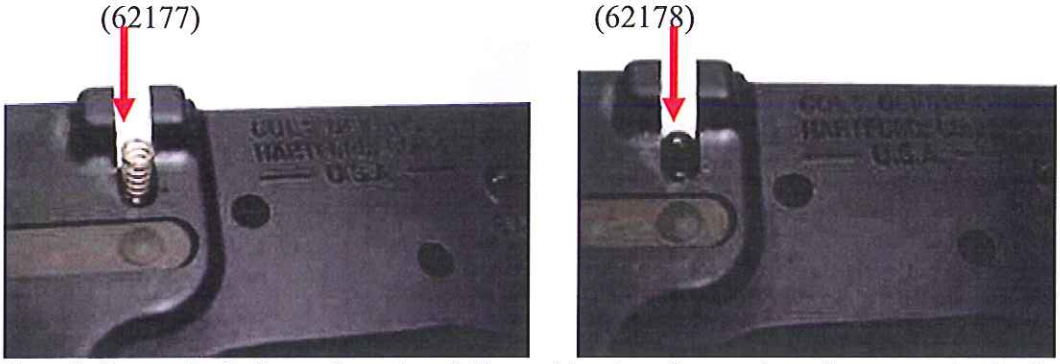
Step 4. To install the magazine catch, drop magazine release spring (61759) into the lower receiver and place the magazine release button (62032) on top.



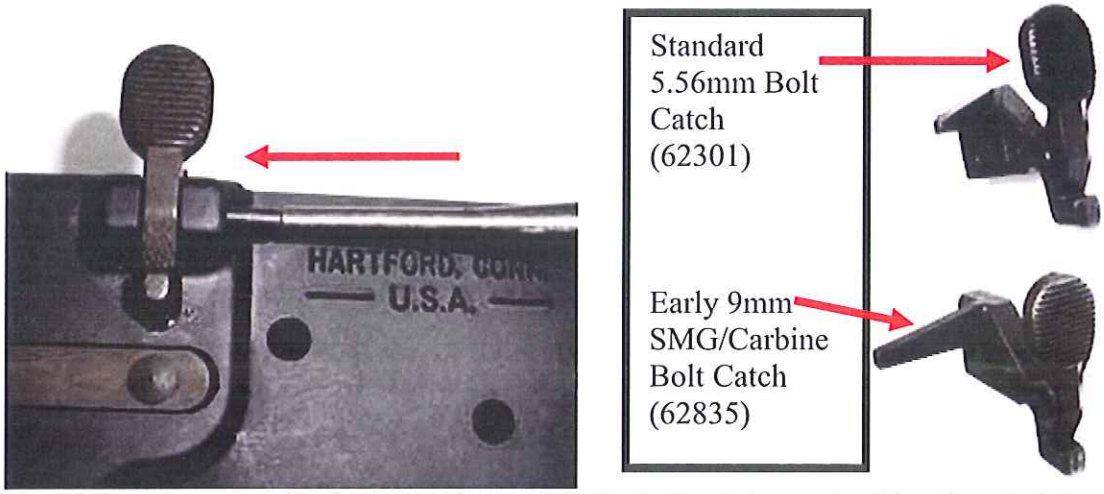
Step 5. With a suitable tool, push inward on the magazine release button (62032) until it bottoms out.



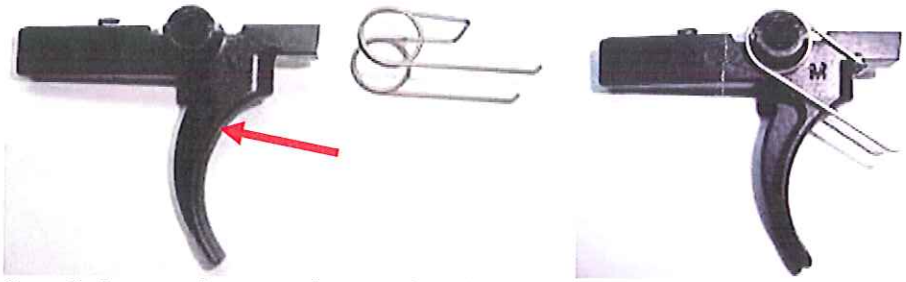
Step 6. Insert Magazine Release Assembly (61604) and rotate clock-wise until the magazine catch is flush with the exterior of the magazine release button.



Step 7. Insert the bolt catch spring followed by the plunger into the recess in the lower receiver. Then insert the bolt catch.



Step 8. Insert a new roll pin (95105) and with the bolt catch punch, drive the pin into position holding the bolt catch in place. Be sure the bolt catch is moving freely. Insert a magazine into the receiver and be sure the catch is engaged by the follower of the magazine and lifts the catch upward.

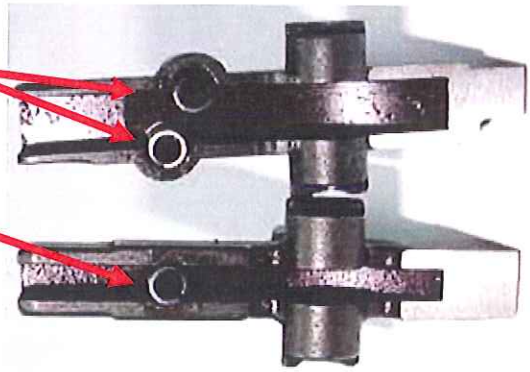


Step 9. Insert trigger spring on the trigger. Ensure disconnector spring(s) are in place.

Disconnector Spring Types		
Type	Part Number	Color
Standard:		
Auto	(63026)	Black
R0921 ONLY:		
Auto	*(61925)*	*Green*
Burst:		
Auto	(63026)	Black
Burst	(64568)	Silver
Semi-Only:		
Semi	(63026)	Black

Burst Trigger Assy (64935)

Auto Trigger Assy (62157)



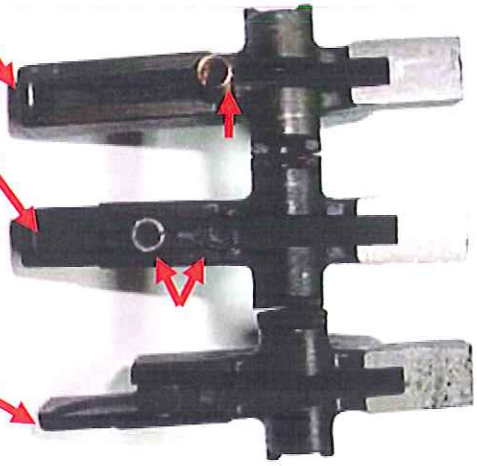
Selective Fire Triggers

AR-15 Sporter Trigger (.154) OBSOLETE (63027)
AR-15 Carbine Trigger (.154) Improved Disconnector (63037)

Both have closed rear ends to not allow insertion of AUTO disconnector.

Sporter/Match/LE Semi-Auto Only (.170) Trigger (63164)

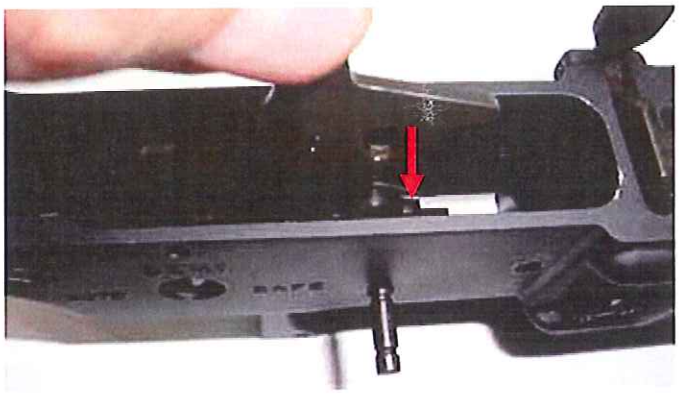
Colt Accurized Rifle
For CR6724
(.170) Nickel Plated Match Trigger (64212)
(.154) Nickel Plated Match Trigger (400129)



Semi-Auto Only Triggers

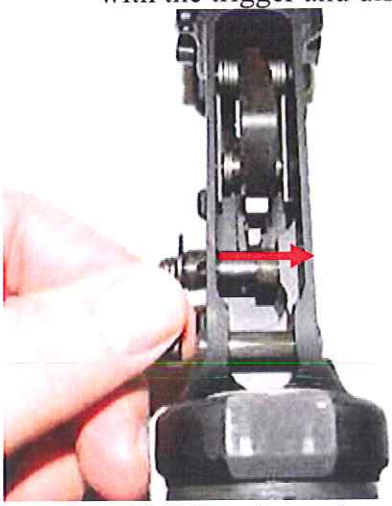
Hammer/Trigger Pin Variations	
.154	(61654)
.154 SMG SS	(62912)
.170	(63158)
.170 SMG SS	(64225)
.170 NICKEL	(64225)
.154 NICKEL	(400122)
For CR6724	

NOTE: The BURST trigger will have two disconnector springs, all others will have one.



Disconnector Variations	
Auto	(62334)
Burst	(64566)
Semi	(64567)
Semi Auto Only SP1	(63028)
OBSOLETE	
Semi Auto Carbine/ Standard Semi Auto Only (.154)	(63036)
Semi Auto (.170)	(63157)

Step 10.Insert trigger assembly into lower receiver and insert the trigger pin. Align pin with the trigger and disconnector(s). Insert trigger pin.



Selector Lever Variations	
Auto/Burst With/Witness Notch	(64564)
Standard Auto Without/Witness Notch	(61959)
Ambidextrous Selector Lever	(400024)
Ambidextrous Selector Handle (Right)	(400025)
Ambidextrous Selector Retaining Screw	(400026)
Standard Semi Auto Only	(63000)

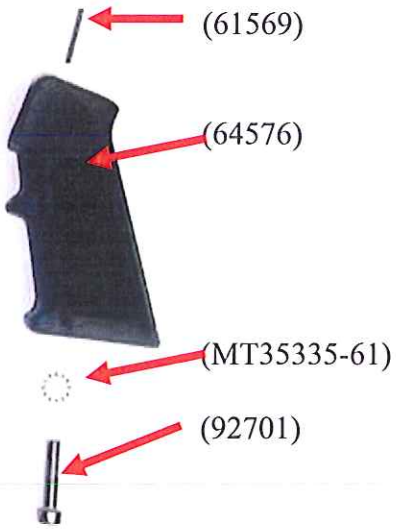
Step11.Insert the selector lever into the left side of the receiver.

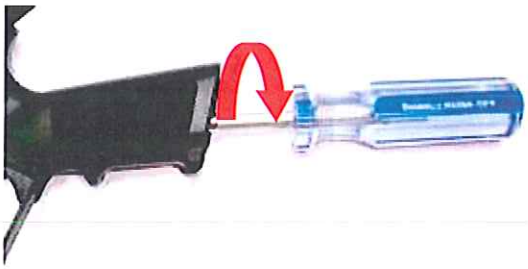
NOTE: Current production (2009) semi-automatic only selector levers are reversible. They are identified by detent slots/tracks on both sides. Simply insert the selector lever from the right side if it is desired to be on the right side of the receiver.

Step12. Insert selector detent (61785) into the bottom of the receiver.

NOTE: The selector lever detent spring and ejector spring are interchangeable.

Step13.Insert the detent spring (61569) into the hole in the pistol grip (64576) and install pistol grip on the lower receiver.





Step14.Install the pistol grip screw (92701) and lock washer (MS35335-61) into the base of the pistol grip (64576). Be sure the selector detent spring is installed on top of the pistol grip. Torque the pistol grip screw to 60 – 65 inch pounds. Test the selector to be sure it has free full range of motion and positively engages in each fire control mode.

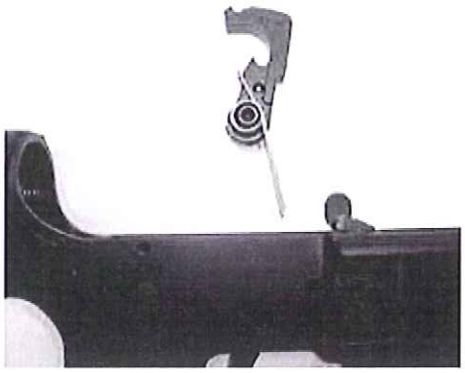
Step15.Install the hammer spring on the hammer. Insure the J-pin is installed in the hammer and properly crimped in place.

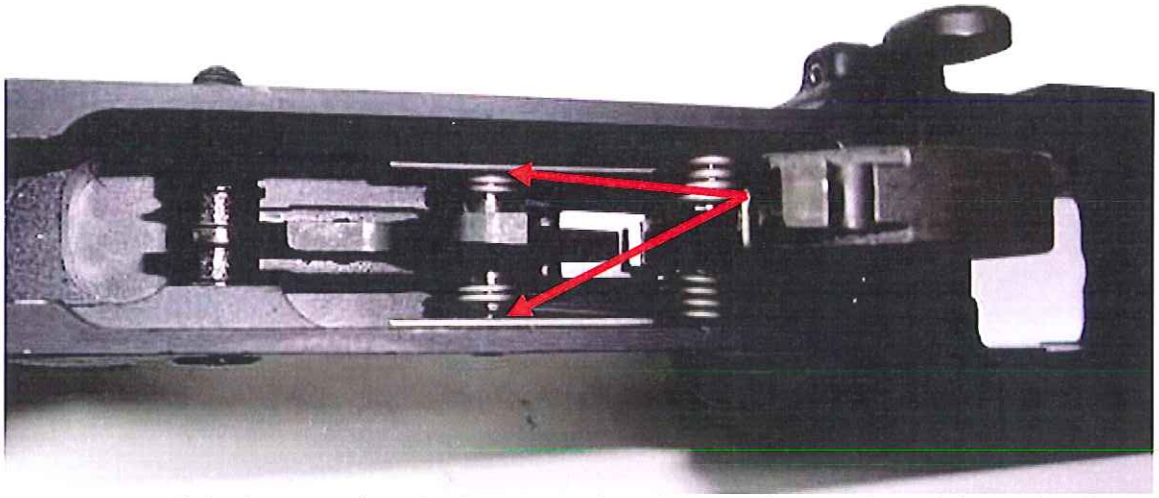
Hammer Spring Variations

(61697) Auto/Semi

(64558) Burst

(64224) Accurized Rifle (CR6724)





Step16. Install the hammer into the lower receiver. Ensure that one leg of the spring is engaging the exposed notch on the trigger pin. This locks the pin in place and prevents it from "walking" out.

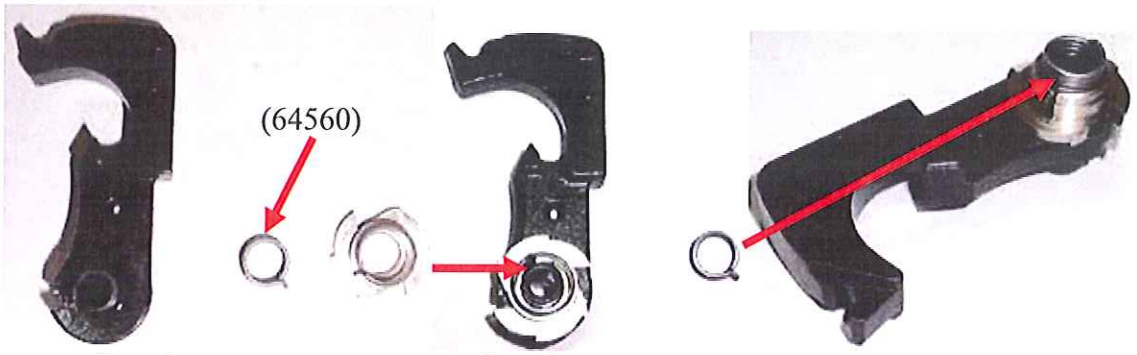
Trigger Pull Specifications	
Semi/Auto	5.5 to 8.5 lbs
Semi-Only	5.5 to 8.5 lbs.
Burst	5.5 to 9.5 lbs

Carbine Cam (64081)

Rifle Cam (64013)

NOTE: When installing hammers in BURST weapons, be sure you have the proper cam on the hammer. For rifles, the BLACK (64013) burst cam is used and for a carbine, the NICKEL PLATED (64081) one must be used. It should be noted the nickel carbine cam might also interchange with the rifle. DO NOT use the black cam in a carbine. This can cause nonconforming bursts and fire on release in a carbine.

To assemble the burst cam onto the hammer:



Step 1 Step 2 Step 3

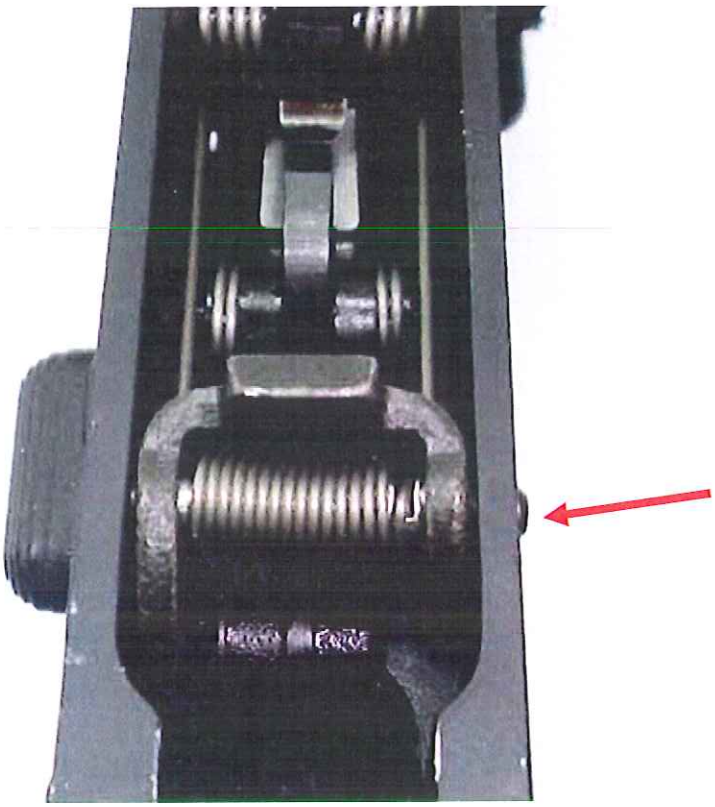
Step 4

Step 1 Retrieve The BURST hammer, cam and cam clutch spring (64560).
Step 2 Insert the cam on the right side of the hammer.
Step 3 Insert the clutch spring inside the cam with the index wire in the downward position and aligned with the notch on the cam.
Step 4 Push clutch spring al the way down until it bottoms out in the guide cut on the cam.

Step17.Insert hammer pin into the receiver and hammer until a click is heard and the pin locks in place.

NOTE: See hammer reference guide for hammer variations and part numbers.

Step 18.SELECTIVE FIRE MODELS ONLY. Install the automatic sear (61622) by crossing spring leg over the arm of the automatic sear. Guide leg of spring onto the notch on the selector.

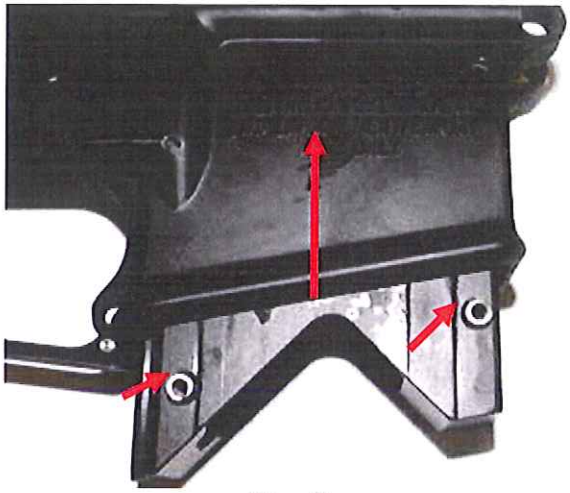


Step 19. Insert automatic sear pin.

Installation of the Magazine Well Adapter in 9mm SMG/Carbine

Step 1. If magazine release is present, depress and hold. If not, disregard step 1.

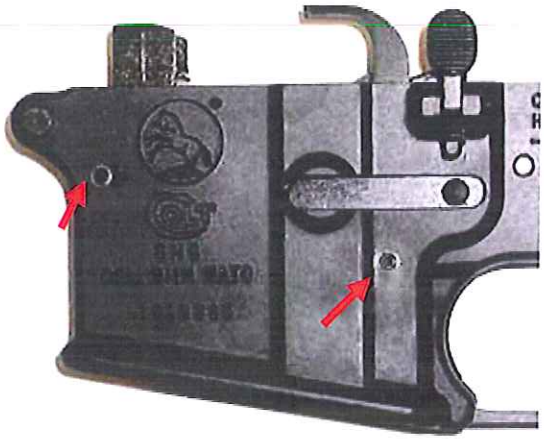
Step 2. Insert the two spring adapters (62831) in the holes on the bottom of the right side of the mag well adapter.



Step 2

Step 3. Depress top spring adapter (62831) and slide mag well adapter into the mag well. Depress the bottom spring adapter (62831) and slide adapter assembly (63558) into the mag well. And replace the two (2) or three (3) retaining pins (95218).

Early 2-Piece Adapter with 3 Pins



Current 1-Piece Adapter with 2 Pins

Installing the Telescopic Stock Assembly

NOTE: Place lower receiver in a magazine well block to stabilize it for installation of the stock.

(Step 1)

(Step 2)

Step 1. Insert the buffer retainer spring (61694) into the recess in the lower receiver.

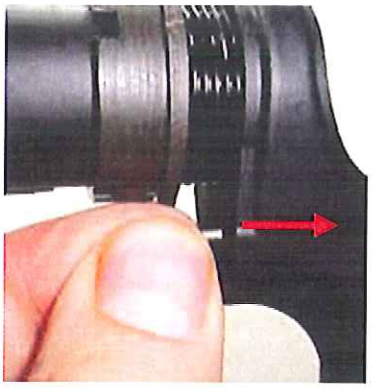
Step 2. Insert the buffer retainer (61582) over the buffer retainer spring (61694).

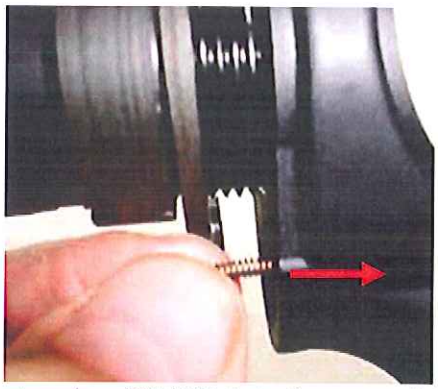
(64072) (64069) (62358)

Step 3. Ensure the receiver extension nut (64069) is all the way to the rearmost position on the receiver extension (64072) and the receiver end plate (62358) is flush with it.

Step 4. Screw the receiver extension onto the lower receiver while pushing downward on the buffer retainer pin. Screw the receiver extension on until the edge captures the buffer retainer pin.

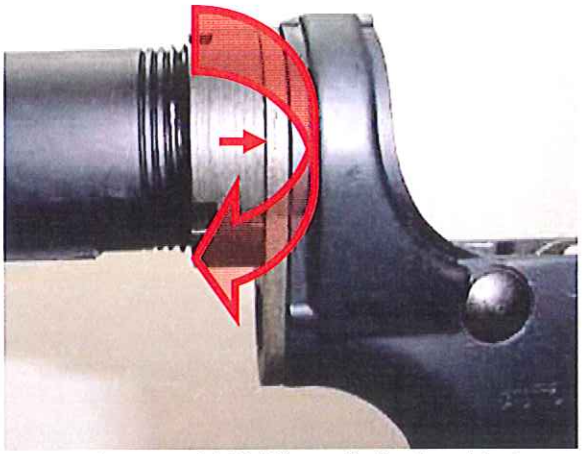
Step 5. Insert the rear takedown pin (61655) from the right side.



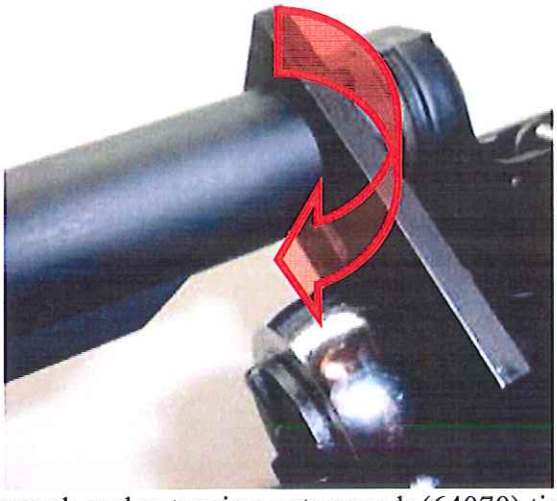


Step 6. Install detent (61698) and then the detent spring (61692) into the rear of the receiver.

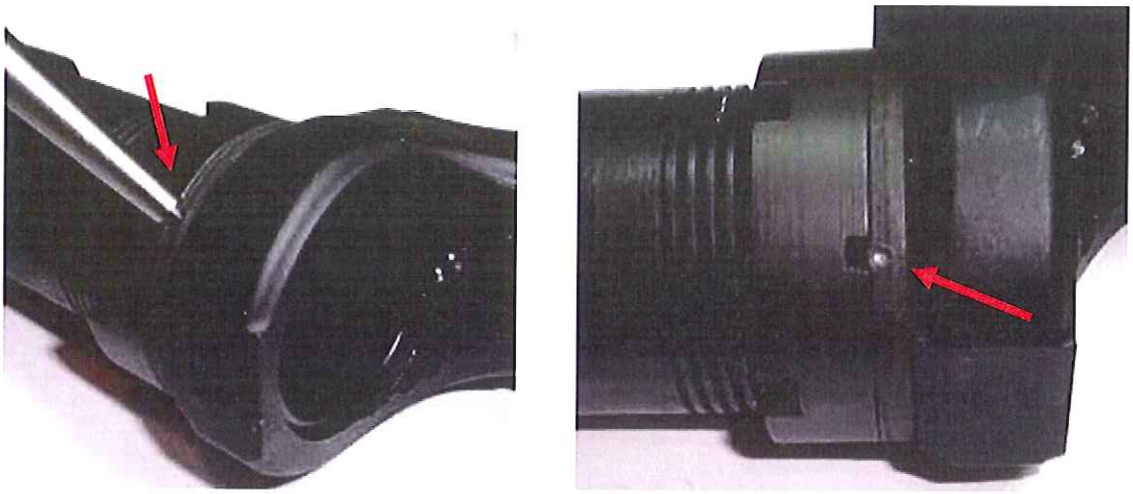
Step 7. Slide receiver end plate (62358) up against the receiver being sure not to bend the detent spring but to push it into the receiver.



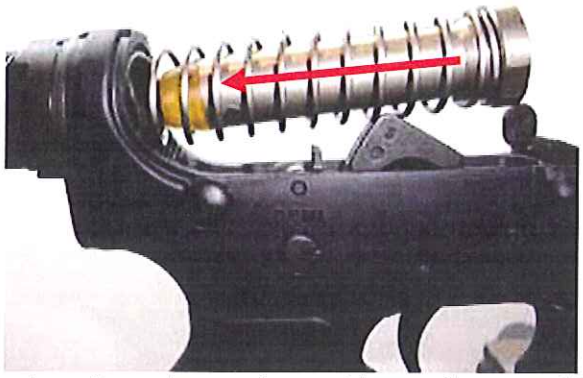
Step 8. Rotate receiver extension nut (64069) until flush with the receiver end plate (62358) and the end plate is flush with the lower receiver.



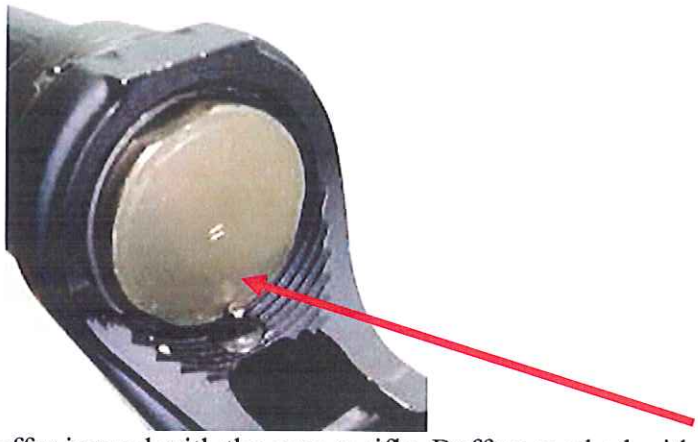
Step 9. With a torque wrench and extension nut wrench (64070) tighten the receiver extension nut to the specified 38 to 42 foot-pounds.



Step 10. With a center punch, stake the edge of the receiver end plate into the notches on the receiver extension nut.



Step11. Insert the buffer into the action spring and insert the assembly into the receiver extension until captured by the buffer retainer.

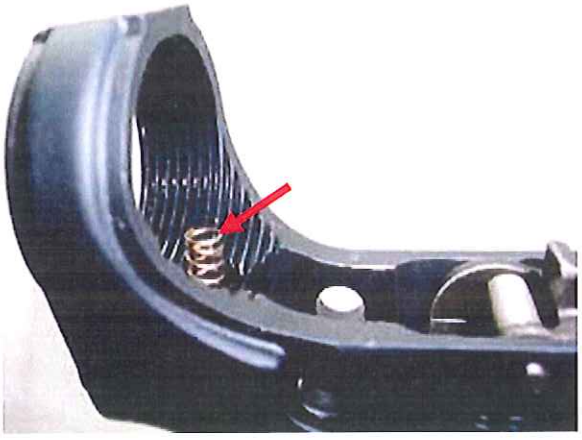


NOTE: Ensure the proper buffer is used with the proper rifle. Buffers marked with "H" are used in all semi-auto only 5.56mm carbines and selective fire M4 and Commando carbines. ***The "H2" buffer is only to be used with heavy barrel carbines barrels.***

Step 12. Pull stock lever downward and slide the stock assembly on the receiver extension. The lower receiver is now completely assembled.

Installing Fixed Stock Assembly

NOTE: Place lower receiver in a magazine well block to stabilize it for installation of the stock.

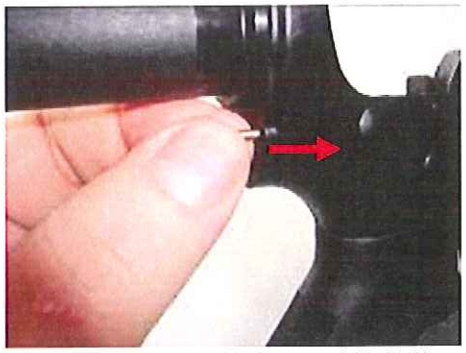


Step 1. Insert the buffer retainer spring (61694) into the recess in the lower receiver.

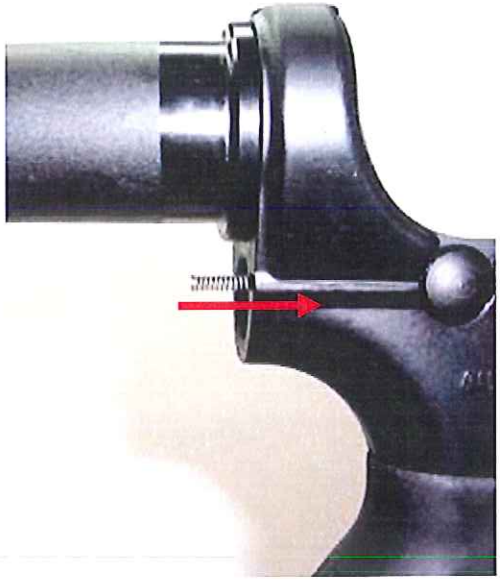
Step 2. Insert the buffer retainer (61582) over the spring.

Step 3. Screw the receiver extension on the lower receiver while pushing downward on the buffer retainer pin. Screw the receiver extension on until the edge captures the buffer retainer pin.

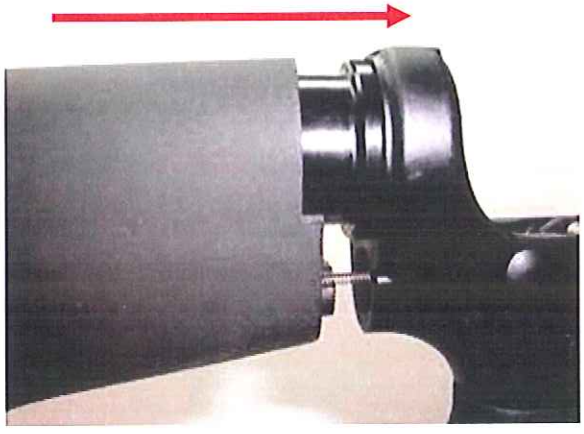
Step 4. With a torque wrench and extension nut wrench tighten the receiver extension nut to the specified 30 to 40 foot-pounds.



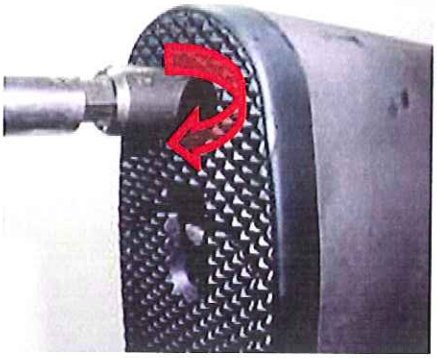
Step 5. Insert the rear takedown pin (61655) from the right side. Install detent (61698) into the rear of the receiver.



Step 6. Insert the detent spring (61692) into the rear of the receiver.



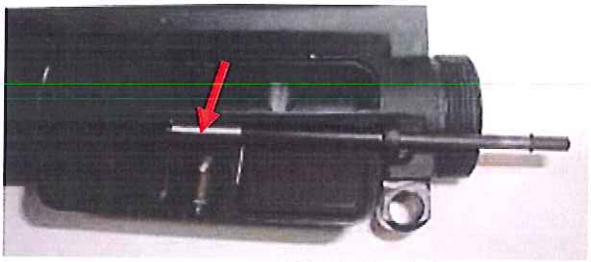
Step 7. Slide the spacer (64578) on the end of the receiver extension if using A2 stock (64571) stock assembly (64571) and slide the stock assembly over the receiver extension (64592) being careful not to bend the detent spring while pushing it inward. If using the older stock (62303 or 62727).



Step 8. Insert and screw the butt cap screw (64577) in place (30 to 40 in/lbs).

EJECTION PORT DUST COVER AND GAS BLOCK (9mm) ASSEMBLY

Step 1. Place ejection port cover (64532) in alignment with the ejection port rod holes in the receiver. Slide ejection port cover rod (61658) into the dust cover until it holds.



Step 2. Place the ejection port cover spring (61518) with the long leg against the right of the ejection port dust cover and slightly slide in the rod until it holds the leg in place. Rotate the left leg one full turn. Set it on the receiver and slide the rod through to the other side of the ejection port cover.

Step 3. Slide rod all the way until its movement is stopped by the ejection port cover retaining ring (90402) on the right side of the rod.

Installation of the Ejection Port Cover on the Monolithic Upper Receiver

Step 1 Shown is the monolithic upper receiver (65705) ejection port.

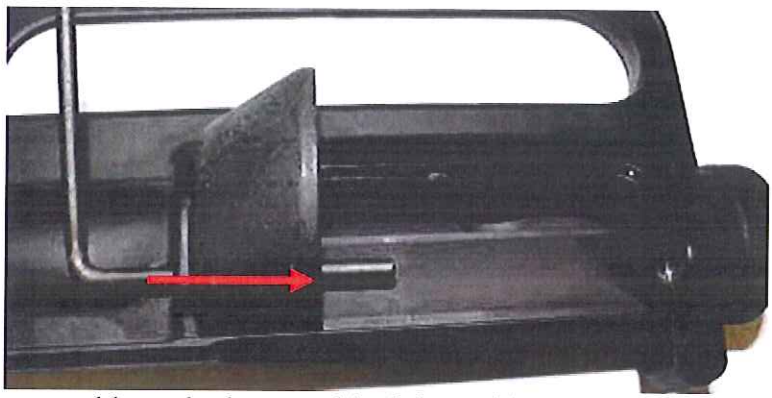
Step 2 Place the ejection port cover spring (61518) in position and slide the ejection port cover hinge pin (65629) into place. Rotate the spring two turns and place it into position and slide the ejection port cover assembly into the track. Release the top leg of the spring. And ensure the ejection port cover door (64532) has spring tension.

Step 3 Place the spring pins (65627) into position and drive them in position with a 1/16 inch drift punch.

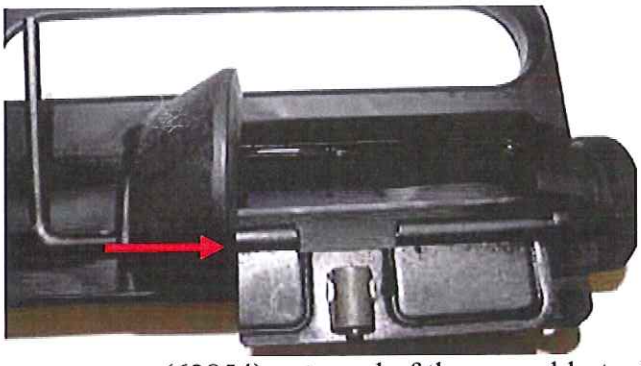
Step 4 The assembled ejection port cover assembly on the monolithic upper receiver.

The 9mm SMG and Carbine Gas Deflector

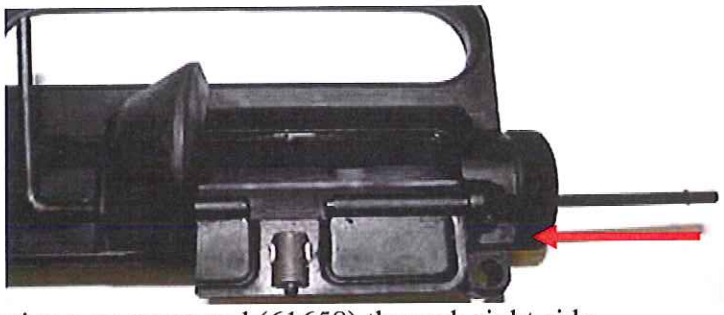
Step 1. Insert spring (64972) in the bottom hole of the gas deflector (62851).
NOTE: PART NUMBER 64972 IS ALSO THE EXTRACTOR SPRING TO THE 5.56mm FAMILY OF WEAPONS.



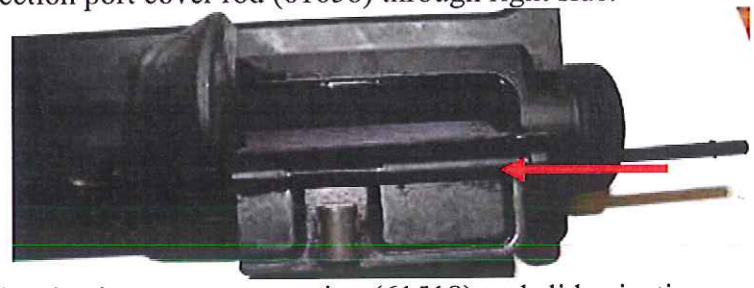
Step 2. With an assembly tool, place gas block in position and push tool through to hold it in place.



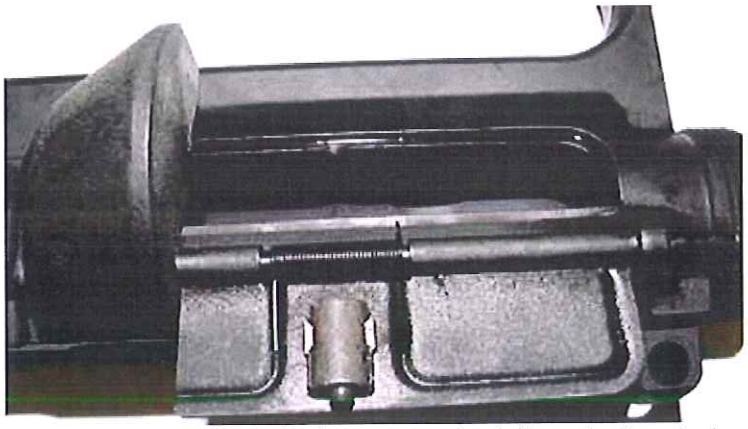
Step 3. Slide ejection port cover (62854) onto end of the assembly tool.



Step 4. Slide ejection port cover rod (61658) through right side.



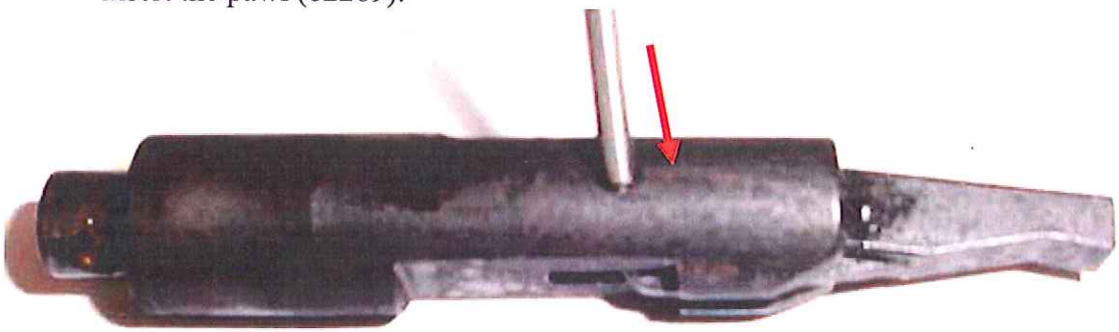
Step 5. Install the ejection port cover spring (61518) and slide ejection port cover rod through the spring into the left side of the ejection port dust cover.



Step 6. Slide ejection port cover rod all the way to the left and when in lace the assembly tool will fall out of the receiver.

INSTALLATION OF THE FORWARD ASSIST

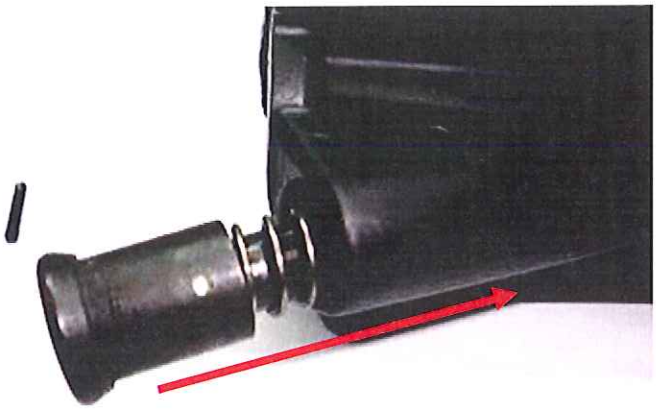
Step 1. Insert the pawl spring (50381) and detent (62270) into the plunger (62268) and insert the pawl (62269).



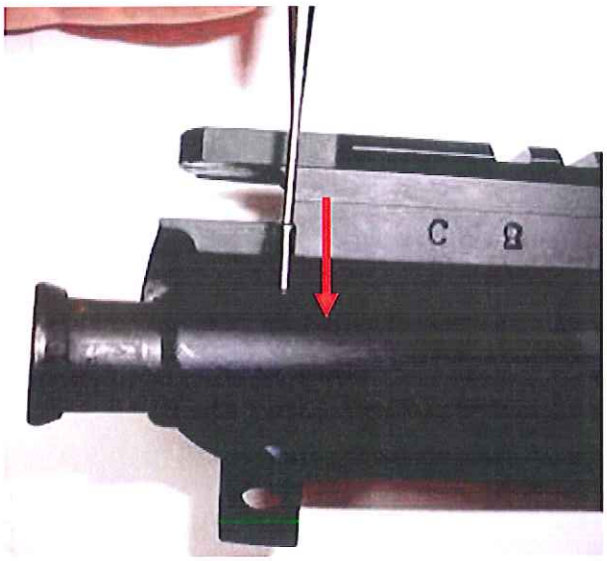
Step 2. Insert the pawl roll pin (95113). Ensure spring tension on the pawl.

Step 3. Insert the plunger (62268) into the plunger cap (64542). Align with hole in the cap and plunger. Insert roll pin.

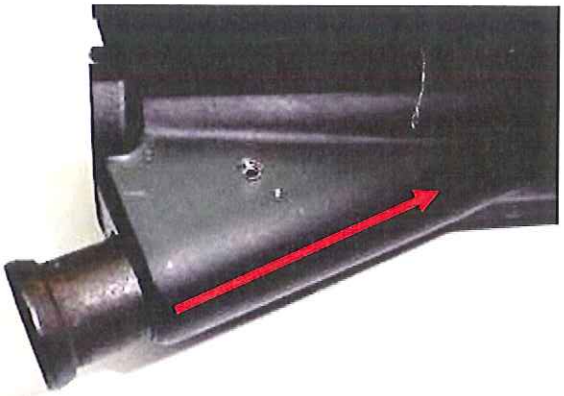
Step 4. Insert the forward assist spring (62271) over the plunger. (64543)



Step 5. Insert the forward assist assembly into the receiver. Push inward making sure the hole in the receiver is aligned with the slot on the forward assist pawl.



Step 6. Insert the forward assist roll pin (95126) and drive it in with a 3/32" punch.



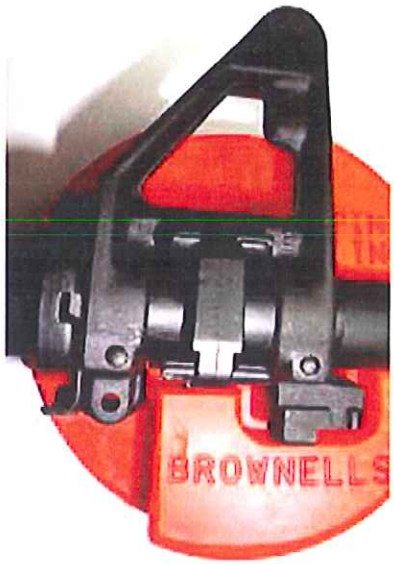
Step 7. Be sure the roll pin is slightly under the surface of the receiver. Ensure there is spring action by pushing inward on the forward assist.

FRONT SIGHT BASE ASSEMBLY

64085 (Flat Top) 62385 (Fixed Carrying Handle)

NOTE: There are various front sight bases depending on the model. Standard barrels for M16A2/M16A3/M16A4 and M4 carbines will use 1 of two front sight bases. For all rifles with fixed front sight bases, they will use the standard (62385) front sight base. For all rifles and carbines utilizing the flat top upper receivers, must use the F-marked front sight base (64085). Rifles and carbine using the thinner A1-style pencil barrel with a flat top upper receiver will utilize a different front sight base (64786). Thin barrels with fixed carrying handles will utilize a different front sight base (62068).

Step 1. Align front sight taper pin holes before installation of new taper pins (62086).



Step 2. With the front sight base supported on a block of wood or a front sight installation block, insert taper pins from the right side and achieve proper alignment. Drive pins in with a taper pin punch and a hammer.

Step3.

Step 4.

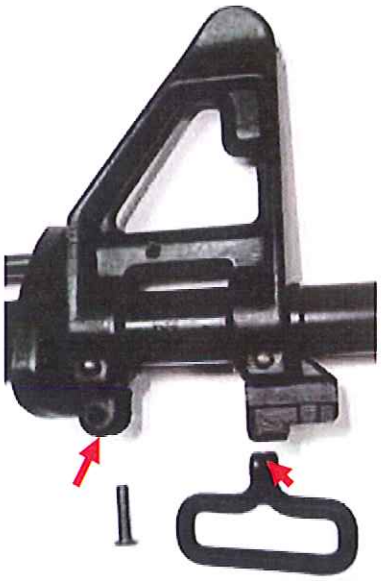
Step 5.

Step 6.

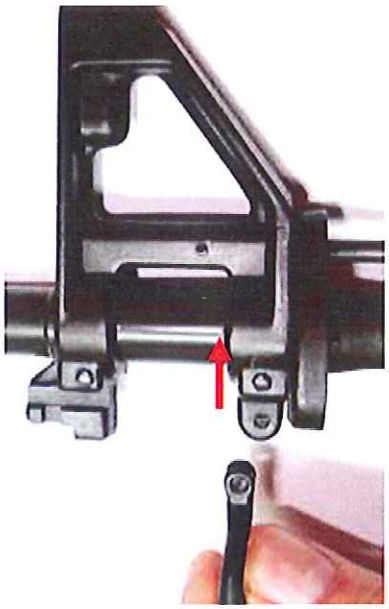
Step 3. Insert the front sight post spring (61709) and detent (61705) into the top of the front sight base.
Step 4. Insert the front sight and turn clockwise until it engages the detent.
Step 5. With a suitable adjustment tool, screw front sight post into the front sight base.
Step 6. Bottom of the front sight should be flush with the front sight base for zeroing.

INSTALLATION OF THE FRONT SLING SWIVEL

Rivet Swaging Tool (62715)

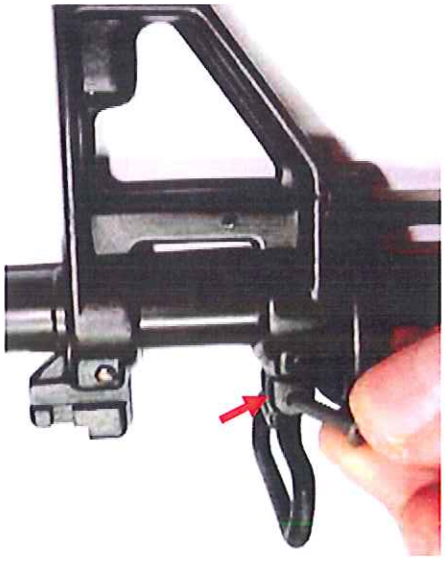


Rivet (91209) Sling Swivel (62280)

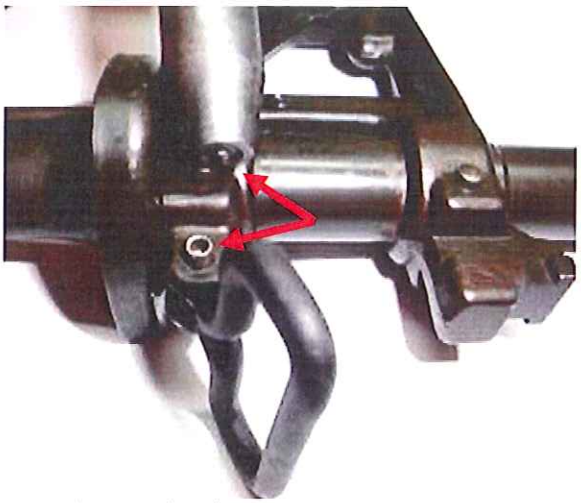


Step 1. Slide Swivel into the front sight base.

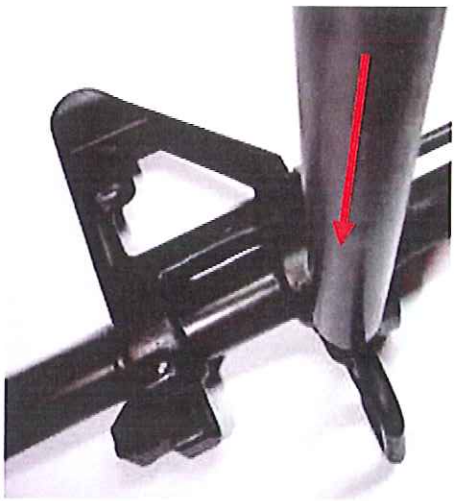
Step 2. Align hole in the Front Sight Base with the hole in the sling swivel.



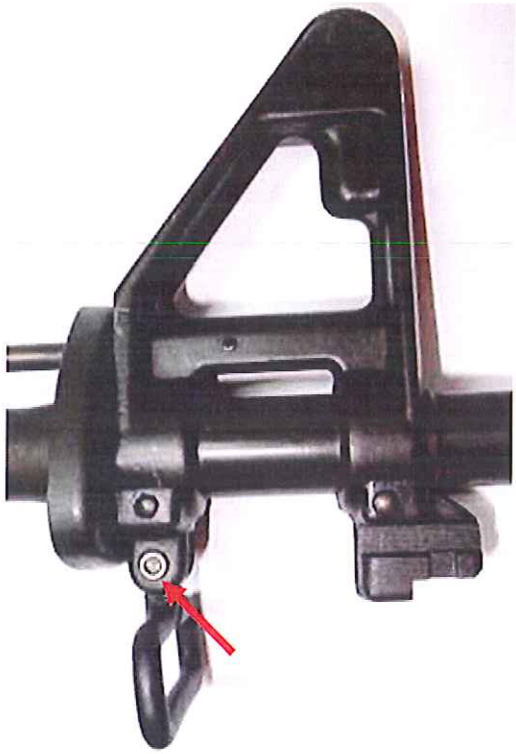
Step 3. Install Rivet (91209)



Step 4. Use the rivet swaging tool to swage the open end of the rivet as shown.



Step 5. With the smooth side of the Rivet supported, hammer the swaging tool into the open end of the rivet.

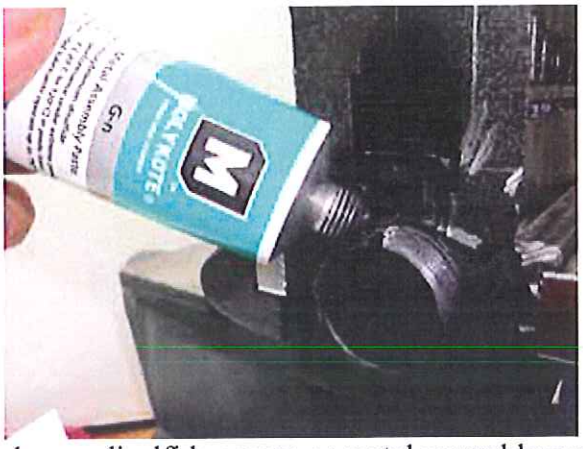


Step 6. The properly swaged rivet secures the sling Swivel into position.

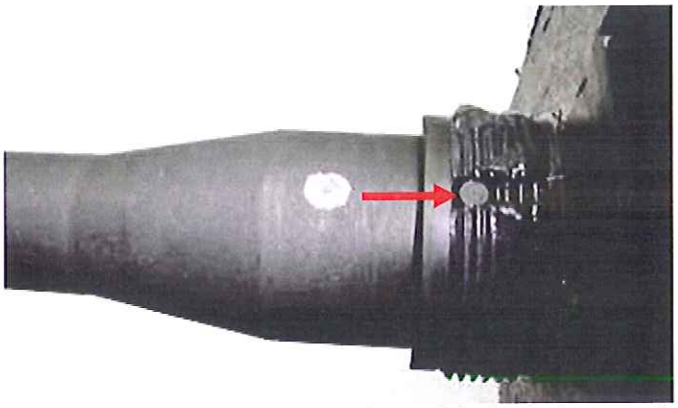
BARREL NUT AND GAS TUBE/FRONT SIGHT ASSEMBLY INSTALLATION

5.56mm

Step 1. Secure upper receiver in an Assembly block or the barrel in barrel vice jaws.



Step 2. Apply a molybdenum disulfide grease or metal assembly paste (Factory uses Molykote® G-n Metal Assembly Paste) to the threads on the upper receiver.

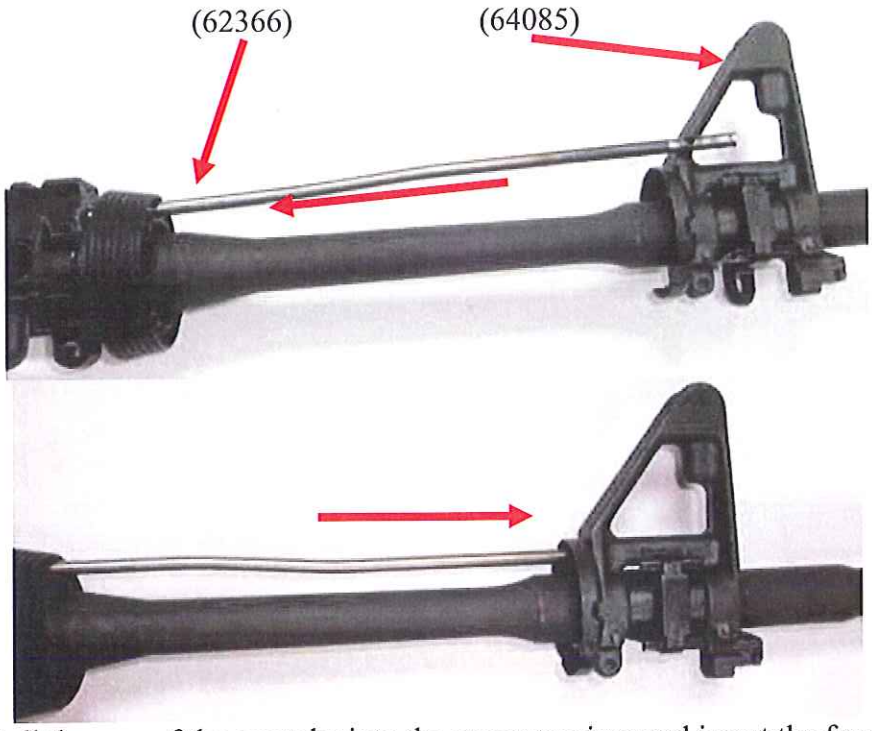


Step 3. Align the index pin on the barrel extension with the index notch on the upper receiver

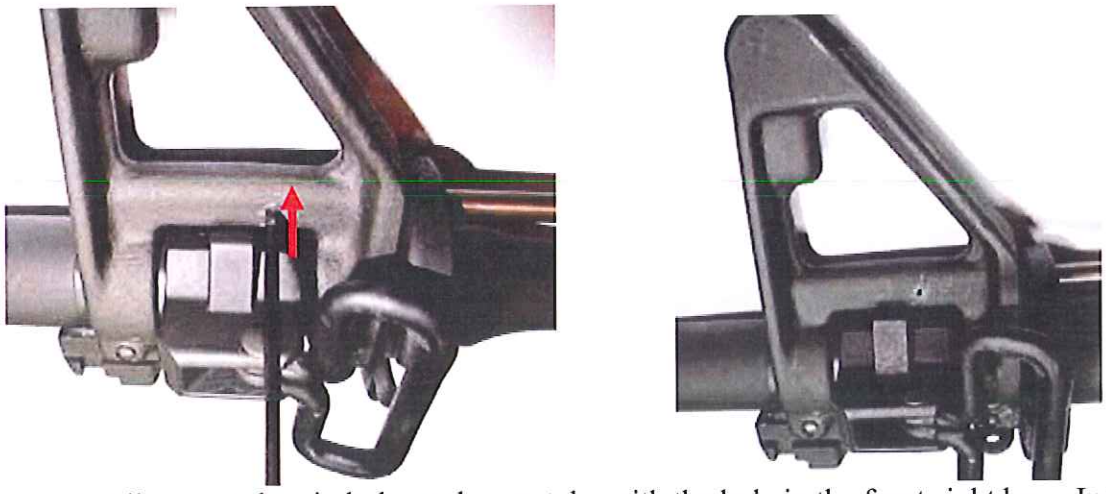
Step 4. Screw on the barrel nut/slip ring assembly hand tight (Clockwise).

Step 5. With the combination wrench and a torque limiting wrench apply the initial 30 foot pounds of torque. Back the nut off and torque again. Back the barrel nut off one last time and re-torque. Maximum allowable torque 80 ft/lbs.

Step 6. Install the barrel nut alignment tube (62693) in the gas key of the bolt carrier assembly and insert into the upper receiver. Apply additional torque as needed to align the barrel nut alignment tool with the barrel nut.

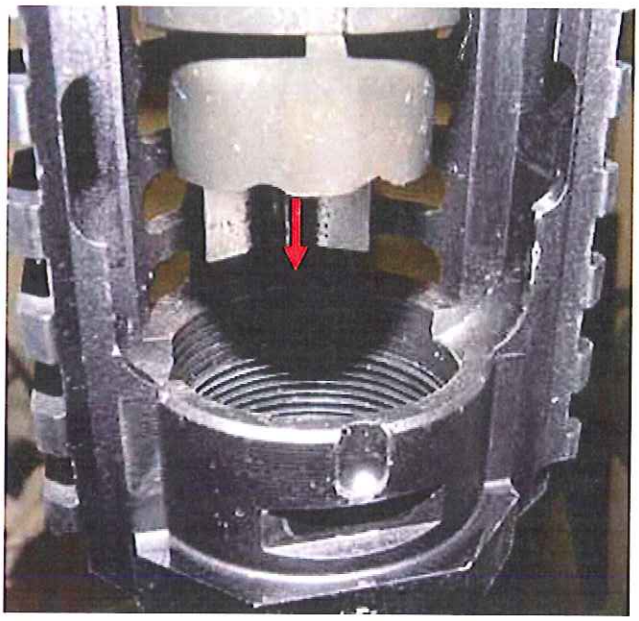


Step 7. Install the rear of the gas tube into the upper receiver and insert the front of the as tube into the front sight base.



Step 8. Align gas tube pin hole on the gas tube with the hole in the front sight base. Install the gas tube roll pin. Be sure it is flush with the front sight base.

Monolithic Upper Receiver



Step 1 Align gas tube with the hole at the 12:00 position in the upper receiver and insert barrel assembly into the top of the upper receiver assembly.

Step 2 With the monolithic barrel wrench and torque wrench tighten the barrel nut to 30 ft/lbs. Back off the barrel nut and re-torque the barrel nut to 45 ft/lbs. Back off the barrel nut and retighten for a final torque of 60 ft/lbs.

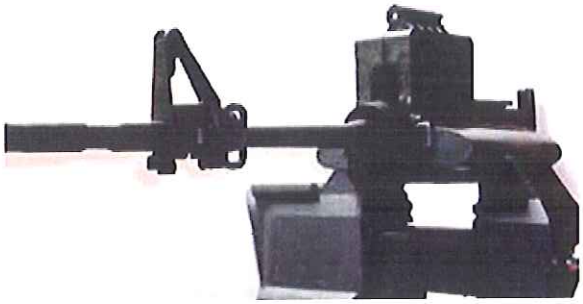
9mm SMG/Carbine

NOTE: Installation of the 9mm SMG and Carbine barrels is identical to that of the 5.56mm with some changes. There is NO gas tube. In order for the handguards to line up square with the front sight base the barrel nut has to be lined up properly.

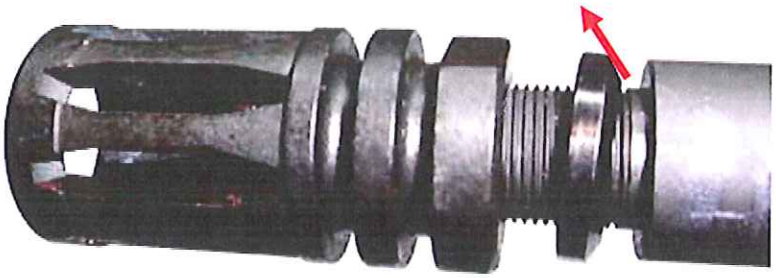
Step 1. With the alignment tool, place top of the tool inside the groove of the carrying handle. Align the gauge with the scallop on the barrel nut. This will require pulling the slip ring back to expose the barrel nut. If the gauge does not clear the scallop, tighten the barrel with the barrel nut wrench until the gauge passes freely through the scallop.

NOTE: If no gauge is available, this can be done by eye. If the handguards do not install square with the front sight base is an indication that the barrel nut is not aligned correctly.

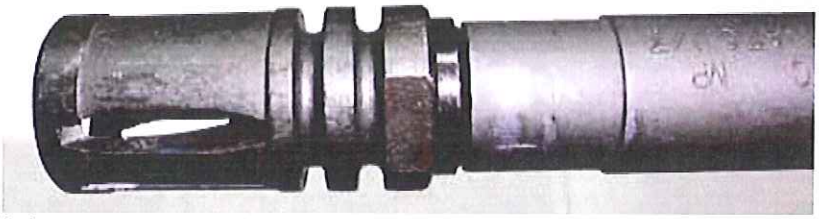
COMPENSATOR INSTALLATION



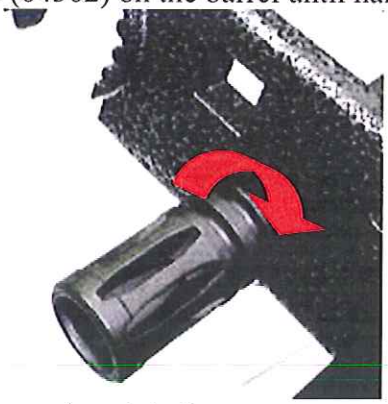
Step 1. Secure upper receiver in a receiver assembly block or the barrel in barrel removal vice jaws.



Step 2. Assure threads on the muzzle are clean and slide on the barrel assembly crush washer (12991533) with the flared end facing forward.



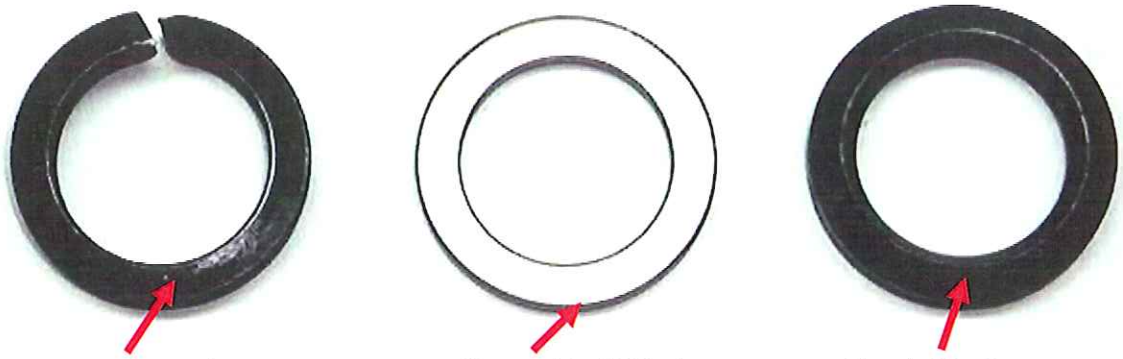
Step 3. Install the compensator (64502) on the barrel until hand tight.



Step 4. With the combination wrench, rotate the compensator one full turn and then index the center slot on the compensator with the top of the barrel within 10°.

Step 5. Shown is the compensator properly indexed.

NOTE: Colt Defense currently uses crush washers on all their models. Earlier A2-rifles and M4 carbines will have used peel washers in order to get the proper orientation of the compensator. Standard birdcage flash suppressor as well as three-prong suppressors used a lock washer. The crush washer can be used regardless of the type of muzzle devise.



Lock Washer
(62126)

Spacer/Peel Washer
(64503)

Crush Washer
(12991533)

The Spacer/Peel (64503) washer adjusts the orientation of the compensator by peeling off layers of the washer with a razor blade/exacto knife.

Flash Suppressors/Compensator/Muzzle Brake	
Three Prong Suppressor	(62182)
Bird Cage (5.56mm)	(62348)
Bird Cage (9mm)	(62813)
Compensator (A2)	(64502)
Muzzle Brake (Pinned On)	(63607)
Lock Washer	(62126)
Spacer (Peel Washer)	(64503)
Crush Washer	(12991533)
Muzzle Brake Pin	(99596)

SECTION 9 Conversion from Selective Fire (Auto/Burst) to Semi-Automatic Only

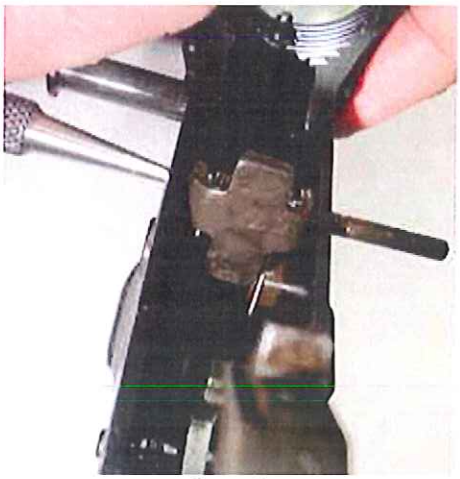
To convert any selective fire AR15/M16/M4-type rifle, the semi-automatic only selector lever (63000) replaces the selective fire selector lever (61959/64564).

Step 1. Ensure the weapon is clear.

- Remove magazine.
- Pull bolt back and visually verify no round in the chamber.

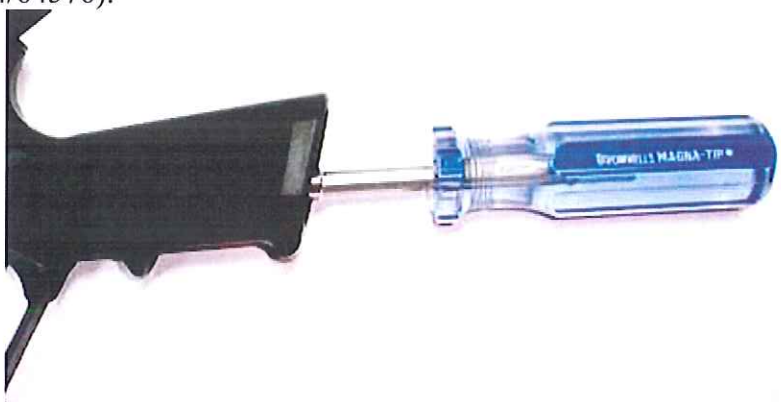
Step 2. Separate upper and lower receiver by pulling takedown pin and front pivot pin out to detent and separating receivers.

Step 3. With a 3/32-inch drift punch, remove the Automatic Sear Pin (61615) and the Automatic Sear (61622) from the lower receiver.



Step 3

Step 4. With a straight bladed screwdriver, remove the pistol grip screw (92701), pistol grip washer (90001), fire control selector detent (61785) and pistol grip (62194/64576).



Step 4

Step 5. Remove the selector lever (61959/64564) from the left side of the receiver. If resistance is felt, push downward on the hammer to give additional clearance between the trigger and the selector lever.

Step 5

Step 6. Insert the semi-automatic only selector (63000) into the receiver from the left or right side. Current production semi-automatic fire selectors can be put in from either side to accommodate left-handed shooters.

Step 6

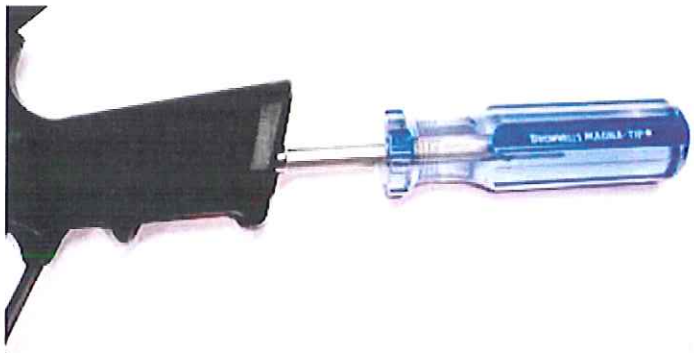
Step 7. Insert the fire selector detent (61785) into the hole on the right side of the receiver.

Step 7

Step 8. Insert the selector lever detent spring/ejector spring (61569) into the hole on right side of the top of the pistol grip. Set the pistol grip on the rear of the receiver. Line up the detent spring on top of the detent.

Step 8.

Step 9. Place the pistol grip screw (92701) and lock washer (90001) inside the pistol grip (62194/64576) and tighten. Only hands tighten the screw.



Step 9

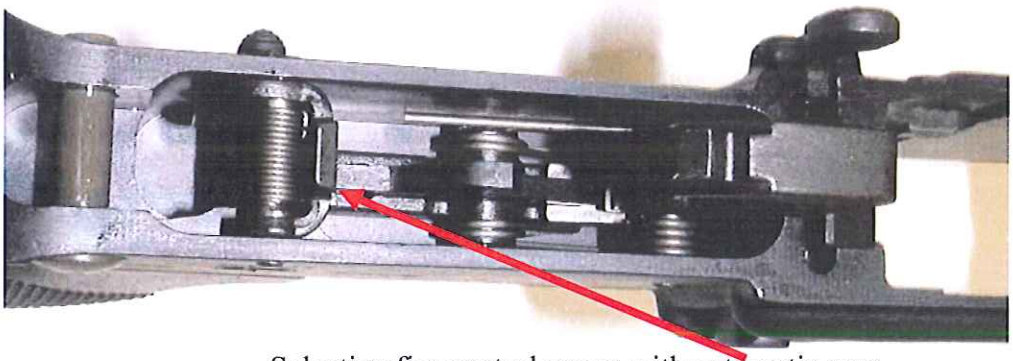
Step 10. Place the automatic sear back in the weapons lower receiver. Be sure the leg of the automatic sear spring is **BEHIND** the selector lever.

Step 10

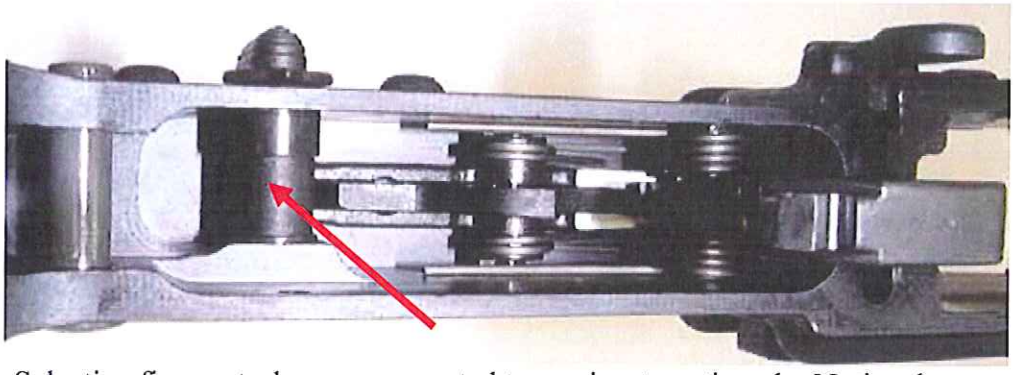
Step 11. Reassemble rifle. Perform a function check. Cock the weapon by pulling rearward on the charging handle and releasing.

- Place the selector lever in the SAFE position. Pull the trigger. The hammer should not fall.
- Place the selector lever in the SEMI position. Pull the trigger and you should hear the hammer fall. Hold the trigger to the rear and recock the weapon by pulling rearward on the charging handle. Release the trigger. You should hear an audible click which is the trigger nose engaging the hammer. Pull the trigger again and the hammer should fall.
- Attempt to place the selector lever on AUTO. It should not move to that position.

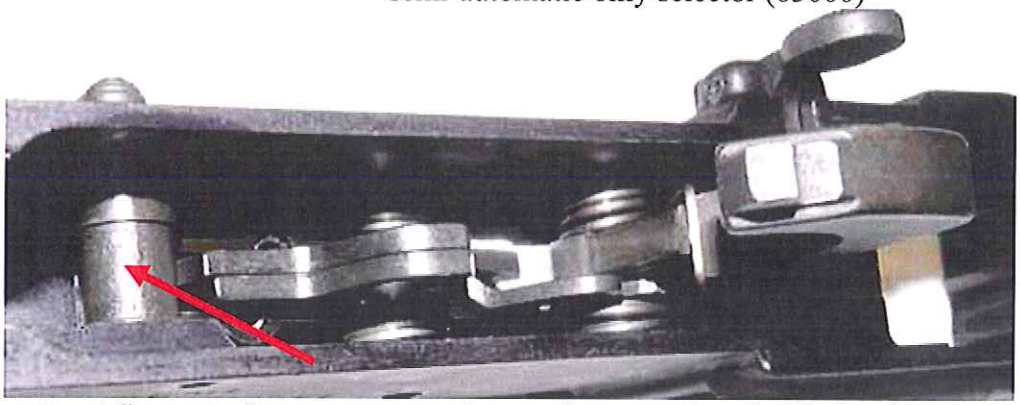
Place automatic sear, automatic sear pin back in the rifle lower receiver. Be sure the leg of the automatic sear spring is behind the selector lever. Store the auto selector lever in a safe place.



Selective fire control group with automatic sear.



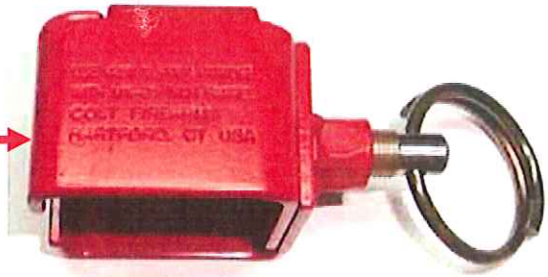
Selective fire control group converted to semi-automatic only. Notice the removal of the automatic sear and the replacement of the selective fire selector (64564) with the semi-automatic only selector (63000)



Burst fire control group converted to semi-automatic only. Notice the removal of the automatic sear and the replacement of the selective fire selector (64564) with the semi-automatic only selector (63000)

SECTION 10 Blank Firing Adapters

M15A2 BFA
Red Color for use with 20" bbl rifles: M16, M16A1, M16A2, M16A3 and M16A4.



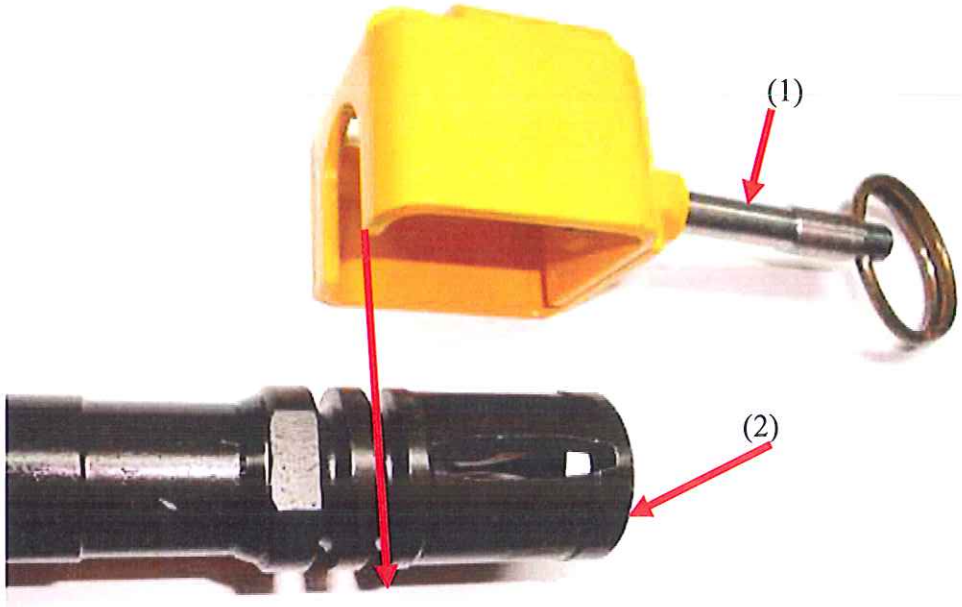
(64931)

M23 BFA
Yellow Color for use with 10.3 and 14.5 inch bbl carbines: M4 and M4A1 Carbines and Mk 18 Mod0

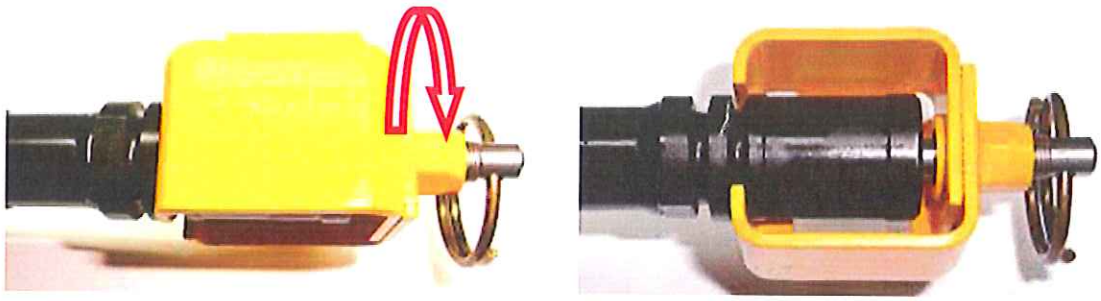
(12597837)

Use only M200 Blanks with the M15A2 and M23 BFA and do not directly at anyone less than 20 feet away.

To install the blank firing adapter:



1. Unscrew the spigot (1) and slide all the way back.
2. Install housing over the compensator/flash suppressor (2).

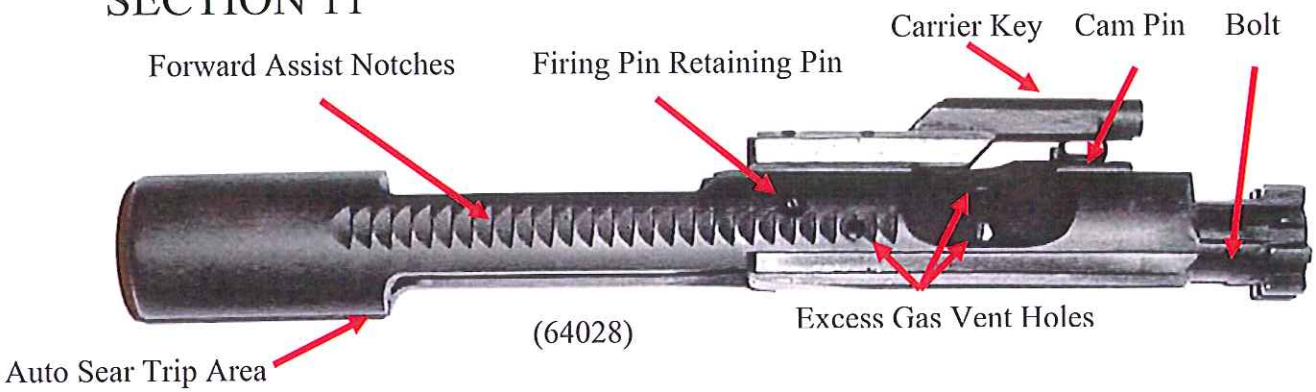


3. Slide spigot (1) into the compensator (2) and HAND TIGHTEN spigot (1) into the compensator (2).

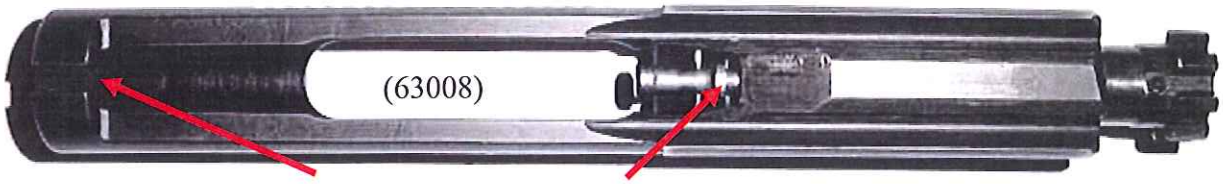
CAUTION: Do not use tools to tighten attachment. HANDS ONLY.

NOTE: After 50 rounds check to see if the BFA is still tight; make sure to clean the carbon buildup after each use.

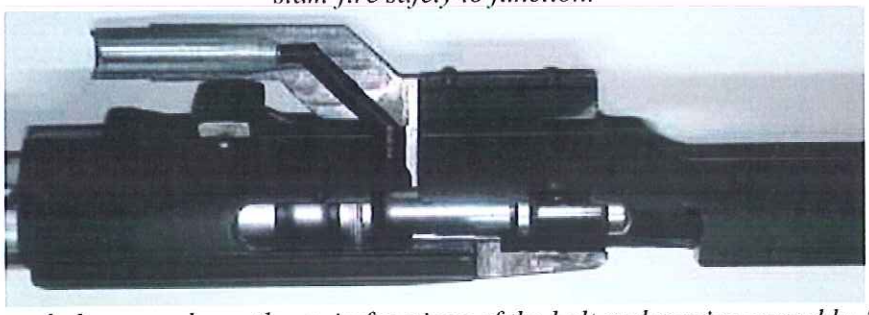
SECTION 11



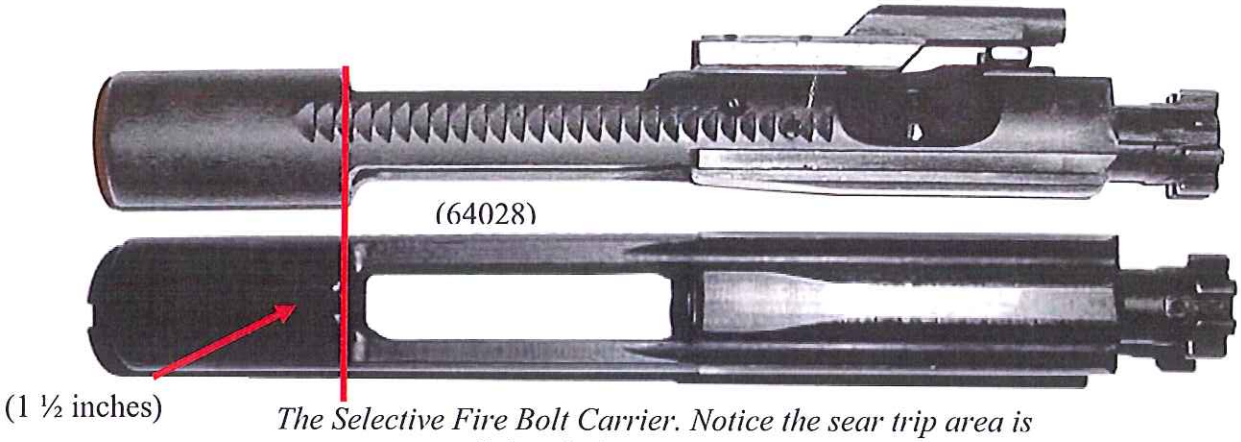
The bolt carrier has many functions/responsibilities. The bottom rear is the automatic sear trip area that prevents the hammer from releasing during automatic/burst fire until the bolt is in the locked position. The forward assist notches allow the pawl of the forward assist to push the bolt carrier group forward in case it does not lock. Also notice the three gas exhaust ports which vent unneeded gas during firing. The cam track is responsible for the timing of the locking and unlocking process.



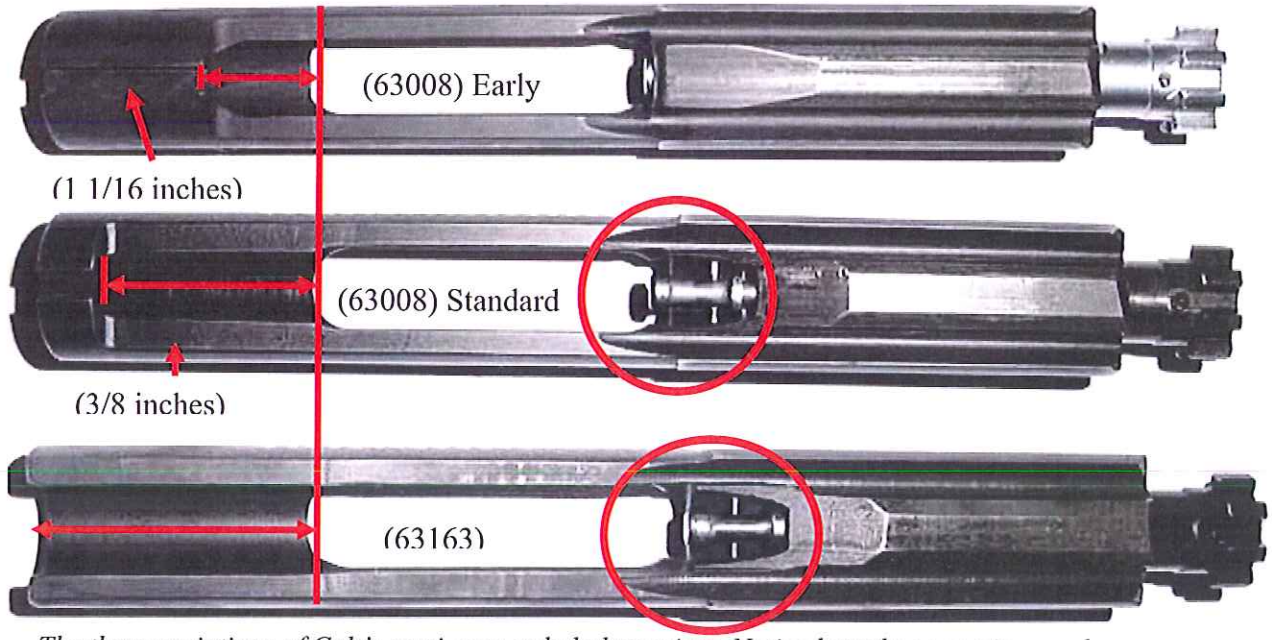
The bottom of a semi-automatic only carrier. Notice the removal of material from the rear so it will not actuate an automatic sear. Also notice the exposed head of the firing pin to enable the slam-fire safety to function.



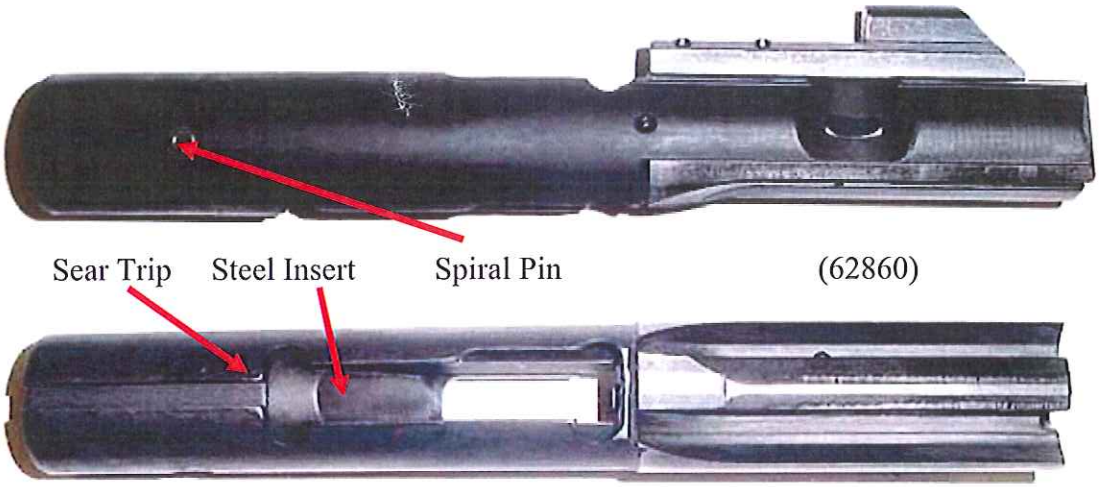
This cut-away bolt group shows the main functions of the bolt and carrier assembly. The path of the gas may be followed from the carrier key, through the channel into the bolt carrier where the piston expansion chamber is made between the back of the bolt and the rear of the bolt carrier.



The Selective Fire Bolt Carrier. Notice the sear trip area is Parallel with the top of the bolt carrier

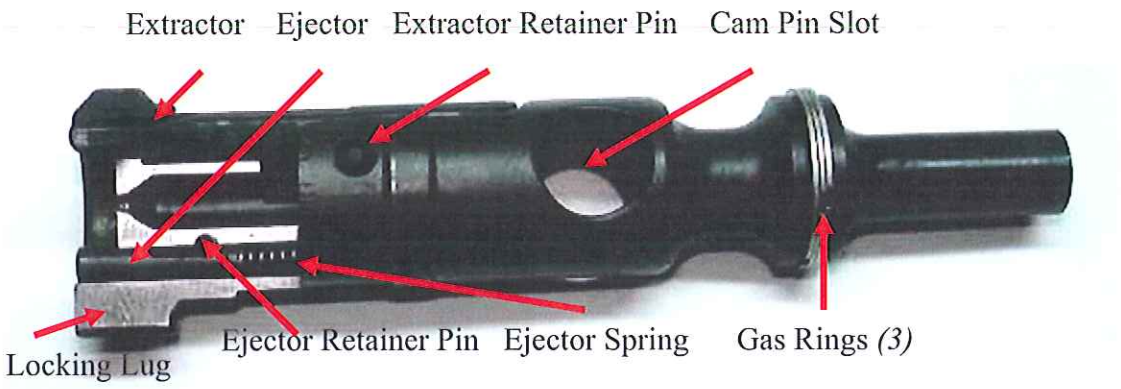


The three variations of Colt's semi-auto only bolt carriers. Notice how the sear trip area has been cut back slightly (Top "Original First Issue") to mostly (Middle, "Standard Issue") and eventually removed entirely (Bottom "Colt Sporter/Match Target" Series).



The 9mm SMG/Carbine bolt assembly consists of a solid 1-piece carrier with a steel insert to add mass to the group to enable the weapon to fire from a blowback operation.

Bolt Anatomy

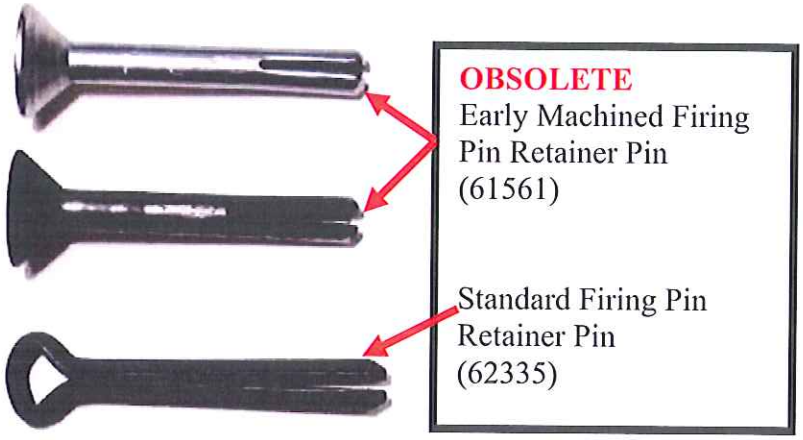


Notice the ejector and extractor on the front of the bolt. Clearly shown is the firing pin channel through the middle of the bolt.

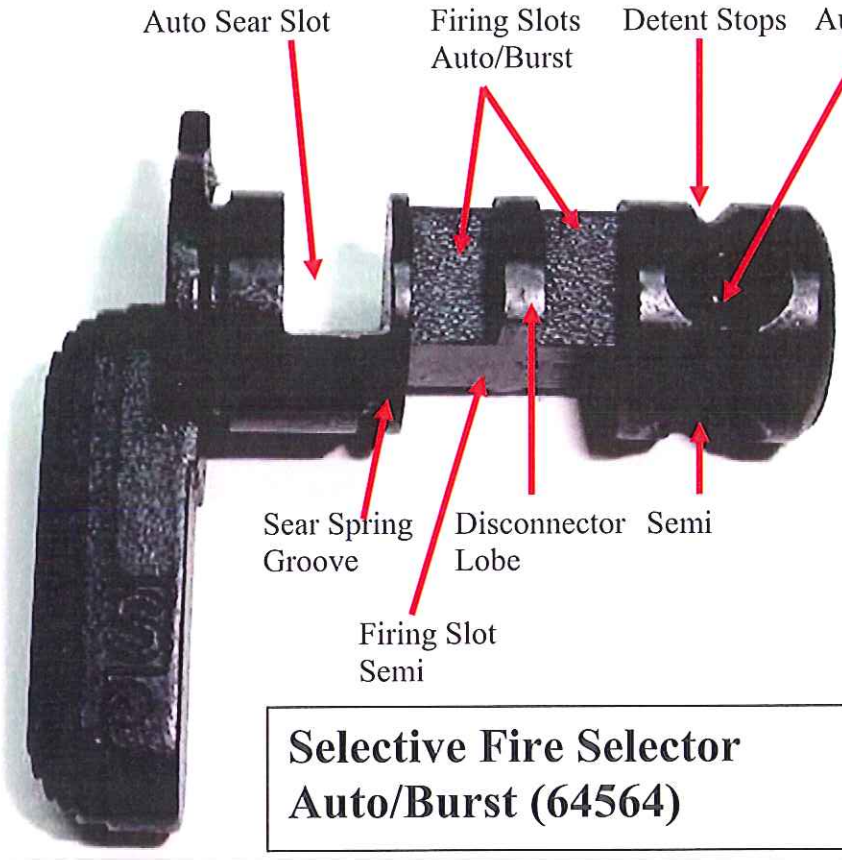
Firing Pin Variations

The original selective fire firing pin (top), the updated selective fire firing pin (middle) and the semi-automatic-only firing pin (bottom). ***If the original selective fire firing pin is found, it should be replaced immediately for safety purposes.***

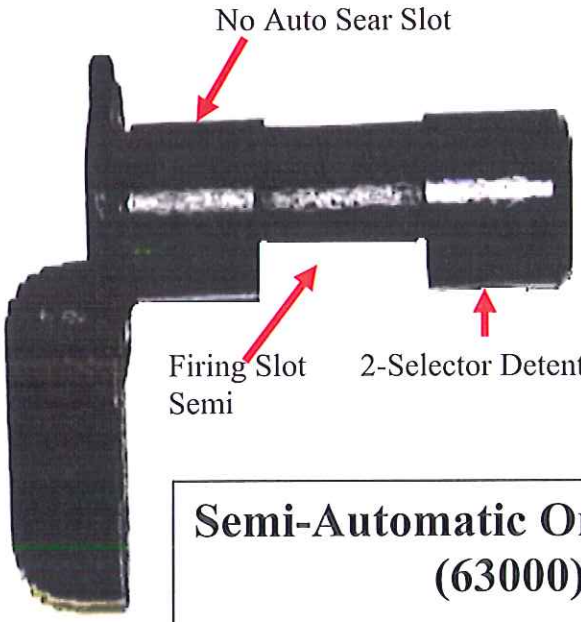
Firing Pin Retainer Variations



Selector Lever Anatomy

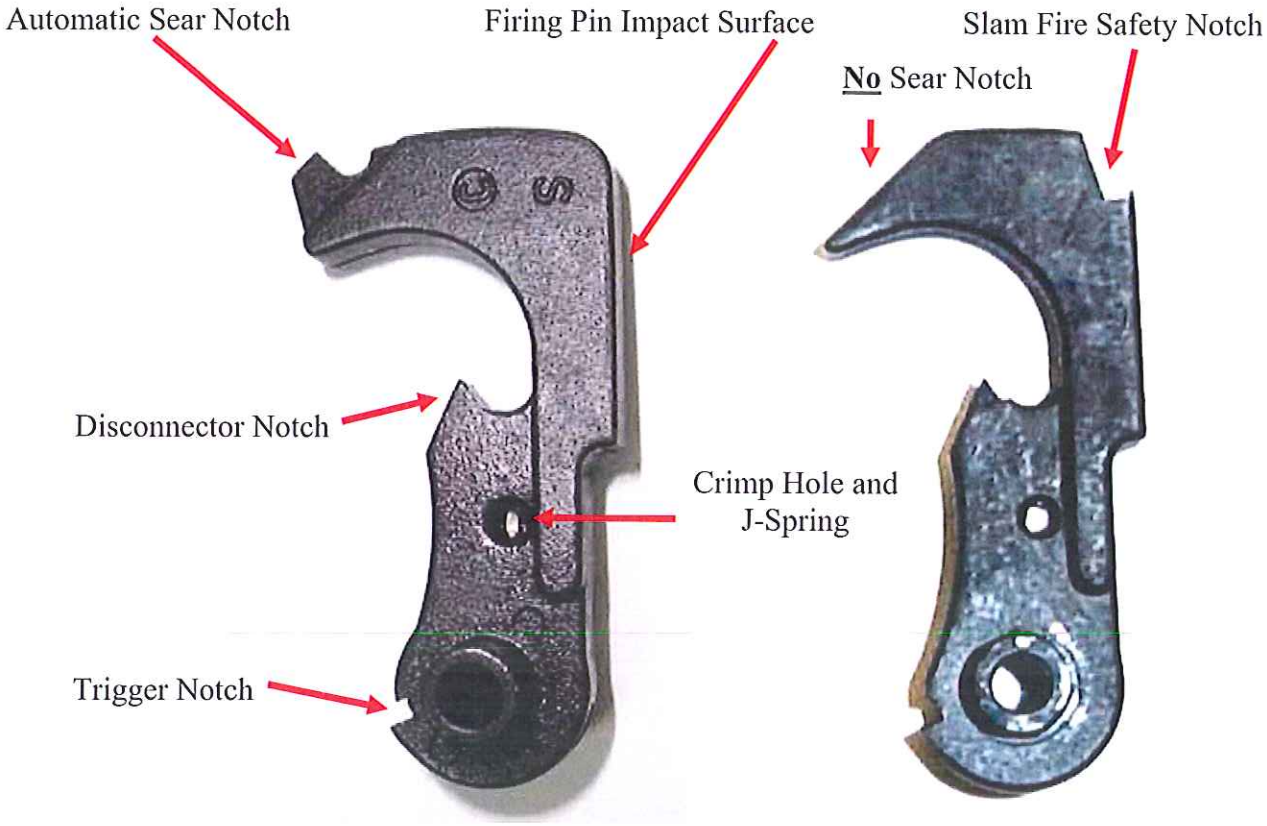


Selective Fire Selector Auto/Burst (64564)



Semi-Automatic Only Selector (63000)

Hammer Anatomy



Selective Fire Hammer
(62317)

Semi-Auto Only Hammer
(63023)

Selective Fire Hammer (.154)

(62317)

Burst Hammer(.154)
Notice the Burst Cam
(64557)-Rifle
(64692)-Carbine

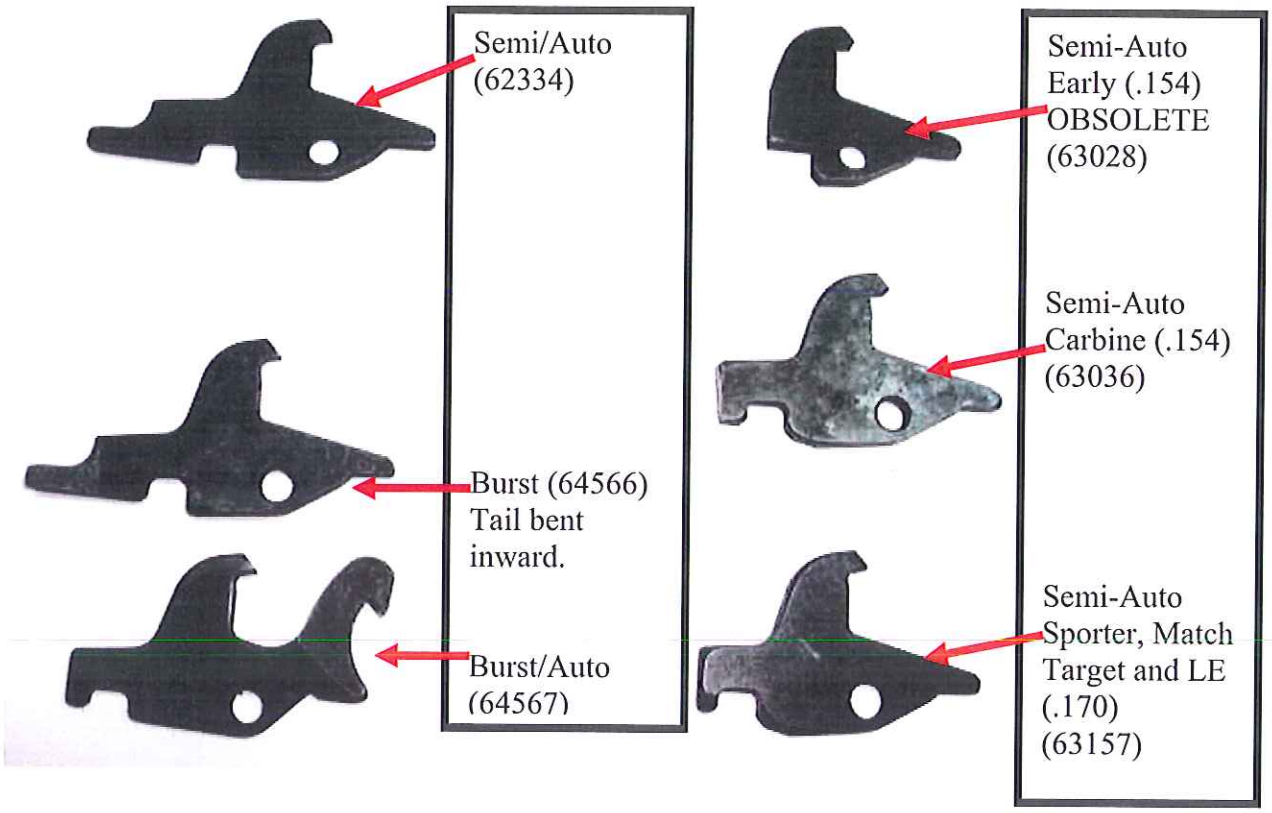
Early Semi-Auto Only (.154)
Auto Sear Hook Removed
(63023 & 400306)

Standard Semi-Auto Only (.154)
Notch for Anti-Slam fire Safety
(63023)

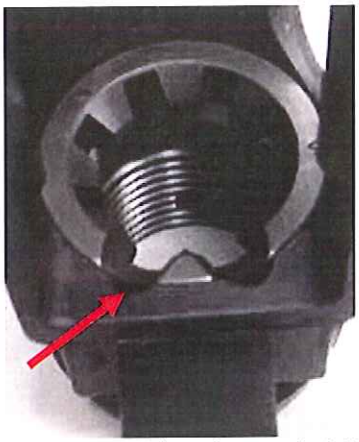
Sporter Series Semi-Auto (.170)
Top cut to clear auto sear block
in Receiver.
(63165)

9mm Carbine (.170)
Modified for Anti-Slam Fire
on 9mm Bolt group.
(62865)-.154
(63612)-.170

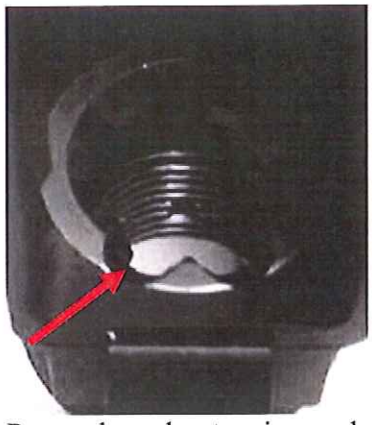
Colt Accurized Rifle
Low Mass nickel plated
(64219) - .170
(400130) - .154



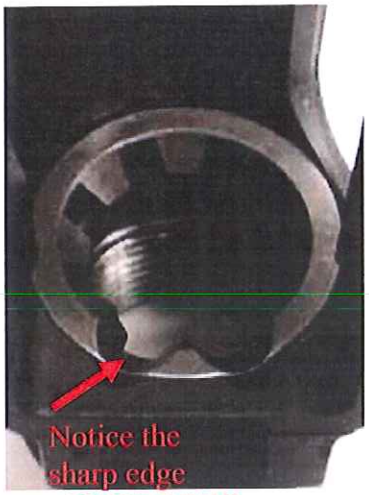
Barrel Extensions



Proper Carbine (extended feed ramp) barrel extension and feed ramp cut upper receiver. Smooth ramps between the extension and upper receiver cuts.



Proper barrel extension and upper receiver for a 20-inch barrel. No sharp edges.

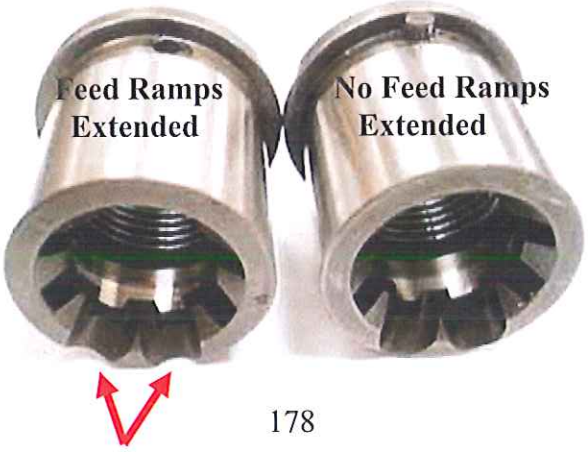


IMPROPER

Rifle barrel extension on carbine upper.

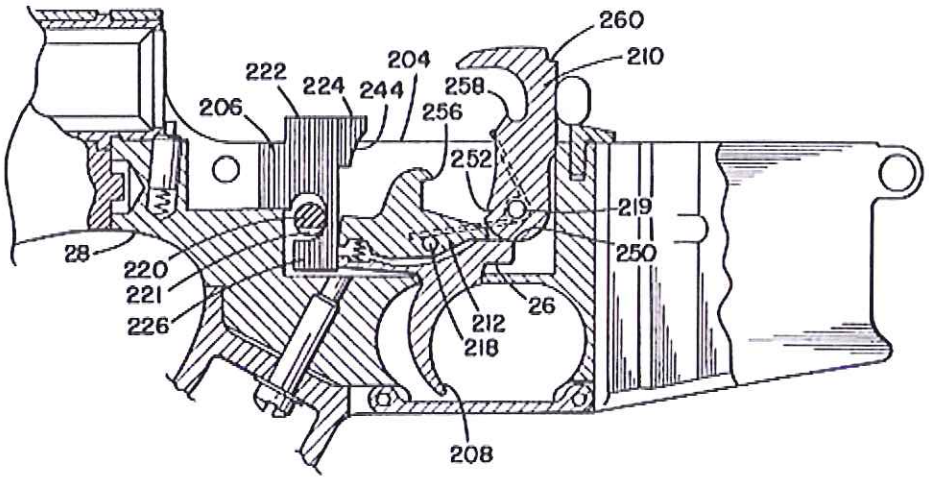
IMPROPER

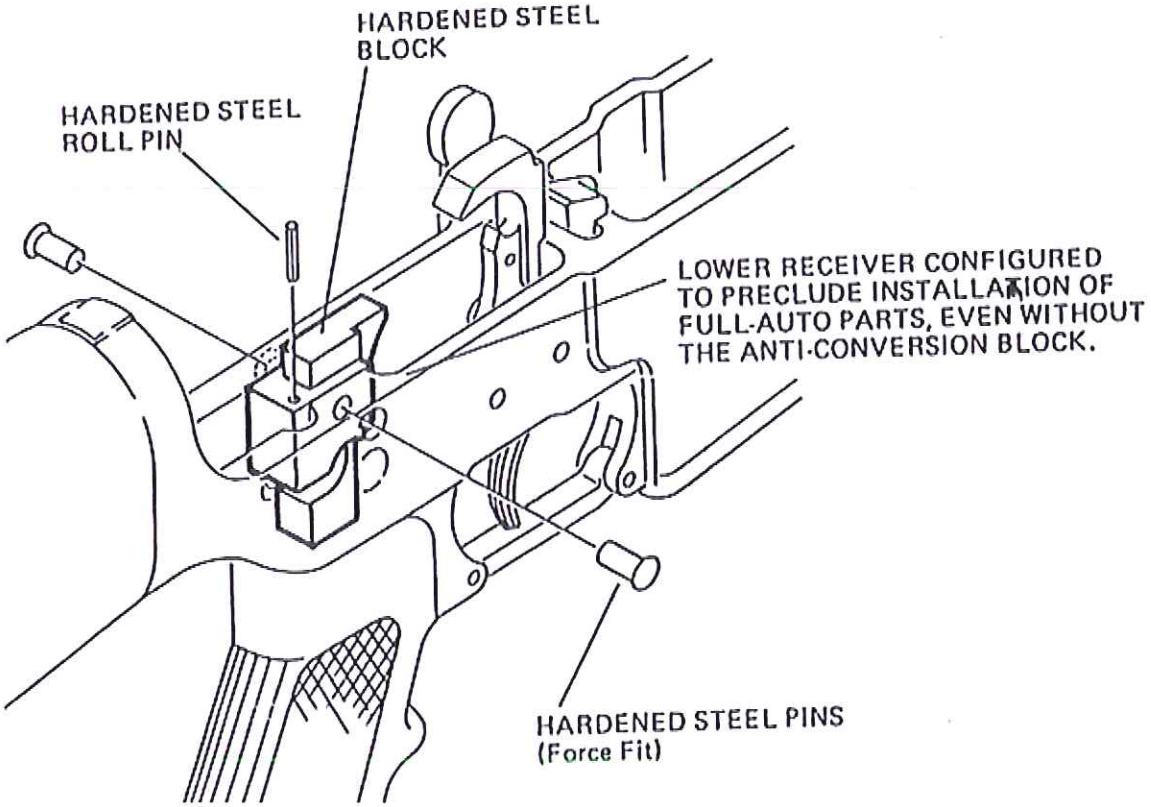
Carbine feed ramp extension on rifle upper receiver. No feed ramp cuts.



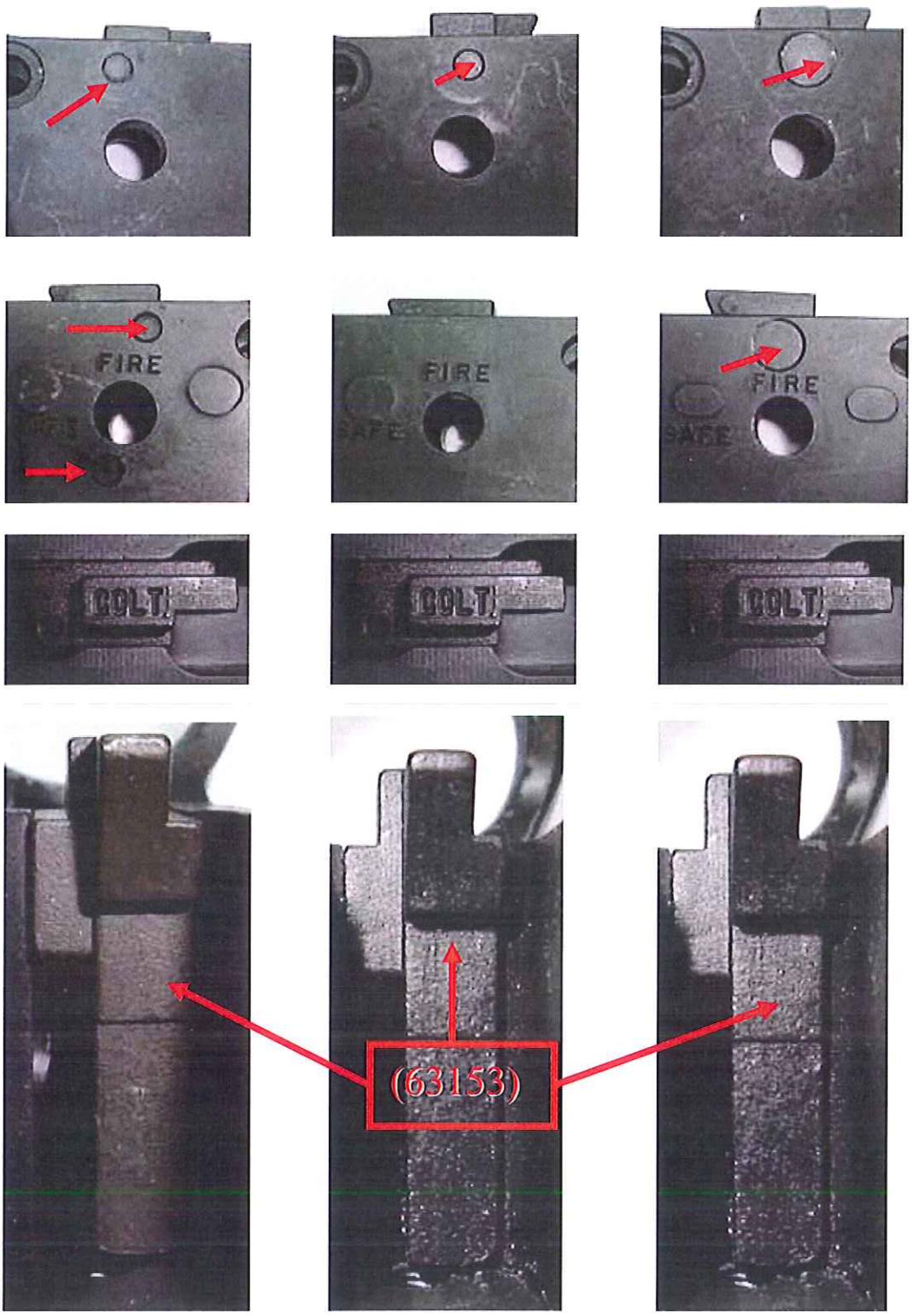
Colt Automatic Sear Blocks

FIG. 4.

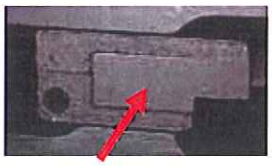


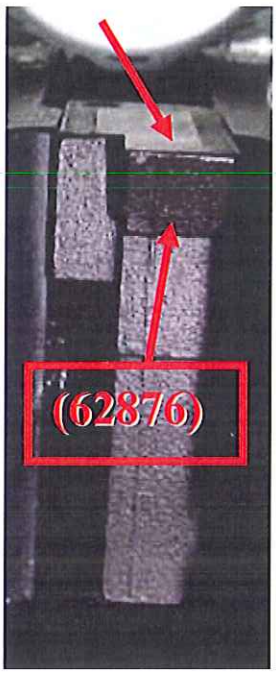


Variations of Colt Automatic Sear Blocks

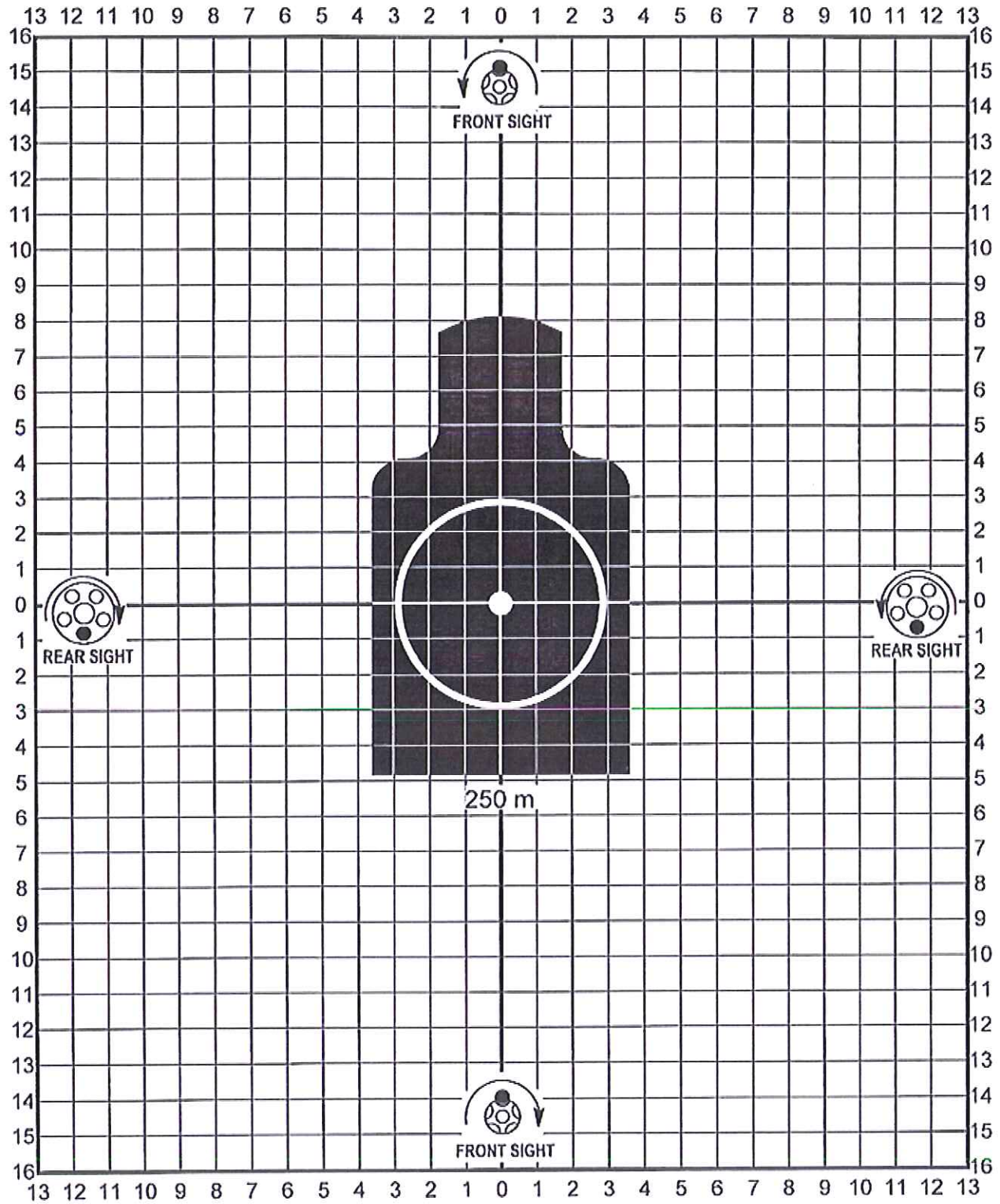


9mm Sporter/Early Match Target





25 m ZEROING TARGET M16A1

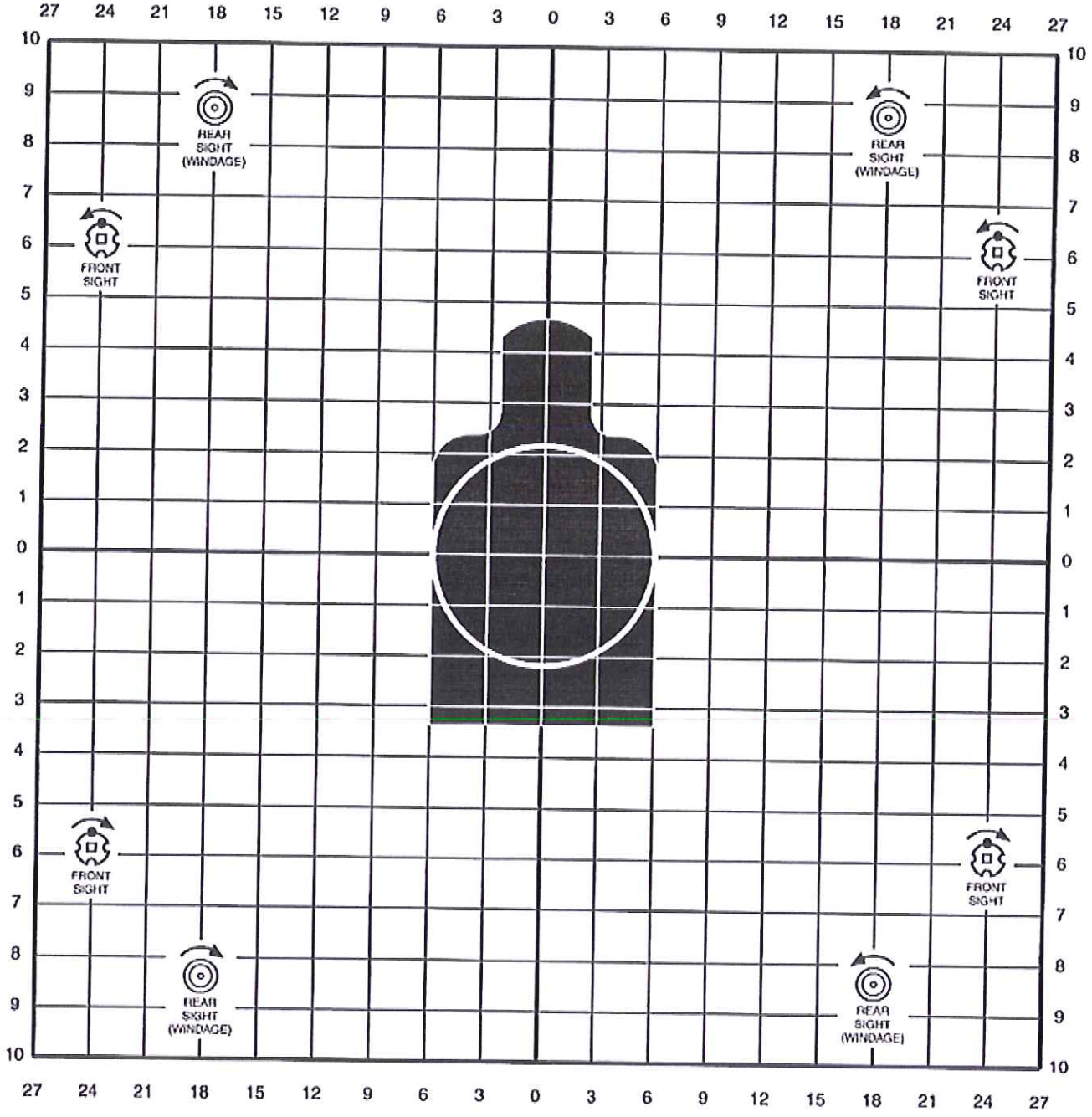


ZEROING INSTRUCTIONS:

1. AIM AT TARGET CENTER AND CAREFULLY FIRE A 3 SHOT GROUP. ADJUST SIGHTS TO MOVE SHOT GROUP CENTER AS CLOSE AS POSSIBLE TO THE WHITE DOT IN CENTER OF TARGET. REPEAT AS NECESSARY.
2. AFTER COMPLETING 25 METER ZERO, USING THE UNMARKED (LARGER) APERTURE. THE WEAPON IS ZEROED AT 250 m FOR M193 (55 GR.) BALL AMMO AND 300 m FOR M855 (63 GR.) BALL AMMO.

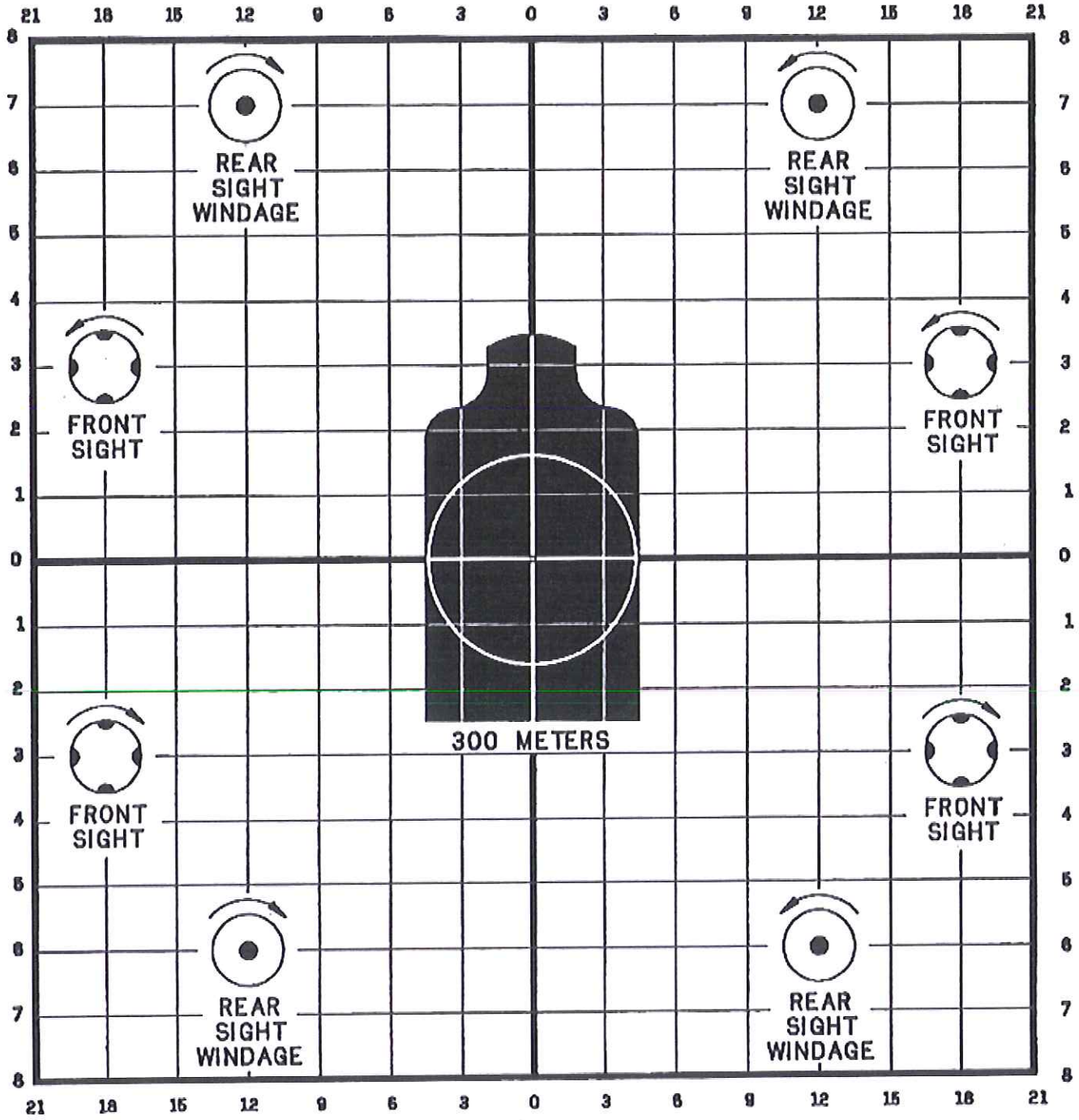
OHMR Form 2444 Jul 89

M16A2 25m ZEROING TARGET



1: SET REAR SIGHT ELEVATION TO ONE CLICK PAST THE 8/3 SETTING.
2: AIM AT TARGET CENTER AND ADJUST SIGHTS TO BRING SHOT GROUPS AS CLOSE AS POSSIBLE TO CENTER OF CIRCLE. ADJUST FRONT SIGHT ELEVATION ONLY.
3: SET REAR SIGHT ELEVATION BACK TO 8/3 SETTING. WEAPON WILL BE ZEROED FOR 300 METERS.

25 METER ZEROING TARGET
M4 CARBINE



ZERO TARGET DATA FOR M4 CARBINE

1 – ROTATE REAR SIGHT ELEVATION KNOB TO THE 8/3 SETTING FOR ZEROING AT 25 METERS.
2 – AIM AT TARGET CENTER. ADJUST SIGHTS TO MOVE SHOT GROUP CENTER AS CLOSE AS POSSIBLE TO THE WHITE DOT IN THE CENTER OF THE TARGET.
3 – AFTER COMPLETION OF THE 25 METER ZERO THE WEAPON WILL BE ZEROED FOR 300 METERS.

OHMR FORM 2444-B (Oct 02)

SECTION 13 TROUBLESHOOTING

The troubleshooting instructions, which follow, are to aid the operator and unit armorer to restore worn, damaged, or inoperative weapons to a serviceable condition.

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
1.	Failure to fire.	1. Selector lever on SAFE/FIRE.	Move selector to SEMI/FIRE or AUTO.	O
		2. Damaged firing pin.	Replace.	O
		3. Improper assembly of firing pin in bolt carrier group.	Remove firing pin and install correctly. Inspect retaining pin for damage.	O
		4. Too much oil in bolt firing pin recess.	Disassemble bolt and clean out excess oil.	O
		5. Fire control mechanism improperly assembled or with worn, broken, or missing parts.	Maintenance facility repair.	A
		6. Trigger pin improperly installed.	Check that tails of hammer spring engage grooves in trigger pin.	A
2.	Failure to unlock. (Bolt seizes—will not rotate from locked position.)	1. Bolt group, firing pin, or barrel extension burred, dirty or carboned.	Remove magazine. Hold Rifle pointing up (stay clear of muzzle) and strike butt sharply and squarely on ground while pulling back on charging handle.* Remove bolt group, clean and lubricate.	O

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
	***CAUTION:** MAKE CERTAIN YOU AND OTHERS ARE CLEAR OF MUZZLE. STRIKE BUTT SQUARELY ON GROUND TO PREVENT DAMAGE TO BUTTSTOCK.			
3.	Failure to extract.	1. Dirty or corroded ammunition.	Remove ammunition and clean the magazine.	O
		2. Carbon and dirt build-up in chamber.	Clean chamber	O
		3. Carbon and dirt built-up in extractor recess or extractor lip.	Disassemble and clean.	O
		4. Defective extractor, Extractor spring, or pin.	Replace.	O
		5. Rubber insert not assembled in extractor spring.	Install extractor spring assembly.	A
		6. Rim shear due to badly pitted chamber.	Maintenance facility replacement.	A
		7. Separated cartridge case caused by excessive headspace, etc.	Remove bolt and run bore brush through from muzzle end of barrel. If this does not remove separated case, turn in for repair. In any event, check headspace.	A
4.	Failure to eject.	1. Broken ejector	Replace.	A
		2. Jammed ejector	Disassemble and clean.	A
		3. Worn or broken ejector spring.	Replace.	A

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
		4. Short recoil.	See "Short Recoil" in malfunction column.	A
5.	Failure to remain cocked.	1. Worn, broken, or missing parts in fire control mechanism.	Maintenance facility repair.	A
		2. Hammer pin incorrectly installed.	Remove and install correctly.	A
6.	Failure to feed.	1. Magazine not seated properly.	Adjust magazine catch. Push in magazine catch button and rotate catch clockwise to tighten.	A
		2. Dirty or corroded ammunition.	Remove ammunition from magazine and clean both.	O
		3. Dirty magazine.	Disassemble and clean.	O
		4. Defective magazine.	Replace magazine.	O
		5. Too many rounds in magazine.	Reload magazine with 20 or 30 rounds as appropriate.	O

CAUTION: DO NOT LOAD THE MAGAZINE BEYOND ITS RATED CAPACITY.

		6. Restricted buffer assembly action.	Remove, clean and lubricate buffer assembly and action spring.	O
		7. Short recoil.	See "Short Recoil" in malfunction column.	O
7.	Double feed.	1. Defective magazine.	Replace magazine.	O

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
8.	Failure to Chamber	1. Dirty or corroded ammunition.	Remove and clean ammunition and clean the magazine.	O
		2. Damaged ammunition.	Replace.	O
		3. Carbon buildup in chamber.	Clean chamber. Clean and lubricate weapon.	O
		4. Bolt cam pin missing.	Replace.	O
		5. Restricted movement of bolt carrier group.	Disassemble, thoroughly clean, and lubricate weapon. Remove charging handle from upper receiver; point receiver upward, and install bolt carrier group in receiver. Slowly slide carrier in receiver to check alignment and free movement of carrier key and gas tube. If binding occurs, turn rifle in to a maintenance facility for repair.	O
		6. Loose or damaged bolt carrier key.	Turn in to a maintenance facility for repair.	A
		7. Improperly assembled extractor spring.	Disassemble and assemble correctly, making sure that rubber insert is installed.	A

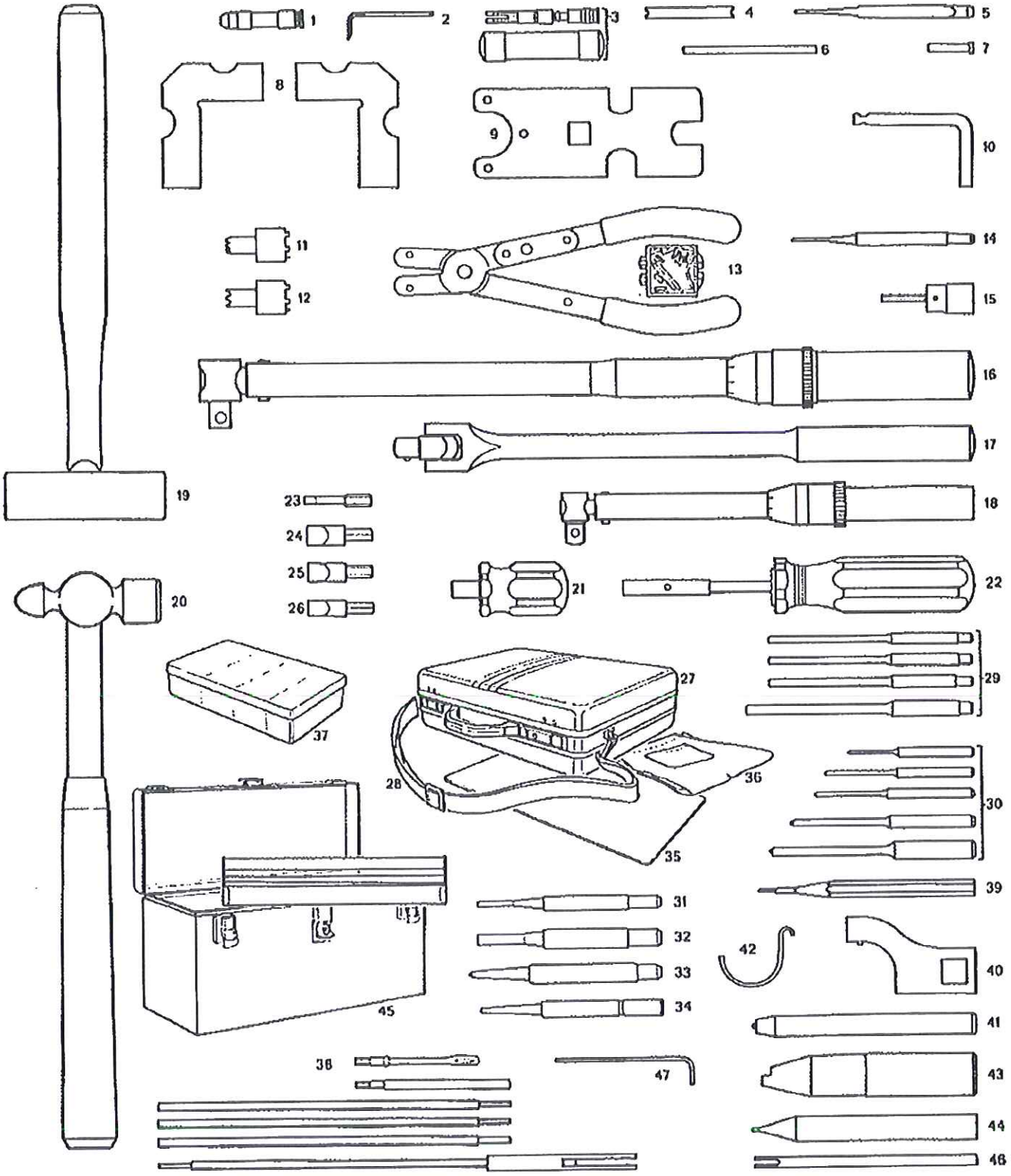
	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
		8. Bent gas tube.	Turn in to a maintenance facility for repair.	A
		9. Misaligned carrier and gas tube.	Turn in to a maintenance facility for repair.	A
9.	Failure to lock.	1. Dirt, corrosion, or carbon buildup on bolt or barrel extension locking lugs.	Clean.	O
		2. Jammed extractor.	Clean and lubricate.	O
		3. Dirt on bolt face.	Clean.	O
		4. Jammed ejector.	Disassemble and clean.	O
		5. Restricted buffer assembly movement.	Remove buffer and action spring, clean and lubricate. Also clean inside receiver extension.	O
		6. Damaged ammunition.	Replace.	O
		7. Weak or broken action spring.	Replace.	O
10.	Short recoil.	1. Gaps in bolt rings not staggered.	Stagger bolt ring gaps.	O
		2. Carbon buildup or dirt in carrier key and on outside of gas tube.	Clean and lubricate bolt carrier group and outside of gas tube.	O
		3. Restricted movement of bolt carrier group of	See "Failure to Lock" in malfunction column.	O/A

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
		buffer assembly.		
		4. Missing or broken bolt rings or loose carrier key.	Maintenance facility repair.	A
		5. Gas leakage due to broken or loose gas tube.	Maintenance facility repair.	A
		6. Restricted gas flow through gas tube due to propellant deposits.	Maintenance facility replacement.	A
11.	Bolt fails to lock to rear after last shot fired.	1. Dirty or corroded bolt catch.	Clean and lubricate. If disassembly is necessary, turn in to a maintenance facility for repair.	O/A
		2. Faulty magazine.	Replace.	O
		3. Broken bolt catch or spring.	Maintenance Facility repair.	A
12.	Failure to cycle with selector set at AUTO.	1. Worn, broken or missing parts in fire control mechanism.	Maintenance Facility repair.	A
13.	Fires with selector at SAFE.	1. Worn, broken or missing parts in fire control mechanism.	Maintenance Facility repair.	A
14.	With selector on SEMI/FIRE, fires when trigger released.	1. Worn, broken or missing parts in fire control mechanism.	Maintenance Facility repair.	A
15.	Selector lever binds.	1. Dirt, corrosion or lack of lubrication.	Clean and lubricate.	O/A
16.	Weapon fires only one round with selector set on	1. Selector lever set to SEMI.	Set selector lever to AUTO.	O

	Malfunction	Probable Cause	Corrective Action	Operator-O Armorer-A
	AUTO.			
		2. Magazine empty.	Reload.	O
		3. Trigger released early.	Pull trigger.	O
		4. Worn, broken or missing parts in fire control mechanism.	Maintenance facility repair.	A
17.	Carbine/Commando sliding buttstock sticks.	Sand, dirt, or foreign matter in buttstock.	Clean and wipe dry.	O
18.	Carbine/Commando release lever sticks.	Sand, dirt, or foreign matter in release lever detent well.	Clean and lubricate.	O/A

NOTE: Most of the malfunctions already listed could also be caused by damaged, faulty or dirty ammunition. Where this is especially likely, a particular note has been included in the list, but in other instances making sure that the ammunition is good before investigating the weapon could save time.

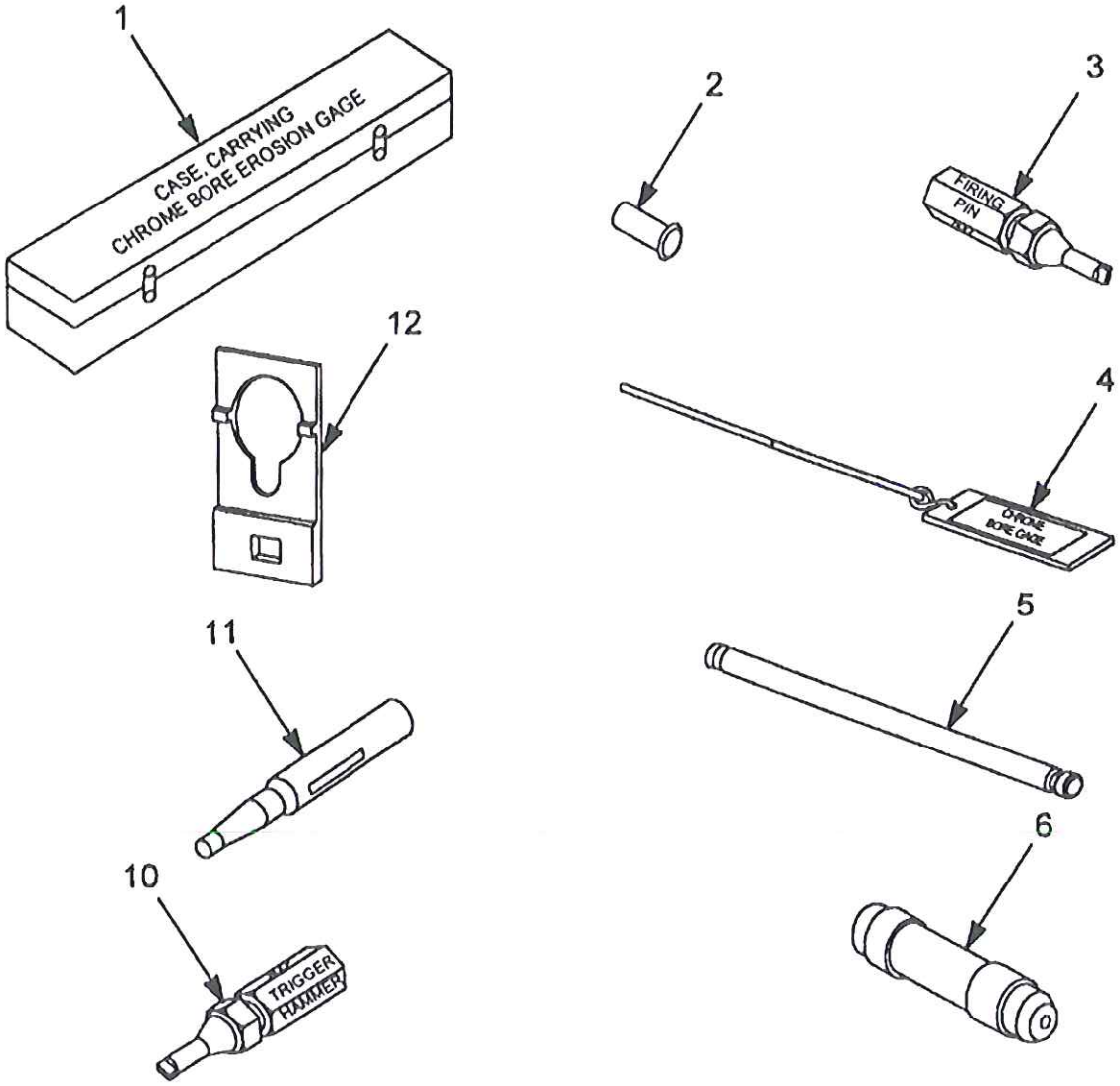
SECTION 14 Standard Armorers Kit and Tools



Standard Armorers Kit and Tools

Item Number	Part Number	Description
1	T27921	Gage, Headspace
2	62673	Depressor, Pivot Pin
3	62674	Extractor, Cartridge Case
4	62679	Gage, Firing Pin Protrusion
5	62680	Punch, Bolt Catch
6	62693	Tool, Barrel Nut Alignment
7	62694	Tool, Chamber Reflector
8	62695	Vise Jaws, Barrel
9	62696	Wrench, Combination
10	62698	Tool, Detent Installation
11	62699	Wrench, Front Sight Adjustment
12	94641	Sight Tool (4-Position A2)
13	94151	Pliers, Retaining Ring c/w Tips
14	94154	Punch, Pin .093 in DIA
15	94158	Socket, Hexagon Bit
16	94620	Wrench, Torque, ½ in Sq. Drive
17	94621	Wrench, 12" long, ½ in Sq. Drive
18	94622	Wrench, Torque, 3/8 in Sq Drive
19	94623	Hammer, Plastic/Brass
20	94624	Hammer, Ball Peen 12oz
21	94625	Handle, Magna-Tip (used with 23-26)
22	94626	Handle, Magna-Tip
23	94627	Bit, 185-2
24	94628	Bit, LB
25	94629	Bit, Red
26	94630	Bit, 445-6
27	94631	Tool Case
28	94632	Tool Case Sling
29	94633	Roll Pin Holders
30	94634	Roll Pin Punches
31	94635	Punch, 1/8 in.
32	94636	Punch, ¼ in.
33	94637	Center Punch, 5/32 in.
34	62721	Punch, Taper Pin Starter
35	94638	Bench Mat
36	94639	Shop Apron
37	94640	Parts Boxes (2)
38	94642	Cleaning Rod with Adapter
39	62697	Punch, Gas Tube Roll Pin
40	62420	Wrench, Spanner (Carbine)
41	62715	Tool, Rivet, Swaging
42	62672	Depressor, Front Sight
43	62682	Punch, Taper Pin (Starter, Heavy)
44	62683	Punch, Taper Pin (Intermediate)
45	91414	Box, Tool, Steel
46	64685	Wrench, Rear Sight Assembly (Fully Adjust A2)
47	64684	Wrench, Hex

Depot Level Armorer Tools



Item	Colt Part No.	NSN	Gov't Part No	Description
1	NA	493010355607	12006359	Case, Bore Gage
2	62694	4933008007508	8448201	Reflector Tool, Chamber
3	SP12620101(98077)	5220010755004	12620101	Gage, Firing Pin
4	SP8448496	5220010148183	8448496	Gage, Barrel Erosion
5	T32571	5220002219391	8448202	Gage, Straightness
6	T27921	5220000707814	7799734	Gage, Headspace
10	SP12006472	5220010439473	12006472	Gage, Plug
11	NA	5315013100370	12926769	Key, Machine
12	64070	5120013246631	9390035	Wrench, Spanner, M4

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M16A1 Parts Compatibility With Current Production Chart.

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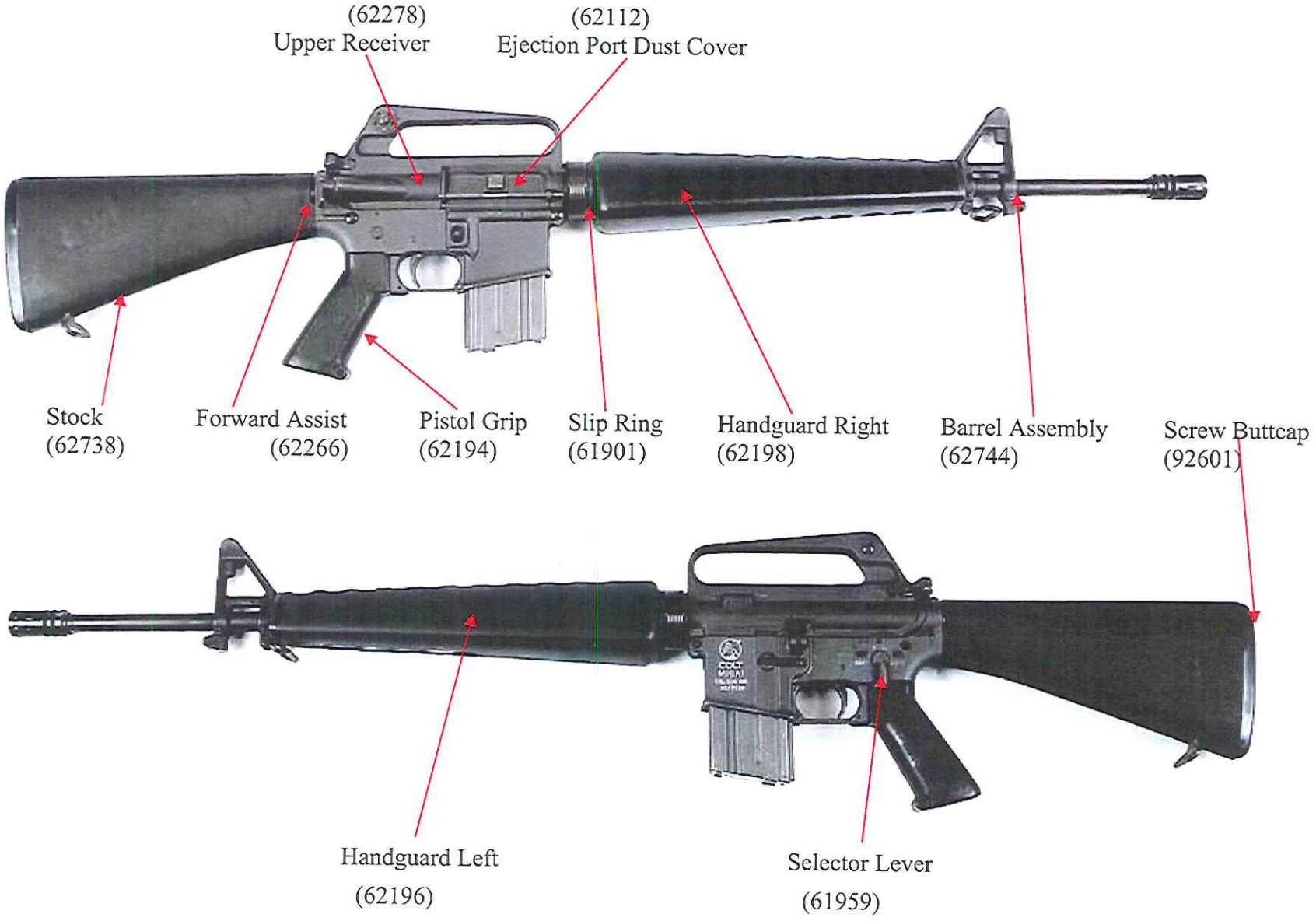

(62278)
Upper Receiver
(62112)
Ejection Port Dust Cover
Stock
(62738)
Forward Assist
(62266)
Pistol Grip
(62194)
Slip Ring
(61901)
Handguard Right
(62198)
Barrel Assembly
(62744)
Screw Buttcap
(92601)
Handguard Left
(62196)
Selector Lever
(61959)

M16A1 Carbines and Commando's

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
62290	Charging Handle Assembly	X		NA	NA
95101	Pin, Roll Latch, Pivot	X		NA	NA
62289	Latch, Charging Handle	X		NA	NA
61875	Spring, Charging Handle Latch	X		NA	NA
62198	Handguard Assembly RH		X	64508	Handguard Assembly Interchangeable A2
62196	Handguard Assembly LH		X	64508	Handguard Assembly Interchangeable A2
62348	Suppressor, Flash "Bird Cage"	X		NA	NA
62126	Washer, Lock		X	12991533	Washer, Crush
62744	Replacement Barrel & Front Sight ASSY (1/12 Twist)		X	64505	Replacement Barrel & Front Sight ASSY (M16A2 with new 1/7 twist)
61706	Post, Front Sight (Round, 5-Pos)		X	64507	Post, Front Sight (Square, 4-Pos A2)
61705	Detent, Front Sight	X		NA	NA
61709	Spring, Front Sight Detent	X		NA	NA
62086	Pin, Taper, Front Sight	X		NA	NA
62280	Swivel, Sling, Forward	X		NA	NA
91209	Rivet, Front Swivel	X		NA	NA
62087	Cap, Handguard, Rifle	X		NA	NA
95108	Pin, Roll, Gas Tube	X		NA	NA
61645	Gas Tube Assembly (Rifle)	X		NA	NA
90403	Snap Ring, Handguard	X		NA	NA
61962	Spring, Weld Assembly, Handguard	X		NA	NA

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
61902	Nut, Barrel	X		NA	NA
61901	Slip Ring, Handguard		X	62483	Slip Ring, Handguard (Delta A2/M4)
61658	Pin, Cover Hinge	X		NA	NA
62112	Ejection Port Cover Assembly		X	64536	Ejection Port Cover Assembly (A2/M4)
95101	Pin, Roll, Rear Sight Drum	X		NA	NA
61703	Drum, Windage	X		NA	NA
61755	Detent Rear Sight	X		NA	NA
61754	Spring, Rear Sight Detent	X		NA	NA
61702	Screw, Rear Sight Windage	X		NA	NA
61700	Sight, Rear	X		NA	NA
61708	Spring, Rear Sight	X		NA	NA
95126	Pin, Roll, Forward Assist	X		NA	NA
62271	Spring, Plunger	X		NA	NA
95113	Pin, Roll (Pawl Pivot) *Multi-Use	X		NA	NA
62269	Pawl, Forward Assist	X		NA	NA
62270	Detent, Pawl	X		NA	NA
50381	Spring, Detent, Forward Assist	X		NA	NA
62266	Plunger Assembly (Tear Drop)		X	64541	Plunger Assembly (Round)
62278	Receiver, Upper		X	64603	**Receiver, Upper with shell deflector**
61696	Spring, Cover Latch		X	64538	Spring Cover Latch

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
62321	Latch, Cover		X	64533	Latch, Cover
62322	Ring, Retaining	X		NA	NA
62335	Pin, Retaining, Firing Pin	X		NA	NA
62294	Pin, Firing	X		NA	NA
61704	Pin, Cam	X		NA	NA
62116	Bolt Assembly (Rifle)	X		NA	NA
61563	Pin, Extractor	X		NA	NA
61562	Extractor	X		NA	NA
62770	Spring, Extractor Assembly		X	64026	Spring, Extractor Assembly
95102	Pin, Roll, Ejector	X		NA	NA
61564	Ejector	X		NA	NA
61569	Spring, Ejector and Safety Detent	X		NA	NA
61540	Ring, Bolt	X		NA	NA
62286	Key and Bolt Carrier Assembly	X		NA	NA
92201	Screw, Cap, Hex Socket Head	X		NA	NA
61547	Key, Bolt Carrier	X		NA	NA
92701	Screw, Pistol Grip	X		NA	NA
90001	Washer, Lock	X		NA	NA
62194	Grip, Pistol		X	64576	Grip, Pistol (A2)

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
61785	Detent, Fire Control Selector	X		NA	NA
61692	Spring, Detent, Takedown Pin	X		NA	NA
61698	Detent, Takedown Pin	X		NA	NA
61655	Pin, Takedown	X		NA	NA
62339	Buffer Assembly	X		NA	NA
61581	Spring, Buffer	X		NA	NA
62727	Buttstock Stowage Assembly		X	NA	No Longer Made. (Use 64571)
61574	Extension, Receiver	X		NA	NA
92601	Screw, Buttcap		X	NA	No Longer Made. (Use 64571)
90218	'O' Ring Buttstock	X		NA	NA
61582	Retainer, Buffer	X		NA	NA
61694	Spring, Buffer Retainer	X		NA	NA
61654	Pin, Hammer and Trigger	X		NA	NA
62317	Hammer & Hammer Pin Retaining Assembly	X		NA	NA
61697	Spring, Hammer (Auto)	X		NA	NA
61615	Pin, Automatic Sear	X		NA	NA
61622	Assembly, Automatic Sear	X		NA	NA
61959	Selector, Fire Control		X	64564	Selector, Fire Control (A2/M4)
62334	Disconnect (Auto)	X		NA	NA
61955	Trigger (Auto)	X		NA	NA

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
61657	Spring, Trigger (Auto)	X		NA	NA
61925	Spring, Disconnect (Auto)		X	64568	Spring, Disconnect (Auto)
95105	Pin, Roll, Bolt Catch	X		NA	NA
62301	Catch, Bolt	X		NA	NA
62178	Plunger, Bolt Catch	X		NA	NA
62177	Spring, Bolt Catch	X		NA	NA
61604	Catch, Magazine	X		NA	NA
62032	Button, Magazine Catch	X		NA	NA
61759	Spring, Magazine Catch	X		NA	NA
95101	Pin, Roll, Trigger Guard		X	95106	Pin, Roll, Trigger Guard
61970	Trigger Guard Assembly	X		NA	NA
62221	Pin, Receiver Pivot	X		NA	NA
61531	Spring, Trigger Guard	X		NA	NA
61250	Plunger, Trigger Guard	X		NA	NA
61609	Bushing, Automatic Sear	X		NA	NA
61616	Spring, Automatic Sear	X		NA	NA
62738	Buttstock		X	64574	Buttstock (A2/A4)
62728	Buttplate Assembly		X	NA	No Longer Made. (Use 64571)
62733	Door		X	64556	Door (A2/A4)

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
62731	Plunger		X	64555	Plunger
62732	Spring, Plunger	X		NA	NA
95201	Pin, Plunger Retainer	X		NA	NA
62736	Hinge	X		NA	NA
62734	Pin Hinge	X		NA	NA
62735	Screw		X	NA	No Longer Made
62737	Swivel	X		NA	NA
62068	Front Sight Base (A1 Barrel)	X		NA	NA
UNK Part Number	11.5 inch Barrel M16A1 Upper Receiver and Barrel Assembly		X	64785 64956	M4 Flattop Upper and 11.5 inch Barrel Assembly M16A2 Windage Only Adjustable Sight upper Receiver and 11.5 inch Barrel Assembly.
61006	M16A1 14.5 inch 1/12 Twist Barrel and M16A1 Upper Receiver Assembly		X	64782 64089	M4 Flattop Upper and Barrel Assembly M16A2 Fully Adjustable Rear Sight Upper and Barrel Assembly
62357	Nut, Receiver Extension		X	64069	Nut, Receiver Extension
62356	Extension, Receiver		X	64072	Extension, Receiver
62486	Buttstock, Sliding, Assembly		X	64243	Buttstock, Sliding, Assembly
62382	Buffer Assembly		X	64688	Buffer Assembly (H)
62381	Handguard, Carbine	X		NA	NA

M16A1 Part No.	Nomenclature	Current	Obsolete	Compatible Part	Nomenclature
64672	Cap, Handguard, Carbine	X		NA	NA
62373	Spring, Action, Carbine	X		NA	NA

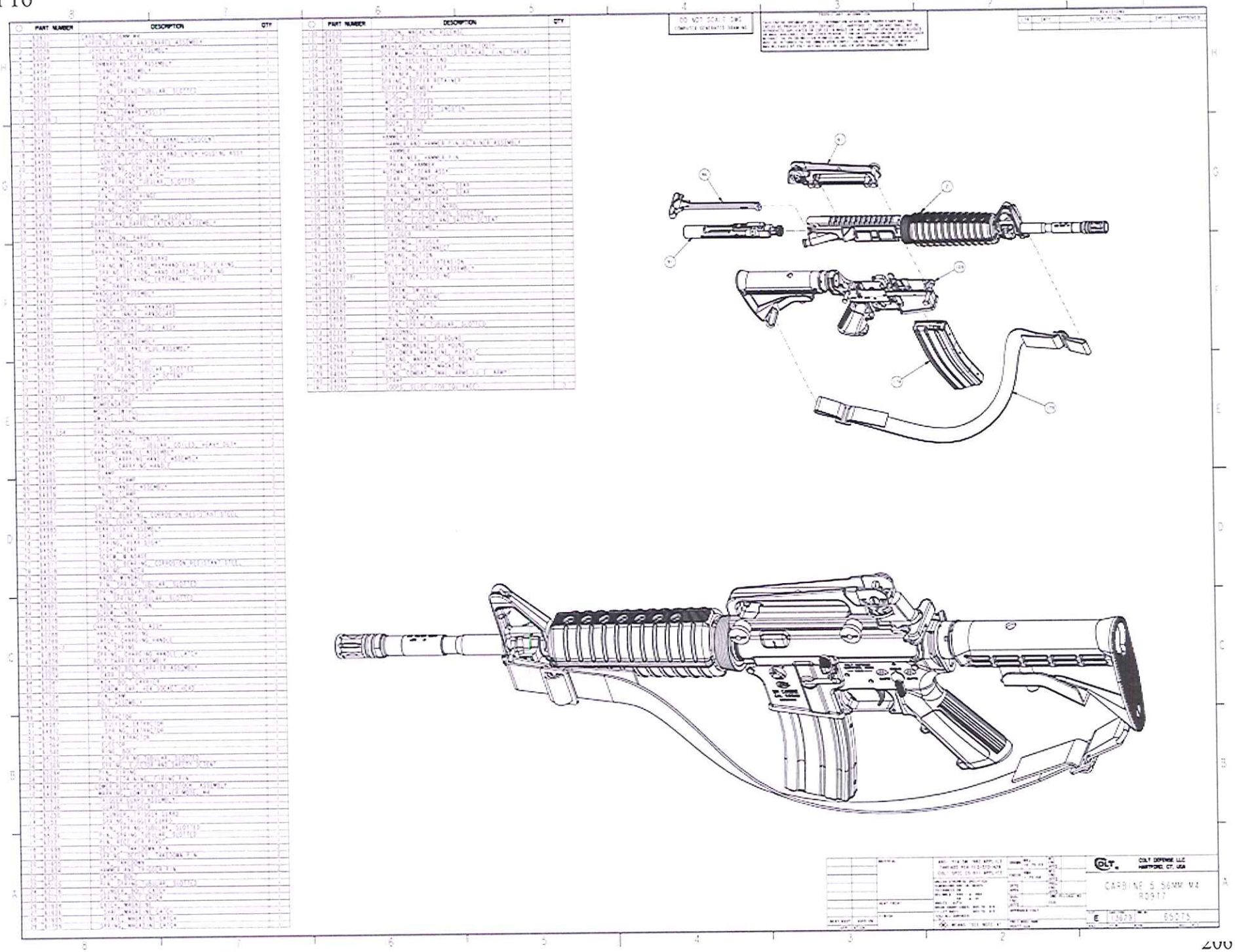
M16A1 rifles may be fully supported with current production component. The only part no longer made nor available is the barrel with the 1/12" twist. However, the M16A2 20 inch barrel Assembly (64694) may be supplemented with no negative consequence. The rifle now will be compatible with new NATO standard 5.56mm ammunition.

Shown on pages 2 and 3 are many of the parts now obsolete. Locate that part number on the chart and the chart will tell the appropriate new part number to work on the M16A1 rifle. When replacement parts are needed for the M16A1 stock (62738), the entire stock assembly should be replaced with the 5/8" longer A2 stock assembly (64571). The ejection port cover assembly (62112) should be completely replaced with the new A2 ejection port cover assembly (64532). Both M16A1 triangular handguards (Right 62198 & Left 62196) need to be replaced with two of the universal M16A2 handguards (64508). The M16A1 selector lever (61959) should be replaced by the A2 selector (64564) the only difference is the witness notch on the right side of the lever.

The barrel assembly for M16A1 Carbine and Commando's are obsolete and no longer in production. These original barrels utilized a 1/12" rifling twist. However, the new production equivalent barrels with the 1/7-inch rifling twist will utilize the extended feed ramps on both the barrel extension and upper receiver. So if the 14.5 inch M16A1 barrel needs to be replaced, the entire upper receiver assembly (61006) should be replaced with either the M4 Carbine 14.5 inch barrel with a flattop upper receiver (64782) or 14.5 inch fully adjustable A2 fixed sight upper receiver (64089). The existing charging handle and bolt carrier group may be used. For the Commando M16A1, either the 11.5 inch barrel with flattop upper receiver (64785) or the 11.5 inch barrel with standard A1-style fixed carrying handle with adjustment for windage only (64956).

The 2-position receiver extension (62356) is obsolete and replaced with the new 4-position receiver extension (61582). All three generations of Colt sliding stocks will fit either generation of receiver extensions. Original aluminum stock, the polymer second-generation stock (62486) and the current third generation polymer stock (64243).

The original M16A1 receiver extension nut (62357) was replaced by the current receiver extension nut (64069). The original nut was tightened by the use of a spanner wrench (62420). If this receiver extension nut must be removed and the spanner wrench is not available, a drift punch may be placed in the hole in the nut and placed on an inside edge and pounded with a hammer until loose. The current receiver extension nut (64069) is installed with a new receiver extension tool (64070).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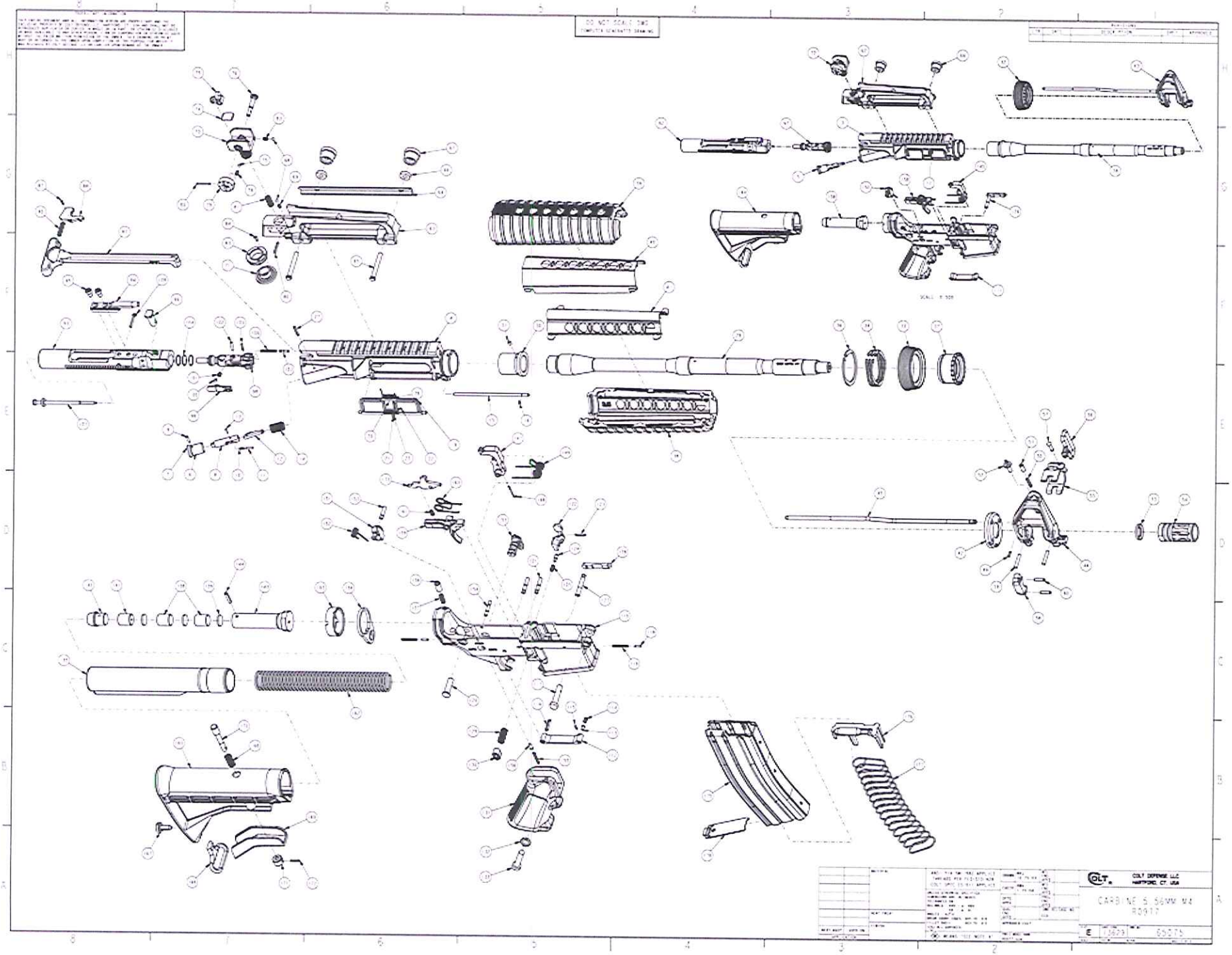
QTY
DO NOT SCALE DWG
COLT DEFENSE LLC
HARTFORD, CT, USA
CARBINE 5.56MM M4
R0917


DO NOT SCALE THIS
COLT DEFENSE LLC
HARTFORD, CT USA
CARBINE, 5.56MM M4
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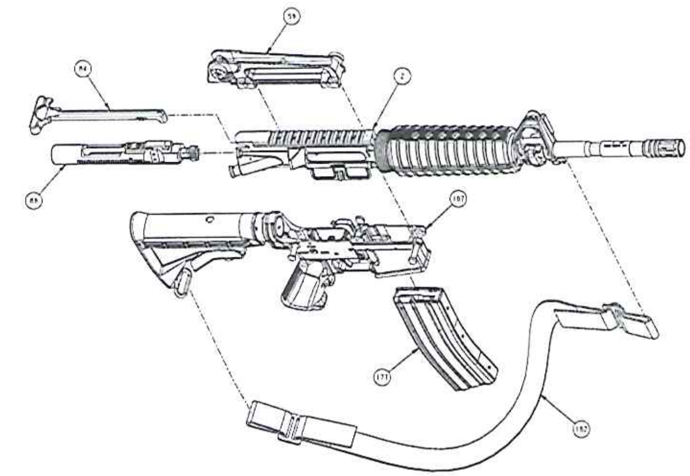
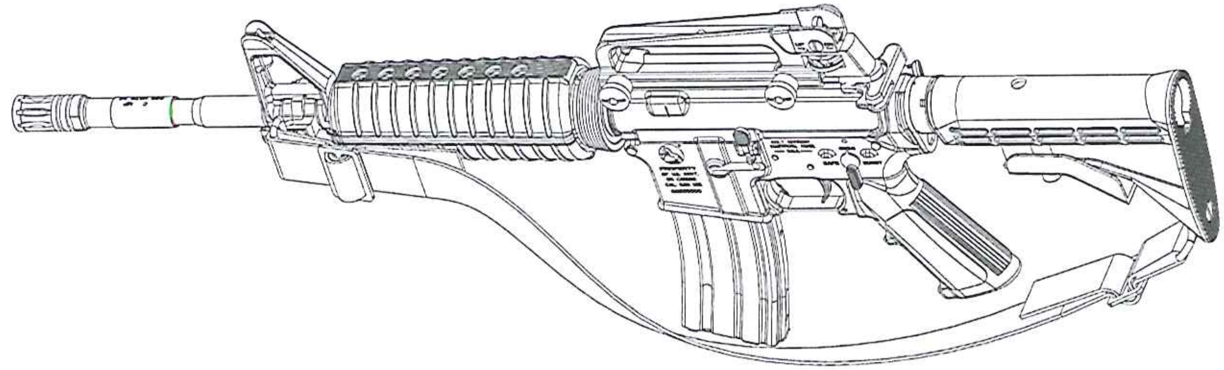
13629
65275

◯	COLT PART NO.	GOV. PART NO.	DESCRIPTION	QTY
1	63920	9390000	CARBINE 5.56MM M4	1
2	63530	12972680	UPPER RECEIVER AND BARREL ASSEMBLY	1
3	63528	12972675	UPPER RECEIVER ASSEMBLY	1
4	63264	12972670	RECEIVER, UPPER	1
5	64543	9349086	FORWARD ASSIST ASSEMBLY	1
6	64541	9349085	PLUNGER ASSEMBLY	1
7	64542	9349084	CAP, PLUNGER	1
8	62268	8448546	PLUNGER	1
9	95127	MS16562-118	PIN, SPRING-TUBULAR, SLOTTED	1
10	58381	8448542	SPRING, BOLT	1
11	62270	8448544	DETENT, PAWL	1
12	62269	8448543	PAWL, FORWARD ASSIST	1
13	95138-2	8448521-2	PIN, SPRING	1
14	62271	8448540	SPRING, PLUNGER	1
15	61658	8448533	PIN, COVER, HINGE	1
16	90482	MS16632-3012	RING, RETAINING, EXTERNAL, CRESCENT	1
17	64532	8448525	EJECTION PORT COVER ASSY	1
18	64535	8448783	EJECTION PORT COVER AND LATCH HOUSING ASSY	1
19	64536	8448785	COVER, EJECTION PORT	1
20	64537	8448784	HOUSING, COVER LATCH	1
21	64538	8448787	SPRING, COVER LATCH	1
22	64534	MS16562-95	PIN, SPRING-TUBULAR, SLOTTED	1
23	64533	8448788	LATCH, COVER	1
24	61518	8448532	SPRING, COVER	1
25	95126	MS16562-121	PIN, SPRING-TUBULAR, SLOTTED	1
26	64676	9390009	BARREL AND BARREL EXTENSION ASSEMBLY	1
27	64677	12991960	BARREL	1
28	64691	9390030	EXTENSION, BARREL	1
29	61611	8448551	PIN, BARREL INDEXING	1
30	62482	8448111	BARREL NUT ASSY	1
31	62483	8448112	SLIP RING, HAND GUARD	1
32	61962	8448555	SPRING WELD ASSEMBLY HAND GUARD SLIP RING	1
33	61961	8448556	SPRING SECTION, HAND GUARD SLIP RING	4
34	90403	MS16626-3137	RING, RETAINING, EXTERNAL, INVERTED	1
35	61902	8448553	NUT, BARREL	1
36	64673	9390083	HANDGUARD ASSEMBLY	2
37	64674	9390084	HANDGUARD	1
38	64675	9390085	LINER, OUTER, HANDGUARD	1
39	64681	9390086	LINER, INNER, HANDGUARD	1
40	64672	9390082	CAP, HANDGUARD	1
41	64682	9390008	SIGHT AND GAS TUBE ASSY	1
42	64085	12972681	SIGHT, FRONT	1
43	62366	9390016	GAS TUBE ASSEMBLY	1
44	62365	9390017	GAS TUBE AND PLUG ASSEMBLY	1
45	62364	9390018	TUBE, GAS	1
46	61644	8448518	PLUG, GAS TUBE	1
47	95108	MS16562-186	PIN, SPRING-TUBULAR, SLOTTED	1
48	61709	8448514	SPRING, FRONT SIGHT DETENT	1
49	61705	8448573	DETENT, FRONT SIGHT	1
50	64507	9349056	POST, FRONT SIGHT	1
51	12991533	12991533	WASHER, CRUSH	1
52	64502	9349051	COMPENSATOR	1
53	64763	12598617	MOUNT, SWIVEL	1
54	62280	8448511	SWIVEL, SLING	1
55	91209	8448697	RIVET	1
56	12991254	12991254	BAR, LOCKING	1
57	62086	8448575	PIN, TAPER, FRONT SIGHT	2
58	99090	MS39086-93	PIN, SPRING - TUBULAR, COILED, HEAVY DUTY	2
59	64987	12951013	CARRYING HANDLE ASSEMBLY	1
60	64792	12951021	BASE, CARRYING HANDLE ASSEMBLY	1
61	64935	12951016	BASE, CARRYING HANDLE	1
62	64080	12951017	CLAMP	1
63	64989	12951029	STUD, CLAMP	1
64	64984	12951023	NUT, HANDLE ASSEMBLY	1
65	64979	12951024	NUT, CLAMP	1
66	64983	12951025	INSERT, NUT	1
67	64982	12951020	SPRING, INDEX	1
68	64517	MS19060-4808	BALLS, BEARING, CORROSION RESISTANT STEEL	2
69	64981	12951019	KNOB, ELEVATION	1
70	64985	12951026	REAR SIGHT ASSEMBLY	1
71	64977	12951028	BASE, REAR SIGHT	1
72	64181	12011987	SPRING, REAR SIGHT	1
73	64524	9349075	SIGHT, REAR	1
74	64525	9349073	SCREW, WINDAGE	1
75	64517	MS19060-4808	BALLS, BEARING, CORROSION RESISTANT STEEL	1
76	64518	9349069	SPRING, INDEX	1
77	64526	9349077	KNOB, WINDAGE	1
78	64522	MS16562-103	PIN, SPRING-TUBULAR, SLOTTED	1
79	64519	9349070	SPRING, ELEVATION	1
80	95126	MS16562-121	PIN, SPRING-TUBULAR, SLOTTED	1
81	64980	12951018	INDEX, ELEVATION	1
82	64514	9349065	SCREW, INDEX	1
83	64518	9349069	SPRING, INDEX	1
84	62290	8448517	CHARGING HANDLE ASSY	1
85	62288	8448518	HANDLE, CHARGING	1
86	62289	8448519	LATCH, CHARGING HANDLE	1
87	95138-2	8448521-2	PIN, SPRING	1
88	61815	8448520	SPRING, CHARGING HANDLE LATCH	1
89	64028	13004788	BOLT CARRIER ASSEMBLY	1
90	62286	8448505	KEY AND BOLT CARRIER ASSEMBLY	1
91	62214	8448507	CARRIER, BOLT	1
92	61547	8448506	KEY, BOLT CARRIER	1
93	92201	8448508	SCREW, CAP, HEX SOCKET HEAD	2
94	61704	8448502	PIN, CAM	1
95	64027	13004787	BOLT ASSEMBLY	1
96	61538	8448510	BOLT	1
97	61562	8448512	EXTRACTOR	1
98	64087	12972693	BUFFER, EXTRACTOR	1
99	64912	12999901	SPRING, EXTRACTOR	1
100	61563	8448513	PIN, EXTRACTOR	1
101	61564	8448515	EJECTOR	1
102	61540	8448511	RING, BOLT	3
103	95102	MS16562-98	PIN, SPRING-TUBULAR, SLOTTED	1
104	61569	8448516	SPRING, EJECTOR AND SAFETY DETENT	1
105	62294	8448503	PIN, FIRING	1
106	62335	8448504	PIN, RETAINING, FIRING PIN	1
107	64678	9390011	LOWER RECEIVER AND BUTTSTOCK ASSEMBLY	1
108	64680	9390015	MARKING, LOWER RECEIVER MODEL M4	1
109	61970	8448587	TRIGGER GUARD ASSEMBLY	1
110	61248	8448588	GUARD, TRIGGER	1
111	61250	8448589	PLUNGER, TRIGGER GUARD	1
112	61531	8448590	SPRING, TRIGGER GUARD	1
113	95101	MS16562-96	PIN, SPRING-TUBULAR, SLOTTED	1
114	95106	MS16562-129	PIN, SPRING-TUBULAR, SLOTTED	1
115	62221	8448621	PIN, RECEIVER PIVOT	1
116	61698	8448585	DETENT, TAKEDOWN PIN	2
117	61692	8448586	SPRING, DETENT, TAKEDOWN PIN	2
118	61655	8448584	PIN, TAKEDOWN	1
119	61654	8448609	HAMMER AND TRIGGER PIN	2
120	62301	8448628	CATCH, BOLT	1
121	95105	MS16562-119	PIN, SPRING-TUBULAR, SLOTTED	1
122	62178	8448634	PLUNGER, BOLT CATCH	1
123	62177	8448633	SPRING, BOLT CATCH	1
124	61604	8448638	CATCH, MAGAZINE	1
125	61606	8448640	SHAFT, MAGAZINE CATCH	1
126	61605	8448639	PLATE, MAGAZINE CATCH	1
127	61159	8448637	SPRING, MAGAZINE CATCH	1
128	62032	8448636	BUTTON, MAGAZINE RELEASE	1
129	64576	9349127	GRIP, PISTOL	1
130	90001	MS35335-61	WASHER, LOCK, FLAT-EXTERNAL TOOTH	1
131	92701	AN501D416-18	SCREW, MACHINE, FILLISTER HEAD, FINE THREAD	1
132	62358	9390021	PLATE, RECEIVER END	1
133	64072	9390019	EXTENSION, RECEIVER	1
134	61582	8448582	RETAINER, BUFFER	1
135	61694	8448583	SPRING, BUFFER RETAINER	1
136	64698	9390023	BUFFER ASSEMBLY	1
137	62343	8448618	DISC, BUFFER	2
138	62342	8448617	WEIGHT, BUFFER	2
139	64058	12972656	WEIGHT, BUFFER TUNGSTEN	1
140	62384	8448619	BUMPER, BUFFER	1
141	64683	9390024	BODY, BUFFER	1
142	95138-1	8448521-1	PIN, SPRING	1
143	64692	9390032	HAMMER ASSEMBLY	1
144	64561	9349110	HAMMER & HAMMER PIN RETAINER ASSEMBLY	1
145	64562	9349111	HAMMER	1
146	61820	8448614	RETAINER, HAMMER PIN	1
147	64081	9390031	CAM, BURST (3 SHOT)	1
148	64560	9349109	SPRING, CLUTCH	1
149	64559	9349107	SPRING, HAMMER	1
150	61622	8448595	AUTOMATIC SEAR ASSY	1
151	61590	8448596	SEAR, AUTOMATIC	1
152	61615	8448598	SPRING, AUTOMATIC SEAR	1
153	61609	8448597	BUSHING, AUTOMATIC SEAR	1
154	61615	8448599	PIN, AUTOMATIC SEAR	1
155	64564	9381367	SELECTOR, FIRE CONTROL	1
156	61785	8448631	DETENT, FIRE CONTROL SELECTOR	1
157	61569	8448516	SPRING, EJECTOR AND SAFETY DETENT	1
158	64934	12972697	TRIGGER ASSEMBLY	1
159	64935	12972698	TRIGGER SUBASSEMBLY	1
160	64641	9390736	TRIGGER	1
161	63026	12972695	SPRING, DISCONNECT	1
162	64568	9349116	SPRING, DISCONNECT	1
163	61657	8448593	SPRING, TRIGGER	1
164	62373	9390022	SPRING, ACTION	1
165	64069	9390020	NUT, RECEIVER EXTENSION	1
166	64243	12012082	SLIDING BUTTSTOCK ASSEMBLY	1
167	12012081	12012081	BUTTSTOCK, SLIDING	1
168	62337	8448652	SWIVEL	1
169	99331	12012083	SCREW, SWIVEL	1
170	62369	9390027	SPRING, LOCKING	1
171	62620	9390014	LEVER, RELEASE	1
172	64881	9390025	PIN, LOCK	1
173	64886	9390026	NUT, LOCK PIN	1
174	95142	MS16562-202	PIN, SPRING-TUBULAR, SLOTTED	1
175	64566	9349113	DISCONNECT - BURST	1
176	64567	9349114	DISCONNECT-SEMI	1
177	62328	8448670	MAGAZINE ASSY, 30 ROUND	1
178	62661	8448674	BOX, MAGAZINE, 30 ROUND	1
179	64991-2	12011994	FOLLOWER, MAGAZINE, PLASTIC	1
180	62666	8448671	SPRING, MAGAZINE, 30 ROUND	1
181	62668	8448673	PLATE, BOTTOM, MAGAZINE	1
182	64095	12011996	SLING, COMBAT, SMALL ARMS (U.S. ARMY)	1
183	64094	12011995	STRAP	1
184	62259	AA55626-45	LOOPS, SLIDE (FOR EQUIPAGE)	2

DO NOT SCALE DWG
COMPUTER GENERATED DRAWING





GOVT. PART NO. 9390000

ANSI Y14.5M-1982 APPLIES
THREADS PER FED-STD-H28
COLT SPEC CS1011 APPLIES

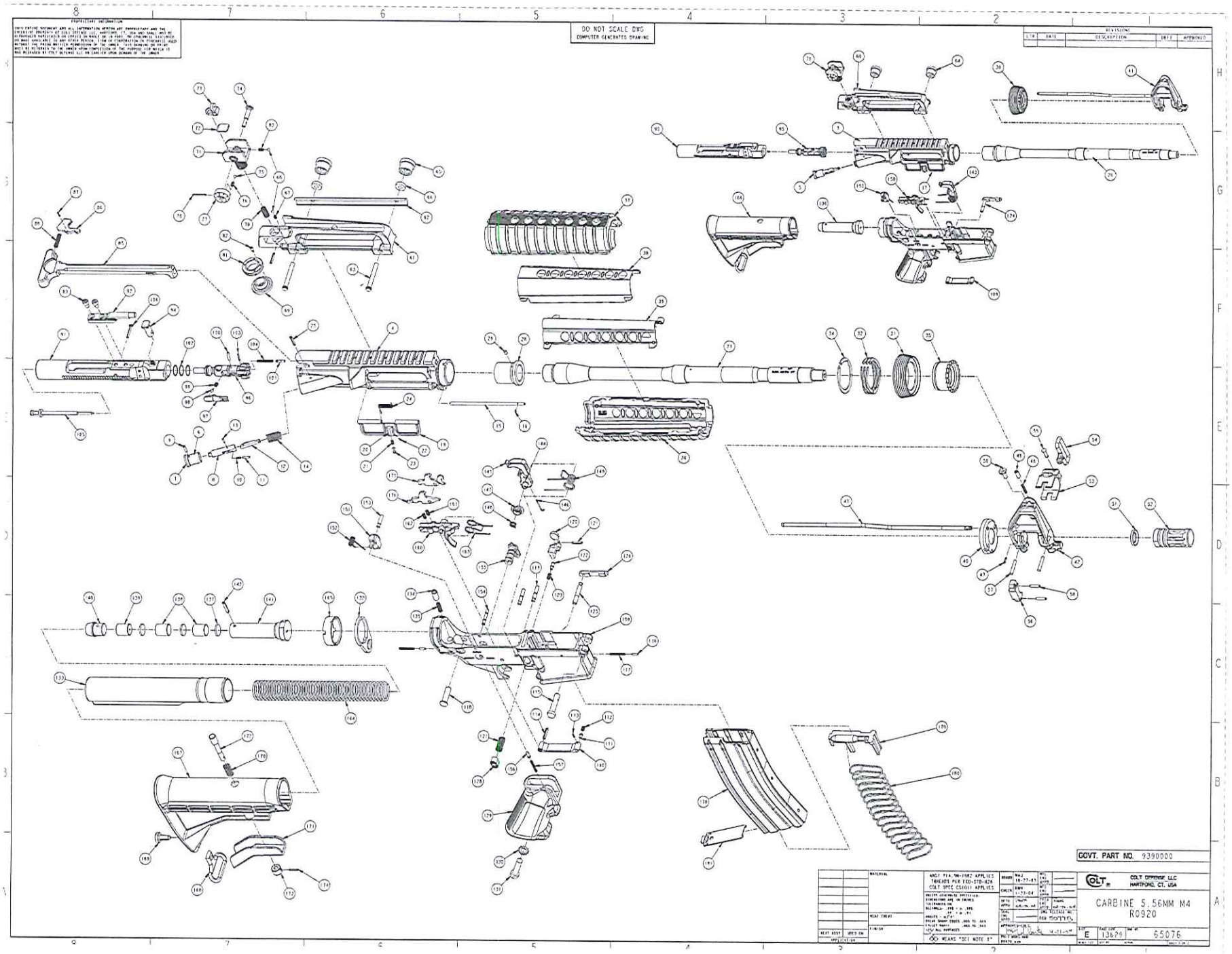
◈ MEANS "SEE NOTE X"

DRAWN MAJ 10-27-03
CHECK PWH 1-23-04

COLT DEFENSE LLC
HARTFORD, CT, USA

CARBINE 5.56MM M4
R0920

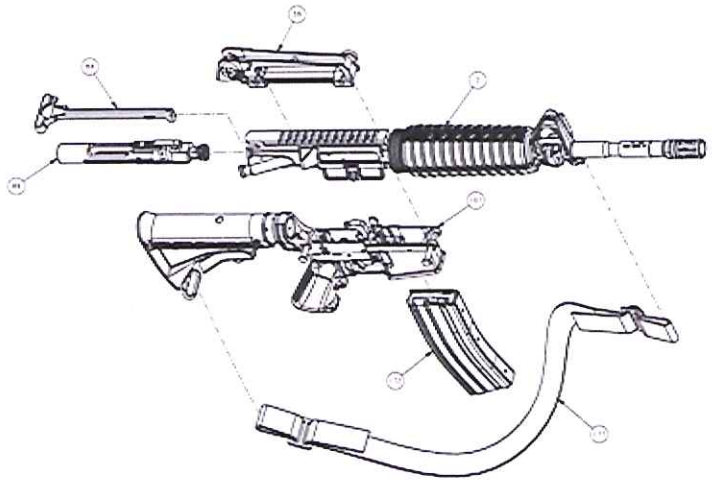
E | 13629 | 65076

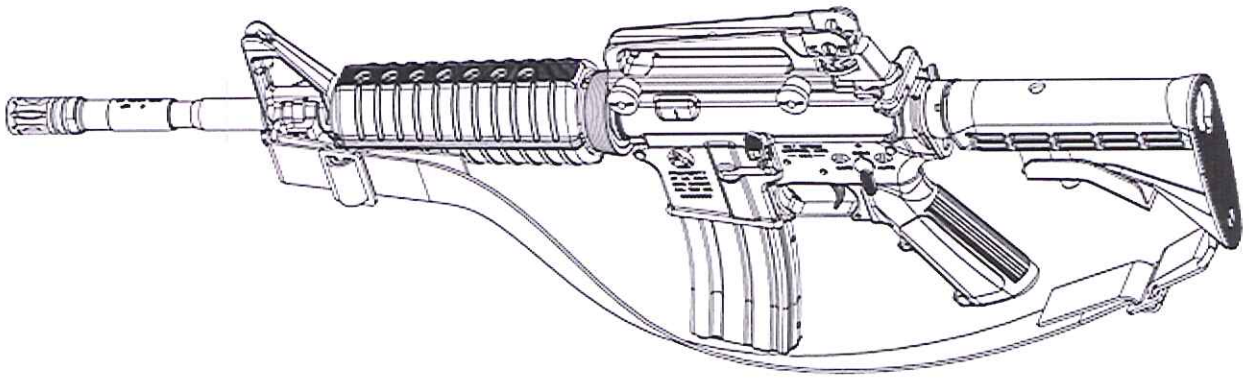

DO NOT SCALE DWG
COMPUTER GENERATED DRAWING
GOVT. PART NO. 9390000
COLT DEFENSE LLC
HARTFORD, CT. USA
CARBINE 5.56MM M4
R0920
SIZE E
13629
55076

COLT PART NO	GOV PART NO	DESCRIPTION	QTY

COLT PART NO	GOV PART NO	DESCRIPTION	QTY

DO NOT SCALE DRG.



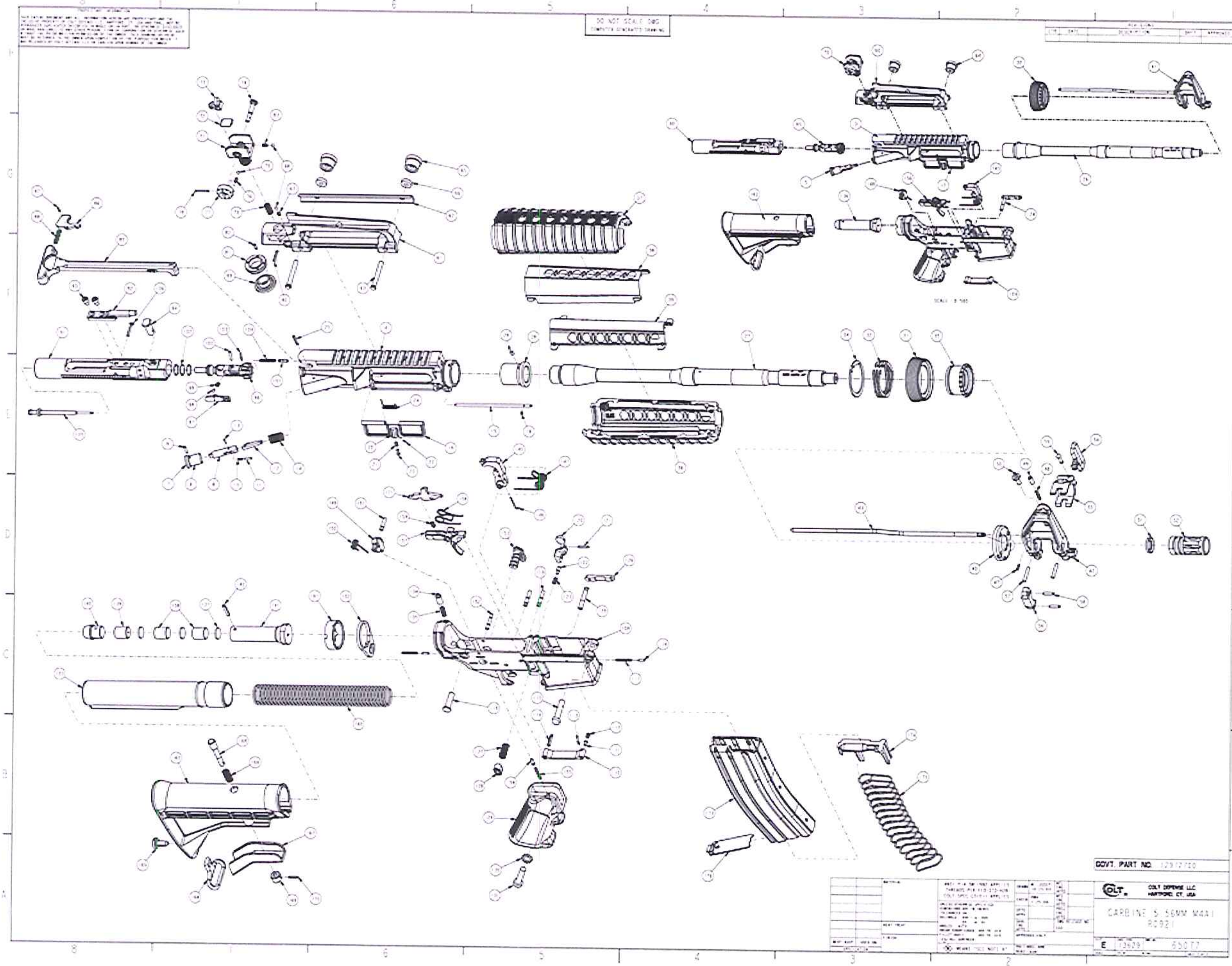


GOVT. PART NO. 12972700

COLT DEFENSE LLC
HARTFORD, CT. USA

CARBINE 5.56MM M4A1
R0921

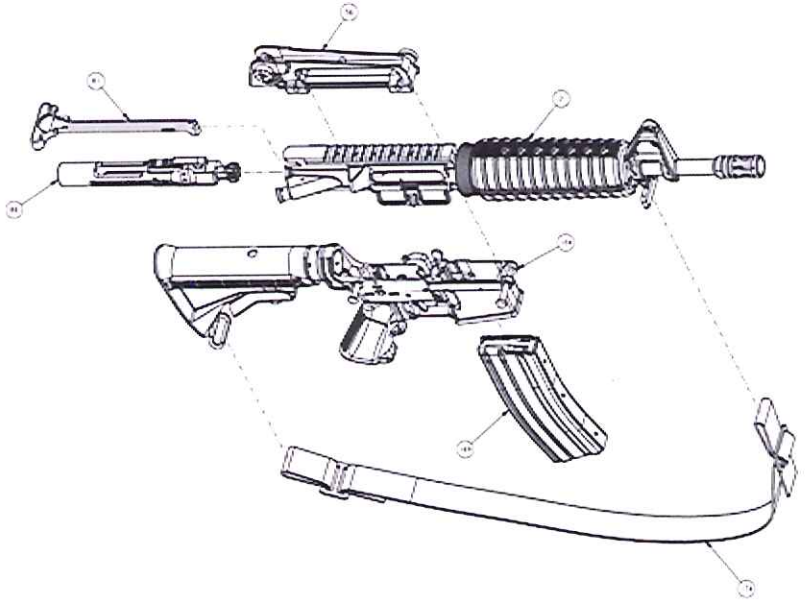
E | 13629 | 65077

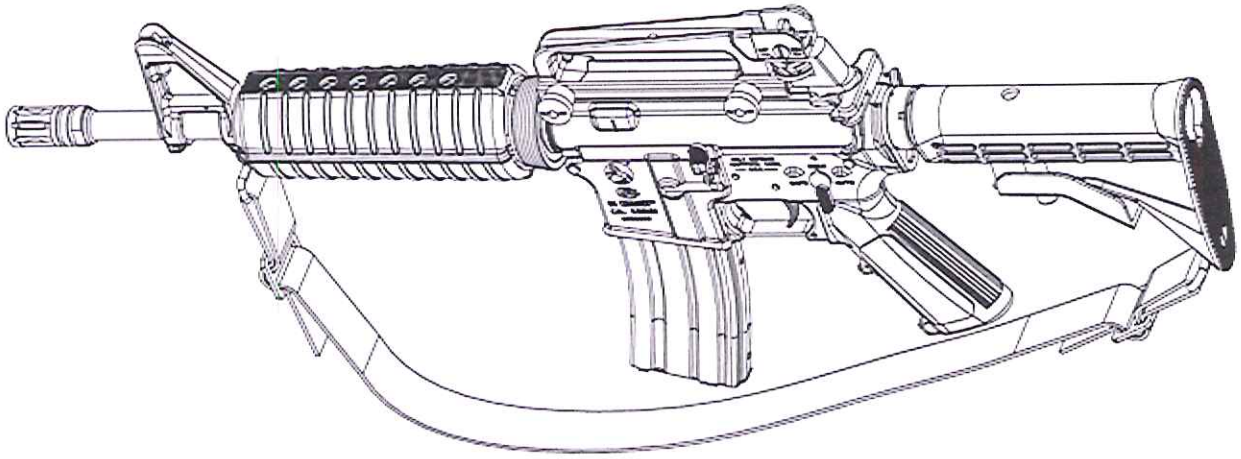

DO NOT SCALE DWG
COMPUTER GENERATED DRAWING
GOVT. PART NO. 12972700
COLT DEFENSE LLC
HARTFORD, CT, USA
CARBINE 5.56MM M4A1
RO921
E
13629
65077

PART NUMBER	DESCRIPTION	QTY

PART NUMBER	DESCRIPTION	QTY

DO NOT SCALE THIS DRAWING

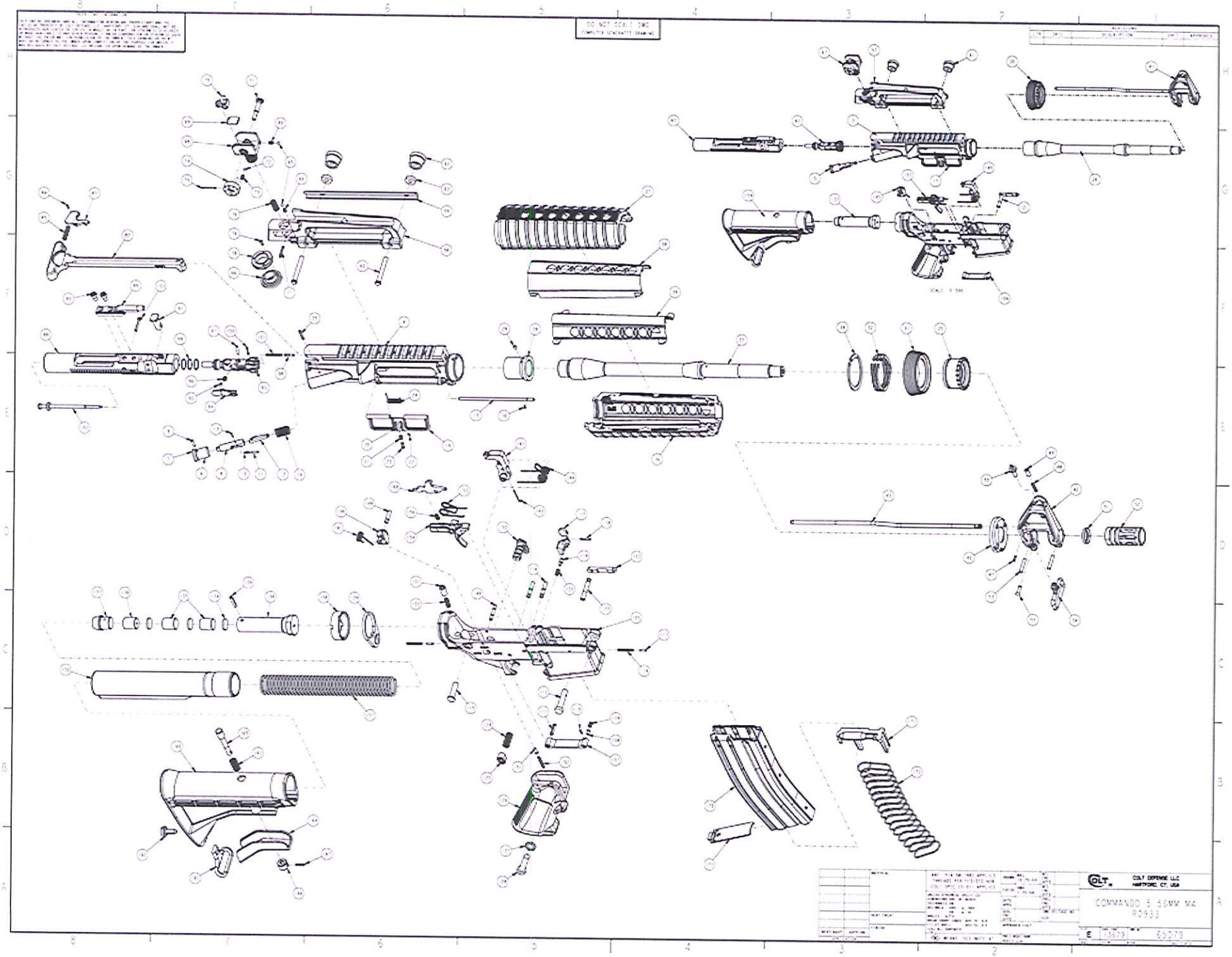




COLT DEFENSE LLC
HARTFORD, CT, USA

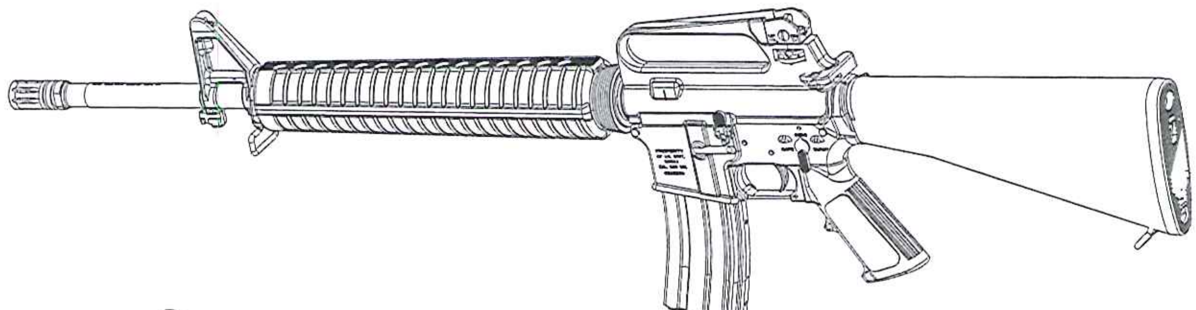
COMMANDO 5.56MM M4
R0933

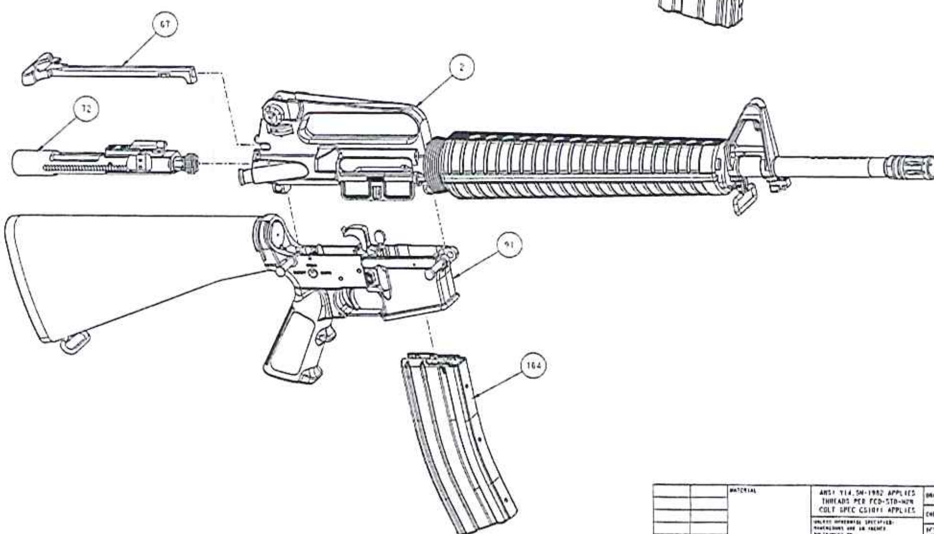
E | 13679 | 69279


COLT DEFENSE LLC
HARTFORD, CT, USA
COMMANDO 5.56MM M4
R6933

○	COLT PART NO.	GOV. PART NO.	DESCRIPTION	QTY
1	64500	9349000	CARBINE, 5.56MM M16A2 R0645	1
2	64528	9349050	UPPER RECEIVER AND BARREL ASSEMBLY	1
3	64519	9349062	UPPER RECEIVER ASSEMBLY	1
4	64512	9349063	RECEIVER, UPPER	1
5	64543	9349086	FORWARD ASSIST ASSEMBLY	1
6	64541	9349085	PLUNGER ASSEMBLY	1
7	64542	9349084	CAP, PLUNGER	1
8	62268	8448546	PLUNGER	1
9	95121	MS16562-118	PIN, SPRING-TUBULAR, SLOTTED	1
10	50381	8448542	SPRING, PAWL	1
11	62270	8448544	DETENT, PAWL	1
12	62269	8448543	PAWL, FORWARD ASSIST	1
13	95113	8448521-2	PIN, SPRING	1
14	62271	8448540	SPRING, PLUNGER	1
15	61658	8448533	PIN, COVER, HINGE	1
16	90402	MS16632-3012	RING, RETAINING, EXTERNAL, CRESCENT	1
17	64532	8448522	EJECTION PORT COVER ASSY	1
18	64535	8448783	EJECTION PORT COVER AND LATCH HOUSING ASSY	1
19	64536	8448785	COVER, EJECTION PORT	1
20	64537	8448784	HOUSING, COVER LATCH	1
21	64539	8448787	SPRING, COVER LATCH	1
22	64534	MS16562-96	PIN, SPRING-TUBULAR, SLOTTED	1
23	64533	8448786	LATCH, COVER	1
24	61518	8448532	SPRING, COVER	1
25	64518	9349069	SPRING, INDEX	2
26	64517	MS19060-4808	BALLS, BEARING, CORROSION RESISTANT STEEL	2
27	64516	9349067	KNOB, ELEVATION	1
28	64515	9349066	INDEX, ELEVATION	1
29	64514	9349065	SCREW, INDEX	1
30	64521	9349072	REAR SIGHT ASSEMBLY	1
31	64523	9349074	BASE, REAR SIGHT	1
32	64181	12011983	SPRING, REAR SIGHT	1
33	64524	9349075	SIGHT, REAR	1
34	64525	9349076	SCREW, WINDAGE	1
35	64517	MS19060-4808	BALLS, BEARING, CORROSION RESISTANT STEEL	1
36	64518	9349069	SPRING, INDEX	1
37	64526	9349077	KNOB, WINDAGE	1
38	64522	MS16562-103	PIN, SPRING-TUBULAR, SLOTTED	1
39	64519	9349070	SPRING, ELEVATION	1
40	95126	MS16562-121	PIN, SPRING-TUBULAR, SLOTTED	2
41	64505	9349054	BARREL AND BARREL EXTENSION ASSEMBLY	1
42	64506	9349054	BARREL	1
43	61519	8448550	EXTENSION, BARREL	1
44	61671	8448551	PIN, BARREL INDEXING	1
45	62482	8448711	BARREL NUT ASSY	1
46	62483	8448712	SLIP RING, HAND GUARD	1
47	61962	8448555	SPRING WELD ASSEMBLY HAND GUARD SLIP RING	1
48	61961	8448556	SPRING SECTION, HAND GUARD SLIP RING	4
49	90403	MS16628-3137	RING, RETAINING, EXTERNAL, INVERTED	1
50	61902	8448553	NUT, BARREL	1
51	64509	9349059	HANDGUARD ASSEMBLY	2
52	64509	9349060	HANDGUARD	1
53	64510	9349061	LINER, HANDGUARD	1
54	64504	9349053	CAP, HANDGUARD	1
55	12991533	12991533	WASHER, CRUSH	1
56	64502	9349051	COMPENSATOR	1
57	62393	9349057	SIGHT AND GAS TUBE ASSY	1
58	62385	9349058	SIGHT, FRONT	1
59	61645	8448562	GAS TUBE ASSEMBLY	1
60	62280	8448571	SWIVEL, SLING	1
61	91209	8448697	RIVET	1
62	95108	MS16562-106	PIN, SPRING-TUBULAR, SLOTTED	1
63	61709	8448574	SPRING, FRONT SIGHT DETENT	1
64	61705	8448573	DETENT, FRONT SIGHT	1
65	64507	9349056	POST, FRONT SIGHT	1
66	62086	8448575	PIN, TAPER, FRONT SIGHT	2
67	62298	8448517	CHARGING HANDLE ASSY	1
68	62288	8448518	HANDLE, CHARGING	1
69	62289	8448519	LATCH, CHARGING HANDLE	1
70	95113	8448521-2	PIN, SPRING	1
71	61875	8448520	SPRING, CHARGING HANDLE LATCH	1
72	62646	12011849	BOLT CARRIER ASSEMBLY	1
73	62286	8448545	KEY AND BOLT CARRIER ASSEMBLY	1
74	62214	8448507	CARRIER, BOLT	1
75	61547	8448506	KEY, BOLT CARRIER	1
76	92201	8448508	SCREW, CAP, HEX SOCKET HEAD	2
77	61204	8448502	PIN, CAM	1
78	62644	12972691	BOLT ASSEMBLY	1
79	61536	8448510	BOLT	1
80	61562	8448512	EXTRACTOR	1
81	64088	12972692	SPRING ASSY, EXTRACTOR	1
82	64087	12972693	BUFFER, EXTRACTOR	1
83	62769	8448753	SPRING, EXTRACTOR	1
84	61563	8448513	PIN, EXTRACTOR	1
85	61564	8448515	EJECTOR	1
86	61540	8448511	RING, BOLT	3
87	95102	MS16562-98	PIN, SPRING-TUBULAR, SLOTTED	1
88	61569	8448516	SPRING, EJECTOR AND SAFETY DETENT	1
89	62294	8448503	PIN, FIRING	1
90	62335	8448504	PIN, RETAINING, FIRING PIN	1
91	64550	9349100	LOWER RECEIVER AND BUTTSTOCK ASSY	1
92	64551	9349101	LOWER RECEIVER AND RECEIVER EXTENSION ASSEMBLY	1
93	64552	9349102	RECEIVER, LOWER MODEL M16A2	1
94	64924	8448581	EXTENSION, RECEIVER	1
95	61502	8448582	RETAINER, BUFFER	1
96	61694	8448583	SPRING, BUFFER RETAINER	1
97	61810	8448587	TRIGGER GUARD ASSEMBLY	1
98	61249	8448588	GUARD, TRIGGER	1
99	61250	8448589	PLUNGER, TRIGGER GUARD	1
100	61531	8448590	SPRING, TRIGGER GUARD	1
101	95101	MS16562-96	PIN, SPRING-TUBULAR, SLOTTED	1
102	95106	MS16562-120	PIN, SPRING-TUBULAR, SLOTTED	1
103	64572	12597640	SPACER, BUTTCAP	1
104	64531	9349119	BUTTSTOCK ASSEMBLY, STORAGE	1
105	64514	9349123	BUTTSTOCK	1
106	64518	9349130	BUTT PLATE ASSEMBLY	1
107	62729	8448651	INSERT	1
108	64573	9349120	SCREW, SWIVEL	1
109	62737	8448652	SWIVEL	1
110	62736	8448653	HINGE	1
111	62734	8448655	PIN	1
112	64553	12999220	DOOR ASSEMBLY, THUMB LATCH	1
113	64556	12999219	DOOR	1
114	95201	MS39086-69	PIN, SPRING - TUBULAR, COILED, HEAVY DUTY	1
115	64555	9381378	PLUNGER	1
116	62737	8448659	SPRING, HELICAL, COMPRESSION	1
117	64511	9349128	SCREW, BUTT CAP	1
118	64516	9349127	GRIP, PISTOL	1
119	90001	MS35335-61	WASHER, LOCK, FLAT-EXTERNAL TOOTH	1
120	92201	AN501D416-18	SCREW, MACHINE, FILLISTER HEAD, FINE THREAD	1
121	62339	8448615	BUFFER ASSEMBLY	1
122	62340	8448616	BODY, BUFFER	1
123	62384	8448619	BUMPER, BUFFER	1
124	62412	8448620	SPACER, BUFFER	1
125	62342	8448617	WEIGHT, BUFFER	5
126	62343	8448618	DISC, BUFFER	5
127	95138-1	MS16562-130	PIN, SPRING	1
128	62581	8448629	SPRING, ACTION	1
129	61604	8448638	CATCH, MAGAZINE	1
130	61606	8448640	SHAFT, MAGAZINE CATCH	1
131	61605	8448639	PLATE, MAGAZINE CATCH	1
132	61759	8448637	SPRING, MAGAZINE CATCH	1
133	62032	8448636	BUTTON, MAGAZINE RELEASE	1
134	62177	8448633	SPRING, BOLT CATCH	1
135	62178	8448634	PLUNGER, BOLT CATCH	1
136	64564	9381367	SELECTOR, FIRE CONTROL	1
137	61785	8448631	DETENT, FIRE CONTROL SELECTOR	1
138	61569	8448516	SPRING, EJECTOR AND SAFETY DETENT	1
139	61692	8448586	SPRING, DETENT, TAKEDOWN PIN	2
140	61698	8448585	DETENT, TAKEDOWN PIN	2
141	61655	8448584	PIN, TAKEDOWN	1
142	61615	8448599	PIN, AUTOMATIC SEAR	1
143	61622	8448595	AUTOMATIC SEAR ASSY	1
144	61590	8448596	SEAR, AUTOMATIC	1
145	61616	8448598	SPRING, AUTOMATIC SEAR	1
146	61609	8448597	BUSHING, AUTOMATIC SEAR	1
147	62301	8448628	CATCH, BOLT	1
148	95109	MS16562-95	PIN, SPRING-TUBULAR, SLOTTED	1
149	62221	8448621	PIN, RECEIVER PIVOT	1
150	61654	8448609	HAMMER AND TRIGGER PIN	2
151	64640	9349115	TRIGGER ASSEMBLY	1
152	64641	9390236	TRIGGER	1
153	64568	9349116	SPRING, DISCONNECT	1
154	61651	8448593	SPRING, TRIGGER	1
155	64566	9349113	DISCONNECT - BURST	1
156	64567	9349114	DISCONNECT-SEMI	1
157	64557	9349106	HAMMER ASSEMBLY	1
158	64561	9349110	HAMMER & HAMMER PIN RETAINER ASSEMBLY	1
159	64562	9349111	HAMMER	1
160	61820	8448614	RETAINER, HAMMER PIN	1
161	64559	9349108	CAM, BURST (3 SHOT)	1
162	64560	9349109	SPRING, CLUTCH	1
163	64558	9349107	SPRING, HAMMER	1
164	62326	8448670	MAGAZINE ASSY, 30 ROUND	1
165	62667	8448674	BOX, MAGAZINE, 30 ROUND	1
166	64991-2	12011994	FOLLOWER, MAGAZINE, PLASTIC	1
167	62666	8448671	SPRING, MAGAZINE, 30 ROUND	1
168	62668	8448673	PLATE, BOTTOM, MAGAZINE	1

REVISIONS				
LTR	DATE	DESCRIPTION	DRFT	APPROVED





GOVT. PART NO. 9349000

ANSI Y14.5M-1982 APPLIES
THREADS PER FED-STD-H28
COLT SPEC CS1011 APPLIES

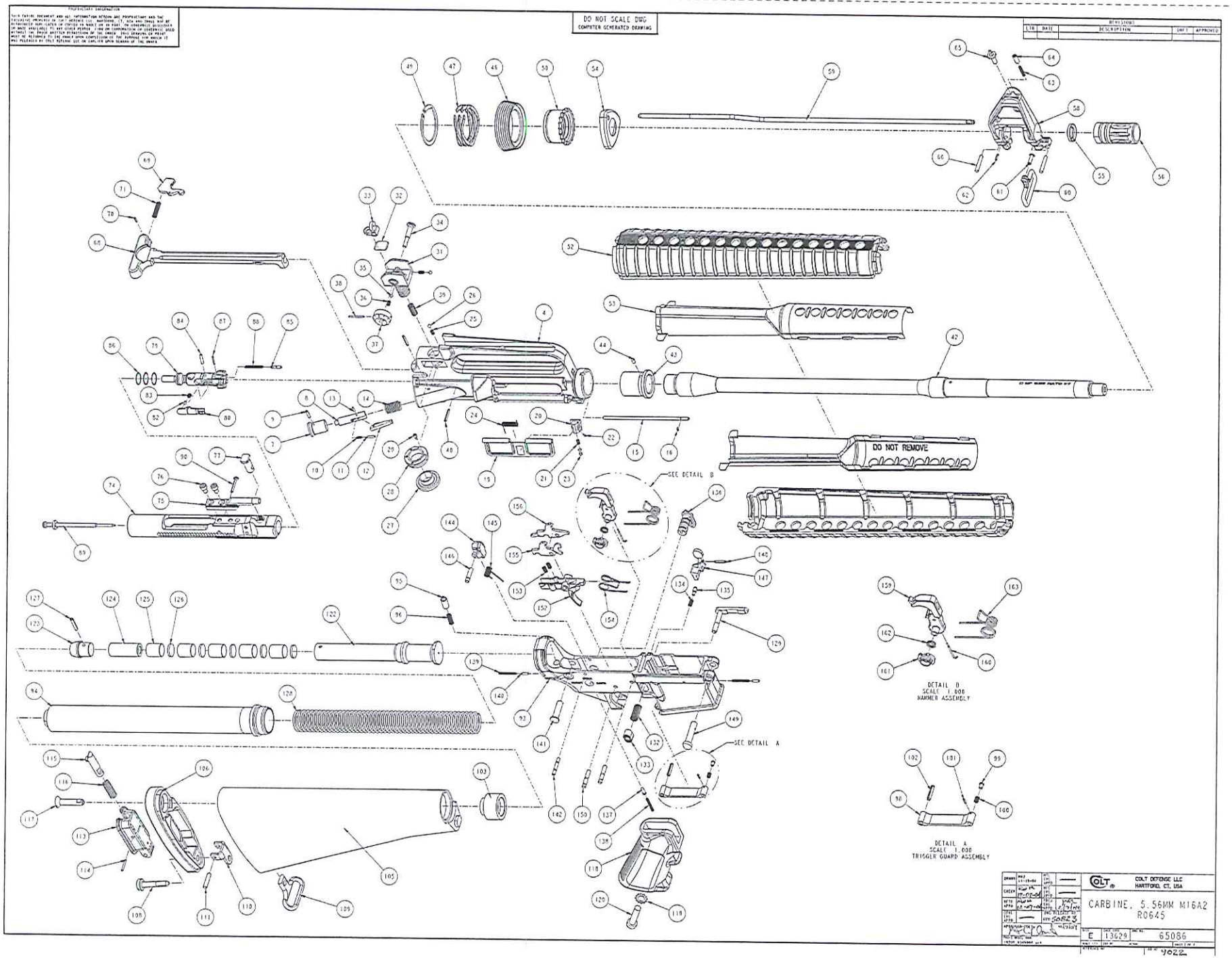
⟨X⟩ MEANS "SEE NOTE X"

COLT DEFENSE LLC
HARTFORD, CT, USA

CARBINE, 5.56MM M16A2
R0645

E 13629 65086

ECO 50923


DO NOT SCALE DWG
COMPUTER GENERATED DRAWING
DO NOT REMOVE
SEE DETAIL B
SEE DETAIL A
DETAIL D
SCALE 1.000
HAMMER ASSEMBLY
DETAIL A
SCALE 1.000
TRIGGER GUARD ASSEMBLY
COLT DEFENSE LLC
HARTFORD, CT, USA
CARBINE, 5.56MM M16A2
R0645
E
13629
65086

NOTES:

SAFETY DEPENDS ON YOU

SIX BASIC SAFETY RULES

1. **ALWAYS KEEP THE FIREARM POINTED IN A SAFE DIRECTION.**

2. **KEEP FIRE CONTROL SELECTOR ON SAFE UNTIL READY TO FIRE.**

3. **UNLOAD WHEN NOT IN USE.**

4. **ALWAYS ENSURE A FIREARM IS NOT LOADED BEFORE CLEANING, DISMANTLING OR STORING.**

5. **PRACTICE HANDLING AN EMPTY FIREARM BEFORE ATTEMPTING TO FIRE.**

6. **NO LIVE AMMUNITION IN WORK AREA.**

⚠ **WARNING: If there is anything you do not understand, get help from someone qualified in the safe handling of firearms.**

COLT DEFENSE LLC
P. O. BOX 118
HARTFORD, CONNECTICUT 06141-0118
USA