CAUTION: Read safety rules before handling the HK416 Enhanced Carbine!

Maintenance Manual for HK416 Enhanced Carbine & Rifle System

5.56mm NATO

TRAINING GROUP

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Clearing the HK416

Clear the weapon, before handling the weapon! "Clear it!" Do so by:

1. Make sure your fingers are outside the trigger guard and the weapon is pointed in a safe direction at all times!

2. ON SAFE – Rotate the safety/selector lever to the "Safe" position (the weapon must be cocked for the safety to engage). With the safety set at the white box with a white bullet symbol inside the box. (See illustration on page __.)

3. REMOVE MAGAZINE – Depress the magazine release button and remove the magazine from the magazine well.

4. CHARGING HANDLE – Rotate the ejection port toward the ground and pull the charging handle rearward one or more times to insure the chamber is empty. Watch for a live round or empty case to be ejected.

5. BOLT CATCH – While holding the charging handle rearward, press the bolt catch in to lock the bolt open.

6. INSPECT THE CHAMBER – Inspect the chamber for the presence of a live round or empty case.
   *Visually – View the chamber through the open ejection port.

   *Physically – Place a cleaning rod into the bore/chamber.

   *Remove any live rounds or empty cases before handling the weapon further.

The HK416 is now considered "CLEAR".

SAFETY RULES

1. Never point the HK416 at anyone during handling.
2. Always point the HK416 in a safe direction.
3. Before handling and before cleaning, the HK416 has to be checked to ensure that:
   - The bolt is locked to the rear.
   - The HK416 is unloaded (chamber empty).
   - The barrel is free of obstructions.
   - The magazine is empty.
4. Keep your fingers off the trigger when loading, unloading or otherwise handling the HK416. Always place the trigger finger outside of the trigger guard.
5. Place your finger on the trigger only when the weapon is aimed at a target.
6. Never use force when handling, disassembling, cleaning and assembling the HK416.
7. Disassemble the HK416 only as far as described in this manual.
8. Always wear eye protection when using the HK416.
9. Always wear hearing protection when using the HK416. Ensure bystanders are also wearing ear and eye protection.
10. Only use factory-loaded and undamaged cartridges of the correct caliber for the HK416.
11. Always ensure that the muzzle area is free of obstacles during firing.
12. Store the weapon and ammunition in separate places.
13. Heckler & Koch does not assume liability for events due to disregarding this manual, improper handling, negligence, and improper treatment, unauthorized exchange of parts or manipulations of the HK416.
14. Read this operator manual, in its entirety and be familiar with the safe handling of this weapon before using it. Keep this manual with the HK416.

WARNINGS

- When handling the HK416, special caution is necessary as the position and direction of the HK416 can be easily changed.
- Carefully read this operator manual before handling the HK416.
- Only use the HK416 after you have fully reviewed and understand these instructions.
- Observe all notes on handling and operation. Failure to do so may result in injury to the operator and bystanders.
- Do not use the HK416 if you are under the influence of alcohol, drugs or medication.
- When passing the Hk416 between persons, the weapon must be "CLEAR"; the bolt should be locked to the rear and the weapon on safe.
- Always treat the HK416 as if it were loaded and ready to fire.
- To avoid damage to the weapon, allow it to cool to ambient temperature after firing 250 rounds in rapid cadence (less than 3 minutes). Compressed air or water can be used to expedite the cooling process if required.

NOTES

1. The HK416 utilizes component parts that ARE NOT interchangeable with competing weapons. Unique HK components such as the buffer (with red dot and HK marking), buffer spring (red coil spring), bolt group (HK engraved on the bolt carrier) and piston and gas system must never be fitted to competing weapons or proper function cannot be assured. In order to realize the improved reliability and component service life offered with the HK416 design **the original HK416 bolt group, buffer and buffer spring must be assembled in the HK416**.

2. When mounting the HK416 upper receiver on a competing lower receiver the HK buffer and buffer spring **MUST be installed to insure proper function.**

3. While the HK416 will function with US issue aluminum magazines in good condition the reliability of the HK416 is improved and can only be guaranteed when using HK High Reliability Steel Magazines. The use of any magazine other than the HK magazine may reduce the reliability of the HK416 and is thus not covered under the warranty for the HK416.

4. The use of non-HK416 parts in the HK416 is not recommended. While in some cases these parts may fit they may not be made to the same dimensions or level of quality as the original HK416 parts. Use of internal non-HK416 parts to replace unique HK416 parts may void the warranty on the item. Exceptions to this are muzzle devices, trigger mechanisms, buttstocks and pistol grips, sights, magazines and other accessory items.

5. Since the HK416 is manufactured in Germany, the European standard is to serialize the part that is attached to the barrel, which in this case is the upper receiver. The upper receiver is stamped with a number which is located in the seam of the upper and lower receiver and below the forward assist. This number in no way is for US standards and the lower receiver will be for US record keeping in accordance with BATF. In most situations upper receiver kits are sold as parts and therefore these numbers will not match.

GENERAL INFORMATION

This manual descries the operation of the 5.5 6 mm fully automatic HK416 weapons. It also provides the operator and unit level maintenance instructions for these weapons and their accessories.

The HK416 Enhanced Carbine was inspired by the resounding success of the mid-life improvement program of the British SA80 (L85/L86) Weapons System, Heckler & Koch began a development program to create the current HK416 Enhanced Carbine. A weapon system is only as reliable as the feed device. Current aluminum and polymer magazines used in the SA80 which are the same as the standard M16-style magazine have long been the weak link in the reliable performance of these weapons. HK recognized this deficiency and therefore designed the most reliable and durable steel 30 round magazines for use in the SA80 as well as all M16-style weapons.

Working with current users from around the globe, HK set out to produce an Enhanced Carbine that would outperform the competing 5.56mm carbines and provide the high degree of performance required by the user community, particularly those within the special operations arena who demand more and expect "NO COMPROMISE" when lives are at stake.

A unique user removable gas system fits within the HK Free Floating Rail System (FFRS) (MIL STD 1913) or the HK one-piece handguard. The FFRS allows all current standard accessories and sights to be fitted to the HK416. The HK-proprietary gas system does not introduce propellant gases and the associated carbon fouling back into the weapons interior. This radically reduces operator cleaning time, increases the reliability of the weapon and extends the interval between stoppages. The elimination of the gas tube, which is typical of the Stoner AR15/M16 direct gas operating system, means that the HK416 will function normally even if the weapon is fired full of water without first being drained.

To improve reliability, service life and operator safety during obstructed bore occurrences or after extreme extended firing sessions (>300 rounds) HK has produced its famous cold hammer forged barrel for the HK416 in various lengths to include 10.5, 14.5, 16.5 and 20 inches. The highest quality steel is used in this unique manufacturing process producing a barrel that provides superior accuracy for greater than 20,000 rounds with minimal degradation.

The HK416 can be fitted with standard accessories such as different stocks, trigger parts, ambidextrous selector lever, magazine catch, bolt catch, detachable sights and all other accessories that attach to the MIL STD 1913 rails. The compensator has the same standard US thread that can be exchanged with all other US compensators and flash suppressors. Although it is recommended that the HK improved buffer and buffer spring not be exchanged due to reliability and functioning. The HK416 Upper Receiver Kit has the HK improved buffer and buffer spring included for this reason.

The HK Carbines and Rifles are generally select fire small arms, which are produced using the most modern and advanced manufacturing techniques and methods. They are chambered for 7.62 x 51 mm NATO or 5.56 x 45mm NATO ammunition and most are capable of semi or fully automatic fire from any position. The rifles that are not select fire are the Precision Marksman rifles.

The HK Rifles are blowback operated with a delayed roller locked bolt system.

The high degree of accuracy found in the HK Rifle family is due to a combination of many factors not found in other military style rifles. The HK Rifles also offer absolute safety and reliability due to the closed bolt system.
The ammunition is fed from a box magazine.

The HK Rifles are capable of being fitted with a variety of accessories including buttstocks of different configurations as well as trigger groups, handguards, scope mounts, sights, blank firing attachments, grenade launchers and much more.

The metal parts of the guns are phosphated. This provides the gun with a finish durable enough to last for years of normal use.

The component style of design to these firearms enables an Armorer to easily maintain them with a minimum requirement of time and tools. As you will see Heckler & Koch has done everything possible to make your job easier.

INTERNAL PARTS NOMENCLATURE

Muzzle – The muzzle is the area at the end of the barrel and the last area that the projectile touches before it exits the bore.

Bore – The part of the barrel that the projectile travels from the chamber to the muzzle contains lands and grooves which make the projectile rotate.

Chamber – The chamber is the area where the cartridge is seated and the initial phase of firing occurs.

Bolt and Carrier Assembly – Provides stripping, chambering, locking, firing, extraction, and ejection of the cartridges are using the buffer spring and projectile propelling gases. These parts are made of the highest quality steel.

Bolt – The bolt locking lugs rotate and lock the cartridge into the chamber.

Extractor – The extractor grabs the rim of the cartridge case and pulls the case out of the chamber. The extractor spring and buffer provide constant pressure on the rim until the case is ejected. The extractor is hammer forged.

Ejector – The ejector constantly pushes the cartridge under spring tension and once the case is extracted and clears the ejection port, the case is ejected out.

Cam Pin – The cam pin allows the bolt to cam inside the bolt carrier, which allows the bolt to lock into the chamber when fully forward and cams to unlock when the carrier is pulled to the rear.

Firing Pin – The firing pin will strike the primer and ignite the firing sequence once the trigger is pulled and the hammer falls on the firing pin and will only protrude thru the face of the bolt when the bolt is fully locked forward.

Firing Pin Retaining Pin –Retains the firing pin from coming out of position.

Buffer and spring – The buffer spring provides constant pressure on the bolt carrier and locks the bolt forward. The buffer has Tungsten granules that provide recoil for the bolt carrier.

Buffer detent – Captures the buffer and spring and when depressed, releases them for cleaning.

Hammer – The hammer, when released by the trigger, strikes the firing pin and returns from the bolt carrier pushing back under recoil makes contact with the disconnector and will release and remains cocked under spring pressure.

Trigger – The trigger, when squeezed, releases the hammer and returns under spring tension.

Disconnector – Captures the hammer when it is cocked to the rear and releases the hammer when the trigger is released, the disconnector then returns to its original position under spring tension.

SPECIFICATIONS

Caliber	5.56x45mm NATO (.223 Remington)
Muzzle Velocity	10" – 2,540fps, 14.5" – 2,790fps, 16.5" – 2,887fps, 20" – 3,002fps
Chamber Pressure	52,000psi
Cyclic Rate of Fire	700-900 rounds per minute
Max Effective Rate of Fire	Semi – 45 rounds per minute,
Sustained Rate of Fire	12/15 rounds per minute
Max Effective Range	Individual/Point Targets, 10" – 300m, 14.5" – 500m, 16.5" – 500m, 20" – 800m Area Targets 10" – 400m, 14.5" – 600m, 16.5" – 600m, 20" – 1,000m
Max Range	3,600m
Operation Principle	Gas operated, firing from a closed bolt
Bolt Principle	Refined rotating bolt head with multiple locking lugs
Modes of Fire	Semi-automatic, Full automatic
Feed Device	HK high reliability 30-round steel magazine (box type)
Barrel Twist	1 in 7", right hand (20" barrels – 1 in 9", right hand)
Trigger Pull	4.6 – 6 lb. (20" with optional 2 stage match trigger, 2lb adjustable)
Weight, complete guns	10" – 7.3lb, 14.5" – 7.7lb, 16.5" – 7.9lb, 20" – 8.5lb
Weight, upper assembly	10" – 5.0lb, 14.5" – 5.5lb, 16.5" – 5.7lb, 20" – 6.3lb
Overall Length (extended)	10" – 30.9", 14.5" – 34.9", 16.5" – 36.9", 20" – 40.4"
Overall Length (collapsed)	10" – 27.0", 14.5" – 31.0", 16.5" – 33.0", 20" – 36.5"
Height (w/o sights)	7.25"
Width	2.25"

CYCLE OF OPERATION

A re-occurring sequence of mechanical events, which take place in the operation of an auto-loading firearm that consists of the following eight steps:

1. Feeding
2. Chambering
3. Locking
4. Firing
5. Unlocking
6. Extracting
7. Ejecting\
8. Cocking

LOADING: Inserting a loaded magazine into the magazine well.

A loaded magazine can be inserted into the magazine well with the bolt forward or to the rear. When the magazine is seating fully into the magazine well, the magazine catch/release will engage the recess in the magazine. If the bolt is not to the rear, pull the charging handle to the rear and press the bolt catch/release to lock the bolt to the rear or to start feeding, release the charging handle, do not ride it forward.

1. **FEEDING:** Removing a round from the magazine.

As the bolt moves forward under the pressure of the expanding recoil spring, the feeding pawl on the bolt head rides between the lips of the magazine stripping a round out of the magazine and feeding it into the chamber.

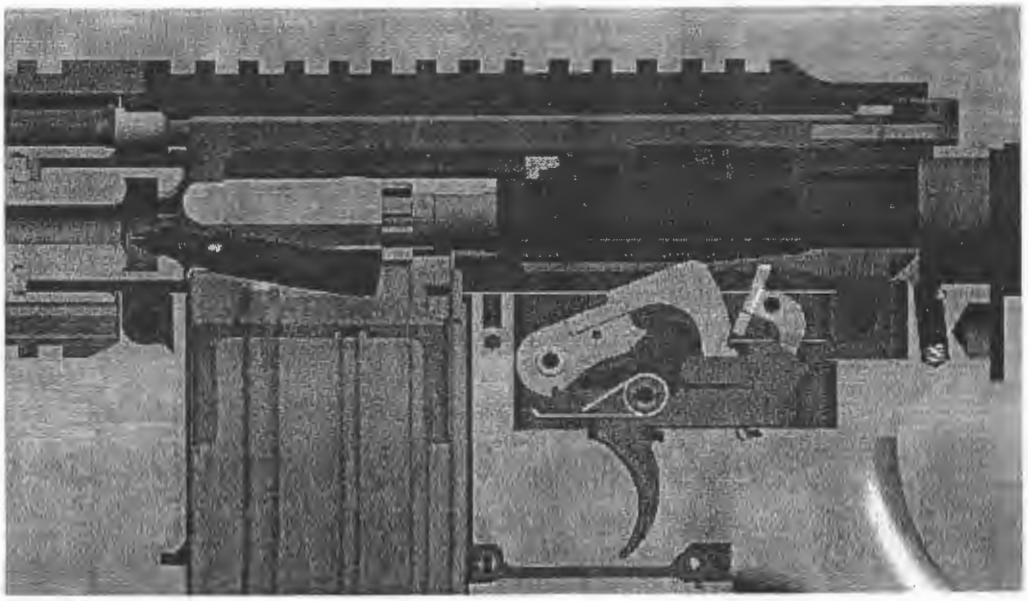


Figure #1

2. **CHAMBERING**: Placing the round into the chamber of the barrel and seating it fully.

The bolt pushes the round forward into the chamber until the shoulder of the casing comes to rest on the end of the chamber (headspace). As the round is in the final stages of chambering the bolt carrier contacts the release lever of the trigger group and the hammer starts to fall, but the sear is in the way and the sear notch of the hammer engages the sear.

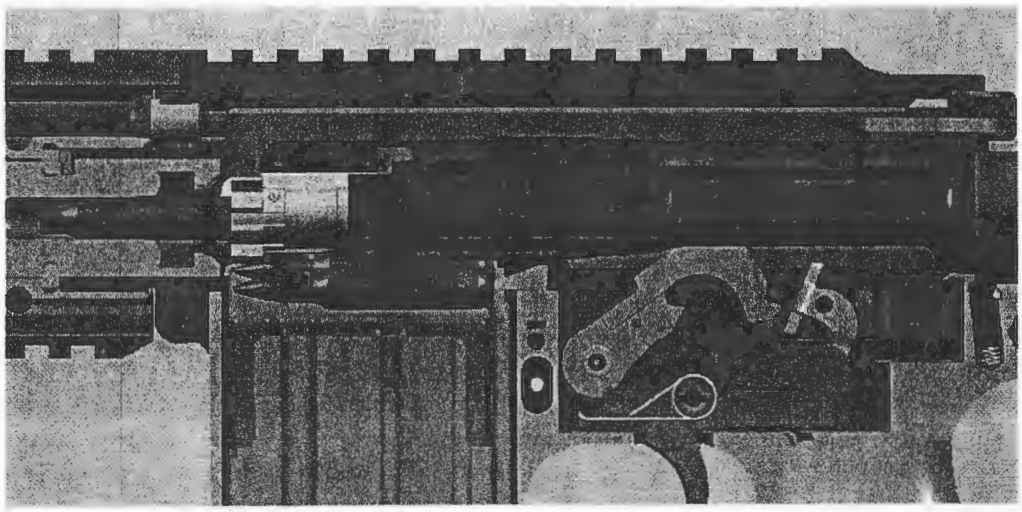


Figure #2

3. **LOCKING**: Closing and locking of the bolt locking lugs prior to the shot.

The bolt, being pushed by the recoil spring, continues to apply pressure to the base of the cartridge until the extractor cams out allowing the bolt to snap forward. The front of the bolt head hits the back of the barrel and stops its forward movement. Once the bolt head has stopped moving, the bolt carrier and locking piece continue forward for about 4mm until the locking piece forces the locking rollers out into the locking recesses of the barrel extension. At the same time the bolt head locking lever drops over the front of the lip located on the rear of the bolt head and the lever locks the bolt carrier to the bolt head. This locking lever assists in preventing bolt rebound

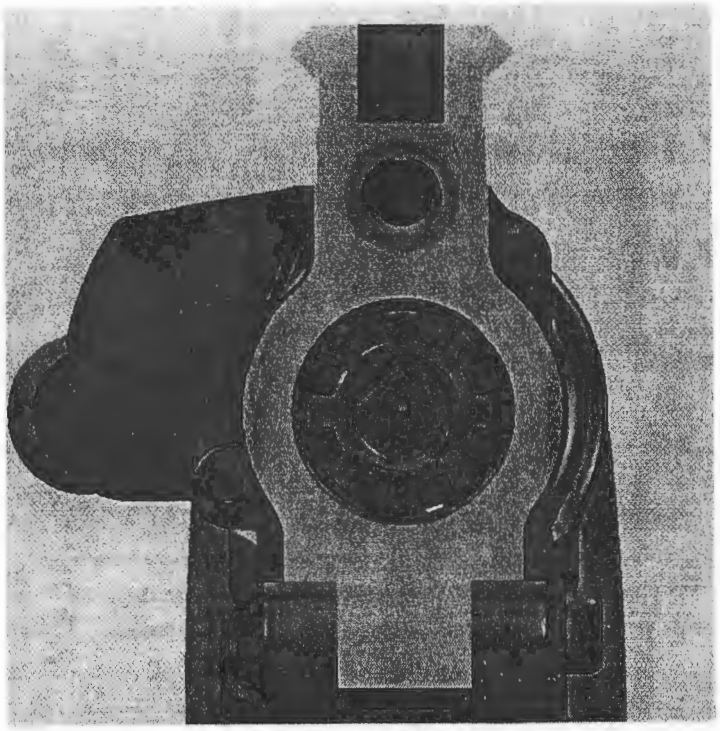


Figure #3

4. **FIRING**: Ignition of the propellant powder.

The trigger is pulled and pushes down on the hammer notch until it releases the hammer forward. The hammer falls to the firing pin and strikes the primer. The primer detonates, igniting the propellant powder and firing has occurred. When the trigger is still held to the rear, and the weapon cycles, the disconnector captures the hammer at the disconnector notch on the hammer.
The hammer spring keeps tension on the hammer in the forward position. This setting of the disconnector prevents double firing on SEMI and the disconnector is reset to catch the hammer before the hammer hits the firing pin. When the trigger is released, the hammer engages the trigger at the lower notch and is ready to fire. In the AUTO mode, the selector lever pushes down on the back of the trigger and allows the hammer to bypass the disconnector and trigger as long as the trigger is pulled to the rear, the sear engages the sear notch on the top of the hammer and the bolt carrier trips the sear when it cycles forward into the locking position. The hammer will continue to hit the firing pin until the shooter releases the trigger or runs out of ammunition.

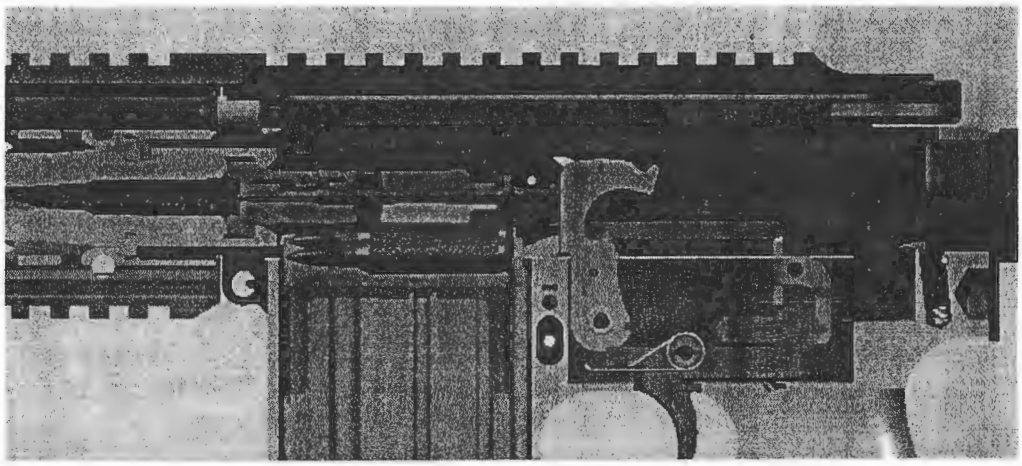
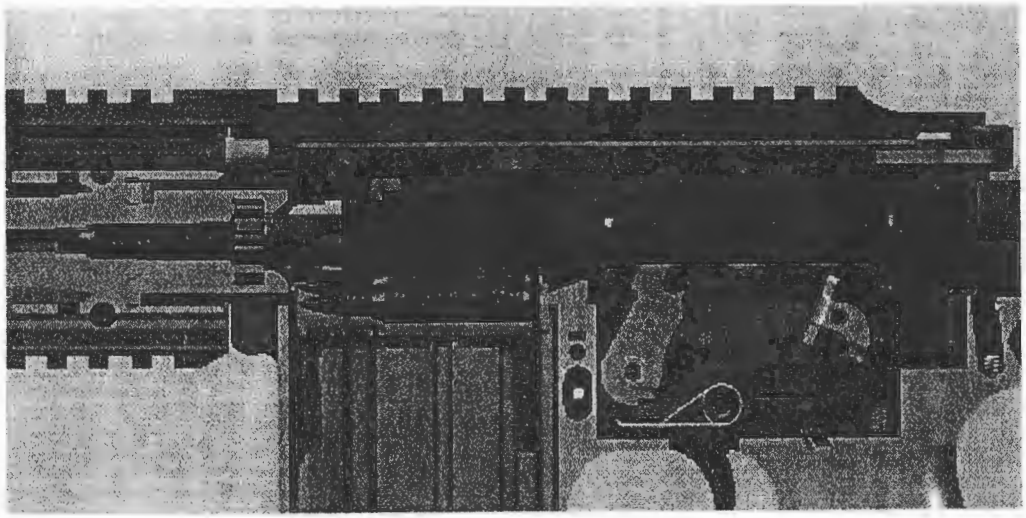


Figure #4

5. **UNLOCKING:** Removal of the blocking mechanism from the chamber so the bolt can open.

The resultant force of the cartridge firing creates an impact on the bolt head that sends force through the pressure of gases flowing through the barrel into the gas block and moving the piston rearward, which drives the piston rod into the bolt carrier. The force of the bolt carrier moving rearward rotates the cam pin, which unlocks the bolt lugs from the chamber lugs and allows the bolt carrier group to move rearward.



Figure#5

6. **EXTRACTING:** Removal of the fired cartridge case, or a round from the chamber.

As the bullet is leaving the cartridge case, expanding gases pressurize the inside of the case and in the chamber. Once the weapon cycles through the unlocking, the extractor grabs the cartridge case through spring tension and retains the cartridge case until it ejects.

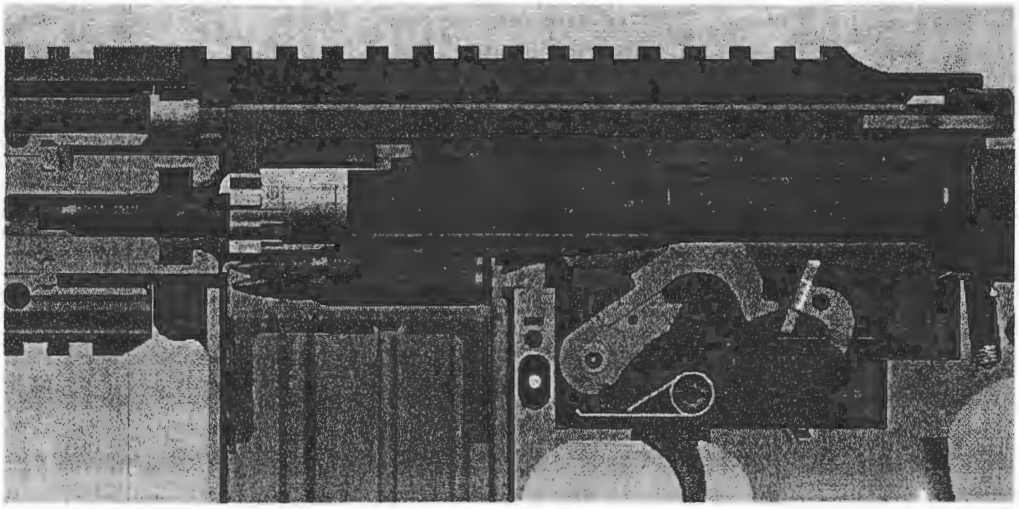


Figure #6

7. **EJECTING**: Expulsion of the round or fired cartridge case from the gun.

The extractor holds the empty case to the face of the bolt head as it travels to the rear. The carrier rides rearward while the ejector is constantly pushing the case forward under spring pressure. When the front of the cartridge case reaches the ejection port opening, the ejector pushes the case to the right and it contacts the brass deflector and is ejected from the weapon.

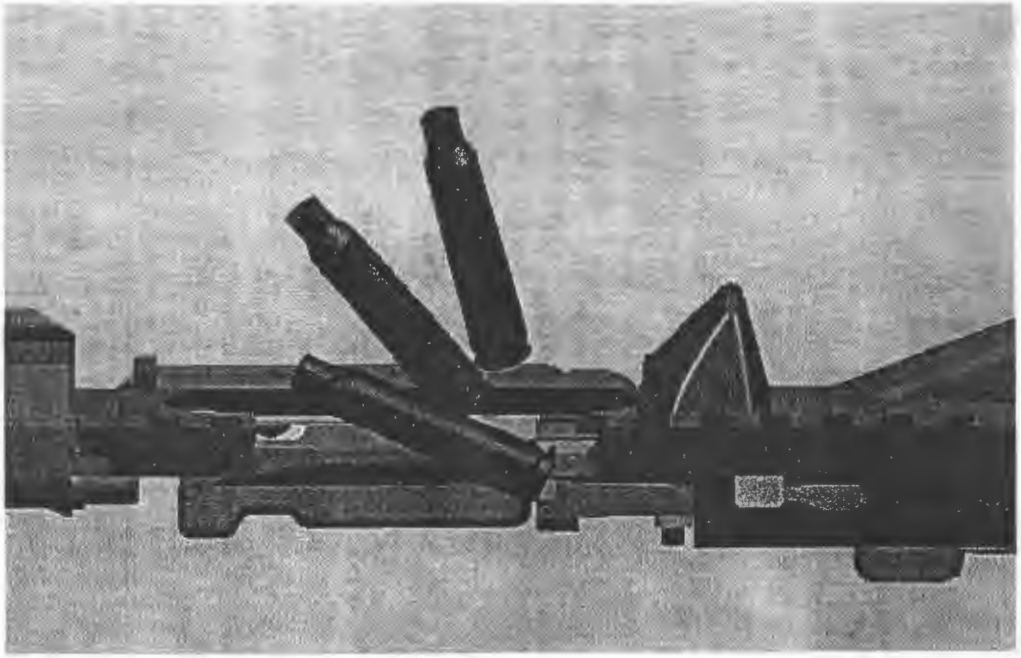


Figure #7

8. **COCKING**: Resetting of the trigger mechanism to enable subsequent shots to be fired.

While the bolt carrier moves to the rear the hammer is pushed back as the bolt carrier rides over it. When the bolt moves forward for the next cycle the hammer starts forward, but is held by the trigger, disconnector or sear. The trigger holds the hammer until the trigger is released and the disconnector releases the hammer to the trigger. When the selector is set on AUTO, the sear retains the hammer when the trigger is released and the weapon can be fired again by squeezing the trigger or the selector can be switched to SEMI or SAFE.

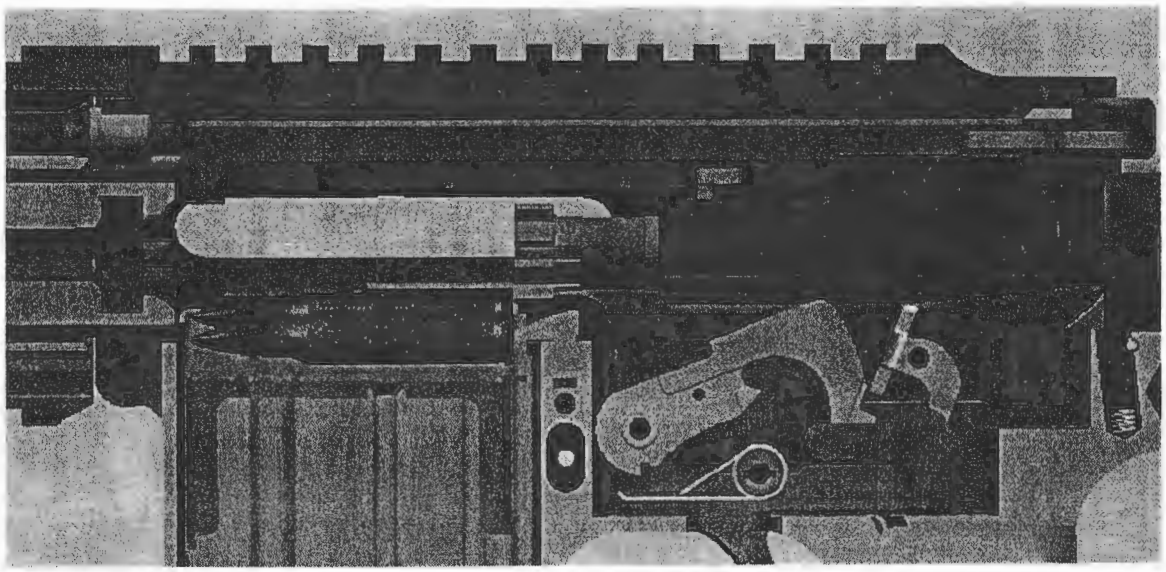
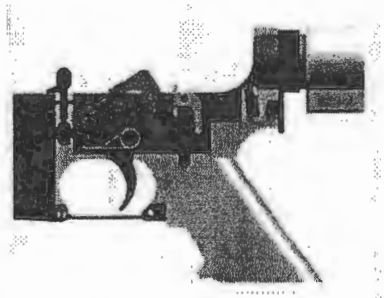


Figure #8

Figure #9
Safe, hammer cocked



Figure#10
Semi, hammer cocked

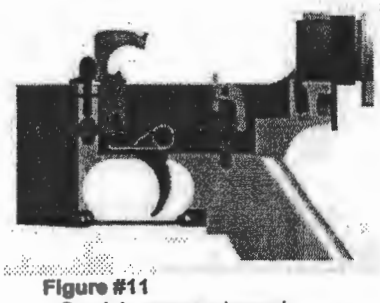
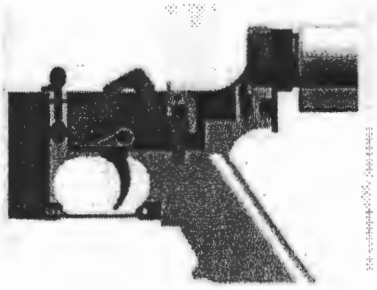


Figure #11
Semi, hammer released

Figure #12
Semi, disconnector captures hammer



FIGURER #13
Semi, hammer cocked

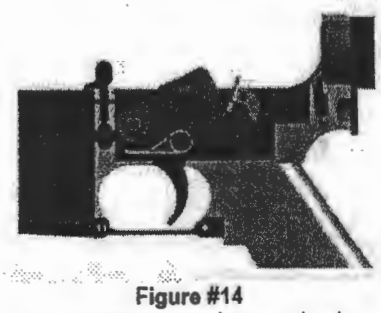


Figure #14
Auto, sear captures hammer hook

INSTALLING AND ADJUSTING THE HK DIOPTER SIGHTS

The HK Diopter sights are installed on the MIL-STD 1913 rail with a Phillips #2 screwdrivers or the HK sight tool. Do not over tighten the screws. Sight adjustment is as follows.

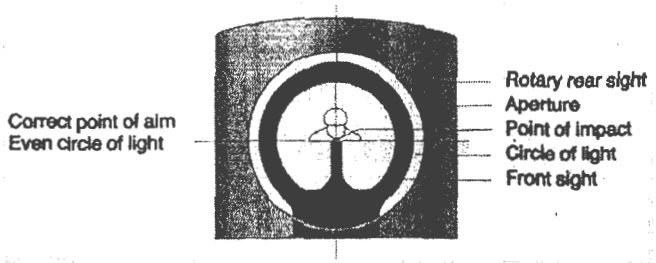


Figure #15

Sight Adjustment

- The rear sight drum has a "V" notch marked "1" and three diopters marked "2", "3" and "4"
- The rifle should be sighted-in at 100 yards using the "V" notch. The top of the front sight blade should be even with the top of the rear sight "V"
  and centered.
- If the shooter's target is at 200 yards, the drum should be rotated so the "2" diopter is now facing the shooter's eye.
- The diopter has been moved up to compensate for the extra 100 yards.
- The "3" diopter should be used for 300 yards and the "4" for 400 yards
- In effect, once the rifle is sighted-in at 100 yards with the "v" notch, the rifle is also sighted-in @ 200, 300 and 400 yards
- Sighting through any of the diopters the shooter should obtain an equal halo of light around the front sight mount positioning the front sight blade in the center.

The sights on the HK rifles can be adjusted for elevation and wind age.

Sight adjustment tool

There are two parts to the sight adjustment tool.

- A short shank Phillips head screwdriver
- The spring loaded tab assembly

The tabs are spring-loaded and will always move outward at the tips. The insertion of the screwdriver from the bottom of the tab assembly will bring the tab tips inward towards each other. It is this manipulation of the tabs that will capture the detents holding the rear sight drum in place.

Sight adjustments

Remember this formula:

LL=C (Lower or Left = Clockwise rotation)

The sight adjustment is a rear sight adjustment, so the movement of the sight will be in the same direction the shooter wants the impact of the round to move. If the hit is to the right of the intended location, then the sights and the impact must be moved left.

Elevation: one-quarter turn of the rear sight drum will move the impact of the round approximately 1.5 inches @ 100yards.

Windage: a 360° rotation of the Windage screw will move the impact of the round 6 inches @ 100 yards

Elevation Adjustment

Insert the screwdriver shaft into the bottom of the adjustment tool. This will bring the tabs towards the center. Place the tabs inside the rear sight drum and on top of the detents

Hold the tool in place and remove the screwdriver. This will release the tabs to the outside of the detents.

Figure #16

Re-insert the screwdriver holding the tool very steady. This will again bring the tabs and this time the detents to the center unlocking the rear sight drum. Turning the screwdriver or tool does nothing; they must remain still while the drum is turned. Make the sight adjustment for elevation and remove the sight tool.

Windage Adjustment

Unscrew the large Phillips head screw of the top rear of the sight approximately one-eighth of a turn, just enough to loosen it.

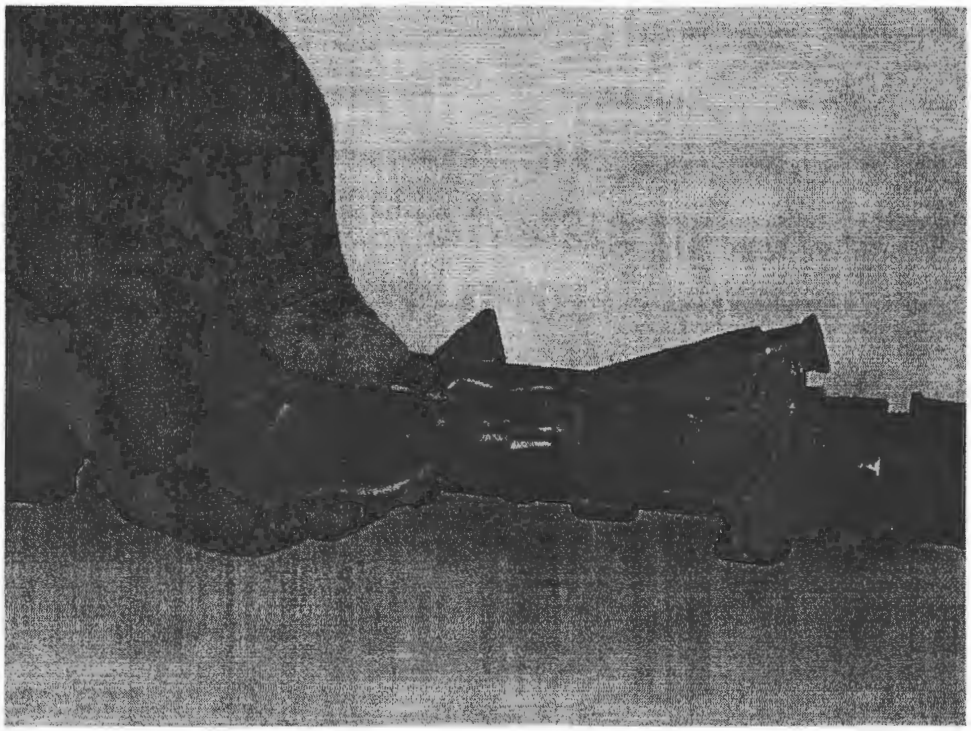
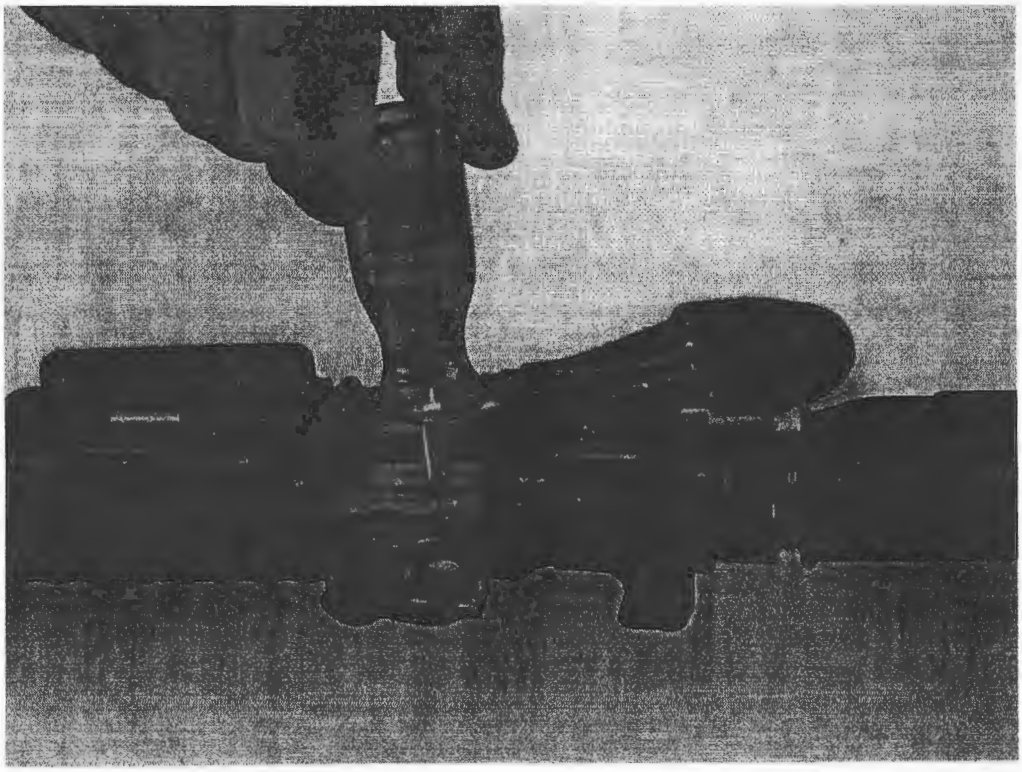


Figure #17

Insert the Phillips head screwdriver into the wind age screw on the right side of the rear sight base. Turn this screw to make the proper wind age adjustment. Retighten the top Phillips head screw.



SAFETY BLANK FIRING ADAPTER (SBFA)

The Safety Blank Firing Adapter (in addition to the Live Round Excluder magazine) can easily be installed by the operator. The SBFA will capture up to three live rounds if loaded and fired accidentally. The operator can install the SBFA by unscrewing the threaded nut until the bracket can be slipped over the compensator and inserted into the locking recess. The threaded nut can then be tightened with an adjustable wrench. The blank magazine must be used with blank ammunition to ensure safety of the shooter and bystanders,

Figure #19

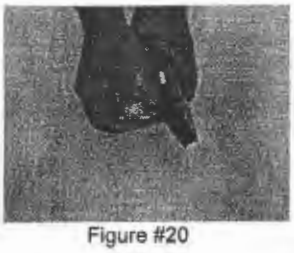


Figure #20

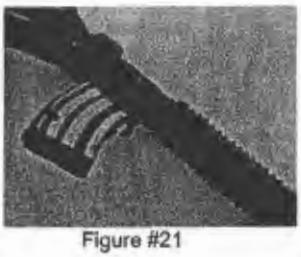


Figure #21

MAINTENANCE INSTRUCTIONS

1. Special Tools and Gauges

ID#	Item Description
018-150-050	Torque Wrench, ½"Drive, 30-150ftlb
221-141-600	Handle, ½" Drive, 10 ½" Long
795-015-100	Vise Jaws
702-004-015	Vise block, lower receiver
080-216-011	Pivot Pin Installation Tool
080-216-010	Pivot Pin Detent Depressor
769-100-223	Broken Shell Extractor, 5.56 mm
084-174-250	Chamber Mirror, #250
352029	Bore Straightness Gauge, 5.56 mm
340801	Barrel Erosion Gauge, 5.56 mm
346053	Cleaning rod assembly, gauge holder
979205	Limit Plug Special Taper Gauge, Trigger pin
979200	Limit Plug Special Gauge, Sear pin
318646	Limit Plug Gauge, Go/No Go (Gas Block, Plug Regulator)
351573	Assembly Fixture, Gas block roll pins
233157	Assembly Shaft (for barrel removal)
300009	Rear Sight Adjusting Tool
346968	Gauge, Extractor, GO (1.28mm)
347076	Gauge, Extractor, No-GO (1.59 mm)
233122	HK416 Multifunctional Tool w/tube & headspace gauges, C/O
233196	HK416 Multifunctional Tool w/o headspace gauges
346280	Firing Pin Protrusion Gauge
351638	Headspace Gauge, GO
351639	Headspace Gauge, No Go
302842	Rod to Caliber Plug Gauge
333907	Rod

2. Adjustments And Tolerances

A. Bolt Headspace: Go – 1.8507", No Go – 1.859"
B. Firing Pin Protrusion: Go - .0354", No Go - .0433"
C. Barrel Caliber: 5.56 mm
D. Bore Erosion Gauge: 5.59 mm
E. Extractor Claw Gauge: Go – 1.28 mm, No Go – 1.59 mm
F. Limit Plug Gauge, Trigger/Hammer Pin Hole: Go/No Go
G. Limit Plug Gauge, Sear Pin Hole: Go/No Go
H. Limit Plug Gauge, Gas Block: Go/No Go
I. Barrel Nut: 110+-10Nm = 81+-7 ft.lbs
J. Handguard: 7+-1Nm = 5 ft.lbs
K. Lower Receiver Extension: 59+-10Nm = 44+-7 ft.lbs

3. Inspection Of The Headspace

Items Needed:
1. 351638 Headspace Gauge, Go
2. 351639 Headspace Gauge, No Go (Identified by Red Collar)

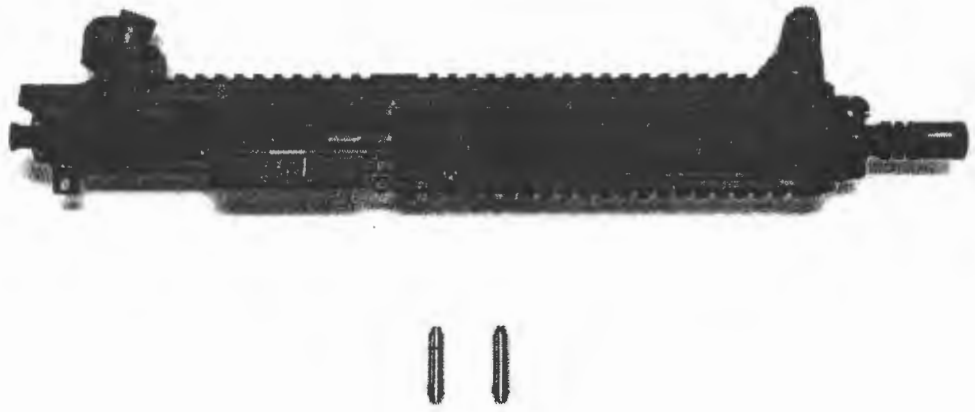


Figure #22

A. Clear the HK416 as stated previously
B. Remove upper receiver assembly from lower receiver assembly by pulling out the pivot pin and take down pin (These are captured pins).
C. Pull charging handle to rear enough so the headspace go gauge can be inserted into the chamber.
D. Insert go gauge into the chamber of barrel (Figure #XX)
E. Slowly push the bolt carrier assembly forward until it stops (do not use force as you can damage the headspace gauge).

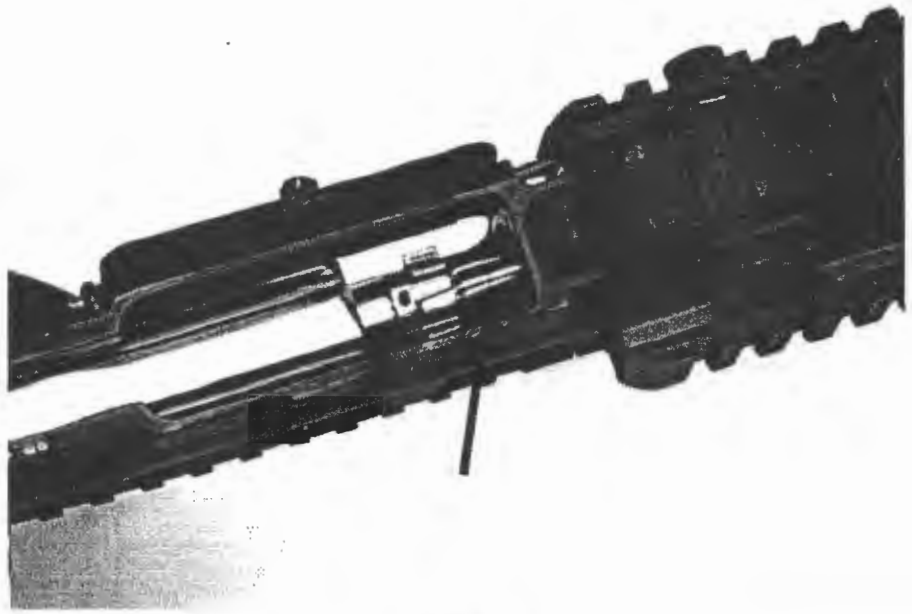


Figure #23

F. The rear of the bolt carrier should be flush with the rear of the upper receiver. This is good, if the bolt carrier does not go forward all the way then the headspace gauge could be damaged or you could have a dirty chamber. Recheck again after checking and cleaning.

Figure #24

G. Remove the headspace go gauge and insert the no go headspace gauge.

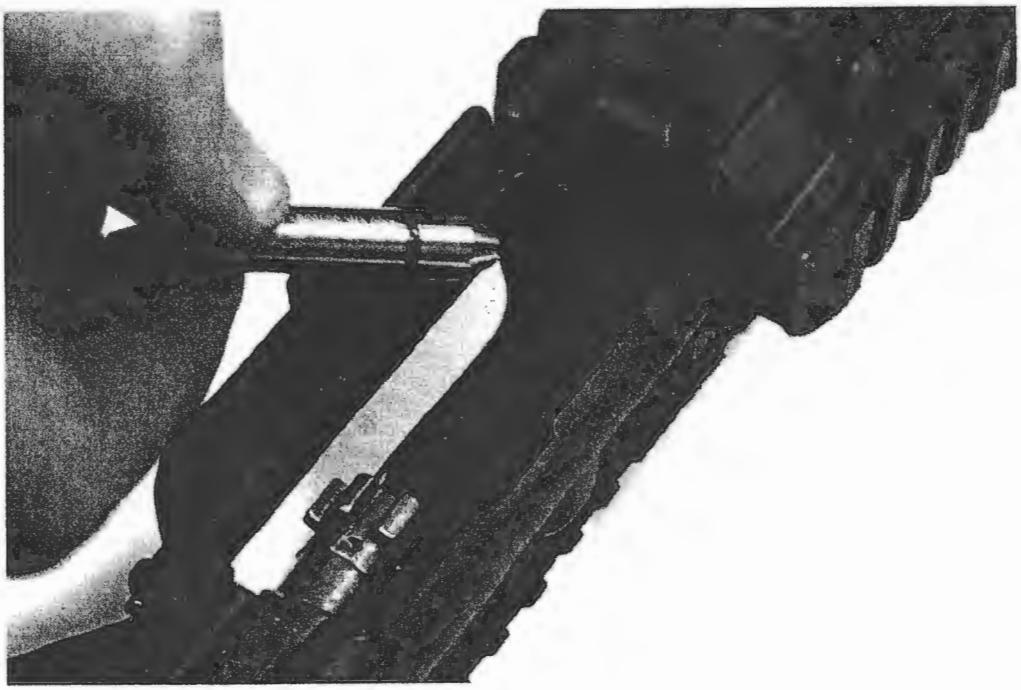


Figure #25

H. The bolt carrier <u>should not be</u> flush with the end of the upper receiver. This is good, if the bolt carrier assembly is flush with the upper receiver, then there is a headspace problem (To correct this, first try replacing the bolt head with a new bolt and recheck again. If the problem still exists then replace the barrel and recheck again. If the problem still exists which it should not, check the gauge to insure it is a no go and try another no go gauge).

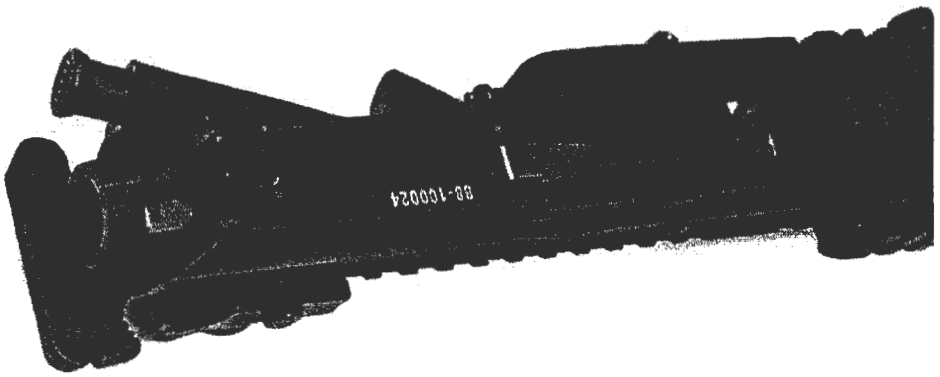


Figure #26

Inspection of the Firing Pin Protrusion

A. Remove the bolt carrier assembly from the upper receiver
B. Hold the bolt carrier assembly up right with the bolt facing up
C. Push down on the bolt so it goes all the way into the bolt carrier assembly
D. Push up on the bottom of the firing pin and hold it up so the firing pin tip protrudes through the hole in the bolt.
E. Place the firing pin protrusion gauge over the firing pin and apply slight pressure and check the height of the gauge.

F. If the gauge lines up within the shoulder, the protrusion is good
G. If the gauge is below the mark then the firing pin is too short and must be replaced (Replace firing pin and recheck again, if still short then inspect the bolt for dirt and /or burrs. Replace, clean or repair bolt if necessary and recheck again.
H. If the gauge is above the mark hen the firing pin is too long and must be replaced.

4. Inspection Of The Barrel Bore

A. Assemble the barrel straightness gauge assembly
B. Insert the barrel straightness gauge into the bore (from the chamber end). If the gauge does not go through freely (without force), then clean the bore and inspect visually for burrs. Recheck again. If the straightness gauge fails again, replace the barrel and recheck again.
C. Assemble the bore erosion gauge to the rod assembly
D. Insert the bore erosion gauge into bore (from the chamber end). Do not force the gauge in, it will stop to a point. This point is measured by checking the number gauge on the rod with the end of the receiver. When the rod goes in to where the number 10 goes into the upper receiver, the barrel bore erosion is worn and the barrel must be replaced (re-inspect with new barrel).

5. Inspection Of The Extractor Claw

Items Needed:
1. 346968 Gauge, Extractor, GO (1.28mm)
2. 347076 Gauge, Extractor, No-GO (1.59 mm) (Identified by Red Collar)

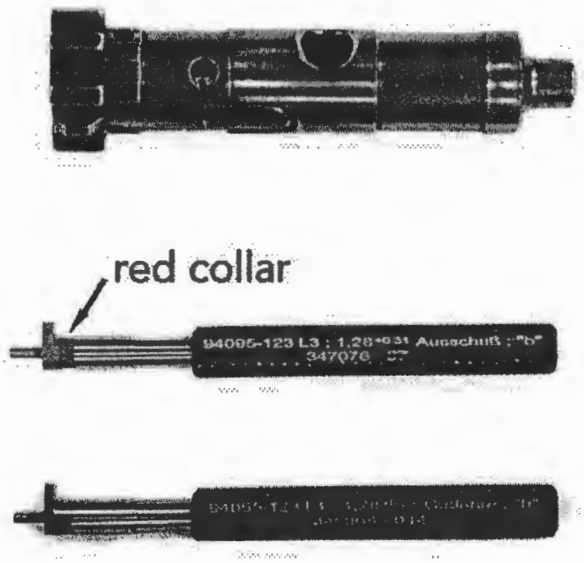


Figure #27

A. Insert the extractor claw go gauge into the face of the bolt with the bolt assembled. If the gauge locks into place, the extractor claw is good. If the go gauge does not lock into place disassemble extractor, clean and inspect for wear (burrs, cracks, etc.). Repair or replace the extractor, extractor pin or spring with the buffer and recheck again.

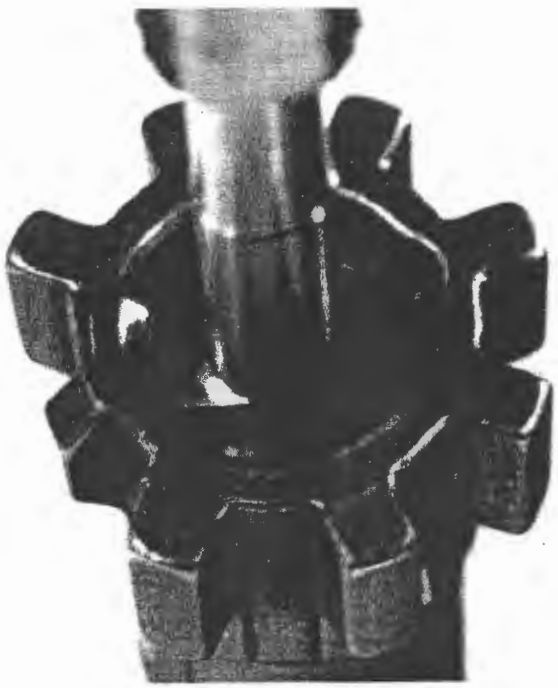


Figure #28

B. Insert the extractor claw no go gauge into the face of the bolt with the bolt assembled. The extractor claw gauge should not lock into place. This is good, if the extractor no go claw gauge locks into place replace one or all (extractor, extractor pin, extractor spring with buffer). Recheck again. If all these parts are new and the extractor no go claw gauge still locks, replace the bolt head and recheck again.

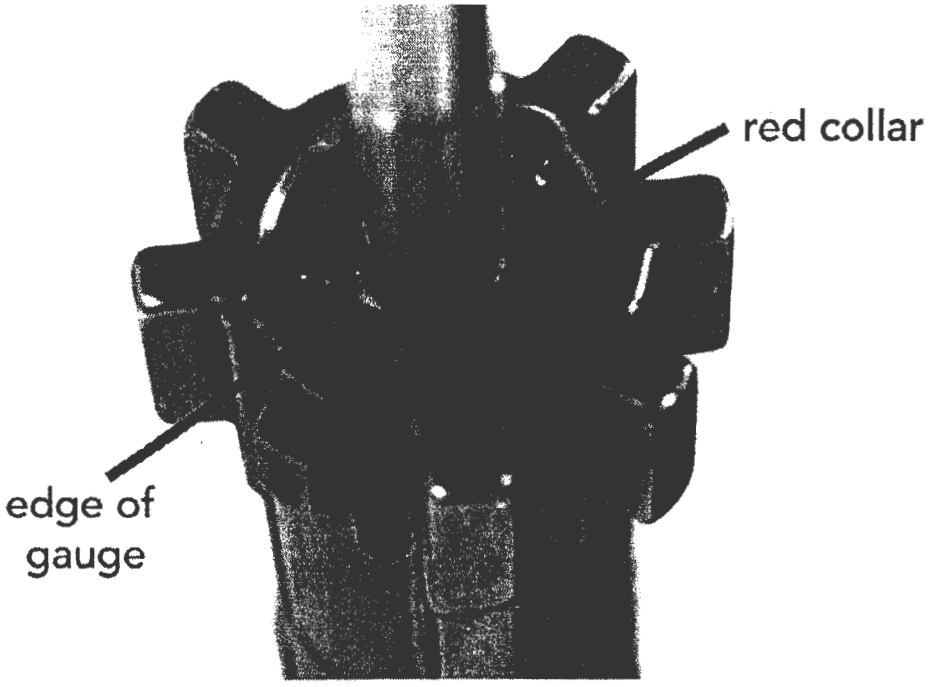


Figure #29

6. Inspection Of The Trigger And Hammer Pin Holes

Items Needed: 1. 979205 Limit Plug Special Taper Gauge, Trigger pin

A. Remove the hammer and trigger from the lower receiver
B. Insert the limit plug gauge into the hammer and trigger pin holes on both sides of the receiver (DO NOT USE FORCE). If the gauge goes into the hold and protrudes into the receiver walls, the holes are worn and the receiver must be replaced. Injury to the operator can occur.

7. Inspection Of The Sear Pin Holes

Items Needed: 1. 979200 Limit Plug Special Gauge, Sear pin

A. Remove the sear from the lower receiver
B. Insert the gauge into both sides of the sear pin holes (DO NOT USE FORCE). If the gauge goes into the hole and protrudes into the receiver walls, the holes are worn and the receiver must be replaced. Injury to the operator can occur.

8. Inspection Of The Gas Block

Items Needed: 1. Limit Plug Gauge, Go/No Go (Gas Block, Plug Regulator)

A. Remove the piston and piston assembly from the barrel. After removing the free floating rail system
B. Insert the gas block limit plug gauge into the gas block at the point where the piston sits. If the gauge goes into the hold past the wear mark, replace the gas block or barrel assembly with the gas block. Recheck again.

FUNCTION CHECK (Unit Level)

1. With the HK416 assembled. Insert a magazine with 10 rounds dummy ammunition into the weapon with the bolt locked to the rear.
2. Depress the bolt catch and let the bolt carrier go forward on its on weight. The bolt carrier should strip a round form the magazine and feed it into the chamber.
3. Depress the forward assist to see if the bolt carrier moves while depressing it. (It should not move under normal conditions.) If the bolt carrier does move, check to see if the chamber is dirty, dummy ammunition is not damaged, buffer spring is not weak.
4. Pace the HK416 on semi and squeeze the trigger. The hammer should fall.
5. Depress the bolt catch while pulling the changing handle to the rear. The bolt carrier should lock to the rear.
6. Pull the charging handle to the rear so the bolt catch will release and let the charging handle go from its most rearward position. Prior to the bolt carrier going forward, check to see the dummy cartridge being extracted from the chamber and once clearing the ejection port, it will eject. The bolt carrier will again strip a round from the magazine and feed it into the chamber. The hammer should not fall.
7. Place the HK416 on safe and squeeze the trigger. The hammer should not fall.
8. Place the HK416 on auto. Pull the trigger and the hammer will fall (leave the HK416 on auto).
9. Change the HK416 three consecutive times while it is on auto and while pulling the trigger to the rear. The hammer, while in the auto mode, will continue to move forward on its own. The bolt carrier will trip the auto sear each time and the auto sear releases the hammer. This will continue until the hK416 is out of ammunition or your finer releases the trigger (Each time the bolt carrier is pulled the rear, check to ensure the cartridges are being extracted, ejected and another round is fed into the chamber).
10. Continue function checking until the magazine is empty. On the last round, the bolt carrier should lock to the rear by the follower of the magazine.

NOTE: A function check with dummy rounds should always be completed when a problem occurs with the HK416. This could determine the problem before any repair attempts are made.

NOTE: Whenever any repairs are made to the HK416, a function check with live ammunition should be completed. It is recommended that a function check should be completed after replacing the following parts at a minimum (barrel, flash hider, gas block, piston, piston rings, piston rod assembly, bold carrier, bolt firing pin, extractor (spring & pin), ejector (spring & pin), charging handle, bolt catch, selector, hammer, trigger, auto sear, buffer, buffer spring, magazine catch.

NOTE: Always ensure the HK416 is clean and in working order prior to any function check.

NOTE: Ensure only proper 5.56 mm ammunition is used. NO RELOADS

DETAILED DISASSEMBLY/ASSEMBLY

NOTE: Follow the procedures previously in the operator disassembly section and in the following sections will describe detailed disassembly for inspection and repair. Some parts are assembled at the factory and are considered assemblies. No further disassembly or repairs are recommended.

1. **Ejector** – Use as 1/16" punch and a hammer and slowly drive out the ejector pin from the bolt. Always beware and use caution because the ejector is under spring tension. Avoid injury to your eyes, use care when removing and installing spring loaded parts. The ejector should only be disassembled it is likely a problem with the ejection or if trust is noticed around the ejector hole. Take note of the groove in the ejector, this must line up with the pin hole for assembly. The ejector must be pushed in enough to line up the hole. A new pin must be used upon assembly.

2. **Piston Rings** – the piston rings should be removed if there is a problem (too much gas or not enough) with cycling. Ensure the piston moves freely inside the gas block. Inspect the as block with the go/no go gauge. If the piston falls out of the gas block on its own weight, replace all three rings (Once the rings are removed, they are stretched and must be replaced). Using a small flat tip jeweler's screwdriver, pry out all three rings by inserting the screwdriver into the opening in the ring.

3. **Piston Assembly** – this is assembled at the factory and no further disassembly is required.

4. **Charging Handle** – The latch should be disassembled from the charging handle if there is a problem. Do not disassemble otherwise. For disassembly use a 1/16" punch and hammer, drive out the spring pin (discard and replace with a new spring pin). Caution: the latch is under spring tension.

5. **Compensator** - The compensator should be removed for repair purposes. Disassembly is not required otherwise the compensator must be removed if the gas block is to be replaced. Place the barrel in the barrel vise jaws or place the assembly shaft in a vise and insert the chamber onto the assembly shaft. Using the HK416 multifunctional tool, loosen the compensator counter clockwise and unscrew from barrel. For assembly a new crush washer must be used. When tightening the compensator to the barrel, the top port in the compensator must be lined up at top dead center (TDC) with the barrel. To achieve this, the torque wrench must be assembled to the multifunctional tool and a minimum torque of 15 -20 ft lbs. must be achieved.

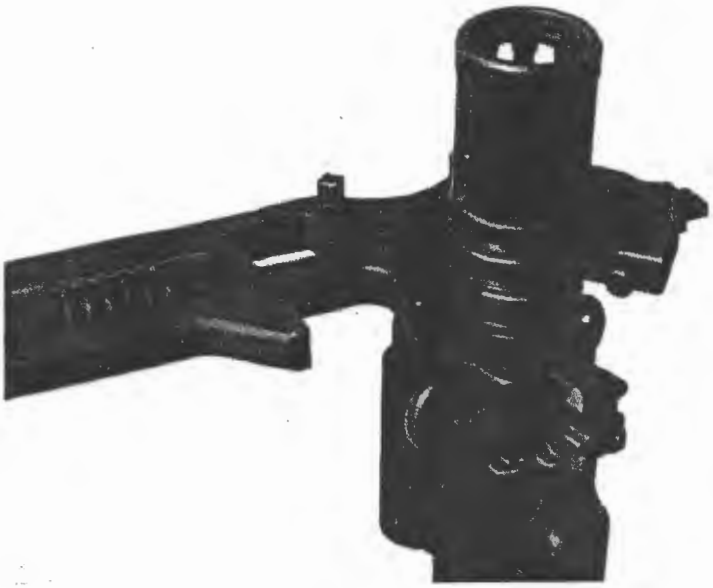


Figure #31

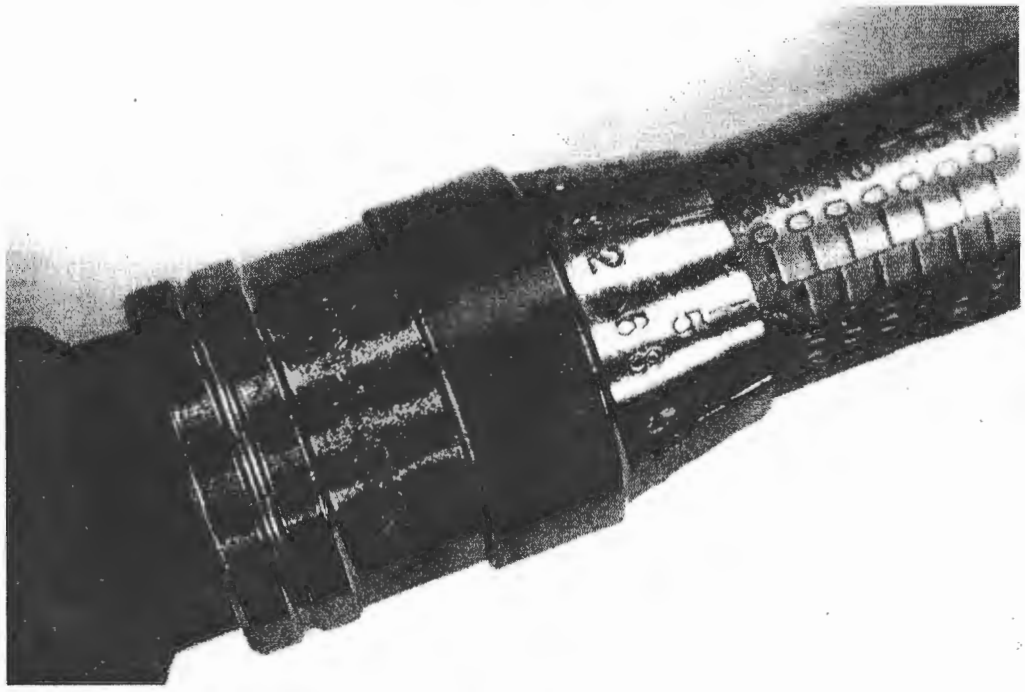


Figure #32

NOTE: The large side of the crush washer must face the compensator.

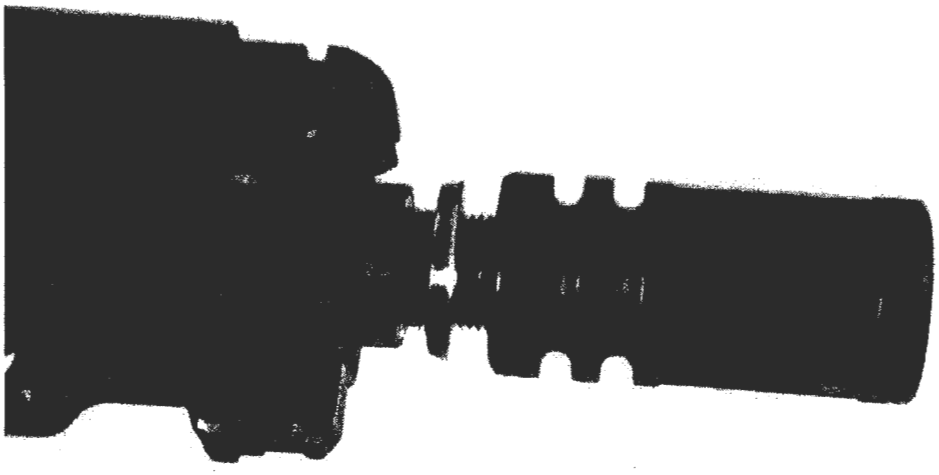


Figure #33

NOTE: The threads on the barrel are the same as the legendary system (most AR type rifles).

6. Barrel:

Items Needed:

1.	018-150-050	Torque Wrench, ½"Drive, 30-150ftlb
2.	221-141-600	Handle, ½" Drive, 10 ½" Long
3.	233157	Assembly Shaft (for barrel removal)
4.	233196	HK416 Multifunctional Tool w/o headspace gauges

BARREL DISASSEMBLY:

The barrel should only be removed if it is damaged and it will be replaced. Place the assembly shaft in a vise; insert the chamber onto the assembly shaft in the vise. Install the HK416 Multifunction tool onto the handle ½" Drive. Using the HK416 multifunctional tool/Handle, ½" Drive combination, attach the tool to the hole in the barrel nut and loosen counter clock wise. Once the barrel nut is all the way off the threads of the upper receiver, the barrel will slide forward. Take note of the barrel alignment pin at TDC and how the barrel aligns with the upper receiver.

Figure #34

BARREL INSTALLATION:

1. Attach the barrel and upper receiver with the barrel pin in the upper receiver slot.

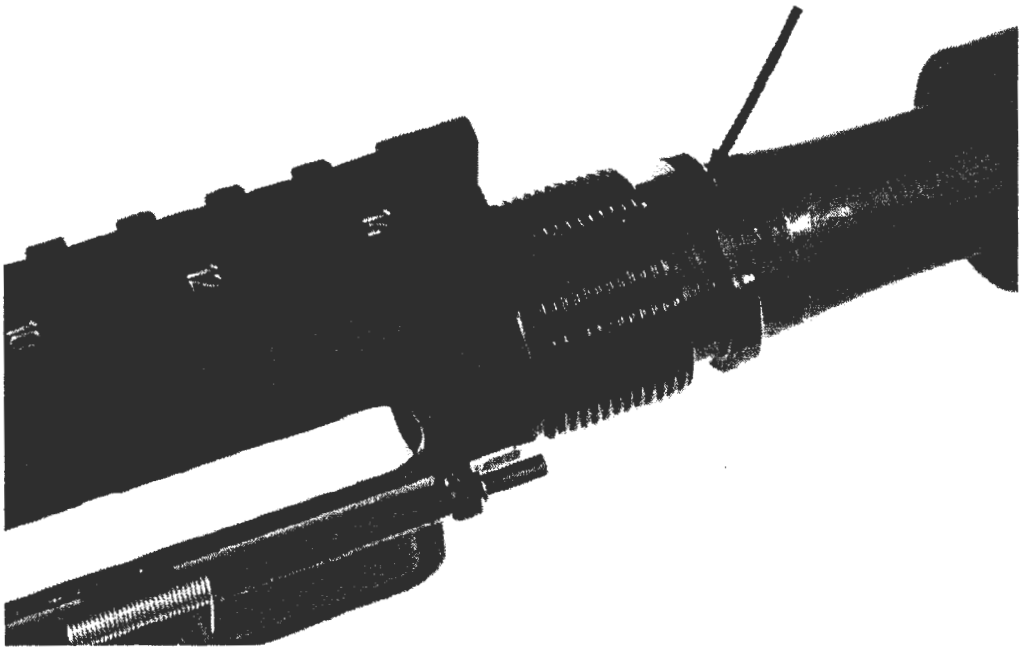


Figure #35

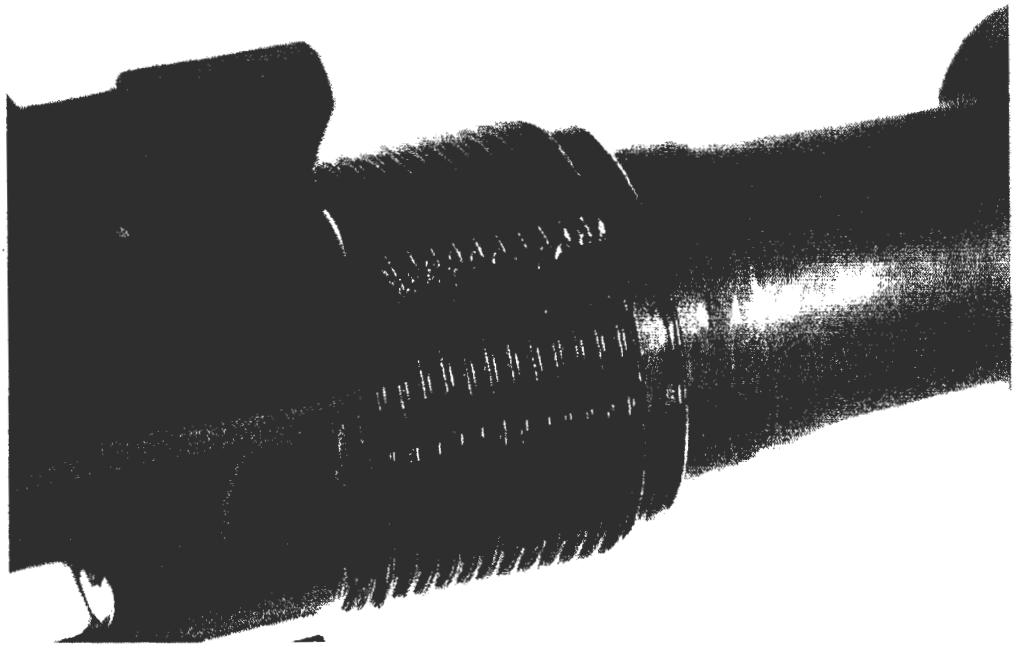


Figure #36

2. Hand tighten the barrel nut onto the upper receiver.

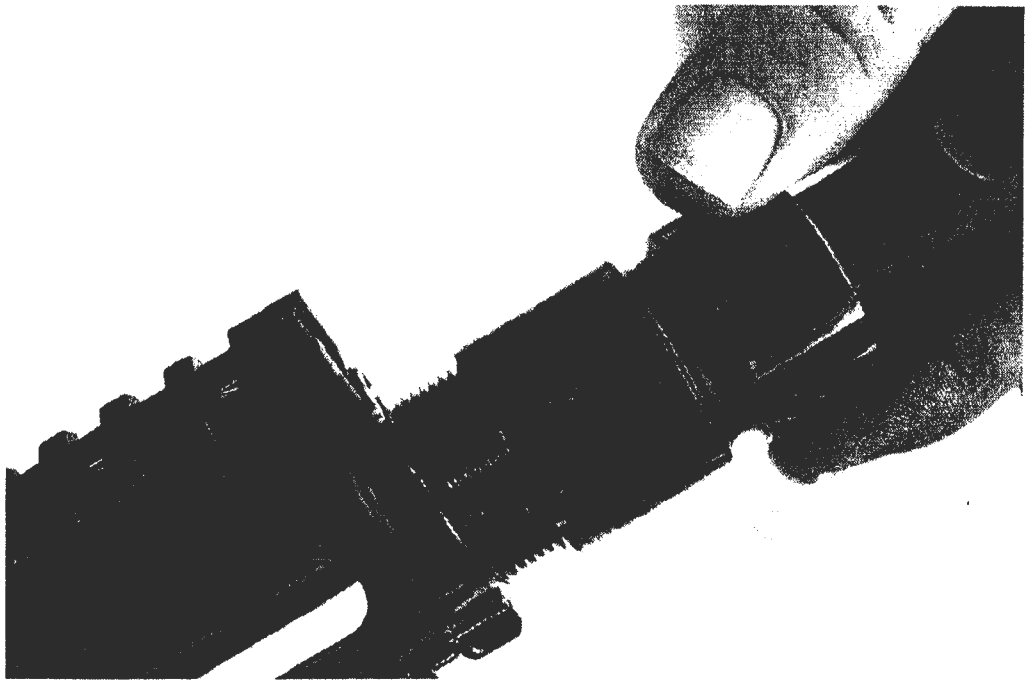


Figure #37

3. Install assembly shaft onto vice and tighten.

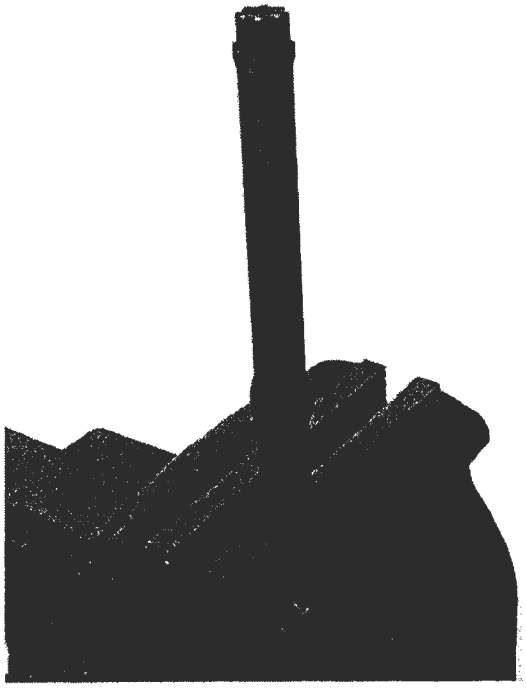


Figure #38

4. **Set the torque value on the torque wrench @ 81 (+/- 7) foot pounds. Adjust the setting by pulling down on the locking collar and rotating the handle clockwise to increase the torque value or counter-clockwise to decrease the torque value. Once the desired setting has been reached, allow the locking collar to snap back into place.**

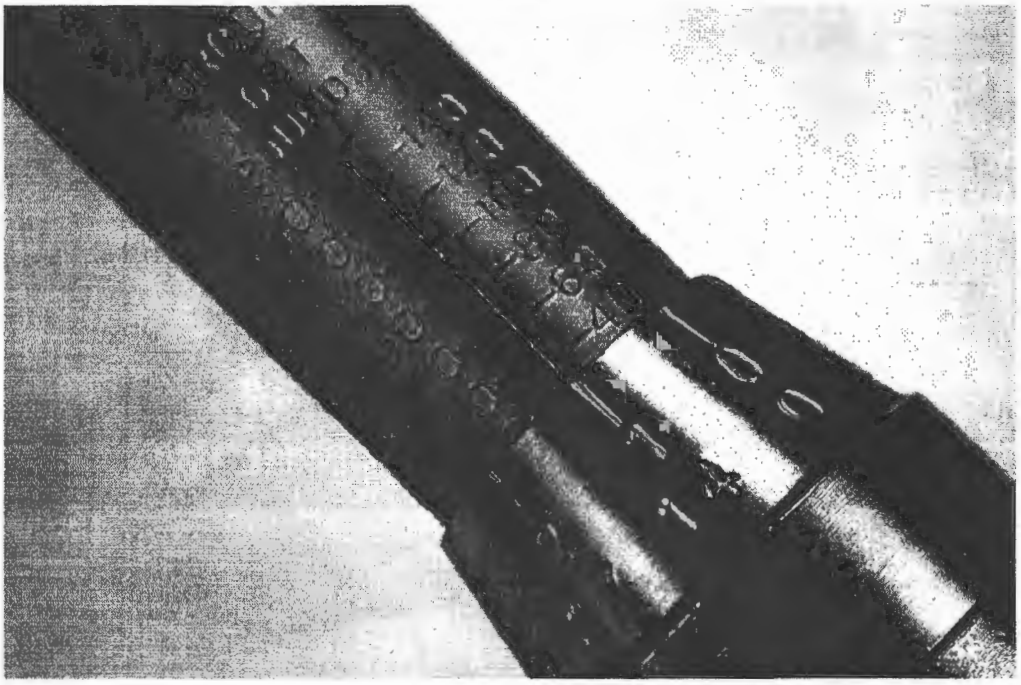


Figure #39

5. **Insert the torque wrench onto the HK416 multi-tool**

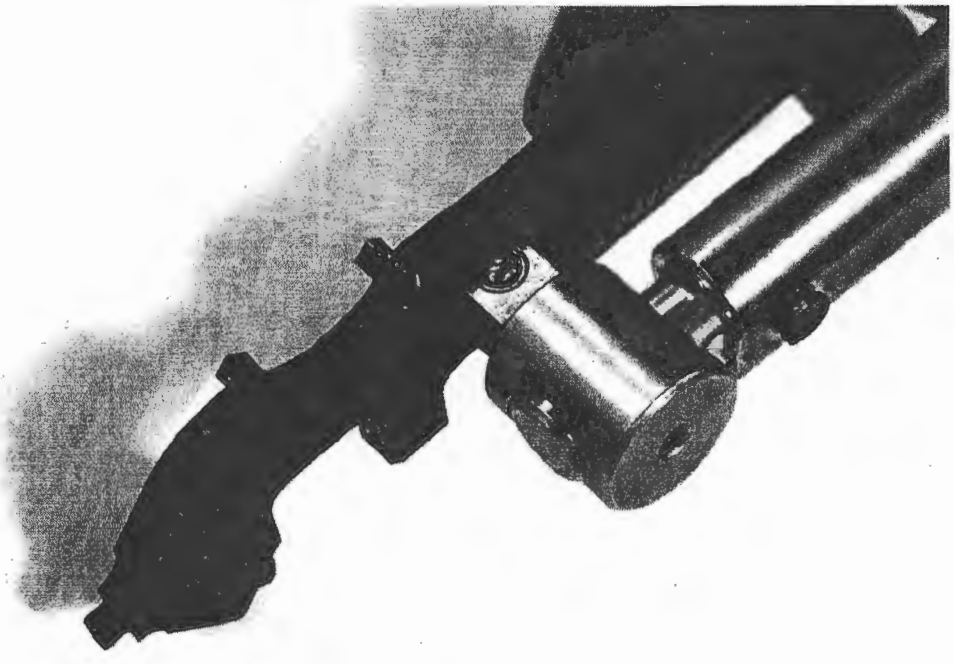


Figure #40

6. Install the upper assembly onto the assembly shaft.

7. Rotate the torque wrench/multi-tool clockwise until the torque setting is reached. A metallic click signifies that the desired setting has been reached. Do not over tighten the barrel nut, as this may result in damage to the receiver.

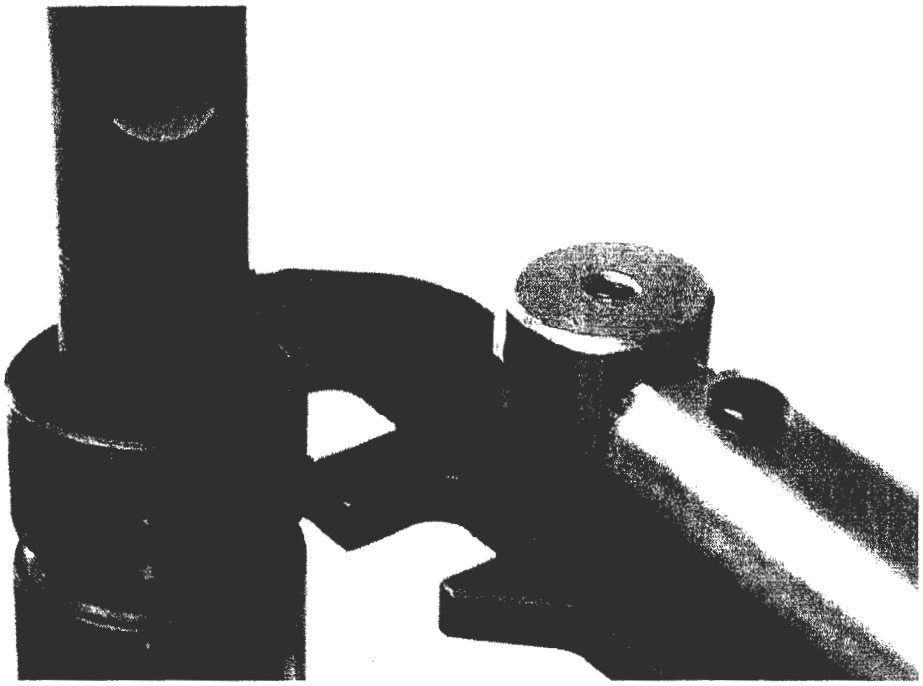


Figure #41

When complete, take the upper receiver in one hand and the barrel in the other hand, check for tightness. It should not have any movement. Then check the alignment of the 1913 rails to the upper receiver with the alignment of the 1913 rails on the gas block. The gas block should not be canted from the alignment of the upper receiver. If there is a cant, redo the barrel alignment and hold the barrel in the desired direction while tightening the barrel nut (There may be a little space between the barrel alignment pin and the upper receiver notch). Recheck and it will also be possible to check alignment with the iron sights attached.

NOTE: Whenever a new barrel is replaced, headspace, bore straightness, bore erosion and a function check must be completed.

7. **Gas Block** – The gas block should only be removed if it is damaged and it will be replaced. For disassembly of the gas block, the compensator and upper receiver must be removed from the barrel. HK recommends that if the gas block is found to be unserviceable, then the complete barrel and gas block assembly can be replaced (Gas block is assembled to the barrel at the factory). The alignment of the gas block to the barrel is crucial and a special tool is offered for this (the assembly fixture for gas block roll pins).

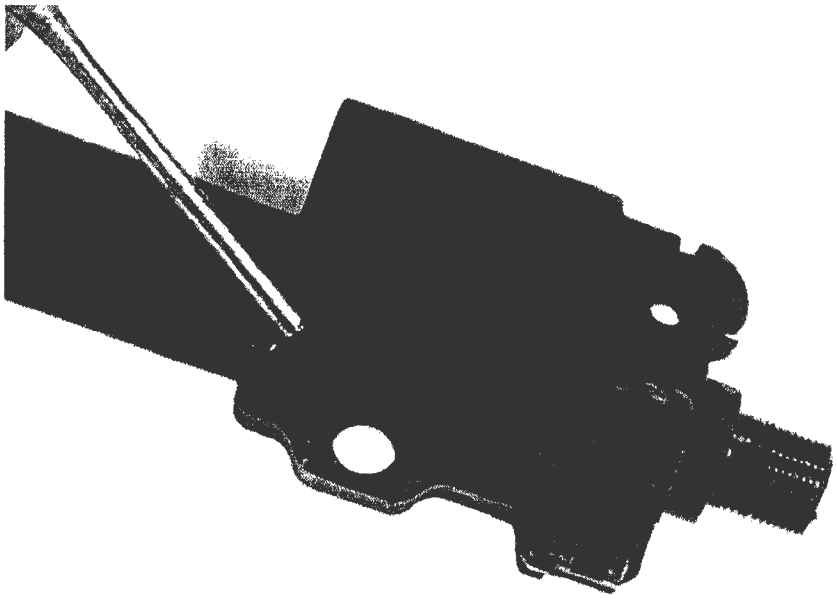


Figure #42

The barrel is inserted onto the assembly fixture and the gas block pins are driven out with a 1/8" punch and hammer (The fixture is placed on a work bench and does not have to be mounted in a vise or clamped to a workbench). The barrel assembly is then removed from the fixture and the gas block will be tapped off towards the muzzle using a rawhide mallet. A new gas block will be assembled with the 1913 rails at 12 o'clock and on the same side as the barrel nut alignment pin (The gas hole in the gas block should also line up with the gas port in the barrel). When the gas block is properly aligned, the pin holes will be lined up. Check the alignment of the holes when the barrel is placed back into the assembly fixture by pushing on the pin punch. If the holes are aligned, insert two new spring pins into the fixture and drive in pins until fully seated. Check alignment and assemble this barrel to the upper receiver as described above.

NOTE: A function check must be completed as well as headspace gauge and gas piston gauge prior to placing the HK416 into service.

8. Upper Receiver – The upper receiver should only be removed from the barrel if it is damaged and or will be replaced. The upper receiver is described in the barrel section for removal and replacement.

9. Ejection Port Cover Assembly – Remove the c-clip with a pair of needle nose pliers or with a jeweler's screwdriver. Slide the rod out towards the forward assist (**Caution**: the ejection port cover spring is under tension, injury to your eyes could occur). Place a finger on top of the spring as the rod is removed (take note that the short leg of the spring is on the ejection port and the long leg is on the cover [right side]). When the rod is completely off, the spring and cover are also apart.

To assemble, place the cover in the location between the holes. Insert the rod from left to right with the groove on the right side (for the c-clip). Insert the rod and stop half way through the slot where the spring will be. Insert the spring onto the rod with the short leg to the left (towards the forward assist). Apply pressure and rotate the long leg one full turn to give it spring tension while pushing the rod all the way through to the second hole. Check the spring tension of the ejection port cover and if correct attach a new c-clip to the other end of the rod.

10. **Forward assist** – The forward assist should only be removed if there is damage and/or it will be repaired/replaced. Remove the roll pin with a 1/16" punch and hammer. Take caution as the forward assist is under spring tension, injury may occur. While removing the forward assist, notice the groove where the roll pin rests (the forward assist is compatible with all legendary systems). The feed pawl can be removed by using a 1/32" punch and is also under spring tension. When the feed pawl is removed, there is a spring and plunger inside the forward assist. Assembly is reversed and while replacing the new roll pin, pressure must be applied to the forward assist so the roll pin will line up with the groove. The feed pawl will also face inside the upper receiver. A function check of the forward assist can be accomplished by inserting the charging handle and bolt carrier assembly into the upper receiver (Do not assemble to the lower receiver). Hold upper receiver assembly upside down. Bolt carrier should be sticking out of the back of the upper receiver. Push on the forward assist until the bolt carrier is fully seated. If the forward assist does not move the bolt carrier the feed pawl and/or spring must be rechecked.

11. **Bolt Catch/Release** – The bolt catch/release should only be removed if there is damage and/or it will be repaired or replaced. Using a 1/16" punch and hammer, drive out the roll pin (caution under spring tension). Remove bolt catcher and spring. Assembly is reverse of disassembly. Replace roll pin with a new roll pin.

Figure #43

12. **Magazine Catch/Release** – The magazine catch/release should only be removed if there is damage and/or it will be repaired or replaced. Depress the magazine catch/release button with a 1/16" punch while holding the button all the way in, the magazine catch/release will protrude out the left side of the receiver.

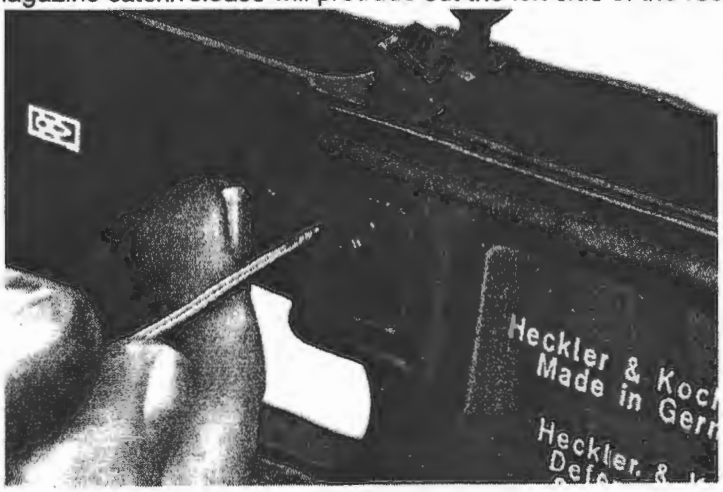


Figure #44

Rotate the shaft counter clockwise until it is unthreaded from the button and remove from the lower receiver (use caution when releasing the button if it is under spring tension).

Remove button and sprint. Assembly is reverse of disassembly. When Assembled the shaft will be even with the face of the button. Tension of the magazine catch/release can be adjusted by screwing in the shaft another full turn will hold the magazine firmer and will require more pressure to release the magazine. If the shaft is loosened a full turn (counter clock wise) then the magazine will release with less pressure to the button. This could also cause the magazine to drop out under adverse conditions and is not recommended.

Figure #45

13. <u>Front Pivot Pin</u> - The front pivot pin should only be removed if there is damage and/or it will be repaired or replaced. Using the pivot pin installation tool, insert from the left o the receiver pivot pin hole until flush with the pivot pin. Take a flat tip jewelers screw driver and depress the detent white rotating the pivot pin so the detent is not in the recess. Then push the pivot pin out using the installation tool.

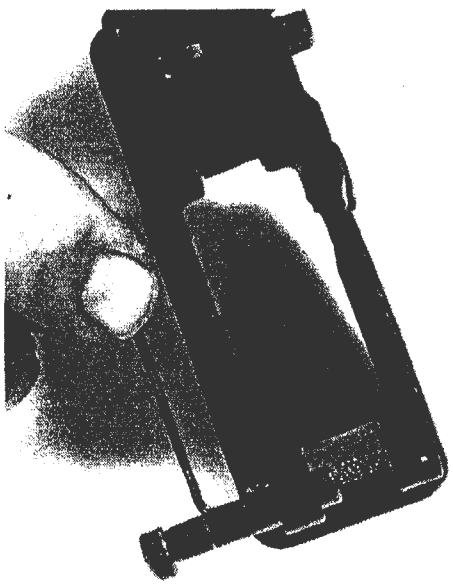


Figure #46

Align the hole in the tool with the detent and spring (caution: spring under tension). The spring and detent will slide out. Insert spring in hole of installation tool while aligned with hole in receiver. Insert detent with pointed end facing the pivot pin. Push a detent and spring in with a 1/16" punch and once punch is flush with the opposite hole, rotate installation tool so the detent will ride on tool. Take pivot pin and push out the installation tool while inserting the pivot pin into the pivot hole. The detent should lock into the recess under spring tension. Ensure pivot pin goes in and out detent locks it in place.

14. Rear Take Down Pin – The rear take down pin should only be removed if there is damage and/or it will be repaired or replaced. The rear take down in can be removed after the fixed stock or collapsible stock is removed. The spring and detent will slide out when the lower receiver is tilted up and then the rear take down pin will slide out to the right. Assembly is reverse of disassembly. Place the rear take down pin in the right side of the receiver with the slot facing the detent and spring hole. Insert the detent with the pointed end facing the slot in the rear take down pin. Insert the spring and then assemble the stock and function check the pin ensuring the detent locks the pin.

15. Pistol Grip – The pistol grip should only be removed if there is damage and/or it will be repaired or replaced. The pistol grip is removed by using a 5/16" allen wrench, inserting it into the cap screw and turning counter close wise until the cap screw and lock washer is removed. Take caution as the selector spring is pat way inserted into the grip. Remove grip by pulling straight down. Assembly is reverse of disassembly. Align spring in hold and tighten cap screw.

Figure #47

16. Trigger Guard - The trigger guard should only be removed if there is damage and/or it will be repaired or replaced. The trigger guard can be opened for cold weather/glove use by depressing the plunger on the right forward hole with a 1/16" punch. Then the trigger guard will rotate down. For removal use a 1/16" punch and drive out the roll pin) replace with a new roll pin). The plunger can be disassembled using a 1/64" punch, driving out the roll pin and then the plunger and spring will slide out. Assembly is reverse of disassembly and replaced roll pins.

Figure #48

17. Hammer – The hammer should only be removed if there is damage and/or it will be repaired or replaced. .Prior to the removal of the hammer pin, ensure the hammer is in the up or forward (uncocked) position by placing the thumb or fore finger over the hammer while pulling the trigger back to the rear.

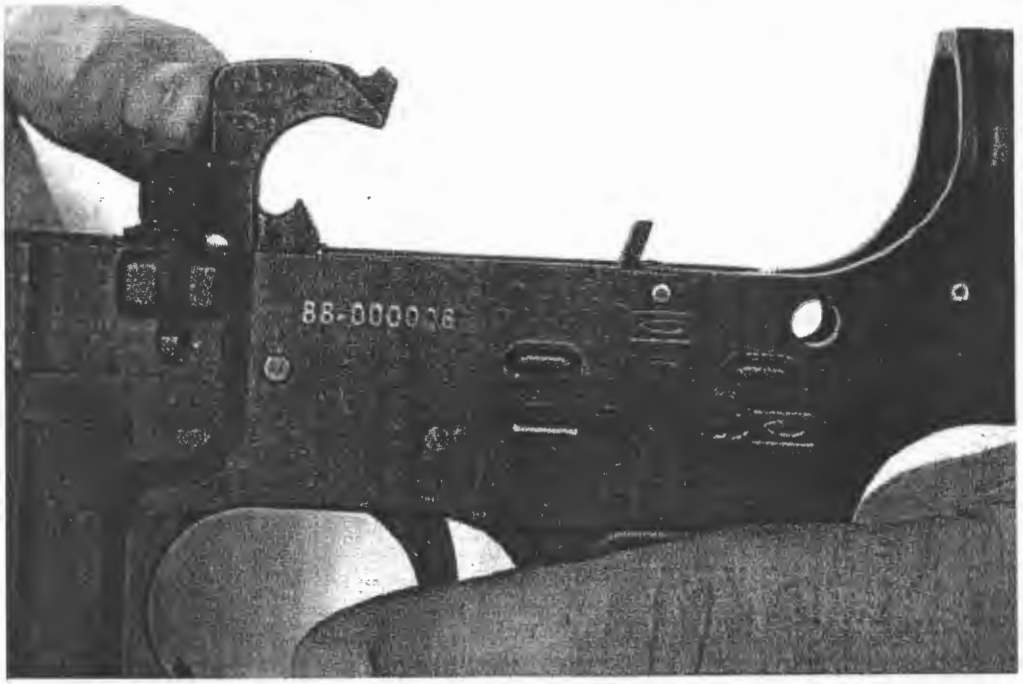


Figure #49

With the HK416 on semi, take a 1/8" punch and hammer, drive out the hammer pin from right to left (or vice versa). Take note of hammer spring legs on top of trigger pin. Once pin is removed hammer and spring will slide out. Assembly is reverse of disassembly. Ensure legs of spring are facing rearward. Place spring legs on top of trigger pin and push hammer down to line up with the holes in the receiver (spring pressure will be felt while pushing down). Insert the hammer pin from left to right with the solid half of the pin inserted first (the spring in the center of the hammer retains in the center groove of the hammer pin and this is what holds the hammer in place). Do not force pin in (line up holes).

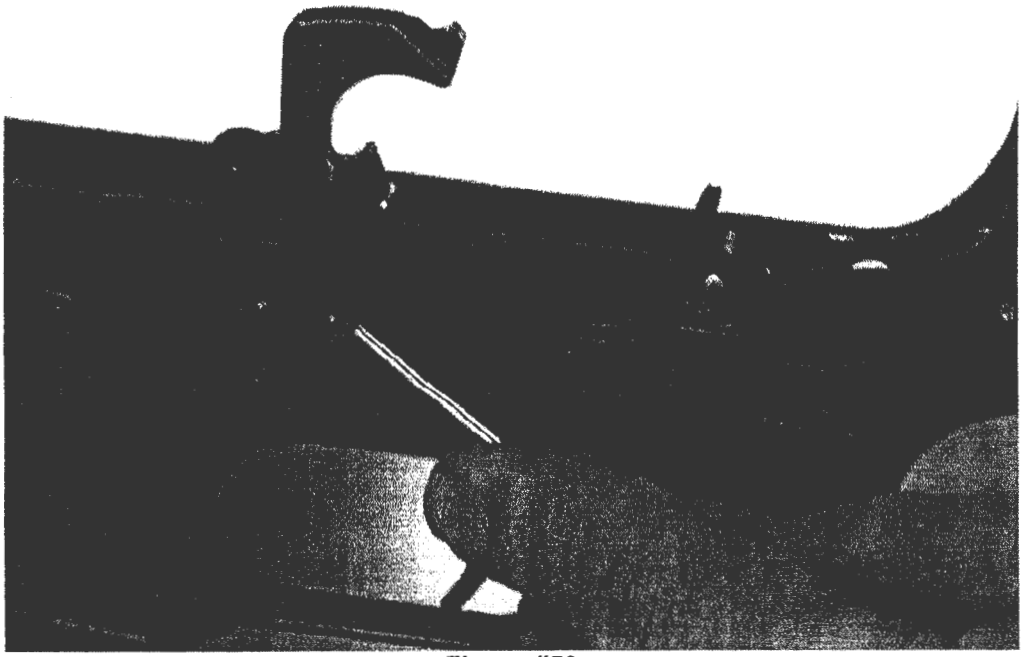


Figure #50

18. <u>Trigger</u> – The trigger should only be removed if there is damage and/or it will be repaired or replaced. Once hammer is removed, take a 1/8" punch and hammer and drive out trigger pin from right to left (or vice versa). Take note of the position of the trigger spring legs and disconnector and disconnector spring. Once pin is removed, trigger, trigger spring, disconnector and disconnector spring will slide out. Assembly is the reverse of disassembly. The trigger spring legs will face forward and while pushing down on the trigger to line up the holes, spring tension will be felt. Insert the disconnector into the groove of the trigger spring tension will be felt on the disconnector. Align the hole in the disconnector while aligning the hole in the trigger with the lower receiver. Insert pin from left to right with the solid half of the pin first. Do not force pin (line up holes). Hammer and trigger pins are interchangeable.

19. Automatic Sear – The automatic sear should only be removed if there is damage and/or it will be repaired or replaced. Using a 1/16" punch and hammer drive out the automatic scar pin from right to left. Take note of the long leg of the spring positioned on the front of the selector and the leg of the scar is positioned to the rear of the selector. Once pin is removed the scar slide will slide out. Assembly is reverse of disassembly ensuring scar leg is to the rear of selector and spring leg is forward of selector. Insert pin.

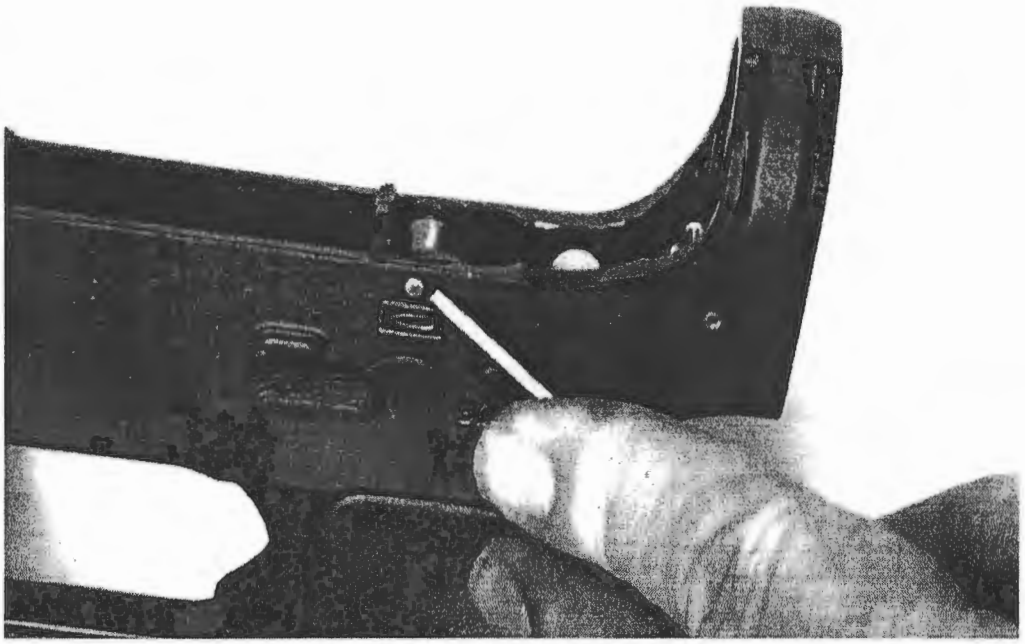


Figure #51

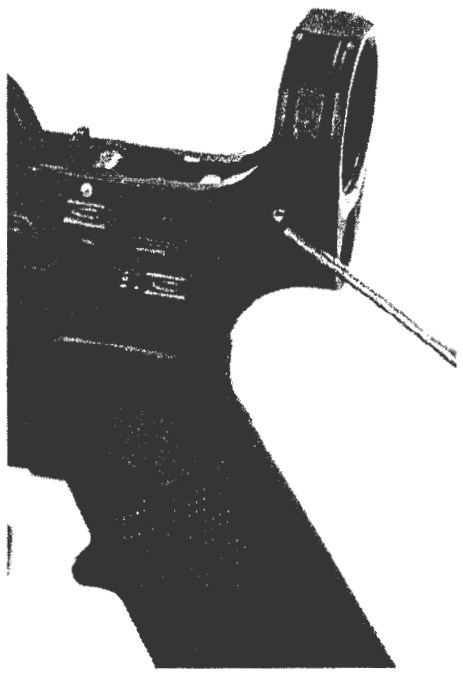
20. Selector – The selector should only be removed if there is damage and/or it will be repaired or replaced. Once the pistol grip is removed, the selector spring and detent will slide out. The selection can then be removed by sliding out the left side. Assembly is reverse of disassembly. Insert selector into lower receiver from left side. Insert detent with pointed ends towards selector. Insert spring into pistol grip and assemble pistol grip.

Figure #52

21. Fixed Stock – The fixed stock should only be removed if there is damage and /or it will be repaired or replaced. Remove the buttstock screw using a large 3/8" flat tip screwdriver and unscrewing counter clock wise until removed. Slide the buttstock rearward, taking note of the rear take down spring. When the stock is removed, there will be an aluminum spacer between the stock and the receiver extension. Assembly is reverse of disassembly. lace a spacer on top to the receiver extension, slide the fixed stock onto the receiver extension and keep straight while applying to the take down spring. Hold stock down while screwing in buttstock screw.

22. Receiver Extension (Fixed Stock) – The receiver extension should only be removed if there is damage and/or it will be repaired or replaced. Remove stock assembly as stated above. Use the HK416 multifunctional tool and the vise block for the lower receiver. Place the magazine well of the lower receiver on the vise block, Attach the HK416 multifunctional tool on the receiver extension and rotate counter clock wise until removed. Assembly is reverse of disassembly. Thread the receiver extension into the lower receiver. Assemble stock as stated above.

23. Buffer Retainer – The buffer retainer should only be removed if there is damage and/or it will be repaired or replaced. Remove stock and receiver extension on either model fixed or collapsible. Once removed drive out the roll pin with a 1/16" punch and hammer. Te buffer retainer and sprig is under tension and will fall out. Assembly is reverse of disassembly. Depress spring and retainer while replacing bolt pin.



Figure#53

24. **Sliding Buttstock** – The sliding buttstock should only be removed if there is damage and/or it will be repaired or replaced. The sliding buttstock can be removed by the operator by pulling the release lever from the opposite direction and sliding the buttstock off the receiver extension. The pin should clear the groove in the receiver extension if enough tension is applied. Next take a 1/16" punch and hammer and drive out the pin and lock index. Then the hut spring pin will come apart from the lever. Next take a 3/8" flat tip screwdriver and remove the swivel screw and the lower sling swivel will be removed. Assembly is reverse of disassembly. Insert the sling swivel and screw in the swivel screw. Attach the release lever and assemble the nut, spring, lock index with a new roll in and then slide onto the receiver extension by pulling back on the release lever. Lock into place and check all locking positions.

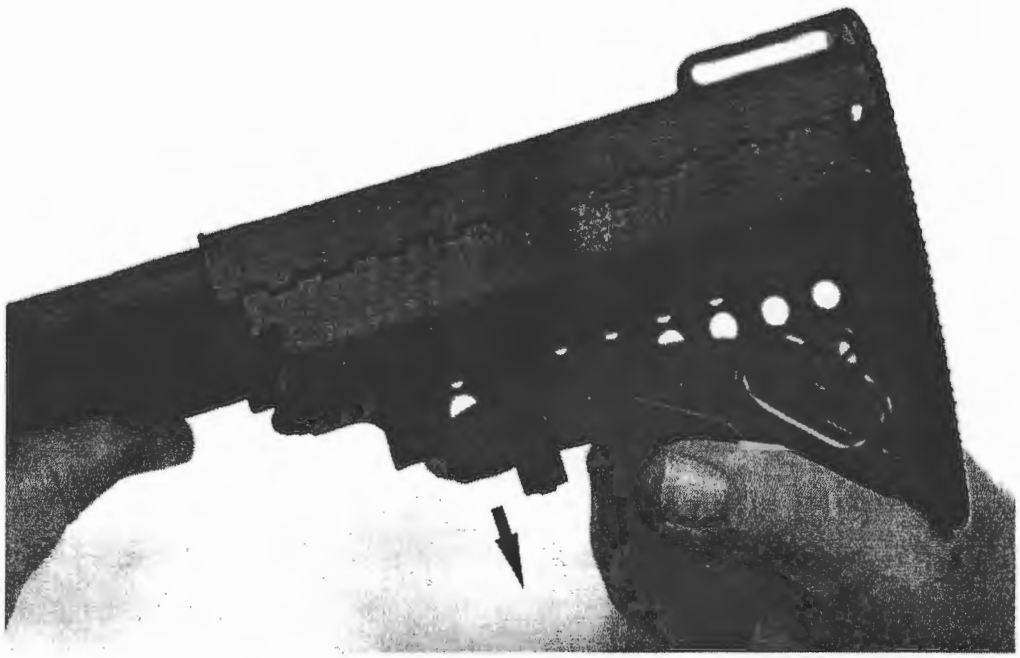


Figure #54

25. **Receiver Extension (Sliding Buttstock)** – The receiver extension sliding buttstock should only be removed if there is damage and/or it will be repaired or replaced. The receiver extension for the sliding buttstock is staked on the lower receiver at the lock nut and plate. This should only be removed if it will be replaced or repaired. The lock nut is removed using the HK416 multifunctional tool turning counter clock wise and then pulling back on the plate (the take down pin spring will be visible). Unscrew the receiver extension counter clock wise. Assembly is reverse of disassembly. A new lock nut must be used and when tight you must stake it in two locations. Attach the torque wrench to the HK416 multifunctional tool and torque the receiver extension to 44 (+/- 7) ft lbs.

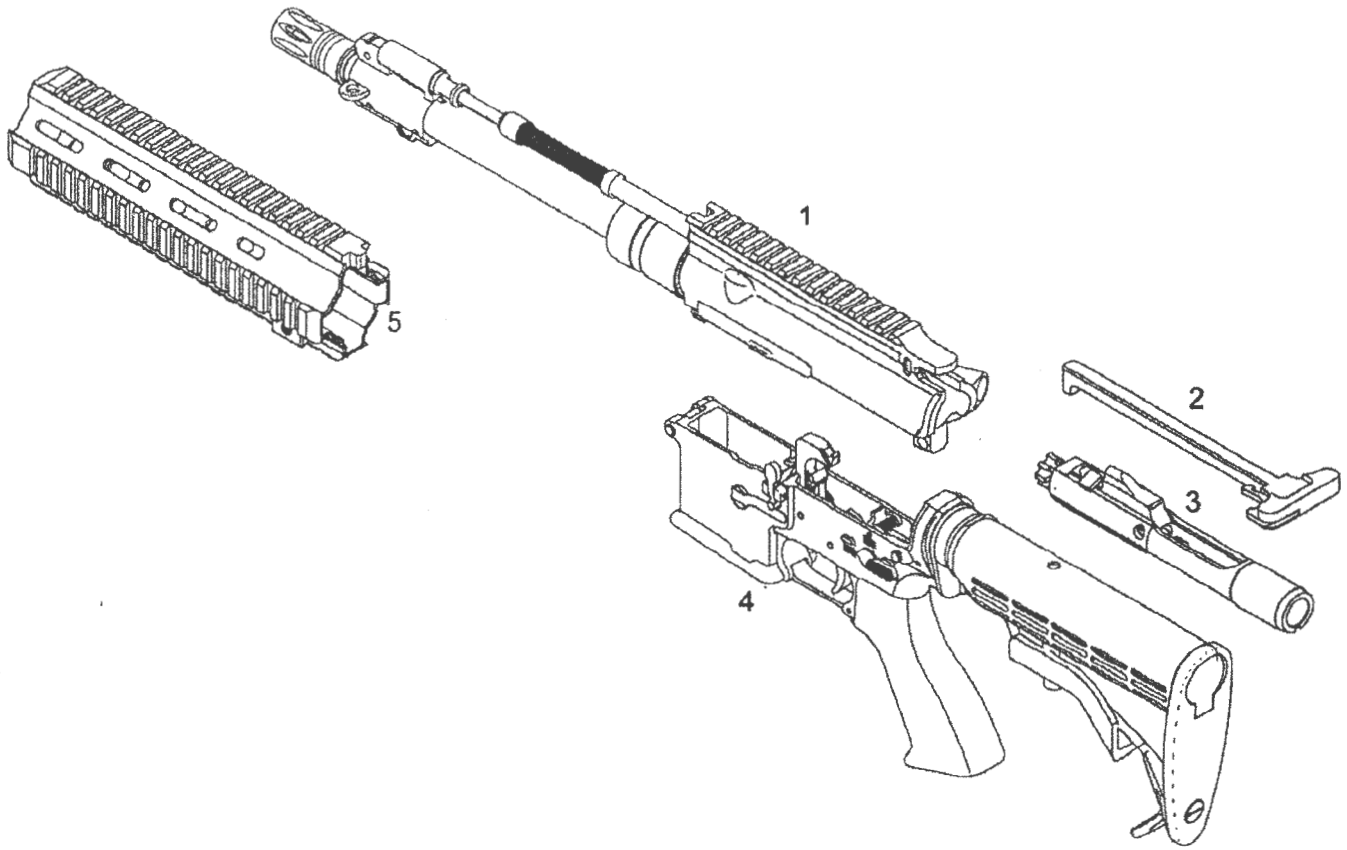
26. **FFRS Take Down Screw** – The take down screw should only be removed if there is damage and/or it will be repaired or replaced. The FFRS take down screw can be removed by pulling strongly over the shape spring. The retainer can by replaced by prying out with a 1/64" punch and jewelers screwdriver. A new retainer can be pressed into place and the screw pressed into the FFRS.

27. **Front Sight (Fixed)** – The front sight (fixed) should only be removed if there is damage and/or it will be repaired or replaced. With the HK sight tool, unscrew the screen from the base and clamp. Dive out the roll in with a 1/8" punch and hammer. Then remove the front sight from the base. Assembly is reverse from disassembly. Replace the front sight blade into the base and drive in a new roll pin. Insert the screw into the clamp and screw in.

28. **Front Sight (Folding)** – The front sight (folding) should only be removed if there is damage and/or it will be repaired or replaced. Remove the spring clip by prying and pushing off the pin with your thumbnail. Slide out the pin and a plunger and spring will slide out. Once the spring and plunger is removed the latch can be removed from the left or right. Remove the roll pin with a 1/16" punch and hammer and then the folding front sight blade can be removed. Assembly is reverse of disassembly. Replace the roll pin with a new one. The folding front sight can be lowered by pushing up on the latch and releasing when in place.

29. **Rotary Rear Sight** – The rotary rear sight should only be removed if there is damage and/or it will be repaired or replaced. The rotary rear sight is the same for disassembly as the standard MP5 series rear sight. The screw is removed with the sight tool from the base and the clamp is removed at the same time. The windage screw lock screen is unscrewed using the sight tool and the rotary drum assembly is removed showing the spacer and lock washer for the windage lock screw. The windage screen can then be unscrewed and a detent ball and spring will be visible. Assembly is reverse of disassembly.

ILLUSTRATED PARTS BREAKDOWN



Weapon Models, compl.

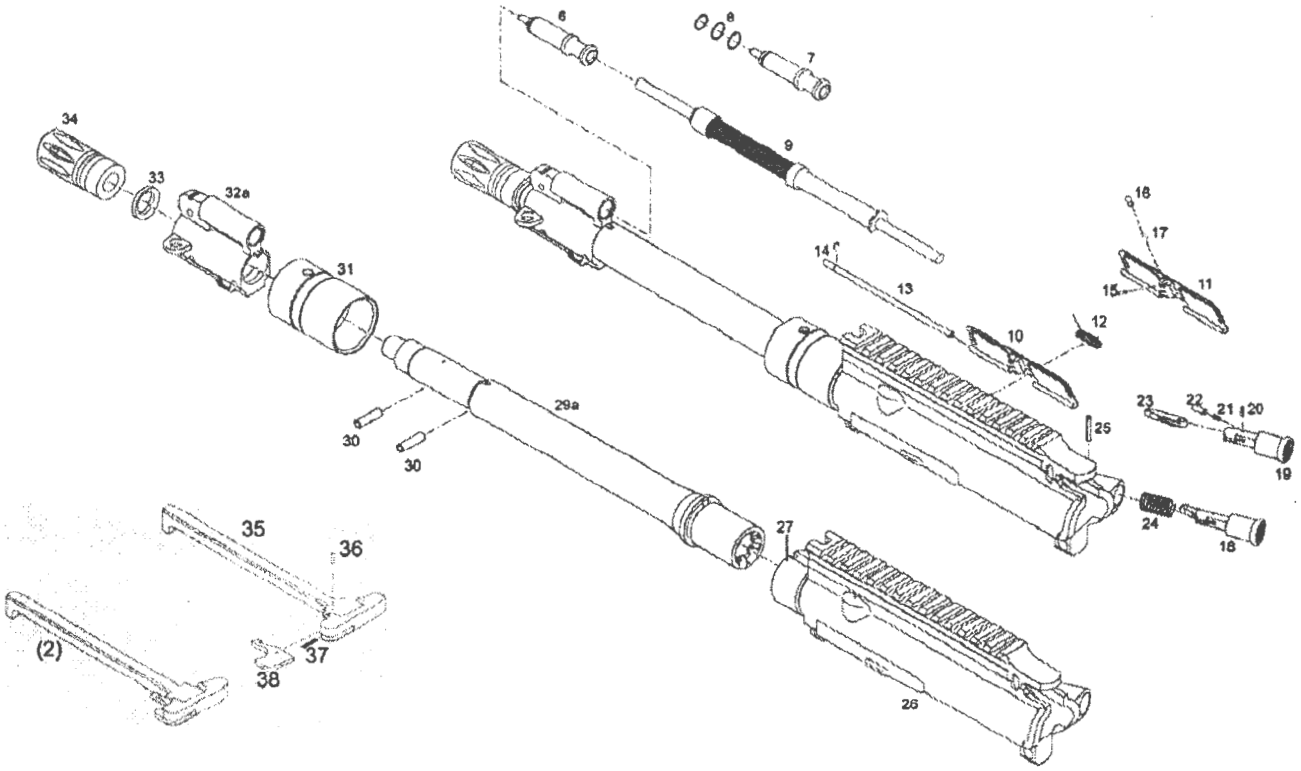
Illust.#	Ident.-Number	Description
-	203550	HK416 D10RS
-	203551	HK416 D14.5RS
-	233222	HK416 D16.5RS
-	203552	HK416 D20RS

Upper Receiver Kit, compl.

Illust.#	Ident.-Number	Description
-	233218	HK416 U10RS
-	233219	HK416 U14.5RS
-	233220	HK416 U16.5RS
-	233221	HK416 U20RS

Assembly groups

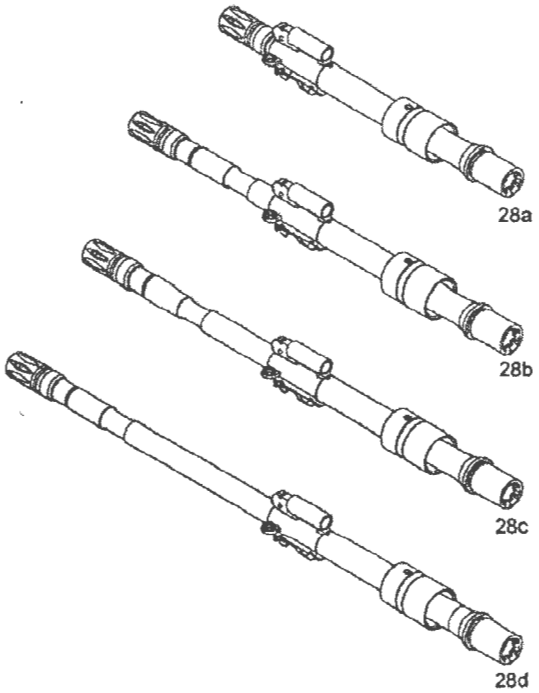
Illust.#	Ident.-Number	Description
1	203559	Upper Receiver **10"**, compl. w/o FFRS, bolt carrier + handle
(1)	203555	Upper Receiver **14.5"**, compl. w/o FFRS, bolt carrier + handle
(1)	233613	Upper Receiver **16.5"**, compl. w/o FFRS, bolt carrier + handle
(1)	233621	Upper Receiver **20"**, compl. w/o FFRS, bolt carrier + handle
2	203597	Handle Charging Assembly, compl.
3	203606	Bolt Carrier Assembly, compl.
4	233113	Lower Receiver, compl. assembled with buffer + spring
5	233184	Free Floating Rail System (FFRS), compl.

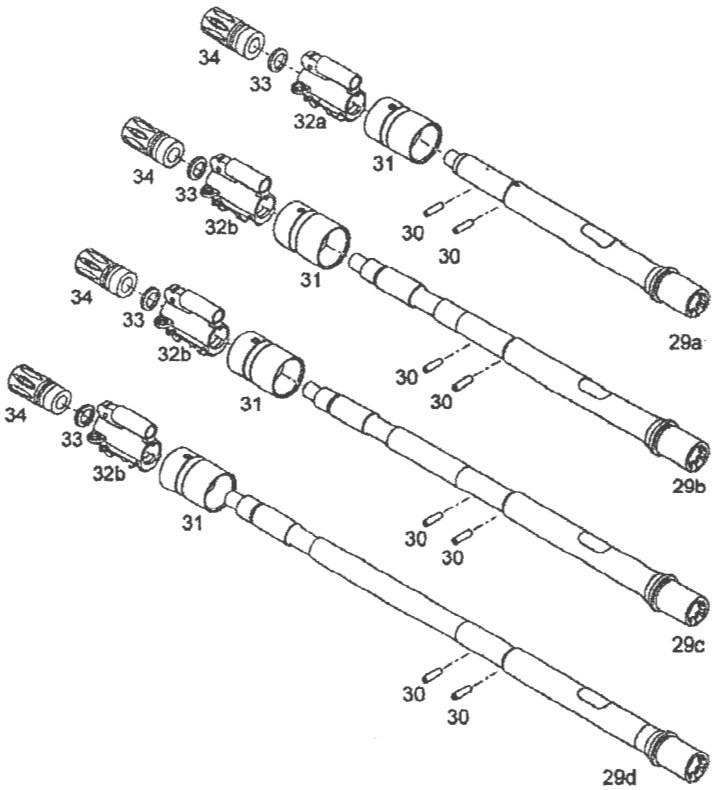


Upper receiver

Illust.#	Ident.-Number	Description
6	205381	Gas Piston, compl.
7	205382	Gas Piston
8	205383	Piston, Ring (3 each)
9	203648	Piston Rod Assembly
10	203571	Cover, Ejection Assembly, compl.
11	203626	*Cover Assembly
12	203632	*Spring, Ejection Port Cover
13	203633	*Pin, Ejection Port Cover
14	979358	*Safety Ring, Ejection Port Cover, .125"
15	979290	*Pin, Lock Bolt (1/16"x3/16")
16	203629	*Lock Bolt
17	203630	*Spring Lock Bolt
18	203600	Plunger Assembly, compl.
19	203599	Forward Assist Assembly
20	979293	Pin, Plunger Forward Assist (1/16"x1/4")
21	203636	*Spring, Pawl Forward Assist
22	203637	*Detent Pawl, Forward assist
23	203601	*Pawl, Forward Assist
24	203635	*Spring Plunger, Forward Assist
25	979313	Pin, Forward Assist (3/32"x5/8")
26	203567	Upper Receiver
27	203576	Threaded Bushing, Piston Guidance
29a	233103	Barrel, **10"** Threaded, Assembled
30	979245	Pin, Gas Block (2 each)
31	203580	Nut, Barrel
32a	203587	Gas Block **10"**
33	203647	Washer, Crush
34	233106	Compensator
Charging Handle		
35	203596	*Handle Charging
36	979291	*Pin Spring, Handle Charging (3/32x1/4)
37	203640	*Spring, Handle Charging, Catch
38	203641	*Catch, Handle Charging

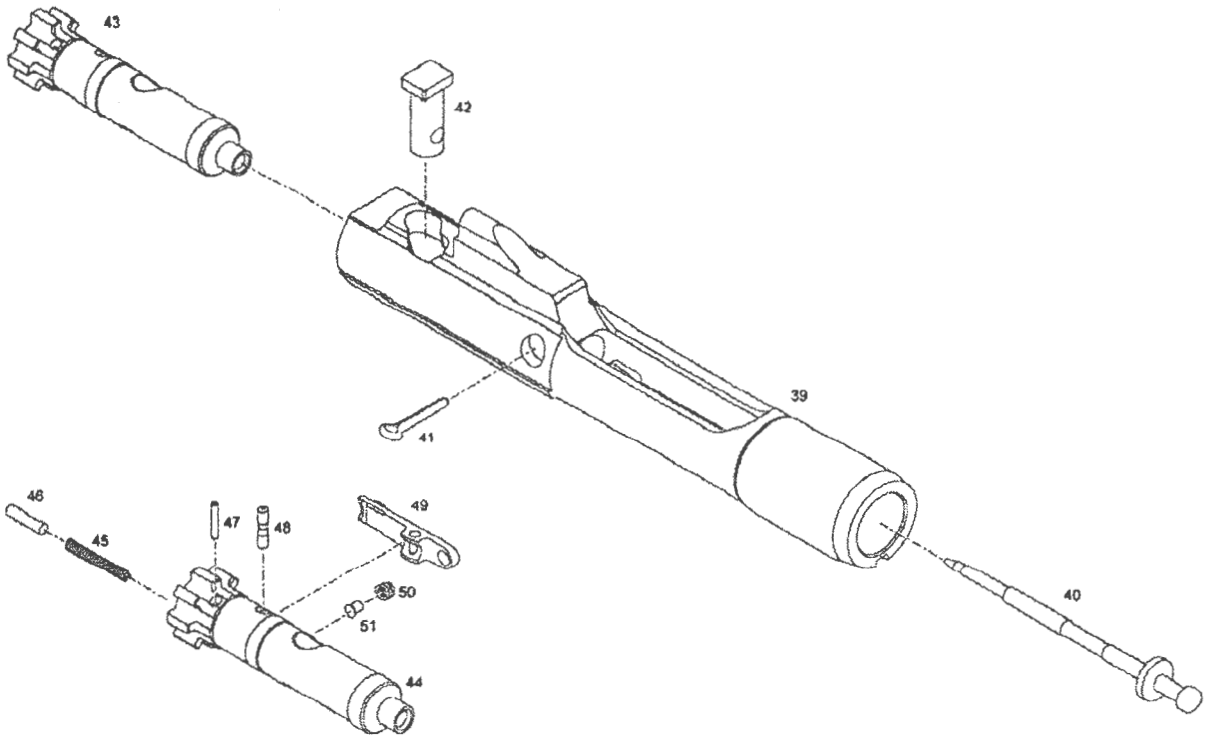
* Included in assembly





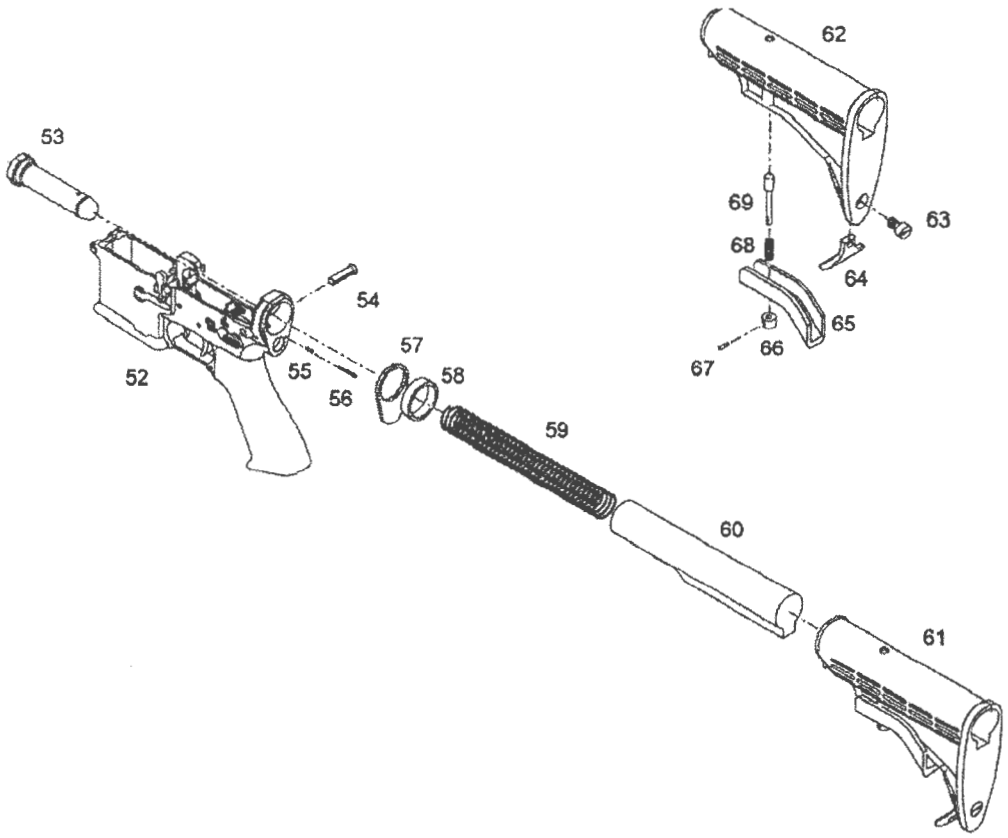
Optional Barrels

Illust.#	Ident.-Number	Description
28a	233107	Barrel, **10"** Threaded, W/Gas Block, compl.
28b	233215	Barrel, **14.5"** Threaded, W/Gas Block, compl.
28c	233223	Barrel, **16.5"** Threaded, W/Gas Block, compl.
28d	233224	Barrel, **20"** Threaded, W/Gas Block, compl.
29a	233103	Barrel, **10"** Threaded, Assembled
29b	233216	Barrel, **14.5"** Threaded, Assembled
29c	233606	Barrel, **16.5"** Threaded, Assembled
29d	233608	Barrel, **20"** Threaded, Assembled
30	979245	Pin, Gas Block (2 each)
31	203580	Nut, Barrel
32a	203587	Gas Block **10"**
32b	203638	Gas Block **14.5** / **16.5"** / **20"**
33	203647	Washer, Crush
34	233106	Compensator



Bolt Carrier Assembly

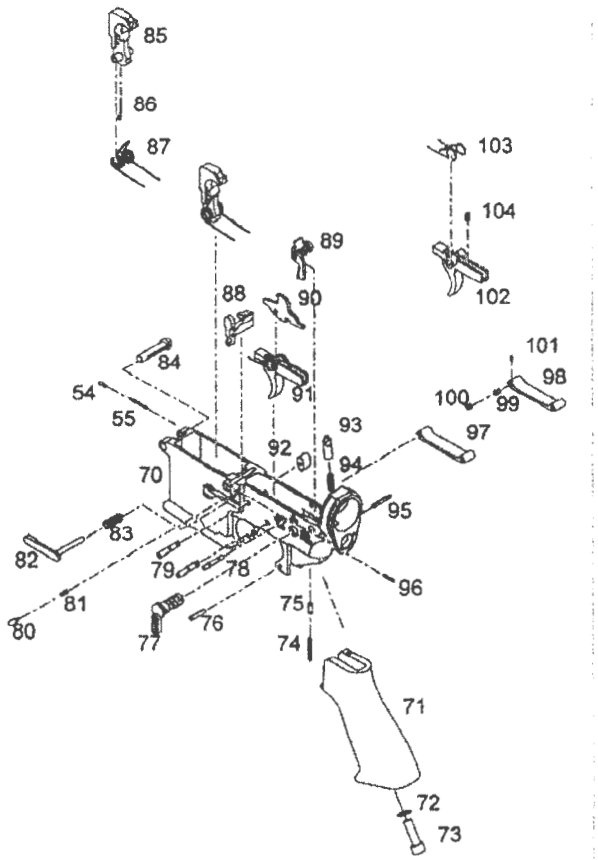
Illust.#	Ident.-Number	Description
39	233101	Bolt Carrier
40	203568	Firing Pin
41	203564	Pin, Retaining, Firing Pin
42	233112	Bolt Cam Pin
43	203565	Bolt Assembly, compl.
44	203566	Bolt, Head
45	233110	Spring, Ejector
46	233109	Ejector
47	929081	Pin, Ejector (5x10)
48	203569	Pin, Extractor
49	233108	Extractor, Cartridge
50	205407	Compression Spring, Extractor
51	207779	Buffer, Extractor



Lower Receiver Assembly

Illust.#	Ident.-Number	Description Drawing-Number
52	233181	Lower Receiver HK416D, Assembled
53	203570	Buffer, compl.
54	233117	Pin, Takedown (2each)
55	233115	Detent, Takedown Pin (2each)
56	233116	Spring, Takedown
57	233164	Plate, Receiver End
58	233165	Nut, Receiver Extension
59	233166	Spring, Recoil
60	233167	Extension Receiver
61	216943	Sliding Buttstock Assembly, compl.
62	233172	*Buttstock Sliding
63	233179	*Screw, Swivel
64	233178	*Swivel
65	233175	*Lever, Release
66	233176	*Nut, Lock Pin
67	979295	*Pin, Nut(5/64"x3/8")
68	233174	*Spring, Lock Index
69	233173	*Pin, Lock Index

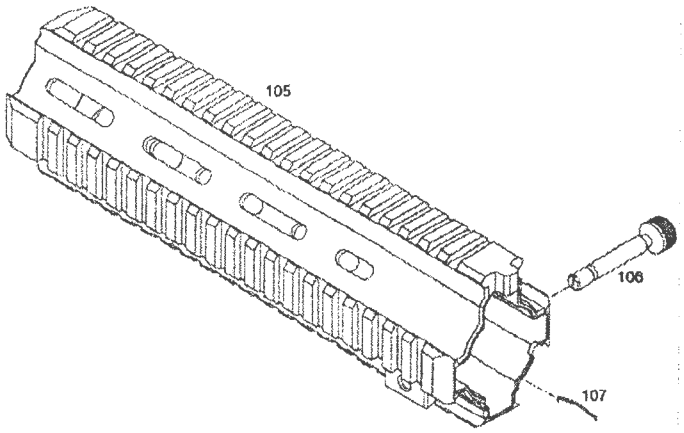
* Included in assembly



Lower Receiver, Exploded

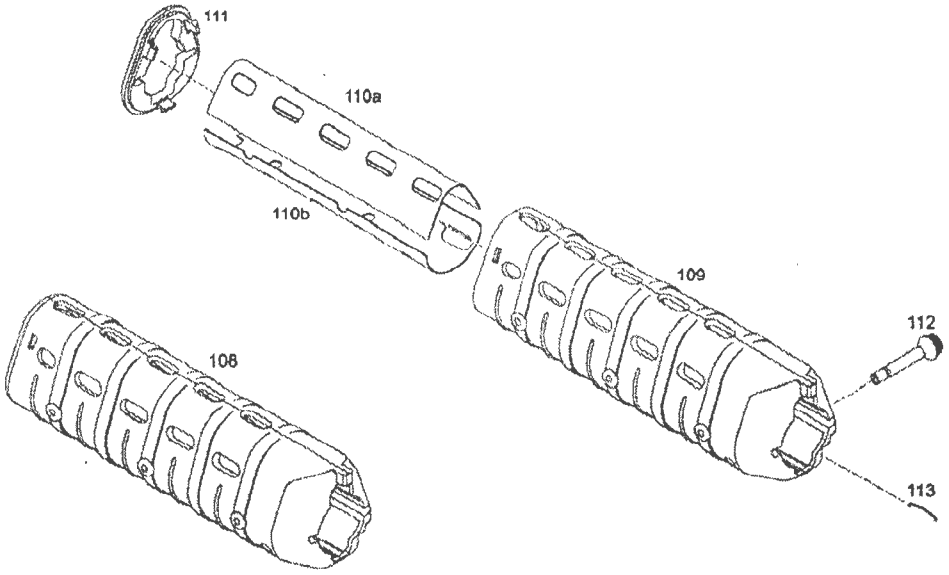
Illust.#	Ident.-Number	Description
70	203591	Receiver, Lower (Auto)
71	233160	Pistol Grip
72	979243	*Lock WasherDIN
73	979355	*Screw, Pistol Grip (1/4"x28-UNF x 1")
74	233136	Spring, Selector Detent
75	233135	Detent, Fire Control Selector
76	979294	Pin, Guard, Trigger (1/8"x5/8")
77	233134	Selector, Fire Control, Auto
78	233141	Pin, Automatic Sear
79	233152	Pin, Trigger & Hammer (2x)
80	233131	Plunger, Bolt Catch
81	233132	Spring, Bolt Catch
82	233123	Catch Magazine Assembly
83	233126	*Spring, Magazine Catch
84	233114	Pin, Receiver Pivot
85	233180	Hammer, Auto, Assembly
86	233144	Retainer, Hammer Pin
87	233145	Spring, Hammer
88	233129	Bolt Catch
89	233137	Sear Automatic Assembly.
90	233151	Disconnector, Auto
91	233147	Trigger Assembly., Auto
92	233127	*Button, Magazine Release
93	233120	Retainer, Buffer
94	233121	Spring, Buffer, Retainer
95	986544	Pin, Retainer, Buffer (2.5x20-ST)
96	979292	Pin, Bolt Catch (3/32"x1/2")
97	233153	Guard, Trigger Assembly, compl.
98	233154	*Guard Trigger
99	233155	*Plunger Trigger Guard
100	233156	*Spring Trigger Guard
101	979293	Pin, Plunger, Trigger Guard (1/16"x1/4")
102	233148	*Trigger, Auto
103	233150	*Spring Trigger
104	233149	*Spring, Disconnect

* Included in assembly



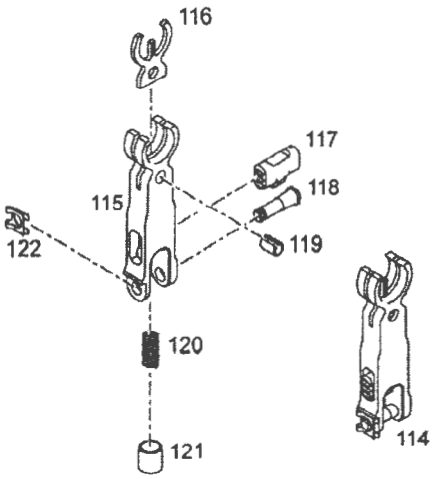
Free Floating Rail System (FFRS)

Illust.#	Ident.-Number	Description
105	233185	Free Floating Rail
106	233187	Screw, FFRS
107	233186	Shaped Spring, FFRS



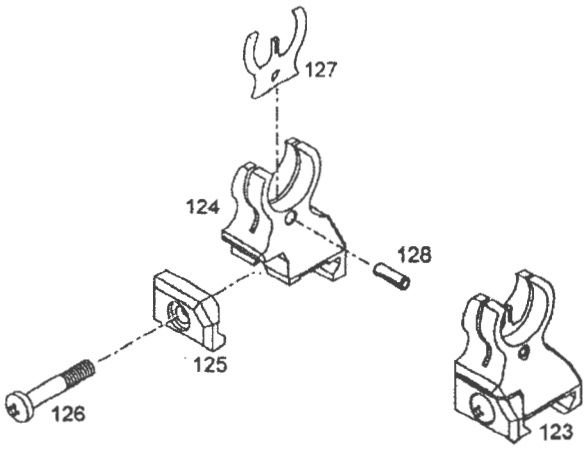
One-Piece Handguard

Illust.#	Ident.-Number	Description
108	233225	One Piece Handguard, compl.
109	currently not available	One Piece Handguard not available
110a	currently not available	Heat shield, Top not available
110b	currently not available	Heat shield, Bottom not available
111	currently not available	Cap, Handguard not available
112	233187	Screw
113	233186	Shaped Spring



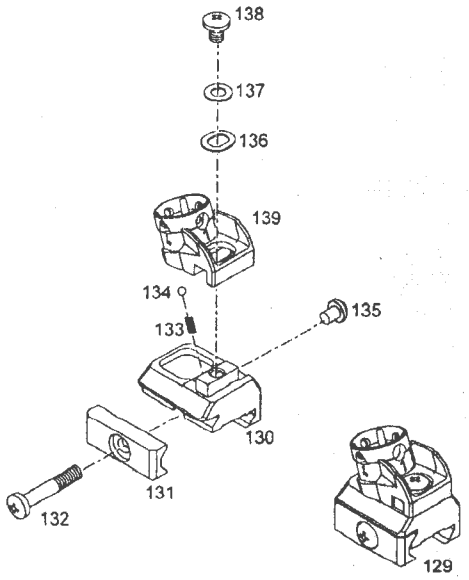
Folding front sight (Front sight assembly) All models

Illust.#	Ident.-Number	Description
114	203622	Folding Front Sight, compl.
115	203623	Base, Folding Front Sight
116	203620	Front Sight Blade, Folding Front Sight
117	203624	Detent Plunger, Folding Front Sight
118	203642	Axle, Folding Front Sight
119	979397	Spring Pin, Folding Front Sight
120	203588	Compression Spring, Folding Front Sight
121	203625	Plunger, Folding Front Sight
122	986551	Retaining Clip, Folding Front Sight



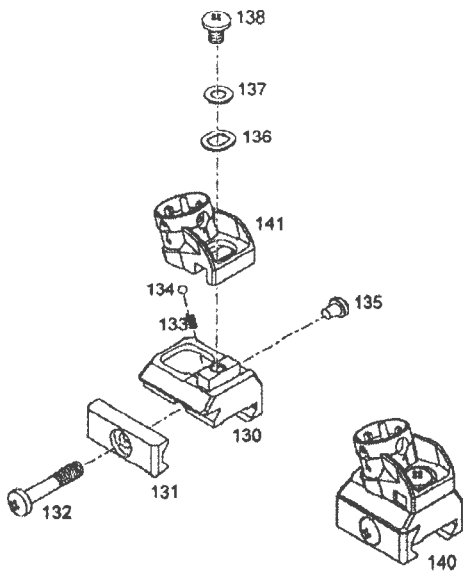
Mechanical sight (Front sight assembly) All models

Illust.#	Ident.-Number	Description
123	233210	Front Sight Assembly, compl.
124	233211	Base, Front Sight
125	203634	Clamp Jaw, Front Sight
126	203643	Clamp Screw, Sight Base
127	233212	Front Sight Blade
128	922609	Roll Pin, Front Sight



Mechanical sight (Rear sight assembly), for 10" barrel model (one dot)

Illust.#	Ident.-Number	Description
129	203621	Rear sight, **10**" complete
130	203618	Sight Base, Rear Sight
131	203619	Clamp Jaw, Rear Sight Base
132	203643	Clamp Screw, Sight Base
133	200383	Compression Spring, Sight Base
134	929897	Ball, Sight Base
135	200384	Windage Screw, Sight Base
136	200371	Spring Washer, Turret Rear Sight
137	922617	Lock Washer, Turret Rear Sight
138	200372	Windage Clamp Screw, Turret Rear Sight
139	233133	Turret Rear Sight, **10**"

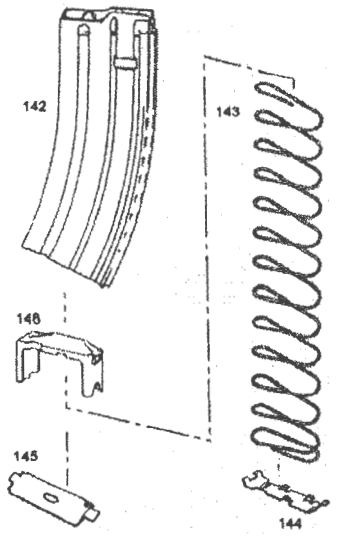


Mechanical sight (Rear sight assembly), for 14.5" + 16.5" barrel model (two dots)

Illust.#	Ident.-Number	Description
140	233197	Rear Sight, **14.5" + 16.5"** complete
141	233198	Turret Rear Sight, **14.5" + 16.5"**

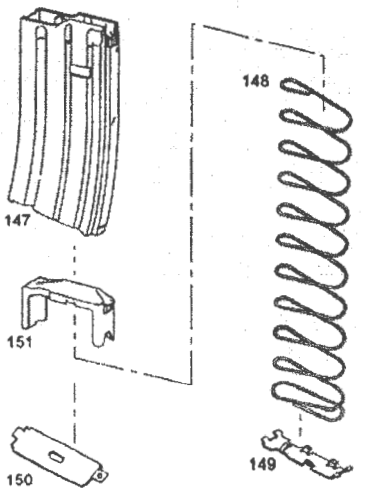
30-rd HK High reliability steel magazine

Illust.#	Ident.-Number	Description
--	251770	Magazine, 30-rd, compl.
142	209354	Housing, 30-rd
143	251772	Spring, 30-rd
144	251773	Locking plate
145	251775	Floor plate ext., front, compl.
146	251771	Follower



20-rd HK High reliability steel magazine

Illust.#	Ident.-Number	Description
--	233609	Magazine, 20-rd, compl.
147	233610	Housing, 20-rd
148	251772	Spring, 20-rd
149	251773	Locking plate
150	251775	Floor plate ext., front, compl.
151	251771	Follower



(30-rd) Blank Round Safety Magazine

Illust.#	Ident.-Number	Description
--	209756	Blank Rd Safety Magazine, compl.
--	209758	Housing, compl.
152	209762	Housing
153	251772	Spring
154	251773	Locking plate
155	251775	Floor plate ext., front, compl.
156	251771	Follower
157	209761	Slide
158	209760	Spring helical compression
159	209759	Spring housing