

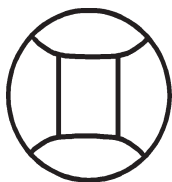
# TM-RAPTOR

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## OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODEL RAPTOR-II

**Before using this suppressor,  
be certain you have read and  
understand this manual.**

Manufactured by



**GEMTECH**  
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P.O. Box 140618  
Boise, Idaho 83714

ISSUED: January 6, 2006

★ ★ ★ ★ ★ **WARNING** ★ ★ ★ ★ ★

☞ **Because sound suppressed weapons make less noise than non-suppressed weapons, it is easy to forget that they are still firearms. It is of vital importance to remember that a sound suppressed firearm is just as dangerous as a non-suppressed one, and the same safe handling requirements apply.**

TM-Raptor

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## **TM-RAPTOR**

OPERATIONAL MANUAL FOR  
SOUND SUPPRESSOR MODEL  
RAPTOR-II (9mm)

*Manufactured by*

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☆☆☆☆☆ **WARNING** ☆☆☆☆☆

☞ **Failure to follow installation and maintenance instructions detailed in this manual can result in potential for serious injury to the user and damage to the weapon.** Firearm sound suppressors are user attached firearm muzzle devices, and as such are subject to improper attachment unless the proper procedures outlined in this manual are followed.

**MANUFACTURER'S DISCLAIMER**

The manufacturer is not responsible for improper usage of this product. This product is potentially dangerous, and as such it is the user's responsibility to understand and implement its proper use. If you do not understand the instructions in this manual, please contact the manufacturer for further clarification.

Congratulations! You have just obtained a highly efficient, state of the art, versatile, and carefully designed 9mm muzzle suppressor designed for the Heckler & Koch MP5 submachine gun available anywhere. Before use, please take a few moments to read this instruction manual.

**GENERAL DESCRIPTION**

The RAPTOR-II suppressor is a radical design exhibiting a quantum increase in efficiency as compared to other suppressors of similar external size and appearance. Designed for high efficiency and rugged abuse, it is configured for mounting on the 3-lug barrel of the H&K MP5 submachine gun utilizing the integral quick detach Gemtech Tri-Lock™ (patented) mount. It will mount on other weapons whose barrels have been converted to the 3-lug configuration.

With simple maintenance, the RAPTOR-II suppressor's life-span is in excess of 175,000 rounds (documented). It is specifically designed for fully automatic fire.

Suppression efficiency is gained through proper design of the suppressor rather than by using "wipes," grease, or other obstacles touching the bullet in free flight. For this reason, weapon accuracy is not impaired, and accuracy may be actually slightly enhanced by tightening of the group size.

## BASIC SUPPRESSION PRINCIPLES


The sound of a firearm discharging is due to the sudden release of high pressure propelling gases. The purpose of a suppressor is to reduce the gas pressure by a combination of increasing the volume for gas expansion, decreasing gas temperatures, and delaying gas exit from the suppressor.

## CONSTRUCTION

The entire suppressor is constructed from hard anodized aircraft grade aluminum alloys with the exception of portions of the Tri-Lock™ mount. Because the radial orientation of the baffles is critical to optimum performance, the suppressor is sealed and cannot be disassembled other than removal of the rear mount. Operational life-span is in excess of 150,000 rounds.

For mounting on the Colt 9mm M16, it will be necessary to replace the existing compensator (flash hider) with the Gemtech 3-lug adapter. Other barrels can be modified to the 3-lug configuration.

☆☆☆☆ **DANGER** ☆☆☆☆

 **Before performing any installation or maintenance operation, always remove the magazine from the firearm, open the action, and visually ascertain that the chamber is empty and the weapon unloaded. Failure to do so can result in potential for serious injury to the user and others in the vicinity.**

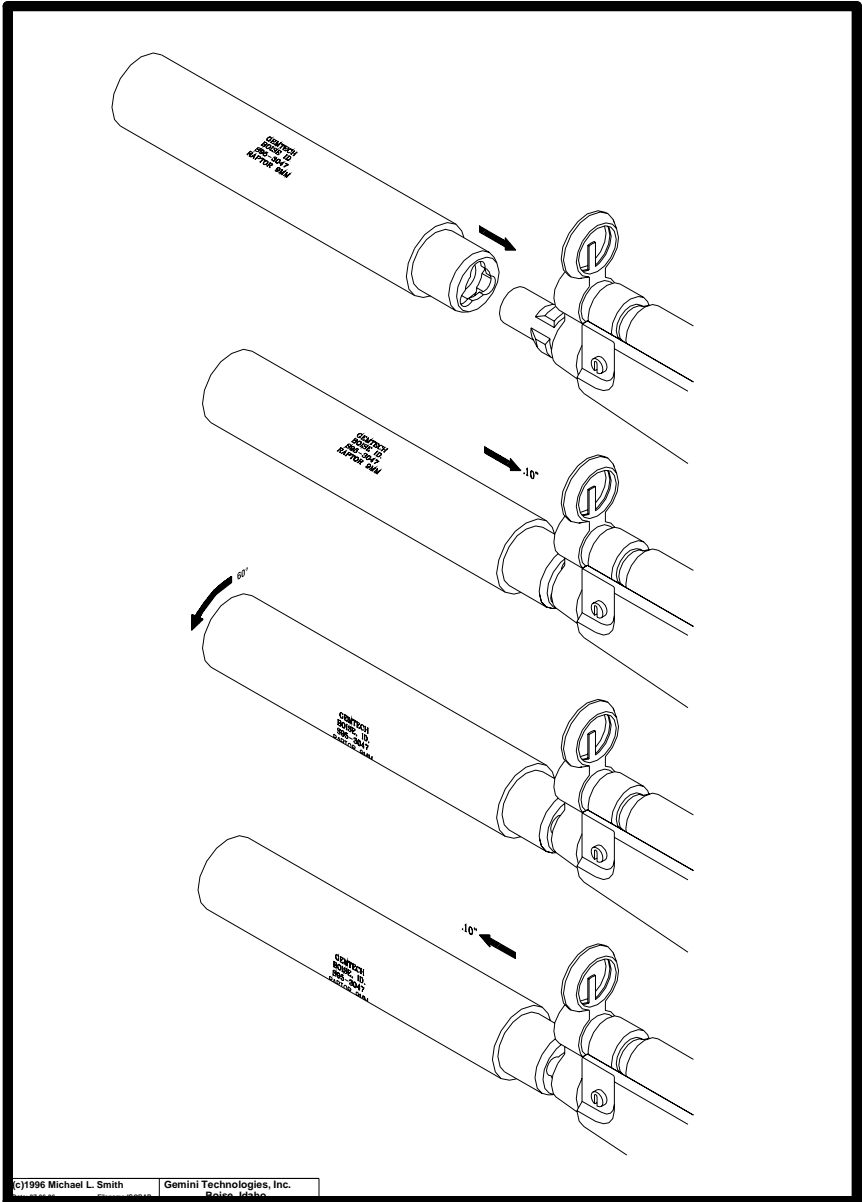
## MOUNTING ON HK WEAPONS

Although some versions of the HK MP5 submachine gun have muzzle threads, we suggest utilizing the 3-lug mount whenever possible, as it is a superior and more stable mount than virtually all thread mounting systems.

The Raptor-II using the Tri-Lock coupler must never be mounted on a 3-lug threaded barrel without a thread protector in place. The thread protector must have a diameter of 0.5905 (‘0.0005) inches at the muzzle. Failure to observe this caution will void the warranty and will result in misalignment. If there is any question, we can provide a suitable thread protector.

We guarantee alignment of the RAPTOR-II suppressor only on original non-threaded German 3-lug H&K MP5 barrels and those manufactured to German Heckler & Koch specifications. Mounting on non-specification barrels or threaded barrels with non-Gemtech thread protectors is done at the operator's risk.

## HK MP5 MOUNTING



**☆☆☆☆☆ CAUTION ☆☆☆☆☆**

**Before initiating Mount/Dismount Procedures, be absolutely certain that the weapon is unloaded, the magazine removed, and the bolt locked in the rear position.**

**RAPTOR-II 3-LUG HK-MP5 MOUNTING INSTRUCTIONS  
For the Gemtech TRI-LOCK™ 3-Lug Barrel Coupler**

1. Be certain the weapon is unloaded, the magazine removed, the safety on, and the bolt locked in the open position.
2. Align the grooves in the silencer mount with the lugs on the barrel.
3. Pull the silencer onto the barrel against spring tension until the silencer can be rotated counter clockwise while holding the weapon in the firing position.
4. Rotate the silencer 60° until it stops and release pressure on the silencer. Rock the silencer to be certain that the lugs have engaged the pocket recesses in the mount.
5. Removal is the reverse of installation. It will be necessary to pull the silencer rearward in order to rotate it 60° clockwise.

**AMMUNITION NOTES****☆☆☆☆☆ WARNING ☆☆☆☆☆**

**Never use ammunition that does not meet SAAMI specifications.**

All commercial American made ammunition is safe, but the origins, storage history, and reason for being surplus of foreign made ammunition is not available for evaluation. Although foreign made ammunition is usually safe, this is not always the case. Damage from non-American ammunition cannot be covered under warranty.

The majority of 9mm ammunition is supersonic, and the projectile traveling at velocities above approximately 1,050 fps will produce a ballistic “crack”

or “sonic boom”. There are several commercial sources of specially loaded subsonic 9mm ammunition, and for maximum effectiveness, we suggest the use of this type ammunition. Although special 9mm subsonic ammunition has a bullet muzzle velocity below 1,000 fps, the higher bullet weight results in a significantly higher bullet kinetic energy.

The majority of subsonic 9mm ammunition is loaded utilizing bullet weights of 147 grain or heavier. Subsonic ammunition utilizing bullet weights of 155 grain or more is apt to be significantly overpressured in some weapons, especially the HK MP5. 147 grain FMJ and JHP bullets for 9mm reloading are available from a variety of suppliers, including Hornady and Speer. **Do not use cast lead bullets.** Loading data for 9mm subsonic ammunition is available from a number of sources, including the Speer Supplement (available from Speer for their 147 grain TMC bullets), and from major powder manufacturers for use with their powders. *We caution against any attempt to hand load beyond recommended SAAMI specifications.*

Commercial subsonic ammunition is available in 158 grain FMJ from Israeli Military Industries and others. For 147 grain bullet weight, there are offerings from Winchester, Remington, Federal, CCI, and others in both full metal jacket and hollow point styles. We have found that although 147 grain ammunition remains subsonic in pistols, it may not remain subsonic in the longer barrel of the Heckler & Koch MP5 submachine gun. The user will need to experiment with different brands. Ammunition with bullet weights over 154 grains is discouraged by H&K. Although some have suggested that the 9mm subsonic cartridge is “downloaded,” we believe users should be aware that this ammunition is anything but an anemic load with kinetic energies and pressures significantly greater than standard 9mm ball ammunition.

We strongly suggest against the use of corrosive ammunition, and evidence of its use will void the warranty. **Never risk your investment in the weapon or suppressor by using cheap ammunition that does not meet SAAMI specifications.**

## MAINTENANCE and CLEANING

As a general rule (and contrary to popular opinion), suppressors have a longer life if no attempt is made at cleaning. There are no perfect solvents for the carbon deposited on the internal parts by the burning of the powder, and some carbon residues will slightly enhance performance. Field experience has shown that the suppressor will outlast a number of barrels.

The design of the RAPTOR-II suppressor is such that any liquid introduced in a cleaning process may not drain completely, and its presence will generate more sludge and residue within the suppressor than not cleaning.



The suppressor is all aluminum, and many normal gun cleaning solvents will damage aluminum. These include Hoppe's, Sweets, GI Bore Cleaner, and all water-based agents. Water or water-based solvents should never be used. Because ultrasonic cleaners develop proper cavitation only with water-based solvents and do not function well with organic solvents, we recommend against their usage. Additionally, ultrasonic cleaners can damage aluminum if left in too long

What does have merit is to occasionally blow out the suppressor with dry compressed air to blow out loose powder granules. Blowing should be done first from the rear and second from the front.

Any other attempt at cleaning may well shorten the life of the suppressor. If it becomes necessary, the suppressor can be rebuilt to factory new condition at a reasonable cost.

## SERVICING THE 3-LUG MOUNT

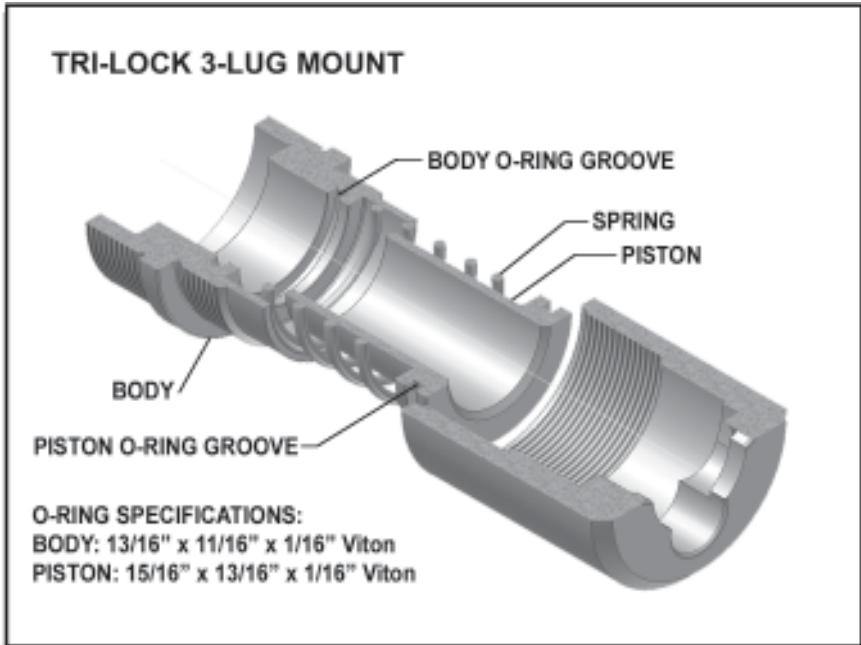
The Raptor-II 3-lug mount can be easily disassembled for servicing. See drawing next page.

1. Unscrew the knurled cap from the body.
2. Remove the spring-loaded piston from the mount body. Remove the spring.

Service consists of:

1. Replace the O-rings if necessary. The O-ring in the body can be removed with a dental pick. O-rings are Viton (neoprene must not be used).
2. Thoroughly clean the spring-loaded piston inside and out. Made of stainless steel, it can be cleaned with red Scotchbrite or fine steel wool moistened with WD-40.
3. Scrub the inside of the knurled cap with a toothbrush and solvent, such as WD-40 or Kroil, to remove all powder and carbon residues. Be certain to clean the recesses that engage the barrel lugs.
4. Coat the outside of the piston with grease as well as the inside of the knurled cap. Lightly coat the inside of the mount body. Suitable greases include marine bearing grease, available at stores that sell boat trailers.
5. Insert the spring in the mount body followed by the piston (small end first). Replace the cap and screw hand tight. Do not use thread adhesives.

It is not unusual for a small amount of grease to be forced through the small vent hole in the knurled cap. This hole is to prevent pressurization of the mount.



## PHYSICAL SPECIFICATIONS

|                  |                        |
|------------------|------------------------|
| Length           | 8.2 inches             |
| Diameter         | 1-3/8 inch             |
| Weight           | 8.5 ounce              |
| Suppression*     | 30 dB(A) dry           |
| Operational life | 150,000 rounds minimum |

\*NOTE: Suppression will vary slightly with ammunition used. We recommend against the use of water or other artificial environment media in the suppressor.

## WARRANTY STATEMENT

Our "warranty" has been practiced since our personnel started in the suppressor business in 1976, in a time before legalese and when a handshake and this simple statement sufficed: "If a Gemtech product breaks and it's your fault, we'll fix it for a fair price in a timely manner. If it's our fault, we'll fix it quickly at no charge." This policy born of pride in craftsmanship and honor has served us and our clients well for over two decades and will continue in Gemtech's future.

The small print follows:

The Magnuson-Moss Act (Public Law 93-637) does not require any seller or manufacturer of a consumer product to give a written warranty. It does provide that if a written warranty is given, it must be designated as "full" or as "limited" and sets minimum standards for a "full" warranty.

As do all major firearms manufacturers, Gemtech has elected not to provide any written warranty, either "limited" or "full," rather than to attempt to comply with the provisions of the Magnuson-Moss Act and the regulations issued thereunder.

There are certain implied warranties under state law with respect to sales of consumer goods. As the extent and interpretation of these implied warranties varies from state to state, you should refer to your state statutes.

Gemtech certifies that all sound suppressors manufactured by them are free of defects in materials or workmanship, and that they meet manufacturing specifications at the time of manufacture.

It is our intent that the customer be completely satisfied with the product. Certain Gemtech products may be classified as ordnance and/or implements of war and are sold by us with the specific understanding that Gemtech has taken every reasonable precaution in providing our customers with inherently safe merchandise, and that we assume no liability whatsoever for unsafe handling by the purchaser or his agents. Gemtech assumes no responsibility whatsoever and we will honor no claims for damages, regardless of nature, for physical injury or property damage resulting from careless and/or irresponsible handling, adjustments to equipment, neglect or abuse.

Gemtech reserves the right to make changes at any time and without notice, in prices, to change specification or design, to add or remove accessory materials, and to add or delete items without incurring any obligation.

Use of ammunition that does not meet SAAMI specifications will void all warranties.

## REPAIR POLICY

Gemtech maintains complete repair facilities for all suppressors manufactured by them or their antecedent companies. Return authorization and shipping instructions must be obtained prior to return. Contact Gemtech for this information.

ATF no longer requires transfer on a Form 5 to the manufacturer for repair. However, they do require a letter accompanying the weapon detailing the repairs required. We will require also a photocopy of the front of the owner's Form 3, 4, or 5.

All Gemtech products are  
100% manufactured in the  
United States of America.

