

TM-HDM

OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODEL HDM

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

Manufactured by



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☆☆ ☆ ☆ ☆ **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.**

Historical References Cited:

THETRUTHABOUTGUNS.COM

MODERNFIREARMS.NET

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HDM

OPERATIONAL MANUAL FOR
INTEGRALLY SUPPRESSED
HIGH STANDARD H-D MILITARY PISTOL
WITH INTEGRAL MODEL HDM SUPPRESSOR

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GEMTECH PROPRIETARY

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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.

HISTORY OF THE SILENT H-D MILITARY PISTOL (HDM)

In 1942, the War Department ordered 34,000 Model H-D High Standard pistols for the Army to use for basic pistol training. The large frame H-D, originally introduced in 1940 as an inexpensive alternative to the Colt Woodsman, had much the same feel, operation, and sights of the Colt 1911 and it was thought that these simple guns could be used to introduce new shooters to the fundamentals of pistol marksmanship before moving on to the Colt .45 ACP. Besides ease of use, the price tag was also a huge selling point; the 22 LR was cheaper by far to shoot and allowed valuable war ammunition to be sent to the front rather than stockpiled at training depots. The model H-D pistol was manufactured for the civilian market until 1955 when it was replaced by the Olympic series.

During World War II, US secret operatives found themselves in need of small caliber suppressed pistols. In response to this, the OSS (forerunner of the CIA) ordered a batch of the model H-D from High Standard featuring an integral sound suppressor. From about October 1943 to March 1944 just over 2600 H-Ds were made with integral suppressors for use by the OSS, also known as the iMS (Military-Silent) variant. These guns used an integral suppressor designed by Electric Bell Laboratories that dropped the sound levels of the pistol by approximately 20 dB, or about the sound of a cough. Delivered to the War Department, they were shipped overseas for immediate use and today a handful still exist in private collections and museums. It's believed that as many as 400 of these are still in CIA and DOD armories today.

The original 6¾ inch barrel was reduced in diameter and perforated with four rows of eleven 1/8 inch holes. The volume between the outside of the barrel and the approximately eight inch long outer tube was filled with a stack of brass screen washers to function as a packing material. Forward of the muzzle was a stack of similar screen washers with a smaller central hole to pass the bullet extending to the front cap. The intent was to replace the screen washer packing every 200-250 rounds – a task that was difficult at the armorer level and impossible in the field. Packing replacement became almost impossible if the interval extended past 500 rounds.

The outer tube and front end cap were mild steel. Original specimens were finished with a standard black oxide (“blued”) finish while subsequent units has a dark grey phosphate (Parkerize) finish.

Various models of the .22 caliber High Standard pistols, including the H-D Military have been suppressed by a number of manufacturers. One company, Automatic Weapons Co in New Mexico in the 1980s, built a number using a shorter tube with a replaceable copper packing material based loosely on the original OSS design but more similar to their suppression of the Ruger Mk1 pistol. Although simpler to repack, service was still required at intervals of 300-350 rounds.

GEMTECH’S HDMs SUPPRESSION OF THE H-D MILITARY

In 2016, the Gemtech custom shop revisited the OSS suppressed H-D Military pistol with the goal being to develop a highly efficient integrally suppressed pistol with easily serviced modern parts that required no part replacement. Further, the requirement was that the cosmetics had to be such that it was indistinguishable from the original OSS version. The resulting design is an improvement on Gemtech’s Quantum integral Ruger MK-2 pistol. While retaining velocity control to permit the use of HV .22LR ammunition, the Gemtech HDM suppressor achieves a sound reduction in excess of 35 dB as contrasted to the original OSS design of 20 dB. Photographs of the original and Gemtech replica are on the next page.

AMMUNITION RECOMMENDATIONS

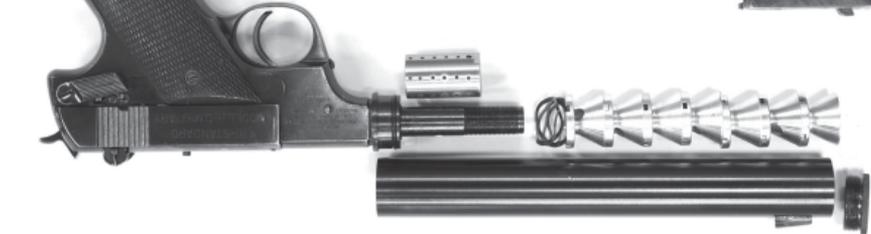
Special barrel modifications allow the use of both standard and high velocity ammunition, although the use of standard velocity loadings will be more pleasing. The weapon functions best using Gemtech subsonic .22LR ammunition with the 42 grain bullet.



**High Standard HDM
OSS Original (1944)**



**High Standard HDM
Gemtech Replica (2017)**



☆☆☆☆☆ **DANGER** ☆☆☆☆☆

☞ Before performing any 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.

☞ Always read the warning label on any cleaner or solvent, and remember that virtually all solvents are inherently dangerous and potentially toxic. Always use adequate ventilation and both skin and eye protection when using organic solvents.

CLEANING and MAINTENANCE

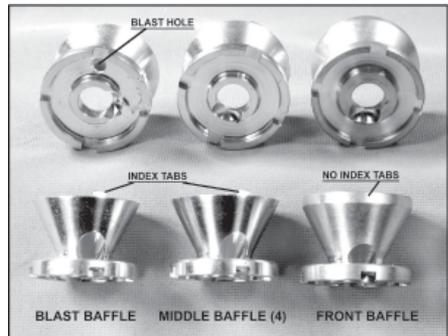
The HDM suppressor can be totally disassembled by the user for cleaning and maintenance. It is strongly recommended that disassembly and cleaning be performed at intervals of 250 rounds or less. Longer intervals will result in greater difficulty removing the baffle stack.

1. Remove the magazine from the weapon, open the action, and visually ascertain that the weapon is unloaded with nothing remaining in the chamber.
2. Remove the 8-32x1/8" setscrew from the bottom rear of the suppressor tube with a 5/64" hex key.
3. While holding the barreled receiver in one hand, firmly grasp the suppressor tube with the other hand and unscrew.
4. While apart, check (and replace if necessary) the small "O" ring gas seal in the rear mount. Replacements are available at any hardware or plumbing store and measure 3/4 inch outside diameter with a 1/16 inch thickness.
6. Unscrew the stainless steel sleeve from the barrel covering the barrel ports. Check and clean the barrel ports if necessary. If any lead is present in the port, it can be pushed out with a paper clip or other sharp object.
7. At this time, clean the bore of the weapon utilizing any method desired.

8. Unscrew the front end cap from the tube. Using a 3/8 inch wood dowel, push the baffle stack out from the rear. Gentle tapping with a small hammer is acceptable. There are seven baffles and a wave spring.
9. There are no perfect carbon solvents. Softening of the carbon deposits can be performed with LRM Carbon Cutter. A reasonable alternative is OxyClean detergent in water. A heated ultrasonic tank may be used.
10. Do not use the vinegar-peroxide internet favorite as it will damage the aluminum baffles and may damage the black oxide finish of the tube and end cap.
11. Following cleaning, rinse thoroughly in warm water followed by drying and oiling the steel parts inside and out.

REASSEMBLY

Reassembly is the reverse of disassembly. The first step is reassembly of the baffle stack. There are three different baffles (all K-type), and their stacking order is important. The five middle baffles have indexing tabs. The rear (blast) baffle differs from the others in that it has a hole in the flat portion of the "K." The front baffle differs in that it does not have the locating tabs.

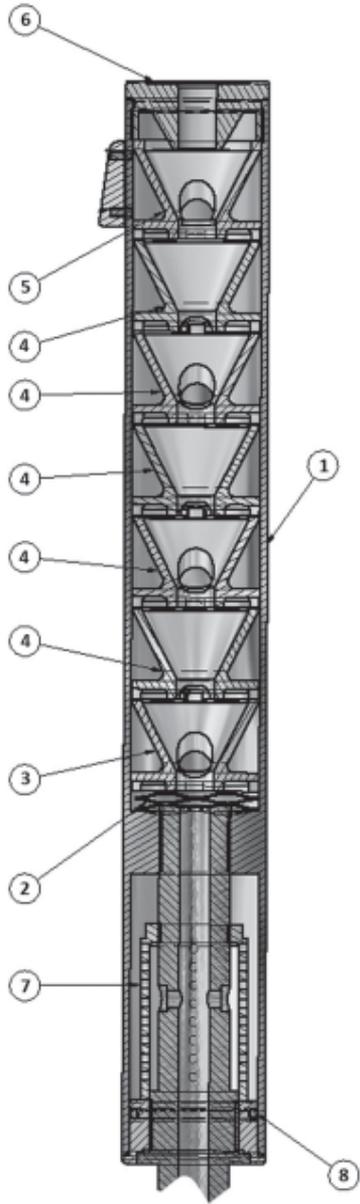


The simplest method of reassembly is to stack the baffles in the proper sequence and orientation on a 1/4 inch diameter rod or dowel approximately 9 inches long. Please refer to the drawing next page.

1. Place the front baffle, cone down, on the rod. This is the baffle with no locating tabs on the end of the cone. Orient this baffle conveniently for reference.
2. Stack the next five baffles on top of the front baffle, rotating each 180° to the one below. The tabs engage notches in the flat portion of the baffle below.
3. Stack the blast baffle, again oriented 180° to the one below.
4. Last, place the wave spring on the blast baffle. Be sure the tabs engage in the notches and the baffles are stacked smoothly.

PARTS LIST

- 1 Outer Tube Assy
- 2 Wave Spring
- 3 Blast Baffle
- 4 Middle Baffles (5)
- 5 Front Baffle
- 6 Front End Cap
- 7 Entrance Chamber Diffuser Sleeve
- 8 O-ring (Viton V1-017)



5. Without moving the stack, slide the outer tube over the stack until the entire stack is within the outer tube.
6. Invert the suppressor while holding the stack in place against spring tension and screw in the front end cap. Gently snug the end cap. It is neither necessary nor desirable to tighten it any more than light finger-tight.
8. Apply a thin layer of grease or Vaseline on the "O" ring to provide a gas seal and ease removal. Replace the "O" ring, if necessary.
9. Replace the diffuser with the open end of the cup to the rear of the weapon. The diffuser threads onto the barrel.
10. Screw the suppressor assembly onto the barrel until the witness marks align on the under side. Replace the 1/8" long 8-32 setscrew.
11. Be sure to oil all steel parts to prevent rust.

PHYSICAL SPECIFICATIONS

<u>Parameter</u>	<u>Reproduction</u>	<u>Original</u>
Suppressor Length (inch)	7.5	7.75
Barrel Length (inch)	4.1	6.75
Overall Length (inch)	14	13.78
Weapon weight (ounce)	40.2	48
Sound reduction (dB)	32	20

MATERIALS (GEMTECH HDM Reproduction)

Outer Tube, endcap: 4130 steel, black oxide finish, same as original

Diffuser: 304 stainless steel.

Baffles: 7075 aluminum (high tensile strength)

LIMITED WARRANTY STATEMENT

Gemini Technologies, Inc., dba Gemtech, warrants to the initial retail purchaser that Gemtech products will be free of defects in workmanship or material and that the product meets manufacturing specifications at the time of manufacture. This warranty is limited to the repair or replacement of the product. This express limited warranty is exclusive and no other express or implied warranty is otherwise provided.

GEMTECH MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

Product technical specifications and/or designs may be changed without notice. This warranty does not cover negligence, misuse, careless or improper handling and/or operation, abuse, unauthorized adjustments or modifications, improper mounting/installation, ordinary wear and tear, the failure to follow manufacturer instructions and/or the use of inappropriate or defective ammunition.

Gemtech shall have no liability for incidental or consequential damages and under no circumstances will Gemtech be liable for personal injury, property damage or economic loss.

This warranty and disclaimer is subject to all applicable laws some of which may limit these terms.

WARRANTY REPAIRS: Return of a Damaged Suppressor

If a suppressor is damaged due to a manufacturing defect once it has been fired, it may be returned to Gemtech for repair or replacement. Determination to repair or replace is made solely at our discretion and only after we have had the opportunity to examine and determine that the cause of the damage is due to a manufacturing defect. It is the responsibility of the customer to cover shipping costs and insurance to return the suppressor to Gemtech for inspection or repair. Gemtech will pay any reasonable shipping and insurance costs to return the unit to you.

To insure proper legal procedures for any repair returns, fill out and provide a copy of the **General Service Form** with any packages sent to us. (Visit gem-tech.com, navigate to [Customer Support/Return and Repair Policies](#) to download the fillable **General Service Form.pdf** or call 208.939.7222)

BATFE no longer requires transfer on a Form 5 to the manufacturer for repair. BATFE does require a letter accompanying the suppressor detailing the repairs or modifications required (satisfied by a completely filled out **General Service Form**). BATFE also requires proof of ownership satisfied by a photocopy of the front of the owner's Form 3, 4, or 5.

NOTE: BATFE prohibits transferring the serial number to a new outer tube in the case of damage to the tube. Tube damage rendering the suppressor unsafe will require a new suppressor.

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

