

SAFETY AND INSTRUCTION MANUAL FOR



GEMTECH[®]
SUPPRESSORS

NEUTRON[™]
7.62



WARNING: READ THESE INSTRUCTIONS AND WARNINGS CAREFULLY BEFORE USE. ALSO READ THE OWNER'S MANUAL FOR YOUR SPECIFIC FIREARM. BE SURE YOU UNDERSTAND BOTH MANUALS BEFORE USING YOUR FIREARM WITH A SUPPRESSOR ATTACHED. FAILURE TO FOLLOW THESE INSTRUCTIONS AND WARNINGS CAN RESULT IN INJURY OR DEATH TO YOU OR OTHERS AND DAMAGE TO PROPERTY.

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WARNING: THIS SAFETY AND INSTRUCTION MANUAL SHOULD ALWAYS ACCOMPANY THIS SOUND SUPPRESSOR AND IT SHOULD BE TRANSFERRED WITH THE SUPPRESSOR UPON CHANGE OF OWNERSHIP. IF THERE IS ANYTHING IN THIS MANUAL YOU DO NOT UNDERSTAND, VISIT OUR WEBSITE (GEMTECH.COM) WHERE YOU'LL FIND:

- **FREE** downloadable copies of suppressor Safety & Instruction Manuals (gemtech.com/manuals)
- **TECHNICAL** support (Gemtech.com/technical-support) • **CONTACT** information (Gemtech.com/contact-us)

If the manual and website do not answer your questions, contact Gemtech customer support or get help from someone qualified in the safe handling of firearms and sound suppressors (such as a certified firearms instructor).

PHONE: 1.833.350.9517 • E-mail: techstaff@gemtech.com

VISIT www.gemtech.com for accessories and adapters manufactured or sold by:

**Gemtech® - A Smith & Wesson Inc. Brand
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YOUR SAFETY RESPONSIBILITIES - SAFETY IS YOUR NUMBER ONE RESPONSIBILITY!



WARNING: YOU MUST FOLLOW ALL OF THESE SAFETY RULES TO ENSURE THE SAFE USE OF YOUR FIREARM AND SUPPRESSOR. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL COULD CAUSE PERSONAL INJURY OR DEATH TO YOU OR OTHERS AND DAMAGE TO PROPERTY.



WARNING: ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS IN THE OWNER'S MANUAL FOR YOUR SPECIFIC FIREARM.

- **AT HOME, IN THE FIELD, AT THE RANGE, OR ANYWHERE, THE FIRST CONCERN OF EVERY FIREARM OWNER SHOULD BE SAFETY.** To avoid injury or death to you or others, apply the following safety rules in every situation, with any kind of firearm. If you feel uncertain about any aspect of your firearm or suppressor, please contact your firearm's manufacturer or GEMTECH® before proceeding with its operation. If you are unfamiliar with firearms, you should seek formal training before using your firearm.
- **FIREARMS ARE DANGEROUS AND CAN CAUSE INJURY OR DEATH IF THEY ARE MISUSED OR USED INAPPROPRIATELY.** Safety must be the prime consideration of anyone who owns or handles firearms. Accidents are the result of violating the rules of safe firearm handling. As a firearm user, YOU accept a demanding responsibility. How seriously you take this responsibility can be the difference between life and death. There is no excuse for careless or abusive handling of your firearm. At all times, handle your firearm with intense respect for its power and potential danger.



YOUR SAFETY RESPONSIBILITIES - CONTINUED

- **NEVER ATTACH, TIGHTEN OR REMOVE A SUPPRESSOR TO/FROM A LOADED FIREARM.** Check the chamber, action and magazine to determine that no ammunition is present. Installation, use and removal of this suppressor must be accomplished in accordance with the information contained in this manual.
- **TREAT EVERY FIREARM AS IF IT IS LOADED AND WILL FIRE.** Never assume and do not take anyone's word that a firearm is unloaded - always look to verify that there is no cartridge in the chamber. A firearm is considered "unloaded" only when the action is open, the magazine is removed, and you have visually verified that there is no cartridge in the chamber. Make sure the firearm is unloaded before attempting to mount or remove a suppressor.
- **ALWAYS KEEP YOUR FIREARM POINTED IN A SAFE DIRECTION.** Never point a firearm at anyone or anything you do not intend to shoot whether or not it is loaded. This is particularly important when loading, unloading, or field stripping the gun. ALWAYS control the direction of the firearm.
- **NEVER PLACE YOUR FINGER INSIDE THE TRIGGER GUARD OR ON THE TRIGGER UNLESS YOU INTEND TO FIRE.** Ensure that other objects do not touch the trigger.
- **ALWAYS BE SURE OF YOUR TARGET AND WHAT IS BEYOND IT.** Always be sure of where the bullet will strike and shoot only where there is a safe backstop free of obstructions, water or other surfaces which can cause ricochets. Be sure your bullet will stop behind your target. Bullets can glance off many surfaces like rocks or the surface of water and travel in unpredictable directions with considerable velocity. Do not fire randomly into the sky.





YOUR SAFETY RESPONSIBILITIES - CONTINUED

- **SUPPRESSED FIREARMS ARE JUST AS DANGEROUS AS UNSUPPRESSED FIREARMS.** Because firearms with suppressors make less noise than firearms without suppressors, it is easy to forget that they are still dangerous. Always remember that a suppressed firearm requires the same safe handling as an unsuppressed firearm. Since suppressors reduce the sound signature of firearms, the shooter must confirm that persons or animals do not accidentally cross the line of fire during use.
- **DO NOT USE A SUPPRESSOR FOR FULLY-AUTOMATIC FIRE UNLESS IT IS RATED FOR SUCH USE.** Gemtech® suppressors list whether a given model of suppressor is rated for fully-automatic fire in the specifications table(s) within each Safety & Instruction manual. See page 41 of the this manual.
- **THE SUPPRESSOR CAN BECOME EXTREMELY HOT DURING USE. USE PROPER SKIN PROTECTION TO PREVENT BURNS WHEN TIGHTENING OR REMOVING A SUPPRESSOR WHILE IT IS HOT.** During use, a suppressor can become hot enough to cause burns to unprotected skin. A hot suppressor can also start a fire when contacting flammable materials or coming in proximity to flammable liquids/vapors. Always allow the suppressor to cool before handling with bare hands or allowing it near potentially flammable materials or flammable liquids/vapors. A hot suppressor is not obvious but will cause severe burns on contact with skin and will cause property damage. Plan ahead and identify a safe place to rest your suppressed firearm after firing. It is highly recommended that you let the suppressor cool off before attempting to remove it from the host firearm.
- **SEE THE AMMUNITION SECTION (p. 10) OF THIS MANUAL FOR INFORMATION ABOUT THE AMMUNITION THAT SHOULD BE USED WITH YOUR GEMTECH SUPPRESSOR INSTALLED.**





YOUR SAFETY RESPONSIBILITIES - CONTINUED


- **CHAMBERINGS AND MINIMUM BARREL LENGTH FOR THIS SUPPRESSOR.** If a suppressor is used on a firearm that does not meet the criteria spelled out for that particular model, it could result in damage to the firearm and/or suppressor and personal injury. Visit www.Gemtech.com for a current list of compatible calibers and barrel length restrictions for your specific suppressor.
- **CONFIRM THAT THE HOST FIREARM AND BARREL ARE SUITABLE FOR USE WITH A SUPPRESSOR.** To reduce the risk of a baffle strike, the user must ensure that the barrel threads are aligned concentrically with the bore axis of your host weapon's barrel. If you do not have the means to verify this, it is strongly recommended that a competent gunsmith verify it for you.
- **THE SUPPRESSOR MUST BE PROPERLY INSTALLED AND ALIGNMENT VERIFIED BEFORE USE.** Follow all installation and alignment instructions in this manual for suppressor, and mounting hardware. Verify the suppressor is aligned with the bore of the firearm barrel before use. We strongly recommend the use of a suppressor alignment gauge. If you cannot verify proper alignment, have a competent gunsmith verify it for you. Firing through a suppressor that is not properly installed could result in a baffle strike which may destroy the suppressor and possibly cause injury or death.
- **ALWAYS WEAR EYE AND HEARING PROTECTION THAT ARE SPECIFIED FOR USE WITH FIREARMS** every time you discharge your firearm. Make sure others in the vicinity of where you will be shooting do so as well. Suppressors reduce but do not eliminate the noise from a firearm discharge. When firing a suppressed firearm, you and those nearby must use appropriate hearing protection.





YOUR SAFETY RESPONSIBILITIES - CONTINUED

- **BEWARE OF BARREL BORE AND SUPPRESSOR OBSTRUCTIONS.** Be sure the firearm's bore and the suppressor are clear of obstructions before shooting. Mud, water, snow or other objects may inadvertently lodge in the bore or suppressor. An obstruction in the barrel bore or suppressor is a dangerous condition and may damage your firearm and cause injury to yourself and others.
- **NEVER DISASSEMBLE YOUR SUPPRESSOR BEYOND THE PROCEDURES OUTLINED IN THIS MANUAL.** Improper assembly of your suppressor can lead to a dangerous condition and lead to injury or death to the shooter or bystanders and damage to property. It may also void your warranty.
- **NEVER ALLOW ANY ALTERATION OR REPLACEMENT OF PARTS IN YOUR GEMTECH® SUPPRESSOR UNLESS PERFORMED BY A FACTORY TECHNICIAN USING GENUINE GEMTECH® PARTS.** If you do otherwise, improper functioning of your suppressor or firearm may occur and injury or death to the shooter or bystanders and damage to property may result.

 **WARNING: SAFE USE OF A FIREARM AND SUPPRESSOR IS YOUR PERSONAL RESPONSIBILITY AND THE FAILURE TO FOLLOW ALL OF THESE BASIC SAFETY RULES MAY RESULT IN SEVERE PERSONAL INJURY OR DEATH TO YOU OR OTHERS AND DAMAGE TO PROPERTY. YOU ARE THE MOST IMPORTANT SAFETY DEVICE WHEN IT COMES TO THE USE OF YOUR FIREARM AND SUPPRESSOR AND GEMTECH® WILL NOT BE RESPONSIBLE FOR ANY PERSONAL INJURY, DEATH OR PROPERTY DAMAGE THAT RESULTS FROM: (1) THE CRIMINAL OR NEGLIGENT USE OF THIS SUPPRESSOR; (2) A DISREGARD OF THESE SAFETY INSTRUCTIONS AND WARNINGS; (3) IMPROPER OR CARELESS HANDLING OF THIS SUPPRESSOR; (4) THE USE OF NON-STANDARD, DEFECTIVE OR IMPROPER AMMUNITION; OR, (5) IMPROPER OR NEGLIGENT MODIFICATIONS OR REPAIRS TO THE SUPPRESSOR.**





OTHER SUPPRESSOR RELATED TOPICS

- **SUPPRESSOR HUNTING NOTICE.** If hunting with a suppressor is desired, consult the applicable state department or agency responsible for enforcement of hunting laws and regulations for further information. Not all states allow hunting with a suppressor, and some states limit the types of game that can be hunted with suppressors.
- **KNOW, UNDERSTAND AND FOLLOW THE LAW.** Sound suppressors (sometimes referred to as silencers, cans, mufflers or moderators) are controlled under the National Firearms Act (NFA; 26 U.S.C. §5849 et seq.). Sound suppressors are NOT LEGAL in every state. Storing an unlocked sound suppressor at home with a person who is not registered to possess the device may be construed as “constructive possession” by the BATFE (U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives), which carries a hefty penalty by law – always keep your suppressor secured as you do with your firearms.



AMMUNITION SELECTION



WARNING: ONLY FACTORY NEW AMMUNITION OPERATING AT PRESSURES CONSISTENT WITH RECOGNIZED COMMERCIAL STANDARDS SHOULD BE USED WITH YOUR GEMTECH® SUPPRESSOR INSTALLED.



WARNING: NEVER FIRE “TRACER” AMMUNITION THROUGH YOUR SUPPRESSOR.



WARNING: USE YOUR SUPPRESSOR ONLY WITH THE CALIBERS FOR WHICH IT WAS DESIGNED.



WARNING: DISCHARGING FIREARMS IN POORLY VENTILATED AREAS, CLEANING FIREARMS, OR HANDLING AMMUNITION MAY RESULT IN EXPOSURE TO LEAD AND OTHER SUBSTANCES KNOWN TO CAUSE BIRTH DEFECTS, REPRODUCTIVE HARM, AND OTHER PHYSICAL INJURY. HAVE ADEQUATE VENTILATION AT ALL TIMES. WASH HANDS THOROUGHLY AFTER EXPOSURE.



WARNING: DO NOT USE NON JACKETED BULLETS SUCH AS 22LR WITH THE NEUTRON™ SUPPRESSOR.



WARNING: DO NOT USE BULLETS WITH A DIAMETER GREATER THAN 7.62MM (.30 CALIBER) IN THE NEUTRON 7.62. REFERENCE PAGE 41 FOR APPLICABLE CALIBERS.





AMMUNITION SELECTION - CONTINUED

- For the best results with suppressed shooting, ammunition choice is vital. Make sure to use ammunition with bullet weights that are compatible with the host firearm's rifling twist rate. To determine if the ammunition is suitable for use with your suppressor, perform the test detailed below before mounting your suppressor.
- In a place where it is safe to shoot, using safe firearm practices, start with a smooth, clean cardboard target at 25 or 50 yards. With no suppressor mounted on the firearm, shoot a five round group for accuracy. Groups should measure less than 3MOA (.75" at 25 yards or 1.5" at 50 yards). If all impacts are circular and show no signs of instability, oblong impacts (keyholing), then the cartridge is stable enough for use with a suppressor.
- Mount the suppressor following the instructions in this manual and ensure proper barrel bore/suppressor alignment.
- Shoot another five round group where the bullet impacts on the target don't overlap. Check bullet impacts for signs of instability. If the impacts are circular and the group is consistent with the previous unsuppressed group, the ammunition is suitable for use with a suppressor.
- Perform this test any time a change of ammunition brand, velocity, bullet weight or bullet design occurs to confirm the barrel of the host firearm is still capable of stabilizing projectiles to the standard stated above.





AMMUNITION SELECTION - CONTINUED



WARNING: IF OBLONG IMPACT HOLES (KEYHOLING) ARE FOUND ON THE TARGET, THIS MAY BE CAUSED BY BAFFLE STRIKES/RUBS. IMMEDIATELY STOP SHOOTING. UNLOAD AND CLEAR THE FIREARM OF ALL AMMUNITION, AND WAIT FOR THE SUPPRESSOR TO COOL TO AMBIENT TEMPERATURE. REMOVE THE SUPPRESSOR FROM THE FIREARM AND INSPECT THE ENDCAP AND APERTURE FOR COPPER STREAKS AND DAMAGE. THESE ARE SIGNS OF ENDCAP RUBS CAUSED BY MISALIGNMENT. NOW HOLDING THE SUPPRESSOR UP TO A LIGHT SOURCE LOOK DOWN THE BORE OF THE SUPPRESSOR TO MAKE SURE THERE IS NOTHING BLOCKING THE BULLET'S FLIGHT PATH AND THAT THE SUPPRESSOR BORE IS PERFECTLY CIRCULAR. IF THE BORE IS NOT CIRCULAR, OR METAL PIECES CAN BE HEARD CLATTERING INSIDE THE SUPPRESSOR, A BAFFLE STRIKE MAY HAVE OCCURRED. SEE PAGES (18 AND 19) FOR WARRANTY AND REPAIR INFORMATION.



POINT OF IMPACT SHIFTING ISSUES

- Any devices that are added to (or removed from) the muzzle of a firearm, including sound suppressors, flash hidere and thread adapters will likely cause a change in the bullet's point of impact on target. The degree of change in the point of impact will vary with the specific firearm and the device(s) added or removed. We recommend re-zeroing your firearm after any device is installed on (or removed from) the muzzle or developing hold-over and/or scope adjustments to make going from unsuppressed zero to suppressed zero.



FULL AUTO FIRING - GENERAL TOPICS



WARNING: LIMIT FULL-AUTO FIRING TO EXTEND SUPPRESSOR LIFE. THE NEUTRON™ SUPPRESSOR IS RATED FOR 90 ROUNDS OF SUSTAINED FULL AUTO FIRE, OR 90 ROUNDS IN A SINGLE FIRING SCHEDULE REGARDLESS OF RATE. IF EITHER OF THESE LIMITS ARE REACHED, ALLOW BOTH SUPPRESSOR AND FIREARM TO COOL TO AMBIENT TEMPERATURE BEFORE RESUMING FIRE, IF POSSIBLE. HIGH FIRING RATES BEYOND THESE LIMITS CAN CAUSE “COOK OFF” CONDITIONS. WHERE THE HOT BARREL CHAMBER IS HOT ENOUGH TO DISCHARGE THE CARTRIDGE BY ITSELF WITHOUT THE TRIGGER BEING PULLED.

IF A STOPPAGE OCCURS, REMOVE THE FIREARM MAGAZINE IF PRESENT, AND ATTEMPT TO CLEAR THE STOPPAGE IN 5 SECONDS OR LESS. IF YOU ARE UNABLE TO REMOVE MAGAZINE OR CLEAR THE STOPPAGE, PLACE THE GUN POINTED IN A SAFE DIRECTION SUCH THAT IF THE AMMUNITION DOES COOK OFF IT WILL SAFELY IMPACT A DESIRED BACKSTOP. ENSURE THE FIREARM CANNOT MOVE DURING THE COOK OFF. IF UNSECURED THE FIREARM MAY RECOIL IN A MANNER WHICH CHANGES THE ORIENTATION OF THE MUZZLE TO AN UNSAFE DIRECTION. WAIT UNTIL THE FIREARM'S TEMPERATURE HAS REDUCED THROUGH NATURAL COOLING BEFORE ATTEMPTING TO CLEAR THE STOPPAGE. UNDERSTAND THAT THE FIREARM CAN CONTINUE TO HAVE COOK OFFS FOR AS LONG AS ITS MAGAZINE FEEDS AMMUNITION, BECAUSE OF THIS, REMOVE THE MAGAZINE.

- NEUTRON™ external temperature will increase ~10 degrees Fahrenheit per round fired. Although designed to withstand fully automatic fire, 90 rounds of rapid fire will increase the external temperature of the suppressor to over 900 degrees Fahrenheit.
- High temperatures can cause severe burns to the shooter (if touched) and possibly ignite flammable vapors or materials that come into contact with the suppressor.



FULL AUTO FIRING - GENERAL TOPICS - CONTINUED

- Plan ahead, and have a safe spot for the suppressor and firearm to cool when conducting rapid firing schedules.
- If consistent rapid firing schedules are expected, the use of a compatible muzzle brake is recommend. A muzzle brake will prolong a suppressor's effectiveness compared to a flash hider over the same firing schedule.

ATTACHING A SUPPRESSOR TO THE HOST FIREARM



WARNING: NEVER ATTACH, TIGHTEN OR REMOVE A SUPPRESSOR TO/FROM A LOADED FIREARM. CHECK THE CHAMBER, ACTION AND MAGAZINE TO DETERMINE THAT NO AMMUNITION IS PRESENT. INSTALLATION, USE AND REMOVAL OF THIS SUPPRESSOR MUST BE ACCOMPLISHED IN ACCORDANCE WITH THE INFORMATION CONTAINED IN THIS MANUAL. FOR DETAILED FIREARM INSTRUCTIONS, REFER TO THE FIREARM INSTRUCTION MANUAL.



WARNING: BEFORE FIRING A FIREARM WITH A SUPPRESSOR INSTALLED, ALWAYS ENSURE THE SUPPRESSOR IS PROPERLY MOUNTED TO THE FIREARM BARREL, OR COMPATIBLE QUICK DISCONNECT MUZZLE DEVICE, AND THAT THE BARREL ITSELF IS SUITABLE FOR MOUNTING A SUPPRESSOR. THE BARREL SHOULDER MUST BE PERPENDICULAR TO THE BORE, AND THE MUZZLE THREADS MUST BE CONCENTRIC TO THE BORE. FAILURE TO FOLLOW THIS SAFETY WARNING COULD RESULT IN A BAFFLE STRIKE, LEADING TO INJURY OR DEATH TO THE SHOOTER OR BYSTANDERS AND DAMAGE TO PROPERTY.





ATTACHING A SUPPRESSOR TO THE HOST FIREARM - CONTINUED



WARNING: BEFORE FIRING A FIREARM WITH A SUPPRESSOR INSTALLED ALWAYS ENSURE MOUNTING HARDWARE IS IN GOOD CONDITION, IS NOT DAMAGED, OR SHOWS SIGNS OF EXCESSIVE WEAR. REPLACE THE MUZZLE DEVICE IF DAMAGE OR EXCESSIVE WEAR IS DETECTED. FAILURE TO FOLLOW THIS SAFETY WARNING COULD RESULT IN A BAFFLE STRIKE, OR BORE OBSTRUCTION, LEADING TO INJURY OR DEATH TO THE SHOOTER OR BYSTANDERS AND DAMAGE TO PROPERTY.

REMOVING SUPPRESSOR FROM THE HOST FIREARM



WARNING: NEVER REMOVE A SUPPRESSOR FROM A LOADED FIREARM. FIRST REMOVE THE MAGAZINE FROM THE FIREARM. SECOND, VISUALLY AND MANUALLY CHECK AND CLEAR THE CHAMBER AND ACTION OF AMMUNITION.



WARNING: THE SUPPRESSOR CAN BECOME DANGEROUSLY HOT WITH USAGE (> 1000° F) WHICH COULD CAUSE SEVERE SKIN BURNS UPON CONTACT. IT COULD ALSO IGNITE FLAMMABLE MATERIALS OR VAPORS IN THE ENVIRONMENT. IF THE SUPPRESSOR MUST BE REMOVED WHEN HOT, A GLOVE OR SUPPRESSOR SOCK RATED FOR, AND MADE OF MATERIAL SPECIFICALLY DESIGNED TO PROTECT AGAINST EXTREME HEAT (E.G., NOMEX) MUST BE USED. ALSO, KEEP HOT SUPPRESSOR AWAY FROM FLAMMABLE MATERIALS OR VAPORS.





CLEANING A SUPPRESSOR - GENERAL TOPICS



WARNING: NEVER ATTEMPT TO CLEAN A SUPPRESSOR ON A LOADED FIREARM. VISUALLY CHECK THE CHAMBER, ACTION AND MAGAZINE TO DETERMINE THAT NO AMMUNITION IS PRESENT.



WARNING: ONCE USED, SUPPRESSORS MAY CONTAIN LEAD RESIDUE. ALWAYS HAVE ADEQUATE VENTILATION. CLEANING FIREARMS IN POORLY VENTILATED AREAS, DISCHARGING FIREARMS, HANDLING AND CLEANING A SUPPRESSOR, OR HANDLING AMMUNITION MAY RESULT IN EXPOSURE TO LEAD AND OTHER SUBSTANCES KNOWN TO CAUSE BIRTH DEFECTS, REPRODUCTIVE HARM, AND OTHER PHYSICAL INJURY. WASH HANDS THOROUGHLY AFTER EXPOSURE.



WARNING: ALWAYS READ AND FOLLOW THE INSTRUCTIONS AND WARNINGS ACCOMPANYING ANY CLEANER OR SOLVENT. REMEMBER THAT VIRTUALLY ALL SOLVENTS ARE HAZARDOUS AND POTENTIALLY TOXIC. AVOID OPEN FLAMES, AND ALWAYS ENSURE ADEQUATE VENTILATION WHEN USING CLEANING CHEMICALS.



WARNING: NEVER MANIPULATE, ADJUST OR CHANGE ANY OF THE INTERNAL COMPONENTS OF YOUR SUPPRESSOR UNLESS SPECIFICALLY DIRECTED TO DO SO IN THIS MANUAL. IMPROPER MANIPULATION OF ANY INTERNAL COMPONENT MAY AFFECT THE SAFETY AND RELIABILITY OF YOUR FIREARM AND SUPPRESSOR AND MAY CAUSE INJURY OR DEATH.



CLEANING THE SUPPRESSOR - CONTINUED



WARNING: ANY MAINTENANCE OR SERVICE NOT SPECIFIED IN THIS MANUAL MUST BE PERFORMED BY A QUALIFIED FACTORY REPRESENTATIVE USING GENUINE GEMTECH® PARTS. IF YOU DO OTHERWISE, IMPROPER FUNCTIONING OF YOUR SUPPRESSOR OR FIREARM MAY OCCUR AND INJURY OR DEATH MAY RESULT.

- If any cleaner is introduced to the inside of the suppressor, completely blow dry with a source of compressed air so no residual moisture is left inside. Firing with liquid remaining in the suppressor can damage the suppressor due to abnormal and excessive internal pressures. Gemtech® is not responsible or liable for any damage that results from the failure to observe all applicable product warnings and instructions.

CAUTION: Care and cleaning of a suppressor's component parts consists of normal cleaning procedures using BREAKTHROUGH® Clean Technologies Carbon Pro Heavy Carbon Remover + Bore Cleaner solution and non-marring tools when necessary. However, under NO circumstances should the suppressor's components be cleaned with an abrasive material such as sand paper, Scotch Brite®, Crocus Cloth, etc. To do so will disrupt the protective surface coating layer and greatly reduce the service life because of excessive erosion that will take place when cleaning and firing.

- See the NEUTRON™ Suppressor Maintenance Section later in this manual (starting on page 35).



GEMTECH® WARRANTY STATEMENT

- Please visit www.gemtech.com for our warranty statement details.

GEMTECH® RETURNS FOR REPAIR

- Suppressors may be returned to Gemtech® for inspection and/or repair service as necessary. Contact the Gemtech customer service department to obtain a Return Merchandise Authorization (**RMA**) in order to return your suppressor. See the Contact and Shipping section of this manual for details. Returned suppressors will be evaluated upon receipt to determine whether no-charge or fee service is appropriate. Gemtech is not responsible or liable for any damage that results from the failure to observe all applicable product warnings and instructions.
- For fee service, a quote will be provided to you and services will commence upon receipt of payment. 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.
- For any repair returns, to ensure proper legal procedures are completed, please download, fill out, and provide a copy of the (**General Service Form**) document with any packages sent to us - available at this web address: www.gemtech.com





GEMTECH® SUPPRESSOR REPAIR POLICY

- GEMTECH® maintains complete repair facilities for all the suppressors it manufactures. Return authorization and shipping instructions must be obtained prior to return. Contact GEMTECH for this information. BATFE no longer requires transfer on a Form 5 to the manufacturer for repair. However, they do require a letter accompanying the suppressor detailing the repairs required. The General Service Form will fulfill the letter requirement.
- We will also require 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 will require a new suppressor.



GEMTECH® PATENT INFORMATION

- This product may be covered by one or more patents. Visit www.gemtech.com for virtual patent information.





CONTACT & SHIPPING INFORMATION FOR OWNERS WITHIN THE UNITED STATES

NOTE: A Return Merchandise Authorization (**RMA**) is the first step in the process of returning a product in order to receive repair service. Please contact GEMTECH'S Customer Service Dept. via e-mail: techstaff@gemtech.com or by phone at 1.833.350.9517 to obtain authorization to return your suppressor so we can process it quickly and efficiently. The RMA number that is supplied by GEMTECH® must be displayed on the outside of the returned product's packaging.

The Return Merchandise Authorization (**RMA**) process allows GEMTECH® an opportunity to try to diagnose and correct a customer's concerns with the product (such as ammunition problems) before it is returned. Accordingly, please contact us before returning your GEMTECH® suppressor.

CONTACT CUSTOMER SERVICE

Phone: 1.833.350.9517

E-mail: techstaff@gemtech.com

RETURNS - FOR SERVICE - ALL GEMTECH SUPPRESSORS

GEMTECH
2100 Roosevelt Ave
Springfield, MA 01104

- Call or e-mail the Customer Service Department for authorization and shipping instructions.



CONTACT & SHIPPING INFORMATION FOR OWNERS WITHIN THE UNITED STATES - CONTINUED

- Enclose a completed **General Service Form**: Which includes your full name and address (no P.O. Boxes, please), daytime telephone number, e-mail address, the serial number of the suppressor, and details of the problem experienced (stating the brand and type of ammunition used when the problem occurred) or work desired.
- Enclose a copy of the first page of the approved BATFE Form 3, 4, or 5 (as applicable) that evidences registration of the suppressor in your name.

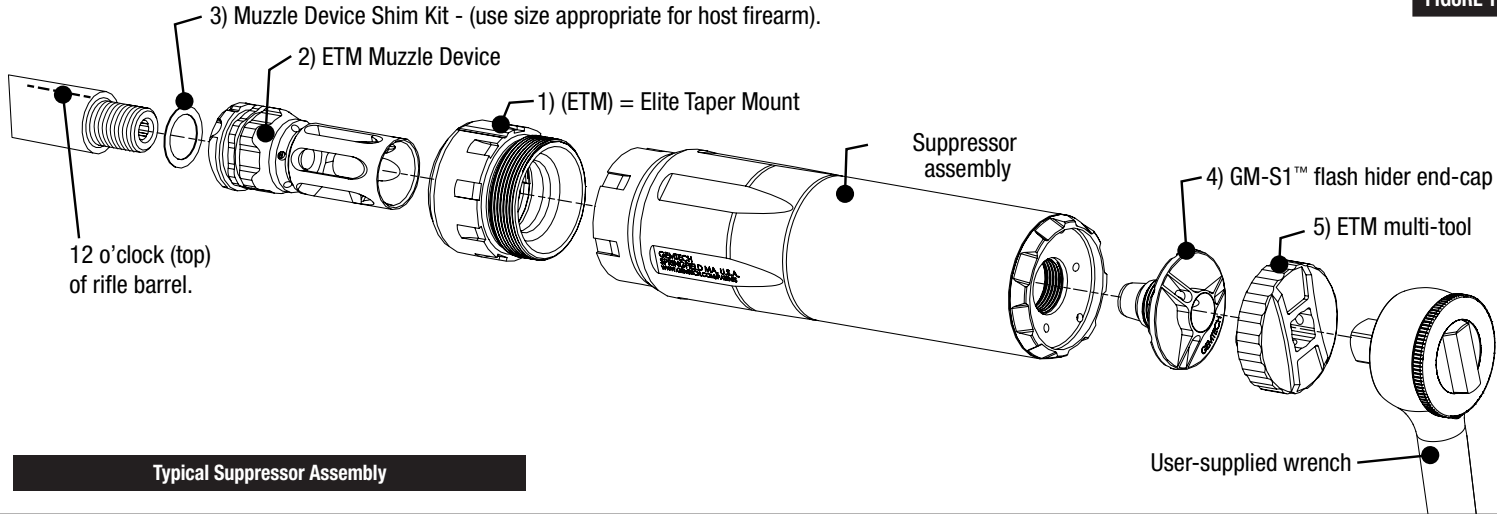
BATFE forms can be found at the following link: <https://www.atf.gov/firearms/firearms-forms>

- Record the serial number before shipping, in case you wish to check on the repair status of your suppressor.
- Place the suppressor in its original case or in a similarly secure container and pack it securely.
- The package must NOT bear any markings which indicate the identity of the contents.
- It is most important that you comply with federal, state, and local laws and regulations. The following guidelines are meant to help, but you must seek assistance from the appropriate authorities if necessary.
- Repair work will begin upon receipt and examination of the suppressor. In the case of repairs, a quotation covering the cost of the work plus transportation charges will be sent to you. Repairs will be scheduled upon receipt of payment.



SUPPRESSOR FAMILIARIZATION



FIGURE 1





SUPPRESSOR FAMILIARIZATION - CONTINUED

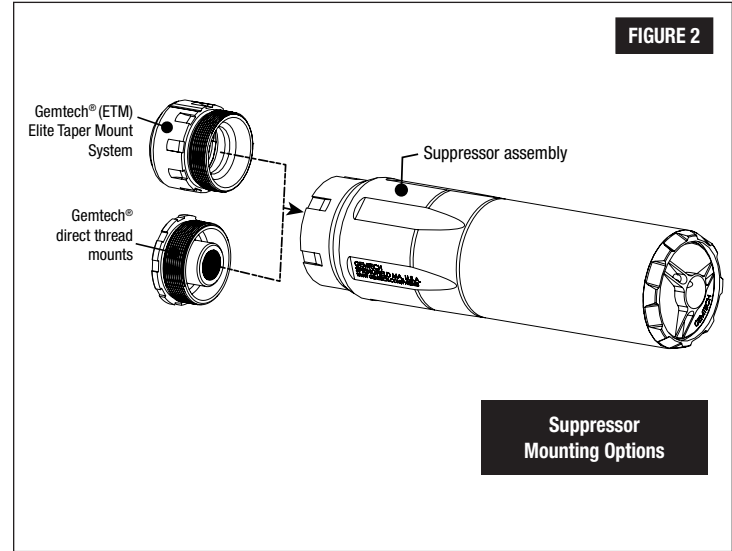
INCLUDED WITH THE NEUTRON™ SUPPRESSOR (FIGURE 1):

- 1) (ETM™) Elite Taper Mount - This requires an ETM™ muzzle device to be installed (flash suppressor or muzzle brake).
 - 2) ETM™ muzzle device - a Quickmount® for the NEUTRON™ suppressor with ETM™ installed.
 - 3) Muzzle device shim kit - Allows muzzle device to be “timed” for correct orientation.
 - 4) Removable flash hider end-cap - (Interchangeable with other Gemtech® GM-S1-style end-caps).
 - 5) The ETM™ Multi-Tool - Use to remove and install end-cap and disassemble and reassemble the ETM™ adapter.
 - 6) Spanner wrenches (two of them) - For installing and removing ETM™ mounting hardware or Thread Mount (not shown here).
 - 7) The owner’s manual, a molle suppressor pouch and a Gemtech® decal (not shown here).
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NEUTRON™ SUPPRESSOR MOUNTING OPTIONS

MOUNTING OPTIONS:

- The NEUTRON™ suppressor body utilizes 1-3/8" x 24 (1.375-24) mounting threads, and can be equipped with an array of mounting solutions (FIGURE 2):
 - 1) Gemtech quick disconnect mounts.
 - 2) Gemtech® direct thread mounts.
 - 3) Compatible aftermarket mounting solutions utilizing 1-3/8" x 24 threads.

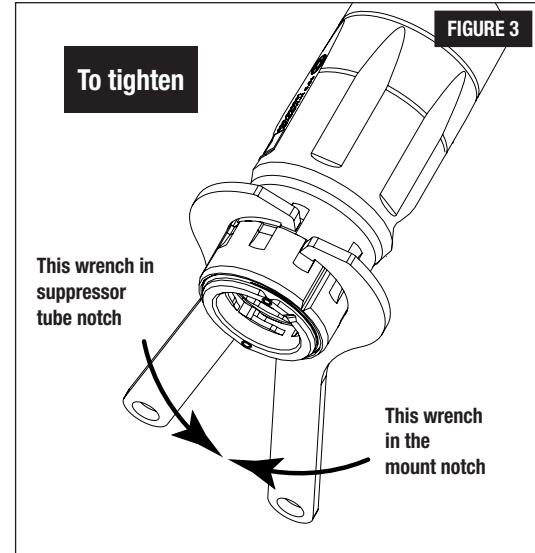


GEMTECH® NEUTRON™ SUPPRESSOR MOUNT INSTALLATION

MOUNT INSTALLATION INSTRUCTIONS ARE IDENTICAL FOR BOTH GEMTECH® DIRECT THREAD AND QUICK DISCONNECT MOUNT OPTIONS.

- Thread the mount hand tight into the base of the suppressor until the mount's threads bottom out. Avoid cross threading, and do not use any type of power tool.
- Use the included spanner wrenches to engage the locking notches on the rear of the suppressor and mount. Adjust the position of the wrenches so there is about a two inch (or less) gap between the handles (FIGURE 3). Squeeze the wrench handles firmly together until the parts are snug.

WARNING: AVOID PINCH POINTS. DO NOT ALLOW FINGERS OR OTHER BODY PARTS BETWEEN THE WRENCHES AS THEY ARE SQUEEZED TOGETHER DURING INSTALLATION OR REMOVAL OF THE SUPPRESSOR AND ITS COMPONENT PARTS.



GEMTECH® NEUTRON™ SUPPRESSOR MOUNT REMOVAL

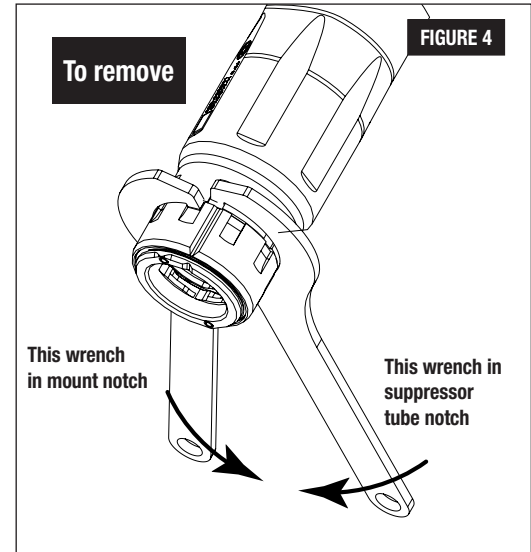
MOUNT REMOVAL INSTRUCTIONS ARE IDENTICAL FOR BOTH GEMTECH® DIRECT THREAD AND QUICK DISCONNECT MOUNT OPTIONS.

- Use the included spanner wrenches to engage the locking notches on the rear of the suppressor and mount. Adjust the position of the wrenches so there is about a two inch (or less) gap between the handles (FIGURE 4). Squeeze the wrench handles firmly together until the parts are broken free from one another.



WARNING: AVOID PINCH POINTS. DO NOT ALLOW FINGERS OR OTHER BODY PARTS BETWEEN THE WRENCHES AS THEY ARE SQUEEZED TOGETHER DURING INSTALLATION OR REMOVAL OF THE SUPPRESSOR AND ITS COMPONENT PARTS.

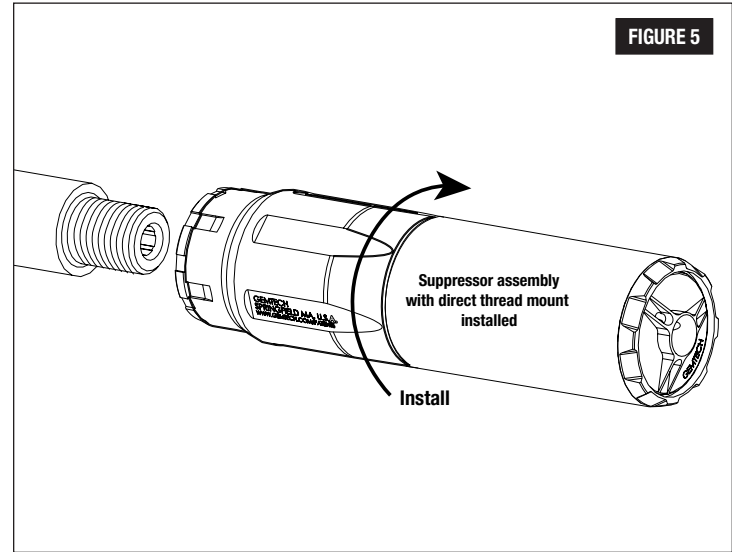
- The suppressor is now ready to accept an alternate mounting system.



MOUNTING NEUTRON™ SUPPRESSOR ONTO FIREARM

GEMTECH® DIRECT THREAD MOUNT (FIGURE 5):

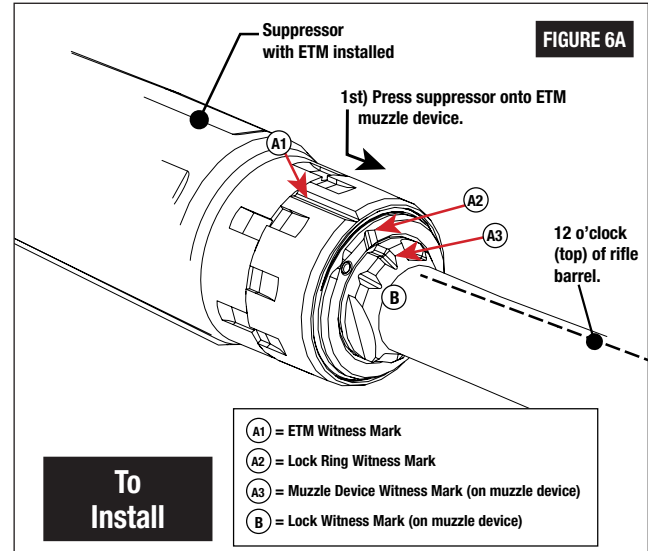
- After confirming that your host firearm is unloaded and the chamber and action are free of ammunition, remove any muzzle devices from the firearm (including shims and/or crush washers), exposing the threads at the muzzle. Clean and degrease the barrel threads with rubbing alcohol.
- Being careful not to cross thread the parts, screw the direct thread mount equipped suppressor onto the barrel's muzzle threads hand tight until the suppressor bottoms out against the barrel's shoulder.
- Use of the spanner wrench to further tighten the suppressor to the host firearm is recommended.
- Check tightness periodically (after allowing suppressor to cool) as all direct thread mounted suppressors will loosen with use.



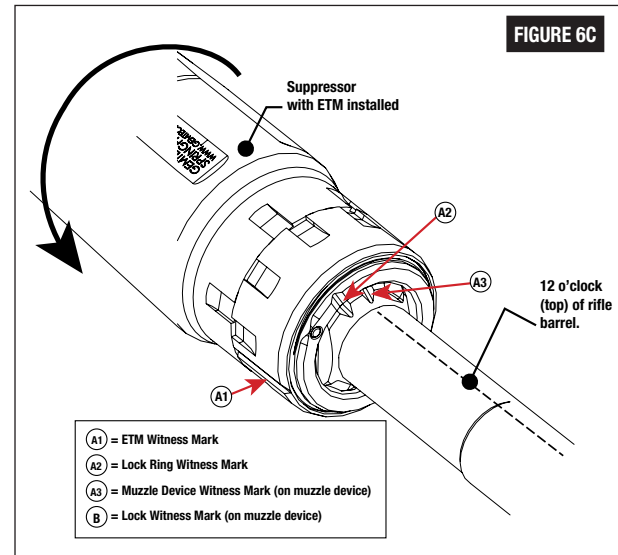
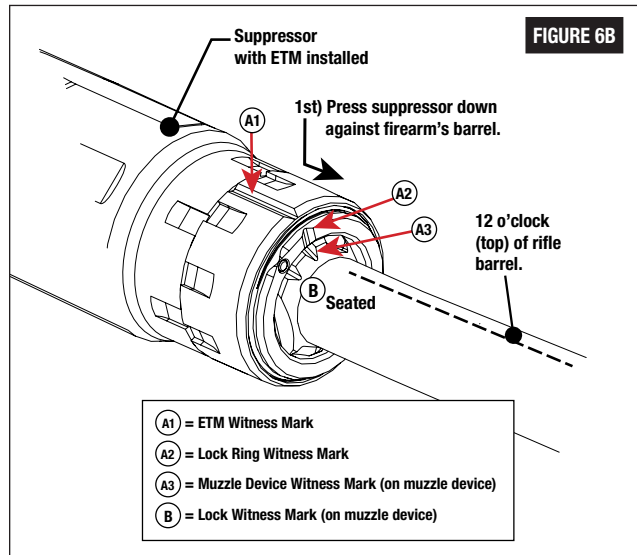
MOUNTING NEUTRON™ SUPPRESSOR ONTO FIREARM - CONTINUED

GEMTECH® ETM™ (ELITE TAPER MOUNT)

- The ETM™ is Gemtech's proprietary mounting system which requires the use of an ETM™ muzzle device. The muzzle device must be properly installed onto the host firearm's barrel before the ETM™ equipped suppressor can be used. Reference ETM™ muzzle device installation instructions contained in this manual.
- Align the witness marks on the ETM™ Body, Lock ring, and muzzle device. (FIGURE 6A)
- Slide the suppressor over the ETM™ muzzle device until it is completely encapsulated and it bottoms out (FIGURE 6B).
- Rotate the suppressor until the clicking noises stop, and it cannot be rotated any further. The witness mark on the lock ring (A2) will be aligned with the "Lock" witness mark on the muzzle device (B) in (Figure 6C).
- Apply some removal force to ensure the suppressor is securely mounted to the muzzle device and excess movement is not detected.

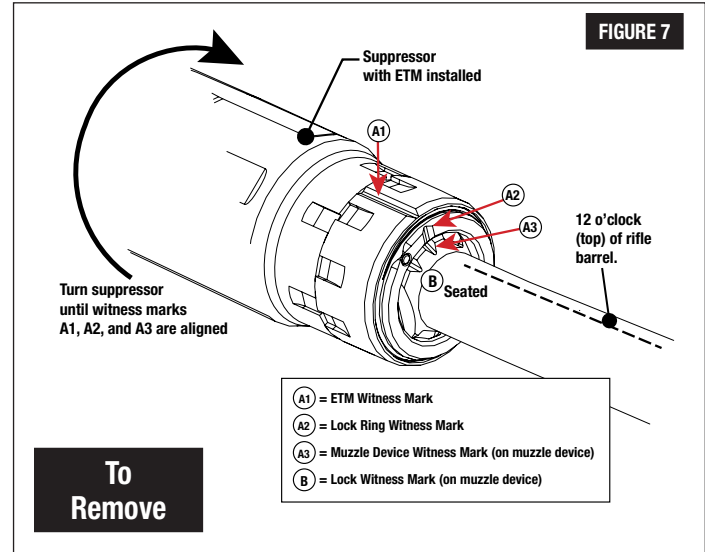


MOUNTING NEUTRON™ SUPPRESSOR ONTO FIREARM - CONTINUED



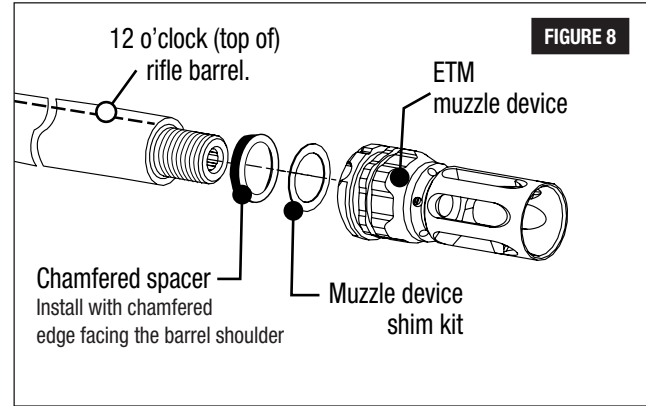
REMOVING THE ETM™ EQUIPPED SUPPRESSOR

- To remove the suppressor rotate it in the opposite direction until the witness marks on ETM™ mount (A1), lock ring (A2) and muzzle device (A3) are all in alignment at 12 o'clock top dead center of the barrel (FIGURE 7). Pull the suppressor straight off to remove it from the muzzle device.



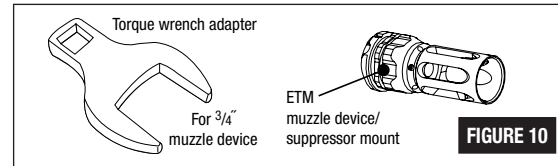
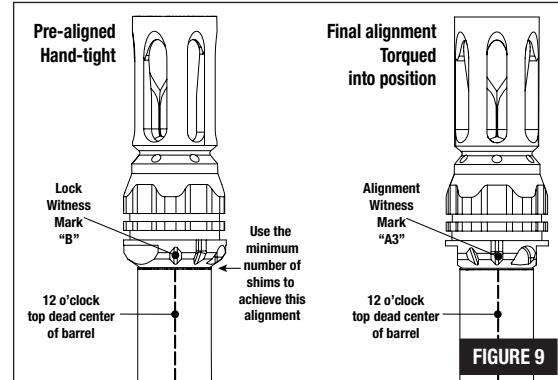
INSTALLING/TIMING THE ETM™ MUZZLE DEVICE

- For proper installation and optimal performance ETM™ muzzle devices must be timed using a Gemtech® precision shim kit.
- Before installing the ETM™ muzzle device confirm that your host firearm is unloaded, and the chamber and action are free of ammunition.
- Remove any muzzle devices from the firearm (including shims and/or crush washers), exposing the threads at the muzzle. Clean and degrease the barrel threads and the muzzle device with rubbing alcohol.
- Use the single thick 2mm chamfered spacer first, install it with the chamfered edge facing the barrel shoulder (FIGURE 8).
- Thread the ETM™ muzzle device onto the barrel threads hand tight until it bottoms out on the chamfered spacer and barrel shoulder.



INSTALLING/TIMING THE ETM™ MUZZLE DEVICE - CONTINUED

- Use as few of the included Gemtech shim spacers as possible to align the small lock witness mark (B) on the muzzle device with 12 o'clock top dead center on the barrel (FIGURE 9). For best fitment, sandwich thinner shims between thicker shims or chamfered spacer.
- Once the correct alignment is established (by hand), remove the ETM™ muzzle device from the barrel, and apply a high-temperature thread locking compound (such as Rocksett™ brand adhesive) to the threads.
- Using a torque wrench and 3/4" adapter (FIGURE 10), tighten the muzzle device to the barrel with 30-40 ft/lbs of torque. The exact value of torque is not as important as achieving correct alignment. Correct alignment is achieved when the alignment witness mark on the muzzle device is at 12 o'clock top dead center of the barrel. See (FIGURE 9) for correct alignment.
- Once the proper muzzle device alignment has been achieved let the thread locking compound cure for 24 hours before shooting.



NEUTRON™ SUPPRESSOR MOUNT INSTALLATION - USING 3RD PARTY MOUNTING SYSTEM

MOUNTING - USING AFTERMARKET SYSTEM(S):

- The NEUTRON™ is compatible with aftermarket mounting solutions available from major brands that utilize 1-3/8" x 24 (1.375-24) mounting threads.
- When using these mounting systems, it is imperative that you follow all instructions provided by the manufacturer of the system.
- After installation of the suppressor, confirm proper alignment (see page 34 for details).

NOTE: Gemtech® is not liable for damages, and Gemtech® suppressor warranty does not cover damage to suppressor, firearm, or other equipment caused by improper installation of third party mounting hardware or defects in third party mounting hardware.

WARNING: BE SURE ALL COMPONENTS THAT YOU WISH TO AFFIX TO THE SUPPRESSOR ARE COMPATIBLE WITH THE SUPPRESSOR AND DO NOT INHIBIT SAFE OPERATION, PARTICULARLY PROPER ALIGNMENT AND MOUNTING SECURITY. JUST BECAUSE A THIRD PARTY MOUNTING SOLUTION MAY UTILIZE 1-3/8" X 24 (1.375-24) MOUNTING THREADS IS NOT A GUARANTEE OF COMPATIBILITY AND SAFE OPERATION. IT IS YOUR RESPONSIBILITY TO UNDERSTAND AND FOLLOW ALL OF THE INSTRUCTIONS IN THIS MANUAL AS WELL AS THOSE WHICH MAY BE SUPPLIED WITH YOUR THIRD PARTY MOUNTING HARDWARE. CONSULT GEMTECH® CUSTOMER SERVICE AND THE MANUFACTURER OF THE ACCESSORY MOUNTING SOLUTION, OR CERTIFIED GUNSMITH TO VERIFY COMPATIBILITY BEFORE USING YOUR GEMTECH SUPPRESSOR WITH A THIRD PARTY MOUNTING SOLUTION.

CONFIRMING SUPPRESSOR ALIGNMENT



WARNING: NEVER CONFIRM ALIGNMENT OF A SUPPRESSOR ON A LOADED FIREARM. REMOVE THE MAGAZINE FROM THE FIREARM AND EJECT ANY CHAMBERED ROUND. VISUALLY AND MANUALLY CHECK AND CLEAR THE CHAMBER AND ACTION OF AMMUNITION.



- Visually inspect suppressor alignment by confirming it is mounted straight to the centerline of the bore, and by looking through the barrel's chamber through to the muzzle end.
- Confirm nothing is blocking the bullet flight path through the suppressor when mounted and the muzzle aperture is completely circular.
- If the aperture is not completely circular, and what looks like shadowing or half-moons are visible the suppressor will need to be realigned.
- Additionally Gemtech recommends barrels with threads machined to SAAMI specification and the use of a suppressor alignment gauge. Follow all instructions in the gauge owner manual to insure proper alignment.
- During firing, check regularly to ensure the suppressor remains securely attached to the host firearm. Misalignment of the suppressor with the bore may cause the bullet to contact internal suppressor parts; damaging or destroying the suppressor or firearm and causing injury.



NEUTRON™ SUPPRESSOR MAINTENANCE

- The NEUTRON™ suppressor requires limited maintenance to preserve peak performance. Maintenance is also a great time to inspect the condition of your suppressor, it's mounting components, and accessories. When cleaning, orient the suppressor so that excess debris does not fall into the suppressor. Pay attention to copper fouling, and prevent large buildup. Use non-marring tools on external surfaces to avoid damaging the finish. Gemtech recommends the use of Breakthrough® Clean Technologies Carbon Pro-Heavy Carbon Remover+ Bore Cleaner to clean the suppressor, mounting systems, and accessories.

We recommend that the suppressor be removed from the host firearm every 600 rounds at a minimum, and it's muzzle device cleaned.

- 
- With firearm pointing in a safe direction, remove any magazine and empty the chamber. You can then proceed to remove the suppressor. Remove the suppressor from the host firearm by following the instructions listed in the suppressor mounting and removal section of this manual.
 - Using brushes, picks, and Breakthrough® Carbon Pro, remove carbon and copper residue from the ETM™ muzzle device and surfaces inside of the mount.
 - Remove the suppressor end-cap and clean fouling from thread surfaces and gas vents.
 - Wipe all surfaces with a clean rag to remove debris and excess cleaning solution. Make sure all threaded surfaces are clean and dry before reassembling the suppressor into the desired configuration.
- 



NEUTRON™ SUPPRESSOR MAINTENANCE - CONTINUED

- Confirm that all mounting components are properly tightened, and nothing has unintentionally loosened during the maintenance process before using your suppressor.
- Confirm proper barrel/suppressor alignment before firing the firearm with suppressor mounted. See the suppressor alignment section of this manual.

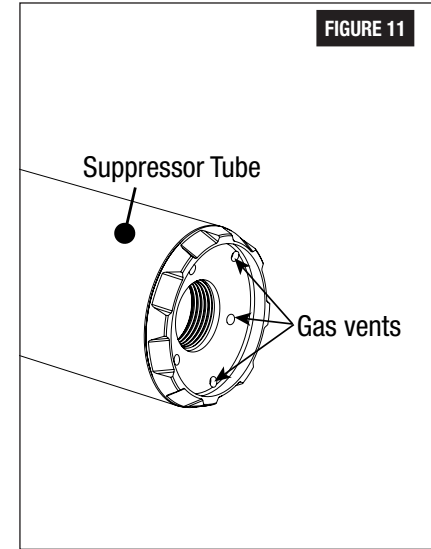
ARMORER LEVEL CLEANING: Deep cleaning of the NEUTRON™ suppressor itself is optional, but recommended.

- Remove the end-cap and ETM™ adapter from the suppressor, and disassemble the mounting system.
- Place the suppressor muzzle up (and its components) in a container that will hold liquid.
- Fill container with Breakthrough® Carbon Pro until the suppressor and components are submerged and let soak for one hour.



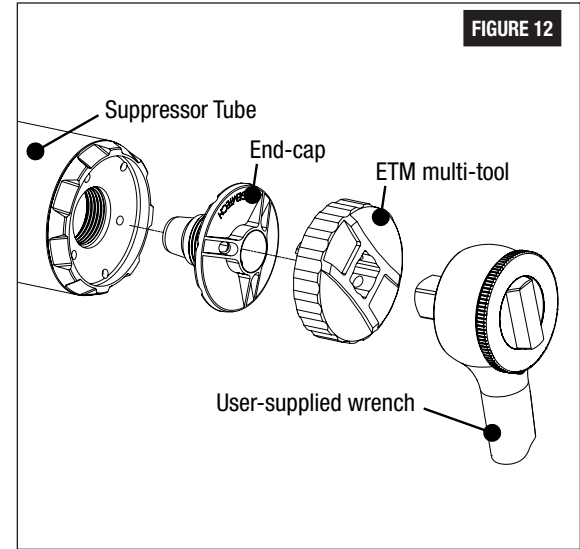
NEUTRON™ SUPPRESSOR MAINTENANCE - CONTINUED

- Clean ETM™ following the instructions listed in this manual. If using a different mounting system follow the manufacturer's instructions.
- Use cleaning picks to remove copper build up in blast chamber and gas vents (FIGURE 11).
- Wipe fouling off suppressor and components and dry them using a cloth and compressed air if desired. Allow suppressor and components to dry before reassembly.
- This process can be repeated annually, or every 1200 rounds, if desired.



GM-S1™ FRONT END-CAP REMOVAL AND INSTALLATION

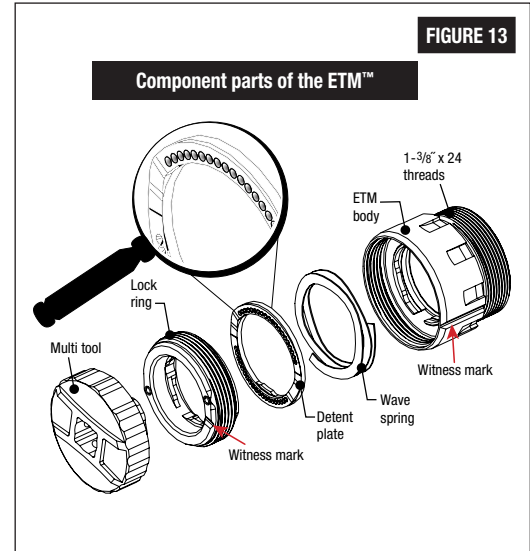
- Using your ETM™ multi-tool, align the cutouts with the “tines” of the end-cap and rotate counter-clockwise (as viewed from the muzzle) to remove flash hider endcap. If required, use a 3/8” socket wrench to aid in the removal (FIGURE 12).
- Make sure all mounting threads are clean before reassembly.
- Being careful not to cross-thread the parts, screw the end-cap onto the suppressor tube until the end-cap bottoms out against the tube. Tighten the end-cap until it is snug using the multi-tool (do not use a wrench to tighten).



ETM™ DISASSEMBLY / ASSEMBLY

To ensure peak performance the ETM™ will need to be disassembled and cleaned every (every 1200 rounds). The ETM™ does not need to be removed from the suppressor in order to be disassembled.

- Insert the ETM™ multi-tool into the mount body and rotate it counter-clockwise to remove the ETM™'s lock ring, detent plate and spring.
- Clean these components with non marring tools and Breakthrough® Carbon Pro. Wipe all components with a clean rag to remove debris and excess cleaner before reassembly.
- Reassembly of the ETM™ is the reverse of disassembly. Insert the spring first followed by the detent plate.
- Place the detent plate over the spring with the dimpled side facing up away from the spring (FIGURE 13), and with its tabs sitting in the ETM™ body's notches.
- With it's witness mark facing up away from the ETM™ body (FIGURE 13) thread the end plate into the ETM™ body using the multi-tool. The lock ring is seated to the correct depth when the multi-tool body makes contact with the ETM™ body.





ETM™ DISASSEMBLY / ASSEMBLY CONTINUED

- The witness marks should be close to alignment at this stage, make small corrections as needed to line up both marks on the lock ring and ETM™ body.
- To confirm proper assembly, mount the ETM™ to an unloaded and cleared firearm with an ETM™ muzzle device installed. If assembled correctly the ETM™ will mount rigidly without excess movement. If excess movement is detected adjust lock ring depth, realign the witness marks and reattempt until the ETM™ mounts properly.



CALIBER/BARREL LENGTH RATINGS

CALIBER	MINIMUM BARREL LENGTH	FULL-AUTO RATED
5.7x28mm	3" Minimum Barrel Length	Yes
5.56 NATO / 223 REM	7" Minimum Barrel Length	Yes
6mm ARC	7" Minimum Barrel Length	Yes
6.5 Creedmoor	16" Minimum Barrel Length	No
300 BLK	3" Minimum Barrel Length	Yes
308 WIN	12" Minimum Barrel Length	No
7.62x39mm	7" Minimum Barrel Length	Yes
300 WIN MAG	16" Minimum Barrel Length	No

NOTE: For the most up to date caliber compatibility information for NEUTRON 7.62 or any other Gemtech Suppressor visit Gemtech.com



MY NEUTRON™ SUPPRESSOR MAINTENANCE LOG

MY SERIAL NUMBER: _____

PURCHASE DATE: _____

MM/DD/YY	ROUND COUNT	MM/DD/YY	ROUND COUNT
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____





MY NEUTRON™ SUPPRESSOR MAINTENANCE LOG

MY SERIAL NUMBER: _____

PURCHASE DATE: _____

MM/DD/YY	ROUND COUNT	MM/DD/YY	ROUND COUNT
_____	_____	_____	_____
_____	_____	_____	_____
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