NOTES

TURBODYNE™

OPERATIONAL INSTRUCTIONS FOR SOUND SUPPRESSOR MODEL

TURBODYNE™

MANUFACTURED BY

AWC SYSTEMS TECHNOLOGY

Phoenix, AZ

TELEPHONE 623 780 1050 FACSIMILE 623 780 2967

WWW.AWCSILENCERS.COM

TurboDyne Rev. 1/2013

GENERAL DESCRIPTION

AWC Systems Technology has been producing .50 caliber rifle suppressors since 1984. Early units were built exclusively for State Arms Gun Co. These units were constructed from 4100 series steel. Sizes were in the 3 inch diameter, 20 inch long range prior to the development of the Turbodyne™ in 1992. Today's Turbodyne™ Suppressor employs a more sophisticated baffle and chamber design that has allowed us to maintain very high performance in a smaller envelope making deployment of a .50 caliber suppressed rifle more practical.

The Turbodyne™ suppressor is an example of technology taken to the extreme. The suppressor design manages to cause the retention of the gases for a period of time causing the sound emitted to be a thump rather than a bang. The suppressor is 100% stainless steel and does not utilize any packing or wipes. Bullet impact can be heard and is the primary source of sound. The Turbodyne™ also functions as a recoil reducer allowing the user to maintain excellent target contact visibility. Felt recoil can be minimized by firing the .50 caliber rifle in the prone position, using bags or bipod for a rest. A bench firing position will increase felt recoil. CAUTION: If replacing a muzzle brake with the suppressor, felt recoil may increase. Eye relief for scoped rifles should be considered before firing.

AMMUNITION

We recommend currently produced ammunition. Like the manufacturers of the rifles, we would discourage use of surplus foreign ammunition which may be of questionable quality. We would also caution against the use of WWII and Korean war vintage ammunition. The propellant chemistry could have changed due to storage under less than proper conditions, causing increased chamber pressures. Consult the manufacturer of your rifle for their specific recommendations.

REPAIR POLICY

Should the sound suppressor require repair or modification, the owner should contact AWC Systems Technology by telephone because many problems can be handled without returning the unit. If it is determined that the suppressor should be returned to the manufacturer for repair or modification, our representatives will provide you the appropriate shipping location.

If repairs are required due to a defect in manufacturing or materials within the warranty period, there will be no charge for repairs. Otherwise, the cost may include both time and materials required.

LIMITED WARRANTY

AWC warrants that all sound suppressors manufactured by them are free of defects in materials or workmanship for a period of one year from the date of the initial transfer from the manufacturer to first transferee. The warranty covers defects discovered during normal use of the sound suppressor and **excludes** the **exterior finish**. The company further disclaims liability for damage to internal parts caused by disintegration of partially jacketed bullets, neglect, abuse, and damage due to misalignment of the suppressor when used on a weapon other than the one to which the suppressor was designed to be fitted or as indicated within this manual.

The warranty is voided if the suppressor is attached to an improperly threaded barrel. The warranty is also voided by unapproved modification of the suppressor.

AWC Systems Technology further denies any liability resulting from the use, abuse, or criminal misuse of this product.

MAINTENANCE

The Turbodyne™ suppressor is constructed from 100% corrosion resistant stainless steel. Users may periodically flush the suppressor with hot soapy water to remove propellant particles. Draining is best accomplished from the barrel mounting end. Complete drainage/drying is not necessary. If you have access to compressed air you can blow compressed air through both ends of the suppressor after cleaning. Also after cleaning it is important to brush mounting threads on the suppressor to insure they are free of debris.

AWC offers a suppressor water jet cleaning tool to assist in the cleaning process which attaches directly to standard water hose spec threads. The tool is not a regulated item and can be purchased and shipped directly to a user at any address.

*DO NOT ATTEMPT DISASSEMBLY OF THE SUPPRESSOR.

These procedures are intended to insure a long service life of your AWC TurboDyne Suppressor System.

MOUNTING PROCEDURES

The installation of the Turbodyne™ suppressor is easiest with some assistance. Have a helper place the rifle's butt plate on the ground, with the muzzle pointed straight up (90º). The helper must maintain a firm grip on the rifle for the next step. You may then place the threaded end of the suppressor in line with the barrel muzzle thread. Screw the suppressor all the way onto the barrel, hand tight. Next, loosen the suppressor slightly, turning the suppressor counter clockwise approximately 45º. Then, in a brisk snapping motion, rapidly turn the silencer to a full stop. This snapping action assures proper seating and mating of the suppressor to the barrel. **DO NOT use the original flash suppressor lock washer or bushing if supplied by the rifle maker.** These washers or bushings may cause an alignment error of the bore of the barrel to the bore of the suppressor. Misalignment will cause poor accuracy performance and damage to the suppressor. Never fire more than 10 rounds without checking to insure you have a solid mating of the suppressor to the barrel. You should have a set of Nomex gloves to protect your hands from the intense suppressor heat.

Installation on rifles with a locking collar

To install: Thread the locking collar on in its customary orientation, bringing it down the shoulder on the barrel. With the rifle upright, thread the TurboDyne down until it stops on the face of the barrel, then back off 1/4 turn and vigorously spin the suppressor into lock up. Bring the locking collar up against the rear of the suppressor and gently snug it down using the proper sized wrench. The locking collar is used for aesthetic purposes covering the exposed threads. Do not over tighten, as this can cause the suppressor to be misaligned.

To remove: Using the proper sized wrench, turn the locking collar in the opposite direction as you would to remove the suppressor. This will allow the suppressor to be removed from the barrel.

RATE OF FIRE

The .50 caliber cartridge produces extreme heat energy. All metals have their limits to heat tolerance. Although 304 stainless steel is highly accepted for sound suppressor construction certain heat considerations must be employed. Overheating of the unit can cause warping of the suppressor. Warping can cause misalignment, resulting in poor accuracy or damage to the suppressor.

The best rule of thumb is: Rapid Fire (10 rounds in 1 minute) - Allow the barrel and suppressor to cool for a minimum of 10 minutes. Slow Fire (10 rounds in 10 minutes) - Allow the barrel and suppressor to cool for at least 5 minutes. After the cooling period, always check the suppressor to insure that loosening has not occurred. Again, you should have a set of Nomex gloves to protect your hands from the heat of the suppressor. Also, inspect the bullet exit area of the suppressor for any “nicks” or “bulges”. If “nicks” or “bulges” are present discontinue firing and contact AWC Systems Technology for further instructions.

IMPORTANT NOTE

Remember, the suppressor works as a heat sink. This is an important component of its ability to reduce sound. Since it is a heat sink, and is attached to a barrel that heats and cools at a different rate, condensation (moisture) may develop in the bore. Also, it is an accepted fact that barrel life can be significantly extended by properly cleaning the bore after each 5 round firing session. We recommend that when practical, the barrel be properly cleaned after each 5 round firing session. The suppressor should be removed prior to cleaning the rifle bore.

HEAT, MIRAGE & RECOIL VS. ACCURACY!

HEAT & MIRAGE

The silencer and barrel of the .50 caliber rifle will become increasingly hotter with each round fired during a shooting session. All trained precision shooters know that Heat & Mirage are a primary obstacle to precise bullet group placement. We believe that 3 rounds of fire within 2 minutes will cause the barrel and suppressor to produce heat waves/shimmer/mirage in front of the rifle optics to the extent that precise accuracy will be adversely affected. Five rounds of fire may cause sufficient heat generated mirage to cause the bullet to miss a military silhoutte target at 500 meters. Remember – Heat is the enemy. Allow the system to cool.

RECOIL

All trained precision shooters know that in order to obtain tight bullet grouping one must never move their head, eye, or any part of their body between the time the first and last shot is fired. The .50 caliber rifle generates tremendous recoil. The only acceptable firing position, in our opinion, is PRONE. Bench rest positions allow for too much upper torso movement to the rear during recoil. The shooter using the bench rest position will likely be forced to “recover” his original position after each shot. Accuracy is, therefore, compromised. It is also more painful to absorb all of the recoil with only the upper body torso. On the other hand, the prone position puts the entire body of the shooter on the same axis as the recoiling rifle. Recoil energy is absorbed through the entire body of the shooter. CAUTION: If replacing a muzzle brake with the suppressor, felt recoil may increase. Eye relief for scoped rifles should be considered before firing.

For shooters not having had formal training in the military or by a NRA certified instructor, we suggest contacting the NRA for a referral to a competent instructor.