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HYDRA-AL™ TECHNICAL MANUAL



SERIES
HYORA



REASSEMBLY

Please observe the diagram for assistance with parts identification or baffle orientation. Thread the suppressor tube on to the 17-4PH SS rear end cap until it shoulders up hand tight. Assemble the baffle stack with the interior cones facing the rear end cap. The baffles should stay together relatively well and there should be 10 baffles in the stack. If there are less than 10...start looking on the floor.

The patent pending ORION™ baffles are all identical and it is not critical to line up the ports or clips in the cones. When you have the baffles stacked up in the correct orientation you can now insert them into the front of the tube ensuring they seat against the taper on the inside of the rear end cap. Now insert the front end cap and tighten it hand tight using the assembly / disassembly tool provided.

LIMITED LIFETIME WARRANTY

Subject to restrictions CGS Suppressors LLC warrants our suppressors for Eternity to be free from any manufacturing defects. At our sole discretion we will repair or replace a suppressor in the unlikely event that you received a defective product. This warranty does not apply to certain conditions or acts. It is at the sole discretion of CGS Suppressors LLC to determine if a particular defect or condition is covered by this warranty. CGS Suppressors LLC and our affiliates are not responsible or liable for the improper, illegal or misuse of this suppressor. This suppressor must only be used as per the accompanied Technical Manual, with high quality factory-loaded ammunition.

If a repair is necessary to one of our products the owner must first contact CGS Suppressors LLC at 575-736-2474. A representative of CGS Suppressors

Double check to make certain the bore of the suppressor is not obstructed and the tube and end caps are properly seated and oriented correctly. The front end cap may sit from close to flush, up to 1/8" from the end of the tube. There should be no visible threads when the suppressor is correctly assembled. The front end cap serves to compress the baffle stack taper seals over the length of the suppressor and should not be overtightened. Hand tight with the supplied tool is sufficient.

DISCLAIMER

CGS Suppressors LLC is not responsible or liable for damages or injuries as a result of the misuse or unintended use of its products. This product, while not potentially dangerous individually, when coupled with a firearm can be extremely dangerous. Adequate safety measures and precautions must be taken in order to prevent damage to the host firearm, damage to the suppressor, or bodily injury including death. Please contact CGS Suppressors LLC with any questions prior to use.



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will make arrangements for the proper and legal return of the product at our shipping expense. Please do not ship anything to CGS Suppressors LLC without first contacting CGS Suppressors. Any suppressor shipped to CGS Suppressors LLC for repair or replacement must be accompanied by the approved BATF Form applicable to the suppressor you are sending. Also include a detailed statement about the problem you are having with the product as well as any information you can provide about events leading up to the problem. Include details in reference to ammunition and host weapon as well.

CONTACT INFORMATION

You can contact CGS Suppressors LLC by telephone directly at 575-736-2474 between the hours of 8-5 MST Monday through Friday. We will most likely be closed most holidays. You can also contact Sales@cgsgroup.com or look for more specific contact information on our website www.cgsgroup.com

Our mailing address is: CGS Suppressors LLC
206 Fletcher Road
Artesia NM 88210

Please don't hesitate to contact us at anytime. We are here to provide the best customer service we can and we truly appreciate you purchasing our products and supporting our company.

INTRODUCING THE CGS SUPPRESSORS HYDRA-AL™

Congratulations and Thank You for purchasing the cutting edge HYDRA-AL™. The CGS Suppressors LLC HYDRA-AL™ is a compact, lightweight, user serviceable suppressor designed for .22 Caliber RIMFIRE firearms. Designed, manufactured, and assembled by hand in Artesia New Mexico, to the highest standards.

The HYDRA-AL™ weighs in at just over 3.53 ounces and as far as silencers go, it does not get much lighter than this. In addition to its cloudlike weight, the HYDRA-AL™ sports a compact 5.6" long build that is just less than 1" in diameter.

Our forward thinking engineers created an original baffle design which we call the ORION™ baffle due to its space capsule reminiscent shape. The Taper Seal Technology employed in the patent pending ORION™ baffle design makes HYDRA-AL™ maintenance beyond convenient.

Each individual baffle is machined with a tapered engagement to the next baffle. This integrated Taper Seal Technology ensures that carbon build-up within the tube is a thing of the past. The stack is easy to assemble, does not require alignment, and can be easily removed from the tube for cleaning.

Then there is the sound, or lack thereof. Nothing is more impressive about the HYDRA-AL™ than the sound attenuation performance. This revolutionary baffle design is just a hint at what CGS Suppressors LLC is capable of. The HYDRA-AL™ is a groundbreaking .22LR RIMFIRE unit combining unparalleled performance, unmatched maneuverability, and significant end user value.

We are proud of this product. We think the HYDRA-AL™ is amazing and we hope you do as well. Thank you again for supporting Chaos Gear Supply and please feel free to contact us at any time with any questions or concerns!

your host weapon safe, please refer to the user manual applicable to your host firearm. Absolutely do not install your suppressor on a host weapon that has not first been made completely safe.

AMMUNITION RECOMMENDATIONS

The HYDRA-AL™ is caliber specific and was designed for up to and including a semi-auto firing schedule of .22 long rifle ammunition ONLY. We would advise you to only utilize high quality factory loaded ammunition with our products as the ammunition will have a significant impact on the sound performance and accuracy of your host weapon / suppressor combination.

Less expensive bulk packaged ammunition is often dirtier causing more lead and carbon deposition within the suppressor internals. While the HYDRA-AL™ sound attenuation performance is truly remarkable, it will not alter or suppress the sonic crack caused when a supersonic projectile breaks the sound barrier.

For best sound suppression from your new HYDRA-AL™ please remember velocity matters. The lower the projectile velocity, the quieter the suppressed shot will be. Most ammunition manufacturers will label their product with the muzzle velocity or either the term supersonic, hyper velocity, or subsonic. If there is any question about ammunition specifications, they should be directed to the ammunition manufacturer.

For best results we recommend CCI Standard Velocity and Subsonic ammunition as well as Gemtech, Winchester, and Remington subsonic ammunition. Do not use any type of frangible ammunition as this can result in damage to your host firearm, your suppressor, and possibly result in personal injury as well.

HYDRA-AL™ SPECIFICATIONS / FEATURES

- 6061 T6 Aluminum outer tube to significantly reduce weight and enhance durability and strength.
- Patent Pending 7075 T6 Aluminum ORION™ Baffles provide superior sound attenuation.
- Taper Seal Technology incorporated into the ORION™ baffle design virtually eliminates carbon build-up on the interior of the tube facilitating ease of maintenance.
- Type 3 Mil Spec Hardcoat anodized aluminum baffles increase durability and longevity of internal and external components.
- Included assembly / disassembly tool for easy end cap removal / installation.
- 17-4 PH Stainless Steel rear end cap adds strength to the mounting solution and ensures precise mating with the host firearm.
- Single point cut 1/2x28 Class 3A threads provide a secure and concentric attachment method.
- 3.53 oz, 5.6 inches long, and 1 inch in diameter, Black T3 Hardcoat Anodized Aluminum, Nitrided 17-4PH.
- HYDRA-AL™ is designed for .22 LONG RIFLE ONLY and is NOT FULL AUTO RATED.

INSTALLING ON HOST FIREARM

After checking to make sure the host weapon is completely safe, examine the muzzle threads and make certain they are clean and have a light coat of lubricant prior to attempting to install your suppressor. Be very careful not to cross thread the suppressor on to the muzzle of your host weapon. If for some reason the suppressor does not thread on smoothly, stop immediately and contact CGS Suppressors LLC.

Thread the HYDRA-AL™ clockwise (to the right) hand tight all the way to the shoulder of the threaded muzzle of your host weapon. Do not use the assembly tool or any other tool to over-tighten the suppressor. Do not thread the HYDRA-AL™ on to any barrel that does not have a proper shoulder to seat against or any threads that do not appear to have been properly cut concentric to the bore of the host weapon.

Now that the suppressor is mounted on your host weapon you must visually confirm that it appears to be mounted straight to the centerline of the bore. Be sure that the suppressor is not tilted or canted in any way when installed. If the suppressor appears to be misaligned please stop the installation process and contact CGS Suppressors LLC. Firing while your suppressor is not properly mounted will cause harm not only to your suppressor but could gravely injure you as well.

REMOVAL FROM HOST FIREARM

Ensure the host weapon is completely safe. Check it again. Before attempting to remove the suppressor remember that it may be very hot. Be very careful not to touch or grab a hot suppressor as it will result in burn injuries.

Wait for it to cool or utilize gloves or some other proper barrier to avoid direct contact with your skin and ensure you are not burned. Remove the HYDRA-AL™ by rotating the suppressor counterclockwise until it is completely unthreaded from the muzzle of the host weapon.

⚠ SAFETY ⚠

FIREARMS ARE INHERENTLY DANGEROUS. PLEASE REVIEW THIS TECHNICAL MANUAL COMPLETELY PRIOR TO USING YOUR SUPPRESSOR. FAILURE FOLLOW GUIDELINES AND INSTRUCTIONS OUTLINED IN THIS MANUAL COULD RESULT NOT ONLY IN DAMAGE TO YOUR FIREARM OR SUPPRESSOR BUT SERIOUS PERSONAL INJURY OR DEATH. PLEASE DO NOT USE THIS PRODUCT UNTIL YOU ARE PROPERLY TRAINED AND COMPLETELY INFORMED. REMEMBER THESE CRITICAL FIREARM SAFETY RULES

ALL GUNS ARE ALWAYS LOADED

FINGER OFF THE TRIGGER UNTIL YOUR SIGHTS ARE ON TARGET

NEVER LET YOUR MUZZLE COVER ANYTHING YOU ARE NOT WILLING TO DESTROY

BE AWARE OF YOUR TARGET, WHAT IS IN LINE WITH IT, WHAT IS BEHIND IT.

PREPARATION FOR USE

Remove the CGS Suppressors LLC HYDRA-AL™ from the beautiful product packaging. Closely inspect your HYDRA-AL™ for any abnormalities. Be sure that both the front and rear end cap are at least hand tight and look down the bore of the suppressor to ensure it is clear of any obstruction.

Check your host weapon and be certain the weapon is completely safe. Chamber confirmed empty, magazine completely removed, safety in safe position if equipped. If there is any question as far as the procedure for making

DISASSEMBLY

With the suppressor removed from the host weapon, grasp the tube firmly and turn the front end cap counter clockwise to remove it using the provided assembly / disassembly tool. With the front end cap removed you may now remove the baffle stack from the front of the suppressor tube.

If the baffle stack is difficult to remove, unscrew the rear end cap from the tube by turning it counter clockwise. You can now use your finger to press the baffle stack out of either end of the suppressor tube. A 3/4 inch wooden dowel can be used to lightly tap the baffle stack out of the tube if necessary.

If at any time the force needed to remove the end caps or baffle stack appear excessive, STOP and contact CGS Suppressors LLC. We love to show off our amazing customer service. It is better to let us take a look at it before the tube is irreparably damaged.

CLEANING & MAINTENANCE

Now that you have completely disassembled your HYDRA-AL™ suppressor you can begin the least enjoyable part of owning a suppressor...cleaning it. The HYDRA-AL™ Can be cleaned using hydrocarbon based solvents and a nylon brush.

Do not use a bore patch or jag to clean your suppressor. This can become lodged in the bore and create an obstruction. If you have trouble removing any part of the HYDRA-AL™ you can soak it in solvent or penetrating oil. There is no user level maintenance required on the HYDRA-AL™ Suppressor other than periodic cleaning as described above.

After cleaning the end caps, baffles and tube, a light coat of any oil acceptable for use on your firearms may be used on the HYDRA-AL™. Apply a light coat to the baffle stack, the tube, and all threaded portions to make reassembly easier.