

HHOG II SledgeHammer

Installation and Maintenance Instructions

We are pleased to bring you the HHOG II SledgeHammer and are glad you have decided to support HHOG Labs. It is our privilege to bring you the latest and greatest safety devices in the Hydroxy field today. We are pleased to know that you have placed your own personal safety before anything else. That being said, by using any HHOG Labs device, you agree to hold us harmless of all risks associated with Hydroxy generation, and its use. The following is a brief overview of how to install and maintain the HHOG II SledgeHammer. We believe if you follow these simple instructions, it will bring you a long service life and help keep you safe.

This unit is currently rated for 500 high output flashbacks; however, it is recommended that you replace it after 300 flashbacks. It is not recommended for SUSTAINED FLASHBACK ACTIVITY. Sustained flashback activity can heat up the HHOG II SledgeHammer's internal parts, unnecessarily. Though we tested it thoroughly, the HHOG II SledgeHammer is designed as a Safety Measure in the event of an **accidental flashback**. We cannot guarantee this unit for **sustained** flashbacks. You should never **purposefully** ignite the output line of your Hydroxy Generator, as this could cause you great bodily harm. A flashback arrestor is intended as your First Line of Defense in a thoroughly constructed safety plan.

Installing the HHOG II SledgeHammer

A Flashback Arrestor is probably the easiest Hydroxy safety device to install. Simply install it on the output hose of your system AFTER your Bubbler (between the final output hose and your Bubbler). It's a "Plug and Play" device. The plastic barb is the INLET side, and the brass barb is the OUTLET side. Simply slip the plastic INLET hose barb into the hose coming from your Bubbler and the brass OUTLET barb into the hose going to your engine, torch, etc. Be sure to take note of the Fuel Flow indications. Hose clamps are not necessary, but may help keep the hose from coming loose in areas of high vibration or from high output flashbacks. The SledgeHammer has NO moisture vulnerability, and will continue functioning successfully after many hours of excessive moisture buildup. That being said, the SledgeHammer should be installed higher than the Bubbler, and at least 18 inches away, to prevent excessive moisture from passing through the SledgeHammer and getting into your torch or engine intake. This allows any built up moisture or electrolyte to drain back into your bubbler or dryer. You should install a hose at least 12 inches long onto the OUTLET port of this flashback arrestor. This allows a "Flame Front" to impact the Flame Front Quenching Chamber, enhancing its ability to extinguish the flashback.

We have found that the SledgeHammer can be installed in any orientation.

Note the Fuel Flow Indicators by barb material.



The SledgeHammer



Plastic Inlet Barb



Brass Outlet Barb

Maintaining the HHOG II SledgeHammer

- 1) Do not drop the **SledgeHammer**. The outer body is ABS and PVC, and may become damaged.
- 2) Do not install the **SledgeHammer** close to engine “Hot Spots”, as excessive heat can damage the outer casing.
- 3) Though the **SledgeHammer** is designed to run cool after several flashbacks, you should not allow continuous flashbacks. If you suffer a flashback, you should turn off the fuel flow, and allow the **SledgeHammer** to cool after a flashback. This will allow you to investigate what caused the flashback and correct it. The HHOG II **SledgeHammer** is a robust flashback arrestor. Though we tested this unit thoroughly and aggressively, excessive heat can damage the internal components.
- 4) The **SledgeHammer** will function perfectly fine even if you do not wish to install a Bubbler between the Generator and the **SledgeHammer** for space-saving reasons. If this is the case, then we HIGHLY recommended that you install an in-line dryer (Like the HHOG II ARID) in place of a Bubbler. This will remove moisture and trap electrolyte condensate before it can potentially pass through the **SledgeHammer** and enter your automobile or equipment.
- 5) If you are getting excessive moisture into the **SledgeHammer**, this can increase your flow restriction. To alleviate this, simply attach the **SledgeHammer** Output Barb to a shop-vac or similar vacuum cleaner and vacuum the moisture out for 15-20 minutes.
- 6) The **SledgeHammer** is designed to withstand 140-PSI backpressure, though we recommend no more than 100-PSI. We DO NOT recommend operating your Hydroxy equipment under this kind of pressure. Higher pressure increases your risk of explosion exponentially.

More information and safety tips:

The above tips are just a few maintenance tips to help you understand how to keep your HHOG II **SledgeHammer** in good working order. But the bottom line is, use common sense. Don't ever underestimate the danger in the production of Hydroxy Fuel. Under optimum conditions, Hydroxy is the perfectly mixed stoichiometric [stoi-kee-uh-meh-trik] mixed fuel. This means it has both the fuel (Hydrogen) and it's oxidizer (Oxygen) combined in a perfect ratio. It doesn't require ambient air to ignite. In storage, it can ignite explosively with a simple spark, or flame. So take special care in it's handling.

Follow the path of the gas. This means you should trace the gas backwards from its outlet to its production, and understand what role your safety measures play in keeping you safe. In a well-constructed safety plan, you should have **AT LEAST** the following setup:

Hydroxy Generator → Bubbler → Flashback Arrestor → Final Output

You should install a Pressure Relief Valve (like the HHOG II EPD v2) onto your Bubbler to prevent accidental ignition from damaging your bubbler. Some Generator configurations allow the installation of a Relief Valve on the casing. If this is the case with your setup, you should install a Relief Valve there, as well.

We hope this paper has been informative, and helped you. You can reach us with questions or comments at the following email address: contact@hhoglabs.com. We try to answer them within a couple hours, or as soon as possible.

Thank you for your business, and as always: BE SAFE!