



# Carlisle Machine Works, Inc.

## Universal Hand Torch Instructional Sheet

The Universal Hand Torch consists of two feed tubes, a mixing chamber, a set of valves to meter the gases entering the mixing chamber, a carburetor, and a nozzle. The bulk of the assembly is manufactured from brass and is then chrome plated. The valve knobs themselves are actually an anodized aluminum in order to color them green and red for oxygen/air and gas respectively. All of the seals used in the construction of the Universal Hand Torch are manufactured from Teflon.

### Universal Hand Torch Specifications:

**Premixed**  
**Fuel Types:** Natural Gas/Air, Propane/Air, Natural Gas/Oxygen, Propane/Oxygen  
**BTU Capacity:** Determined by burner tip used  
**CFH Gas:** Determined by burner tip used  
**CFH Air:** Determined by burner tip used  
**CFH Oxy:** Determined by burner tip used

### Operating Your Universal Hand Torch:

The first step of operating any torch is to check the connections for leaks. For this, the operator could use a leak detector solution or soapy water to cover the connections while they are under pressure. If there is a leak, the leak detector or soapy water will bubble up.

If a leak is detected, try tightening up the connection slightly and testing it again. If the leak persists, next try using Teflon tape or a Teflon sealant of some kind on the threads themselves. If the leak still continues, contact your Carlisle Representative who will be happy to assist you.

Once your Universal hand Torch has been tested for leaks, follow the steps below to operate your Hand Torch:

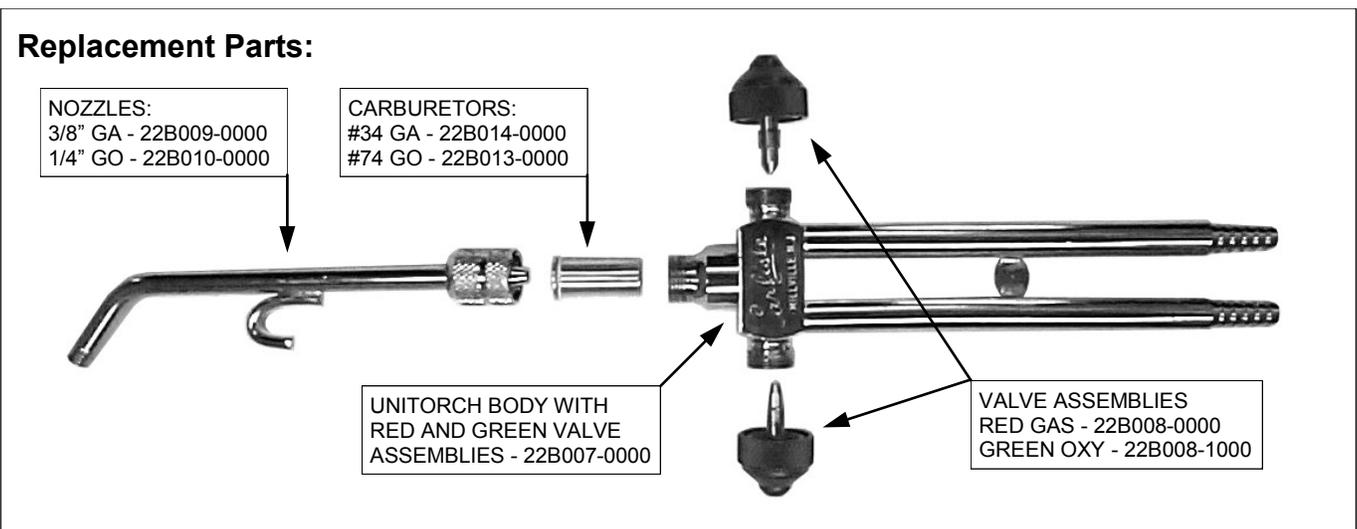
1. When you are ready to light the torch tip that you have selected to use with your Hand Torch, adjust the gas (red valve) slightly and light the tip using either a striker or bunsen burner flame.
2. Then adjust the oxygen (green valve) until you have a more focused blue flame.
3. Continue this adjustment of the gas (red valve) and oxygen (green valve) until the desired flame is achieved.
4. When you are ready to shut off the burner, turn off the oxygen (green valve) first and you will see the flame turn to an unfocused bright orange/yellow flame.
5. Then turn off the gas (red valve) and the burner will shut off.

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## Nozzle Sizes:

The Universal Hand Torch comes in two different models known as the GA and the GO. Both the GA and GO models utilize the same body. The only parts that differ on these two models are the nozzles and carburetors. The GA nozzle is 3/8" with a 3/8"-32M thread on the end and uses a #34 carburetor. The GO nozzle is 1/4" with a 1/4"-28M thread on the end and uses a #74 carburetor. Please note that although these are called the GA (Gas - Air) and GO (Gas - Oxy) nozzles, this does not mean that these nozzles are restricted to the gases they were named after. The nozzles were named for the trend of using a Gas - Oxy mix with a smaller nozzle and not to imply that one could not use Gas - Oxy with the GA nozzle and vice versa.



## Maintenance:

During use, the Universal Hand Torch may accumulate particulate inside of the piping. It is suggested that the torch be cleaned once every week. To clean the Universal Hand Torch, follow the instructions below.

1. Disassemble the torch and place the pieces into a bath of soapy water. Allow the pieces to soak for one hour.
2. Use a pipe cleaner of adequate size to dislodge any particulate from inside the nozzle and the feed tubes.
3. Dry pieces thoroughly and assemble the torch.

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