

STANDARD TORCH ADJUSTMENT

Proper torch adjustment can alleviate a host of common problems in the dental lab, including casting porosity, porcelain bubbling, miscasts, and oxide problems. This technique offers a very reproducible, standardized way of adjusting a torch that has given good results in our laboratory over the years.

These instructions apply specifically to the Harris model 16, but they can be used with other torch models as well. Some torches, such as those from Degussa, have on the torch handle the recommended gas pressures. If your torch specifies gas pressures other than what we recommend, use those that are recommended for the torch. The Degussa torch and those similar tend to utilize slightly lower pressures than what is used in the Harris.

STEP BY STEP:

- 1 Open the propane and oxygen tanks. With the torch valves open, set the regulators to the following pressures.
 - Most Ceramic Alloys: 10 psi propane and 20 psi oxygen.
 - Most C&B Alloys: 5 psi propane and 10 psi oxygen

When you close the torch valves, these pressures will rise, so do it with the torch valves open in a well ventilated area.

- 2 Open the gas valve on the torch handle, and light the torch.
- 3 Open the oxygen valve on the torch handle all the way (so that further opening does not change the flame).
- 4 Adjust the gas control on the torch handle so that the bright blue cones near the tip are 1/4 inch long.
- 5 You will be melting the alloy typically from 2 to 4 inches from the tip.

A FEW WORDS ON TORCH MAINTENANCE:

If porcelain bubbling is the problem, and you are following this technique, buy a new torch tip. These parts do wear over time. Don't sandblast your tip – it won't burn quite right again if you do. Clean tips with a torch tip cleaning tool, and replace the tip once in a while. (We replace ours about twice a year)

The Harris model 16 should have the following parts:

- H-16-S Mixer
- D-50-C Tube
- "H" Multi-orifice tip

If your Harris torch has a different mixer than this, you may have a miss-matched part on your torch which should be replaced.

Always use flashback arrestors!

Buy hoses that are approved for propane (*not all welding hoses are!*) Propane approved hoses are "Grade T".

800-243-2000 www.jensendental.com



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