

## Direct Wire™ Probe Attachment, Forming, and Positioning Instructions

A Direct Wire™ high voltage probe and a locking hex nut (6-32) have been included with each igniter. Below are instructions for attaching, forming, and positioning of the Direct Wire™ probe.

The Direct Wire™ high voltage probe uses a Kanthal® wire that runs directly from the high voltage spark transformer to the spark gap at the side of the burner slit. Below are instructions for forming, attaching and positioning of the Direct Wire™ probe.

### Probe Formation:

After attaching the probe wire to the transformer, the wire can now be bent and formed to position the spark gap at the edge of the burner slit such that the probe wire is perpendicular to the slit and horizontal. The probe wire should be to the right of the burner for optimal operation. Make sure the probe wire does not extend out in front of the burner and avoid having a loop at the end of the wire (see examples of incorrect probes on 2<sup>nd</sup> page). When bending and forming the probe wire, be careful not to apply too much pressure where the probe connects to the post of the transformer or you may damage the post.

The figures below show how the wire probe is bent and positioned using three different types of open flame burner assemblies.



Burner Type 1



Burner Type 2



Burner Type 3

### Probe Attachment:

Place the washer onto the post of the HV Transformer, followed by the probe and the locking hex nut. Start nut with fingers and spin down until it touches the probe. Hold the probe so that it does not move. Using a torque screwdriver (set at 6 IN.LB), a 5/16" Nut Driver or a wrench, *slowly* tighten nut just until the probe is held firmly in place with no movement or shifting of the probe.

To avoid stripping bolt and damaging HV Transformer, DO NOT cross threads or over tighten nut. We highly recommend using a torque screwdriver (shown below.)



Stanley Proto® Industrial Tools  
(J6106 - 1/4 Inch Pound Torque Screwdriver)

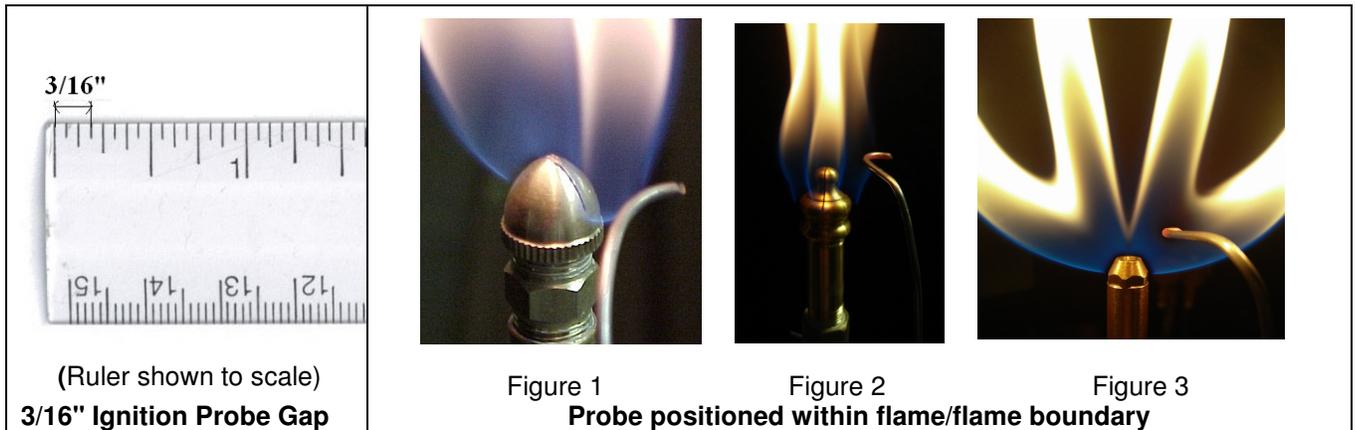
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### Final Probe Alignment:

After attaching and securing the probe wire, align Direct Wire™ probe as shown in the photos below that correspond to your burner type.

Round Tip and Pyramid Knob burner tips: For burner styles shown in Figure 1 and Figure 2, the Direct Wire™ Probe should be lined up so that it is just inside the edge of the flame without distorting the flame. When aligning the Direct Wire™ probe, be sure to align so that it is perpendicular to the slit near the base of the burner tip; the probe gap should be approx.  $3/16"$  –  $1/4"$  for proper sparking. The best way to position the probe in the flame boundary is to light the flame; then you can see exactly where the boundary is. Relight and blow out flame several times until burner lights consistently.

For burner stems shown in Figure 3, the probe will light best when positioned inside the flame as shown. If you have a 3 Prong flame type, it is best to position the probe directly over the tip of the burner stem (not shown).



**It is important that wire sparks from the side rather than the end of the wire.**

Probe wire should be slightly bent around to the side so that the spark will come off the side of the wire. The igniter will not light reliably if the wire sparks from the end. A slight reverse bend in the wire at the slit will direct the spark to the brass tip at the slit area. Avoid any type of a loop at the end of the wire; "loop" probes do not work well and cause erratic operation. This ignition method works quite reliably and has the further advantage that the probe does not soot up, even when using propane.

If you have questions, please call 651 636-1008.

Examples of Incorrect Probes:



Circle Loop



Large Loop; Left of burner



Large Loop; Right of burner