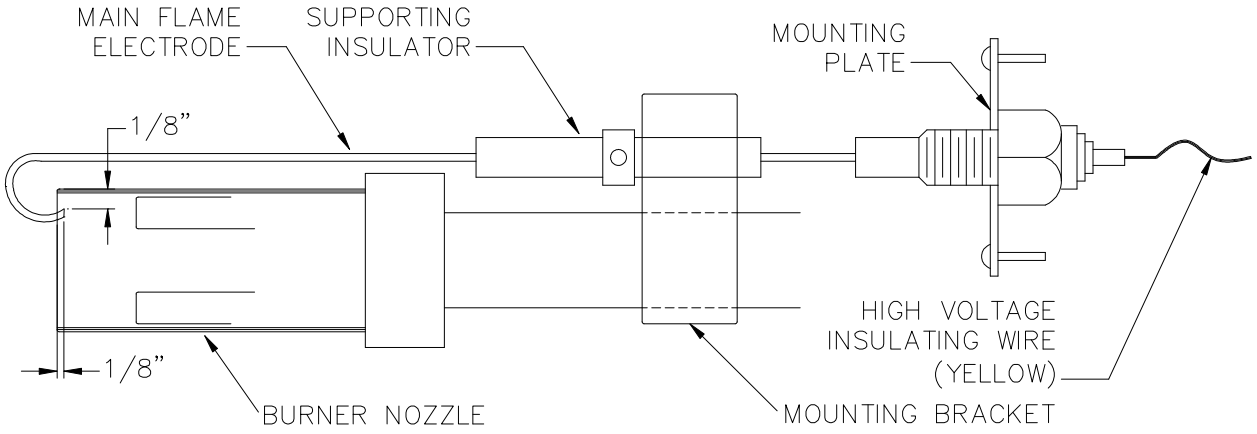
SELLERS

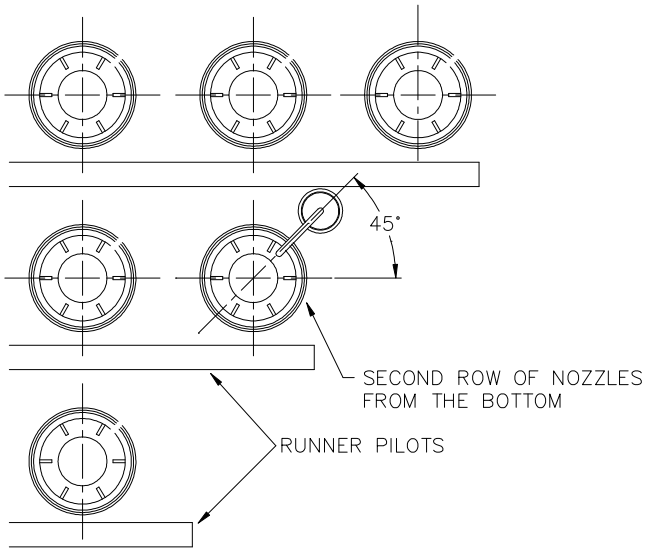
TECHNICAL BULLETIN
1005
JULY 1, 2008

MAIN FLAME ELECTRODE MOUNTING DETAILS

Main Flame Rod Assembly – Side View



Main Flame Rod Assembly – Front View



Note: Electrode may be cut and bent as required.

Sellers ENGINEERING COMPANY
P.O. Box 48 · Danville, Kentucky 40423-0048
Phone: 859/236-3181
Web-site: www.sellersengineering.com

MAIN FLAME PROVING ELECTRODE REPLACEMENT

1. **Turn off and lock out all power to the boiler.**
2. **Open the burner front door assembly.**
3. **Loosen and remove the bolt and nut on clamp half securing the main flame proving electrode porcelain insulator.**
4. **Spread the clamp halves and pull the insulator and main flame electrode out from between the clamp halves.**
5. **Remove the two bolts securing the main flame proving electrode mounting bracket to the burner plate and pull the electrode and wire end out of the mounting hole.**
6. **Slide the insulating rubber boot off of the main flame electrode end and down the ignition wire to expose the wire connection. Check the rubber boot and wire for cracks and replace if required.**
7. **Loosen and remove the long cap nut securing the wire to the main flame proving electrode, remove the old electrode from the wire.**
8. **Remove the old main flame proving electrode from the mounting bracket by simply unscrewing it.**
9. **Install the new main flame proving electrode in the mounting bracket being sure to insert the electrode end from the back of the bracket. Tighten the pilot main flame electrode in the bracket.**
10. **Reconnect the wire using the long cap nut.**
11. **Slide the insulating rubber boot back over the main flame proving electrode end so the wiring connection is completely covered and protected.**
12. **Push the main flame proving electrode and wire end back into the mounting hole and secure the electrode mounting bracket to the burner plate using the bolts.**
13. **Bend the main flame proving electrode near the spark plug end nearest the burner plate into a shape that resembles the original electrode with the intention of positioning the proving end for clamping. Do not bend or cut the proving end of the main flame proving electrode until after the porcelain insulator has been installed and clamped.**
14. **Slide a new porcelain insulator onto the proving end of the main flame proving electrode and slide it into a position to be centered in the original clamp.**
15. **Slide the insulator into the clamp halves and reinstall the bolts and nuts in the clamp. Be sure the main flame proving electrode bends are complete and that the electrode is not binding or in tension against the clamping position. Then tighten the bolt and nut on the clamp to secure the insulator and main flame proving electrode in position.**
16. **Cut off any excess length leaving enough electrode to make the final bend. This will require about 1" of electrode to protrude beyond the nozzle tip.**
17. **Make the final bend in the main flame proving electrode. The final position should allow for the end of the main flame proving electrode to penetrate very slightly into the small space on the main burner nozzle between the main nozzle bore and the outer nozzle tube. This will monitor the flame retention ring on the nozzle.**
18. **Do not bend the main flame proving electrode to touch the nozzle in any way.**
19. **Check to be sure all tools are removed from inside of the boiler and close the front door assembly.**
20. **Restore power to the boiler and start normally.**