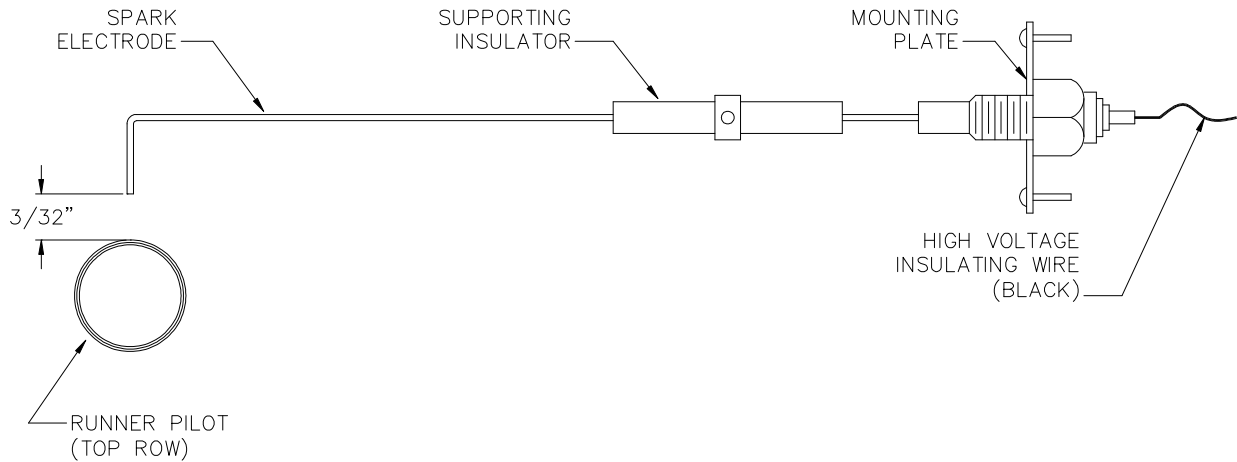
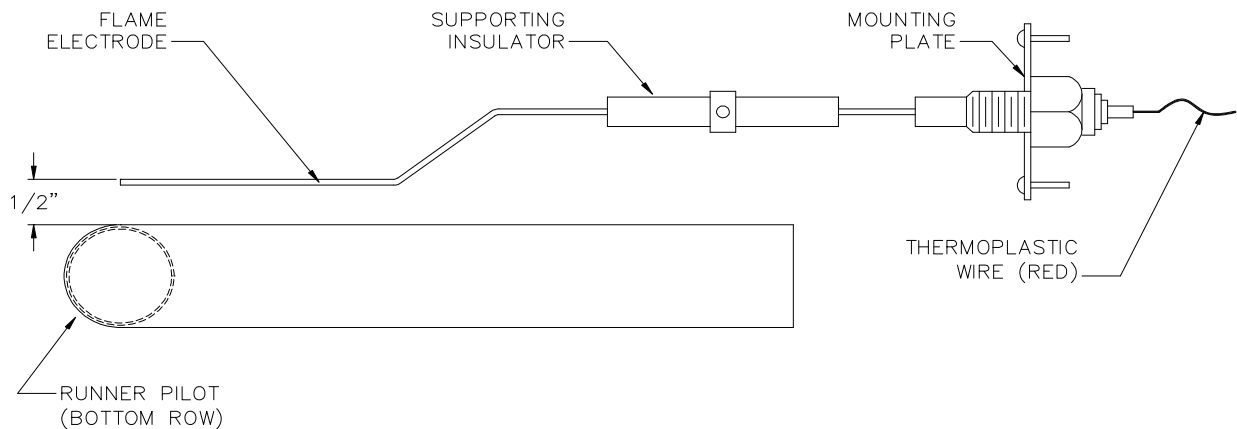


PILOT FLAME & SPARK ELECTRODE DETAILS

Pilot Spark Rod Assembly



Pilot Flame Rod Assembly



Note: Electrode may be cut and bent as required.
Replacement electrode may be used for flame or spark positions.

PILOT IGNITION ELECTRODE REPLACEMENT

1. Turn off and lock out all power to the boiler.
2. Open the burner front door assembly.
3. Loosen the bolt and nut on clamp half securing the porcelain insulator and remove the bolt and nut.
4. Spread the clamp halves and pull the insulator and ignition electrode up and out from between the clamp halves.
5. Remove the two bolts securing the ignition electrode mounting bracket to the burner plate and pull the flame rod and ignition wire end out of the mounting hole.
6. Slide the insulating rubber boot off of the ignition electrode end and down the ignition wire to expose the wire connection. Check the rubber boot and ignition wire for cracks and replace if required.
7. Loosen and remove the long cap nut securing the wire end eye to the ignition electrode end and remove the old ignition electrode from the wire.
8. Remove the old ignition electrode from the mounting bracket by simply unscrewing it. This may be more easily accomplished if the bracket is clamped in a vice.
9. Install the new ignition electrode in the mounting bracket being sure to insert the wire end from the back of the bracket. Tighten the new ignition electrode in the bracket.
10. Reconnect the ignition wire to the new ignition electrode using the long cap nut.
11. Slide the insulating rubber boot back over the ignition electrode end so the wiring connection is completely covered and protected.
12. Push the ignition electrode and ignition wire back into the mounting hole and secure the flame rod mounting bracket to the burner plate.
13. Bend the ignition electrode wire near the spark plug end nearest the burner plate into a shape that resembles the original ignition electrode with the intention of positioning the sparking end for clamping. Do not bend or cut the sparking end of the ignition electrode until after the porcelain insulator has been installed and clamped.
14. Slide a new porcelain insulator onto the sparking end of the ignition 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 ignition electrode bends are complete and that the wire is not binding or in tension against the clamping position. Then tighten the bolt and nut on the clamp to secure the insulator and ignition electrode in position.
16. Make a final bend in the end of the ignition electrode to determine the final position and length. The final position should allow for the tip of the electrode to be roughly centered between two main burner nozzles and 3/32" (this is referred to as the spark gap) above the pilot pipe.
17. The excess length of the pilot flame proving electrode should be cut off and removed.
18. Carefully position the trimmed ignition electrode to provide the proper spark gap. The tip should be even with or slightly in front of the holes in the pilot. The spark gap should be 3/32" or about the width of a nickel.
19. Check to be sure all tools are removed from inside the boiler and close the front door assembly.
20. Restore power to the boiler and start normally.

PILOT FLAME PROVING ELECTRODE REPLACEMENT

1. Turn off and lock out all power to the boiler.
2. Open the burner front door assembly.
3. Loosen the bolt and nut on clamp half securing the porcelain insulator and remove the bolt and nut.
4. Spread the clamp halves apart and pull the insulator and pilot flame proving electrode up and out from between the clamp halves.
5. Remove the two bolts securing the pilot flame proving electrode mounting bracket to the burner plate and pull the pilot flame proving electrode and wire end out of the mounting hole.
6. Slide the insulating rubber boot off of the pilot flame proving electrode end and down the proving 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 end eye to the pilot flame proving electrode end and remove the old pilot flame proving electrode from the wire.
8. Remove the old pilot flame proving electrode from the mounting bracket by simply unscrewing it.
9. Install the new pilot flame proving electrode in the mounting bracket being sure to insert the electrode end from the back of the bracket. Tighten the pilot flame proving electrode in the bracket.
10. Reconnect the wire using the long cap nut.
11. Slide the insulating rubber boot back over the pilot flame proving electrode end so the wiring connection is completely covered and protected.
12. Push the pilot flame proving electrode and wire end back into the mounting hole and secure the pilot flame proving electrode mounting bracket to the burner plate.
13. Bend the pilot flame proving electrode near the spark plug end nearest the burner plate into a shape that resembles the original pilot flame proving electrode with the intention of positioning the proving end for clamping. Do not bend or cut the proving end of the pilot 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 pilot 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 pilot 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 pilot flame proving electrode in position.
16. Make a final bend in the end of the pilot flame proving electrode to determine the final position. The final position should allow for the end of the pilot flame proving electrode to be parallel to and about 1/2" above the flame proving leg of the bottom runner pilot assembly. The pilot flame proving electrode end should be directly above the holes drilled in this proving leg.
17. The excess length of the pilot flame proving electrode should be cut off and removed. Do not bend the pilot flame proving electrode around the bend in the pilot. This will not enhance the flame signal but could, in fact, dilute the signal.
18. Check to be sure all tools are removed from inside of the boiler and close the front door assembly.
19. Restore power to the boiler and start normally.