



TECHNICAL SERVICE BULLETIN

Date: 11/10/04	Number: 2004-09
Subject: KC1000 SPARK IGNITOR & FLAME DETECTOR REPLACEMENT	
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INTRODUCTION

This Service Bulletin provides the instructions to perform the recommended annual maintenance on KC1000 Boilers and Water Heaters by replacing the spark ignitor and flame detector using the items provided in this kit.

WARNING!

TO AVOID PERSONAL INJURY, BEFORE SERVICING:

(A) DISCONNECT THE AC SUPPLY BY TURNING OFF THE SERVICE SWITCH AND AC SUPPLY CIRCUIT BREAKER

(B) SHUT OFF THE GAS SUPPLY AT THE MANUAL SHUT-OFF VALVE PROVIDED WITH THE UNIT

(C) ALLOW THE UNIT TO COOL TO A SAFE TEMPERATURE TO PREVENT BURNING OR SCALDING

SPARK IGNITOR

The spark ignitor assembly is located in the body of the burner (Figure 1). The ignitor may be HOT. Care should be exercised. It is easier to remove the ignitor from the unit after the unit has cooled to room temperature.

To inspect/replace the Ignitor :

1. Set the **ON/OFF** switch on the control panel to the **OFF** position and disconnect AC power from the unit.
2. For access to the spark ignitor, remove the unit's right side panel. Access can also be gained by removing the rear panels and condensate drainage system
3. Disconnect the ignitor cable from the ignitor extension. Remove the silicone ignitor plug from the burner shell by simultaneously twisting and pulling downward.
4. Insert the ignitor removal tool into the burner shell, where the ignitor plug was removed. Screw the outer barrel of the tool into the burner shell. Push the inner barrel up and fit the hexagonal end of the tool over the ignitor. Unscrew the ignitor from the burner head and then the tool from the burner shell.
5. The ignitor is gapped at 1/8-inch. If there is a substantial erosion of the spark gap or ground electrode, the ignitor should be replaced. If carbon build-up is present, clean the ignitor using fine emery cloth. Repeated carbon build-up on the ignitor is an indication that a check of the combustion settings is required (see Section 4 of GF-109 (Boiler) or GF-111 (Heater) for Combustion Calibration).
6. Prior to reinstalling the ignitor, an anti-seize compound must be applied to the ignitor threads.

CAUTION!

The ignitor must be removed and installed using the ignitor removal tool provided with the unit(s). Damage to the burner due to using a socket for removal and installation of the ignitor is not covered under warranty.

7. Reinstall the ignitor assembly using the ignitor removal tool. Do not over tighten the ignitor. A slight snugging up is sufficient.
8. Reinstall the ignitor plug into the burner shell by simultaneously twisting and pushing it into the shell.
9. Reattach the ignitor cable to the extension and verify that it “clicks” into place.
10. Replace the rear cover panels or right side panel. Replace the condensate cup to drain tubing.

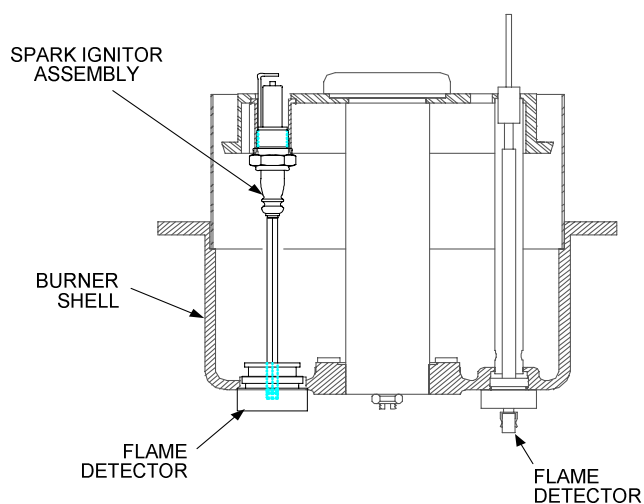


Figure 1. Spark Ignitor and Flame Detector Location

FLAME DETECTOR

The flame detector assembly is located in the body of the burner (Figure 1). The flame detector may be HOT. Allow the unit to cool sufficiently before removing the flame detector.

To inspect or replace the flame detector:

1. Set the ON/OFF switch on the control panel to the OFF position and disconnect AC power from the unit.
2. Remove the left side panel from the unit.
3. Disconnect the flame detector lead wire. Unscrew the flame detector and remove it from its guide tube. The detector is flexible and may be bent to ease its removal.
4. Inspect the detector thoroughly. If eroded, the detector should be replaced. Otherwise clean the detector with a fine emery cloth.
5. Reinstall the flame detector hand tight only.
6. Reconnect the flame detector lead wire.
7. Replace the rear cover panels or left side panel and reconnect the rear covers to the unit. Replace the condensate cup to drain tubing.