

## REPLACING THERMOCOUPLE

MODELS: 80VP, 125VP, 170VP



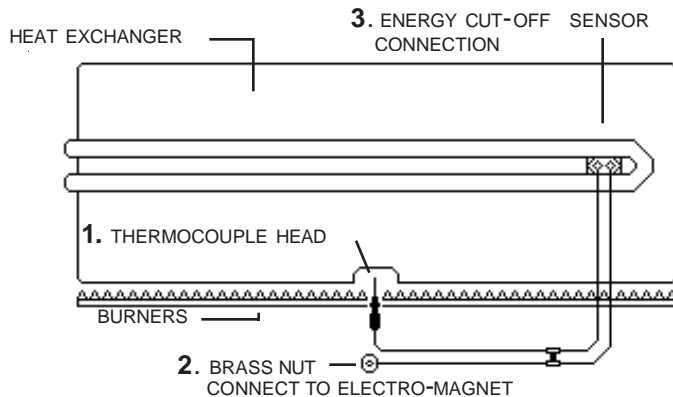
### WARNING

LP & NG ARE EXTREMELY FLAMMABLE SO TAKE EXTRA PRECAUTIONS WHEN PERFORMING ANY WORK TO THE HEATER

### Components

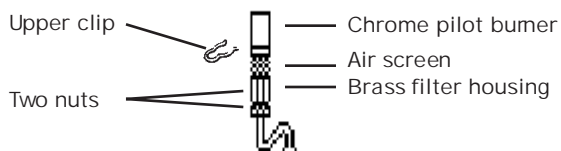
1. A copper tube with a pointed head which is heated by the pilot flame. When heated this thermocouple generates 25-30 millivolts.
2. A shorter copper tube whose terminal brass nut fastens to the electromagnet-part#20883 (model 80 & 125 & 170);
3. Two wires whose terminal eyelets attach to the energy cut-off sensor: eco-part #34209 (model 80 & 125 & 170).

#### MODEL 80/125VP SHOWN



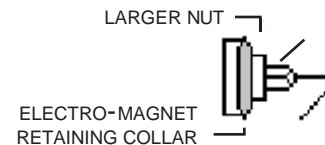
### Optional pilot removal

1. Shut off gas supply
2. Pull out upper clip
3. Disconnect pilot using two wrenches and save washer
4. Swing tube slightly to the side
5. Once tubing has been pushed to the side, slide complete pilot assembly down and out.



### To remove the thermocouple from the heater.

1. Removing the tray located at the bottom of the Aquastar will facilitate the process.
2. Removing the pilot burner is optional for better access.
3. Detach the two wires from the energy cut-off sensor Part# 34209.
4. Locate the electro-magnet at the rear of the gas valve, directly behind the pilot push button assembly. Using two wrenches, hold the larger retaining nut of the electro-magnet in place. With the other wrench undo the smaller nut of the copper tube attached to the electro-magnet. (see diagram)



5. Remove the thermocouple retaining clip at the pilot bracket.  
To remove the clip, insert the broad edge of a flat head screwdriver under the left side of the clip. Before twisting it off, cover the working area with your free hand so as not to lose the clip once it is released. Be very careful of sharp edges surrounding this area.
6. Once the retaining clip is removed, push the thermocouple head away from you and then pull it down and out of the burner area.

**Note:** The model 170 thermocouple is held by a hairpin clip which is removed by pulling on it.

### To reinstall a new thermocouple.

1. Before reinstalling a new thermocouple bend it to match the shape of the old one.
2. Before re-attaching the retaining clip make sure the the thermocouple head is resting firmly on its base. Press the retaining clip in place until it snaps in.
3. Follow instructions on front panel of heater for relighting the pilot. **Address #4 first.**
4. IF THE PILOT WAS REMOVED. Before relighting the pilot, check for gas leaks by applying soap solution at the base of the brass filter housing and the base of