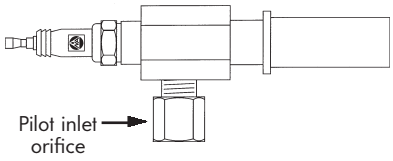
PILOT TIP SETUP

The 4723- "G" Model uses the North American 4-28157-1 pilot tip and is held in place with the same yoke as the direct spark igniter shown above. A 6000 volt transformer is required. After lighting, the spark should be turned off to prolong electrode life. Spark distributor systems can be used with the pilot. A UV scanner can see the pilot flame from the center observation port. The igniter can also be used as a flame rod to monitor when the pilot flame is on, but will not monitor the main burner flame.

A pilot orifice is provided with the pilot assembly to raise the mixture pressure between the mixer and pilot assembly. This improves the pilot premix distribution when multiple tips are used with a common mixer. It also helps reduce combustion pulsations that can extinguish the pilot as the burner cycles from low to high fire. If there is insufficient air pressure available to use the orifice, the mixer should be installed as close as possible to the pilot tip.

Mixture pressure should be set between 14-18"w.c. with the orifice and 4-5"w.c. without orifice. Any backpressure in the radiant tube must be added to the mixture pressure. Use a 8666 Testip or sight down the center observation port to set fuel/air ratio in the center of the stability range.



No Pilot Orifice

Mixture pressure, "w.c.	Air flow, cfh
3	103
6	150

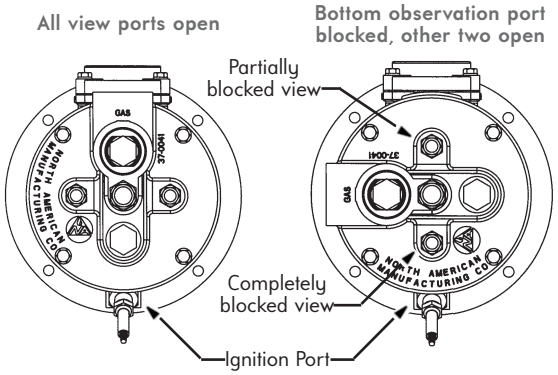
With Pilot Orifice

Mixture pressure, "w.c.	Air flow, cfh
8	118
14	155
20	172

OBSERVATION PORTS

The 4723 is supplied with 3 observation port locations.

When the gas inlet is oriented with the air inlet or ignition port, the two side observation ports both sight into the flame retainer and around the outside of the flame retainer. If the backplate is oriented with all the observation ports in line with the air inlet, the view of bottom port will be completely blocked by the ignition port inside the burner body. The view into the flame retainer of the other port will also be blocked, but the view around the outside of the flame retainer is still available.



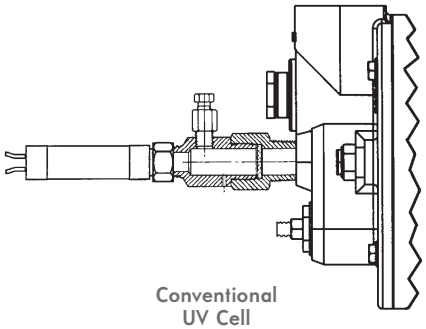
UV FLAME SUPERVISION

Flame supervision can be used with 4723 Radiant Tube Burners. The center port sights down the primary air tube and gas tube exit. It gives the best unobstructed view of the flame, and is the best location for mounting a UV cell. This port on all 4723 models is $^{3}/_{4}$" NPT female thread, see Bulletin 8832 for mounting details for specific UV cells. A sealing lens must be used between the UV and this burner port connection.

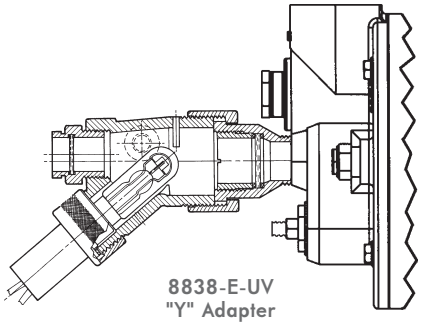
To maintain observation on the center port while using a UV cell, use an 8838-E-UV "Y" UV adapter. The 8838-E-UV assembly is threaded into the burners center port in place of the center observation port. An integral observation port is mounted in the upper leg of the "Y", while the lower leg holds a C7035A-1080 Detector. The "Y" fitting can be removed without disturbing the quartz sealing lens in the front of the adapter. When replacing an 8838-E-UV detector in the field, remove the black shield from C7035A-1080 UV tube to allow adequate signal strength. Position detector tube for maximum grid exposure with upright plates at sides. For more details see Bulletin 8832.

During operation, direct spark ignition or gas pilot must be interrupted after normal ignition interval. Pilot air can be left on under all normal operating conditions. The UV will pick up a pilot flame.

Burners fired vertically downward with long "L" dimensions (8" or longer than normal) generate reduced UV signal at low fire. There are a number ways to compensate for the reduced signal depending on the application. Consult North American for more information on special configurations.



Conventional
UV Cell



8838-E-UV
"Y" Adapter