



Hot Water Management Experts Since May, 1993

Monthly Tech Tips

INTERMITTENT FLAME FAILURES

It has been almost seven years since Texas adopted the Clean Air Act and required gas fired appliances (under 2,000MBH) to meet low NOx standards. During this time we continue to learn more about trouble shooting these fan-assisted boilers.

One call that has become more prevalent is the intermittent flame failure. The scenario is the service call where you have replaced the borderline H.S.I., and for good measure, you installed a new flame sensing rod. You know the burner gas pressure and burner air pressure are set to factory recommendations. However, you still experience a random 'flame failure' from the Fenwal ignition module (LED blinks three times). Why won't the confounded thing fire consistently?

Many times the culprit is dirty burners. If the boiler is in a dirty environment or the filters have just been neglected, the burners become the secondary filter. How many of you have seen a dusty, dirty boiler with a nice clean air filter? Guess what the maintenance man did right before he called you to come fix his boiler? Right, he finally cleaned or replaced the neglected filter and said he cleans them every other week.

Most burners on horizontal copper fin tube boilers have an inner tube and an outer tube. The inner tube is the one that will get stopped up with dirt, dust or lint even when the outer tube (the visible side) looks pretty clean. Your pressure readings look good because a stopped up burner puts back pressure in the cabinet you are testing from. However, the firing side of the burner and burner cabinet never sees the correct gas or air pressure. The initial result is an improper flame on the burner which will damage the burner over time. Later, you find split and damaged burner tubes. Unfortunately, you normally will not see a trouble call until the burners are already damaged and need to be replaced (Please note: when several burners are severely damaged, you will find the air damper has to be opened much wider than original factory settings to achieve correct burner air pressure).

So what is the remedy? **Add cleaning the burners to the maintenance contract!** Just remove each burner tube and blow them out with compressed air. This will help minimize burner problems and decrease the confounding intermittent flame failures!

WE'VE GONE COPPER...

Just a reminder that Hydrotemp stocks copper pipe, valves & fittings, Pro-press and black pipe, from 1/2" up to 3". In addition we stock ball valves, dielectric nipples and unions. Save yourself an extra trip and have this material delivered along with your boiler order. Hydrobucks DO apply! We are looking to help make things easier for you.

QUICK NOTES

Boiler Training:

The agenda for advanced boiler training class is in the process of being created. A date has not yet been chosen. We will send an email notification soon.

Out of the Office

Jessica will be out of the office April 24 and April 27.

Joke of the Month

A plumber attended to a leaking faucet at the neurosurgeon's house. After a two-minute job the plumber demanded \$150.

The neurosurgeon exclaimed, 'I don't charge this amount even though I am a surgeon.'

The plumber replied, "I agree, you are right. I too, didn't either, when I was a surgeon. That's why I switched to plumbing!"



Any comments or suggestions regarding this monthly publication would be greatly appreciated.