



### **SUBJECT: Condensing Boilers – The Significance of the First Year Inspection**

Regular annual inspection and maintenance by a qualified heating professional is essential to keep a modern high efficiency condensing boiler operating at peak efficiency over its useful life. In addition to the annual start-up service and maintenance requirement, these boilers **require** a special First-Year Inspection. The First-Year Inspection is very important and must be performed. In addition to the normal annual start-up checks on the boiler, the First-Year Inspection is important in determining the frequency of future scheduled maintenance. As indicated in the boiler installation manual, failure to perform this inspection can result in severe personal injury, death or substantial property damage.

Following maintenance and inspection instructions is as important to the operation and useful life of the boiler as following all other installation instructions, such as water piping, gas piping, venting, and electrical. The First-Year Inspection provides the professional service person with the opportunity to evaluate the boiler for the presence of irregularities in the gas and/or combustion air. Unusual build-up or blockage of the heat exchanger flueways could be from contaminated air or gas. Solids blocking the burner would be from debris in combustion air. Jelly-like substance in the lower pin area of an Ultra residential boiler could be from ammonia or a high level of nitrogen in the combustion air. Unusual deterioration of the lower heat pins could be from low pH condensate caused by high levels of odorant in the gas. This First-Year inspection is also an opportunity to inspect the cover plate insulation for wear and deterioration. The cover plate silicone seal should be inspected for deterioration from condensate and heat. Also, check the igniter for unusual wear and discoloration, which could be an indication of flue gas recirculation. Any part that shows significant wear should be replaced. If any of these conditions exist, the boiler may be operating in adverse conditions or have a higher than normal duty cycle. In either case, a 6-month service schedule should be considered. If the flueway is clean and all parts are in very good condition, then the normal annual start-up service and inspection can be scheduled for one year, waiting two years for the next internal inspection. At a minimum, the internal inspection should be performed every third year.

Failures of parts resulting from the lack of required service are not covered by warranty.