



Heating Boiler Start-up Checklist

Every year, several thousand heating boilers begin a journey which will eventually take them to the 'heating boiler graveyard'. The Hartford Steam Boiler Inspection and Insurance Company (HSB) loss prevention inspectors can help you because they know that the leading cause of heating boiler failures is 'low water'. As a business equipment insurance specialist, HSB has investigated thousands of boiler failures resulting in claims as high as \$300,000. The trouble often starts with a leak which probably will not appear dramatic; it could be simply a damp spot or puddle on the floor.

If the boiler's safety devices are working properly, the small leak will cause problems over time which will require repair. If the safety devices are not working properly, serious problems are imminent because 'low water' in a boiler is like an engine without oil. A failure will undoubtedly occur; it is only a matter of time.

The results of a boiler failure are repairs, replacement and possible new construction costs if an old building must be adapted to accommodate new equipment.

The following tips from our loss prevention inspectors will help you avoid the most common heating boiler problems by means of strategic maintenance.

- Have a competent service firm disassemble the low water cut-off and make-up water feeding devices. All parts should be thoroughly cleaned and reconditioned as required, then tested before the boiler is put into regular service. While in service, the cut-off should be tested once a week.
- Burner equipment should be cleaned and adjusted to give maximum efficiency. This can save fuel dollars.
- The boiler heating surfaces, firebox, ash pit, casing and ducts should be cleaned of all deposits. Dirty internal surfaces not only waste fuel and dollars, but also can lead to the burning, bulging, cracking, corrosion and even explosion of the boiler.
- The safety/relief valve should be tested for freedom of operation. This is of primary importance. *The boiler must not be fired if the safety/relief valves are inoperative or otherwise defective. These valves should be tested once a month while in service.*
- If the boiler is of a type designed to permit cleaning of the water spaces, this should be done, and where necessary, a suitable chemical treatment should be used to minimize new buildup of scale and to prevent corrosion.



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- All pressure and temperature controls and gauges should be checked for satisfactory operation and adjusted or replaced as necessary. The water level gauge glass must be cleaned to indicate the proper water level at all times.
- Any leaking pipes or fittings located on the boiler or anywhere throughout the heating system should be repaired or replaced to prevent a loss of water.
- Water lines exposed to freezing temperatures should be insulated to prevent freeze-up. Steam and condensate return lines should be insulated to prevent unnecessary heat loss. Such action will reduce fuel bills and eventually more than pay for itself.
- All mechanical equipment, such as fans and pumps, should be checked for smooth operation and proper lubrication.
- A suitable record of boiler operation should be established and maintained throughout the season. Call HSB; we can help!
- The boiler room should be kept dry and clean.