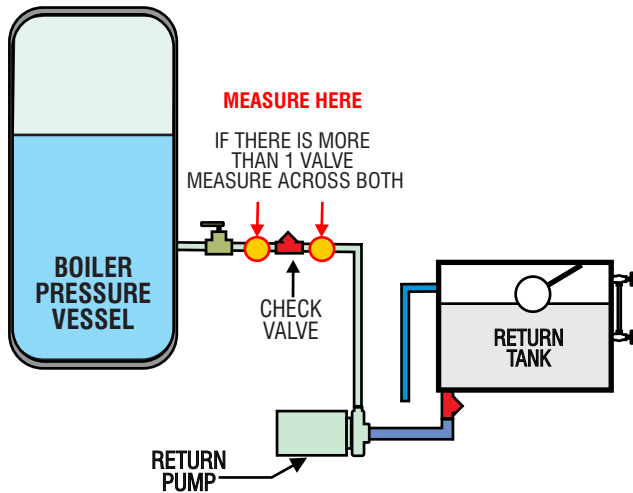


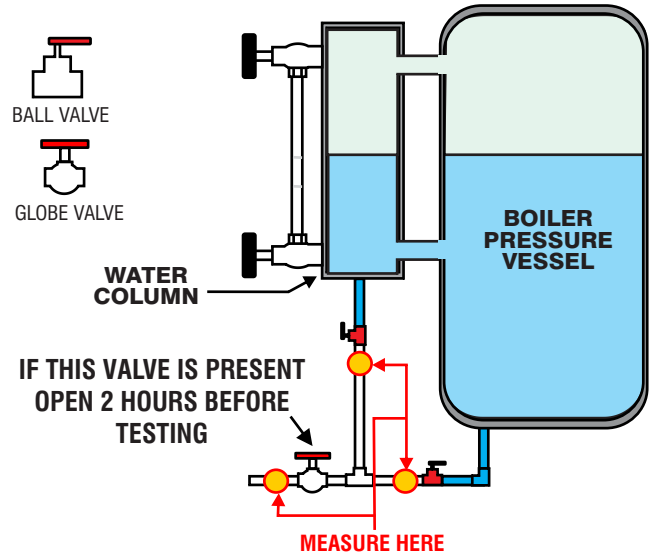
SIMPLE-NO COST METHOD TO FIND EXPENSIVE BOILER VALVE LEAKS

CHECK VALVE TESTING



1. WHEN THE PUMP STOPS NORMALLY SHUT OFF THE PUMP SWITCH.
2. WAIT AT LEAST TWO MINUTES THEN MEASURE ACROSS THE CHECK VALVE OR VALVES AS INDICATED BY THE YELLOW CIRCLES. THERE SHOULD BE AT LEAST A 40 DEGREE F DIFFERENCE ACROSS THE VALVES.
3. TURN ON THE PUMP SWITCH.

BLOW DOWN VALVE TESTING



1. PLACE A 1" BLACK TEE ON THE BOILER ROOM FLOOR NEAR THE BOILER AND LEAVE IT THERE FOR AT LEAST 2 HOURS BEFORE TESTING, THEN MEASURE THE TEMPERATURE OF THE TEE.
2. MEASURE THE TEMPERATURE OF THE PIPE ON THE OUTLET SIDE OF THE BLOWDOWN VALVE UNDER TEST. IF THIS READING IS MORE THAN 30 DEGREES F. HIGHER THAN THE TEMPERATURE OF THE TEE ON THE BOILER ROOM FLOOR THE VALVE IS LIKELY LEAKING.

USING THE LASER THERMOMETER

The following is a short explanation of the operations of the laser thermometer. The frequency of infrared radiation (a form of light) being emitted by a target object is dependent on the temperature of the object. A sensor in the thermometer measures that frequency and converts it into numbers that correspond to what we call degrees of temperature. However, the infrared sensor doing that measuring has its limitations.

1. The surface of the target should **NOT** be a highly reflective color like silver or white or have a highly polished finish like chrome or stainless. If it does, take a black Sharpie marker and shade an area about the size of a quarter black, use the blackened area as the target spot of the surface to be tested.
2. The laser pointer is used to select the target area and illuminates the center of the target area. Since the sensor itself measures all of the infrared energy entering the lens its accuracy decreases the further you are from the target area because background heat is radiated from all over the boiler room. The sensor will become progressively more accurate the closer to the target area you measure it. When using the laser thermometer to run the tests shown on this chart be sure to position the lens of the thermometer slightly above the surface of the area being measured.

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