

DIY maintain Hot water tank

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Hot water tank is an important item in the home inspection, which is also a concern of most clients. This is because the life expectancy of HW is limited, also once there is leaking, not only the cost of replacement but the possible water damage restoration has to be paid by home owner. During the inspection we will check the pipe material, connection, condition and valves, as well as the fuel assembly. We will confirm the existing condition of the HW & age, also the safety and emergency protection.



figure 1



figure 2



figure 3

The natural gas HW is the most common one in residential area. Generally 40 gallon size is enough for the family usage and can last 10 -15 years. It may vary up to the life style of the family. I have ever seen 7 year old HW in poor condition but the 20 years service one was still functional. I will introduce how to clean HW by yourself in order to extend its service.

Simply speaking HW is like the kettle to boil water. We knew it would be scaled inside of the kettle if we do not clean it. After a while, the sediment would get thicker and affect the heat transfer. Furthermore, it could cause the metal corrosion under the sediment & finally leaking. The principle of HW is very similar to this. Although our local water source is soft & does not have too much metal ion, the concentration of precipitated metal ion would accumulate after continuously heating & replenishing water. There will be minerals starting from tiny & loose particles and precipitating inside of the HW tank. If we can wash & clean these loose particles before their scaling, the life expectancy of HW can be extended. Due to the easy operation, the home owners can do it by themselves once every year. First, we have to find drain valve at the bottom of HW tank (figure 1). Then we can connect the hose on this valve & open to release water to floor drain or outside about 5-10 minutes. This is the simplest & lazy operation but not very effective and waste fuel. The more efficient & friendly method is to turn down the thermostat (figure 2) on the tank and continue to use the hot water until feel the apparent temperature drop, then close the cold water supply valve; open the drain valve which little water comes out due to the negative pressure inside the tank; open the pressure relief valve (figure 3). The sediment starts draining out with water. Once the water turns back to clear or stops, we are done. The reset steps will be close drain valve first, and then open the water supply valve until the water drain from pressure relief valve; set back relief valve and the thermostat to normal temperature. The HW tank is functional again.

This self clean method is effective on electric and indirect Water Heater.