

▼ TANKLESS WATER HEATERS

By Leo Vaillancourt

maintenance THE KEY TO EFFICIENCY



Today's consumer is demanding more and more efficiency in home appliances. Whether they are looking at dishwashers, furnaces, boilers, air conditioners or even water heaters, they want to get the most performance out of their operating dollars, but there's a lot more to efficiency than simply buying top-notch technology. To get the promised performance out of high efficiency appliances, they need to be maintained and serviced properly.

Unlike the mechanical equipment of yesteryear, homeowners can no longer hide these essential systems in the utility room and forget about them until they fail or need replacing. To do so will have them replacing or repairing equipment more often. Premature equipment failure can be quite costly to your customers, and can strain your relationship with them.

So how do we keep tankless water heaters running efficiently while maximizing their longevity? Simple: we provide service and maintenance for the appliance. This involves a few relatively easy steps. Read on.



SUGGEST A
MAINTENANCE

SCHEDULE

When you sell a client on high efficiency equipment, make sure they understand the need for regular maintenance and the consequences of not following a scheduled program.

Would a homeowner not have their automobile serviced on a regular basis?

Modern HVAC and plumbing equipment have much the same needs.

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THE SCOURGE OF SCALE

Tankless water heaters operate with a small volume of water within them and use heat exchangers with small waterways. If not maintained, these waterways are susceptible to scale buildup from the particles in the water that are left behind when the water is heated.

This buildup will reduce the efficiency and performance of the water heater, and may also cause the heat exchanger to overheat. This can cause premature failure if left unchecked.

So, how do we avoid this? Again, the simple answer is maintenance.



TANKLESS HEATER FLUSHING

While the specific setup might vary based on the brand and model of tankless water heater, the steps to flush and clean the heat exchange surfaces will be similar, so we can use the unit shown here as an example.

The first step is to shut off the power and gas supply to the unit. Once de-energized, isolate the unit by closing the valves on the cold and hot water lines (valves C and D).

Then, attach a hose to valve A and place the other end of this hose into your flushing kit's bucket. Connect a second hose from valve B to your pump outlet, and another hose from the pump inlet to the bucket.

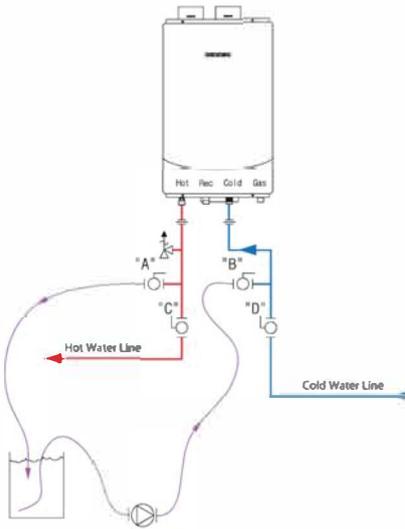
Pour the cleaning solution into the

bucket. You can use white vinegar, or any of the commercially available cleaners.

You are now ready to open valves A and B. Turn on the pump and allow the fluid to circulate for 30 to 45 minutes.

After the cleaning solution has circulated, rinse it from the water heater and disconnect the hoses. Remove the hoses from the bucket and place the hose connected to valve A into a drain. After that, close valve B, open valve D, and flush fresh water through the water heater for five minutes. Close valve A, open valve C, and then turn on the power and gas.

That's all there is to it!



THE BARE MINIMUM: DIY

If you cannot convince your client to have you do regular maintenance on their water heater, at least have them perform the heat exchanger flush themselves. The process is simple enough, and is generally contained in the user manual. If the right valve setup is used on installation, the flush should be no problem for a moderately handy homeowner.



RECIPE FOR LONGEVITY

Maintaining a tankless water heater is quite easy. All you have to do is follow these few steps, which should take about an hour and a half once a year. With the proper maintenance, the appliance will provide many years of efficient domestic hot water production.

1 Flush the heat exchanger at least once a year.

2 Clean all water filters that may exist in the appliance. Many units have filters for the cold water inlet and, if the DHW system has a recirculation loop or pump, filters may also be in the recirculation lines.

3 Check the condensate drain system, traps, neutralizers,

4 Check the condition of any flow- or temperature-sensing devices. Make sure they are clean and free of any scale buildup as well.

5 Check the venting system, both intake and exhaust, for possible blockages that currently exist or have the potential to occur in the future. If possible, and if the appliance allows for it, pour some water down the exhaust pipe to flush it out as well.

6 A scheduled maintenance visit is also a good time to check the condition of the ignitor and flame sensing rod. Better to clean or replace it while you're servicing the unit than to get a call later to come and replace it – especially since those “emergency calls” always seem to happen on a Sunday when company is over or you are planning to be off that day.

7 Once you have performed all of these steps, run the appliance through a complete sequence of operation from startup to shutdown to verify everything is working as it is intended, and you should be good for another year.

INVESTIGATE & ADJUST

The first time you service the appliance, check to see how much scale and other contaminants are flushed from the system. Based on what you see, you may decide that this maintenance can be extended to 18, or even 24, months. No two jobs are the same. The amount of scale buildup will depend on three factors: water quality, amount of usage and the temperature set point.

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