

# WaterGram - August 2017

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## The Importance of EXPANSION TANKS

It is important to have an expansion tank installed on your hot water tank.

Water supply lines in the area served by the La Mesa- Sundance Mesa Water Co-operative are equipped with check valves. This prevents water from flowing backwards out of your house into the water main. However, that means that if the water in your hot water tank heats up and expands, it needs a place to flow to, to prevent pressure build-up. An expansion tank provides that space. An expansion tank contains a volume of air enclosed by a flexible membrane. When water flows into the expansion tank, it compresses the air in the tank. The pressure rises slightly, but much less than it would if the water were enclosed by solid metal. If you do not have an expansion tank, the pressure rise could be sufficient to damage other components of your water system, causing a leak. Water softeners are particularly at risk.

## CHECKS TO MAKE

You should check whether or not you have an expansion tank. It is normally installed on the top of the hot water tank, and is normally labelled as an expansion tank. It is usually close to one foot high.

If you do have an expansion tank, you should also check whether or not it is still functioning. The flexible membrane that

separates the air from the water in the tank may begin to leak because of age. To test whether or not the tank contains air, tap it lightly with a light metal object such as a screwdriver. If the tank still contains air, the part of the tank above the membrane will produce a ringing tone, and the part below the membrane will produce a dull clunk.

If you are not confident that you can tell that the tank is still charged with air by the tap test, there is another more complex test. You will require a water pressure meter (\$10 - \$15 at Home Depot or Lowe's). It is calibrated in psi (pounds per square inch). Install the meter on one of your hose bibs (outdoor faucets). Turn down the temperature setting on your hot water heater to its minimum value. Run the hot water at one of your faucets for about five minutes, then turn it off and check the pressure reading at the hose bib. Turn the temperature setting on the water heater back up to its normal value, and watch the pressure gauge on the hose bib. If it rises sharply (more than about 10 psi) your expansion tank is not charged with air. Do not let the pressure rise more than 20 psi. You can stop the pressure rise simply by opening a cold water tap in the house a little bit and letting it run until the water in the hot water tank is reheated. (This test is also useful for Doubting Thomases who aren't convinced they need an expansion tank.)

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