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Frosting of a Fuel Regulator on a Propane Buffer

Purpose: To show the difference between a normal looking fuel regulator, one that has been frosted due to a propane tank being too full, and the steps to rectify this problem.

This picture is of a normal fuel regulator on a propane buffer.

The frosting of the fuel regulator is caused by the propane tank being filled too full by a propane filling station. The liquid propane is entering and passing through the regulator and is causing the frost to develop on the outside. If frost on the outside of the regulator happens, the machine needs to be turned off immediately and the venting procedure performed below. The liquid propane can and will damage the internal parts of the regulator and cause permanent damage to the diaphragm material causing it to rupture. This will cause extremely high CO emissions, leading to the replacement of the regulator.

The release valve is on the top of the tank as shown. The overfilled tank must be taken outside away from people and buildings. DO NOT OPEN THE VALVE WITH YOUR BARE HANDS. Put on protective gloves and glasses. Standing away from the valve, use a pair of vise grips and turn the valve counter-clockwise to open. The propane will then vent out the side of the valve, towards the outside of the tank. Walk a safe distance away from the tank so you don't breathe in the propane vapors. Allow the valve to vent for several minutes. When finished, turn the valve clockwise to close completely. A properly filled tank should only be at 80% full for proper propane vapor delivery to the regulator. Repeat , if necessary, until no more frost develops.