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## **Propane Tank Instructions and Safety**


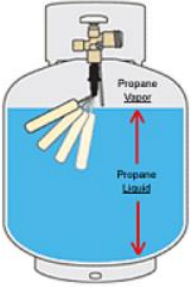

Two common types of liquid propane tanks are used in firepits, horizontal and vertical. Vertical is the more common tank that is used on most grills. Horizontal tanks are used when there is a height restriction.

**Unfortunately, it is common for propane filling technicians not to follow safety guidelines and to overfill a tank, causing a safety concern. When the tank is overfilled, the gas appliance may not to perform correctly. Please review this entire document for complete understanding.**

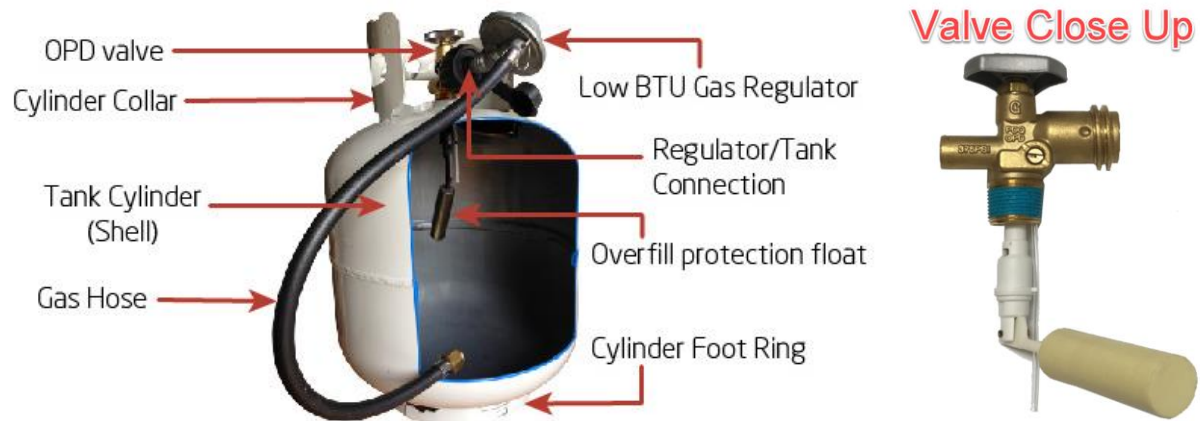
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## Types of Propane Tanks

Liquid Propane Tanks	Image	Details	Filling
Vertical 20lbs exchange tank		<ul style="list-style-type: none"> <li>✓ No overfill safety device</li> <li>✓ Underfilled by an average of 5 pounds</li> </ul>	Should be exchanged and not refilled at a propane filling station. There is no overfill prevention.
Owned 20lb vertical refill tank		<ul style="list-style-type: none"> <li>✓ Includes an overfill safety device</li> </ul>	Follow the manufacturer's recommendations on the label on the tank.
Owned 20lbs horizontal refill tank		<ul style="list-style-type: none"> <li>✓ Includes Overfill Safety Device</li> </ul>	Follow the manufacturer's recommendations on the label on the tank.

## What Does The Inside Of A Propane Tank Look Like?



Part	What?
OPD Valve	Overfilling Prevention Device Valve consists of a pressure relief valve and quick closing coupling to improve the safety when using a propane tank.
Low BTU Regulator	Reduces the pressure from the tank to a usable level for the grill or firepit.
Cylinder Collar	Protect the OPD from accidental damage
Regulator Tank Connection	Threaded attachment point for gas appliances
Tank Cylinder Shell	Steel shell designed to hold liquid propane under pressure
Overfill protection float	This is a float switch that closes off the filling tube when the tank is 80% full. It works just like the float in a toilet cistern. By only allowing the tank to be 80% full, there is adequate room left in the tank, called headspace.
Gas Hose	Supplies the reduced pressure propane to the appliance
Cylinder Foot Ring	Protects the bottom of the tank and makes the tank stable in the orientation it should be used. Please note that a horizontal tank has the foot ring for filling only. A horizontal tank should be used on its side on the two additional welded on feet.

## Videos

- ✓ **How do you refill a propane tank?**
  - <https://www.youtube.com/watch?v=tQvgneIHgmw>
- ✓ **Whats inside the tank by U-Haul?**
  - <https://www.youtube.com/watch?v=XBJ6vXueYZ4>
- ✓ **What propane looks like in the tank by Tarantin Industries**
  - <https://www.youtube.com/watch?v=XBJ6vXueYZ4>
- ✓ **RV Propane Tank Overfill Protection Device Identification by RV Repair Club**
  - <https://www.youtube.com/watch?v=M1SBTOz5m8w>
- ✓ **My Propane Keeps Getting Overfilled**
  - <https://www.youtube.com/watch?v=gneIFZy4Ga8>
- ✓ **My Fire pit has low flames by Ontario Gas BBQ**
  - <https://www.youtube.com/watch?v=5cgeNzrYa6Q>
  - <https://www.youtube.com/watch?v=oaol4frvhSQ>

## Making Sure Your Tank Is Not Overfilled

An overfilled propane tank is not safe. It can cause a propane appliance to burn too hot, ice up and stop working, or not work at all.

A propane tank should not weigh more than the Tear Weight (TW) stamped on the tank + pounds of propane it is designed to hold.

### Example:

A tank with a Tear Weight of 20.2 lbs filled full with 20 lbs of propane in it should not weigh more than 40.2 lbs. To be safe, you can subtract 1lbs and ask for a maximum weight of 39.2 lbs.

## How do I check the weight of my tank at home?

You can check the weight of your tank by weighing yourself on a house hold scale, then weigh yourself again while holding the propane tank.

### Step 1:

	Example	Your Numbers
Tank Tear Weight (TW) <small>Tear weight is the weight of the empty tank. TW is marked on the protective collar of the cylinder.</small>	20.2 lbs	
Pounds of liquid propane the tank is designed to hold.	20 lbs	
<b>Total Maximum Weight of Full Tank</b>	40.2 lbs	

### Step #2

	Example	Your Numbers
Your weight on the scale holding the propane tank	190 lbs	
Your weight on the scale	235 lbs	
<b>The Difference is the Weight of your Tank</b>	45 lbs	

### Step #3

	Example	Your Numbers
<b>Total Maximum Weight of Full Tank</b>	40.2 lbs	
<b>Weight of your Tank</b>	45 lbs	
<b>Difference</b>	-4.8lbs	

### Results

Status	Weight Range
Overfull	-0.01 lbs or less
Maxed Out	0 - .2 lbs
Good	.3 - 12 lbs
Low	13 lbs – 17.5 lbs
Empty	17.6 lbs – 20 lbs

## Frequently Asked Question

1. The fill stations says I cannot get a full fill on my horizontal propane tank.
  - a. Please read the sticker on the tank and follow the instruction for a full fill.



2. How can I make sure my horizontal propane tank is not overfilled?
  - a. Read the filling instruction on the label on the tank. Watch the technician filling your tank and ensure they follow the specific instruction for your tank.
  - b. All tanks should be filled by weight, not by pressure. Make sure the technician filling your tank measures your filled cylinder's weight and it is in alignment with what is stamped on your cylinder collar. Overfilled cylinders are not safe.
3. Why won't my horizontal propane tank work if I overfill it?
  - a. An overfilled tank is unsafe. The safety devices in the Overfilling Prevention Device Valve outlined earlier in this document are trying to prevent an unsafe condition and may prevent your device from working properly.
4. How do I know if my horizontal propane tank is overfilled?
  - a. The easiest way to make sure your tank is not overfilled is to check the weight. The cylinder collar will outline the manufacturer's recommended full weight. Anything over this weight indicates overfilled.
  - b. A trained filling technician can also check for an overfill situation by placing the tank in its correct operating orientation in a safe environment, while wearing the correct safety gear and opening the bleed screw on the tank's valve. If liquid comes out and not gas, the tank is overfilled.