

# Portable Propane Tank Safety

Portable liquified petroleum gas (LP gas), otherwise known as propane, is a commonly used and versatile fuel for space and water heating, as well as cooking. If used as a vehicle fuel source, it's known as propane autogas. As new developments in technology emerge, propane applications will continue to increase. Here we'll point out the risks of using propane as a fuel source and provide some safe handling tips.

## What is propane?

Propane is a colorless, odorless (an identifier is added), and nontoxic gas normally stored as a liquid. It's a byproduct of natural gas processing, although some may be produced from crude oil refinement. Propane has been approved as an alternative, cleaning-burning fuel due to its efficiency and low emissions. If spilled, it's released as gas and doesn't contaminate the surrounding environment.

Propane is stored in steel tanks or cylinders which come in a variety of sizes for different applications. They're advertised in either pounds or gallons. For example, a 20-pound tank can also be described as a 5-gallon tank.

## Safety tips

### Keep the tank in the upright position

Portable tanks should be kept in the upright position with the valve's handle on the top. If positioned on its side or upside down, the pressure may force the liquid out of the tank. If you're setting it down or leaving it unattended, make sure the tank is secured so it can't tip over or be moved abruptly.

### Inspect your tank

The propane tank is designed to maintain the pressure unless compromised. For this reason, routine inspection of the tank is necessary. Be on the lookout for rust and/or corrosion. A few small areas of rust are no cause for alarm; however, large patches may mean a new tank is in order. In general, any sign of rust should always be remedied as soon as possible.

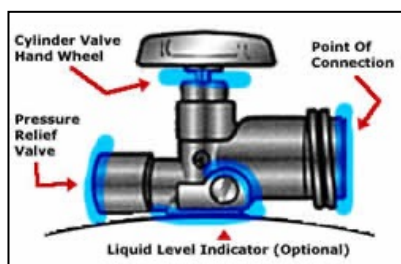
Unusual bulges and dents may also indicate the integrity of the tank has been compromised and is at risk for failure. If you have any concerns about your tank, have it inspected by a qualified technician or retire it.

### Requalify your tank

Propane tanks must be requalified 12 years after the date of manufacture. The inspection dates are stamped on the collar of the bottle. After the first 12-year period, tanks must be visually inspected. If no real deterioration is found, the tank is requalified for another 5 years. All requalification dates should be stamped on the collar of the bottle, as well. There may be several dates stamped, so be sure to identify the most recent one.

### Inspect hoses and connections

Make sure to inspect all hoses and connections before each use. Look for any signs of cracking or deterioration which can lead to gas leaks, which may worsen over time.



To safely check for leaks:

- ✓ Mix liquid soap or dish washing detergent with water.
- ✓ Spread the mixture on all the hoses and connections.
- ✓ If connected to an appliance, open the tank to pressurize the line, then shut it off. If not connected to an appliance, keep the tank off.

If bubbles form, you have a leak.

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## Propane regulator

The regulator's job is to control the pressure from the tank before feeding through the line. Under normal operation, regulators make a humming noise which shouldn't be construed as a malfunction. They can be found under the tank dome or installed outside of the dome with the vent pointing downward. Like any other parts of the system, regulators should be protected. If your system isn't working or the flames show yellow instead of blue, it may be a sign that your regulator is failing. They do contain moving parts which are susceptible to wear and tear over time. Regulators should last at least 15 years before replacement may be necessary.

## Driving with propane

Traveling with your propane on is extremely dangerous. For example, it may be convenient to keep your RV refrigerator running while on a road trip, but a broken line can trigger a fire instantly. There are a variety of situations in which driving with active propane is illegal. Always make sure you follow all applicable laws.

## Propane safety equipment

### ✓ Carbon monoxide detector

An incomplete burn will result in the production of carbon monoxide, which is colorless and odorless. Since carbon monoxide is lighter than air, any detector should be mounted on an elevated surface. Carbon monoxide in the air can cause poisoning and death.

### ✓ Smoke detector

Working and current smoke detectors are required by law.

### ✓ Fire extinguisher

A non-expired, class B- or C-type extinguisher should be readily available when propane is in use.

### ✓ Propane alarm

Since propane is colorless and odorless, a propane alarm should be in place to detect any leaks which can easily ignite and start a fire. Propane can also replace available oxygen causing suffocation.