

# Safe Fueling Techniques

It's easy to forget that fueling is a potentially dangerous part of boating, but when dealing with explosive gasoline fumes, you can never be too careful. The U.S. Coast Guard says that most fires and explosions on boats happen during or after fueling. For this reason, take as much care as possible when at the pump. Most small boats used for fishing have outboards, so consider some special safety tips for these kinds of engines.

## Outboard awareness

Since outboards use gasoline, it is particularly important that no open flames or lit cigarettes be nearby during fueling, and for the boater to take care not to let any kind of a spark or open flame occur. It should go without saying that the engine should be off during fueling. Also, hold the pump metal to the fuel-opening metal.

This helps prevent static electricity sparks, and it ensures that fuel isn't spilled into the water or back into your boat.

If you are fueling portable tanks of less than six gallons, always fill them on the dock and always use a designated gas can, which is made for safe fueling and transportation.



photo-Art Michaels

When fueling your boat, have your passengers get off, just in case there is an emergency. There is no reason to take chances when just a couple of extra minutes could help save lives in case of an onboard fire.

## Fuel systems

A properly maintained fuel system can help prevent the spills that can lead to the buildup of gas or fumes. In larger boats, some aluminum tanks are located in foam insulation where they can become corroded and the damage is difficult to see, so check any persistent gas smells, and check the tank often. Use only approved fuel line tubing for marine use, and check that fittings are snug and dry and that connections are tight.

## Avoid over-fueling

Leaving your vessel unattended while fueling or topping off the tank can cause dangerous spills into your boat, or spills into the water, which can lead to stiff fines. To avoid over-fueling, always keep your hand on the fuel nozzle, and listen

for sounds from the fuel vent that indicate it is almost full. Know the size of your fuel tank and aim to fill it no more than 95 percent full. On hot days, the fuel will expand, and if the tank is already filled completely, fuel will leak out.

## Fumes can kill

One of the most dangerous parts of fueling, particularly on larger boats with enclosed cabins, is the collection of gas fumes in certain areas of your boat. Gas fumes are much heavier than air and always go to the lowest part of your boat. These fumes can accumulate in your bilge and lead to an explosion. That's why you should close all cabin doors and hatches to avoid letting fumes inside. After fueling, be sure to run your blower for at least four or five minutes and make sure you cannot smell gas before starting your engine. Place your fire extinguisher on board where you can reach it in a fueling emergency.

## How much fuel?

A common rule suggested by the U.S. Coast Guard Auxiliary is the one-third rule. Be sure to have enough fuel on board so that one third will get you to your destination, one third will get you back, and one third is available for emergencies. Often one leg of the trip will require more fuel because of currents, winds or weather.

*This information is provide by the BoatU.S. Foundation. Visit its web site at [www.boatus.com/foundation/sportsman](http://www.boatus.com/foundation/sportsman).*

## Fueling Checklist

- Secure boat to the dock.
- Switch off engine(s).
- Extinguish all open flames.
- Do not use electrical switches.
- Do not smoke.
- Close ports, hatches and doors.
- Make certain all passengers are ashore.
- Determine quantity of fuel required and use the proper type of fuel.
- Hold hose nozzle firmly against fill pipe opening.
- Do not overfill.
- Wipe up all spillage.
- Open ports, hatches and doors to ventilate.
- If you have a blower, turn it on at least for four minutes.
- Sniff for fumes.
- Do not start engine(s) until all fumes are gone.
- Re-board passengers.
- Untie from dock and cast off.