

28 January, 2025

TN 251002 B: Storage of Gasoline in Portable Containers

What is the issue?

Recently we have repaired many small engine problems, which cost nearly the replacement cost of the machine- almost all of them could have been prevented by proper fuel storage. We address best practices for fuel storage here.

Ethanol Content

Almost all motor fuel sold in New Jersey contains a significant percentage of ethanol- ranging from 5% on up. **Contrary to popular belief, the ethanol itself will not cause any problems with small engines.** However, the water it can attract does cause problems. Storing it is *different* than was the case for traditional, 100% mineral, gasoline, and the storage practices that worked in 1862 are not well suited to today.

Humidity

In New Jersey (and the surrounding region), the air has some significant percentage of water content, 12 months a year- even in winter! Ethanol is very good at soaking up water, and will do so if allowed. Water contamination of fuel causes the majority of small engine malfunctions we see. The solution to this is simple- keep the fuel container sealed all the time except when pouring or filling.

Plastic Fuel Cans

It has been widely noted that plastic fuel cans sold in the past 10 years are difficult to use. That is certainly true. However, throwing away or defeating the features of these cans hurts us more than it does the EPA- **please do not throw away the factory nozzle system for these cans!** Managing evaporative emissions is not the sole purpose of these nozzles. The other critical function they provide is automatically sealing the can when not in use. This prevents water from contaminating the fuel.

I don't care, [bleep] the EPA and I'm not using these dumb fuel cans

Use a Type II safety can. For what it's worth, the EPA hates them and only begrudgingly allows them. Safety cans are easier to use and better for small engines. They automatically open every time they're picked up, and automatically seal when let go- even more convenient than old-school plastic cans! Most models are available with a flexible metal 5/8" spout perfect for filling the tanks on small handheld equipment. While these cans are more expensive than plastic containers, most users who adopt them find the reduced labor costs, greater small engine reliability, and the increased durability compared to plastic, more than make up for it.