



STOP Static... Staying Safe at the Pump

As we reported in Issue 9 of Ear to the Ground, The American Petroleum Institute (API) and the Petroleum Equipment Institute (PEI) have launched a campaign to raise awareness of the potential fire and safety risks during vehicle re-fuelling. The need for this campaign is underlined by the fact that, on average, there are over 1,000 static-caused fires during re-fuelling in the USA alone. These fires give rise to consumer injuries and even fatalities, as well as extensive direct property damage.

When you consider that in the USA there are between 11 to 12 billion vehicle-refuelling transactions per year, static electricity-related incidents at retail fuel/gasoline outlets are extremely unusual. However the devastating consequences of an incident are so serious that this "one in a million" risk must be controlled. It is also fair to say that the likelihood of such incidents is increasing as more US retail fuel/gasoline outlets move over to "self serve", rather than having a trained attendant on hand.

The guidelines shown and references to the adopting of these relate to action currently taking place in the USA. However, it was felt that the scenario of "static electricity on a person causing the ignition of flammable vapours" would be of interest to all readers of Ear To The Ground, particularly when the "domestic" nature of the incidents is related to similar industrial situations.

If a pump with a latching handle is used (such as the type often seen in the USA) static electricity may build up on the motorist when he / she re-enters the vehicle and slides across the seat, as the pump is left to automatically fill the tank. If the motorist is not wearing static-dissipative footwear, static may discharge from the body to the fill point, as he / she returns to the nozzle. This may ignite gasoline vapours, causing a flash fire or even a sustained fire. Potential problems with static electricity at the pump may occur any time of year, but most typically incidents have occurred when the air is cool and dry.

The following advice for consumers is offered by the Stop Static awareness campaign: -

The primary way consumers can avoid static electricity problems at the gas pump is to stay outside the vehicle while refuelling. It may be a temptation to get back in the car for any number of reasons. But the average fill-up takes only two minutes, and staying outside the vehicle will greatly reduce the likelihood of any build-up of static electricity that could be discharged at the nozzle.

If a motorist experiences a fire when refuelling, leave the nozzle in the fill pipe of the vehicle and back away. Leaving the nozzle in the vehicle will prevent any fire from becoming much more dangerous. Notify the station attendant immediately to shut off all dispensing devices and pumps.

If the facility is unattended, use the emergency shutdown button to shut off the pump and use the emergency intercom to summon help.

If you must re-enter your vehicle during refuelling, be sure to discharge any static that may have built up before reaching for the nozzle. Static may be safely discharged by touching a metal part of the vehicle, such as the vehicle door, or some other metal surface, away from the nozzle, with a bare hand.

Consumers can minimise these and other potential fuelling hazards by following safe refuelling procedures all year long. Always put portable fuel storage containers on the ground to fill them and keep the nozzle in contact with the rim of the container. Never allow children under licensed driving age to operate the pump.

SAFE REFUELLING AND FUEL HANDLING GUIDELINES FOR CONSUMERS

Here are consumer refuelling and fuel safety guidelines that will help keep you and your family safe when refuelling your vehicle or filling up gasoline storage containers:

- Turn off your vehicle engine. Put your vehicle in "Park" (if it has automatic transmission) and/or set the emergency (hand) brake. Disable or turn off any auxiliary sources of ignition such as a camper or trailer heater, cooking units, or pilot lights.
- Do not smoke, light matches or lighters while refuelling at the pump or when using gasoline anywhere else.
- Use only the refuelling latch provided on the gasoline dispenser nozzle. Never jam the refuelling latch on the nozzle open.
- Do not re-enter your vehicle during refuelling. If you cannot avoid re-entering your vehicle, discharge any static build-up BEFORE reaching for the nozzle by touching something metal with a bare hand -- such as the vehicle door -- away from the nozzle.)

In the unlikely event a static-caused fire occurs when refuelling, leave the nozzle in the fill pipe and back away from the vehicle. Notify the station attendant immediately.

PORTABLE CONTAINERS

- When dispensing gasoline into a container, use only an approved portable container and place it on the ground to avoid a possible static electricity ignition of fuel vapours. Containers should never be filled while inside a vehicle or its trunk, the bed of a pickup truck or the floor of a trailer.



Avoid potential static electricity problems at the gas pump by staying outside your vehicle while refuelling.



- When filling a portable container, manually control the nozzle valve throughout the filling process. Fill a portable container slowly to decrease the chance of static electricity build-up and minimise spilling or splattering. Keep the nozzle in contact with the rim of the container opening while refuelling.
- Fill container no more than 95 percent full to allow for expansion. Place cap tightly on the container after filling - do not use containers that do not seal properly.
- Only store gasoline in approved containers as required by federal or state authorities. Never store gasoline in glass or any other unapproved container.
- If gasoline spills on the container, make sure that it has evaporated before you place the container in your vehicle. Report spills to the attendant.
- When transporting gasoline in a portable container make sure it is secured against tipping and sliding, and never leave it in direct sunlight or in the trunk of a car.

ADDITIONAL SAFETY GUIDELINES

- Do not over-fill or top-off your vehicle tank, which can cause gasoline spillage.
- Never allow children under licensed driving age to operate the pump.

- Avoid prolonged breathing of gasoline/petrol vapours. Use gasoline only in open areas that get plenty of fresh air. Keep your face away from the nozzle or container opening.
- Never siphon gasoline by mouth nor put gasoline in your mouth for any reason. Gasoline can be harmful or fatal if swallowed. If someone swallows gasoline, do not induce vomiting. Contact a doctor or an emergency medical service provider immediately.
- Keep gasoline away from your eyes and skin; it may cause irritation. Remove gasoline-soaked clothing immediately.
- Use gasoline as a motor fuel only. Never use gasoline/petrol to wash your hands or as a cleaning solvent.

Since API and PEI launched their joint public safety awareness campaign on static and refuelling last year, the National Fire Protection Association has adopted new language for warning labels at refuelling pumps that includes these safe refuelling guidelines. These guidelines were proposed by API and supported by both organisations. The new warning language will continue to appear at gasoline stations located where many local and state governments follow NPFA guidelines as part of their safety regulations. Similarly the International Code Council is also considering updating its warning language guidelines to be posted at refuelling pumps.

For more information on avoiding potential problems with static electricity build-up at the pump, refuelling safety and safe fuel storage and handling guidelines, visit the API or PEI websites at www.api.org or www.pei.com