Technical Bulletin

SAFETY PRECAUTIONS FOR USING PORTABLE FUEL CONTAINERS

This Technical Bulletin is provided to inform consumers of this safety concern and offer prudent safety measures to follow while fueling portable fuel containers. These safety measures are intended to minimize the possibility of fire in this situation.

Electrostatic charge build-up on portable fuel containers, should be a safety concern for the consumer. Over the past few years, the Petroleum Equipment Institute has received first-hand reports of isolated fire incidents which may have arisen from static charge accumulation on portable fuel containers. The jobber, retail station operator, and consumer should be aware of the possible static charge build-up that can occur on portable fuel containers while being filled. Generation of static charge can occur through the friction of the fuel moving through piping, filters and fittings and moving against the portable container surface. This same situation occurs with the electrostatic charge that builds up on a person while rubbing his or her shoes on carpet. The spark that is emitted from the person when he contacts another surface is one that is also sufficient to ignite fuel vapors if present.

In order for the threat of fire to exist, three components are required; an ignition source (a spark arising from static charge accumulation in this case), oxygen and fuel. Not only are oxygen and fuel required, but they are required in specific proportion - called the flammable range. Outside of the flammable range, too lean or too rich an air:fuel vapor mixture, ignition does not occur.

The following is a list of precautions which must be taken in order to greatly reduce the risk of a fire due to static charge build-up while filling portable containers with fuel:

*****Only use approved fuel containers.

It is unlawful to dispense gasoline product into a non-approved container. Containers for fuel storage and transport approved by Underwriters Laboratory (UL) possess their trademark “UL” symbol. UL certifies plastic or metal portable gasoline safety containers. Containers must be predominantly red in color and be sufficiently labeled as a gasoline container. UL does not certify regular metal gasoline cans. Canadian Standards Association also certifies portable fuel containers. Containers possessing the discontinued standard ASTM D3435 are still currently approved. Containers should be discarded if their integrity is in question.

* Extinguish all smoking materials before filling the fuel container.
* Turn your vehicle’s engine off while fueling into your vehicle or a fuel container.
* Container placement should be on the ground, preferably on cement, and sufficient distance from any vehicles in the area.
* The fuel pump nozzle should remain **in contact** with the portable container while filling.
* The consumer should control the flow of fuel into the can. Do not place the trigger valve in a lock position while filling the container. This aids in overflow/spill prevention. Slower fuel flow also helps to reduce the rate at which static charge accumulates.
* Fuel volume in the container should not exceed 95% or recommended limits on the can. Fuel dispensed into the can, many times, is cooler than ambient air temperature, and room for expansion due to warming of the fuel must be taken into consideration.
* Before transporting the fuel-filled container, secure closures and clean off any residual gasoline that may have spilled on the container. Secure the container tightly in a cool, dry location in your vehicle. Do not allow the container to slide around during transport. Do not allow the container to remain, for any length of time, in a location where it will heat up.
* Once your destination is reached, store the fuel container in a cool, dry location.
* Fire codes advise storing only the amount of fuel necessary for operation of equipment, and not to exceed ten gallons. If the fuel is stored in a special cabinet designated for flammable storage, the amount should not exceed thirty gallons.
* Fueling recreational vehicles such as jet skis or snowmobiles is done more safely from a portable container than directly from a service station pump due to reduced fuel flow rate. A slower fuel flow rate reduces the rate of static charge accumulation thus reducing the possibility of spark emission and fire.
* BP, Amoco and ARCO service station pumps display a warning label advising of safe fueling practices while filling portable gasoline containers.

For further information on BP fuels, contact:

BP Quality & Technical Service
Phone: 1-800-841-5255
BP Naperville Complex
150 West Warrenville Road
Naperville, Illinois 60563-8460
Website: www.bp.com