

Safety Note #25

## SAFE FUELING PRACTICES



According to the National Fire Protection Association (NFPA), from 2010 to the present, the incidence of fueling station fires has been influenced by several factors. The leading causes of fires at fueling stations include static electricity, smoking, and vehicle-related issues such as backfires or malfunctioning parts (NFPA). Static electricity remains a significant cause, particularly in cold, dry weather that enhances static buildup, making proper grounding before fueling crucial. Despite clear signage and regulations, smoking and open flames still contribute to incidents due to negligence. Equipment malfunctions, such as faulty pumps, hoses, and nozzles, can lead to spills and subsequent fires. Additionally, vehicle issues, including backfires,

overheated engines, and electrical faults, can ignite fuel vapors, further emphasizing the need for vigilance and proper maintenance at fueling stations. Safe fueling practices are outlined in the California Code of Regulations (CCR), Title 8, Section 3319.

### CCR Title 8, Section 3319 requires the following:

1. No internal combustion engine shall be refilled with a flammable liquid while the engine is running.
2. Fueling shall be done to minimize spillage.
3. If a spill occurs, it shall be cleaned up immediately, either by washing away, allowing it to evaporate, or taking equivalent action to control vapors before restarting the engine.
4. Fuel tank caps shall be securely replaced before starting the engine.
5. Smoking, open flames, or operating arcing equipment near fuel storage tanks or internal combustion engine equipment must be avoided when fueling with flammable liquids.
6. Always use approved safety fuel containers equipped with automatic closing caps and flame arresters.

### Additional Safe Fueling Practices:

- Do not re-enter your vehicle once you have started fueling. Re-entering can cause a static charge to accumulate, which may discharge and ignite fuel vapors when you touch the pump handle.
- Fuel operator shall not leave the fueling station/vehicle while fuel is actively pumping.
- Always fill portable fuel containers while they are on the ground. Containers placed in truck beds with plastic liners or carpeting can accumulate static charges, which can ignite fuel vapors during dispensing.
- There is no verifiable evidence that smartphones, pagers, and other electronic devices cause ignition of flammable fluids when fueling vehicles, machinery, equipment, or portable containers. However, it's best to minimize distractions during fueling.
- Never top-off fuel tanks or portable containers. Overfilling can lead to spills and increased fire risk. Avoid blocking open the fuel pump handle trigger.
- Always wash any spilled fuel off your hands with soap and water immediately to prevent skin irritation or fire risk.
- In the event of a fire, do not remove the pump nozzle from the fuel tank or container. Immediately engage the emergency fuel shut-off, sound the fire alarm, and, if feasible, use a fire extinguisher to put out the fire. If the fire extinguisher cannot control the fire, notify a supervisor or safety coordinator immediately.
- Static Discharge Prevention: Post signage reminding users to touch a metal surface away from the fueling point before touching the pump handle. Consider grounding systems for high-risk fueling areas.
- Training and Awareness: Conduct regular safety training sessions for all personnel handling fuel. Include practical demonstrations of emergency procedures, such as basic firefighting techniques, using fire extinguishers and emergency shut-offs.
- Regular Inspections/Maintenance: Regularly inspect fuel dispensing equipment for wear and tear, ensuring all safety mechanisms, like automatic shut-offs and grounding cables, are functioning correctly. Maintain clear records of inspections and maintenance activities.