

Refuelling safety

QFleet driver safety fact sheet

Refuelling can be a hazardous activity. The hazards are greater when highly flammable fuels such as petrol are being dispensed, because petrol releases flammable vapours that expand into the atmosphere.

When a flammable liquid flows, static electricity is generated from the friction between dissimilar materials (e.g. the fuel and the metal fuel filler neck). When the static electricity discharges, it produces sparks which can ignite the fuel vapours. The fuel dispensing pumps found at service stations and the fuel filler necks of motor vehicles are earthed to minimize and control the static electricity produced during normal vehicle refuelling.

Static electricity is dangerous because it is:

- invisible and unpredictable
- discharged in the form of a spark which can ignite flammable materials
- a natural phenomenon that cannot be prevented but can be controlled
- rarely understood by most people.

To control the effects of static electricity and for general fire safety during refuelling the following should be observed.

- Switch off the vehicle engine while refuelling and ensure the park brake is applied.
- Do not smoke or allow other ignition sources into the refuelling area.

- Do not use foreign items to lock the refuelling trigger in the “on” position.
- Do not re-enter the vehicle while refuelling is in progress. If the driver must re-enter the vehicle, any static electricity must be discharged before touching the refuelling nozzle by first touching the metal on the outside of the vehicle.
- In the event of a refuelling fire, leave the nozzle in the vehicle’s filler neck and back away from the vehicle. Notify the service station attendant immediately.
- Do not overfill the vehicle.
- Avoid using high speed fuel pumps, particularly when refuelling vehicles with plastic fuel tanks. Faster flowing fuel can develop static electricity.
- Clean up spilled fuel.
- Observe safety signage at service stations.



The risk of refuelling fires is greater when fuel is dispensed into portable containers. To control the effects of static electricity and to control the risk of fire when refuelling portable containers and other plant, the following should be observed:

- Always read and observe the safety signs at service stations.
- Never use unapproved containers to store fuel.
- Always use a plastic fuel container that complies with AS2906 or an appropriate metal container with a well-sealed lid.
- Use only containers with serviceable caps / lids and seals.
- Always place the fuel container on the ground before filling with flammable liquid. This will discharge any static electricity prior to refuelling.
- Never fill a container in the boot of a car, or in the tray, or on the tailgate of a utility, particularly if it is fitted with a plastic tray liner.
- Fill containers slowly to avoid overflow and spillages.
- Do not lock the refuelling trigger “on”.
- Do not fill portable containers to more than 95% full; this allows for expansion.
- Secure portable fuel containers against transit damage.
- Avoid refuelling petrol operated equipment (mowers, generator sets, jet skis, etc.) while located within a utility tray.



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