

Introduction

1. Fuel cans are likely to become pressurised due to high ambient temperatures, direct sun, proximity to heat sources (e.g. exhaust, fire) and vibration. If opened too quickly, pressurised fuel and fuel vapours will discharge. There is the potential for the fuel to ignite and cause significant injury to personnel.

Personnel must be aware of this hazard and apply safe operating procedures when opening fuel cans. Further information is provided at Directive 3.2 – Incident Control.

[Directive 3.2 – Incident Control](#)

2. **Safety Precautions.** The following precautions are designed to ensure safe use of fuel cans:

- Fuel cans are not to be opened on a fire or incident ground (e.g. the hot zone)
- Never open a fuel can within 5m of either an ignition source or other personnel
- Always wear a minimum of Level 1 PPC (i.e. long sleeves and long pants) including:
 - Safety Glasses/Goggles
 - Level 1 Tunic
 - Gloves
 - Helmet (with the visor down)

Procedures

3. **Fuel Can Maintenance.** All operational personnel are reminded to take the following steps as part of regular equipment/maintenance checks:

- Remove all fuel cans from their bracket,
- Check the fuel cans for any visible damage or leaks,
- Ensure the outside of the fuel cans are clean and dry,
- Ensure fuel can bracket is clean, dry and free from debris,
- Ensure anti-explosive mesh is present in fuel can.

Routine care and maintenance of fuel cans will help ensure unserviceable or at-risk fuel cans do not create a potential hazard on vehicles. Any fuel cans found to be damaged and at risk of leaking are to be removed from service and replaced immediately.

Funnels are to be removed from the fuel can and stored in a locker to limit dirt/debris entering the fuel system. This will also prevent blow-back (the situation where fuel expelled under pressure hits the funnel and deflects onto the person opening the fuel can).

The rubber mat covering the surface of the Light Tanker tray is used to prevent excessive heating of the bottom of the can; further insulation housing would hinder surrounding air movement, reduction of convection heat, and would also trap fumes.

All 5L fuel cans are fitted with anti-explosion mesh. This is designed to act like a baffle in the event that fuel vapours ignite within the can.

[NUCOM – Fuel Can](#)

4. **Preparedness.** Prior to entering the fire ground and each time the vehicle travels to the water point or staging area for replenishment, a vehicle check is to be conducted including:

- water tank level
- pump engine fuel level
- vehicle fuel level
- vehicle damage
- leaf/debris build-up
- drinking water/refreshments

Operational personnel are directed to remove fuel cans from ALL Career and Volunteer Light Tankers on arrival at an incident and place the fuel can at either;

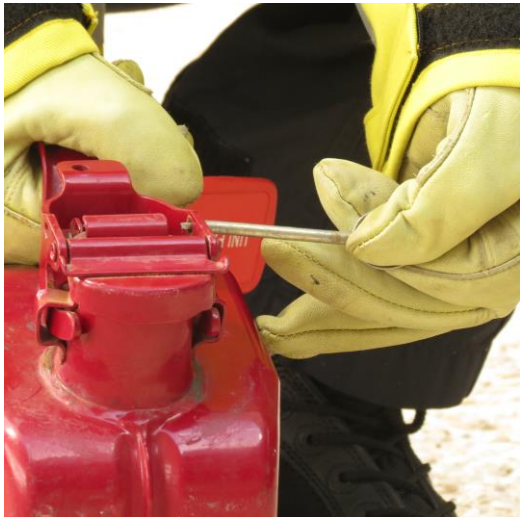

1. A control point;
2. With your additional appliance responding to the incident (other than a Light Tanker); or
3. A shaded area that will not be impacted by fire.

5. **Refuelling.** In order to minimise the risks associated with refuelling pump motors, refuelling will only occur when the vehicle is in a safe area (e.g. a water point, staging area, well-ventilated area, cold zone). The greatest risk of injury caused by pressurised fuel occurs when the fuel can is being opened. Ensure minimum PPE is worn and fuel can is opened in an area completely free of any potential ignition sources. This procedure is to be followed for refuelling of all static motors on all vehicles where fuel cans are utilised as the refuelling method:

- Move vehicle to a clear area (e.g. off the fire ground)
- Ensure pump engine is not running.
- Remove the fuel can from the vehicle.
- Ensure minimum PPE is worn.
- Ensure a 5m radius safe zone free of ignition sources (including the vehicle) and other personnel.
- Follow correct fuel can opening technique (see [Annex A](#) for photographic instructions):
 - Kneel behind the fuel can with cap facing away from the body.
 - Fully withdraw the retaining pin.
 - Lift cap handle slowly to allow pressure build up to vent, with any venting away from the body.
 - Control opening with hand pressure as required.
 - Lift cap handle completely once venting has ceased.
- Prior to pouring fuel from the fuel can into the pump engine fuel tank ensure that your feet are on the ground, you earth yourself by touching the appliance, and the pouring funnel is in contact with the fuel tank. This will reduce the potential for ignition due to static.
- Always clean off excess fuel from the tank with a rag.
- Do not re-enter the fire ground if PPE has been splashed with fuel (find alternate PPE).

Fuel cans on vehicles or held at stations/units must not be overfilled. Fuel vapours will expand when exposed to heat and an expansion chamber for the vapours must be maintained. Fuel cans should only be filled to a maximum of 80% of total capacity. The easiest way to ensure the fuel can is not overfilled is at the petrol bowser, i.e. only put 4L into a 5L fuel can, or 16L into a 20L fuel can.

SOP 3.2.9 Fuel Can Opening Technique**ANNEX A**

	<ol style="list-style-type: none"> 1. <u>Position 5m clear area from ignition source and other personnel</u> <ul style="list-style-type: none"> • Safety Eyewear • Helmet Visor down • Wild fire gloves • Level 1 tunic • Level 1 pants / cargo pants • T shirt under tunic • Firefighting boots
	<ol style="list-style-type: none"> 2. <u>Position behind fuel can</u> <ul style="list-style-type: none"> • Kneeling position • Opening facing away from operator
	<ol style="list-style-type: none"> 3. <u>Remove safety pin</u> <ul style="list-style-type: none"> • Ensure bayonet luges secure
	<ol style="list-style-type: none"> 4. <u>Apply pressure to front of cap whilst releasing bayonet luges</u>
	<ol style="list-style-type: none"> 5. <u>Fuel Pressure in can to be released slowly under control</u> <ul style="list-style-type: none"> • Ensure head and upper body is away from opening



6. Allow for full pressure venting under control before fully opening

DOCUMENT HISTORY

VERSION	DATE	DESCRIPTION of CHANGE
1.0	Nov 15	New procedure.