



INDUSTRY SAFETY ALERT

Water pump exhaust ignites container of gasoline

Date of Incident: June 2024

Details: While battling the Tiffin Creek Wildfire near Lillooet, two tenders were filling from a small creek with two pumps in a gully adjacent to grass and sagebrush, approximately 10 minutes from the fire.

During the filling procedure, one of the tender operators moved the pump's jerry can filled with gasoline to allow him to be able to adjust the suction hose. This inadvertently placed the jerry can directly in front of the pump exhaust, causing it to explode a few minutes afterwards. This lit the suction hose on fire, spread burning fuel downstream approximately 10 metres, and ignited the opposite bank.

The tender operator removed the burning suction hose, rendering the pump inoperable. He reported the situation and called for immediate wildfire crew assistance at the fill site.

A nearby helicopter was diverted to get a visual on the new fire and provide support with buckets, while a nearby crew arrived at the fill site within 15 minutes. With the support of several bucket drops, the tender operators were able to re-start a second pump and extinguish the remaining flames.

The Initial Attack crew arrived a few minutes later to complete a thorough mop-up and patrol. The fire was held to 5m x 10m, with no further action required.



Above: The location and condition of the jerry can as found by the IA crew.





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The immediate cause of the jerry can explosion was the gasoline vaporizing from the heat of the pump exhaust and becoming pressurized in the jerry can. Eventually the jerry can melted and the fire was likely caused by the pressurized gasoline and vapours contacting the hot pump exhaust.

The root cause was limited space at the pump site. The pump equipment was crowded at the pump site due to brush and lack of clear space, which may have caused there to be limited places to place the jerry can.

The Prime Contractor is responsible for ensuring the worksite is safe before work begins and responding to reports of unsafe work conditions and correcting them.

Lesson: What went well?

- Quick communication of the incident to the site supervisor allowed for an immediate redirection of resources and quick containment of the fire.
- The tender operator remained composed in getting a second pump running to prevent the fire from spreading.

Lesson: What can be improved?

- Ensure jerry cans are not placed on the same side of the pump as its exhaust outlet, even for a few minutes.
- When choosing a pump site, allow for ample space to avoid equipment congestion. Consider the surrounding fuel types, the presence of gasoline, and a heat source (pump exhaust).
- Encourage equipment operators to report any safety concerns about pump sites. Corrective actions will vary from site to site but could include brushing out a pump site or removing tripping hazards.
- Keep fuel containers and fuel lines as far as operationally possible from water sources to prevent environmental contamination in the event of leaks or spills.

This information submitted by BC Wildfire Service – to share a safety alert click [here](#)

