



Propane and Tiger Torch Use for Pile Burning

Location: Southern Interior

Date of Incident: Fall 2019

Details of Incident: Pile burning on harvested sites is well underway. The trend for ignition tools has shifted from the drip-torch containing a diesel/gas mix to a small propane cylinder and tiger torch. Use of propane requires some special considerations.

Excerpt from TDG Regulations when carrying small cylinders:

I.32.3 Class 2, Gases, in Small Means of Containment Exemption
SOR/2008-34

Part 3, Documentation, and Part 6, Training, do not apply to dangerous goods that are transported in one or more small means of containment on a road vehicle solely on land if

- (a) the dangerous goods are
 - (i) UN1001, ACETYLENE, DISSOLVED,
 - (ii) UN1002, AIR, COMPRESSED,
 - (iii) UN1006, ARGON, COMPRESSED,
 - (iv) UN1013, CARBON DIOXIDE,
 - (v) UN1060, METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED,
 - (vi) UN1066, NITROGEN, COMPRESSED,
 - (vii) UN1072, OXYGEN, COMPRESSED, or
 - (viii) UN1978, PROPANE;
- (b) the dangerous goods are contained in no more than five small means of containment;
- (c) the gross mass of the dangerous goods is less than or equal to 500 kg; and
- (d) the labels displayed on the small means of containment can be seen from outside the road vehicle.

SOR/2008-34

General Small Propane Cylinder Safety:

- Transport cylinders upright and secure
- Always close the cylinder valve when not in use
- Never store or transport a filled cylinder inside a vehicle, heated structure or location with poor ventilation (propane is heavier than air)
- Don't use outdated cylinders. They must have overflow prevention devices and a pressure relief valve.

Tips for use of tiger torches:

- Open the tank slowly. One full turn of the valve is usually enough for full flow and allows for quick shut off in an emergency
- Light the tiger torch at very low flow, Turn the torch off or down for moving from pile to pile
- When travelling across slope carry the torch on your downhill side. (to avoid falling onto the hot torch in case of a slip, trip or fall)
- Keep the cylinder level and the torch well away from you when igniting a pile. If tilted an increased flow of liquid propane may come out the torch end causing a mini fireball
- Inspect the hoses and connections at least daily. Avoid snagging hoses on branches and debris when moving
- When piles are difficult to ignite, workers might operate the torch at full flow for several minutes. This will cause icing of the tank, hose and fittings and make them brittle. The weakest point is at the hose connections at the tank and torch ends. A broken hose could cause a very high volume of propane to escape and if this occurs while close to open flame, could have serious consequences. Use caution when the hoses are frozen. Consider reinforcing the connection points.



Hose broke at the tank connection when frozen

Recommended Preventative Actions:

For further information on propane safety consult the Canadian Propane Association web site:
<https://propane.ca/safety-regulation/>

For more information, please contact: Doug MacLeod, MacLeod Forest Services
macforserv@gmail.com (250) 499-1075