

NATF Redacted Operating Experience Report

Disposable Portable Propane Tank Storage

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Topic

Disposable portable propane tank storage

Description

A field employee was using a small, portable, propane torch on a cold day. The employee was storing the torch in the cab of the truck to keep the tank warm as the unit would not work properly in the frigid weather. The employee left the torch, attached to the tank, in the truck cab overnight with the valve, reportedly, in the off position. The propane tank itself was a 14oz disposable tank for hand held use.

The employee went to his service truck the next morning and opened the cab door. When the door was only partially open, the truck cab exploded. The employee was blown back from the vehicle, the windshield was blown across the street, and the entire firewall and back of the cab were pushed out. There was no fire but the vehicle was a total loss due to the expansion of the cab. The employee was treated for small cuts and bruises but was otherwise unhurt.

Lessons Learned

1. Employees were using propane torches to thaw frozen padlocks and the torches would not function in cold weather applications.
2. Propane torches were frequently being kept in the cabs of trucks in various positions during the workday.
3. Investigation showed that many new, off the shelf, portable/disposable propane tanks would begin leaking on their own when below freezing.
4. Propane tanks are never to be stored in a way that allows the liquid propane to touch the cylinder relief valve or liquid propane may escape, releasing a much higher volume of gas.
5. Propane tanks should never be transported or stored in an enclosed, non-ventilated portion of a vehicle.
6. Employees were unaware of the potential for large explosions related to small, disposable propane tanks.

Actions Taken

1. Employees were trained on proper, disposable propane tank storage.
2. Required all disposable propane tanks not in use to be capped with a brass cap designed for hand held tanks.
3. Required that any tank stored or transported must be in a ventilated area outside of passenger cabins.

4. Required that all propane cylinders be stored in an upright position.
5. Tanks may be warmed in a truck cab as long as windows remain open.

Extent of Condition

Explanatory photos:

Damage to vehicle from a single, hand held, disposable propane tank:





Ventilated storage of disposable propane tanks:



Brass propane cap required to be used on all disposable tanks not in use:

