

# Health and Safety Bulletin No. 18

# Dangers of storing aerosol cans inside vehicle cabins

Date: 11 June 2025

Note: WorkSafe's investigation is ongoing. The information contained in this bulletin is based on knowledge and understanding at the time of writing.

# **Background**

WorkSafe Mines Safety is currently investigating two notifiable incidents related to aerosol cans that ruptured and ignited inside vehicle cabins. These separate incidents involved a wheel loader and an underground bogger. In both cases, the aerosol cans released their contents uncontrollably which ignited, causing severe burns to the operators.

Aerosol cans are used to contain and dispense pressurised gaseous or liquid products, such as marking spray paint or insect control sprays. The contents usually include flammable propellent gasses or flammable products.

As aerosol cans have thin aluminium walls, they are susceptible to being ruptured by physical damage (e.g. being punctured by moving seats) and sensitive to external heat sources (e.g. sunlight, friction or electrical components), which are commonly found inside vehicle and machinery cabins.

If the contents are exposed to an ignition source, which may potentially include the heat generated by damage to the can itself, there is a significant risk of rapid ignition of the flammable gas. This can expose workers to hazards, such as heat, flames, smoke and chemicals. Additionally, the can or its fragments may become a hazardous projectile if ruptured.

Aerosol cans often display a dangerous goods class label, along with instructions for safe storage, handling and disposal that must be followed. For more information, see <u>Transporting retail dangerous goods</u>.

# **Contributory factors identified**

- In both instances, the aerosol cans were stored inside the operator's cabin.
- Despite pre-start checks requiring cabins to be kept clean, aerosol cans were not removed.
- Aerosol cans released their contents in an uncontrolled manner, leading to ignition due to a heat source being present.

# **Actions required**

- Remove aerosol cans from cabins of all vehicles and machinery and ensure they are stored as per the requirements of the safety data sheet (SDS).
- Review the use of aerosol cans. If not required, remove them from site.

- Assess the risks of using aerosol cans containing flammable materials or propellants and substitute with non-flammable alternatives where possible, such as hand-activated spray bottles.
- Review workplace and equipment storage provided for aerosol cans to ensure compliance with SDS requirements. Aerosol cans should be kept:
  - a dedicated storage area, preferably in an aerosol storage cage
  - cool, dry areas away from direct sunlight
  - well-ventilated locations
  - more than 3 metres away from an ignition source
  - segregated and separated from other dangerous goods classes.
- Audit vehicle and machinery wiring, ensuring:
  - wires are not hot
  - wires are not damaged or pinched
  - electrical components are properly ventilated
  - electrical components are clean and protected from external damage
  - where there have been changes to original equipment manufacturer electrical components or electrical components have been added, risk assessments are conducted with controls implemented and maintained.
- Include the removal of fire or explosion risk goods (e.g. aerosols, oils, fuels, batteries) stored in vehicles and machines during pre-start checks.
- Train workers in safe handling, storage, use and disposal of aerosol cans.
- Ensure fire suppression equipment is accessible and maintained.
- Provide emergency communication equipment to operators for reporting fires in mobile equipment.
- Ensure adequate trauma response capability for workers involved in, or who witness, serious events.
- Ensure compliance with Work Health and Safety (Mines) Regulations 2022 Part 7.1, regarding the control of hazardous chemicals. The hygiene management plan (regulation 675EA) must address relevant health hazard controls.

#### References and further information

#### **Work Health and Safety Commission**

- Managing risks of plant in the workplace: Code of practice
- How to manage work health and safety risks: Code of practice

# **Department of Energy, Mines, Industry Regulation and Safety**

# WorkSafe

- Loader cab fire incident WorkSafe Mines Safety News Alert 23 April 2024
- Separate and ventilate

#### Other sources

- Safe storage of aerosol spray cans: NT WorkSafe
- Aerosol can safety: WorkSafe ACT
- Aerosol can explodes due to exposure to heat: Resources Safety Queensland
- Aerosol fire ignites warning: SafeWork SA