



Box trucks and carbon monoxide

Box trucks and carbon monoxide can be deadly

Running gas-powered equipment in a box truck can cause carbon monoxide to build up in the truck and other areas where workers may be exposed. (A box truck is a truck with a box-shaped cargo area.)

Workers can be exposed when the exhaust from gas-powered equipment is not properly vented away from the truck. Oregon OSHA compliance officers discovered that workers are often unaware they are exposed to carbon monoxide gas. Even when the exhaust pipes are vented outside the truck, carbon monoxide gas can endanger workers if the exhaust and intake vents are positioned incorrectly.

AN EXAMPLE

In a recent case, workers were using a gas-powered engine mounted in a box truck to blow insulation into the attic of a house. The engine's exhaust was vented by a pipe that went through the wall of the truck and under the truck's frame. However, the air intake for the blower was too close to the exhaust vent and the exhaust was being sent into the attic with the insulation. Also, with the exhaust vent under the truck, the hot exhaust rose and flowed into the truck exposing workers there too.

The company's owner said he knew the exhaust was harmful, but did not realize that it would be drawn in by the machine's air intake. The company eliminated the hazard by repositioning the exhaust pipe and venting the exhaust above the truck.

(See photos next page.)

How to prevent carbon monoxide poisoning

- Teach employees about the symptoms of carbon monoxide poisoning.
- Train employees about safe ventilation methods when they use internal-combustion equipment indoors.
- Use natural or mechanical ventilation when possible to keep carbon monoxide levels below Oregon OSHA's permissible exposure limit.
- Do not operate internal-combustion equipment indoors when it is possible to use the equipment outdoors.
- Have a procedure to check on people who work alone and use internal-combustion equipment indoors.
- Require workers to use personal carbon monoxide monitors in areas where overexposure to carbon monoxide is possible.



Box trucks and carbon monoxide – continued



The hazard: Air intake too close to the exhaust vent.

Although carbon monoxide's reputation as a silent killer is well known, it continues to find unsuspecting victims. Carbon monoxide is a colorless, odorless, tasteless poisonous gas produced by the incomplete burning of any material containing carbon – gasoline, natural gas, oil, propane, coal, or wood. It is harmful because it displaces oxygen in the blood and deprives the heart, brain, and other vital organs of oxygen. It is one of the leading causes of poisoning by inhalation and is a common workplace hazard.

Mild exposure to carbon monoxide can cause nausea, dizziness, or headache. Prolonged or high exposure may worsen symptoms and include vomiting, confusion, collapse, loss of consciousness, and muscle weakness.



The fix: Exhaust vent repositioned above the truck.

Symptoms vary from person to person. Severe exposure can result in permanent brain and heart damage or death. Heart and lung conditions, vascular disease, anemic conditions, barbiturate and alcohol use, and smoking increase susceptibility to carbon monoxide poisoning.