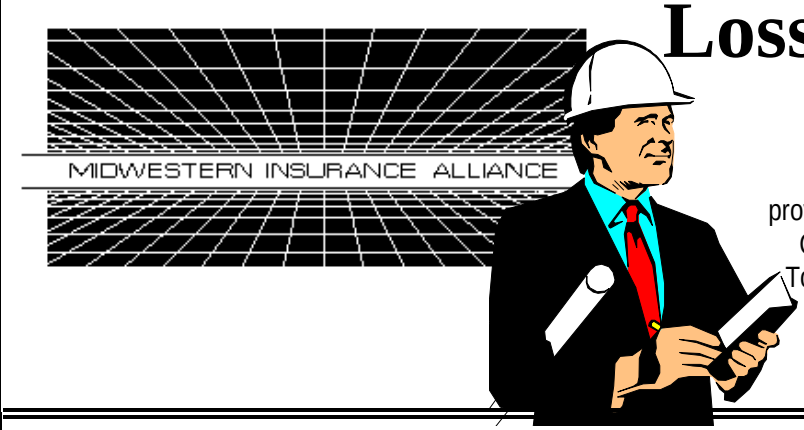
MIDWESTERN INSURANCE ALLIANCE

Loss Control Newsletter

April 1998



Midwestern Insurance Alliance maintains the goal of providing our insureds with a wide range of loss control services. Only one of which is this monthly *Loss Control Newsletter.* To become aware of the many other services offered, contact Loss Control Manager, Keith Wertz at (502) 429-9990 or send e-mail to krwertz@midwesterninsurance.com

Are You Certain that Your Employees are Adequately Protected from Carbon Monoxide Poisoning?

Hundreds of people have been poisoned and many have died due to the inhalation of carbon monoxide gas contained the exhaust fumes of internal combustion engines. What is more disturbing is that, even with the knowledge we have today, many employers do not adequately protect their workers from this hazard.

What are the Possible Sources?

Internal combustion engines are an integral part of virtually every business. Gasoline-fueled automobiles and diesel-fueled trucks are the most common uses of the internal combustion engine in business. However, there are many other sources as well. These include forklifts, electric-generating equipment, concrete saws, pressure washers, pumps and other small equipment fueled by gasoline, diesel fuel or natural gas.

Common hazards include operating a vehicle in an enclosed space (or partially-enclosed space). This may include vehicles being serviced, or vehicles left idling during loading or unloading.

It is also hazardous to operate a vehicle outdoors near an open door, window or air HVAC air intake.

Other hazards include operating forklifts, or small equipment which is powered by an internal combustion engine indoors, or in a partially-enclosed area.

Every workplace is different, and must be thoroughly assessed to determine what potential carbon monoxide hazards exist.

About Carbon Monoxide

Carbon monoxide is a deadly poison contained in the exhaust fumes of internal combustion engines, including those fueled by gasoline, diesel fuel or natural gas. Whether generated from a automobile, truck, forklift or small piece of equipment, internal combustion engines produce high concentrations of carbon monoxide.

Carbon monoxide can produce illness, permanent neurological damage and death. Because it is odorless and colorless, it can overcome exposed persons without warning. Often there is little time before victims experience symptoms that inhibit their ability to seek safety.

Symptoms of Carbon Monoxide Poisoning

Employees should be aware of the symptoms of carbon monoxide poisoning. When exposed to hazardous levels of carbon monoxide, a worker may experience headaches, dizziness and nausea. Additionally, weakness, confusion and decreased mental abilities may follow, and can inhibit a worker's ability to recognize the hazard and to escape the area.

Employees Often Don't Realize the Significance of the Hazard

One problem associated with exhaust fumes is that, in many situations, the hazard is either not recognized or is underestimated. Although most people are aware that exhaust fumes are hazardous, and can even kill... they may not be aware of the degree to which they are exposed to carbon monoxide.

Efforts to Address the Hazards are Often Insufficient

Another problem associated with exhaust fumes is that, even when the hazard is recognized, and is not underestimated, attempts to control the hazard are insufficient.

It is widely known that proper ventilation is the answer to addressing the hazards of exhaust fumes. However, there is a common misconception of what constitutes proper ventilation.

An employee may open a garage door, windows or even turn on an exhaust fan... but that may not be sufficient.

The National Institute for Occupational Safety and Health (NIOSH) indicates that, even in areas which appear to be well ventilated, there can be a significant risk of poisoning or even death from the carbon monoxide contained in exhaust fumes.

An open garage door or windows provides very little ventilation if there is little or no wind flowing through the building. Furthermore, even when there is a sufficient flow of fresh air, carbon monoxide can accumulate in pockets which are not well ventilated.

"It hasn't Been a Problem in the Past"

Undoubtedly, some employers will read this article and think to themselves, "It hasn't been a problem in the past... Why should I be concerned now?" This attitude gives employers and employees a false sense of security, as many carbon monoxide poisonings and deaths have occurred when the victim was doing something that he has done many times before.

To have a true sense of security, an employer must determine if the lack of carbon monoxide poisonings in the past is a result of mere chance (luck), or adequate control of the hazard.

Controlling the Hazard of Vehicles Idling Indoors

Whether it is for the loading or unloading of a truck, or the mechanical servicing of any vehicle or piece of equipment with an internal combustion engine, the most frequent occupational carbon monoxide hazard is a vehicle left idling while in an enclosed (or partially enclosed space).

Many times the hazard is not recognized; is not regarded as significant; or is addressed with inadequate attempts to control the hazard... such as opening doors and windows.

Once a hazard of this type is recognized, every reasonable effort should be undertaken to <u>eliminate</u> the hazard. For example, if loading or unloading vehicle indoors turn off the engine immediately upon entering. If operating a forklift with an internal combustion engine while indoors, switch to an electric forklift.

Sometimes the hazard cannot be eliminated. In such circumstances, the hazard must be <u>controlled</u>.

The key to controlling an accumulation of carbon monoxide is proper ventilation.

For vehicles serviced indoors, and left idling, "local exhaust systems" are preferred... meaning that it is preferable to direct the vehicle exhaust fumes out of the enclosed area by attaching a forced-air exhaust system hose to the vehicle's tailpipe, rather than using "general ventilation," which removes fumes from the indoor atmosphere once they enter the breathing air of employees.

Whether using a local exhaust system or general ventilation, guidelines are available which indicate the recommended rate of ventilation exhaust (in cubic feet per minute), and the diameter of duct, based upon the amount of vehicle exhaust generated.

For Further Information

NIOSH, OSHA, EPA and several other governmental and private agencies have jointly created a booklet which provides more details about carbon monoxide hazards and control measures. Although directed at alerting readers to the hazards and controls associated with small gasoline-powered engines and tools, the information contained in the booklet is applicable to <u>all</u> sources of carbon monoxide gas emitted through engine exhaust.

For a free copy of that publication, call 1-800-35-NIOSH.