

SAFETY & TECHNOLOGY ORGANIZER

NOVEMBER 2012

ENCLOSED

Safety Topic: "Carbon Monoxide"

Traffic Bulletin: "Qualifying a New Driver"

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Safety Meetings are important!

They: get your employees actively involved
encourage safety awareness
help identify problems before they become accidents
motivate employees to follow proper safety procedures

We are happy to provide you with a monthly topic for your agenda.

ROUTE TO:

- ☐ General Manager
- ☐ Safety Coordinator
- ☐ Supervisor Dept. _____
- ☐ Other _____
- ☐ Date of Meeting _____

Carbon Monoxide

I have a few safety topics that warrant repeating on an annual basis. One is the proper filling and storage of LPG products and another is carbon monoxide asphyxiation. With the heating season coming upon us, now is the time to remind people about carbon monoxide.

Do you know the leading cause of poisoning in the America? It is odorless. It is colorless. It is tasteless. It is deadly. It is carbon monoxide. Mild poisoning can cause such symptoms as nausea, dizziness or headaches while severe poisoning can result in brain or heart damage or even death.

Carbon monoxide (CO) is a gas produced during the incomplete combustion of carbon containing substances (paper, wood, and petroleum products). Forklifts powered by gasoline, natural gas, or propane may emit dangerous levels of CO. Because CO has no warning properties, employees can be exposed to high levels without realizing that there is a problem. This also applies to other gasoline, natural gas, or propane fueled vehicles, power tools, or other equipment used indoors, such as floor buffers, pressure washers, ice cleaners used to resurface ice rinks, or unvented space heaters.

The most effective way to keep CO concentrations below the 35 parts per million of air (ppm) eight hour time-weighted average permissible and the ceiling of 200 ppm (as measured over a 15 minute period) (individual State regulations may be more stringent) is to utilize one or more of the following controls:

Suggestions for Employers:

- Where possible, substitute equipment that doesn't produce CO or Nitrogen Oxides (NOx) (e.g. electric forklifts).
- Ensure proper maintenance of forklifts to reduce emissions.
- Maintain appliances and equipment in good order, adjusting flames, burners and drafts to reduce the formation of carbon monoxide.
- Do not allow forklifts to idle while waiting to resume operations.
- Ensure proper ventilation of work areas. This is especially a potential problem during periods of cold weather when shop and warehouse doors and windows are shut tight and ventilation is restricted.

Suggestions for Employers (continued):

- Use CO sensors or alarms; conduct periodic sampling of the work area for CO and NO_x.
- Provide training to employees on the symptoms, sources, and prevention of CO and NO_x poisoning.

Suggestions for Workers:

- Report to your employer any condition which might make carbon monoxide form or accumulate.
- Be alert to ventilation problems, especially in enclosed areas where gases of burning fuels may be released.
- Report complaints early. Don't overexert yourself if you suspect carbon monoxide poisoning. Physical activity increases the body's need for oxygen and thus increases the danger of poisoning.
- If you get sick, don't forget to tell your doctor about the possibility of exposure to carbon monoxide.
- Think carefully about your smoking habits. Tobacco, when burned, releases carbon monoxide which reduces the oxygen-carrying ability of the blood, even before any industrial exposure is added.

Two more areas to consider for fuel burning forklifts are:

1. Catalytic Converter

Recent technology has produced the catalytic converter. Once installed on the exhaust system of a fork lift, the converter works by chemically changing the carbon monoxide to relatively harmless carbon dioxide. This device is particularly valuable in situations where large numbers of fork lifts are operated in a limited space, or they can't be removed from service frequently. Catalytic converters can reduce carbon monoxide levels dramatically. Be aware that catalytic converters are not inexpensive, and the catalyst must be replaced periodically to maintain its effectiveness. Also to work properly, they require high exhaust gas temperatures, so they are not as effective when engines are run cold or for brief periods of time.

2. Carbon Monoxide Controller

This computer operated device detects the level of carbon monoxide in the exhaust pipe and automatically causes the proper air to fuel ration adjustments to be made in the engine. This device not only reduces carbon monoxide emissions, but has the added benefit of better fuel economy.

These control measures should also keep NO_x exposures below the permissible exposure limit. It is important to recognize that although adjustment of carburetor balance on fueled engines can reduce CO emissions to safe levels, over-adjustment can actually increase NO_x emissions to hazardous levels. It is very important to establish and maintain correct carburetor balance of fueled equipment used indoors.

What about the home?

The Consumer Product Safety Commission (CPSC) recommends installing at least one carbon monoxide detector per household, near the sleeping area. I highly recommend the **Nighthawk** CO Detector which is available almost everywhere. If you have any type of propane or natural gas burning equipment in your home, or a fire place, please consider the purchase of a CO detector. It is a gift of life that you would be giving your family. Don't forget relatives or friends. Many of them may not have heard about CO detectors and how effective they are at saving lives.

In the workplace:

Remember, any fuel burning apparatus will emit carbon monoxide. People think about forklifts and vehicles but tend to forget about the heating system or the hot water heater. I know of many instances where we have installed the Nighthawk CO Detector and found a cracked heat exchanger in a heater or a plugged vent pipe or chimney.

If you suspect carbon monoxide, get out of the area and into the open fresh air. Remove anyone overcome by the gas immediately and give the person artificial respiration. Call for a doctor and continue the artificial respiration until the doctor arrives or the person recovers. Prompt action can make the difference between life and death.

As always, if there are questions or items that I can help you with, please don't hesitate to



TRAFFIC BULLETIN

November 2012

Qualifying a new driver

What are the things that I need to do to hire a driver? How fast can I put a new driver on the road? What items do I need to have in my hands before letting a driver go out on the road? What should I look for on the motor violation records when deciding to hire a driver? What minimums should I have for hiring a driver? These are some of the questions that I get when someone is trying to put on a new driver. The following guidance assumes that you want a **driver for loads requiring placards**.

Must have items before letting a person drive

1. DOT employment application
2. CDL with hazmat endorsement (if you have a tank(s) bolted to the vehicle with more than 119 gals of capacity, then you need a cargo tank endorsement)
3. Current medical card
4. A negative pre-employment drug test
5. Road test form and certificate (391.31(g)), or CDL license or certificate accepted in lieu of road test (391.33),
 - a. A CDL is acceptable.
 - b. Doubles / triples or cargo tankers must have a road test certification for the specific vehicle within the previous 3 years.

Items that you must have within 30 days

1. Motor vehicle record from states (391.23),
 - a. Must be obtained within 30 days of employment
 - b. Must be for the prior 3 years
 - c. Please note that the regulations require this within 30 days, but I suggest that you have this and review it prior to letting the driver drive your vehicles.
2. Previous employer information (391.23),
 - a. Must be obtained within 30 days of employment
 - b. Must be for the prior 3 years
 - c. The information must be verification of employment, any DOT accidents (or any other accidents that the previous employer may want to provide), and the drug and alcohol test results/violations.

Items needed later down the road

1. Annual review of driving record (391.25),
 - a. Must be done at least annually
 - b. Must keep a copy of the state inquiry results in the file.



TRAFFIC BULLETIN

Items needed later down the road (continued)

- c. The motor carrier must consider the driver's accident record and any evidence that the driver has violated laws governing the operation of motor vehicles, and must give great weight to violations, such as speeding, reckless driving, and operating while under the influence of alcohol or drugs, that indicate that the driver has exhibited a disregard for the safety of the public
2. List of violations (391.27) (part of the above annual review),
 - a. The driver shall provide a list of driving violations for the previous 12 months. The driver shall sign this list.
 - b. If the driver has already provided this information as required by 383.31, then they don't have to repeat the information. 383.31 requires that drivers notify their carrier within 30 days of any vehicle violations, other than parking tickets, of which they have been convicted. The notification must be in writing and contain the 7 items listed in 383.31.
3. Medical Examiner's Certificate kept current

Suggested items for the DQ file

1. Not required, but highly suggested is to have a copy of their current driver's license in the file.

Common Question

"What do I do about an existing employee that I want to make a driver?" The easiest and best thing to do is to treat the employee as a brand new hire. Make sure you have used a DOT driver application form. If not, then have them fill out a new DOT employee application. You still have to do the previous employer background checks for the previous 3 years, but you do get to count the time the employee was working for you in that 3 year time period. Be sure to do the pre-employment drug screen.