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Carbon Monoxide Safety Message

CHARACTERISTICS OF CO

Carbon Monoxide is a harmful byproduct of incomplete combustion. Specific characteristics are:

Colorless - undetectable by sight

Odorless - no detectable odor

Tasteless - leaves no taste in the mouth

Flammable - combustible between 12.5% & 74% volume in air

Not much lighter than air - 0.9672 specific gravity

Toxic - with sufficient exposure, CO is deadly

Many times CO is associated with a sharp pungent odor. This odor, however, is a result of aldehydes and alcohols that are also produced as a result of incomplete combustion. These aldehydes and alcohols are responsible for the irritating effects to the eyes and nasal passages. When these odors are detected, carbon monoxide is almost always present. The absence of these odors however, does not insure that carbon monoxide is not present.

SOURCES OF CO IN HOMES

As stated earlier, CO is byproduct of incomplete combustion. This incomplete combustion may be from any fuel that utilizes a carbon base. Types of carbon base fuels include wood, tobacco, coal, kerosene, gasoline, and natural gas.

Potential sources of CO are any appliance, machinery or process that burns these fuels. Besides gas appliances, other sources of CO may be kerosene heaters, internal combustion engines, fireplaces and even smoking. It is important for the gas serviceman to be aware of these other potential CO sources when performing an investigation.

CARBON MONOXIDE POISONING

Carbon monoxide can only enter the body through the respiratory system. It acts to asphyxiate the body by combining with the hemoglobin in the bloodstream. (Hemoglobin is the oxygen carrying component of blood). CO replaces oxygen in the bloodstream causing asphyxiation to occur.

The amount of CO absorbed by the body depends on the following factors:

- CO concentration in air
- length of exposure
- breathing rate
- exposure to fresh air between CO exposures
- degree of physical activity
- physical fitness.

SYMPTOMS OF CO POISONING

The early symptoms of CO poisoning appear to be “flu-like”. The most common of these symptoms are:

- Headache
- Dizziness
- Nausea
- Weakness
- Increased perspiration
- Vomiting

Later stages of CO poisoning are much more severe. They include:

- Shortness of breath
- Extreme muscular weakness
- Mental confusion
- Unconsciousness
- Intermittent convulsions

If these symptoms are not immediately treated or the person is exposed to dangerous levels for any length of time, death could possibly occur. If these symptoms are experienced and thought to be associated with CO poisoning, consult a doctor immediately.

An awareness of what produces carbon monoxide can help protect you and your family. Be sure your natural gas appliances are inspected regularly by a licensed contractor to ensure that they are functioning properly, and repair any malfunctioning appliances immediately.

SAFETY TIPS:

- Yellow flame indicates that the gas is not burning and is giving off carbon monoxide
- Replace filters regularly. Most are inexpensive
- Have your furnace and water heater inspected annually by a heating contractor.
- Look for signs of improper venting. Soot around the appliance and moisture on the inside of windows when the appliance is running are tell tale signs of CO
- Install a carbon monoxide detector (replace batteries as recommended to ensure proper operation)
- Vent-free heaters should be placed near a window or exterior door for venting.
- Vents and chimneys should be clear of debris or anything that may cause blockage
- Have chimney inspected and cleaned as needed
- Check oven pilots for carbon build-up
- Never run your car while in a garage
- Never line burners with foil