

# SAFETY NOTICE

## INSIDE THIS ISSUE:

**CO PREVENTION 2**

**CO DETECTORS 2**

**UNFORSEEN PROBLEMS 2**

**ROUTINE MAINTENANCE 3**

**POISONING FROM CO IS ON THE RISE 3**

**WHAT'S AN S.E.A. ? 3**

**WHAT DO YOU KNOW ABOUT CO? 4**

## SPECIAL POINTS OF INTEREST:

- Carbon Monoxide is poison.
- Know what to look for and the symptoms.
- Carbon Monoxide can be prevented.
- Many furnaces have been recalled by the consumer products safety commission.

## CARBON MONOXIDE

Carbon monoxide is a poisonous gas that forms as a result of incomplete combustion. The combustion process requires the correct mixture of fuel and air. Examples of fuel are natural gas, propane, wood, kerosene, and gasoline. Air consists primarily of oxygen and nitrogen. If there is too little air, fuel goes unburned and carbon monoxide (CO) is created. CO is measured in parts per million (PPM).

### Health Effects

People get CO poisoning by inhaling it. From the lungs it is transported throughout the body by way of the bloodstream, CO attaches to the hemoglobin and depletes the body of oxygen. At a high enough concentration, CO can

cause an individual to become unconscious, suffocate, and die. Symptoms related to CO poisoning include:

- Brain Damage
- Nausea
- Vomiting
- Dizziness
- Body Weakness
- Headaches, and Flu-like symptoms.

Nearly as dangerous as exposure to increased levels of CO is exposure to lower levels of CO over a long period of time.

Carbon Monoxide is the leading cause of accidental poisoning deaths in America, according to the Journal of the American Medical Association (JAMA). 1,500 people die annually due to accidental carbon monoxide exposure, and additional 10,000 seek medical attention. Medical experts agree that it's difficult to estimate the total number of carbon monoxide incidents because the symptoms of carbon monoxide poisoning resemble so many other common ailments. If you are suffering from chronic flu-like symptoms, see your doctor and ask him if it could be a low-level CO poisoning.

## HOW IS CARBON MONOXIDE PRODUCED?

Equipment that uses the combustion process produces carbon monoxide. CO is also produced from heaters, campfires and barbecues, but for the purpose of our discussion we will concentrate on HVAC equipment. If the equipment is properly tuned and there is sufficient air for combustion and the

vent passages are clear all the way, CO is vented to the atmosphere through a vent pipe or chimney. Change this equation in any way, and CO is likely to stay in the building and threaten the safety of the occupants.



MVC-0045.JPG

## TIPS TO PREVENT CARBON MONOXIDE POISONING

### THE DEADLY THREAT OF CARBON MONOXIDE CAN BE STOPPED BY A YEARLY PROFESSIONAL INSPECTION

Having your home inspected each year at the beginning of the heating season can help avoid deadly carbon monoxide gas from leaking into your home.

Consumers can avoid this hazard by having their fuel-burning appliances inspected by a qualified technician each year,



Modern heating equipment is sophisticated and requires special training and tools for proper maintenance. We recommend that consumers should not service their own appliances, but instead have a qualified professional perform an inspection. A yearly inspection of your home by a professional should include a careful look at the following sources of carbon monoxide; Gas burning furnaces, hot water heaters and stoves, clothes dryers. "Any appliance that burns fuel."



*Black stains on the outside of this furnace indicate that pollutants are leaking into the structure.*

## CARBON MONOXIDE DETECTORS

### WHAT ARE THE DIFFERENT TYPES OF CARBON MONOXIDE DETECTORS AND HOW DO THEY WORK?

There are a number of different types and brands of carbon monoxide detectors on the market today; They can be most easily characterized by whether they operate on household current or batteries. Underlying this, in most cases, is the type of sensor employed in the detectors operation. Detectors using

household current typically employ some type of solid-state sensor which purges itself and re-samples for CO on a periodic basis. This cycling of the sensor is the source of its increased power demands. Detectors powered by batteries typically use a passive sensor technology which reacts to the prolonged exposure to carbon monoxide gas. This type of alarm can be purchased at a home improvement store. Infants and people with chronic illness are susceptible to lower levels of CO, which cannot be

measured by store-bought alarms. A more sensitive alarm is recommended for those individuals. This type of alarm is available from contractors. Only use CO detectors that meet UL 2034 listing.

We recommend a detector on each floor of a residence. At a minimum, a single detector should be placed on each sleeping floor with an additional detector in the area of the furnace, water heater, and other gas appliances.

**“Carbon monoxide is a flammable, colorless, odorless, tasteless toxic gas.”**

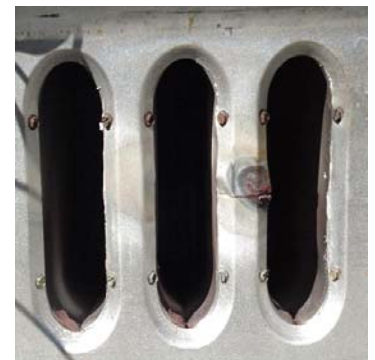
## UNPREDICTABLE PROBLEMS

While many causes can be prevented others cannot and may occur unpredictably. Not only are these problems harder to predict but they also tend to be more serious in nature. Examples of these type problems are:

- Cracked furnace heat exchanger.
- Malfunctioning furnace or water heater.
- Blocked chimney.
- Other unpredictable events- vehicle left running in garage, gas powered device placed near fresh air vent to home, etc.

Minimizing preventable events allows everyone to take other less preventable and predictable events more seriously.

The picture on the right shows a crack in the heat exchanger.



## ROUTINE MAINTENANCE AND INSPECTIONS

Routine maintenance and equipment inspections are the best way to prevent appliances & furnaces from producing the carbon monoxide and preventing fire hazards.

**Furnace Maintenance inspections** should include the cleaning of burner intakes, ribbon burners, main burners, pilot burner assembly, heat exchangers and draft diverters. Heat exchangers should be inspected for

cracks and rust. Air filters replaced. Burner operation must be checked to insure that flame rollout does not occur. All gas connections and valves should be tested for gas leaks. Fan controls and High limit safety switches should be checked for normal operation. High efficient models have additional controls. Inducer fan motors may require oil seasonally depending on the manufac-

turer. For furnaces installed in a confined space high and low combustion are vents must be opened and free from obstructions.

**Water heaters;** require only light maintenance. The main burners, pilot burner should be checked cleaned as needed. **Clothes dryers;** Lint is the problem here. They should be vacuumed out and the drier vents hose clear. Clean out the vent hose.



Top- Defective burners.  
Bottom- New Burners

## POISONING FROM CARBON MONOXIDE IS ON THE RISE.

Today's houses are more air tight due to energy conserving measures. Therefore there is less fresh air coming into a home and not as many pathways for Stale or polluted air to leave it. When furnaces and boilers are starved of the oxygen needed to burn fuels completely, carbon monoxide is produced. Many newer houses are so airtight that powered exhaust fans in the kitchen

and bathroom can overcome the draft in the furnace chimney and literally pull the toxic gases into the living space.

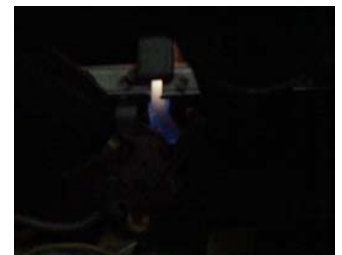
The new high-efficiency gas furnaces, when hooked up to existing flues, often do not perform at an optimum level. The differences in performance create conditions that allow combustion byproducts to more easily enter home living spaces.

These conditions join a number of older, on-going problems including damaged or deteriorating flue liners, soot build-up, debris clogging the passageway, and animal or bird nests obstructing chimney flues.

**"Today's houses are more air tight and less fresh air is coming into a home."**

## WHAT IS AN S.E.A. ? THIS IS HOW WE CAN HELP.

You ask what is an S.E.A. ? It is a Safety & Efficiency Agreement (S.E.A.) For a low annual investment you can have our trained technicians at your home or business 2 times a year to perform routine maintenance on your heating and cooling systems. This is not only piece of mind for you and your family it insures your equipment is operating Safely and Efficiently. That means that you don't need to worry because your equipment will be working safe and sound. Efficiently means **you save money \$\$\$**. Additionally most air conditioning problems can be prevented. In fact during our busy season (May thru Sept.) a majority of our service calls are air conditioning systems that had preexisting problems that could have been addressed on an S.E.A. visit. This saves you time, aggravation and money . Here's how: when you're A/C goes out on that 100 degree day it is unlikely a technician will be able to come out on your time schedule. This means taking time off work and waiting in a hot house while your stress level increases rapidly.



This pilot not burning clean and is emitting excessive products of combustion. CO

Visit us on the web!

[www.a1ocean.com](http://www.a1ocean.com)

## A-1 OCEAN BREEZE, INC.

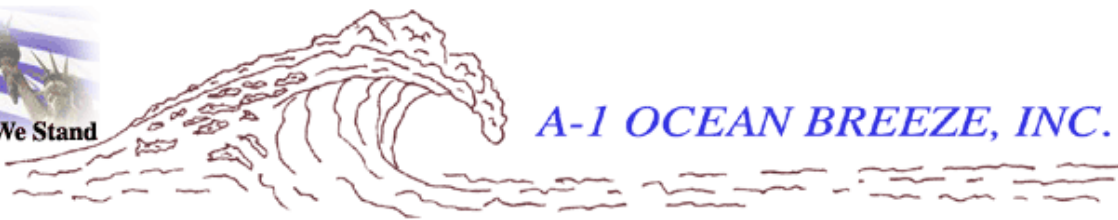
26845 Oak Ave. Unit 16  
Canyon Country, CA 91351  
Phone: 661-252-6800  
Fax: 661-252-7979  
Email: [bill@a1ocean.com](mailto:bill@a1ocean.com)

A-1 Ocean Breeze, Inc. is a Heating, Ventilation, Air Conditioning, and Refrigeration Company.

We are a locally owned/operated business, that has been servicing the Santa Clarita and San Fernando valleys since 1989. We specialize in commercial Air Conditioning, Heating, Refrigeration and Ice machines and are accomplished residential system technicians. We are bonded and insured. At our company, we depend on good workmanship, professional service and a good reputation to keep all our customers satisfied.

Our office hours are Monday through Friday 8:00 AM to 5:00 PM. We are also available on weekends and holidays.

For more information contact Bill Marcus



**A-1 OCEAN BREEZE, INC.**

**"WHEN YOU'RE TIRED OF THE REST CALL THE BEST"**

**STATE LICENSE 752344**

## WHAT DO YOU KNOW ABOUT CARBON MONOXIDE?

Do you know what carbon monoxide is?

What are the health effects?

Where does Carbon Monoxide come from?

How can Carbon Monoxide poisonings be prevented?

What type of Carbon Monoxide detector is the right one for you?

Does Carbon Monoxide have an odor?

Is Carbon Monoxide flammable?

Can Carbon Monoxide Kill People and pets?

Are low levels of Carbon Monoxide as dangerous as high levels?

What types of symptoms could you expect if you were exposed to Carbon Monoxide gas?

According to the Journal of the American Medical Association (JAMA). How many people will accidentally die this year due to accidental carbon monoxide exposure?

Inside this news letter you will find the answers to these questions and many more.



***The information that is given in this safety bulletin could save the life of you or someone you know. It is a must that you thoroughly understand its contents.***

