

Additional Input:

## **New Westerbeke “Safe-CO™” Series Generators Slash Carbon Monoxide Emissions By More Than 99% To Greatly Improve Boating Safety And Reduce Pollution.**

### **New Products**

- A line of gasoline-fueled electric generators for use in boats; these generators produce extremely low emission of carbon monoxide: a 99% or better reduction compared with conventional generators.
- Electrical output from 3 kW (enough for a small boat’s small air-conditioner plus a microwave oven, some lights and entertainment products) to 25 kW (enough power for a large powerboat or houseboat with multiple air-conditioners, electric kitchen/galley, washer/dryer, and extensive onboard electrical and electronic devices).
- Targeted to boaters whose boats have convenience and navigation electronics and electrically-operated devices which exceed their engines’ electrical-supply capability and to boaters who may not always be able to tie up in a marina which offers shore power.
- Difference from what has previously been available: gasoline-fueled engines and generators produce carbon monoxide (a lethal gas) through combustion; Westerbeke's new Safe-CO generators reduce these emissions by more than 99%; the resulting emission levels are much safer and much less polluting.
- Westerbeke has employed patented, innovative engineering, in combination with electronic fuel injection, to achieve these dramatic reductions and enhanced safety.

### **Who Is Westerbeke?**

- A three-generation family company, founded in 1937, which has been recognized far and wide for its marine diesel and gasoline engines and generators, industrial diesel generators and marine air-conditioners.
  - A major supplier to boat builders in North & South America, Western & Eastern Europe, Africa, and Asia with distribution and dealers in more than 60 countries.; boat builders include many of the largest and the most prestigious brands - worldwide.
  - A supplier to municipal, state and federal government agencies (including many fire departments) as well as the U.S. Coast Guard, Navy and other military departments.
  - Products recognized by NMMA (National Marine Manufacturers Association), NEMA (National Engine Manufacturers Association), ABYC (American Boat & Yacht Council), ABS (American Bureau of Shipping), Lloyds of London and carry the CE mark.
  - Winner of the NMMA 2003 Innovation Award (for a small gasoline-fueled generator).
- > web resource: [www.westerbeke.com](http://www.westerbeke.com)



*Ultra-Low Carbon Monoxide Emissions*

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## Carbon Monoxide Danger

- Colorless, odorless, tasteless, invisible and lethal to human beings.
- Robs blood of its ability to carry oxygen.
- Nicknamed "the silent killer".
- Effects of poisoning are hard to notice, until it's often too late to save oneself.
- Dangerous at even relatively low levels (ppm = parts per million); many government and environmental agencies have set limits on exposure.
  
- Published CO-level standards include:

	<u>Recommended Exposure Limit (REL)</u>	<u>Ceiling Limit</u>
NIOSH	35 ppm	200 ppm
ACGIH	25 ppm	125 ppm (30 minutes)
OSHA		50 ppm (8 hours)
U.S. EPA		9 ppm (8 hours), 35 ppm (1 hours)
WHO		26 ppm (1 hour), 87 ppm (15 minutes)

>web resource: <http://safety.net.smis.doi.gov/thelistbystate7.pdf>

## Concerns Over Boating Safety

- Boating fatalities from carbon monoxide poisoning have escaped attention in the past because they were not separated from other CO fatalities; now, the extent of the danger has become apparent to concerned citizens, the U.S. Coast Guard and others.
- USCG and NIOSH (National Institute for Occupational Health & Safety) have conducted on-water testing to measure CO concentrations on and around houseboats, with and without devices to reduce or disperse CO emissions.
- USCG and ABYC involved in marine industry meetings for discussion of CO hazard, possible setting of emission limits, and related policy-oriented decisions.

> web resource: [www.uscgboating.org](http://www.uscgboating.org)

## Related topics

- Concern over "wake surfing" exposure to CO at dangerous concentrations.  
>web resource: [www.watersportsindustry.com](http://www.watersportsindustry.com)
- Heavy CO concentrations around marinas and narrow channels.  
> web resource: [www.uscgboating.org](http://www.uscgboating.org)

## Some recent articles about marine CO dangers

- "Carbon Monoxide: A Shore Thing" - Boat/US Magazine, September 2003, p14.
- "Carbon Monoxide/What you can't see can hurt you" - Lakeland Boating, February 2004, p72.
- "Class-action suit is filed in CO fatalities" - Soundings Trade Only, September 2003, p36.

>This topic is easily searched and there have been numerous articles published in recent months; the above three are listed simply as typical examples.



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