

BOATU.S. SEAWORTHY MAGAZINE ARTICLE.



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LPG Water Heater Hazard



Several marine surveyors have recently told *Seaworthy* that they've come across boats with LPG (propane) on-demand, tankless water heaters installed. While these water heaters are fine in a house, they're not safe installed in a boat, and installing one is almost certainly contrary to American Boat and Yacht Council (ABYC) standards.

Here's why: Any LPG appliance produces deadly carbon monoxide (CO), including, say, an LPG stove. What makes LPG tankless water heaters dangerous is that they're designed to turn on automatically. Stoves, on the other hand, are attended, require frequent attention by the operator, and can't turn themselves on while someone aboard may be sleeping or unaware. ABYC standards require that any unattended LPG appliance must have a combustion-chamber that draws in air from the outside, not the cabin, and also exhausts the combustion products outside. LPG tankless heaters don't have a room-sealed combustion chamber, which means when they are on, a leak or even a strong downdraft could cause carbon monoxide to collect in the boat. Most often, surveyors say, these appliances are mounted in the head, which has precious little air — it doesn't take much CO in a small space to build up to dangerous levels. Leaking CO into the head from tankless LPG water heaters has already caused several close calls. Don't take the risk — install only a marine-rated, tank-type water heater in your