

Gas Safety

WOA Wiki information for gas regulators for LPG systems.

The following has been written for our members by Nick Vass of Omega Yacht Services, a gas qualified marine surveyor.

Marine regulators are different from general purpose outdoor regulators because of the more arduous demands of the marine environment. Potential corrosion issues are well understood by many of us, however the need for gas regulators with an over pressure relief valve may be less understood by Westerly yacht owners.

Westerly and other sailing yachts heel over sufficiently enough to cause high pressure liquid gas to slosh around and breach the gas regulator causing an over pressure condition within the low pressure cooker feed pipe. Over pressure in the low pressure feed pipe to the cooker can cause gas to breach & leak past seals to either; collect in the bilges, or unintentionally ignite at or near the source of the leak itself (e.g., cooker control knob). Both conditions are extremely hazardous.

The current standard regarding liquid petroleum gas (LPG) safety on yachts and small craft is EN ISO 10239 (updated 2017) which took over from British Standard PD 5482 in 1998 when yachts had to be built to the Recreational Craft Directive Standard. EN ISO 10239 is the current standard accepted by the British UKCA system which replaced the RCD post Brexit.

ISO 10239 stipulates that a pressure reducing regulator must be compliant with ISO 16129 Annex-M, be marked with the word Marine or have a symbol of a boat on it, be made of corrosion resistant materials that do not include plated or galvanised steel and that it must have an overpressure release valve that vents into the gas locker and must have stronger internal components such as springs and diaphragms that can stand up to the marine salty and wet environment. These marine grade regulators have to be marked Annex-M meaning that they were intended for marine use.

Most Westerly yachts were built before 1998 and their LPG systems would have been designed to comply with the British Standard 5482 which did not require marine regulators because they were not invented then. That is why most Westerly yachts would have standard outdoor BBQ regulators.

Calor Gas stopped filling the popular 4.5kg butane bottle forcing Westerly owners to source other supplies and the smaller Campingaz 2.7kg and Flogas 3.9kg bottles fit into the lockers.

Unfortunately, suppliers of alternatives such as most chandlery shops, marinas, garden centres, garages, Halfords, Homebase, B&Q, B&M Stores sell ordinary outdoor BBQ regulators ignorant of the requirement for boats to have marine regulators.

Ordinary outdoor regulators will be marked ISO 16129 but not with Annex-M or have the word Marine on them or have a small pressure release valve on the side. That is the differences.

The Campingaz regulators currently on special offer for £10.00 at Halfords state not suitable for use in caravans and motorhomes in the instructions. No mention of boats but a boat is a more enclosed space than a caravan surely. When asked Campingaz replied that they make bottles and cookers intended for camping use in well-ventilated open areas only and do not make specialist marine regulators.

Currently, there are only two make of marine grade regulators for Campingaz and Calor Gas. GOK and Haywards.

There are universal bulkhead marine regulators that can take any Flogas bottles but currently no marine type regulators that clip directly onto 20mm and 27mm Flogas bottles.

For practical purposes there would be no justifiable reason for a sailing yacht fitted with an LPG system as described above to go to sea with anything other than a current spec ISO 16129 Annex M compliant gas regulator correctly installed and fitted.

Such a regulator will provide longevity with respect to corrosion and a safe route away from the Westerly yacht (via a properly vented gas locker) for any gas discharged by the regulators over pressure relief valve.

BS EN ISO 16129 Annex M marine gas regulators are available for under £50 it is sensible to fit the correct regulator for the intended use.