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Cooking, heating, refrigerating and lighting appliances

The Boat Safety Scheme Essential Guide



For more technical information

The requirements in this chapter have been informed by, and may refer to, the following technical references, codes and regulations. If you are building, fitting-out or making substantial changes to a vessel, we strongly recommend you refer to, and take account of, the codes and standards below:

- **BS 5258-11:1980 Safety of domestic gas appliances. Flueless catalytic combustion heaters (3rd family gases) (superseded, withdrawn)**
- **BS EN 449:2002 Specification for dedicated liquefied petroleum gas appliances. Domestic flueless space heaters (including diffusive catalytic combustion heaters)**
- **BS EN 9094-2:2002 'Small craft – Fire protection. Part 2: Craft with a hull length of over 15m'**
- **BS EN ISO 10239 'Small craft – liquefied petroleum gas (LPG) systems'**
- **BS EN ISO 14895 'Liquid fuelled galley stoves'**
- **PD 5482-3:2005 'Code of practice for domestic butane and propane gas-burning installations – Part 3: Installations in boats, yachts and other vessels'**
- **Statutory Instrument 1998 No. 2451 The Gas Safety (Installation and Use) Regulations 1998' (www.opsi.gov.uk/si/si1998/19982451.htm)**
- **Calor Gas: 'LPG (Bottled Gas) for Marine Use'**



BSS Essential Guide

This chapter considers the means to minimise the risk of fire and explosion caused by fuel leaking from appliances or by overheating surfaces and materials. Also highlighted, are the potential risks from ignition sources, such as pilot lights.

This chapter covers the capacity of an appliance to shut down automatically if its flame goes out and it examines what is a 'satisfactory flame picture' and why one is necessary to stay safe. The need to turn off appliances with naked flames and disable automatic ignition systems before taking on fuel is covered here too.

Inadequate ventilation has been the cause of avoidable and tragic accidents on boats. It is a cause, but not the only one, of incomplete or inefficient combustion of gas, solid or liquid fuels that can lead to a lethal build-up of carbon monoxide. Whether the cause of this toxic gas is poor burning, blocked flues or leaking exhausts, it can be prevented by having appliances properly installed and maintained both competently and routinely.

Boats obliged to meet BSS requirements must comply with the following:

- 25** All appliances must be designed, installed and maintained in a way that minimises the risks of explosion or of fire starting and spreading.

- 26** All liquid-fuelled appliances must have an emergency shut-off valve located at a safe distance from the appliance.

- 27** a) **LPG and liquid-fuel burning appliances installed from 3 January 2000**

All burners and pilot lights shall be fitted with a device that automatically shuts off the fuel supply if the burner flame fails.

- b) **LPG and liquid-fuel burning appliances installed before 3 January 2000**
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Burners on catalytic appliances, appliances with continuously-burning flames and pilot light burners shall be fitted with a device that automatically shuts off the fuel supply if the burner flame fails.

- 28** All appliance flues must be designed, installed and maintained in a way that minimises the risk of fire.
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- 29** All fuel and power supply systems for appliances must meet these general requirements where relevant.
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There is good advice on keeping people safe from carbon monoxide on your boat in our leaflet 'Avoiding The Silent Threat – Carbon Monoxide'.



Carbon monoxide - the silent threat

Your safety, that of your crew and that of visitors to the boat is in your hands, but we will offer you some information and advice, which may help you with that responsibility. To that end, we draw your attention the risks of carbon monoxide poisoning and we will help you identify possible hazards caused by installations burning carbon-based fuels such as LPG, coal, wood, petrol and diesel.

The production of carbon monoxide even at low rates over a period of time can lead to dangerous accumulations of this toxic gas in enclosed spaces. For this reason, we urge you to use only appliances that are serviceable, in good condition and suitable for use in a boat.

Furthermore, for greater safety we recommend that you choose room-sealed appliances, whenever possible. There is a growing recognition of the risks associated with the use of non-room sealed gas appliances when used in confined spaces such as boats. This is very important with appliances that operate for extended periods and during the night. It is vital that you have them maintained regularly by competent persons and, of course, always in accordance with the manufacturer's recommendations.

8.1 Appliance fuel and power supply

The safe installation and condition of the appliance must be supported by a safe fuel or power supply.

8.1.1/R REQUIREMENT

Does the fuel or power supply to an appliance meet the applicable BSS requirements?

For each appliance, identify the type of fuel or power supply arrangements and apply the checks of the relevant chapter of the BSS General Requirements.

The fuel or power supply arrangements for all installed appliances must meet the applicable BSS General Requirements.

Note – Concerning diesel, paraffin, electric, or LPG installed appliances, apply the requirements in Chapters 2, 3, and 7 respectively, as appropriate.

The ability to shut off fuel supplies in the event of an emergency can prevent a fire from starting or from getting worse. The means to shut off that supply must be safely, easily and quickly accessible in an emergency.

8.1.2/R REQUIREMENT

Are all liquid-fuelled appliances fitted with shut-off valves, and are the valves or their means of operation in a readily accessible and safe position?

Identify all fuel supplies to liquid-fuelled appliances and check for the presence of valves or cocks.

Check the position and accessibility of the valves or cocks, or their means of operation.

Liquid-fuelled appliances must be provided with a valve or cock to shut off the fuel supply.

All shut-off valves or cocks, or their means of operation, must be installed in a readily accessible position.

All shut-off valves or cocks, or their means of operation, must be installed within reach of the appliance but not in a position that requires the user to reach over or around the appliance to operate them.

Notes – This check does not cancel out the fuel tank shut-off requirements at Checklist Item 2.13.1, which must be met.

The valve or cock should normally be situated in the same compartment as the appliance. However, there may be installations where it is not physically possible or safe to do so. For example: where the appliance is installed on a bulkhead between compartments; or, if there is less than approximately 1m (39 in) of fuel pipe in the same compartment. In these cases it is acceptable for the valve or cock to be installed at the nearest practicable point.

Automatic fire valves of a suitable proprietary type are an acceptable alternative to manually operated valves or cocks. Where fire valves are installed, fitting them immediately adjacent to the appliance will help ensure their usefulness in case of an appliance fire.

Appliances fitted with electrical fuel-supply pumps that shut off the fuel supply when the pump is not in use, are an acceptable alternative to manually-operated valves or cocks.

8.2 LPG or paraffin refrigerators on vessels with petrol propulsion engines

There have been numerous explosions resulting from the use of gas refrigerators with naked flames on petrol-powered boats.

The low-level permanent flame of a pilot light or burner could light any stray petrol or petrol vapour.

8.2.1/R REQUIREMENT

Where the vessel has a petrol propulsion engine, is the burner of a LPG or paraffin refrigerator room-sealed, or completely enclosed?

Identify the presence of a non-room sealed LPG or paraffin refrigerator in a vessel with a petrol propulsion engine.

If present, check that the burner is totally enclosed, or if necessary, have available a declaration from an equipment manufacturer or supplier that supports compliance.

The burners of LPG or paraffin refrigerators in vessels with petrol-propulsion engines, must be room-sealed or completely enclosed.

Notes – This check is limited to vessels with petrol propulsion engines, including outboard motors.

If the burner assembly is not visible, and its compliance is not supported by a declaration from the manufacturer or supplier, the fridge will be considered as non-compliant until its suitability can be verified.

Known room-sealed models include the Electrolux RB180, RB182, RM4213 LSC and RM6401 LSC models.

If a boat does not comply with this requirement, a warning notice will be issued and the navigation or harbour authority will be informed.

8.2.2/R REQUIREMENT

On vessels with petrol propulsion engines that have non-room sealed fridges with enclosed burners, is the combustion air drawn and exhausted through a suitable effective flame trap or piped to the appliance as required?

Identify the presence of a non-room sealed LPG or paraffin refrigerator with an enclosed burner in a vessel with a petrol propulsion engine.

If present, check the air intake and exhaust for the presence of a suitable flame trap.

If the combustion air is not drawn and exhausted through a suitable flame trap visually check how the air is piped to and exhausted from the appliance.

The air intakes and exhausts of non-room sealed LPG or paraffin refrigerators in petrol-engined vessels must pass through a flame trap, with a gauze of not less than 11 wires per linear cm (28 wires per inch) mesh.

If the combustion air is not drawn and exhausted through a suitable flame trap, the combustion air and exhaust must be piped to the appliance from either:

- outside the vessel; or,
- a point inside the vessel above the level of windows, other openings, or other means of ventilation in the accommodation space.

Notes – If the combustion air intake and/or the burner is not visible, and its compliance is not supported by a declaration from the manufacturer or supplier, the fridge will be considered as non-compliant until its suitability can be verified.

If a boat does not comply with this requirement, a warning notice will be issued and the navigation or harbour authority will be informed.

8.3 Installation of appliances in petrol-engine spaces

Special care must be taken with spaces where there could be petrol vapour. Petrol vapour mixed with air is highly explosive and there is a risk that it could be ignited by an appliance burner.

8.3.1/R REQUIREMENT

Are petrol-engine spaces free of LPG and/or liquid-fuelled appliances?

Check petrol-engine spaces for the presence of LPG and/or liquid-fuelled appliances.

LPG and/or liquid-fuelled appliances must not be installed in petrol-engine spaces.

Notes – In certain circumstances LPG and/or liquid-fuelled appliances may be located in petrol-engine spaces where they are installed in a separate vapour-tight compartment. If your boat has such an installation and you wish to claim compliance or equivalence, please contact the BSS Office.

The installation will not be compliant if the appliance is located outside of the engine space but the air intake to that appliance is located within the space.

Best practice

Some appliances are unsuited for use on boats e.g. where they generate too much heat in a confined space or where they are heavy and unstable. To prevent problems seek reassurance from the supplier that each appliance is suitable for use on your boat; that it is situated in sufficient space and that it is properly installed according to the manufacturer's instructions specifically for boats.

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8.4 Protection against fire risks from appliance installations (including solid-fuel and liquid-fuelled appliances)

If surfaces or fabrics next to an appliance get overheated, there is a danger that they could catch fire.

For example enough heat from a solid-fuel stove can reach a tiled surround to cause burning in a timber framework underneath the tiled surface.

8.4.1/R REQUIREMENT

Are appliances and surrounding surfaces clear of signs of heat damage and leaking fuel?

Check all appliances and all their surrounding surfaces for signs of heat damage and leaking fuel.

Appliances and all their surrounding surfaces must not show signs of:

- scorching, blistering or discolouration; or,
- fuel leakage; or,
- smoke or soot deposits; or,
- heat damage or deterioration to appliance structure.

Note – This check applies to all fuel burning appliances.

8.4.2/R REQUIREMENT

Are all curtains, blinds and other textile materials near to appliances free of heat damage?

Check all curtains, blinds and other textile materials near appliances for signs of heat damage.

Curtains, blinds and other textile materials near all appliances must not show signs of heat damage such as scorching or burning.

Best practice

We highly recommend meeting the fire-proofing standards for surfaces adjacent to appliances set out in BS EN ISO 9094. Also, free-hanging curtains or other fabrics are best fitted well away from appliance burners. Supplementary information on these recommendations is available on www.boatsafetyscheme.com or by post or email from the BSS Office.

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8.4.3/R REQUIREMENT

Are non-portable appliances properly secured against accidental or unintended movement?

Check for the presence and condition of securing systems on all non-portable appliances.

Where practicable, apply light manual force to check the security of all non-portable appliances.

Where a manual check is not practicable, such as with solid fuel and oil-fired stoves, check the condition of securing systems.

Non-portable appliances must be incapable of unintended movement in any direction.

Securing systems must be installed on all non-portable appliances and securing systems and their fixing points must be of suitable strength and must:

- show no signs of fractured mounting brackets;
- not have loose, missing or fractured bolts or nuts.

Notes – Appliances in gimbals may tilt, but the retaining mechanism must be secure.

Appliances connected to the fuel supply by hoses or electrical cables may be retained using fixed chains provided there is no possibility of strain on the hose and/or cable connections.

This check applies to liquid-fuelled, solid-fuel and LPG appliances only.

Information

Gas appliances can be connected with flexible hoses; read Chapter 7 of this Guide especially sections 7.9-7.10 for details.



8.5 Protection against fire risks from appliance flues and exhausts

Appliance flues carry very hot gases and can be the source of both conducted and radiated heat such that combustible materials nearby or brushing against these flues can begin to burn.

8.5.1/R REQUIREMENT

Are all vessel structures, equipment, and curtains, blinds and other textile materials near appliance flues free of signs of heat damage?

Check vessel structures, equipment, and curtains, blinds and other textile materials near all appliance flues and exhausts for signs of heat damage.

Vessel structures, equipment, and curtains, blinds and other textile materials near all appliance flues and exhausts must not show signs of heat damage such as scorching, blistering or discolouration.

Note – This applies to all fuel-burning appliances with flues or exhausts.

8.6 LPG catalytic heaters

Catalytic heaters are known to fail over time, so you need to be certain that the fuel supply will shut off if yours has a problem.

8.6.1/R REQUIREMENT

Is a LPG catalytic heater compliant with a suitable manufacturing standard?

Identify any LPG catalytic heaters and check compliance with the following aspects of BS 5258-11 or BS EN 449 by visual inspection:

For BS 5258-11 check:

- provision of a guard; **and**,
- three-position on-off tap; **and**,
- flexible tubing to BS 3212 type 2.

For BS EN 449 check:

- legible and durable marking of open, closed and any reduced-rate positions on control taps; **and**,
- clear marking of any special position of the control tap for ignition; **and**,
- provision of a fireguard.

LPG catalytic heating appliances must comply with the elements of:

- BS 5258-11; or,
- BS EN 449

as prescribed in the check.

8.7 Flame supervision/ failure devices (FSD/FFD)

This section covers the use of a safety feature that, depending on the date of installation and the type of appliance, is either a requirement, or a highly recommended feature even when it is not mandatory.

If the burner on any of your appliances goes out and the fuel continues to flow and is ignited this could start a fire or cause an explosion.

8.7.1/R REQUIREMENT**Are flame supervision devices fitted to all LPG and liquid-fuelled appliances that require them?**

Check all LPG and liquid-fuelled appliances for the presence of flame supervision devices.

For any LPG appliance not fitted with flame supervision device(s) seek to determine from the owner, or from available documentary evidence, the date the appliance was installed.

For any liquid-fuelled appliance not fitted with flame supervision device(s), seek to determine from the owner, or from available documentary evidence, whether the appliance manufacturer requires such a device to be fitted.

For LPG appliances:

All the burners and pilot lights of LPG appliances installed **on or after 3 January 2000** must be fitted with a device that automatically shuts off the LPG supply if the burner flame fails.

LPG appliances installed **before 3 January 2000** must be fitted with a device that automatically shuts off the LPG supply if the burner flame fails on:

- the burners on catalytic appliances; **and**,
- appliances with continuously-burning flames; **and**,
- pilot light burners.

For liquid-fuelled appliances:

Flame supervision devices must be fitted to all liquid-fuelled appliances where the appliance manufacturer requires such a device to be fitted.

Notes – If you are unsure of whether a particular liquid-fuelled appliance should be fitted with a flame failure device, or seeking clarification as to the suitability of such a device, you should contact the BSS Office.

Engine-start blowlamps and gas pokers are not required to have FSDs.

8.8 LPG appliance burner operation**Incorrect gas pressure at an appliance will result in ineffective combustion and unusual flame behaviour.**

If the pressure is too low, the burner flame on an appliance can go out. This can result in gas leaking into your boat and the risk of fire or explosion. If it's too high, the flame can lift-off the burner and extinguish.

If the combustion air supply is insufficient the burner may produce a yellow or sooty flame, which can be the source of carbon monoxide.

8.8.1/R REQUIREMENT

Are all LPG appliance burners in good condition and delivering a proper flame?

Light all LPG appliance burners and operate them at their maximum setting at the same time.

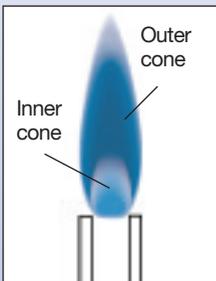
Compare the flame pictures at each burner to the 'burner flame trouble' illustrations below.

A satisfactory flame picture must be present at each LPG appliance burner when all burners in the system are operating at their maximum setting at the same time.

Note – Any appliances with 'hidden' burners will be ignited as part of this check at examination, but there is no requirement to see the burner flame picture.

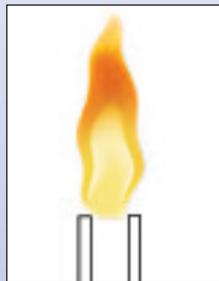
In the event of a poor flame picture, shut down the LPG supply and have a competent person remedy the fault. If an examiner discovers such a fault he or she will issue a warning notice and may have to inform the navigation or harbour authority. In particular, if the regulator is operating outside of the lock-up tolerance, or is more than 10 years old, or is marked in imperial units, the BSS Warning Notice will include a note about the performance or age of the regulator as appropriate.

At the time of examination if any appliance burner cannot be lit it will be considered 'not verified' and the reason why noted. It is considered as non-compliant until such time as its good condition has been verified.



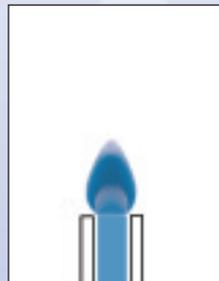
Gas and air in correct proportions

Good pattern



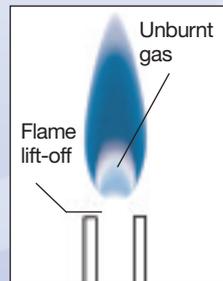
Too much gas,
too little air

Incomplete combustion
Sooty yellow flame



Too much air,
too little gas

Flame travels back
to injector



Pressure too high,
too much primary air

Flame lifts off

Best practice

Regulators have a finite life and it is generally recommended that they are replaced at least at 10-year intervals.

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8.9 Ventilation

The responsibility for the safety of anybody onboard your boat lies with the owner or skipper. We advise strongly that boats have enough fixed ventilation to feed all the appliances on board that use LPG, coal, wood, oil or other carbon-based fuels.

Inadequate ventilation will starve the burners of vital oxygen resulting in poor burning and that can produce highly toxic carbon monoxide.

Room-sealed appliances have their own external air supply built into the flue ductwork, but other appliances take their combustion air supply directly from the cabin space.

The ventilation requirement can be calculated by using the formula from Annex B of PD 5482-3. It takes account of the number and type of appliances as well as the people on board.

Minimum effective area (mm²) = [2200xU]+[650xP]+[440xF]

U = total input rating (kW) for all appliances (including cookers) without flues

P = number of people for which the compartment is designed

F = input rating (kW) for all open or closed flue appliances

The input rating for your appliances can normally be found on the manufacturer's plate on the appliance and/or in the operating instructions.

The ventilation requirement needs to be split as equally as practicable between:

- high level (ideally cabin roof), and,
- low level.

Low-level venting can be achieved by letting in cold air from vents in doors and/or bulkheads, or by means of ducting from a higher level.

Careful examination must be made of each ventilator to check for the presence of anything that would reduce the clear air opening e.g. filter, insect screen. Such filters or screens must also be in a clean and serviceable condition as partial or complete blockage of the clear air openings could make the ventilator totally ineffective and your calculations inaccurate. Louvered doors are a common form of providing permanent ventilation and the effective area needs to be carefully measured.

8.9.1/A ADVICE

Is fixed ventilation in accordance with the relevant standard?

Calculate the fixed ventilation requirements in accordance with guidance immediately preceding this box.

Measure the effective area of fixed high- and low-level ventilation.

Confirm that the fixed ventilation area is divided as equally as practicable between high and low level.

Fixed ventilation accords with Annex B of PD 5482-3.

Notes – Ventilators that can be closed without the use of tools must not be included in the calculations except for seagoing boats with ventilator-closing devices.

Permanent and measurable gaps around doors and windows when the windows or doors are fully closed can be taken into account as part of the total fixed ventilation provision.

In the event of a shortfall, we recommend remedying the fault as soon as possible. If an examiner discovers a significant shortfall he or she will issue a warning notice. A significant shortfall is 50% of the calculated fixed ventilation requirement; or, any shortfall in the calculated requirement for continuous-burning appliances; or, the existence of no high- or no low-level ventilation.

Supplementary advice concerning ventilation can be found on www.boatsafetyscheme.com or can be sent by email or post from the BSS Office.

If your boat is used exclusively on inland waterways, we recommend strongly that the ventilators are fixed open. This is not always practical; for example with sea-going boats that experience severe weather and require ventilators to be closed for weather tightness. In this case a warning notice e.g. 'Warning – open ventilator(s) before use' fixed close by every appropriate appliance is recommended.

8.9.2/A ADVICE

Are warning notices displayed on sea-going boats with closable ventilators?

Identify seagoing boats with closable ventilators.

Check for the presence of, and the wording on, warning notices on or near to all non-room sealed fuel-burning appliances.

On all sea-going boats with closable ventilators a warning notice is displayed on or near all non-room sealed fuel-burning appliances.

The warning notice must read: 'WARNING – open ventilator(s) before use'.

Note – If your examiner records a fault is here, he or she may issue a warning notice.

8.10 Flues and draught diverters

Defective or inappropriate flues can cause a build-up of combustion by-products inside the cabin space, which may lead to a risk of carbon monoxide poisoning. This is an important safety issue and one where the responsibility rests with the boat owner.

With *non* room-sealed appliances

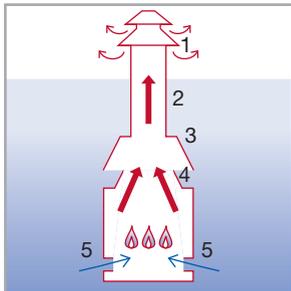
For your own safety, appliances recommended as needing a flue are:

- instantaneous water heaters, supplying a bath or shower
- instantaneous water heaters installed in confined spaces
- instantaneous water heaters which serve more than one hot water outlet
- solid fuel appliances
- any appliance which is fitted with a flue spigot.

With *room-sealed* appliances

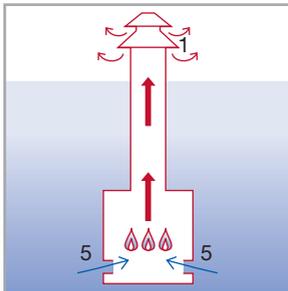
Defective or inappropriate flue ductwork serving room-sealed appliances could cause an escape of products of combustion or carbon monoxide into the cabin space. Flue components, including ductwork and terminals on room-sealed appliances installed according to the manufacturer's instructions will minimise this risk. Some flues are fabricated from corrugated and relatively thin material that is susceptible to damage if it is not properly installed.

Open Flue System



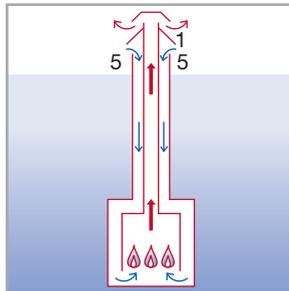
1 Terminal
2 Secondary Flue

Closed Flue System



3 Down Draught Diverter
4 Primary Flue

Room-Sealed System



5 Air Inlet

8.10.1/A ADVICE

Are all appliances requiring a flue fitted with one?

Check that:

- a flue and draught diverter are fitted to all multi-point instantaneous water heaters and those single point instantaneous water heaters supplying a shower or bath; **and**,
- a flue is fitted to any appliance fitted with a flue spigot and any solid-fuel or oil burning appliance; **and**,
- flue components including air intake and flue ductwork and terminals are fitted to all room-sealed appliances; **and**,
- a flue does not serve more than one appliance.

A flue must be fitted to all appliances designed exclusively for use with one as prescribed in the check.

Flues must not serve more than one appliance.

Note – If an examiner discovers a fault he or she will issue a warning notice.

Advice about flue condition

The examiner must visually inspect flues, flue securing and flue terminals where these are readily accessible before offering you advice about any defects he or she may have found relating to:

- completeness
- obstruction
- signs of damage or flue gases escaping into cabin areas.

Carbon monoxide from appliances can enter the cabin space if there is no flue where one is required.

Flues deteriorate over time and can be easily damaged or blocked.**8.10.2/A ADVICE****Are all flues complete and in good condition?**

Check the condition of all flues and ductwork, flue terminals and flue joints and securing mechanisms that can be seen or reached.

All flues must be complete, properly fitted and maintained and must show no obvious signs of:

- obstruction or flue diameter restriction; or,
- crushed or blocked terminals; or,
- modifications to the flue not in accordance with the appliance manufacturer's recommendations; or,
- damage or deterioration; or,
- evidence of flue gases escaping into cabin areas (soot deposits, etc).

Notes – If an examiner discovers a fault here, he or she will issue a Warning Notice.

Examples of obvious unsuitable flue modifications include extensions to LPG fridge flues and tin cans used as flue terminals.

LPG and paraffin fridges in non-petrol-engined boats may be installed to open-vent into the boat's interior, but the use of a suitable proprietary flue is recommended. Any components added to the appliance's integral flue stack may place people aboard at risk and will be recorded as a hazardous fault at examination.

During the examination instantaneous water heater flue length and terminal suitability will be checked by the flue spillage test (8.10.4).

Flue terminals that can be enclosed by your boat's canopies may be a potential carbon monoxide hazard.**8.10.3/A ADVICE****Do all flues terminate directly to outside air?**

Check the location of all flue terminals.

Check for the presence of a canopy or canopy fixings where a flue terminates at any part of the vessel which could be enclosed by a canopy.

Flue terminals must be located outside the interior of the vessel and outside of any areas which may be enclosed by a canopy.

Note – If an examiner discovers a fault here, he or she will issue a warning notice.

8.10.4/A ADVICE

Are all open flues operating effectively?

In the event no fault is recorded at Checklist Item 8.10.3 in connection with the appliance, a BSS examination will include a flue spillage test on all appliances with open flues. Details are available on www.boatsafetyscheme.com or from the BSS Office by phone, post or email.

Open flues must ensure safe transfer of flue gases to the outside of the boat.

Note – A test will not be carried out if its outcome is likely to be affected by flue damage, obstruction or unsuitability determined at Checklist Item 8.10.2. Nor will a flue spillage test be carried out on fridges with open flues.

If an examiner discovers a fault here, he or she will issue a warning notice.

At examination, if for any reason the examiner cannot complete a flue spillage test, the report will note that this check is 'not verified' and the reason(s) why.

Information

The warning notice gives brief details of the problem(s) an examiner has identified. There is more information on warning notices in the Introduction to this Essential Guide, (see Pg 15).

