



# **BSS interim position on fuel tanks and supply lines for diesel appliances**

**Version 1.0 – December 2021**

## 1. Scope

This document sets out the approach Examiners must take when examining permanently installed diesel appliances (e.g. heaters and diesel stoves).

## 2. Background

The BSS are aware that an increasing number of automotive variant diesel heaters are being installed in small craft and that diesel heaters and stoves are being supplied into the small craft market with small capacity unmarked plastic fuel tanks and unmarked plastic/nylon fuel lines. At a meeting in October 2021 the BSS Technical Committee agreed to undertake a wide-ranging review covering the supply, installation and use of diesel appliances and their fuel systems. It's possible the review may lead to permanent, changes to the published BSS Requirements.

Until the full review has been completed the BSS Technical Committee has agreed the following interim approach to Examining diesel heaters and diesel stoves.

## 3. Interim approach - tanks and fuel supply lines

All relevant BSS Requirements continue to apply from the 2021 Core Examination Checking Procedures (for Privately owned and managed vessels and for hire boats) or from the 2002 Examination Checking Procedures (for other classes of commercial boats other than hire boats) except that:

- a. Examiners may accept unmarked (i.e. not CE marked) plastic fuel tanks (wherever located) connected to permanently installed diesel heaters and stoves provided they have a capacity of no more than 10lt and appear to be of suitable proprietary manufacture (e.g. on the face of it, they were manufactured for use with such appliances)
- b. Where connected to suitable proprietary tanks of 10lt or less, Examiners may accept unmarked plastic/nylon/hose fuel lines and their connections, plastic filters, etc (wherever located) provided they appear to be of suitable proprietary manufacture (e.g. they look like they were manufactured for use with such appliances).
- c. The tank and the fuel lines must be in good condition with no signs of damage or deterioration, missing components, or leaking fuel. If such issues are found record a 'fail' at the appropriate Check (i.e. at Part 2 of the 2021 or 2002 ECP depending on the class of vessel).
- d. Notwithstanding that the tank maybe removed for refuelling, it must be considered part of a permanently installed fuel system and must be securely installed so as to limit the potential for:
  - the tank falling over; and,
  - chaffing on adjacent surfaces; and,
  - pulling on connections.

If such tanks are not securely installed record a 'fail' at the appropriate Check (2.5.1 of the 2021 ECP or 2.6.1 of the 2002 ECP).

- e. Plastic/nylon and hose fuel lines must be supported clear of anything likely to damage them. If plastic/nylon and hose fuel lines are not adequately supported record a 'fail' at the appropriate Check (2.10.4 of the 2021 ECP or 2.14.3 of the 2002 ECP).

- f. The type of connections used in the fuel lines are not required to comply with the Requirements at Section 2.11 of the 2021 ECP or Section 2.15 of the 2002 ECP. However, where they can be seen or reached all fuel line connections must be free of signs of damage or deterioration and be free of signs of fuel leaks. If fuel line connections are not free of signs of damage or deterioration or fuel leaks record a 'fail' at the appropriate Check (2.11.1 of the 2021 ECP or 2.15.1 of the 2002 ECP).
- g. Fuel line connections and components (including filters, pumps etc) are not required to be secured as covered by Check 2.11.3 of the 2021 ECP or Check 2.13.4 of the 2002 ECP. However, where they can be seen or reached all fuel line connections and components must be free of signs of damage or deterioration and be free of signs of fuel leaks. If fuel line connections or components are not free of signs of damage or deterioration or fuel leaks record a 'fail' at the appropriate Check (2.11.1 of the 2021 ECP or 2.15.1 of the 2002 ECP).

Notes:

- i. For every Examination where an unmarked (i.e. not CE marked) plastic tank of 10lt or less capacity is found onboard and where the fuel lines for such tanks are unmarked plastic/nylon/hose, Examiners must advise the boat owner in writing that the acceptance of such fuel tanks and fuel lines by the BSS is an interim position and possibly subject to change in the future. For each Examination this advice must be added to the Examination record on the BSS Database using the Additional Observation facility. In this way the advice will appear on the BSS Examination Report/Certification.
- ii. For all tanks of more than 10lt capacity the relevant Requirements from the Core 2021, or the 2002, ECP apply. However, in the event Examiners come across unmarked plastic tanks of slightly more than 10lt capacity that appear to be of suitable proprietary manufacture they should contact the BSS Office for guidance.
- iii. If a fuel line is connected to a tank of more than 10lt then all the current/normal BSS Requirements apply both to the tank and the fuel line.
- iv. The above interim position regarding unmarked plastic tanks of 10lt capacity or less and their fuel lines has been made on the basis that the associated risks are very low. The interim position is consistent with the current BSS position that no Requirements apply to spare diesel containers (of any capacity) other than they must be in good condition and free of signs of leaking fuel.
- h. Examiners may occasionally come across diesel appliances with integral tanks. Where such appliances are permanently installed the above interim Requirements at a. to g. apply to such integral tanks and their fuel lines where they can be seen or reached. For such appliances Examiners are not required to remove covers or housings that may obscure part, or all of the tank and its fuel line. If fuel residues are present on the exterior of such appliances indicating a fuel leak inside the cover or housing record a 'fail' at Check 2.11.1 of the 2021 ECP or 2.15.1 of the 2002 ECP.

#### **4. Interim approach – appliances**

There is no revised interim approach concerning the appliances themselves (the body of the heater or stove). All relevant Requirements continue to apply from the 2021 Core Examination Checking Procedures (for Privately owned and managed vessels and for hire boats) or from the 2002 Examination Checking Procedures (for other classes of commercial boat other than hire boats).

## **5. Interim approach – appliance exhausts**

There is no revised interim approach concerning diesel heater or stove exhausts. All relevant Requirements continue to apply from the 2021 Core Examination Checking Procedures (for Privately owned and managed vessels and for hire boats) or from the 2002 Examination Checking Procedures (for other classes of commercial boat other than hire boats).

Notes:

- i. Where they can be seen or reached, all exhaust system connections must be checked rigorously for soundness and signs that they are not gas-tight (e.g. soot deposits around the connections). This includes silencers on diesel heaters. If soot deposits are seen on or adjacent to exhaust system connections or components Examiners must record a 'fail' at 2021 Core ECP Check 8.10.2 or 2002 ECP Check 8.8.3 depending on the class of vessel being Examined.
- ii. Where they can be seen or reached, all exhaust systems and adjacent vessel structures, equipment, curtains etc, must be checked rigorously for signs of heat damage. If signs of heat damage are present Examiners must record a 'fail' at 2021 Core ECP Check 8.5.1 or 2002 ECP Check 8.3.2 depending on the class of vessel being Examined.
- iii. In the event an exhaust is found to terminate inside the boat record a 'fail' at 2021 Core ECP Check 8.10.3 or 2002 ECP Check 8.8.3 depending on the class of vessel being Examined.
- iv. Examiners are not required to confirm that exhaust system components are original to the installed appliance. However, all exhaust system components must be of suitable proprietary manufacture in that they must, on the face of it, appear to have been manufactured as diesel appliance exhaust system components.

## **6. Additional comments**

Portable diesel heaters and stoves are not covered by the BSS Requirements. However, if a diesel heater or stove is connected to a remote fuel tank, or permanently connected to the boat's electrical system then it's not a portable appliance and must be compliant with the BSS Requirements.

## **7. BSS guidance to boat owners on choosing diesel-fuelled appliances**

The Boat Safety Scheme's guidance to boat owners when installing new diesel appliances or replacing an existing diesel appliance is: -

Always chose an appliance and accompanying fuel system that is marketed by the manufacture as being suitable for use in small craft and that comes with installation instructions for small craft. Boat owners are also recommended to have such appliances and fuel systems installed by a competent person to the appliance manufacturer's small craft installation instructions.

## Annex A – supporting images



Fig 1. Example of a 10lt diesel heater tank which can be accepted as being of suitable proprietary manufacture. The tank is connected to a plastic fuel line incorporating a plastic filter all of which can be accepted as being of suitable proprietary manufacture as they are of a type known to be supplied by diesel heater manufactures. The plastic fuel line material and the filter are acceptable provided the tank does not have a capacity of more than 10lt.



Fig 2. Spare fuel containers, such as the one shown in this photograph, cannot be accepted as diesel appliance tanks of suitable proprietary manufacture as they will not have been manufactured for such use or sold by the appliance manufacture for such use.



## Annex A – supporting images

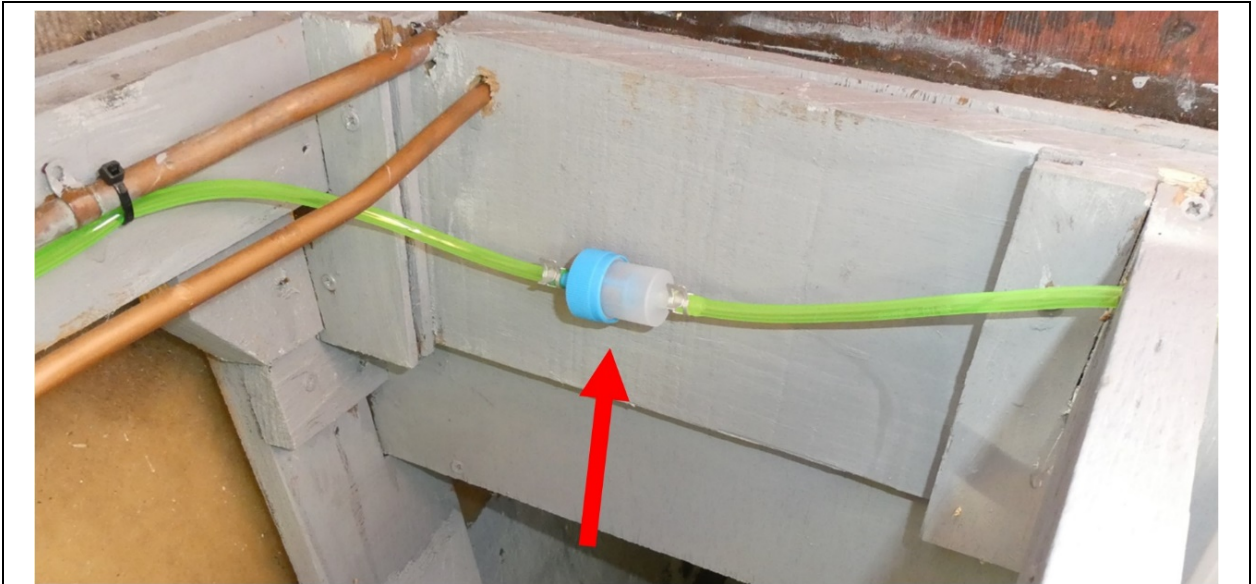


Fig 3. Plastic fuel filters, such as the one shown in this photograph, may be accepted as being of suitable proprietary manufacture (provided the fuel tank has a maximum capacity of 10lt) as they are supplied with diesel appliances.

Also, where the fuel tank has a capacity of no more than 10lt, fuel line connections and components (such as the filter) do not have to be securely installed (but there must be no signs of fuel leaks at the component or its connections).

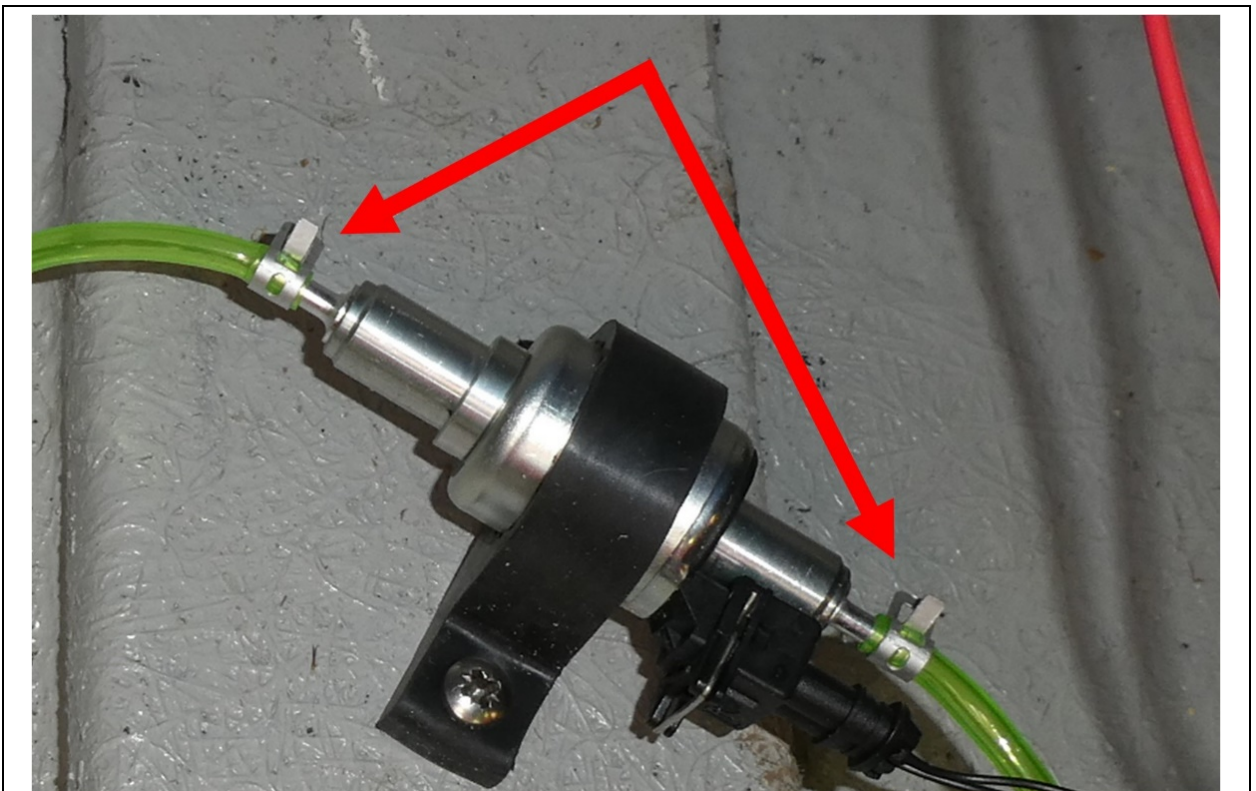


Fig 4. Where the fuel tank has a capacity of no more than 10lt, fuel line connections are not required to comply with the Requirements at Section 2.11 of the 2021 ECP or Section 2.15 of the 2002 ECP and therefore may be push-fit or use spring clips (as shown in the accompanying photograph).

