Impression

jeudi 9 janvier 2014 23:06

Heating Questions and Answers

Here are some frequently asked questions and their answers. If you continue to have problems, please contact your local Eberspächer dealer.

Questions

Answers

The heater switches on and only operates for 20 to 45 seconds and then stops.
This is the classic symptom of low voltage to the heater under load, so please check the voltage at the heater power input connection with a multi-meter when you initially switch your heater on. See point numbers 1 to 4.

1. Check the battery battery voltage going to your heater. It should be: 10.5V to 14V (12V system) or 21V to 30V (24V system) under load.

Many heaters have failed to operate because the battery voltage has become too low due to lack of battery charging or excessive power drain from other ancillary equipment or faulty batteries.

2. Check the wiring harness or connections for corrosion, the build up of corrosion around a terminal or battery connection will hamper the connection or the batteries ability to allow power to pass. Whilst checking the condition of a terminal, don't forget to check the terminal or connections security.

A loose terminal or connection can have the same affect as corrosion.

Maybe cleaning and applying some corrosion inhibitor (e.g. petroleum jelly) will prevent this problem from occurring again in the future. A routine check of all terminals and connections is always a good method of preventative maintenance with any vessel or vehicle.

3. Check the condition and rating of the fuses used on the heater ensure they are in good order and the correct amperage. As stated in 1.2 above, corrosion and loose connections can cause problems.

4. Undertake a visual inspection of the heater and its associated parts. Is there any physical damage to any component parts as this may have a detrimental effect on the heater's ability to function correctly?

Back to top

The heater does not work.
Is there any power to the operating unit (e.g. lights or display digits) Check if a fuse has blown, refer to the technical manual for your heater that the correct amperage fuse and type has been used. If you replace the fuse, ensure the correct amperage is fitted. Should the fuse still "blow" then you must contact you local Eberspächer distributor for further assistance.

Do not under any circumstances increase the amperage of the fuse in an attempt to cure the problem. The correctly rated fuse is there to protect the heater and the wiring in the event of an electrical short circuit.

Remove the ignition glow plug and check coils for continuity or excessive build up of carbon across the coils.

Back to top

The heater fails to fire up after trying for three minutes.
Conduct a visual inspection of the intake to the heater, the warm air ducting and the air outlets. A restriction to the airflow can make the heater overheat.

Has the ducting been crushed, the air intake to the heater inhibited, or have any or all of the

outlets been closed off.

Check that the airflow into and away from the heater through the ducting system is not restricted.

For water heating systems, check that there is adequate water flow around the piped system. Ensure that regulating valves are open and functioning correctly. Ensure that no air is trapped within the heater emitters, i.e. the radiators, fan matrices or fin radiators. Bleed the air from the system if necessary.

Important: when topping up the header tank, us a 50/50 mixture of antifreeze to water solution.

DO NOT TOP UP WITH NEAT TAP WATER.

Check the heater exhaust pipe and combustion air tube for any damage or possible restriction. Water ingress in either tube or any mechanical damage can influence the operation of the heater. Please check this out.

Back to top

The heater fires up, runs for a short period and then shuts down again.
The heaters are fuel fired units, so a lack of fuel could be the reason why the heater is not operating as required. Within the heater's fuel line system is a "Fuel metering pump" that contains an internal fuel filter. Refer to the technical for location of the filter.

This small pot shaped filter may need cleaning or replacing. A blocked or restricted filter will not allow the heater to run efficiently and maximise the potential heat energy available. Should the boat or vehicle be subjected to rough weather or travel over rough ground, sediment in the bottom of the tank may have become disturbed and is now blocking the metering pump filter. So please check this out.

This problem usually revolves around lack of fuel being delivered into the combustion chamber. It always worth checking out the comments made in Q3 for air and water heaters. Your heater may be overheating.

It could also be the thermostat or modulator is set too low, ensure that the thermostat or modulator control is adjusted up to a higher setting.

Check that the fuel metering pump is working, this is confirmed if the fuel metering pump is "ticking" also check that fuel is being delivered to the heater fuel inlet connection, and check all fuel line joints for security and that they are not either leaking fuel or allowing air into the fuel system.

Check the fuel level gauge, have you run to low on fuel in the main fuel tank?

Check that any heater fuel shut off valve is in the open position.

Inspect the exhaust pipe or combustion air tube for any restrictions.

Back to top

When the heater is switched on the blower motor runs very slowly but the heater does not fire up.
A fault has been detected by the control box during the pre-start diagnostic phase. In this instance you will need to contact your local Eberspächer dealership, who has the necessary diagnostic equipment to determine the actual reason for the heater not operating.

The same situation would also apply to Hydronic water heaters.Q6: I have just purchased a second hand heater, which I would like to change over the operating voltage? i.e. from 12V DC to 24V DC or 24V DC to 12V DC.

Back to top

I have just purchased a second hand heater. Can I change the operating voltage? (12V to 24V DC or 24V to 12V DC).
It is not economical to change over the voltage of the heater as this will entail the following changes.

The control box, fuel metering pump, blower motor, voltage regulation relay and in some case the ignition system will have to be modified.

Back to top

Will my Eberspächer heater run on red diesel and how often will it need servicing?
"Our heater products are designed to run on fuel to specification BS EN 590 as stated in the Technical book that accompanies all heaters".

It is commonly thought that red diesel is road diesel with a red dye in it. Unfortunately, this is not always the case. There are two types of red diesel available, one is Gas Oil with red dye, and the other is Low Sulphur Gas Oil (City Gas Oil) with a red dye. The latter meets BS EN 590 and has the same specification as road diesel.

We have contacted a couple of Fuel Suppliers to ascertain "what exactly is it in the fuel that makes it different".

The main differences between "Gas Oil (non BS EN 590)" and Low Sulphur Gas Oil (to BS EN 590), is the former has a lower 'Cetane rating' 46 against 52, higher sulphur %Wt 0.2 against 0.005, higher Flash point 82 against 67 and Carbon residue, on 10% distillation residue, %Wt .12 against <0.001.

The fuel commonly found on the canal system is unfortunately "Gas Oil". The other "Red diesel" available is called "City Gas Oil" (ultra low sulphur gas oil) (Linton Fuel Oil Ltd Stock code 103). This meets BS EN 590 and apparently costs the marina only 1.5 pence more per litre. Our contact was quoted saying "why anyone chooses to buy normal gas oil, I don't know!" another supplier was challenged to why it was not always offered he said "surprisingly no one asks for it but it is readily available".

We have found boat owners using the better quality fuel to have a longer period between servicing, therefore what is needed are people like you demanding this far superior fuel. I am sure you would be happy to pay a few pence more for better fuel.

In answer to your servicing questions our heaters have a service interval of approximately 2000 hrs, this can be adversely affected by the use of Gas Oil (non BS EN 590), bacterial or water contamination. We have many customers who have taken onboard the advice we have given in the past regarding additives and now have far longer service intervals. Additives such as 'Fultron' are available from all good chandlers and stockists.

Back to top

Eberspächer (UK) Ltd.

Headlands Business Park
Salisbury Road
Ringwood, Hampshire BH24 3PB

Phone: +44 1425 480151
Fax: +44 1425 480152
enquiries@eberspaecher.com