

## Airtronic S2 D2L

Tips for when installing your heater unit.



Please **READ** the installation tips below before installing this heater unit.  
Failure to do so could result in your warranty being void.



# Warranty information

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Please refer to the Eberspacher warranty booklet for more detail or the warranty information card supplied by us.

**3 Year Warranty:** Unlike some companies we offer a full 3-year warranty which includes free technical support on **01924 274774**. The warranty period starts from the purchase date unless another date has been agreed.

Below are a few items which are **not** covered under warranty.

1. The cost of removing this product from the vehicle, transporting it to a dealer/Mellor Online and refitting is the responsibility of the end user.
2. Please note that the **burner units** are not covered within the warranty periods shown as they are classed as serviceable items. Any failure will be the result of bad fuel quality which has been supplied to the burner unit.

*Tip – make sure the fuel is road quality diesel and has a good fuel filter.*

3. Incorrect installation of the heater unit as per the manufacturer's installation instructions.

*If you are unsure or need a copy of any documents for this heater, please see 'Download PDF Documents'*

Warranty Provider	Period (Years)
Eberspacher Worldwide or Mellor Online	1 (one)
Eberspacher Worldwide or Mellor Online	2 (two)
Mellor Online or Partners of Mellor Online	3 (three)



# Download PDF Documents.

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**Try it:** Below is a link to our customer download area which has been provided via Dropbox, there you will be able to download all PDF documents regarding your heater.

If you need any more documents, please email [support@melloronline.co.uk](mailto:support@melloronline.co.uk)

1. Type the link into your web browser (<https://bit.ly/2WVWdpL>)

2. Scan the QR code



22.1000.35.2203.0A\_EN\_0419.pdf



22.1000.35.2204.0A\_EN\_0518.pdf



25.2027.95.2681.0D\_EN\_0519.pdf



25.2720.90.0001.0B\_EN\_0319.pdf



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# Installing the EasyStart Pro Controller

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Connection diagrams are provided in the download area or in the box which came with the Pro Controller.

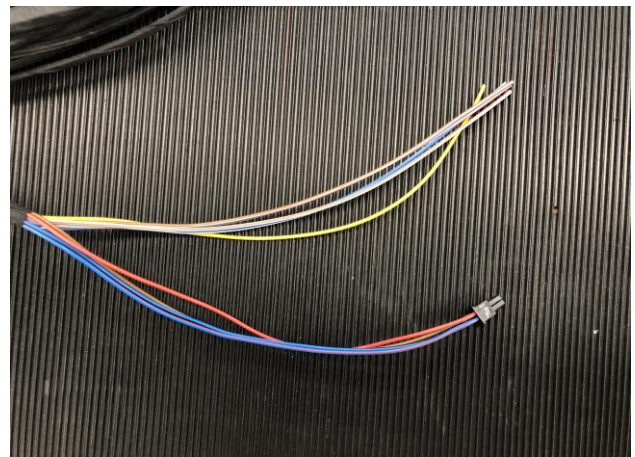
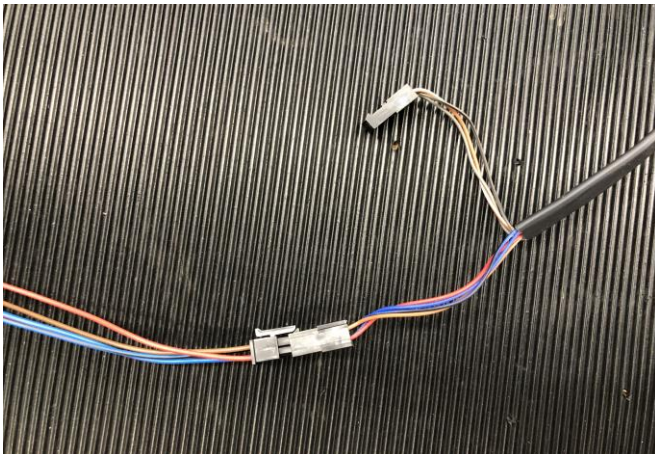
Please download and read the operation instructions carefully before use.

**Top Tip:** The controller has a 4-pin plug connector which plugs directly into the heater loom. This controller works via the CAN Network, therefore the pro needs to read the heater first.

1. You MUST connect the heater which has a **20amp** fuse first for about 30 seconds.
2. Then connect the controller **5amp** fuse last.

Please note that this model of the D2L will not work with the below controllers which were supplied with the older D2 Airtronic (H-Kit) models. An update will be out soon to enable these units to be retro fitted at a later date.

- EasyStart Select
- EasyStart Timer
- EasyStart Web TP7 (TP8 will only work with the D2L)



The photo on the left shows the Pro Controller 4 pin connector connected to the heater loom, its plug and play. The photo on the right shows the Pro Controller connector and an extra set of wires which are for older controllers and can be disregarded if you are installing the Pro Controller.

If fitting any other types of controllers, see instructions in the box what your controller came in.



# Common Voltage Problems

**Voltage problems are common on inland boats for several reasons.**

Each time the heater starts the glow pin or glow plug, depending on the heater, comes into circuit, between 10amps and 22amps are taken from the battery, this also happens when the heater shuts down as the glow pin/plug comes back into circuit for self-cleaning.

If this is happening on a regular basis i.e. short cycling of the heater, the battery can be drained in a relatively short period of time.

- Power cables are too thin. These should be kept within the manual's specification.
- Flat batteries, owners can easily underestimate the amount of time it takes to recharge a large bank of batteries.
- Loose connections or fuses.
- Corrosion or verdigris build up on connections or fuses.

Again, good housekeeping, looking after the batteries, checking terminals etc.

*Tip: Voltage should be checked at the batteries AND at the heater as the heater is starting up and the glow pin/plug is in circuit. With the system under load any faults will be easier to spot.*

Start	Small	Large
Electrical power consumption without water pump		
100 W	6 W	31 W
Power		
	850 W	2,200 W
Fuel consumption		
	0.1 l/h	0.28 l/h

## Attributes

Operation suitable to x altitude	3,000 Hm
Upper voltage limit	16 V
Lower voltage limit	10.5 V

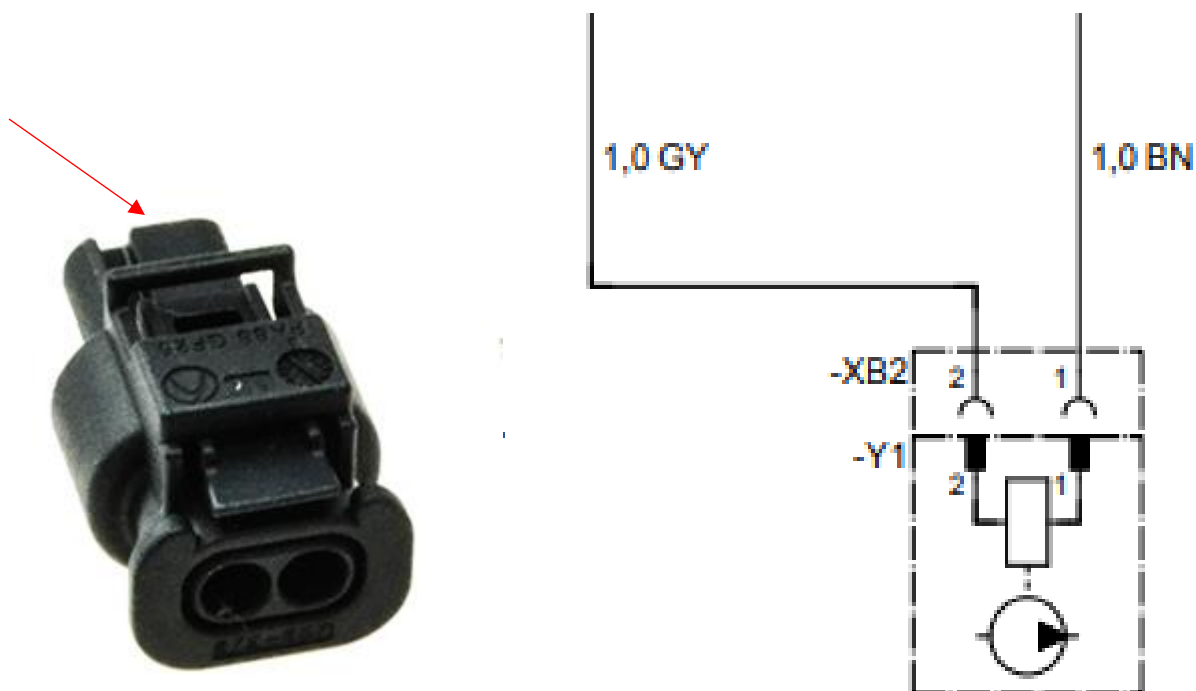
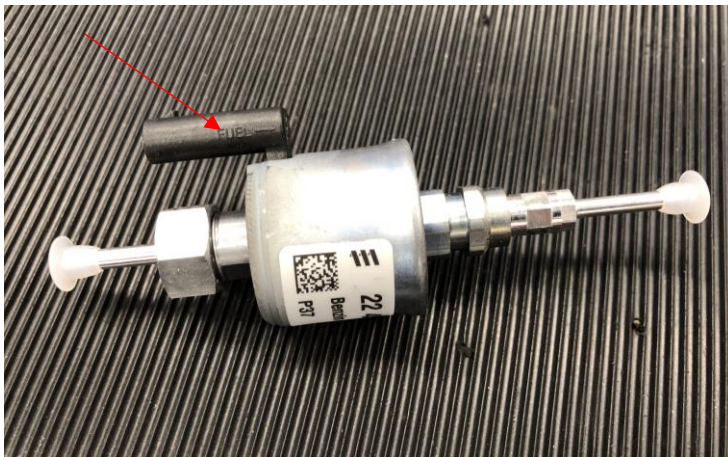


# Fitting the new Fuel Pump

*Tip:* This is Eberspacher's latest fuel pump and as you can see from the below photo it has a direction arrow to show you which way the fuel should flow. This will be shown on the black plastic connector on the top of the fuel pump.

Please make sure you install it the correct way around making sure you connect the brown (BN) wire to pin 1 and the grey (GY) wire to pin 2, as per the below diagram. The 1 & 2 pin number are shown on the male connector plug at the front (insertion side)

Please make sure the fuel line is fully primed of fuel and all connections are tight, so the fuel pump isn't sucking air. If the unit is started above 7 or 8 times without no fuel, a fault will display on the Pro controller if fitted and the heater unit may lock out and will need to be return for resetting.





# Air Temperature Sensors

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The S2 D2L has an internal air temperature sensor build into the heater unit as standard.

The new EasyStart Pro Controller has a built-in external temperature sensor. When you power up the controller for the first time, the controller install menu will ask you if you want to use the **target temperature** as the control unit (EasyStart Pro) or the heater. It will also ask you to select where you would like to detect the **display temperature**. The choice is up to you and this will depend on your installation needs.

As you can see from the below photo the loom, which is teeing off the main loom, is for another external sensor which can be installed. This will need to be programed by us before we dispatch your heater.

Please contact us for more details.

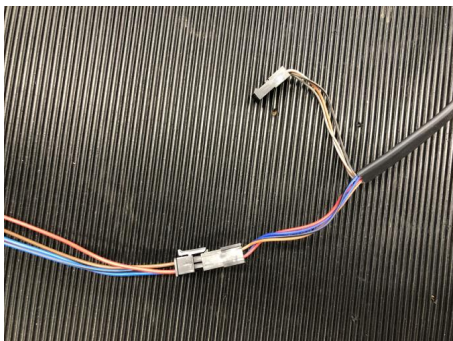
## Fuel issues on marine installations.

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**“Red diesel”** on the inland waterways is now ultra-low sulphur gas oil, a fuel used specifically for ‘off road machinery, agricultural equipment and inland waterways. This fuel can contain a low percentage of FAME (Fatty Acid Methyl Ester) commonly known as biofuel.

Although this fuel is generally far better quality than the previous high sulphur gas oils that were used it still needs to be looked after and kept clean and fresh. Fuel condition is extremely important to a diesel fired heater, for example; if a heater is suffering from one of the problems we have just covered, the carbon build up can be accelerated by the condition of the fuel.

**Degradation:** Gas oil will start to degrade after approximately 6 months this is where the oxidation in the fuel causes heavy molecules to separate in the fuel and begin to sink to the bottom of the tank forming ‘sludge’ and varnishes. Water will also start to separate from the fuel and collect with the water generated by condensation. The cetane value of the fuel will begin dropping. This process starts to happen before the fuel even leaves the refinery. Fuel is generally refined abroad and then transported by tanker ship to the UK where it sits in the main storage depots tank until it is transported by road tanker to the smaller distribution depots, from here it is transported to the marinas fuel tank, then finally into the boats tank. That is normally the last time that the fuel will get



mixed or shaken because unlike sea boats or road vehicles, the inland waterways tend to be calm, so the fuel can sit and separate.

Eventually there will come a point when the cetane value of the fuel falls so low the fuel will no longer ignite in the heater. **DO NOT** take fuel for granted or overlook it when fault finding the heater. If a fuel additive has been added, make sure it is mixed in and not just tipped into a tank and allowed to sit there.



Diesel bug will cause problems with a heater. It will normally be found as a black sludge in the pump filter. This will alter the fueling at the heater by restricting the fuel filter, ultimately to the point where the heater will no longer run. If additives have been added check the fuel has been agitated regularly. Some fuel additives will separate out if the fuel is not stirred or shaken up regularly.

*Tip: If the heaters standpipe is kept at least 25mm shorter than the engines pick up it will stand a better chance of pulling slightly cleaner fuel. Also, if the heater has used the last of the fuel it can reach, there will still be enough left in the tank to run the engine. If it is wintertime, check that fuel has been winterized to stop waxing at low temperatures. Gas oil will not be automatically winterized at the pumps and will start waxing from 0°C. Run the heater at least once a month for 15 – 20 minutes to keep fuel fresh in the lines, copper fuel lines oxidize and destroy diesel.*

### **Rectification**

- Good housekeeping is one of the main points. Keep fuel tanks clean and keep fuel in good condition.
- Use all the fuel in the tank and replace with fresh as often as possible.
- Fuel additives with stabilizers and antioxidants will help slow down the degradation process.