



INSTRUCTION MANUAL

HEATWAVE™

Codes:

THERMO 1



English

INSTR-THERMO1

Your **HEATWAVE™** includes three kits - fuel line kit, exhaust kit and air intake kit. Before commencing installation, identify these kits, making sure that all the components have been included. Special care must be taken with the connections found with the fuel pump.

Installation Guides

Installation

When positioning the **HEATWAVE™**, all due precautions must be taken to minimize all risk of bodily injury, as well as damage to the vehicle.

- Position the **HEATWAVE™** where there is sufficient clearance beneath the vehicle in order to fit the air intake and exhaust hoses, avoiding components which could be adversely affected by the heat of the exhaust hose. e.g. Fuel tank, plastic parts under body protection, etc.
- Remove the front cover of the cabinet carefully, in order to avoid damaging the attaching wires.
- Drill two holes in the vehicle floor, large enough for the air intake and exhaust hoses, (Approx 30mm in diameter) and place the heater cabinet above these holes.
- Drill four 8mm holes, corresponding with the fixing holes, in each corner of the cabinet and secure the cabinet to the floor of the vehicle, using spreader washers underneath if necessary.

Air Intake

- Secure the air intake hose to the appropriate spigot on the heater and the black air intake filter to the end of the hose, securing it underneath the vehicle, with the hose clip supplied. The air intake must be located so that it cannot become clogged with dirt. The air intake must not point in the direction of travel, must be protected from splashing water and must be above the fording line of the vehicle. Ensure adequate distance from the exhaust system.

Exhaust

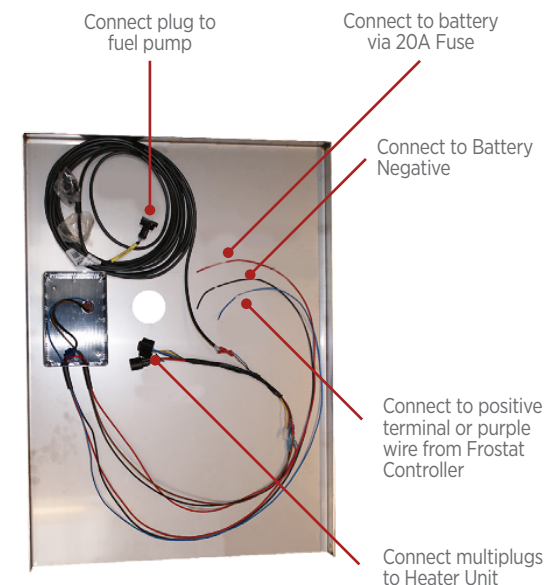
- Attach the exhaust hose to the appropriate spigot on the heater and secure it underneath the vehicle. Cut the hose to the required length if necessary. The total length of the exhaust hose must not be less than 500mm and must not exceed 1000mm. Fit the exhaust muffler in line where ever convenient, ideally near the heater. The exhaust hose must be positioned in such a way as to exclude all risk of injury or damage due to direct contact. The exhaust hose should not point in the direction of travel and must be positioned in such a way that exhaust gases cannot enter the vehicle via the ventilation openings. Any bends in the exhaust hose must have a minimum radius of 50mm. The opening must not be directed towards any part of the vehicle.

Installation

- Attach the fuel line to the appropriate spigot on the heater, using the connecting hoses and clamps supplied. Route the fuel line through the floor, protecting it from sharp edges, sufficiently away from the exhaust pipe and run it to the integration point, securing it to the vehicle where necessary. Fuel lines must always be routed through cool areas in order to prevent the formation of bubbles due to heating up. Mount the fuel pump underneath the vehicle, using the rubber mounting supplied, making sure that the flow direction is correct. The tapered end of the fuel pump must point in the direction of the fuel integration source. The pump should be within a metre of the integration point and mounted in a cool place. The fuel integration point is different on each vehicle. Request the manufacturer's advice if uncertain. If an independent fuel supply is being used, a fuel filter should be installed before the fuel pump. Only EN590 grade diesel is acceptable for this heater.
- A coil of thin wire will be found bundled inside the base of the heater cabinet. Route this wire through the vehicle floor, protecting it from sharp edges, to the fuel pump. The wire should be secured adequately to the vehicle to prevent sagging, avoiding the hot exhaust components.

Power

- The **HEATWAVE™** will require its own 85ah leisure battery as its source of power. If an existing leisure battery is already being used, connect the suggested battery in parallel to the existing battery and make sure that they are being charged by the vehicles charging system via a split charge relay. Connect the two leads from inside the cabinet to the 12V battery via a 20A inline fuse. Red - positive + Black - negative. Lengthen the leads if necessary with the equivalent gauge cable. The battery should be situated as close to the **HEATWAVE™** as possible.
- Identify the purple wire exiting the black box on the inside of the front cover of the **HEATWAVE™**. Lengthen this wire if necessary and connect it to the positive terminal of the same battery. (Unless a Frostat controller is to be fitted - see the Frostat option.)
- See the fig 1 for wiring confirmation.
- Replace the front cover of the **HEATWAVE™**, securing it with the four screws.

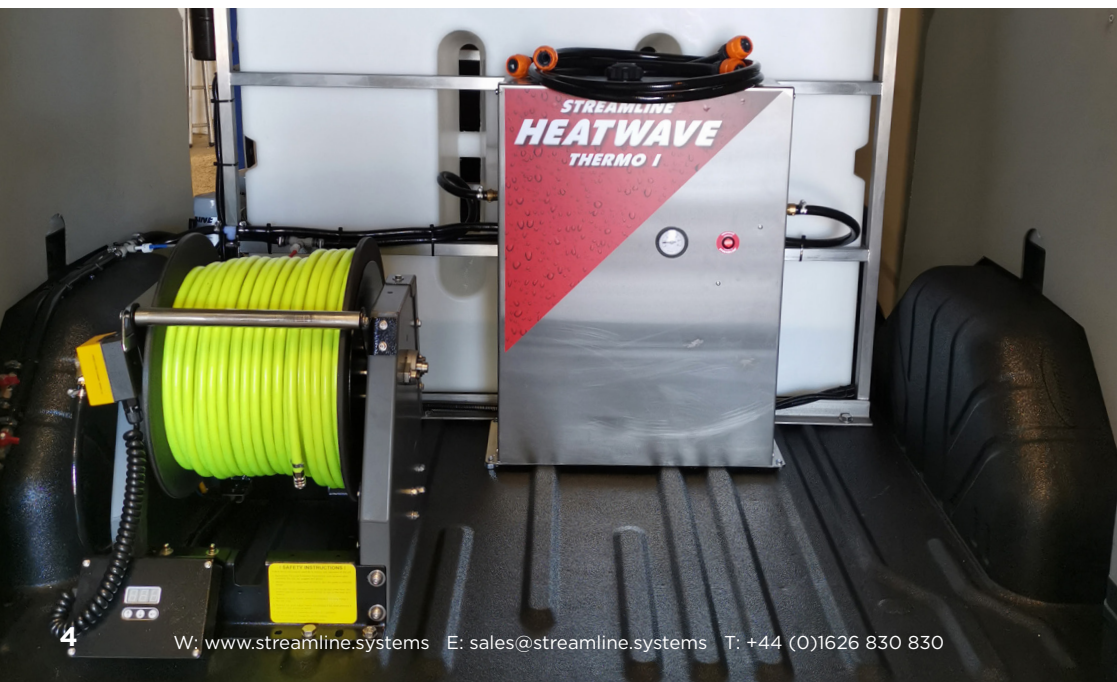


Connection to the pure water system

- Top up the header tank located at the top of the cabinet, with an anti freeze and water solution – 1:3 ratio, allowing approx. 1" air gap at the top of the tank. (Check this level once the heater has run for a few minutes). A coolant additive will eliminate the build up of sludge.
- Attach the hose from the existing pure water system after the last DI filter vessel, before the hose reel, to the left hand side inlet fitting on the **HEATWAVE™**. Attach a hose from the right hand side outlet fitting of the **HEATWAVE™** to the hose reel.
- Switch on the pure water system pump and allow it to pressurise, checking for leaks, and purging the air out the **HEATWAVE™**. Switch off the pump.

Frostat Option

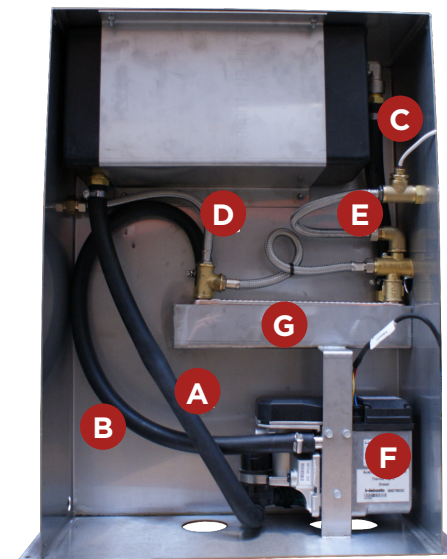
- If the **HEATWAVE™** has been supplied with the frostat option, adhere to the fitting instructions found with the controller.
- The **HEATWAVE™** controller will replace any existing controller or Varis-tream presently on the system.
- Connect the purple wire from the **HEATWAVE™** controller to the blue wire found inside the front cover of the **HEATWAVE™**.
- The temperature sensor should be located after the **HEATWAVE™**, before the hose reel. Cut the pure water hose in an appropriate place, and insert the brass T piece. Position the sensor in a protected space and secure it firmly so as to avoid damage to this sensitive connection.



The HEATWAVE™ Is Now Ready To Operate

- Whilst the vehicle engine is running, turn the heater on at the switch in the front cover.
- The heater will perform its own test functions for a few seconds and the fuel pump will begin to pulse drawing in fuel. This may take a few minutes. Progress can be monitored by watching the fuel advancing slowly along the fuel line.
- Allow the heater to warm up for approx. Ten minutes. Switch on the pure water pump and test the water temperature. Allow a few minutes for the cold water in the hose reel to be displaced.

Thermo 1 Parts Identification



- A. Header tank supply hose.
- B. Heater exchanger supply hose.
- C. Heat exchanger return hose.
- D. Cold water feed hose.
- E. Hot water feed hose.
- F. Heater unit.
- G. Heat exchanger

STREAMLINE®? Warranty

The warranty on all Machines and Equipment is for 1 year (12-months) from RECORDED DATE OF PURCHASE.

THIS WARRANTY EXCLUDES NORMAL MAINTENANCE ITEMS, including but not limited to HOSES, FILTERS, O-RINGS, DIAPHRAGMS, VALVES, GASKETS, CARBON BRUSHES and damage to motors and other components as a result of failure to replace normal maintenance items. THIS LIST IS NOT EXHAUSTIVE.

If **STREAMLINE®** receives notice of such defects during the warranty period, **STREAMLINE®** will either, at its opinion, repair or replace components which prove to be defective.

Replacement parts will only be supplied under warranty, upon the inspection and approval of the defective parts by **STREAMLINE®**.

Should it be necessary to supply replacement parts before the opportunity to inspect, these will be charged at current prices and credit will only be issued upon subsequent inspection and warranty approval by **STREAMLINE®**.

The customer is responsible for the cost of return of the defective part. If warranty is approved, **STREAMLINE®** will pay for the cost of the repaired or replacement part.

This warranty excludes the following conditions and circumstances which are at the discretion of **STREAMLINE®**:

Wear and tear, misuse, abuse improper maintenance, frost damage, the use of chemicals other than those supplied or approved by **STREAMLINE®**, improper installation or repair, unauthorised modification, incidental or consequential costs, loss or damage, service, labour or third party charges, the cost of returning defective parts to **STREAMLINE®**.

This warranty constitutes the exclusive remedy of any purchaser of a **STREAMLINE®** unit and is in lieu of all other warranties, express or implied, including without limitation any implied warranty of merchantability or fitness for use, to the fullest extent permitted by law. In no event shall any implied warranty of merchantability or fitness for use exceed the term of the applicable warranty stated above and **STREAMLINE®** shall have no other obligation or liability.

Important

Unfortunately these rights cannot be transferred to a third party.



Why STREAMLINE®?

Flexibility

- **STREAMLINE®** systems can be built according to customers' exact requirements
- For non-standard systems, the user's needs or specifications are listened to and turned into reality.

Quality

- Whilst price is important, quality is remembered long after price is forgotten
- We insist on sourcing brand name products from around the world, only of a reputable quality, and bring them together under the **STREAMLINE®** name
- All **STREAMLINE®** products carry a full one year's warranty, according to the manufacturers' standard terms and conditions of sale.

Service

- We have an in-house technical helpline able to answer most of your questions relating to the capabilities and functionalities of all **STREAMLINE®** products
- If we get it wrong, we will put it right. If you are sent a wrong item, we will immediately attend to sending you the correct item and arrange a collection of the wrong item without any quibbles
- **STREAMLINE®** is backed by a comprehensive range with massive stocks providing you with a 'one stop shop' for all your requirements.



MANUFACTURED
IN THE
UNITED KINGDOM

STREAMLINE®
SAFELY CLEANING AT HEIGHT

CHECKED AND
TESTED BY
QUALITY CONTROL



Hamilton House, 8 Fairfax Road,
Heathfield Industrial Estate,
Newton Abbot
Devon, TQ12 6UD
United Kingdom

Telephone: +44 (0) 1626 830 830

Email: sales@streamline.systems

Visit: www.streamline.systems

INSTR-THERMO1