

PROPEX



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www.vw-t4camper.info - a useful site for owners and enthusiasts of Volkswagen T4 Transporter camper vans.

PROPEX

Propex
Compact
Heaters



Installation
&
Operation Instructions

ENGINEERED FOR
COMFORT & RELIABILITY

TECHNICAL DESCRIPTION

Propex Heaters are indirect combustion heaters fuelled by either Propane or Butane gas and are designed to work on either 12 or 24 volt D.C. power source.

PRINCIPLE OF OPERATION

The air for combustion is taken from outside the vehicle or boat, mixed with the gas inside the heater where it is ignited by an electrical spark generator. The flame burns inside a two stage stainless steel heat exchanger and exhausts through a flexible tube to the outside.

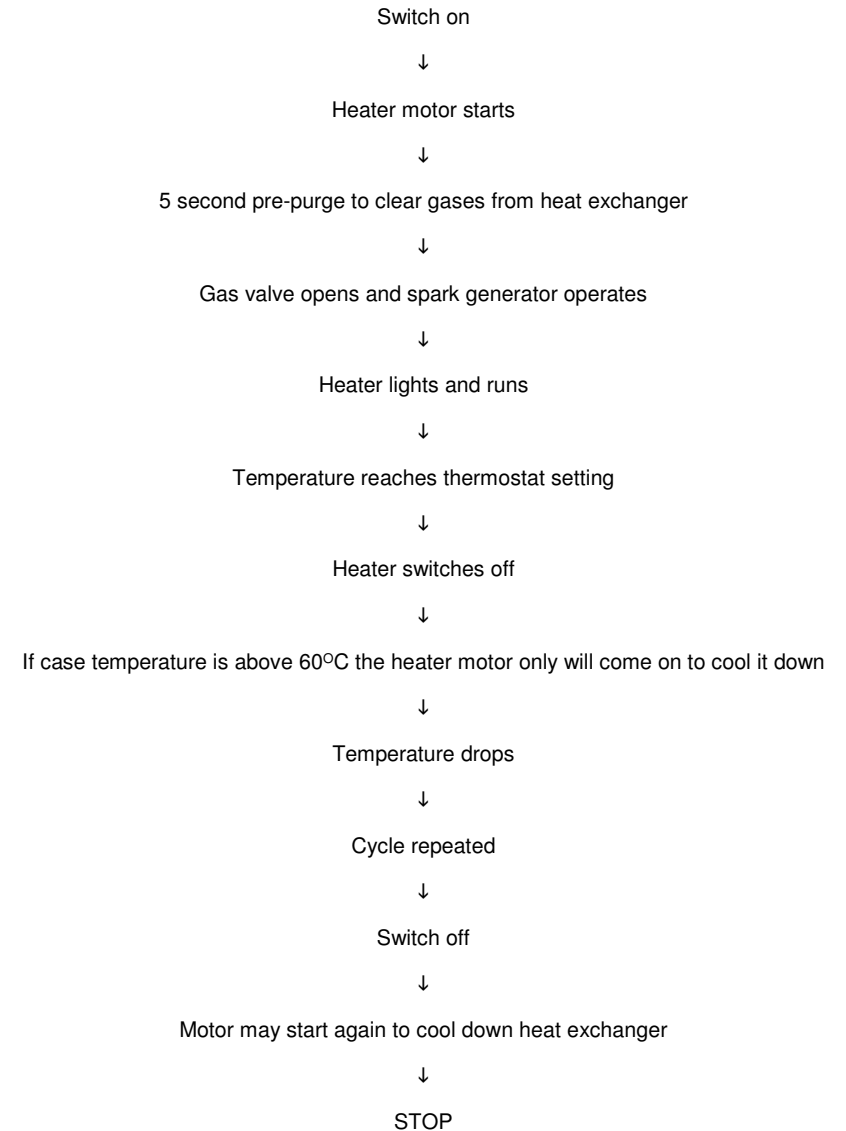
The air for heating is drawn in through a separate orifice by a fan and forced over the outside of the heat exchanger where it then distributed by ducting to one or more outlets to heat the interior of the vehicle or boat.

The fact that the combustion side of the heater is totally separate from the heated air means that the heater produces no condensation and the electronic monitoring system means that it is fully automatic and safe for overnight sleeping.

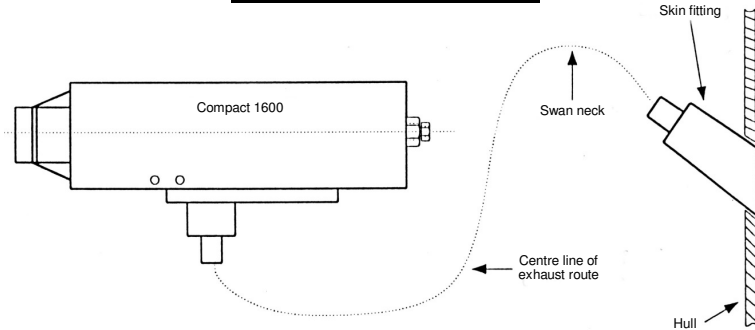
SAFETY INFORMATION

- a) The gas supply to the heater must be either 28 mbar Butane or 37 mbar Propane. **WARNING: Do not use industrial or adjustable regulators!**
- b) Propex heaters are negative earth and must be protected with a 5 amp fuse. Both 12 or 24 volt versions are available.
- c) A data label is situated adjacent to the gas inlet.
- d) Propex heaters are designed for mounting inside the vehicle or boat.
- e) Do not operate the heater while refueling.
- f) Do not use whilst in a confined space - such as a garage.
- g) Make sure the hot air outlet and re-circulation air inlets are not obstructed.
- h) Regularly check exhaust and combustion air pipes for damage or obstruction.
- i) The Gas supply line should be checked regularly for damage / leaks and tested under pressure with a proprietary leak tester or inspected by a corgi registered installer.
- j) The heater does not contain any asbestos or asbestos related products.
- k) The heater should be installed by a competent person in accordance with the relevant regulatory and safety requirements.

SEQUENCE OF OPERATION



MARINE INSTALLATION



FITTING THE HEATER

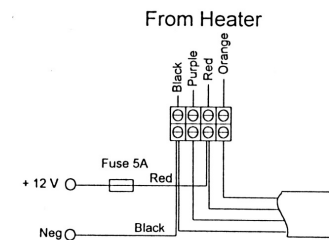
- Find a suitable location. This is very important in marine applications to ensure reliable service from your heater. The 1.5m length of exhaust / combustion air hose is the maximum permissible on the Compact heater so choose a location where the exhaust can exit as high above the water-line as possible and that the heater is not exposed to the weather or will have any wet sails or ropes stored against it.
- The heater can be mounted any way up as long as it is not vertical, as the motor bearings will be damaged (i.e. It can be mounted around the horizontal axis).
- Fix the bulkhead bracket in the chosen position and secure with 6 of the 3/4" x No.8 self tapping screws provided.
- Remove the 4 x 1/2" M4 set screws from the base of the heater and fix the heater on the mounting bracket.
- Mark the area for the stainless steel skin fitting on the outside of the hull and drill a centre pilot hole. Ensure that there are no obstructions on the inside and open the hole out to 55mm.
- Apply the silicon sealant around the inside of the flange and fix the skin fitting in place with the M5 x 40 countersunk set screws provided.
- The exhaust pipe on the marine version of the compact heater is routed inside the combustion air pipe. Cut the pair to the required length and fix to the skin fitting and the heater with the clips provided.
NOTE: Ensure that the exhaust is not touching any cables, bilge pipes etc, as it does get hot!
- Mount the hot air outlets in the desired location using a 95mm hole saw and route the ducting in the most direct way to ensure maximum air flow. Cut the ducting to length and fix to the heater and the outlets with the clips provided. It is preferable to operate the heater with no ducting on the air inlet so as not to restrict air flow. So therefore ensure that the locker where the heater is mounted is vented.

GAS CONNECTION

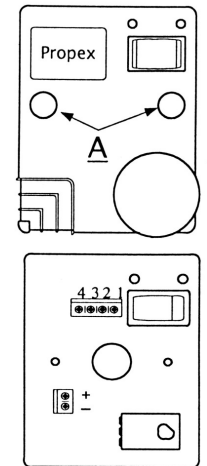
- The heater uses an 8mm (5/16") gas connection and is provided with the appropriate olive.
- The gas supply should be connected with copper gas pipe with an isolating valve inline and all connections made with brass compression fittings.
- When the gas line is complete the system should be checked for leaks and the final connection made by a corgi registered installer.

WIRING INSTRUCTIONS

for solid state thermostat



Stat Ref	Cable Colour.
+	Red
-	Black
1	Purple
2	No Connection
3	No Connection
4	Orange



- The Propex heater is heater is supplied with a 4 way termination block, a 2 core loom and a 4 core loom.
- Find a suitable location for the thermostat between waist and shoulder height. Make sure that it is not mounted in an area with poor air circulation or in direct sunlight. Also make sure that it is not situated above a cooker or refrigerator. Ensure that the location chosen enables clearance for the connector on the back of the thermostat.
- When you have chosen the location, drill a 13mm hole and feed the bare end of the 4 core loom through and down to the heater.
- Undo screws "A" and release the backplate off the thermostat. Fix the backplate to the wall making sure that the square cut-out in the back lines up with the hole for the cable.
- Connect the loom into the thermostat as in the diagram above and fix the lid back onto the baseplate with the screws provided.

- f) Push the "caps" into the lid to cover the screw heads.
- g) Cut the 4 core loom to the length and terminate into the block at the heater as per the diagram. Cut the 2 core loom to length, insert the fuse holder supplied and wire directly to the battery. Terminate the loom at heater as per the diagram
- h) Insert the 5 amp fuse and test.

OPERATION

- a) Check the gas supply is turned on.
- b) Rotate the thermostat dial fully anti-clockwise and push the three position switch to the left. The red power light should illuminate.
- c) Rotate the thermostat dial until the orange light illuminates. The heater motor will start and ignition should occur within 10 seconds.
- d) Find the desired temperature setting by adjusting the dial on the thermostat. The heater will then cycle on and off to maintain that temperature.
- e) When the set temperature is reached the orange light will go out on the thermostat and the heater will switch off. When the temperature falls below the set temperature, the orange light will come on and the heater will repeat the cycle.
- f) Push the three way switch to the right and the right-hand LED will illuminate green and the fan will blow cold air only.

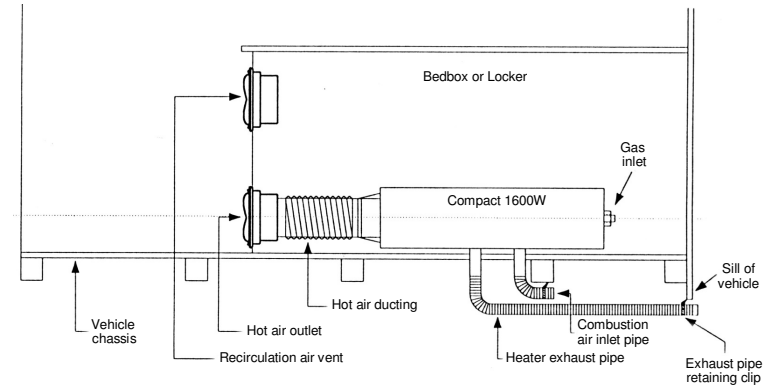
MAINTENANCE

The heaters and their controls are designed to require no periodic servicing as such. However, we do recommend that the safety checks listed under "Safety information" are carried out.

A pre season check on the heater installation to check for any blockages or damage to the exhaust pipe or gas pipe is recommended to ensure reliable and safe operation of your heater.

The heater should not be left for long periods without use. So it is advisable to run the motor for short periods throughout the summer.

VEHICLE INSTALLATION



FITTING THE HEATER

- a) Find a suitable location, usually in a bedbox, locker or base of a cupboard and checking that there are no chassis members underneath the location of the exhaust and combustion air spigots.
- b) Using the template provided, drill a 3mm pilot hole through the exhaust and combustion air spigot centres. Examine underneath the vehicle to check that there is adequate clearance for a 32mm hole saw. Cut away any carpet around the exhaust and combustion air spigots and open out the holes to 32mm.
- c) Attach the mounting brackets to the heater with the screws provided and mount the heater in position. Drill a 4 x 3.5mm holes and fix the heater to the floor with the 3/4" x No.8 self tapping screws provided.
- d) Now mark the positions of the hot air outlet and air inlet vent. Drill a pilot hole through the centres. Drill a 95mm hole to mount the vents and fix with the black 1/2" x No.8 counter-sunk screws provided.
- e) Fix the 63mm reducer (push fit) into the hot air outlet. Cut the ducting to length and fix with the clips provided.

NOTE: It is not necessary to put ducting on the air inlet vent which is why there is no reducer supplied for it.

- f) Fix the 1" aluminium flexible exhaust pipe to the heater spigot and secure with a 25mm hose clip. Now route the exhaust to the sill of the vehicle and cut to length. Secure the exhaust to the chassis with a "P" clip and bend the exhaust pipe so that it faces towards the back of the vehicle, so that no debris enters it while the vehicle is in motion. Ensure that the exhaust has a continuous downward slope to prevent any water traps. The combustion air pipe can now be fixed to the heater and cut to length with the end facing towards the rear of the vehicle. It is not necessary to extend the combustion air inlet pipe to the sill of the vehicle.