



VERTICALLY MOUNTED COOLANT HEATER INSTALLATION NOTES

PLEASE READ NOTES BELOW CAREFULLY BEFORE COMMENCING INSTALLATION.
THANK YOU.

Two points connecting into the water system are needed for each **PEREGRINE** coolant heater of vertical type. Wherever possible, an installation sketch is supplied to facilitate the fitting of the heater. It is essential however that the following instructions are complied with, as an incorrect installation will not function correctly, may cause heater damage and does invalidate the warranty. Please therefore contact us if you have ANY queries about the installation whatsoever. Please also check the suitability of the supplied fitting kit before commencing installation, as some engines do vary. We will supply alternative fittings if required.

The top connection should be a point on the engine block to which there is a direct rise of water from the heater unit without any possibility of an air-lock. The point in question should have a head of water in the block above it for maximum circulation (e.g. core plug, side block connection etc).

The **PEREGRINE** heater should be mounted within 30° of vertical, beneath the top engine connection and with its connector box at the lower end, secured to a nearby panel, beam or chassis member. On mobile applications where excessive vibration may be encountered, the use of anti-vibration mounts may be advisable to avoid heater damage. Please ask us if uncertain. The lower (side) connection of the heater should be pointing in the general direction of the bottom engine connecting point used for the installation.

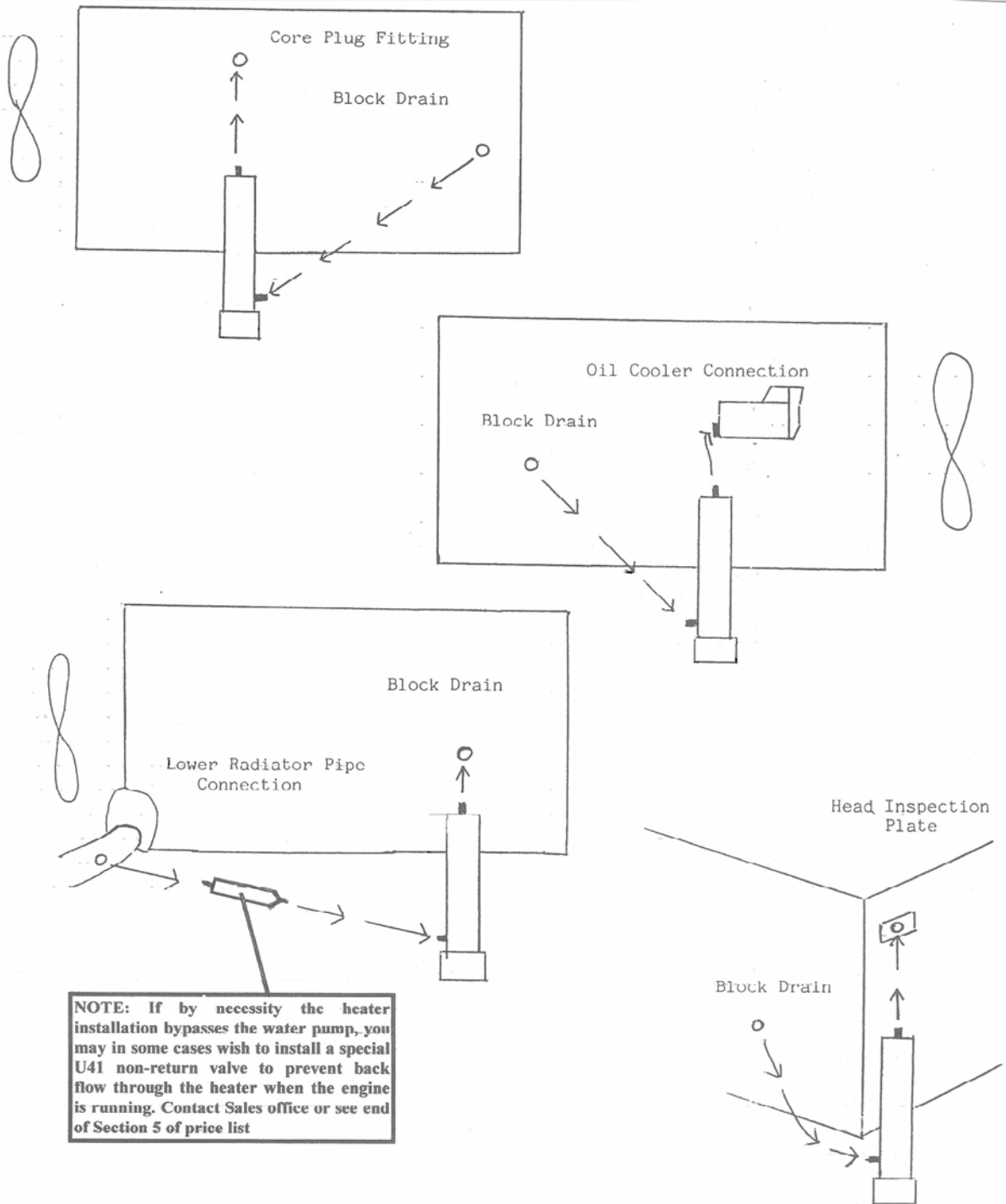
The bottom engine connecting point should be any suitable low point such as; block drain, oil cooler drain, etc that will allow sufficient flow of water, and should ideally be at least 200mm lower than the top engine connecting point. A bottom connecting point may be used between the water pump and radiator, but see note overleaf before installing. If the two block connecting points used are of similar height, there is a danger that there will be an inadequate flow of coolant through the heater due to insufficient temperature difference, and heat stress may occur, shortening the life of the heater.

The length of the hose run should be as short as feasible as this maximises flow. The hose supplied with the fitting kit should easily be sufficient for the installation. There must be no LOOPS, DIPS or KINKS in the hose to allow air-locks or blockages to form, and the fittings must also be installed in such a way that no air-locks or sludge traps can be formed by their positioning, as these would restrict coolant flow through the heater, thereby possibly causing damage to the heater and shortening its life. The hose from the bottom engine connecting point should run downwards to the heater's side (lower) connection as shown in our example sketches overleaf, the hose from the heater's top connection running up to the top engine connection.

Please ensure when re-filling the engine that no impurities (rust, oil etc) are allowed to form within the system as this can cause a build-up of scale on the elements, causing premature element failure by preventing heat dissipation from the elements' surface. At regular intervals check the high temperature hoses for signs of cracking or hardening and replace as necessary. We are able to supply many sizes of high temperature rubber and silicone hose in whatever length you require. See details at end of our price list or contact our Sales Department.

WE MUST RE-EMPHASISE THAT IF YOU HAVE ANY QUERIES OR PROBLEMS DO NOT HESITATE TO CONTACT US. WE ARE HERE TO ASSIST. P.T.O. FOR GENERAL INSTALLATION SKETCHES AND WIRING INFORMATION.

EXAMPLES OF TYPICAL INSTALLATIONS



Wiring Information. Each heater is supplied with 2000mm of cable fitted (unless alternative lengths requested at time of ordering). To comply with warranty, always use cable, connector box and nameplate supplied fitted to heater (over tightening of cable securing nuts may cause internal element coil damage). Wiring is standard - brown - live, blue - neutral, green/yellow - earth. If in any doubt, please contact our Sales Office.