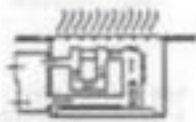
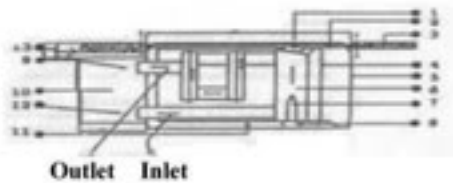


Installation And Operating Instructions For

Underfloor Heater DE LUXE



Function Principle:



| | Description |
|----|--------------------------|
| 1 | Peephole |
| 2 | Grill |
| 3 | Caravan Floor |
| 4 | Protection Plate |
| 5 | Outer Casing |
| 6 | Combustion Chamber |
| 7 | Burner Head And Injector |
| 8 | Burner Tube |
| 9 | Exhaust Outlet |
| 10 | Exhaust Inlet Box |
| 11 | Screw For Base Plate |
| 12 | Fresh Air Inlet |
| 13 | Deflector Plate |

Instructions For Installation.

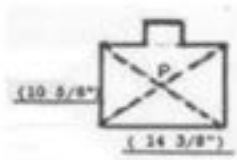
NOTE: The heater must be installed so that the inlet & the outlet face in the direction opposite or at right angles in which the vehicle will move.

Note that when driving no leaves, dust, water etc can enter into the inlet exhaust chamber.

1. Determine the most favourable position for the heater where people would walk less, i.e. near the entrance or under the table. By checking there is no main chassis members in the way.

N.B.: There must be at least 4" / 100mm of free space between the exhaust outlet & any chassis member.

To find the right position under the floor it is advised to cut a piece of carton with the overall sizes of the heater.



Then drill a hole from underneath the floor to determine where to make the cut out from inside the vehicle.

2. Cut out the floor to the correct measurements save this cut out & the carpet as they make an ideal cover for the heater when not in use. Remove the exhaust chamber by unscrewing the two retaining screws & lower the heater into the cut-out ensuring the exhaust is correctly aligned. Screw heater to the floor

3. Moving under the vehicle first screw the deflector plate to the underside of the floor immediately above the exhaust chamber. Please note that the depressions in the plate are mounted against the floor. Now refit the exhaust chamber to the heater. The outlet with the holes pressed from the inside to the outside is to be located on the top.



4. The heater is fitted with a coupling for 5/16 (8mm) outside diameter copper piping. Locate the nearest existing copper pipework & measure distance from this to the heater coupling. Allow an extra 10" (250mm) for easier working. Check outside diameter of existing copper pipework. Obtain copper pipe required T-coupling from your local plumbing or builders merchant.

Switch off gas bottle

Cut required section from existing gas pipe & fit T-coupling. Fit new gas-pipe to both heater coupling & T-coupling. Switch off all other gas appliances. To test your new gas connections for leaks apply a lot of soapy water to each connection & switch on gas at the bottle. If soapy water starts to bubble there is a leak so try to tighten the coupling a little more but do not over tighten. If bubbling stops there is a safe connection. If bubbling continues switch off gas bottle, undo leaky coupling clean ends & reconnect, switch gas back on & carry out retest on all couplings.

NOTE: Relight all other gas appliances if necessary. Never use a naked flame when carrying out gas tests.

Instructions for use.

1. Check you are using the correct gas. In freezing weather propane gas must be used as butane is unsuitable for such conditions. The heater will operate both gases. Switch on gas at the bottle & remove the heater dust-shield which should be stored in a safe place. The dust shield must never be placed back onto the heater when it is in use!
2. Remove grill & turn the control knob to “”
3. Press control knob down & keep it depressed while also pressing down on the ignition button. Release ignition button but keep control knob depressed. Check that the burners are alight by looking through the peephole. If burners are not alight repress ignition button until they do light. The control knob should continue to be depressed for 20 seconds to allow the thermocouple of the safety device to warm up & keep open the magneto-valve in the gas-cock that allows the gas to flow freely to the burners. **Important;** If the burners fail to ignite after 5 attempts it is imperative to wait for at least 5 minutes before repeating above mentioned ignition procedure in order to let escape the surplus of gas in the heater.
4. Release the control knob & allow the heater to burn for a few minutes to allow a natural circulation to develop. **NOTE;** On first lighting the heater will “smoke” for a few minutes while burners lit. “bed in” **This is normal.**
5. After a few minutes the control knob can be turned to the full on position – marked “” or any intermediate position.
6. Stepping on the grill is permissible but do not keep standing on the grill as this will damage your shoes & effect the circulation of heat around your van.
7. Should the heater go out for any reason, the safety device ensures the gas supply to the heater is cut off owing to the cooling of the thermocouple (see point 3) **NOTE;** Though the heater itself does not use oxygen from the van (fresh air is taken into the burner from the outside) other appliances & people themselves use oxygen so adequate ventilation must always be allowed.
8. To turn the heater off the control knob should be turned back to the “o” position (closed)
9. It is not advisable to switch off the gas at the bottle first because in doing so the gas in the pipework will be used & the pipework will then fill with air resulting in difficulty in relighting the appliance.

Disturbances.

In the unlikely event of problems arising with your heater, i.e.; failure of the burners to ignite or burners going out without clear reasons, check out the following points.

- Have you run out of gas?
- Are you using the correct gas?
- Is there an ignition spark? If there is an ignition spark, the ignition must happen at the time there is a correct gas-oxygen proportion in the combustion chamber. Therefore it is necessary to press down the control knob which operates also the flame failure device & push the ignition knob a few times till the burner is supplied with the correct gas quantity. If there is too much gas in the combustion chamber a detonation will follow. If there is no ignition spark, first check if the ignition cable is correctly connected to the spark-plug & piezo igniter. If this connection is correct, but the ignition keeps failing then the spark-plug or igniter is broken down & this part must be changed.
- Did you release the control knob too quickly thereby allowing the thermocouple to be insufficiently heated & therefore cutting off the gas?
- Can the exhaust gases flow freely from the exhaust chamber? Did you fit it too close to a chassis member (point 1 of installation instructions)? Or is it blocked by leaves?
- Did you fit the exhaust box correctly (see point 3 of installation instructions)?

SPECIAL NOTE:

Should the ignition fail for some reason (moisture in the early season) the heater can be lit by the following method

1. Unscrew peep-hole
2. Press & hold control knob to "★" position
3. Keeping control knob depressed insert hand held igniter (or a lighted match) in the peep-hole until burners are alight replace peep-hole & screw on immediately. Keep control knob depressed for at least 30 seconds to "burn off moisture"
4. Release control knob.

CLEANING:

Dirt & dust will not effect the heater because the burners are fully enclosed & protected. However at the end of the each season any dirt or dust that has fallen through the grill can be removed by loosening screw that retains the base plate in place & removing the base plate. The dirt will fall through to the ground. A soft brush will remove any dust affixed to the sides of the heat exchanger. When replacing the base plate ensure it is correctly located in its slots before tightening the base plate screw. (Note the base plate can be fitted in 2 positions)