

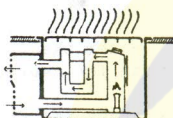


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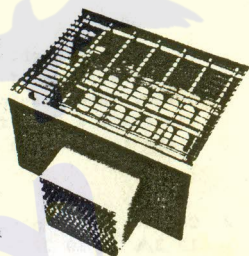
INSTALLATION AND OPERATING INSTRUCTIONS FOR:

UNDERFLOOR HEATER DE LUXE

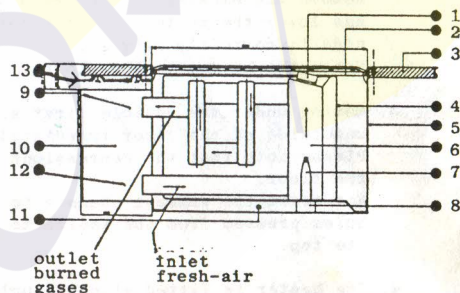


Technical data
Length: 14 3/4"
Width: 10 5/8"
Depth: 8 1/4"
Floor thickness max:
2 1/8"
Weight: 9 kg

Cap input: 6800 BTU max.
2400 BTU min.
Consumption: Min. 0.7 CFH
Max. 1.73 CFH
Fuel: Butane 11"
Propane 14"
Ignition: Piezo spark



FUNCTION PRINCIPLE:



POS.	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

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INSTRUCTIONS FOR INSTALLATION:

NOTE: The heater must be installed so that the inlet and outlet face in the direction opposite or at right angles to the direction in which the vehicle will move so 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 walk less, i.e. near the entrance or under the table. By checking under the vehicle ensure no main chassis members are in the way.

N.B.: There must be at least 4" / 100 mm free space between exhaust outlet and 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 (see drawing).

(10 5/8")

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



(14 3/8")

2. Cut out an opening in the selected part of the floor measuring 12 3/8" x 10 3/4" (365 mm x 273 mm). Save this cut-out and the piece of carpet - they make an ideal cover for the heater when it is not in use. Remove the exhaust chamber by unscrewing the two retaining screws and lower the heater into the cut-out ensuring the exhaust chamber side is correctly aligned. Screw the 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" (8 mm) outside diameter copper piping. Locate nearest existing copper pipework and measure distance from this to the heater coupling. Allow an extra 10" (250 mm) for easier working. Check outside diameter of existing copper pipe. Obtain copper pipe and required T-coupling from your local plumbing or builders merchant.
Switch off gas-bottle:
Cut required section from existing gaspipe and fit T-coupling. Fit new gaspipe to both heater coupling and 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 and switch gas on at bottle. If soapy water starts to bubble there is a leak so try to tighten the coupling a little more but do not overtighten! If bubbling stops there is a safe connection. If bubbling continues switch gas off bottle, undo leaky coupling, clean ends. Switch gas back back on and carry out retest on all couplings.

NOTE: Relight all other 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 on both gases. Switch on gas at bottle and remove 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. Set the control knob to "X"
3. Press control knob down and keep it depressed while also pressing downon 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 30 seconds to allow the thermocouple of the safety device to warm up and 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 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 and 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 etc. '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 permissable but do not keep standing on the grill as this will damage your shoes and affect the circulation of the 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 outside) other appliances and 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 "○" - 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 and the pipework will then fill with air resulting in difficulty in realighting the appliances.

DISTURBANCES:

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

A) Have you run out of gas?

B) Are you using the correct gas?

C) 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 and 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 sparkplug and piezo-igniter.

If this connection is correct, but the ignition keeps failing, then the spark-plug or igniter is broken down and this part must be changed.

D) Did you release the control knob too quickly thereby allowing the thermocouple to be insufficiently heated and therefore cutting off the gas?

E) 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 the chamber blocked by leaves?

F) 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 and turn control knob to position "M"

3. Keeping control knob depressed insert handspark-igniter (or a lighted match) in the peephole until burners alight and replace peephole-screw immediately.
Keep control depressed for at least 30 seconds to "burn off" moisture.

4. Release control knob.

CLEANING:

Dirt and dust will not affect the heater because the burners are fully enclosed and protected.

However at the end of each season any dirt or dust that has fallen through the grill can be removed by loosening the screw that retains the base-plate in place and removing this 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).