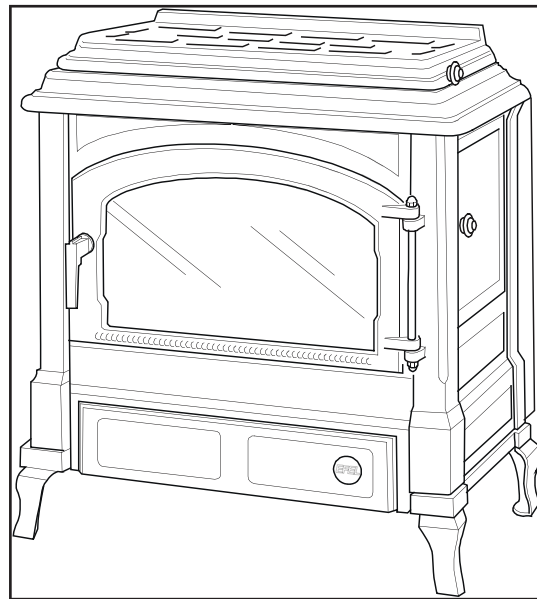
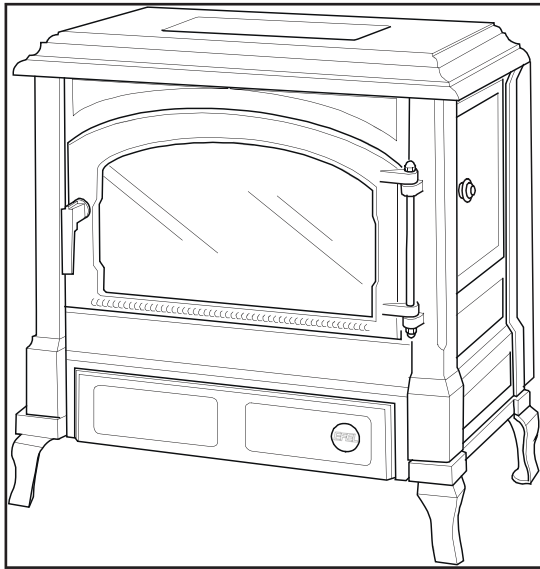


Lighting, Operating and Maintenance Instructions for Harmony/Coachman Thermical Burning Stoves.



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Part No.

Serial Number

BEFORE LIGHTING THE STOVE

If the stove has been operating within the past two hours no attempt must be made to re-light the burners, or open the stove door until the stove and catalysers have cooled. If the flue draught is very low when lighting the burner it may be necessary to leave the stove door slightly ajar until the flame becomes stable, but the stove must not be left unattended until the door is shut. If weather conditions cause the burners to take too long in establishing sufficient draught the flames may become very long and yellow as the oil level builds up in the burner. It is advisable to turn the oil control knobs to "0" until the flames are reduced to their normal size and colour before turning the control knobs to position "2" again. The stove should not be turned to a setting higher than "2" until the flue has reached its operating temperature.

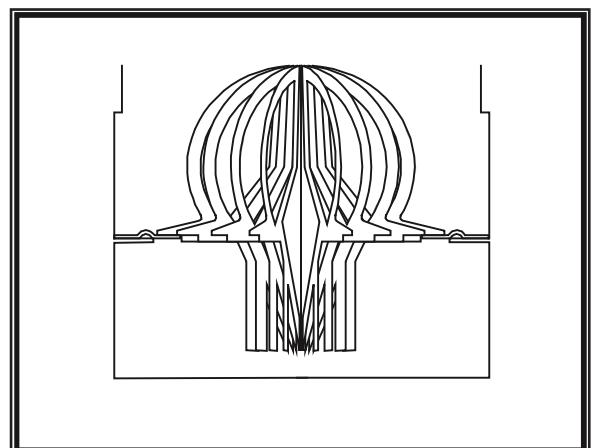
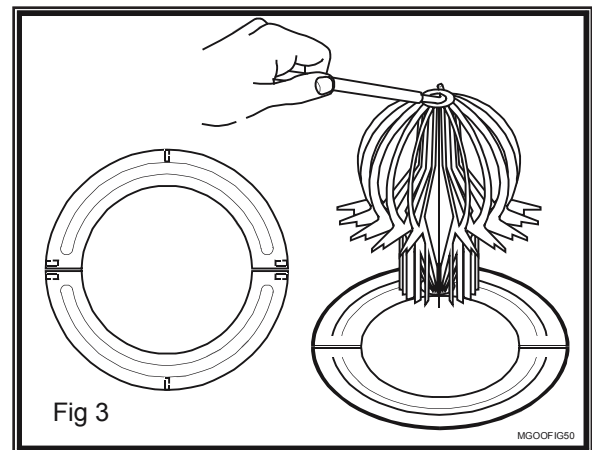
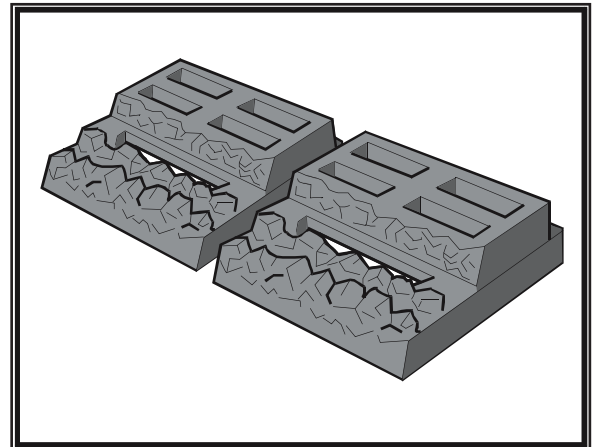
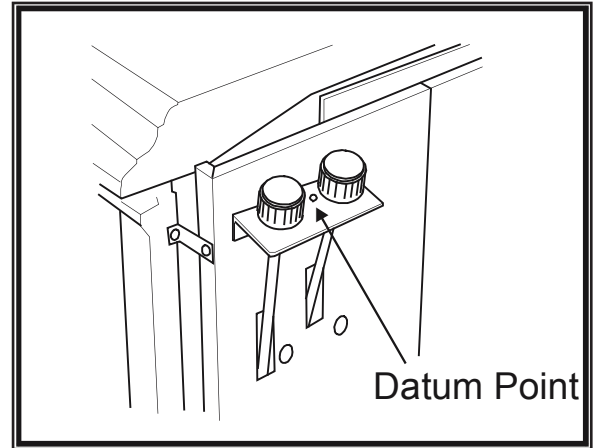
This stove is fitted with an aquastat which, when "tripped" will override the fuel metering valve controls to prevent the flow of oil. Before beginning the lighting procedure this will need to be verified as being "set" by lifting the reset bar to its highest position and releasing. If only one burner is to be lit the unused burner must have its metal cover plate fitted to prevent air entering the stove through the unlit burner. If both burners are to be lit they must be lit at the same time.

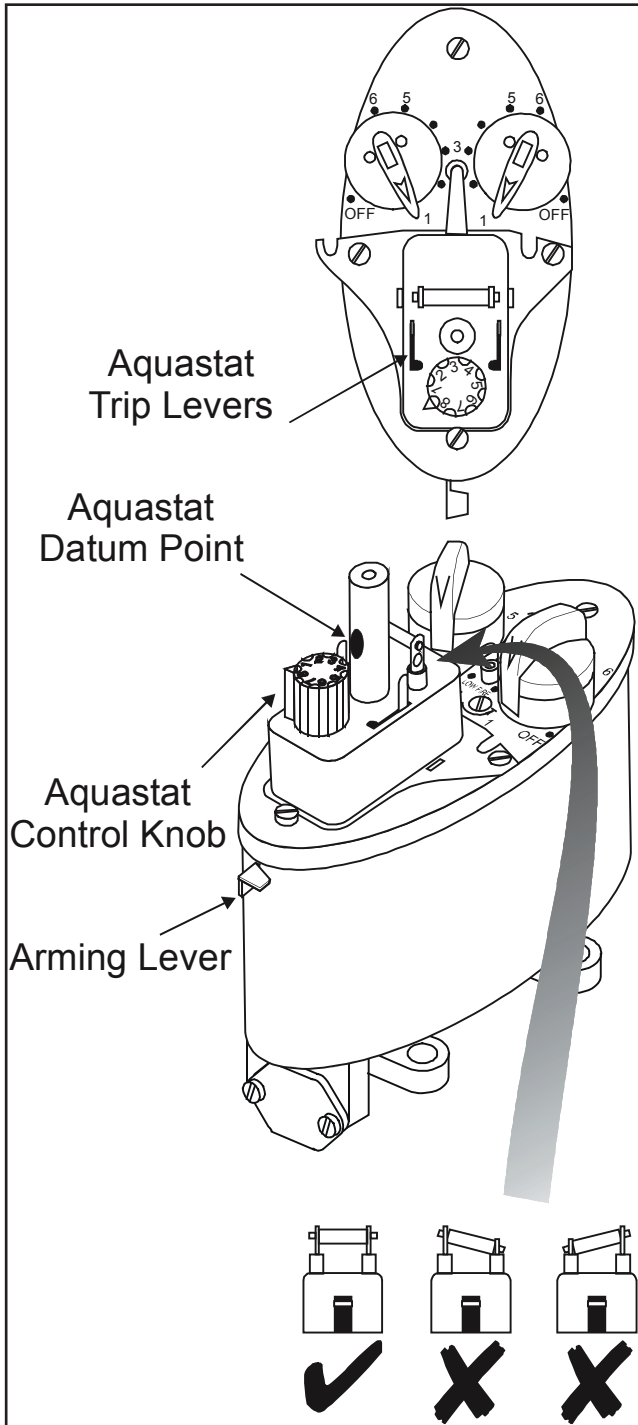
LIGHTING THE STOVE

1. The oil supply to the stove should be turned on and the oil metering valve control knobs should be turned "off" which is indicated as position "0".
2. Open the front door of the stove and lift out the coal effect and catalyser of the burners to be lit, taking care not to disturb the catalyser support plates. Examine the burner bottoms for evidence of oil. If the burners are dry, lighting may proceed. If oil is present no attempt should be made to light the stove until this oil has been removed and you are satisfied the oil metering valve is not allowing oil to leak through when the oil valve is turned off.
3. The oil metering valve arming lever should now be pressed down and the control knob of the burner, or burners if both are to be lit, turned to position "1". Oil will now enter the relevant burner and should be allowed to wet the burner bottom, a patch the size of a biscuit (65mm diameter) before the control knob is returned to the "0" position.
4. A piece of firelighter the size of a sugar cube or a waxed taper should be placed on the burner bottom, centrally to the oil patch and lit with a long match or spill.
5. The catalysers and coal effects should be replaced, taking great care to install them correctly, and the stove door closed.
6. The oil metering valve should now be turned to position number "2" and the stove left at this setting until the burner, stove and flue have warmed sufficiently to allow stable burning at higher settings. Because the boiler is so efficient this may take an hour or more and you are advised to increase the oil metering valve settings in stages to ensure the flue is capable

EXTINGUISHING THE BURNER

Turning the oil metering control knob to "0" will stop the supply of oil to the burner and cause it to extinguish. If the stove is to be left unlit for several weeks the arming lever should be raised and for additional security the supply to the stove should be turned off.





EFFICIENT STOVE OPERATION

Stoves are designed to provide a constant source of heating, capable of being controlled to give a variable output between its minimum and maximum output, rather than being turned off or on. By avoiding the extremes of heat and cold the level of comfort in the home is greatly improved. The Thermal stove is designed to be not only a space heating stove but to operate as a central heating unit, providing domestic hot water and heating for remotely positioned radiators, which allows all the house heating to be consistent. Your water heating circuits and their control will be specific to your house but the following notes are to explain the operation

The Thermal stove's boiler is controlled by the aquastat which adjusts the oil metering valve to vary fuel supply to the burners ensuring the burner outputs maintain a constant boiler temperature, whatever the heating load. Should the boiler temperature ever become too high the thermally controlled cut-out will shut off the oil supply from the oil metering valve to the burners.

The oil metering valve has independent controls governing the flow of oil to the individual burners, allowing the operation of only one burner during mild weather or low hot water demand. The ability to vary the settings of both the boiler temperature and the burner rates, makes this stove extremely versatile and economical; optimising these settings is not complicated if it is approached in a logical manner.

The boiler operating temperature should be set, by adjusting the aquastat, to give the heat output required to maintain the domestic hot water at the required temperature. The aquastat settings are numbered "1-8" and correspond to the temperatures 40°C to 85°C and until you become familiar with the requirements of your system a setting of "3-5" should be chosen. The burner firing rates will be automatically adjusted by the aquastat to maintain the set temperature; increasing the firing rate as the heating load increases when the hot tank or radiator circuits call for heat and lowering the firing rates when the demand diminishes.

The low volume boiler tubes are at their most efficient when the burner flame tips are passing through the heat exchanger fins, and so setting the burners to setting "6" allows the burners and boiler to respond quickly and efficiently to the demands of the remote heating circuits. By restricting the maximum burner firing rates the boiler responds more slowly to the demands of the heating circuits, and a higher proportion of the heat is given off from the stove body. The overall efficiency of the burners remains constant, only the distribution of heat between the stove and boiler is altered. Setting the burners to "6" should be the initial setting, which can be decreased if more heat is required from the stove.

During mild weather when the amount of heat needed for space heating is reduced, but the demand for domestic hot water remains high, running the stove with only one burner set at "6" will give the minimum heat to the stove body yet supply sufficient boiler output.

Because of the large heat output of this stove and the speed with which it responds to calls for increased heat input, the burners increase and decrease their firing rates with one burner responding faster than the other, allowing the flue draught more time to stabilize to the changing air flow requirements.

SUMMARY

High output capability from the boiler with minimum output from the stove, set the burner firing rates to maximum.

High output from the stove, set the burners to the minimum firing rate capable of supplying the boiler output demanded by the heating circuits.

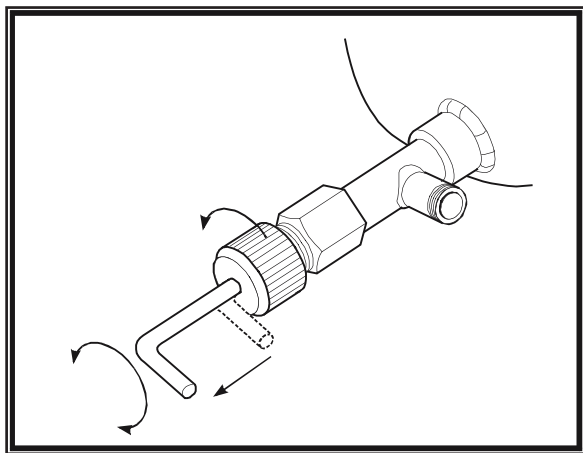
The stove is only the source of heat, the distribution of this heat is dependent upon your plumbing and control

MAXIMUM BURNER OUTPUT

To ensure the burners are operating efficiently and capable of its maximum output the fuel inlet to the burner will need to be kept free of carbon deposits by operating the decoking lever weekly. This is accomplished by slackening the knurled brass nut a half-a-turn and rotating the lever whilst withdrawing it no more than 35mm. While continuing to rotate the lever insert it fully, then re-tighten the brass nut.

A sudden loss of burner capacity may be caused by low fuel levels or dirt in the fuel causing the oil metering valve to block. This can be cleared by turning the control knob to "5" and pressing the thermostat pin of the valve, smartly, ten times.

The stove should be serviced annually to ensure the burners are operating correctly, the flue is clear of soot and the oil metering valve is operating correctly. It is important during the service that the oil control valve is examined for contamination by water or dirt and that all fuel pipes are sound with no evidence of leaks.



CLEANING YOUR OIL STOVE

THE STOVE BODY

Dusting the stove may be carried out when the stove is at its minimum heat output temperature, using light strokes of a real bristle paint brush. Thorough cleaning, or attempting to remove marks on the stove body, must only be done when the stove is cold.

Stoves with an enamel finish should be cleaned with a damp cloth, or very gentle use of a cleaner recommended for enamel finishes. It should be noted that even approved cleaners will damage the highly polished finish of the stove if used too vigorously. All traces of the cleaner must be removed before the stove is lit and no finishing polishes must be used, as these will leave unsightly streaks on the stove when it becomes hot.

must never be cleaned with a cloth as the texture of the paint will abrade and collect lint from the cloth which will be almost impossible to remove. Vigorous brushing with a stiff bristle brush will remove all dust, but where the paint is marked, the stains are better obliterated with a spray of suitable stove paint rather than attempts made to clean them off. Suitable paint may be purchased from a stove shop or direct from Euroheat.

BRASS FITTINGS

Any proprietary brass cleaner may be used to clean the brass on the stove, but care must be taken to ensure the polish does not come into contact with the stove enamel or the black cast finish, where it will leave a stain.

THE BURNER

Together with routine operation of the decoking mechanism, each burner will need cleaning periodically to ensure efficient burning. The frequency with which they will need cleaning is dependent upon the burner running time and operating conditions but the burners should be inspected monthly. The stove must be extinguished and cold, before attempting to inspect or clean the burner. The coal effects should be withdrawn carefully, taking care not to touch the "coals", and put in a safe place; they are fragile. The catalysers should be lifted out, but no attempt must be made to clean off the red-brown deposit. This deposit is the oxide of a chemical treatment applied to the catalyser during manufacture and is essential to it performing correctly. The two-part inner rings should be removed for cleaning, taking note of their positioning on the support pins. Only the burner bowls and fuel inlet pipes remain; these can be cleaned of all carbon deposits using a suitable hardwood implement or, with great care, a blunt screwdriver. (Excessive soft carbon or layers of very hard coke may be an indication of incorrectly adjusted flue draught and your service engineer should be consulted.) When cleaned, the burner components must be reassembled, taking care to fit the inner ring and catalyser correctly as soon as possible, to minimise the risk of damage.

THE BOILER TUBES

Periodic inspection of the boiler tubes and their fins to ensure they are free of deposits is advised, as the efficiency of the boiler will only be maintained if they are clean. The tubes should be examined to determine the nature of any accumulated deposits on them; heavy deposits of soot may indicate the boiler is operating at too low a heat, the burners need cleaning or that the flue draught is not correct. An accumulation of soot will not only reduce the efficiency of the boiler but will progressively restrict the flue path and worsen any flue draught problem. If it becomes necessary to clean the tubes, a very stiff bottle brush will be found to be the ideal tool, but a correctly operating stove should not

THE GLASS

The glass in your stove is specially formulated to withstand the very high temperatures and proprietary glass cleaners are not recommended as their compositions may contain chemicals that will weaken or etch into the glass. Newspaper moistened with water to which a little vinegar has been added will normally remove most staining, but for really stubborn marks, gentle polishing with fine steel wool lubricated with a few drops of dish washing detergent will need to be employed. Great care must be taken not to clean the glass too vigorously as particles of grit may have adhered with the stain and these could cause scratching if dragged across the glass. However well the stove burns it will eventually become necessary to clean the glass, but if cleaning becomes necessary too often we advise you to review your operating procedures to determine whether cleaner and more efficient combustion can be achieved.