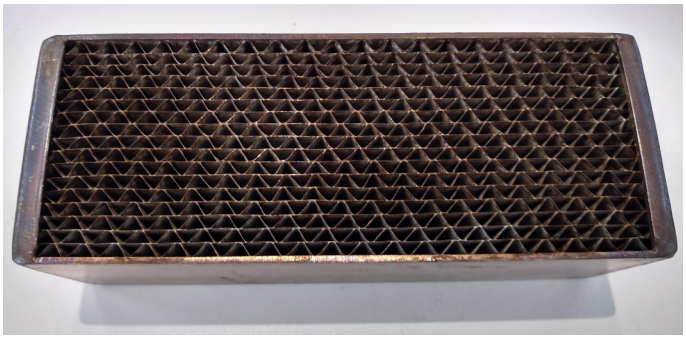
NESTOR MARTIN
WOODBOX® TECHNOLOGY
CATALYTIC STOVES

Catalyst Maintenance
and
Removal for Sweeping

Catalyst Maintenance and Removal for Sweeping

The catalyst should be removed and inspected at least once during the heating season to ensure clean combustion is occurring. A build up of tar and soot can reduce the effectiveness of the catalysts cleaning properties.



Cleaning the catalyser may be done using a vacuum cleaner on both sides. You can also use a soft bristled brush (like a paint brush). If your catalyst seems plugged with ash even after brushing or vacuuming, you can gently clean the cells with a pipe cleaner.

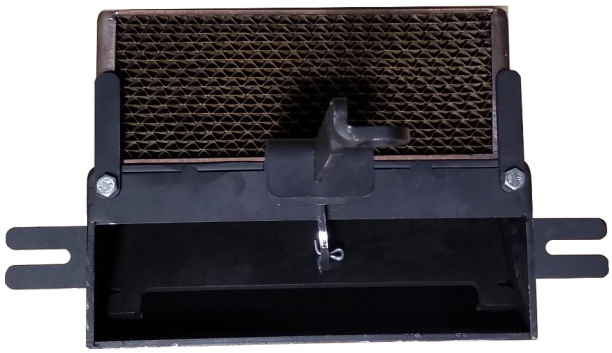
We do not recommend that you clean your catalyser with an air compressor, unless you can ensure a very low pressure. Using high pressure air to blow the cell free of fly ash build up can also blow off the catalysts metal coating inside the cells. However, the compressed air that comes in a can may be used very effectively.

Removal H13 S13 vertical exit

The housing containing the catalyst can be removed from the stove. Take out the vermiculite baffle in the top of the stove which will give you access to the housing. Using a 4mm Allan key remove the 2 screws holding the housing to the support brackets on either side.

It is also possible to remove the 2 bolts holding the housing to the top of the stove and then withdrawing the housing the stove. The catalyst may then be removed for cleaning.

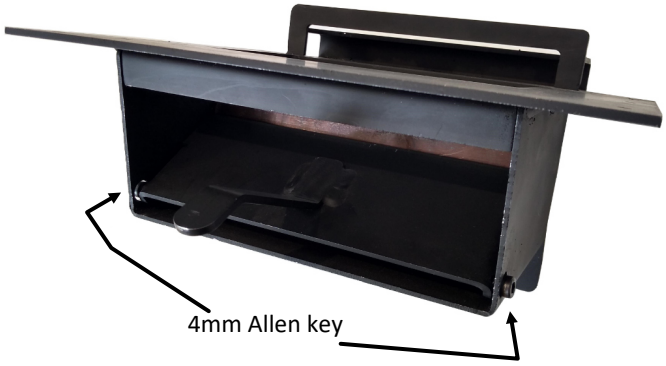
Removal H13 S13 horizontal exit



The catalyser box for rear exit of the stove is again held in place by 2 bolts. Remove the vermiculite top baffle and then the bolts. The box can then be withdrawn from the stove.

Removal H23 S23 vertical exit

To remove the catalyser for cleaning in these models you will need to have a 3mm Allan key for the catalyser retaining screw and a 4mm Allan key for the 2 screws on the flue gas diverter valve.



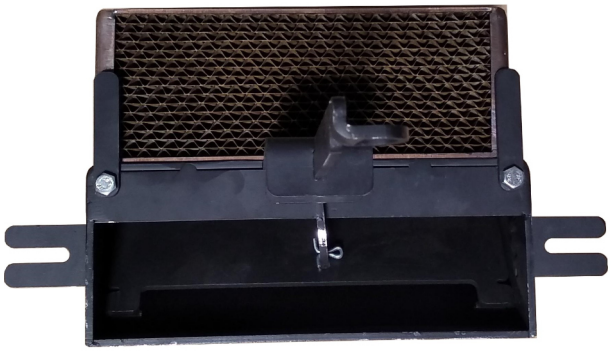
Locate the screw under the catalyst box and remove it using the 3mm Allen key.

Using the 4mm Allen key remove the 2 screws holding the flue gas diverter valve. Remove this from the box.

The catalyst can then be withdrawn from the box for cleaning.

If the catalyser box needs to be removed the retaining bolts in the roof of the stove need to be taken out and the box withdrawn.

Removal H23 S23 horizontal exit



The catalyser box for rear exit of the stove is again held in place by 2 bolts. Remove the vermiculite top baffle and then the bolts. The box can then be withdrawn from the stove.

Removal H33/43 S33/43 vertical exit

The removal of the catalyser and box is similar to the H23 S23, the box is just bigger and there are 2 catalysts within the box.

Locate the screw under the catalyst box and remove it using the 3mm Allen key.

Using the 4mm Allen key remove the 2 screws holding the flue gas diverter valve. Remove this from the box.

The catalyst can then be withdrawn from the box for cleaning.

If the catalyser box needs to be removed the retaining bolts in the roof of the stove need to be taken out and the box withdrawn.

Removal H33/43 S33/43 horizontal exit

The catalyser box for rear exit of the stove is again held in place by 2 bolts. Remove the vermiculite top baffle and then the bolts. The box can then be withdrawn from the stove.

IMPORTANT:

The stove must never be used without the catalyst box and catalyser fitted as this could cause over firing and damage the stove.

The life expectancy of the catalyst is about 4 to 5 years depending upon use of the stove and the quality of the wood being used.

Burn only dry, seasoned wood, with a moisture content of 20 percent or less. Season wood at least six months; store outdoors, loosely covered, to allow air to circulate freely through the pile. "Green" or wet wood releases less heat because energy from the fire must first evaporate the moisture before producing useful heat.

Build and maintain moderately hot fires quickly after loading the wood. A hot initial fire will help your catalyst reach operating temperature faster. We recommend the inverted lighting method, with the kindling and firelighters on top of 2 small logs. Once “lit”, the catalyst will stay “lit” even if the fire burns lower. Catalyst temperatures of 500°C or more are typical in normal operation. Once a catalyst is “lit" it will stay lit at temperatures of about 200°C.

Burning moderate to full loads of wood providing several hours of uninterrupted burning. Minimising door openings allows the temperatures to stay high, which reduces pollution. Frequent door openings allows cold air into the stove and cools the catalyser.

Operate your stove in the bypass mode initially so that smoke bypasses the catalyst. Wait until the stove is hot enough before engaging the catalyst, but be careful not to overheat the stove. The reason for this is that, to some extent, the catalyst may reduce the draft. With poor flue draft, the fire will take longer to develop and the catalyst will take longer to become “lit”.

Don't operate your stove in the catalyst bypass mode after the catalyst has reached the operating temperature (200°C to 320°C). At this point, your catalyst should be working for you so producing more heat using less firewood and kinder to the environment. Using a flue temperature gauge is recommended to ensure that the flue gases are hot enough before closing the flue gas diverter valve.

Don't over fire your stove, especially when the catalyst is engaged. Avoid excessive catalyst temperatures. This is another reason to use a flue temperature gauge. Catalysts can be damaged or destroyed by prolonged excess heat.

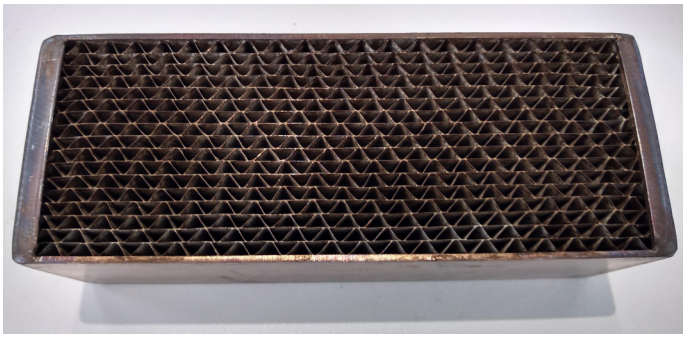
Don't open the ash pan door while the stove is lit because this will lead to overheating and damage the catalyser.

Check door rope seals regularly to ensure no uncontrolled air is entering the stove leading to over firing.

Check for catalyst deterioration by either of these two methods:

1) Observe the chimney, both before and after the catalyst has engaged, to determine if the catalyst has reduced the amount of smoke being emitted from the chimney. If the sky provides a solid light background, you should be able to see a difference between the smoke from a stove before and after the catalyst is engaged.

2) Inspect the inside of the chimney for creosote buildup. Although there will still be some creosote buildup from operating catalytic stoves properly, the rates of buildup should be much lower than in conventional stoves. Your chimney sweep will be able to help you ascertain this.



A replacement catalyser can be obtained from your local Nestor Martin dealer or directly from Eurostoves spare parts website.

www.eurostove.co.uk

The part number for the catalyser:

N91300-55-03-99-00