

MAINTENANCE

Ash Removal

If your Palladian or Keystone is in continuous operation, ashes will have to be removed every 3-4 days. You do not have to let the fire die out completely to remove the ashes, but do let it burn down to coals. First make sure the combustor is in bypass position. Remember to wear stove gloves - the ash pan will be hot! Open the ash removal door under the side door. Carefully remove the ash pan from the base of the stove and attach the lid to the top of the ash pan. The lid slides into two channels in the sides of the ash pan. Use both hands, and pick up the pan by both ends. Close the ash pan door.

NOTE: Do not open the ash removal door while the stove is in the middle of a long burn, because the additional draft created under the fire could cause the stove to burn excessively hot and the ash pan itself will be very hot, and full of live coals. If you are burning your stove 24 hours/day, it is often easiest to empty the ashes first thing in the morning, after an overnight burn.

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible material, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Live cinders can take up to 36 hours to cool.

Never shovel ashes into a combustible container like a cardboard box or a plastic bucket. Do not use a vacuum cleaner to remove ashes unless it is specifically designed for wood stove ash removal. Do not ever leave a container of hot ashes on a wood floor or porch.

Stove Cleaning

The ornamental cast iron frame of the Woodstock Soapstone Stove is painted with two coats of high temperature stove paint. Under normal operating conditions, this paint will not peel or blister. We suggest cleaning by dusting with a soft brush or vacuuming with a brush attachment when the stove is cold. If the iron castings are exposed to moisture for a long period of time they may rust. If this happens, brush the affected area until clean with either a short wire brush or medium steel wool and then touch-up with high temperature stove paint, which is available from Woodstock Soapstone Company.

Soapstone is a very soft mineral and the polished exterior surfaces can be scratched. Scratches may be easily removed by sanding lightly with medium steel wool or 120 grit sandpaper. The surface may then be buffed with 400 grit sandpaper or fine steel wool. Remove dust created by sanding with a vacuum cleaner; a damp cloth will simply spread it around. Be sure the stove is cold before you clean it.

Glass Cleaning

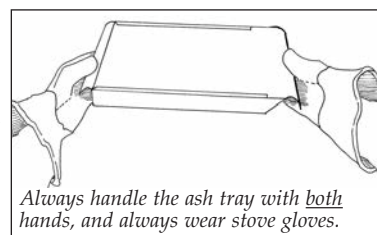
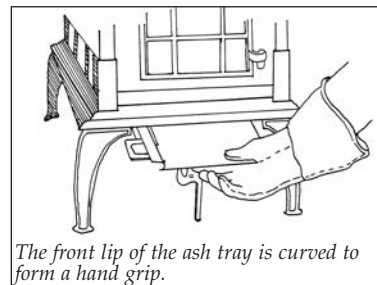
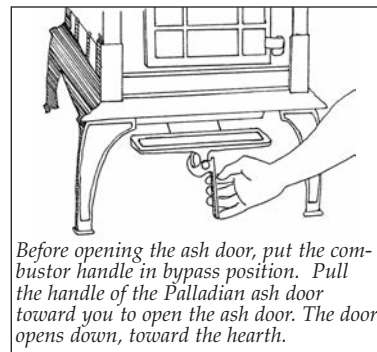
We use ceramic glass in our stoves because it is resistant to both impact and thermal shock. The panes of ceramic glass installed in the stove fronts have full gaskets around the perimeter so there is no contact between the glass and the cast iron frame.

There are two panes of glass in each fireplace front, with an air-space between the two panes. This "thermal-pane" arrangement helps keep the temperature on the inside of the glass higher and prevents condensation and soot from accumulating. The Keystone and Palladian have large glass areas and also have an "air-wash" design in which the primary air supply washes over the front glass to assist in keeping the glass free of ash and soot.

The glass may soot up the first time you use the stove (from condensation already inside the stove). **Don't be alarmed!** Usually, as soon as you build up adequate temperature with a hot fire, the glass will clean itself. The residue will burn off, and it will stay clean. Soot accumulation on the inside of the glass is more likely in the spring and fall, when temperatures are very mild and you are less likely to maintain a hot fire.

To clean the inside of the glass or wipe off fly ash, we recommend that you use a brush with soft bristles (like a paintbrush). You may clean heavy soot from the glass with very fine steel wool (.0000 grade), but first, be sure the fire is out; and second, be sure that the glass has cooled to room temperature before you clean it.

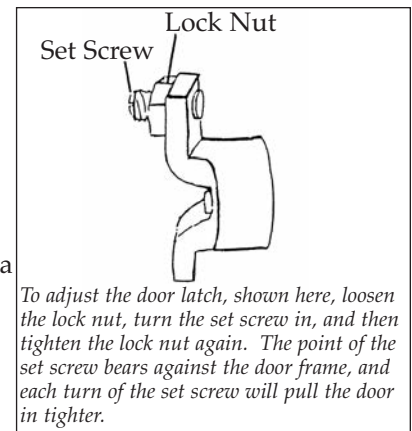
DO NOT ATTEMPT TO CLEAN HOT GLASS.



Door Latch Adjustment

The Keystone and Palladian stoves have latches that can be easily adjusted as required. If the gasketing on the side door becomes compressed, the latch has a set screw that can be adjusted to take up the slack, maintaining a tight seal around the door.

To adjust the latch, loosen the lock nut on the back of the latch. Tighten the set screw a turn or two, until the door closes more tightly. Then tighten the lock nut so the set screw will not move.



To adjust the door latch, shown here, loosen the lock nut, turn the set screw in, and then tighten the lock nut again. The point of the set screw bears against the door frame, and each turn of the set screw will pull the door in tighter.

Gasket Replacement

There are five areas on your stove where you should check the gasket routinely: (1) on the side door, (2) the ash pan door, (3) under the catalytic bypass damper, (4) under the catalytic combustor, (5) and the flue collar & cover plate. These five gaskets are the most important for maintaining high efficiency and clean burning. Close a slip of paper in these gasketed areas. There should be resistance as you pull the paper out. If there is any evidence of deterioration and/or leaking in any of these areas or if any of the gasket material in the stove becomes worn or frayed, it should be replaced. Please contact Woodstock Soapstone Company for replacement gasket and replacement instructions.

The sizes of all the gaskets on your Keystone/Palladian woodstove are included in the parts list on page 30 of this manual.

Routine Checks And End of Season Maintenance

Every two months of operation we recommend checking the chimney connector (stovepipe), chimney, and combustor (see combustor section) and cleaning, if necessary. If any of the gasket material in the stove becomes worn or frayed, it should be replaced. Also inspect the cast iron interior parts to make sure that over-firing hasn't occurred.

When the weather warms up and the burning season is over, it is a good idea to do a thorough spring cleaning and inspection of your stove and combustor. We recommend a yearly service visit from a certified chimney sweep who will look at the whole system, from top to bottom. Chimney safety is important for you and your family so you can fully enjoy your stove without worrying. The best way to gain confidence in the safety of your Keystone/Palladian is to have it serviced and inspected once a year by a professional chimney sweep.

If you live in a climate with warm, humid, summer weather, your stove may collect moisture from warm, moist chimney downdrafts during the summer. If this happens, the moisture may wick through the gasket between the cast iron and the soapstone panels, and appear as discoloration around the edge of the soapstone, on the outside of the stove. If this happens, you can remove any discoloration with fine steel wool. You can prevent future occurrences by blocking the flue exit in the stove with fiberglass insulation at the end of the heating season. This will prevent downdrafts from entering the stove. (You'll have to be careful to remember to remove the insulation before you light the stove again in the fall!)

Creosote - Formation and Need for Removal

WHEN WOOD IS BURNED SLOWLY, IT PRODUCES TAR AND OTHER ORGANIC VAPORS, WHICH COMBINE WITH EXPELLED MOISTURE TO FORM CREOSOTE. THE CREOSOTE VAPORS CONDENSE IN THE RELATIVELY COOL CHIMNEY FLUE OF A SLOW-BURNING FIRE. AS A RESULT, CREOSOTE RESIDUE ACCUMULATES ON THE FLUE LINING. WHEN IGNITED THIS CREOSOTE MAKES AN EXTREMELY HOT FIRE. THE CHIMNEY CONNECTOR AND THE CHIMNEY SHOULD BE INSPECTED AT LEAST ONCE EVERY TWO MONTHS DURING THE HEATING SEASON TO DETERMINE IF A CREOSOTE BUILDUP HAS OCCURED. IF CREOSOTE HAS ACCUMULATED IT SHOULD BE REMOVED TO REDUCE THE RISK OF A CHIMNEY FIRE.

The most likely conditions for creosote to occur are: (1) when a large number of small pieces of wood are added to a hot bed of coals and the damper is then completely closed; (2) extremely long, smoldering fires, and; (3) burning wet or green wood.

Lack of combustion air and smoldering fires usually result in dense smoke and low stack temperatures in the chimney connector and the chimney. Wet or green wood can also produce dense smoke and excessive water vapor, which can quickly lead to creosote buildup.

Creosote will accumulate faster in exterior chimneys than interior chimneys because of colder outside temperatures.

There are three stages of creosote build-up. The first is a flaky, crystal-like accumulation which can be removed with a brush. The second is a tar-like coating. The third is a hard, glossy enamel-like coating that is difficult to penetrate. If your chimney is heavily coated with tar or enamel-like creosote, we recommend that you consult with an experienced chimney sweep about removal and prevention.

PREVENTION: Without question, the best way to treat creosote is to prevent its accumulation. In order to reduce the danger of accumulation, we recommend the following:

1. Burn only dry cordwood. Dry wood burns hotter and expels less moisture to condense.
2. Use the catalytic combustor properly. It can reduce possible creosote accumulation by as much as 90% and improve stove efficiency at the same time. Be sure to read the section on catalytic combustors.
3. Never operate your stove for extended periods of time with the draft control completely closed. Both the wood fire and the catalytic combustor need oxygen to burn efficiently.
4. Try to re-establish a hot fire, and re-ignite the combustor after every reloading by opening the primary air control for about 10 minutes.
5. Check the catalytic combustor output. Use the thermometer provided with the stove to be sure that the catalytic combustor is igniting properly when you kindle a fire or reload the stove. The temperatures on the stove top should rise noticeably, and pipe temperatures should drop, when the catalytic combustor becomes engaged.
6. Avoid long, smoldering fires. Again, the catalytic combustor is critical here. Hot firebox temperatures (with the stove top thermometer in the 400-600° range) will produce more complete combustion and maintain proper catalytic activity.

