

Kamado™

Project: Minor Mosaic Tile Repair

For an example there are 24 tiles that became loose on the lid of a #7 Kamado and need to be replaced.

We would consider this a minor tile repair. More often, there are only a few tiles that were damaged in shipping, or when the band slipped down or up, or around the top of the neck where the hot "flue" gasses meet the damper top or possibly the lower row of tiles on the damper. The procedure is the same for tiles that have become loose when moisture has entered below the tile in freezing and thawing situations or improper break-in procedures are not follow. None of these situations are harmful to the Kamado and can with reasonable time and effort be made to look like new.



(Click on on the thumbnail to enlarge)

Note: It is important to save any missing tile to match.

Tools and Equipment Required




- Inexpensive thin rubber gloves
- Putty knife
- Plastic container (1/2 to 1 gallon) to mix adhesive.
- Plastic container (1 gallon or more) to wash tile, sponge & tools
- Sponge (any household)

Materials Required

- **Matching tile.** It is preferable to use the same tile that was removed. This is especially important if your Kamado has unique custom tile colors. Where some tiles are missing, please estimate the number of 1 x 1 inch mosaic tiles that are needed, so they can be matched and sent from the factory. From the picture above, you can count the number of rows and number of tiles missing on each row.
- **Adhesive mortar.** This is a two part mixture of a liquid and powder. These 2 items are readily found in all Home Depot or similar stores. Or our formula can be sent from the

factory, including any missing tile. To prevent our shipping delay or shipping costs, you might elect to purchase locally at Lowe's, Home Depot or similar stores as they have excellent, inexpensive new products that are equal in quality as our factory formulas. Any excess material can be saved for future grouting or other use as the shelf life is years. When purchasing, you will buy probably the smallest quantity displayed of:

- *Thinset* (powder). Most brands are excellent. Suggest brand is Custom Building Products. Please click on pictures below.
- *Acrylic* (liquid). We suggest Custom Building Products or Laticrete.
- **Grout.** We have a record of the grout color used when your Kamado was made and this can be sent to you. However, almost all of our grout colors and many others are found in Home Depots and other tile stores. You might consider purchasing a small box of "unsanded" or "sanded" grout to do this repair and future grouting when and if necessary. We mix the grout into a paste form by adding the power to the acrylic or liquid sent to you (the same liquid used to make the adhesive mortar for setting the tile.) Most common grout color we use is "charcoal", by Custom Building Products or Laticrete.

	<p>Picture of Thinset bag</p>		
<p>Acrylic is added to Thinset or our Power adhesive</p>		<p>Non Sanded Grout for smaller tile joints. Comes in many colors</p>	<p>Sanded Grout for larger tile joints. Comes in many colors</p>

Procedure















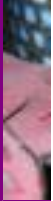
- Clean the surface area of the Kamado to be re-tiled. Remove any lumps and brush off any powder or dust on the Kamado. Use 80 grit sandpaper and/or a scraper/putty knife. The surface does not have to be perfectly level.
- For *new* tile, where the missing tile was not saved, you will place the sheet or sheets in water with detergent and remove the nylon backing and clean the glue from the back of the tile. Then rinse with clean water. The tile will absorb some moisture, which is fine. We will be setting the 1 inch by 1 inch tiles individually.
- For replacing existing tile that was removed and saved, you will remove the loose material on the back and sides of each tile. A wire brush, small disc sander or masonry stone in a small drill can be used. It is not necessary to wash with soap, just wash to dust off.
- Mix the Thinset (powder) and acrylic (liquid) to a mortar consistency of peanut butter.
- We recommend thin rubber gloves when applying the tile. However many of us do not use gloves for minor tile repair as shown in some of the pictures below. We do wash our hands soon after tiling and apply some hand cream.
- Apply a thick coating to the area to be re-tiled and to the back of the tiles themselves.
- Press in tiles so that the adhesive completely surrounds the tile.
- When the mortar is completely dry, usually 24 hours, apply the grout. Mix the grout with



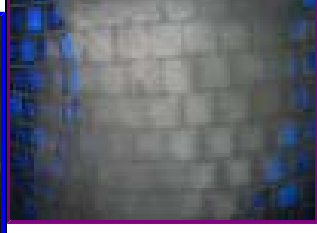
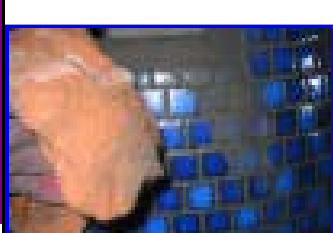

the acrylic liquid or water to make a paste like thin peanut butter consistency. Apply the grout to the mortar (seams) by gloved HAND. Wipe off excess with dry soft rag (usually 10 to 20 minutes). This is similar to polishing your car after waxing.

- There is a break-in period. We recommended that the temperature not exceed 350 degrees for 2 or 3 hours depending on outside temperature and how much time since the repair. Do not allow steaming of any remaining moisture.

Application Photos:

(please to enlarge the thumbnail pictures)

 <p>Buttering the tile with adhesive</p>	 <p>Pushing IN one tile at a time in the adhesive. Start at bottom.</p>	 <p>Pushing IN and DOWN so mortar surrounds the tile</p>	 <p>The first of four rows are in.</p>	 <p>Filli</p>
 <p>Plastering the 3rd row with adhesive</p>	 <p>Pushing IN and Down on third row</p>	 <p>Setting the 4th and last row of tile. One at a time.</p>	 <p>Two more tiles to set</p>	 <p>Last r</p>
 <p>Pushing a little more adhesive between tiles and making tile spacing even</p>	 <p>There's still time to adjust one tile</p>	 <p>A damp sponge is used to remove excess adhesive before it has initially set (about 30 minutes)</p>	 <p>After 24 hours we will grout this area or re-grout the whole lid while we are at it.</p>	 <p>Gr Us sp r</p>

				
<p>Mashing grout in by hand covering the entire area besides just the joints</p>	<p>Be liberal in applying the grout and mash in all directions</p>	<p>After about 10 minutes, depending on temperature, excess grout is removed.</p>	<p>Removing excess grout with soft dry rag</p>	<p>Final polish It is</p>

Notes:

- Apply the adhesive mixture liberally. It is here that Kamado mosaic tiling method differs in the setting or embedding of the tile.
- The normal or standard method of setting tile (not on a Kamado) is to use a thin layer of adhesive (Thinset). This works fine on a flat surface and is much less expensive. However, our surfaces are not flat but curved, and we must therefore have a much thicker adhesive base in which to set the tile. Additionally and more important, we want to form an “undercut” on the tile. That is, the adhesive covers the smaller outer edge of the tile and holds the tile in this “seat” where in normal tile setting the bottom of the tile is only being held by the adhesive and the grouting fills up the space between the tiles. We want to fill the space between the tiles with adhesive, because grout has very little adhesive ability. Our tiling method is extremely important, but the down side is there is less room for grout coloring or in our case it more “staining” than what would be called grouting.
- Apply the grout by your gloved hand.. After the surface becomes dry, approximately 10 to 20 minutes, remove any excess or by polishing the tile surface with a clean, soft, dry rag or towel.

Frequently Asked Questions:

- ***Does the tile that has been removed or fallen need to be cleaned of the adhesive before replacing?***
This is not generally necessary. An uneven surface is not necessarily unattractive. Often the tile can be replaced in the same location. When desired, a small drill with masonry stone will quickly remove the remaining adhesive remaining on the back of the tile.
- ***Does the body (lid or base) need to be sanded smooth before tile is replaced?***
Generally no unless the surface is extremely rough. Sometimes a sharp chisel used to scrape or level the surface.

- **Can you “re-grout” to a different color or shade?**
Yes, to a certain degree. Usually to a darker but similar color. You might select one of many matching grout colors found in tile and larger hardware stores. Our most popular color tile is cobalt blue where we use charcoal grout. You will find that this re-grouting is more staining than normal grouting because the procedure we use in setting or embedding the tile leaves little room between the tiles for grouting.
- **Do you need special skills to accomplish a tile repair?**
No, not in the least if they are replacing missing tile, as this tile is merely being filled in.. The horizontal lines are the guides and the tile will fit between the rows (although there might be a need to scrape or chisel a little room). It is quite another matter to start from scratch.
- **Can or should we save any tile that has been knocked off or become loose?**
In most every case loose tiles can be cleaned and reused. (Pictures of before and after). Most tile colors can be reordered if desired. If your Kamado has a unique or special tile color, it would be important to save the tile or tiles.
- **What causes the tile to become loose or need to be replaced?**
Shipping might require replacing a few tiles. Improper or too fast an initial break-in (this is the most common reason), continuous freeze and thaw cycles over the years in colder climates where the Kamado is exposed to the elements and isn't sealed, or extreme and extended Kamado combustion temperatures. Defects in manufacture of the adhesive (common in early years). Excessive glue on the back of the tile when the tile factory applied the cloth backing web.
- **How do you clean the tiles that are to be replaced?**
A small disc sander or masonry stone will speed removing the adhesive. The tile is much stronger/durable than the adhesive that is on the tile to be cleaned.
- **Does the entire tile surface need to be cleaned of prior adhesive?**
No, just the loose or protruding mortar.
- **Should we protect our Kamado by covering it or locating it under a protection?**
Yes and no, depending on whether the Kamado is sealed, what the winter temperatures are, or whether heavy rain has deteriorated the grout/adhesive, allowing moisture to form and freeze between/under the tile.
- **How much time does it take to replace tile?**
Depending on the surface area, about 1 to 2 hours per square foot for larger areas. If you were going to replace 8 or 10 pieces of tile around the band area, for example (picture), it would take about 20 to 30 minutes including cleaning the pieces of tile.
- **How much time does it take to grout the tile after the tile has been set?** Just a few minutes per square foot. Much like polishing your car.
- **Should we "seal" the tile after replacing or repairing the tile?** In most instances, we now recommending sealing all Kamados. After the tile has been set, dried and grouted the Kamado should be operated at normal baking temperatures to completely dry before sealing. There are many excellent tile and grout sealers available in Home Depot, Lowes and similar large hardware stores, in addition to many Tile Stores.
- **Should I be concerned if tile is loose?**
No. Only if it needs to be replaced. Do not try to force or remove tile. A hollow sound when tapping on the tile does not necessarily mean there is a problem. If tile has become so loose as to have fallen off in an area, as in the picture above, the procedure for repair is the same as for replacing the tile described here. If there is an area of loose tiles it is

possible to carefully remove 3 or 4 tiles and "flow " thinset underneath the adjoining tile and replace the removed tile. This will "anchor" a large area of loose or "hollow" sounding tile. Additional areas can be "anchored" in the same method.

- ***How often does the tile need to be replaced?***

Hopefully never. But it is not unusual to have to repair or replace tile. What is wonderful about this is that if CAN be done by anyone and the function and beauty of the Kamado is in no way affected.