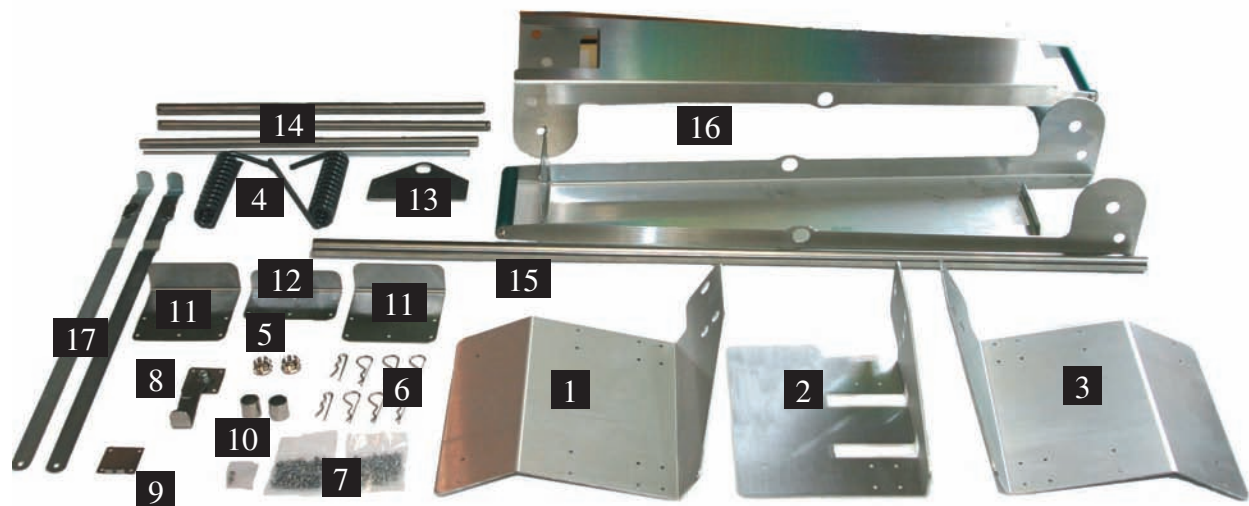




# GM 1414 Lid Lifter Upgrade Kit



## CONTENTS



50 #1003  
Self-tapping



2 #776



66 #093

- |  |  |
|--|--|
| <b>1 Left Body Hinge</b>               | <b>11 Rear Support Plates (2)</b>                    |
| <b>2 Center Body Hinge</b>             | <b>12 Front Support Plate</b>                        |
| <b>3 Right Body Hinge</b>              | <b>13 Lid Pad Eye (2)</b>                            |
| <b>4 Springs (Left and Right)</b>      | <b>14 Rods (1-3/4", 2 - 5/8", 1 - 3/8")</b>          |
| <b>5 Cross Bar Caps (2)</b>            | <b>15 Cross Bar</b>                                  |
| <b>6 Cotter Pins (6 Large 2 Small)</b> | <b>16 Lid Lifter Arms (Left and Right)</b>           |
| <b>7 3 Bags of Screws (See Detail)</b> | <b>17 Lid Braces (Left and Right)</b>                |
| <b>8 Lid Prop Arm</b>                  | <b>18 Lid Band (Not Pictured)</b>                    |
| <b>9 Lid Prop Catch Plate</b>          | <b>19 Lid Band Reinforcements (6) (Not Pictured)</b> |
| <b>10 Spacers</b>                      | <b>20 Screw-on Connectors (4) (Not Pictured)</b>     |

(continued)

## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**REQUIRED TOOLS**

- 12 Volt or Higher Cordless Drill w/ #2 Phillips Head Bit
- Tape Measure
- Wire Strippers
- Pliers
- Slot Groove Screwdriver
- Bit Extension
- Side Cutters
- Propane Torch

An underpowered cordless drill will make it difficult to set the screws into the band material. A Phillips screwdriver may also be used. If a screwdriver is used it will be necessary to set the screws by hitting the screwdriver with the butt of your hand before screwing them in.

## GM1414 LID LIFTER UPGRADE KIT CONTINUED

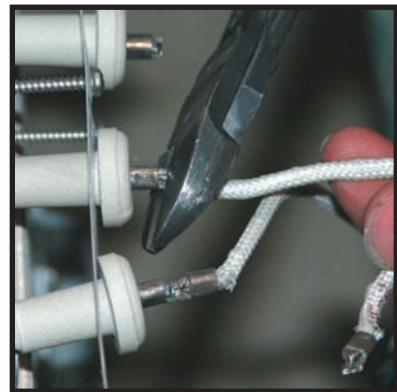
**INSTALLATION INSTRUCTIONS****STEP 1 - UNPACK LID LIFTER KIT**

Examine the contents to ensure you have all the items listed on the front page.

**STEP 2 - UNPLUG THE KILN****STEP 3 - REMOVE LID BOX**

*This is only required if you are changing your lid band. If your band is new and tight to the lid you may want to save the new band for future use and skip to step 5. This will save you a lot of time especially if you have crimped on element connectors.*

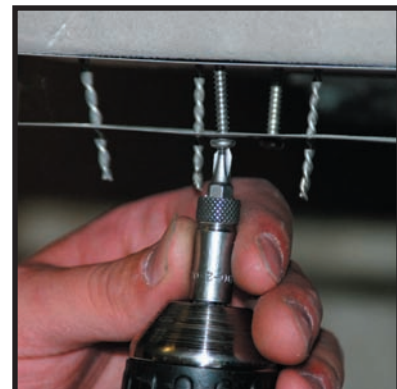
- A. Remove lid box screws

**STEP 4 - DISCONNECT ELEMENT FEEDER WIRES**

*Newer models will have the feeder wires attached with screw on element connectors. If your kiln has screw on element connectors remove them and proceed to step 5.*

If your kiln has crimped-on barrel connectors, you will need to split the barrel connector with a pair of side cutters to remove it. Cut the feeder wire off at the crimp on the barrel connector. Line the cutters up on the seam in the barrel connector. The seam is hard to see but it is there. Cut through the seam and pry the barrel off of the element.

Remove the porcelain insulators and the stainless steel heat shield. There are 2 screws holding the heat shield.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 5 - REMOVE LID BRACE.**

Remove the whole lid brace as a unit by removing the 4 screws holding the lid brace pad.

**STEP 6 - REMOVE LID HANDLES****STEP 7 - REMOVE LID AND BODY HINGES**

## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 8 - REMOVE BAND**

If you are not replacing your band than skip to step 10. To remove the band, hold the worm screw attachment with a pair of pliers while loosening the screws that hold the band tight. When it is loose enough slide it off of the lid and discard it.

**STEP 9 - INSTALL BAND**

Slide the new band into position. Before you tighten the band line up all of the band re-enforcements in the correct position on your kiln lid and slide them into place.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

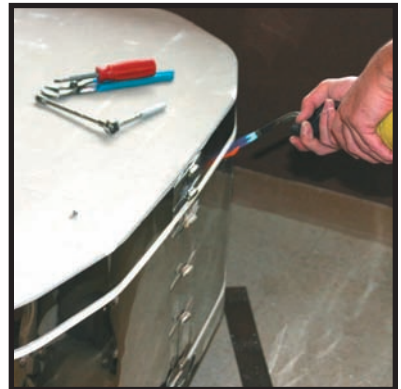
Be sure the band is centered well over the pigtail wires.



Tighten the band as much as you can. Be sure to hold the worm screw attachment securely with some pliers every time you tighten the band. This will prevent you from braking a tack weld.



Use a torch to heat the lid band. This will expand the metal and allow you to get a few extra turns on the screws. Repeat this several times until you can no longer tighten the screws.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 10 - ASSEMBLE THE HINGE PLATES**

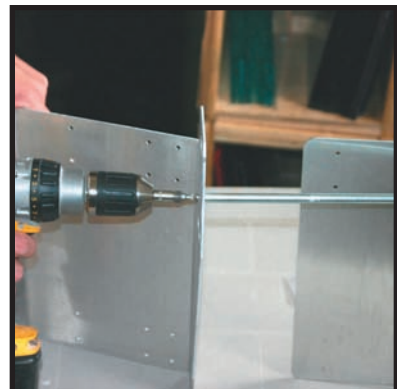
Using a #776 machine screw attach the 3/8" rod to the right body hinge as shown. (Items are designated right or left as viewed from the back of the kiln).



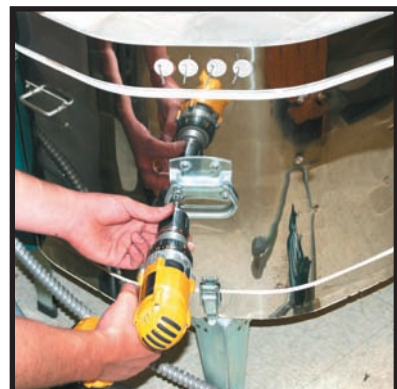
Pass the 3/8" rod through the correct hole on the center body hinge.



Attach the other end of the rod to the left body hinge.

**STEP 11 - REMOVE CHEST HANDLES**

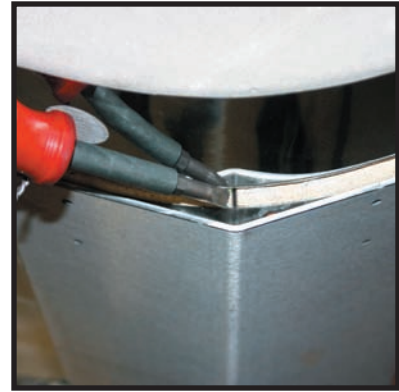
Remove only the 2 rear chest handles.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 12 - ATTACH HINGE ASSEMBLY**

Line up the corner of the left body hinge flush with the top of the body band and in line with the brick seam to the right of where the lid box was mounted.



Attach all of the screws to the right and left body hinge using #093 screws. DO NOT ATTACH SCREWS TO THE CENTER BODY HINGE YET.

**STEP 13 - RE-ATTACH CHEST HANDLES**

Use #093 screws to re-attach the chest handles as close to their original position as possible

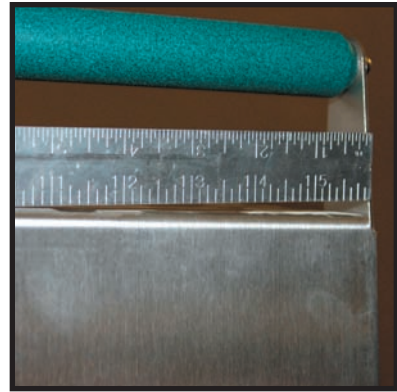




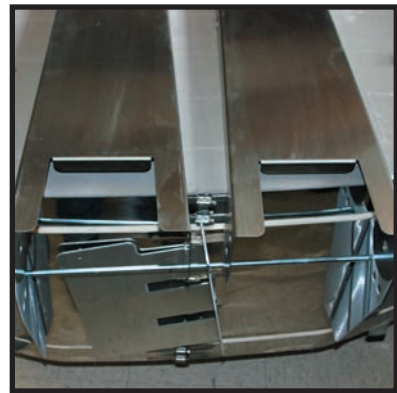
## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 14 - POSITION LID LIFTER ARMS**

There is a left and right lid lifter arm to compensate for the slight angle difference on the front of the kiln. To tell the difference look straight down near the handle and you should see the difference. Pictured is the right lid lifter arm. Remember all parts are designated left and right as viewed from the back of the kiln.



The back ends of the GM1414 lid lifter arms go on the inside of the body hinge brackets.

**STEP 15 - INSTALL SPRING ROD AND SPRINGS**

Slide one of the 3/4" rods through the hole as shown. Slide the spring over it making sure the long arm of the spring is on the side of the lid lifter arm closest to the center of the kiln.



Continue to slide the rod through the center Body hinge placing a spacer on either side.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

Slide the rod through the other lid lifter arm inserting the spring so again the long arm of the spring is on the side of the lid lifter arm closest to the center of the kiln.



Attach larger cotter pins to each end of the rod.

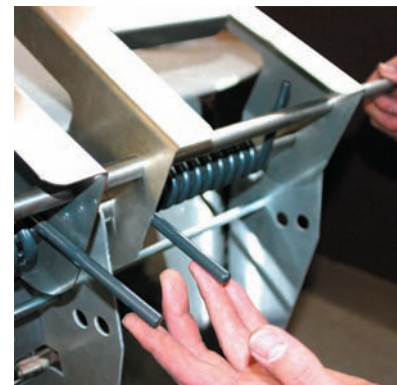


### STEP 16 - INSERT POSITIONING ROD

In order to easily fit the positioning rod it helps to prop up the lid lifter arms using a box.



Slide the remaining 5/8" rod through the holes shown making sure that the short arms of the springs are on top of the rod and the long arms are below.

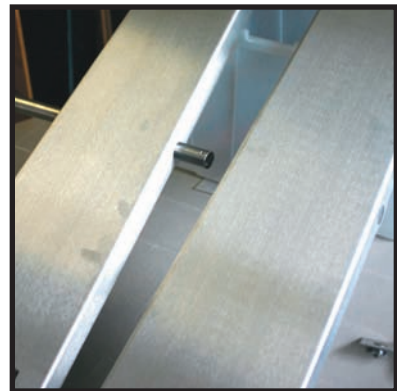


## GM1414 LID LIFTER UPGRADE KIT CONTINUED

Insert large cotter pins on either side of the spring position rod.

**STEP 17 - INSERT CROSS BAR**

Before you insert the Cross Bar make sure there is no packing material left inside the tube that may melt. It is a tight fit. Spin the bar if necessary but do not pull it up and down or side to side as this may bend the bracket.



Position a Lid Pad Eye on either side of the Cross Bar and secure it with a cotter pin.



Lower the lid lifter arms carefully so the front edges and lid pad eyes do not damage the lid.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 18 - POSITION THE LID**

Position the lid so that the outside edge is flush with the outside edge of the body of the kiln.

**STEP 19 - SECURE LID LIFTER ARMS**

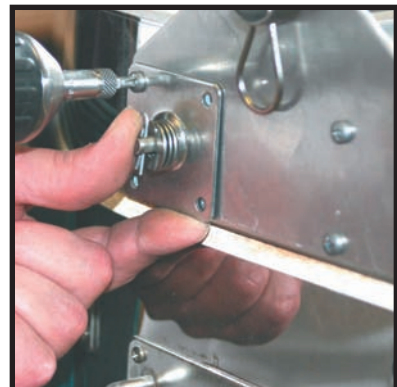
Line up the bottom edge of the Lid Lifter Arm with the bottom edge of the lid band and secure with self-tapping #1003 screws.

**STEP 20 - SECURE EYE LID PADS**

Align the bottom edge of the Eye Lid Pad with the bottom edge of the lid band and secure with #1003 screws.



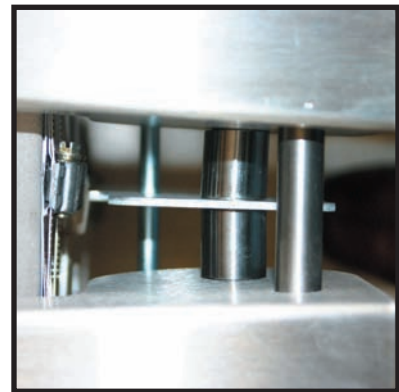
The Lid Brace Pad will mount directly to the Eye Lid Pad using 4 of the screw holes.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 21 - ATTACH CROSS BAR CAPS****STEP 22 - SECURE CENTER BODY HINGE**

Make sure the Center Body Hinge is aligned. Look down between the Lid Lifter arms to make sure it is centered and perpendicular to the kiln.



Secure the hinge using #093 screws. You may need to use a bit extension on your drill to reach some of the screw heads.

**STEP 23 - ATTACH REAR SUPPORT PLATES**

You will need a bit extension on your drill to drive these screws. Use the self-tapping #1003 screws.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 24 - INSERT SPRING TENSIONING ROD**

With the lid in the open position slide the rod through the hinges as shown. (You will need another person to hold the lid during this step). Make sure the long legs of the springs are between the rod and the kiln.



Position the springs so they are slid to the outside edge of the hinges.



Attach the smaller cotter pins and lower the lid. It should now be fully tensioned.

**STEP 25 - RE-ATTACH HEAT SHIELD**

**If you did not replace your lid band skip to Step 30.**

Use some smaller screws to start the holes. The long ones can get wobbly when trying to drive a new hole. Once it breaks the band take it out and drive in the new ones.

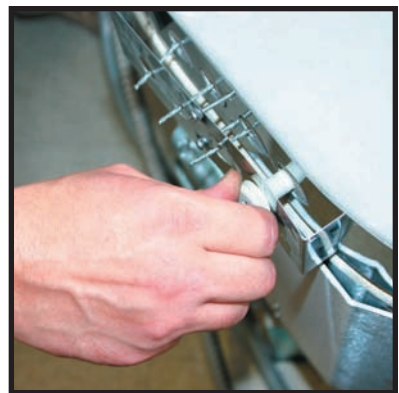


## GM1414 LID LIFTER UPGRADE KIT CONTINUED

Attaching the heat shield

**STEP 26 - REPLACE THE INSULATORS**

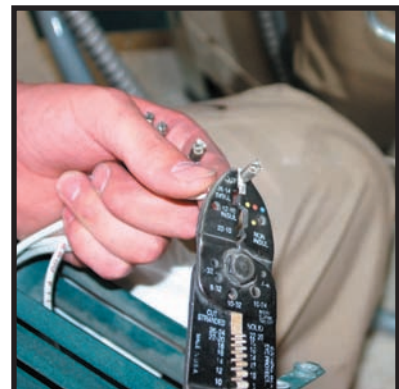
Replace the four porcelain insulators back over the element pigtails and through the heat shield. It may be necessary to twist them into the brick a little in order to get enough pigtail exposed to attach the element connector.



When in place they should look like this.

**STEP 27 - RECONNECT THE FEEDER WIRES**

Cut off the remainder of the barrel connector.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

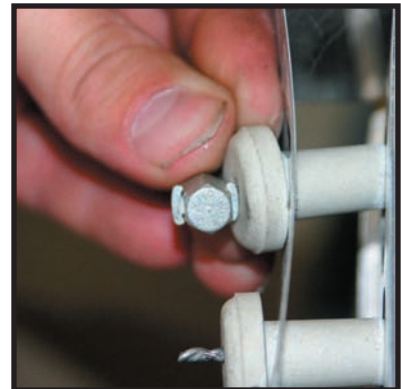
Strip the end of the feeder wire back about 1/2". This will give you enough wire to double the wire over for a tight connection.



Double the wire over.



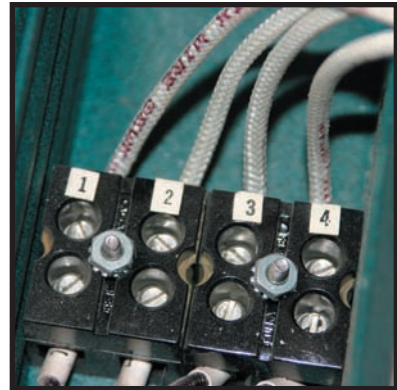
Place the screw on element connector over the element pigtail.





## GM1414 LID LIFTER UPGRADE KIT CONTINUED

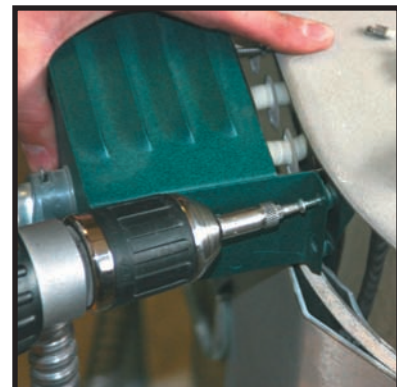
The feeder wires are labeled so they can be positioned correctly on the elements.



This is the correct position for the numbered wires.



Place the feeder wire in the other end of the element connector and tighten the screw as tight as you can get it.

**STEP 28 - REPLACE THE BOX**

## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 30 - FRONT SUPPORT PLATE**

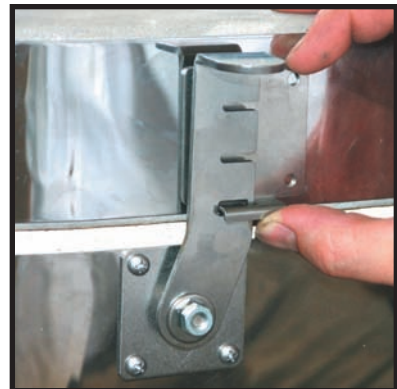
This may cause the lid to ride up a little. Over time it will settle itself in.

**STEP 29 - ATTACH LID PROP**

Position the lid prop even with the top of the body band and near the chest handle as pictured. Attach with #093 screws.



Position the Lid prop catch plate in a position that allows the prop to just fit into place.



Try placing 2 screws (#1003 self tapping) in first and then latch and un-latch the lid. If it works smoothly, go ahead and drive the other screws. If it doesn't, try loosening the two screws and adjusting it. There is a small amount of play in the screw holes that can make a world of difference. It may be necessary to slightly lift the lid in order to get it to un-latch. This is okay.



## GM1414 LID LIFTER UPGRADE KIT CONTINUED

**STEP 31 - REPOSITION LID BRACE CATCH**

Move the lid brace catch up so it is even with the top of the body band. The brace should hang about 1/8" away from the arm of the catch that is closest to the front of the kiln. Attach with #093 screws.



# Congratulations You Are Done!

