



# Lid Lifter Upgrade Kit



#103 (34)

#093 (24)

#756 (8)

#776 (2)

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| <b>1 Left Body Hinge</b>            | <b>11 Prop Arm Pad (Threaded w/nut)</b> |
| <b>2 Right Body Hinge</b>           | <b>12 Lid Brace Bracket</b>             |
| <b>3 Right Spring</b>               | <b>13 Lid Pad Eye (2)</b>               |
| <b>4 Left Spring</b>                | <b>14 5/8" Spring Retainer Rod (2)</b>  |
| <b>5 Hitch Pins</b>                 | <b>15 Strut Rod</b>                     |
| <b>6 Main Hinge Cotter Pins (2)</b> | <b>16 3/4" Main Hinge Rod</b>           |
| <b>7 Bag of Screws (See detail)</b> | <b>17 Lid Brace</b>                     |
| <b>8 Lid Prop Arm</b>               | <b>18 Metal Hole Plug (2)</b>           |
| <b>9 Lid Prop Catch Plate</b>       | <b>19 Cross Bar</b>                     |
| <b>10 Lid Brace Pad</b>             | <b>20 Lid Lifter Arm</b>                |

(continued)

## LID LIFTER UPGRADE KIT CONTINUED

**REQUIRED TOOLS****- 12 Volt or Higher Cordless Drill w/ #2 Phillips Head Bit**

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.

**INSTALLATION INSTRUCTIONS**

1. Open your Lid Lifter retrofit kit and examine the contents. Check to ensure you have all the items listed on the front page. A few items may look slightly different depending on the model you are upgrading but the number and general type will be the same.
2. With your existing kiln lid closed, remove the following hardware from your kiln:

A. Remove Lid and Body Hinge Assemblies



B. Remove Lid Handle



C. Remove the Lid Brace, Lid Brace Pad, and Lid Brace Guide



## LID LIFTER UPGRADE KIT CONTINUED

3. **Tighten the lid band and upper section body band securely.** Use a little WD-40 or similar lubricant on the worm screws if they are corroded.
4. There will be sharp raised areas where the old sheet metal screws were on your lid and body band. These should be filed smooth or tapped flat gently with a small hammer to remove or flatten the burrs.
5. Attach the left and right lid lifter body hinges.

- A. Attach the Strut Rod to the Left Body Hinge using a #776 machine screw.



- B. Stand both body hinges up on a flat surface and attach the Right Body Hinge to the other end of the strut Rod



- C. Slide the lid towards the front of the kiln so you can locate the seams on the rear brick. The inside bends of the Body Hinges are going to align on these seams. Mark them with a pen so you can see them when the lid is slid back in position.



- D. Align the Body Hinge Assembly so the edge is even with the top edge of the body band and the inside bend of the Body Hinges are in line with your marks. Secure with #093 screws beginning with the second column of holes in from the strut rod and working your way out. The first column of holes on each Body Hinge requires slightly longer screws so use the #756 screws.



## LID LIFTER UPGRADE KIT CONTINUED

## 6. Attach the Lid Lifter Arm

- A. Ensure that the kiln lid is positioned and centered on the top section with the lid band buckles lined up with the body band buckles. Line up the 3/4" holes in the lid lifter arm with the 3/4" holes in the body hinges and pin in place using the 3/4" Main Hinge Rod. Placing something under the Arm helps prevent damaging the lid during this step. Lower the lid lifter arm so it rests on the kiln lid. Install the 2 Cotter Pins in the ends of the Main Hinge Rod, securing it in place.



- B. Line up the bottom edge of the bent flange on the front of the lid lifter arm with the bottom edge of the lid band and center the flange on the lid band using the top peep plug hole as a reference. Secure the flange to the lid band using the #103 sheet metal screws.



- C. Slide the 1" diameter Crossover Bar through the holes in the middle of the lid lifter arm and center the tube. Slide the two Pad Eyes over each end of the Crossover Bar and insert a Hitch pin on each end of the bar.



- D. The Pad Eyes should be squared up with the lid band and fastened in place using the #103 sheet metal screws. The Lid Brace Pad mounts on top of the left Pad Eye. The position varies depending on the model. Check photos.



- E. Insert the metal hole plugs into the ends of the Crossover Bar.



## LID LIFTER UPGRADE KIT CONTINUED

## 7. Install and Tension the Springs

- A. With the lid closed, install the torsion springs on the main hinge rod as follows: Remove one hitch pin from the main hinge rod. Slide the main hinge rod out so that only one side of the hinge assembly is still hinged. Slide the torsion springs over the end of the main hinge rod taking care that the long ends of the springs are together and facing down. (See photo). Slide the main hinge rod back in place and reinstall the hitch pin.



- B. Slide the 5/8" upper spring retainer rod in place in the upper 5/8" holes ensuring that the upper ends of the torsion springs are behind the retainer rod. Install the hitch pins in the ends of the retainer rod.



- C. Open the kiln lid fully about 10 degrees past vertical and allow the upper spring retainer rod to stop the lid movement. The lid should be stable and safe in this position. Install the 5/8" lower spring retainer rod in place using the outermost set of 5/8" holes in the body hinges. Ensure the lower ends of the torsion springs are behind the retainer rod. It may be necessary to push on the spring ends slightly to install the spring rod properly. Install the hitch pins in the ends of the spring retainer rod.



- D. When the lid is carefully lowered, the torsion springs will be put in compression. Ensure that no one is standing behind the kiln when the lid is lowered until it is determined that all hinge parts are securely fastened and are working properly. Make a thorough inspection of all hinges, spring rods, etc. to ensure that nothing has worked loose.

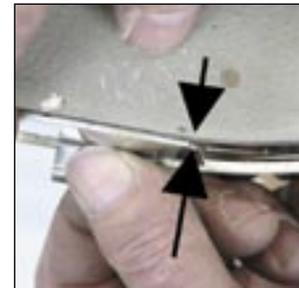
## LID LIFTER UPGRADE KIT CONTINUED

## 8. Install Lid Prop

- A. The Lid Prop Plate should be located on the lid with the right edge of the plate flush with the first facet junction to the left of the handle. See photo.



- B. To line it up position the Plate overlapping the facet junction and slide it back until there is no gap between the right edge of the Plate and the lid band. Line up the bottom edge of the Catch plate flush with the bottom edge of the lid band. Attach the Plate using #103 screws.

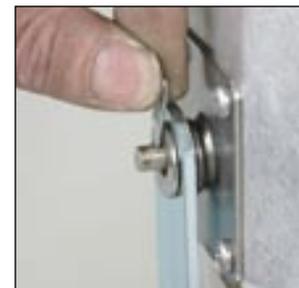


- C. Position the Lid Prop Arm by placing the Prop Catch in the first notch and aligning the prop so it is perpendicular to the lid band. The Prop Arm should be able to rock back out of the closed position without catching on the Prop Catch. Secure the Prop Arm Pad with #103 screws.



## 8. Install Lid Brace

- A. Attach the Lid Brace to the Lid Brace Pad. Be sure that 2 washers are used between the Lid Brace and Lid Brace Pad and 1 washer is used between the Lid Brace and the CotterPin



- B. The Lid Brace Bracket position will be different depending on whether it is a 10-sided model or a 12-sided model. Use the photos to help position the bracket and then secure it with #103 screws.



## LID LIFTER UPGRADE KIT CONTINUED

Congratulations! Your Lid Lifter Upgrade is now complete. Periodic checks should be made to the spring and hinge assembly to ensure all components are staying tight and in proper working order. A light lubricating oil may be applied to the main hinge rod if squeaking is present.

## OPERATION

### The lid prop and lid brace

The lid prop has several functions. The first notch in the Lid Prop holds the kiln lid down to ensure that the lid stays closed during the firing. Since the lid is extremely light there is a potential for the lid to be raised by the upward flow of heat radiation during the firing. **Always be sure to fasten the Lid Prop before firing the kiln.**

The second to positions on the Lid Prop are used for venting. For normal venting use the second middle notch and for heavy venting use the top notch. After the kiln has reached 1000 F be sure to lower the lid and reset the Prop to the closed position for the remainder of the firing.

- **Never use the venting positions if your kiln is equipped with a downdraft vent.**
- **Always use gloves when operating the Lid Handle or Lid Prop when the kiln is hot.**

Your upgrade kit included a new style lid brace. This new lid brace has 2 positions. The first position is convenient for normal everyday use and the second opens the lid over 90 degrees so large objects can be lowered into the kiln without obstruction. The new brace also includes a safety stop to prevent the lid from opening too far.