Model PS21

Owner’s Manual and Parts List
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Thank you and congratulations on the purchase of your new Model PS21 Patty Molding Machine from Patty-O-Matic, Inc! The Model PS21 will form, interleave paper between, and stack patties. This machine is designed for easy operation and cleaning. Please become familiar with this manual and your machine will give you many years of service.

The Model PS21 is shipped to you in at least three cartons which contain the patty machine, feed tray, mold plate guard, spare parts box, receiving table, riser platform, and the manual. If you purchased your machine with any other accessories, such as a mobile table or patty paper, these items may be in a separate carton.

Your machine is equipped with two interlocks. One is located on the front of the machine and one is located on the top of the machine. The Mold Plate Guard must be installed on the machine to engage the interlock on the front of the machine and the Feed Tray including the guard must be installed on top of the Hopper to engage the interlock on top of the machine.

### Installing Machine onto Riser Platform
Place machine on the riser platform making sure the 4 legs of the machine go into the 4 leg wells on the Riser Platform. The Picture shown shows the front view of the Riser Platform.

### Installing the Mold Plate Guard
Loosen Guard Bolts on the Hopper and the rear post. Place Mold Plate Guard under the washers located under the bolt heads. Tighten bolts using the provided Speed Driver. To activate the interlock, slide push rod into the plunger, inside the keylatch, and turn rod to the right. This will lock the push rod in place and activate the interlock.

### Installing the Feed Tray
Place stainless steel tube of Feed Tray over the Hopper. Make sure the Plunger on the bottom of Feed Tray depresses the Tower Stem inside the Tower Sleeve.
**Accessories Equipped with the Model PS21**

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
<th>Part #</th>
</tr>
</thead>
</table>
| 1     | Spare Parts Box
   
   Holds Spare Parts, Patty Paper Sample, Machine Lubricant, Speed Driver, and Locator Rings c/w instructions | 655     |
| 2     | Receiving Table                                                             | 609-6   |
| 3     | Speed Driver                                                                | 544     |
| 4     | 8 Ounce Bottle of Machine Lubricant and Cleaner                             | 600     |
| 5     | Gallon of Machine Lubricant(Separate Order Only)                            | 600A    |
| 6     | Machine Locator Rings                                                       | 610-2   |
Please become familiar with some of the parts of your machine prior to operation.

Feed Tray Guard and Mold Plate Guard are installed for your safety. Do not tamper with them in any way!
Proper Label Location for a Model PS21
<table>
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<th>Description</th>
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<td>Safety instructions</td>
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<td>9.</td>
<td>Danger on/off</td>
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<td>Do Not Pressure Wash</td>
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<td>11.</td>
<td>Unplug Machine</td>
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<td>12.</td>
<td>Made in USA</td>
<td>514-19</td>
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</table>
**Setting the Ring Pin Pressure Plate for your Patty Size**

The Purpose of the Pressure Plate is to entrap the amount of product necessary to form your patty. This part is also used in controlling the firmness of your patty. With the Pressure Plate set correctly you will in turn have:
- less leakage, oozing, and coating of parts
- less over working of your product
- and less strain on your machine.

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If your patty weight is 8 ounces, keep the ring pin in the storage hole as described in the picture. This will allow the Pressure Plate to move all the way into the Hopper and stop on the welded stop, which traps the most product and is the maximum volume setting.

If your mold cavity is for 4 ounces, remove the ring pin from the storage hole and place it in the 4 ounce hole.

If your mold cavity is for 6 ounces, place the ring pin in the 6 ounce hole.

If you would like to have a tightly packed patty, move the ring pin to a higher than recommended setting for that particular weight.

**These are only recommended settings. A variety of circumstances may call for you to insert the ring pin in a different location.**

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**Proper Procedure for Operating a PS21**

When the Model PS21 is fully assembled with all guards secured in their proper place, put product to be molded in the Feed Tray. Push the product through the holes in the Feed Tray Guard, or under the Feed Tray guard and into the Hopper. **DO NOT PUT HANDS OR FINGERS, OR FOREIGN OBJECTS, SUCH AS STOMPERS OR PLUNGERS INTO THE HOPPER. THERE ARE NO STOMPERS OR PLUNGERS NECESSARY WHEN USING THIS UNIT, THEREFORE NONE ARE SUPPLIED.** After you allow product to drop into the Hopper turn the machine on by moving the On/Off switch down towards the on position. The machine may need to cycle a few times to prime the machine with product. As patties are being formed continue to push product through the holes and under the Feed Tray Guard. Patty paper may be added to the machine as needed. The machine can hold up to 1 inch of paper at a time, but no more.

As the Mold Plate moves back and forth to form patties, a thin coating of product may accumulate over its surface. This coating may also accumulate on the edges of the Knock Out Cup or on the front of the Hopper and Spacer Plate. This accumulation does occur on all molding machines. It is nothing to be concerned with. There are certain machine settings that may lessen this accumulation.
Changing Your Machine’s Mold Plate

Always disconnect the machine from its power source before attempting to change or clean any of the machines component parts.

If the Mold plate is all the way into the machine, remove the T-Knob from the Back Drive by lifting the ring pin and unthreading the knob. Pull the Mold Plate out from the back of the machine. If the Mold Plate is slightly out of the machine and you prefer to remove it without removing the T-Knob, simply pull the ring pin out and unhook the Connecting Arm from the T-Knob. Then slide the Mold Plate from the back of the machine.

When changing the Mold Plate always use the corresponding Double Seal Spacer Plate and Knock Out Cup. The thickness fraction stamped on the Double Seal Spacer Plate should match the fraction stamped on the front right corner of the Mold Plate. For example: if your Mold Plate is stamped “4F ½” then the Double Seal Spacer Plate should be stamped “1/2”. The Double Seal Spacer Plate is held in place by the Retaining Rod. The Retaining Rod is secured by a spring into the Guard Block. Lift the Retaining Rod up and to the side so it does not protrude into the Double Seal Spacer Plate. There is no need to remove the Retaining Rod from the Guard Block. After putting the new Mold Plate and corresponding Double Seal Spacer Plate into the machine, lift the Retaining Rod and let it go into the hole located on the front of the Double Seal Spacer Plate. Make Sure that the Double Seal Spacer Plate is in the locked position and the O’Rings are facing up. Failure to do so may cause the Double Seal Spacer Plate to move with the Mold Plate, and could damage the machine. Since no Double Seal Spacer Plate is required when using a 3/4” Mold Plate, leave the Retaining Rod in the storage position.
Proper Disassembly for Cleaning your Model PS21

Always Unplug Machine from its Electrical Source Before Cleaning

- Remove Feed Tray by lifting it off the Hopper, and Mold Plate Guard by loosening the Guard Bolts, and unlatching the push rod.

- Remove Pressure Plate by detaching Pressure Plate Spring and sliding Pressure Plate from inside of the Hopper. Pull Retractable Meat Stop out of the hopper until it stops. Remove feeder by loosening bolt using the tool provided. Twist feeder washer away from bolt and lift feeder from the inside.

- Remove the four Hopper Bolts using the provided speed driver. The two bolts on the Chamber Lid may be removed for additional cleaning.

- Loosen the two Hopper Bolts using the disassembly tool provided. The two bolts on the chamber lid may be loosened to be able to remove the Chamber lid for additional cleaning if necessary.

- Remove Hopper by sliding it toward the on/off switch and lifting it off the Main Shaft.

- After the Hopper is removed from the machine, remove Spacer Plate from the top of the Mold Plate. *Note--Occasionally the Spacer Plate sticks to the bottom of the Hopper. 3/4” Molds do not use a spacer plate. Retaining Rod should be left in storage position when using a 3/4” mold.

- Remove the Mold Plate by pulling the ring pin and disengaging the Connecting Arm from the T-Knob. This will allow the Mold Plate to be removed from between the Guide Rails and removed from the machine. The T-Knob may also be un-screwed from the Back Drive as an alternate means of disassembly.

- Remove the two Hopper Bolts using the disassembly tool provided. The two bolts on the chamber lid may be loosened to be able to remove the Chamber lid for additional cleaning if necessary.

- Loosen the two Hopper Bolts using the disassembly tool provided. The two bolts on the chamber lid may be loosened to be able to remove the Chamber lid for additional cleaning if necessary.

- Remove Hopper by sliding it toward the on/off switch and lifting it off the Main Shaft.

- After the Hopper is removed from the machine, remove Spacer Plate from the top of the Mold Plate. *Note--Occasionally the Spacer Plate sticks to the bottom of the Hopper. 3/4” Molds do not use a spacer plate. Retaining Rod should be left in storage position when using a 3/4” mold.

- Remove the Mold Plate by pulling the ring pin and disengaging the Connecting Arm from the T-Knob. This will allow the Mold Plate to be removed from between the Guide Rails and removed from the machine. The T-Knob may also be un-screwed from the Back Drive as an alternate means of disassembly.
- To Re-Assemble the Machine reverse the above procedure. Hopper bolts should only be hand tightened with the Speed Driver provided.

- All of the parts that were removed from the machine can now be washed and sanitized thoroughly. USDA recommends the sanitizing solution should be 50 parts per million but no more than 200 parts per million. The machine itself should be cleaned and sanitized by hand. After all the parts are cleaned, sanitized and dry they should be coated in mineral oil as an extra protectant. **DO NOT HOSE DOWN OR PRESSURE WASH THIS MACHINE!**

*To Re-Assemble the Machine reverse the above procedure. Hopper bolts should only be hand tightened with the speed driver provided.

*The Knock Out Cup Should be installed on the Machine before the Feed Tray and Mold Plate Guard, but after all other parts are in place. The Mold Plate should be all the way forward and the Knock Out Arm should be in the down position for the cup to align with the Mold Plate properly.

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**Installing Patty Paper on Interleaver**

- Place a stack of paper no thicker than 1 inch under the pressure foot. Slide the hole in the paper over the center pin.

*Placing more than 1 inch of paper may cause improper paper feeding.

Paper Sleeves Stops should be adjusted for different size patty paper

Shown without guard for better visual
Points of Daily Lubrication For Your Model PS21:

Always Unplug Machine and use Food Approved Oil and Grease!

The Following Parts should be lubricated daily

- Pressure Foot should be lifted up and oiled. Hold the Acorn Nut and lift up. Place a few drops of oil on the Pressure Foot shaft.

- Knock Out Shaft should be oiled when the Knock Out Arm is in the up position. The picture shown displays the Arm in the up position.

- Tower Stem should be oiled when the Feed Tray is removed as shown.

- Rod End Bearings should be oiled with a few drops of oil. There are two Rod End Bearings to be oiled. Do not allow oil to drip onto the Conveyor Belt.

- Main Shaft should be oiled when the machine is disassembled as shown in this picture. Be sure to oil the bottom of the shaft by the Hopper Bushing.

- The inside of the machine can be lubricated through the Rear Inspection Opening. By spraying lithium grease here, you can lubricate all internal moving components.

- The Grease Fitting on the side of the machine by the On/Off switch should be greased once every two weeks. 3 to 4 shots of grease are recommended.

Acorn Nut
Tower Stem
Pressure Foot Shaft
Knock Out Arm
Knock Out Shaft
Rod End Bearings
Conveyor Belt
Main Shaft
Grease Fitting located on this side
Rear Inspection Hole
### Poly Coved Feed Tray

**1. Quick Feed Tray Guard Assembly**

**2. Feed Tray Guard Hardware**

**3. Stainless Steel Flange Support**

**4. Mold Plate Guard Assembly**

**5. Push Rod Collar**

**6. Push Rod**

**5 & 6. Push Rod and Collar Assembly**

**7. Knock Out Knob**

**8. Knock Out Arm (partial view)**

**9. Knock Out Cup Plastic Washer**

**10. Round Knock Out Cup (Specify Size)**

**11. Knock Out Cup Flat Washer and Lock Washer**

**12. Knock Out Air Valve (shown in red for visual affect)**

**13. Knock Out Cup Bolt**

**14. Knock Out Cup Fender Washer**

**15. Feed Tray Tower Plunger and Bolt (Located on the bottom of the feed tray)**

-Knock Out Cup Assembly is Part #PS21-571
-Knock Out Cup Hardware Only is Part #PS21-571-H1

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<td>1</td>
<td>Quick Feed Tray Guard Assembly</td>
<td>543-QP</td>
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<td>2</td>
<td>Feed Tray Guard Hardware</td>
<td>541-B</td>
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<td>3</td>
<td>Stainless Steel Flange Support</td>
<td>554</td>
</tr>
<tr>
<td>4</td>
<td>Mold Plate Guard Assembly</td>
<td>PS21-550SC</td>
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<tr>
<td>5</td>
<td>Push Rod Collar</td>
<td>553-1B</td>
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<tr>
<td>6</td>
<td>Push Rod</td>
<td>553-5</td>
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<tr>
<td>5 &amp; 6</td>
<td>Push Rod and Collar Assembly</td>
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<td>7</td>
<td>Knock Out Knob</td>
<td>PS21-571-7</td>
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<tr>
<td>8</td>
<td>Knock Out Arm (partial view)</td>
<td>502B</td>
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<tr>
<td>9</td>
<td>Knock Out Cup Plastic Washer</td>
<td>571-6</td>
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<td>10</td>
<td>Round Knock Out Cup (Specify Size)</td>
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<td>11</td>
<td>Knock Out Cup Flat Washer and Lock Washer</td>
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<td>12</td>
<td>Knock Out Air Valve (shown in red for visual affect)</td>
<td>571-4</td>
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<td>13</td>
<td>Knock Out Cup Bolt</td>
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<td>Knock Out Cup Fender Washer</td>
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<td>Feed Tray Tower Plunger and Bolt (Located on the bottom of the feed tray)</td>
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<td>Hopper Casting</td>
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<td>3</td>
<td>Hex Hold Down Bolt (also used as Hopper hold down)</td>
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<td>4</td>
<td>Retaining Rod</td>
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<td>5</td>
<td>Guard Block</td>
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<td>Retractable Meat Stop</td>
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<td>Pressure Plate Block Assembly</td>
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<td>Feeder</td>
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<td>Guard Block Mounting Screws</td>
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<td>Feeder Washer</td>
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<td>Mixer Collar</td>
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<td>17</td>
<td>Feeder Washer Bolt</td>
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### Note:

Many parts are also sold as assemblies.

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<td>Knock Out Cup</td>
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<td>Paper Weight</td>
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<td>Knock Out Bumper</td>
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<td>Knock Out Shaft Bushing (white bushing pressed</td>
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<td>into Machine Frame)</td>
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<td>Round Key Latch Assembly</td>
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<td>Plunger Switch(Located inside machine)</td>
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<td>Paper Stop</td>
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<tr>
<td>17</td>
<td>2 Return Bracket Mounting Screws249</td>
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<tr>
<td>18</td>
<td>Left Return Spring</td>
<td>246L</td>
</tr>
<tr>
<td>19</td>
<td>Right Return Spring</td>
<td>246R</td>
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<th>Item #</th>
<th>Description</th>
<th>Part #</th>
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<tbody>
<tr>
<td>20</td>
<td>Spring Adjusting Collar w/ set screw</td>
<td>244</td>
</tr>
<tr>
<td>21</td>
<td>Set Screw (one in each collar)</td>
<td>245</td>
</tr>
<tr>
<td>22</td>
<td>Pivot Rod Support</td>
<td>243</td>
</tr>
<tr>
<td>23</td>
<td>Paper Motor Cover c/w Hardware</td>
<td>PS21-537</td>
</tr>
<tr>
<td>24</td>
<td>Interleaver Support Hardware</td>
<td>499</td>
</tr>
<tr>
<td>25</td>
<td>Interleaver Support Bar</td>
<td>PS21-497</td>
</tr>
<tr>
<td>26</td>
<td>Interleaver Support Bar Spacers</td>
<td>PS21-498</td>
</tr>
<tr>
<td>27</td>
<td>Weight Shaft Hardware</td>
<td>528</td>
</tr>
<tr>
<td>28</td>
<td>Conveyor Belt</td>
<td>534</td>
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<tr>
<td>29</td>
<td>Conveyor Belt Guard</td>
<td>PS21-536</td>
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<tr>
<td>30</td>
<td>Paper Interleaver Casting Frame</td>
<td>519</td>
</tr>
<tr>
<td>31</td>
<td>Weight Shaft Spacers (Not Shown)</td>
<td>531</td>
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<tr>
<td>32</td>
<td>Interleaver to Support Bar Hardware</td>
<td>PS21-539-1</td>
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</tbody>
</table>
Item # | Description                                      | Part # |
-------|--------------------------------------------------|--------|
 1     | Pressure Plate Spring and collar                | 549    |
 2     | Ring Pin Adjustment Holes                       | N/A    |
 3     | Ring Pin (shown in the storage hole)           | 546C   |
 4     | Ring Pin Pressure Plate                         | 546-3  |
 5     | Back Drive Stop Bolt                            | 565    |
 6     | Mold Plate Back Drive                           | 564    |
 7     | Air Grooves (colored for visual)               | N/A    |
 8     | Round Mold Plate Only                           | 563-1  |
 9     | Set of Back Drive Hardware                      | 568A   |

Item # | Description                                      | Part # |
-------|--------------------------------------------------|--------|
10     | Back Drive Clamp                                 | 568    |
11     | T-Knob                                           | 567    |
12     | Hopper Casting                                   | PS21-545 |
13     | Hold Down Bolt                                   | 556B   |
14     | Feeder Washer                                    | PS21-560 |
15     | Retractable Meat Stop                            | PS21-555 |
16     | Shear Key and Screw                              | PS21-562 |
17     | Spacer Plate (Specify Size)                      | 569DS  |
18     | PS21 Feeder Washer bolt                          | PS21-558B |
19     | Double Seal Spacer Plate O’Rings                 | 569A   |

Part # PS21 -563 - Mold Plate Assembly
-Includes Round Mold Plate, Back Drive Assembly and Knock Out Cup Assembly

Other Shapes Available
<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Round Key Latch</td>
<td>609-A1</td>
</tr>
<tr>
<td>2</td>
<td>On/Off Switch Guard</td>
<td>501</td>
</tr>
<tr>
<td>3</td>
<td>On/Off Switch Boot</td>
<td>500B</td>
</tr>
<tr>
<td>4</td>
<td>Power Cord</td>
<td>115-01</td>
</tr>
<tr>
<td>5</td>
<td>Wire Grommet</td>
<td>487</td>
</tr>
<tr>
<td>6</td>
<td>Guard Switch</td>
<td>608-1B</td>
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<tr>
<td>7</td>
<td>Guard Switch Wire</td>
<td>608-1D</td>
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<tr>
<td>8</td>
<td>On/Off Switch (insulated in electrical tape)</td>
<td>500</td>
</tr>
<tr>
<td>9</td>
<td>Tower Switch</td>
<td>620-10B</td>
</tr>
<tr>
<td>10</td>
<td>Tower Switch Wire</td>
<td>620-10A</td>
</tr>
<tr>
<td>11</td>
<td>15 AMP Circuit Breaker</td>
<td>115-15</td>
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Part # 608-5A – Includes Guard Switch and Wire    Part # 620-10 – Includes Tower Switch and Wire
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<thead>
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<th>Item#</th>
<th>Description</th>
<th>Part #</th>
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<tbody>
<tr>
<td>1</td>
<td>Tower Sleeve</td>
<td>620-16</td>
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<td>2</td>
<td>Tower Stem</td>
<td>620-3</td>
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<tr>
<td>3</td>
<td>Tower Tube</td>
<td>620-5</td>
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<td>4</td>
<td>Tower Block</td>
<td>620-6</td>
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<tr>
<td>5</td>
<td>Tower Locator Lock Bolt</td>
<td>620-7</td>
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<td>6</td>
<td>Tower Switch</td>
<td>620-10B</td>
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<td>7</td>
<td>Rubber Seal</td>
<td>464S</td>
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<tr>
<td>8</td>
<td>Tower Block Hardware</td>
<td>620-8</td>
</tr>
<tr>
<td>9</td>
<td>Tower Jam Nut</td>
<td>620-06</td>
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<td>10</td>
<td>Tower Spring</td>
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<td>11</td>
<td>Tower Acorn Nut</td>
<td>620-15</td>
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<td>12</td>
<td>Tower Bushing</td>
<td>620-4</td>
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<td>13</td>
<td>Tower Switch Wire</td>
<td>620-10A</td>
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<tr>
<td>Item#</td>
<td>Description</td>
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<tr>
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<tr>
<td>1</td>
<td>Main Shaft Bushing (pressed into Machine Frame)</td>
<td>470</td>
</tr>
<tr>
<td>2</td>
<td>Main Shaft Thrust Washer</td>
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<td>3</td>
<td>Timing Sprocket</td>
<td>465T</td>
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<td>4</td>
<td>Chain Tension Adjuster Bolt</td>
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<td>5</td>
<td>Main Shaft Bearing (pressed into Machine Frame)</td>
<td>464A</td>
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<tr>
<td>6</td>
<td>Timing Chain and Link</td>
<td>471</td>
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<tr>
<td>7</td>
<td>Main Shaft Clamp</td>
<td>467</td>
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<td>8</td>
<td>Main Shaft Clamp Hardware</td>
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<td>9</td>
<td>Main Shaft Fender Washer and Hardware</td>
<td>240-1</td>
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<td>10</td>
<td>Main Shaft Driven Sprocket (Specify Amount of Teeth)</td>
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<td>11</td>
<td>Main Shaft Threaded Insert Set Screw</td>
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<td>Main Shaft Threaded Insert c/w Set Screw and Locking Nut</td>
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<td>Main Shaft Sprocket Key</td>
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<td>14</td>
<td>Grease Line System (Not completely shown)</td>
<td>PS21-704</td>
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<td>15</td>
<td>Main Shaft C/W Insert and Set Screw</td>
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<tr>
<td>Item #</td>
<td>Description</td>
<td>Part #</td>
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<tr>
<td>1</td>
<td>Connecting Arm</td>
<td>455</td>
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<tr>
<td>2</td>
<td>Crank Arm</td>
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<tr>
<td>3</td>
<td>Crank Shaft Housing Casting</td>
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<td>PS21 Grease Line System</td>
<td>PS21-704</td>
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<td>5</td>
<td>Crank Housing Assembly</td>
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<td>6</td>
<td>Crank Shaft</td>
<td>456</td>
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<tr>
<td>7</td>
<td>Crank Housing Bearing(2)(pressed into Crank Housing)</td>
<td>457A</td>
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<td>8</td>
<td>Crank Shaft Sprocket</td>
<td>460</td>
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<td>9</td>
<td>Timing Chain and Link</td>
<td>471</td>
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<tr>
<td>10</td>
<td>Crank Arm Hardware</td>
<td>453</td>
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<td>11</td>
<td>Connecting Arm Thrust Washer</td>
<td>456B</td>
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<td>12</td>
<td>Connecting Arm Cotter Pin</td>
<td>455A</td>
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<td>Connecting Arm Bushing (white poly bushing pressed into the Connecting Arm not shown)(2)</td>
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<tr>
<td>14</td>
<td>Sprocket Key</td>
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<td>Connecting Arm Spring Washer (Between the Connecting and Crank Arm)</td>
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<td>Item#</td>
<td>Description</td>
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<tr>
<td>1</td>
<td>Machine Legs (set of 4)(Only 2 shown)</td>
<td>446</td>
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<td>2</td>
<td>Motor Drive Sprocket(Specify Teeth)</td>
<td>236</td>
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<td>3</td>
<td>Motor to Main Shaft Chain and Link</td>
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<td>4</td>
<td>Idler Arm Shoulder Bolt Hardware</td>
<td>229B</td>
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<td>5</td>
<td>Idler Arm Shoulder Bolt</td>
<td>229A</td>
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<td>6</td>
<td>Idler Arm</td>
<td>230-A</td>
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<td>7</td>
<td>Idler Arm Sprocket and Bushing Assembly</td>
<td>232</td>
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<td>Idler Arm Spring Tab</td>
<td>231A</td>
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<td>9</td>
<td>Idler Arm Spring Tab Hardware</td>
<td>231B</td>
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<td>10</td>
<td>Main Shaft Fender Washer and Hardware</td>
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<td>Main Shaft Driven Sprocket(Specify Teeth)</td>
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<td>12</td>
<td>Idler Arm Spring</td>
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<tr>
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<td>Idler Arm Spring Bolt and Hardware</td>
<td>235</td>
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<td>14</td>
<td>Gear Head Motor Mounting Hardware(set of 5)</td>
<td>284B</td>
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<tr>
<td>15</td>
<td>Idler Arm Sprocket Bushing(Set of 2)</td>
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Part # 229 – Idler Arm Assembly - Includes spring, tab, arm, and all hardware
Knock Out Cam Bottom View

Knock Out Lever Assembly

Knock Out Shaft and Lever Assembly

<table>
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<tr>
<th>Item#</th>
<th>Description</th>
<th>Part #</th>
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<tbody>
<tr>
<td>1</td>
<td>Crank Housing Hardware</td>
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<td>2</td>
<td>Steel Knock Out Cam Assembly</td>
<td>472-S</td>
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<tr>
<td>3</td>
<td>Machine Legs (set of 4)(2 Shown)</td>
<td>446</td>
</tr>
<tr>
<td>4</td>
<td>Steel KO Cam Drive Key(Not Shown)</td>
<td>477-1</td>
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<tr>
<td>5</td>
<td>Knock Out Shaft</td>
<td>PS21-449</td>
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<td>6</td>
<td>Knock Out Lever</td>
<td>450</td>
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<td>7</td>
<td>Cam Follower Bearing Hardware</td>
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<td>8</td>
<td>Knock Out Lever Hardware</td>
<td>451</td>
</tr>
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<td>9</td>
<td>Knock Out Lever Bushing Hardware</td>
<td>450B</td>
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<tr>
<td>10</td>
<td>Cam Follower Bearing</td>
<td>474</td>
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<td>11</td>
<td>Steel Knock Out Cam Bolts(2)</td>
<td>472-S1</td>
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<td>12</td>
<td>Steel KO Cam Keeper Bolt and Hardware</td>
<td>472-S2</td>
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<td>13</td>
<td>Knock Out Lever Bushing(sits inside Knock Out Lever)</td>
<td>450A</td>
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<td>Knock Out Shaft Bushing</td>
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</table>

Part # 450X
Knock Out Lever Assembly

-Includes Lever, Bushing, Cam Bearing, and all Hardware
<table>
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<th>Item#</th>
<th>Description</th>
<th>Part #</th>
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<tbody>
<tr>
<td>1</td>
<td>PS21 Hopper Bushing</td>
<td>PS21-603</td>
</tr>
<tr>
<td>2</td>
<td>Mold Plate Guide Rail</td>
<td>494</td>
</tr>
<tr>
<td>3</td>
<td>Gear Head Motor</td>
<td>PS21-284</td>
</tr>
<tr>
<td>4</td>
<td>Motor Spacer(5 Required)(2 Shown)</td>
<td>284A</td>
</tr>
<tr>
<td>5</td>
<td>Machine Legs (set of 4)(1 Shown)</td>
<td>446</td>
</tr>
<tr>
<td>6</td>
<td>Rubber Feet (set of 4)</td>
<td>448</td>
</tr>
<tr>
<td>7</td>
<td>Main Shaft C/W Insert and Set Screw</td>
<td>464</td>
</tr>
<tr>
<td>8</td>
<td>PS21 Bed Plate</td>
<td>464-1</td>
</tr>
<tr>
<td>9</td>
<td>Main Shaft Insert c/w Insert and Set Screw</td>
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</tr>
<tr>
<td>10</td>
<td>Mold Plate Guide Rail Bolts (set of 2 bolts)</td>
<td>495</td>
</tr>
<tr>
<td>11</td>
<td>Hold Down Bolt</td>
<td>556B</td>
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<tr>
<td>12</td>
<td>Mold Plate Guard Rear Post Assembly</td>
<td>PS21-551-D</td>
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<tr>
<td>13</td>
<td>PS21 Guide Rail</td>
<td>PS21-494</td>
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<td>PS21 Guide Rail Button Bolts(Set of 2)</td>
<td>PS21-494B</td>
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<td>15</td>
<td>PS21 Bed Plate Bolts(Set of 4)</td>
<td>PS21-602-1</td>
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<tr>
<td>16</td>
<td>PS21 Guide Rail Set Screws (Set of 2)</td>
<td>PS21-494C</td>
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</table>

Please contact the factory for instructions on installing new Mold Plate Guide Rails.
WIRING DIAGRAM

KEY: W = WHITE/NEUTRAL   B = BLACK/115 VAC   G = GREEN/GROUND

115 VAC

15A CIRCUIT BREAKER

GROUND

LIMIT SWITCH

PAPER INTERLEAVER

MOTOR

MAIN MOTOR

1/2 HP
13 AMPS
60 CYCLE
1 PHASE
115 V

POWER

OFF

ON

LIMIT SWITCH

TOGGLE SWITCH

NO

NOT USED

NC

W

B

G