

*Patty-O-Matic, Inc.*<sup>®</sup>  
THE WORLD'S FINEST FOOD MACHINES

**Model 330A**

**Owner's Manual and Parts List**



## **Model 330A Owner's Manual**

### **Table of Contents**

• Introduction to your new machine	Page 3
• Installing Mold Plate Guard	Page 3
• Installing Feed Tray	Page 3
• Accessories Equipped with the Model 330A	Page 4
• Parts to Become Familiar with	Page 5
• Label Location and Description	Pages 6&7
• Operating Procedure	Page 8
• Setting Ring Pin Pressure Plate	Page 8
• Changing Mold Plate and Spacer Plate	Page 9
• Proper Disassembly for Cleaning and Sanitizing	Page 10&11
• Installing Patty Paper	Page 12
• Points of Lubrication	Page 12

### **Parts Representation**

• Feed Tray Assembly	Page 13
• Mold Plate Guard Assembly	Page 13
• Knock Out Cup Assembly	Page 13
• Hopper Assembly	Page 14
• Feeder Assembly	Page 14
• Assembled Machine Views	Page 15
• Paper Interleaver Assembly	Page 16
• Ring Pin Pressure Plate	Page 17
• Mold Plate Assembly	Page 17
• Assembled Hopper and Feeder	Page 17
• Electrical Switches	Page 18
• Tower Assembly	Page 19
• Main Shaft Assembly	Page 20
• Crank Housing Assembly	Page 21
• Motor To Main Shaft	Page 22
• Knock Out Cam Assembly	Page 23
• Knock Out Shaft and Lever Assembly	Page 23
• Main Motor Side View	Page 24
• Mold Plate Guide Rails	Page 24
• Main Shaft Outside Machine View	Page 24
• Wiring Diagram	Page 25
• Warranty Information	Page 26
• Important Information Guide	Page 27
• Notes	Page 28

Thank you and congratulations on the purchase of your new Model 330A Patty Molding Machine from Patty-O-Matic, Inc! The Model 330A 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 productive service.

The Model 330A is shipped to you in at least two cartons which contain the patty machine, feed tray, mold plate guard, spare parts box, receiving table, and this 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. The parts box that comes with the machine should include a bottle of machine lubricant, a speed driver, samples of patty paper, and a spare parts kit.

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.

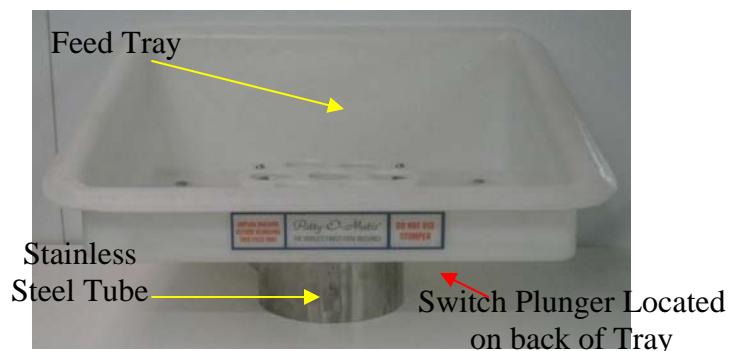
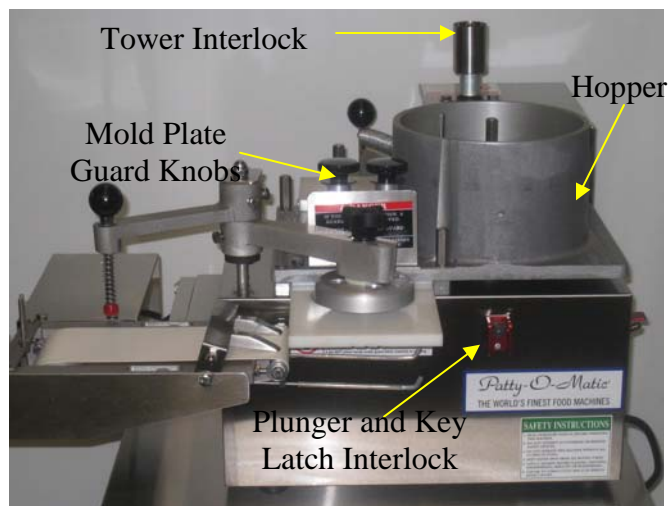
#### **Installing the Mold Plate Guard**

Loosen Guard Knobs on the Hopper and place Mold Plate Guard under the fender washers located under the knobs. Tighten down on Guard Knobs. To Activate the interlock switch, slide push rod against the plunger, inside the keylatch, and turn rod to the right. This will lock the push rod in place and activate your interlock switch.

#### **Installing the Feed Tray**

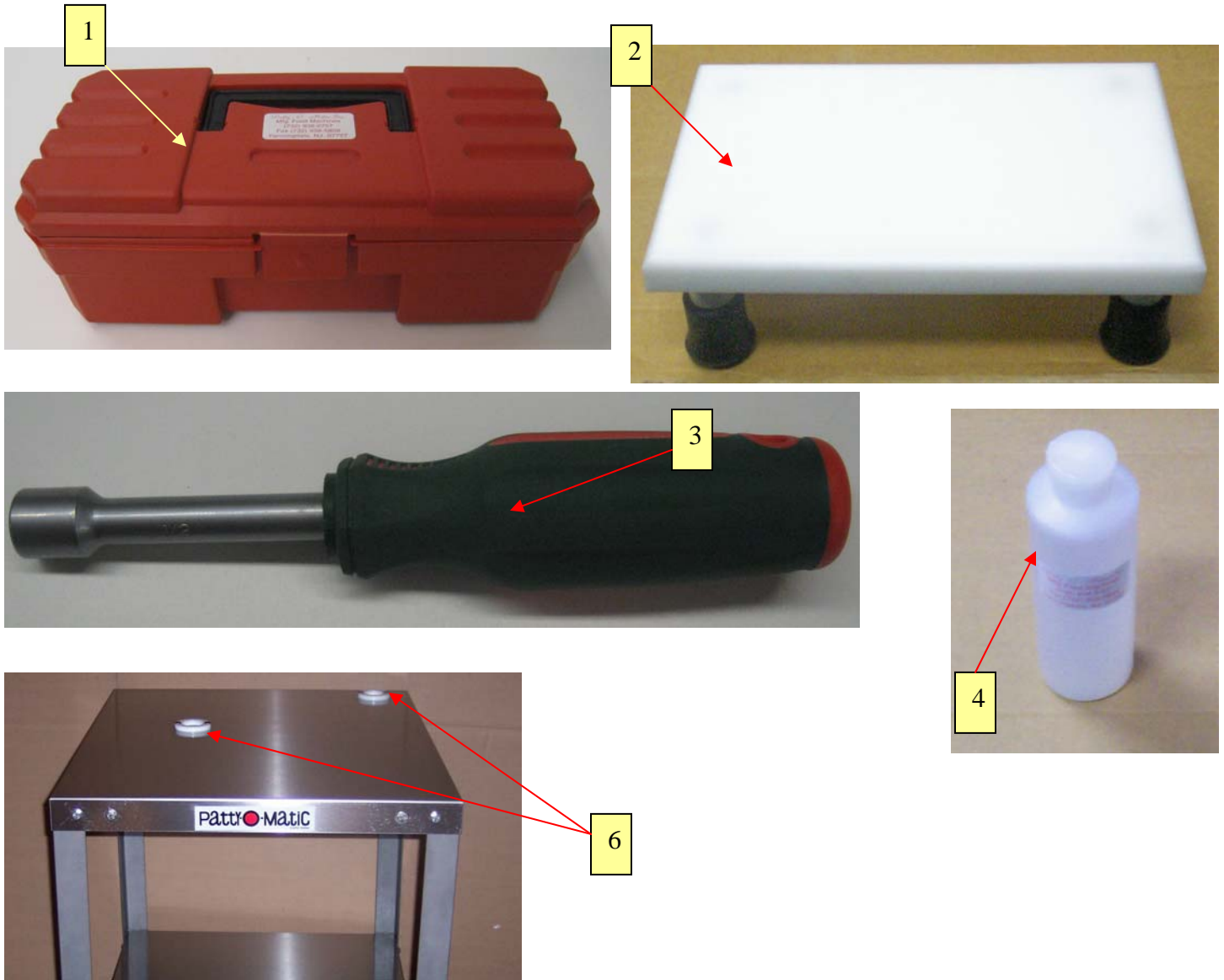
Place stainless steel tube of feed tray over the Hopper. Make Sure the Switch Plunger on the bottom of Feed Tray depresses the Tower Stem inside the Tower Sleeve on the top of the machine.

**DO NOT ATTEMPT TO RUN THIS MACHINE WITHOUT THE FEED TRAY AND THE MOLD PLATE GUARD IN THEIR PLACE!! FAILURE TO DO SO COULD RESULT IN SERIOUS BODILY INJURIES!!**



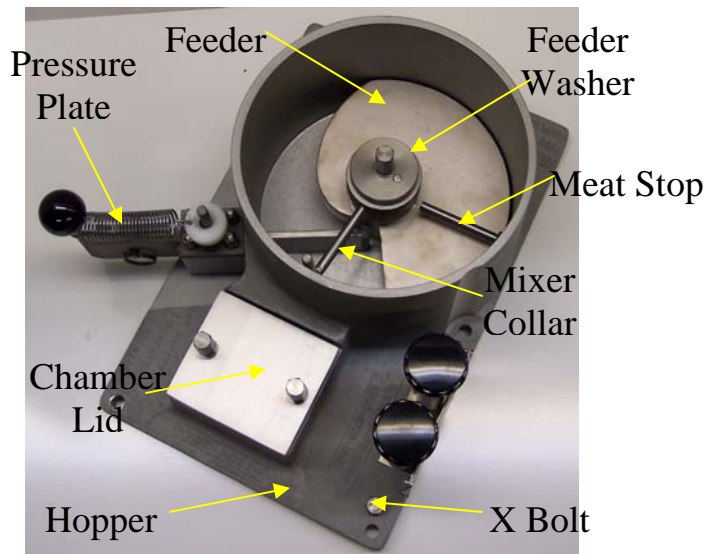
## Accessories Equipped with the Model 330A

4



<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Spare Parts Box	655
↙	Holds Spare Parts, Patty Paper Sample, Machine Lubricant, Speed Driver, and Locator Rings	
2	Receiving Table	609-6
3	Speed Driver	544
4	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 operating machine



Mold Plate Assembly Side View



Mold Plate Assembly Underside View

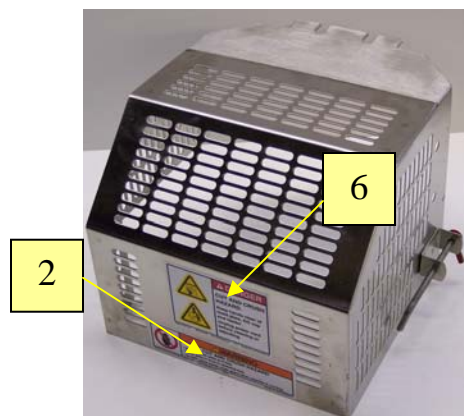
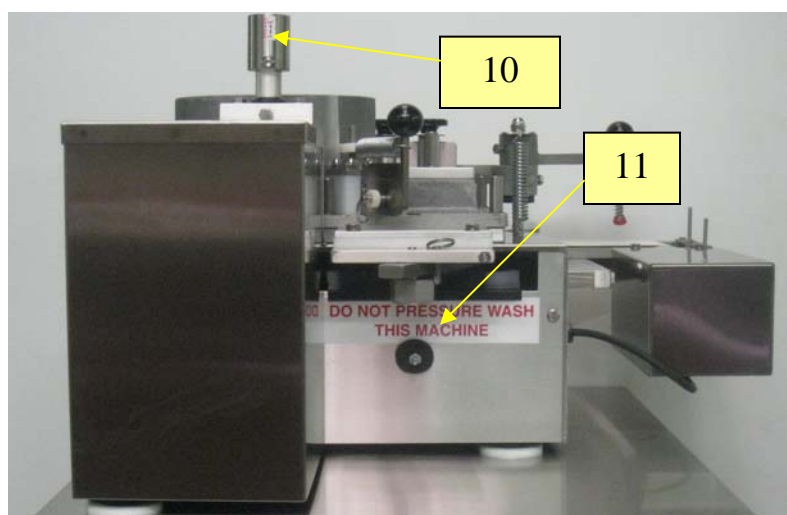
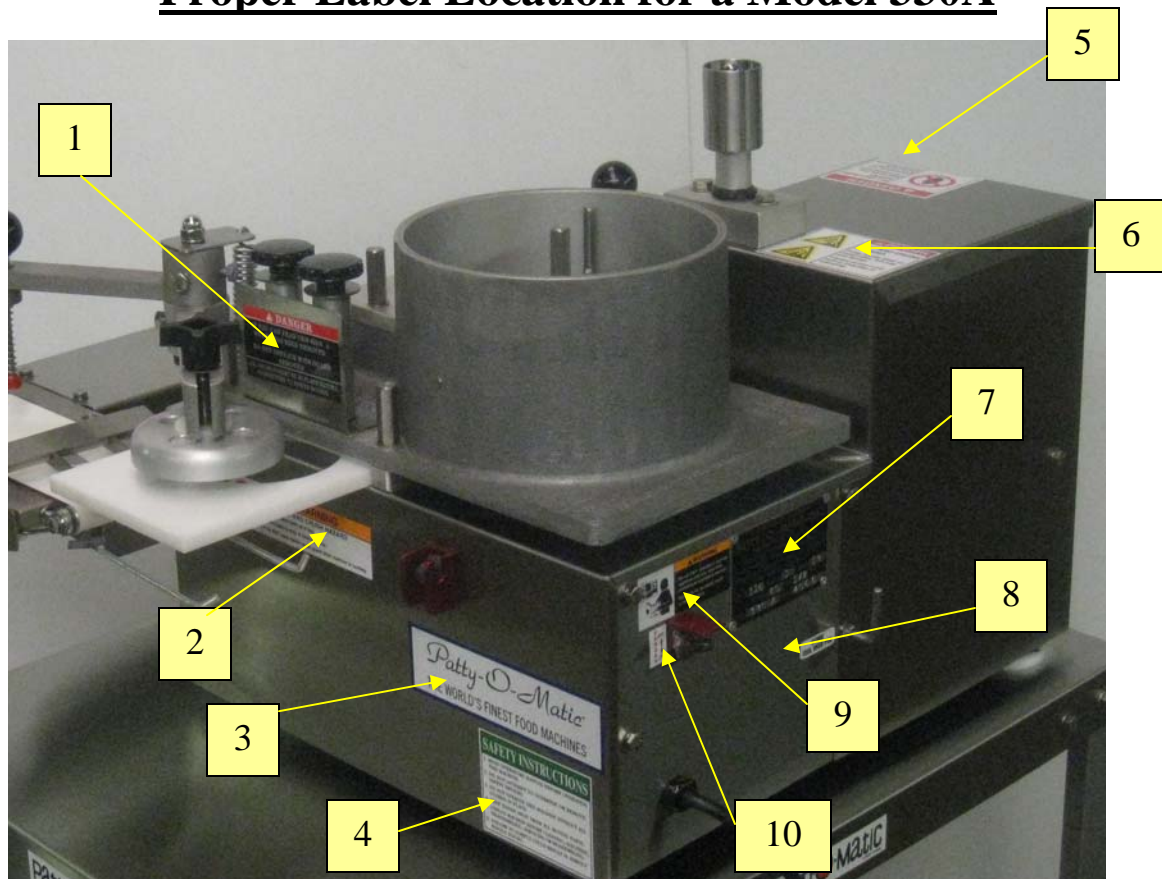




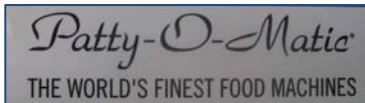









Knock Out Cup



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 330A



<u>Item #</u>	<u>Description</u>		<u>Part #</u>
1.	Danger Label 3		514-09a
2.	Warning Orange		514-02
3.	Patty-O-Matic		514-08
4.	Safety instructions		514-06
5.	Danger Label 1		514-03
6.	Danger Label 2		514-00
7.	Serial Tag		514-15
8.	Store Tool		514-14
9.	Warning Manual		514-01
10.	Danger on/off		514-05
11.	Do Not Pressure Wash		514-04
12.	Unplug Machine		514-07

### **Proper Procedure for Operating a Model 330A**

When the Model 330A is fully assembled with all guards secured in their proper place, put product to be portion molded in the Feed Tray. Push the product through the holes in the Feed Tray Guard into the Hopper opening. **DO NOT PUT HANDS OR FINGERS, OR FOREIGN OBJECTS, SUCH AS STOMPERS OR PLUNGERS INTO THE HOPPER. THERE ARE NO STOMPERS OR PLUNGERS NEEDED WHEN USING THIS UNIT, THEREFORE NONE ARE SUPPLIED.** After you allow product to drop into 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.

### **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 kneading of your product
- and less strain on your machine.

-----

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 is the maximum volume setting.

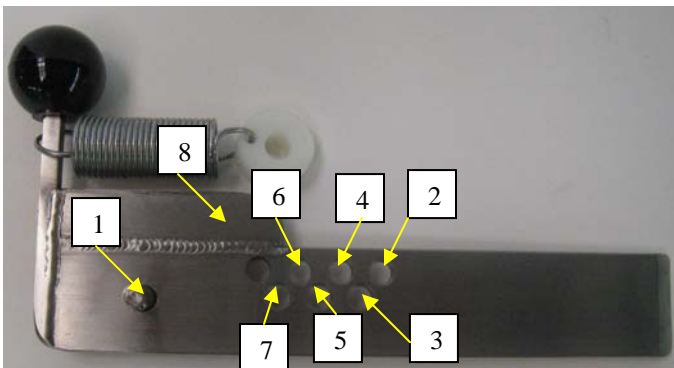
If your patty is 4 ounces remove the ring pin from the storage hole and place it in the 4 ounce hole.

If you patty weight is to be 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.

- |                              |
|------------------------------|
| 1 - Ring Pin in storage hole |
| 2 - 2 ounce hole             |
| 3 - 3 ounce hole             |
| 4 - 4 ounce hole             |
| 5 - 5ounce hole              |
| 6 - 6 ounce hole             |
| 7 - 7 ounce hole             |
| 8 - 8 ounce welded stop      |



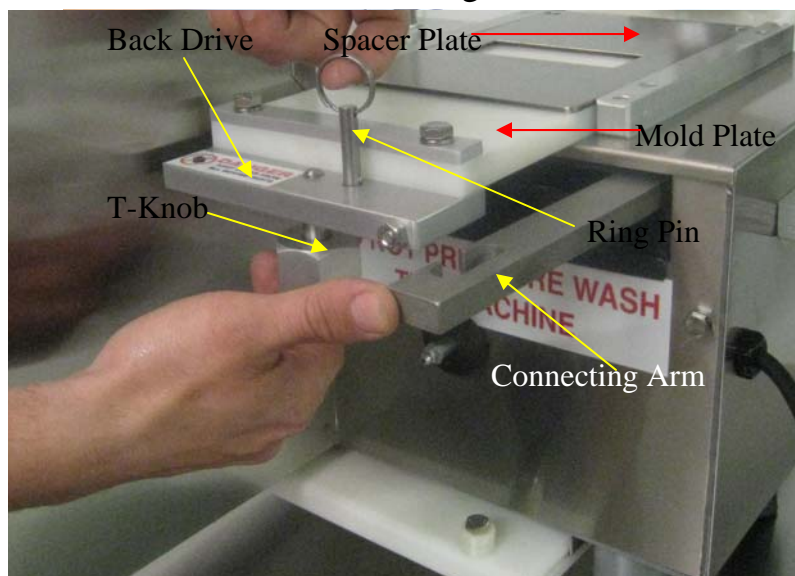
## Changing Your Machine's Mold Plate

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

First remove the T-Knob from the Back Drive of the Mold Plate, then pull the Mold Plate out from the back of the machine. If you prefer, remove the Mold Plate from the machine without removing the T-Knob from the Back Drive. Simply unhook Connecting Arm from the T-Knob and slide the Mold Plate from the back of the machine.

When changing the Mold Plate always use the corresponding Spacer Plate. The thickness fraction stamped on the 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 1/2" then the Spacer Plate should be stamped "1/2". The Spacer Plate is retained by the X-Bolt. The X-Bolt is threaded into the Hopper. Turn the X-Bolt counter clockwise enough to remove the Spacer Plate. There is no need to remove the X-Bolt from the Hopper. After putting the new Mold Plate and corresponding Spacer Plate into the machine, turn the X-Bolt into the hole located on the front of the Spacer Plate just enough to hold the plate in place. DO NOT over tighten X-bolt into hopper. This may cause scoring of the Mold Plate or other damages to the machine.

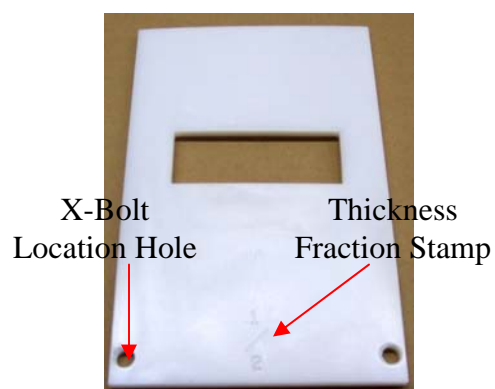
### Mold Plate and Connecting Arm Rear View



### Hopper Front View



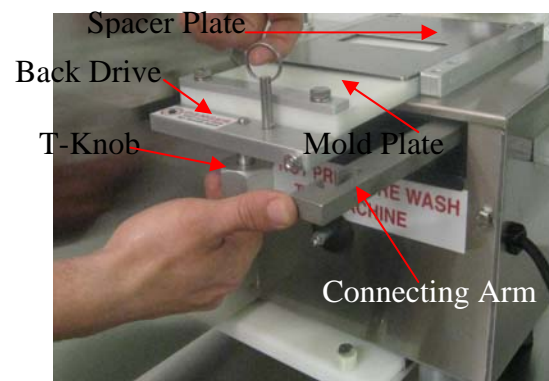
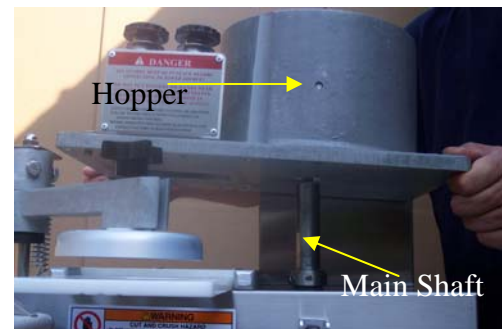
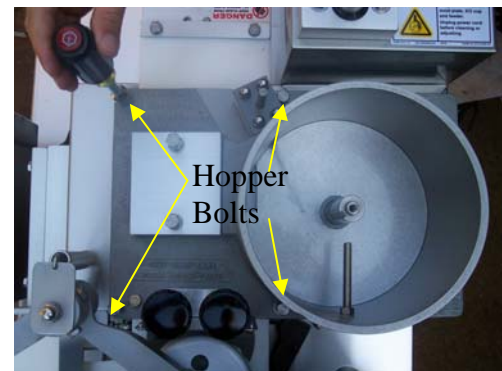
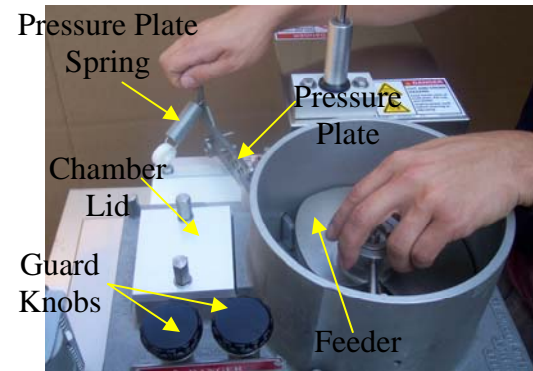
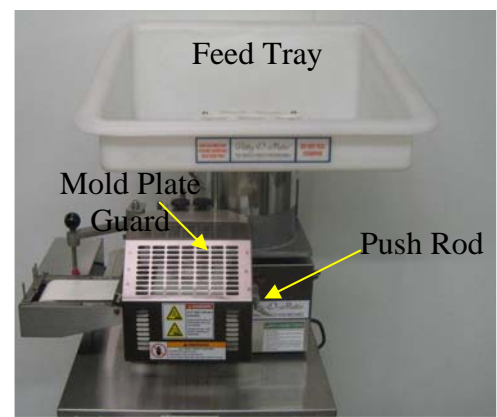
### Spacer Plate Top View



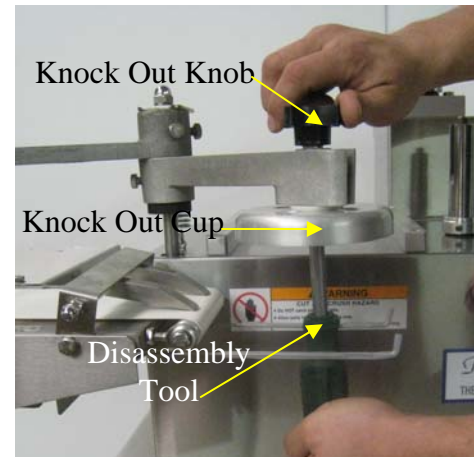
## **Proper Disassembly for Cleaning Your Model 330A:**

### **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 Mold Plate Guard Knobs, and unlatching the push rod.
- Remove Pressure Plate by detaching spring and sliding Pressure Plate from inside of the Hopper. Remove Feeder by unscrewing the feeder bolt using speed driver provided. Remove Feeder Washer by lifting it off the Feeder and lift Feeder from the inside of the Hopper.
- Remove the four Hopper Bolts using the speed driver provided. The two bolts on the Chamber Lid may be removed as well for additional cleaning.
- Remove Hopper by lifting it off the Main Shaft of the Machine.
- 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.
- Remove the Mold Plate by disconnecting 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 unscrewed from the Back Drive as an alternate means of disassembly.



- Remove Knock Out Cup By loosening the Knock Out Knob while holding the other end of the bolt with the speed driver provided with the machine.
- 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 chlorine, but no more than 200 parts per million. The machine itself should be cleaned and sanitized by hand. After all Parts are clean they should be coated in mineral for added protection.



**DO NOT HOSE DOWN OR PRESSURE  
WASH THIS MACHINE!**

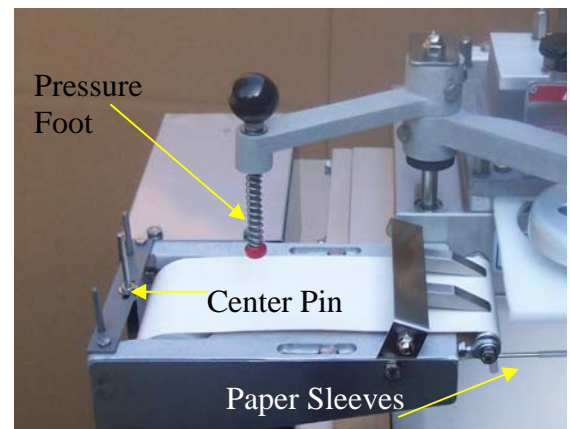
**\*To Re-Assemble the Machine reverse the above procedure. Hopper bolts should only be hand tightened with the speed driver provided.**

**\*The Knock Out Cup Should be installed on the Machine 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.**

### **Installing Patty Paper on Interleaver:**

Place a stack of paper no thicker than one inch under the Pressure Foot. Slide paper hole in paper over center pin on. This can be accomplished without stopping the machines movement.

**\*Placing more than one inch of paper on center pin may cause improper paper feeding.**



Paper Sleeves should be adjusted for different size patty paper

## Points of Daily Lubrication For Your Model 330A:

12

**Always Unplug Machine and use Food Approved Oil and Grease!**

The Following Parts should be lubricated daily to ensure proper machine maintenance

- Pressure Foot should be lifted up and oiled. Hold the Ball knob 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.

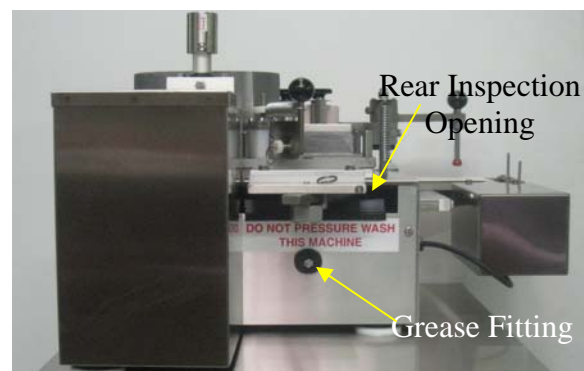
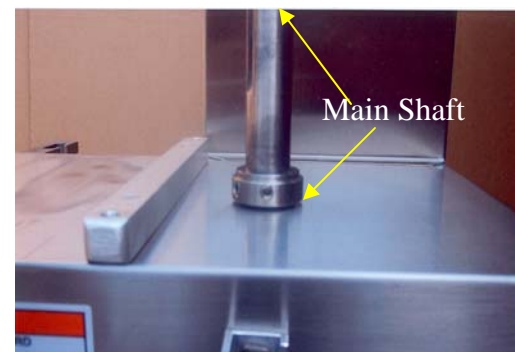
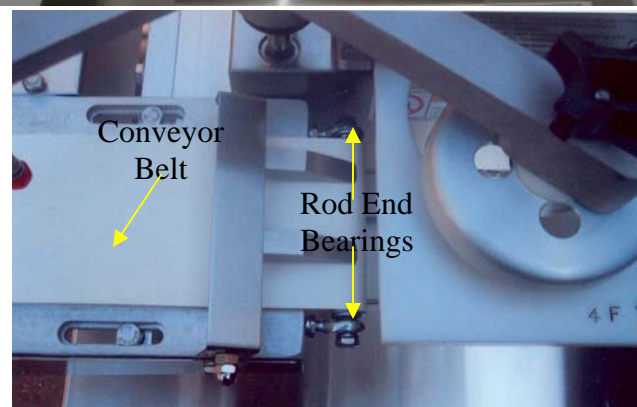
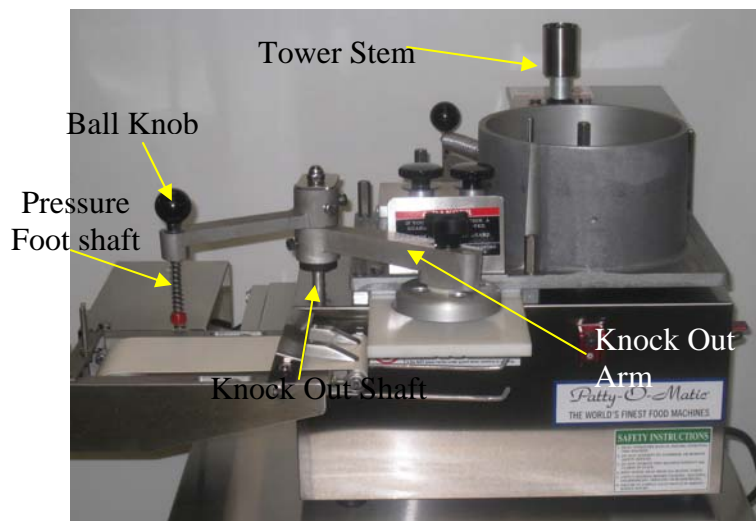
- Tower Stem should be oiled when the Feed Tray is removed as shown.

- 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.

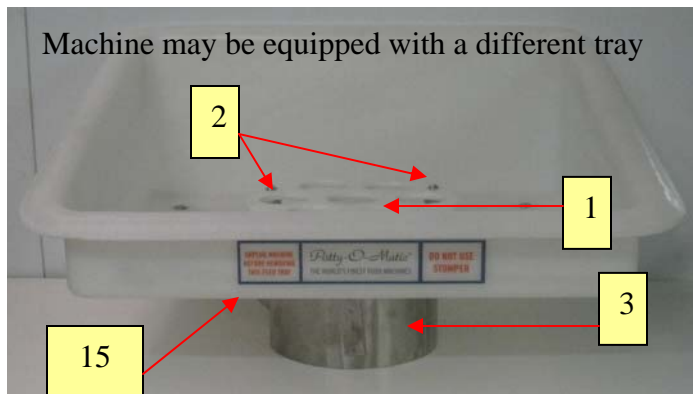
- Main Shaft should be oiled when the machine is disassembled as shown in this picture. Be sure to oil under the collar by the machine cabinet.

- The inside of the machine can be oiled through the Rear Inspection Opening. By spraying oil here you will be oiling the inside components.

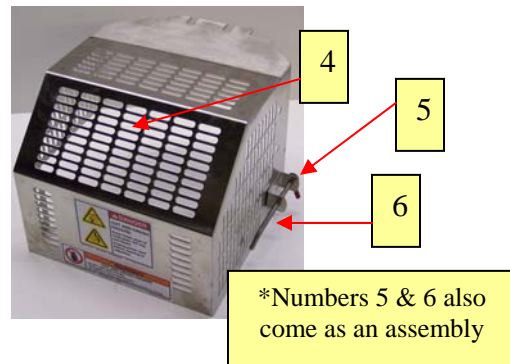
- The Grease Fitting in the back of the machine should be greased once every two weeks. 3 to 4 shots of grease are recommended.



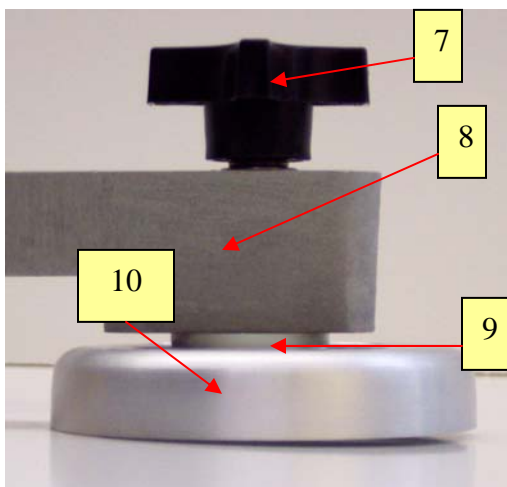
### Poly Coved Feed Tray



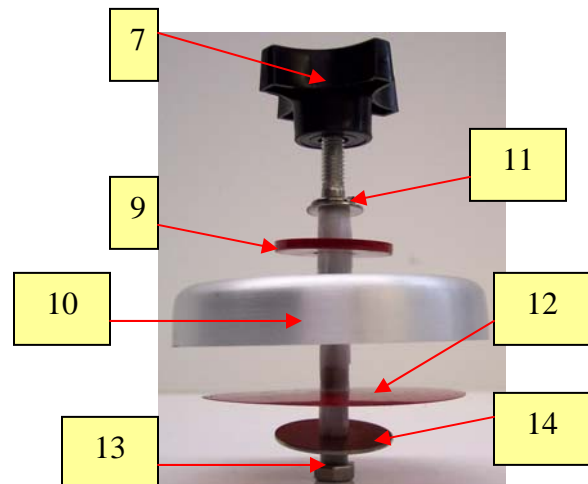
### Mold Plate Guard Assembly



### Knock Out Cup Assembly



### Knock Out Cup Exploded View

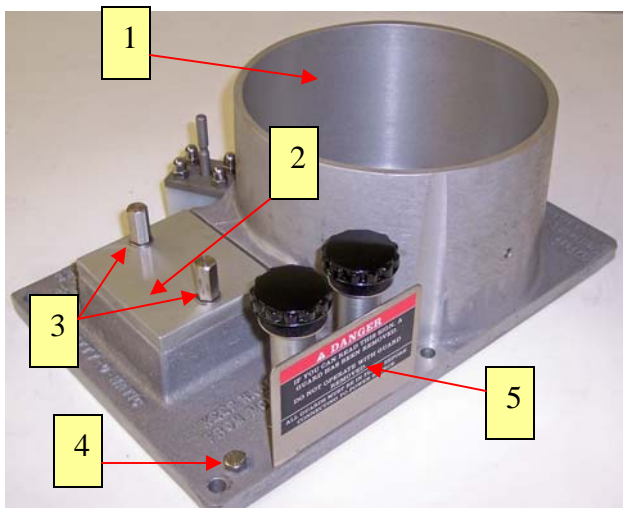
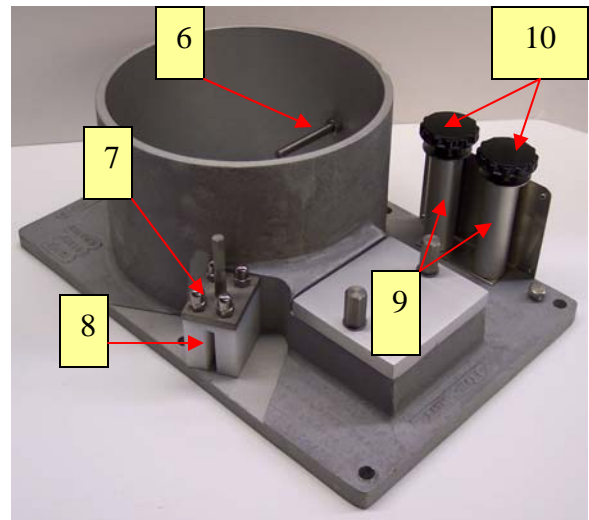
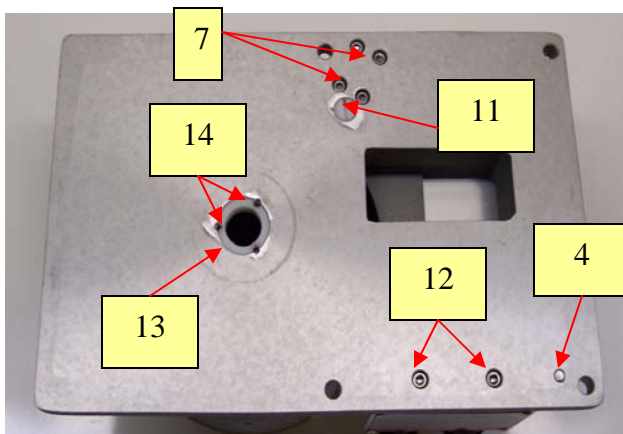
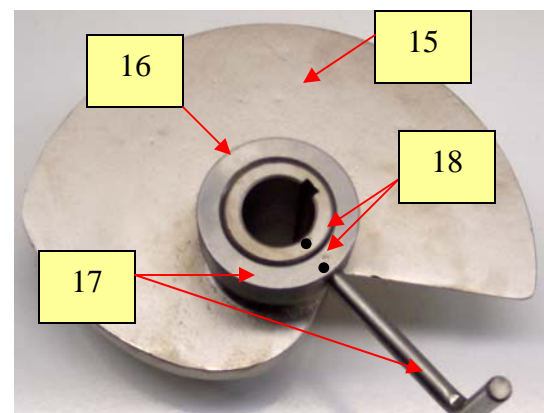


\*Knock Out Cup Hardware is also sold as an assembly.

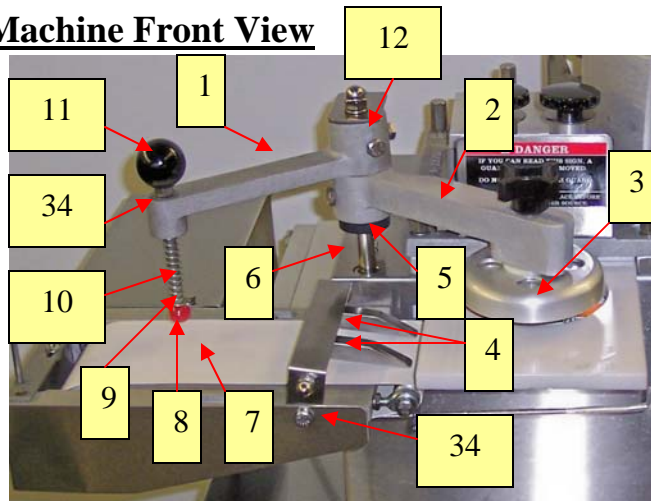
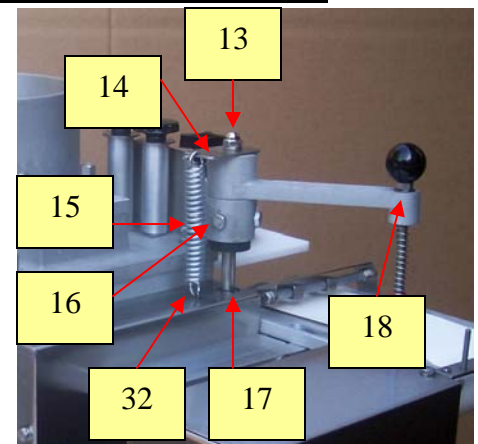
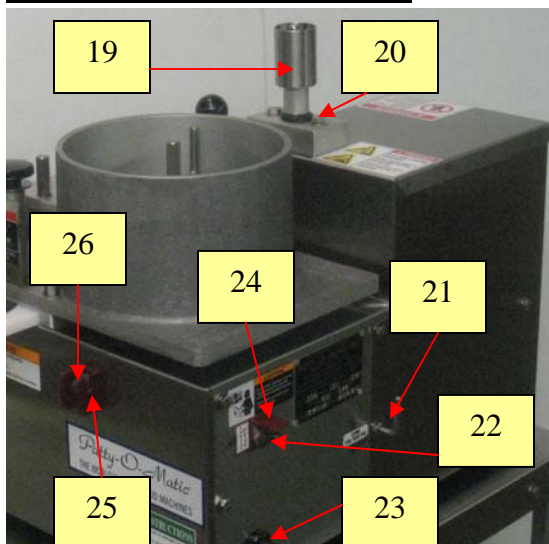
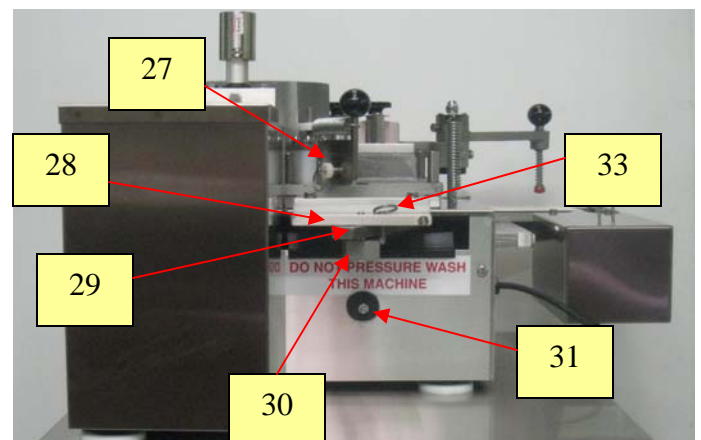
-Knock Out Cup Assembly w/ Hardware is Part #571

-Knock Out Cup Hardware **Only** is Part #571-H1

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Feed Tray Guard Assembly	543
2	Feed Tray Guard Hardware	541-B
3	Stainless Steel Flange Support	554
4	Mold Plate Guard Assembly	550SC
5	Push Rod Collar	553-1B
6	Push Rod	553-5
5&6	Push Rod and Collar Assembly	553
7	Knock Out Knob	571-7
8	Knock Out Arm (partial view)	502B
9	Knock Out Cup Plastic Washer	571-6
10	Round Knock Out Cup(Specify Size)	571-1
11	Knock Out Cup Flat Washer and Lock Washer	571-8
12	Knock Out Air Valve (shown in red for visual affect)	571-4
13	Knock Out Cup Bolt	571-9
14	Knock Out Cup Fender Washer	571-10
15	Feed Tray Tower Plunger and Bolt	620-17

**Hopper Front View****Hopper Rear View****Hopper Bottom View****Feeder Top View**

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Hopper Casting	545
2	Chamber Lid	545-A
3	Hex Hold Down Bolt (also used as Hopper hold down)	556B
4	X-Bolt	570
5	Guard Post Guard Information Plate	551-B
6	Meat Stop c/w Washer	555
7	Pressure Plate Block Hardware	548-C
8	Pressure Plate Block	547
9	Mold Plate Guard Post (2)	551
10	Mold Plate Guard Knob and Washer(2 Required)	550-1
11	Hopper Threaded Plug	607
12	Guard Post Screw	551-A
13	Hopper Nylon Bushing	603
14	Hopper Nylon Bushing Set Screw(3 Required)	604
15	Feeder	557
16	Mixer Collar Set Screw	559
17	Mixer Collar	558
18	Witness Marks (one on Feeder and Mixer Collar for location)	N/A

**Machine Front View****Machine Left Side View****Machine Right Side View****Machine Rear View**

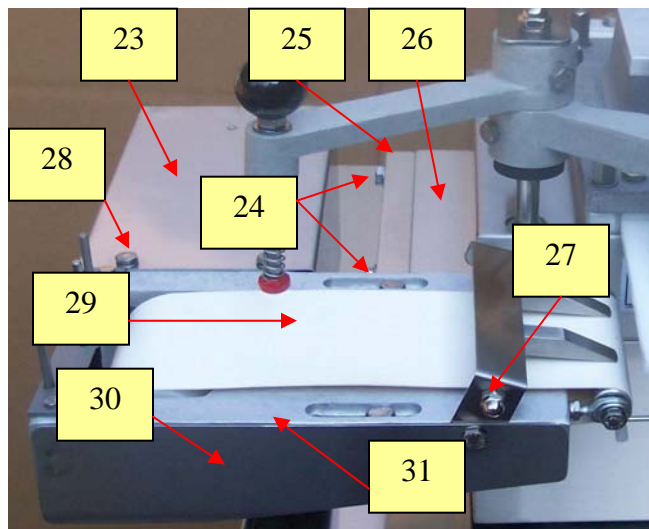
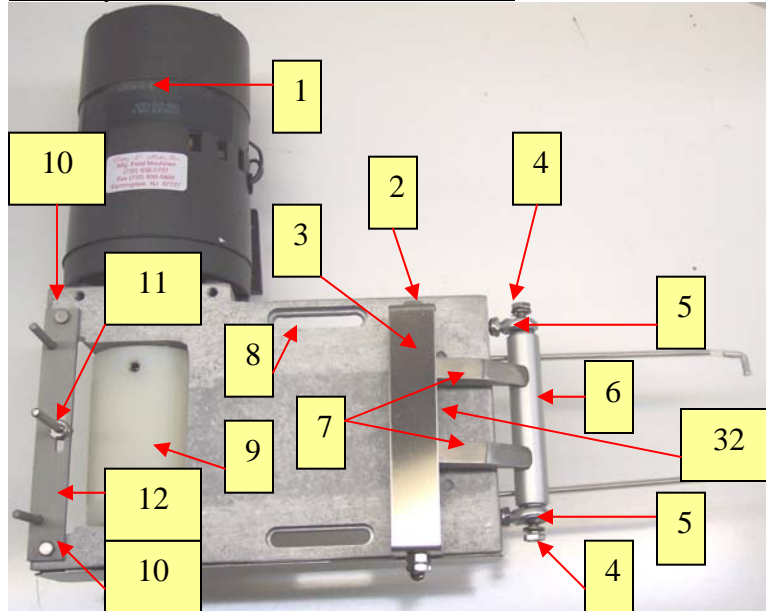
Item #	Description	Part #
1	Paper Interleaver Arm and Bolts	505
2	Knock Out Arm and Bolts	502B
3	Knock Out Cup	571-1
4	Paper Weight	532
5	Large Knock Out Bumper	504
6	Knock Out Shaft	449
7	Conveyor Belt	534
8	Pressure Bolt Tip	506D
9	Pressure Bolt	506
10	Pressure Foot Spring	508
11	Pressure Foot Ball Knob	506B
12	Paper Interleaver Arm Bolt(2)	505-1
13	Knock Out Shaft Acorn Nut	503
14	Knock Out Spring Tab	498C
15	Knock Out Spring	490
16	Knock Out Arm Bolt(2)	502-1
17	Knock Out Shaft Bushing (white bushing that is pressed into Machine Frame)	462
18	Paper Interleaver Arm Bushing (white poly bushing)	505-1B

Item#	Description	Part#
19	Feed Tray Tower Sleeve	620-16
20	Feed Tray Tower Block	620-6
21	Tool Holder	601
22	On/Off Switch	500
23	Power Cord	115-01
24	On/Off Switch Guard	501
25	Key Latch	609-A1
26	Plunger Switch	608-1B
27	Ring Pin Pressure Plate	546-3
28	Mold Plate Back Drive	564
29	Connecting Arm	455
30	T-Knob	567
31	Grease Fitting	PS701
32	Knock Out Spring Cotter Pin	490D
33	Ring Pin	546C
34	Weight Shaft Support Hardware	530
35	Pressure Foot Hardware	507

Many parts are also sold as assemblies. Please contact the factory for further information:  
 Toll Free in the U.S.A. 877-938-5244  
 Outside the U.S.A. 732-938-2757

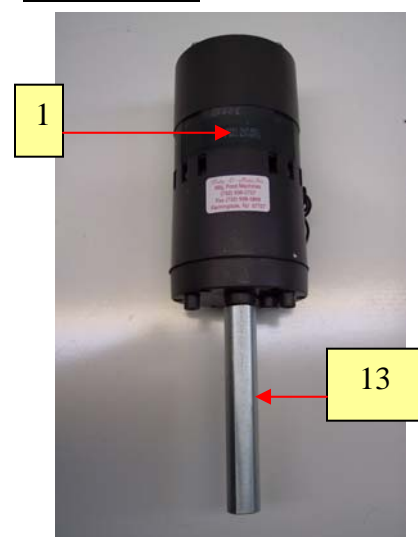
### Paper Interleaver Top View

(Conveyor Belt is Removed for Visual)

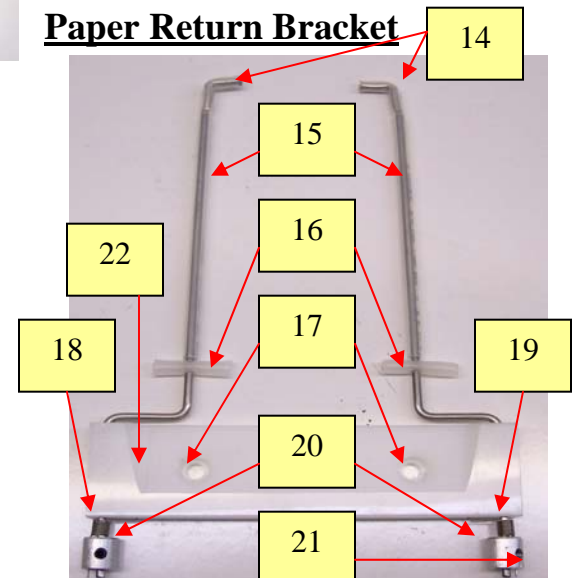


Item #	Description	Part #
1	Paper Interleaver Motor c/w Extension Shaft	516
2	Weight Shaft	527
3	Weight Shaft Support	529
4	Rod End Hardware	523
5	Rod End Bearing (2 required)	522
6	Paper Interleaver Front Pulley	521
7	Paper Weight (2 required)	532
8	Interleaver Adjustment Slots	N/A
9	Paper Interleaver Back Pulley	520
10	Pin Holder Bolt and Nuts (2 required)	526
11	Paper Pin, Nuts, and Washers	525
12	Paper Pin Assembly	524-A
13	Motor Extension Shaft and Screws	517
14	Paper Sleeve Stop	248A
15	Stainless Steel Paper Pivot Rod(2)	247

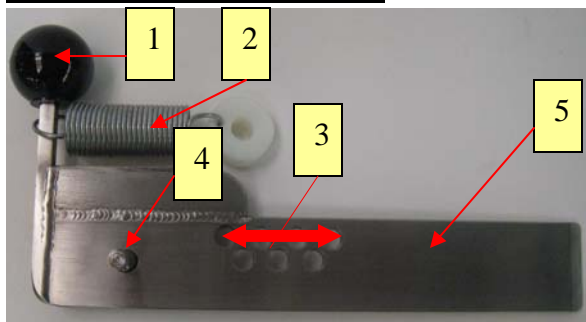
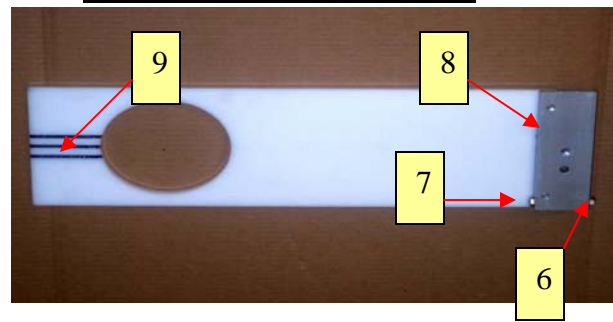
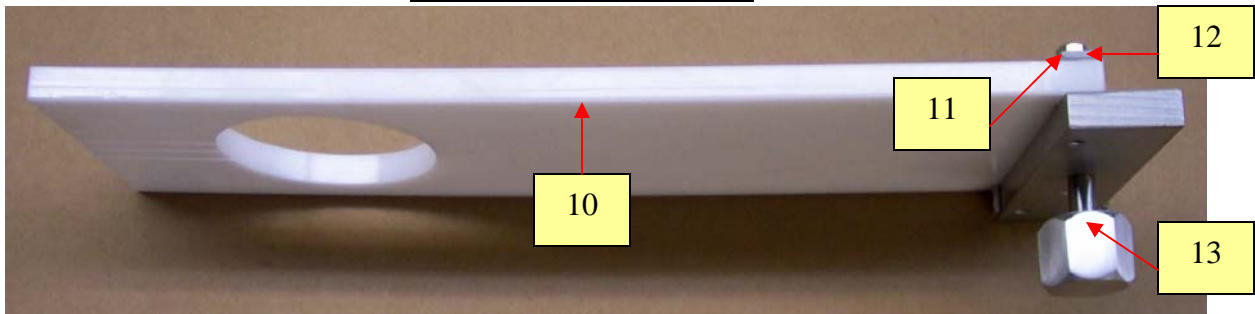
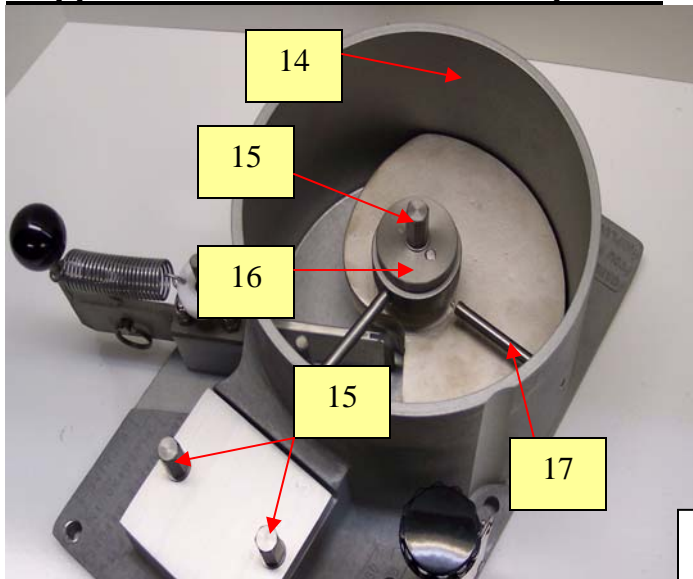
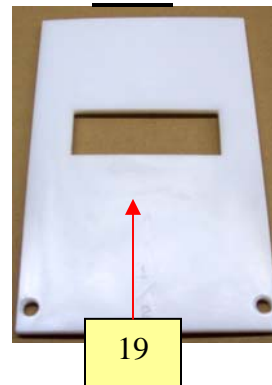
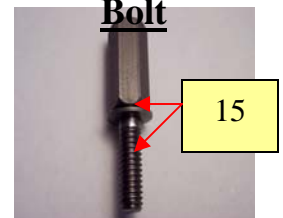
### Paper Motor



### Paper Return Bracket



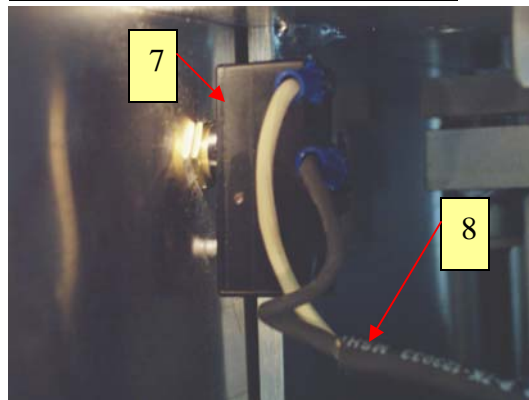
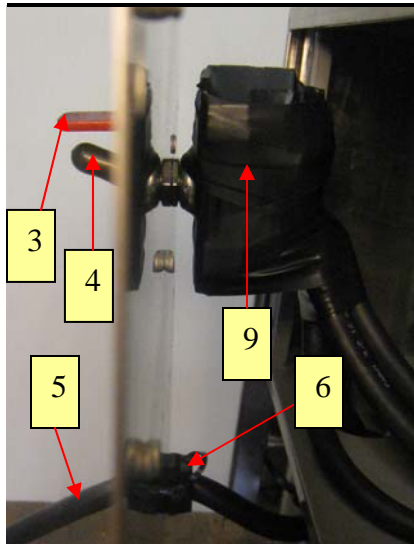
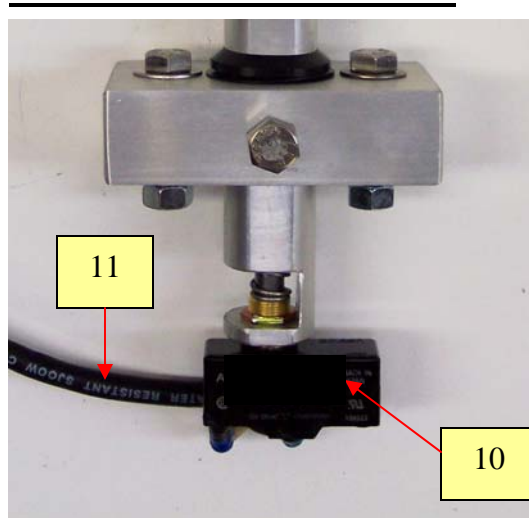
Item#	Description	Part#
16	Paper Stop	248
17	2 Return Bracket Mounting Screws	249
18	Left Return Spring	246L
19	Right Return Spring	246R
20	Spring Adjusting Collar (2 required)	244
21	Set Screw (one in each collar)	245
22	Pivot Rod Support Bracket	243
23	Interleaver Motor Cover	537
24	Interleaver Support Hardware	499
25	Paper Attachment Support Bar	497
26	Interleaver Support Bar Spacer	498
27	Weight Shaft Hardware	528
28	Motor Cover bolts (2 Required)	538
29	Conveyor Belt	534
30	Conveyor Belt Guard	536
31	Paper Interleaver Casting Frame	519
32	Weight Shaft Spacers (Not Shown)	531

**Ring Pin Pressure Plate****Mold Plate Bottom View****Mold Plate Side View****Hopper and Feeder Assembled Top View****Feeder Washer & Shear Pin****Spacer Plate****Hold Down Bolt**

<u>Item #</u>	<u>Description</u>	<u>Part #</u>
1	Pressure Plate Ball Knob	546D
2	Pressure Plate Spring	549
3	Ring Pin Adjustment Holes	N/A
4	Ring Pin(shown in the storage hole)	546C
5	Ring Pin Pressure Plate	546-3
6	Back Drive Stop Bolt Nut	566
7	Back Drive Stop Bolt	565
8	Mold Plate Back Drive	564
9	Air Grooves (colored for visual)	N/A
10	Round Mold Plate	563-1
11	Set of Back Drive Hardware	568A
12	Back Drive Clamp	568

<u>Item #</u>	<u>Description</u>	<u>Part #</u>
13	T-Knob	567
14	Hopper Casting	545
15	Hold Down Bolt	556B
16	Feeder Washer	560
17	Meat Stop	555
18	Shear Pin	562
19	Spacer Plate( Specify Size)	569

**Part # 563 - Mold Plate Assembly**  
**-Includes Round Mold Plate,**  
**Back Drive Assembly and**  
**Knock Out Cup Assembly**  
*Other Shapes Available*

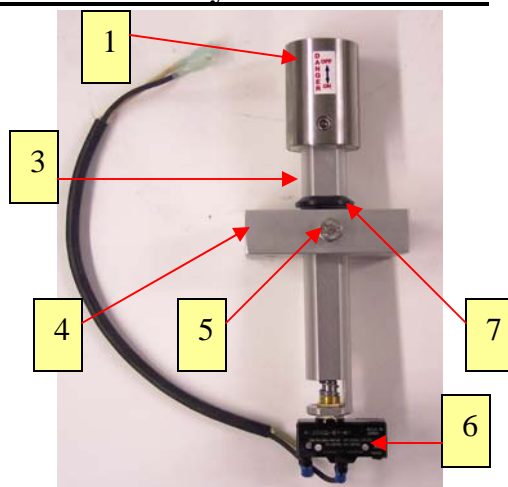
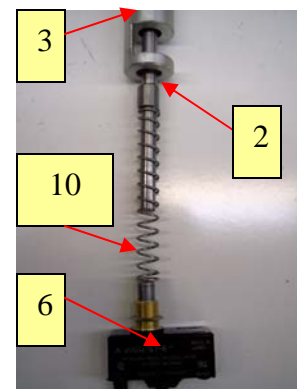
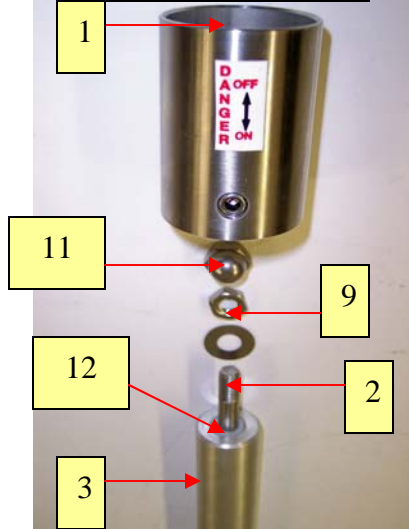
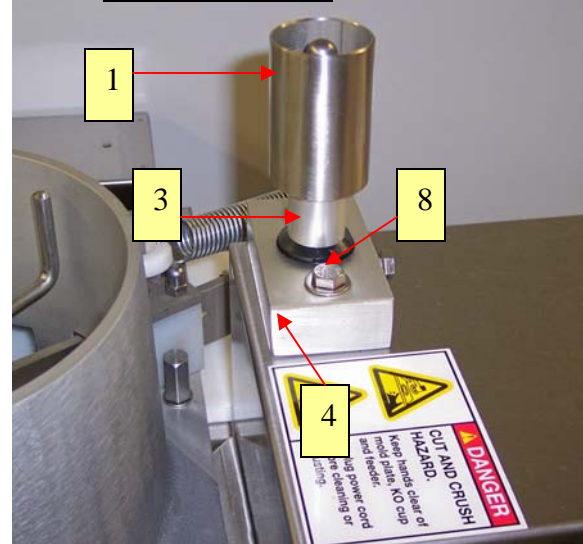
**Machine Switches Front View****Guard Switch Interior View****On/Off Switch Interior View****Tower Switch Interior View**

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Key Latch	609-A1
2	Plunger Switch Boot	608-1C
3	On/Off Switch Guard	501
4	On/Off Switch Boot	500B
5	Power Cord	115-01
6	Wire Grommet	487
7	Guard Switch	608-1B
8	Guard Switch Wire	608-1D
9	On/Off Switch (shown insulated in electrical tape)	500
10	Tower Switch	620-10B
11	Tower Switch Wire	620-10A

Part # 608-5A – Includes Guard Switch and Wire

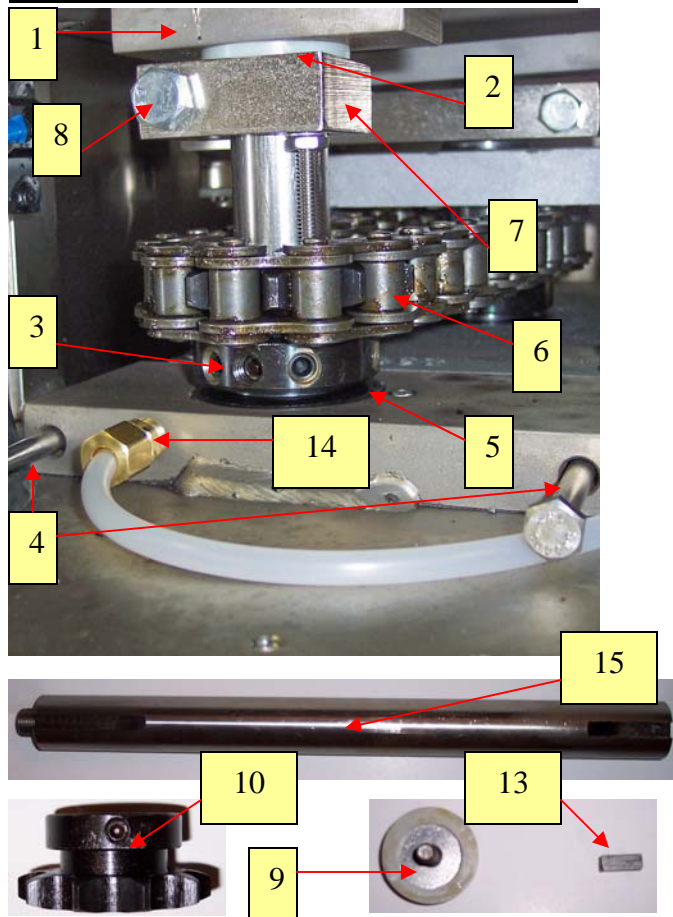
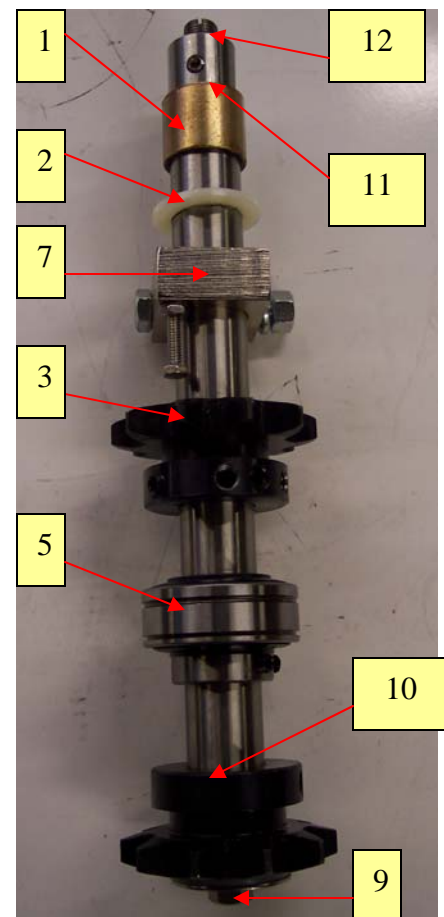
Part # 620-10 – Includes Tower Switch and Wire

Many other parts are also sold as assemblies. Please contact the factory for further information:  
Toll Free in the U.S.A. 877-938-5244  
Outside the U.S.A. 732-938-2757

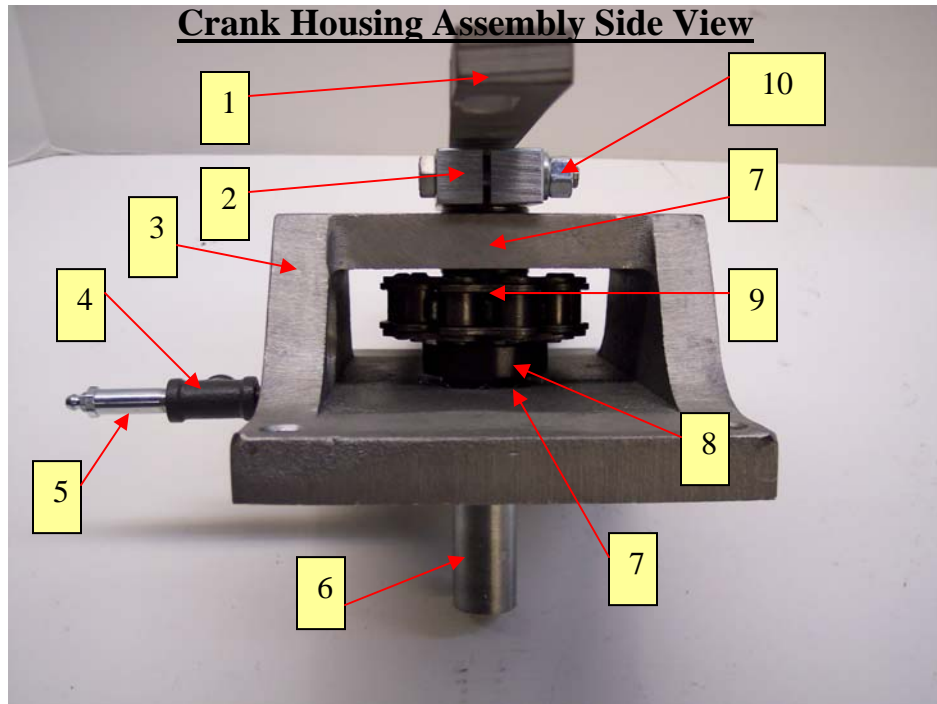
**Tower Assembly w/ Tower Block****Tower Assembly  
Exploded Bottom View****Tower Assembly  
Inverted Top View****Tower Assembly  
Machine View**

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Tower Sleeve	620-16
2	Tower Stem	620-3
3	Tower Tube	620-5
4	Tower Block	620-6
5	Tower Locator Lock Bolt	620-7
6	Tower Switch	620-10B
7	Rubber Seal	464S
8	Tower Block Hardware	620-8
9	Tower Jam Nut	620-06
10	Tower Spring	620-9
11	Tower Acorn Nut	620-15
12	Tower Bushing	620-4

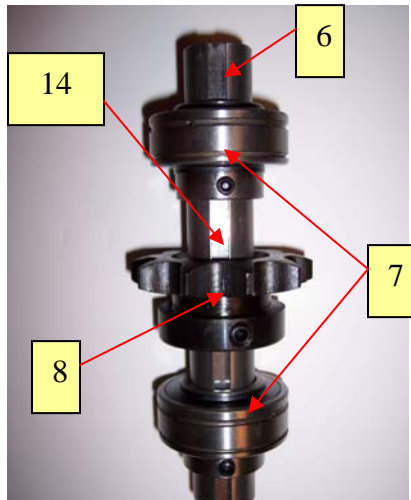
Many parts are also sold as assemblies. Please contact the factory for further information:  
 Toll Free in the U.S.A. 877-938-5244  
 Outside the U.S.A. 732-938-2757

**Main Shaft Assembly Interior View****Main Shaft Exploded View**

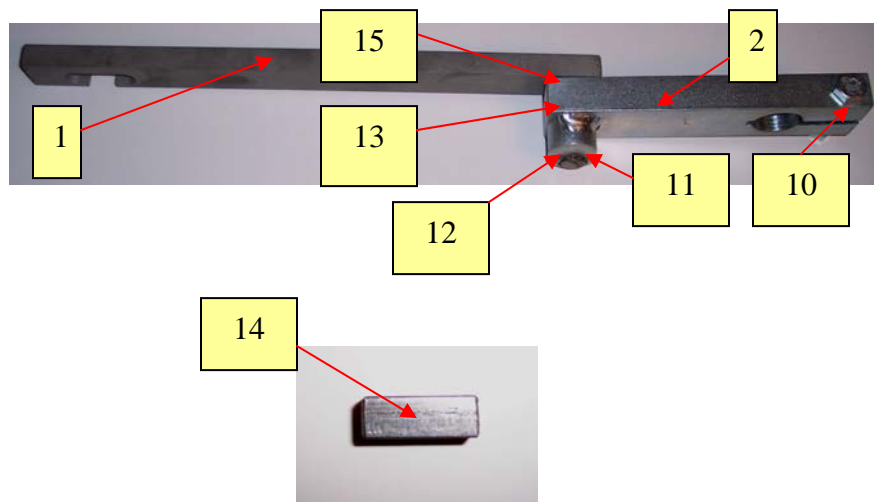
<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Main Shaft Bushing (pressed into Machine Frame)	470
2	Main Shaft Thrust Washer	469-1
3	Timing Sprocket	465T
4	Chain Tension Adjuster Bolt	463
5	Main Shaft Bearing (pressed into Machine Frame)	464A
6	Timing Chain and Link	471
7	Main Shaft Clamp	467
8	Main Shaft Clamp Hardware	468
9	Main Shaft Fender Washer and Hardware	240-1
10	Main Shaft Driven Sprocket(Specify Amount of Teeth)	240
11	Main Shaft Threaded Insert Set Screw	464-2
12	Main Shaft Threaded Insert	464-1
13	Main Shaft Sprocket Key	241
14	330A Grease Line System(Not completely shown)	704
15	Main Shaft C/W Insert and Set Screw	464



**Crank Shaft Assembly  
Exploded View**



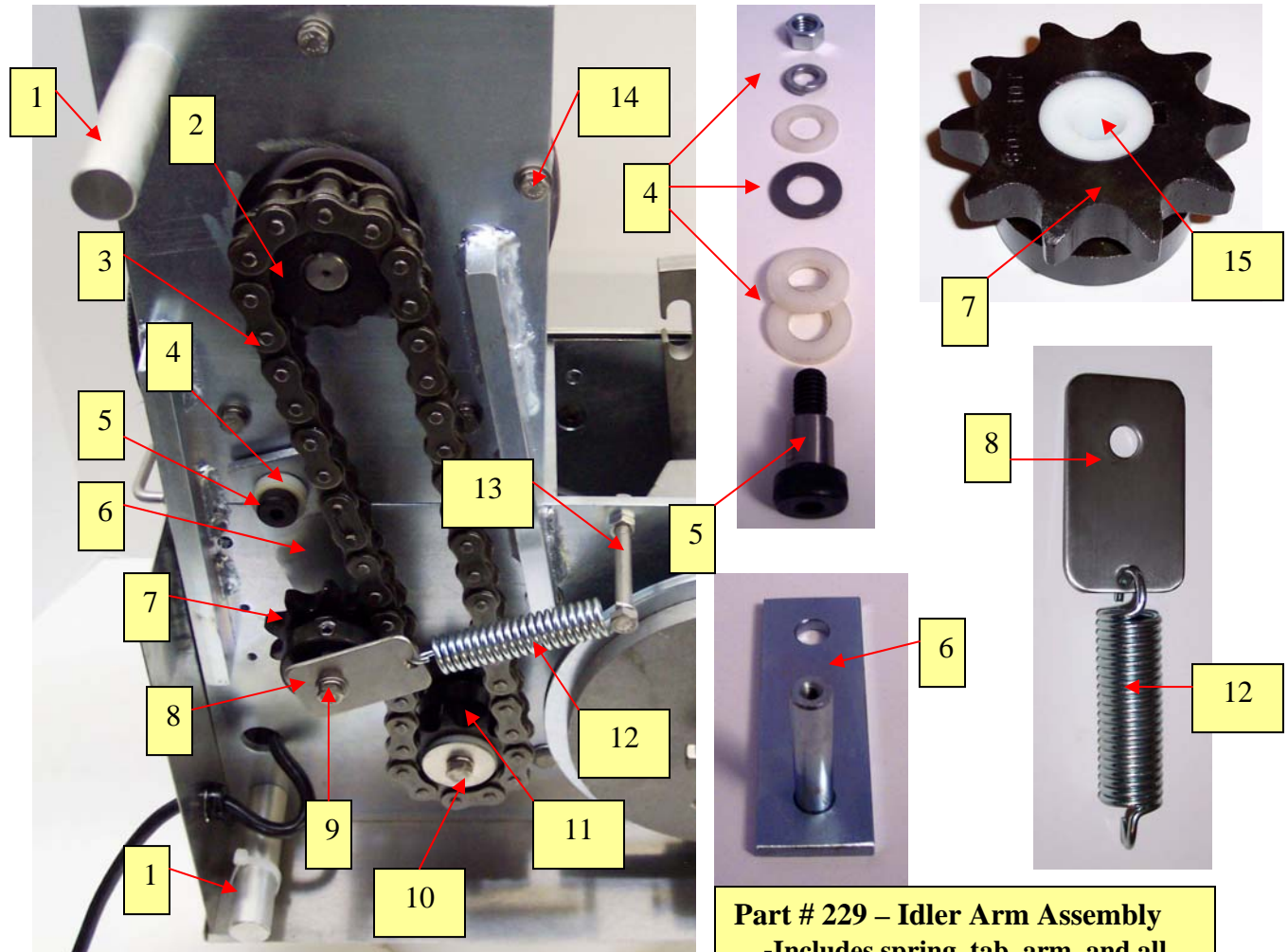
**Crank/Connecting Arm Assembly**



<u>Item #</u>	<u>Description</u>	<u>Part #</u>
1	Connecting Arm	455
2	Crank Arm	452
3	Crank Shaft Housing Casting	457
4	Grease Line T Fitting	703
5	External Grease Fitting	701
6	Crank Shaft	456
7	Crank Housing Bearing(2)(pressed into Crank Housing)	457A

**Part # 459 – Crank Housing Hardware  
-Holds Crank Housing to Machine**

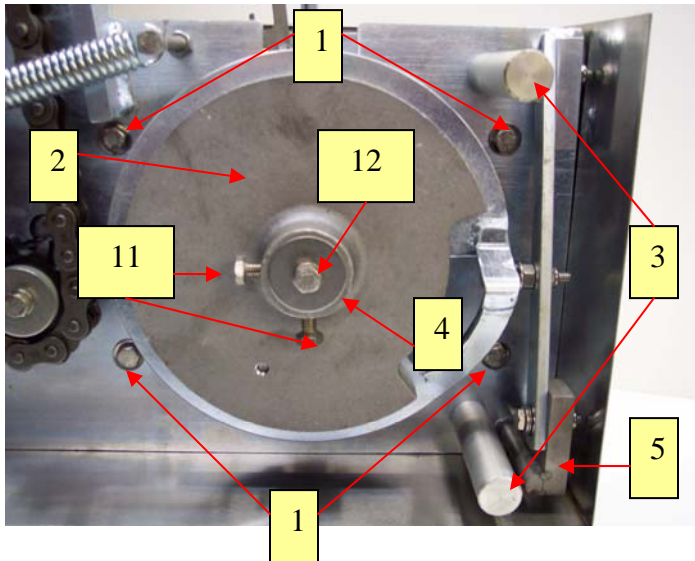
<u>Item #</u>	<u>Description</u>	<u>Part #</u>
8	Crank Shaft Sprocket	460
9	Timing Chain and Link	471
10	Crank Arm Hardware	453
11	Connecting Arm Thrust Washer	456B
12	Connecting Arm Cotter Pin	455A
13	Connecting Arm Bushing (white poly bushing pressed into the Connecting Arm not shown)(2)	455-1
14	Sprocket Key	461
15	Connecting Arm Spring Washer (Between the Connecting and Crank Arm)	455C

Motor to Main Shaft Bottom ViewIdler Arm Assembly Parts

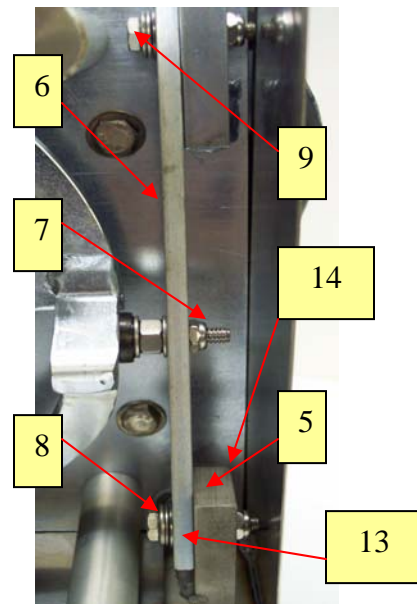
**Part # 229 – Idler Arm Assembly**  
**-Includes spring, tab, arm, and all hardware**

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Machine Legs (set of 4)(Only 2 shown)	446
2	Motor Drive Sprocket	236
3	Motor to Main Shaft Chain and Link	239
4	Idler Arm Shoulder Bolt Hardware	229B
5	Idler Arm Shoulder Bolt	229A
6	Idler Arm	230-A
7	Idler Arm Sprocket and Bushing Assembly	232
8	Idler Arm Spring Tab	231A
9	Idler Arm Spring Tab Hardware	231B
10	Main Shaft Fender Washer and Hardware	240-1
11	Main Shaft Driven Sprocket	240
12	Idler Arm Spring	231
13	Idler Arm Spring Bolt and Hardware	235
14	Gear Head Motor Mounting Hardware(set of 5)	284B
15	Idler Arm Sprocket Bushing(Set of 2)	234

### Knock Out Cam Bottom View



### Knock Out Lever Assembly



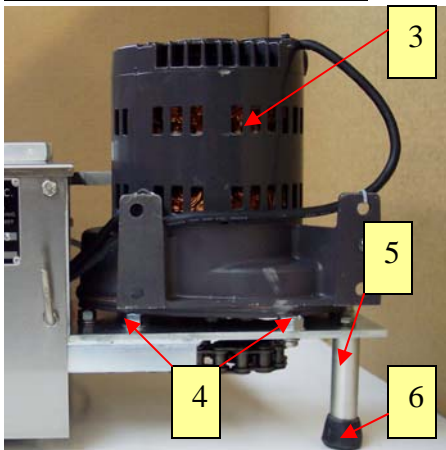
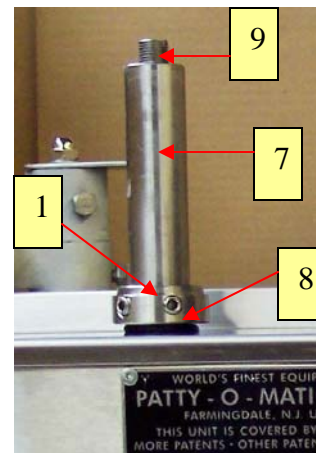
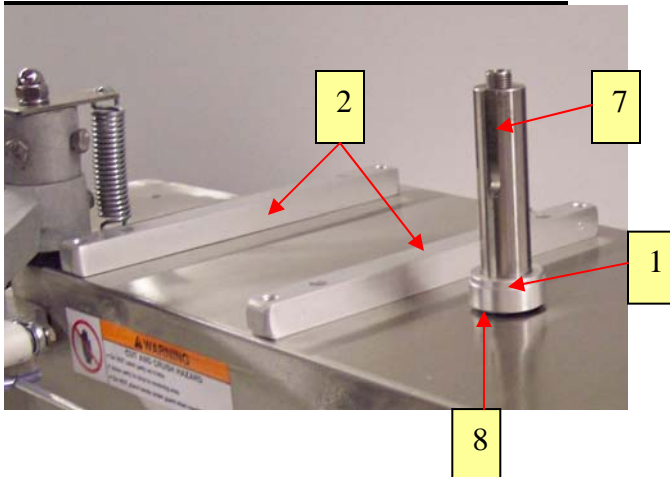
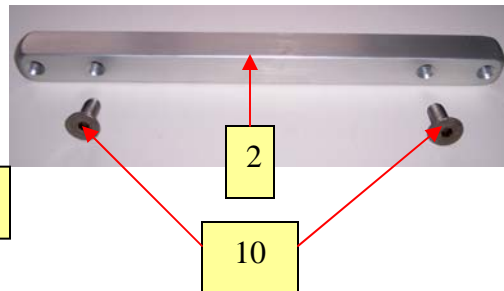
### Knock Out Shaft and Lever Assembly



#### Part # 450X Knock Out Lever Assembly

**-Includes Lever,  
Bushing, Cam  
Bearing, and all  
Hardware**

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Crank Housing Hardware	459
2	Steel Knock Out Cam Assembly	472-S
3	Machine Legs (set of 4)(2 Shown)	446
4	Steel KO Cam Drive Key(Not Shown)	477-1
5	Knock Out Shaft	449
6	Knock Out Lever	450
7	Cam Follower Bearing Hardware	475
8	Knock Out Lever Hardware	451
9	Knock Out Lever Bushing Hardware	450B
10	Cam Follower Bearing	474
11	Steel Knock Out Cam Bolts(2)	472-S1
12	Steel KO Cam Keeper Bolt and Hardware	472-S2
13	Knock Out Lever Bushing(sits inside Knock Out Lever)	450A
14	Knock Out Shaft Bushing (white bushing not shown)	462

**Main Motor Side View****Main Shaft Machine View****Mold Plate Guide Rails Front View****Mold Plate Guide Rail**

Please call factory for  
instructions on installing new  
Mold Plate Guide Rails  
Toll Free in the U.S.A. 877-938-5244  
Outside the U.S.A. 732-938-2757

<u>Item#</u>	<u>Description</u>	<u>Part #</u>
1	Hopper Bushing Set Collar w/ screws and o-ring	603C
2	Mold Plate Guide Rail (2 Required)	494
3	Gear Head Motor	284
4	Motor Spacer(5 Required)(2 Shown)	284A
5	Machine Legs (set of 4)(1 Shown)	446
6	Rubber Feet (set of 4)(1 Shown)	448
7	Main Shaft C/W Insert and Set Screw(Screw not shown)	464
8	Hopper Bushing Set Collar O-Ring	603E
9	Main Shaft Insert	464-1
10	Mold Plate Guide Rail Bolts (set of 2 bolts)	495

