

Operating Instructions & Parts List for the BB-1 115V, BB-1 115V CANADIAN BB-2 115V, BB-1F 230V





Manual# 103006

Issued: February 2, 2015 TMC# 801 Bettcher Industries, Inc. 6801 State Route 60 Birmingham, OH 44889 U.S.A. Phone: (440) 965-4422 Fax: (440) 328-4535 Information in this document is subject to change without notice.

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BETTCHER INDUSTRIES, INC. 6801 State Route 60 Birmingham, Ohio 44889 U.S.A. Telephone: 440/965-4422 (In The U.S.A.): 800/321-8763 Fax: 440/328-4535

The Information Provided In These Operating Instructions Is Important To Your Health, Comfort And Safety.

For Safe And Proper Operation, Read This Entire Manual Before Using This Equipment.

http://www.bettcher.com



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Safety and Ergonomics



Section 1

Safety and Ergonomics

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The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.



SIGNAL WORD PANELS

A DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury. (The signal word Danger is in white letters on a safety red background)
	Indicates a hazardous situation that, if not avoided, could result in death or serious injury. (The signal word WARNING is in black letters on a safety orange background)
	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. (The signal word CAUTION is in black letters on a safety yellow background)
NOTICE	Indicates information considered important, but not hazard-related (e.g. messages relating to property damage). (The signal word NOTICE is in italicized, white letters on a safety blue background)

The signal word definitions provided, comply with the American National Standard for Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials (ANSI Z535.6-2011).

This technical manual is printed in black and white.



SAFETY SYMBOLS



The safety alert symbol indicates a potential personal injury hazard. It is not used for messages related to property damage. The safety alert symbol may be used alone or in conjunction with a signal word in a signal word panel



Danger of electrical shock



Danger of Hand Entanglement - Drive Chain



Danger of Hand Entanglement - Roller Shaft



Read Operator's Manual



Two Person Lift

Symbols are harmonized with ANSI Z535.4 and ISO 3864-2 standards. Warning symbols are presented on a safety yellow background. Mandatory action symbols are presented on a safety blue background.

This technical manual is printed in black and white.



SAFETY RECOMMENDATIONS AND WARNINGS

Labels must be in place and readable at all times. Bettcher Industries will replace any label that becomes unreadable, free of charge.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Bettcher Industries, Inc.

Use only replacement parts manufactured by Bettcher Industries, Inc. Use of substitute parts will void the warranty and may cause injury to operators and damage to equipment.

All maintenance procedures should be performed by qualified personnel.



To avoid personal injury, guards must be in place while operating the machine.



Never operate without guards in place.

Moving machine parts and pinch points. Never operate without discharge tray in place.

Sprocket and Chain

To avoid personal injury, guards must be in place while operating the machine.



Never attempt to repair a wirebelt that has been previously repaired or has damage in more than one place. A belt with these properties could have small pieces break off into the product long before the next failure is noticed.



To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly/assembly, troubleshooting or cleaning.

All electrical repairs should be completed by a qualified electrician or approved service provider.



SAFETY RECOMMENDATIONS AND WARNINGS (CONTINUED)



Heavy lifting can cause injury. Use two-man lift.

Place frame assembly on a flat, level surface that can support 200 pounds.



Do not over tighten screws in plastic components. Damage may occur.



All sprockets must be in alignment with the wirebelting.



Make sure wirebelt is installed in the proper direction.



SAFETY RECOMMENDATIONS AND WARNINGS (CONTINUED)



Make sure wirebelt is installed in the proper direction. If wirebelt edgeloop is installed improperly, damage to the wirebelt may result.

NOTICE

The recommended cleaning solution for the Optimax[®] Automatic Batter-Breader is eXtra[©] Heavy Duty Cleaner.



eXtra© Heavy Duty Cleaner, (PN:184332), is a concentrated cleaner and degreaser for food processing equipment. Contact Bettcher Industries, Inc. for details.



Do not machine wash drive guard covers or batter tanks. Excessive heat generated by machine washing can damage parts.

Do not submerge frame and motor assembly as damage to motor could result. Clean with damp cloth or sponge only.

ERGONOMIC FEATURES

The Optimax[®] Batter-Breading System eliminates manual application of batter and breading.

NOISE LEVEL

With normal use, the Optimax[®] noise emission value is less than 70 dB(a).

Designated Use



Section 2

Designated Use

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DESIGNATED USE

The Optimax[®] Automatic Batter-Breading machine provides the food service industry with a compact, economical and reliable batter-breading machine that consistently applies batter and/or breading to virtually all types of foods.

MACHINE FUNCTION

The Optimax[®] Automatic Batter-Breading machine applies a full range of batters and breadings to foods. Products are conveyed through the batter and then through the breading for an even, consistent coating.



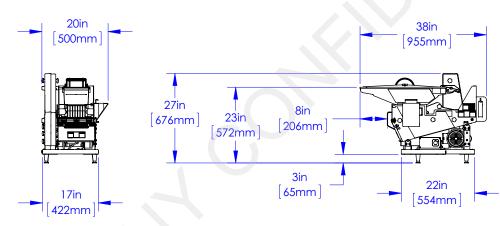
MACHINE SPECIFICATIONS - BB-1

The Optimax[®] Batter-Breading machine has been tested and meets the requirements of the National Sanitation Foundation (NSF), Intertek (ETL), and bears the official markings of these agencies.

Weight

os. (53kg)
s. (31 kg)
s. (18 kg)
(4 kg)
(1 kg)

Overall Size



Speeds

Batter Conveyor Breading Conveyor Usable Belt Width 20 ft./min. (6.1 m/min) 34 1/2 ft./min. (10.5 m/min) 6 in. (152 mm)

Power Requirements

Power Source 115 VAC/ 1 Phase/ 60 Hz 2.4	А
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Capacity

Batter Capacity	
Breading Capacity	

6 qt. (5,7 l) 8-18 lbs. (3,6 to 8,1 Kg)



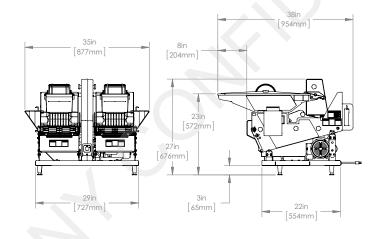
MACHINE SPECIFICATIONS - BB-2

The Optimax[®] Batter-Breading machine has been tested and meets the requirements of the National Sanitation Foundation (NSF), Intertek (ETL), and bears the official markings of these agencies.

Weight

	BB-2
Total Machine	181 lbs. (82kg)
Frame	81 lbs. (37 kg)
Breader Conveyor	38 lbs. (18 kg) x 2
Batter Conveyor	9 lbs. (4 kg) x 2
Batter Tank	2 lbs. (1 kg) x 2

Overall Size



Speeds

Batter Conveyor Breading Conveyor Usable Belt Width 20 ft./min. (6.1 m/min) 34 1/2 ft./min. (10.5 m/min) 6 in. (152 mm)

Power Requirements

Power Source

115 VAC/ 1 Phase/ 60 Hz 2.4 A

Capacity

Batter Capacity Breading Capacity 6 qt. (5,7 l) 8-18 lbs. (3,6 to 8,1 Kg)



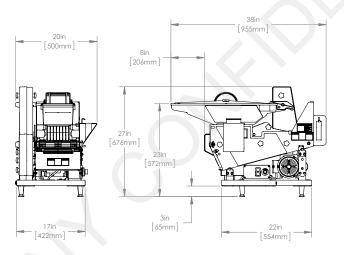
MACHINE SPECIFICATIONS - BB-1F

The Optimax[®] Batter-Breading machine has been tested and meets the requirements of the National Sanitation Foundation (NSF) and CE, and bears the official markings of these agencies.

Weight

	BB-1F
Total Machine	116 lbs. (53kg)
Frame	67 lbs. (31 kg)
Breader Conveyor	38 lbs. (18 kg)
Batter Conveyor	9 lbs. (4 kg)
Batter Tank	2 lbs. (1 kg)

Overall Size



Speeds

Batter Conveyor Breading Conveyor Usable Belt Width 20 ft./min. (6.1 m/min) 34 1/2 ft./min. (10.5 m/min) 6 in. (152 mm)

1.39 A

Power Requirements

Power Source

230 VAC/ 1 Phase/ 50 Hz

Capacity

Batter Capacity Breading Capacity 6 qt. (5,7 l) 8-18 lbs. (3,6 to 8,1 Kg)



Section 3

Unpacking and Installation

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Installation Instructions	
Pre-operational Checkout	

<u>NOTE</u>

BEFORE YOU BEGIN INSTALLATION

Check the contents of the box to make sure that all parts are included. If any items are missing, or you notice any damage, contact Bettcher Industries, Inc. at 1-800-321-8763 or contact your local distributor.

NOTE

In the event you have questions about the installation, use, care or service of this product, contact our customer service department at Bettcher Industries, Inc. at 1-800-321-8763 or contact your local distributor.



CONTENTS

Shown below are the typical contents found inside the shipping carton.



Batter Conveyor: Boxed individually, inside shipping carton.



Breader Conveyor: Installed on frame for shipping purposes.



UNPACKING

Step 1: Remove all components from the foam trays, packaging and shipping containers.



Breader Conveyor Components and manual are shipped in the upper foam tray.



Removing Batter Conveyor from packaging



Heavy lifting may cause injury! Remove the breader conveyors from the frame assembly before removing the frame assembly from the shipping container base.



Step 2: Release the locking latch and spacer lock.



Locking Latch



Spacer Lock



UNPACKING (CONTINUED)



Heavy lifting can cause injury. Use two-man lift.

Place frame assembly on a flat, level surface that can support 250+ pounds.

Step 3: Remove discharge tray



Discharge Tray

Step 4: Lift breader conveyor off of the bottom pan.



Bottom Pan

Breader Conveyor



UNPACKING (CONTINUED)



Heavy lifting can cause injury. Use two-man lift.

Place frame assembly on a flat, level surface that can support 250+ pounds.

Step 5: Remove bottom pan off of the frame.

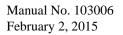


Bottom Pan

Step 6: Remove the frame assembly from the shipping container base and set it on a flat, level surface that can support 250+ pounds.



Shipping Container Base



Unpacking and Installation Optimax[®] Operating Instructions and Parts List





INSTALLATION INSTRUCTIONS



Place frame assembly on a flat, level surface that can support 250+ pounds.

Step 1: Make sure that the locking latch is in the position shown.



Step 2: Set bottom pan onto frame with tab located as shown.



Bottom Pan







Step 3: Set the breader conveyor onto the bottom pan.



Breader Conveyor

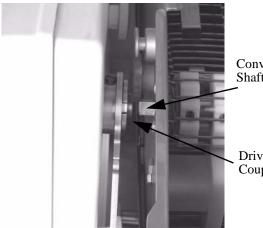
Step 4: Position the front of the breader conveyor to align with the drive shaft coupler.



Drive Shaft Coupler

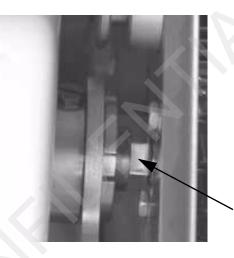


Step 5: Rotate the breader conveyor driven shaft square end so that it aligns with the square of the drive shaft coupler.



Conveyor Driven Shaft's Square End

Drive Shaft Coupler **Step 6:** Push the breader conveyor's driven shaft into the drive shaft coupler until engaged.



Engaged

Step 7: Rotate latch into position.



Latch

Step 8: Rotate spacer lock into position.



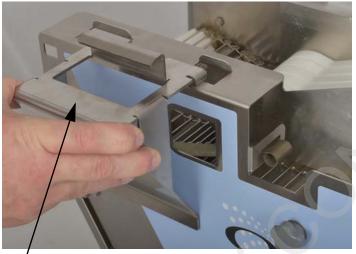
Spacer Lock



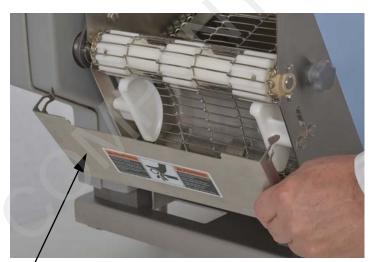
Step 9: Assemble by installing:

Discharge Tray and Pan Bracket

- Place the slots of the pan bracket onto the flange of the breader conveyor side rail.
- Position the bottom edge of discharge tray onto the bottom pan. Rotate discharge tray upward until it snaps into the breader conveyor side rails.



Pan Bracket

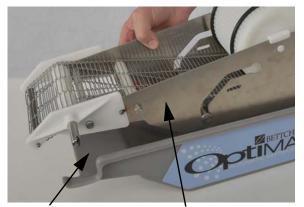


Discharge Tray



Step 10: Place the batter conveyor assembly into the batter tank.

Step11: Install the batter conveyor assembly and tank on the breader conveyor.



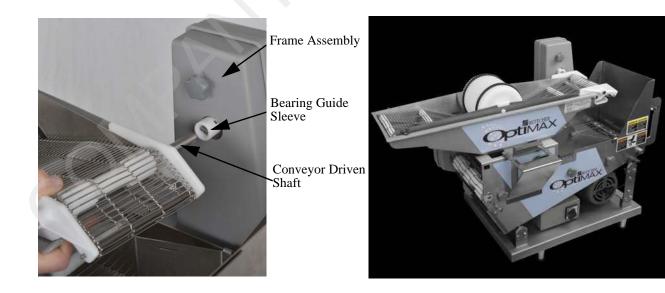
Batter Tank

Batter Conveyor Assembly

Step 12: Align the conveyor driven shaft with the bearing guide sleeve on the frame assembly.



Step 13: Unit ready for pre-operational checkout.





PRE-OPERATIONAL CHECKOUT

Step 1: Turn the power switch to OFF.

Step 2: Plug in the power cord.

Step 3: Turn the power switch to ON.

Step 4: Verify that the batter and breader conveyors are operating smoothly. The machine is now ready for adding the batter and breading as described in the operating instructions.





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Instructions for Operation



Section 4

Instructions for Operation

CONTENTS OF THIS SECTION

Loading the Breader Tank	
Loading the Batter Tank	
Product Coating Operation	



To avoid personal injury, guards must be in place while operating the machine.



Never operate without guards in place.

machine.

Moving machine parts and pinch points. Never operate without discharge tray in place.

Sprocket and Chain To avoid personal injury, guards must be in place while operating the



LOADING THE BREADING

Step 1: Turn the machine ON.

Step 2: Scoop the breading into the breader conveyor assembly.

Step 3: Continue to fill the breader conveyor assembly, with the conveyor running, until the breading depth is even with fill slot.

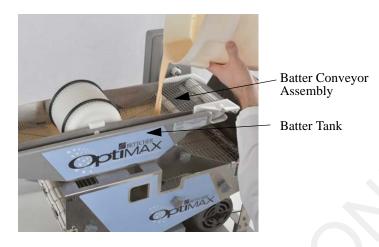




LOADING THE BATTER

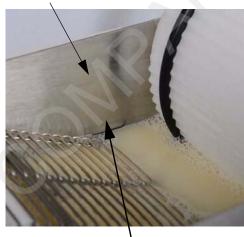
Step 1: Turn the machine OFF.

Step 2: Fill the batter conveyor assembly with batter.

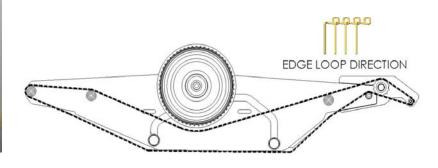


Step 3: Stop filling when the batter reaches the top of the slots in both side plates of the batter conveyor assembly.





Slot Top





PRODUCT COATING OPERATION

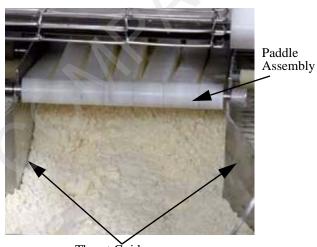
Step 1: Turn the machine **ON**.

NOTE Always place the product in the center of the conveyor. For best results, leave some space between each piece of product.

Step 2: Place the product on the center of the batter conveyor assembly. The product is coated with batter as it passes under the wheel.



Step 3: The product will be coated with breading as it goes through the throat guides and under the paddle assembly. The product will exit at the front end of the breader.



Throat Guides

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- Section 5B Breader Conveyor Assembly
- Section 5C Frame Assembly
- Section 5D Preventive
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Batter Conveyor Assembly



Section 5A

Maintenance Batter Conveyor Assembly

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Batter Conveyor Arm Replacement	5A-2
Batter Conveyor Wirebelt Replacement	
Batter Conveyor Driven Shaft Replacement	
Batter Tank Alignment	
	•••••





All maintenance procedures should be performed by qualified personnel.

The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

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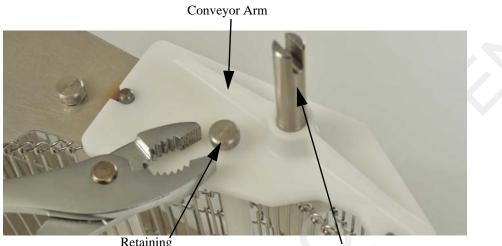
Never attempt to repair a wirebelt that has been previously repaired or has damage in more than one place. A belt with these properties could have small pieces break off into the product long before the next failure is noticed.



BATTER CONVEYOR ARM REPLACEMENT

Step 1: Remove the retaining thumbscrew from one side of the batter conveyor arm and lift it off of the driven shaft.

Step 2: Install the new conveyor arm and tighten the retaining thumbscrews. Replace the conveyor arm on the opposite side, using the same procedure. **See the belt path label to ensure proper tracking.*

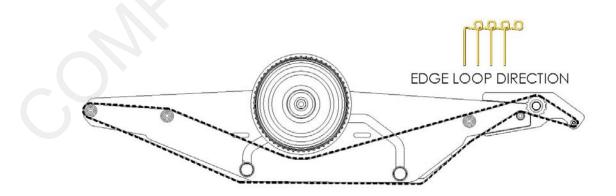


Retaining Thumbscrew

Driven Shaft



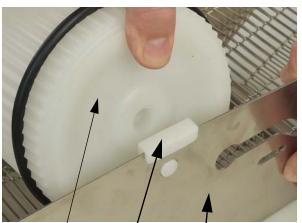
If the wirebelt is installed improperly, damage to the wirebelt may result. Refer to the wirebelt replacement instructions in this section of the manual.





BATTER CONVEYOR WIREBELT REPLACEMENT

Step 1: Remove the batter wheel by slightly spreading the conveyor side rails open and slipping the wheel from its mounts.

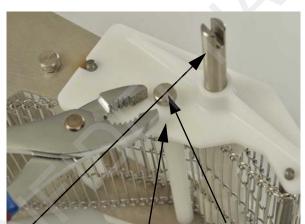


Mount

Batter Wheel

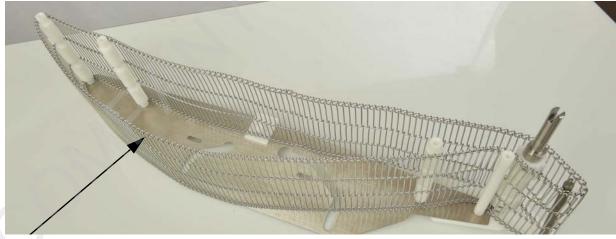
Side Rail

Step 2: Place the batter conveyor assembly on its side. Remove the retaining thumbscrews from one side of the conveyor then slide the conveyor arm off the driven shaft.



Driven Shaft Conveyor Arm Retaining Thumbscrew

Step 3: Remove the conveyor side rail and slide the wirebelt from the assembly.



Wirebelt

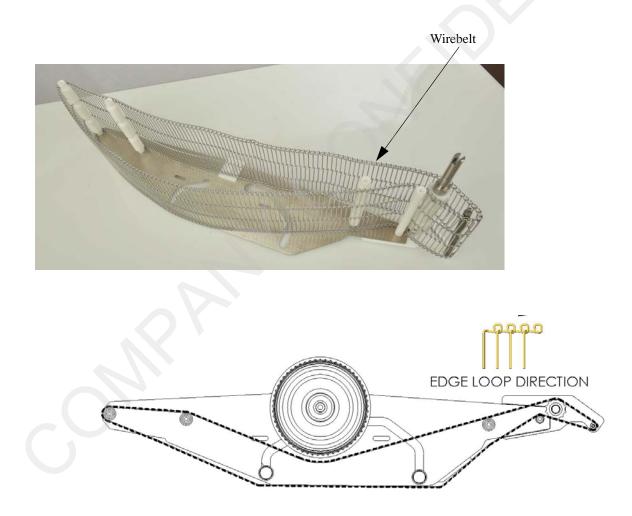


BATTER CONVEYOR WIREBELT REPLACEMENT (CONTINUED)

NOTICE

If the wirebelt is installed improperly, damage to the wirebelt may result.

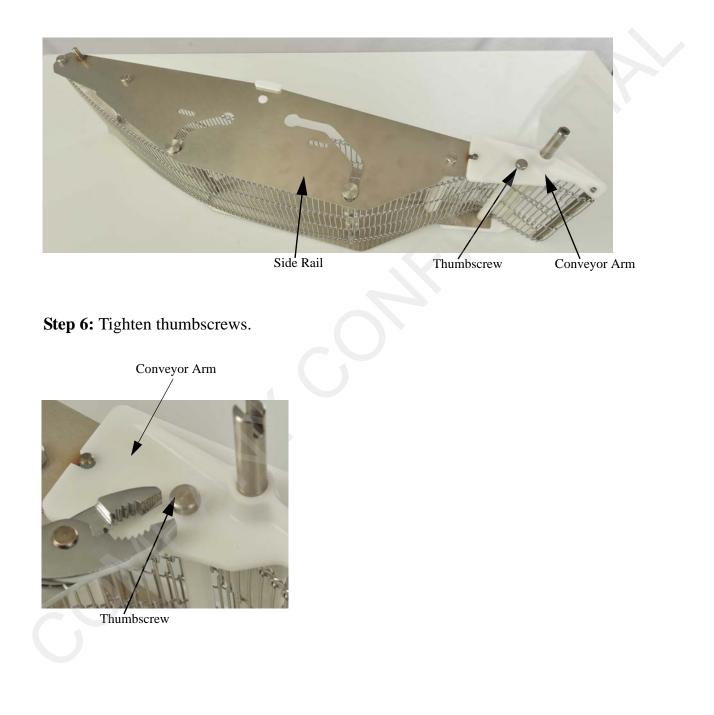
Step 4: Place the new wirebelt between the side rails. Make certain the edge loops are facing the direction of travel. **See the belt path view*.





BATTER CONVEYOR WIREBELT REPLACEMENT (CONTINUED)

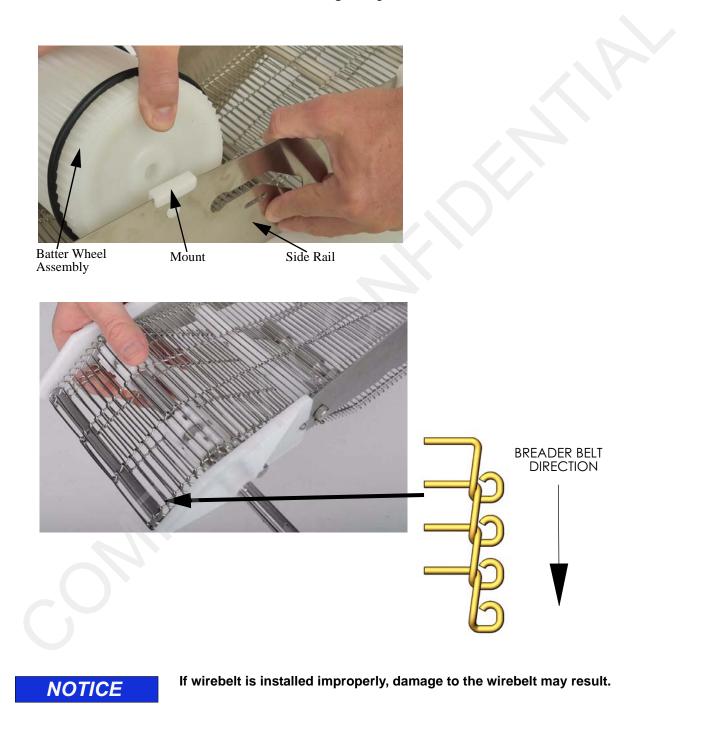
Step 5: Reinstall the side rail, conveyor arm, and thumbscrews.





BATTER CONVEYOR WIREBELT REPLACEMENT (CONTINUED)

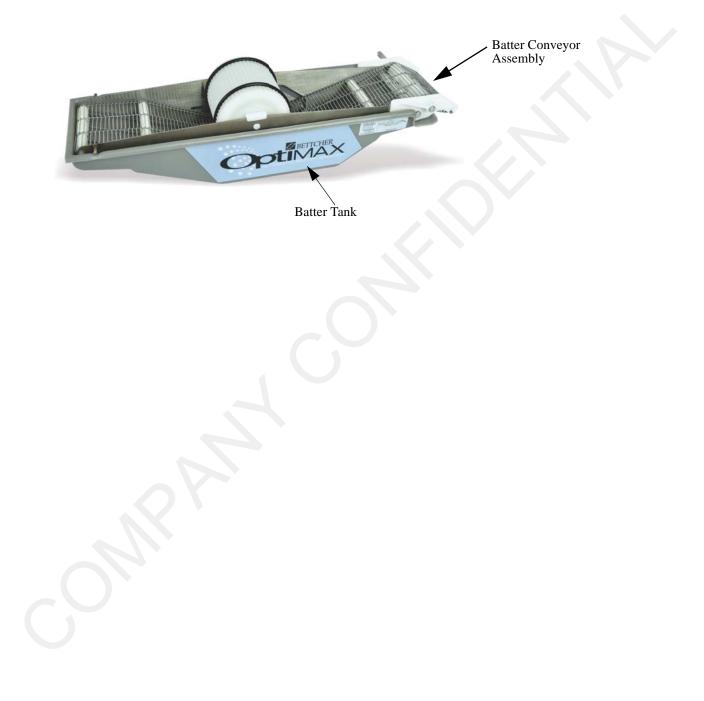
Step 7: Insert the batter wheel assembly into the batter conveyor by slightly spreading the side rails. Make certain that the wirebelt edge loop flats are in the directions shown.





BATTER CONVEYOR WIREBELT REPLACEMENT (CONTINUED)

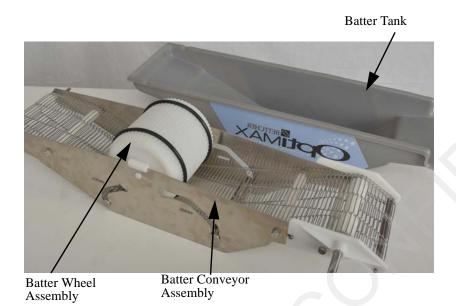
Step 8: Install the batter conveyor assembly into the batter tank.



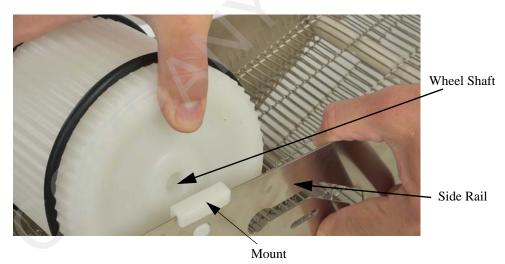


BATTER CONVEYOR DRIVEN SHAFT REPLACEMENT

Step 1: Remove the batter conveyor assembly from the batter tank and clean it, before attempting to remove the batter conveyor driven shaft components from the conveyor. **See cleaning instructions, Section 6.*

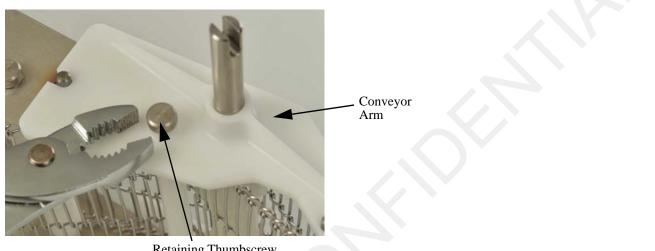


Step 2: Remove the batter wheel assembly by slightly spreading the conveyor side rails open and slipping the wheel from its mounts.



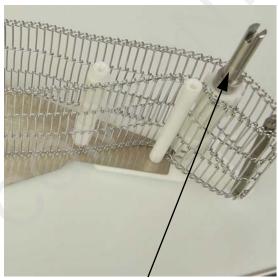


Step 3: Place the batter conveyor assembly on its side. Remove the retaining thumbscrew from one side of the conveyor and slide the batter conveyor arm off of the shaft.



Retaining Thumbscrew

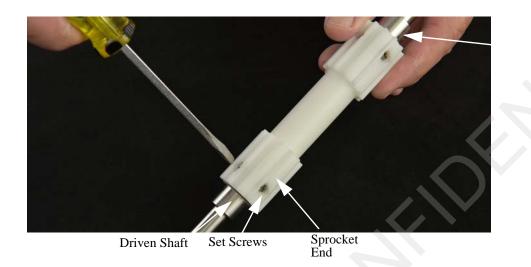
Step 4: Slide the driven shaft with sprockets out from the wirebelting.



Driven Shaft with Sprocket



Step 5: Loosen the set screws on the sprocket end and remove the driven shaft.



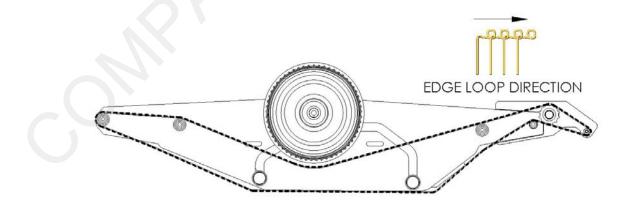
Step 6: Insert the new driven shaft into the sprocket end, aligning the sprocket hole with the orientation dimple on the driven shaft. Tighten set screws.





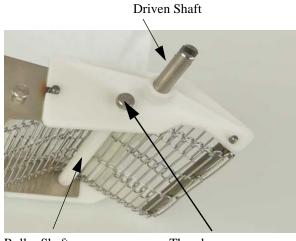
Step 7: Install the completed driven shaft assembly into the conveyor assembly. Make sure the driven shaft assembly is installed facing the proper direction. Confirm the driven shaft assembly is inside of the wirebelt.







Step 8: Align and reinstall conveyor arm and thumbscrew. Tighten thumbscrew.

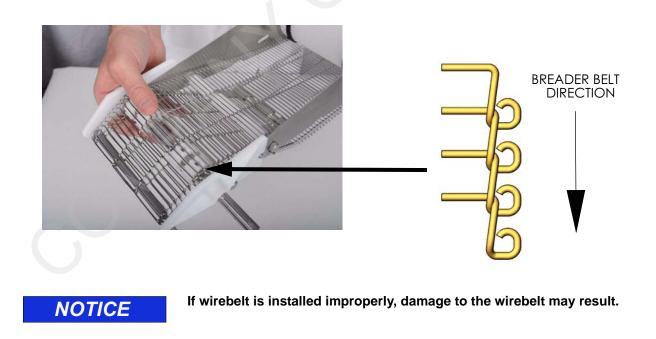




Roller Shaft

Thumbscrew

Step 9: Rotate the driven shaft by hand to ensure that it turns freely.





Step 10: Install the batter conveyor assembly into the batter tank.





BATTER TANK ALIGNMENT

Step 1: If the batter tank driven shaft doesn't seem to engage the drive shaft properly, simply try sliding the batter tank either forward or backwards until the alignment improves.





If further adjustment is required, please contact Bettcher Industries at 1 800 321-8763.

Breader Conveyor Assembly



Section 5B

Maintenance Breader Conveyor Assembly

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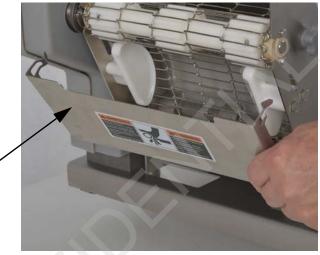


BREADER CONVEYOR BEARINGS AND DRIVEN SHAFT

Step 1: Disassemble breader conveyor by removing:

Discharge Tray

• Pull the top of the discharge tray away from the breader assembly releasing the tray from the breader holes.



Discharge Tray

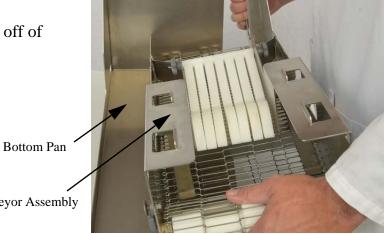
Pan Bracket

• Remove the pan bracket from the breader conveyor side rail.



Breader Conveyor Assembly

• Remove breader conveyor assembly off of bottom pan.



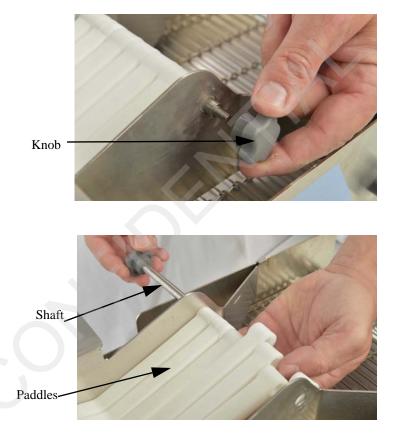
Pan Bracket

Breader Conveyor Assembly



Paddle Assembly

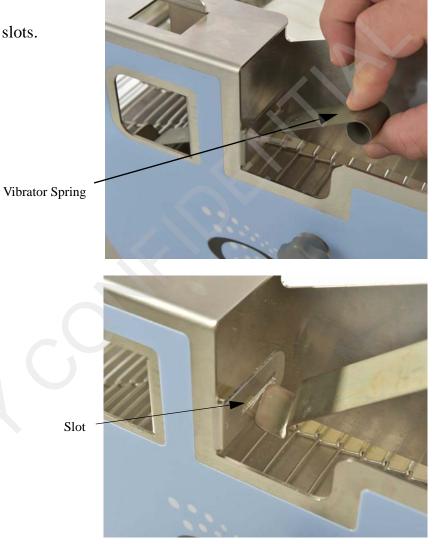
• Remove knob, shaft and paddles.





Vibrator Springs

• Remove vibrator springs from slots.





<u>NOTE</u>

When removing the side rail, lift from the front of the side rail and work your way to the rear.

<u>NOTE</u>

Make sure that the bearing assemblies remain on the support shaft.

Step 2: Remove the knobs from one side of the breader conveyor. Lift the side rail off of the breader conveyor. **Make sure that the bearing assemblies remain on the support shaft*.

Top Side Rail



Front of Side Rail

Knobs Removed

Bearing Assembly

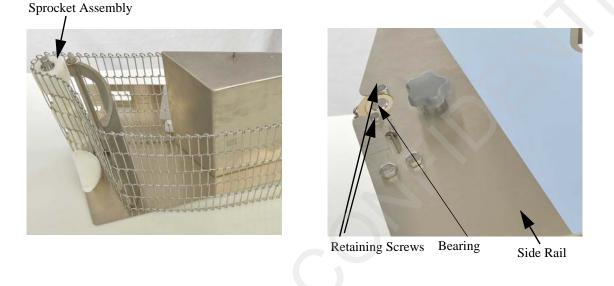


Support Shaft

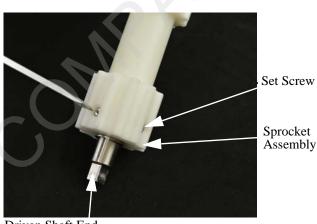


Step 3: Remove the sprocket assembly from the breader conveyor assembly.

Step 4: Remove the bearings from the side rails by removing the retaining screws, using a 5/16" wrench or nut driver. Install the new bearings, using the same retaining screws. **Do not overtighten*.



Step 5: Using a flat blade screw driver, loosen the sprocket set screws and remove the driven shaft from the sprocket assembly end.









Do not over tighten screws in plastic components. Damage may occur.

Step 6: Slide the new driven shaft end into the sprocket assembly, positioning the sprocket hole over the orientation dimple. Install the set screws into the sprocket assembly and tighten.



Orientation Dimple

Driven Shaft End

Sprocket Assembly

Set Screw



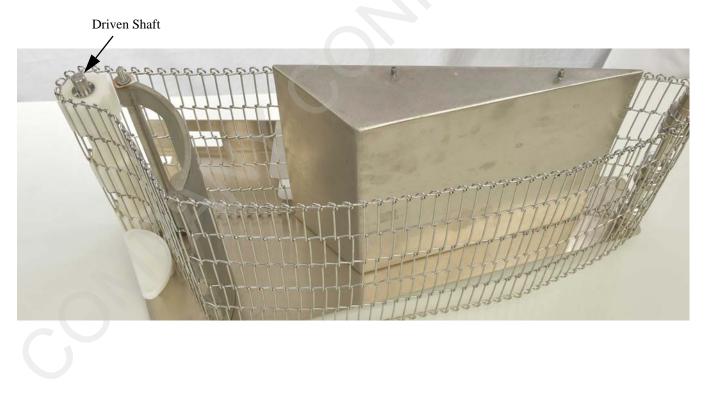
<u>NOTE</u>

The driven shaft will only fit properly one way. If it doesn't install properly, turn it over and try again.



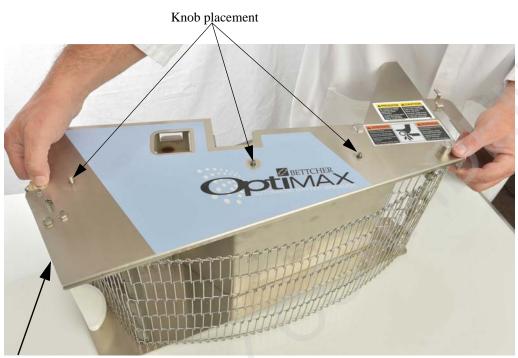
All sprockets must be in alignment with the wirebelting.

Step 7: Reinstall the driven shaft. Align the sprockets with the wirebelting.





Step 8: Reinstall the breader side rail and (3) knobs, installing from the front end of the side rail and working your way towards the rear. **Make sure all components are located and aligned prior to tightening the knobs*.



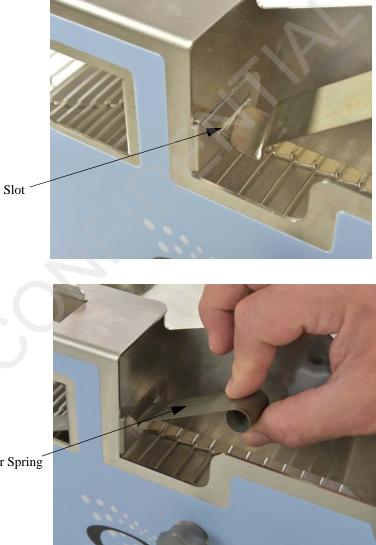
Front of Side Rail



Step 9: Reassemble by installing:

Vibrator Springs

• Install vibrator springs into slots.

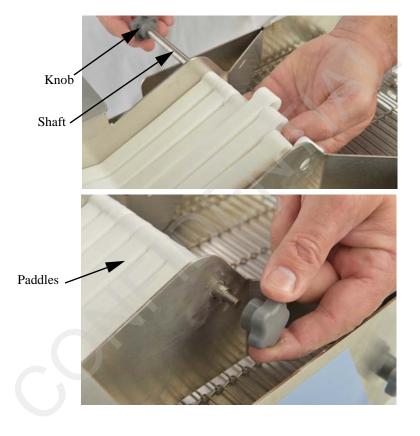


Vibrator Spring



Paddle Assembly

• Install knob, shaft and paddles.



Breader Conveyor

• Install breader conveyor assembly onto bottom pan.

Bottom Pan -

Breader Conveyor , Assembly

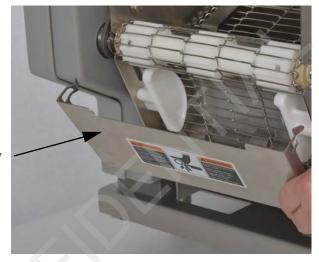




Discharge Tray

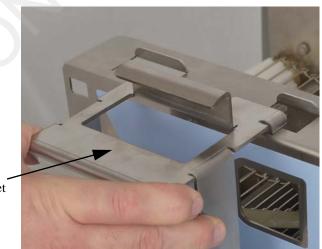
• Position the bottom edge of discharge tray onto the bottom pan. Rotate discharge tray upward until it snaps into the breader conveyor side rails.

Discharge Tray



Pan Bracket

• Install the pan bracket onto the breader conveyor side rail.



Pan Bracket

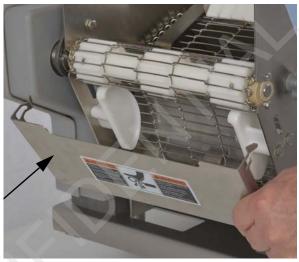


WIREBELT REPLACEMENT

Step 1: Disassembe breader conveyor by removing:

Discharge Tray

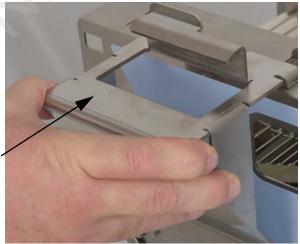
• Pull the top of the discharge tray away from the breader assembly releasing the tray from the breader holes.



Discharge Tray

Pan Bracket

• Remove the pan bracket from the breader conveyor side rail.

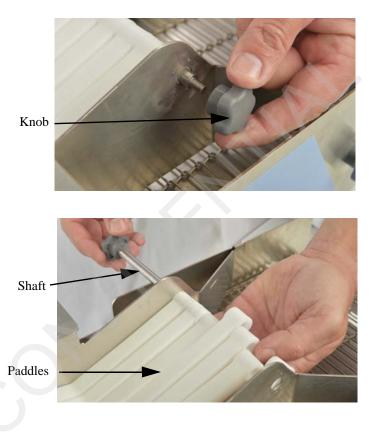


Pan Bracket



Paddle Assembly

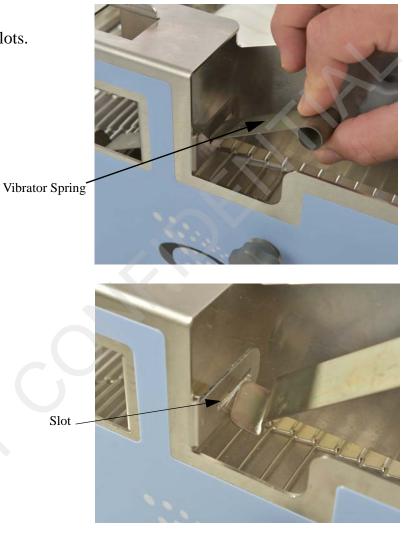
• Remove knob, shaft and paddles.





Vibrator Springs

• Remove vibrator springs from slots.



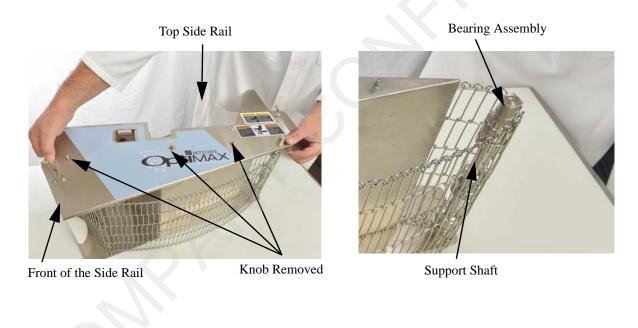


<u>NOTE</u>

When removing the side rail, lift from the front of the side rail and work your way to the rear.

NOTE Make sure that the bearing assemblies remain on the support shaft.

Step 2: Remove the knobs from one side of the breader conveyor. Lift the side rail off of the breader conveyor. **Make sure that the bearing on the support shaft assembly remains intact.*





Step 3: Remove the sprocket assembly and wirebelt from the breader conveyor assembly.



Wirebelt



Make sure wirebelt is installed in the proper direction.

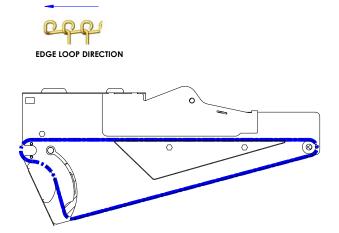
Sprocket Assembly will only fit properly one way. If it doesn't install properly, turn it over and try again.

All sprockets must be in alignment with the wirebelting.

Step 4: Install the new wirebelt and sprocket assembly, making sure the wirebelt is installed behind the idler block. *See the belt path label to ensure proper tracking.



Idler Block



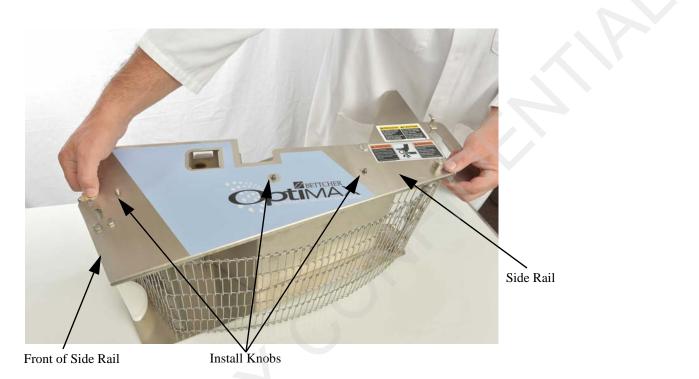
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Step 5: Reinstall the breader side rail and knobs, installing from the front end of the side rail and working your way towards the rear. **Make sure all components are located and aligned prior to tightening the knobs*.

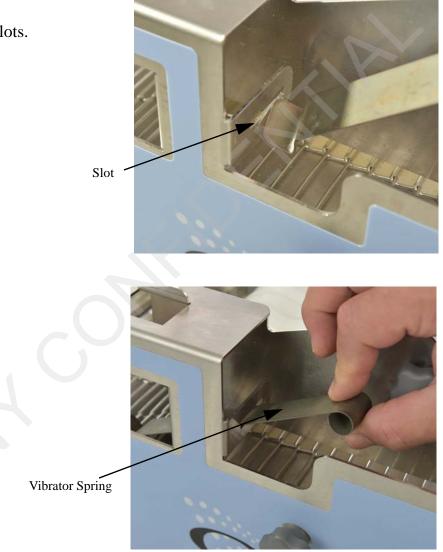




Step 6: Reassemble by installing:

Vibrator Springs (3)

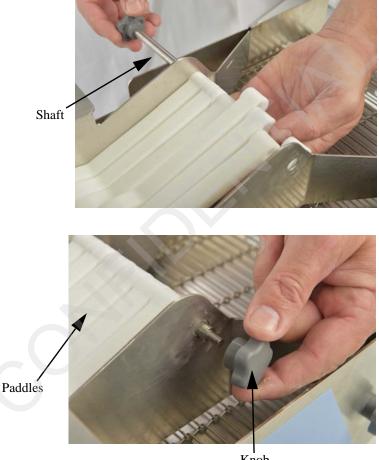
• Install vibrator springs into slots.





Paddle Assembly

• Install knob, shaft and paddles



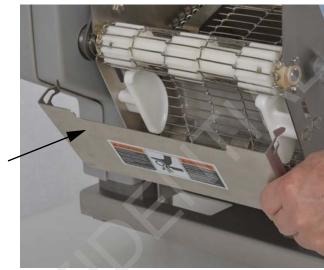
Knob



Discharge Tray

• Position the bottom edge of discharge tray onto the bottom pan. Rotate discharge tray upward until it snaps into the breader conveyor side rails.

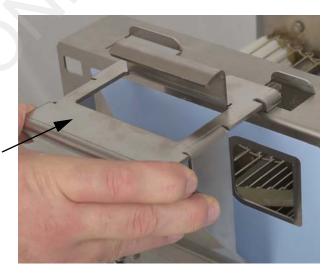
Discharge Tray



Pan Bracket

• Place the slots of the pan bracket onto the flange of the breader conveyor side rail.

Pan Bracket





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Section 5C

Maintenance Frame Assembly

CONTENTS OF THIS SECTION

Safety Recommendations and Warnings	
Batter Drive Shaft/Bearing Replacement	
Breader Drive Shaft/Bearing Replacement	5C-11
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SAFETY RECOMMENDATIONS AND WARNINGS



All maintenance procedures should be performed by qualified personnel.

The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Bettcher Industries, Inc.

Use only replacement parts manufactured by Bettcher Industries, Inc. Use of substitute parts will void the warranty and may cause injury to operators and damage the equipment.

Electrical shock may occur! Always disconnect unit from power supply prior to servicing.



All electrical repairs should be completed by a qualified electrician or approved service provider.



SAFETY RECOMMENDATIONS AND WARNINGS (CONTINUED)





To avoid personal injury, guards must be in place while operating the machine.

Never operate without guards in place.

Moving machine parts and pinch points. Never operate without discharge tray in place.

Sprocket and Chain To avoid personal injury, guards must be in place while operating the machine.



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BATTER DRIVE SHAFT/BEARING REPLACEMENT

Step 1: Disassemble the frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers

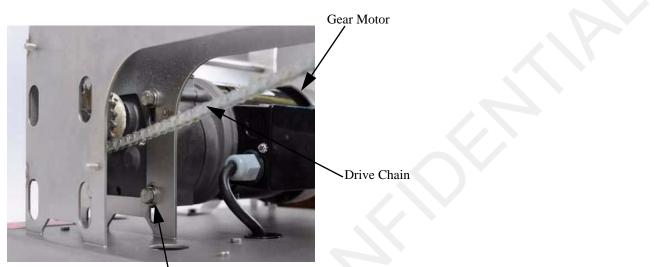








Step 2: Loosen the 4 motor mounting bolts and lift up the gear motor to loosen the drive chain. Slightly tighten one motor mounting bolt to position the gear motor in the upper most position.

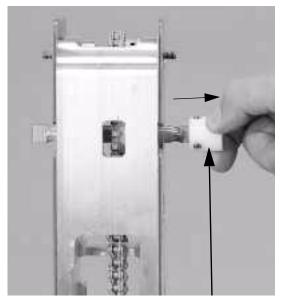


Motor Mounting Bolt

Step 3: Remove the guide sleeve by loosening the four guide sleeve set screws.



Set Screw



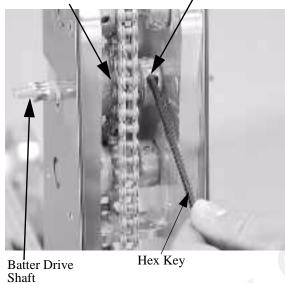
Guide Sleeve



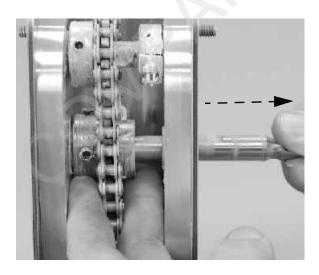
Step 4: Using a 9/64" hex key, loosen the clamp collar screw and slide the collar away from the bearing.

Step 5: Using a 1/8" hex key, loosen the 2 drive sprocket set screws so that the batter drive shaft rotates freely inside the drive sprocket.

Sprocket Set Screws Clamp Collar Screw

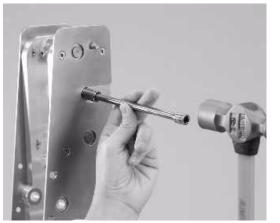


Step 6: Hold the drive sprocket and clamp collar while pulling the drive shaft out of the drive tower.





Step 7: Using a hammer and punch, remove the old bearings. Install the new bearings.

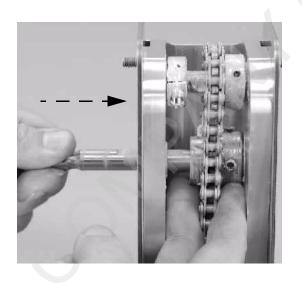


Remove



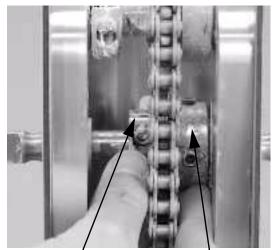
Install

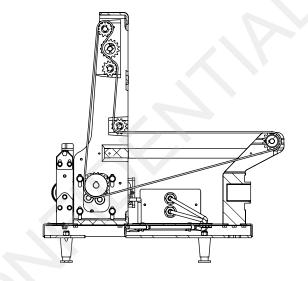
Step 8: Slide the shaft through the frame and one bearing.





Step 9: Install the drive sprocket and clamp collar on the drive shaft. Make sure the chain is positioned on the drive sprocket. **Refer to the chain path view below.*



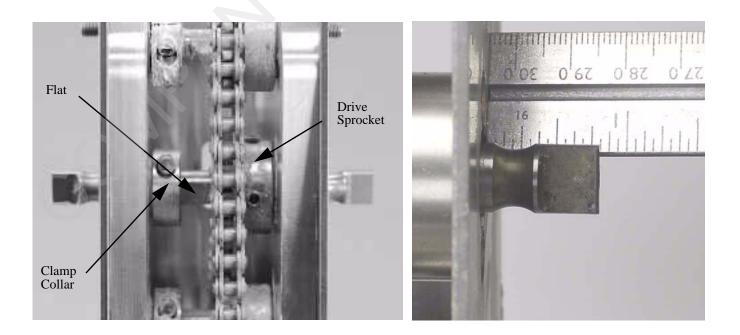


Clamp Collar

Drive Sprocket

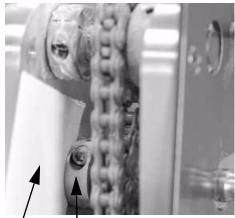
Step 10: Slide the drive sprocket against the bearing. Before tightening the sprocket set screws, check that the drive shaft is extended from the side of the frame approximately 13/16".

IMPORTANT: Make sure one of the sprocket set screws tighten on the flat part of the drive shaft.





Step 11: Use a small piece of paper to create a shim. Place the shim between the clamp collar and the left side bearing. Slide the collar against the paper shim. Tighten the clamp collar screw then remove the paper shim.

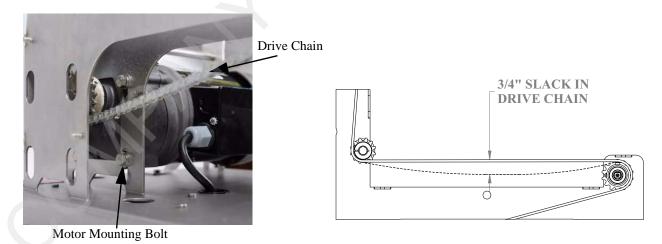


Shim Clamp Collar

Step 12: The shaft assembly adjustment is correct if the shaft can be turned by hand and side to side movement is less than 1/64 of an inch (.4mm). Reinstall the guide sleeve.



Step 13: Adjust the drive chain tension by allowing the weight of the motor to tension the drive chain. To avoid over tensioning the drive chain, make sure the drive chain has 3/4" slack as shown. Tighten the 4 motor mounting bolts.



Step 14: Reinstall the drive guard covers, knobs, and locking latch. **For installation instructions, see Section 3 of this manual.*

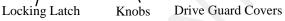


BREADER DRIVE SHAFT/BEARING REPLACEMENT

Step 1: Disassemble the frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers





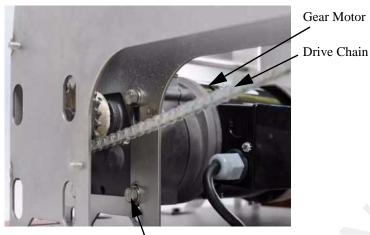


Latch Alignment





Step 2: Loosen the 4 motor mounting bolts and lift up the gear motor to loosen the drive chain. Slightly tighten one motor mounting bolt to position the gear motor in the upper most position.



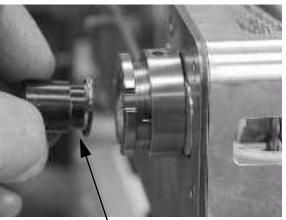
Motor Mounting Bolt

Step 3: Using a 5/16" wrench or flat tip screw driver, remove the coupler screw from the locking housing and remove the coupler.



Coupler Screw

5C-12



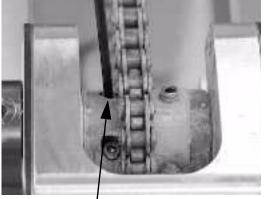
Coupler

Frame Assembly

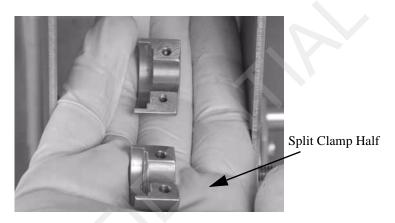


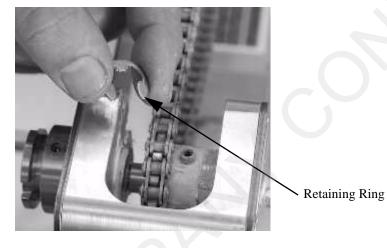
BREADER DRIVE SHAFT/BEARING REPLACEMENT (CONTINUED)

Step 4: Using a 7/64" hex key, remove the 2 screws from the split clamp and remove both clamp halves. Remove the retaining ring underneath.

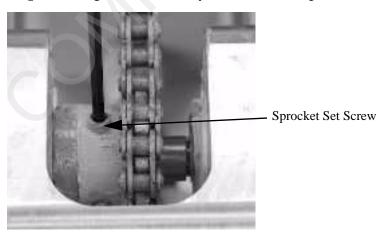


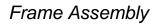
Screw





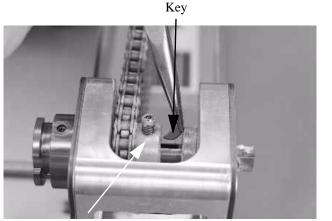
Step 5: Using a 1/8" hex key, loosen the 2 sprocket set screws.

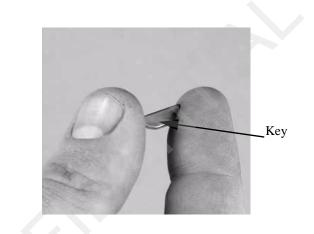






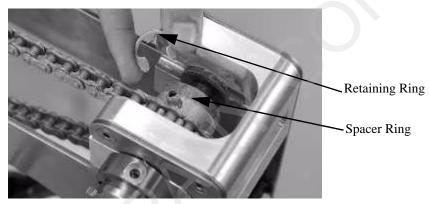
Step 6: Slide the sprocket over to expose the sprocket key and remove the key.





Sprocket

Step 7: Slide the spacer ring towards the sprocket to expose the retaining ring. Remove the retaining ring.



Step 8: Slide the drive shaft out of the bearing assemblies. While sliding the old shaft out, be certain to hold onto the loose components on the shaft (thrust bearings, thrust washer, spacer ring and drive sprocket) to prevent loss.



Frame Assembly Optimax[®] Operating Instructions and Parts List



Step 9: Using a hammer and punch, remove the old bearings.

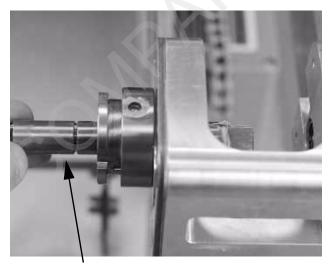
Step 10: Install the new bearings.



NOTICE

When installing the screws, use thread locker (Loctite 242 or equivalent).

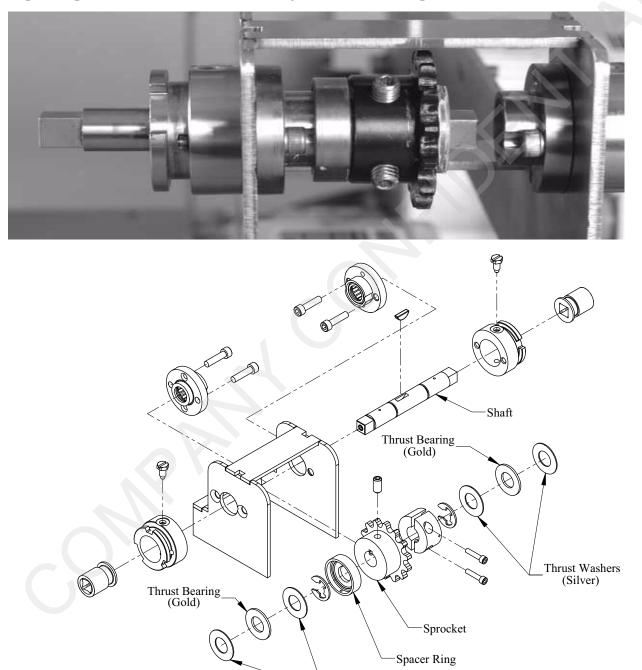
Step 11: Insert the drive shaft into the left side of the locking housing and bearing.



Drive Shaft



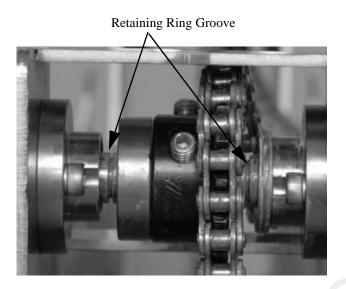
Step 12: While inserting the drive shaft, slip thrust washers (silver), thrust bearings (gold), spacer ring and sprocket over the exposed end of the shaft. If any of these components require replacement, do so before moving on to the next step.



Thrust Washers (Silver)

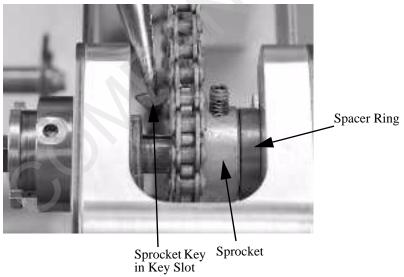


Step 13: *Make certain the drive chain is correctly looped over the sprocket, then push the drive shaft through so that both retaining ring grooves are visible.



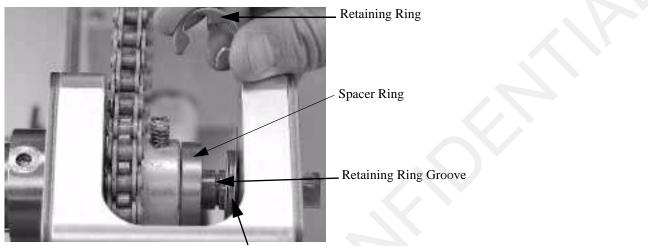
Step 14: Slide the sprocket and the spacer ring away from each other, exposing the key slot.

Step 15: Install the sprocket key into the left most key slot of the drive shaft.

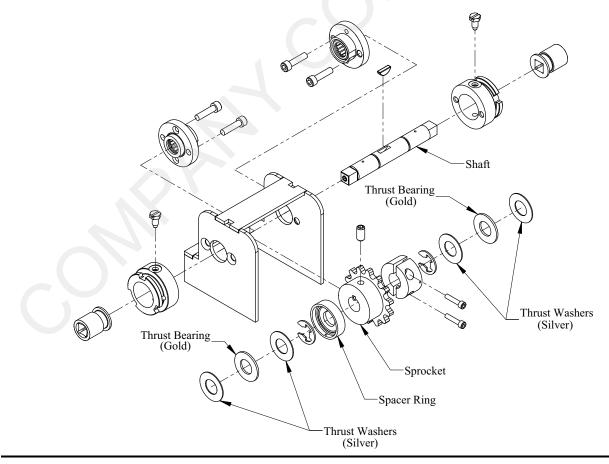




Step 16: Slide the spacer ring towards the sprocket to expose the retaining ring groove. Be sure that the thrust washers (silver) and the thrust bearing (gold) are properly installed (See diagram below). Install the retaining ring.



Thrust Washer (Silver) and Bearing (Gold)



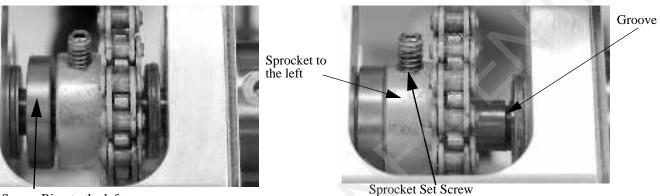
Frame Assembly



BREADER DRIVE SHAFT/BEARING REPLACEMENT (CONTINUED)

Step 17: Slide the spacer ring to the left side until it stops on the retaining ring.

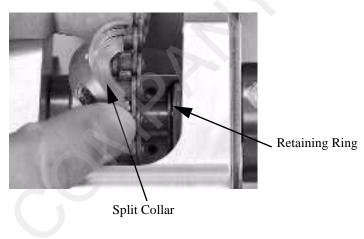
Step 18: Slide the sprocket to the left until it stops on the spacer ring. Make sure that the sprocket's keyway lines up with the key in the shaft. Tighten the set screws. Install the retaining ring into the groove.



Spacer Ring to the left

Sprocket Set Serew

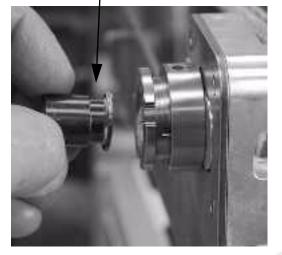
Step 19: Install the split collar halves around the shaft. Slide the split collar against the retaining ring. Apply thread locker (Loctite 242 or equivalent) to the 2 screws. Tighten the screws, using a 5/64" hex key. Once assembled, the collar must rest against the retaining ring on the right side of the shaft. **Do not rest it against the sprocket.*

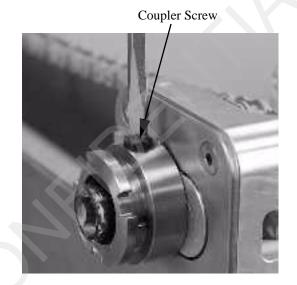




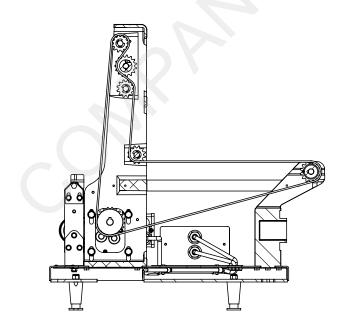
Step 20: Reinstall coupler and coupler screw.





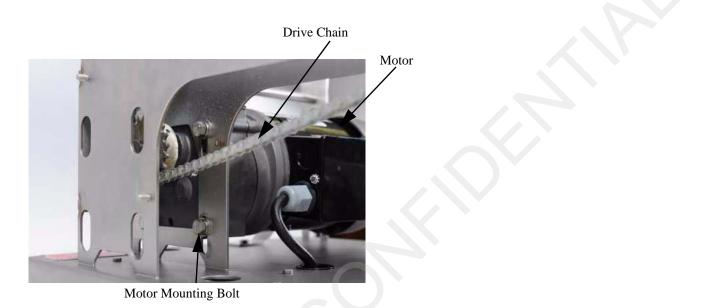


Step 21: Ensure that the drive chain is routed around the sprockets as shown in the diagram.

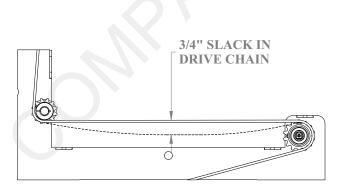




Step 22: Adjust the drive chain tension by allowing the weight of the motor to tension the drive chain. To avoid over tensioning the drive chain, make sure the drive chain has 3/4" slack as shown. Tighten the 4 motor mounting bolts.

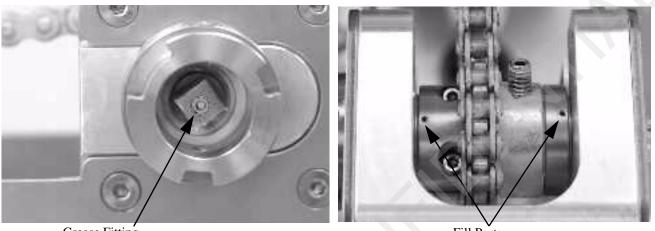


Step 23: Verify the drive chain tension by pressing down on the chain as shown. Drive chain deflection should be 3/4 of an inch.





Step 24: Grease the breader drive shaft by using the grease gun (PN: 501417) to pump the grease into the grease fittings in the drive shaft and into the fill ports in the spacer ring and split collar. Regrease the bearings every six months.



Grease Fitting

Fill Ports

Step 25: Reinstall the drive guard covers, knobs, and locking latch. **For installation instructions, see Section 3 of this manual.*



DRIVE CHAIN REPLACEMENT

Step 1: Disassemble the frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers



Locking Latch Knobs Drive Guard Covers



Latch Alignment



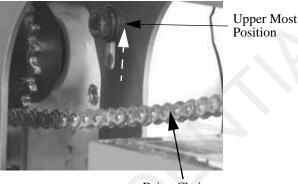


DRIVE CHAIN REPLACEMENT (CONTINUED)

Step 2: Loosen the 4 motor mounting bolts and lift up the gear motor to loosen the drive chain. Slightly tighten one motor mounting bolt to position the gear motor in the upper most position.

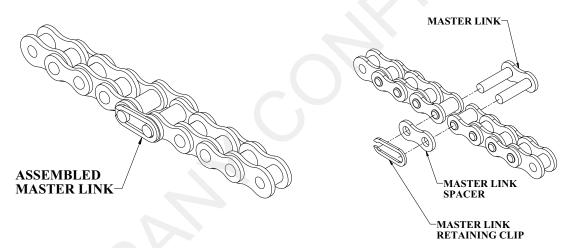


Motor Mounting Screw

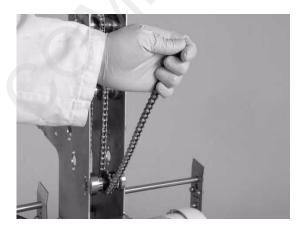


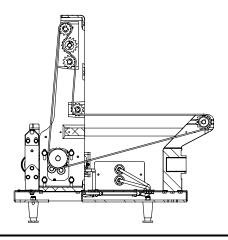
Drive Chain

Step 3: Remove the master link retaining clip, master link spacer and slide the master link out.



Step 4: Remove the old drive chain. Install the new drive chain around the sprockets as shown. Reinstall the master link.





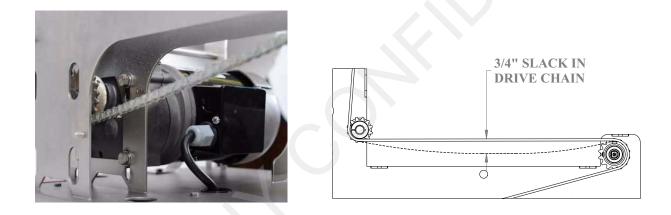


DRIVE CHAIN REPLACEMENT (CONTINUED)

NOTICE

Verify that the drive chain path is correct.

Step 5: Adjust the drive chain tension by allowing the weight of the motor to tension the drive chain. To avoid over tensioning the drive chain, make sure the drive chain has 3/4" slack as shown. Tighten the 4 motor mounting bolts.



Step 6: Reinstall the drive guard covers, knobs, and locking latch. **For installation instructions, see Section 3 of this manual.*

GEAR MOTOR REPLACEMENT



Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

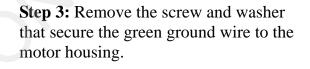


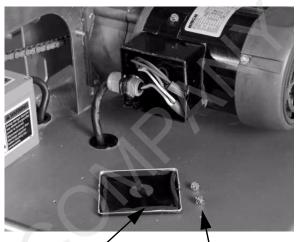
All electrical repairs should be completed by a qualified electrician or approved service provider.

Step 1: Disassemble the frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers

Step 2: Using a screw driver or a 1/4" nut driver, remove the motor junction box cover by loosening the screws on each side.





Junction Box Cover

Screws



Green Ground Wire

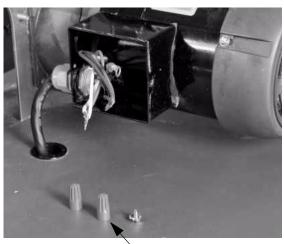
Frame Assembly



GEAR MOTOR REPLACEMENT (CONTINUED)

Step 4: Remove and save the wire nuts connecting the motor cord wire to the motor wires. *See the electrical schematics in Section* 7.

Step 5: Remove and save the locknuts that hold the connectors into the junction box. Pull the motor cord and connector from the junction box.

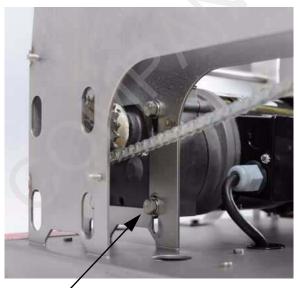


Wire Nuts

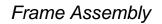


Motor Cord Lock Nut

Step 6: Remove the gear motor by removing the mounting screws and washers that attach it to the frame. When removing, raise the motor high enough to slacken and unhook the drive chain from the motor sprocket. **Save the gear motor mounting screws for reassembly.*



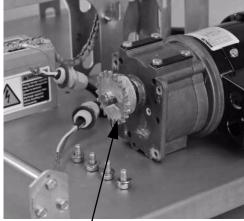
Motor Mounting Screw



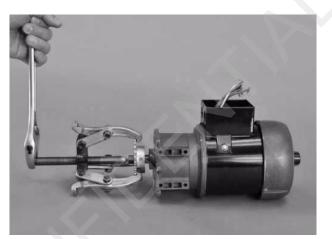


GEAR MOTOR REPLACEMENT (CONTINUED)

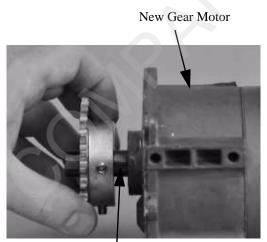
Step 7: Loosen the 2 set screws located in the gear motor drive sprocket. Remove the gear motor drive sprocket from the shaft. **This sprocket is keyed to the gear motor shaft and may require a gear puller to remove.*



Gear Motor Drive Sprocket

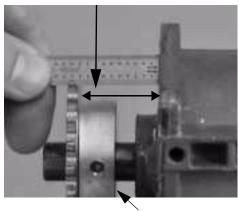


Step 8: Install the gear motor drive sprocket onto the new motor. Install with the sprocket hub facing the gear motor. Align the sprocket keyway with the gear motor shaft key. **Step 9:** Position the inside edge of the gear motor drive sprocket 11/16 on an inch (17.5mm) from the motor housing and tighten the set screws.



Gear Motor Shaft Key

1-3/8" Center of Teeth

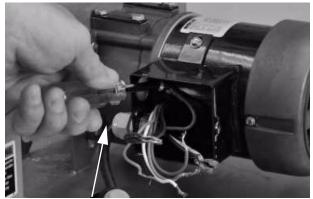


Ìub



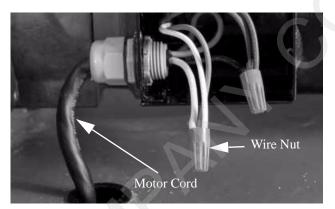
GEAR MOTOR REPLACEMENT (CONTINUED)

Step 10: Remove the new motor junction box cover by loosening the screws on each side. Insert the motor cord and strain relief into the bottom hole in the motor junction box and secure it with a lock nut. Fasten the ground (green) wire to the motor housing inside the junction box with the provided screw and washer.

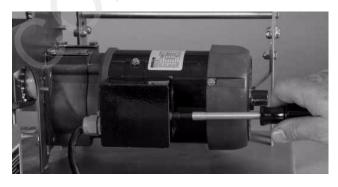


Motor Cord installed in the bottom hole of junction box

Step 11: Connect the motor switch cord wires together, using the wire nuts. **See the electrical schematic in Section 7.*



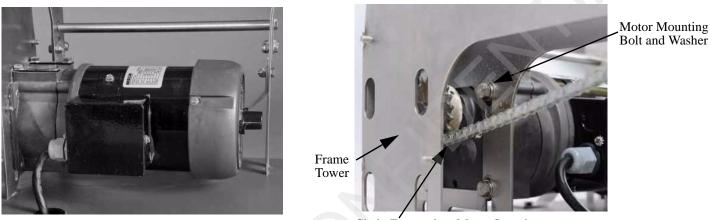
Step 12: Using a screwdriver or a 1/4" nut driver, install the junction box cover, securing it with the shake proof washers and screws provided with the new motor.





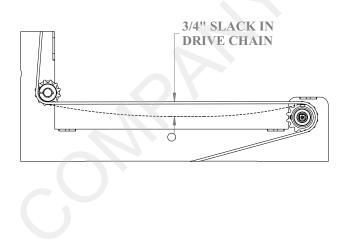
GEAR MOTOR REPLACEMENT (CONTINUED)

Step 13: Set the motor into the frame tower and engage the chain with the motor sprocket. Install the gear motor mounting bolts and washers. **Do not tighten.* Lower the gear motor and allow the weight of the motor to tension the drive chain.



Chain Engaged on Motor Sprocket

Step 14: Adjust the drive chain tension by allowing the weight of the motor to tension the drive chain. To avoid over tensioning the drive chain, make sure the drive chain has 3/4" slack as shown. Tighten the 4 motor mounting bolts.



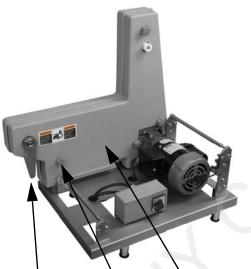
Step 15: Reinstall the drive guard covers, knobs, and locking latch. **For installation instructions, see Section 3 of this manual.*



ON/OFF SWITCH REPLACEMENT - BB-1

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers



Locking Latch Knob Drive Guard Cover



Latch Alignment





ON/OFF SWITCH REPLACEMENT - BB-1 (CONTINUED)



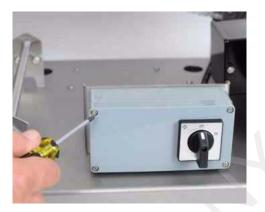
Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

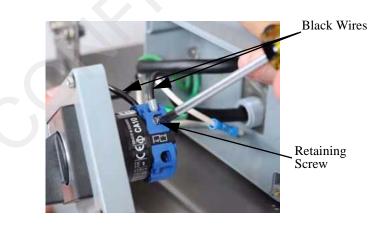


All electrical repairs should be completed by a qualified electrician or approved service provider.

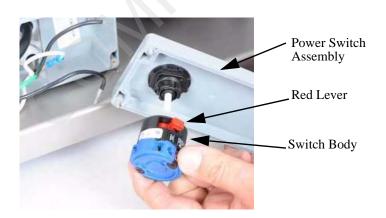
Step 2: Remove the 4 screws that attach the power switch assembly.

Step 3: Pull the power switch out of the power switch box and disconnect the two black wires from the back of the switch by loosening the retaining screws.





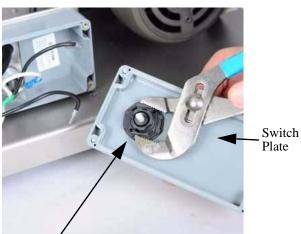
Step 4: Remove the power switch assembly from the switch body by releasing the red lever.





ON/OFF SWITCH REPLACEMENT - BB-1 (CONTINUED)

Step 5: Remove the switch lever from the switch plate by removing the locking ring on the rear of the switch plate.



Locking Ring

Step 6: Install the new switch lever into the switch plate, aligning the tab on the switch knob with the cut out in the switch plate



Cut out in the switch plate

Step 7: Install the locking ring and tighten.

Step 8: Install the new switch body and secure it with the red lever.



Locking Ring

Red Lever on Switch Body



ON/OFF SWITCH REPLACEMENT - BB-1 (CONTINUED)

Step 9: Install the two black wires and tighten the retaining screws. **See electrical schematics in Section 7.*



Step 10: Install the 4 screws attaching the power switch assembly to the frame.



Step 11: Reinstall the drive guard covers, knobs, and locking latch.

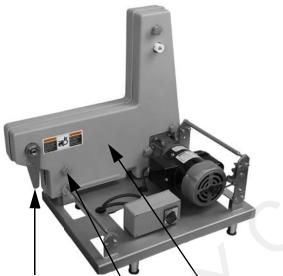




POWER CORD REPLACEMENT - BB-1

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers



Locking Latch Knob Drive Guard Cover



Latch Alignment







Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

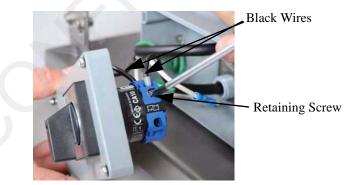


All electrical repairs should be completed by a qualified electrician or approved service provider.

Step 2: Remove the 4 screws that attach the power switch assembly.

Step 3: Pull the power switch out of the power switch box and disconnect the wires from the back of the switch by loosening the retaining screws.



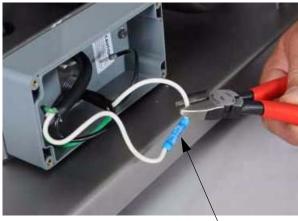


Step 4: Remove the power cord ground wire screw from the inside of the power switch box by using a 5/16" nut driver.





Step 5: The power cord neutral (white) wire is spliced to the motor cord wire (white). Remove the splice by cutting the white wires on either side of the splice. Strip the end of the motor cord's white wire.

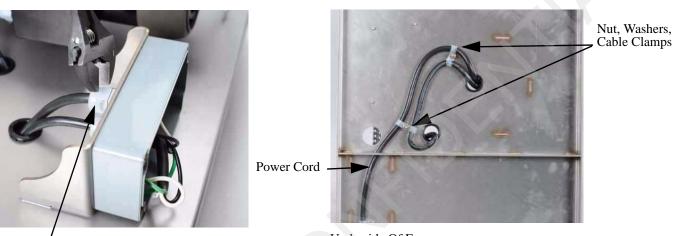


Splice



Step 6: Loosen the connector's top cap retaining the power cord. Pull the power cord out of the connector.

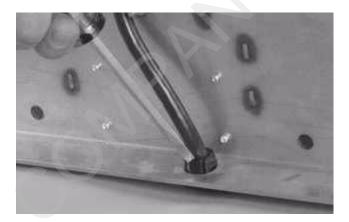
Step 7: Turn the frame on its back, so that the cords are visible. Remove the three nuts, washers and cable clamps that hold the power cord.



Connector's Top Cap

Underside Of Frame

Step 8: From the underside of the frame, use a screwdriver to push out the power cord strain relief bushing. If the strain relief bushing is not damaged, save for reuse on the new power cord.





Step 9: Install the new power cord through the openings in the frame and through the opening in the switch box.**See Section 7, Service Parts, Electrical Components-Power Cord for routing. Make sure to pull enough wire into the switch box for splicing.* **Step 10:** Reinstall the nuts, washers and cable clamps under the frame.

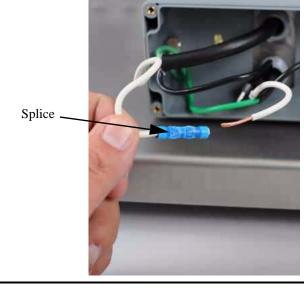


Step 11: Install the green ground wire to the back of the switch box using a 5/16" nut driver.



Step 12: Using the splice provided, crimp together the power cord's white wire with the motor cord's white wire.





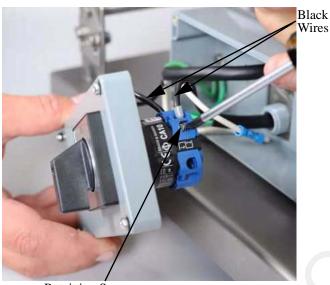
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Step 13: Install the black lead wires into switch terminals and tighten the retaining screws.

Step 14: Once all the wires are secure, install the switch plate onto the frame assembly and tighten the screws.



Retaining Screw



Step 15: Tighten the connector's top cap. *Make sure the outer jacket is completely through the connector.



Power Cord

Straight Connect's Top Cap



Step 16: Using a pair of pliers, compress the strain relief bushing around the power cord. Insert the strain relief bushing through the opening in the frame.



Step 17: Reinstall the drive guard covers, knobs, and locking latch.





ON/OFF SWITCH REPLACEMENT - BB-2

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latches (remove by aligning the tabs with the grooves)
- drive guard covers



Locking Latch Knob Drive Guard Cover







ON/OFF SWITCH REPLACEMENT - BB-2 (CONTINUED)



Electrical shock may occur! Always disconnect unit from power supply prior to servicing.



All electrical repairs should be completed by a qualified electrician or approved service provider.

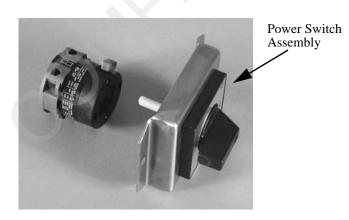
Step 2: Remove the 2 screws that attach the power switch assembly, by using a 5/16" nut driver.

Step 3: <u>FOR 115V UNITS</u>: Pull the power switch out of the power switch box and disconnect the two black wires from the back of the switch by loosening the retaining screws.



Step 4: Remove the power switch assembly from the switch body by releasing the red lever.

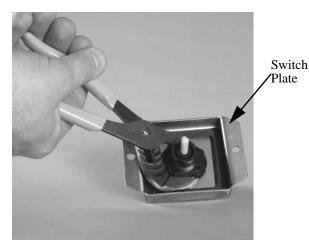






ON/OFF SWITCH REPLACEMENT - BB-2 (CONTINUED)

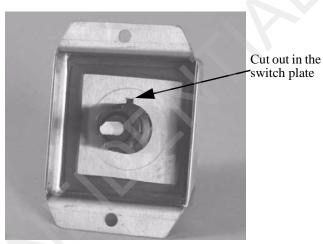
Step 5: Remove the switch lever from the switch plate by removing the locking ring on the rear of the switch plate.



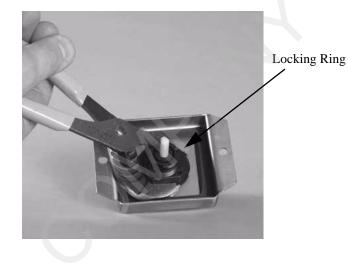
Locking Ring

Step 7: Install the locking ring and tighten.

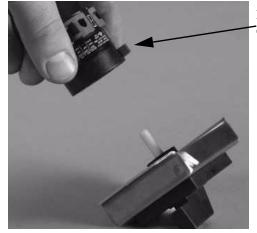
Step 6: Install the new switch lever into the switch plate, aligning the tab on the switch knob with the cut out in the switch plate.



Step 8: Install the new switch body and secure it with the red lever.



5C-44



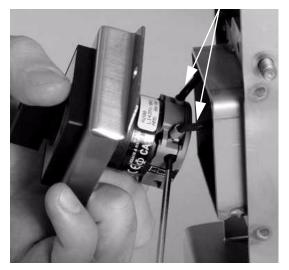
Red Lever on Switch Body



ON/OFF SWITCH REPLACEMENT - BB-2 (CONTINUED)

Step 9: <u>FOR 115V UNITS</u>: Install the two black wires and tighten the retaining screws.

Black Wires (115V)



Step 10: Install the two screws attaching the power switch assembly to the frame.



Step 11: Reinstall the drive guard covers, knobs and locking latches.

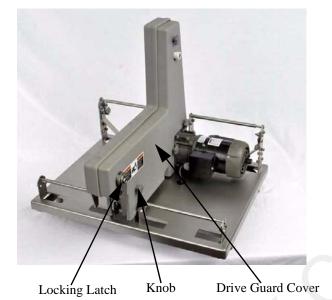




POWER CORD REPLACEMENT - BB-2

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latches (remove by aligning the tabs with the grooves)
- drive guard covers











Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

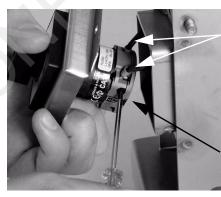


All electrical repairs should be completed by a qualified electrician or approved service provider.

Step 2: Remove the 2 screws that attach the power switch assembly, by using a 5/16" nut driver.

Step 3: <u>FOR 115V UNITS:</u> Pull the power switch out of the power switch box and disconnect the wires from the back of the switch by loosening the retaining screws.





Black Wires (115V)

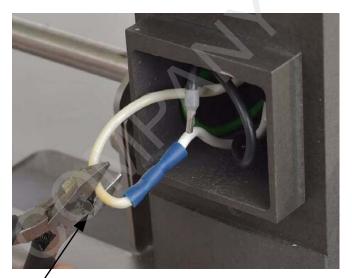
Retaining Screw



Step 4: Remove the power cord ground wire screw from the inside of the power switch box by using a 5/16" nut driver.



Step 5: <u>FOR 115V ONLY</u>: The power cord neutral (white) wire is spliced to the motor cord wire (white). Remove the splice by cutting the white wires on either side of the splice. Strip the end of the motor cord's white wire.



Splice 115V Only

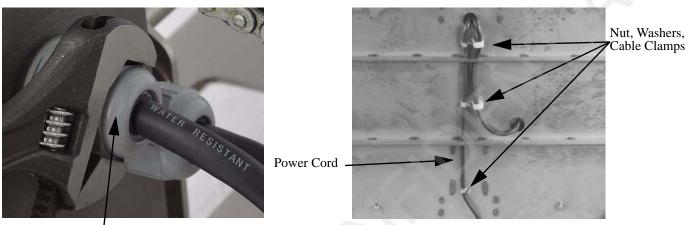
Frame Assembly



POWER CORD REPLACEMENT - BB-2 (CONTINUED)

Step 6: Loosen the connector's top cap retaining the power cord. Pull the power cord out of the connector.

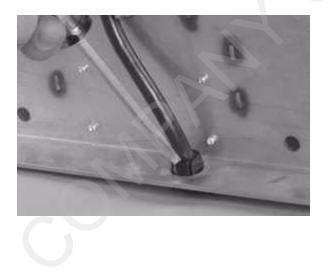
Step 7: Turn the frame on its back, so that the cords are visible. Remove the three nuts, washers and cable clamps that hold the power cord.

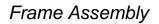


Connector's Top Cap

Underside Of Frame

Step 8: From the underside of the frame, use a screwdriver to push out the power cord strain relief bushing. If the strain relief bushing is not damaged, save for reuse on the new power cord.







Step 9: Install the new power cord through the openings in the frame and through the opening in the switch box.**See Section 7, Service Parts, Electrical Components-Power Cord for routing. Make sure to pull enough wire into the switch box for splicing.*

Step 10: Reinstall the nuts, washers and cable clamps under the frame.



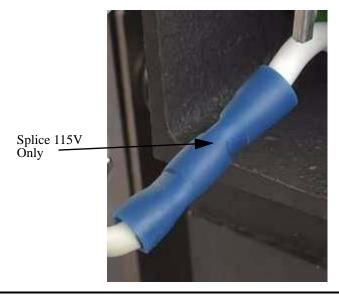
Step 11: Install the green ground wire to the back of the switch box using a 5/16" nut driver.



Cable Clamp

Step 12: <u>FOR 115V UNITS ONLY:</u> Using the splice provided, crimp together the power cord's white wire with the motor cord's white wire.

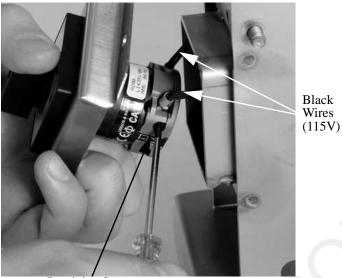




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Step 13: <u>FOR 115V UNITS:</u> Install the black lead wires into switch terminals and tighten the retaining screws.



Retaining Screw

Step 14: Once all the wires are secure, install the switch plate onto the frame assembly and tighten the screws using a 5/16" nut driver.

Step 15: Tighten the connector's top cap. **Make sure the outer jacket is completely through the connector.*







Step 16: Using a pair of pliers, compress the strain relief bushing around the power cord. Insert the strain relief bushing through the opening in the frame.



Step 17: Reinstall the drive guard covers, knobs and locking latches.





ON/OFF PUSH BUTTON SWITCH REPLACEMENT - BB-1F

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the grooves)
- drive guard covers



Locking Latch

Knobs Drive Guard Cover



Latch Alignment





ON/OFF PUSH BUTTON SWITCH REPLACEMENT - BB-1F (CONTINUED)

Electrical shock may occur! Always disconnect unit from power supply prior to servicing.



All electrical repairs should be completed by a qualified electrician or approved service provider.

Step 2: Remove the screws that attach the power switch cover.

Step 3: Pull the power switch out of the power switch box and disconnect the wires from the back of the switch by loosening the retaining screws.





Retaining Screw

Step 4: Remove the power switch assembly from the switch body by loosening the switch body screw and releasing the lever.



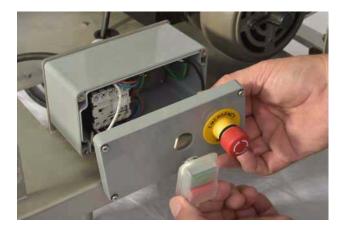
Switch Body Screw





ON/OFF PUSH BUTTON SWITCH REPLACEMENT - BB-1F (CONTINUED)

Step 5: Install the new switch into the switch plate.



Step 6: Install the new switch body onto the switch and tighten the switch body screw securely.





Switch Body Screw



ON/OFF PUSH BUTTON SWITCH REPLACEMENT - BB-1F (CONTINUED)

Step 7: Install wires and tighten the retaining screws. **See electrical schematics in Section* 7.



Step 8: Install the two screws attaching the power switch assembly to the frame.



Step 9: Reinstall the drive guard covers, knobs, and locking latch.





POWER CORD REPLACEMENT - BB-1F

Step 1: Disassemble frame assembly by removing:

- knobs
- locking latch (remove by aligning the tabs with the groove)
- drive guard covers



Locking Latch Knob Drive Guard Cover



Latch Alignment







Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

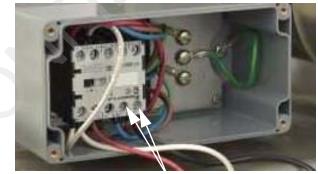


All electrical repairs should be completed by a qualified electrician or approved service provider.

Step 2: Remove the 4 screws that attach the enclosure cover and remove cover.

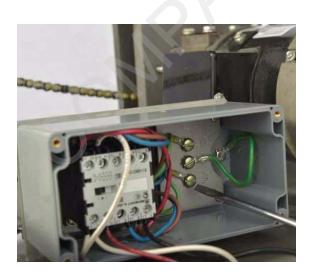


Step 3: Loosen the retaining screws on the contact block to remove the power cord wires from the dropout relay.



Retaining Screws

Step 4: Remove the power switch assembly from the panel.



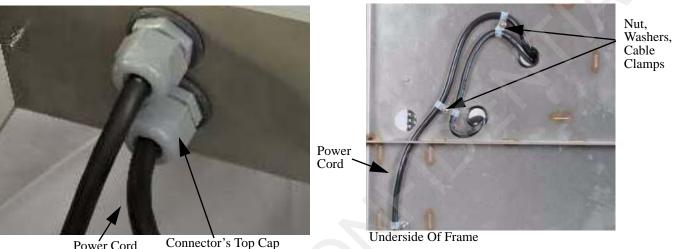
Frame Assembly



POWER CORD REPLACEMENT - BB-1F (CONTINUED)

Step 5: Loosen the connector's top cap retaining the power cord. Pull the power cord out of the connector.

Step 6: Turn the frame on its back, so that the cords are visible. Remove the three nuts, washers and cable clamps that hold the power cord.



Power Cord

Step 7: From the underside of the frame, use a screwdriver to push out the power cord strain relief bushing. If the strain relief bushing is not damaged, save for reuse on the new power cord.





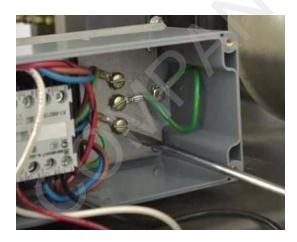
Step 8: Install the new power cord through the openings in the frame and through the opening in the switch box.**See Section 7, Service Parts, Electrical Components-Power Cord for routing. Make sure to pull enough wire into the switch box for splicing.*

Step 9: Reinstall the nuts, washers and cable clamps under the frame.





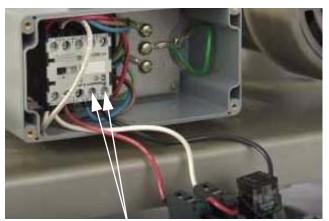
Step 10: Install the green ground wire to the panel.





Step 11: Install the black lead wires into switch terminals and tighten the retaining screws.

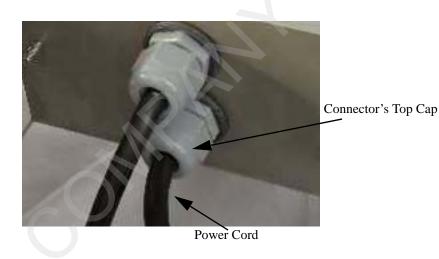
Step 12: Once all the wires are secure, install the switch plate onto the frame assembly and tighten the screws.



Retaining Screws



Step 13: Tighten the power cord connector's top cap. **Make sure the outer jacket is completely through the connector.*





Step 14: Using a pair of pliers, compress the strain relief bushing around the power cord. Insert the strain relief bushing through the opening in the frame.



Step 15: Reinstall the drive guard covers, knobs, and locking latch.





Section 5D

Maintenance Preventive

CONTENTS OF THIS SECTION

Safety Recommendations and Warnings	
Preventive Maintenance Checks	
Daily Preventive Maintenance Chart	
Monthly Preventive Maintenance Chart	
Six Month Preventive Maintenance Chart	

SAFETY RECOMMENDATIONS AND WARNINGS



All maintenance procedures should be performed by qualified personnel.

The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Bettcher Industries, Inc.



PREVENTIVE MAINTENANCE CHECKS

Regular maintenance of the machine will keep it running properly and will help extend the operating life. The checks that are recommended and the time intervals of each check are provided in the following table.

Daily Preventive Maintenance Chart

Item to Check	Procedure	Action
Machine inspection and cleaning	Check for signs of equipment damage and refer to cleaning instructions in Section 6.	Repair or replace damaged components. See Section 7 for parts listings.
Knobs on guards and conveyor assemblies	Check for loose or missing knobs.	Retighten or replace knobs as required.
Vibrator springs and paddles	Check components for proper installation and proper position.	Re-install or reposition components.
Wirebelts	Check conveyor wire belts for signs of bending, breakage and excessive wear.	Replace wirebelt.

Monthly Preventive Maintenance Chart

Item to Check	Procedure	Action
Power Cord	Check that the power cord has no visible nicks or cuts in the black outer jacket. Check that the plug end has no damaged or missing prongs.	replacement instructions in

Six Month Preventive Maintenance Chart

Item to Check	Procedure	Action
Regrease breader drive shaft and bearings.	Pump grease into fill ports.	Refer to the breader drive shaft/bearing replacement instructions in the frame assembly section of this manual.
Lubrication	Apply food grade spray lubrication to chain.	Refer to Section 7 Service Parts for Lubrication Kit.
Drive Chain Tension	Check that the drive chain slack is 3/4".	Refer to the drive chain replacement instructions in the frame section of this manual.



Section 5E Maintenance Trouble Shooting

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SAFETY RECOMMENDATIONS AND WARNINGS

WARNING



All maintenance procedures should be performed by qualified personnel.

The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Bettcher Industries, Inc.

Use only replacement parts manufactured by Bettcher Industries, Inc. Use of substitute parts will void the warranty and may cause injury to operators and damage the equipment.



TROUBLE SHOOTING/FAULT DETECTION AND CORRECTION

Problem 1: Breading is coming off of the end of the conveyor.

Possible Causes	Possible Solutions
Breading is too wet.	Change breading material.
Breader unit is over filled.	Unload breading material.
Vibrator Springs Missing	Check for Vibrator Spring Placement

Problem 2: Batter/Breading coverage is not satisfactory.

Possible Causes	Possible Solutions
Batter tank is not properly filled.	Add batter to the batter tank.
Breader tank is not properly filled.	Add breading to the breader conveyor.

Problem 3: Erratic Batter/Breader Conveyor Product Feed.

Possible Causes	Possible Solutions
Batter conveyor assembly is not properly engaged.	Realign batter conveyor assembly. See installation instructions in Section 3.
Breader Conveyor belting may need repair.	Refer to the wirebelt replacement instructions in the breader tank section of this manual.
Batter drive shaft is not rotating.	Refer to the batter drive shaft/bearing replacement instructions in the frame assembly section of this manual.



TROUBLE SHOOTING/FAULT DETECTION AND CORRECTION (CONTINUED)

Problem 4: Batter Conveyor is not moving.

Possible Causes	Possible Solutions
Batter Conveyor assembly is not properly engaged.	Realign batter conveyor assembly. See installation instructions in Section 3.
Batter Conveyor wirebelt may need repair.	Refer to the batter conveyor wirebelt replacement instructions in the batter tank section of this manual.
Batter drive shaft is not rotating.	Refer to the batter drive shaft/bearing replacement instructions in the frame assembly section of this manual.

Problem 5: Breader Conveyor is not moving.

Possible Causes	Possible Solutions
Breader assembly is not properly engaged.	Re-align breader conveyor assembly. See the installation instructions in Section 3.
Breader conveyor wirebelting n need repair.	hay Refer to the wirebelt replacement instructions in the breader tank section of this manual.
Breader drive shaft is not rotatin	ng. Refer to breader drive shaft/bearing replacement instructions in the frame assembly section of this manual.
Breader coupler is worn.	Replace the coupler. Refer to Section 7, Breader Drive service parts for the coupler part number.



TROUBLE SHOOTING/FAULT DETECTION AND CORRECTION (CONTINUED)

Problem 6: Motor is making noise (Scraping sound)

Possible Causes	Possible Solutions
Obstructions in front of motor fan area.	Remove all obstructions from in front of fan area.
Damaged Air Shield or fan	Replace motor. All electrical repairs should be made by a qualified electrician or service provider.

Problem 7: Motor is running and machine does not operate

Possible Causes	Possible Solutions
Drive chain is broken.	Replace chain. Refer to the drive chain replacement instructions in the frame assembly section of this manual.
Drive chain tension is not correct.	Chain deflection should be 3/4".
Drive chain links locked up or seized.	Remove Drive Chain (Refer to Section 5C Drive Chain Replacement).
	• Soak chain in degreaser/solvent.
	• Wipe off degreaser/solvent.
	• Lubricate using a food grade lubricant.
	(Refer to Section 7 Service Parts for Lubrication Kit)



TROUBLE SHOOTING/FAULT DETECTION AND CORRECTION (CONTINUED)

Problem 8: Motor is not running.

Possible Causes	Possible Solutions
Power cord is not plugged in.	Connect power cord to wall outlet.
Power switch is not turned to " ON ".	Turn power switch to " ON ".
The circuit breaker for the wall outlet has been activated.	Have an electrician reset the tripped circuit breaker, then check the wall outlet and repair as needed.
Is the overload on the motor activated? (Canadian Version Only)	Press the overload button on the motor unit. This only applies to Canadian units.
Obstructions in front of motor fan area.	Remove all obstructions from in front of fan area. See cleaning instructions in Section 6 of this manual.



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Cleaning



Section 6

Cleaning

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Batter Assembly - Daily	
Breader Assembly - Daily	
Frame Assembly - Every 6 Months	10



To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.



NOTICE



The recommended cleaning solution for the Optimax[®] Batter-Breader Machine is eXtra[©] Heavy Duty Cleaner.

eXtra© Heavy Duty Cleaner, (PN: 184332), is a concentrated cleaner and degreaser for food processing equipment. Contact Bettcher Industries, Inc. for details.



NOTICE

Do not machine wash drive guard covers or batter tanks. Excessive heat generated by machine washing can damage parts.

Do not submerge frame and motor assembly as damage to motor could result. Clean with damp cloth or sponge only.

Do not submerge or directly spray frame and motor assembly. Damage could occur and may void the warranty. Clean with damp cloth or sponge only. Dry after cleaning.

Do not wash drive components including sprockets and drive chain.

Do not machine wash.



CLEANING INSTRUCTIONS

Batter Assembly - Daily

Step 1: Turn the power switch OFF. Unplug power cord.

Step 2: Lift the batter conveyor assembly enough to pull the conveyor drive shaft out of the guide sleeve.

Step 3: Remove the batter conveyor tank assembly.



Conveyor Drive Shaft

Guide Sleeve

Step 4: Pour batter out of the batter tank.





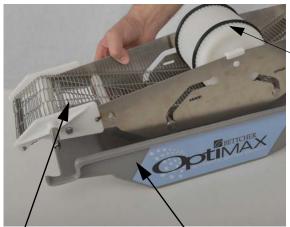


CLEANING INSTRUCTIONS (CONTINUED)

Batter Assembly - Daily (Continued)

Step 5: Remove the batter conveyor assembly from the batter tank. Machine or hand wash conveyor assembly using Bettcher Industries, Inc. eXtra© Heavy Duty Cleaner. O-rings can be moved towards the center of the batter wheel if needed for cleaning.

O-ring



Batter Conveyor Assembly Batter Tank

Step 6: Hand wash the batter tank and turn upside down to air dry.

Step 7: After the components are dry, place the batter conveyor assembly into the batter tank.







Cleaning

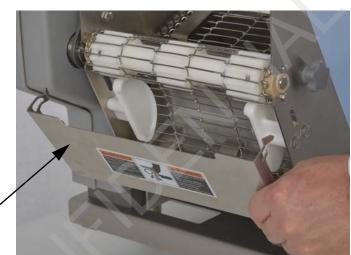
CLEANING INSTRUCTIONS (CONTINUED)

Breader Assembly - Daily

Step 1: Disassemble breader conveyor by removing:

Discharge Tray

• Pull the top of the discharge tray away from the breader assembly releasing the tray from the breader holes.

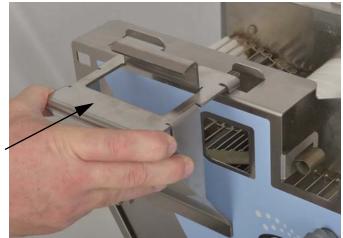


Discharge Tray

Pan Bracket

• Remove the pan bracket from the breader conveyor side rail.

Pan Bracket



Cleaning



CLEANING INSTRUCTIONS (CONTINUED)

Breader Assembly - Daily (Continued)

Step 2: Place discharge pan in front of breading unit



Step 3: Disengage locking latch.



Step 4: Support breader at the front with left hand on the sprocket and right hand at the rear. (Place thumb through the handle with fingers supporting bottom pan.)





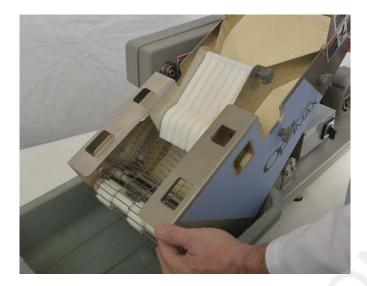




CLEANING INSTRUCTIONS (CONTINUED)

Breader Assembly - Daily (Continued)

Step 5: Slide the breader into the discharge pan.



Step 6: Empty breading into discharge pan.





Breader Assembly - Daily (Continued)

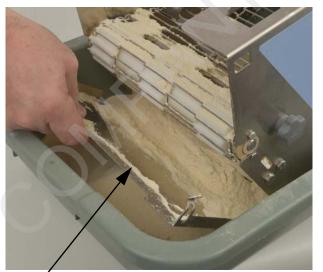
Step 7: Pull bottom pan away from breader and remove.

Bottom Pan





Step 8: Remove discharge tray and discharge extra breading.



Discharge Tray





Breader Assembly - Daily (Continued)



NOTICE

The recommended cleaning solution for the Optimax[®] Batter-Breader Machine is eXtra© Heavy Duty Cleaner.

eXtra© Heavy Duty Cleaner, (PN: 184332), is a concentrated cleaner and degreaser for food processing equipment. Contact Bettcher Industries, Inc. for details at 1 800 321-8763.

Step 9: Machine or hand wash the breader conveyor assembly and bottom pan.



Step 10: Machine or hand wash discharge tray and pan bracket.



Cleaning



CLEANING INSTRUCTIONS (CONTINUED)

Breader Assembly - Daily (Continued)

Step:11 After cleaning, reassemble unit. *Refer* to Section 3, Installation Instructions.





Frame Assembly - Every 6 Months



To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.





Do not submerge or directly spray frame and motor assembly. Damage could occur and may void the warranty. Clean with damp cloth or sponge only. Dry after cleaning.

Do not wash drive components including sprockets and drive chain.

Do not machine wash.



Frame Assembly - Every 6 Months (Continued)

Step 1: Disassemble the frame assembly by removing:

- locking latch (remove by aligning the tabs with the grooves)
- knobs
- drive guard covers





Tabs and Grooves Latch Alignment

Step 2: Clean both drive guard covers by wiping them with a damp cloth or sponge.





Frame Assembly - Every 6 Months (Continued)



performing any adjustments, disassembly / assembly, trouble shooting or cleaning.

To avoid personal injury, always disconnect the power cord before



Do not wash drive components including sprockets and drive chain

Step 3: Brush off any loose breading material. Use a damp soapy sponge or towel to clean the frame, motor and motor vents. Wipe dry.

IMPORTANT: Brush and remove any debris from the drive chain. Visibly check the chain for proper lubrication. If the chain appears dry, lubricate with food grade lubricant (Refer to Service Section 7 for Lubrication Kit).





Frame Assembly - Every 6 Months (Continued)

Step 4: Reinstall the drive guard covers, knobs, and locking latch to the frame.



Step 5: After cleaning, reassemble unit. Refer to Section 3, Installation Instructions.





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Section 7

Service Parts

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Safety Labels	
Optional Equipment Available	
Electrical Schematics	
115V/1PH/60Hz Internal Capacitor	
115V/1PH/60HZ Internal Capacitor (Canadian)	
230V/1PH/50HZ Internal Capacitor	



HOW TO ORDER PARTS

Contact our service department by phone, fax or mail.

Bettcher Industries, Inc. Attn: Service Department P.O. Box 336 Vermilion, OH 44089 Phone: (440) 965-4422 Phone: (800) 321-8763 Fax: (440) 328-4535

When ordering parts, please include the following information with your request.

- Part Number from parts list.
- Complete description of the part as given in the parts list.
- Model number and serial number of your machine.



HOW TO ORDER PARTS (CONTINUED)

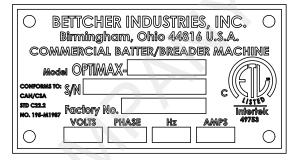
The model number and serial number are stamped on the red model number plate, located at the rear of the machine frame, directly above where the power cord enters the machine.

Serial Number Identification

This label contains the following information:

- Model
- Model Type
- Serial Number
- Factory Number
- Operating: Voltage/Phase/Frequency/Current

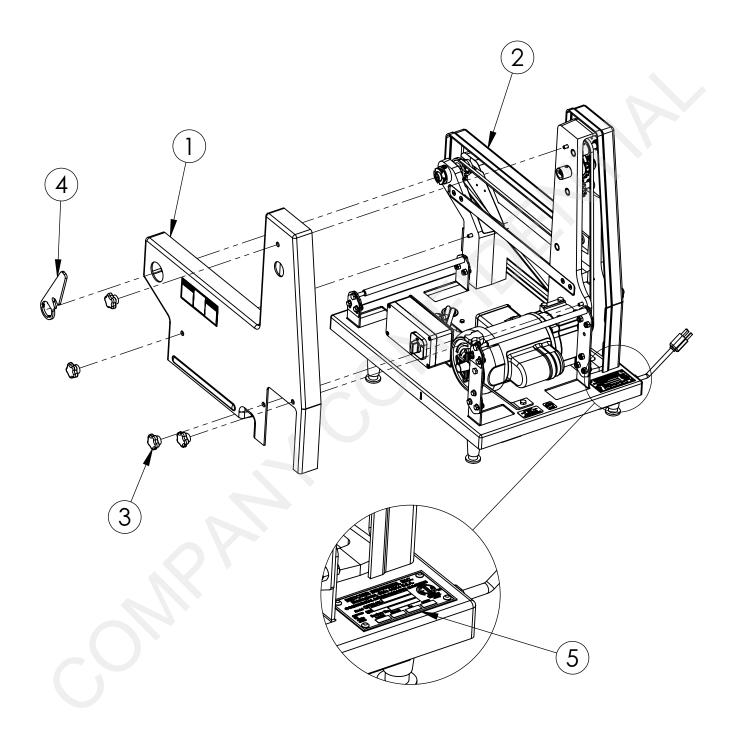
O BETTCHER INDUSTRIES, INC. O Birmingham, Ohio 44316 U.S.A. COMMERCIAL BATTER/BREADER MACHINE				
Model OPTIMAX- CONFORMS S/N YO: ANSI/UL STD 74.3 VOLTS PHASE Hz AMPS 61753 VOLTS OF ASE O	35			







DRIVE GUARD AND SPECIFICATION PLATE



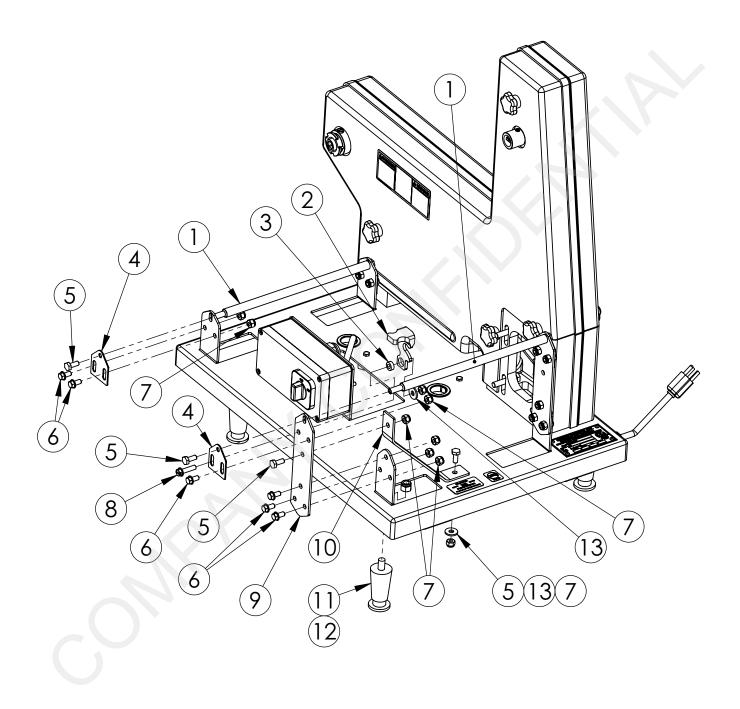


DRIVE GUARD AND SPECIFICATION PLATE (CONTINUED)

		Part	
Item	Description	Number	Quantity
1	Drive Guard, RH, English/Spanish	103622	1
	Drive Guard, RH English/French	103641	1
2	Drive Guard, LH, English/Spanish	103623	1
	Drive Guard, LH English/French	103640	1
3	Knob	501475	9
4	Locking Latch	501000	1
5	Specification Plate	502033	1
	Specification Plate (CANADA)	502032	1
	Specification Plate	501824	1



FRAME ASSEMBLY



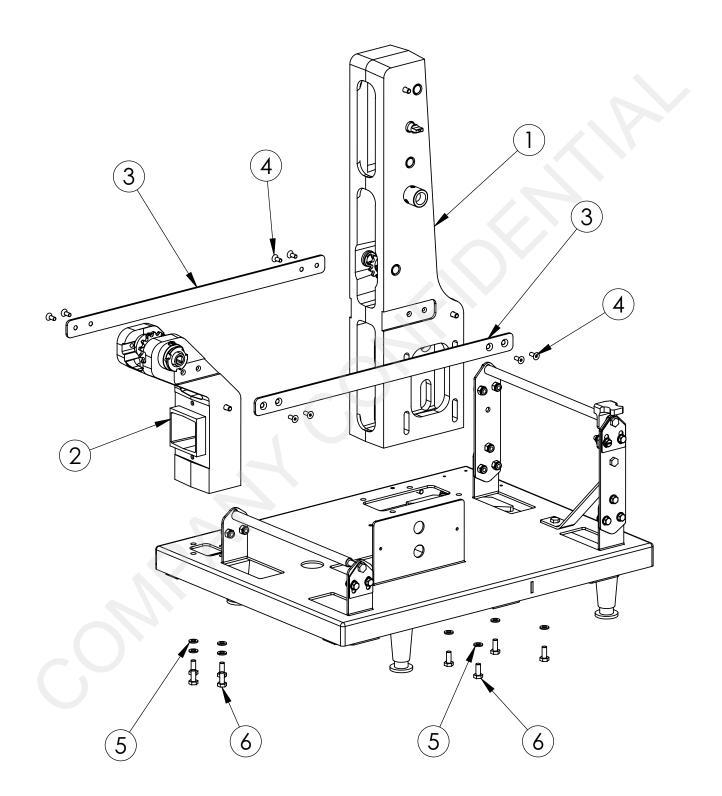


FRAME ASSEMBLY (CONTINUED)

ITEM	Description	Part Number	Quantity
1	Breader Support Shaft	102675	2
2	Spacer Lock	102673	1
3	Spacer Lock Bushing	102674	1
4	Adjustable Retaining Plate	500377	4
5	Hex Head Screw 1/4-20 x 5/8"	120587	6
6	Hex Washer Head Screw 1/4-20 x 1/2"	123234	13
7	ESNA Nut 1/4-20	120304	16
8	Hex Washer Head Screw 1/4-20 x 1"	123263	1
9	Rear Support	102678	2
10	Support Brace	500437	1
11	Leg Assembly 2-1/2"	502050	4
12	ESNA Nut 3/8-16	125307	4
13	Washer 1/4" Special	120261	2



DRIVE ASSEMBLY



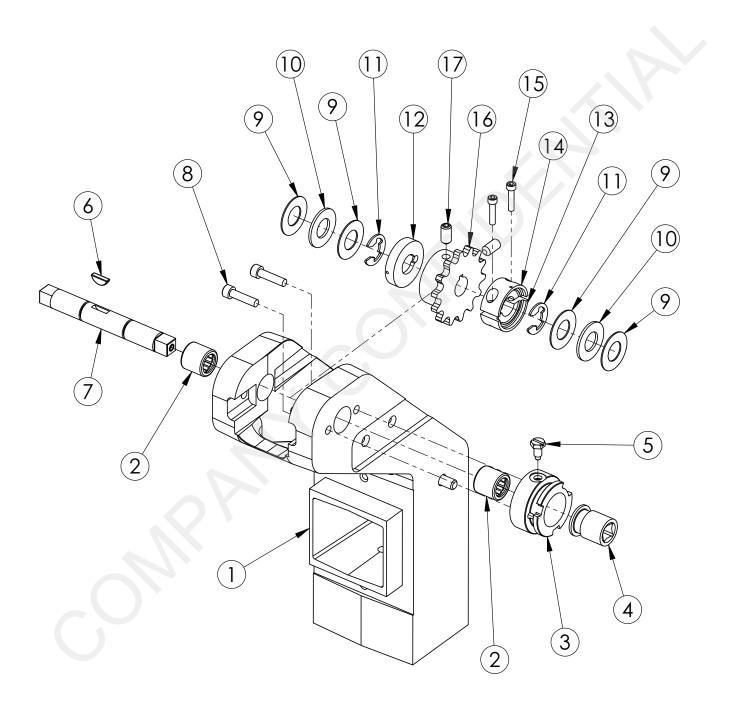


DRIVE ASSEMBLY (CONTINUED)

ITEM	Description	Part Number	Quantity
1	Batter Drive Assembly	102129	1
2	Breader Drive Assembly	102119	1
3	Tower Brace	102022	2
4	Flat Head Screw #10-24 x 1/2"	123280	8
5	Lock Washer 1/4"	120220	8
6	Hex Head screw 1/4-20 x 5/8"	120587	8



DRIVE ASSEMBLY - BREADER DRIVE



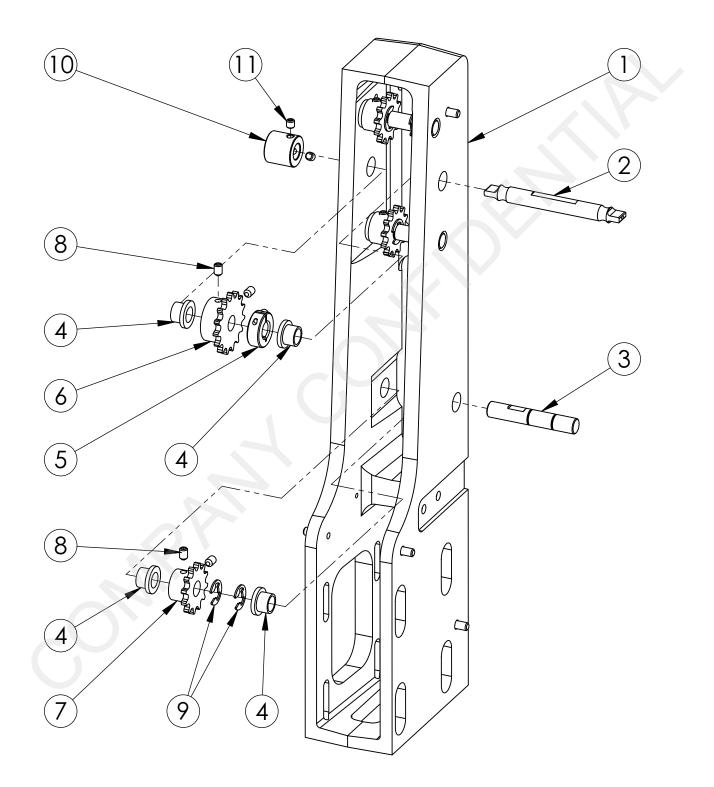


DRIVE ASSEMBLY-BREADER DRIVE (CONTINUED)

		Part	
Item	Description	Number	Quantity
1	Bearing Housing, Front	102239	1
2	Needle Bearing	501339	2
3	Locking Housing	501340	1
4	Drive Shaft Coupling	501345	1
5	Screw	501346	1
6	Woodruff Key	122605	1
7	Drive Shaft	501369	1
8	Cap Screw, #10-24 x 2/3"	122794	2
9	Thrust Washer (Silver)	501368	4
10	Thrust Bearing (Gold)	501367	2
11	Retaining Ring	122047	2
12	Spacer Ring	501716	1
13	Split Collar, Threaded	501717	1
14	Split Collar	501718	1
15	Cap Screw, #6-32 x 5/8"	501374	2
16	Machined Sprocket	501365	1
17	Sprocket Set Screw 1/4-20 x 1/2"	123108	2



DRIVE ASSEMBLY- BATTER DRIVE



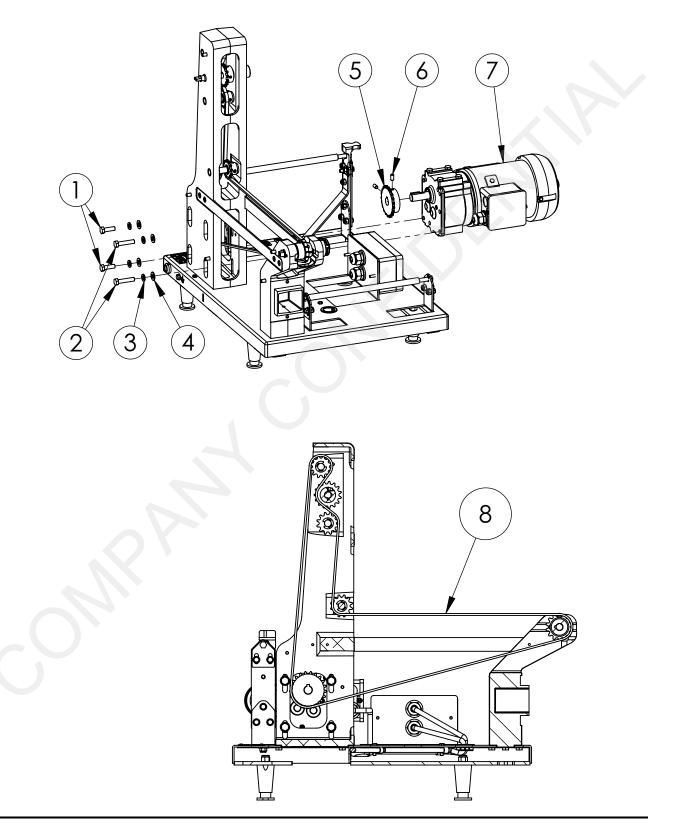


DRIVE ASSEMBLY - BATTER DRIVE (CONTINUED)

Item	Description	Part Number	Quantity
1	Bearing Housing, Rear	102207	1
2	Drive Shaft	500315	1
3	Idler Shaft	101832	3
4	Flange Bearing	101979	8
5	Split Collar	122038	1
6	Sprocket, 15 Tooth	501613	1
7	Sprocket, 12 Tooth	501611	3
8	Sprocket Set Screw 1/4-20 x 3/8"	120081	8
9	Retaining Ring	122047	6
10	Guide Sleeve	500307	1
11	Set screw 1/4-20 x 1/4"	123131	2



DRIVE ASSEMBLY - DRIVE MOTOR AND CHAIN



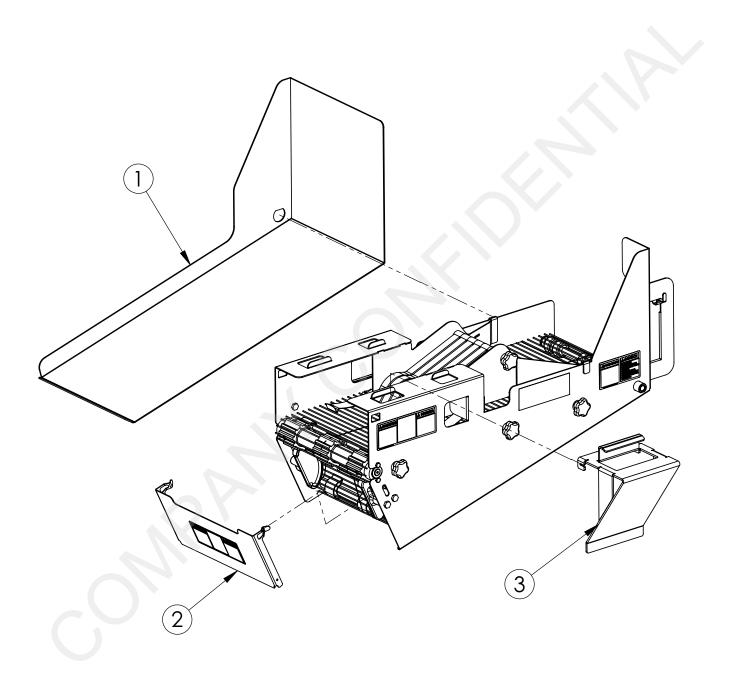


DRIVE ASSEMBLY - DRIVE MOTOR AND CHAIN (CONTINUED)

Item	Description	Part Number	Quantity
1	Hex Head Screw 5/16-18 x 1"	120020	2
2	Hex Head Screw 5/16-18 x 1.5"	120030	2
3	Lock Washer 5/16"	120223	4
4	Flat Washer 5/16"	120258	4
5	Sprocket, 21 Tooth, 115V	102053	1
5a	Sprocket, 25 Tooth, 230V	100421	1
6	Set Screw 1/4-20 x 1/2"	123108	2
7	Gear Motor Assembly	501849	1
8	Chain, Long Assembly #35, 3/8 Pitch, 115V	502055	1
8a	Chain, Long Assembly #35, 3/8 Pitch, 230V	501778	1



BREADER CONVEYOR - EXTERNAL PARTS



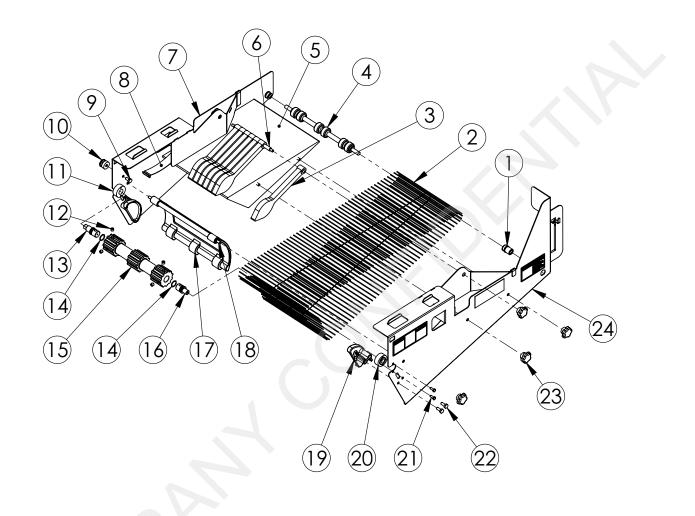


BREADER CONVEYOR - EXTERNAL PARTS (CONTINUED)

Item	Description	Part Number	Quantity
1	Side Rail, LH	102986	1
1	Side Rail, BB-2	103658	1
2	Discharge Tray, No Lip, English/Spanish	501905	1
	Discharge Tray, No Lip, English/French	103642	1
3	Pan Bracket	501767	1



BREADER CONVEYOR - INTERNAL PARTS



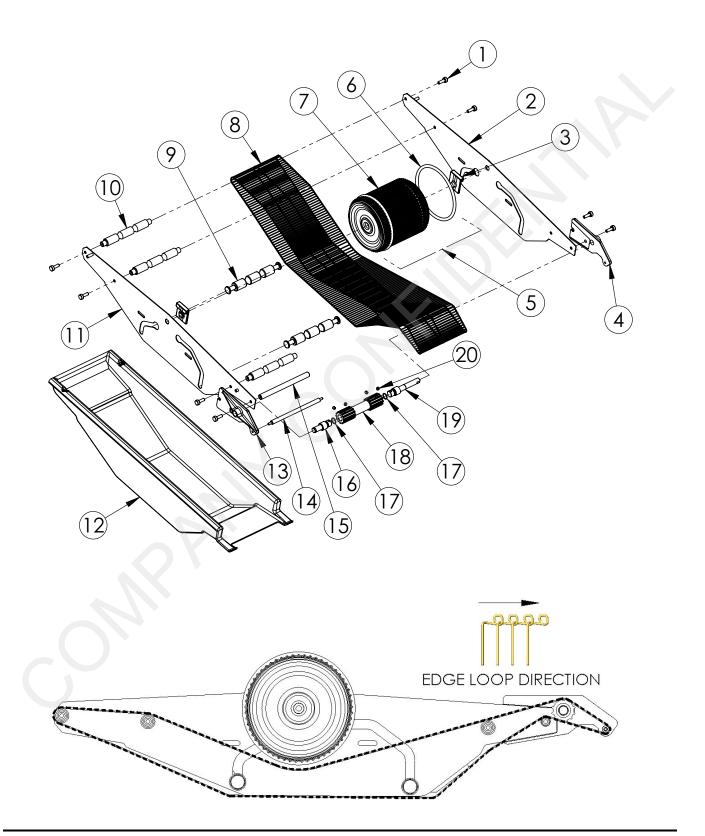


BREADER CONVEYOR - INTERNAL PARTS (CONTINUED)

Item	Description	Part Number	Quantity
1	Bearing Assembly (.375 I.D.)	501069	2
2	Kit, Endless Breader Belt	501592	1
3	Long Paddle	501742	7
4	Support Shaft	501173	1
5	Breader Pan	501853	1
6	Paddle Shaft	500800	1
7	Rail, Internal	102975	1
	Rail, Internal, BB-2	103659	1
8	Vibrator Spring, HD	501944	2
9	Hex Head Screw 1/4-20 x 1/2"	121419	1
10	Locking Shaft	501016	1
11	Bearing, (5/8" I.D.)	501380	1
12	Set Screw 5/16-18 x 1/2"	123113	4
13	Sprocket Mount, Square End	101916	1
14	O-Ring	122328	2
15	Sprocket, Breader	101904	1
16	Sprocket Mount, Round End	101920	1
17	Deflector	102130	1
18	Shaft, Deflector Mounting	500327	1
19	Idler Block	101932	2
20	Bearing, (1/2" I.D.)	501375	1
21	Hex Head Screw #10-24 x 1/2"	120785	2
22	Hex Head Screw 1/4-20 x 5/8"	120587	2
23	Knob	501475	8
24	Side Rail, RH, English/Spanish	103625	1
	Side Rail, RH, English/French	103638	1
	Side Rail, BB-2 English/Spanish	104141	1



BATTER CONVEYOR COMPONENTS



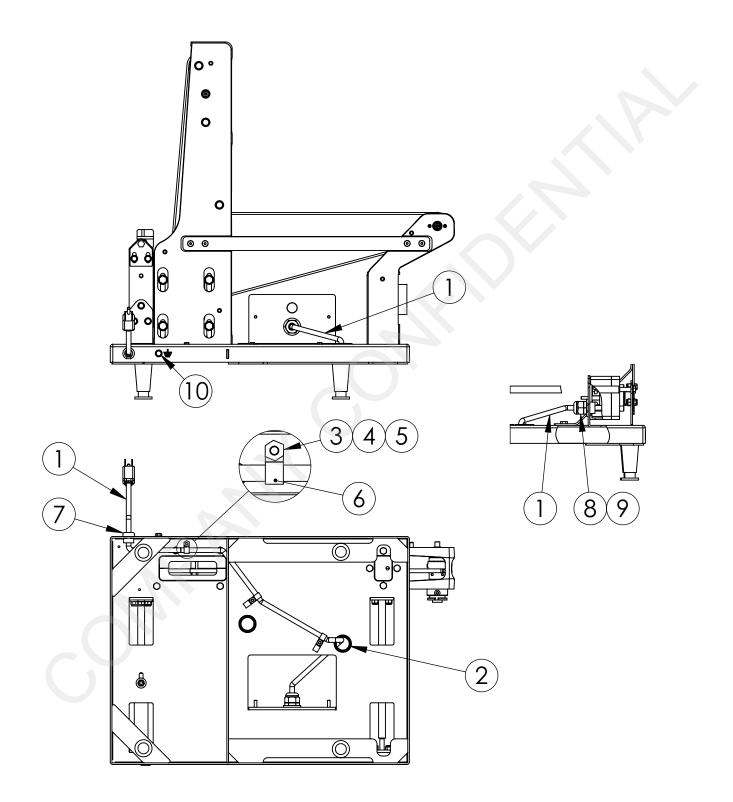


BATTER CONVEYOR COMPONENTS (CONTINUED)

Item	Description	Part Number	Quantity
1	Thumbscrew, Knurled	122764	8
2	Side Left Hand	102057	1
3	Wheel Mount	100598	2
4	Arm, Short LH Non-Adjustable	501255	1
5	Wheel Assembly with O-Rings	100031	1
6	O-Ring, Black	501619	2
7	Batter Wheel	100726	1
8	Belting - Endless Batter	501272	1
9	Tensioner Bar	102058	2
10	Cross Rod	500287	3
11	Side Right Hand	102056	1
12	Batter Tank, RH	103624	1
13	Arm, Short RH Non-Adjustable	501254	1
14	Roller, Fixed	500545	1
15	Rod	500288	1
16	Batter Shaft, Short, Batter Sprocket	101973	1
17	O-Ring	102030	2
18	Batter Sprocket	101905	1
19	Batter Shaft, Long, batter Sprocket	101974	1
20	Set Screw 1/4-20 x 1/4"	123131	4



ELECTRICAL COMPONENTS - POWER CORD - BB-1



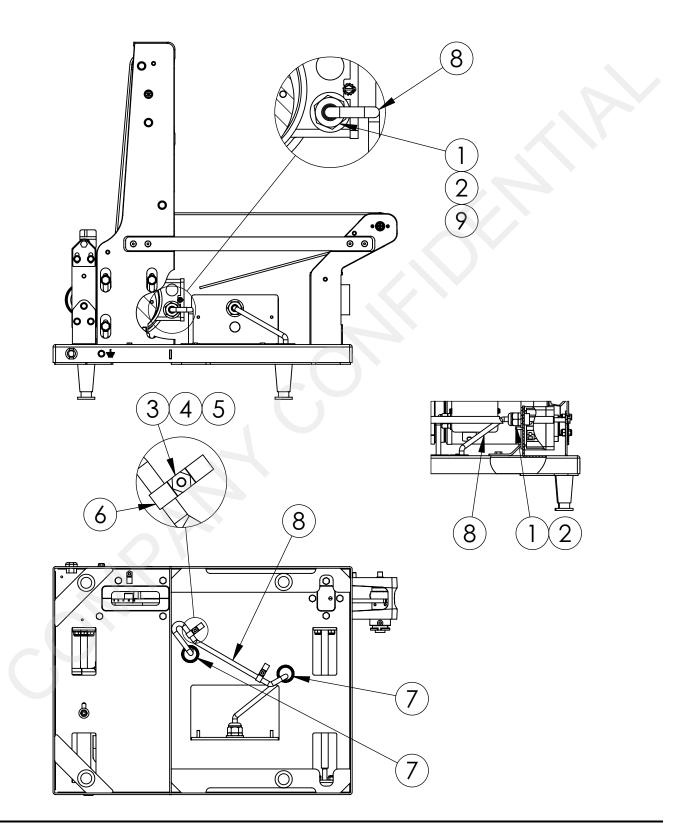


ELECTRICAL COMPONENTS - POWER CORD - BB-1 (CONTINUED)

Item	Description	Part Number	Quantity
1	Cordset Power Unit	500760	1
2	Bushing Snap, 5/16	124744	1
3	Nut, #10-24 Standard Hex	120330	3
4	Screw. #10-24 X 3/4"	120759	3
5	Washer, Plain, #10	120281	3
6	Clamp Cable, 3/8	125078	3
7	Bushing, Strain Relief	124746	1
8	Connector, Straight, 1/2	124751	1
9	Seal, 1/2 Conduit	105245	1
10	Hex Washer Head Screw 1/4-20 x 1/2"	123234	1



ELECTRICAL COMPONENTS - SWITCH / MOTOR CORD - BB-1



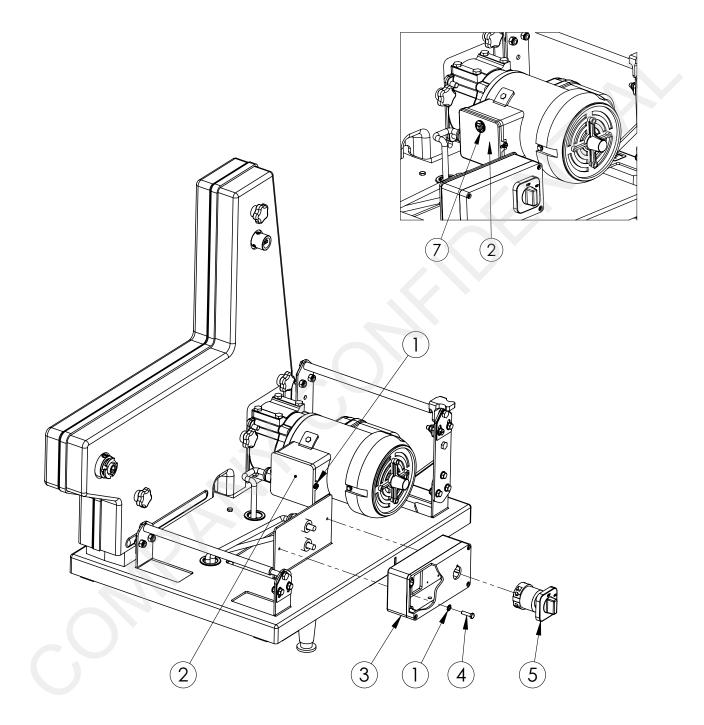


ELECTRICAL COMPONENTS - SWITCH / MOTOR CORD - BB-1 (CONTINUED)

Item	Description	Part Number	Quantity
1	Connector, Straight, 1/2"	124751	2
2	Seal, 1/2 Conduit	105245	2
3	Nut, #10-24 Standard Hex	120330	2
4	Screw, 10-24 X 3/4"	120759	2
5	Washer, Plain #10	120281	2
6	Cable Clamp	123831	2
7	Bushing, Snap	124744	2
8	Cord, Motor On/Off Switch	502006	1
9	Nut, Lock, 1/2 Conduit	122653	1



ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH - BB-1



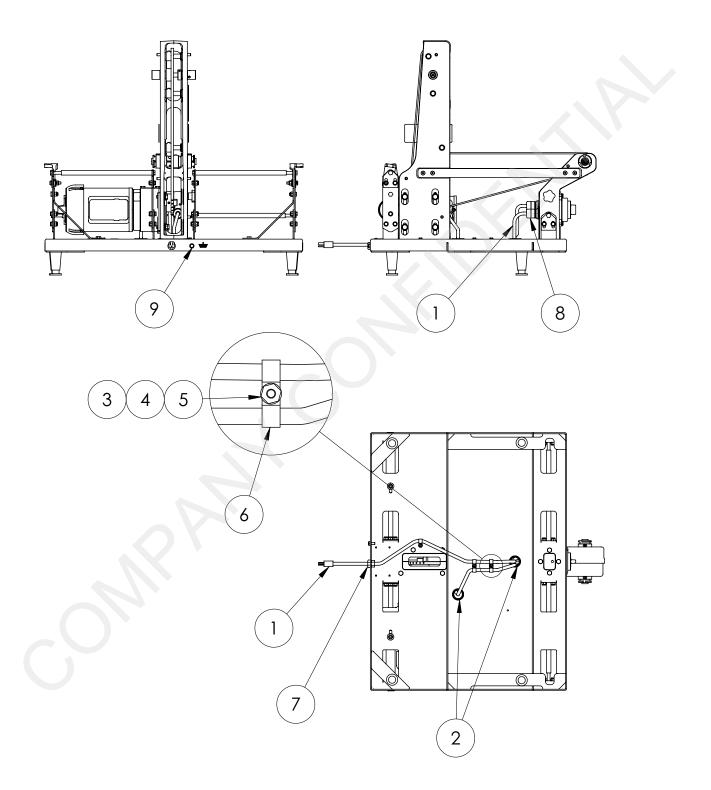


ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH - BB-1 (CONTINUED)

Item	Description	Part Number	Quantity
1	Washer, External Tooth, #10	120232	3
2	J-Box Cover	500842	1
	J-Box Cover (CANADA)	500847	1
3	Enclosure, Switch	502008	1
4	Screw, #10-24 x 3/4"	120759	2
5	Switch, 2-position Cam With Plate	124750	1
6	Capacitor (Not Shown)	501066	1
7	Circuit Breaker Assembly (CANADA)	500843	1



ELECTRICAL COMPONENTS - POWER CORD - BB-2



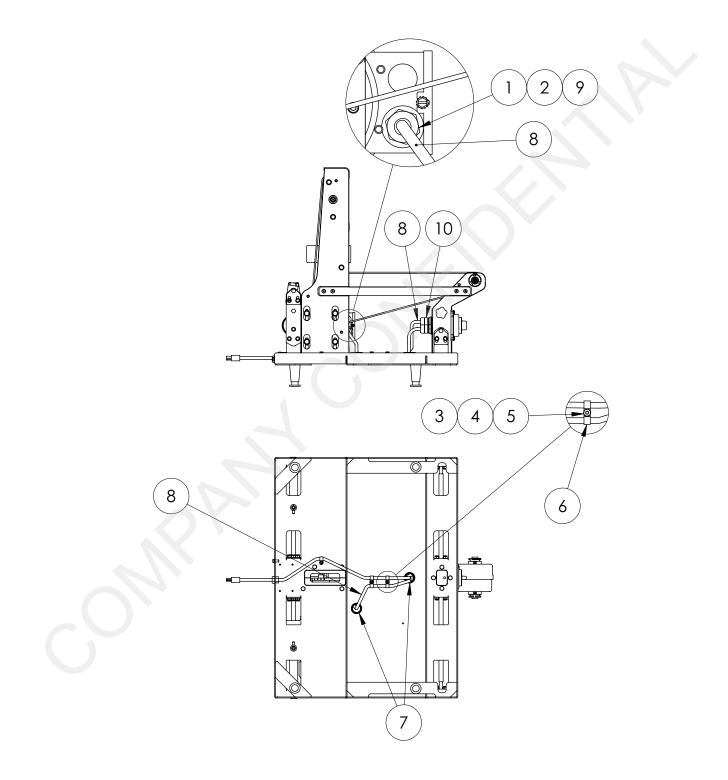


ELECTRICAL COMPONENTS - POWER CORD - BB-2 (CONTINUED)

Item	Description	Part Number	Quantity
1	Cordset Power Unit	500760	1
2	Bushing Snap, 5/16	124744	2
3	Nut, #10-24 Standard Hex	120330	3
4	Screw. #10-24 X 3/4"	120759	3
5	Washer, Plain, #10	120281	3
6	Clamp Cable, 3/8	125078	3
7	Bushing, Strain Relief	124746	1
8	Connector, Strain Relief, Snap-in	103985	1
9	Hex Washer Head Screw 1/4-20 x 1/2"	123234	1



ELECTRICAL COMPONENTS - SWITCH / MOTOR CORD - BB-2



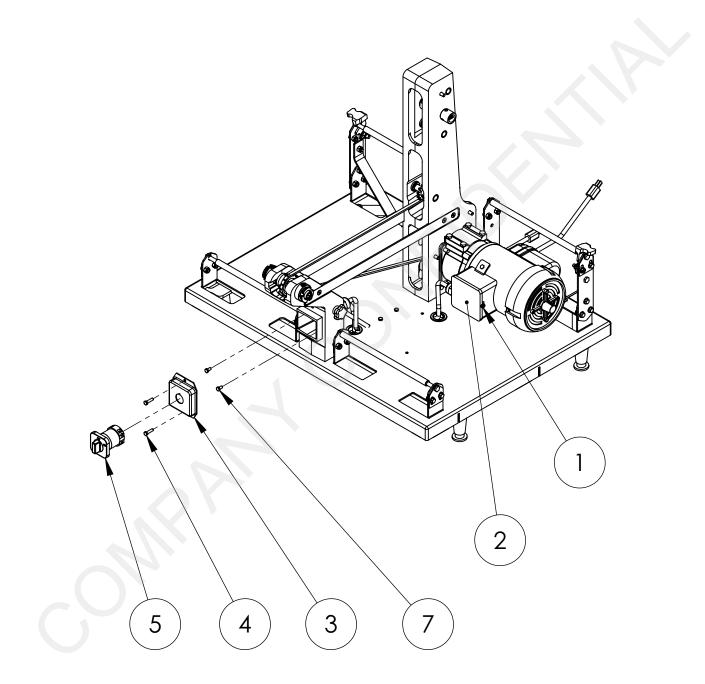


ELECTRICAL COMPONENTS - SWITCH / MOTOR CORD - BB-2 (CONTINUED)

Item	Description	Part Number	Quantity
1	Connector, Straight, 1/2"	124751	1
2	Seal, 1/2 Conduit	105245	1
3	Nut, #10-24 Standard Hex	120330	2
4	Screw, 10-24 X 3/4"	120759	2
5	Washer, Plain #10	120281	2
6	Cable Clamp	123831	2
7	Bushing, Snap	124744	2
8	Cord, Motor On/Off Switch	502006	1
9	Nut, Lock, 1/2 Conduit	122653	1
10	Connector, Strain Relief, Snap-in	103985	1



ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH - BB-2



Service Parts

Service Parts

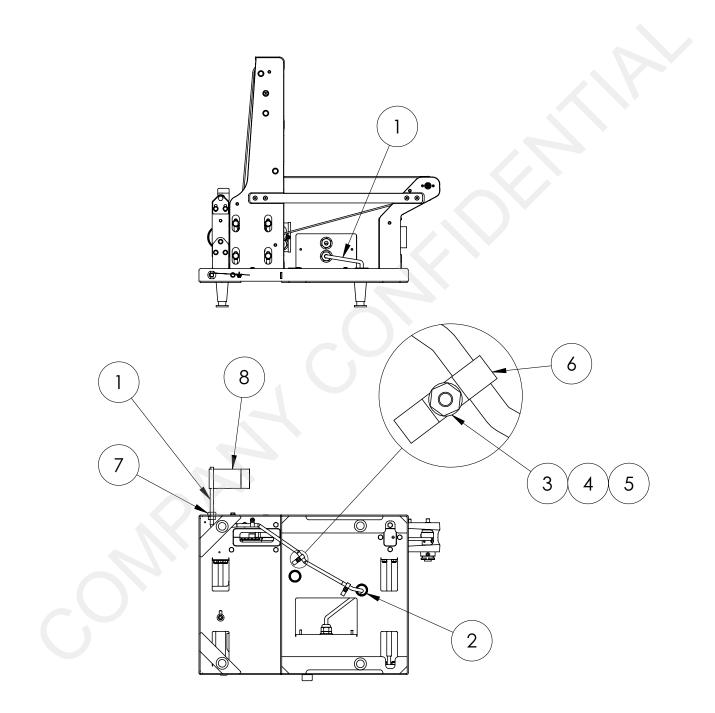


ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH - BB-2 (CONTINUED)

Item	Description	Part Number	Quantity
1	Washer, External Tooth, #10	120232	3
2	J-Box Cover	500842	1
3	Cover Assembly with Gasket	500344	1
4	Screw, #10-24 x 3/4"	120759	2
5	Switch, 2-position Cam With Plate	124750	1
6	Capacitor (Not Shown)	501066	1
7	Screw, #10-24 x 3/8"	120760	2



ELECTRICAL COMPONENTS - POWER CORD 230V - BB-1F



Service Parts

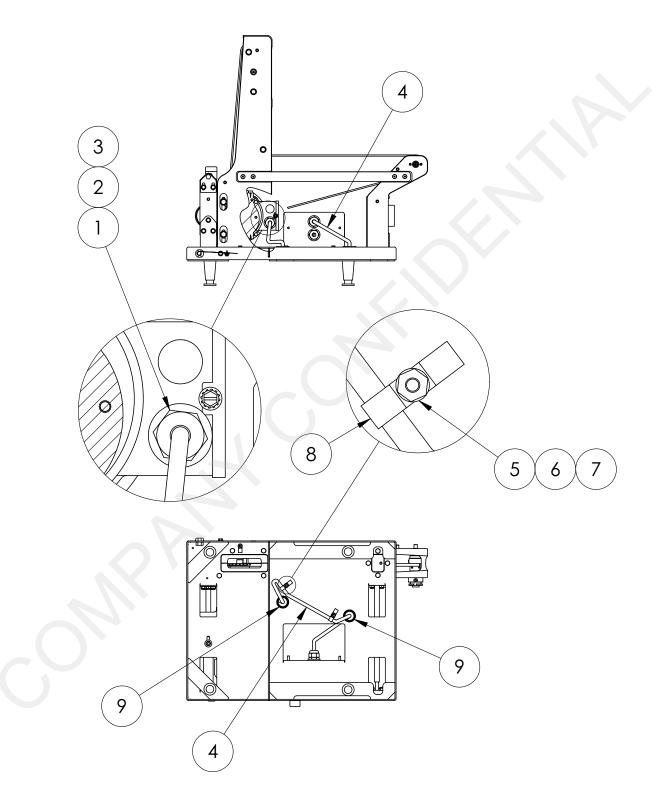


ELECTRICAL COMPONENTS- POWER CORD 230V - BB1-F (CONTINUED)

ITEM	Description	230V Part Number	QTY
1	Cordset Power Unit	500469	1
2	Bushing Snap, 5/16	124744	2
3	Nut, #10-24 Standard Hex	120330	1
4	Screw. #10-24 X 3/4"	120759	1
5	Washer, Plain, #10	120281	1
6	Clamp Cable, 3/8	125078	1
7	Bushing, Strain Relief	124746	1



ELECTRICAL COMPONENTS - MOTOR CORD 230V - BB1-F



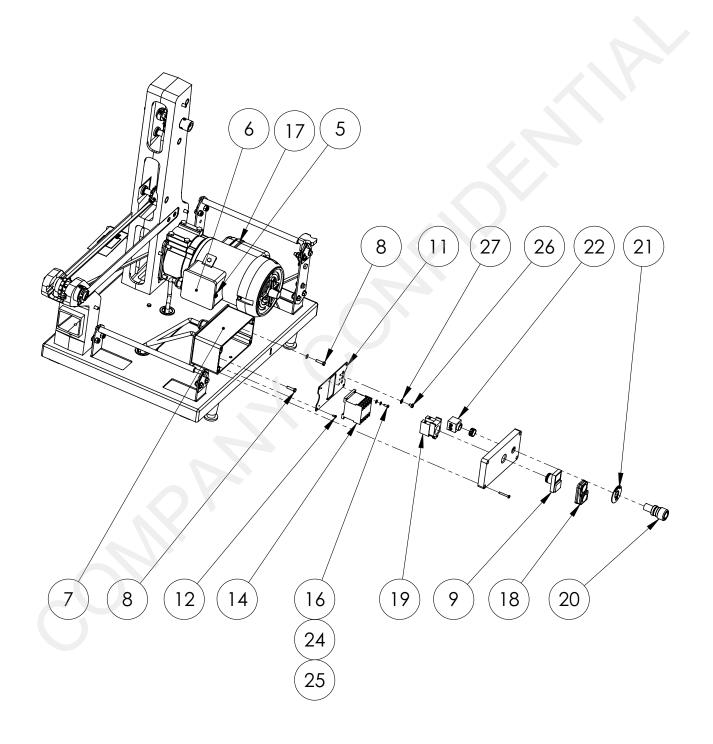


ELECTRICAL COMPONENTS - MOTOR CORD 230V - BB1-F (CONTINUED)

Item	Description	230V Part Number	QTY
1	Connector, Straight, 1/2"	124751	1
2	Seal, 1/2 Conduit	105245	1
3	Nut, Lock, 1/2 Conduit	122653	1
4	Cord, Motor	104167	1
5	Nut, #10-24 Standard Hex	120330	1
6	Screw, #10-24 x 3/4"	120759	1
7	Washer, Plain, #10	120281	1
8	Clamp, Cable, 3/8	125078	1
9	Bushing Snap, 5/16	124744	2



ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH 230V - BB1-F



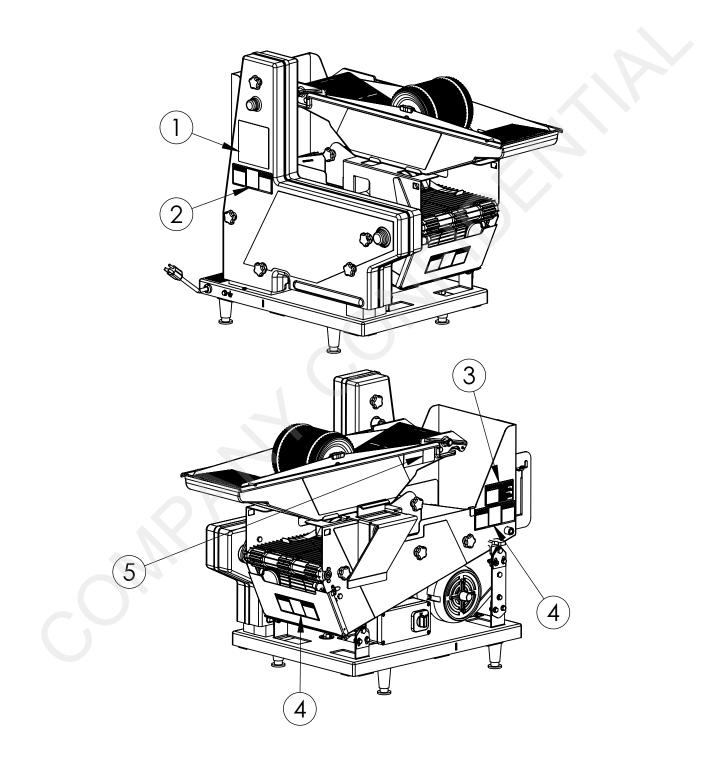


ELECTRICAL COMPONENTS - CAPACITOR AND SWITCH 230V - BB1-F (CONTINUED)

Item	Description	230V Part Number	QTY
1	Wire - White, 6" - NOT SHOWN	501755	2
2	Wire - Red/Black, 7" - NOT SHOWN	501754	1
5	Washer, External Tooth, #10	120232	2
6	J-Box Cover	500842	1
7	Enclosure, E-Stop	104153	1
8	Screw, Hex, 10-24 x 3/4"	120759	2
9	Switch, Drop Out	501763	1
9a	Wire - Red 5" - NOT SHOWN	501756	2
11	Panel, Enclosure	104154	1
12	Screw, M3 x 6mm	155021	4
13	Wire Assembly 5" - NOT SHOWN	500712	1
14	Mini Contactor	124907	1
16	Pan Head #6-32 x 3/8"	120780	4
17	Capacitor	501066	1
18	Boot, Drop-out	501681	1
19	Element, Switching, Drop-out	501680	1
20	Switch, E-stop	501834	1
21	Plate, E-stop	501836	1
22	Element, Switching, E-stop	501835	1
23	Wire, Black, 7" - NOT SHOWN	501985	2
24	Lock Washer, #6	120233	4
25	Washer	123524	4
26	Screw, #10-32 x 1/4"	123256	3
27	Washer External Tooth #10	120232	4



SAFETY LABELS





SAFETY LABELS (CONTINUED)

Item	Description	Part Number	Quantity
1	Label, Frame Wash Down	501630	1
2	Label, Chain Hazard	500636	2
3	Label, Washing Caution	501425	1
4	Label, Pinch Hazard	500637	2
5	Label, Batter Belt Path	500845	1



OPTIONAL EQUIPMENT AVAILABLE

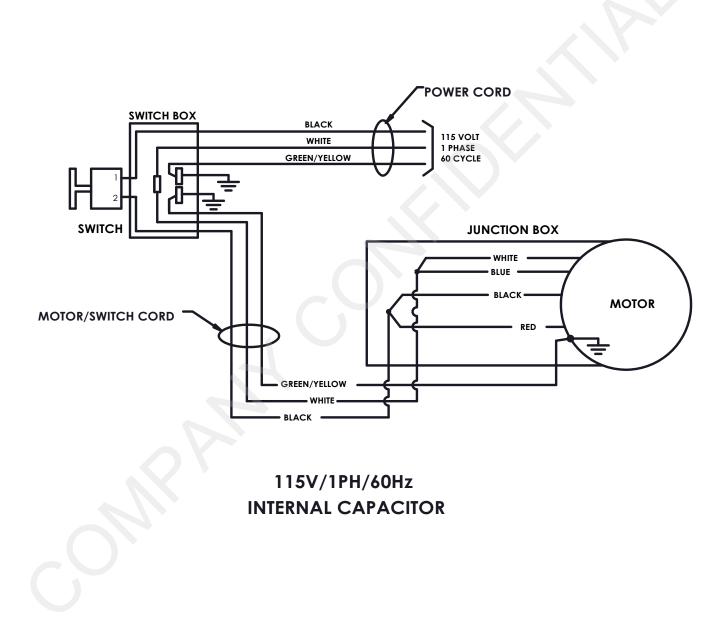
Item	Description	Part Number
1	Case of eXtra© Heavy Duty Cleaner	184331
2	eXtra© Heavy Duty Cleaner (1 gallon jug)	184332
3	Grease Gun, Filled (for lubricating breader drive shaft)	501417
4	Triple B Silicone Spray, Case (12 Cans)	185685
5	Kit, Endless Breader Belt, Optimax [®]	501592
6	Basket, Interlocking	501642
7	Lubrication Kit	501669
8	Triple B Silicone Spray, (1 Can)	502013
9	Scraper, Wheel, Optimax	103612

Service Parts



ELECTRICAL SCHEMATICS

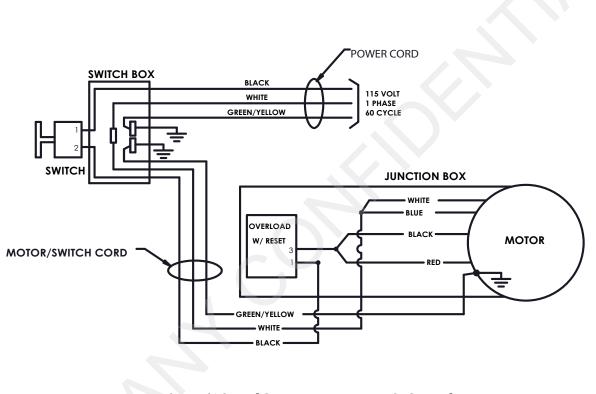
115V/1PH/60Hz Internal Capacitor





ELECTRICAL SCHEMATICS (CONTINUED)

115V/1PH/60HZ Internal Capacitor (Canadian)

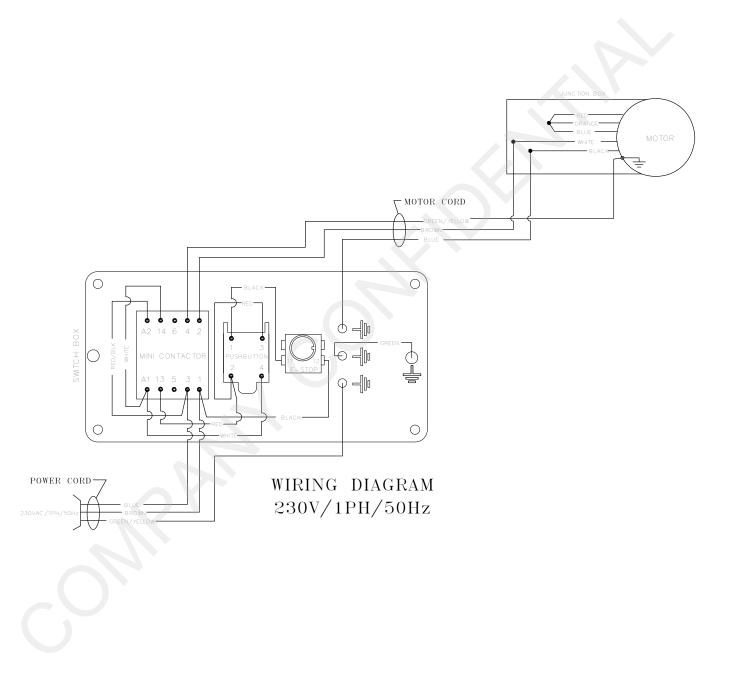


115V/1PH/60Hz (CANADIAN UNITS ONLY) INTERNAL CAPACITOR



ELECTRICAL SCHEMATICS (CONTINUED)

230V/1PH/50HZ Internal Capacitor





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Contact and Document Information



Section 8

Contact and Document Information

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CONTACT ADDRESS AND PHONE

For additional information, service providers, technical support and spare parts, contact your Regional Manager, Distributor, or Bettcher Industries Representative:

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Bettcher do Brasil Comércio de Máquinas Ltda. Av. Fagundes Filho, 145 Cj 101/102 - São Judas São Paulo - SP CEP 04304-010 - BRASIL Tel: +55 11 4083 2516 Fax: +55 11 4083 2515

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Issued:

SOFTWARE AND DUPLICATION

For more information, contact your local Representative or:

Bettcher Industries, Inc. Administrative Assistant/Engineering Department PO Box 336 Vermilion, Ohio 44089 USA



SERVICE PROVIDERS

NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING

Bettcher Industries, Inc. Foodservice Equipment

ALABAMA (AL)

All ZIP Codes

South Eastern Food Equipment 102 2nd Street PO Box 357 Helena, AL 35080 205-663-7653 205-664-3604 (fax) sebutcher@charter.net

ALASKA (AK)

All ZIP Codes

Restaurant Appliance Service Main office: 22322 20th Ave SE Bothell, WA 98011-8418 206-524-8200 425-486-8544 (fax) 866-770-2022 tom.mcpeters@3wire.com

ARIZONA (AZ)

All ZIP Codes

Service Solutions Group Main office: 4832 South 35th Street Phoenix, AZ 85040 602-234-2443 602-232-5862 (fax) 800-824-8875 tim.harper@servicesg.com

Branch office: 1121 W. Grant Rd. #410 Tucson, AZ 85705 520-629-0040 520-629-0622 (fax) 800-300-3337 (SW AZ) doug.hargadon@servicesg.com

ARKANSAS (AR)

ZIP Codes 71600-72299, 72300-72499, 72500-72999

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Bromley Parts and Service 1000 Ringo Street Little Rock, AR 72202 501-374-0281 501-374-8352 diane@bromleyparts.com

CALIFORNIA (CA)

ZIP Codes 90000-91899, 92300-93599

Industrial Electric Service 5662 Engineer Drive Huntington Beach, CA 92649 714-379-7100 714-379-7109 (fax) 800-45-SERVE Debbie.palmer@nacps.com

Service Solutions Group 5367 Second Street Irwindale, CA 91706 626-960-9390 626-337-4541 (fax) 800-258-6999 larry.matteson@servicesg.com

ZIP Codes 93600-96699

P&D Appliance Service Center Main office: 100 South Linden Avenue South San Francisco, CA 94080 650-635-1900 650-635-1919 (parts) 800-424-1414 Sanfran.service@nacps.com Branch office: 4220 "C" Roseville Road North Highlands (Sacramento), CA 95660 916-974-2772 916-974-2774 (fax) 800-824-7219 Sacramento.service@nacps.com

Cal-west Service Inc 6405 Golden Gate Drive Dublin, CA 94568 925-551-6400 925-551-6444 (fax) 888-306-6401 jmartinez@calwestservice.com

ZIP Codes 91900-92299

Service Solutions Group 5160 Mercury Point #C San Diego, CA 92111 858-751-0390 858-751-0399 (fax) steve.ruegsegger@service.com

COLORADO (CO)

All ZIP Codes

Hawkins Commercial Main Office: 3000 South Wyandot St. Englewood, CO 80110 303-781-5548 303-761-8861 (fax) 800-624-2117 jeffs@hawkinscommercial.com

Branch Office: 56 Buchanan Colorado Springs, CO 80907 719-477-1242 719-477-1513 (fax) Darrell@hawkinscommercial.com

BETTCHER Industries, Inc. FOODSERVICE GROUP

6801 State Route 60, Birmingham, OH 44816 Phone (440) 965-4422 Fax (440) 965-4900 www.bettcher.com

Contact and Document Information Optimax[®] Operating Instructions and Parts List



NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Industries, Inc. Foodservice Equipment, Page 2

CONNECTICUT (CT)

All ZIP Codes

Authorized Appliance Main office: 74 River Street Rutland, VT 05701 802-775-5588 802-775-9593 (fax) 800-874-1080 bborger@together.net

Branch office: 109B Loomis St Manchester, CT 06040 860-649-2355 860-646-8926 (fax) aasc1@together.net

DELAWARE (DE)

All ZIP Codes

Electric Motor Repair 263 Quigley Blvd. Suite 12 New Castle, DE 19720 302-834-5292 302-834-5596 (fax) 888-687-8080 jdriver@emrco.com

DISTRICT OF COLUMBIA (DC)

All ZIP Codes

Daubers Inc. Main Office: 7645 Dynatech Court Springfield, VA 22153 703-866-3600 703-866-4071 (fax) 800-554-7788 chuck@daubers.com

Branch Office: 2407 Ownby Lane Richmond, VA 23220 804-359-9065 804-359-4331 (Fax) 800-273-9593 jim@daubers.com

FLORIDA (FL)

All ZIP Codes

Heritage Service Group of Florida 800-983-9027 866-388-9838 (fax) fredh@hfse.com

GEORGIA (GA)

ZIP Codes 30000-39999

Heritage Service Group of Atlanta 2100 Norcross Parkway Suite 130 Norcross, GA 30071 800-983-9027 866-388-9838 (fax) fredh@hfse.com

HAWAII (HI)

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Burney's Commercial Service 528 Mokauea Street Honolulu, HI 96819 808-848-1466 808-848-0545 (fax) burneyshi@aol.com

IDAHO (ID)

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Restaurant Appliance Service 22322 20th Ave SE Bothell, WA 98011-8418 206-524-8200 425-486-8544 (fax) 866-770-2022 tom.mcpeters@3wire.com

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Custom Commercial Service Main office: Branch office: 8280 Hwy 200 E Milltown, MT 59851 406-829-8288 406-829-8290 (fax) ccsmt@aol.com

ZIP Codes 83300-83399, 83600-83799

Ron's Service 11481 West Fairview Avenue Boise, ID 83713 208-375-4073 208-375-4402 (fax) info@ronsservice.com

ILLINOIS (IL)

ZIP Codes 60000-60799, 61100-61199, 61300-61399

General Parts 248 James Street Bensenville, IL 60106 630-595-3300 630-595-0006 (fax) 800-880-5027 (fax) 800-880-3604 carolw@generalparts.com

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Dan Cone Group 2408 40th Avenue Moline, IL 61265 309-797-5323 309-797-3631 (fax) 800-716-7070 cones@cones.com

ZIP Codes 62000-62299, 62800-62899, 62900-62999

Commercial Kitchen Services, Inc. 10667 Midwest Industrial Blvd. Saint Louis, MO 63132 314-890-0700 314-890-0705 (fax) 800-966-2936 info@cks-stl.com

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NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Industries, Inc. Foodservice Equipment, Page 3

800-410-9794 rayh@generalparts.com

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KANSAS (KS)

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General Parts

Main Office: 1101 E 13th Street Kansas City, MO 64106 816-421-5400 816-421-1270 (fax) 800-279-9967 800-279-9968 (fax) stever@generalparts.com

Branch Office: 9212 E 37th Street North Wichita, KS 67226 316-315-0044 316-315-0660 (fax) 866-211-5439 ronb@generalparts.com

KENTUCKY (KY)

All ZIP Codes

Service Solutions Group

Main office: 127 Dishman Lane Bowling Green, KY 42101 270-783-0012 270-783-0058 don.roenigk@servicesg.com Branch office: 1051 Goodwin Dr. Lexington, KY 40505 859-254-8854 859-231-7781 (fax) 800-432-9269 cassie.walker@servicesg.com

Branch office: 4283 Produce Road Louisville, KY 40218 502-964-7007 502-964-7202 (fax) 800-637-6350 don.roenigk@servicesg.com

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MAINE (ME)

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Pine Tree Food Equipment Inc.

Main office: 175 Lewiston Road Gray, ME 04039 207-657-6400 207-657-5464 (fax) 800-540-5427 (in Maine) dan@pinetreefoodequipment.com Branch office: 6 State Street Brewer, ME 04412 207-989-4862 800-540-5427 info@pinetreefoodequipment.com

MARYLAND (MD)

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Electric Motor Repair

Main office: 9100 Yellow Brick Road Suite H Rosedale, MD 21237 410-467-8080 410-467-4191 (parts fax) 410-243-2509 (service fax) 410-467-2512 (corp. fax) 800-879-4994 (24 hour) emr@emrco.com

Branch office: 5316 Sunnyside Ave. Beltsville, MD 20705 301-931-7000 301-931-3060 (fax) 800-348-2365 rlee@emrco.com

Branch office: 805 N. Salisbury Blvd. Salisbury, MD 21801 410-543-8080 410-548-4038 877-753-8080 dcheeser@emrco.com

MASSACHUSETTS (MA)

ZIP Codes 01000-01399

Authorized Appliance

Main office: 74 River Street Rutland, VT 05701 802-775-5588 802-775-9593 (fax) 800-874-1080 bborger@together.net

> BETTCHER Industries, Inc. FOODSERVICE GROUP

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Branch office: 109B Loomis St Manchester, CT 06040 860-649-2355 860-646-8926 (fax) aasc1@together.net **ZIP Codes 01400-02799**

Ace Service Company

Main office: 95 Hampton Avenue Needham, MA 02494 781-449-4220 781-444-4789 (fax) 800-225-4510 service@aceserviceco.com

Branch office: 500 Harvey Rd. Manchester, NH 03103 603-668-5070 603-626-6067 (fax) 800-225-2510 service@aceserviceco.com

MICHIGAN (MI)

ZIP Codes 48000-48799

A&R Repairs/Bakers Kneads 26352 Lawrence Centerline, MI 48015 586-758-4440 586-758-0740 (fax) 800-852-2261 gary@arrepairs

ZIP Codes 48800-49799

Midwest Food Equipment Service Inc.

Main office: 3055 Dixie Avenue Grandville, MI 49418 616-261-2000 616-261-2020 (fax) 800-288-7060 Midwest@mfeservice.com

Branch office: 3310 Redmond Kalamazoo, MI 49001 616-372-1012 616-372-1054 (fax) 800-288-7050

Midwest@mfeservice.com

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General Parts W223 N735 Saratoga Drive Waukesha, WI 53186 262-650-6666 262-650-6660 (fax) 800-279-9976 800-279-9978 (fax) jeanh@generalparts.com

MINNESOTA (MN)

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Main office: 11311 Hampshire Ave. South Bloomington, MN 55438 952-944-5800 952-944-7101 800-279-9980 guyj@generalparts.com

Branch office: 10 South 18th Street Fargo, ND 58103 701-235-4161 701-235-0539 (fax) 800-279-9965 (fax) 800-279-9987 gregp@generalparts.com

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MISSOURI (MO)

ZIP Codes 63800-63899

Heritage Service Group of Florida 800-983-9027 800-800-4981(fax) fredh@hfse.com

ZIP Codes 63000-63799, 63900-63999, 65000-65299, 65400-65599

Commercial Kitchen Services, Inc. 10667 Midwest Industrial Blvd. Saint Louis, MO 63132 314-890-0700 314-890-0705 (fax) 800-966-2936 info@cks-stl.com

ZIP Codes 64000-64899, 65300-65399, 65600-65899

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Main office: 1101 E 13th Street Kansas City, MO 64106 816-421-5400 816-421-1270 (fax) 800-279-9968 (fax) 800-279-9967 stever@generalparts.com

MONTANA (MT)

All ZIP Codes

Custom Commercial Service Main office: 1817 East Main Laurel, MT 59044 406-628-2262 406-628-2264 (fax) 800-736-5357 ccsmt@aol.com

Branch office: Mailing Address: P.O. Box 2066 E Helena, MT 59635 Shipping address: 101 W. Main E. Helena, MT 59635 406-443-1333 406-443-1222 (fax) 866-443-1333 ccsmt@aol.com

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NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Foodservice Equipment, Page

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NEBRASKA (NE)

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NEVADA (NV)

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Burney's Commercial Service Main office: 4480 Aldebaran Avenue Las Vegas, NV 89103 702-736-0006 702-798-7531 (fax) burneyscomm@aol.com

Branch office: 1528 Linda Way Sparks, NV 89431 775-355-9111 775-355-9128 (fax) 800-240-9111 burneyssparks@sbcglobal.net

NEW HAMPSHIRE (NH)

All ZIP Codes

Authorized Appliance Main office: 74 River Street Rutland, VT 05701 802-775-5588 802-775-9593 (fax) 800-874-1080 bborger@together.net

NEW JERSEY (NJ)

ZIP Codes 08000-08799

Electric Motor Repair 3494 Progress Dr., Unit F Bensalem, PA 19020 215-604-1260 215-604-1306 (fax) 888-467-8080 ssandlass@emrco.com

ZIP Codes 07000-07999, 08800-08999

Jay Hill Repairs 90 Clinton Road Fairfield, NJ 07004 973-575-9145 908-780-1411 973-575-5890 (fax) 800-836-0643 888-529-4455 dvazzano@jayhillrepairs.com

NEW MEXICO (NM)

All ZIP Codes

R&B Commercial Service, Inc. 4412 Towner NE Albuquerque, NM 87110

PO Box 36378 Albuquerque, NM 87176 505-889-4090 505-889-3845 (fax) 800-376-1821 barryd@rbcommserv.com

NEW YORK (NY)

ZIP Codes 10000-11999

ALPRO Service Company 1127 Willoughby Avenue Brooklyn, NY 11237 718-386-2515 718-417-6380 info@alproservice.com

ZIP Codes 12000-14999

Duffy's Equipment Service

Main office: 3138 Oneida Street Sauquoit, NY 13456 800-836-1014 315-737-7132 (fax) info@duffysequipmentservice.com

Branch office: 1310 Clinton Street Buffalo, NY 14206 800-836-1014 716-824-9442 (fax) buffmanager@duffysequipment.com Branch office: 1904 E. Main Street Endicott, NY 13760 800-836-1014 607-754-3343 (fax) bingmanager@duffysequipment.com

Branch office: 109 Albion Ave. Liverpool, NY 13088 800-836-1014 315-428-8715 (fax) syrmanager@duffysequipment.com

Branch office: 140 Child Street Rochester, NY 14611 800-836-1014 585-328-2627 (fax) rochmanager@duffysequipment.com

Branch office: 305 State Street Watertown, NY 13601 800-836-1014 315-778-5058 (fax) wtnmanager@duffysequipment.com

NORTH CAROLINA (NC)

All ZIP Codes

Whaley Food Service

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Branch office: 3630 Cessna Dr. Garner, NC 27529 919-779-2266 919-779-2224 (fax) terry.humphries@whaleyfoodservice.com

Branch office: 3020B Thurston Avenue Greensboro, NC 27406 336-333-2333

BETTCHER Industries, Inc. FOODSERVICE GROUP



NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Industries, Inc. Foodservice Equipment, Page 6

336-808-4917 (fax) Dan.sampson@whaleyfoodservice.com Branch office: 6418-101 Amsterdam Way Wilmington, NC 28405 910-791-0000 910-332-0080 (fax) Ken.spencer@whaleyfoodservice.com

NORTH DAKOTA (ND)

All ZIP Codes

General Parts 10 South 18th Street Fargo, ND 58103 701-235-4161 701-235-0539 (fax) 800-279-9965 (fax) 800-279-9987 gregp@generalparts.com

OHIO (OH)

ZIP Codes 43000-43399, 43700-43899, 45000-45799

Service Solutions Group

Main office: 890 Redna Terrace Cincinnati, OH 45215 513-772-6600 513-612-6600 (fax) 800-543-2060 don.horman@servicesg.com

Branch office: 6025 N. Dixie Dr. Dayton, OH 45414 937-898-4040 937-898-4177 (fax) 800-257-2611 don.horman@servicesg.com

ZIP Codes 43400-43699, 45800-45899

The Wichman Company 7 North Westwood Avenue Toledo, OH 43607 419-385-9121 419-385-0202 (fax) wichmanservice@bex.net

ZIP Codes 43900-44799

Appliance Installation Service 5265 Naiman Parkway Suite I Cleveland, OH 44139 440-248-1489 800-428-8448 440-248-1543 (fax) wevans@ais-service.net

Appliance Installation Service 590 East Western Reserve Road Youngstown, OH 44514 330-729-9705 877-346-6544 330-729-9707 (fax) ytownsvc@ais-service.net

OKLAHOMA (OK)

All ZIP Codes

Hagar Restaurant Service 1229 West Main Street Oklahoma City, OK 73106 405-235-2184 405-236-5592 (fax) 800-445-1791 bhagar@hagarrs.com

Hagar Restaurant Service 5932 S Kelly Drive Tulsa, OK 74135 918-664-4665 918-664-1618 (fax) 800-722-0229 lcarlson@hagarrs.com

OREGON (OR)

All ZIP Codes

Ron's Service Main office: 16364 Southwest 72nd Ave. Portland, OR 97224 503-624-0890 503-684-6107 (fax) 800-851-4118 info@ronsservice.com

Branch office: 201 Bateman Dr., Suite 8 Central Point, OR 97502 541-665-0410 541-665-0411 (fax)

info@ronsservice.com

PENNSYLVANIA (PA)

ZIP Codes 18900-19499

Electric Motor Repair Main office: 3494 Progress Dr., Unit F Bensalem, PA 19020 215-604-1260 215-604-1306 (fax) 888-467-8080 ssandlass@emrco.com

ZIP Codes 15000-16799

Appliance Installation Service 1911 West 26th Street Erie, PA 16508 412-809-0244 800-726-6020 412-809-0246 (fax) rgray@ais-dervice.net

Appliance Installation Service 740 Vista Park Drive Pittsburgh, PA 15205 412-809-0244 800-726-6020 412-809-0246 (fax) wevans@ais-service.net

ZIP Codes 16900-18899, 19500-19699

K&D Factory Service Main office: 1833 North Cameron Street Harrisburg, PA 17103 717-236-9039 717-238-4367 (fax) 800-932-0503 info@kdfsi.com

Branch office: 480 Business Park Lane Allentown, PA 18109 610-432-0266 717-238-4367 (fax) info@kdfsi.com

Branch office: 597 Lehigh Avenue Lancaster, PA 17602 717-394-4892 717-238-4367 (fax) info@kdfsi.com



NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Industries, Inc. Foodservice Equipment, Page 7

Branch office: 1818 Cedar Avenue Scranton, PA 18505 570-342-5135 717-238-4367 (fax) info@kdfsi.com

Branch office: 2670 Euclid Avenue Williamsport, PA 17702 570-323-8010 717-238-4367 (fax) info@kdfsi.com

Branch office: 2100 W Market Street York, PA 17404 717-793-8525 717-238-4367 (fax) info@kdfsi.com

RHODE ISLAND (RI)

All ZIP Codes

Ace Service Company 95 Hampton Avenue Needham, MA 02494 781-449-4220 781-444-4789 (fax) 800-225-4510 service@aceserviceco.com

SOUTH CAROLINA (SC)

All ZIP Codes

Whaley Food Service

Main office mailing address: P.O. Box 615 Lexington, SC 29073

Main office shipping address: 137 Cedar Road Lexington, SC 29071 803-996-9900 803-996-9910 (fax) 800-877-2662 info@whaleyfoodservice.com

Branch office: 748 Congaree Road Greenville, SC 29607 864-234-7011 864-770-8993- (fax) don.mason@whaleyfoodservice.com Branch office: 1406-C Commerce Place Myrtle Beach, SC 29577 843-626-1866 877-798-8892 (fax) rand.reeder@whaleyfoodservice.com

Branch office: 4740-A Franchise St. North Charleston, SC 29418 843-760-2110 843-552-4803 (fax) David.douglas@whaletfoodservice.com

SOUTH DAKOTA (SD)

All ZIP Codes

General Parts 10 South 18th Street Fargo, ND 58103 701-235-4161 701-235-0539 (fax) 800-279-9965 (fax) 800-279-9987 gregp@generalparts.com

TENNESSEE (TN)

ZIP Codes 37500-37599, 38000-38399

Heritage Service Group of Tennessee 800-983-9027 901-379-0935(fax) fredh@hfse.com

ZIP Codes 37000-37499, 37600-37999, 38400-38599

Whaley Foodservice Repairs 438 Harding Industrial Drive 615-690-1400 615-882-0827(fax) terry.williams@whaleyfoodservice.com

TEXAS (TX)

ZIP Codes 75000-75799, 76000-76999, 79000-79799

Cooking Equipment Specialist (RSI) 3040 East Meadows Mesquite (Dallas/Ft Worth), TX 75150 972-279-3800 972-686-9656 (fax) 888-866-9276 jpritchett@rsidfw.com

Hagar Restaurant Service 433 Regal Row Dallas, TX 75247 214-574-5200 214-574-5211 (fax) 866-919-5200 bgilpatrick@hagarrs.com

ZIP Codes 75800-75999, 77000-77899, 78900-78999

Armstrong Repair Center 5110 Glenmont Houston, TX 77081 713-666-7100 713-592-5214 (fax) 800-392-5325 rga@armstrongrepair.com

Armstrong Repair Center 2215 Woodward Street Austin, TX 78744 512-416-1101 512-416-6912 (fax) 800-392-5322 ernestd@armstrongrepair.com

ZIP Codes 77800-78899, 79800-79999

Commercial Kitchen Parts & Service

Main office: 1377 N. Brazos San Antonio, TX 78207 Mailing address: PO Box 831128 San Antonio, TX 78283 210-735-2811 210-735-7421 (fax) brock@ckps.com

Branch office: 2215 Woodward Street Austin, TX 78757 800-392-5322 512-416-6912 (fax) david@ckps.com

> BETTCHER Industries, Inc. FOODSERVICE GROUP



NORTH AMERICA AUTHORIZED SERVICE AGENCY LISTING, Bettcher Industries, Inc. Foodservice Equipment, Page 8

Branch office: 1117 Hendricks Street #126 Corpus Christi, TX 78417 800-242-5928 361-882-4903 (fax) frankr@ckps.com

Branch office: 301 N. McColl Road #D McAllen, TX 78501 956-664-8267 956-585-0451 (fax) leo@ckps.com

UTAH (UT)

All ZIP Codes

Lamonica's 6211 South 380 West Murray, UT 84107 801-263-3221 801-263-3229 (fax) lamonicas81@aol.com

VERMONT (VT)

All ZIP Codes

Authorized Appliance Main office: 74 River Street Rutland, VT 05701 802-775-5588 802-775-9593 (fax) 800-874-1080 bborger@together.net

VIRGINIA (VA)

All ZIP Codes

Daubers Inc. Main Office: 7645 Dynatech Court Springfield, VA 22153 703-866-3600 703-866-4071 (fax) 800-554-7788 chuck@daubers.com

Branch Office: 5255 Henneman Drive Norfolk, VA 23513 757-855-4097 757-855-1795 (fax) 800-880-7775 randy@daubers.com Branch Office: 2407 Ownby Lane Richmond, VA 23220 804-359-9065 804-359-4331 (Fax) 800-273-9593} jim@daubers.com

WASHINGTON (WA)

ZIP Codes 98000-98599, 98700-99499

Restaurant Appliance Service 22322 20th Ave SE Bothell, WA 98011-8418 206-524-8200 425-486-8544 (fax) 866-770-2022 tom.mcpeters@3wire.com

ZIP Codes 98600-98699

Ron's Service

Main office: 16364 Southwest 72nd Ave. Portland, OR 97224 503-624-0890 503-684-6107 (fax) 800-851-4118 info@ronsservice.com

WEST VIRGINIA (WV)

All ZIP Codes Heritage Service Group West Virginia 800-983-9027 800-800-4981(fax) fredh@hfse.com

WISCONSIN (WI)

All ZIP Codes

General Parts W223 N735 Saratoga Drive Waukesha, WI 53186 262-650-6666 262-650-6660 (fax) 800-279-9976 800-279-9978 (fax) jeanh@general.com

WYOMING (WY)

All ZIP Codes

Custom Commercial Service 2009 Robertson #13 Worland, WY 82401 888-567-8199 877-291-9761 (fax) ccsmt@aol.com

BETTCHER Industries, Inc.

FOODSERVICE GROUP

6801 State Route 60, Birmingham, OH 44816 Phone (440) 965-4422 Fax (440) 965-4900 www.bettcher.com

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