

## **WARNING!**

**DO NOT USE SILICONE BASED GREASE OR SPRAY LUBRICANTS. DOING SO WILL CAUSE THE COMPOSITE BUSHINGS TO FAIL AND VOID YOUR WARRANTY. ONLY PETROLEUM LUBRICANTS ARE RECOMMENDED.**

## **NOTICE!**

**PUTTING OIL IN YOUR OIL LESS VACUUM PUMP WILL VOID YOUR WARRANTY.**

## **WARNING!**

**DO NOT ALTER OR DISMANTLE MACHINE PARTS. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY MODIFICATIONS TO THE EQUIPMENT PARTS AND ANY MODIFICATIONS TO MACHINE PARTS WILL VOID THE MANUFACTURER'S WARRANTY. WARRANTY DOES NOT COVER PARTS THAT HAVE BEEN INSTALLED IMPROPERLY, ABUSED, MISUSED, OR NEGLECTED ACCORDING TO PLANNED MAINTENANCE PROCEDURES, SERVICED BY NON-COMBI EMPLOYEES, USED FOR PURPOSES OTHER THAN ORIGINALLY DESIGNED FOR, AND/OR DAMAGED DUE TO USING ACCESSORIES SUPPLIED BY COMPANY OTHER THAN COMBI PACKAGING SYSTEMS LLC.**

# **WARNING!**

If applicable, wash-down units must adhere to the following precautionary measures prior to cleaning to avoid possible electrical shock or water damage to components:

- 1 Remove the tape head(s)
- 2 Cover vacuum pumps
- 3 Cover push button stations and the touchscreens
- 4 Cover all motors and any electrical items that may not be labeled as a 'wash-down' item

Follow your company's Lock-out/Tag-out procedures before performing maintenance or adjustments to the equipment. Additional lock-out /tag-out procedures are described in this section of the manual.

COMBI PACKAGING SYSTEMS, LLC can not be responsible for damages caused by the lack adherence to the precautionary measures listed above.

## 2EZSB PLANNED MAINTENANCE SCHEDULE

<p><b>!</b> WARNING</p>	<p>FOLLOW YOUR COMPANY'S LOCKOUT / TAG OUT PROCEDURE BEFORE PERFORMING MAINTENANCE OR ADJUSTMENTS TO EQUIPMENT. ADDITIONAL PROCEDURES ARE LOCATED IN THIS SECTION OF THIS MANUAL</p>
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### DAILY

1. Check the vacuum level with gauge daily or every 8-production hour cycle. Negative Pressure levels should read as follows:  
  
Becker Vacuum Pump – 21 Hg min. / 25Hg max  
  
Vacuum Generator – 15Hg min / 20 Hg max  
  
**Note: Vacuum levels should be checked by placing a non-porous material on the Vacuum Cups. Do not use the corrugate to check the vacuum.**
2. The filter unit on the Main Air Filter / Regulator should be checked and drained daily or as needed. The airline pressure on the Regulator should be set at a minimum of 80 psi and 100psi maximum, with a minimum of a 3/4" diameter air supply line. Drain filter as necessary.
3. Check Vacuum Cups / Fittings and Hoses for visible wear and tear. Cups need to be replaced when cracked or worn.
4. Check CAREFULLY knife blade(s) in tape head(s) for cleanliness and sharpness. See tape head manual for safety procedures. Place several drops of 10W oil on felt pad on blade guard every week. See 3M Accuglide II or other taper component manual (located in section five) for maintenance procedure.
5. Check for loose belts. See belt tensioning procedure in page 13.
6. Remove excessive corrugate dust using rag or low pressure air gun. We recommend the use of a shop vacuum to ensure removal of the corrugate dust.

### 40 PRODUCTION HOURS.

1. A replaceable internal filter cartridge protects the Vacuum Pump. This should be inspected every 40-production hour cycle under normal conditions. Do not run system without a cartridge. This may damage the Vacuum Pump. If equipped with an optional external Vacuum Filter, clean or replace every 40 production hours and the internal filter every 160 production hours.
2. Inspect all Vacuum Cups / Hoses and Fittings in addition to all Air Lines for cracks or kinks.

## 2EZSB TROUBLESHOOTING & SAFETY

### 40 PRODUCTION HOURS continued

3. Clean off Photo Eyes and Reflectors. **WARNING! DO NOT CLEAN SENSORS WITH ANY DETERGENT AND THE MACHINE MUST BE IN AN “E”-STOPPED STATE.** .
4. Inspect all guards at discharge end of Drive Belt Assemblies. Replace as needed.
5. Clean the conveyor chain (if applicable) with a mild cleaning solution every 40-production hour cycle or as needed.
6. Check Carriage Bearings and Rails for wear and tightness, adjust or replace as needed. See section 2 or 5 of this manual for proper bearing adjustment.
7. Wipe clean and lubricate with 10W oil all bearing shafts and acme threads located at each point of adjustment or movement.
8. Check Major Flap Folders for proper position, see photos and adjustment procedure detailed later in this Section 2.
9. Check the relationship between the Trailing to Leading Minor Flap Folders, see photos and adjustment procedure detailed later in this Section 2.

## 2EZSB TROUBLESHOOTING & SAFETY

### 80 PRODUCTION HOURS

1. Complete a visual inspection of each machine looking for:
  - a. Broken or damaged parts. Repair or replace immediately or at first available opportunity depending on the severity. Please note that not replacing these parts may lead to failures in other areas.
  - b. Cylinder operation. Make sure cylinders are not operating to fast than needed to obtain the desired CPM output. Adjust flow controls as necessary on cylinders.
  - c. Loose electrical connections in wiring, safety switches, photo eyes, proximity switches and main panel.
  - d. Safety doors and guarding adequately in place. If not, the repair, replace or secure immediately.
3. Check mufflers on main valve bank every 80 production hours. Replace if dirty. See photo and description located in this Section 2 of the manual.
4. Clean all foreign material from Carriage Bearings and Rails lubricating with light weight oil.
5. Perform items listed on **40 Production Hours Schedule**.

### 160 PRODUCTION HOURS

1. Check for loose bolts every 160-production hours, and if found, apply Loctite thread adhesive and retighten. Main areas to look at:
  - a. Magazine case follower assembly.
  - b. Carriage plate assembly.
  - c. Bottom flap folding assembly.
  - d. Case hold down plate assembly.
2. Perform items listed on **40 & 80 Production Hours Schedules**.

## 2EZSB TROUBLESHOOTING & SAFETY

### 2EZSB TROUBLESHOOTING

**WARNING!** Only authorized personnel should be permitted to carry out adjustments, repairs or maintenance procedures.

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
<p>System will not power up.</p>	<p>No power to system from source.</p> <p>Power failure in system.</p>	<p>-Check input power at source receptacle, breaker, fuse, cord, and conduit. -Turn on main disconnect.</p> <p>-Check power source inside enclosure; -Blown Fuse: replace with proper rated fuse. -Loose wiring: tighten at terminals and fuse posts.</p>
<p>System powers up but will not operate.</p> <p><b>NOTE: REFER TO THE BANNER ON HMI FOR FAULT DESCRIPTION</b></p>	<p>Air pressure is off or inadequate.</p> <p>“E-Stop” or “Door” Safety switch is defective.</p> <p>“Start” push button is defective.</p> <p>PLC Faulted</p>	<p>-Check air at source. -Check that Regulator is set to proper pressure (80 – 100 psi). -Verify that Main Air Valve is fully open -Verify operation of Soft Start Valve.</p> <p>-Verify operation of switches / wiring and Safety Relay.</p> <p>-Verify operation of switch / wiring and Input to PLC.</p> <p>-See corresponding component literature.</p>
<p>System powers up but then shuts down.</p> <p><b>NOTE: REFER TO THE BANNER ON HMI FOR FAULT DESCRIPTION</b></p> <p>System powers up but then shuts down.</p>	<p>“Carriage Home” Switch is miss-aligned, or defective.</p> <p>“Case Release” Photo Eye is blocked / dirty or defective.</p>	<p>-Re-position with Carriage in the fully retracted position.</p> <p>-Verify operation of sensor / wiring and Input to PLC</p> <p>-Verify that Photo Eye is not blocked and lens is clean. -Verify operation of sensor / wiring. And Input to PLC</p>

## 2EZSB TROUBLESHOOTING & SAFETY

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
<p>"Vacuum Plate" will not extend.</p> <p><b>NOTE: REFER TO THE BANNER ON HMI FOR FAULT DESCRIPTION</b></p>	<p>"Case Present Photo Eye" dirty or defective (symptom will include Squaring Arm and Flap Kicker energizing without a case).</p> <p>"Discharge Backup Photo Eye" is blocked / misaligned / or defective.</p> <p>Carriage not at "Home Position"</p> <p>Defective Solenoid Valve or PLC Output</p> <p>"Vacuum Plate" Air Cylinder defective.</p> <p>"Vacuum Plate Assembly" on a mechanical bind.</p>	<p>-Clean Lens -Verify wiring / operation of sensor and Input to PLC</p> <p>-Verify that Photo Eye is not blocked / the lens &amp; reflector are clean and that the Photo Eye sees the reflector. -Verify operation of sensor / wiring. and Input to PLC</p> <p>-Verify that the Carriage is at home position.  -Verify operation of sensor / wiring. and Input to PLC</p> <p>-Verify operation of Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p> <p>Verify freedom of movement and re-align bearing assembly if needed and lubricate.</p>
<p>"Vacuum Plate" extends but will not retract.</p>	<p>"Vacuum Plate Extended Magnetic Read Switch" is miss-aligned or defective.</p>	<p>-Verify alignment and operation of switch / wiring and Input to PLC.</p>

## 2EZSB TROUBLESHOOTING & SAFETY

<b>NOTE: REFER TO THE BANNER ON HMI FOR FAULT DESCRIPTION</b>	Defective Solenoid Valve or PLC Output	-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.
	“Vacuum Plate” Air Cylinder defective.	-Verify operation of Air Cylinder.
	“Vacuum Plate Assembly” on a mechanical bind.	- Verify freedom of movement and re-align bearing assembly and lubricate.

<b>SYMPTOMS</b>	<b>POSSIBLE ANSWERS</b>	<b>TO CORRECT</b>
Vacuum Plate extends but will not extract a case from the magazine.	<p>Vacuum leak(s) with in the circuit.</p> <p>Vacuum Generator is operating less than capacity (15Hg Minimum).</p> <p>Vacuum Generator is not operating.</p> <p>Set up issues, magazine and vacuum cup position</p> <p><b>Note: Should your machine be equipped with a Becker Vacuum Pump please refer to page 14 in this section</b></p>	<p>-Inspect vacuum cups, hoses and fittings for signs of cracks or wear and replace if needed.</p> <p>-Remove and clean vacuum venture cartridge and or vacuum filter.</p> <p>-Verify the air pressure is at a minimum of 80psi.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Loosen Magazine sides and/or decrease the amount of pressure being applied by the Upper Case Opening Device.</p> <p>-Verify magazine height is set to case width</p> <p>-Verify the cup placement, not on a score line or cut outs</p>



## 2EZSB TROUBLESHOOTING & SAFETY

<p>“Vacuum Plate” continues to extend with case already on Vacuum Cups.</p>	<p>“Case Present” Photo Eye miss-aligned or defective.</p>	<p>-Verify alignment and operation of switch / wiring and Input to PLC.</p>
<p>“Squaring Arm” does not extend.</p>	<p>“Vacuum Plate At Index Position” Magnetic Read Switch is miss-aligned, or defective.</p> <p>“Vacuum Plate Index” (Cylinder that is attached to the long vacuum plate at back end) Solenoid Valve or PLC Output defective.</p> <p>“Vacuum Plate Index” (Cylinder that is attached to the long vacuum plate at back end) Air cylinder defective</p> <p>“Squaring Arm” Solenoid Valve or PLC Output defective.</p> <p>“Squaring Arm” Air Cylinder defective.</p>	<p>-Verify alignment and operation of switch / wiring and Input to PLC.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p>

**2EZSB TROUBLESHOOTING & SAFETY**

**2EZSB TROUBLESHOOTING CONTINUED**

<b>SYMPTOMS</b>	<b>POSSIBLE ANSWERS</b>	<b>TO CORRECT</b>
“Minor Flap Kicker” does not extend or retract.	<p>“Minor Flap Kicker” Solenoid Valve or PLC Output defective.</p> <p>“Minor Flap Kicker” Air Cylinder defective.</p>	<p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p>
“Carriage Cylinder” will not extend.	<p>“Call for Case” selector switch on panel set to “off”.</p> <p>“Discharge Backup Photo Eye” is blocked / misaligned / or defective.</p> <p>“Call For Case” selector switch is defective.</p> <p>“Belt Drives” are not running.</p> <p>“Carriage” Solenoid Valve or PLC Output defective.</p> <p>“Carriage” Air Cylinder defective.</p>	<p>-Set switch to AUTO.</p> <p>-Verify that Photo Eye is not blocked / the lens &amp; reflector are clean and that the Photo Eye sees the reflector.</p> <p>-Verify operation of switch / wiring and Input to PLC.</p> <p>Reset Motor Overloads.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p>
“Major Flap Folder” cylinders do not rotate up.	<p>“Vacuum Release Position” Photo Eye is miss-aligned or defective.</p> <p>“Major Flap Folder” Solenoid Valve or PLC Output defective.</p> <p>“Major Flap Folder” Air Cylinder defective.</p>	<p>-Verify alignment and operation of switch / wiring and Input to PLC.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p>

## 2EZSB TROUBLESHOOTING & SAFETY

“Major Flap Folder” cylinders do not rotate up.	“Major Flap Folder” Trans Torx bushings are loose	- Verify Trans Torx bushings are tight
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## 2EZSB TROUBLESHOOTING CONTINUED

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
“Major Flap Folder” cylinders do not rotate down.	“Major Flap Folder” Solenoid Valve or PLC Output defective.	-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.
	“Major Flap Folder” Air Cylinder defective.	-Verify operation of Air Cylinder
	“Major Flap Folder” Trans Torx bushings are loose	- Verify Trans Torx bushings are tight
“Carriage Extends but does not release case at belt drives	“Vacuum Release Position” Photo Eye is miss-aligned or defective.	-Verify alignment and operation of switch / wiring and Input to PLC.
	“Vacuum” Solenoid Valve or PLC Output defective.	-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.
	“Blow Off” Solenoid Valve or PLC Output defective.	-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.
	“Vacuum Plate Index” Solenoid Valve or PLC Output defective	- Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve
“Vacuum Cups” do not retract away from case once “Blow Off” is activated.	“Vacuum Plate Index” Solenoid Valve or PLC Output defective.	- Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.
	“Vacuum Plate Index” Air Cylinder defective.	-Verify operation of Air Cylinder.

**2EZSB TROUBLESHOOTING & SAFETY**

<p>“Vacuum Cups” do not retract away from case once “Blow Off” is activated.</p>	<p>“Vacuum Plate Assembly” on a mechanical bind.</p> <p>“Blow Off” Solenoid Valve or PLC Output defective</p> <p>“Vacuum On” Solenoid Valve or PLC Output defective</p>	<p>- Verify freedom of movement and re-align bearing assembly and lubricate.</p> <p>- Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve</p> <p>- Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve</p>
<p>“Carriage Cylinder” will not retract.</p>	<p>“Carriage Extended Magnetic Read Switch” is miss-aligned or defective.</p> <p>“Carriage Cylinder” Solenoid Valve or PLC Output defective.</p> <p>“Carriage Cylinder” Air Cylinder defective.</p>	<p>-Verify alignment and operation of switch / wiring and Input to PLC.</p> <p>-Verify operation of Solenoid Valve and for the presence of voltage from Output to Valve.</p> <p>-Verify operation of Air Cylinder.</p>

<b>SYMPTOMS</b>	<b>POSSIBLE ANSWERS</b>	<b>TO CORRECT</b>
<p>System slows down below quoted speed after a period of time.</p>	<p>“Mufflers” located on “Valve Bank” have become clogged and restrict air flow.</p> <p>“Compressed Air Source” not able to provide adequate <b>Volume</b> of air to system</p>	<p>-Remove mufflers and clean or replace.</p> <p>-Verify by watching pressure gauge at Main Air Valve looking for drop in pressure as machine operates do to low volume of air.</p>
<p>System shuts down in mid-cycle.</p>	<p>“Carriage” jam timers have timed out causing system shutdown.</p>	<p>-Observe Slider movement and increase air flow in the direction of movement where the machine is shutting down.</p>

### 2EZSB TROUBLESHOOTING & SAFETY

	Door Safety Switch defective	- Verify operation of door switches and door latches.
Machine powers up but Belt Drives do not operate	No power to motors	- Verify voltage presence at motor and motor starter - Check/reset motor overloads. - Verify operation of PLC output.

**NOTE:** See the electrical schematic and operation program for additional information required for troubleshooting. Consult the factory for any electrical items needed for replacement or spare parts.

## BECKER VACUUM PLANNED MAINTENANCE AND FILTER REPLACEMENT INSTRUCTIONS

This only applies to machines with Becker Pump, as referenced on bill of material in manual.

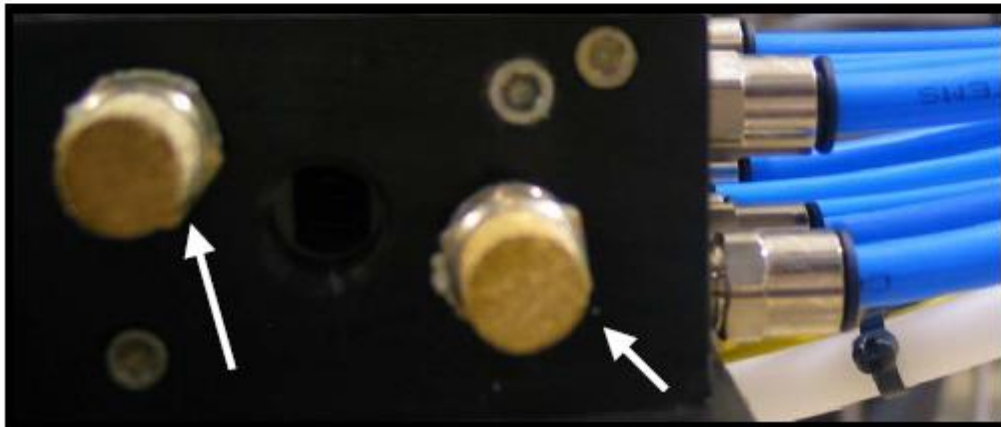
<b>Preventative Maintenance Task: Becker Vacuum Pump Replacement Filter</b>		
Equipment application:	All E-Series Case Erectors w / Becker Vacuum Pumps	Frequency: Monthly
Tools/materials needed:	1- 5 mm Allen key, Becker vacuum Filter (Part # PV0190004B)	Equipment/Safety requirements: Safety glasses, Gloves
Prerequisites:	Field training on Vacuum filter Replacement, or follow visual and written instructions on Becker vacuum pump.	References: Refer to manual section 2, page 2. Reference step # 6.
<b>Task Steps</b>		
<b>Problem:</b>	<b>Steps (What to do)</b>	<b>Suggestions</b>
Becker Vacuum Pump Filter Replacement	<p>Identify the end of the pump where the filter is located, the same end as the ID &amp; Specification tag. Opposite end as the motor.</p> <p>Remove exterior cover by removing the 2 Allen screws with the 5 mm Allen key.</p> <p>Remove the Pump Head mounted behind the cover in the same manner.</p> <p>The intake filter is located on the lower left. Remove and replace with the new filter cartridge.</p> <p>Re-attach the Pump Head with the 2 Allen screws that were removed.</p>	<p>Depress the E-stop, and Lockout equipment to be sure that machine is not started accidentally.</p> <p>Remember to wear safety glasses and gloves. Vacuum pump could be <b>HOT</b>.</p> <p>Keep the screws with the covers.</p> <p>When inserting the new filter be sure that it is correctly oriented.</p> <p>The gasket seal must be intact.</p>

## BECKER VACUUM PLANNED MAINTENANCE AND FILTER REPLACEMENT INSTRUCTIONS CONT.

Task Steps		
Problem:	Steps (What to do)	Suggestions
Becker Vacuum Pump Filter Replacement Continued	<p>Re-attach exterior cover by aligning holes and inserting the 2 Allen screws that were removed.</p> <p>Remove lockout tag, and pull out E-stop to operate the machine.</p>	<p>To avoid cross threading, the fasteners should be hand tightened.</p> <p>Check the vacuum gauge to ensure that there is proper vacuum with no leaks.</p>
Vacuum Pump does not operate.		

# TROUBLESHOOTING

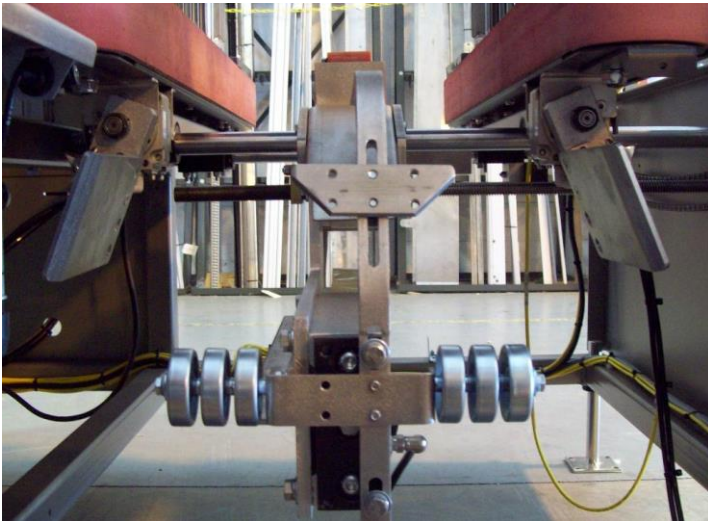
## MUFFLES ON MAIN VALVE BANK



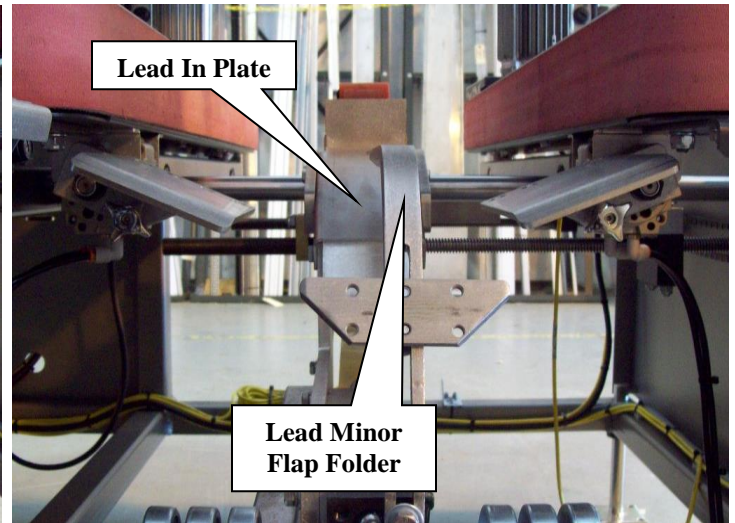
Check mufflers every 80 production hours. Replace if they become dirty. Dirty mufflers can reduce the rate that air is exhausted through them resulting in decreased cycle time.



## MAJOR FLAP FOLDERS



**Proper Retracted Position**

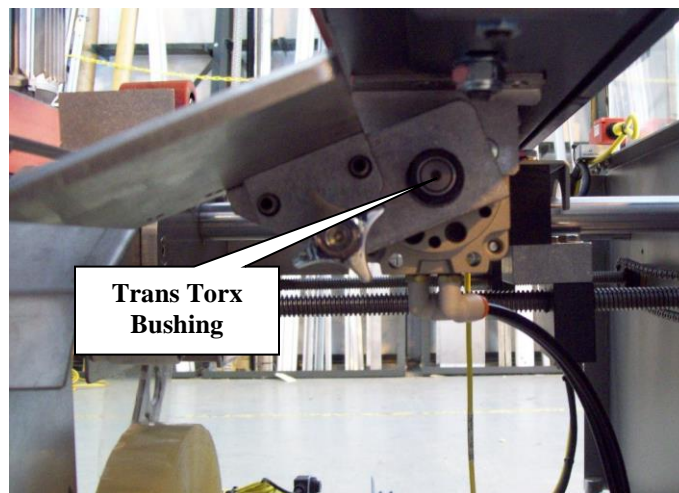


**Proper Extended Position**

When checking for proper position of the Major Flap Folders when fully retracted they should be positioned about 20deg past 90deg.

When fully extending they should be about 20deg shy of 90deg with the intent of folding the Major Flaps just high enough that the major flaps do not “pinch” on leading minor flap folder and can cleanly transfer onto the Lead-In Plate prior to the Tape Head.

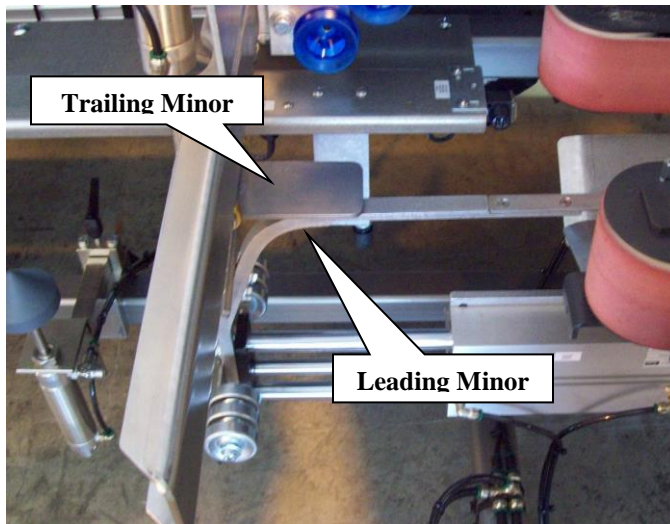
**NOTE: Folding the Major Flaps to high will cause them to be pinched against the Leading Minor Flap Folder which will cause the case to skew.**



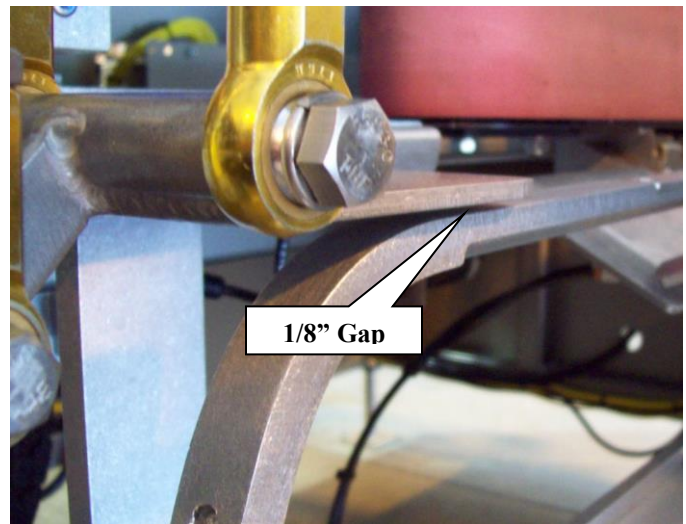
**Flap Folder Adjustment Device**

To adjust the position of the Major Flap Folder, loosen the Trans Torx Bushing (shown above) and position the flap to the position shown in the Proper Position photos above and then tighten the Trans Torx Bushing insuring that the position of the 2 folders are positioned equally.

**LEADING / TRAILING MINOR FLAP FOLDERS RELATIONSHIP**

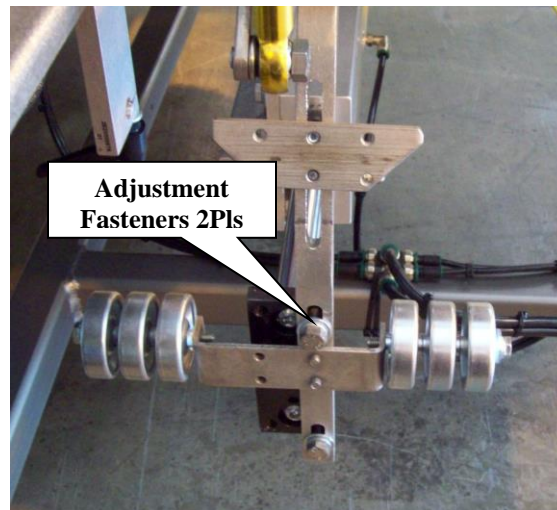


**Leading and Trailing Minor Flap Folders**



**Proper Position**

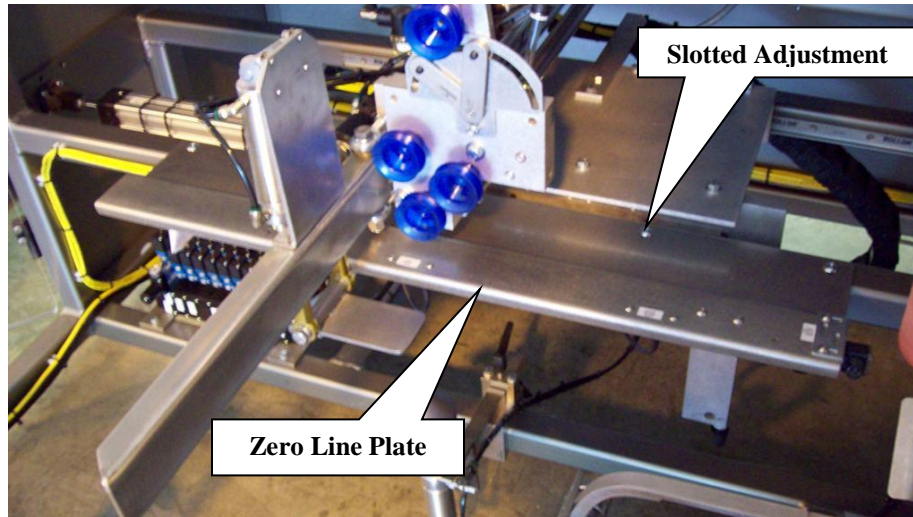
To verify the relationship between the Leading & Trailing Minor Flaps extend both the Carriage and Leading Minor Flap assemblies. When properly adjusted the Trailing Minor Flap should be positioned about 1/16" above the Leading Minor Folder as shown above.



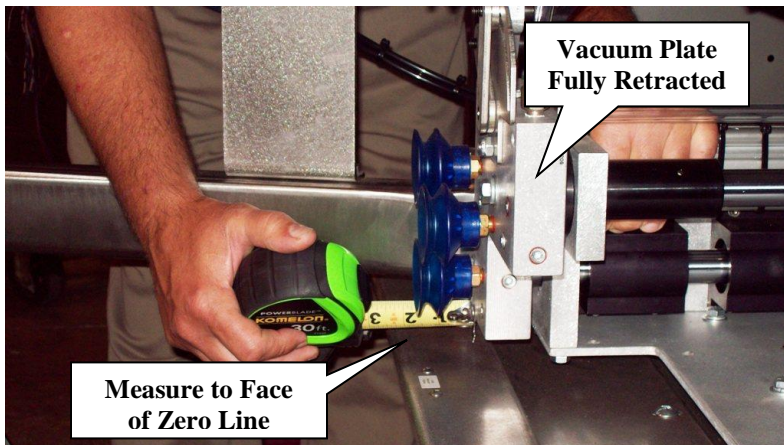
**Adjustment Location**

Should adjustment become necessary loosen the two fasteners shown above and adjust to the correct position.

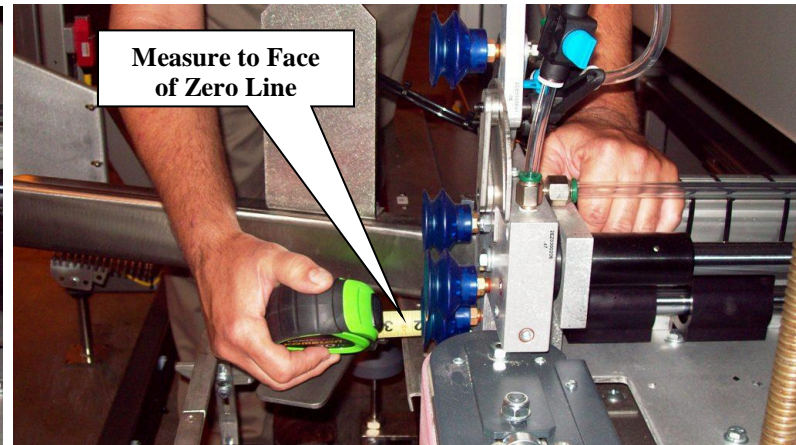
**ZERO LINE TO VACCUM PLATE RELATIONSHIP**



**Zero Line**



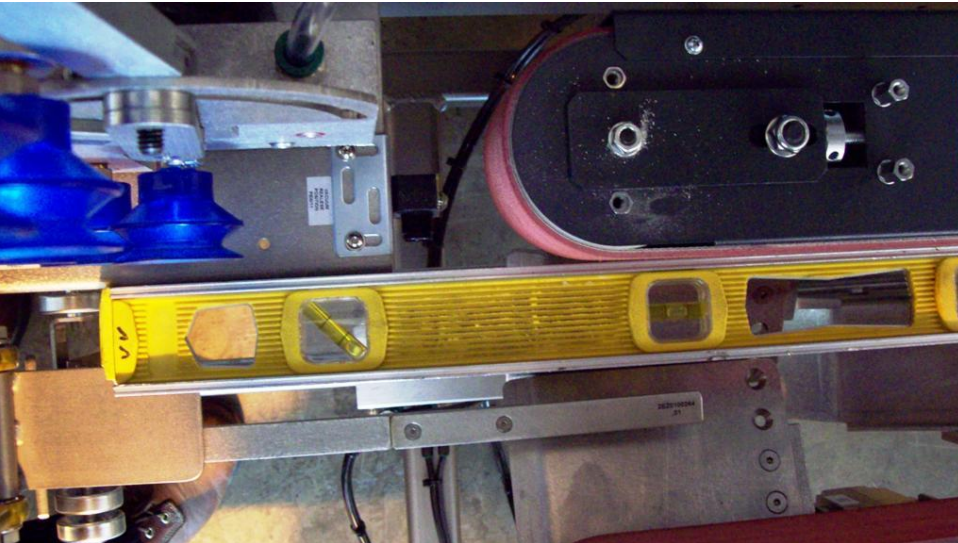
**Slider Fully Retracted**



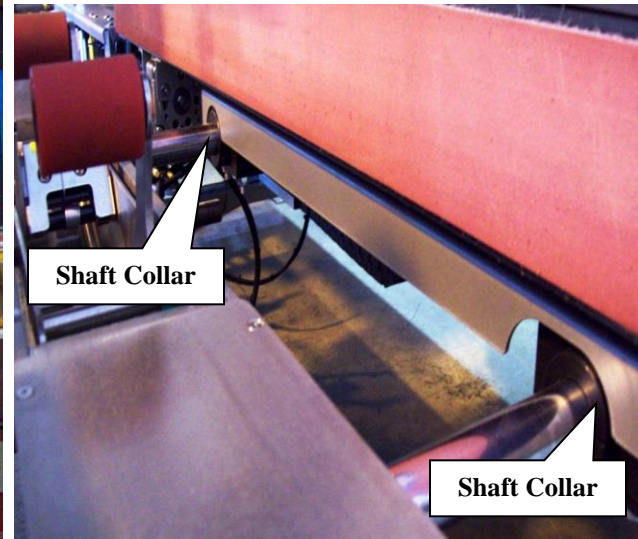
**Slider Fully Extended**

To verify the relationship between the Vacuum Plate and the Zero Line you will begin by Fully Retracting the Vacuum Plate Cylinder in addition to the Slider (carriage) Cylinder. At this point you will take a measurement from the face of the Vacuum Plate to the face of the Zero Line Plate. Now Fully Extend the Slider Cylinder and repeat the measurement, if measurements are not equal adjust by loosening the fastening hardware at the Slotted Adjustment in the Zero Line Plate and adjust until the measurements are equal.

**ZERO LINE TO DRIVE RELATIONSHIP**



**Proper Zero Line to Drive Relationship**

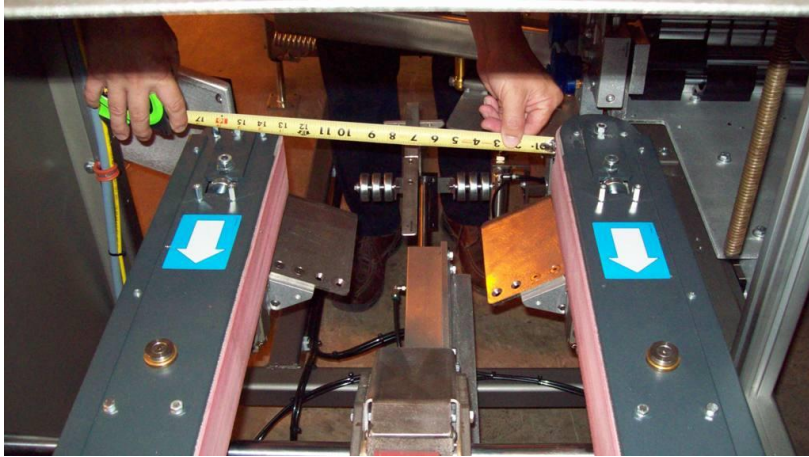


**Locking Shaft Collars Adjustment**

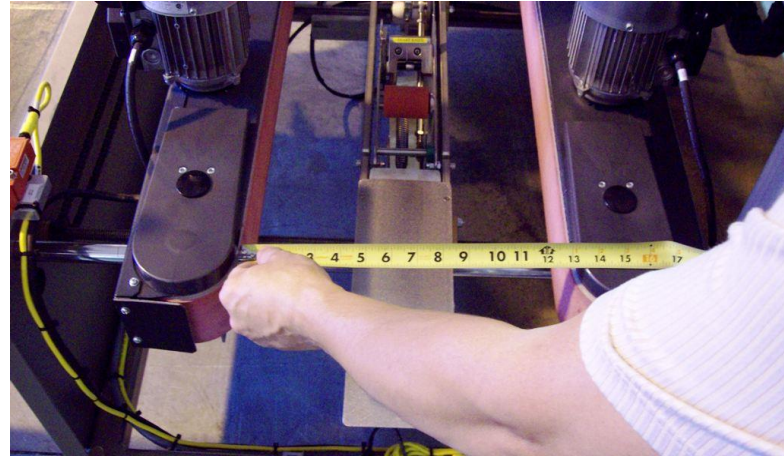
To verify the relationship between the Zero Line to the Drive Belt place a Straight Edge against the face of them as shown above. Proper adjustment is indicated by the 2 components forming a straight line between them. If adjustment is needed you must first check to verify that the relationship between the Vacuum Plate and Zero Line are correct and if so you can adjust the Fixed Drive by loosening the 2 Shaft Collars adjusting the Belt Drive to the proper position.

**NOTE: Whenever this adjustment is performed you must also verify that the Belt Drives are “Parallel” to each other as described below.**

**DRIVE BELT PARALLELISM**



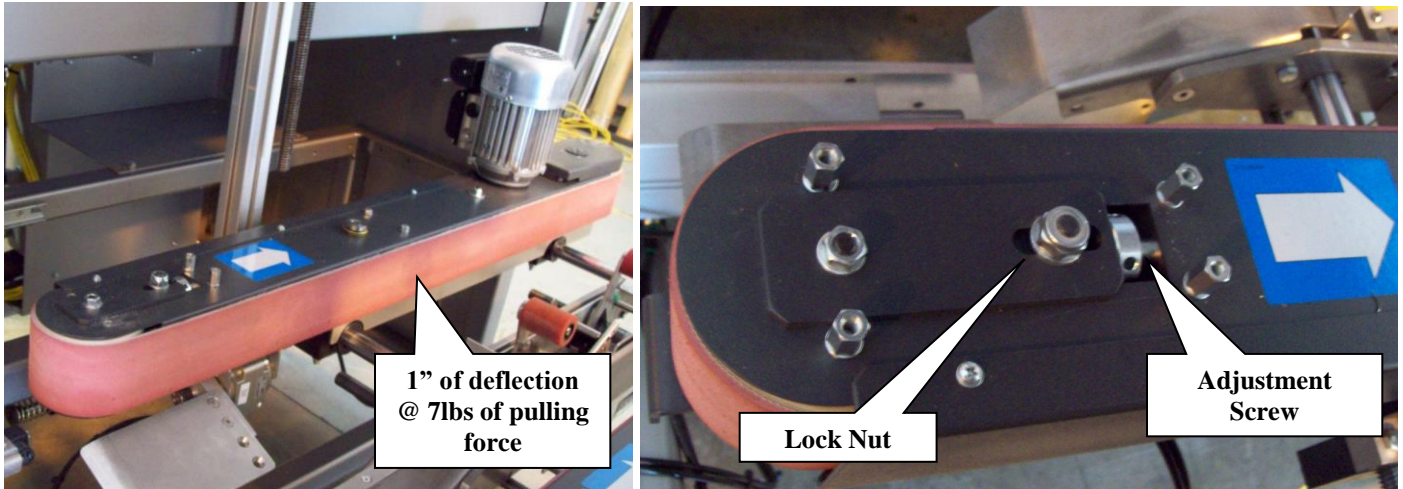
**Drive In-Feed Measurement**



**Drive Discharge Measurement**

To verify that the Belt Drives are parallel to each other, simply take a measurement at both the In-Feed and Discharge end of the Belt Drives. At no point should the In-Feed end be smaller than the Discharge end but it is permissible for the In-Feed end to be slightly wider (1/4" max.) than the Discharge end. If adjustment is required make the adjustment at the 2 Locking Shaft Collars on the Fixed Drive Belt as described on the previous page.

**DRIVE BELT TENSION ASSEMBLY**



To adjust belt tension loosen the Lock Nuts at both the top and bottom of the drive. Lengthen or shorten the Adjustment Nuts equally to obtain the proper belt tension (1" deflection @ 7lbs of pull at center point of drive).

## COMBI PACKAGING EQUIPMENT SAFETY RECOMMENDATIONS

Equipment	Potential Hazards	Recommended Action Or Procedure
Case Erector	Injury to hands, arms and fingers. Paper cuts. Electrical shock.	<ul style="list-style-type: none"> <li>• To clear jams or rethread tape, E-Stop machine and follow your Lock Out Tag Out procedures</li> <li>• Never put hands in moving machinery.</li> <li>• Use <b>caution</b> at all times.</li> <li>• Equipment starts and stops automatically.</li> <li>• Keep hands clear of moving parts at all times.</li> <li>• Never “REACH” into machine when equipment is running.</li> <li>• Only operate equipment from front of machine (where operator panel is located).</li> <li>• When doing changeovers, be sure machine is “E”-Stopped and Locked-out.</li> <li>• If servicing electrical panel, be sure it is Locked-Out.</li> <li>• <b>Never override Safety Devices</b></li> </ul>
Tape Sealer	Cut fingers and bruises. <b>Note: This machine has very sharp blades!</b>	<ul style="list-style-type: none"> <li>• To clear jams or rethread tape, E-Stop machine and follow your Lock Out Tag Out procedures.</li> <li>• Take extra caution around Taper Blades.</li> <li>• Never put fingers too close to sharp edges.</li> <li>• Keep hands clear of moving parts at all times.</li> <li>• <b>Never override Safety Photo Eyes and Reflectors.</b></li> </ul>

It is suggested that anyone who operates or works around packaging machinery be equipped with earplugs to prevent hearing loss. If equipment reaches decibel levels of 85 or more, it should be mandatory.

# **WARNING!**

**DO NOT USE SILICONE BASED GREASE OR SPRAY LUBRICANTS. DOING SO WILL CAUSE THE COMPOSITE BUSHINGS TO FAIL AND VOID YOUR WARRANTY. ONLY PETROLEUM LUBRICANTS ARE RECOMMENDED.**

# **WARNING!**

**DO NOT ALTER OR DISMANTLE MACHINE PARTS. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY MODIFICATIONS TO THE EQUIPMENT PARTS AND ANY MODIFICATIONS TO MACHINE PARTS WILL VOID THE MANUFACTURER'S WARRANTY. WARRANTY DOES NOT COVER PARTS THAT HAVE BEEN INSTALLED IMPROPERLY, ABUSED, MISUSED, NEGLECTED, ACCORDING TO PLANNED MAINTENANCE PROCEDURES, SERVICED BY NON-COMBI EMPLOYEES, USED FOR PURPOSES OTHER THAN ORIGINALLY DESIGNED FOR, AND/OR DAMAGED DUE TO USING ACCESSORIES SUPPLIED BY COMPANY OTHER THAN COMBI PACKAGING SYSTEMS LLC.**



# **WARNING!**

If applicable, wash-down units must adhere to the following precautionary measures prior to cleaning to avoid possible electrical shock or water damage to components:

- 1 Remove tape head(s)
- 2 Cover touch screens
- 3 Cover all motors and any electrical items that may not be labeled as a 'wash-down' item

Follow your company's Lock-out/Tag-out procedures. A sample procedure is described at the end of this section.

COMBI PACKAGING SYSTEMS, LLC can not be responsible for damages caused by the lack adherence to the precautionary measures listed above.

