

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, 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 tapehead(s)
- 2 Cover vacuum pumps
- 3 Cover 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 equipment. Additional Lock-out/Tag-out procedures are located 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.

TBS100FC CASE SEALER PLANNED MAINTENANCE SCHEDULE

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

1. 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 daily. See 3M Accuglide II or other taper component manual located in Section Five for maintenance procedures.

EXERCISE GREAT CAUTION WHEN CLEANING OR REPLACING BLADE(S)!

2. See Nordson or component manual for Hot Melt procedures (if applicable).
3. Check for loose belts on belt drive. See belt tensioning procedures in Section Two of this manual.
4. Remove excessive corrugate dust using a rag or low pressure air gun.

40 PRODUCTION HOURS

1. To avoid excessive wear on belts, visually inspect the end guard plates at discharge end of belt drives, (if applicable to your system) and make sure there is at least an 1/8" gap between end guard plate and belt. If not, reposition end guard plate so there is a 1/8" gap. See troubleshooting photos and instructions located in Section Two of this manual.
2. Inspect all airlines for cracks or kinks regularly. Replace as necessary.
3. Clean off Photo Eyes and Reflectors regularly. **WARNING! DO NOT CLEAN SENSORS UNLESS MACHINE IS "E"-STOPPED.**
4. Wipe clean and lightly lubricate with 10W oil all bearing shafts and acme threads located at each adjustment point.

TBS100FC CASE SEALER PLANNED MAINTENANCE SCHEDULE

80 PRODUCTION HOURS

1. Drive belts should be checked every 80 production hours and adjusted if necessary. To adjust tension, tension both the top and bottom equally to keep pulleys square. See Section Two “Drive Belt Adjustment” instructions.
2. Complete a visual inspection of each machine every 80-production hours looking for:
 - a. Broken or damage parts. Repair or replace immediately or at first available opportunity depending on severity. Please note that not replacing these parts may lead to failures in other areas.
 - b. Safety doors and guarding adequately in place. If not, then repair or replace or secure immediately.
3. Check mufflers on individual solenoid valves every 80-production hours. Replace if dirty. See photo and description located in Section Two of this manual.
4. All chains and chain drive assemblies should be inspected every 80 hours for correct chain tension and possible signs of wear. Replace as necessary.
5. Perform items listed on the **40 Production Hours Schedule**.

160 PRODUCTION HOURS

1. Check for loose bolts every 160production hours, and if found, apply loctite thread adhesive and retighten.
2. Look for signs of wear on parts every 160 production hours. Replace as necessary.
3. Loose electrical connections at safety switches, photo eyes, proximity switches and terminal connections in the main panel.
4. Perform items listed on the **40 & 80 Production Hours Schedule**.

TAPER TROUBLE SHOOTING

CAUTION: PLEASE TAKE GREAT CAUTION WHEN CLEANING OR REPLACING BLADES. THEY ARE EXTREMELY SHARP.

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

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
<p>Sealer 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.</p> <p>Emergency Stop Buttons reset. All safety doors closed.</p> <p>Turn on main disconnect. Check “on” switch.</p> <p>Check power source inside enclosure; check power cord, check disconnect.</p> <p>Fuse: replace with proper rated fuse.</p> <p>Transformer: check for 120V on output.</p> <p>Check/reset motor overloads.</p> <p>Loose wiring: tighten at terminals and fuse posts.</p> <p>Check for proper voltage at motor leads. Check for proper rotation.</p>

TAPER TROUBLESHOOTING CONTINUED

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
Motors function but Flap Kicker will not actuate	<p>Air pressure is off or inadequate.</p> <p>Soft Start set too tight.</p> <p>Valve or Output is faulty.</p>	<p>Check air at source. Regulator is on and set to proper pressure (80 – 100 psi).</p> <p>Shut Off Valve fully open.</p> <p>Repair/replace main air valve.</p> <p>Check Cylinder for binding or jamming</p> <p>Open Soft Start Valve.</p> <p>Check for voltage from PLC to Valve</p> <p>Replace solenoid valve or coil if manual override does not function.</p>
Case does not seal	<p>Tape supply is out.</p> <p>Tape is bound or not moving freely.</p>	<p>Replace tape roll.</p> <p>Rethread tape, check that all rollers are moving freely. (Reference tape head manual for further information).</p>
Tape does not cut	<p>Blades are dull.</p> <p>Rack assembly set too high</p>	<p>Check carefully and replace blades.</p> <p>Adjust to case height</p>

TAPER TROUBLESHOOTING CONTINUED

SYMPTOMS	POSSIBLE ANSWERS	TO CORRECT
Trouble with tapehead/hot melt unit	Reference tapehead or hot melt manuals for specific adjustments and trouble shooting.	Follow instructions in tape head manual or hot melt manual.
Cases are not square	Check belt tension.	Adjust belt tension per manufacturers' instructions.
Belt slipping	Check pulleys for excessive wear Check belt tension	Replace as necessary. Adjust belt tension per manufacturer's instructions

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

CAUTION: IF A CASE IS JAMMED IN THE MACHINE, THE AIR PRESSURE IS STILL ON! ALWAYS SHUT OFF THE MACHINE TO CLEAR A JAM AND PREVENT POSSIBLE INJURY.

COMBI PACKAGING SYSTEMS EQUIPMENT SAFETY

Sequence of Basic Job Steps	Potential Hazards	Recommended Action Or Procedure
Tape Sealer	Cut fingers and bruises. Note: This machine has very sharp blades!	<ul style="list-style-type: none"> • To clear jams or rethread, E-stop machine and follow your company's lockout/tagout procedures. • Take extra caution around Taper Blades. • Never put fingers too close to sharp edges. • Keep hands clear of moving parts at all times. • Never override Door Safety Switches. • Never remove guarding or run Taper without guarding.

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.

BELT TENSIONING PROCEDURE

Follow these steps to ensure correct belt tension on your new belts:

1. Loosen large nylock nuts on top and bottom of drive that the slotted plates ride in. This will allow the plates to slide back and forth freely.

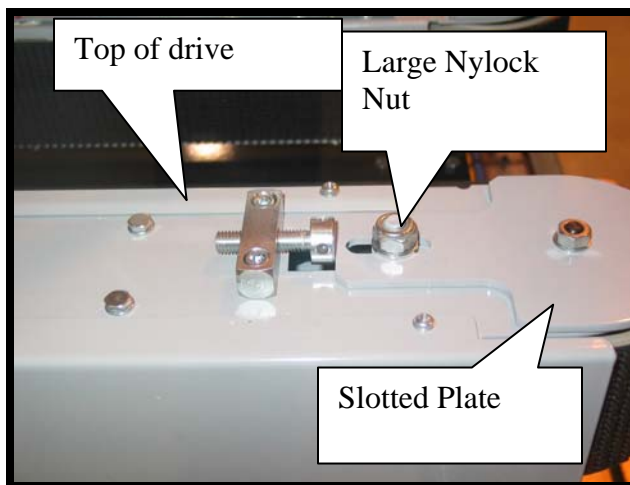


Figure 1 – Belt Tension Nylock.

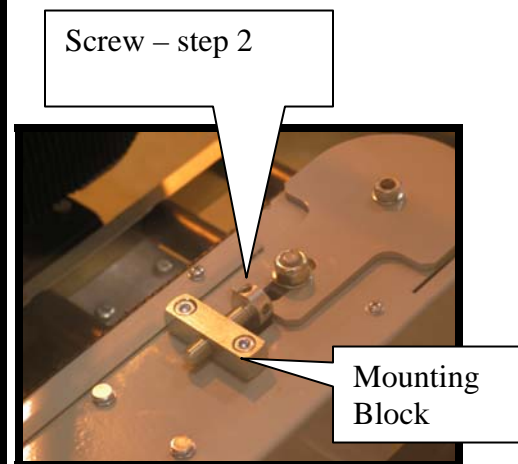


Figure 2 – Belt Tension Screw

2. Begin by adjusting the top of the drive first. Insert a tool to turn screw out (see figure two). Adjust the screw until the belt takes 7 lbs to pull the center of the belt 1” away from the rollers. Once achieved, tighten the top nylock nut.
3. Measure the distance from the bottom of the round head of the adjustment screw to the top of the mounting block. Adjust the bottom to the same distance. This will ensure that the pulley is straight. Once the dimensions are the same on the top and bottom, tighten the lower nylock nut to hold the pulley in position.
4. Repeat for other drive.

NOTE: New belts will stretch the most during the first 24-48 hours of operation and need to be observed carefully. If the belt has too much slack, complete steps 1-3 in order to re-tension. Continue to check belt tension daily as part of your planned maintenance schedule.

NOTE: If you cannot properly adjust the bottom screw, you can remove the two bolts that mount the entire drive and lift the drive up to perform procedure.

TROUBLE SHOOTING

Avoid excessive wear on belts

To avoid excessive wear on belts, visually inspect the end guard plate at discharge end of belt drive (if applicable to your system) and make sure there is at least an 1/8" gap between end guard plate and belt.

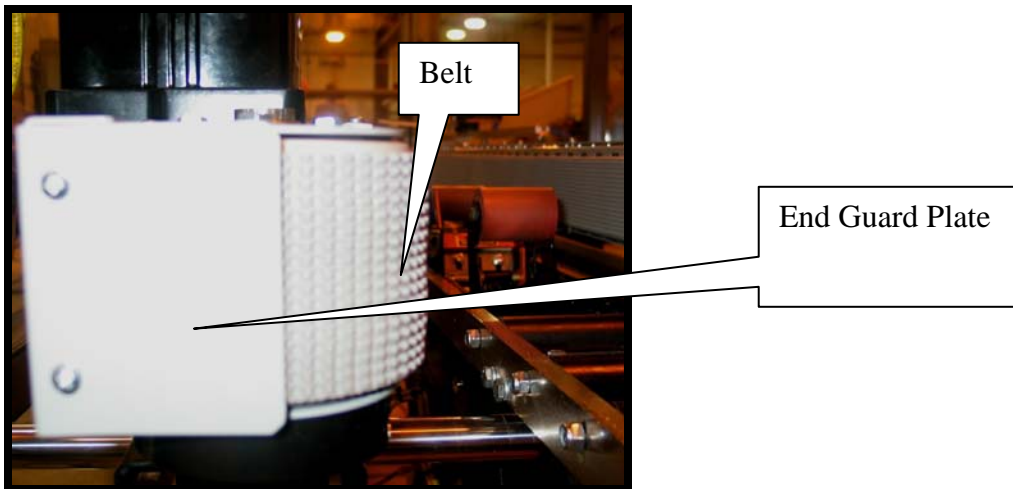


Figure 3 – Belt Drive End Guard

End Guard Plate located at discharge end of discharge belt drive

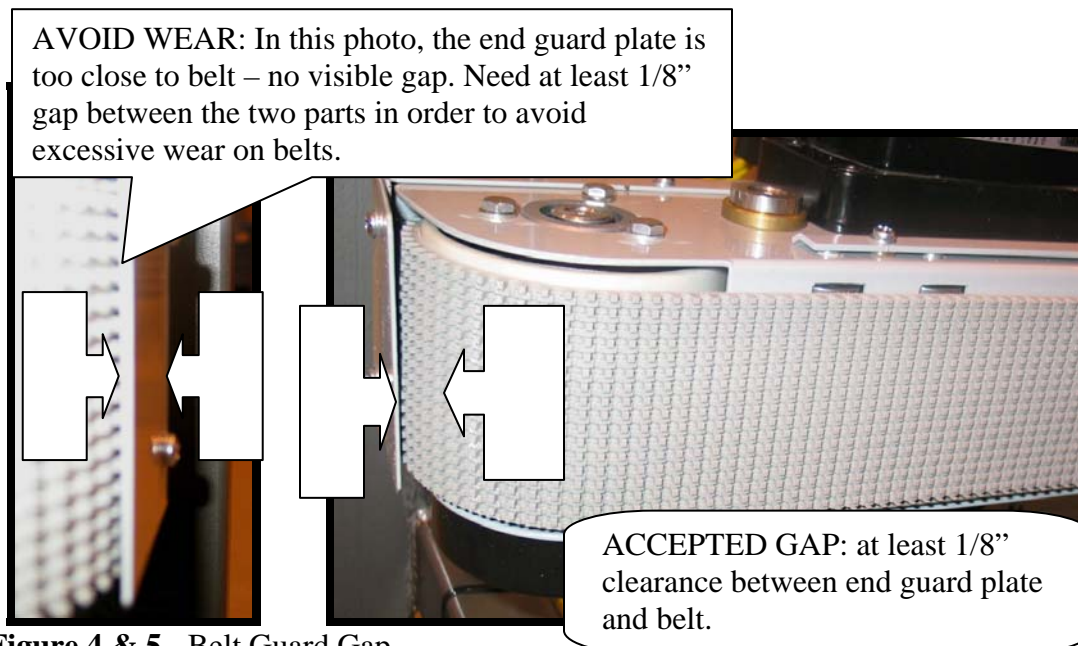


Figure 4 & 5 - Belt Guard Gap

Flow Valves / Mufflers

Check mufflers every 80 production hours. Replace if they become dirty. Dirty mufflers can cause air to flow through at a slower rate resulting in decreased cycle time.

To prevent premature wear of air cylinders and associated components, adjust Flow Valves to obtain smooth extend and retract movements of the Air Cylinder. Turning the flow valve clockwise will decrease the speed and counter clockwise will increase the speed of movement. **Note:** Once adjustments are made be sure to tighten jam nuts.



Flow Valve /
Mufflers

Figure 6 – Flow Valve Muffler

Lock Out / Tag Out Procedure

