



Count-Wise IntelCount Manual

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COUNT-WISE INTELECOUNT

COUNT-WISE INTELECOUNT

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Section #1:

WARRANTY

Must be returned within 10 Days after receipt of machine or warranty can be disputed.

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Section #2:

INSTALLATION INSTRUCTIONS

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COUNT-WISE I SHEET COUNTER

1. Remove carton containing mounting bolts, jogging plates, table supports, insert tape, breathers (wood inserts), power cord, receptacle guard, bag of hardware and manual.
2. Place machine on workstation, or optional base cabinet.

WARNING: PROPER ASSEMBLY OF COUNTER IS ESSENTIAL TO ELIMINATE TIPPING OF THE MACHINE.

3. Remove hex head screws from left and right sides of front panel and install table support brackets using same screws.
4. Place table onto brackets and into the “throat” of the counter.
5. Place the small silver hex-bolt through the table at the “point” nearest the throat of the counter. Tighten the bolt so that the table is approximately 1/32” above the table flap.
6. Install the remaining two (2) long silver hex-bolts through the table and the brackets. You may have to move the brackets into position so they support the table.
7. Open back panel access door.
8. Remove all packing material from interior of machine. This includes:
A) cardboard under counting head; **B)** two rubber bands holding tape cover closed and counting head down; and **C)** white plastic wire ties holding counting head down
9. Install receptacle guard to rear of machine (Refer to Image #1, Page 9).
10. Remove shipping bands from the counting head. Plug power cord securely into the socket located on the rear panel. **MUST BE INSERTED FIRMLY.**

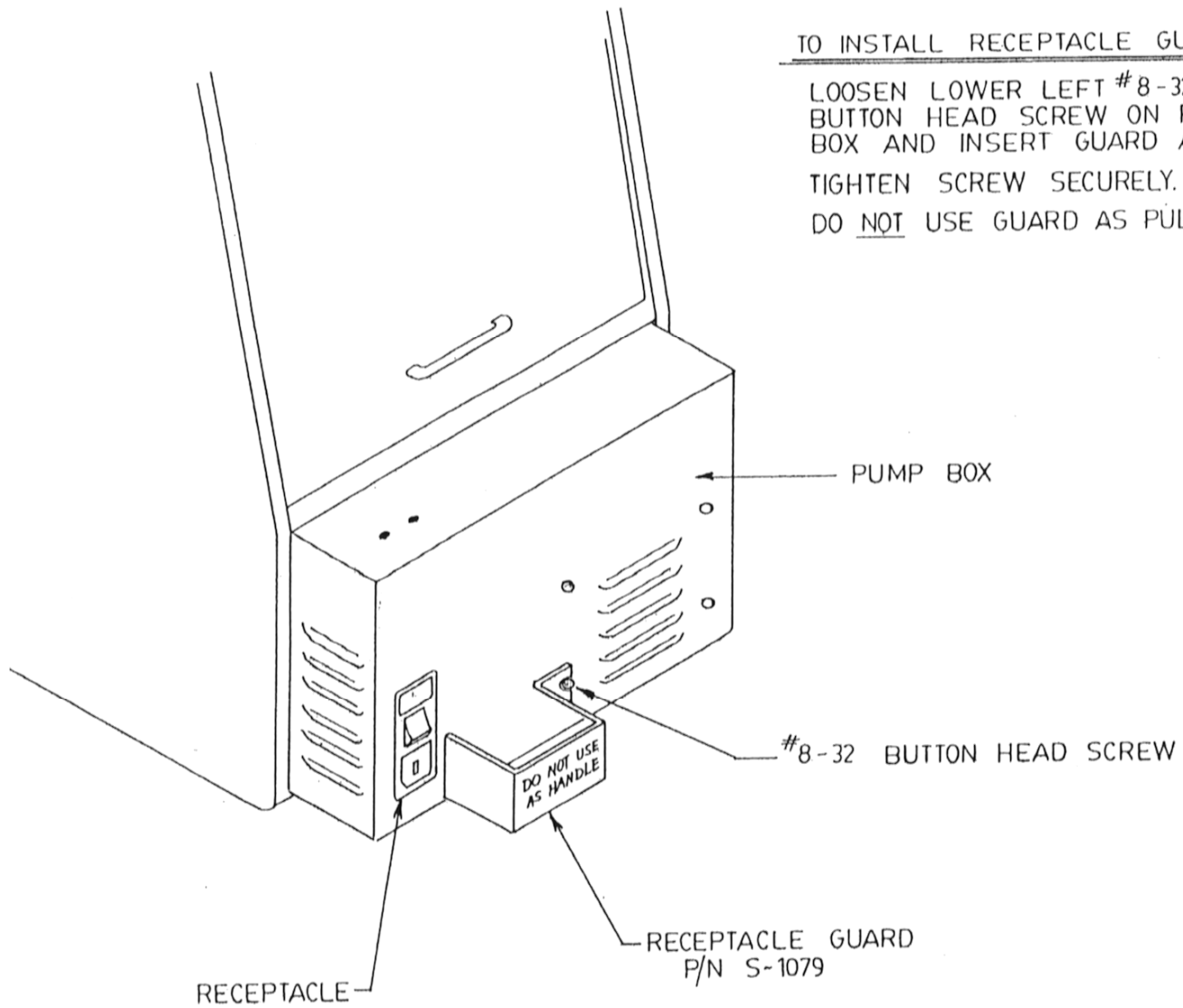
NOTE: REAR BACK PANEL MUST BE CLOSED FOR MACHINE TO OPERATE.

COUNT-WISE INTELECOUNT

(Image #1 RECEPTACLE GUARD)

TO INSTALL RECEPTACLE GUARD

LOOSEN LOWER LEFT #8-32
BUTTON HEAD SCREW ON PUMP
BOX AND INSERT GUARD AS SHOWN.
TIGHTEN SCREW SECURELY.
DO NOT USE GUARD AS PULL HANDLE.



COUNT-WISE INTELECOUNT

COUNT-WISE M SHEET COUNTER (Image #2, Page 11)

1. Remove carton containing mounting bolts, jogging plates, table supports, insert tape, breathers (wood inserts), power cord, receptacle guard, bag of hardware and manual.
2. Open wings on the cabinet until each wing wedges into its corner of the cabinet.
3. Lift counter and place it into the cups on the base cabinet. Slide the counter all the way forward into the wings.
4. Place table onto the wings and into the "throat" of the counter.
5. Place the small silver hex-bolt through the table at the "point" nearest the throat of the counter. Tighten the bolt so that the table is approximately 1/32" above the table flap.
6. Install the remaining four (4) long silver hex-bolts through the table and the wings. You may have to move the wings into position so they support the table.
7. Install the two (2) jogging plates (available on Count-Wise M only) insuring the plates are parallel with the throat of the machine.
8. Open back panel access door.
9. Remove all packing material from interior of machine. This includes: **A)** cardboard under counting head; **B)** two rubber bands holding tape cover closed and counting head down; and **C)** white plastic wire ties holding counting head down.
10. Install receptacle guard to rear of machine (Refer to Image #1, Page 9).
11. Remove shipping bands from the counting head. Plug power cord securely into the socket located on the rear panel. **MUST BE INSERTED FIRMLY.**

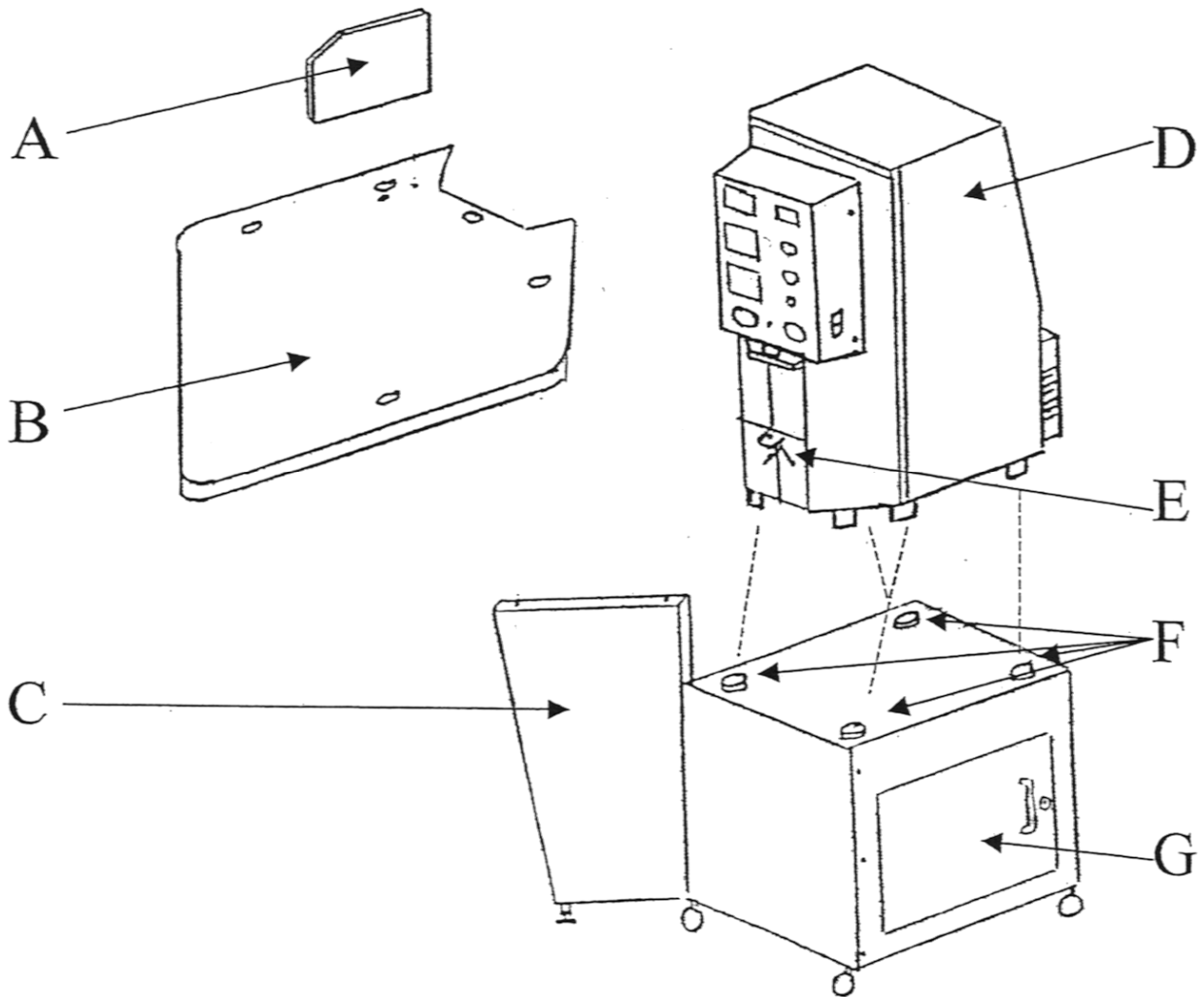
AIR FLOTATION SYSTEM

1. Connect the plug coming out of the top of the case to the receptacle coming out of the bottom of the machine.
2. Install the hose connector to the underside of the table. Connect the hose coming from the base cabinet to this connector and tighten.

NOTE: REAR BACK PANEL MUST BE CLOSED FOR MACHINE TO OPERATE.

COUNT-WISE INTELECOUNT

(Image #2 – COUNT-WISE M)



A. Jogging Plate	E. Table Mounting Bolt
B. Table	F. Bumper Cups
C. Table Support	G. Base Cabinet w/ Locking Storage Compartment
D. Side Panel	

COUNT-WISE INTELECOUNT

Section #3:
Technical Details

COUNT-WISE INTELECOUNT

COUNT-WISE 1, M & BANTAM TECHNICAL DETAILS

<u>DIMENSIONS</u>	<u>COUNT-WISE 1</u>	<u>COUNT-WISE M</u>	<u>MAX-BANTAM</u>
Weight :	185 lbs / 84 kg	275 lbs / 125 kg	160 lbs / 72 kg
Height:	30" / 75cm	55" / 138cm	28" / 70cm
Width:	38" / 95cm	42" / 105cm	18" / 45cm
Depth:	54" / 135cm	56" / 140cm	36" / 90cm
*Stack Size:	8" / 20cm	8" / 20cm	6" / 15cm
Table Dimensions:	27" X 27"	32" X 32"	15" X 18"
	68cm X 68cm	80cm X 80cm	38cm X 45cm
	(unless special order)		

SHEET SIZE:

Minimum:	2 ¼" x 5"	2 ¼" x 5"	2 ¼" x 5"
	5.5cm x 13cm	5.5cm x 13cm	5.5cm x 13cm
	Smaller sheets can be counted using optional coupon tray (2 ¼" x 2 ¾") (57mm x 70mm)		
Maximum:	Limited only by size of table selected.		

***PAPER RANGE:** 20 up to 250 G/M²
 20 lb Book up to .010 Stock
 4 lb Bond up to .010 Stock

SUCTION BLADE GUIDE FOR RANGE OF PAPER TO BE COUNTED

(Choice of 2 with the purchase of any of these three counters.)

<u>Blade #70:</u>	30 – 75 G/M ² 20 – 50 lbs Books 8 – 20 lbs Bond	<u>Blade #71:</u>	50 – 90 G/M ² 33 – 60 lbs Book 13 – 24 lbs Bond
<u>Blade #72:</u>	75 – 110 G/M ² 50 – 73 lbs Book 20 – 30 lbs Bond	<u>Blade #73:</u>	110 – 220 G/M ² 73 – 113 lbs Book 29 – 45 lbs Bond
<u>Blade #74:</u>	20 – 30 G/M ² Tissue thru onion skin	<u>*Blade #75:</u>	110 up to 250 G/M ² 006" up to .010

COUNTING SPEED: CW-1 & M: Variable up to 2500 sheets per minute according to texture of paper.
 Bantam: Variable up to 2000 sheets per minute according to texture of paper.

***TAB INSERTION:** CW-1 & M: 3 TO 9999 Bantam: 5 TO 999

ELECTRICAL: 120v AC 60 Cycle, 15 Amps or 230V AC 15 Amps @50/60 Hz
(If you cannot maintain a steady power source, please call us to purchase an optional line conditioner to insure accuracy.)

CE: Standards to which conformity is declared: CW-1 & M: EN 55022 Class A, EN 55024:1998 & EN 60950 (1992).
 BANTAM: EN 55011, EN 50082-1 & EN 60204-1.

***NOTE: DEPENDING UPON THE PAPER TO BE COUNTED, BREATHERS (WOOD INSERTS) MAY BE NECESSARY ON THE CW-1 OR CW-M (SEE PAGES 38 & 39). STACK SIZE AND COUNTING ABILITY MAY VARY DUE TO THE SUBSTANCE AND TEXTURE OF THE PAPER BEING COUNTED AND THE TABBING RANGE SELECTED. A CURL OF THE CORNER COUNTED IS TO BE EXPECTED DUE TO THE MECHANICAL OPERATION THAT SEPARATES THE SHEETS.**

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Section #4:

Operation Instructions

COUNT-WISE INTELECOUNT

Basic Operating Instructions

1. Counting head should be equipped with a suction blade suitable for the paper. Suction blade chart located on Page 14.
2. Activate main switch at rear of machine to "ON" position.
3. Be sure to set the desired batch amount and if tabbing is required the tabbing function is turned on from the "Main Menu"

CAUTION: When tabbing in low numbers or counting thin paper, stack, height and speed of counting may be reduced considerably (refer to main manual for more information). Check that reset on-off and tape lengths are set correctly for the desired results as well.

4. Load paper on table, insert breathers (wood inserts) if necessary and then place firmly in throat of machine to insure a proper jog.
5. Press start switch.
6. At completion of count, clamp will release. Remove paper; counters will reset automatically.
7. Wait for counting head to lower and wiper pin resets to its home position. Once completed repeat steps 4-7.

IMPORTANT

- A. According to the height of the paper to be counted, breathers (wood inserts) may be necessary.
- B. Stack size, counting speed and ability may vary due to the substance and texture of the paper being counted and the tabbing range selected.
- C. A slight curl of the corner counted is normal. The thickness of the stock determines the amount of curl.

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Main Screen Operation instructions

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COUNT-WISE INTELECOUNT

Setting Batch Amount(s):

Image #3

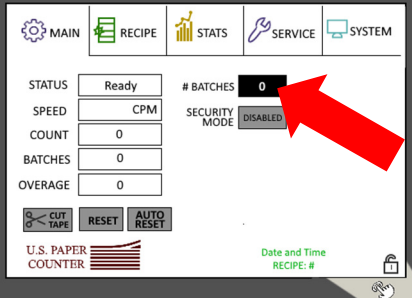
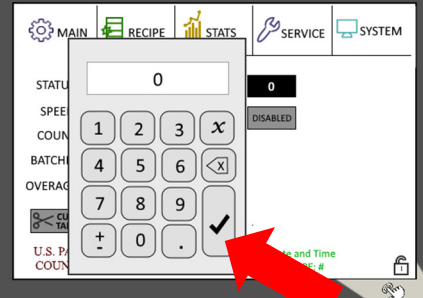


Image #4



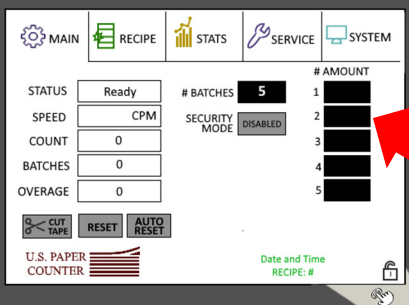
1. Click the black box located next to the section labeled “# BATCHES” (refer to image #3)
2. A keypad will pop up.
3. Using the keypad, type in the desired number of batches; you can have as many as 50 different batches.

NOTE: To have the stack tabbed in the same batch amount enter “1”

Or to turn off tabbing enter “0”.

4. Once entered press the check mark on the bottom right of the keypad (refer to image #4).
5. Boxes will appear; number of boxes depends on how many batches you require (refer to image #5 showing 5 batch amounts).
6. Enter in each box the desired batch amount (refer to step #5 for each batch).
7. Once all batch amounts are entered the machine is ready to tab.
8. Place the corner of a stack of paper into the opening of the machine.
9. Press the green start button located on the front of the machine to count the stack.

Image #5



COUNT-WISE INTELECOUNT

Tabbing Off:

1. Make sure the “# BATCHES” section is set to “0”.

Manual Reset and Auto Reset:

Manual Reset:

1. After counting press the “RESET” button to manually clear count, batches and overage sections (refer to image #6).

Automatic Reset:

1. To have the machine automatically reset your counts every time press the green start button, make sure the “AUTO RESET” button is pressed (refer to image #7).

Image #6

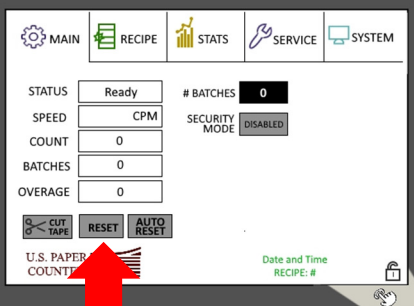
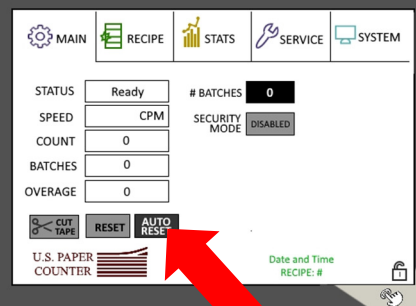


Image #7



COUNT-WISE INTELECOUNT

Security Mode:

When activated if the total number of sheets counted does not match the entered security amount, the clamp will not release.

NOTE: you must be logged-in to change anything in the security mode and to release the clamp.

Turn On Security mode:

1. Press the button labeled “DISABLED” (refer to image #8) to turn on the security mode.
2. Once turned on enter the security amount in the “SECURITY AMOUNT” box (refer to image #9).
3. Once amount is entered insert stack into the throat of the machine to count.
4. Press the green start button.
5. Once stack is counted and the security amount and total count match, the clamp will release.
6. When counts DON'T match, the clamp will stay locked down until the “RELEASE” button has been pressed (the button is located right below the “SECURITY AMOUNT”)

Turn Off Security mode:

1. Press the button labeled “ENABLED” to turn off the security mode.

Image #8

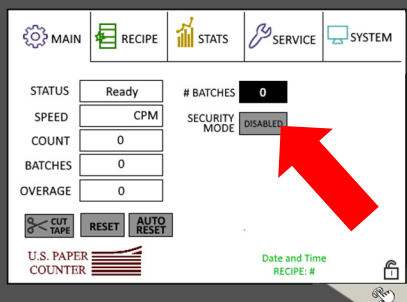
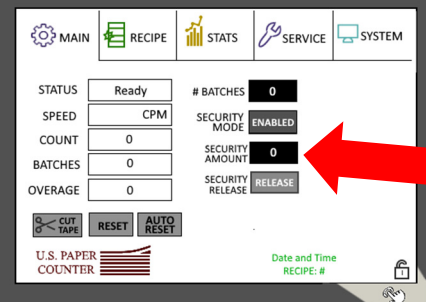


Image #9



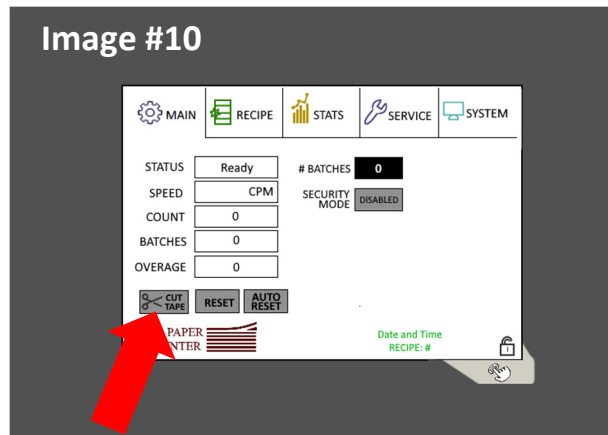
COUNT-WISE INTELECOUNT

Setting Tape length:

Tape length is set automatically, based on the speed of the machine.

Tape Cut:

After changing the rolls of tabbing tape or after working on the counting head, press the “CUT TAPE” button. (refer to image #10)



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User Log-In:

1. To log-in press the lock on the bottom right hand of the screen. (refer to image #11).
2. Log-in screen will appear.
3. Click on "OPERATOR" or "SUPERVISOR" (will be highlighted in orange).
4. Press the black box under "PASSWORD" (refer to image #12).
5. Keypad will appear enter in passcode (to change passwords refer to the sub "SYSTEM" tab under the "SYSTEM" the on Page #36).

Default Passwords

Operator: 1111

Supervisor: 9999

6. Press check mark when completed to return to the log-in screen.
7. Press "LOG-IN" to complete and return to the main screen.

NOTE: the lock on the bottom right of the screen will now appear unlocked.

Image #11

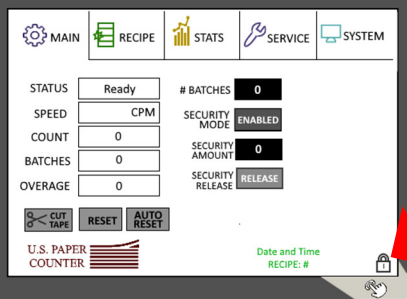
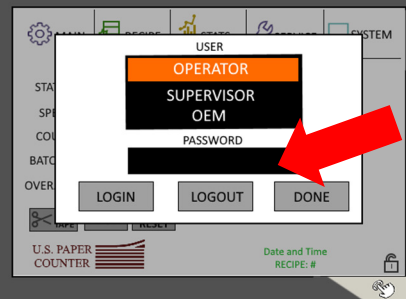


Image #12



Recipe operation instructions

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5. Import recipe files.....25

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Creating / Saving a Recipe:

1. On the “RECIPE” tab click on the button marked “NEW” (refer to image #13). You can save up to 25 different recipes.
2. A screen will appear to name the recipe.
3. To name the recipe click on the black box (refer to image #14).
4. A keyboard will appear to type in the desired name.
5. Once completed click on the check mark to return to the previous screen (refer to image #15).
6. Now click on the “NEW” button to save the recipe file name (refer to image #16).
7. Once the above steps are completed go to the main screen and create the recipe/ job you wish to save.
8. Once a recipe/ job is completely set up on the main screen return to the “RECIPE” tab.
9. Make sure the recipe file you want to save your recipe/ job under is highlighted orange.
10. Click the “SAVE” button located two buttons below the “NEW” button.

Image #13

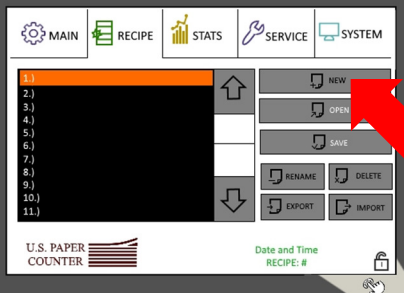


Image #14

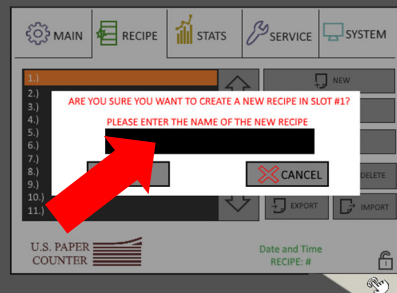
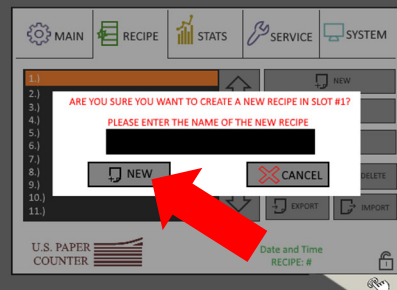


Image #15



Image #16



COUNT-WISE INTELECOUNT

Opening a Recipe:

1. Click on the recipe you wish to open (make sure it is highlighted orange).
2. Click on the “OPEN” button located on the right of the screen.

Deleting a Recipe:

1. Click on the recipe you wish to delete (make sure it is highlighted orange).
2. Click on the “DELETE” button located on the right of the screen.

Export file:

1. Insert USB drive into back of screen behind faceplate.
2. Click on “EXPORT” button.
3. A screen will appear. Click on the black box and enter the file number you wish to export
4. Once entered click on the “EXPORT” button located in the center of the pop up screen.

NOTE: to export all files click on “EXPORT ALL” button on the left of the pop up screen.

Import file:

1. Insert USB drive into back of screen behind faceplate.
2. Click on “IMPORT” button.
3. A screen will appear. Click on the black box and enter the file number you wish to import.
4. Once entered click on the “IMPORT” button located in the center of the pop up screen.

NOTE: to import all files click on “IMPORT ALL” button on the left of the pop up screen.

COUNT-WISE INTELECOUNT

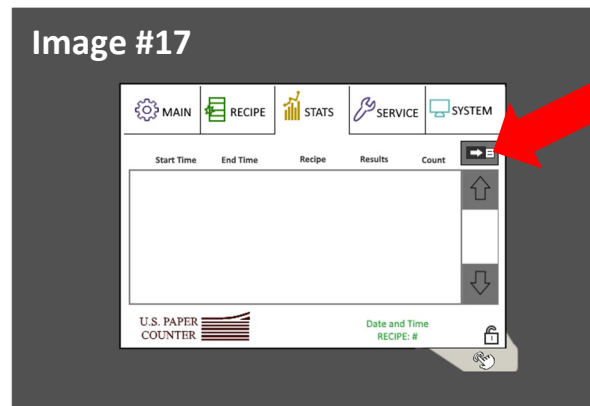
Stats Operation Instructions

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This screen shows you all jobs that have been performed on the machine (Date, Time, recipe (if applicable), count and also lets you know if the machine went through a stack currently or if an error occurred.

Export Stats:

1. Insert USB drive into back of screen behind faceplate.
2. Click on button on the top right of the screen that looks like a flash drive (refer to image #17).
3. A pop up screen will appear. Click on the “EXPORT” button to send data to your USB drive.



COUNT-WISE INTELECOUNT

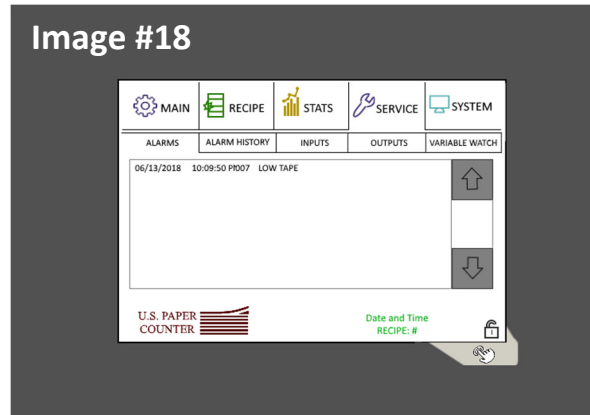
Service Operation Instructions

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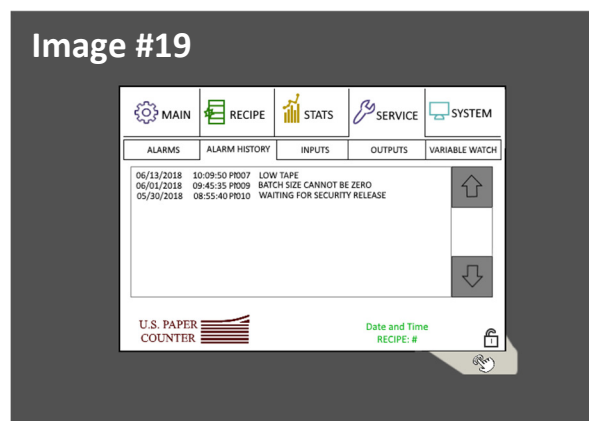
Alarms Tab:

Shows you all current errors on the machine with the date and time they appeared (refer to image #18).



Alarm History Tab:

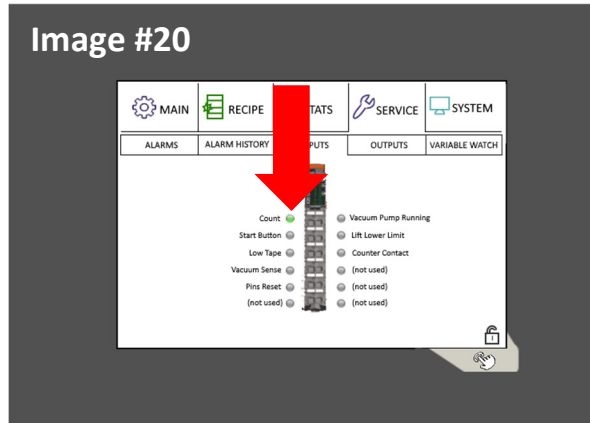
Shows you all alarms that have appeared in the last several days with date, times they occurred as well as the error description (refer to image #19).



COUNT-WISE INTELECOUNT

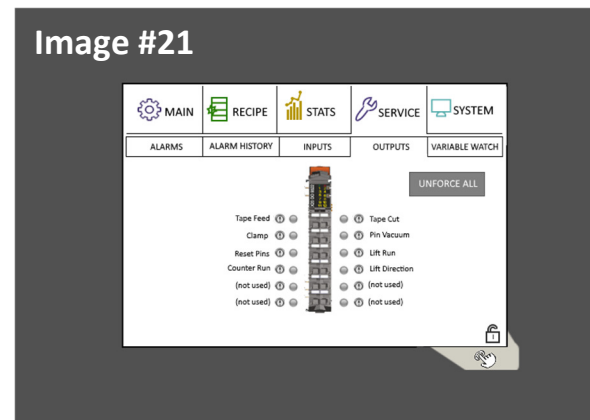
Inputs Tab:

Let you know what switches are activated. When light is green this indicates which switch is on (refer to image #20).



Outputs Tab:

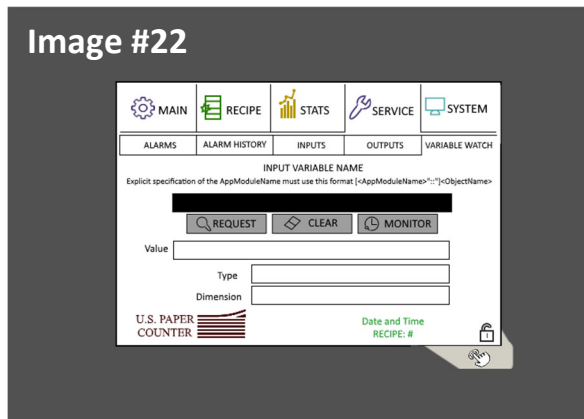
Let you know what switches are activated. When light is green this indicates which switch is on (refer to image #21).



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Variable Watch Tab:

Used for diagnostics of inputs and outputs. You must contact the U.S. Paper Counters Service department for assistance (refer to image #22).



Systems Operations Instructions

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COUNT-WISE INTELECOUNT

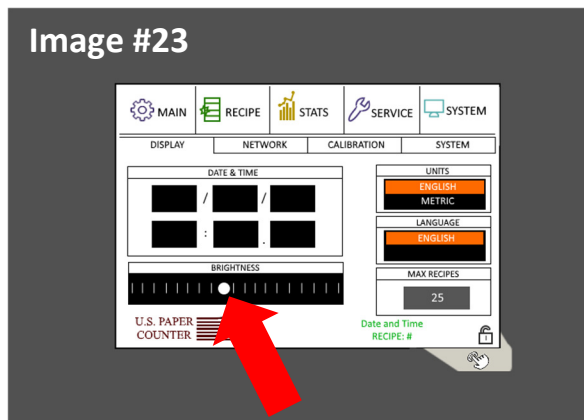
Display:

Update Date and time:

1. Click on the black box in the date and time section to change each date and time.
2. Date order is Month, Day and year.
3. Time order is Hour, Minute Seconds (Military time).

Adjust Brightness:

1. Slide the white circle under brightness (refer to image #23).
2. Slide to the left to dim the screen.
3. Slide to the right to brighten the screen.



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Change units:

1. Click on either English or Metric.
2. Make sure the option you chose is highlighted orange.

Language:

1. Click on either the language you prefer.
2. Make sure the option you chose is highlighted orange.

Max Recipes:

Determines the number of Recipes/ Jobs you can save. This section can only be changed by the OEM.

COUNT-WISE INTELECOUNT

Network: Must be logged in under supervision to change (refer to page #22 to log-in).
To reference the network screen refer to image #24 & #25.

Image #24

MAIN					RECIPE					STATS					SERVICE					SYSTEM																			
DISPLAY										NETWORK										CALIBRATION										SYSTEM									
MODE																				STATIC					INA NODE														
IP ADDRESS										192					168					10					14					2									
SUBNET MASK										255					255					255					0					SET									
GATEWAY										0					0					0					0					SET									
U.S. PAPER COUNTER																				Date and Time										RECIPE: #									

Image #25

MAIN					RECIPE					STATS					SERVICE					SYSTEM																			
DISPLAY										NETWORK										CALIBRATION										SYSTEM									
MODE																				STATIC					INA NODE														
IP ADDRESS										192					168					10					14					2									
SUBNET MASK										255					255					255					0					SET									
GATEWAY										0					0					0					0					SET									
U.S. PAPER COUNTER																				Date and Time										RECIPE: #									

Calibration:

This section can only be changed by logging in as the OEM.

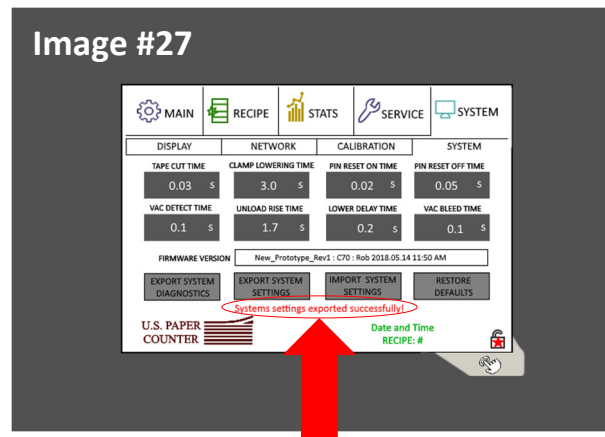
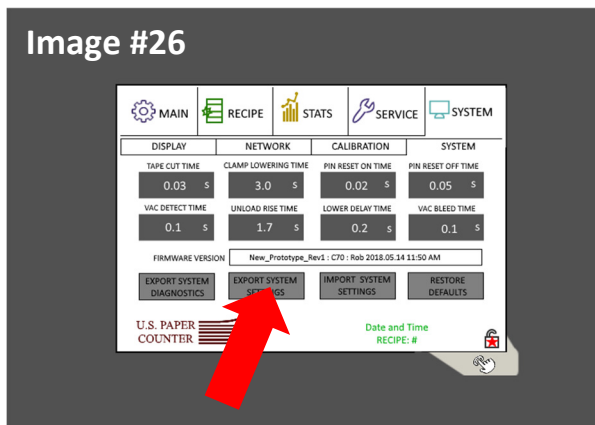
COUNT-WISE INTELECOUNT

System:

Supervisor must be logged in.

Changing Default Password:

1. Open Faceplate.
2. Insert thumb drive into USB port located on the back of the screen.
3. Click on “EXPORT SYSTEM SETTING” (refer to image #26).
4. Wait for it to say “System setting exported successfully!” writing will appear in red at the bottom of the screen. (refer to image #27)
5. Remove the Thumb Drive from the back of the PLC.
6. Insert thumb drive into a computer that has Excel.
7. Open file labeled “SYS”.
8. Scroll down until you find “Reserved1” (for the Operator’s passcode) and “Reserved2” (for the Supervisor’s passcode).
9. Enter new passwords.
10. Save to Thumb Drive.
11. Remove Thumb Drive from computer.
12. Insert thumb drive into the back of the PLC.
13. Press “IMPORT SYTEM SETTINGS” (located next to the export system settings button).
14. Wait for it to say “system setting imported successfully”.



COUNT-WISE INTELECOUNT

COUNT-WISE INTELECOUNT

BREATHERS

(WOOD INSERTS-Count-Wise Models Only)

(Refer to image #28 on Page 39)

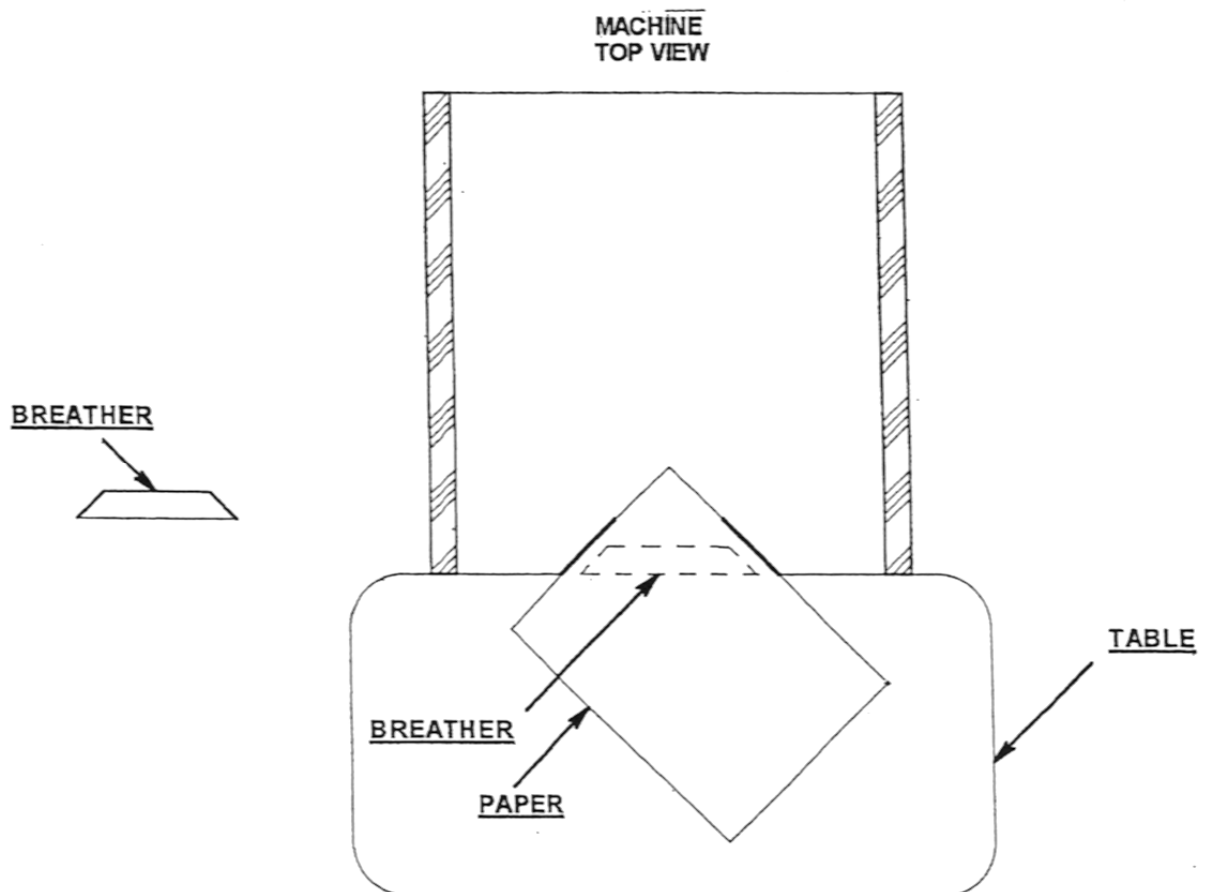
Breathers - wood inserts – are specifically shaped lengths of wood and inserted in the stack to loosen the corner by creating an air space. This space allows the counting head to operate without damaging the paper or the machine.

The intervals at which breathers (wood inserts) should be inserted in the stack follow no hard and fast rule. Papers vary in weight, texture and finish which will affect the breather spacing. Through experience, spacing at 3 in. (76mm) intervals for one type of paper gives excellent results. Different weights of material may require different spacing. Overuse of breathers (wood inserts) must be avoided; an excessive number inserted in the stack will loosen the corners so much that the "FOLLOW-UP" of the counting head will bend them back and give erratic counting.

On thin paper care should be taken not to damage the sheets when inserting breathers (wood inserts).

COUNT-WISE INTELECOUNT

Image #28- Breathers



COUNT-WISE INTELECOUNT

NOTES:

COUNT-WISE INTELECOUNT

Section #5:

Counting Head & Maintenance Schedule

COUNT-WISE INTELECOUNT

LOADING INSERT TAPE

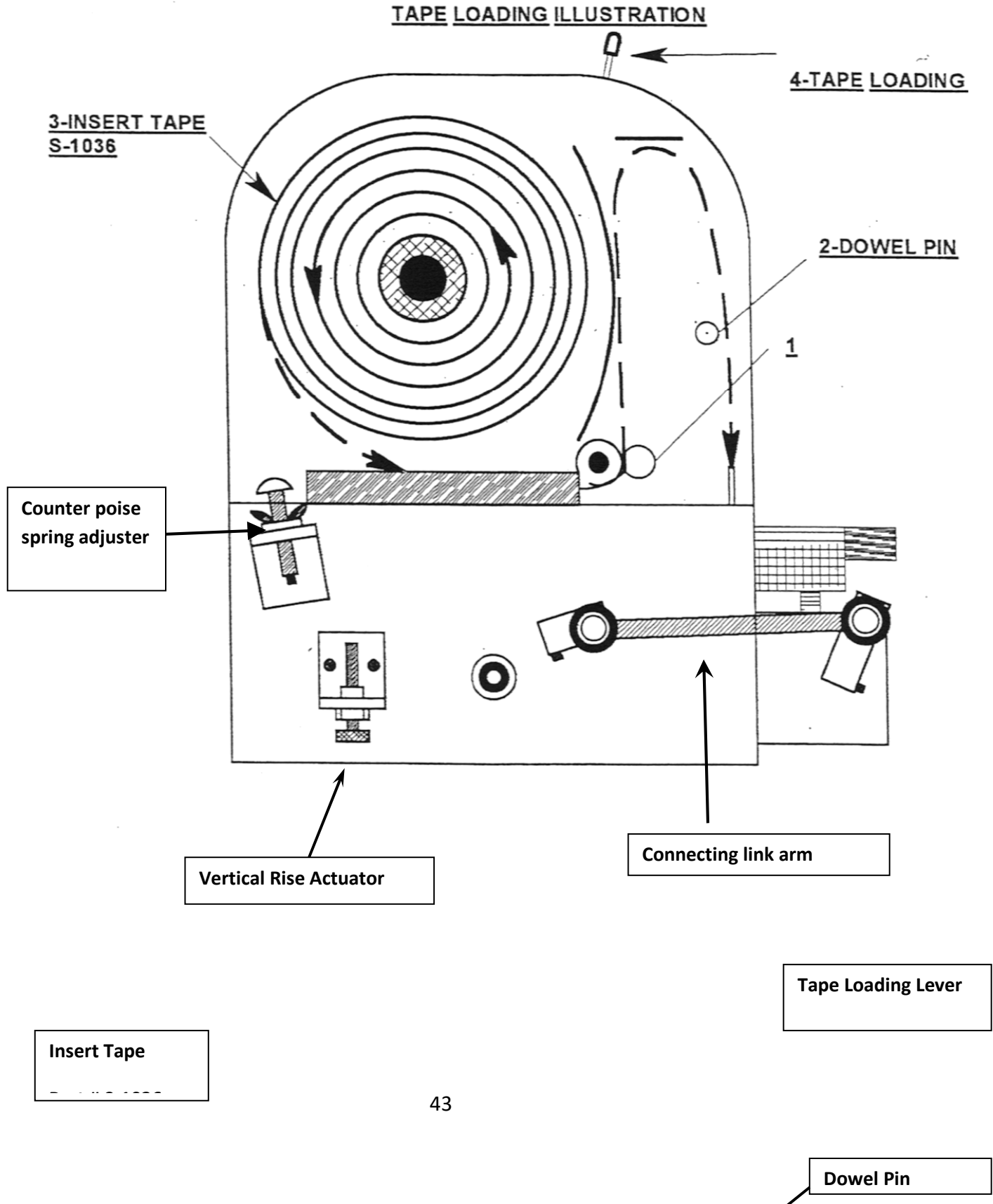
(Video available on Web Site, "Service & Support")

CAUTION: Use extreme care when installing tape so as **not** to bend or distort the looper wire. After loading tape, make sure looper switch wire has not been distorted out of shape and that it is not rubbing against the tape reel cover when closed. Switch wire **must** operate freely for proper loop follow-up when tabbing, or the loop will not keep up and will cause a tape jam or no tape will come out.

1. **NOTE:** When back access door is open, power is automatically turned off.
2. Loading insert tape:
 - a. Be sure that tape roll is **flat (not coned)** and center core is not "egg shaped". Spool must spin and float freely when cover is closed.
 - b. Place a roll of insert tape on the counting head, as shown in the illustration on Page 43.
 - c. Close magnetic tape cover.
 - d. Pull out a 12" to 14" length of tape.
 - e. Spread tape loop rollers using tape-loading lever.
 - f. Place tape between looper rollers.
 - g. Push end of tape through the chute until it exits the front of the counting head.
 - h. Open tape cover; place remaining loop inside. Close cover.
 - i. Close back access door; turn on power.
3. To cut the excess tape, press the Cut Tape button located on the front panel.

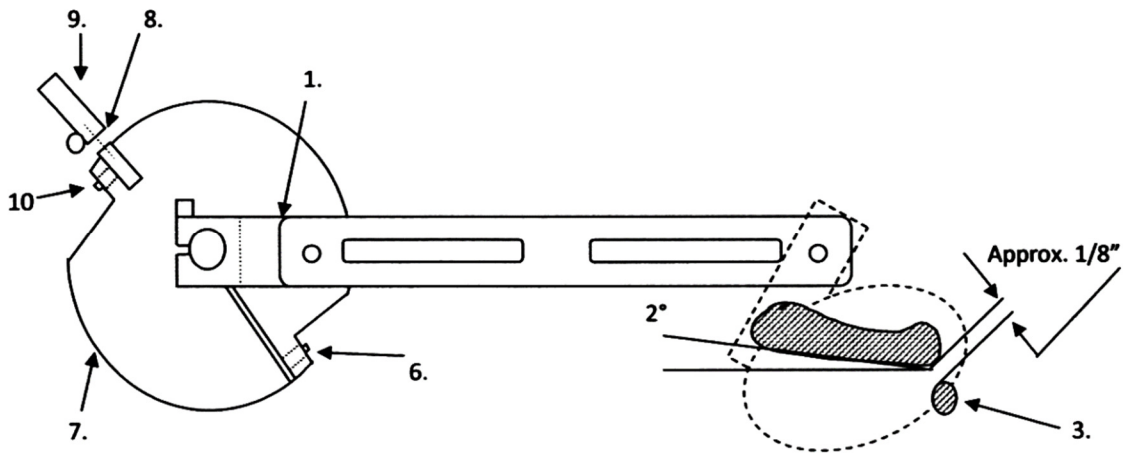
COUNT-WISE INTELECOUNT

(Image #29 – LOADING INSERT TAPE)



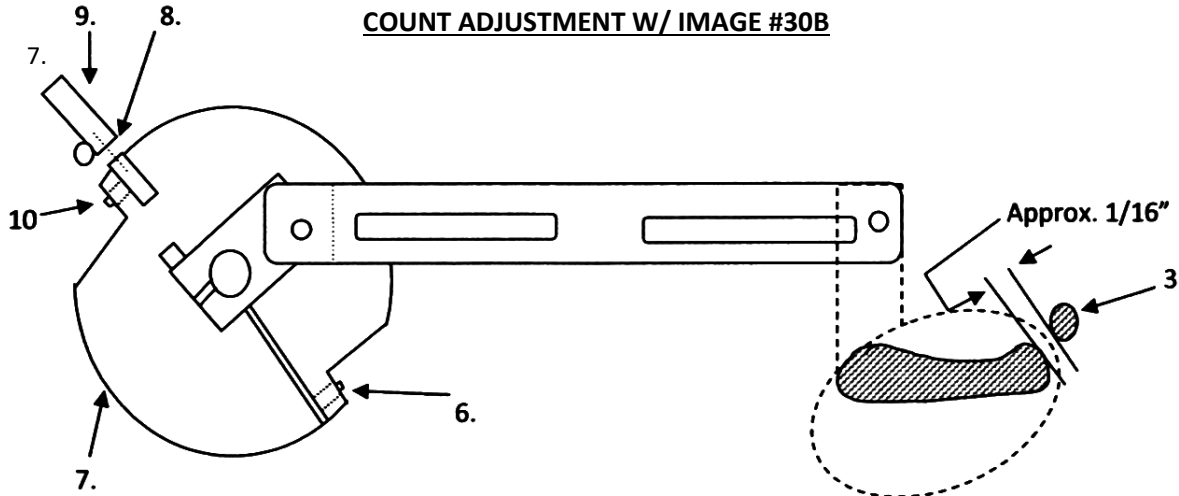
COUNT-WISE INTELECOUNT

RESET ADJUSTMENT W/IMAGE #30A



1. Remove counting head from machine. (See instructions, page 46.)
2. Remove both counting head covers.
3. Place ohmmeter on #9 reset leads with magnet, #8 away from switch. Meter should register "closed".
4. Position wiper pin #3 as shown above.
5. Loosen allen screw #6, turn magnet carrier #7 until meter registers "open". See Figure above.
6. Tighten screw #6. Check tightness – allen screw #10

COUNT ADJUSTMENT W/ IMAGE #30B



1. Remove counting head from machine. (See instructions, page 46.)
2. Remove both counting head covers.
3. Place ohmmeter on #9 on count switch leads (with magnet (#8)) away from switch. Meter should register "open".
4. Position wiper pin #3 as shown above.
5. Loosen allen screw #6, turn count magnet carrier #7 until meter registers "closed". See Figure above.
6. Tighten screw #6. Check tightness – allen screw #10
7. Verify meter readings after rotating counting head one full turn clockwise.

COUNT-WISE INTELECOUNT

COUNTING HEAD INSTALLATION AND ALIGNMENT**

****Refer to photos on Pages 47, 62, & 64**

1. Raise carriage assembly approximately halfway. Loosen pivot block bolts (**p.47, #4 & 9**) from carriage base plate.
2. With a marker, indicate center of suction blade directly behind hole in suction blade.
3. Lower carriage assembly and stop when suction blade is level with tabletop surface.
4. Insert paper squarely into throat or jog of machine over suction blade.
5. Viewing from top of machine, adjust counting head until corner of paper is on centerline mark on blade and approximately 1/16" (1.59mm) from back edge of blade.
6. Move right pivot block 1/16 to 1/4 of an inch forward, causing right side of head to be closer to paper.
7. Raise counting head again approximately halfway and tighten pivot blocks to carriage base plate.
8. Hook counter poise (**p.64, #2**) spring to dash pot bracket.
9. Insert a 3/8" (9.54mm) spacer block between carriage base bracket and counting head base to level head.
10. Loosen set screw on dash pot assembly (setting to be a #5 or mid-range) and adjust dash pot plunger so that a 1/16" to 1/8" gap exists between the plunger and suction blade housing. Tighten nuts.
11. Remove 3/8" (9.54mm) spacer and lower counting head leveling bolt on rear of dash pot bracket to give approximately 1/16" (1.59mm) gap between dash pot plunger tip and base of suction blade housing. Tighten.
12. To set vertical rise setting: Turn mushroom cap bolt into vertical rise switch button until you hear a click. When it clicks, adjust approximately 1/16th of a turn into vertical rise switch, hold and tighten.
13. Adjust counter poise spring tension to lightly pull counting head down. Approximately half the length of the bolt or less is satisfactory.

****ADJUSTMENT IS CRITICAL FOR PROPER FOLLOW-UP THROUGH PAPER**

COUNT-WISE INTELECOUNT

COUNTING HEAD REMOVAL (Refer to Pages #47, 62 & 64) (Video available on Web Site, "Service & Support")

1. Pull off "Vacuum Hose" (p.47, #1).
2. Pull "15 Pin head Plug" (p. 47, #2) from counting head (**NOTE:** Grasp *plug (not wires)* when unplugging cable) and hook into white clip on side of counting head (p.62, #8).
3. Loosen wing nuts on left and right pivot blocks, and lift hinged top from bearing.
4. Remove Counter Poise Spring (p.64, #2) by unhooking "S" clip (p.47, # 10) from dash pot bracket.
5. Grasp front of counting head by vacuum shaft housing and the back of counting head. Carefully lift head out.

REPLACING COUNTING HEAD

1. Place counting head into pivot blocks (refer to diagram on pg. 47). Take care to position left side bearing squarely between guide pins located in left side housing. Close hinged top onto pivot bearing and tighten wing nuts.
2. Connect counter poise spring "S" clip into hole provided in rear of dash pot bracket.
3. Plug cable into counting head and reconnect vacuum hose.

REMOVING/ REPLACING COUNTING HEAD CENTER PLATE (Video available on Web Site, "Service & Support")

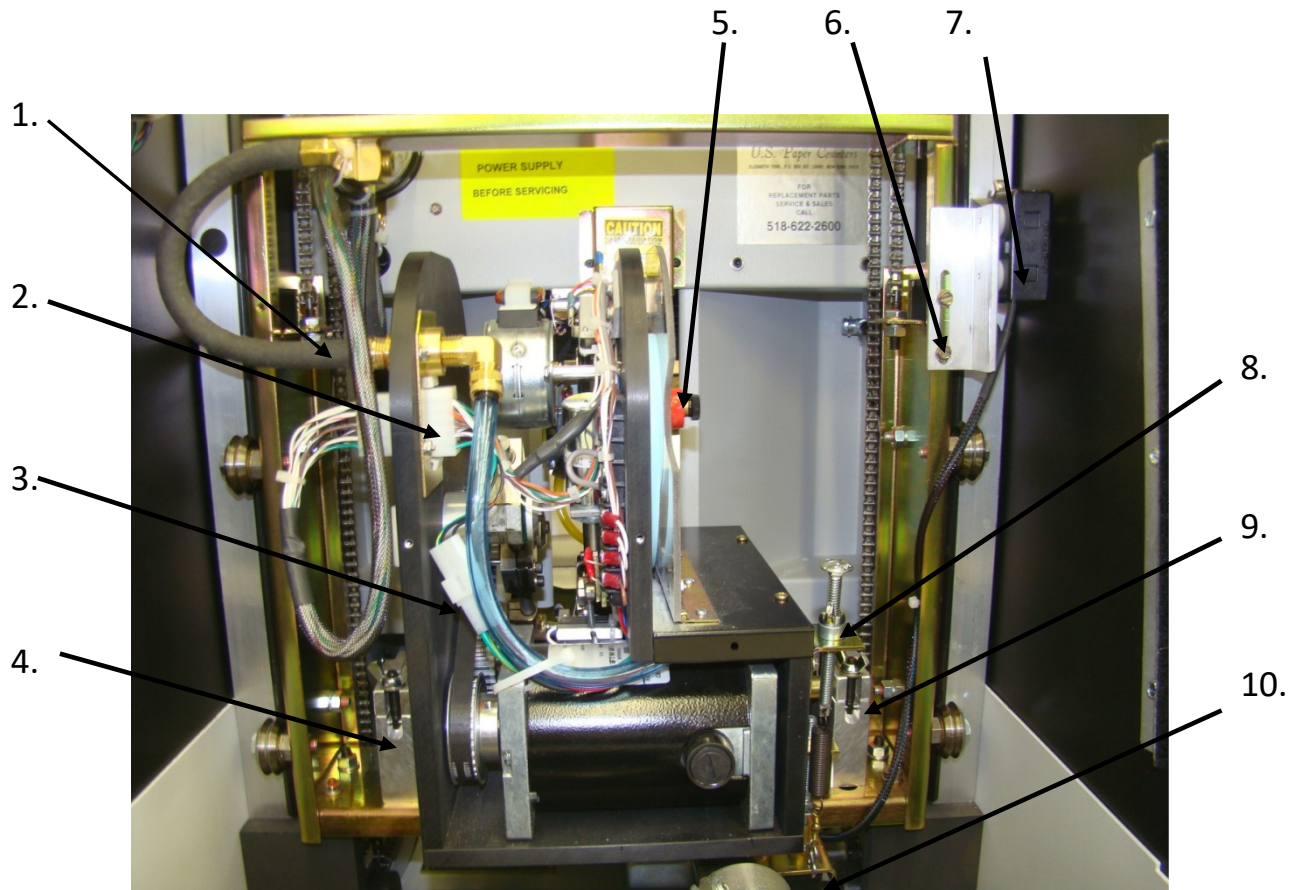
1. Remove counting head from machine; remove counting head covers and insert tape.
2. Unscrew vacuum hose from suction blade housing.
3. Place screwdriver on the outer side top of 15-pin plug. Press down and in. Plug will disconnect from plate. (Plug should hang free inside counting head.)
4. Disconnect 3-pin motor plug.
5. Remove 2 allen screws from the bottom of Counting Head base plate connecting center plate. Carefully lift center plate out.

NOTE: When REPLACING center plate, position on steel guide pin and gently push into position. Take care that drive gears are properly meshed before tightening allen head screws.

COUNT-WISE INTELECOUNT

COUNTING HEAD REMOVAL

PHOTO/DIAGRAM #31



1) Vacuum Hose (S-4033)	6) Down limit adjustment plate (S-2247)
2) 15 Pin head plug (S-3032)	7) Down limit switch (S-3112)
3) 3 Pin counting head motor plug (S-3037)	8) Counter poise spring adj. bolt. (S-6171)
4) Left side pivot block (S-2221)	9) Right side pivot block (S-2222)
5) Tape reel cover (S-6162)	10) "S" Clip (S-6174)

Note: Photo above shows counting head with center cover removed. Do not run machine without center cover installed.

COUNT-WISE INTELECOUNT

HOW TO CHANGE A SUCTION BLADE**

(Video available on Web Site, "Service & Support")

1. Turn off power receptacle (main power, rear of machine) and disconnect cord.
2. Remove counting head from machine (refer to "Counting Head Removal", page 46).
3. Holding the link arm, loosen the allen cap screw in the center of the blade and remove the blade from the holder.
4. Take the blade required, line up the locator pin with the slot in the holder, and install the blade.
5. Again, holding the link arm, tighten the allen cap screw in the blade.
6. Reinstall and connect counting head.
7. Reconnect cord and turn on power. The machine is ready to count.

SETTING VERTICAL RISE SWITCH**

1. With counting head in machine, loosen "locking nut" on vertical rise actuator.
2. Adjust the vertical rise actuator so it lifts off the vertical rise switch.
3. Screw the vertical rise actuator onto the vertical rise switch until you hear the switch click or switch close.
4. Turn the vertical rise actuator no more than 1/16" (1.59mm).
5. Tighten the "locking nut".

SETTING THE COUNTER POISE SPRING**

1. Loosen wing nut on counter poise spring bolt.
2. Adjust tension of spring by turning the counter poise spring bolt so that there is sufficient tension on counter poise spring to ensure that the head of the vertical rise actuator will engage into the vertical rise switch.
3. Secure bolt by locking wing nut.

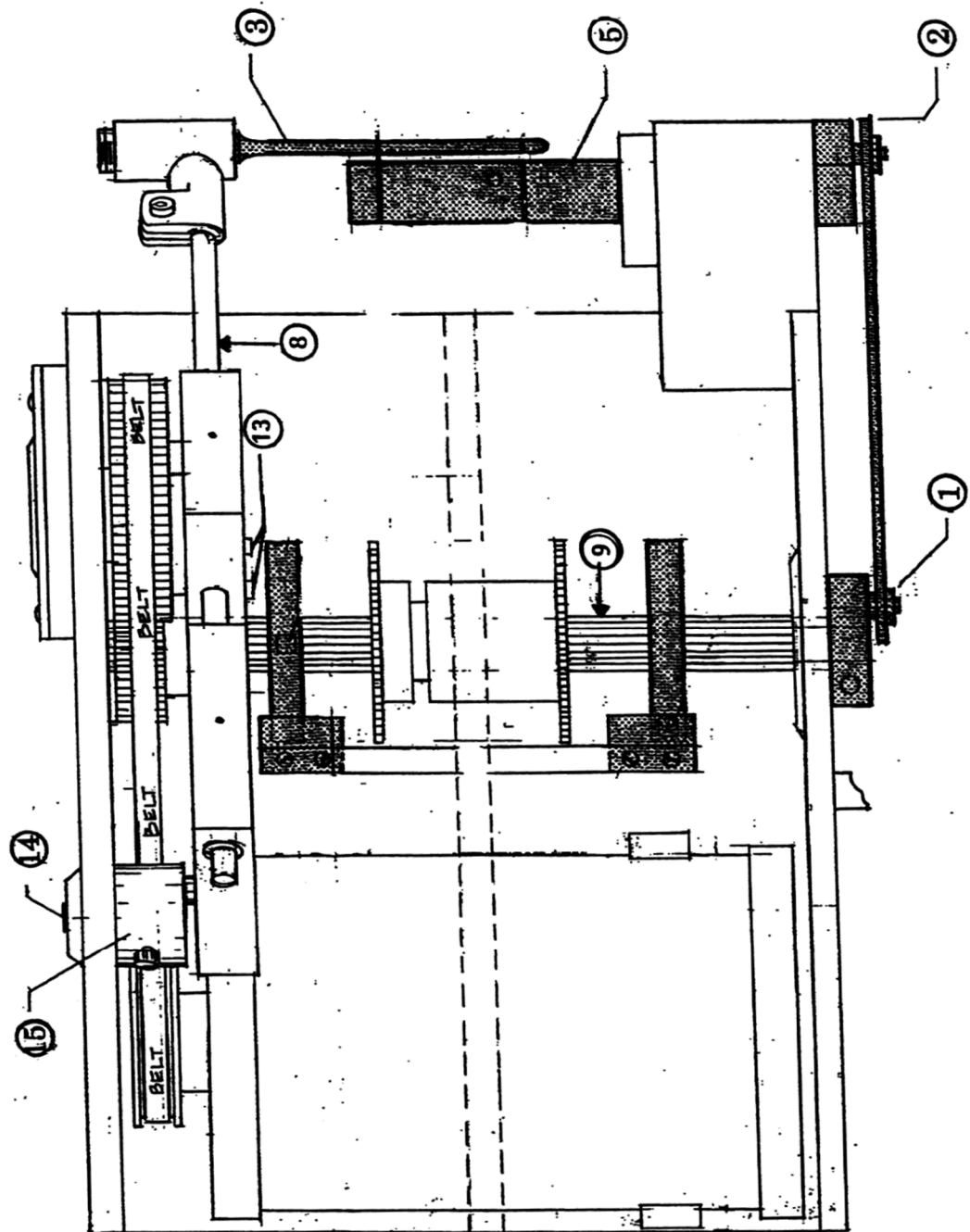
****Refer to photos on Pages 62 & 64.**

COUNT-WISE INTELECOUNT

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COUNT-WISE INTELECOUNT

(Image #32 – ORBIT ADJUSTMENT)



COUNT-WISE INTELECOUNT

ORBIT ADJUSTMENT (REFER TO DIAGRAM ON PAGE #50)

CAUTION: Read and understand all instructions before attempting this adjustment.

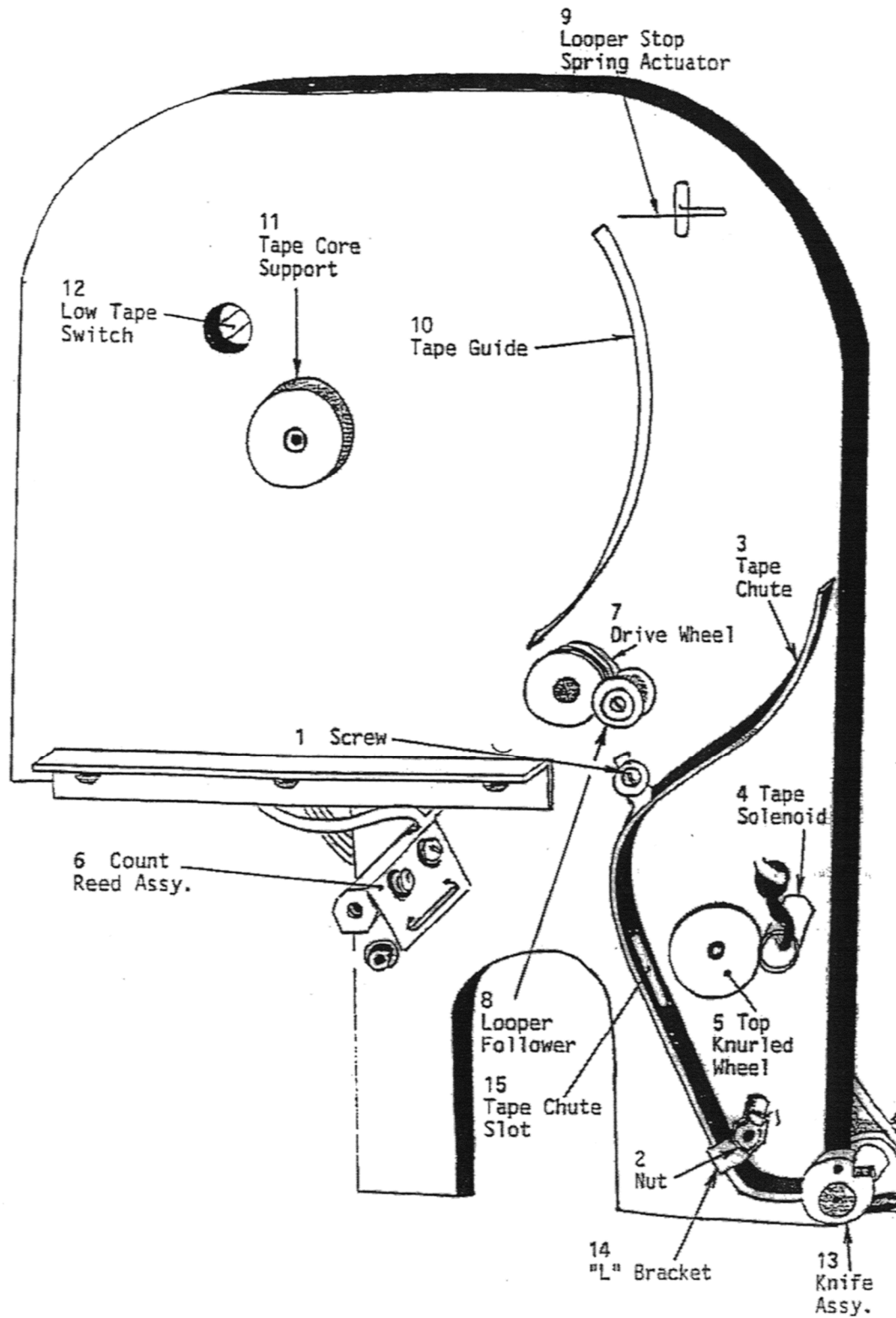
1. Remove counting head from machine. (Refer to procedures on Page 46)
2. Remove both covers and tape spool.
3. Disconnect small vacuum line from suction blade housing, 15-pin plug from side plate and disconnect 3-pin motor plug.
4. Remove 2 screws from bottom of base connecting center plate and carefully lift plate out.
5. Loosen allen screw on **small crank arm #1**. Rotate and hold crank arm at maximum forward position so that allen screws are facing downward.
6. Loosen allen screw on **large crank arm #2** and raise back edge of **suction blade #5** approximately 2 degrees above level. Lightly tighten screw.
7. While holding **small crank arm #1** at *maximum forward position*, rotate **main shaft #9** until top of **wiper pin #3** is flush and parallel with front surface of **suction blade #5** and approximately 1/8" (3.18mm) away from front edge.

NOTE: Adjustment of **push rod #8** may be required to obtain this setting. Loosen 2 **screws #13** on orbitor assembly to adjust.

8. Lightly tighten all screws.
9. Continue rotating **wiper pin #3** under **suction blade #5** and around back edge. Set clearance of approximately 1/8" (3.18mm) between **wiper pin #3** and back edge of **suction blade #5** by loosening **screw #14** and rotating **rocker arm adjustor #15**. Lightly tighten screw.
10. Continue rotating **wiper pin #3** across top surface of **suction blade #5** to achieve approximately 1/16" (1.59mm) clearance. Set this by adjusting **push rod #8** length. (Refer to note in Step 7).
11. Rotate **wiper pin #3** around **suction blade #5** observing all clearances. Repeat procedures 5 through 10 if necessary to obtain uniform orbit.
12. Tighten all screws securely.

COUNT-WISE INTELECOUNT

(Image #33 – COUNTING HEAD, CENTER PLATE / TAPE CHUTE)



COUNT-WISE INTELECOUNT

HOW TO REMOVE A TAPE JAM (REFER TO DIAGRAM ON PGS. 56 & 57)

(Video available on Web Site, "Service & Support")

1. Remove head from machine. (Refer to **Counting Head Removal, Page 46 & 47**).
2. Remove both head covers.
3. Push small knurled wheel against large knurled wheel and rotate the main shaft to "back-out" the jam in the chute.

NOTE: On 2000+ models, the internal size of the chute has been increased and the slot has been extended for easier removal of tape jam.

4. If step 3 doesn't work, use a small pair of needle-nose pliers or tweezers, grasp the tape and pull the jam from the chute. Do not damage knurled wheels by "picking" at the tape with a screwdriver and be careful not to damage the tape chute by scoring or burring where the tape travels.
5. If step 4 did not work, removal of knife assembly is necessary. **Do not pick at tape through knife or serious damage will result to knife assembly.**
 - a. Unhook black **Connecting Link Arm (R-11, S-6283)** from **teardrop (R-14)** pg 56.
 - b. Loosen the **#10-32 nut (p.52, #2)** and remove **#10-32 allen cap screw (pg. 52, #1)**.
 - c. Carefully lift **knife assembly (#13) from tape chute (#3). Pg. 52**
 - d. You will now see the tape protruding from end of chute. Grab tape with small needle-nose pliers and pull out straight.
 - e. While you have knife assembly out, this is an excellent time to internally clean the knife. Remove anvil from barrel and clean both pieces with a Q-tip and acetone.
DO NOT OIL THIS ASSEMBLY.
 - f. Reassemble knife and carefully place back onto tape chute.
 - g. Replace **#10-32 (#1) allen cap screw** until it "bottoms out" in knife. **DO NOT OVER TIGHTEN OR DAMAGE WILL RESULT TO END OF TAPE CHUTE.**
 - h. Adjust screw so the tape will exit from center of slot. Hold and tighten nut securely.
 - i. Reattach connecting link S-6283.
6. If step 5 did not work, the tape chute will have to be removed (**Tape Chute Removal, Page 54**). Using a small torch, heat area of tape to "burn out" the tape jam. Pass a new piece of tape through the chute to clear or you may order a new **Tape Chute, S-6056-1**, if necessary.

COUNT-WISE INTELECOUNT

TAPE CHUTE REMOVAL

(REFER TO Image #33, PAGE 52)

1. Remove **screw (#1)**.
2. Loosen **nut (#2)**. DO NOT “REMOVE”.
3. Slide tape chute carefully out of knife assembly and “**L**” **bracket (#14)**.

REPLACING TAPE CHUTE

1. Replace chute carefully into knife and “**L**” **bracket (#14)**.
2. Replace **screw #1- DO NOT TIGHTEN**.
3. Insert tape into chute until tape comes through knife assembly smoothly. If restrictions are felt, move the chute out of the knife assembly slightly until the tape passes smoothly through the knife. Tighten **nut (#2)**.
4. Re-insert tape into **tape chute (#3)** and push tape through to the **tape chute slot (#15)**.
5. Position chute so that tape lightly brushes bottom knurled drive wheel (not shown) while passing over **tape chute slot (#15)**.
6. Secure **screw (#1)**.

COUNT-WISE INTELECOUNT

CHANGING TAPE SOLENOID (S-3103)

These instructions reference photo and parts on Pages 56 & 57.

1. Remove center plate (**Refer to instructions, Page 46**).
2. Remove **tape drive (#R9)** by removing 2 allen screws.
3. Using ½" (12.7mm) socket, remove nut holding the tape solenoid to the center plate.
4. Push back the sleeve over the solenoid wires and cut the wires.
5. Take the wires of the new solenoid and solder them to the cut wires. **Use shrink tube or electrical tape to cover solder connections.**
6. Replace the ½" nut that holds the solenoid to the center plate.
7. Replace the tape drive with the 2 allen screws. Before tightening, make sure the gear of the top tape drive is engaged with the gear of the bottom tape drive.
8. Push the top tape drive so that both knurled wheels touch.
9. Turn the solenoid plunger into the solenoid while holding down the top tape drive until you feel the top tape drive being pushed away.
10. At this point, turn the plunger one full turn **away** from the tape solenoid.

REMOVAL OF KNIFE ASSEMBLY (S-6285-1) –Refer to Page 56

1. Remove **connecting link arm (#R11)** from **tear drop (#R14)** of knife.
2. Loosen locking nut and remove allen screw.
3. Remove knife assembly from the end of tape chute and adjusting plate.

****DO NOT USE OIL ON KNIFE ASSEMBLY****

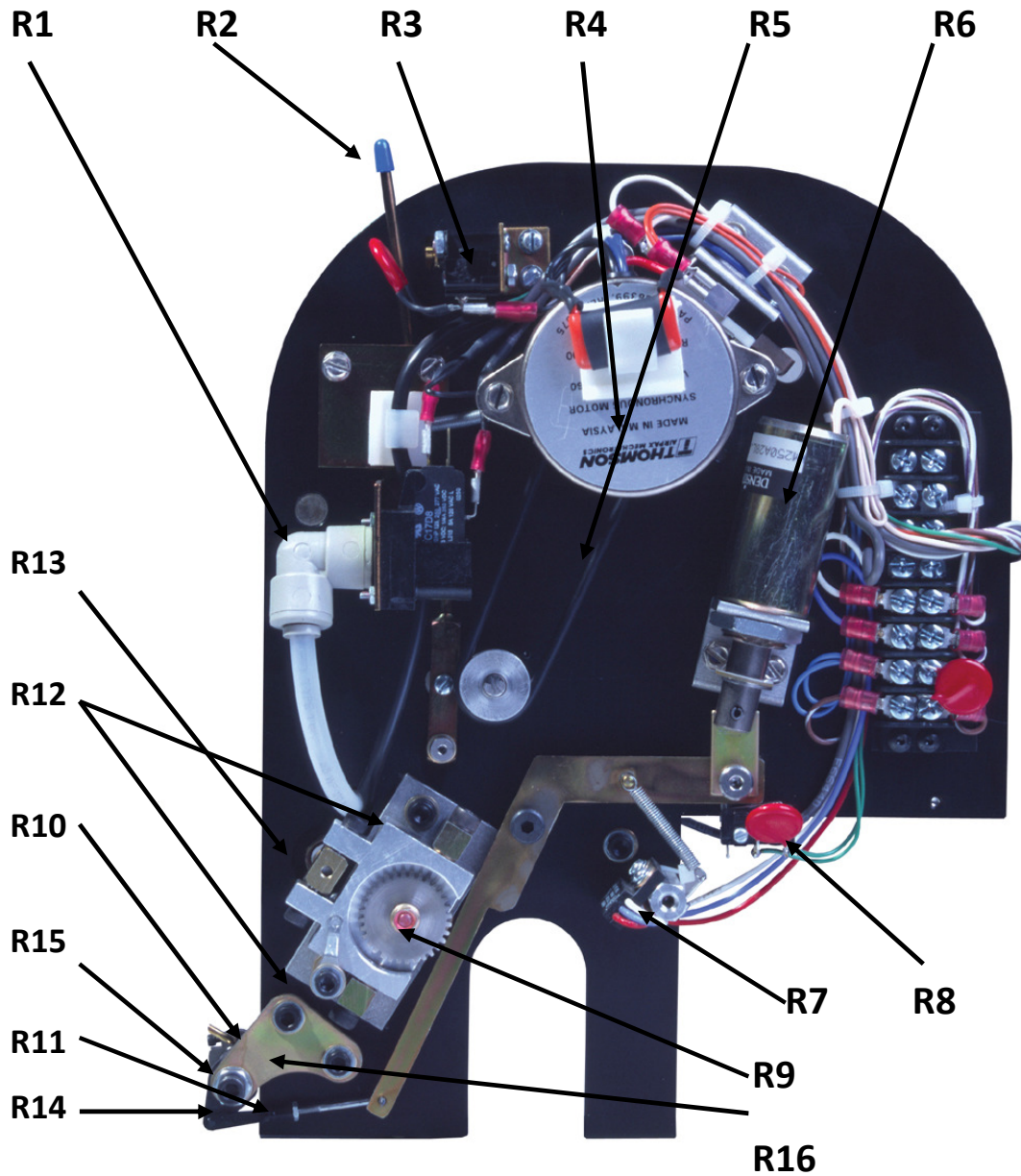
REPLACING KNIFE ASSEMBLY (S-6285-1)

1. Position knife on tape chute. Turn allen head screw into knife adjusting plate until screw "bottoms out".
2. Attach knife **Connecting Link Arm (#R11)** to **tear drop (#R14)**.
3. Push tape through until it comes through the knife anvil. Tape must travel smoothly through anvil. Slightly turn the allen head screw clockwise or counter-clockwise until tape flows smoothly.
4. Lock down the **locking nut (#R15)**.
5. Depress knife solenoid and ascertain knife blade completely passes over anvil slot with over travel not to exceed 1/32" (.79mm). This adjustment is made via the **connecting link arm (#R11)**.
6. Place counting head in a flat position. Push tape through chute until tape hits bottom of blade, approximately mid-way. Adjust the angle of the of the knife anvil using the allen head screw.

****DO NOT USE OIL ON KNIFE ASSEMBLY****

COUNT-WISE INTELECOUNT

COUNTING HEAD, CENTER PLATE – RIGHT SIDE (Image # 34)

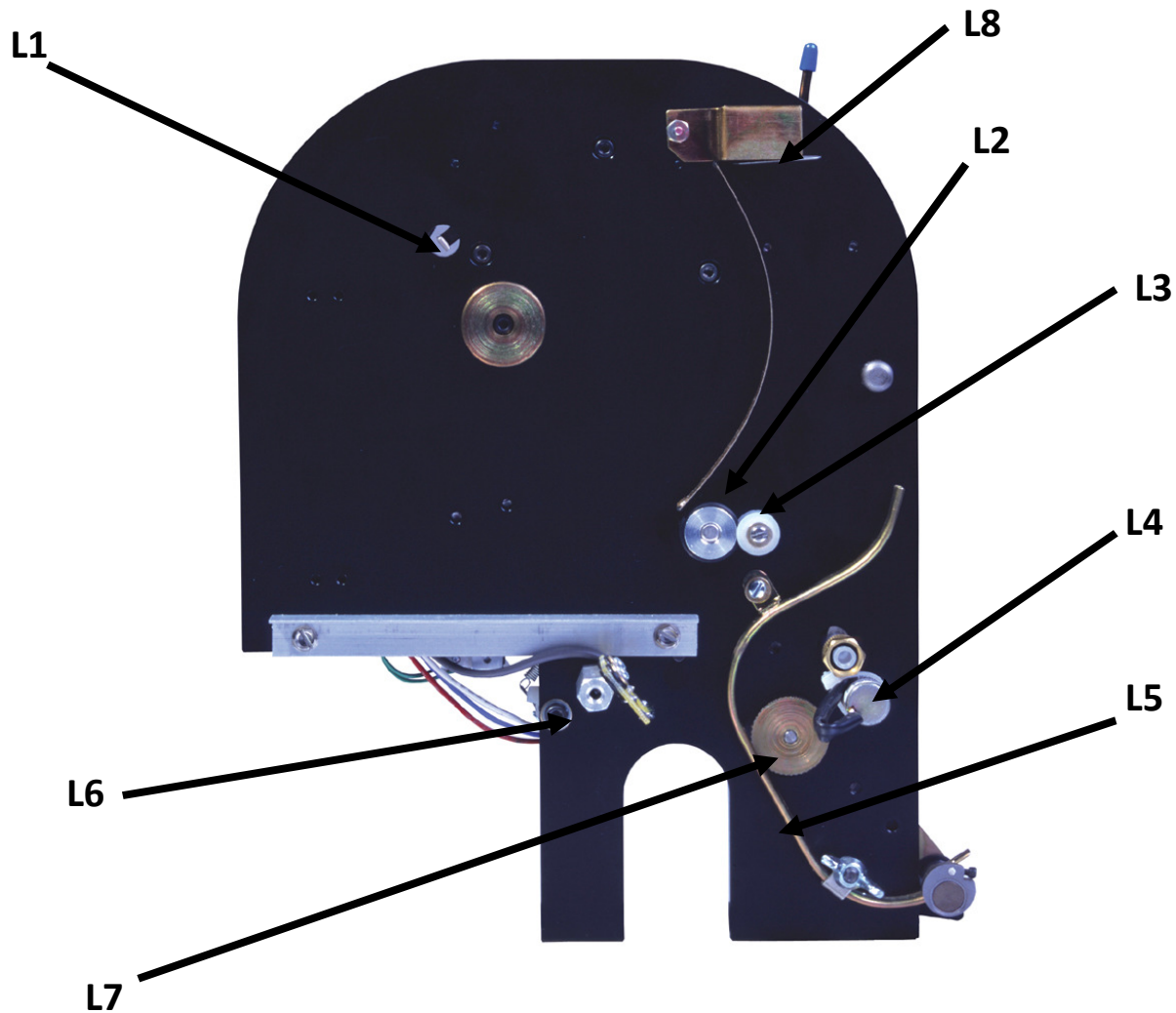


R1- Vacuum Switch (S-3043-1)	R9 – Tape Drive (S-6250)
R2- Tape Loading Lever (Ass'y S-6045)	R10- Knife Assembly (S-6285-1)
R3- Looper Stop Switch (S-3105)	R11- Connecting Link Arm (S-6283)
R4- Looper Driver Motor (S-3106-1)	R12- Allen Screw
R5- Looper Drive Belt (S-6062)	R13- Nut
R6- Knife Solenoid (S-3102)	R14- Tear Drop
R7 – Reset Reed Switch (S-3107)	R15 – Locking Nut (H-154)
R8- Tape On / Off Switch (S-3140)	R16 - Knife Adjusting Plate (S-6287)

COUNT-WISE INTELECOUNT

COUNTING HEAD CENTER PLATE LEFT SIDE

(Image #35)



L1- Low Tape Actuator (S-3110)	L5- Tape Chute (S-6056-1)
L2- Loop Drive Assembly (S-6040) (O-Ring = S-6054)	6- Count Reed Switch (S-3108)
L3- Looper Follower (S-6050)	L7- Knurled Wheels (S6250-E, S-6021(plated)... not shown)
L4- Tape Solenoid (S-3103)	L8- Looper Stop Actuator (S-3105-A)

COUNT-WISE INTELECOUNT

MAINTENANCE SCHEDULE

1. **Filter assemblies (vacuum manifold and counting head):** Remove jars and clean filters **daily**. Depending on dust and paper material, more frequent cleaning or replacement of filters may be necessary. Be sure jars are tight to avoid vacuum leaks.
2. **Wiper pin bearing (critical):** Due to the extreme load placed on the wiper pin assembly, it must be checked **daily**. For free spinning and **no** excessive up and down movement. To lubricate, remove brass end cap using a large tipped flat screwdriver and push assembly through housing. Use either Teflon based oil, any high-grade motor oil or lithium or Teflon grease and place directly into bearings. It is **not** recommended to use multi-oil or light household oil because it will not adhere to the ball bearings. **Lubricate weekly or every 40 hours of operation.**
3. **Knife assembly (critical):** The knife assembly should be checked **daily** for free movement. If knife appears sluggish, use a high-pressure contact cleaner and spray directly into knife. Disassembling the knife may be required to clear barrels internally if sluggishness persists. **Do not** use any oil on knife assembly. This will attract dust and cause knife malfunction.
4. **Tape Loop Drive (critical):** To ensure proper tape loop and tabbing, the tape loop drive must always spin freely. Check that all o-rings are in place. If tape loop drive is binding, it may have to be disassembled and lubricated using a light oil. When reinstalling, **do not** sandwich pieces together tightly. Remember that it must move freely. **Inspect and check monthly (every 30 days).**
5. **Counting blade:** The wiper pin must orbit the blade without coming in contact with it. Any scoring of the blade can cause tearing, miscounts or marking of the stock being counted. If blade shows signs of wear, it must be replaced. If paper chips or dust becomes lodged in blade, it must be removed and cleaned. When reinstalling, make sure housing seat and bottom of suction blade are clean and be sure blade is tight to avoid vacuum leaks.
6. Additional lubrication points (**lubricate weekly or every 40 hours of operation, using a light oil**):
 - Pivot bearings (on sides of head)
 - Connecting link bearings (dog bone assembly)
 - Rocker arm assembly (in head; remove covers)
 - Tape drive assembly (in head; remove covers)**Note:** **Do not spray lubricant inside mechanical parts on head.** This can and **will cause head failure**. If you have any questions, contact the factory. (See page 68 for contact information.)
7. Inspect upper and lower knurled wheels and gears. (**Refer to Diagram on Page #57**) Check all mechanical and electrical connections for tightness.
8. **Machine:** General cleaning of machine may be done using a store bought glass cleaner or all-purpose cleaner.

Note: Remove any tabs from bottom of machine that could block the laser pick-up assembly.

COUNT-WISE INTELECOUNT

Section #6:

Parts List, Photos & Diagrams

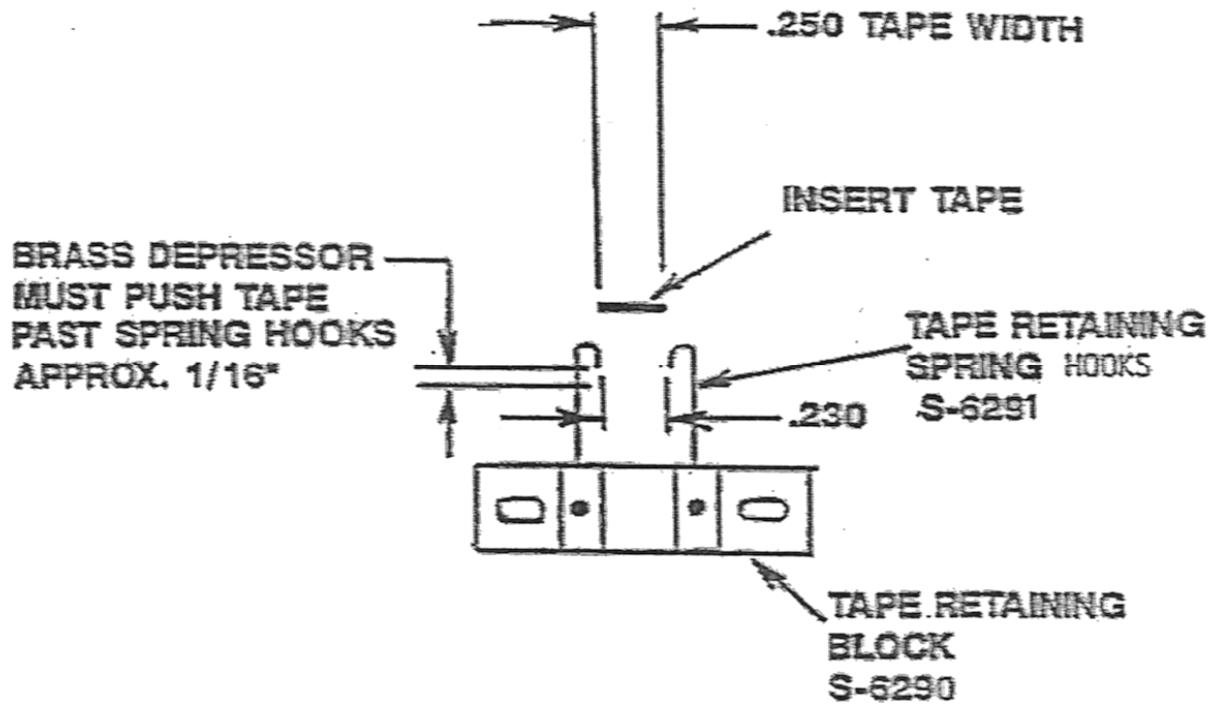
(NOTE: Part #'s may change; please call to verify)

COUNT-WISE INTELECOUNT

Tape Retaining Block

(Image #36)

(Refer to Photo on Page #64, Key #13)



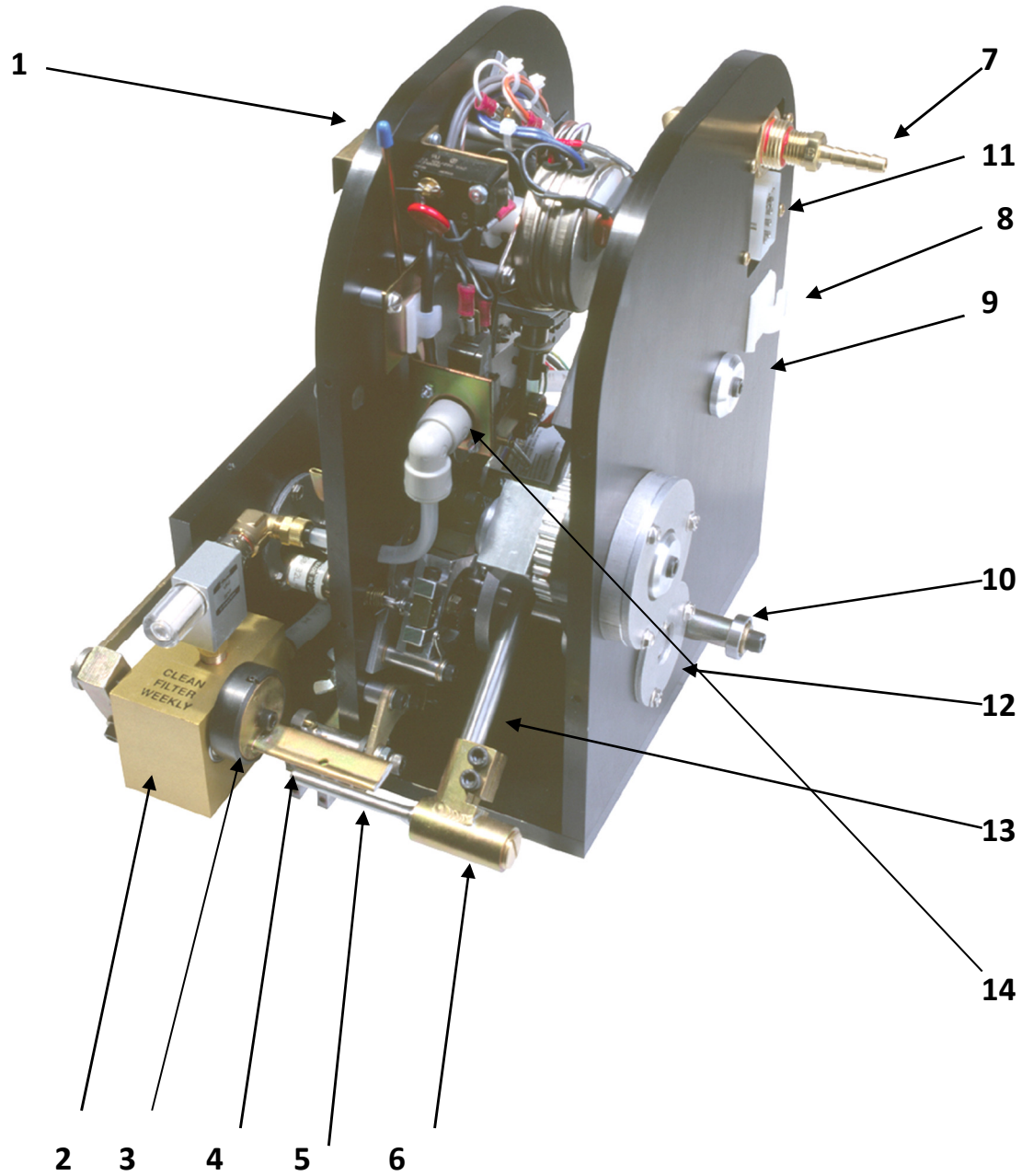
COUNT-WISE INTELECOUNT

RECOMMENDED SPARE PARTS

PART #	QUANTITY	PART DESCRIPTION
S-3105	1	Looper Stop Spring Switch
S-3043-1	1	Vacuum Switch-New Type
S-6062	1	Drive Belt O-Ring
S-6054	3	Looper Drive O-Ring
S-3108	1	Count Reed Switch Assembly
S-6236-2	1	Wiper Pin W/Bearings (Includes wiper pin, 2 open bearings, large & small spacers & E-clip)
S-6237	4	Open Bearing
S-6173	1	Counter Poise Spring
S-4019	2	Filter & Muffler Element
S-3114	1	Vertical Rise Switch
S-3023	1	K-H Relay (24V) Sm (Dir.VR)
S-1053-1	1	Test Kit Complete-New
S-1077	1 Bag	Assorted Nuts & Bolts
S-627*	1	Suction Blade (*most commonly used)
S-3103	1	Tape Solenoid
S-3102	1	Knife Solenoid
S-6283	1	Adj. Connecting & Link Arm
S-3140	1	Tape On/Off Switch
S-4062-C	10	Felt Filter
S-3055-1	1	Assorted Fuse Pack
S-3049-*	1	Start Switch (*Depends on type of machine)

COUNT-WISE INTELECOUNT

COUNTING HEAD (Image #37)



COUNT-WISE INTELECOUNT

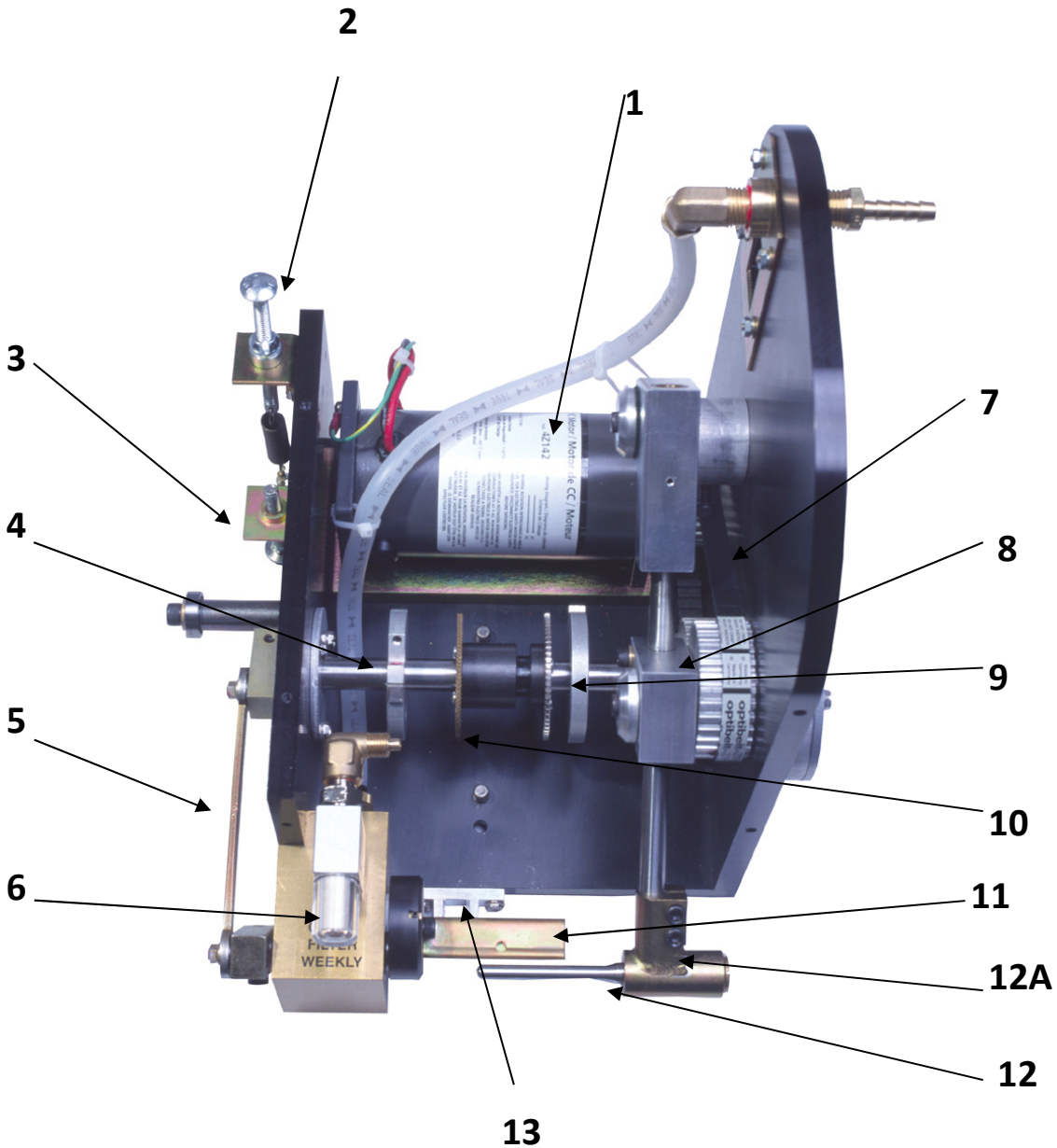
PARTS LIST-COUNTING HEAD

KEY #	PART #	PART DESCRIPTION
1	S-6045	Tape Loading Lever Assembly
2	S-6269 S-6132 S-6135	Suction Blade House Assembly - Seals-Suction Blade (2) - Bearings-Suction Blade & Orbitor
3	S-6133	Suction Blade Shaft
4	S-627* S-6234	Suction Blade (#70-#75- See Page 14 "Suction Blade Guide") Wiper Pin Assembly Complete
5	S-6236-2	Wiper Pin W/Bearings (includes wiper pin, 2 open bearings large & small spacers & E-clip)
6	S-6235 S-6235-A S-6238 S-6232 S-6237 S-6239	Wiper Pin Housing - End Cap - Small Spacer (not shown) - Large Spacer (not shown) - Wiper Pin Bearing (2) (not shown) - Snap Ring Clip
7	S-4032-A	Hose Barb Connector
8	S-3073	Cable Clamp-Black Plastic (not shown in this photo)
9	S-6151	Lock Buttons, Relieved
10	S-6106	Pivot Bearing
11	S-3032	Receptacle 15-pin
12	S-6320 S-6318 S-6321 S-6332 S-6330 S-6331	Mainshaft Bearing Retainer (2) Mainshaft Bearing Snap-Ring (2) Mainshaft Snap-Ring (2) (not shown) Orbitor Bearing (not shown) Orbitor Bearing Retainer (not shown) Orbitor Bearing Housing (not shown)
13	S-6233	Push Rod
14	S-3043-1	Count Vacuum Switch

COUNT-WISE INTELECOUNT

FRONT VIEW COUNTING HEAD

(Image #38)

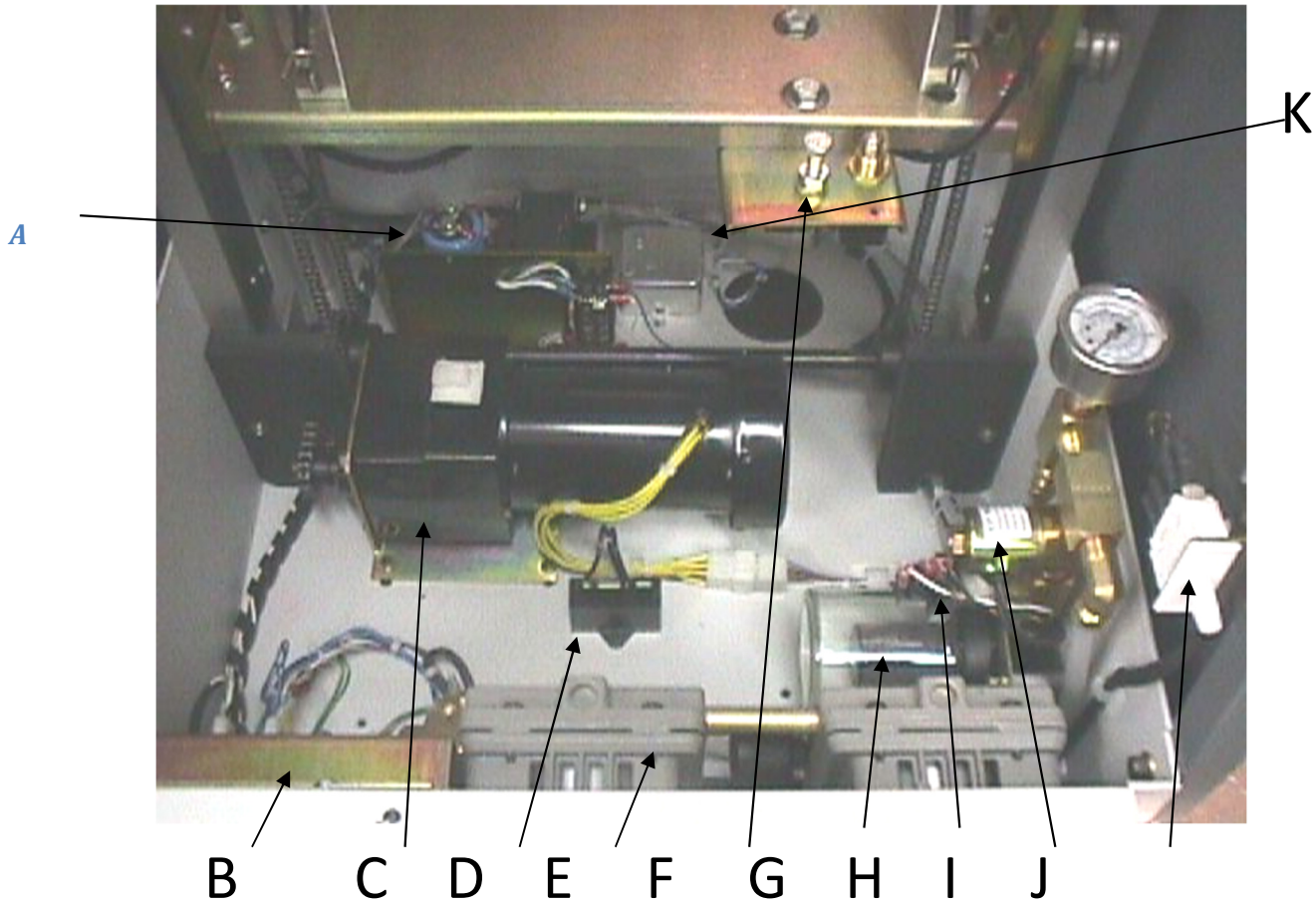


1- Counting Head Motor (S-3100-B)	8- Orbitor (S-6230)
2- Counter Poise Spring (S-6173)	9- Magnet Carrier Reset Reed (S-6316)
3- Vertical Rise Actuator (S-6175)	10- Lower Tape Drive Ass'y (S-6020)
4- Magnet Carrier Count Reed (S-6316)	11- Suction / Counting Blade (S-627--)
5- Connecting Link Arm (S-6100)	12- Wiper Pin w/bearings (S-6236-2)
6- Counting Head Filter (S-4062)	12a- Wiper Pin w/housing (S-6234)
7- Drive/Timing Belt (S-6011)	13- Tape Retaining Block (S-6290)

COUNT-WISE INTELECOUNT

PHOTO - POWER SUPPLY & VACUUM AREA

(Image #39)



A	Power Supply Assembly (S-3008-1)	G	Filter Housing Assembly (S-4018) Plastic Rivet (S-4018-A) Filter Stem (S-4018-B) Filter Element 2 (S-4019)
B	Vacuum Pump Cut-off (S-3132-2) Vacuum Pump Cut-Off w/ Air (S-3132-*)	H	Vacuum Switch (3043-1)
C	Vertical Rise Motor (S-3005-*)	I	Count Vacuum Valve (S-3042)
D	Starting Cap. V/R Motor (S-3007)	J	Cover Safety Switch (S-3165)
E	Vacuum Pump 110 (S-3004-3) Vacuum Pump 220 (S-3004-4)	K	Lower Laser System (S-3079-L)
F	Vertical Rise Switch (S-3114)		

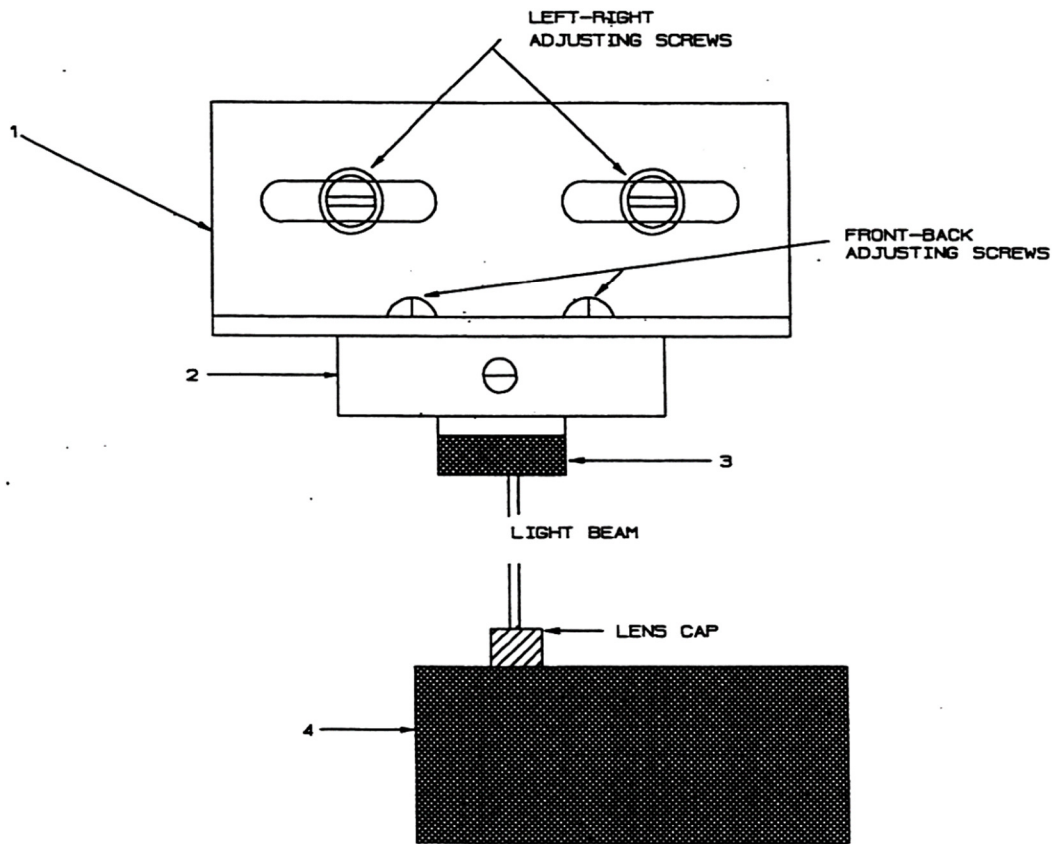
* - Different styles available depending on machine

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Image #40: LASER SYSTEM OPERATION WITH PARTS LIST

The upper laser system contains a laser diode, which projects a light down on the lower laser system receiver. When the laser beam is broken, a signal is sent to the S-3170 Logic Controller, which activates the vacuum pump and enables the start switch. This will allow the clamp to lower and the paper to be counted when the "Start" switch is depressed.

The laser beam must fall on the lens cap located on the lower laser receiver. Adjustments to the lens position can be made by loosening the left to right or front adjustment screws located on the upper laser system. The laser mounting bracket can now be moved, so that the beam is in the correct position, and the screws re-tightened.



1	Laser mounting bracket	S-1072-A
2	Laser mounting block	S-1072-B
3	Cellomating lens	S-3080
	Upper laser system (above 3 items + laser diode)	S-3079-U
4	Lower laser system	S-3079-L

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NOTES:

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CONTACT INFORMATION

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