

W360 Multifunction Tabber System



Service Manual

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.



CAUTION: Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Shielded I/O and USB cables must be used with this equipment to ensure compliance with the limits. Use of unshielded cables is prohibited.

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Due to publication lead times and continuing product development, this manual may not reflect final product release configurations and recommended service procedures. Equipment and material specifications as well as performance features are subject to change without notice. Available product features may vary, depending on machine model, system software level and system setup. Some product features may be country specific.

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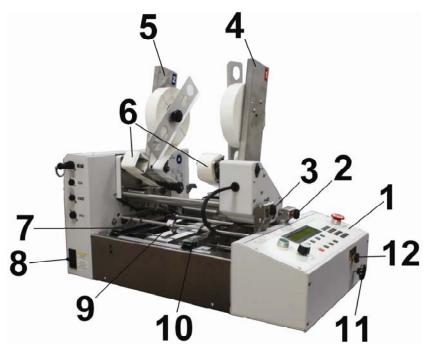
Section 1	- Getting Acquainted	1
	Front View	1
	Exit End View	2
	Tabber Electrical Connections	3
	Feeder and Connections	4
	Tabber Control Panel	5
Section 2	2- Assembly, Installation and Operation	7
	Assembly	7
	Connecting	8
Section 3	3- Troubleshooting	11
	Jams	11
	Tab Placement Problems	12
	Stamp Placement Problems	14
	Tabber Operation Problem	15
	Advanced	15
	Diagnostics	16
Section 4	4- Adjustments	19
	Motor Drive Belt	19
	Tab Guide Plate Alignment	20
	Tab Brake Adjustment (Head 1 and Head 2)	21
	Tab Clutch Position Adjustment	22
	Head Assembly Alignment	23
	Power Supply Adjustment	25
	Tab Web Sensor Adjustment Head 1 and Head 2	26
	Media Sensor Adjustment	27
	Tabber and Feeder Speed control Adjustment	28
Section 5	5- Disassembly and Assembly	31
Tabber	Removing Reel Assembly	31
	Tabb Applicator Removal and Disassembly	32
	Removing Front Cover	33
	Removing Rear Cover	34
	Left-Hand Side Cover	35
	Encoder and Encoder Driver Belt	35
	Replacing Take-up Reel Drive Belts	36
	Replacing the Drive Motor	36
	Replacing Sandpaper on Tab Drive Roller	38
	Replacing Clutch and Brake	39
	Replacing Transport Belts	41
FEEDER	Removing Covers	45
	Replacing Feed Rollers	46
	Feeder Front View	47
	Removing the Drive Roller	47

TABLE OF CONTENTS

Section 6 – Maintenance	<i>49</i>
Cleaning	49
Rollers and Transport Belts	49
Cleaning the Sensors	50
Media Sensor Test	51
Tab Sensor Test	51
Cleaning the Tab Wrap Guides	51
Lubrication	52
Appendices	53
A- Specifications	53
B-Identifying Tab Types	54
C-Wiring Diagrams	55
Index	57

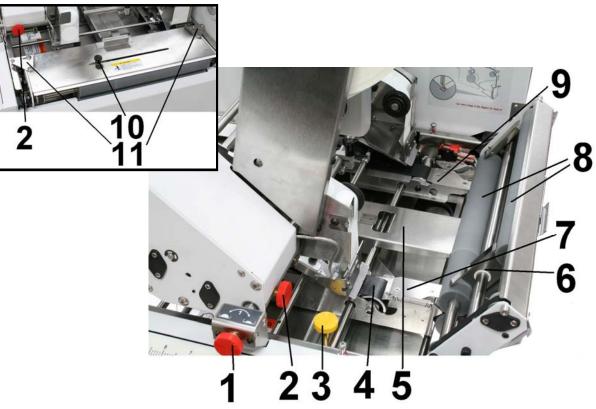
SECTION 1 – Getting Acquainted

Front View



1	Control Panel – The machine is controlled and programmed from this panel.
2	Head 1 Fine Tuning Adjustment – This Knob permits fine positioning of the Tabs on
	Head 1.
3	Head 2 Fine Tuning Adjustment – This Knob permits fine positioning of the Tabs on
	Head 2.
4	Head 1 – This head can apply stamps or tabs on either the edge or end of the media.
5	Head 2 – This head can only apply tabs on the edge of the media.
6	Take-up Reels – The tab web is wound up here after the tab is applied.
7	Left Media Guide Assembly – Transports the media to the tabbing area. This guide is
	not adjustable.
8	Main Power Switch & Receptacle-Tabber – The power cord is plugged here and the
	switch turns the Tabber On and Off.
9	Center Support Plate – Used to support media 6.5" wide or larger. This plate also
	contains the slot used when tabbing at the lead edge of a piece.
10	Right Media Guide Assembly – This guide transports the media to the tabbing area
	and is adjustable for the width of the media.
11.	Media Thickness Adjustment Knob – Adjusts the Heads and Pressure Rollers to the
	thickness of the media.
12.	Media Width Fine Adjustment – This knob fine tunes the media guide for the width of
	the media.

Exit End View



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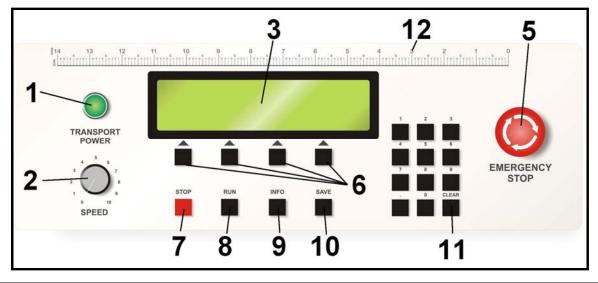
1	Emergency Stop Input – This connector when wired into an existing safety circuit		
	permits an emergency stop on from the existing circuit to stop the Tabber. The jumper		
	plug is required when this feature is not used.		
2	Emergency Stop Output – This connector permits the Tabber to control the emergency		
	stopping of another machine.		
3	Conveyor Interface – The W985 Stacker is connected here to control the Tabber		
	Operation.		
4	Tabber/Feeder Connection – The feeder is connected here to permit automatic		
	operation of the feeder when used with the Tabber.		
5	Main Power Switch-Tabber – This switch turns the Tabber On and Off.		
6	Fuse – The main power fuse (2.5A / 250V) for the Tabber is located here		
	Caution! Disconnect the power before replacing the fuse.		
7	Power Inlet Tabber – The power cord is plugged in here.		

Feeder and Connections

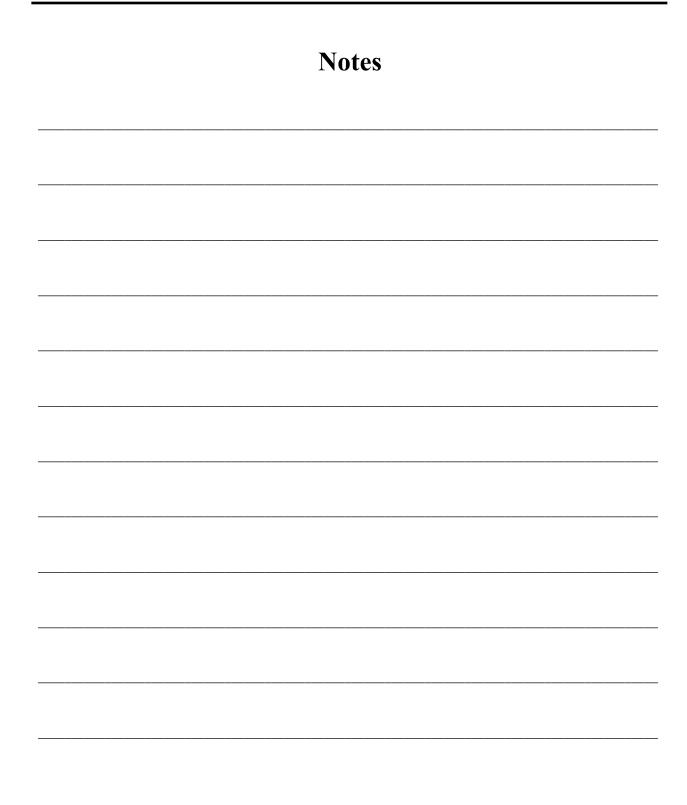


1	Tabber/Feeder Control Cable – This connection permits the tabber to control the	
	feeder when the mode switch is in the Automatic Position.	
2	Power Inlet-Feeder – The power cord is plugged in here.	
3	Fuse – The feeder fuse is located here.	
4	Main Power Switch-Feeder – This switch will turn the feeder On and Off.	
5	Mode Switch – The mode switch permits selection of either the Automatic Mode (the	
	tabber controls the Feeder) or Manual Mode (the feeder speed is controlled manually by	
	the Feeder Speed Control).	
6	Feeder Speed Control – When the feeder mode switch is in the manual position, this	
	knob controls the speed of the feeder.	
7	Media Thickness Adjustment-Feeder – Loosening the knob and repositioning the	
	lever is used for adjusting the exit rollers of the feeder for thicker media.	

Tabber Control Panel



1.	Transport Power Switch – Turns the Tabber transport power ON.		
	NOTE: The Transport Power will not activate unless all of the safety and		
	emergency switches are closed.		
2.	Speed Control – Adjusts the speed of the Tabber.		
	NOTE: The maximum speed of the Tabber tabber is controlled by the software.		
	The speed of the tabber for applying single tabs to one side of a piece is 25,000		
	pieces per hour, for applying double tabs to one side of a piece it is 15,000 pieces		
	per hour and for applying triple tabs to one side of a piece is 10,000 pieces per		
	hour. Exceeding these speeds will cause the tabber to stop. The Tab placed on the		
	end of the piece is not counted in the above.		
3.	LED Display – Keeps the operator informed of the status of the Tabber.		
4.	Key Pad – Used to enter the data to program the Tabber		
5.	Emergency Stop – When the Tabber is properly connected to the feeder and/or other		
	pieces of equipment activating this button will stop the machines.		
6.	Soft Keys – The soft keys are used to step through the various menu options to program the Tabber.		
7.	Stop Key – Pressing this key will stop the Tabber and hold it in a ready state to resume		
	operation.		
8.	Run Key – Pressing this key to start the Tabber when running a job.		
9.	Info Key – Pressing this key will change the display to the information mode.		
10.	Save Key – This key is used to save the entries into the memory.		
11.	Clear Key – This key will clear any incorrect entry before it is saved in the memory.		
12.	Measuring Scale – Use the scale to determine where to place the tabs.		



SECTION 2 - Assembly and Installation

The Tabber is shipped in a single carton.

Assembly

Choose a Location

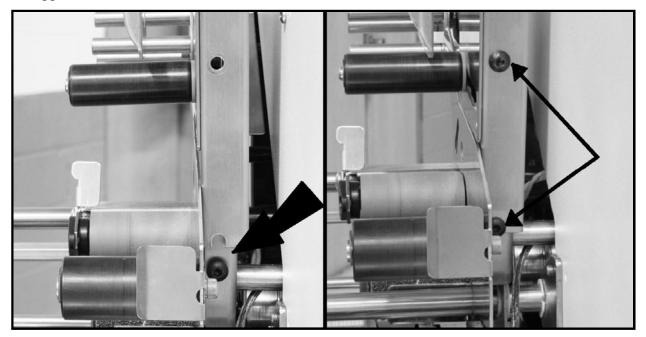
Place the Tabber with its feeder on a sturdy worktable or cabinet at least 12 inches from any walls. Allow enough room to place the Feeder on the same work surface. Protect the Tabber from excessive heat, dust, and moisture – avoid placing it in direct sunlight.

CAUTION

THE UNIT IS HEAVY. IT IS STRONGLY RECOMMENDED THAT TWO TECHNICIANS REMOVE THE Tabber FROM THE CARTON AND PLACE IT ON THE WORKING SURFACE.

Install Reel Supports

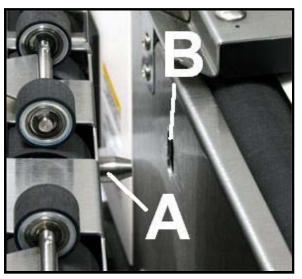
The two Reel Supports have to be installed. Loosen the lower mounting screw and slide the Reel Supports over the frame until they bottom on the lower mounting screw. Then install and tighten the upper screw and lower screw.



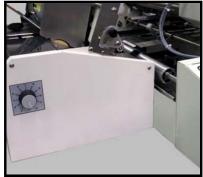
ASSEMBLY AND INSTALLATION

Install the Optional Feeder

1. The pin [A] on the feeder should mate with the hole [B] on the Tabber body.



2. When the feeder is properly aligned with the tabber body it will appear as in this picture.



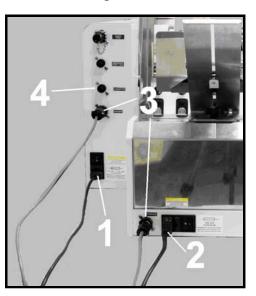
Connecting

Plugging in the Feeder and Tabber

Make sure that the emergency stop switch of the Tabber is in the OFF position and the main

power switch above the power cord receptacle is in the OFF position. Make sure that the power switch on the feeder is in the OFF position also.

- 1. Connect one end of the Tabber power cord [1] to the rear of the Tabber in the corresponding receptacle.
- 2. Connect one end of the Feeder power cord [2] to the rear of the Feeder in the corresponding receptacle.
- 3. Plug the other end each cord into a 115-220 Volt AC, 50/60 Hz. Grounded outlet.



CAUTION

DO NOT USE ADAPTER PLUGS OR EXTENSION CORDS TO CONNECT THE Tabber OR THE FEEDER TO THE WALL RECEPTACLE. DO NOT USE OUTLETS CONTROLLED BY WALL SWITCHES. DO NOT USE AN OUTLET THAT SHARES THE SAME CIRCUIT WITH LARGE ELECTRICAL MACHINES OR APPLIANCES.

4. Connect the Feeder Interface cable [3] to the Feeder and to the lower connector on the Tabber.

ľ	Notes

SECTION 3 – *Troubleshooting*

The following trouble-shooting guide is provided to assist you in solving any problems that might occur with the Tabber Tabber. We have tried to make it as complete as possible. The best advice we can offer is to make sure that the tabs, labels or stamps are threaded properly and that the machine is plugged in and turned on.

Jams

CONDITION	SOLUTION
Media jams in transport section of Tabber.	 Check alignment of Feeder to Tabber. Media should be feed between 1/16" to 1/32" from the fixed guide in the tabber. Check that the two paper guides are not pressing down too firmly on the media. Check that the adjustable center guide is not pushing the paper tightly against the fixed side guide Check that the head pressure is not too tight.
Tabs jam in tab guide.	Clean the Tab guides. See Maintenance Section.
Side Tab Tears and does not seal to the bottom of the piece. Piece may be wrinkled.	Side guide too tight against the media. Open the width of the guide.

Tab Placement Problems CONDITION	SOLUTION
Tabs are not placed in the same spot on	Tabs should be placed within $+/- 1/8$ "
the media.	 Check the pitch setting for the tab. It should be slightly more than the tab size plus the space between the tabs. Check the amount of head pressure. Too little can cause the media to slip when it is being fed. Check that the pointer on the applicator head is in the center of the tab Check that the tabs are threaded properly. Are they behind the "Reel Brake Roller Arm?
More of the tab is on the top of the media	Adjust the fine adjustment Knob 1 or 2
than on the bottom.	depending on the head that requires adjustment. See Fine Tuning Adjustments for more detail.
Less of the tab is on the top of the media than on the bottom. DIRECTION OF TRAVEL	Adjust the fine adjustment Knob 1 or 2 depending on the head that requires adjustment. See Fine Tuning Adjustments for more detail.
Lead edge tab is more on the top than the bottom. DIRECTION OF TRAVEL MORE TAB ON TOP	This adjustment is performed by the software. See Head 1 Tabbing at the Lead Edge of a Piece in the Operating Instruction Section.

Tab Placement Problems

Tab Placement Problems (continued)

CONDITION	SOLUTION
Lead edge tab is more on the top than the bottom DIRECTION OF TRAVEL MORE TAB ON BOTTOM	This adjustment is performed by the software. See Head 1 Tabbing at the Lead Edge of a Piece in the Operating Instruction Section.
Tab is not flush with the edge of the media.	Media is not being fed flush with the fixed side guide. There should not be more than $1/16$ " to $1/32$ " space between the media and the fixed side guide when the media enters the tabber.
When double tabbing one tab is not placed properly on the edge of the media.	 The media may not be traveling along the fixed side guide. Adjust the angle of the guide rollers by turning the knob on the skew guide. Check the pressure between the head and the transport. Too much pressure will cause the media to flex as it is transported. Too little pressure can cause the media to skew as the tab is being applied.
Two or three tabs applied next to each other.	Programming issue. When programming the multiple tabs Together was selected instead of Separate . Reprogram the job.

Tab Placement Problems (continued)

CONDITION	SOLUTION		
More than three tabs applied on each piece.	Tab sensor adjustment improper. Check Tab Voltage and Backing Voltage adjustments. (Page 21)		

Stamp Placement Problems

CONDITION	SOLUTION		
Stamps are not placed in the same place on the media.	 Stamp placement should be within +/- 1/8" 1. Check the pitch setting for the stamp. It should be slightly more than the stamp size plus the space between the stamps. 2. Check the amount of head pressure. Too little can cause the media to slip when it is being fed. 		
Direction of TRAVEL	 The media may not be traveling along the fixed side guide. Adjust the angle of the guide rollers by turning the knob on the skew guide. Check the pressure between the head and the transport. Too much pressure will cause the media to flex as it is transported. 		
Two or three stamps applied evenly spaced.	Programming issue. When programming multiple stamps Separate was selected instead of Together . Reprogram the job.		

CONDITION	SOLUTION			
More than three stamps applied one after	Tab (Stamp) sensor adjustment improper.			
another on the media when 1, 2 or 3	Check Tab Voltage and Backing Voltage			
stamps are selected.	adjustments. (Page 21)			
DIRECTION OF TRAVEL				

Tabber Operation Problems

CONDITION	SOLUTION		
Tabber flashes "Exceeding Tabbing Rate" warning, while tabbing.	 Speed of tabbing exceeds maximum speed for the number of tabs being applied. Slow down tabber. Feeder speed is too fast, leaving too little gap between pieces. Slow down feeder or use the optional feeder connected to the tabber. NOTE if this condition continues for more than 10 seconds, the tabb er will stop and display the condition below. 		
Tabber Stops while tabbing and displays Status: Maximum Tabbing Rate Exceeded	 Speed of tabbing exceeds maximum speed for the number of tabs being applied. Slowdown tabber transport speed. Feeder speed is too fast, leaving too little gap between pieces. Slow down feeder. 		
Tabber Stops while idling with no media going through it.	The Tabber is equipped with a transport timeout if no media is feeding after 30 seconds it will stop. Pushing the Run key will restart it.		

Advanced

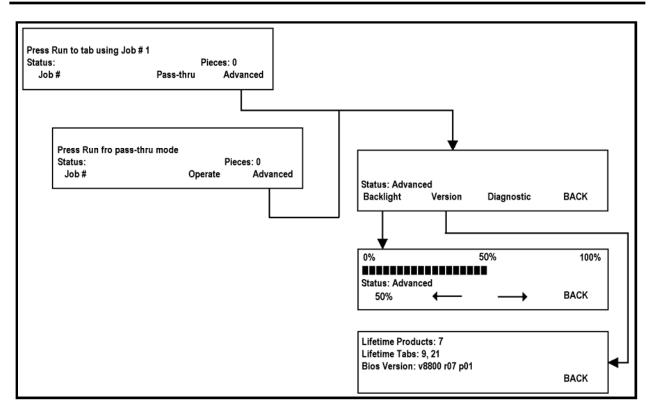
A diagnostic routing is built into the Tabber Software. It can be accessed through the Operate or the Pass-Thru screen. Click on the Advanced Soft key and the Status: Advanced screen will appear.

On this screen in addition to Diagnostics, the Backlight on the LCD Display can be adjusted for intensity and you can display the Version of the software along with the Lifetime Products and Lifetime Tabs on both heads.

Below is a flowchart of the functions for Advanced:

W360 Tabber Service Manual

TROUBLESHOOTING



Pressing the BACK key will return the Tabber to the previous screen.

Diagnostics

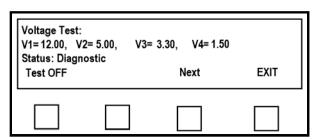
A diagnostic function is built into the Tabber software. The Diagnostics are accessed through the Advanced key. Pressing the Diagnostic key will start the tests in order. To pass a test simply press the Next key, to return to a test press the Previous key. The tests in order are:

1. Voltage Test – Displays the voltages in the power supply and logic.

Voltage Test: V1= 0.000, V2 Status: Diagno	2= 0.000, V3= 0	0.000, V4= 0.0	00
Test ON	55110	Next	EXIT

When you click on Test ON, V-1 should be 12.0 volts for the main power supply. V-2, V-3 and V-4 are voltages on the logic board. Click EXIT to return to the Voltage Test screen or Next to go to the next test.

2. Encoder Test – Tests if the encoder is working.



Encoder Tes Reading: 00 Status: Diag	0000000		
Test ON	Previous	Next	EXIT

When you click on Test ON, a number will display in the Reading: rotate the exit roller, if the number changes the encoder is working. Click Next to go to the next test.

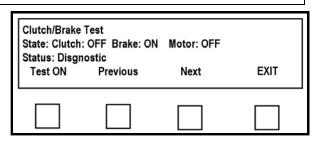
Encoder Test Reading: 12635167 Status: Diagnostic Test OFF Previous Next EXIT					

IMPORTANT

REMOVE THE TABS FROM BOTH HEADS FOR THE REMAINING TESTS. .

3. Clutch/Brake Test – Tests the function of the clutch and brake for both of the heads at the same time. The test OFF position has the Clutch and the Motor Off.

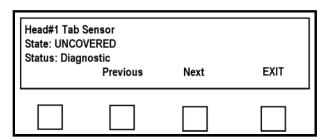
Clicking on Test ON will cause the Clutch and Motor to turn on and the Brake to go off. You should be able to hear this action. Use the Next key to go to the next test.

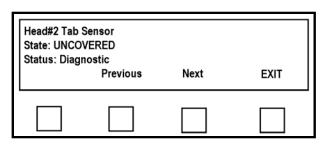


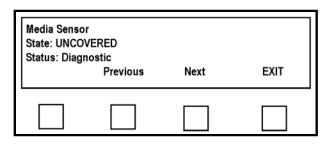
Clutch/Brake Test State: Clutch: ON Brake: OFF Motor: ON [:] Status: Disgnostic						
Test OFF						

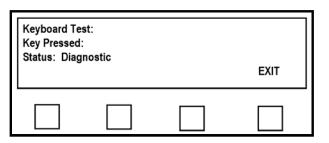
TROUBLESHOOTING

- 4. Head #1 Tab Sensor Tests that the tab sensor in Head # 1 is working. This test should be conducted with the tabs removed from the tabber. A piece of paper inserted into the sensor should cause the display to change from UNCOVERED to COVERED. Press Next to proceed to the Head # 2 Tab Sensor test.
- 5. Head #2 Tab Sensor Tests that the tab sensor in Head # 2 is working. This test should be conducted with the tabs removed from the tabber. A piece of paper inserted into the sensor should cause the display to change from UNCOVERED to COVERED. Press Next to proceed to the Media Sensor Test.
- Media Sensor Tests that the Media Sensor is working properly. Place a piece of paper between the sensor and the reflective lens. The screen should go from UNCOVERED to COVERED. Press Next to proceed to the Keyboard Test.
- Keyboard When in the keyboard test mode each time you press a key the display should show the name of the key in the Key Pressed line. Press EXIT last to return to the Advanced screen and exit the tests.









This concludes the diagnostic testing. Any returns that do not match the above indicate a problem with the component tested.

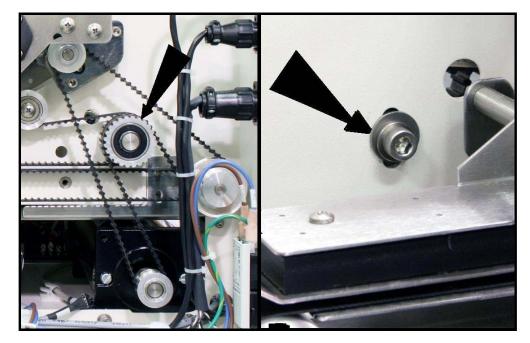
SECTION 4 – Adjustments Motor Drive Belt

Requirement:

The drive belts must have the proper tension.

Adjustment:

- 1. Unplug the machine from its power source.
- 2. Remove the four screws and remove the rear cover.



- 3. Loosen the nut on the idler pulley and adjust the tension 1/8" play in the motor drive belt.
- 4. Tighten the nut and then recheck the adjustment.
- 5. Replace the covers.

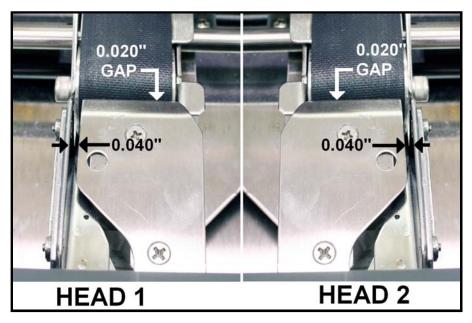
Tab Guide Plate Alignment

Requirement:

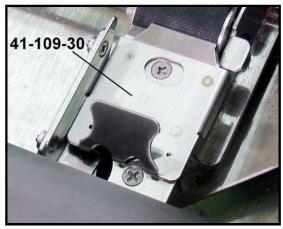
The Tab Guide Plate must be returned to its proper position whenever it is removed for cleaning.

Adjustment:

- 1. The Tab Guide Plate is held in place by two screws and a nut plate.
- 2. Loosen the two Guide Plate mounting screws and install the 41-109-30 Tab Plate Installation Fixture over the Tab Guide making sure that the lip on the fixture is between the belt and the Guide Plate.
- 3. Push the Tab Guide Plate against the fixture and toward the Guide and the Transport Belt.
- 4. Tighten the two screws and then remove the fixture.
- 5. When the adjustment is complete the Tab Guide Plate should be 0.040" from the Side of the Guide and 0.020" from the belt.



NOTE: The 41-109-30 Fixture is used for both heads.



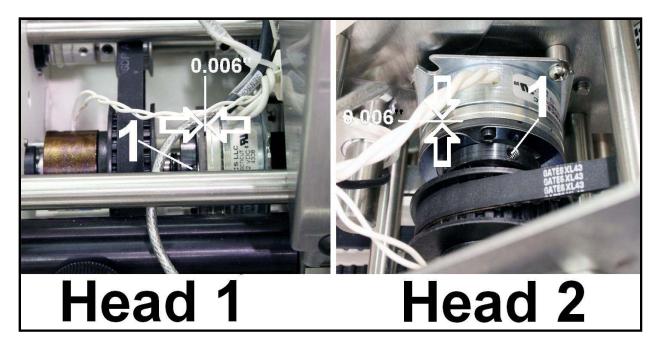
Tab Brake Adjustment (Head 1 and Head 2)

Requirement:

The Tab Brake must be set properly to advance the tabs.

Adjustment:

- 1. Remove the Rear Cover of the Tabber to access the Brake on Head 2 or remove the Top cover from the Head 1 to access its Brake.
- 2. Loosen the two Allen screws [1] that hold the brake plate to the shaft.
- 3. Insert a 0.006" feeler gage between the brake and the brake plate.
- 4. Tighten the two Allen screws [1].
- 5. Replace the covers.



Tab Clutch Position Adjustment

Requirement:

The tab must be placed in the position that is selected in the software.

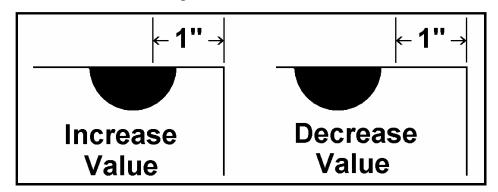
NOTE: THIS ADJUSTMENT SHOULD BE CHECKED EACH TIME A CLUTCH IS REPLACED IN EITHER HEAD.

Adjustment:

- 1. After replacing a clutch in either head, set up a job to place a tab 1" from the lead edge of a piece.
- 2. Run at least five (5) pieces and check the location of the tab on each one. If it is 1" from the edge, no adjustment is required.
- 3. If it is not, measure the distance the tab is from the lead edge using the scale on the tabber control panel. It is in tenths of an inch.
- 4. Turn off the tabber, then hold down the CLEAR key and turn the tabber on. In a few seconds the "Enter Sensor offset #1 and press SAVE key" screen will appear.

Enter Sensor offset #1 and press SAVE key 0.000" Current Value: 3.750"		Enter Sensor offset #2 and press SAVE key 0.000" Current Value: 3.750"				
Status: Diagr Offset#2	iostic	EXIT	Status: Diagr Offset#1	IOSTIC		EXIT

5. The default value is 3.750" for both heads. If the tab is too close to the lead edge enter a number in 0.010" increments that is greater than the default. If the tab is farther from the lead edge of the piece, enter a number that is less than the default in increments of 0.010". Enter the number and press SAVE.



- 6. If you wish to adjust Head # 2 press the Offset # 2 soft key otherwise enter a number and press SAVE. Then press EXIT.
- 7. This will return you to the operate screen. Run at least five (5) pieces to check the adjustment.

NOTE: The Center Tab position is adjusted by the operator in the software.

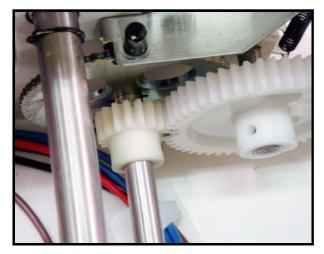
Head Assembly Alignment

Requirement:

The Pressure rollers must be parallel and provide pressure to seal the tab for both heads.

Adjustment:

- 1. Position Head 1 at its closest point on the operator side of the Tabber.
- 2. Unplug the Tabber from the power source. Then Open the front Control Panel and remove the rear and right hand covers.
- 3. Turn the raise and lower gear until the head assembly is at its lowest point on the cams assembly on the operator side of the tabber. The point at which the timing marks on the gears match.



4. Place two strips of 90 # card stock between the two sides of the Applicator Head exit rollers and check for an even pull.



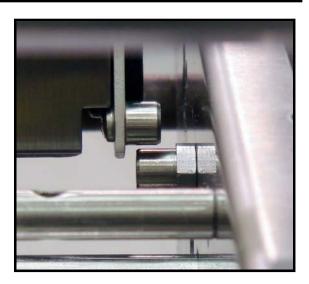
NOTE: The pressure required to pull the strips of paper should not be excessive.

- 5. Also, put two strips of 90# paper under the two entrance guides. Check that when the strips are pulled you can feel the Balls turning in the belt guide.
- 6. If the pull on the paper on the non-operator side is not even, adjust the cam roller eccentric (5) on the non-operator's side. The Cam roller eccentric is accessible through the hole in the rear side frame. If the pull is not even on the operator side when the bridge is all the way down go to step 11.



ADJUSTMENTS

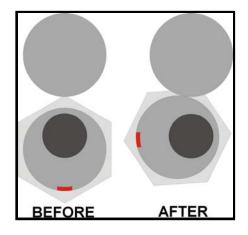
 Turn the two Applicator Head Stop Cams to their lowest position making sure that the stop does not touch the cam as shown. Loosen the lock nuts on the two latch screws and raise the screws.



8. Place two strips of 90 # paper between the forwarding rollers on the Applicator Head assembly and the Transport Belts and close the Applicator Head assembly. Check for an even pull on the strips. Turn the screws to a point below the latches and then unscrew them until the latch just closes against the screw, back off an additional 1/4 turn. Tighten the lock nuts while making sure the screws do not move. Check for an even pull on both sides. The pull should be even on both sides.



- 9. Also, put two strips of 90# paper under the two entrance guides. Check that when the strips are pulled you can feel the Balls turning in the belt guide.
- 10. Adjust the two eccentric stops against the Applicator Head until they just touch as shown in the before and after illustration.

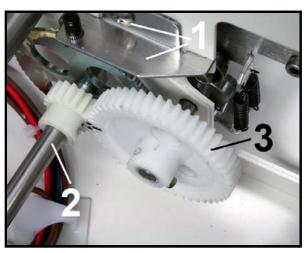


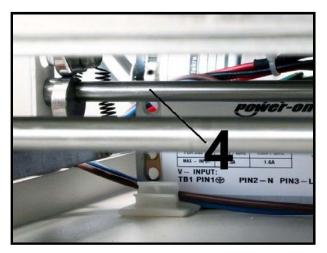
NOTE: The adjustment below is only done if the pull on the paper is less on the operator side of the machine.

11. If the pull on the Operator Side is not correct after the above adjustment is performed, remove the screw (1) that holds the Cam pin in place on the side frame. Loosen the collar on the inside of the front cover that holds the positioning drive gear in place and pull the Raise and lower knob toward you to release the Drive Gear (2) from the Raise and Lower Gear. (3).

NOTE: When reassembling after making this adjustment, make sure that the stop pin is in its proper or "0" position.

12. The front or right-hand cam shaft that is part of the raise and lower geer should allow the head to be in its lowest point where the operator side of the exit rollers touch. If the cams do not allow the head assembly to bottom out, the grasp the rear shaft (4) with a pair of pliers and turn the Raise and Lower gear (3) to slip the belt on the pulleys until the head sits evenly front to back.





CAUTION

DO NOT LOOSEN OR REMOVE THE CAMS TO ADJUST THE BRIDGE ASSEMBLY. DOING SO WILL MAKE REASSSEMBLY DIFFICULT.

13. Reassemble the Raise and Lower Drive Gear (2) making sure that the timing mark matches the timing mark on the Raise and Lower Gear (3). Reinstall the Cam Pin assembly (1). Then go to Step 3 through 10 and repeat the adjustments.

Power Supply Adjustment

Requirement:

Provide proper output from power supply to machine.

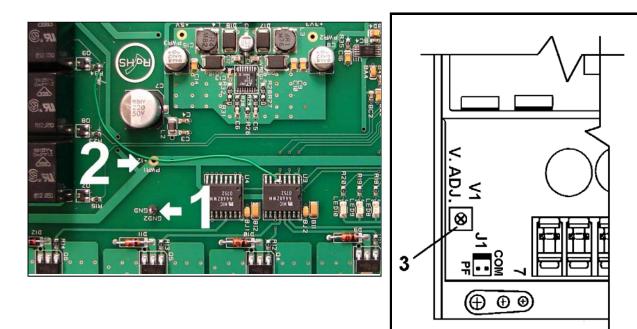
Adjustment

- 1. Remove rear cover and the left-hand side cover and connect voltmeter probe to GND [1] and +12V [2] on Interface PC Board. Turn the tabber **ON**.
- 2. Adjust V1 ADJ potentiometer [3] on the Power Supply module to obtain 12.0 VDC \pm 0.1 V.

CAUTION

THE ADJUSTMENT IS NEAR THE CONNECTION POINTS FOR THE INPUT AND OUTPUT OF THE POWER SUPPLY. USE A NON-CONDUCTING TOOL FOR MAKING THE ADJUSTMENT AND PUT THE TOOL IN PLACE BEFORE TURNING ON THE Tabber POWER.

3. Turn the tabber **OFF**, apply lacquer such as nail polish to the potentiometer, and replace the cover.



INTERFACE PC BOARD

POWER SUPPLY

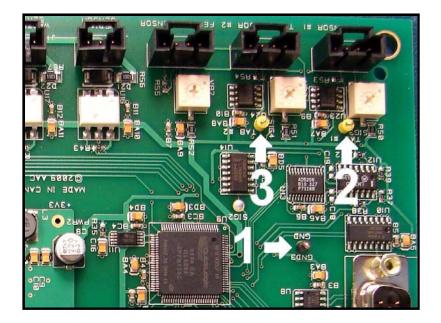
Tab Sensor Adjustment Head 1 and Head 2

Requirement:

Adjust the Tab Sensor so that it can automatically detect the tabs in the machine and that the voltages are equal.

Adjustment:

- 1. Remove the rear cover from the tabber.
- 2. Remove the Tabs from both of the heads.
- 3. Place a Business Card in each sensor.
- 4. Locate the Tab Sensor potentiometers on the I/O PC Board. (upper right-hand corner)
- Attach a volt meter to GND (1) and to one of the Sensor Output connections (Head1 (2) or Head 2 (3). Turn on the Tabber and adjust the potentiometer to obtain 3.0 V DC. Then adjust the second potentiometer for 3.0 V DC.
- 6. Remove the Cards, install tabs and use the software to set the V-Tab voltages for each head.
- 7. Replace the rear cover on the tabber.



I/O PC BOARD

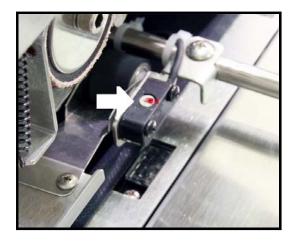
Media Sensor Adjustment

Requirement:

Adjust the Media Sensors so that they detect the media.

Adjustment:

- 1. Turn the tabber on with the main power switch.
- 2. Place a piece of white paper or card stock on the belts so that it blocks the reflective lens mounted on the base of the tabber.
- 3. Turn the sensitivity adjustment on the top of the sensor fully counterclockwise to the minimum sensitivity position.
- 4. The turn it clockwise past the point at which the ORANGE light turns GREEN
- 5. Remove the piece of media the light should be ORANGE. Re-insert the piece of paper and check that the light turns GREEN.
- 6. Place a small amount of lacquer or nail polish on the adjustment.



MEDIA SENSOR

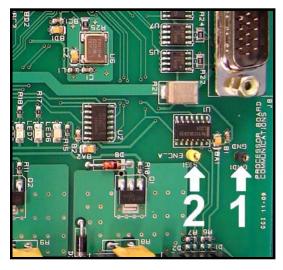
Tabber and Feeder Speed Control Adjustment – Part 1

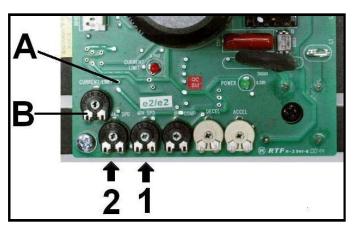
Requirement:

The maximum speed must be no more than 100 ips.

Adjustment:

- 1. Open the Control Panel. The speed control is located on the left-hand side.
- 2. Pre set the IR Comp pot to the 10 o'clock position and the ACCEL to the 11 o'clock position.
- 3. Turn on the Tabber and turn on the Transport Power. Press the RUN button to start the tabber.
- 4. Put a voltmeter between points A and B and adjust the Current Limit pot for 1.5 VDC.
- 5. Adjust the Motor Speed Control knob on the control panel to "0". The belts should not be moving at this point. Adjust the Min Speed potentiometer [1] on the Motor Control PC Board until the belts just turn, then turn the pot so that the belts do not turn.
- 6. Turn the Motor Speed Control knob to position "1". The belts should be moving at slow speed.
- 7. Turn the Motor Speed Control knob to position "10". The belts should be moving at a speed of 250 feet per second as measured with a tachometer. This is equivalent to a 25.0 KHz signal on the I/O PC Board at GND1 and SIG 1(ENC A). Adjust the Max Speed potentiometer [2] on the Speed Control PCB.
- 8. Turn off the Tabber and replace the covers.





I/O PC BOARD

Tabber MOTOR SPEED CONTROL PCB

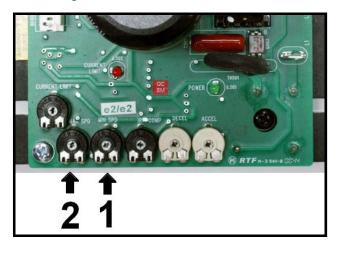
Tabber and Feeder Speed Control Adjustment – Part 2

Requirement:

The maximum speed must be less than the speed of the Tabber when it is operating in the Auto Mode.

Adjustment:

- 1. Remove the operator side covers. The speed control is located on the base of the machine. Set the Auto/Manual Switch on the Feeder to the **Manual** position.
- 2. Pre set the IR Comp pot to the 10 o'clock position and the Current Limit pot to the 11 o'clock position.
- 3. Turn on the Feeder power switch.
- 4. Adjust the Motor Speed Control knob on the control panel to "0". The rollers should not be moving at this point. If they are adjust the Min Speed potentiometer [1] on the Motor Control PC Board so that the rollers do not turn.
- 5. Turn the Motor Speed Control knob to position "1". The rollers should be moving at slow speed.
- 6. Set the Auto/Manual Switch to **Auto** and feed some media with the tabber speed control set at maximum. Adjust the Max Speed pot [2] on the feeder so that there is a minimum of 1-1/2' gap between the pieces being fed.
- 7. Turn off the machines and replace the covers.



FEEDER MOTOR SPEED CONTROL PCB

SECTION 5 – Disassembly and Assembly

The following will assist you in disassembling the Tabber for servicing:

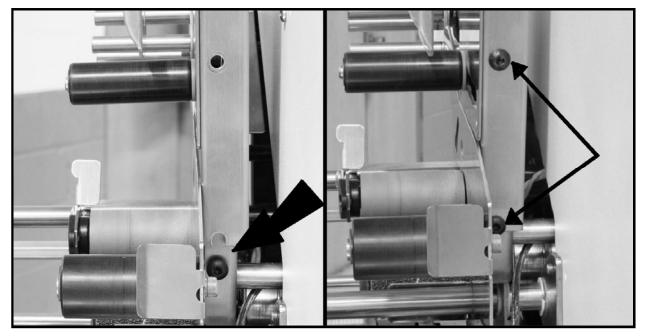
CAUTION

DISCONNECT THE Tabber AND THE FEEDER FROM THE POWER SOURCE BEFORE ATTEMPTING ANY DISASSEMBLY

Tabber Disassembly

Removing the Reel Assembly

1. Remove the upper screw that holds the Reel Assembly to the Tabber and loosen the lower screw. Lift the Reel Assembly from the machine.



2. Reassemble in reverse order.

Tab Applicator Removal and Disassembly

Dry, compressed air should be used to clear dust from the inside of the Tab Applicator Assemblies and Tab Sensors. Never use liquids to clean sensors.

To clear tabs/stamps and adhesive from inside the Tab Applicator Assemblies and Tab Sensors, the Tab Applicator Assemblies can be removed from the heads and disassembled for cleaning.

CAUTION: Be careful of wire connections when performing this task.

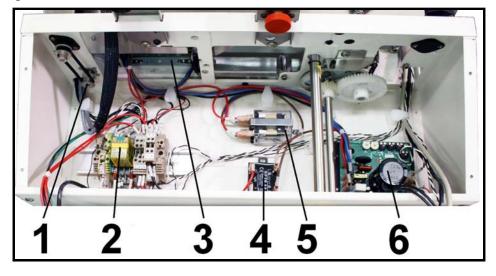


Removing Front Cover

1. Remove the four screws from the Front Cover; hinge the cover forward to gain access.

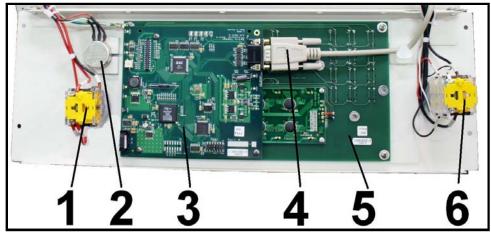


2. Components under Front Cover:



- 1. Encoder
- 2. I/O Relay
- 3. Power Supply

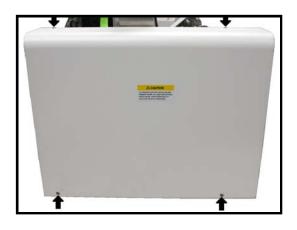
- 4. Transport Motor Relay
- 5. Speed Control Relay
- 6. Motor Speed Control
- 3. Components inside front cover.



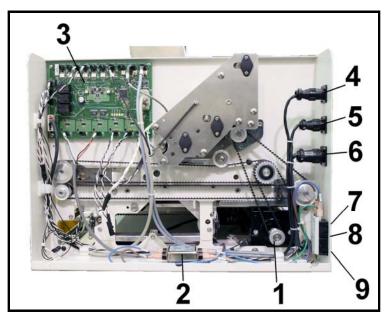
- 1. Transport Power Switch
- 2. Transport Speed Control
- 3. Main Processor PC Board
- 4. Interface Cable
- 5. Control PC Board and Display
- 6. Emergency Stop Switch

Removing Rear Cover

1. Remove the four screws holding the cover in place and remove the cover.



2. Components under rear cover:



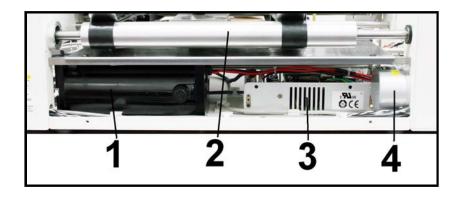
- 1. Main Drive Motor.
- 2. Line Filter
- 3. I/O PC Board
- 4. Emergency Stop Input
- 5. Emergency Stop Output
- 6. Tabber/Feeder Connection
- 7. Main Power Switch Tabber
- 8. Fuse
- 9. Power Inlet Tabber

Removing the Left-hand Side Cover

1. Remove the two screws from the cover and then remove the cover.



2. Components under Left-hand Cover are:

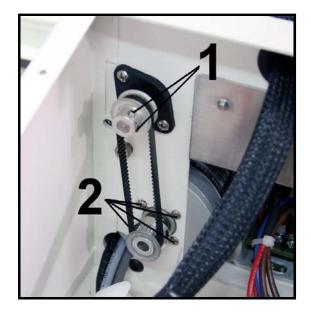


- 1. Main Drive Motor
- 2. Main Drive Roller

- 3. 12 Volt DC Power Supply
- 4. Encoder

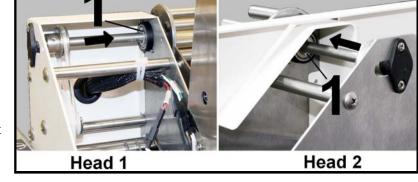
Encoder and Encoder Drive Belt

- 1. The Encoder and Encoder Drive Belt are located under the front cover panel on the left-hand side of the tabber body.
- 2. To remove the Encoder or replace the Encoder Drive belt loosen the two screws on the drive roller (1), remove the pulley and belt.
- 3. To remove the Encoder, remove the four screws (2) that mount the encoder to the frame.
- 4. Reassemble in reverse order.



Replace the Take-up Reel Drive Belts

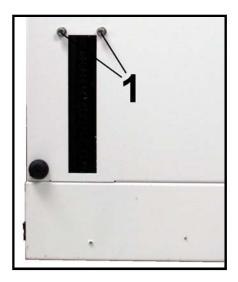
- 1. To replace the Take-up Reel Drive belt on Head 1 remove the cover over the Take-up Reel drive assembly. To replace the Take-up Reel Drive belt on Head 2 remove the rear cover from the tabber.
- 2. Remove the Tru Arc (1) from the Take-up Reel shaft.
- 3. Slide the Take-up Reel assembly away from the support bearing.
- 4. Remove the old belt and install a new one.



- 5. Slide the Take-up Reel assembly back into the bearing and reinstall the Tru Arc.
- 6. Replace the cover.

Replacing the Drive Motor

- 1. Unplug the feeder from its power source.
- 2. Turn the Tabber over on its back (rear cover).
- 3. Remove the two motor mounting screws (1), and then set the Tabber back on its feet.

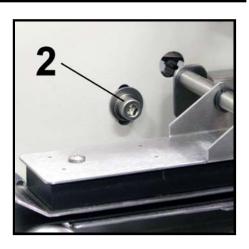


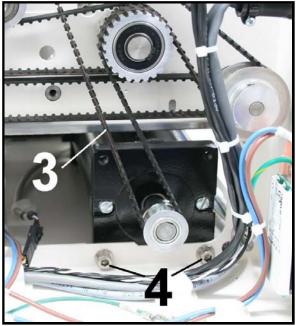
- 4. Remove the Left-hand Side Cover, the Non-operator Side Cover and the Control Panel Cover.
- 5. Unplug the motor from the Motor Speed control PC Board.

NOTE: THE CABLE IS HELD TO OTHER WIRES BY TIE-WRAPS. THESE WILL HAVE TO BE CUT AND REPLACED WHEN REASSEMBLING.

6. Loosen the adjustment Allen screw (2) on the Double Pulley.

7. Remove the Drive Belt (3) and the two Allen screws (4), and then remove the Motor.





8. Reassemble in reverse order; making the belt tension adjustment after the two mounting screws on the bottom of the Tabber are installed.

IMPORTANT

WHEN ROUTING OF THE WIRE TO THE SPEED CONTROL MAKE SURE THAT YOU REPLACE ANY TIE-WRAPS THAT WERE REMOVED.

9. Replace the covers and test the operation of the Tabber.

Replacing Sandpaper on Tab Drive Roller

1. Turn the Tabber on and set the speed control to "0". Press the start button to cause the brake to activate. This will lock the drive roller so that the Allen screw can be removed.



2. Remove the Allen screw that attaches the tab driver roller to the drive shaft and remove the Sandpaper roller.

IMPORTANT

THE ALLEN SCREWS THAT APPLY PRESSURE TO THE ROLLER ARE REMOVED AS FOLLOWS: HEAD 1 TURN THE SCREW COUNTERCLOCKWISE TO REMOVE AND HEAD 2 CLOCKWISE TO REMOVE.



3. Repeat the steps in reverse after replacing the sand paper roller. Tighten the Allen screw to compress the rubber roller and hold the sandpaper roller in place.

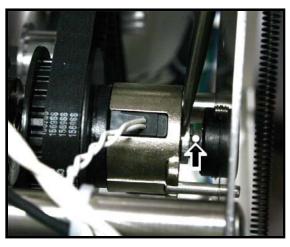
Replacing Clutch and Brake

NOTE: Both Head 1 and Head 2 clutch and brake are removed in the same manner.

- 1. For Head 1 remove the cover over the head assembly. For Head 2 remove the rear cover from the Tabber. In either case cut the Tie-Wrap that is holding the wires in place.
- 2. Use a screwdriver to push the clutch toward the brake. Remove the pin from the rear of the clutch by pushing it out with a small piece of wire. Set the pin aside.

3. Loosen the two screws that hold the brake plate to the shaft.

4. Continue by removing the screw that holds the Sandpaper Roller and rubber roller assembly.





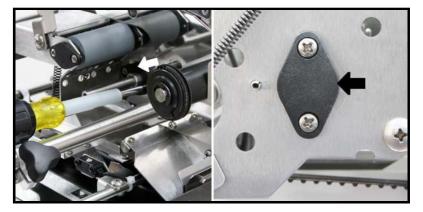


DISASSEMBLY AND ASSEMBLY

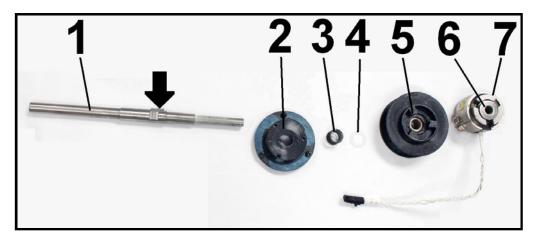
5. Remove the Allen screw, washer, sandpaper roller, rubber drive roller and the washer behind the drive roller and set aside.



6. Remove the Bearing from the roller side and from the clutch side of the Head.



7. Pull the Shaft out of the assembly by pulling it from the Sandpaper roller side of the assembly. The belt will be freed when the shaft is removed.

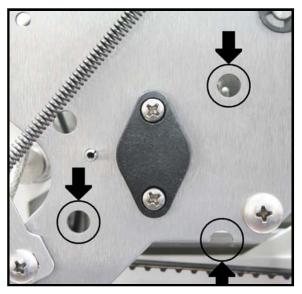


NOTE:	The arrow	points to a	key in	the shaft t	hat holds t	the brake	face in place.
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Key	Part #	Description	Key	Part #	Description
1.	41-121-03	Shaft	5.	29-103-06	Pulley
2.	41-500-79	Brake (Head 1)	6.	27-102-10	Washer
2.	41-500-78	Brake (Head 2)	7.	41-500-18	Clutch (Head 1)
3.	29-103-08	Spring	7.	41-500-19	Clutch (Head 2)
4.	123-0312	Washer			

NOTE: The Clutch and Brake for each head have different part numbers.

8. Remove the Brake by removing the three screws that attach it to the side frame. There are three access holes in the outer frame to permit access.

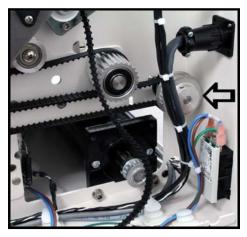


NOTE: A little dab of grease on the end of the Phillips Screw Driver will make it easier to reassemble the Clutch and Brake.

9. Reassemble in reverse order. Make sure that the two washers are properly installed. Refer to Step 7 for their location. When you have finished the assembly adjust the Brake Plate. Then test run the machine and check the tab placement before replacing the covers.

Replacing Transport Belts

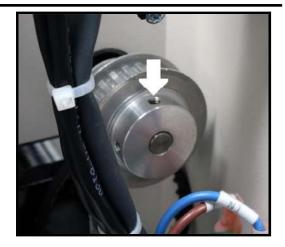
- 1. Unplug the Tabber.
- 2. Remove the Control Panel, Rear cover and Left-hand cover.
- 3. Loosen the drive belt adjustment and remove the drive belt from the Rear Drive Roller pulley.



W360 Tabber Service Manual

DISASSEMBLY AND ASSEMBLY

4. Remove the Drive Pulley from the Drive roller shaft.



5. Loosen the Exit Roller drive pulley and the Drive Roller pulley. Remove them and the Roller Drive Belt from the Tabber.

6. Remove the two pulleys and the belt from the Drive Roller and the Encoder.

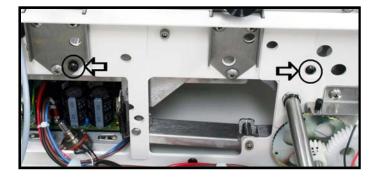




7. Remove the Center Support Plate and the Guide from the Tabber.



8. Remove the Two Support Rods screws.



9. Slide the Rods toward the Rear of the Tabber.



10. Remove the two screws and the Drive Roller Bearing from the Operator's side of the Tabber.



W360 Tabber Service Manual

DISASSEMBLY AND ASSEMBLY

11. Remove the two screws in the Drive Roller bearing at the rear of the Tabber and slide the roller toward the front of the machine. This will provide clearance for removing the belts.

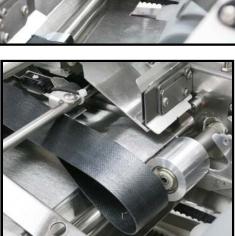


12. Remove the tab guide plate from the transport assembly (two Allen screws).

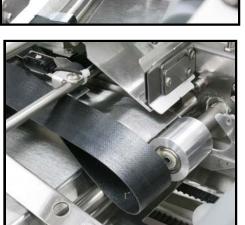
13. Slip the belt off the front guide roller and then slide it off the Drive Roller.

14. Then remove it from the Drive Roller at the rear.



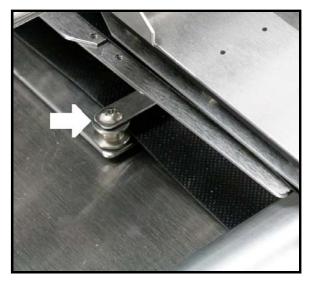






Removing Transport Belt on Head 1 -

15. The Transport belt on Head 1 is removed in the same manner as on Head 2 with the exception that the Belt Guide must be removed before the belt can be removed. The belt guide is held in place by two screws.

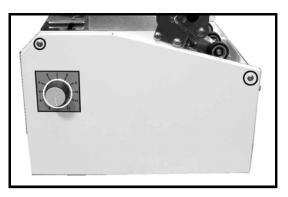


16. Reassemble in reverse order and then check the Tab Guide adjustment and the Motor Drive belt tension adjustment.

Feeder Disassembly

Removing Covers

- 1. Unplug the feeder from it power source.
- 2. Remove the Speed Control Knob and the two screws circled from the operator's side of the feeder. Then lift the cover from the machine.

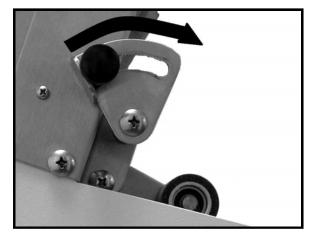


3. Remove the two screws circled from the nonoperator's side of the feeder and lift the cover from the machine.



Replacing Feed Rollers

- 1. Remove Side covers from the machine.
- 2. Lock the upper forwarding rollers in the maximum open position by loosening the locking screw and rotating the lever clockwise, then tightening the locking screw.



3. Remove the two screws that attach the side guide to the feeder and remove the side guide.

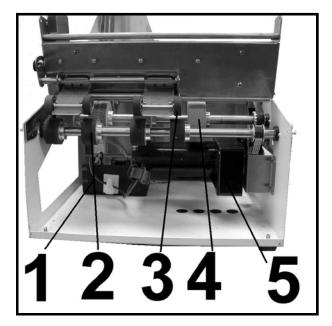
4. Remove the seven screws that attach the front plate to the feeder. There are two screws on each side and three across the top behind the feed roller.





5. Remove the bearings from each side of the roller shaft and remove the roller and shaft assembly from the machine. Replace the rollers and reassemble.

Feeder Front View

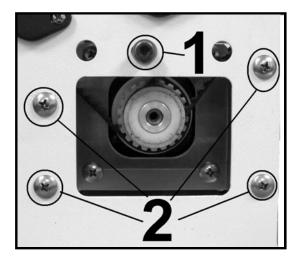


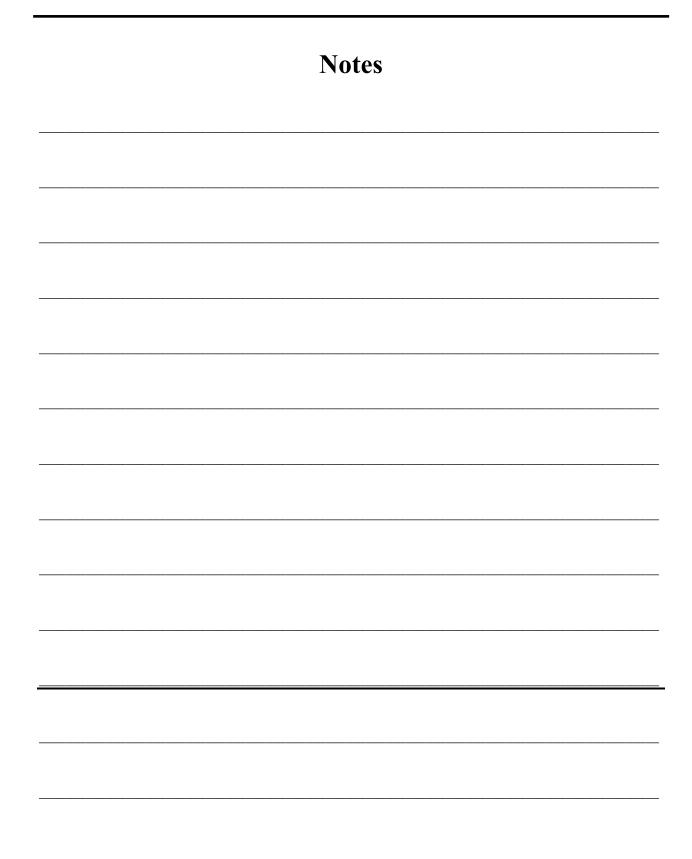
1.	Motor Speed Control
2. Low	er Forwarding Rollers
3. Upp	er Forwarding Rollers
4. Feed	Rollers
5.	Feeder Main Drive Motor.

Removing the Drive Motor

- 10. Unplug the feeder from its power source.
- 11. Remove the non-operator side cover.
- 12. Unplug the motor from the Motor Speed control PC Board.
- 13. Remove the Take-up Roller by removing the Allen screw [1].
- 14. Remove the four screws [2] that attach the motor to the feeder frame.

15. Reassemble in reverse order.





SECTION 6 – *Maintenance*

This section describes maintenance that an experienced operator can perform. If any service or maintenance beyond which is described in this document is required, please contact your local dealer.

Cleaning

WARNING

THE Tabber AND FEEDER ARE PRECISION MACHINES THAT SHOULD BE CLEANED REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE, DISCONNECT THEM FROM THEIR POWER SOURCE!

The Tabber and Feeder must be cleaned regularly of accumulated paper dust and ink. Depending on the types of media that are run, paper dust may accumulate within machines and on the transport. To clean unplug both machines from the power receptacle and then remove the covers.

The internal areas are best cleaned with a vacuum that has a soft brush attachment to help loosen the dust particles. Take care not to damage the PC Boards or electrical wiring.

The exterior of the machine may be cleaned with any standard household cleaner, which is nonabrasive and does not contain plastic harming solvents.

CAUTION

NEVER SPRAY OR POUR CLEANERS DIRECTLY ON OR INTO THE Tabber OR FEEDER. EXCESS LIQUID COULD HARM ELECTRONIC PARTS. ALWAYS DAMPEN A RAG WITH THE CLEANER AND APPLY IT TO THE PARTS TO BE CLEANED.

Rollers and Transport belts

The belts and rollers can become glazed with paper lint and ink from the media. They should be regularly cleaned with a mild abrasive household cleaner on a damp cloth.

Avoid using solvents on the rubber rollers.

MAINTENANCE

Shafts with movable parts

All of the shafts that have parts of the machine moving on them should be cleaned with a soft cloth.

CAUTION

THE BEARINGS ON THE MOVING PARTS SUCH AS TAB HEAD 1 AND THE TRANSPORT BELT ASSEMBLIES ARE OIL-LESS NYLON. DO NOT PUT ANY SOLVENTS OR OIL ON THEIR SURFACES.

Cleaning the Sensors

There are three sensors in the tabber; two tab sensors one on each of the applicator heads and one media sensor located on the Head 2 Transport Belt assembly. These sensors should be clean and free of accumulated paper dust. Use dry compressed air to remove the dust.

WARNING

DO NOT USE ABRASIVES OF ANY KIND ON THE SENSOR LENS

The sensor locations are as follows:



Media Sensor Test:

There are two LED's located on the entrance side of the Media Sensor.

Green LED ON – Power Present

Orange LED ON – No Paper (not interrupted)

Orange LED OFF – paper Present (interrupted)

If the orange LED is not on when there is no paper present, then the reflector may need to be cleaned.

If the Orange LED comes ON even when paper is present, then the sensor intensity may need to be lowered. This is rare, but possible when high gloss media is being used. A qualified service person should make this adjustment.

Tab Sensor Test

Use the V-Tab adjustment screen to check the live tab sensor voltage (V=) value.

Not Interrupted (Nothing in sensor, Tab stock removed.) = 0.12V or less.

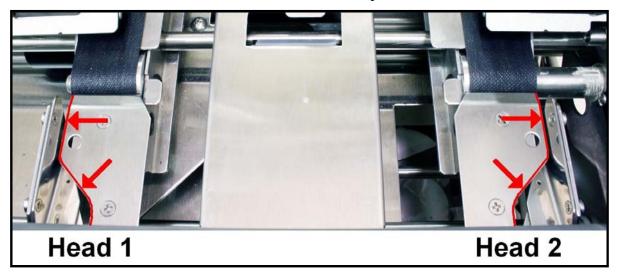
If you removed all the tab material from the Tab Applicator and clean the tab sensor, but it still reads higher than 0.12V; this would indicate a dirty or damaged sensor.

If the tab sensor reads 3.30V or higher, even when the sensor is not interrupted; this would indicate a totally blocked, damager, or disconnected sensor.

If the Tab sensor does not respond correctly after being cleaned, a qualified service person should be contacted to disassembly clean and possibly replace the tab sensor.

Cleaning Tab Wrap Guides

Each of the Transport Belt assemblies has a tab guide that help to fold the tab over for sealing by the pressure rollers. In the course of running a buildup of adhesive will restrict the tab from going into the guide. Both of the guides and the slots should be periodically cleaned with a Q-tip saturated with WD-40 to remove the adhesive residue and provide some lubrication.



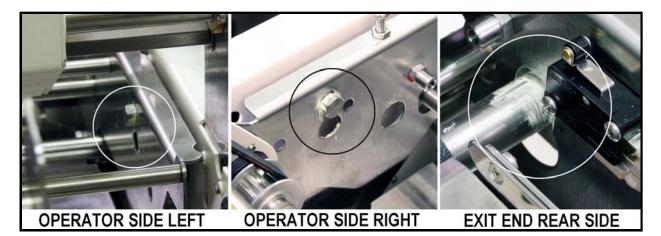
Lubrication

WARNING

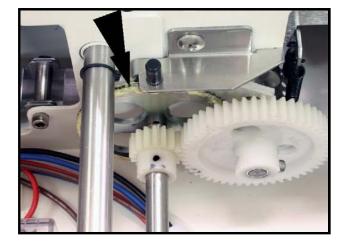
THE Tabber AND FEEDER ARE PRECISION MACHINES THAT SHOULD BE CLEANED REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE, DISCONNECT THEM FROM THEIR POWER SOURCE!

Several locations on the Tabber Tabber require regular lubrication. They are as follows:

1. Place a small amount of White Lithium Grease on the surfaces where the Head Assembly raises and lowers.



2. Lubricate the surface of the stepper cam for the head raise mechanism with white lithium grease as shown.



Appendix A – *Specifications for Tabber*

ONE PASS TAB: STANDARD TAB:	1-3 per side or 1-3 on 1side and 1 front Minimum: 3/4" Maximum 1-1/2"
STAMPS:	1 to 3
MEDIA SIZE (L X w):	Minimum: 3.5" x 5"
	Maximum: 11' x 15" (Detachable Feeder (12" x 17")
MAX MEDIA THICKNESS:	1/4″
TAB SIZE CALIBRATION:	Fully automatic or manual
TAB PLACEMENT SETTING:	Manual or Automatic
TAB SENSOR CALIBRATION:	Manual or Automatic
MEDIA HEIGHT ADJUSTMENT:	Heads
TAKE-UP SPOOLS:	Standard
PRODUCTION RATE:	Two sides tabbed simultaneously (1 tab – 25,000/h)
	Two sides tabbed simultaneously (2 tabs - 15,000/h) Two sides tabbed simultaneously (3 tabs – 10,000/h)
PRODUCTION RATE CALCULATED WITH:	Tri-fold 8-1/2" x 11'
REEL CAPACITY:	Two reels, 10" diameter each
DIMENSIONS: WEIGHT:	28" W X 26" H (with reels) x 34" L (with feeder) 97 lbs.

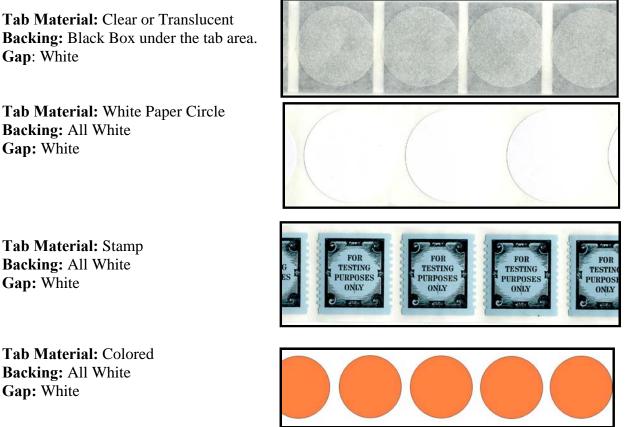
Specifications are subject to change without notice.

Appendix B – *Identifying the Tab Types*

The following images will help you identify which Tab Type (Opaque or Clear) to select when using the Automatic V-Tab feature.

Tab Type – Opaque

Stock that has white space/line (white gap) between each tap/stamp.



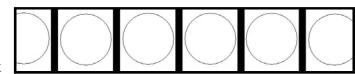
Tab Type - Clear

Stock that has a black space/line (black Gap) between each tab.

Tab Material: Translucent CircleBacking: Black line between each tab.Gap: Black



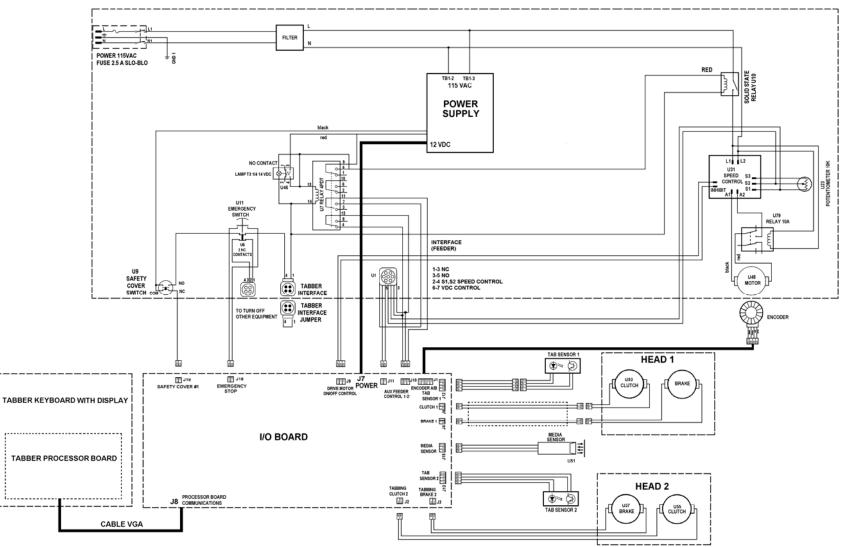
Tab Material: Clear CircleBacking: Black line between each tab.Gap:Black



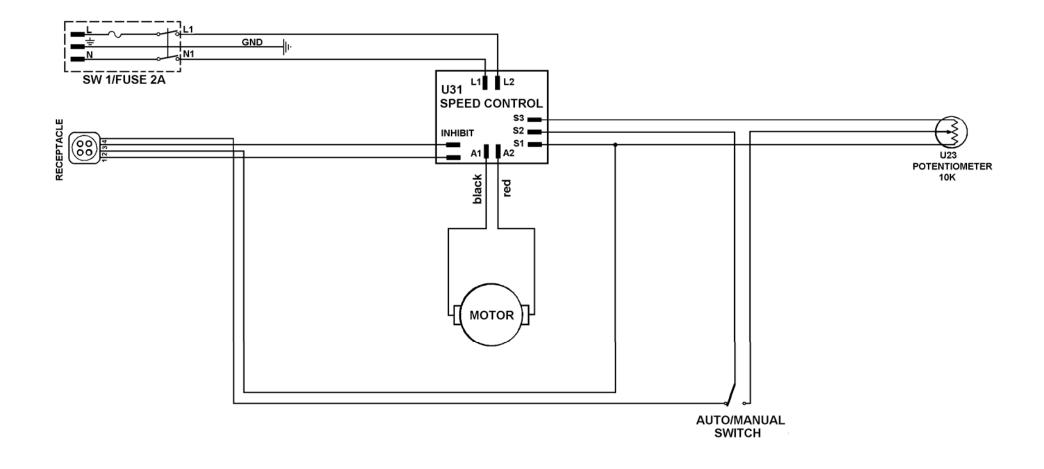
APPENDIX

Appendix C – *Wiring Diagrams*

Tabber Wiring Diagram



FF-309 Feeder Wiring Diagram



INDEX

Α	
Adjustments	19
Advanced	15
Assembly	7
Assembly, Installation and Operation	7
С	
Cleaning	49
Cleaning the Sensors	50
Cleaning the Tab Wrap Guides	51
Connecting	8
D	
Diagnostics	16
Disassembly and Assembly	31
Ε	
Encoder and Encoder Driver Belt	35
Exit End View	2
F	
Feeder and Connections	4
Feeder Front View	47
Feeder Wiring Diagram	58
Front View	1
Н	
Head Assembly Alignment	23
Ι	
Identifying Tab Types	54
J	
Jams	11
L	
Left-Hand Side Cover	35
Lubrication	52
Μ	
Maintenance	49
Media Sensor Adjustment	27
Media Sensor Test	51

Motor Drive Belt	19	
Р		
Power Supply Adjustment	25	
R		
Removing Covers	45	
Removing Front Cover	33	
Removing Rear Cover	34	
Removing Reel Assembly	31	
Removing the Drive Roller	47	
Replacing Clutch and Brake	39	
Replacing Feed Rollers	46	
Replacing Sandpaper on Tab Drive Roller	38	
Replacing Take-up Reel Drive Belts	36	
Replacing the Drive Motor	36	
Replacing Transport Belts	41	
S		
Specifications	53	
Stamp Placement Problems	14	
Τ		
Tab Applicator Removal and Disassembly	32	
Tab Brake Adjustment (Head 1 and Head 2)	21	
Tab Clutch Position Adjustment	22	
Tab Guide Plate Alignment	20	
Tab Placement Problems	12	
Tab Sensor Test	51	
Tab Web Sensor Adjustment Head 1 and Head 2	26	
Tabber and Feeder Speed control Adjustment	28	
Tabber Control Panel	5	
Tabber Electrical Connections	3	
Tabber Operation Problem	15	
Tabber Wiring Diagram	57	
Troubleshooting		
W		
Wiring Diagrams	55	



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