3600ST SLAM PRINTER

APPLICATOR TRAINING HANDOUT

2020

FOR TECHNICAL SUPPORT:

PHONE: 330-332-1800 x129

EMAIL: TECHSUPPORT@CTMINT.COM

CTM RECOMMENDED SETTINGS – 3600ST SLAM

Zebra Printer	Recommended Settings
Zebra Firmware	V53.17.18z
Darkness	18.0
Print SPD	10 IPS
Slew SPD	10 IPS
Backfeed SPD	2 IPS
Tear Off	Printer Dependent
Printer Mode	Applicator
Applicator Port	Mode 2
Start Print SIG	Pulse Mode
Media Type	Non-Continuous
Sensor Type	Web
Print Method	Direct Thermal
Print Width	1200
Max. Length	8.0 IN
Early Warning	Media Disabled
Early Warning	Maint. Off
Init. Flash Mem	Yes
Parallel Comm	Bi Directional
Serial Comm	RS232
Baud	9600
Data Bits	8 Bits
Parity	None
Host Handshake	Xon/Xoff
Protocol	None
Communications	Normal Mode
ZPL Mode	ZPL II
Media Power Up	No Motion
Head Close	No Motion
Backfeed	Before
Label Top	+000
Left Position	+0000 (could change)
Error On Pause	Enabled
Ribbon Low Mode	Disabled
Ribbon Low Output	Active High
Reprint Mode	Disabled
IP Protocol	Permanent
IP Address	Customer's Responsibility
Subnet Mask	Customer's Responsibility
Default Gateway	Customer's Responsibility
Zebra Communication Port	Customer's Responsibility
CTM Application Setup	**Recommended Settings**
Label Placement	0.001 sec
Detector Lockout	0.01 sec
Air Blast	0.060 sec
Extended Air Assist	0.001 sec
Encoder Option	Off
Pulse Length	0.0012 In
Compensation	0.023 In
Encoder Filter	10 Scans
CTM Application Options	**Recommended Settings**
Inhibit Mode	1
Label On Pad	On
Vac Off	On
E-Stop Mode	System Dependent
Printer Bypass	Off
Rewind Delay On	0.000 Sec
Rewind Delay Off	1.000 Sec

Air Pressure Settings:
Slam Line Regulator: 80 PSI
Air assist: 30 – 50 PSI
Blow: 50 - 60 PSI
Vacuum: 12 - 15 PSI
Roto: 80 PSI

Label On Pad Vacuum Switch:
Threshold: -0.6

Air Pressure Sensor:
Threshold: 40

Printer Left Position:
If print is too far outboard relative to the label, adjust this setting as an example to -.050.

Print Engine "No Media Error":
If doing a hard calibration does not clear this error message, CTM suggests reducing the Trans Gain value to approximately 60.

Ethernet Connection Notes:
CTM uses an IP address of 10.8.0.xxx and a Base Raw Port of 9100 and has the print engine set to permanent.

Amazon changes the Base Raw Port to 5964 for SLAM applicators with their own IP Address using DHCP.

E-Stop Mode:
Mode 1 = N/O Input
Mode 2 = N/C Input

CTM RECOMMENDED SETTINGS – 3600ST SLAM (cont'd)

CTM Tamp Setup Menu	Recommended Settings	Notes
Home Offset	.250 In	Expect between .150" and .350"
Print Offset	0.00 In	Refer to manual for more info
Tamp Speed	60 In/Sec	
Height To Speed Comp	55 %	Do not change
Long Tamp Length	21.00 In	Setup dependent
Short Tamp Length	2.00 In	Setup dependent
Delay Roto Alarm Time	.500 Sec	
Extend Roto Clr Distance	0.50 In	
Delay Retract Clr Distance	6.00 In	

Special Options Menus		
Drive Parameters	**Recommended Settings**	**Notes**
Above Home	0.50 In	Do Not Change- consult factory
Below Home	21.12 In	This value should cause the applicator to fault 1/4" - 3/8" above the conveyor surface
Encoder Deadband	0 In/min	
Low Accel	600	Do not change – consult factory
High Accel	1100	Do not change – consult factory
Servo Tuning	**Recommended Settings**	**Notes**
Kpos Gain	700	Do not change – consult factory
Kp Gain	20,000	Do not change – consult factory
Ki Gain	0	Do not change – consult factory
Abort Decel	2000	Do not change – consult factory
Tamp Return	**Recommended Settings**	**Notes**
Retract Current	18 Amps	Do not change – consult factory
Extend Current	17 Amps	Do not change – consult factory
Velocity Error	0.030 In/sec	Do not change – consult factory
Following Error	0.50 In	Do not change – consult factory
Stop Delay	0.075 Sec	Do not change – consult factory
Return Delay	0.100 Sec	Do not change – consult factory
Motion Monitoring	On	
Return Current Monitoring	On	
Misc. Settings	**Recommended Settings**	**Notes**
Applicator Hand	Applicator Dependent	
Tamp Status On Power Up	Enabled On Power Up	
Failure to Home Critical	ON	
Air Pressure Sensor Option	ON	

I/O and PLC troubleshooting

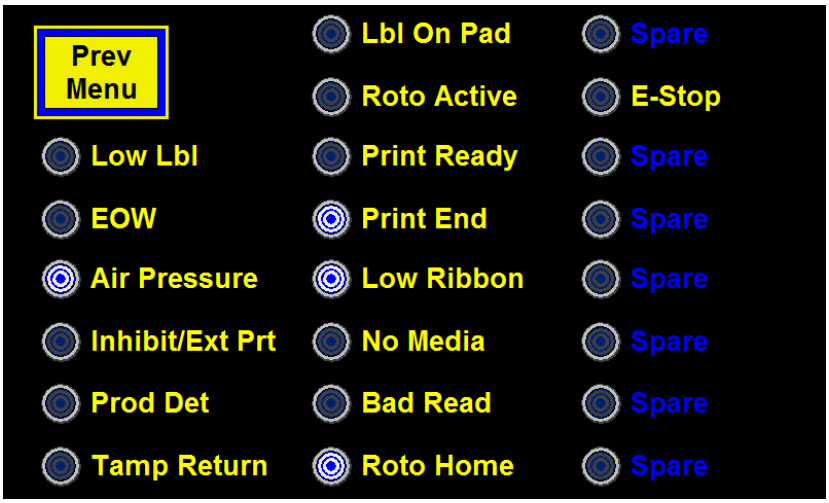
CTM's Inputs/Outputs are "sinking" or NPN.

Checking on/off status of 3600ST I/O

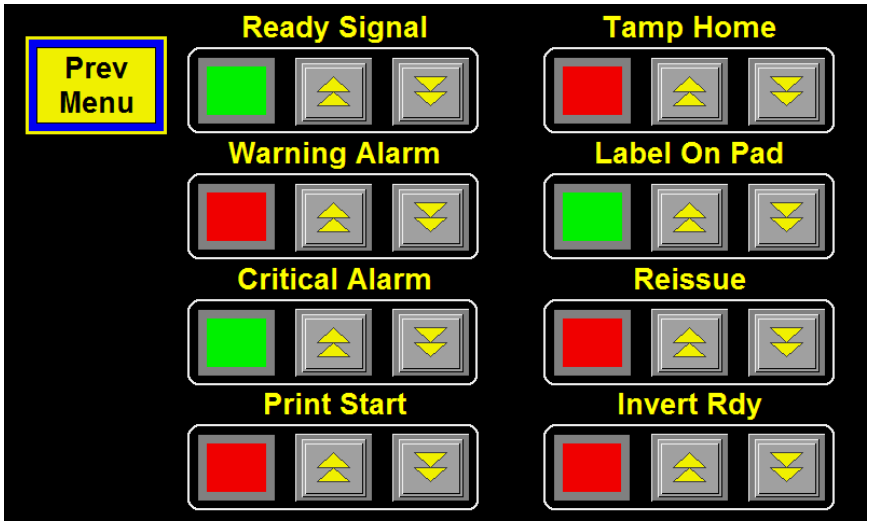
Set voltmeter to VDC. With the red probe of the voltmeter in +24 VDC terminal strip (Terminals 1, 2, 3, 26, and 27 on a 3600ST) and the black probe in the input or output that you are checking read the number on your voltmeter.

- If the reading is +24 VDC (or within .3 VDC) then the input or output is "On" or "active".
- If the reading is 0 VDC or no reading then the input or output is "off" or "inactive".

On a 3600ST the I/O diagnostics menu can be used to monitor whether inputs are on or off and you can manually force the outputs on. The below image shows the input menu of the I/O diagnostics screen. In this image you can see that the inputs for Air Pressure, Print End, Low Ribbon, and Roto Home inputs are turned on. This would mean if you stuck your red probe in 24 VDC and the black probe in the terminal block corresponding to one of the active inputs your meter would read 24VDC.



In the output menu of I/O diagnostics you can choose which outputs are turned on at any time. In the below image the ready signal, critical signal, and label on pad output have all been turned on. This would mean that with your red probe in 24 VDC terminal and your black probe with a terminal corresponding to one of the turned on outputs your meter would read 24 VDC. These outputs function and transition completely independently of any inputs while I/O diagnostics is active.



Panasonic Vac Switch - CTM # PE-SW1074 - Set-up Guidelines
AMAZON

Where Used
3600st – Label on Pad

Blu= 0vdc
Brn= 24 vdc
Blk= Sensor Output

1) Once powered up – Press and hold the blue *Mode Key* for 2 seconds
2) Select: Easy / Out1; press *Mode Key*
3) Select: OFF / Out2; press *Mode Key*
4) Select: NC / NoNc; press *Mode Key*
5) Select: 2.5(ms) / SPED; press *Mode Key*
6) Select: G-ON / CLOR; press *Mode Key*
7) Select: inHg / UNIT; press *Mode Key* to enter run mode

***Label On Pad option - The program will monitor this output from the time the air assist turns off until the air blast output turns on.**

Calibrating new "out of box" sensors:

Before setting up the threshold value, the sensor needs to be calibrated. To calibrate the sensor follow the below steps:

A) Install the sensor and power up the machine.
B) After the label feed and vacuum are properly setup make sure no label is present on the pad and that the air is on to the applicator.
C) Press and hold the "Up" and "Down" arrow keys on the sensor for two seconds. The value in the main "L.E.D." display screen should read 0.0.
D) Proceed to set up the sensor threshold value as instructed below.

Note: If the vacuum pressure is increased or decreased, you may have to recalibrate the sensor so it again shows 0.0.

Set-up of threshold value:

A) Use the *Up* or *Down* arrow keys on the sensor to set the threshold to **-0.6.**

Note: The sensor will output as **ON** whenever vacuum greater than **-0.6** is detected.

Panasonic Air Pressure Switch - CTM Part Number PE-SW1026
Set-up Guidelines

Blu= 0vdc
Brn= 24 vdc
Blk= Sensor Output

1) Once powered up – Press and hold the blue Mode Key for 2 seconds
2) Select: Easy / Out1; press *Mode Key*
3) Select: OFF / Out2; press *Mode Key*
4) Select: N.o / N.oN.c; press *Mode Key*
5) Select: 2.5(ms) / SPED; press *Mode Key*
6) Select: G-ON / CLOR; press *Mode Key*
7) Select: PSI / UNIT; press *Mode Key* to enter run mode

***Air Pressure Sensor Option must be enabled in the Special Options section of the display.**

Set-up of threshold value:

A) Enter 40 in the sub display by using the "up and down" arrow keys.

Note: For new "out of box" sensor installations

Before setting up the threshold value, the sensor needs to be calibrated. To calibrate the sensor follow the below steps:

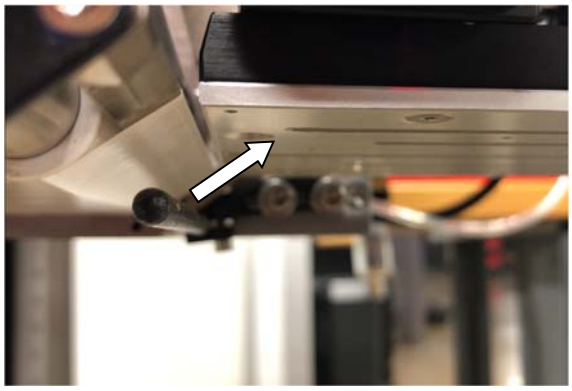
A) Install the sensor and power up the machine.
B) Turn the air to the system off, via the manual shut off valve.
C) Press and hold the "Up" and "Down" arrow keys on the sensor for two seconds. The value in the main "L.E.D." display screen should read 0.0.
D) Proceed to set up the sensor threshold value as instructed above.

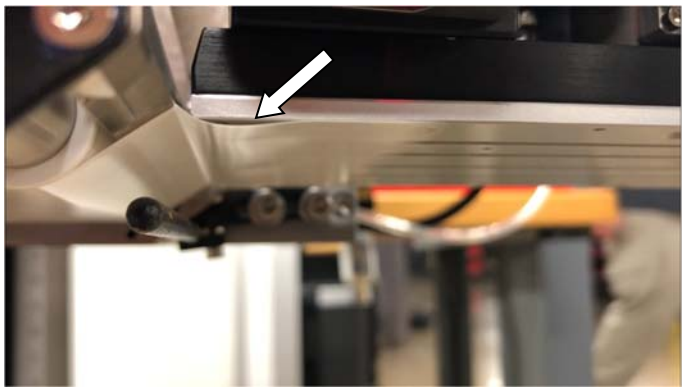
Tamp Position Setup Guide

For: 3600ST SLAM

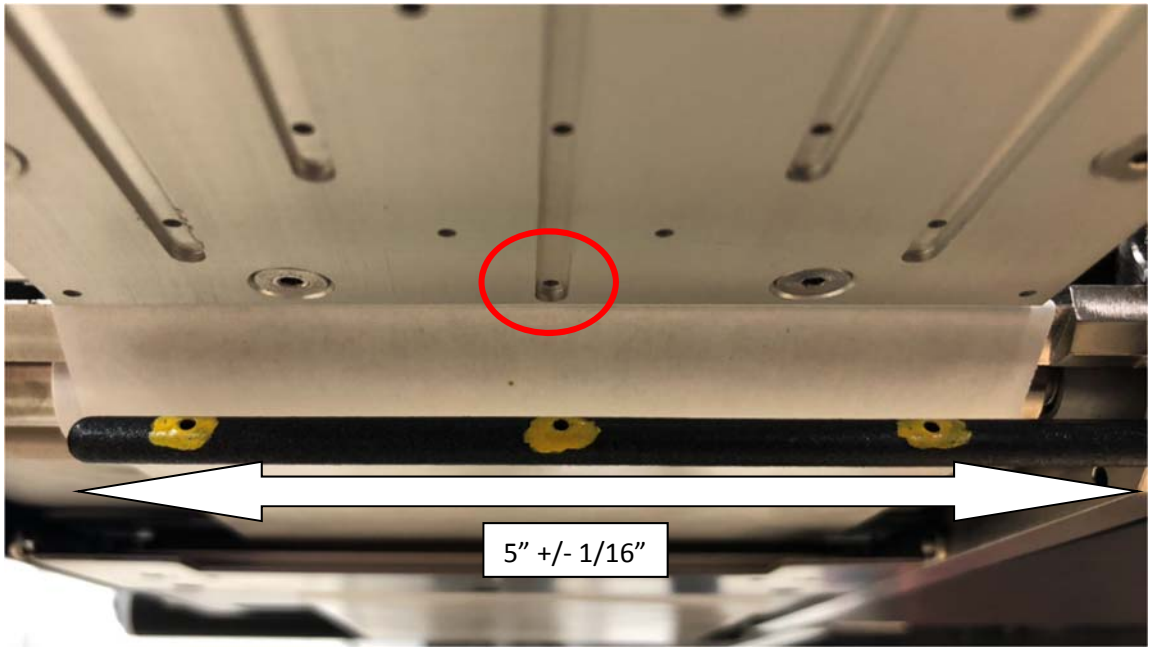
The distance between the peel bar of the printer and the chamfered edge of the label pad should be slightly over 1/16”.

The height of the pad in relation to the peel tip will vary, but should position the pad slightly lower than the peel tip of the printer. The Home Offset setting in the tamp setup menu should be set to .250” +/- .100”.





The angle of the air assist tube should be set so that the label does a short dip below the label pad before being blown back onto the label pad for a smooth consistent feed. The arrow in the left image shows the approximate location which the air assist holes should be aimed at the label pad. The arrow in the right image shows the short dip below the pad that will be seen as the label feeds out from the printer.



The holes in the air assist tube should be centered across the label pad to provide an even air flow pattern across the label width. In order to center the tube across the pad the center hole in the tube should be lined up with the center groove on the label pad. This will leave about 5” +/- 1/16” of the air assist tube sticking out from the faceplate.

Typically, when the label feed needs adjusted it can be attributed to various aspects:

- **Air pressure**: Ensure that the air assist pressure and vacuum pressure are within the recommended ranges. Having a vacuum that is too high can cause a “flutter” in the label feed. When adjusting the vacuum pressure be sure to re-zero the vacuum switch. For instructions on zeroing the vacuum switch find the “Panasonic Vacuum Switch” page in the training handout.
- **Tamp Position**: The position of the tamp head can manipulate the label feed. Ensure that the tamp is setup correctly. The tamp pad position can cause issues because the label may feed into the side of the pad if the pad is too low or the label may not fully “pop” off the liner if the pad is above the peel edge.
- **Air assist tube position**: The air assist tube position, or distance it is extended from the faceplate, can cause issues. The main issue that can arise from an incorrect air assist tube position is a crooked label. The tube should be centered on the pad as seen in the photos.
- **Air assist tube angle:** An angle that is too steep can cause the label to not feed out far enough onto the pad to cover all the vacuum holes. An angle that is too flat can cause the label to blow off the end of the pad.

Initial Setup of Keyence LR-ZB250CN Tamp Return

For Amazon SLAM 3600st

To setup the Keyence sensor it must be programmed to measure a max distance of eight inches. The eight-inch mark would then be the sensors “zero point.” After the zero point is set the sensor will measure the height of an object above or below that point and will transition when a user-defined threshold is reached.

To set the zero point move the tamp pad so that it is 8 inches away from a product or the conveyor belt. The sensor needs to be looking at an object that is 8 inches away before the next step.

Hold the set button located above the LED indicator on the sensor for three seconds once the tamp pad is 8” away from the target. The word “Set” will flash in the window.

After a successful read the sensor should display a number on the LED. Press the “Up” button for 1 second briefly – then adjust the value in the window to 95 (threshold) using the up and down buttons.

ASS-238ST-0401-AMZ

FUSED AT 10 AMP
IEC CONNECTOR AND FILTER
COOLING FAN
GRN
WHT
BLK
24 VDC POWER SUPPLY

MOTOR CABLE (ASS-238ST-0406)
SERVO MOTOR (C-PE-M01082)
TB102 AC POWER
AUX POWER

FEEDBACK CABLE (ASS-238ST-0405)

J	1	1	SHIELD
H	3	3	ENC 5V
M	5	5	HB
F	6	6	MKR–
E	7	7	MKR+
K	10	10	HA
P	11	11	HC
T	13	13	BRK–
A	14	14	COS+
B	15	15	COS–
C	17	17	SIN+
D	18	18	SIN–
G	21	21	ENC COM
S	25	25	BRK+
14 YEL	12	12	CW LMT
13 PINK	20	20	COM LMT
16 GRY	22	22	HOME LMT
15 PUR	24	24	CCW LMT

J103 FEEDBACK

PRODUCT DETECT (C4 CON): BRN, BLU, WHT
LOW LABEL (C5 CON): BRN, BLU, GRY
END OF WEB (C6 CON): BRN, BLU, WHT

VALVE (C9 CON)
VALVE BANK: VAC, BLOW, ASSIST, ROTO, DUMP
REF. PE-238ST-0408
REWIND MOTOR (ASS-238-0428)
RWND
CAP
ENCODER (C7 CON)

7 W/BRN	4	4	PD SIGNAL (din 0,4)
8 W/BLU	17	17	LOW LBL (din 0,0)
9 W/YEL	18	18	END OF WEB (din 0,1)
10 W/BLK	25	25	PRESSURE SENSOR (din 0,2)
11 W/GRN	26	26	INHIBIT (din 0,3)
12 W/GRY	6	6	TAMP RETURN (din 0,5)
37 YEL	7	7	VACUUM VALVE (dout 0,0)
38 GRY	8	8	BLOW VALVE (dout 0,1)
39 PUR	9	9	ASSIST VALVE (dout 0,2)
40 ORG	16	16	REWIND MOTOR (dout 0,3)
19 YEL/GRN	13	13	ANALOG IN (+)
20 W/ORG	22	22	ANALOG OUT
21 PINK	1	1	A+ CHANNEL
22 W/PUR	2	2	A– CHANNEL
23 GRN	10	10	B+ CHANNEL
24 W/RED	11	11	B– CHANNEL
25 RED	12	12	5 VDC
BRN	5	5	24 VDC
BRN	3	3	24 VDC
BLU	23	23	0 VDC
BLU	21	21	0 VDC
BLU	15	15	OUTPUT COM
BLU	14	14	ANALOG IN (–)
BRN	24	24	INPUT COM

J104 PRIMARY I/O

TB202

24 VDC	1	1	BRN
0 VDC	2	2	BLU
SYSTEM READY	3	3	YEL/GRN 48
WARNING ALARM	4	4	PINK 49
CRITICAL ALARM	5	5	RED 50
PRINT START	6	6	ORG 36
TAMP HOME	7	7	YEL 47
LBL ON PAD	8	8	PUR 46
REISSUE	9	9	GRY 45
INVERT READY	10	10	W/YEL 43

TB203

24 VDC	1	1	BRN
0 VDC	2	2	BLU
TAMP ACTIVE	3	3	YEL 42
ROTO VALVE	4	4	ORG 44
DUMP VALVE	5	5	
(5) SPARE OUTPUTS			
	10	10	

ASS-200a-1419 x3

TB204

24 VDC	1	1	BRN
LABEL ON PAD	2	2	W/RED 17
ROTATE INPUT	3	3	W/ORG 18
PRINTER READY	4	4	W/BRN 30
PRINT END	5	5	W/PUR 31
LOW RIBBON	6	6	W/GRY 32
NO MEDIA	7	7	W/YEL 33
BAD READ	8	8	W/GRN 34
ROTO HOME	9	9	W/BLU 35
	10	10	

ASS-238-0406x

TB205

24 VDC	1	1	BRN
SPARE INPUT	2	2	
E-STOP	3	3	W/ORG 41
(6) SPARE INPUTS			
5 VDC	10	10	

TB103

RS-232 TXD	2	2	WHT
RS-232 RXD	3	3	RED
SIGNAL COM	4	4	BLK
(–) BRAKE INPUT	5	5	BLU
(+) BRAKE INPUT	6	6	BRN

ALARM (C8 CON)

GRN	7	GRD
BRN	3	24 VDC
YEL/GRN	4	READY
PINK	5	WARNING
RED	6	CRITICAL

I/O(ASS-238a-0402-AMZ) (C2 CON)

BLU	1	0 VDC
BRN	2	24 VDC
48 YEL/GRN	3	READY SIGNAL
49 PINK	4	WARNING ALARM
50 RED	5	CRITICAL ALARM
42 YEL	6	TAMP ACTIVE
47 WHT/BLK	7	TAMP HOME
46 WHT	8	LABEL ON PAD
36 GRY	9	BLOW VALVE
39 PUR	10	ASSIST VALVE
7 W/RED	11	PD SIGNAL
11 W/GRN	12	INHIBIT
18 W/RED	13	ROTATE INPUT
43 W/YEL	14	INVERT READY
41 W/GRY	15	E-STOP

HEIGHT (C3 CON)

BRN	1	
19 YEL/GRN	5	
BLU	3	
BLK	4	

GRD BAR

DISPLAY (C1 CON)

BLU	9	
BRN	7	
RED	2	
WHT	3	
BLK	5	
GRN	1	

PRINT ENGINE
SERIAL PORT (C10) (ASS-238-0405) (C10B)
PARALLEL PORT (C11) (EY244-MF) (C11B)
INTERFACE PORT (C12) (C12B)

NOTE: AIR DUMP AVAILABLE ON PROGRAM 3600ST-4AMZ.1.0.01 AND NEWER.

XX –TB2 TERMINALS

TB2-1	AC/LINE POWER	TB2-4	AC/NEUTRAL POWER
TB2-2	AC/LINE POWER	TB2-5	AC/NEUTRAL POWER
TB2-3	AC/LINE POWER	TB2-6	AC/NEUTRAL POWER

XX –TB1 TERMINALS

TB1-1	24 VDC	TB1-26	24 VDC
TB1-2	24 VDC	TB1-27	24 VDC
TB1-3	24 VDC	TB1-28	0 VDC
TB1-4	0 VDC	TB1-29	0 VDC
TB1-5	0 VDC	TB1-30	PRINTER READY
TB1-6	0 VDC	TB1-31	PRINT END
TB1-7	PD SIGNAL	TB1-32	LOW RIBBON
TB1-8	LOW LABEL	TB1-33	NO MEDIA
TB1-9	END OF WEB	TB1-34	BAD READ
TB1-10	JOG	TB1-35	ROTO HOME SENSOR
TB1-11	INHIBIT/EXTERNAL PRINT	TB1-36	PRINT START
TB1-12	TAMP RETURN	TB1-37	VACUUM VALVE
TB1-13	LIMIT COM	TB1-38	BLOW VALVE
TB1-14	CW LIMIT	TB1-39	ASSIST VALVE
TB1-15	CCW LIMIT	TB1-40	REWIND MOTOR
TB1-16	HOME PROX	TB1-41	ESTOP INPUT
TB1-17	LABEL ON PAD	TB1-42	TAMP ACTIVE
TB1-18	ROTATE INPUT	TB1-43	INVERT READY
TB1-19	ANALOG INPUT	TB1-44	ROTO VALVE
TB1-20	ANALOG OUTPUT	TB1-45	REISSUE OUTPUT
TB1-21	(A+) CHANNEL	TB1-46	LABEL ON PAD OUTPUT
TB1-22	(A–) CHANNEL	TB1-47	TAMP HOME
TB1-23	(B+) CHANNEL	TB1-48	READY SIGNAL
TB1-24	(B–) CHANNEL	TB1-49	WARNING SIGNAL
TB1-25	5 VDC	TB1-50	CRITICAL SIGNAL

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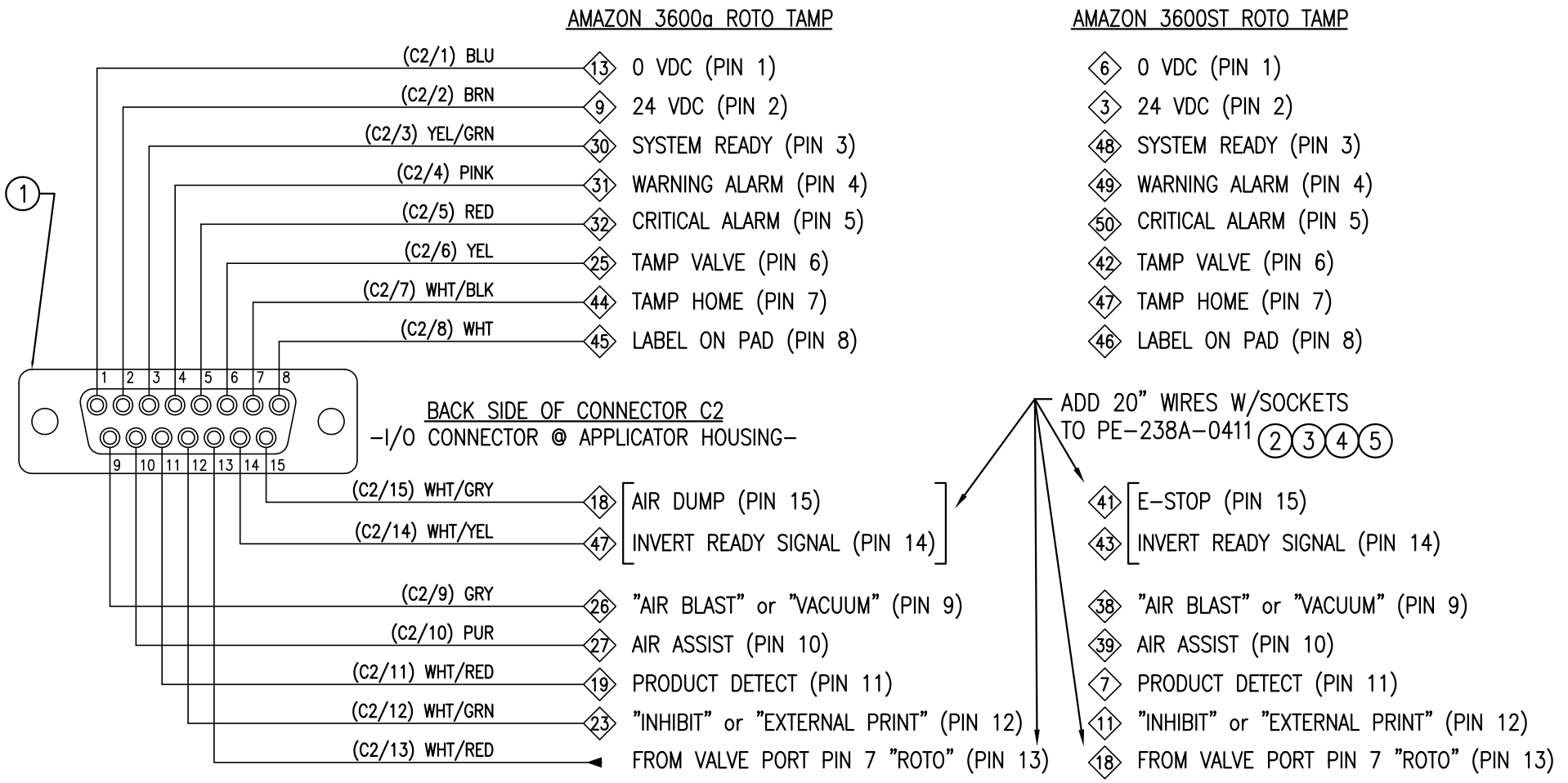
TITLE: AMAZON 3600-ST ROTARY ACTUATOR APPLICATOR
PART: WIRING DIAGRAM
Dept. Code: 70
Quantity: 1 Assy
Scale: 1=2
F:\Engineering\Customer Standards\AMAZON\AMZ\ASS-238ST-0401-AMZ
Drawn by: JWS
Date: 11/8/17
REV. BY: JWS
REV. DATE 7/19/18
REV. 3
REV. DESCRIPTION DUMP VALVE ADDED

ASS-238a-0402-AMZ

BILL OF MATERIAL

ASS-238A-0402-AMZ

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-238A-0411	APPLICATOR I/O CONNECTOR HARNESS
②	3	PE-CON7057	SOCKET
③	20"	PE-W1044	WHT/YELLOW 22 GA. WIRE
④	20"	PE-W1048	WHT/GRY 22 GA. WIRE
⑤	20"	PE-W1042	WHT/RED 22 GA. WIRE



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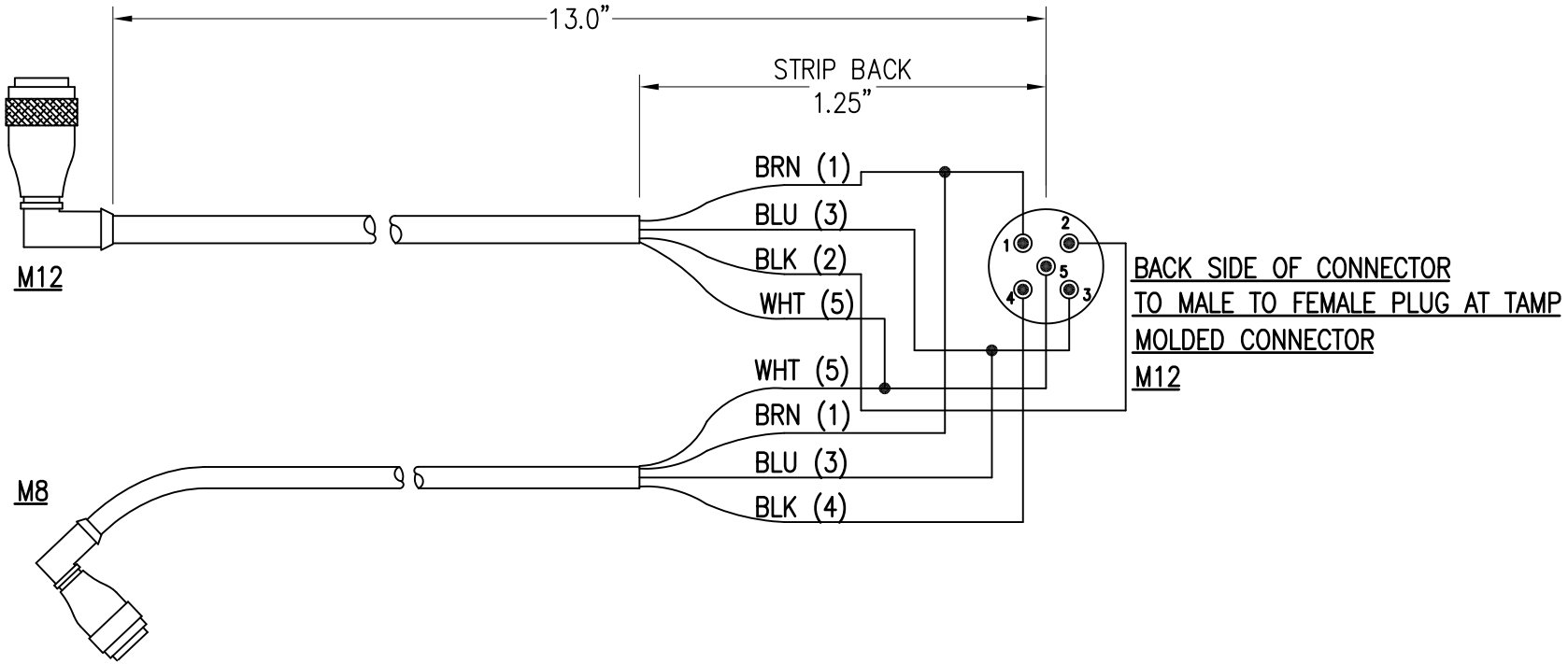
APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
3600a	5"/7.5"/10"	AMAZON	ROTARY ACTUATOR I/O HARNESS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Customer Standards\Amazon\
2	ADDED TABULATION FOR SERVO TAMP	11/10/17	JWS	1=2	8/03/16	dkm	ROTARY SWING AWAY\ASS-238a-0402-AMZ

ROTO HOME SENSOR



TAMP RETURN SENSOR

SEE ASS-238ST-0403-AMZ FOR NON MOLDED ASSY.

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
3600-ST	5"/7.5"/10"	AMAZON	3600-ST ROTARY ACTUATOR SENSOR SPLITTER CABLE	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Customer Standards\Amazon\
0	–	–	xxx	1=2	5/8/18	JWS	AMAZON\PE-238ST-0403-AMZ

ASS-238ST-0405-AMZ

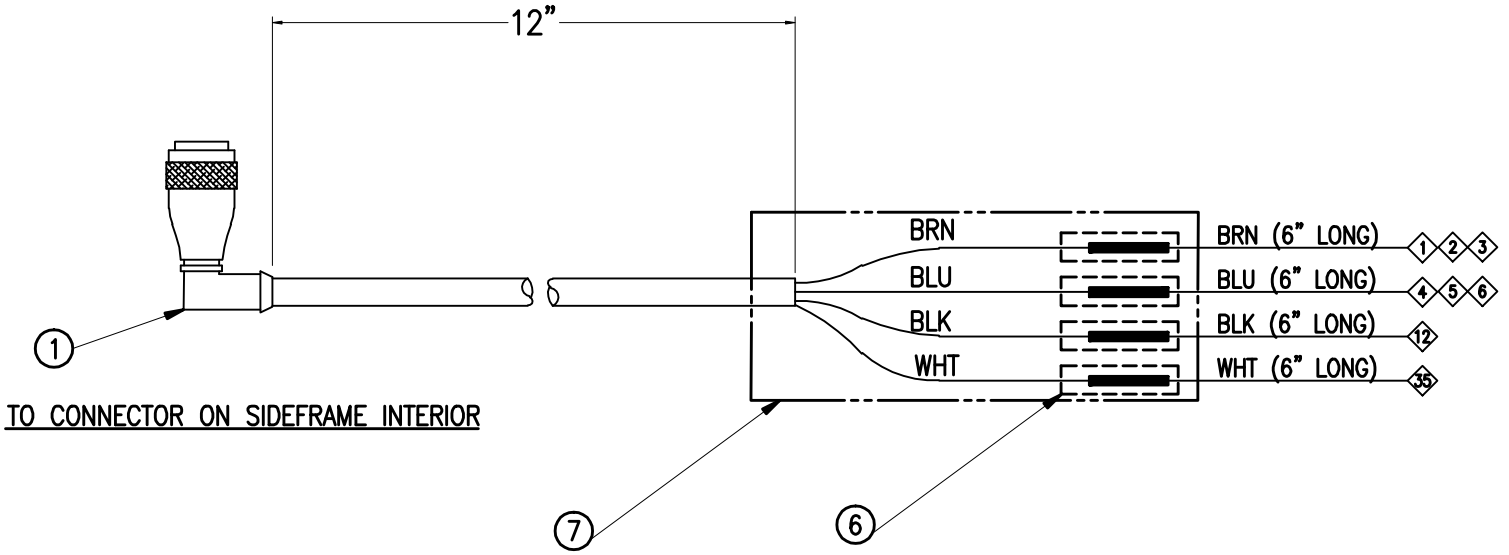
BILL OF MATERIAL

ASS-238ST-0405-AMZ

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SE3053	SENSOR CABLE
②	1	PE-W1036	22 AWG (BLUE) WIRE x 6" LONG
③	1	PE-W1032	22 AWG (BLACK) WIRE x 6" LONG
④	1	PE-W1031	22 AWG (WHITE) WIRE x 6" LONG
⑤	1	PE-W1037	22 AWG (BROWN) WIRE x 6" LONG
⑥	4	PE-ST1000	3/32"ø SHRINK TUBE x 3/4" LONG
⑦	1	PE-ST1015	1/4"ø SHRINK TUBE x 1" LONG

ASSEMBLY NOTES:

1) STRIP CABLE OUTER JACKET BACK 1-1/2" TO EXPOSE FOUR WIRES.
2) STRIP EACH OF THE FOUR WIRES BACK 3/8".
3) SOLDER WIRE EXTENSIONS TO THE CABLE WIRES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
4) APPLY ONE PIECE OF 3/32"ø x 3/4" LONG SHRINK TUBE OVER TOP OF EACH OF THE SOLDERED CONNECTIONS AS SHOWN.
5) APPLY ONE PIECE OF 1/4"ø x 1" LONG SHRINK TUBE OVER ALL FOUR WIRES COVERING SHRINK TUBE APPLIED IN STEP 4.



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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
3600-ST	5"/7.5"/10"	AMAZON	3600-ST ROTARY ACTUATOR INTERIOR SENSOR CABLE	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Customer Standards\Amazon\
				1=2	11/9/17	JWS	AMAZON\ASS-238ST-0405-AMZ

ASS-SW1026

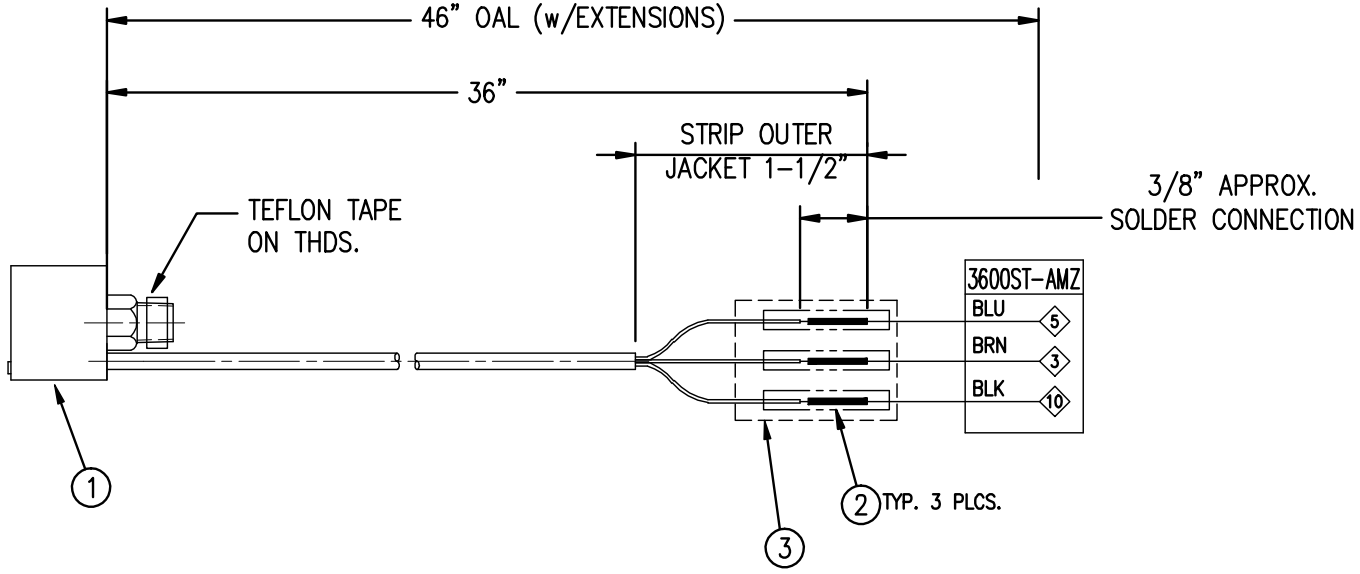
BILL OF MATERIAL

ASS-SW1026

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SW1026	HIGH PRESSURE SENSOR
②	3	PE-ST1000	3/32" ø SHRINK TUBE x 3/4" Lg.
③	1	PE-ST1010	3/16" ø SHRINK TUBE x 1" Lg.
	1	PE-W1036	22 AWG (BLUE) WIRE x 10" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 10" LONG
	1	PE-W1032	22 AWG (BLACK) WIRE x 10" LONG

ASSEMBLY NOTES:

1) STRIP CABLE OUTER JACKET BACK 1-1/2" TO EXPOSE THREE WIRES.
2) STRIP EACH OF THE THREE WIRES BACK 3/8".
3) SOLDER WIRE EXTENSIONS TO THE CABLE WIRES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
4) APPLY ONE PIECE OF 3/32"ø x 3/4" LONG SHRINK TUBE OVER TOP OF EACH OF THE SOLDERED CONNECTIONS AS SHOWN.
5) APPLY ONE PIECE OF 3/16"ø x 1" LONG SHRINK TUBE OVER ALL THREE WIRES COVERING SHRINK TUBE APPLIED IN STEP 4.



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TITLE:	PART:	Dept. Code
3600 SERIES APPLICATOR: ELECTRICAL	HIGH PRESSURE SENSOR ASSEMBLY FOR 3600s	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\3600:
0	NEW RELEASE	2/23/18	JWS	1=2	2/23/18	JWS	238\ASS-SW1026

ASS-SW1074

BILL OF MATERIAL

ASS-SW1074

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-SW1074	VACUUM SWITCH
②	3	PE-ST1000	3/32" ø SHRINK TUBE x 3/4" Lg.
③	1	PE-ST1010	3/16" ø SHRINK TUBE x 1" Lg.
	1	PE-W1036	22 AWG (BLUE) WIRE x 10" LONG
	1	PE-W1037	22 AWG (BROWN) WIRE x 10" LONG
	1	PE-W1032	22 AWG (BLACK) WIRE x 10" LONG

REV 3

NOTE: THIS SWITCH HAS THE FOLLOWING USES:

FOR STANDARD 3600: 1) LABEL REPRINT 2) LABEL ON PAD

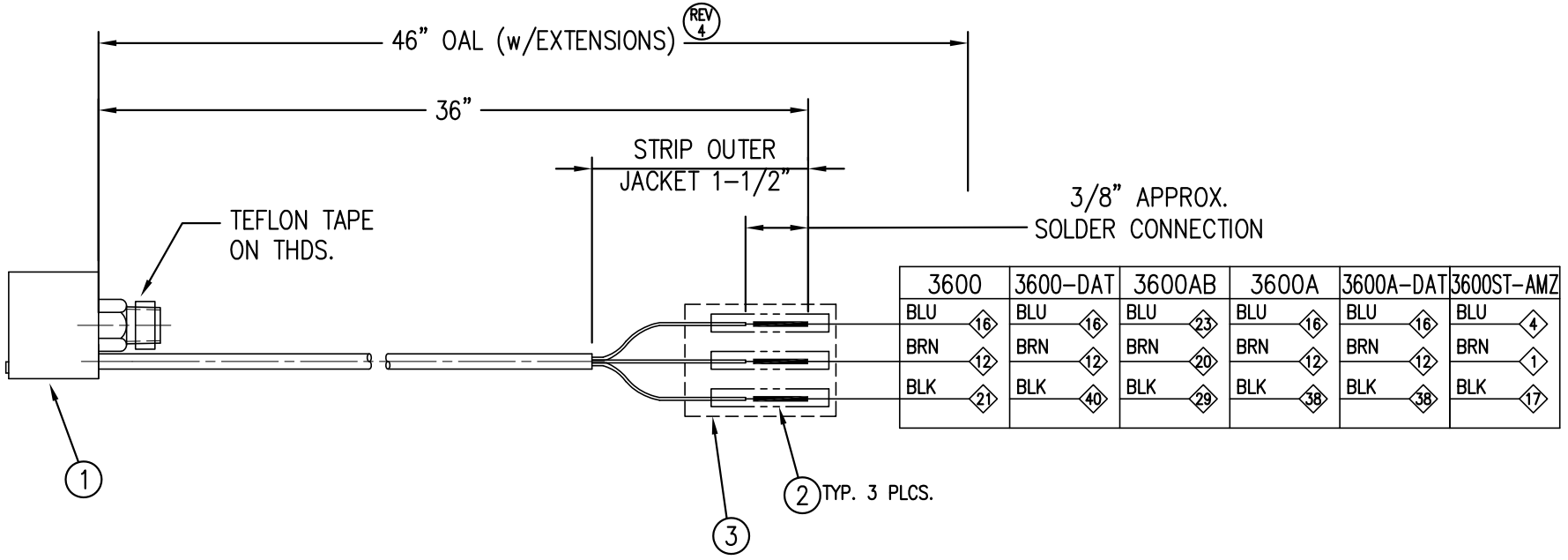
FOR 3600-DAT: 1) LABEL REPRINT

REMOTE ALARM RESET CANNOT BE USED WITH LABEL REPRINT OPTION ON DAT

ASSEMBLY NOTES:

1) STRIP CABLE OUTER JACKET BACK 1-1/2" TO EXPOSE THREE WIRES.
2) STRIP EACH OF THE THREE WIRES BACK 3/8".
3) SOLDER WIRE EXTENSIONS TO THE CABLE WIRES; MATCHING WIRE EXTENSION COLOR WITH SAME COLOR CABLE WIRE.
4) APPLY ONE PIECE OF 3/32"ø x 3/4" LONG SHRINK TUBE OVER TOP OF EACH OF THE SOLDERED CONNECTIONS AS SHOWN.
5) APPLY ONE PIECE OF 3/16"ø x 1" LONG SHRINK TUBE OVER ALL THREE WIRES COVERING SHRINK TUBE APPLIED IN STEP 4.

SEE ASS-238-0462
FOR ADDITIONAL PIPING REQUIRED



3600	3600-DAT	3600AB	3600A	3600A-DAT	3600ST-AMZ
BLU 16	BLU 16	BLU 23	BLU 16	BLU 16	BLU 4
BRN 12	BRN 12	BRN 20	BRN 12	BRN 12	BRN 1
BLK 21	BLK 40	BLK 29	BLK 38	BLK 38	BLK 17

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TITLE:	PART:	Dept. Code
3600 SERIES APPLICATOR: ELECTRICAL	VACUUM SWITCH ASSEMBLY FOR 3600s	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	F:\Engineering\Standard Parts\Applicator\3600:
9	ADDED AMZ SERVO TAMP TABULATION	11/16/17	JWS	1=2	10/3/14		238\ASS-SW1074

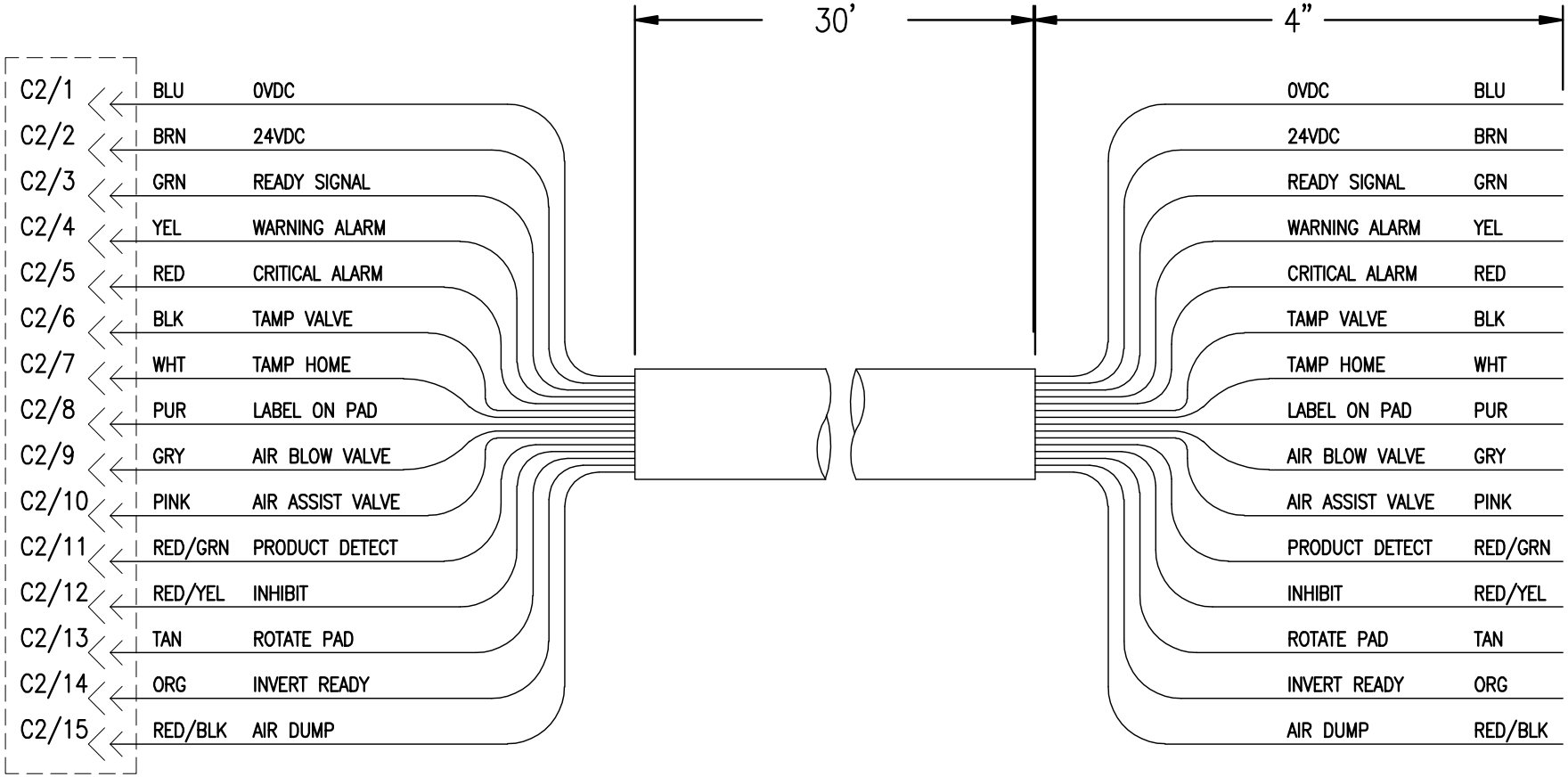
BILL OF MATERIAL

PE-238a-0410-AMZ

PE-238a-0410-AMZ

ITEM	QTY	CTM PART NUMBER	PART DESCRIPTION
①	1	PE-CON2049	15-PIN D-SUB MALE CONNECTOR
②	15	PE-CON7055	MALE/SOCKET
③	1	PE-CON3010	15-PIN HOOD
④	30'4"	PE-CAXXXX	15 CONDUCTOR CABLE (22 AWG) x 30' 4" LG.

Component	15 X 1 Conductor
Conductor	22 (7/30) AWG TC
Insulation	0.010" Wall, Nom. PVC, Semi Rigid
Color Code	Alpha Wire Color Code D



MALE CONNECTOR

-15-PIN SUB D W/OVERMOLD-

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APPLICATOR SERIES:	APPLICATOR WIDTH(S):	GROUP:	TITLE:	Dept. Code
3600a	5"/7.5"/10"	AMAZON	ROTARY ACTUATOR MOLDED I/O CABLE WITH FLYING LEADS	70

REV.	REV. DESCRIPTION	REV. DATE	REV. BY:	Scale:	Date:	DRAWN BY:	
2	ADDED FLYING LEAD LENGTH. NOTED MOLDED CONNECTOR	1/26/17	JWS	1=1.5	1/13/17	JWS	F:\Engineering\Customer Standards\Amazon\ROTARY SWING AWAY\PE-238a-0410-AMZ

Printhead Maintenance Kit

Installation Instructions

This kit includes the parts and documentation necessary to install a printhead into the ZE500™ Series Print Engines.

Read these instructions thoroughly before attempting to install this kit.

Note • For optimal printing quality and proper printer performance across our product line, Zebra strongly recommends the use of genuine Zebra™ supplies as part of the total solution. Specifically, the ZE500 print engines are designed to work only with genuine Zebra™ printheads, thus, maximizing safety and print quality.

Parts List

Each kit contains only one printhead and these installation instructions.

Figure 28 • Kit Contents

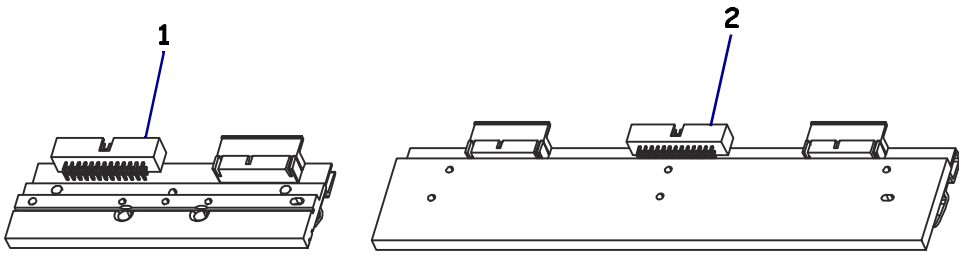

Table 13 • Kit Parts List

✓	Item	Qty	Part Number	Description
	1	1	**P1046696-099**	Printhead Kit ZE500-4 (203 dpi)
	1	1	**P1046696-016**	Printhead Kit ZE500-4 (300 dpi)
	1	1	**P1004236**	Printhead Kit ZE500-6 (203 dpi)
	1	1	**P1004237**	Printhead Kit ZE500-6 (300 dpi)

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P1056403-001 Rev. A
11/20/12

Tools Required

Tools • You need these tools to complete this procedure:

- ❑ Flatblade Screwdriver Set
- ❑ Antistatic Mat and Wrist Strap
- ❑ 47362* Zebra Preventive Maintenance Kit

* In place of the Preventive Maintenance Kit, you may use a clean swab dipped in a solution of isopropyl alcohol (minimum 90%) and deionized water (maximum 10%).

Note • For best print quality replace the platen roller.

Caution • Turn off (**O**) the print engine/print engine and disconnect it from the power source before performing the following procedure.

Remove the Printhead

1. **Caution** • While performing any tasks near an open printhead, remove all rings, watches, hanging necklaces, identification badges, or other metallic objects that could touch the printhead.

   Remove the media and ribbon.

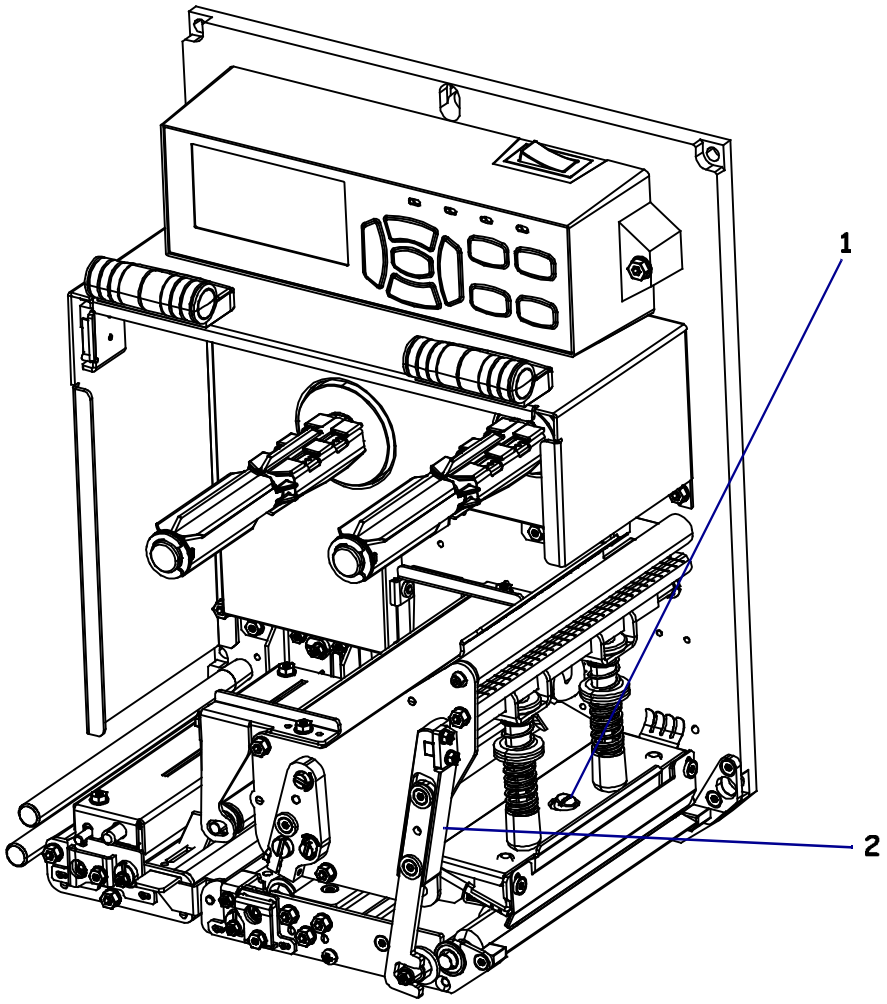
2. **Caution** • The printhead may be hot and could cause severe burns. Allow the printhead to cool.

   Slide the printhead toggles away from the printhead mounting screw area.

3. **Caution** • Before touching the printhead assembly, discharge any built-up static electricity by touching the metal printer frame or by using an anti-static wriststrap and mat.

See Figure 29. Loosen the printhead mounting screw and then lift the printhead release lever.

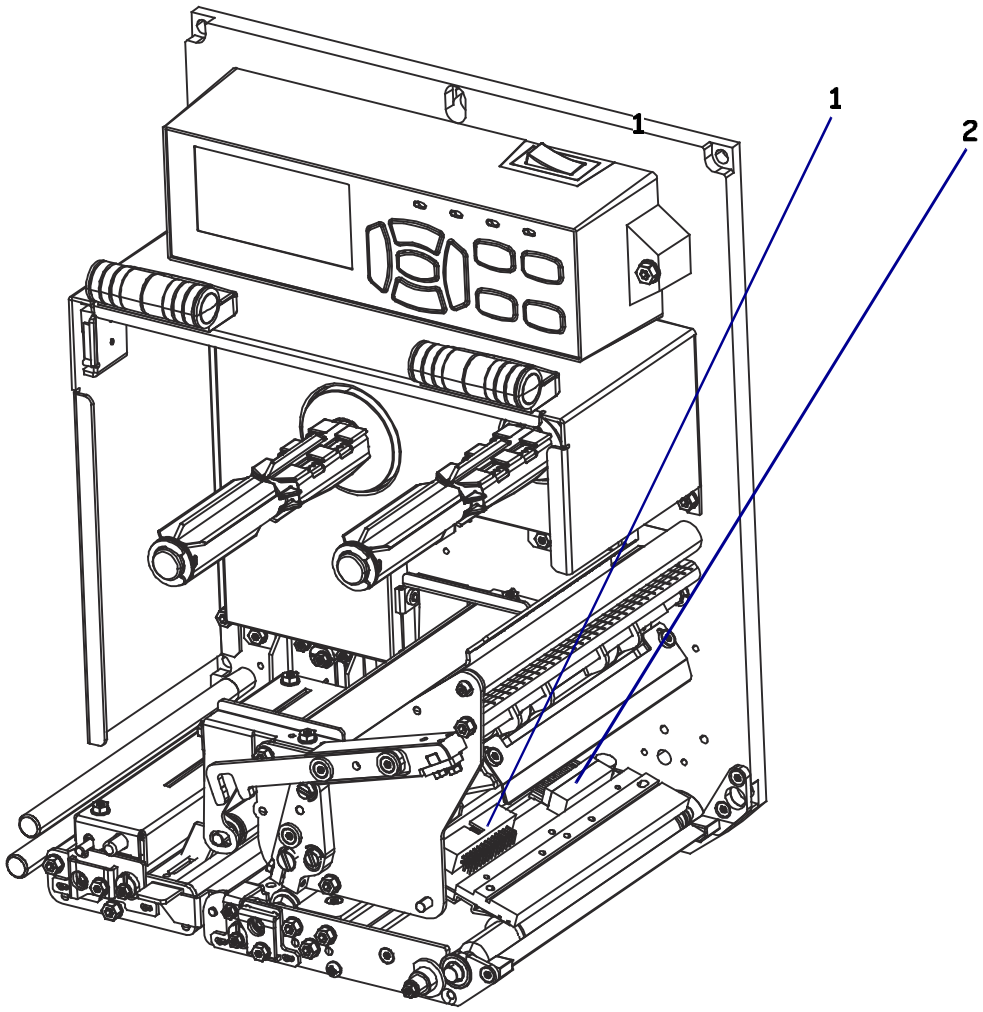
Figure 29 • Loosen the Printhead



1	Printhead mounting screw
2	Printhead release lever

4. See Figure 30. While supporting the printhead, disconnect the power connector and the printhead data connector.

Figure 30 • Remove the Printhead



1	Printhead data cable
2	Printhead power cable

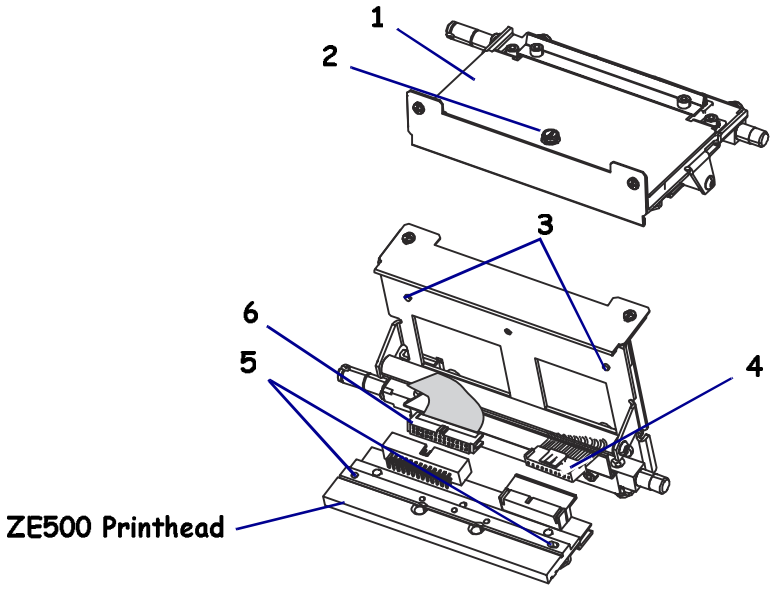
Install the Printhead

1. **Caution** • An improperly connected printhead data or power cable may cause the printhead to generate excessive heat and/or a false HEAD COLD message to display while the printhead is hot enough to cause severe burns. Allow the printhead to cool.

   See Figure 31. Reconnect the printhead power cable and the data cable to their appropriate connectors on the printhead. Seat both connectors firmly in place.

2. Fit the printhead into the mounting bracket by aligning the printhead alignment posts into the printhead alignment holes.

Figure 31 • Printhead and Bracket Alignment



1	Printhead mechanism assembly
2	Printhead mounting screw
3	Printhead alignment posts
4	Printhead power connector
5	Printhead alignment slots
6	Printhead data connector

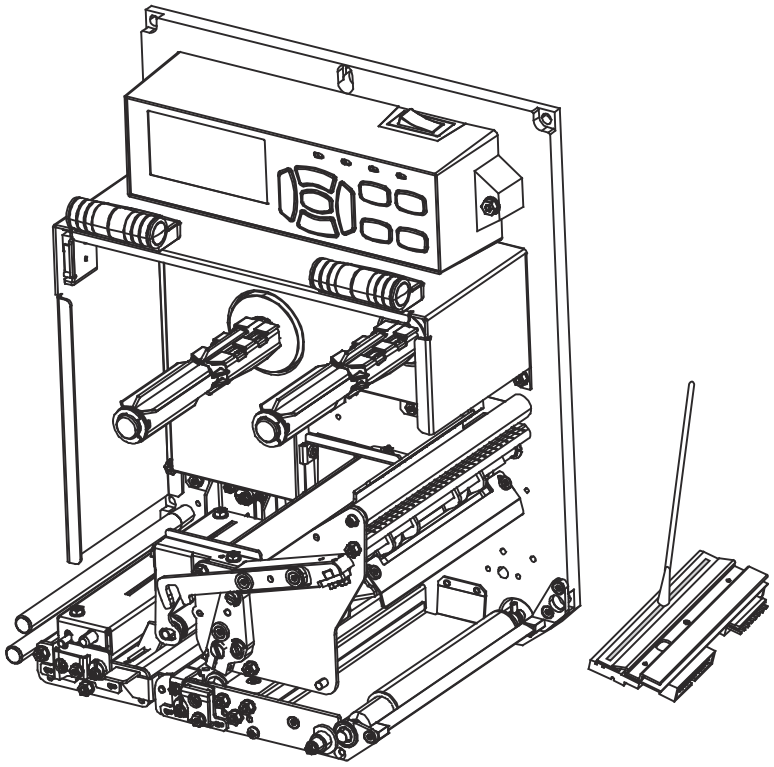
3. Verify that the printhead is seated properly. Carefully guide the printhead mounting screw into the printhead's aluminum body. After the screw is aligned properly, tighten it until snug.

   Do not over-tighten.

Clean the Printhead

1. See Figure 32. Clean the new printhead elements using Zebra's Preventive Maintenance Kit, part number 47362. You may use a clean swab dipped in a solution of isopropyl alcohol (minimum 90%) and deionized water (maximum 10%).

Figure 32 • Cleaning the Printhead



1	Printhead elements (gray area)
2	Printhead

2. **Caution** • When you are loading media or ribbon, remove all jewelry that could come into contact with the printhead or other printer parts.

   Reinstall the media and ribbon.

3. Ensure that the printhead toggles are positioned evenly across the width of the media.
4. Close the media cover.
5. Reconnect the AC power cord and data cables.
6. Press and hold PAUSE while turning on (**I**) the print engine.
7. Press PAUSE to pause the printer and check the labels for proper print quality. If the print quality is not correct, refer to the *User Guide* and the *Maintenance Manual*.

The installation is complete.