



Engineering  
labeling solutions.

# R-320



Operator's Manual

Serial #

## **WARRANTY**

UniVersal Labeling Systems, Inc. warrants all parts to be free from defects in material and workmanship for a period of one year from the date of shipment from our facility.

This guarantee is based upon equipment being used 8 hours per day, or 40 hours per week, or in any increment which does not total more than a single shift operation, or 2,080 hours per year. Warranty will be reduced proportionally.

This warranty does not cover part failure caused by lack of normal maintenance, abuse or misuse of the equipment.

## **PERFORMANCE GUARANTEE**

All equipment manufactured by UniVersal Labeling Systems, Inc. carries a 30-day performance guarantee. If your machinery does not perform as described in our quote to you, UniVersal must be notified within 30 days of your dissatisfaction and we will make every attempt to correct it. If after a reasonable period of time, the machine does not meet the specified performance, we will take your machine back and reimburse you in full.

Warranty

Assembly and Operation

Drawings

Layout, Main

Exploded View (conveyor)

Exploded view BASE Conveyor

Assembly, Applicator Crank

Micro Adjustor

Sensor Mounting Bracket SBK

Wipe Down WPD-500

R320 Elect. Control box

R320 Control Box Electrical Schematic

Product Spacer

Turning Unit BOM

Turning Unit

Mounting Assy CP-1000

Electrical Schematic L15

## MODEL R-320

### ASSEMBLY AND OPERATING INSTRUCTIONS

**Conveyor Height can be adjusted from your system's specified height by adjusting the leveling pads**

RE-TIGHTEN LOCKING BOLT AND ANGULAR BRACE, BEFORE REMOVING SUPPORT AT BOTH ENDS OF CONVEYOR. FAILURE TO RE-TIGHTEN THE LOCKING SCREW ON SLIDING SLEEVE COULD RESULT IN THE CONVEYOR AND ATTACHMENTS DROPPING, CAUSING SERIOUS DAMAGE TO THE SYSTEM.

SEE APPLIER INSTRUCTION MANUAL FOR PROPER OPERATION OF APPLIER HEAD AND WEBBING.

TO ADJUST SYSTEM FOR INDIVIDUAL CONTAINERS, PROCEED AS FOLLOWS:

1. Selecting the container to be labeled, place on conveyor for reference and adjust vertical height of turning unit so that belt is centered vertically on container.
2. Adjust vertical height of guide rails opposite the applier and turning unit to center on product but never low enough that rail drags on conveyor top.
3. Adjust guide rail across conveyor so that container is encapsulated securely between the turning belt and the sponge backing plate. Move container along belt of turning unit to establish that the sponge backing is adjusted parallel to belt. This is important, as container must be controlled by turning unit and sponge backing on guide rail.
4. With applier head turned off, turn on conveyor. Set speed control by knob on control box on front of conveyor to maximum speed.
5. Turn on turning unit by on-off switch located on control box on top of unit. (NOTE: This unit's power cord is to be plugged into control box on front of conveyor). Adjust speed of turning unit so that turning belt is moving at a slightly higher rate of surface speed than conveyor.
6. Place container on conveyor on entrance end and allow to proceed through turning unit.
7. When it is considered that the container is being properly controlled and guide rail adjustments are proper, select the appropriate label; place roll on applier and web properly. Refer to applier instructions.

## **MODEL R-320**

### **ASSEMBLY AND OPERATING INSTRUCTIONS**

8. Stop conveyor by turning speed control to "O". Turn off turning unit. Plug power cord of applier into control box on front of conveyor. (NOTE: Applier and turning unit will not receive power with switch on control box on front of conveyor in OFF position).
9. Raise or lower applier so that label is centered on container. Label web must always run to lower edge of peeler bar on this system, with edge of peeler bar clearing top of conveyor EDGE. **DO NOT LOWER APPLIER TO THE POINT WHERE EDGE OF PEELER BAR IS RESTING ON TOP OF CONVEYOR EDGE.**
10. Adjust peeler bar so that back side clears turning belt by no more than 1/8".
11. Turn on master switch on applier, then turn on motor switch; one label will advance.
12. Product sensing micro switch is secured to edge of guide rail with arm extending through guide rail. Activating this switch by hand will cause applier to deliver a label. NOTE: Position label at end of peeler bar and adjust star wheel on applier so that 1/8" to 1/4" of label is extending beyond peeler bar edge when label is delivered and applier stops delivering a label. Trigger applier head with product sensing several times to allow web to track properly and to observe extension of label beyond peeler bar.

### **YOU SHOULD NOW BE READY TO LABEL**

Turn on conveyor by speed control knob and adjust to just below maximum speed. Turn on turning unit. Speed control knob on applier should be set at approximately 65 on dial - - with turning unit at approximately the same setting.

With all systems running - - Place container on conveyor and

NOTE:

1. Point at which product switch activates relative to position of container. The ideal point of which the applier starts delivering the label is as the container contacts the center line of the first pulley of the turning unit and is encapsulated between the turning unit belt and the rubber of the guide rail. Adjust the product sensing switch back or forward to achieve the best results. A little experimenting by the operator for the optimum position is in order. Triggering the applier too early or too late can result in mis-register or wrinkled labels.
2. Next in this procedure, observe that as the label is being dispensed and applied that the speed of the applier is not causing the label to be pulled by being too slow. (Speed up by speed control on applier), or is delivering the label too fast as to incur wrinkling of label on the container (slow applier by same procedure).

## MODEL R-320

### ASSEMBLY AND OPERATING INSTRUCTIONS

IT IS EXTREMELY IMPORTANT THAT SPEEDS OF LABEL DELIVERY AND PRODUCT BE MATCHED FOR SATISFACTORY PLACEMENT AND WIPE DOWN OF LABEL.

If label is tending to walk up or down on container, label applier may be rotated to position peeler bar in parallel with container, so that label is started on container accurately, by loosening large hex nut on swiveling bracket that applier is secured to and located on sliding sleeve on post. Rotate applier by turning knurled knob at swivel point. NOTE: In making this adjustment, be sure that rotating the applier does not cause the peeler bar to be forced into contact with top of conveyor. Raise applier to prevent this, then lower into position after adjustment is made. Re-test by passing one container through the system and noting the label placement. If still off, re-adjust as above until the optimum position is found.

It has been noted many times that during a labeling run that label placement may vary slightly. This is most often the result of non-uniformity in the containers.

1. Slight tapers from top to bottom in the containers not visible to the eye.
2. Bottoms and sides of the containers not square, again not detectable visually.

Variations in containers as small as .005 inch can result in visual mis-alignment when wrapping labels completely around containers. Most often these discrepancies are attributed to the abetting system and are pointed out in these instruction as GUIDE LINES in TROUBLE SHOOTING the equipment.

Suggestions for improvements in the design of our equipment is solicited and appreciated.

Many thanks for reading these instructions in their entirety.

**SUGGESTED SPEED SETTING**

As tested at the factory, the following are suggested setting of speeds and time delays:

	<b><u>DIAL SETTING</u></b>
* Conveyor Speed	_____
* Turning Unit	_____
* Applier	_____
Product Spacer	_____
These settings will product approximately parts per minute production	_____

If speed of any of the above “\*” are changed for any reason, comparable changes in the other settings should be made.

The above speed settings are provided only as guidelines for start-up and may need to be changed because of variables in voltages, area to area, and other variables over which we have no control.

**SETUP INSTRUCTIONS**

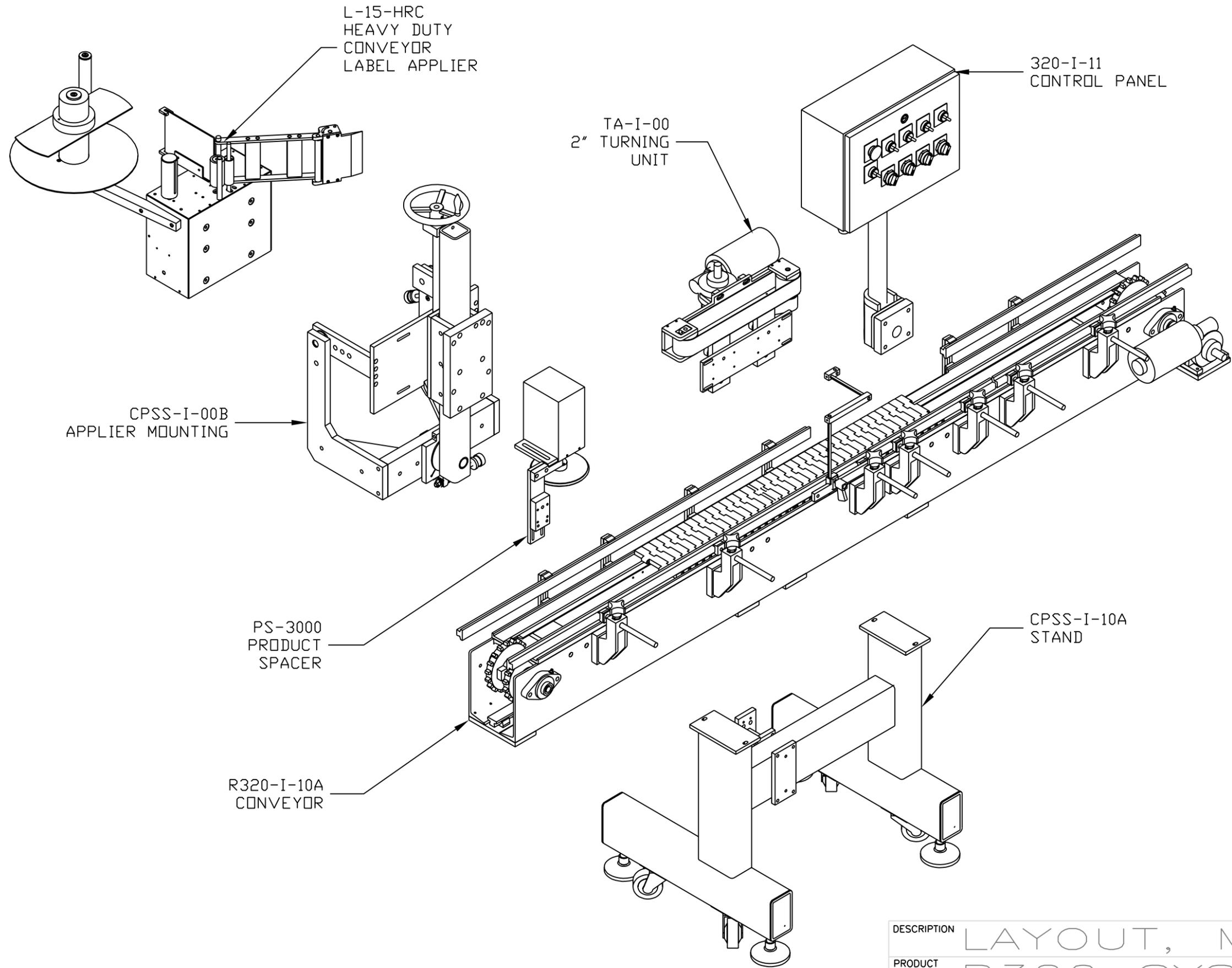
When machine is received, open carton carefully and remove machine by placing hands under machine base for lifting. Place machine on flat surface for installation of label roll holder to machine. (NOTE: Acorn nuts and hex nuts to be removed). Slide label reel over the two threaded studs, secure with hex nuts, then install the two acorn nuts. Machine is not ready for installation and can be secured to an appropriately fabricated bars, flatplate, etc., by the four (4) bolts on the bottom of machine that are securing the bottom cover for shipment.

**FOR THOSE MACHINES EQUIPPED WITH LOW LEVEL ALARM AND/OR WEB  
BREAK ALARM:**

NOTE: Low level alarm is mounted to label reel bar and needs only to be plugged into small 2 prong plug dangling from rear of machine. Swinging curved bar is to be moved downward for loading of labels and rests on outside of roll when in operation, under slight spring pressure. When position of curved bar reaches a position near core of label roll, an audible sound will emit from small box mounted to top of machine. Light will also come on at same time. Both audible alarm and light may be cut off by toggle switch on top of box.

NOTE: Web break alarm - - located between the pull roll and web rewind. Waste web must pass under plastic finger. The finger is supported by waste web and in the event of web breakage, finger will drop downward causing audible signal and light to come on top of box on top of machine.

**SEE WIRING DIAGRAM IN BACK OF MANUAL**



DESCRIPTION	LAYOUT, MAIN				
PRODUCT	R320 SYSTEM				
SCALE	N.T.S.	DRAWN BY	REV. LEV.	REV. BY	CAD NO
DATE	12-28-1999	E. W. A.	X	X	R320-I-00A

REV	DATE	ECO	CHANGE BY	CHKD BY

REVISION RECORD



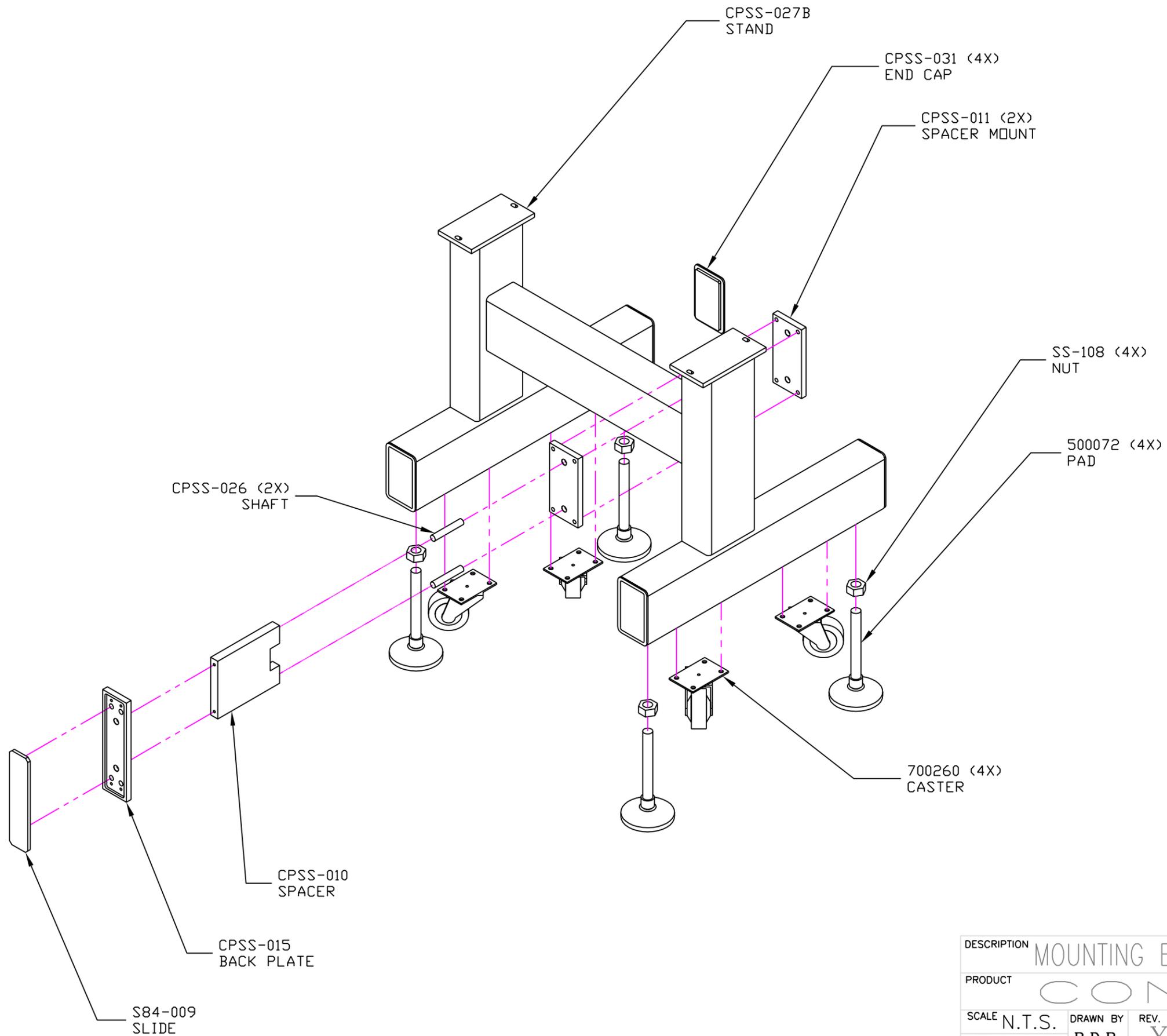
3501 8TH AVENUE SOUTH  
ST. PETERSBURG, FLORIDA 33711  
TEL. (727) 327-2123

R320-I-00A

**R320 AUTOMATIC SYSTEM  
WITH L15H APPLICATOR  
RECOMMENDED SPARE PARTS**

<b>PART #</b>	<b>PART DESCRIPTION</b>
200109	MICRO SWITCH, LABEL SENSING
200198	POWER MODULE
420173	STARWHEEL SPRING
L-129-S	STARWHEEL, LABEL SENSING
L-137-H	DRIVE ROLLER (HD)
L-140-F-3	SLIP CLUTCH COLLAR (REPLACES L-140-F-2)
L-175-1	ASSY. SPROCKET W/FELT & BEARINGS
L-143	LOWER IDLER ROLL ASSY (KNURLED ALUMINUM)
L-176-1	DRIVE BELT (120 X L037)
200160	TRANSFORMER
300013	REPLACEMENT MOTOR BRUSH FOR L-15H
300023	REPLACEMENT MOTOR BRUSH FOR TURNING UNIT
600008	4" TURNING UNIT BELT
600007	2" TURNING UNIT BELT
TA-215	2"W.x15"L. FOAM PAD W/PLATE
TA-415	4"W.x15"L. FOAM PAD W/PLATE
500030	PLASTIC COMPRESSION CLIP FOR CONVEYOR RAILING
L-132	IDLER ASSY (FOR L-15H)
LP-100-S-1-X	ASSY, INTERMEDIATE SPROCKET
410000	CHAIN FOR L-15H (19.25")
L-128-C	REWIND SPOOL CLAMP FOR L-15
L-105-RA	ASSY, WEB GUIDE CLAMP (R.H.)
L-105-LA	ASSY, WEB GUIDE CLAMP (L.H.)
600300	1" PEELER PLATE TAPE (50' ROLL)
200046	FUSE FOR CONTROL BOX (10 AMP)
500085	3/8 RATCHET HANDLE





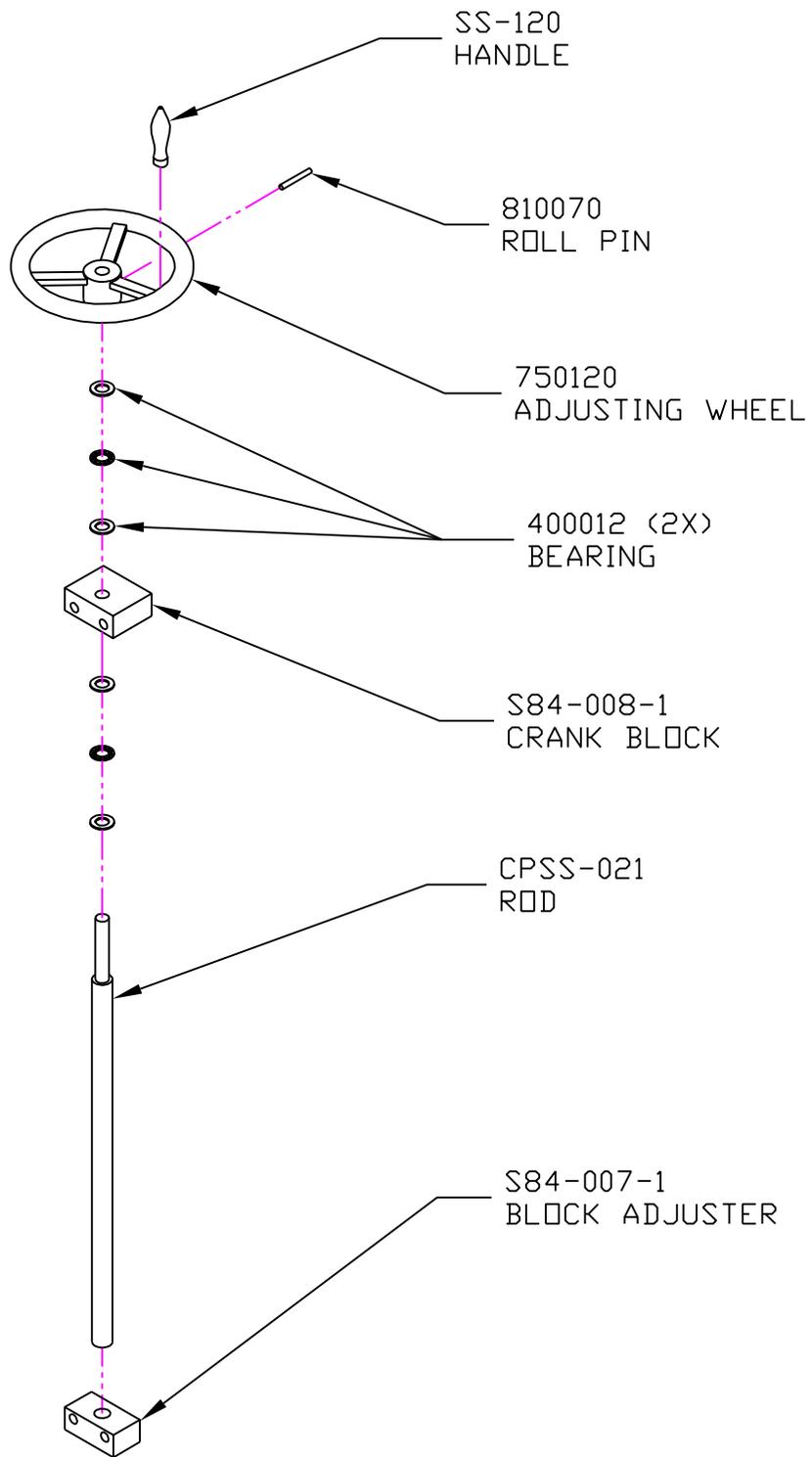
DESCRIPTION	MOUNTING BASE-EXPLODED VIEW			
PRODUCT	CONVEYOR			
SCALE	N.T.S.	DRAWN BY	REV. LEV.	REV. BY
DATE	9-3-99	R.D.R.	X	X
				CAD NO
				CPSS-I-10A

REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY
-	-	-			

**Universal**  
LABELING SYSTEMS INC.

3501 8TH AVENUE SOUTH  
ST. PETERSBURG, FLORIDA 33711  
TEL. (727) 327-2123

PART NUMBER  
CPSS-I-10A

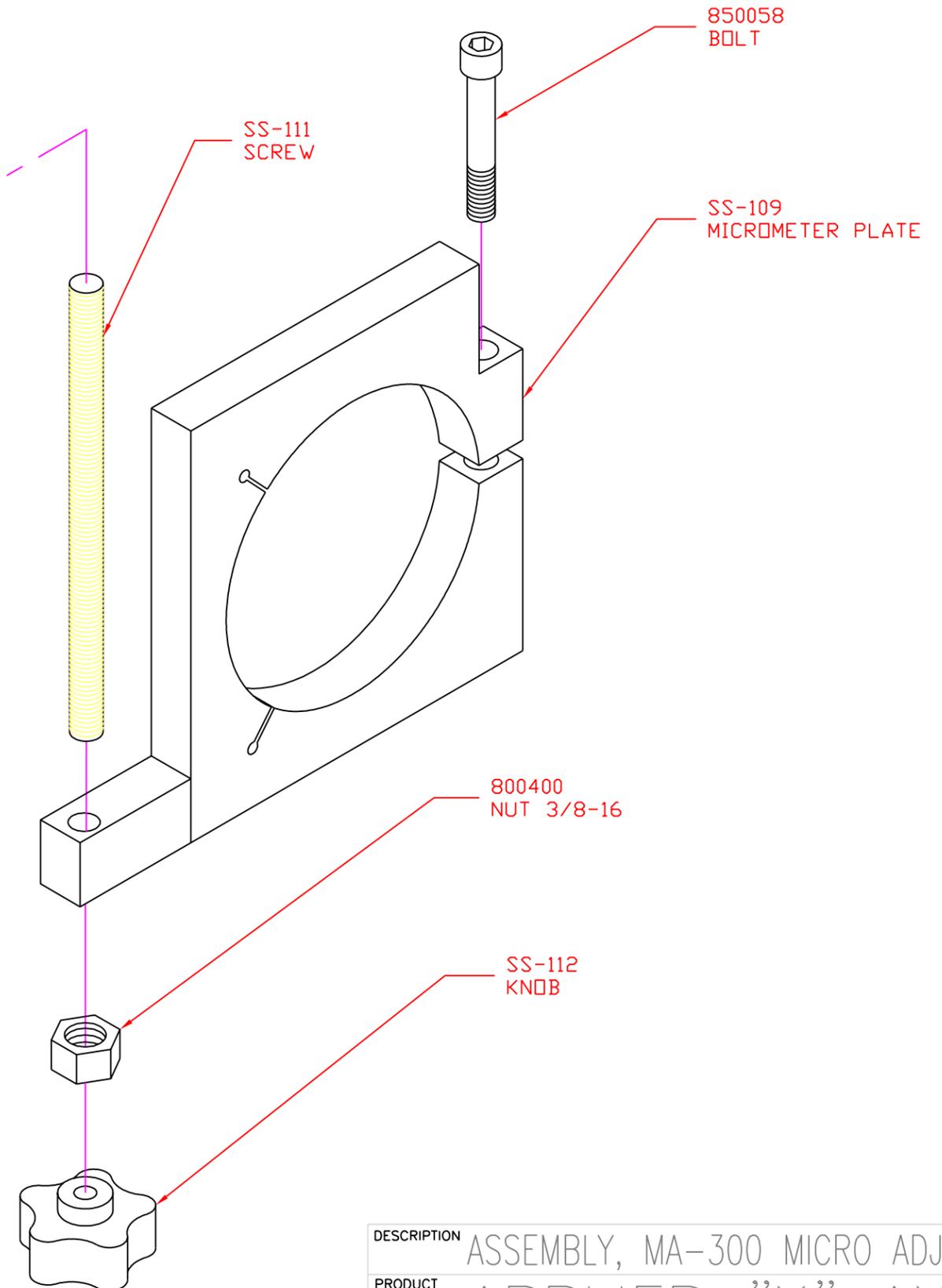
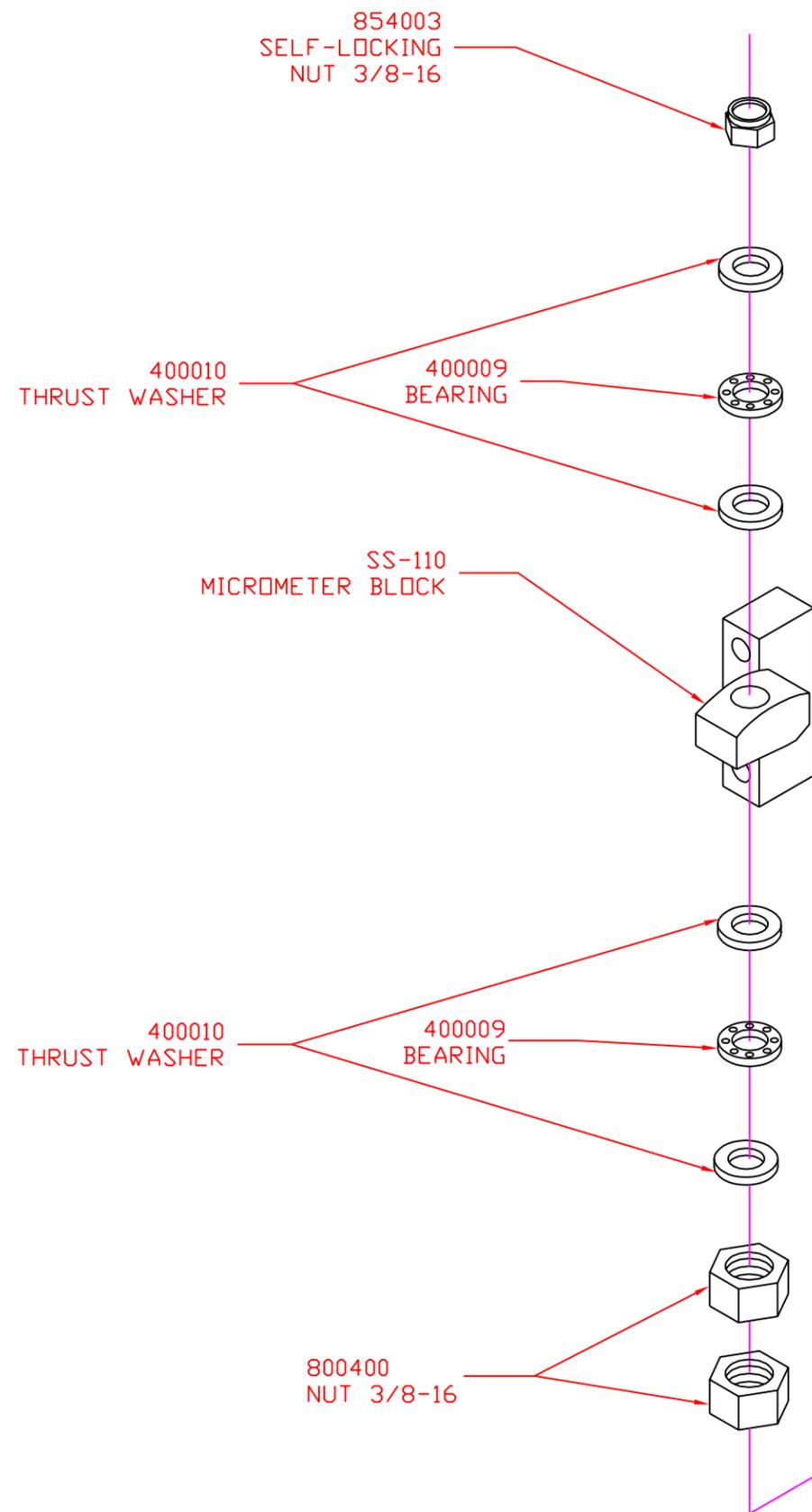


DESCRIPTION					ASSEMBLY, APPLICATOR CRANK
PRODUCT					SL-2000 MOUNTING ASSEMBLY
DATE	DRAWN BY	REV. LEV.	REV. BY	CAD FILE:	
9-3-1999	R.D.R.	X	X	CPSS-I-30	

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LABELING SYSTEMS INC.

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TEL. (727) 327-2123

PART NUMBER  
CPSS-I-30



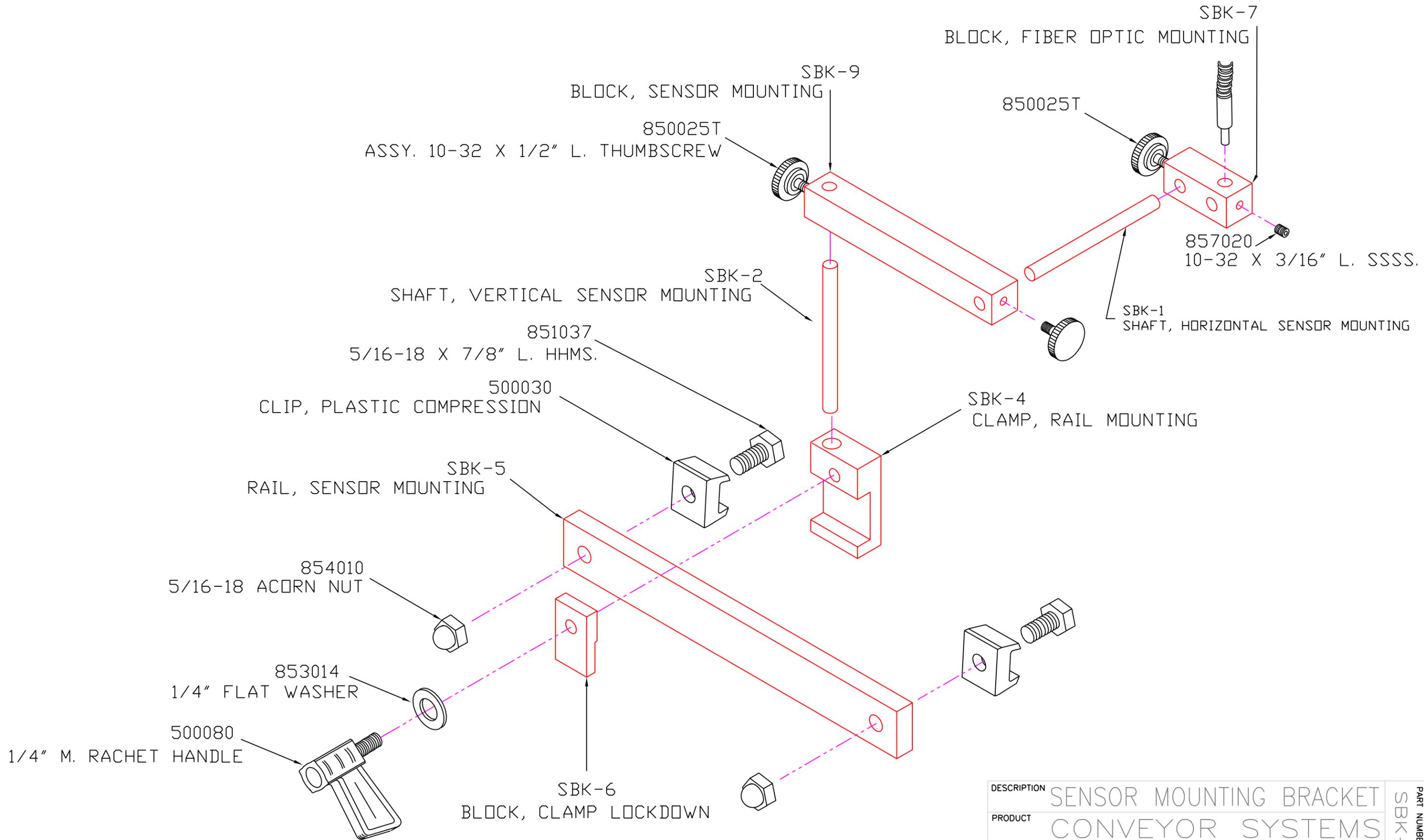
REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY
-	-	-			

DESCRIPTION	ASSEMBLY, MA-300 MICRO ADJUST				
PRODUCT	APPLIER "X" AXIS				
SCALE	-	DRAWN BY	REV. LEV.	REV. BY	CAD NO
DATE	02-10-2000	J.T.L	X	X	MA3-I-00

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3501 8TH AVENUE SOUTH  
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TEL. (727) 327-2123

PART NUMBER  
MA3-1-00



DESCRIPTION	SENSOR MOUNTING BRACKET				
PRODUCT	CONVEYOR SYSTEMS				
SCALE	N.T.S.	DRAWN BY	REV. LEV.	REV. BY	CAD NO
DATE	7-28-1998	G.T.H.	X	X	SBK-I-00

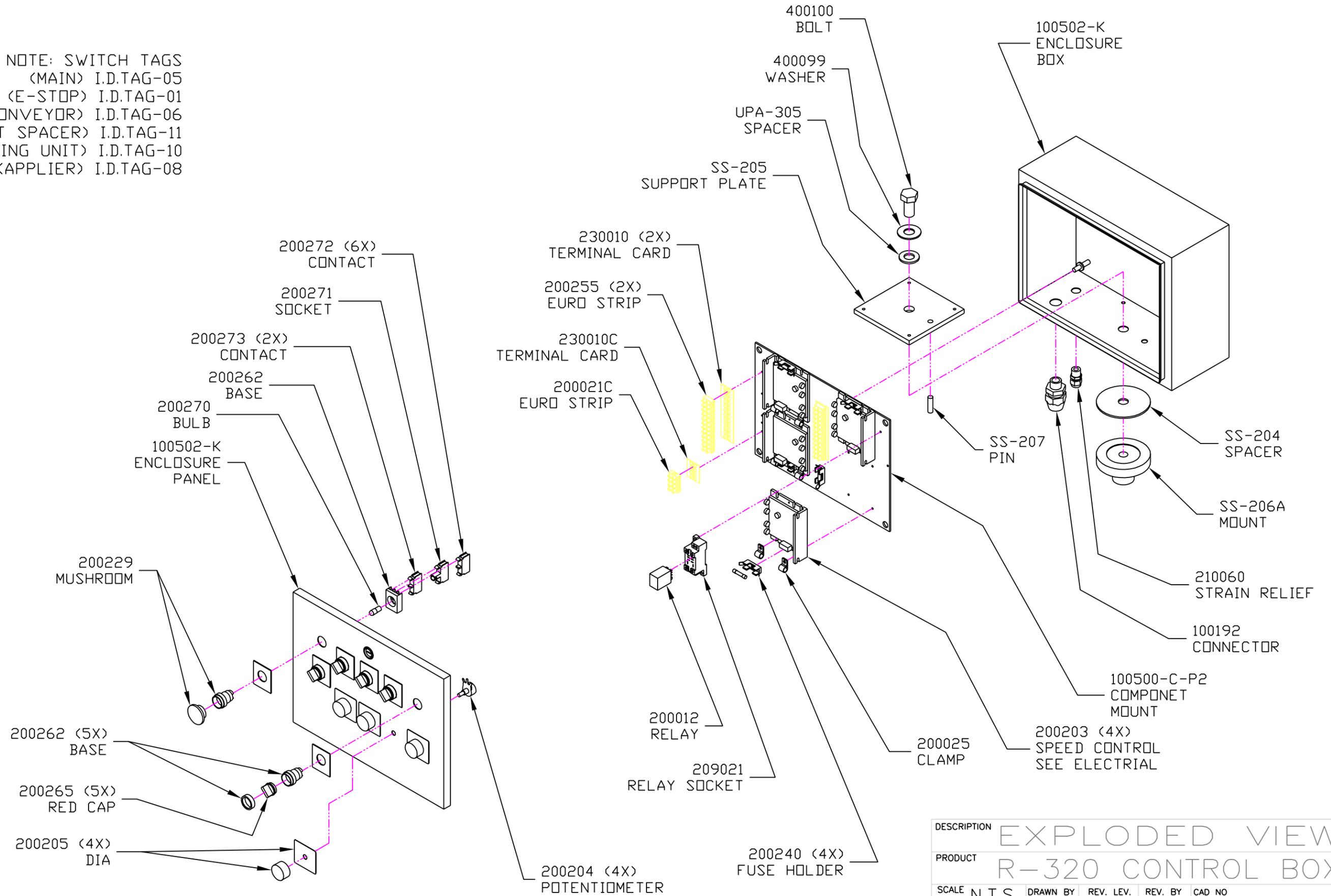
**Universal**  
LABELING SYSTEMS INC.

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ST. PETERSBURG, FLORIDA 33711  
TEL. (727) 327-2123

PART NUMBER  
SBK-I-00

A	7-28-98	—	REMOVED SBK-3, ADDED SBK-9 (ITEM 5)	G.T.H.	
REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY

NOTE: SWITCH TAGS  
 (MAIN) I.D.TAG-05  
 (E-STOP) I.D.TAG-01  
 (CONVEYOR) I.D.TAG-06  
 (PRODUCT SPACER) I.D.TAG-11  
 (TURNING UNIT) I.D.TAG-10  
 (APPLIER) I.D.TAG-08



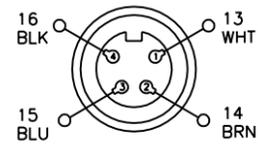
REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY
-	-	-			

DESCRIPTION	EXPLODED VIEW				
PRODUCT	R-320 CONTROL BOX				
SCALE	N.T.S	DRAWN BY	REV. LEV.	REV. BY	CAD NO
DATE	09-01-2000	J.T.L	X	X	R320-I-11A

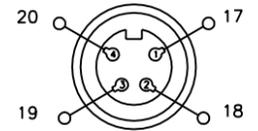
**Universal**  
 LABELING SYSTEMS INC.  
 3501 8TH AVENUE SOUTH  
 ST. PETERSBURG, FLORIDA 33711  
 TEL. (727) 327-2123

PART NUMBER  
 R320-I-11A

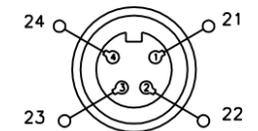
APPLIER



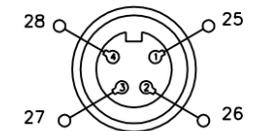
TURNING UNIT



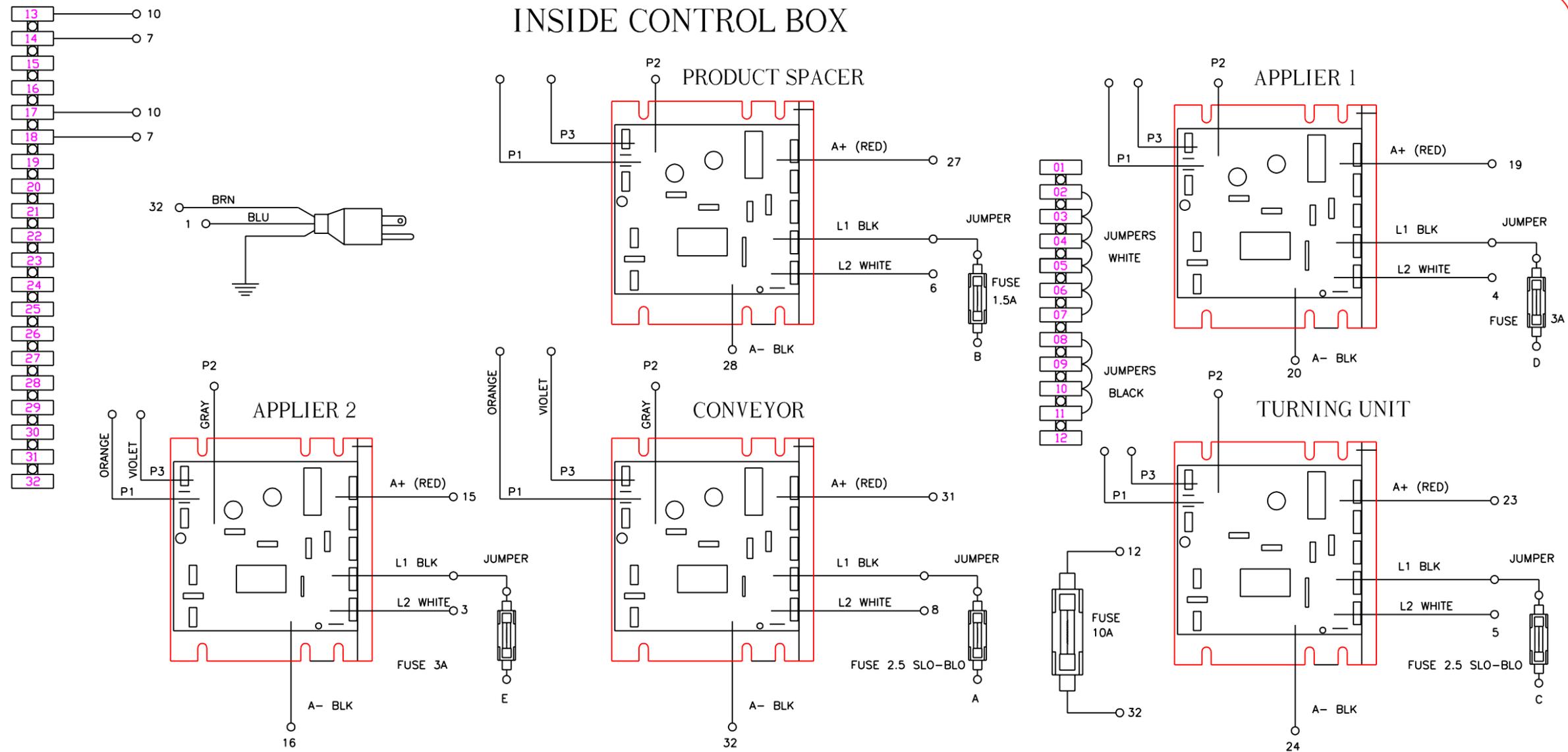
PRODUCT SPACER



CONVEYOR



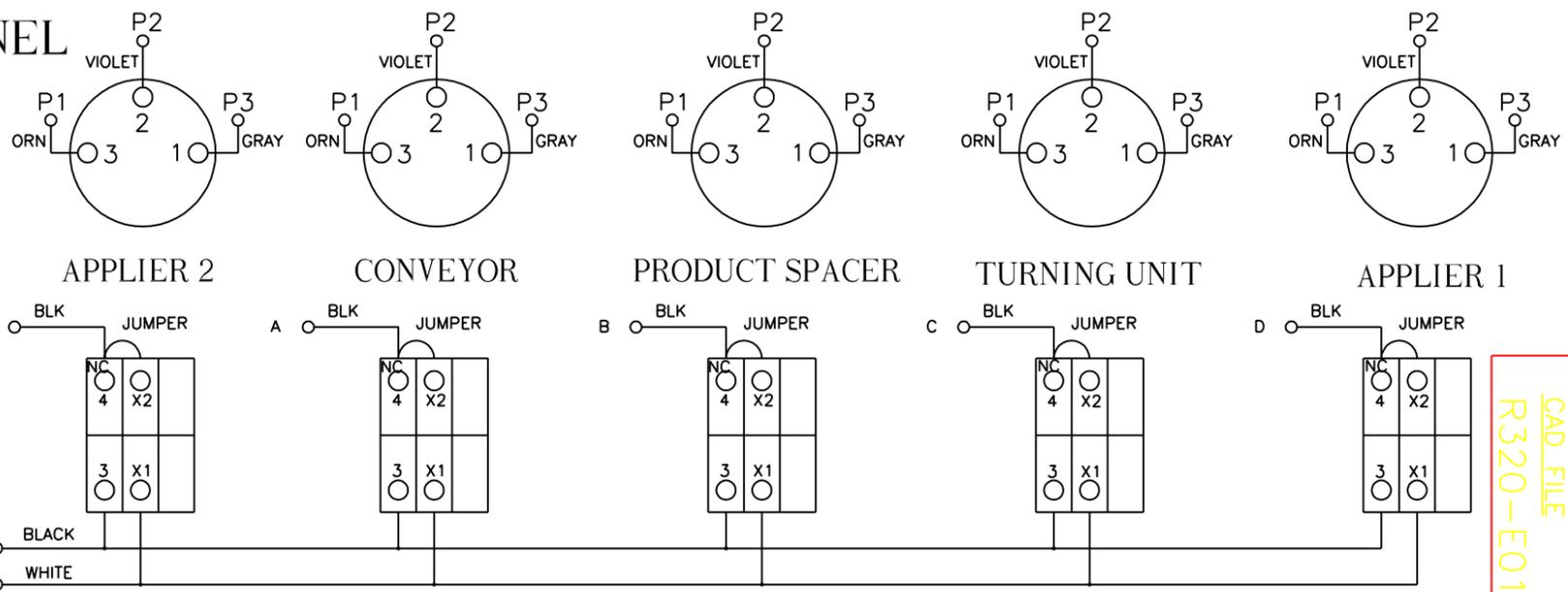
INSIDE CONTROL BOX



BACKSIDE VIEW OF CONTROL PANEL

EMERGENCY STOP

MAIN



AMPHENOL PLUGS ON SIDE OF CONTROL BOX

NOTE - AMPHENOL PLUGS USED ON STAINLESS ENCLOSURES ONLY

DESCRIPTION

ELECTRICAL SCHEMATIC FOR STANDARD R-320

LAST REVISION

5-9-96

DATE

8-28-95

REVISED BY:

mh

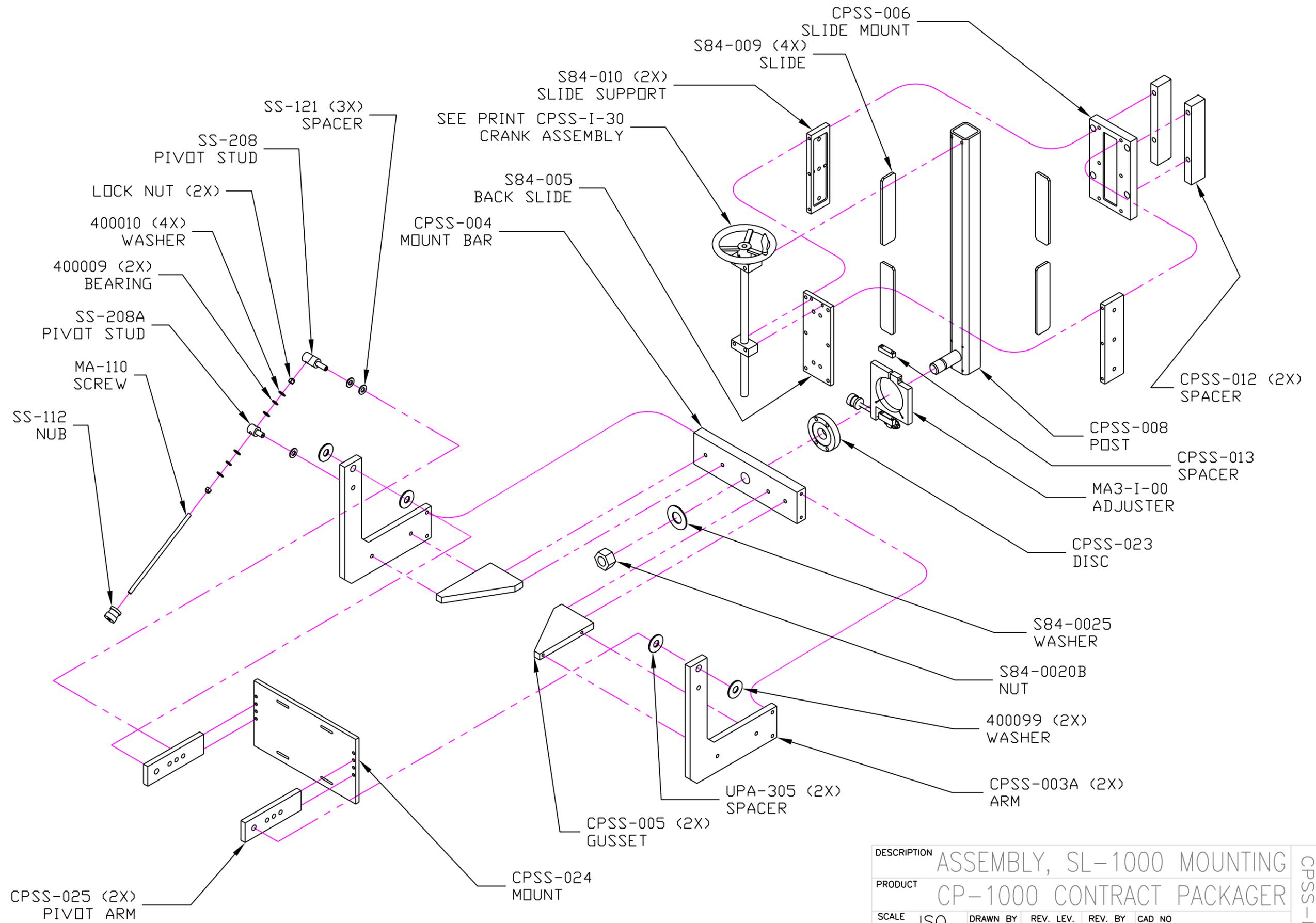
CHECKED BY

SCALE N.T.S. JRL

**PARK PRODUCTS, INC.**

3501-B 8TH AVENUE SOUTH  
ST. PETERSBURG, FLORIDA 33711  
TEL. (813) 327-2123

CAD FILE  
R320-E01

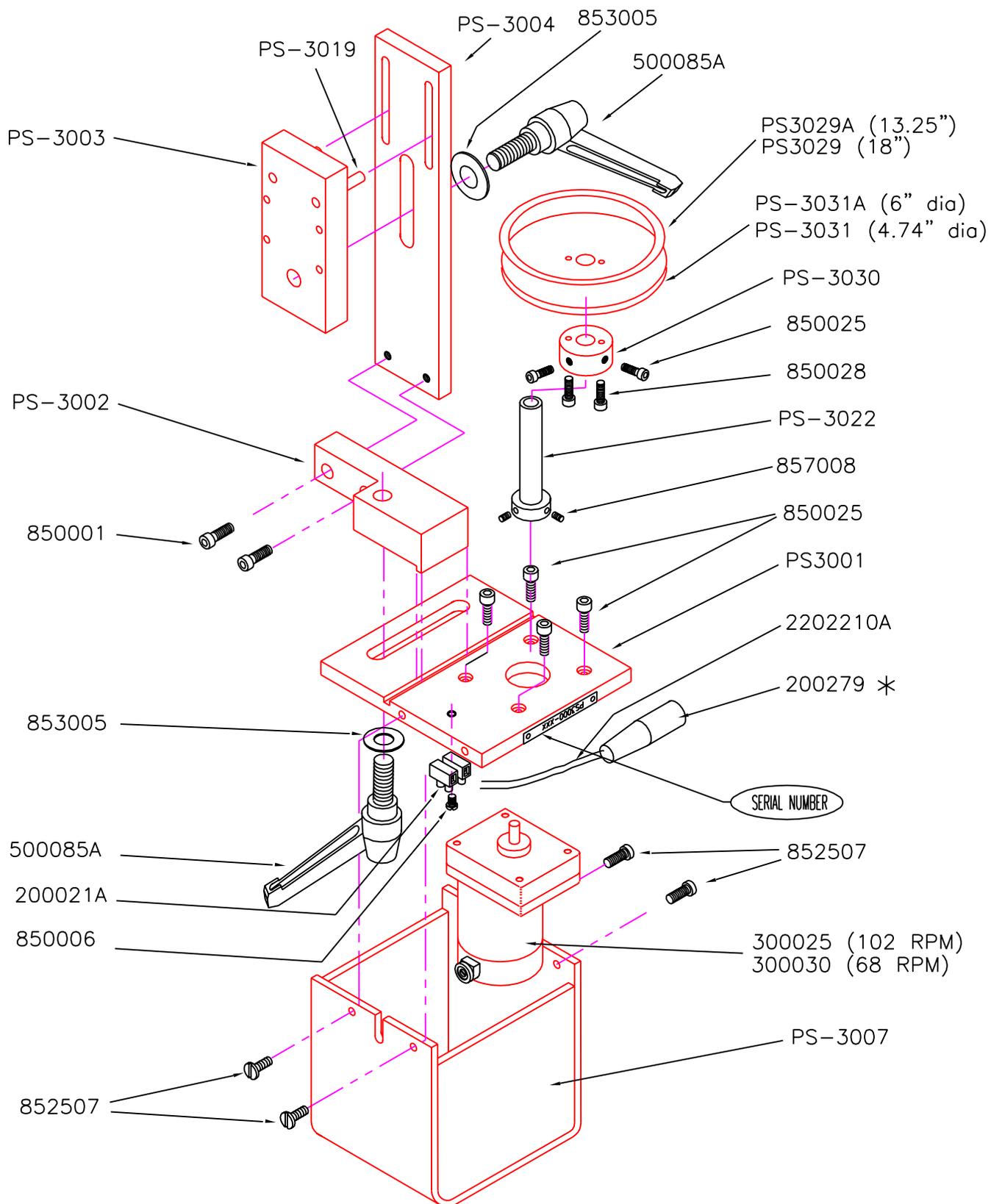


DESCRIPTION	ASSEMBLY, SL-1000 MOUNTING				
PRODUCT	CP-1000 CONTRACT PACKAGER				
SCALE	ISO	DRAWN BY	REV. LEV.	REV. BY	CAD NO
DATE	12-28-1999	R.D.R.	X	X	CPSS-I-00A

REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY
-	-	-			

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 ST. PETERSBURG, FLORIDA 33711  
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PART NUMBER  
 CPSS-I-00A



\* NOTE: CONNECT BLACK WIRE TO PIN 3 OF PLUG  
CONNECT RED TO PIN 4

DESCRIPTION	ASSEMBLY, PRODUCT SPACER			
PRODUCT	CONVEYOR SYSTEMS			
DATE	DRAWN BY	REV. LEV.	REV. BY	CAD FILE:
7/16/1998	DBP	X	X	PS3-1-00
		3501 8TH AVENUE SOUTH ST. PETERSBURG, FLORIDA 33711 TEL. (727) 327-2123		

PART NUMBER  
PS3-1-00

# TA-2/4      2 & 4 INCH TURNING UNITS

## Bill of Material

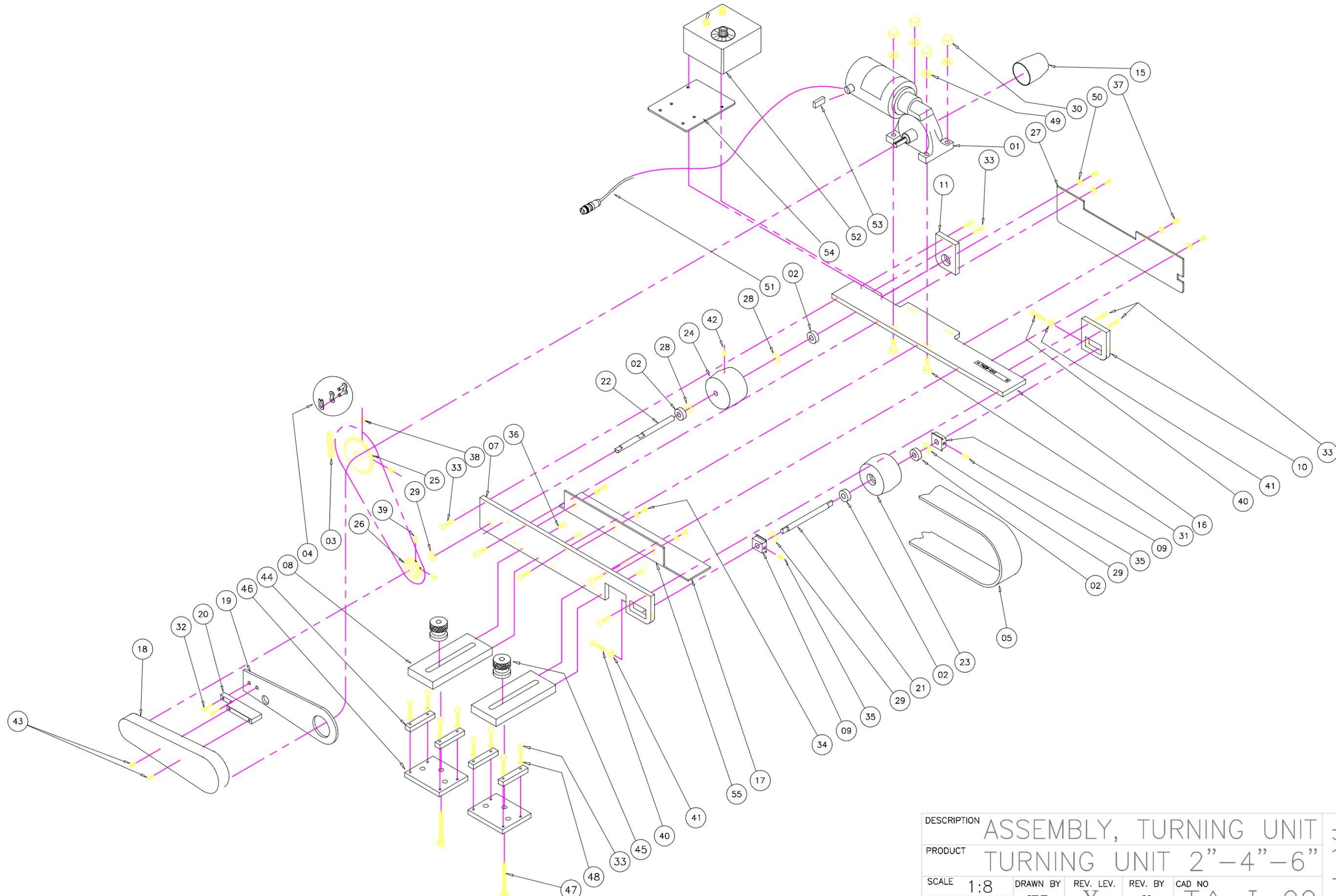
ID#	PART#	QTY	DESCRIPTION
1	300022	1	MOTOR, (1/4 HP. 100 RPM.)
2	400016	4	BEARING, (SEALED 3/8" 99R6)
3	410000	1	CHAIN, (# 25 LINK 19.375")
4	410001	1	LINK, (# 25 MASTER)
5	600007	1	BELT, (2" X 37-1/4" 2" TA)
**	600008	1	BELT, (4" X 37-1/4" 4" TA)
7	TA-2-202	1	FRAME, MAIN
8	TA-2-203	2	POST, MOUNTING
9	TA-2-205	2	BLOCK, BEARING
10	TA-2-205-A	1	PLATE, IDLER ROLLER MOUNTING
11	TA-2-205-B	1	PLATE, UPPER BEARING MOUNTING
15	TA-2-219-1	1	COVER, MOTOR SHAFT
16	TA-2-201	1	PLATE, MOTOR BASE
**	TA-4-401	1	PLATE, MOTOR BASE
17	TA-2-217	1	PLATE, CONVEYOR BELT BACKING
**	TA-4-403	1	PLATE, CONVEYOR BELT BACKING
18	TA-4-406-1	1	COVER, TA CHAIN GUARD (1 OF 2)
19	TA-4-406-1	1	COVER, TA CHAIN GUARD (2 OF 2)
20	TA-4-407	1	SUPPORT, CHAIN GUARD
21	TA-2-206-A	1	SHAFT, IDLER ROLLER
**	TA-4-408A	1	SHAFT, IDLER ROLLER
22	TA-2-206-B	1	SHAFT, DRIVE ROLLER
**	TA-4-408B	1	SHAFT, DRIVE ROLLER
23	TA-2-204-A	1	ROLLER, IDLER 2" WIDE
**	TA-4-409A	1	ROLLER, IDLER
24	TA-2-204-B	1	ROLLER, DRIVE 2" WIDE
**	TA-4-409B	1	ROLLER, DRIVE
25	TA-4-413-1	1	SPROCKET, MOTOR
26	TA-4-412	1	SPROCKET, DRIVE
27	TA-2-218	1	PLATE, 2" COVER
**	TA-4-418	1	PLATE, 4" COVER
28	L-172-04	2	SPACER, .125
29	L-172-03 OR L-172-12	3	SPACER, (.062 OR .093 RESPECTIVELY)
30	FLOOR STOCK	4	ACORN NUT, 1/4-20
31	FLOOR STOCK	4	1/4-20 x 1" H.H.M.S.
32	FLOOR STOCK	2	8-32 x 3/4" S.H.C.S.
33	FLOOR STOCK	17	10-32 x 3/4" S.H.C.S.
34	FLOOR STOCK	3	10-32 x 1/2" S.H.C.S.
35	FLOOR STOCK	2	8-32 x 3/8" SOCKET SET SCREWS
36	FLOOR STOCK	4	1/4-20 x 5/8" F.H.M.S.
37	FLOOR STOCK	4	6-32 x 3/8" S.H.C.S.
38	FLOOR STOCK	2	1/4-20 x 1/4" SOCKET SET SCREWS
39	FLOOR STOCK	2	10-32 x 1/4" SOCKET SET SCREWS
40	FLOOR STOCK	2	8-32 x 1" S.H.C.S.
41	FLOOR STOCK	2	8-32 HEX NUT
42	FLOOR STOCK	1	1/4-20 x 1/2" SET SCREW
43	FLOOR STOCK	2	8-32 x 3/8" S.H.C.S.

# TA-2/4      2 & 4 INCH TURNING UNITS

## Bill of Material

ID#	PART#	QTY	DESCRIPTION
44	TA-2-215B	4	GUIDE, BACK PLATE
45	SS-112	2	KNOB, MICROMETER ADJ.
46	TA-2-215A	2	PLATE, TURN-AROUND MOUNT
47	FLOOR STOCK	2	BOLT, 3/8 x 2-1/4 H.H.M.S
48	FLOOR STOCK	11	WASHER, #10 x .06 THK.
49	FLOOR STOCK	4	WASHER, 1/4" x .06 THK.
50	FLOOR STOCK	4	WASHER, #6
51	200026	1	CONNECTOR, 4 PIN MALE (CONVEYOR MODEL)
52	TB-1	1	ASSEMBLY, TA BOX (FIELD UPGRADE MODEL)
N/S	300023	2	BRUSHES, FOR MOTOR 300022

(\*\*) = SPECIFICALLY FOR 4" TURNING UNIT (TA-4)

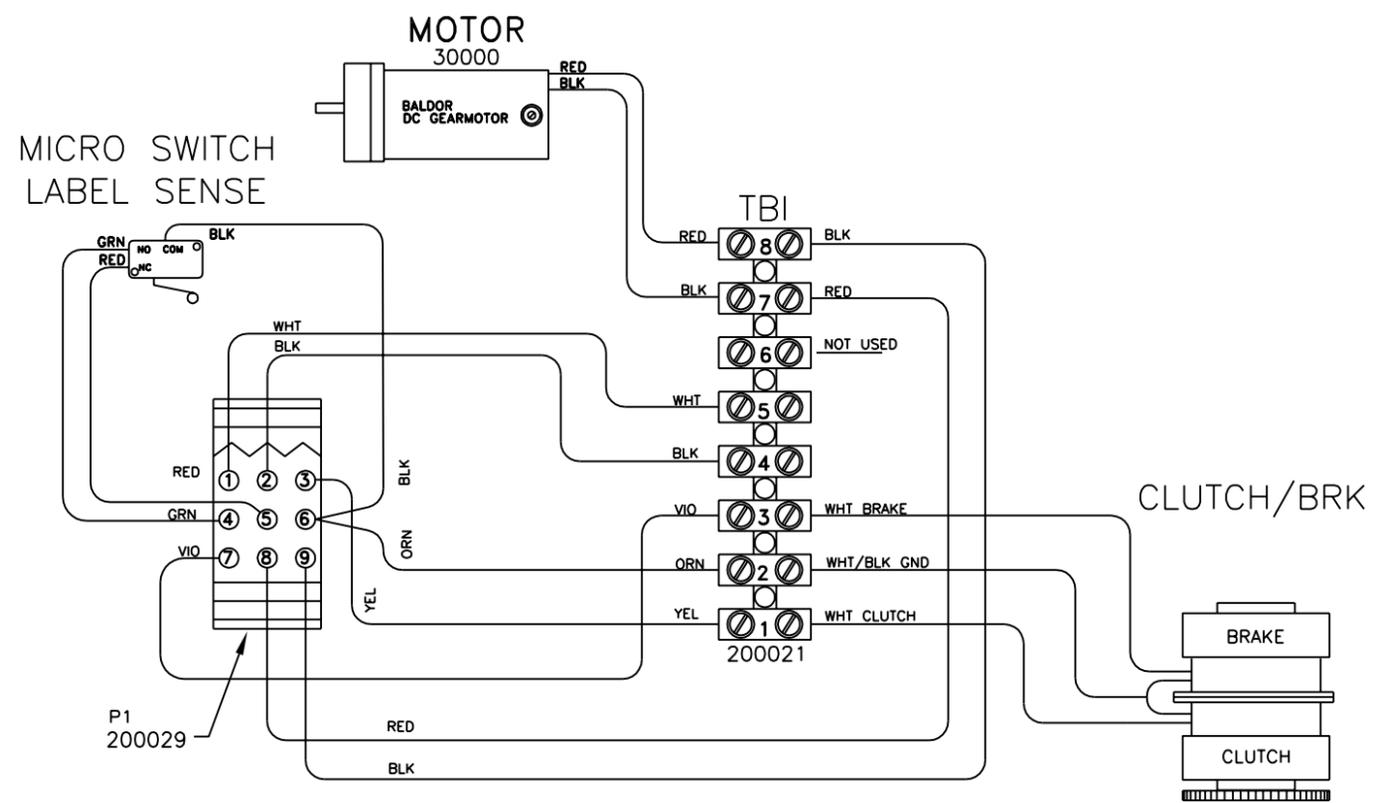
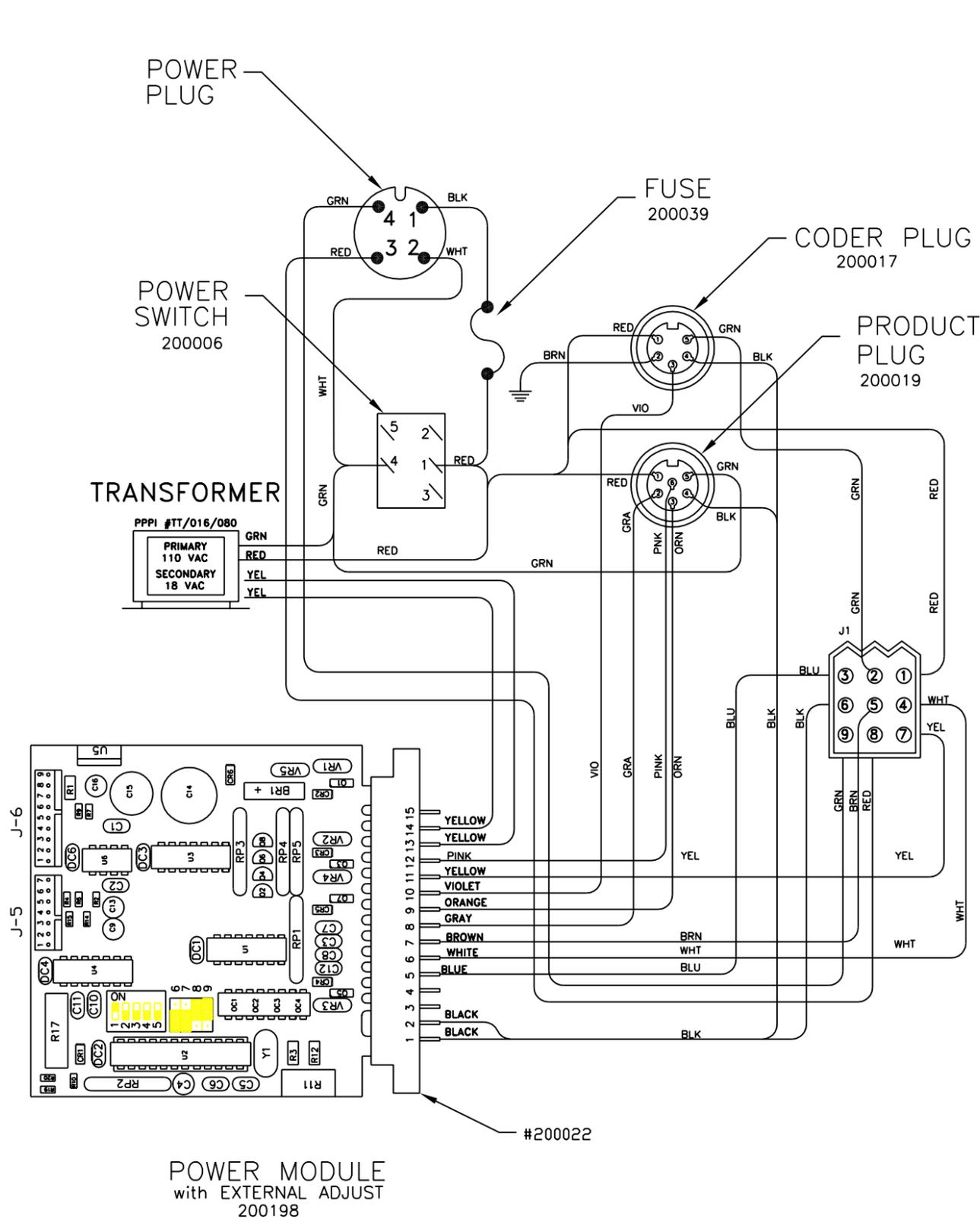


DESCRIPTION	ASSEMBLY, TURNING UNIT			
PRODUCT	TURNING UNIT 2"-4"-6"			
SCALE	1:8	DRAWN BY	REV. LEV.	REV. BY
DATE	08-03-1998	JBR	X	X
				CAD NO
				TA-I-00

REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY


 3501 8TH AVENUE SOUTH  
 ST. PETERSBURG, FLORIDA 33711  
 TEL. (727) 327-2123

PART NUMBER  
TA-I-00



**NOTES:**

- FOR AIR APPLIER – USE TB1-1 & TB1-2 NUMBER TERMINALS TO CONNECT SOLENOID.
- TBI WIRING AS SHOWN IS FOR RIGHT HAND MACHINE. LEFT HAND MACHINE IS MIRROR IMAGE, PLUS MOTOR RED TO TBI-7 & MOTOR BLACK TO TBI-8.
- IF CODER IS INSTALLED, THE DWELL POT ON THE POWER MODULE IS ADJUSTED FOR PLATEN STRIKE TIME.
- PRODUCT PLUG WIRING  
 PIN 1 – 110 VAC (L1)  
 PIN 2 – NORMALLY CLOSED  
 PIN 3 – NORMALLY OPEN  
 PIN 4 – COMMON/GROUND/12VDC(-)  
 PIN 5 – 110 VAC (L2)  
 PIN 6 – 12 VDC (+)
- CODER PLUG WIRING  
 PIN 1 – 110 VAC (L1)  
 PIN 2 – CODER CHASSIS GROUND  
 PIN 3 – DWELL PHASE 12VDC(+)  
 PIN 4 – COMMON 12 VDC(-)  
 PIN 5 – 110 VAC (L2)
- FUSE IS AGC 1.5 AMP.
- CONVEYOR PLUG WIRING  
 1. 110 VAC (L1)  
 2. 110 VAC (L2)  
 3. 90VDC (+)  
 4. 90VDC (-)

DESCRIPTION	ELECTRICAL SCHEMATIC			
PRODUCT	L-15 CONVEYOR			
SCALE	1:1	DRAWN BY	REV. LEV.	REV. BY
DATE	04/29/1992	G.T.H.	X	X
				CAD NO
				L-15ELEC
		3501 8TH AVENUE SOUTH ST. PETERSBURG, FLORIDA 33711 TEL. (727) 327-2123		

L-15ELEC

REV	DATE	ECO	REVISION RECORD	CHANGE BY	CHKD BY