

USERS MANUAL

FOR

MODEL DL-5000

TICKET EATER ®

120 Liberty Lane Chalfont, PA 18914

215-997-8616 Fax 215-997-9806

Deltronic  **Labs, Inc.**

DL-5000 TICKET EATER
with Rev. 5 Logic Board
Beginning with Serial# 6956
July 2005

2nd GENERATION DL-5000
Now Microprocessor Controlled!

NEW FEATURES:

When the Ticket Eater® is turned on, it will first do a display test. When done, the display will be reset to 0. Any time the Ticket Eater® is at idle for a few seconds, it will display rotating zeros.

2 PULL BACK DETECTION OPTIONS:

Normally the Ticket Eater® is used by a game room attendant, so cheating may not be an issue. If the Ticket Eater® is used by a customer, although not recommend, they can gain additional points by pulling back on the tickets. To reduce this problem, two pull-back detection options are available. Select one or both of the options to reduce cheating.

SETTING THE PULL BACK DETECTION OPTIONS:

- 1) Turn power off.
- 2) Open the lid and slide the logic board up slightly without removing the connectors.
- 3) There are two jumpers on the logic board used to set the options.
- 4) The location of the jumpers are pointed out on the Logic Board Layout. (Page 2)
- 5) Place the jumpers according to below:

OPTION 1: DEDUCT POINTS WHEN PULLING BACK ON TICKETS IS DETECTED.

JUMPER 1:

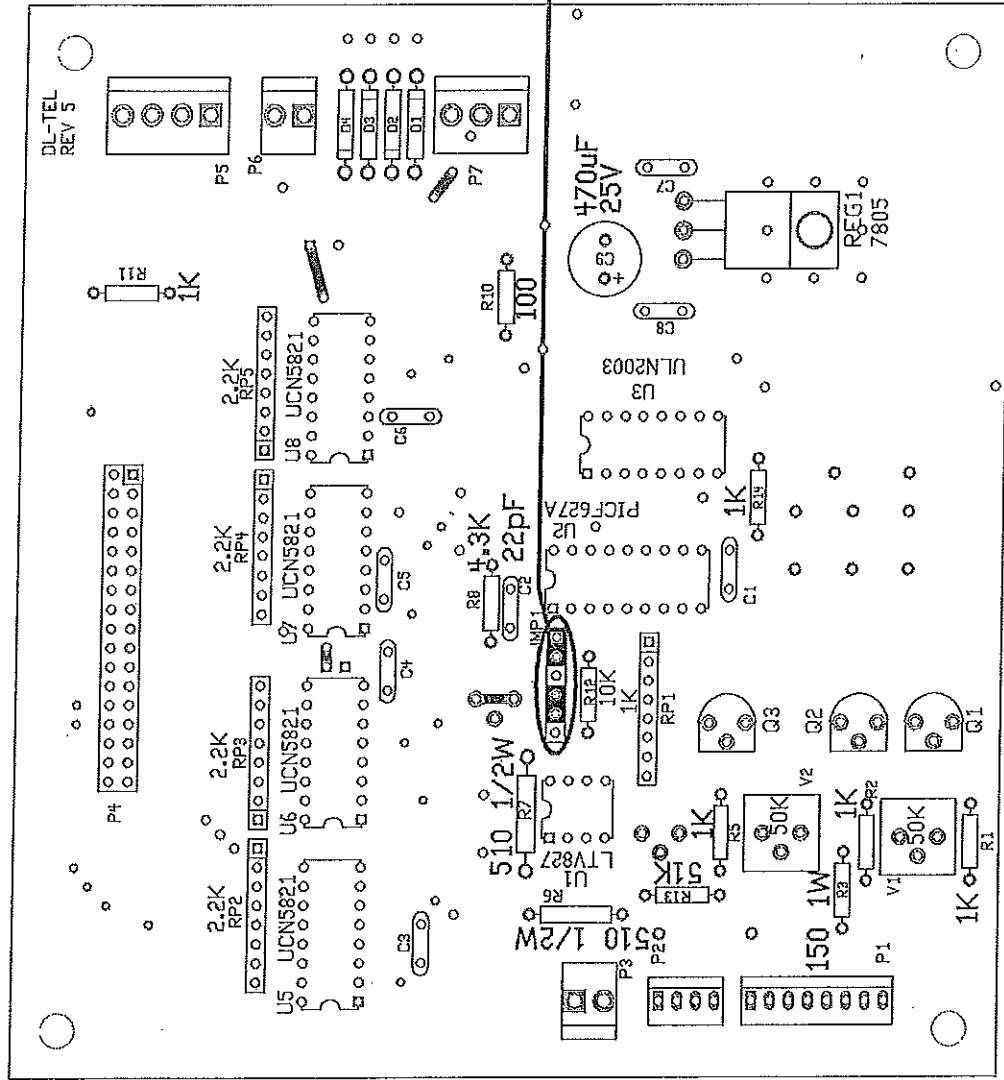
POSITION 1: DO NOT DEDUCT POINTS (factory setting)
POSITION 2: DEDUCT POINTS

OPTION 2: TURN OFF MOTOR WHEN TICKETS ARE PULLED BACK.

JUMPER 2:

POSITION 1: DO NOT TURN MOTOR OFF (factory setting)
POSITION 2: TURN MOTOR OFF FOR 10 SECONDS

- 6) Slide the board back down, close the lid, and turn the power back on. The new settings now apply.



All caps .1 except as noted
 All transistors 2N4401
 All diodes 1N4001

DLTEL REV. 5
6/1/2005

- Jumper 1 in position 1
- Jumper 1 in position 2
- Jumper 2 in position 1
- Jumper 2 in position 2

DL-TEL REV 5

DL-TEL

DL-TEL

James N. Augeri

6/1/2005

Doc:	DL-TEL REV 5	Revision:	5
Title:	DL-5000/6000 - Logic Board Layout	Scale:	A
Board:	DL-TEL	Date:	6/1/2005
Author:	James N. Augeri	Sheet:	1 of 1

TROUBLE SHOOTING GUIDE DL-5000

DOES NOT COUNT :

- 1) Half of a ticket could be stuck underneath the dual sensor.
- 2) The light bulb under the mechanical assembly could be burned out.

REMOVING A HALF TICKET:

- 1) Unplug the Ticket Eater®, open the lid, and remove the blade cover.
- 2) Unscrew the red thumb screw holding the dual sensor in place.
- 3) With a small tool push the half ticket in the circular cut-out toward the rear roller.
- 4) While pushing the ticket, rotate the large gear.
- 5) The ticket will then be forced out of the guides and cut by the blade.
- 6) Finally, re-install all removed components.

CHECKING LIGHT BULB:

- 1) Open the lid and unscrew the red thumb screw holding the dual sensor in place.
- 2) Turn the power ON.
- 3) Keep loose clothing, hair, and other objects out of the machine.
- 4) Press the white safety switch located at the front of the machine.
- 5) Where you removed the dual sensor, look through that hole for a lit light bulb.
- 6) If OFF, refer to Replacing light bulb below.

REPLACING LIGHT BULB:

- 1) The light bulb fixture is mounted to the underside of the Ticket Eater®.
- 2) Place the Ticket Eater® on its side and remove the only Phillips screw.
- 3) Slide the metal bracket out of the Ticket Eater®.
- 4) Replace the bulb with another #73 bulb.
- 5) Finally, re-install all removed components.

DOES NOT CUT TICKETS:

- 1) The bottom guide could be bent down allowing the tickets to go under the blade.

CHECKING AND FIXING BOTTOM GUIDE:

- 1) Unplug the Ticket Eater®, open the lid and remove the blade and chute cover.
- 2) The blade is located between the two guides.
- 3) The two guides must be parallel with each other and the blade should protrude approx. 1/8" below the bottom guide.
- 4) If the guides are not parallel with each other, bend the bottom guide up.
- 5) If the bottom guide or blade is broken, it will need to be replaced.

MOTOR RUNS CONSTANTLY:

- 1) The front sensor could be blocked.
- 2) If there is a lot of sunlight or other bright light near the Ticket Eater®, it could interfere with the front sensor. Shade or move the Ticket Eater®.

REMOVING DEBRIS BLOCKING FRONT SENSOR:

- 1) Unplug the Ticket Eater® and open the lid.
- 2) Unscrew the red thumb screw holding the front single sensor down and remove the sensor.
- 3) Check the bottom of the sensor for any debris attached to it.
- 4) Look down the pathway of the sensor for any partial tickets or other material.
- 5) If the front sensor is not blocked, disconnect the sensor from the logic board.
- 6) Close the lid, plug the Ticket Eater® in, and turn power ON.
- 7) After the display test is finished, the motor should NOT turn on. If the motor does turn ON with the sensor disconnected, return the Ticket Eater® for service.

DOES NOT START:

- 1) Check fuses and AC plug.
- 2) Make sure the front sensor is plugged into the logic board. (Small 4-Pin Conn.)
- 3) If the Error Detect is enabled, there is a 10 second delay at power ON.

MISCOUNT:

Please note: Miscounts are almost always caused by worn mechanical parts or bad tickets seldom by any electronic part. **Mechanical re-build recommended every 8-10 million tickets.**

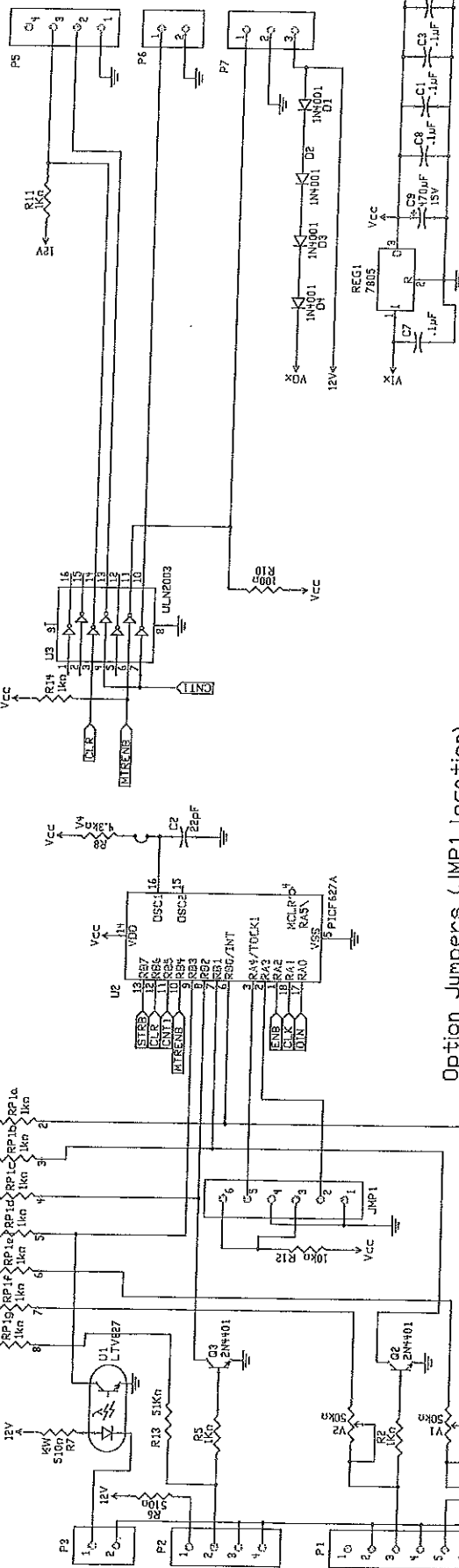
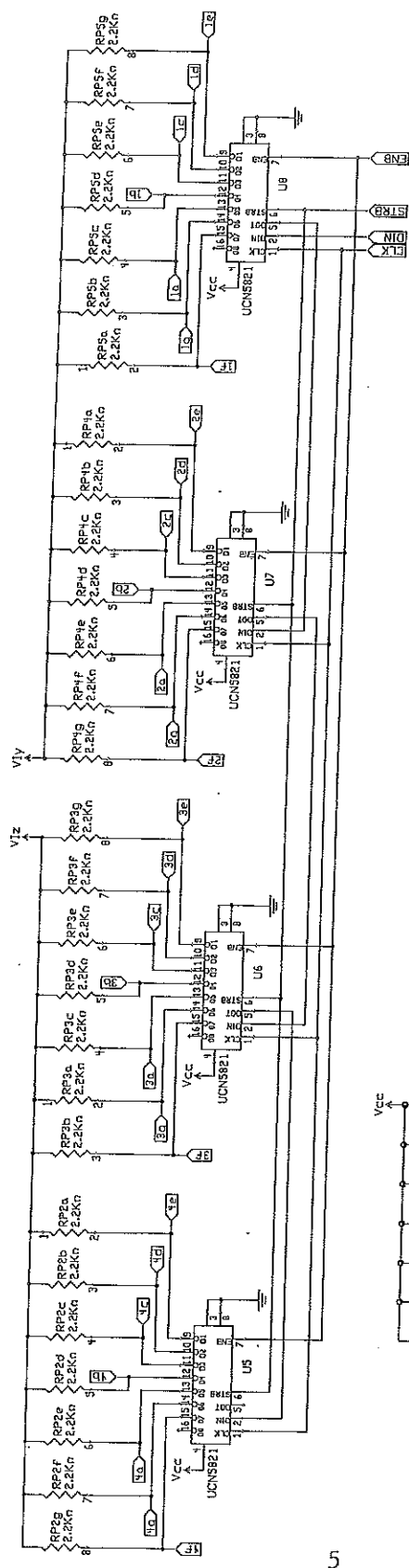
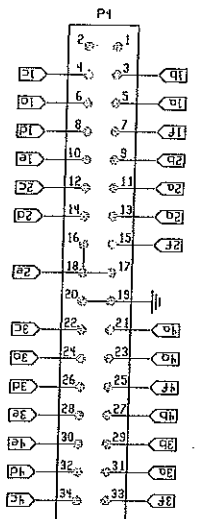
- 1) Make sure the dual sensor is centered above the hole in the guides.
- 2) Clean the Ticket Eater® of any dust or other debris.
- 3) Check that all thumbscrews are tightened.
- 4) Make sure the tension springs are applying tension to the rollers.
- 5) Make sure the drive belt is not slipping.

COUNTS BACKWARDS OR STOPS TAKING TICKETS:

- 1) Error Detect Enabled. (See Page 1, "2 PULL BACK DETECTION OPTIONS")

TICKET JAM:

- 1) Trash bin is overflowing and preventing tickets from exiting. (See User Manual Page 3)
- 2) Chute cover is bent or out of position. (See User Manual Page 2, #4)



Configuration Jumpers:

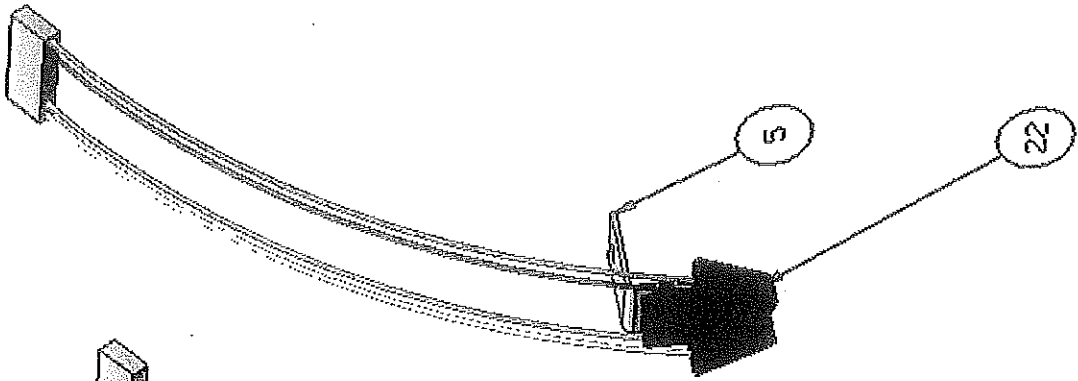
1. Vix to 12V
2. Viy to V0x
3. Viz to V0x

Option Jumpers (JMP1 location)

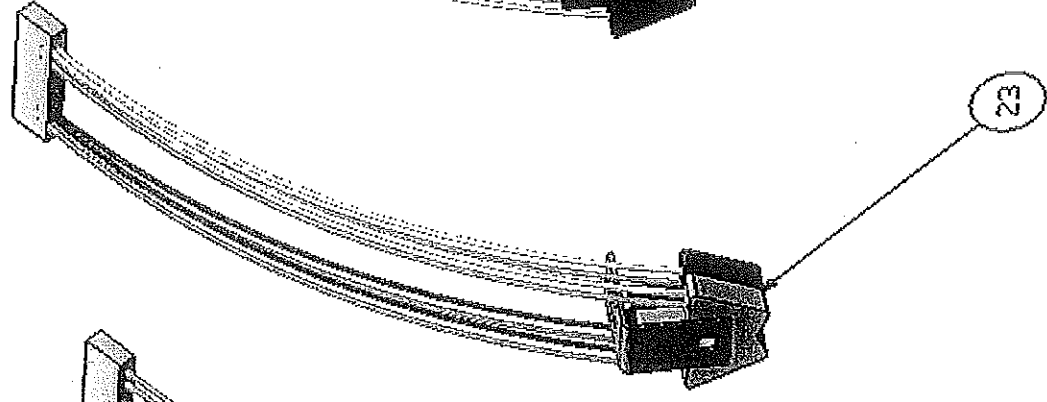
1. Pin 2 to 1 to enable error 1
2. Pin 3 to 3 to disable error 1
3. Pin 5 to 4 to enable error 2
4. Pin 5 to 6 to disable error 2

NOTE: Error 1 is if tickets are pulled backwards.
 Error 2 is if tickets are moving too fast/slow
 (Both conditions can occur if cheating is attempted)

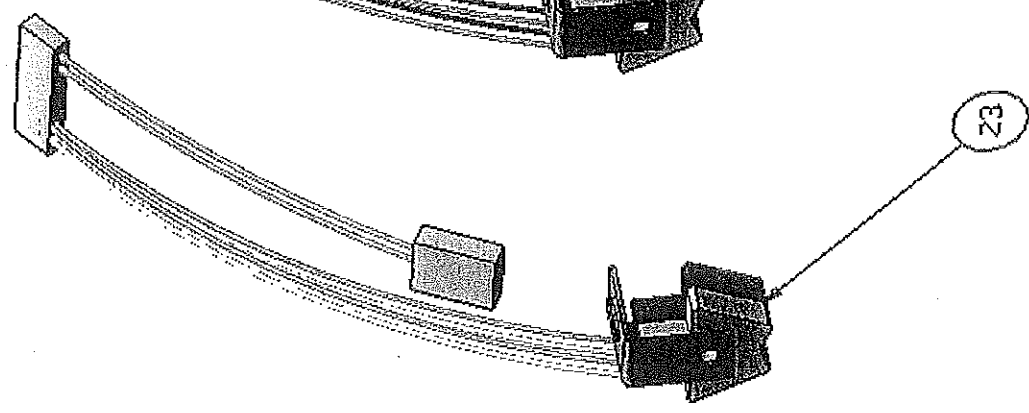
Doc:	DL-5000/5000 - Logic Board Schematic
Title:	DL-5000/5000 - Logic Board Schematic
Board:	DL-TEL
Author:	James N. Augeri
Date:	6/1/2005
Revised:	5
Size:	A
Sheet:	1 of 1

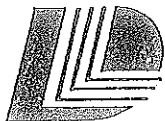


DUAL SENSOR USED BEFORE
S/N 3376



DUAL SENSOR USED AFTER
S/N 3376





TICKET EATER PARTS LIST

<u>EM</u>	<u>QTY.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	1	MOTR-/TE/	TICKET EATER MOTOR
2	1	RM-SDPLRT/TE/REV4	SIDE PLATE RIGHT (MOTOR SIDE)
3A	1	RM-SDPLLT/TE/REV4	SIDE PLATE LEFT (GEAR SIDE)
3	1	BLOK-FRONT/TE/	FRONT END BLOCK SPACER
4	1	BLOK-CENTER/TE/	CENTER BLOCK SPACER
5	2	BRKT-SENSOR/TE/	SENSOR BRACKET
6	1	GUID-TOP/TE/MET	TOP TICKET GUIDE
7A	1	GUID-BOTTOM/TE/MET	BOTTOM TICKET GUIDE
7	2	RM-SPACER/TE/REV5	TICKET SPACERS
8	1	BLOK-REAR/TE	REAR BLOCK SPACER
9	2	RM-BKTMNT/TE/ANGL	MOUNTING BRACKET (GEAR SIDE)
10A	2	ROLR-DRIVE-TE/	MOUNTING BRACKET (MOTOR SIDE)
10	2	ROLR-DRIVE-TE/	DRIVE ROLLER
11	1	SHFT-DRVRLR/TE/	DRIVE ROLLER SHAFT
12	1	RM-ARBORB/TE/	SAW BLADE ARBOR ONLY
13A	1	BLAD-SAW/TE/ARBOR	BLADE ASSEMBLY w/ARBOR 8-31 set screw, saw blade, nut, washer
13	1	SHFT-CUTTER/TE/REV3	CUTTER SHAFT
14	2	ROLR-IDLER/TE/	IDLER ROLLERS
15	2	SPRG-ROLLER/TE/	ROLLER SPRINGS
16	1	GEAR 32.219/TE/SM	GEAR NYLON (SMALL)
17	1	GEAR 52.219/TE/LRG	GEAR NYLON (LARGE)
18	1	BLAD-SAW/TE/	SAW BLADE
19	2	GEAR-.219/TE/	PULLEY GEAR



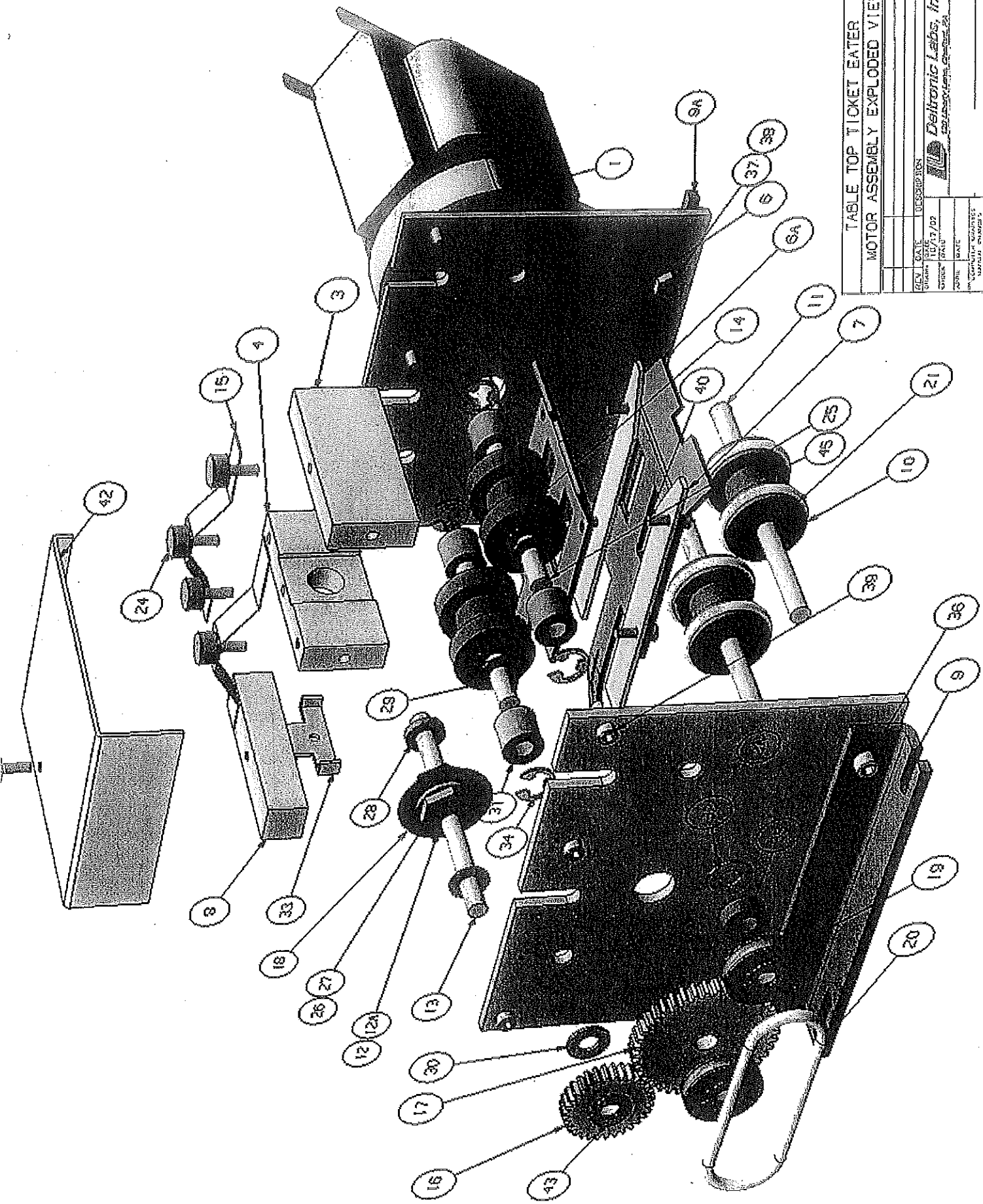
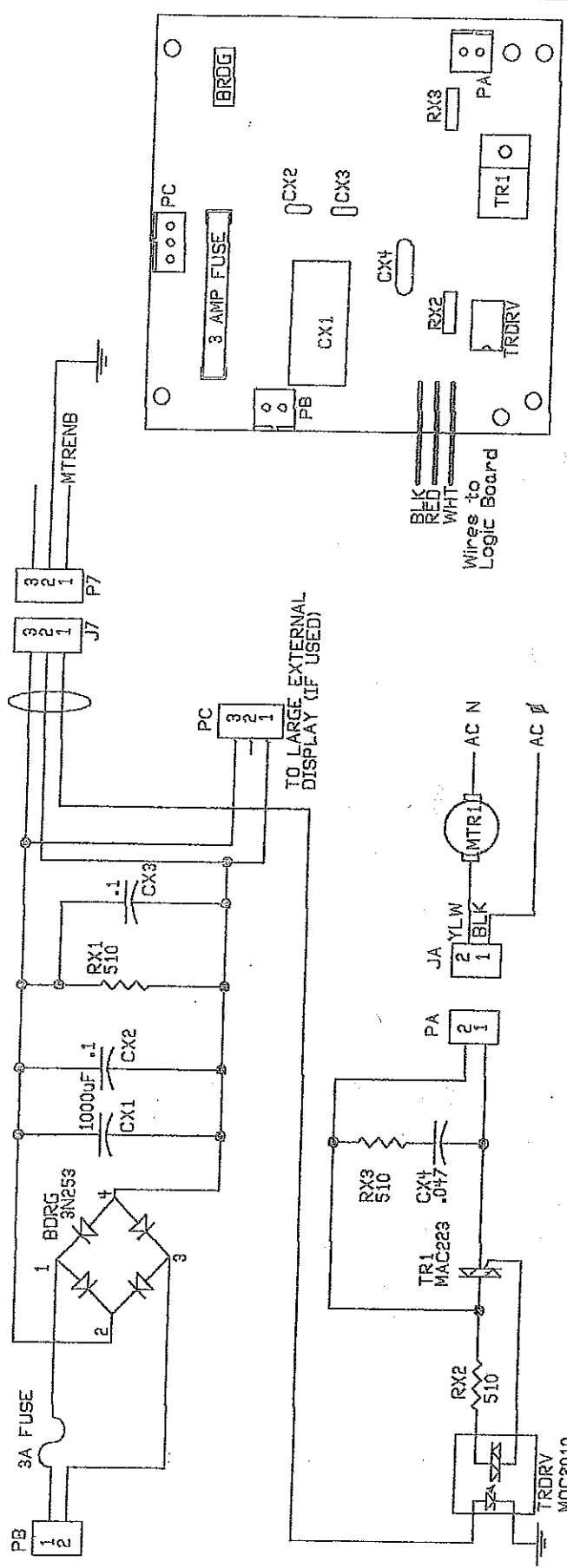


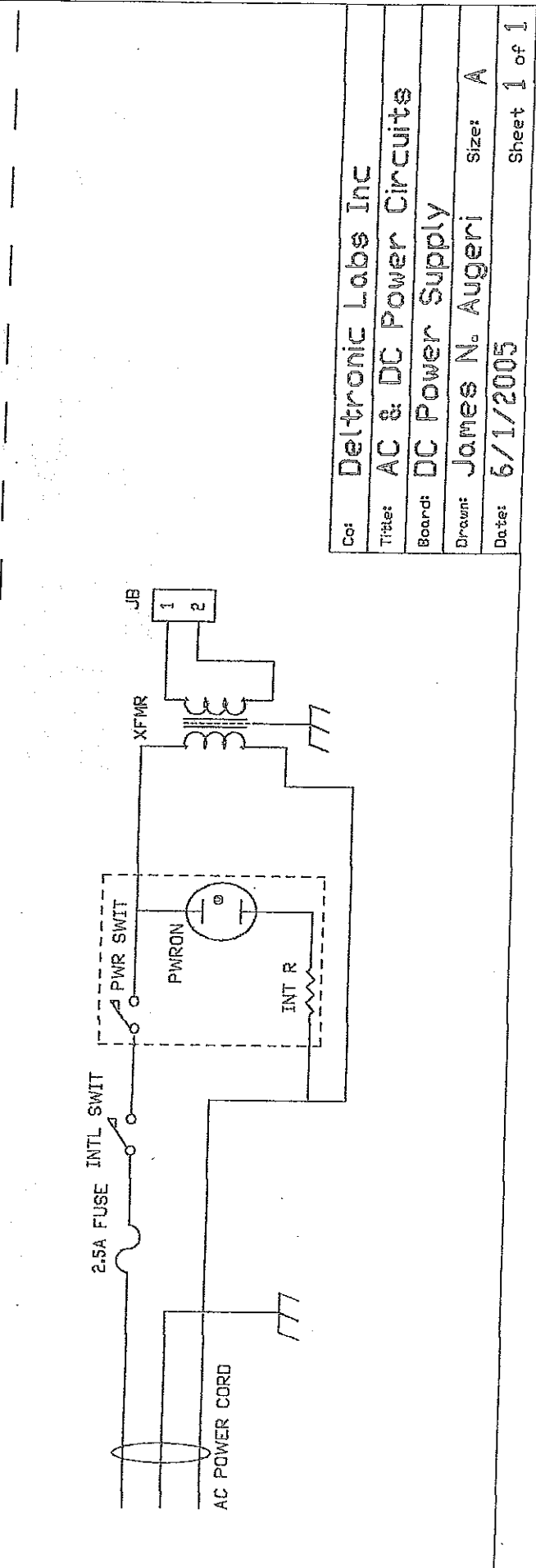
TABLE TOP TICKET EATER
MOTOR ASSEMBLY EXPLODED VIEW

DESIGN	DATE	DESIGNED BY
10/13/52		
CHECKED	DATE	
APPROVED		
DATE		
BY		
APPROVED		
DATE		
BY		
APPROVED		
DATE		
BY		

Deltronic Labs, Inc.
10000 Deltronic Drive
Delton, Michigan, U.S.A.



DC Power Supply Schematic and Layout

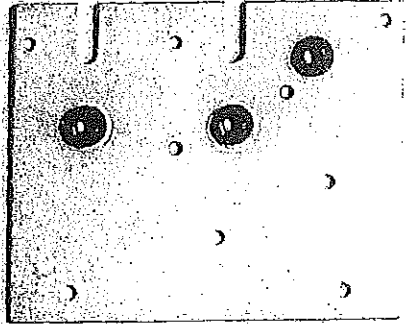
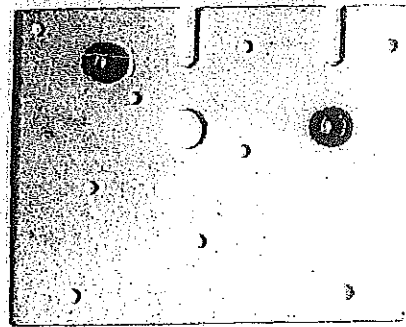
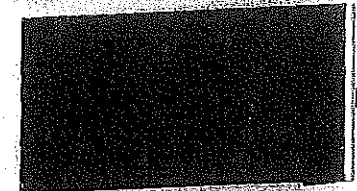
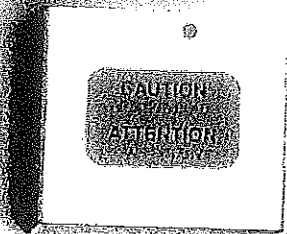
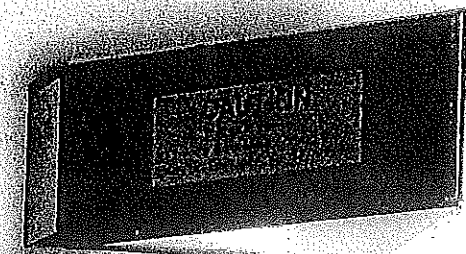


Co:	Deltronic Labs Inc		
Title:	AC & DC Power Circuits		
Board:	DC Power Supply		
Draught:	James N. Augeri	Size:	A
Date:	6/1/2005		Sheet 1 of 1

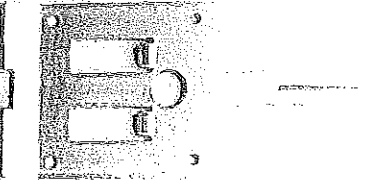
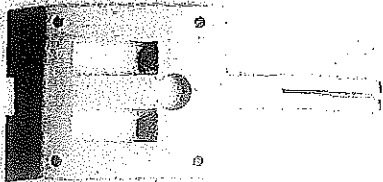
20	1	BELT-DRIVE/TE/	DRIVE BELT
21	4	RING-O/TE/	"O" RING DRIVE ROLLER
22	1	SENS-SINGLE/TE/OPTO	SINGLE SENSOR
23	1	**SENS-DUAL/TE/OPTO **SENS-DUAL/TE/3376 **Serial # and model # REQUIRED	DUAL SENSOR USED BEFORE SN.3376 DUAL SENSOR USED AFTER SN.3376 when purchasing dual sensors
24	5	SCRW-THUMB/TE/RED	6-32x3/8 RED CAP THUMBSCREWS
25	2	SHFT-IDLR/TE/	IDLER ROLLER SHAFT
26	1	RM-NUTARB/TE/5-9M	1/2-20 X 1/8 NUT
27	1	RM-WASHER/TE/BLAD	1/2 X 3/4 X .06 NYLON WASHER
28	1	SPAC-093/TT/WSHR SPAC-032/TT/WSHR	1/4 X 1/2 X .093 NYLON WASHER (for ECM MOTOR) 1/4 X 1/2 X .032 NYLON WASHER (for MERKLE MOTOR)
29	1	SPAC-032/TT/WSHR	1/4 X 1/2 X .032 NYLON WASHER
30	1	SPAC-032/TT/WSHR	1/4 X 1/2 X .032 NYLON WASHER
31	4	SPAC-232/TE/IDLR	1/4 X 1/2 X 7/16 NYLON SPACER
32	8	SPAC-032/TT/WSHR	1/4 X 1/2 X .032 NYLON SPACER
33	1	RM-BKTTAB/TE/BEAU	BRACKET ANGLE (BEAU)
34	6	RING-E25RET/TT	RETAINING RINGS
35	1	PULY-SP212/TE/NYLN	SPACER SP212 FOR TE & TD
36	4	RM#8-32C/TE/1/2	8-32 X 1/2 CAP SCREWS
37	4	RM#8-32/TE/NUT	8-32 HEX NUT
38	4	RM-#8SPSW/TE/	#8 SPLIT LOCK WASHER
39	6	RM#6-32C/TE/3/8	6-32 X 3/8 CAP SCREWS
40	6	RM#6-32C/TE/1/2	6-32 X 1/2 CAP SCREWS
42	1	COVR-CUTTER/TE/REV2	CUTTER COVER
43	3	RING-SHF-25/TE/1/4"	RETAINING RING 1/4" SHF-25
45	2	SCRW-SET/TT/	8-32 X 3-16 SET SCREWS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
SWCH-INLOCK/TE/CHRY	INTERLOCK SWITCH (WHITE)
CABL-RIBBON/TE	RIBBON CABLE ONLY (DL-5000 Small Display)
LENS-2"4 DIG/TE/5-7	RED 2" 4 DIGIT FILTER LENS
BLAD-MTRFAN/TE	MOTOR FAN BLADE
LOCK-/TE/	LOCK 5/8" CAM & KEY #2316
DISP-LED/TE/2DGT	2 DIGIT (LED) RO
CHIP-NE555/YB/	IC CHIP NE555
CHIP-74C04/TE/HEX	IC CHIP 74C04 HEX INVERT
CHIP-74C48/TE/	IC CHIP 74C48
CHIP-74C192/TE/	IC CHIP 74C192 or CD40192N
CHIP-74C00N/TE/	IC CHIP 74C00N
FUSE-3 AG/TE/1 AMP	3AG 1 AMP FUSE
FUSE-3 AG/TE/2.5 A	3AG 2.5 AMP FUSE
PCBD-LOGIC/TE/REV 4	T/E LOGIC PCB R.4 (Discontinued)
PCBD-LOGIC/TE/REV 5 (starting w/sn: 6963)	T/E LOGIC PCB Rev5
PWSP-PWRSUP/TE/5000	T/E POWER SUPPLY PCB DL-5000 (below sn: 6963)
PWSP-PWRSUP/TE/5N6 (after sn: 6963)	T/E POWER SUPPLY PCB DL-5000 (after sn: 6963)
PWSP-DL-9000	DL-9000 POWER SUPPLY BOARD
RM-CNTKTR/TE/	INTERNAL TICKET COUNTER
DISP-TEDCBL/TE/5&6M	TE Small 4 DIGIT 1" DISPLAY/CABLE

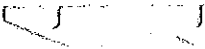
<u>PART NUMBER</u>	<u>DESCRIPTION</u>
RM-TKTSHF/TE/	TICKET SHELF
CHUT-TICKET/TE/5-7M	TICKET CHUTE 5000
RM-TKTCHU/TE/8-9M	TICKET CHUTE (8000, 9000)
CÓVR-TKCHUT/TE/	TICKET CHUTE COVER
RM-CNTCOV/TE/REV2	COUNT CHASSIS & COVER
RM-POWCRD/TE/8'	DL-5000 POWER CORD 8'
RM-POWCOR/DC/9000	DL-9000 POWER CORD 6 1/2'
RM-SWIBUT/TE/BLK	PRINT BUTTON DL-9000
RM-SWIBUT/TE/RED	RESET BUTTON DL-9000
KEY-SET/TT/	SET OF 2 KEYS
LAMP-73	1 BULB IN TE LIGHT KIT (DL-5000 & DL-6000)
LAMP-73	DL-9000 DISPLAY (20 PER DISPLAY)
LAMP-74	DL-6000 DISPLAY D2-4 (20 PER DISPLAY)
SWCH-ALCO/TE/ONOF	SWITCH POWER/ON
BUTN-RESET/TE/CAP	RESET BUTTON CAP ONLY DL-5000
SWCH-RESET/TE/NUT	SWITCH RESET WITH NUT DL-5000



#7



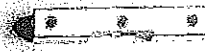
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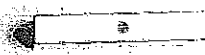
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#10



#11



#12



#13



#14



#15 16 17 18



#19 20 21 22



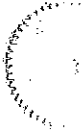
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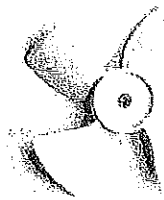
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#31



#32

#33



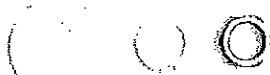
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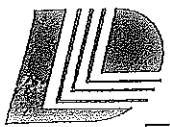


#36

#37

#35





<u>ITEM #</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
#1	COVR-TKCHUT/TE/	TE TICKET CHUTE COVER REV 5
#2	COVR-CUTTER/TE/REV2	CUTTER COVER REV2
#3	CHUT-TICKET/TE/5-7M	TICKET CHUTE TE5000 REV1
#4	RM-SDPLRT/TE/REV4	SIDE PLATE RIGHT REV4 (MOTOR SIDE)
#5	RM-SDPLLT/TE/REV4	SIDE PLATE LEFT REV4 (GEAR SIDE)
#6	BRKT-MOTGER/TT/ANGL	LEFT MOTOR SIDE MOUNTING BRACKET
#6	BRKT-MOTSID/TT/ANGL	RIGHT MOTOR SIDE MOUNTING BRACKET
#7	GUID-BOTTOM/TE/MET	TE BOTTOM TICKET GUIDE
#7	GUID-TOP/TE/MET	TE TOP TICKET GUIDE
#8	RM-SPACER/TE/REV5	TICKET SPACER
#9	BLOK-REAR/TE/	TE REAR SPACER BLOCK
#10	BLOK-CENTER/TE/	TE CENTER SPACER BLOCK
#11	BLOK-FRONT/TE/	TE FRONT SPACER BLOCK
#12	ROLR-ASSMBY/TE/IDLR	TE IDLER ROLLER ASSEMBLY
#13	ROLR-DRIVE/TE/	TE DRIVE ROLLER
#14	BELT-DRIVE/TE/	TE DRIVE BELT
#15	SCRW-THUMB/TE/RED	TE THUMB SCREW RED
#16	RM-#8-32C/TE/1/2	#8-32 X 1/2 CAP SCREW
#17	RM-#8-32C/TE/3/8	#8-32 X 3/8 CAP SCRW BLACK
#18	RM-#6-32C/TE/1/2	#6-32 X 1/2 CAP SCREW BLACK
#19	RM-#8FLTW/TE/	#8 FLAT WASHER



<u>ITEM #</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
#20	RM-#8SPSW/TE/	#8 SPLIT LOCK WASHER
#21	RM-#6LOCW/AD/	#6 LOCK WASHER
#22	RM-#8-32/TE/NUT	#8-32 HEX NUT
#23	GEAR-.219/TE/	PULLEY GEAR .219
#24	GEAR-32.219/TE/SM	SMALL SPUR GEAR 32.219
#25	GEAR-52.219/TE/LRG	LARGE SPUR GEAR 52.219
#26	RING-E25RET/TT/	RETAINING RING E-25
#27	SPAC-093/TT/WSHR	SPACER WASHER 093
#28	SPAC-032/TT/WSHR	SPACER WASHER 032
#29	RING-SHF-25/TE/1/4	RETAINING RING 1/4" SHF-25
#30	SPRG-ROLLER/TE/	ROLLER SPRING REV4
#31	BLAD-MTRFAN/TE/	TE MOTOR FAN BLADE
#32	SHFT-CUTTER/TE/REV3	CUTTER SHAFT REV3
#33	SHFT-DRVRLR/TE/	TE DRIVE ROLLER SHAFT REV2
#34	RM-ARBORB/TE/	BLADE ARBOR ONLY
#35	BLAD-SAW/TE	SAW BLADE ONLY
#36	RM-WASHER/TE/BLAD	WASHER (PLASTIC) FOR BLADE ASSEMBLY
#37	RM-NUTARB/TE/5-9M	HEX NUT 1/2"-20 5/8" x 1/8"