Model Number: 55SRBU

SERIAL NUMBER_____

PALLET STRETCH WRAPPER

IPM INTERNATIONAL PACKAGING MACHINES, INC.

OPERATING & SERVICE MANUAL

MODEL:
55SRBU PLATFORM SPIRAL WITH ROLLER BRAKE (U/D)

OPTIONS: - PE

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WARRANTY

55 Series Models
LP (10 rpm) Models

All new machines sold by the Company are warranted to be free from defects in material and workmanship to the original user for a period of THREE YEARS from the date of shipment.

Within this period, the Company will replace any parts or materials found to be defective provided, that failure of said parts or materials is not the result of abuse or misuse of the product. The Company will, at its option and expense, repair or replace parts found to be defective.

The Company's liability under this Warranty or any other Warranty whether expressed or implied in law or fact shall be limited to the repair or replacement of defective material and workmanship, and in no event shall it be liable for consequential or indirect damage.

Any modification to IPM equipment without express written approval of IPM may void this Warranty.

The Company makes no representation that its product will conform to any federal, state or local laws, ordinances, regulations, codes or standards except as particularly specified and agreed upon the compliance in writing as a part of the contract between Buyer and the Company. The Company's product prices do not include the cost of any related inspection, permits or inspection fees.

INTERNATIONAL PACKAGING MACHINES, INC.

MOVING THE STRETCH WRAPPER

All IPM stretch wrappers bases are provided with openings for lift truck forks in order to lift and move the machines easily at time of installation or subsequent relocation. Location of lift openings are indicated by "LIFT HERE" labels with arrows pointing to the openings.

When moving the wrapper to another location, be sure that electrical power and compressed air (if used) are disconnected.

After truck forks enter the openings as far as possible, TILT forks back and then UP to lift machine off of floor. To avoid damage, do not attempt to lift or move wrapper by the turntable or by placing forks in any other location than indicated by the "LIFT HERE" labels.

UNPACKING AND SETTING UP

1. When the wrapper has been positioned in the desired location, it should be relatively level and fully supported under its base. It is not necessary to bolt a single base machine to the floor, although many users prefer to do so. Multiple base machines or machines with conveyors must be bolted to the floor to maintain alignment of the sections.

2. Remove all strapping and packing material being careful not to throw away any small parts of the machine with the packing material. Unpack and check against Packing Check List.

3. Install plug-in Timers and Relays into proper sockets in the Control Box. See Electrical Component drawing for proper location of these components.

SAFETY TIPS

Your IPM Stretch Wrapper is designed to minimize the hazard of a power rotating device to operating personnel. However, caution is urged, and it is recommended that the machine be located away from pedestrian walkways and that operating personnel be thoroughly familiar with the safe operation of the wrapper.

Unless otherwise requested, controls for turntable speed and number of wraps are located inside of the control cabinet to reduce the invitation to unauthorized personnel to make arbitrary adjustments. If it becomes necessary to readjust these controls, power should be disconnected before opening the control cabinet door.

TURNTABLE SPECIFICATIONS -- "55" SERIES

The standard turntable drive is adjustable speed 0 to 10 rpm, 1/2 HP, D.C. drive with "soft start" gradual acceleration and "soft stop" gradual deceleration and dynamic braking which stops the turntable in the same position each time at the end of a wrapping cycle. (This is important on conveyorized turntables where turntable conveyor must align with infeed and discharge conveyors). The "soft start" is desirable if the load tends to be unstable, as in the case of column-stacked cartons which might tip easily and fall off of the pallet. Often it is desirable to wrap very unstable loads at lower speeds.

LOAD CAPACITY

Load capacity on the "55" Series turntable is 4,000# (1,814 kg). The turntable is supported by three wheels, two of which are phenolic with Timken roller bearings and a third urethane friction drive wheel powered by the drive described above.

GENERAL SPECIFICATIONS - UTS TOWER

The tower houses the electrical controls and film carriage elevator mechanism. The elevator is a double #40 chain hoist powered by a 1/2 HP D.C. motor on all spirals EXCEPT on Uni-Tension models where 3/4 HP D.C. motor is used. Elevator speed is adjustable from 0 to 300 inches (7,620 mm) per minute. Usually the speed is set to allow a film overlap of approximately 2 inches (5 cm) as the spiral wrap takes place.

LOAD HEIGHT

Elevator travel is approximately 60 inches (1,524 mm). Using 30 inch (762 mm) wide film, maximum load coverage is 90 inches (2,286 mm), but an allowance of 3 to 5 inches (76 to 127 mm) must be made for film neckdown and/or if top of load is to be overwrapped. Therefore, maximum wrapping height is approximately 85 to 87 inches (2,159 to 2,210 mm). Using 20 inch (508 mm) wide film, wrapping height would be approximately 77 inches (1,956 mm).

HI-SLIDE MAST EXTENSION

The optional MX88 HI-SLIDE Telescoping Mast Extension increases film carriage travel to 100 inches (2,540 mm) to cover a load height of approximately 130 inches (3,302 mm), using 30 inch (762 mm) film or 120 inches (3,048 mm) with 20 inch (508 mm) film. However, deduct 3 to 5 inches (76 to 127 mm) for film neckdown and/or top overwrap.

Mast extension up to 145 inches (3,683 mm) is available on special order.

FILM TENSION BRAKE - SPIRAL MODELS

SEE REFERENCE DRAWING ENCLOSED FOR FOLLOWING INSTALLATION:

Machines are shipped with Brake Arm and Idler Arm installed on the Spiral Mast at 90 degrees from operating position.

1. A packing block supports the Spiral Mast during transit. Turn ON power switch, press AUTO and run elevator up slightly to allow removal of block. Turn power switch OFF.

2. Loosen the Brake Arm locking screw, lower it off of the bottom end of the Spiral Mast, turn it 90 degrees so that core chuck is toward the turntable with core chuck pointing up, re-install onto the bottom of the mast at desired level and tighten locking screw securely.

3. Loosen Idler Arm locking knob, raise it off of the top of the mast, turn it 90 degrees so that core chuck is toward the turntable with the chuck pointing down, re-install onto the top of the mast and tighten locking knob.

NOTE: If your stretch wrapper is equipped with a photo electric height sensor, it will have been properly installed at the factory in the correct position -- that is, at 90 degrees from the Brake and Idler Arms.

IPM

Tension Brake Adjustments

If your IPM stretch wrapper is equipped with an electromagnetic brake (either 4" or 5"), it should be adjusted as follows:

1) Place a new roll of film or netting on the film holder pressing it down so that lower chuck enters the core of the roll. Lower the top arm so that the upper chuck fits loosely into the top of the core. Tighten the locking knob.

2) Attach film to load or to "film grabber" located on the turntable.

3) Turn tension control knob to zero (counter-clockwise).

4) Press START button to begin cycle.

5) A tension delay timer reduces tension to approximately 50% of set value during the first 2 to 4 seconds (adjustable) to prevent film from being pulled off of load.

6) Turn tension control knob clockwise until desired wrapping tension is obtained.

7) As film or netting is consumed, the roll diameter decreases. Tension will increase in direct proportion to the decrease in diameter so that it is necessary to turn down (counter-clockwise) the tension very slightly (about one graduation on the dial) to maintain the same desired stretch level. This must be done every two or three loads, depending upon the size of the load.

8) Upon completion of the wrapping cycle, the turntable stops at the "home" position, but the tension remains on to facilitate easier cutting of the film or netting. Tension will shut off automatically after 40 seconds or upon pressing RESET button.

CAUTION: DO NOT APPLY OIL TO BRAKE SURFACES.

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If your wrapper is equipped with a Magnetic Particle Brake, operation and adjustment is essentially the same except that fewer adjustments are required as the film or netting roll diameter decreases.

CAUTION: IN EVENT OF MALFUNCTION, DO NOT OPEN BRAKE. Exposure to moisture or loss of magnetic particle material will cause failure of the brake and void Warranty.

CONTROL FUNCTIONS

1. Indicator Lights at the top of the Control Cabinet door indicate when power is "on", when wrapper is in the "ready" mode and when film tension is "on".

2. Main Power Switch is located directly below the indicator lights on the Control Cabinet door.

3. AUTO/RESUME Button activates the PLC and places wrapper in "ready" mode at start-up and will also allow a wrapping cycle to be resumed or continued after an Emergency Stop (as for a film break).

4. START Button starts the automatic wrapping cycle. Hold this button to pause elevator for "belly banding".

5. RESET Button Film tension turns off automatically 60 seconds after completion of wrapping cycle to allow time for operator to cut film while it is taut. Pressing RESET Button will turn off tension earlier, if desired.

6. STOP Button is used for emergency stopping of the wrapper.

7. UP/DN Elevator Switch is used to return film carriage to the top or bottom of travel. This control is inoperable during automatic wrapping cycle.

8. Elevator Speed Control is adjusted to obtain desired film or netting overlap.

9. TENSION Control

   a) Brake Systems:
   If wrapper is equipped with a tension brake, the tension control is located on the door of the Control Box. Adjust to obtain desired film or netting tension.

   b) Magna-Stretch System:
   If wrapper is equipped with a Magna-Stretch film tension system, tension is adjusted by turning the tension knob located on the Magna-Stretch dancer. Turn clockwise to increase tension and counter-clockwise to reduce tension.

   c) Uni-Tension(V) System (Variable Stretch Ratio):
   If wrapper is equipped with a Uni-Tension film variable pre-stretch and constant tension system, wrapping tension is adjusted by turning the air control located on the lower panel of the tower. Pre-stretch is adjusted by turning the knob located on the top of the Uni-Tension carriage.

(continued)

d) Uni-Tension(F) System (Fixed Stretch Ratio):
If wrapper is equipped with a fixed ratio film pre-stretch system, there is no pre-stretch adjustment although stretch ratio may be changed by changin sprockets. (See Page 6.1). On spring-loaded dancer models, wrapping tension may be adjusted by turning the tension knob on the dancer clockwise to increase tension and counter-clockwise to reduce tension. On optional air dancer models, wrapping tension may be adjusted by turning air pressure control located on the lower panel of the tower.

10. Turntable Speed Control If wrapper is equipped with an adjustable speed turntable, the control is located inside of the Control Cabinet.

11. Bottom Wrap Timer TD-1 This plug-in timer, located inside of the Control Cabinet, controls the number of bottom wraps to be applied to the load in the automatic cycle. Settings for this timer are described on the chart located in this manual and also on the inside of the door of the Control Cabinet.

12. Top Wrap Timer TD-2 This plug-in timer, located inside of the Control Cabinet, controls the number of top wraps to be applied to the load in the automatic cycle. Settings for this timer are described on the chart located in this manual and also on the inside of the door of the Control Cabinet.

13. Program Switch This switch, located inside of Control Cabinet, allows selection of either one of two wrapping programs. Description of these programs is located elsewhere in this manual.

14. Upper/Lower Limit Rod Assembly is located just to the left of the Control Cabinet door. Collars on the rod are set to control the upper and lower limits of elevator travel. The lower collar is set so that film will wrap to the bottom of the load (top of the turntable) and may be adjusted to suit specific requirements. The upper collar may be set and locked with the knob according to the height of the load. Pins in the rod limit how far the collars may be adjusted and damage could result if these pins are removed.

15. Photo Electric Load Height Sensor If wrapper is equipped with this option, the upper limit rod collar should be set all the way to the top position. The sensor will automatically stop the upward direction of the film carriage when it reaches the top of the load. Adjust the PE downward if more film overwrap over the top of the load is required or upward if less is required.

Load Photo Sensor Delay Inside the photo head assembly is a time delay adjustment with an ON delay and an OFF delay circuit. These delays provide a useful function when sensing the existence and height of a load on the turntable. By setting both delays to approximately 1/4 second, the sensor, when reaching the top of the load, will ignore any object (film ripples, irregular surfaces, etc.) smaller than about 6 inches

(continued)

wide. The delay setting also prevents the sensor from responding to small "see through" holes or openings in the middle of the load which would otherwise give a false height signal. (See photo electric literature in the back of this manual for adjustment instructions).

16. Cycle Counter Each stretch wrapper is equipped with a totalizing cycle counter, located inside of the Control Cabinet, which indicates the total number of loads wrapped.

OTHER CONTROL FEATURES

On systems equipped with film brakes, a Delayed Tension Start feature reduces brake tension to half power at the start of the wrapping cycle until the first wrap is approximately 3/4 of a turn around the load. The delay is controlled by a timer located on the brake control on the back of the Control Cabinet door. It may be adjusted to a longer or shorter delay as desired. If full tension start is desired, set the timer dial to zero.

Belly Banding
Pausing the film carriage for "belly banding" or reinforcing of loads with additional wraps at critical points may be accomplished by pressing and holding the START button, which stops the film carriage travel, in either the up or down direction, for as long as the button is held depressed.

RESUME
Wrapping cycle will automatically RESUME when AUTO is pressed after an EMERGENCY STOP.

To cancel RESUME and reset the wrapping cycle:
Hold down the RESET button, press and release the START button, then release the RESET button. The turntable will automatically return to the "home" position. Film carriage must then be brought to either the upper or lower limit of travel by using the manual UP-DN switch.

NOTE: A new wrapping cycle may not be started unless film carriage is at top OR bottom limit of travel.

OPERATION - SPIRAL

1. Gently "drop" a roll of film vertically onto the lower core chuck so that the chuck makes an adequate "bite" into the film roll core. Support the roll vertically as the upper idler core chuck is lowered to engage the upper end of the film roll core. Press top idler core chuck firmly into the core and lock the arm to the mast. (Braking action during the wrapping cycle may tear out the core of a loosely mounted film roll).

2. Place a pallet load onto the turntable.

3. Set top and bottom wrap timers for desired number of wraps.

4. Set Program switch, located inside of Control Cabinet. (See program selection in Appendix).

5. Pull film from roll and tuck into load or attach to "film grabber" located on the side of platform turntable.

6. Set film tension as described under CONTROL FUNCTIONS.

7. Set Elevator speed to approximately 4.5.

8. Turn power switch "on" and press AUTO button. Then press START button. Wrapping cycle is automatic. Upon completion of the wrapping cycle, the turntable will stop at the "home"position. (See Program for sequence details).

9. Film tension will remain "on" to keep the film taut and easy to cut. Operator cuts film and wipes it against the load where the "cling" of the film will secure it to the preceding layer. Load may now be removed from the turntable.

OPERATION OF DUAL TURNTABLE MODELS

Operation is similar to that of single table models except that a selector switch is provided to select which table is to be operated. If wrapper is equipped with dual photo electric load height sensors, the selector switch also selects the appropriate sensor.

LUBRICATION

1. Electric Motors are equipped with sealed bearings and require no lubrication.

2. Check speed reducer oil level monthly during the first three months of operation. Change oil at six months and annually thereafter.

3. Grease platform turntable casters monthly. (Low profile turntable casters are sealed for life and require no lubrication).

4. Apply a light coating of grease to the elevator slides on spiral models.

5. NOTE: DO NOT OIL FILM TENSION BRAKE.

MAINTENANCE

1. Periodically check for and tighten any loose fasteners.

2. Check for loose electrical connections and frayed cables.

3. Vacuum clean dirt, dust and pieces of film from around motors, motor vents, caster bearings and brakes. Never blow off with an air hose.

4. Be sure to replace any blown fuses with <u>exact</u> duplicates.

NOTE;
IPM Stretch Wrappers are designed to tolerate the normal abuse expected in heavy materials handling operations and are relatively free from the need for any extensive or special lubrication or maintenance attention. The frequency of attention should increase with high usage and/or heavy loads.

TROUBLE SHOOTING

MACHINE WILL NOT RUN - NO POWER:

CHECK:
1. Power cord plugged in.
2. Power source.
3. Blown fuse.
4. Loose wiring, damaged power cord.

MACHINE WILL NOT RUN - READY LIGHT ON:

CHECK:
1. Defective motor.
2. Loose wiring.
3. Defective motor control.
4. Under-rated extension cord in use.
5. Defective PLC.

TURNTABLE STOPS AFTER ONE REVOLUTION:

CHECK:
1. All timers plugged in.
2. Defective timers.
3. Plug-in timers not in proper sockets.

TURNTABLE FAILS TO STOP OR ROTATES TOO MANY TURNS:

CHECK:
1. Timers not set properly.
2. Defective timers.
3. Turntable limit switch arm improperly positioned.
4. Defective turntable limit switch.
5. Defective motor control relay.
6. Wrapping cycle started with film carriage NOT at top OR bottom of travel. (See Control Functions, S-7.3).
7. Defective PLC.

TURNTABLE ROTATES - SPIRAL DOES NOT GO UP:

CHECK:
1. Blown fuse.
2. Defective elevator motor control.
3. Defective UP-DN limit switch.
4. Adjustable elevator speed set too low.
5. Defective timer.
6. Defective PLC.
7. Loose or broken wiring, cables or connections.

(continued)

FILM CARRIAGE DOES NOT GO DOWN:

CHECK:
1. Blown fuse.
2. Defective UP-DN limit switch.
3. Defective timer, relay or PLC.
4. Program switch setting.
5. Carriage or HI-SLIDE jammed at top of travel.
6. Defective elevator motor or motor control.
7. Loose or broken wiring, cables or connections.

GENERAL

At initial start-up, or even after running for a period, problems can occur in the automatic cycling of a machine due to loosened terminal screws and connections, wire nut connections or initial errors in hooking up cable connections at installation. Recheck connections for damage to flexible cables and cords.

PROGRAMMABLE LOGIC CONTROLLER (PLC)

All IPM spiral model stretch wrappers use an Allen-Bradley SLC100 Programmable Logic Controller (PLC) to control wrapping sequences. The program is recorded on a plug-in EEPROM (electronically erasable programmable read only memory) module, which is factory programmed with two (2) programs. Programs "A" and "B", as described on the following pages, are supplied as standard with each spiral wrapper.

However, special wrapping programs can be written to meet specific customer requirements. Upon receipt of customer requirements, IPM can write and test special programs, record an EEPROM and send it to our customer. Upon receipt, the customer replaces the old EEPROM with the new one. Upon powering up the stretch wrapper, the new program will automatically be written to the PLC. EEPROM's can then be changed at will as requirements vary.

REPLACING AN EEPROM IN YOUR IPM SPIRAL STRETCH WRAPPER

1. Disconnect power to the machine.
2. Remove "old" EEPROM carefully, working it straight out of the socket.
3. Insert the "new" EEPROM carefully pressing it firmly and straight into the socket.
4. Restore power to the machine and the new program will automatically overwrite the previous program.

NOTE: Follow the same procedure to change back to the previous EEPROM, if desired.

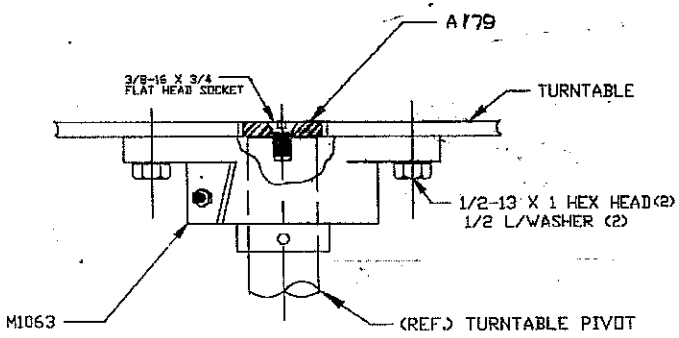
PROGRAM "A"

	OPERATOR FUNCTIONS	WRAPPER FUNCTIONS
1.	Set Program switch to "A".	
2.	Place load onto turntable.	
3.	Attach film to load.	
4.	Turn main power switch "on".	Power light "on".
5.	Press AUTO button.	"Ready" light "on".
6.	Press START button.	Turntable rotates, film tension turns "on" and bottom wraps are applied to the load. Film carriage moves to the top of the load, and top wraps are applied. Film carriage returns to the bottom, and turntable stops at the "home" position. Tension remains "on" for 60 seconds unless RESET button is pressed.
7.	Cut film and remove load.	

PROGRAM "B"

OPERATOR FUNCTIONS	WRAPPER FUNCTIONS
1. Set Program switch to "B".	
2. Place load onto turntable.	
3. Attach film to load.	
4. Turn main power switch "on".	Power light "on".
5. Press AUTO button.	"Ready" light "on".
6. Press START button.	Turntable rotates, film tension turns "on" and bottom wraps are applied to the load. Film carriage moves to the top of the load, and top wraps are applied. Turntable stops at the "home" position. Tension remains "on" for 60 seconds unless RESET button is pressed.
7. Cut film and remove load.	
8. Place load on the turntable.	
9. Attach film to load. (Press RESET to release film tension).	
10. Press START button.	Turntable rotates, film tension turns "on", and top wraps are applied to the load. Film carriage moves to the bottom of the load, and bottom wraps are applied to the load. Turntable stops at "home" position. Tension remains "on" for 60 seconds unless RESET button is pressed.
11. Cut film and remove load.	

(REPEAT)



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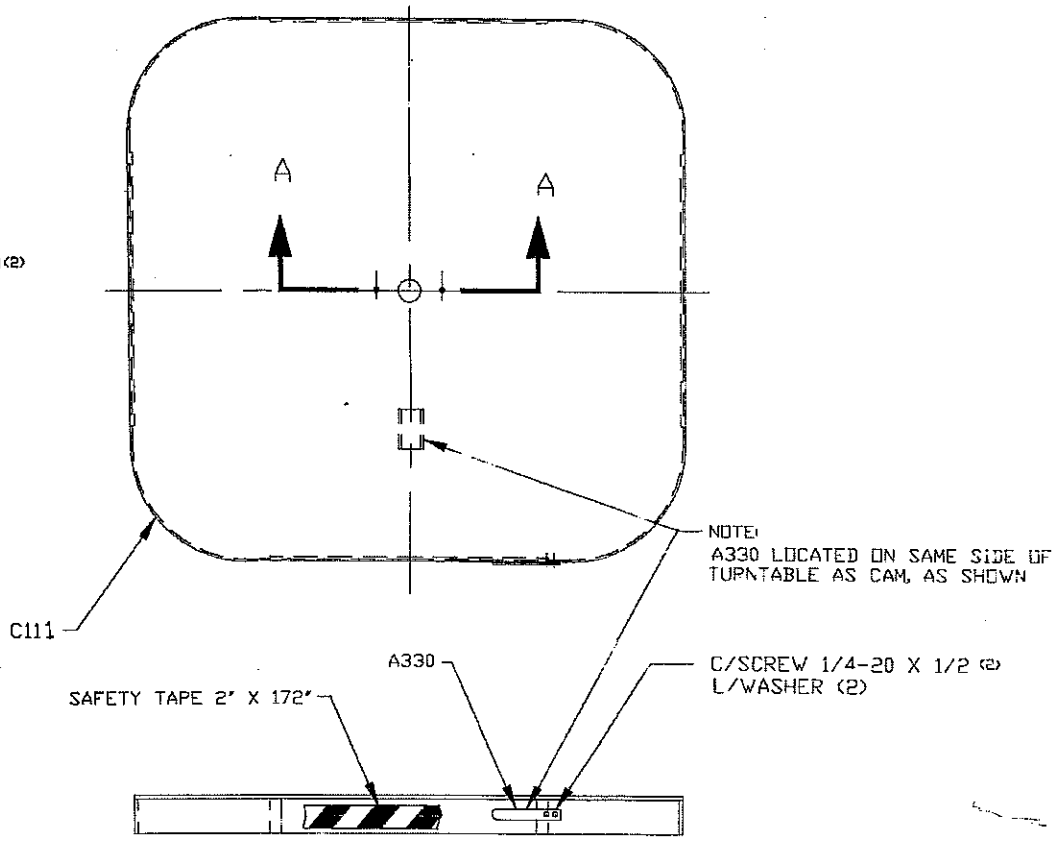
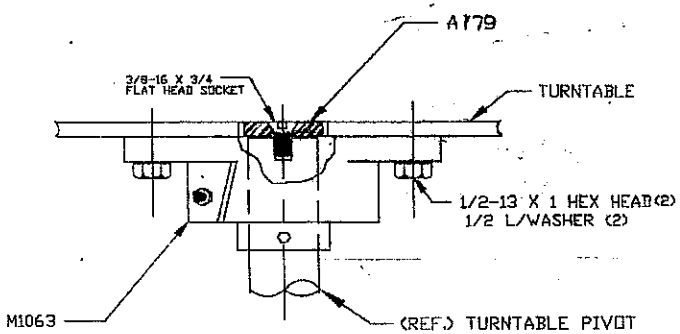


	INTERNATIONAL [illegible] INC.
TITLE	Assy - Turntable
DWG. NO.	C333



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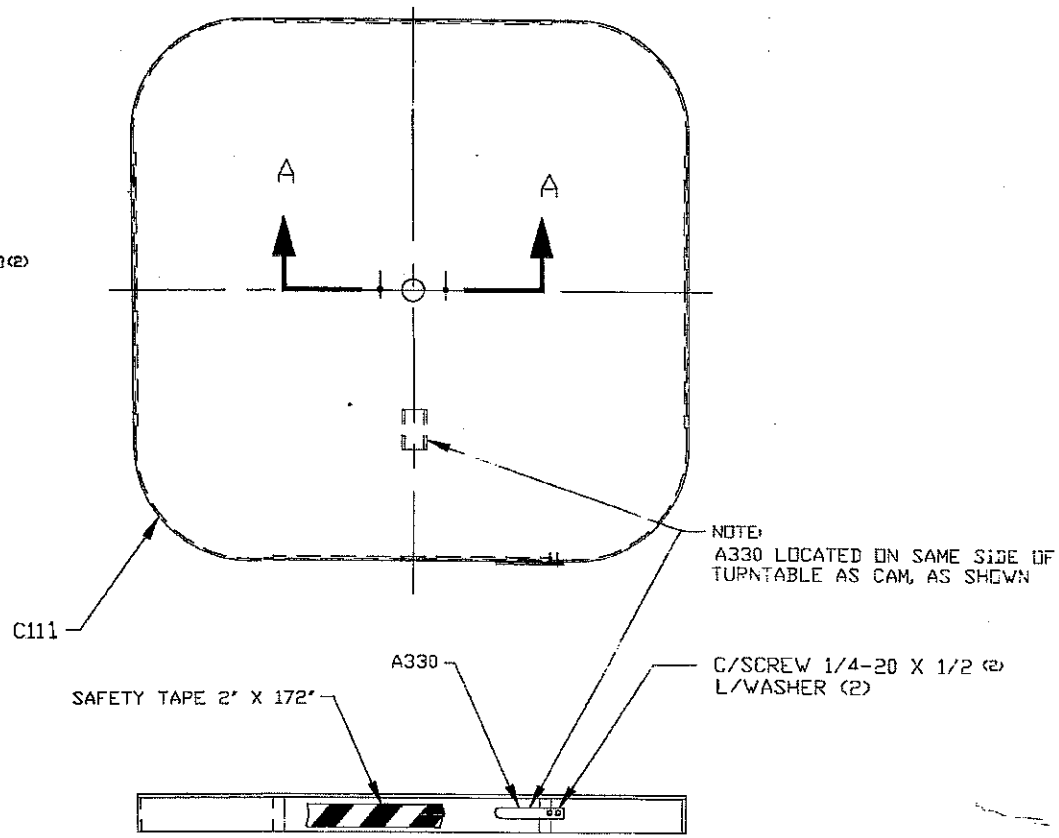

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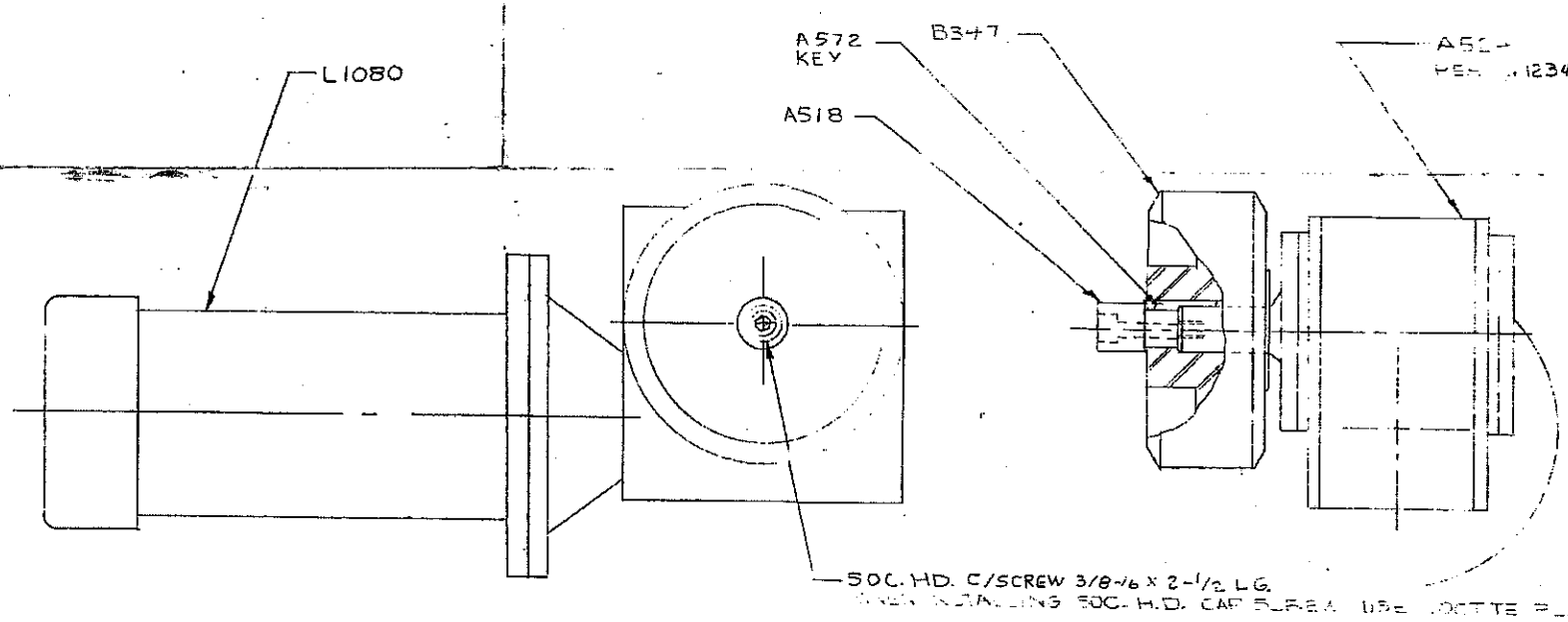
DWG. NO.
C333



INTERNATIONAL PACKAGING MACHINES, INC.

TITLE
Assy Drive - 55DC

DWG. NO.
C343

International Packaging Mach

B I L L O F M A T E R I A L

********** L E V E L 1 O N L Y ****

08-07-96

****

* B788 ASSY PE 55RBU LO

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* LEVEL: 1 PAGE: 1

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PART NUMBER/DESC	LOC	TYPE	VENDOR	QTY REQD
L1391		P	6033	1.000
PHOTO EYE AB 42GTP9042-0D				
B746-1		S	1000	1.000
BRKT PE MTG				
L1318		P	2009	3.000
CONNECTOR .25 CORD GRIP				
L1392		P	6033	1.000
CONNECTOR-AB 6024231-0D				
L1044		P	2048	1.000
Connector 3/8Romex 6623				
M1101		P	2030	1.000
Knob DK-6				
L1060		P	2009	1.000
COVER BOX 2X4 RACO 860				
A372-1		S	1000	1.000
ROD PE MTG				
L1393		P	6033	1.000
BRKT-SWIVEL/TILT AB602439				

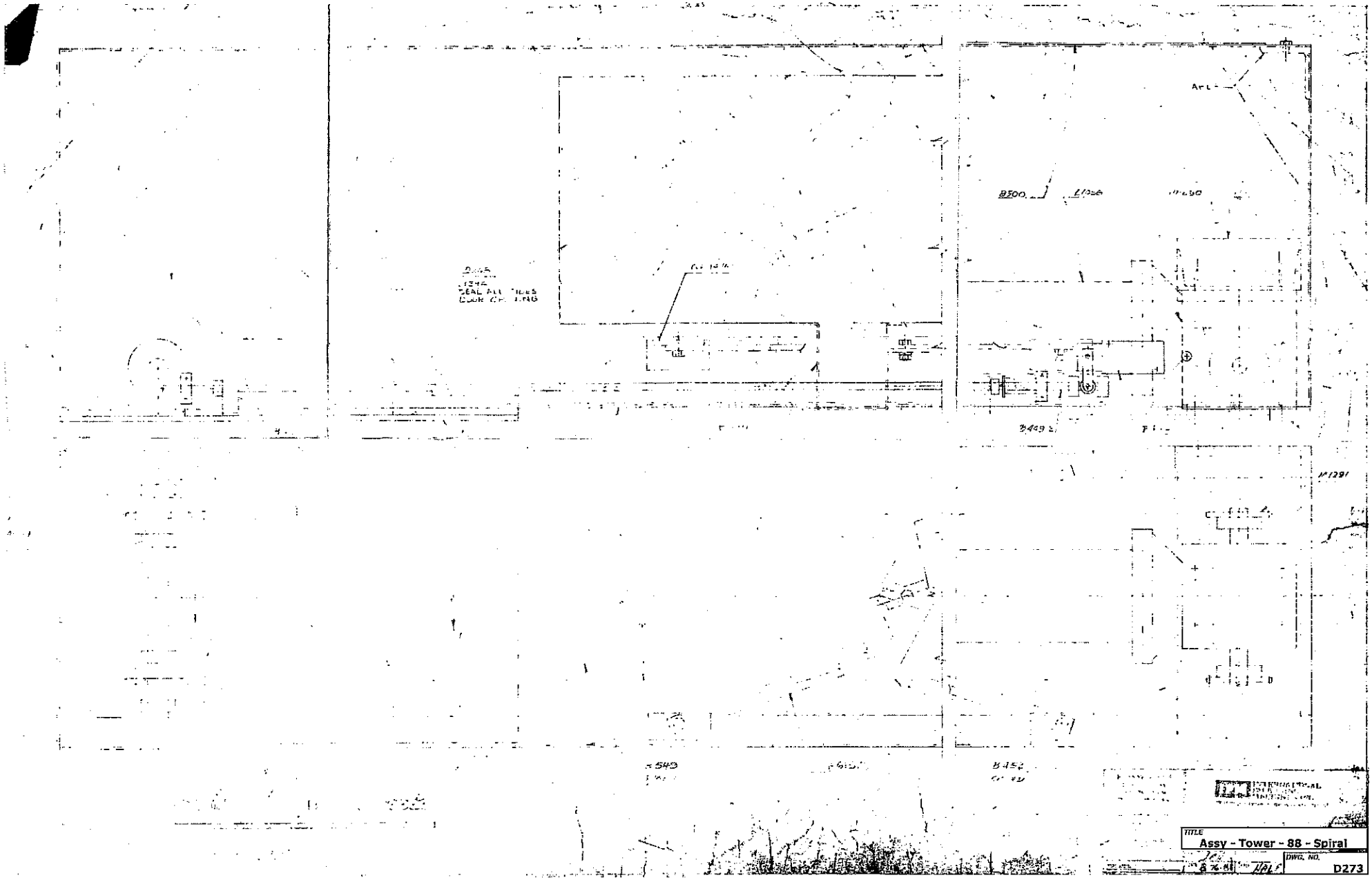
MATERIAL COST

DIRECT LABOR

FACTORY OVERH

TOTAL COST

STANDARD COST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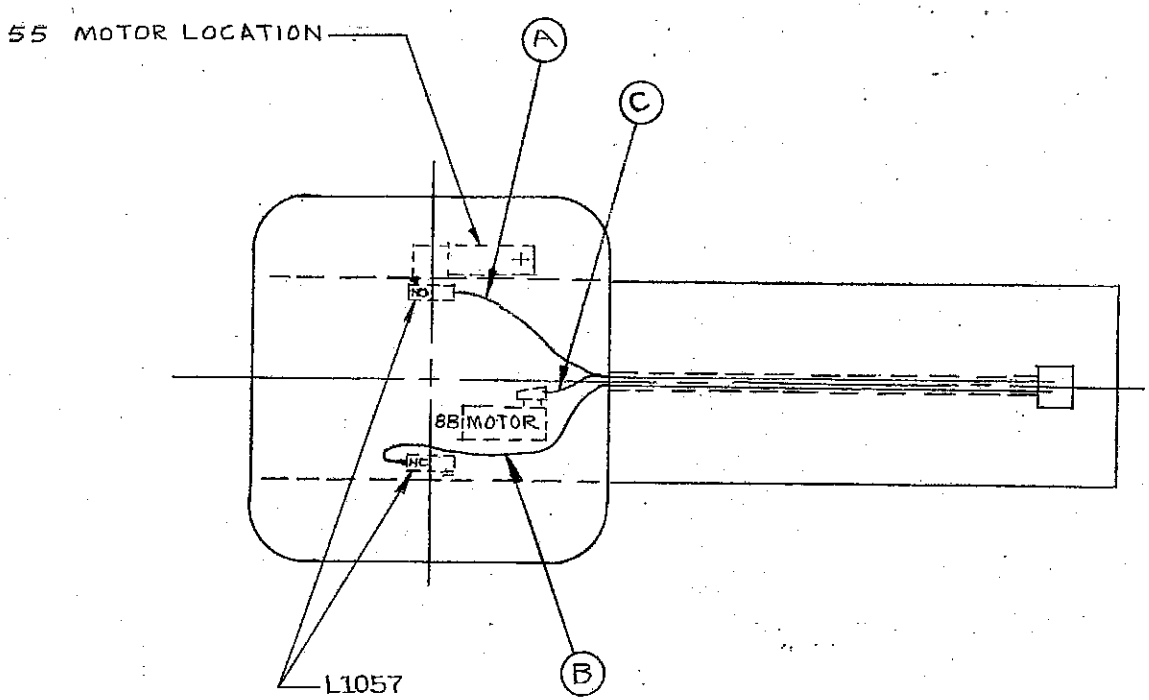
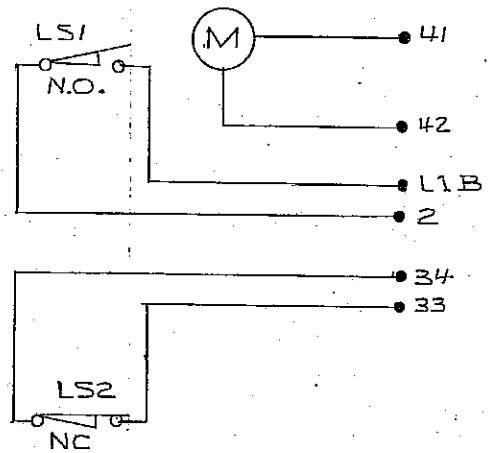
DWG. NO.
D273

B528





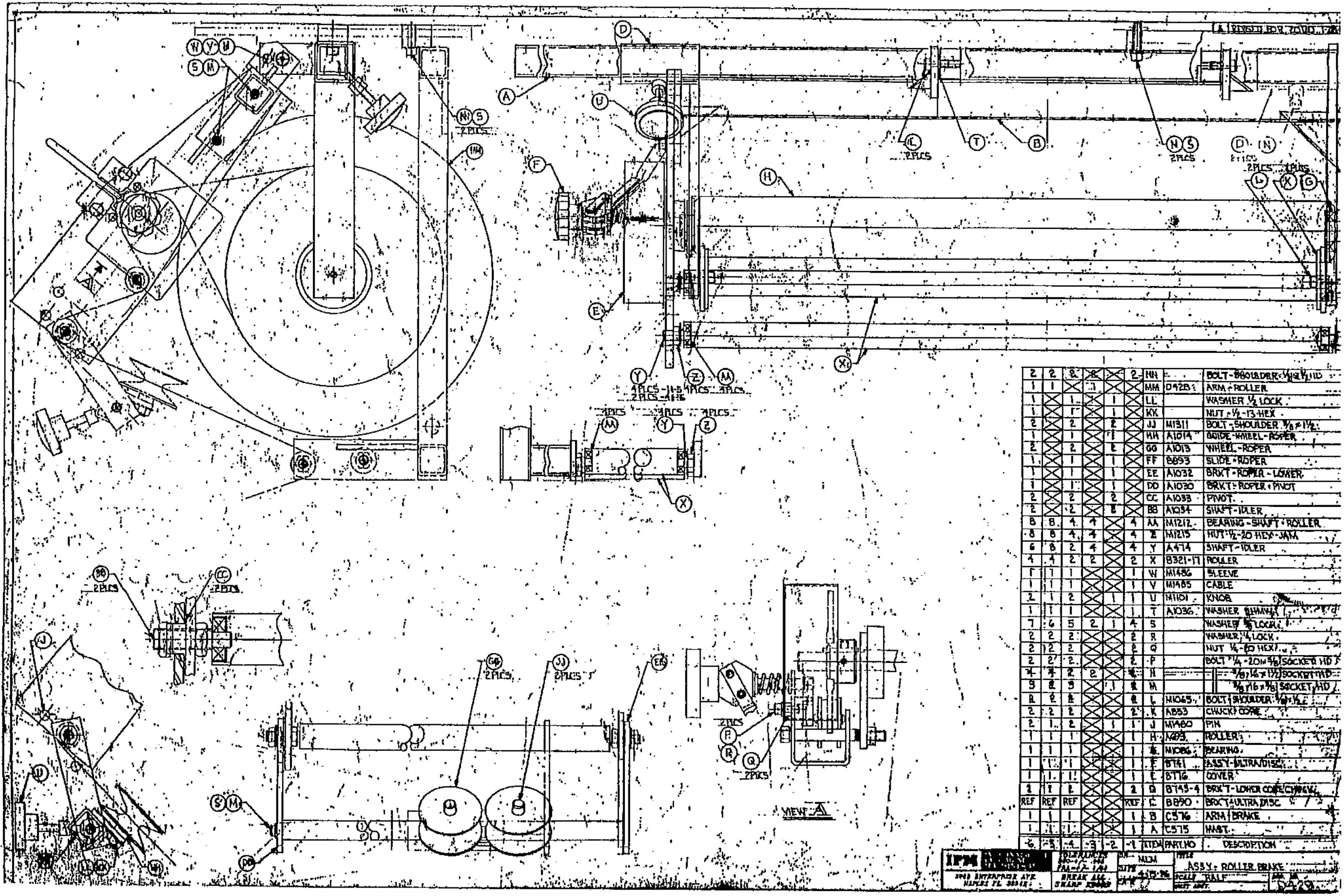
B528-2	B471-1	B472-1	A525-1	FX
B528-1	B471	B472	A525	STD
ASSY.	Ⓐ LS1 ASSY.	Ⓑ LS2 ASSY.	Ⓒ MOTOR ASSY.	

IPM INTERNATIONAL PACKAGING MACHINES, INC.
3963 ENTERPRISE AVE.
NAPLES FL 33942

TOLERANCES
DEC=+/- .005
FRA.=+/- 1/64
BREAK ALL SHARP EDGES

DR J.SB
DATE 4-11-89
CH'K

TITLE ASSY.-BASE-ELEC PLT-DC
SCALE 3/4
NEXT ASSY.
DRG. NO. B528



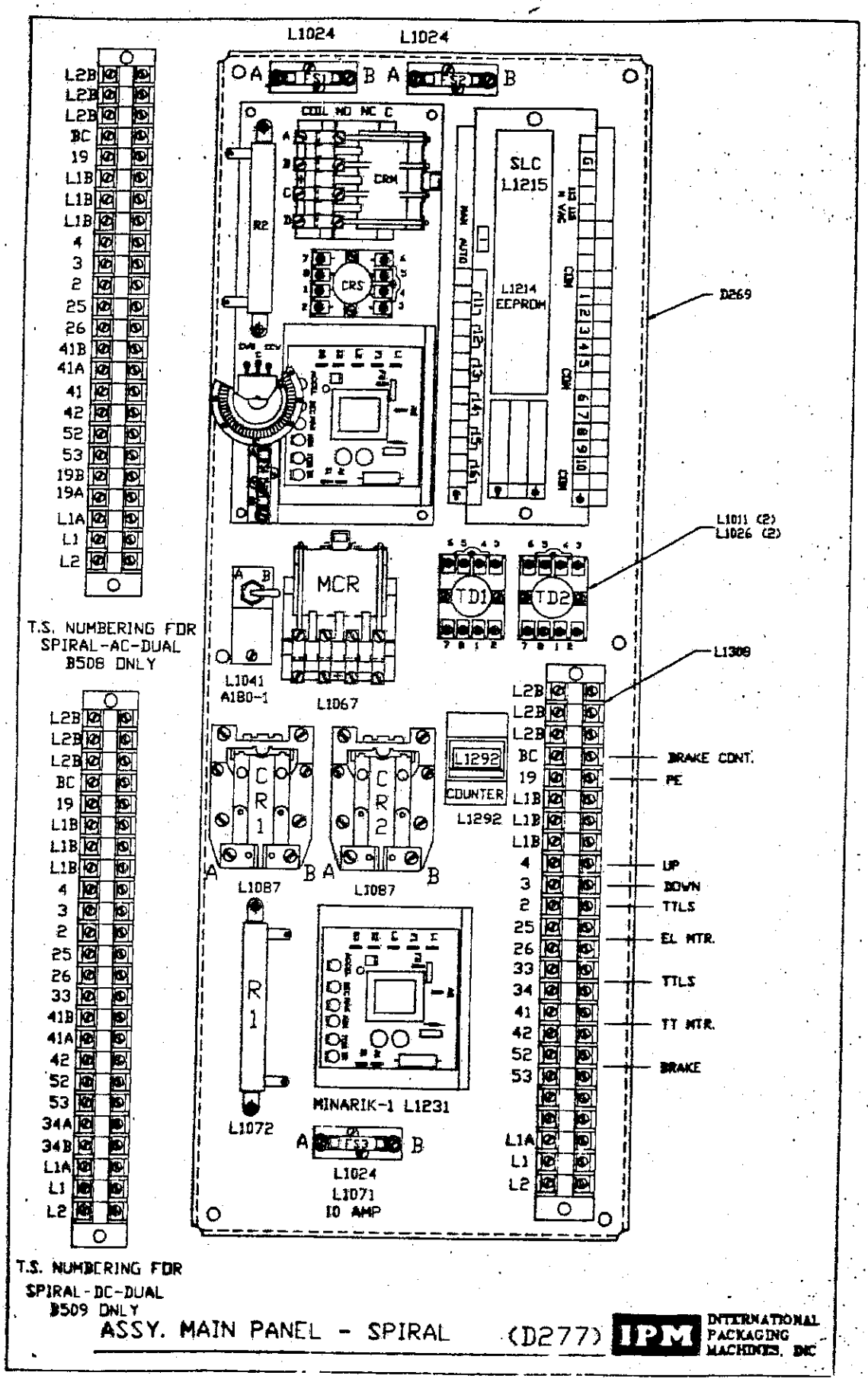
-6	-5	-4	-3	-2	-1	ITEM	PART NO	DESCRIPTION
2	2	2	2	X	2	NN		BOLT-SHOULDER-¼x1½ HD
1	1	X	1	X	X	MM	D4281	ARM-ROLLER
1	X	1	X	1	X	LL		WASHER ½ LOCK
1	X	1	X	1	X	KK		NUT-½-13-HEX
2	X	2	X	2	X	JJ	M1311	BOLT-SHOULDER ⅜x1½
1	X	1	X	1	X	HH	A1014	GUIDE-WHEEL-ROPER
2	X	2	X	2	X	GG	A1013	WHEEL-ROPER
1	X	1	X	1	X	FF	B893	SLIDE-ROPER
1	X	1	X	1	X	EE	A1032	BRKT-ROPER-LOWER
1	X	1	X	1	X	DD	A1030	BRKT-ROPER-PIVOT
2	X	2	X	2	X	CC	A1033	PIVOT
2	X	2	X	8	X	BB	A1034	SHAFT-IDLER
8	8	4	4	X	4	AA	M1212	BEARING-SHAFT-ROLLER
8	8	4	4	X	4	Z	M1215	NUT-½-20 HEX-JAM
6	8	2	4	X	4	Y	A474	SHAFT-IDLER
4	4	2	2	X	2	X	B321-17	ROLLER
1	1	1	X	X	1	W	M1486	SLEEVE
1	1	1	X	X	1	V	M1485	CABLE
2	1	2	X	1	1	U	M1101	KNOB
1	1	1	X	X	1	T	A1036	WASHER SHIM
7	6	5	2	1	4	S		WASHER ⅜ LOCK
2	2	2	X	X	2	R		WASHER ¼ LOCK
2	12	2	X	X	2	Q		NUT ¼-20 HEX
2	2	2	X	X	2	P		BOLT ¼-20x⅝ SOCKET HD
4	4	2	2	X	2	N		⅜-16x1½ SOCKET HD
9	8	5	X	1	8	M		⅜-16x⅝ SOCKET HD
8	8	8	X	X	8	L	M1065	BOLT SHOULDER ⅜x½
2	2	2	X	X	2	K	A853	CHUCK CORE
2	1	2	X	1	1	J	M1480	PIN
1	1	1	X	X	1	H	A493	ROLLER
1	1	1	X	X	1	G	M1086	BEARING
1	1	1	X	X	1	F	B741	ASSY-ULTRA/DISC
1	1	1	X	X	1	E	B716	COVER
2	1	2	X	X	2	D	B745-4	BRKT-LOWER CORE/CHUCK
REF	REF	REF	X	X	REF	C	B890	BRKT-ULTRA DISC
1	1	1	X	X	1	B	C576	ARM BRAKE
1	1	1	X	X	1	A	C575	MAST

IPM
3949 ENTERPRISE AVE
NAPLES FL 33942

TOLERANCES
BREAK ALL SHARP EDGES

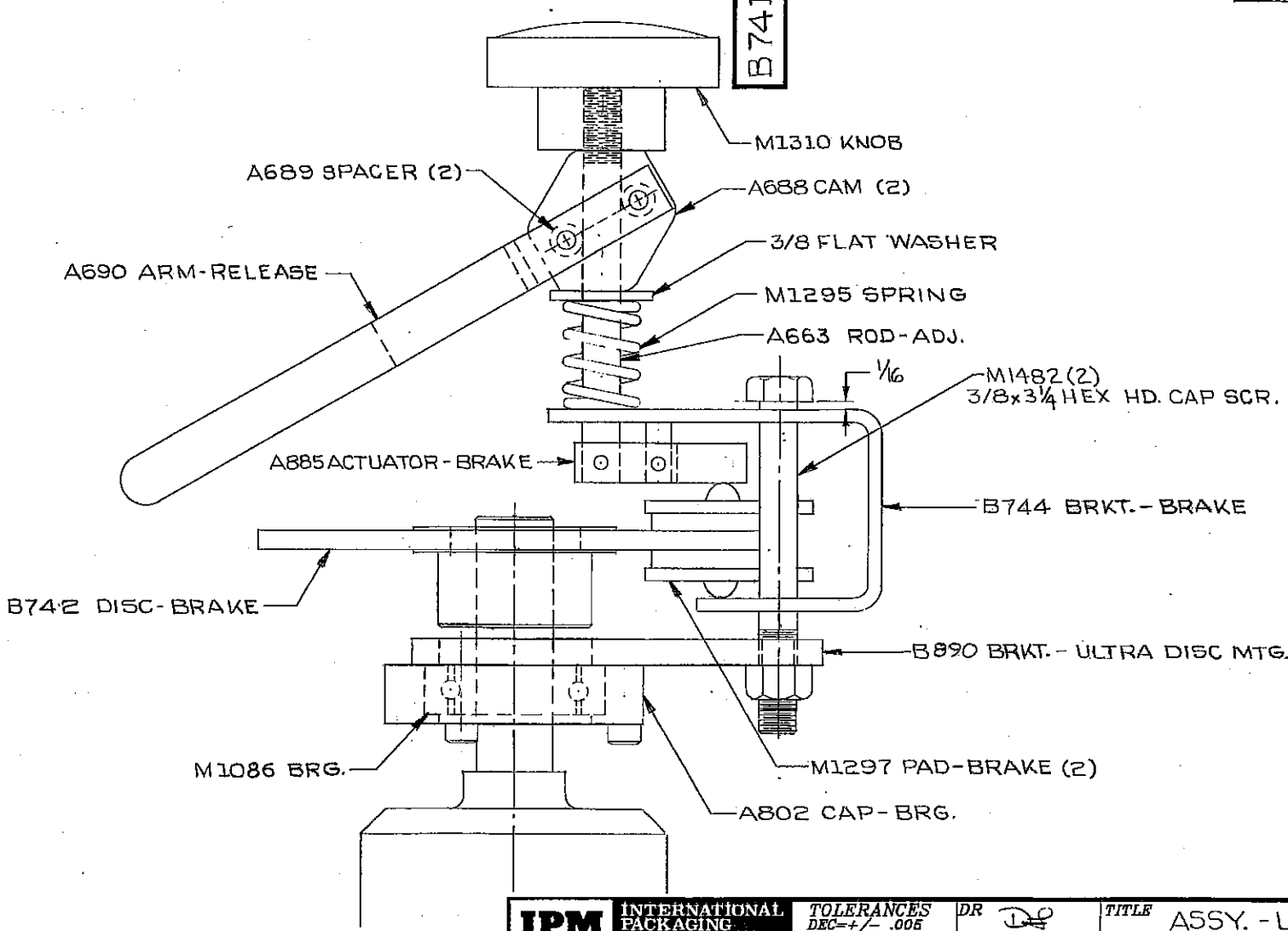
DR. HLM
DATE 4-15-96
TITLE ASSY - ROLLER BRAKE
SCALE HALF
DWG NO. D429

20/20-50


L1024
L1024
L2B
L2B
L2B
BC
19
L1B
L1B
L1B
4
3
2
25
26
41B
41A
41
42
52
53
19B
19A
L1A
L1
L2
T.S. NUMBERING FOR SPIRAL-AC-DUAL B508 ONLY
L2B
L2B
L2B
BC
19
L1B
L1B
L1B
4
3
2
25
26
33
41B
41A
42
52
53
34A
34B
L1A
L1
L2
T.S. NUMBERING FOR SPIRAL-DC-DUAL B509 ONLY
COIL NO NC C
CRM
R2
CRS
SLC
L1215
L1214
EEPROM
D269
L1011 (2)
L1026 (2)
MCR
TD1
TD2
L1041
A180-1
L1067
L1309
L2B
L2B
L2B
BC
19
L1B
L1B
L1B
4
3
2
25
26
33
34
41
42
52
53
L1A
L1
L2
BRAKE CONT.
PE
UP
DOWN
TTLS
EL. MTR.
TTLS
TT MTR.
BRAKE
L1292
COUNTER
L1292
CR1
CR2
L1087
L1087
R1
L1072
MINARIK-1 L1231
L1024
L1071
IO AMP
ASSY. MAIN PANEL - SPIRAL (D277)
IPM
INTERNATIONAL PACKAGING MACHINES, INC

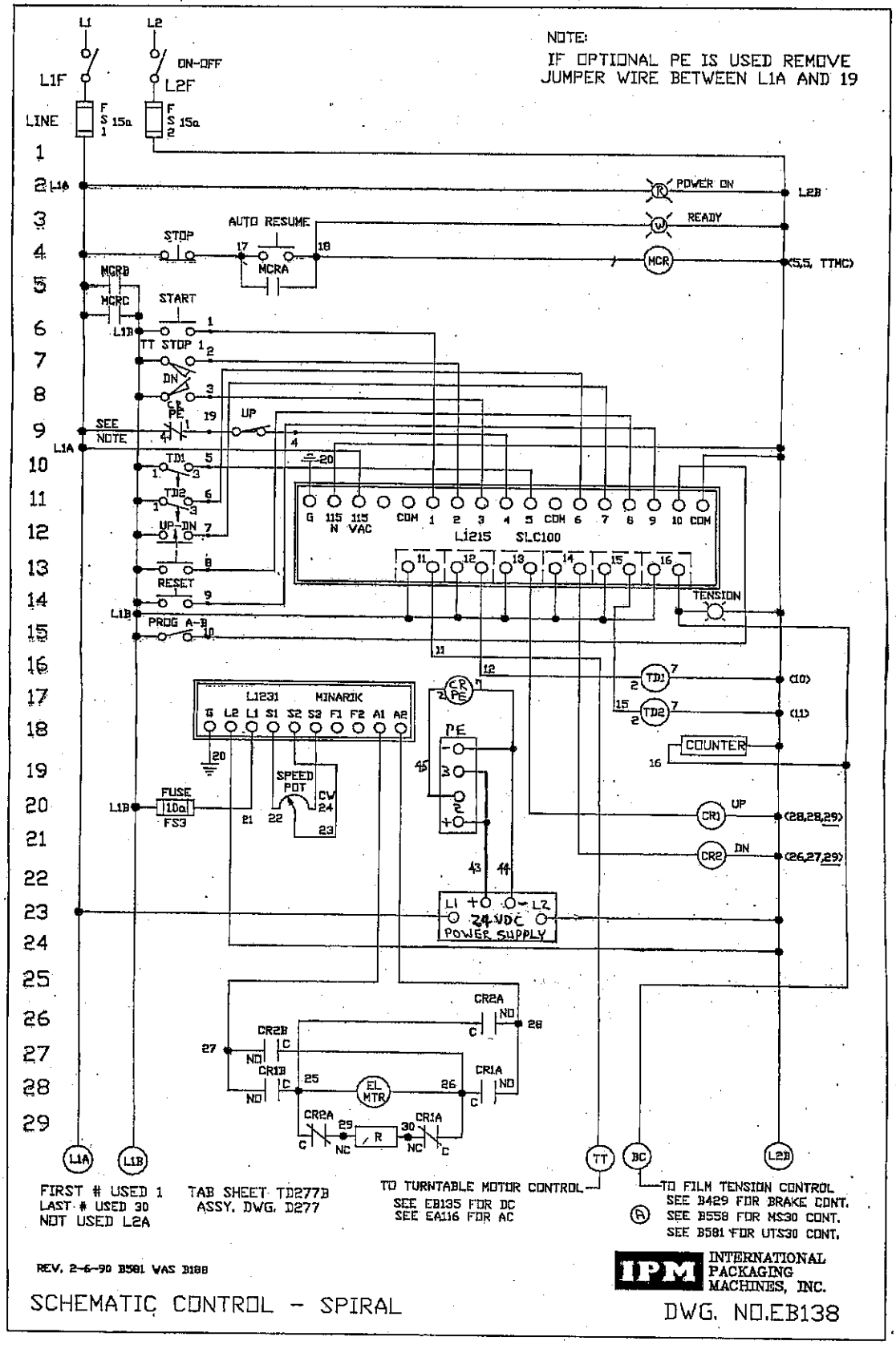
B741

[B] B890 WAS B885 9-17-96

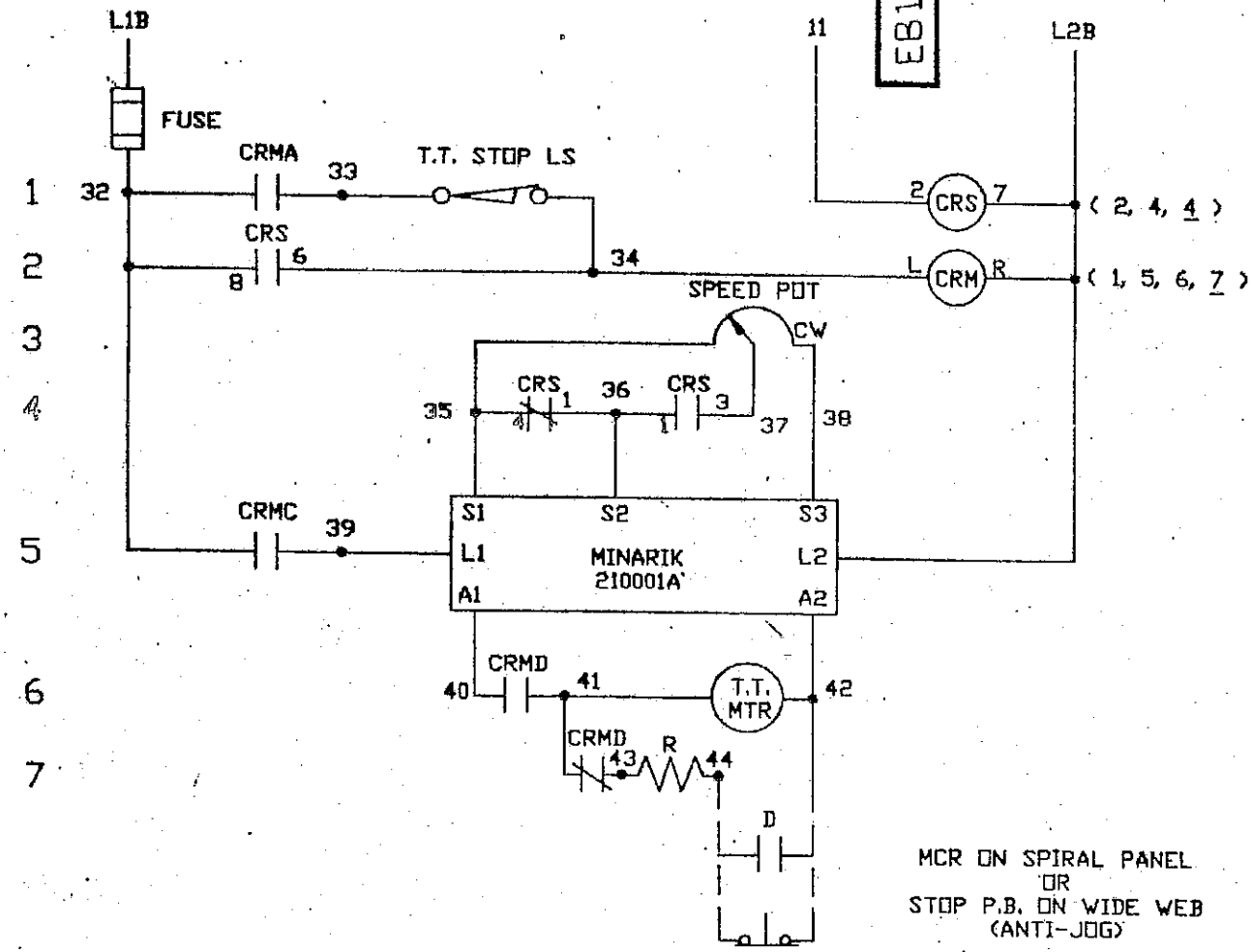


IPM INTERNATIONAL PACKAGING MACHINES, INC. 3963 ENTERPRISE AVE. NAPLES FL. 33942	TOLERANCES DEC=+/- .005 FRA.=+/- 1/64 BREAK ALL SHARP EDGES	DR DATE 10-11-93 CH'K	TITLE ASSY. - ULTRA DISC BRAKE ROLLER BRAKE SCALE 1:1 NEXT ASSY.	DRG. NO. B741 B

331719


NOTE:
IF OPTIONAL PE IS USED REMOVE JUMPER WIRE BETWEEN L1A AND 19
L1
L2
ON-OFF
L1F
L2F
LINE
F S 15a 1
F S 15a 2
POWER ON
READY
AUTO RESUME
STOP
MCRA
MCR
MCRB
MCRC
START
TT STOP
DN
UP
PE
SEE NOTE
TD1
TD2
UP-DN
RESET
PROG A-B
G 115 115 N VAC COM 1 2 3 4 5 COM 6 7 8 9 10 COM
L1215 SLC100
TENSION
L1231 MINARIK
G L2 L1 S1 S2 S3 F1 F2 A1 A2
SPEED POT
CW
FUSE 10a FS3
COUNTER
CR1
CR2
24 VDC POWER SUPPLY
CR2A
CR2B
CR1B
CR1A
EL MTR
R
L1A
L1B
L2B
TT
BC
FIRST # USED 1
LAST # USED 30
NOT USED L2A
TAB SHEET TD277B
ASSY. DWG. D277
TO TURNTABLE MOTOR CONTROL
SEE EB135 FOR DC
SEE EA116 FOR AC
TO FILM TENSION CONTROL
SEE B429 FOR BRAKE CONT.
SEE B558 FOR MS30 CONT.
SEE B581 FOR UTS30 CONT.
REV. 2-6-90 B581 WAS B188
INTERNATIONAL PACKAGING MACHINES, INC.
SCHEMATIC CONTROL - SPIRAL
DWG. NO.EB138

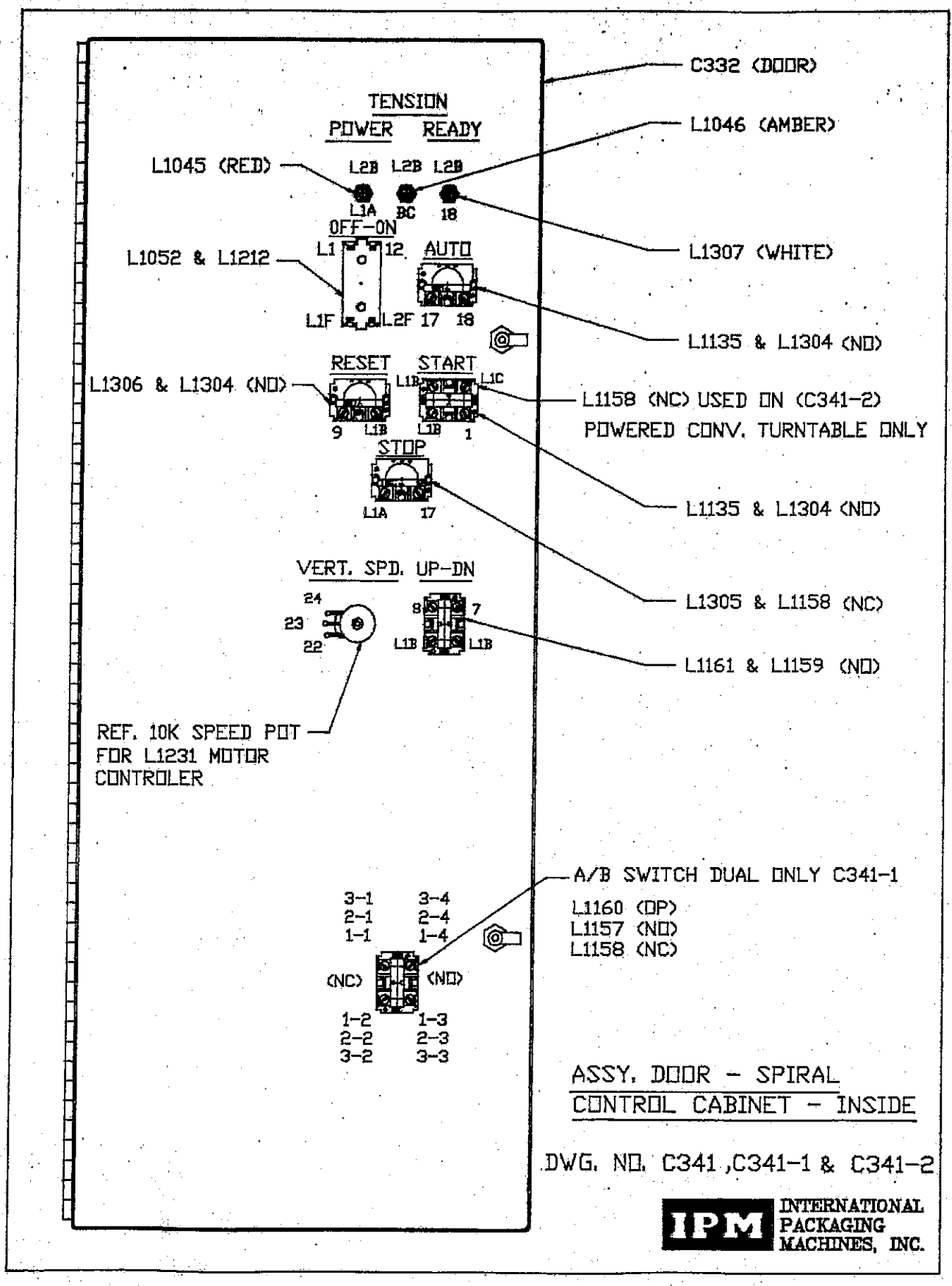
EB135



MCR ON SPIRAL PANEL
'OR'
STOP P.B. ON WIDE WEB
(ANTI-JOG)

TAB SHEET # TB437A
ASSY. DWG # B437
FIRST NO. USED = 32
LAST NO. USED = 44

IPM INTERNATIONAL PACKAGING MACHINES INC.	TOLERANCES DEC=+/- .006 FRA.=+/- 1/64	DR J.S.B.	TITLE SCHEMATIC	
3963 ENTERPRISE AVE. NAPLES FL. 33942	BREAK ALL SHARP EDGES	DATE 12-21-88 CH'K	T.T. MOTOR CONTROL - D.C.	
		SCALE -	DWG. NO. EB135	
		NEXT ASSY.		


C332 (DOOR)
TENSION
POWER READY
L1046 (AMBER)
L1045 (RED)
L2B L2B L2B
L1A BC 18
L1307 (WHITE)
OFF-ON
L1 12
AUTO
L1052 & L1212
L1F L2F 17 18
L1135 & L1304 (NO)
RESET START
L1306 & L1304 (NO)
L1B L1C
L1158 (NC) USED ON (C341-2)
POWERED CONV. TURNTABLE ONLY
9 L1B L1B 1
STOP
L1135 & L1304 (NO)
L1A 17
VERT. SPD. UP-DN
L1305 & L1158 (NC)
24
23
22
8 7
L1B L1B
L1161 & L1159 (NO)
REF. 10K SPEED POT
FOR L1231 MOTOR
CONTROLER
A/B SWITCH DUAL ONLY C341-1
L1160 (OP)
L1157 (NO)
L1158 (NC)
3-1 3-4
2-1 2-4
1-1 1-4
(NC) (NO)
1-2 1-3
2-2 2-3
3-2 3-3
ASSY. DOOR - SPIRAL
CONTROL CABINET - INSIDE
DWG. NO. C341 ,C341-1 & C341-2
IPM
INTERNATIONAL
PACKAGING
MACHINES, INC.