orion

PACKAGING SYSTEMS, INC.

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Tel.: (450) 667-9769, Fax: (450) 667-6320

orion®
PACKAGING INC.

OPERATION MANUAL

For All Inquiries
Please Contact
Our Local Distributor

FOR U.S.A. (Only)
1-800-333-6556

Thank you for choosing ORION'S stretch-wrapping equipment. It is a wise choice, which will benefit your company now and in the future.

ORION uses a unique combination of functional, rugged steel structure and sophisticated control systems to offer equipment high in durability and low in maintenance requirements. Our advanced control systems mean that ORION equipment can be operated safely and efficiently without the need for special operator expertise and skills.

Please read this manual carefully and keep it handy. Following these simple operating instructions will insure the safe and efficient performance of this machine and simple maintenance procedures will guarantee long and productive life of the equipment.

Notice:

Our manual covers standard features of the machine. Certain options may not be fully covered due to their unique application.

In order to acquire more information about custom made features of your machine and to provide quicker service, the following information is required when making an inquiry:

1) Model 2001-0411608 2001-0411609
2) Serial Number
3) Subassembly (see PART LIST)

H/L77-15
Dwg. # 302 211

SAFETY

ORION'S stretch wrappers should be operated with caution and common sense as any other industrial equipment. To prevent a potential injury and/or electrical shocks, careful operation of the machine and awareness of its many automatic functions is required.

NOTE: All electrical power and compressed air must be disconnected prior to all inspection, maintenance or repair work.

ORION PACKAGING SYSTEMS INC.
SEMI-AUTOMATIC SPECIFICATIONS - EFFECTIVE MARCH 15, 2000

2001-0411608

2001-0411609

ORION EPIC® SERIES MODEL L-77

Spiral Semi-Automatic Medium Duty Low Profile

Maximum Load Size	55"W x 55"L x 84"H
Weight Capacity	4,000 lbs. Dynamic, 20,000 lbs. Static
Utilities	115/1/60 15 Amp Service
Turntable	59" Diameter Structural Steel Plate Dura-Glide™ Turntable Support System Quiet in Operation, Maintenance Free 3" Height Floor to Top of Turntable
Turntable Drive	0-12 RPM Variable Turntable Speed Variable Speed Drive Motor Heavy Duty Chain Drive with Tensioner Electronically Adjustable Acceleration/Deceleration (Soft Start) Positive Alignment Feature
Control Features	CSA Approved, NEMA 12 Control Panel State-of-the-Art Logic Control User Friendly Microprocessor with Micro-Switch Keypad Revo-Logic™ Exact Wrap Counting Technology Electronic Film Tension Control Adjustment on the Panel Separate Top / Bottom Wrap Count Selectors with LED Count Display Variable Speed Film Carriage Up/Down Control Film Carriage Raise/Lower Switch (Manual) Photocell for Automatic Load Height Detection Turntable Jog Pushbutton
Film Delivery	20" Insta-Thread LT Powered Pre-Stretch Film Delivery System 200% Pre-Stretch Ratio Easy & Safe to Operate Self-Threading Carriage Design Electronic Film Tension Control Adjustment on the Panel Variable Speed Film Output (Non-Wearing Sensor) Heavy Duty Chain & Sprocket Ratio Control Adjustable Film Roping Bar on Chassis for Stronger Interlocking of Load and Pallet
Film Carriage Elevator Drive	Heavy Duty ANSI Chain Carriage Lift Variable Speed Drive Motor Multi-Point UHMW Precision Carriage Guidance System
Structural Features	100% Structural Steel Construction Throughout Easy Access to All Components Open Mechanical Design for Ease of Maintenance Forklift Portable Base Design Structural Steel Tube Mast Design Hinged Mast for Ease of Shipping, Portability
Estimated Shipping Weight	1,500 lbs.

UNLOADING

Machine can be easily unloaded and transported by a forklift with a minimum capacity of 2500 lbs.

1. Carefully insert the forks into the lifting tubes to the maximum possible depth. Depending on the model, a forklift access may be either at the turntable end of the machine frame, the tower end or both. In case of the mongoose machine enter the forks under the frame or insert the forks in the tube brackets welded to the top of machine.

2. Lift the machine (or other part of system) only to the necessary height to move it with no bouncing or friction on the floor.

3. Sit the machine down assuring uniform contact with the floor, which is necessary to ensure correct and smooth operation.

INSPECTION

1. Remove all packing and supporting additions - these may include the blocks under the carriage and the restraining bar over the table.

NOTE: when removing the stretchwrap film covering the machine, care must be taken not to cut any of the electrical wires and/or polyurethane covering on the film carriage rollers.

2. Perform a visual inspection of the electrical and mechanical parts for loosened joints and/or broken connections. Any suspected shipping damage must be reported immediately to the freight carrier. Any transport damage cannot be claimed to Orion Packaging Inc.

Items that are vulnerable to damage and must be inspected:

- motors and transmissions (transmissions may require purge plugs which could have been be unplugged for the transport purpose).
- junction boxes
- electrical conduits
- proximity and limit switches
- photocells

3. Check the turntable assembly to ensure that there is no crippling of the movable parts i.e. casters, center axle or drive assembly.

4. Verify the following:

- turntable or rotary arm drive system to confirm that the reducer to drive the chain is snug and properly aligned
- verify the wires tight conduits for crushed sections or loose fittings
- verify the film carriage to be sure that it is correctly aligned with the tower
- verify the tension on the lift chain
- verify all the dials and knobs on the control panel for smooth action

MACHINE INSTALLATION

After the visual inspection has been completed, the electrical power and the compressed air shall be connected as specified on the diagrams supplied with the machine.
An electrical diagram is provided with each machine in the operating manual envelope attached to the panel enclosure.

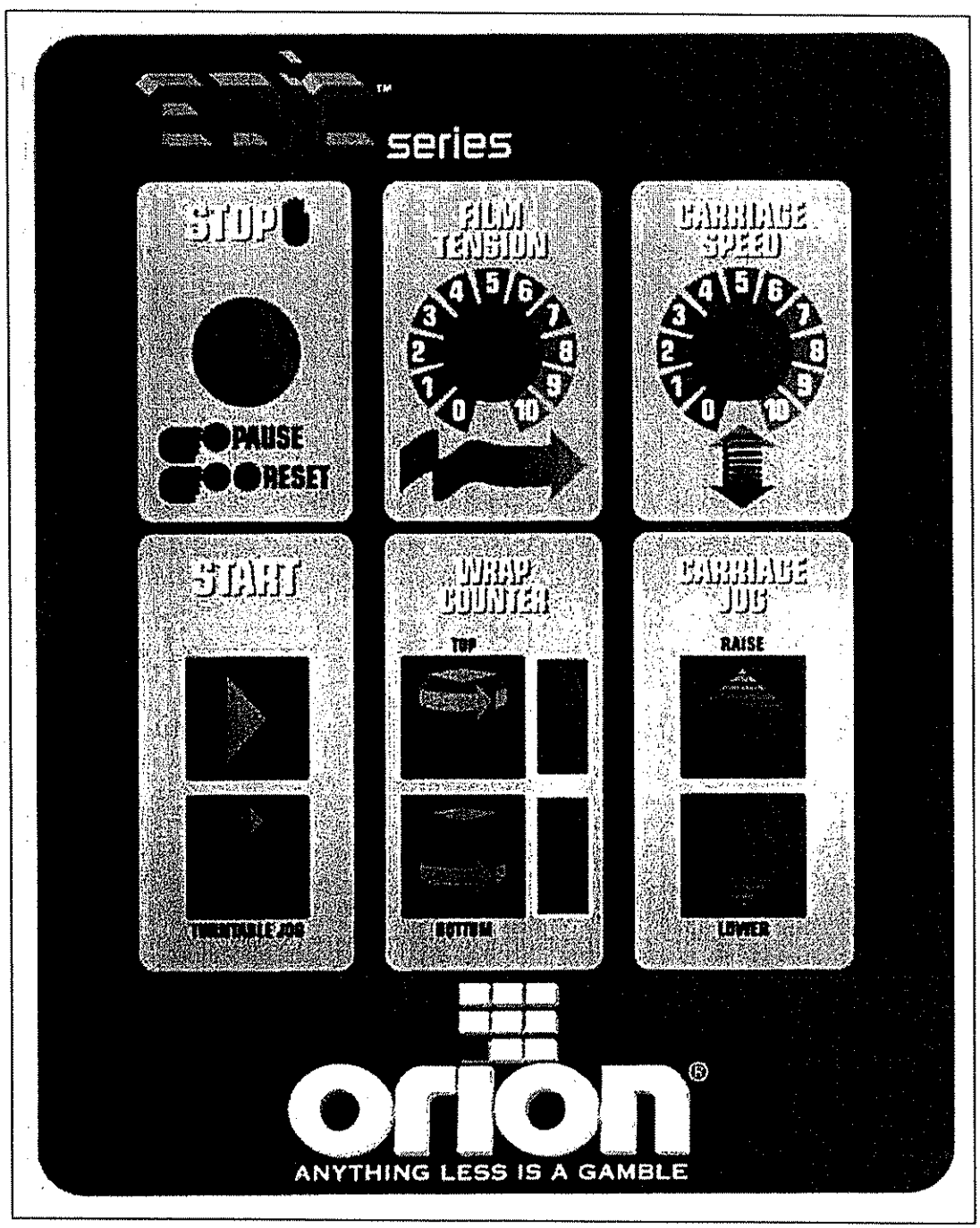
ASSEMBLY PROCEDURE

The structural frames of the machine have to be installed on a leveled floor. Locate the main wrapper section into its final position, keeping the tower assembly away from any traffic.
The wrapper mainframe section **must be bolted to the floor by the 1/2"** concrete floor anchors (leg & shield or expandable type).
NOTE: Mongoose M66IS or M67IS the "Z" stand **must be bolted to the floor by the 5/8"** or stronger anchors

- Any wiring that has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. Any wire run that appears too short or long may indicate that the position of the mechanical components is incorrect. Verify the status of all assemblies before proceeding.
- The tower deviation from vertical must not exceed 1/4" on the distance of 10 feet (angle: 0 degree 6').
- The conveyor roller deviation from horizontal must not exceed 1/16" on the distance of 52" (angle: 0 degree 4').

CONTROL PANEL

In the case of the free standing panel (console) place it adjacent to the system and anchor firmly to the floor. Connect the liquid tight (rigid conduit) to the main junction box located on the wrapper main frame next to the tower.


series
STOP
PAUSE
RESET
FILM TENSION
0
1
2
3
4
5
6
7
8
9
10
CARRIAGE SPEED
START
WRAP COUNTER
TOP
BOTTOM
CARRIAGE JOG
RAISE
LOWER
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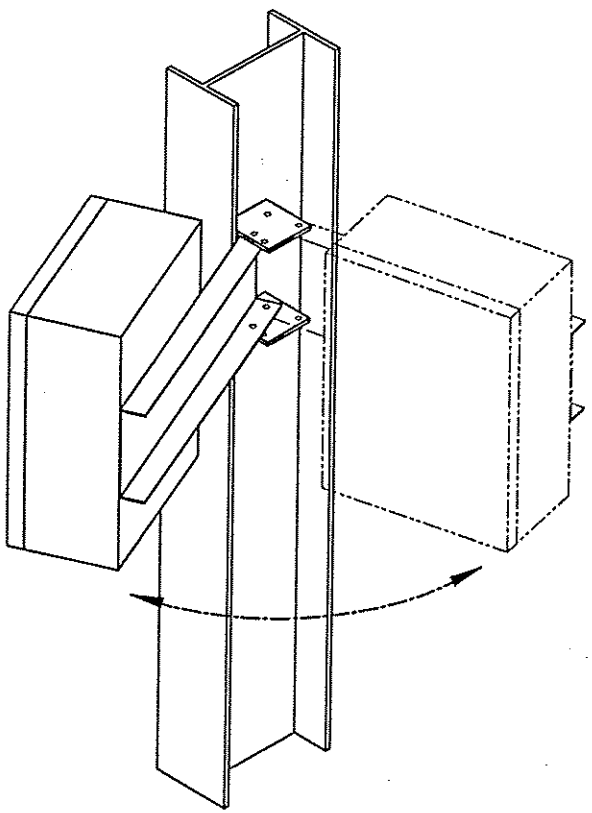
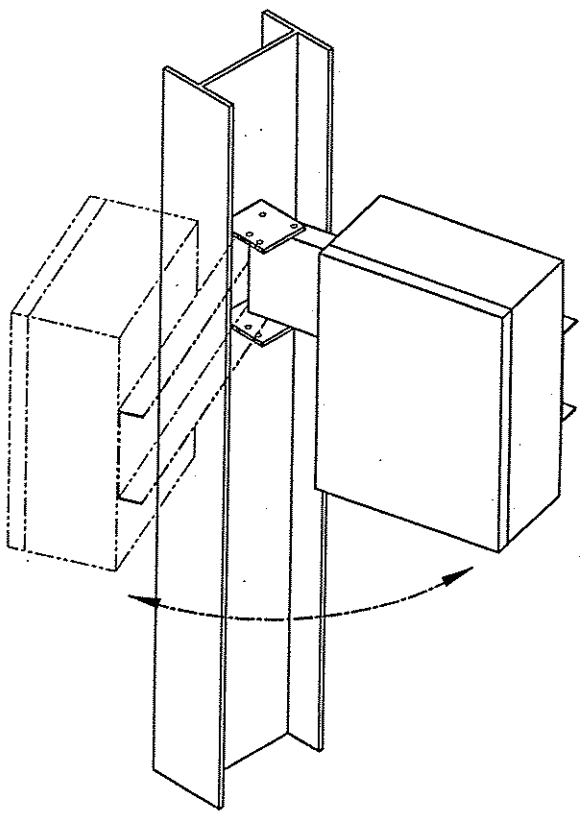
ANYTHING LESS IS A GAMBLE

In order to facilitate acces and manipulation, the control panel can be mounted in two positions:



Position 1



Position 2

CONTROL PANEL MOUNT
TWO POSTIONS

UPDATED FEB-15-99 DWG #418390

MACHINE OPERATION

Before Starting Machine Operation

Verify that the machine is properly connected to the electrical source. The electrical requirements depend on the machine type and features. For this information, please see the machine electrical diagram provided with the machine operation manual.
The control panel layout for the machine is shown on the drawing.

CAUTION: Before proceeding the machine operation familiarize yourself with the EMERGENCY-STOP button and all functions, switches and pushbuttons.

POWER SWITCH

Located on the panel door or side of the panel box, the lockable power switch has two settings:
ON - connects a power source to the machine
OFF - disconnects the power source.

FILM TENSION

Film tension may be adjusted using the film tension control knob. It has a range of tension from 0 to 10 (0 to 4 the low range, 4 to 8 the most useful range for most of the films used by our customers, 8 to 10 as a very high range which may break some films).

CARRIAGE SPEED

The carriage speed potentiometer control can be used to control the amount of overlap the film will have during the wrap. The potentiometer has settings from 0 to 10, the higher settings being the fastest. High settings mean less film overlap because of faster carriage speed and low settings mean more film overlap because of lower carriage speed.

MACHINE WRAPPING TEST

Notice: It is advisable to test-run the equipment with several pallet loads before attempting to wrap using film. Please position the operator beside the EMERGENCY STOP push button.

Start up of the machine (system) may determine the need for the adjustment of:

- load height stop photoswitch (on the carriage)
- top limit switch position
- bottom limit switch position
- roping bar height adjustment

Before the test procedure adjust the wrapping cycle parameters i.e. top wraps, bottom wraps, height photocell on/off, film tension, carriage speed (those two parameters may be adjusted during the wrapping cycle).

LOADING THE FILM

The film roll can be loaded on the carriage mandrel from either end of the roll. When using tacky film, please verify that the inward tacky surface of the film is inward on the load.

1. Disconnect power (turn off power switch)
2. Swing up the top mandrel spool
3. Put the roll of film on the bottom mandrel
4. Install the top mandrel on top of the roll to prevent upward movement
5. Pull the handle marked PULL TO OPEN to open film distributor cradle
6. Pass the roped tail of the film through opening (as shown on the film quick threading pattern DWG. # 418180 Fig. 1)
7. Close the film distributor cradle by pushing bar marked PUSH TO CLOSE
8. When the film feeding is completed (Fig. 2) - turn the power switch on
9. Peel off the first few winds of the film (multistretch will run due to displacement of the dancer roller) and fix the film end onto the load.

The system is now ready to begin the first wrapping cycle.

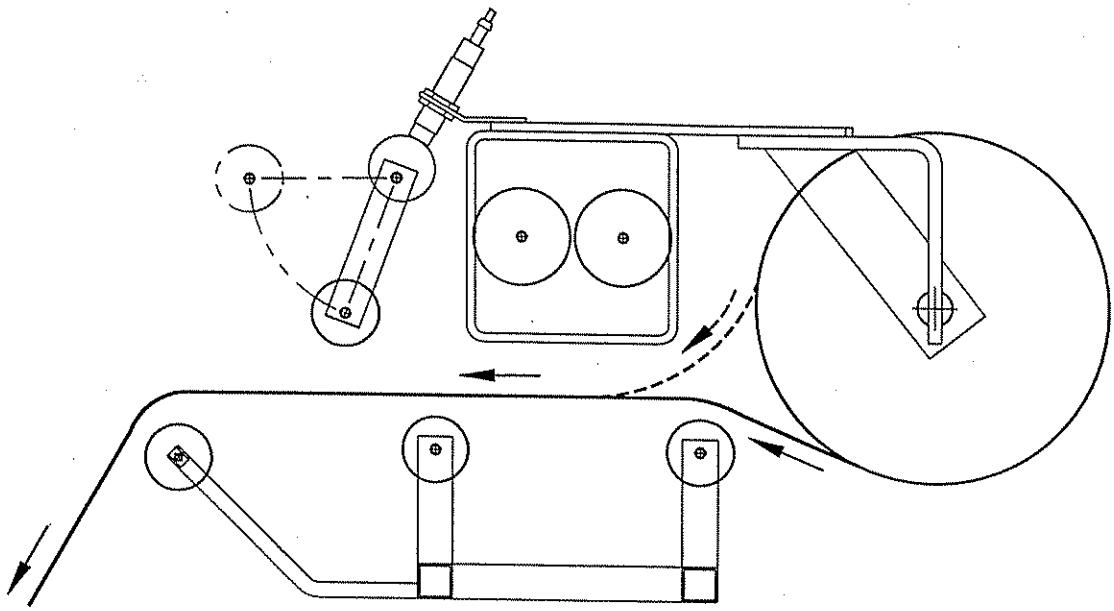


Fig. 1 OPEN CRADLE

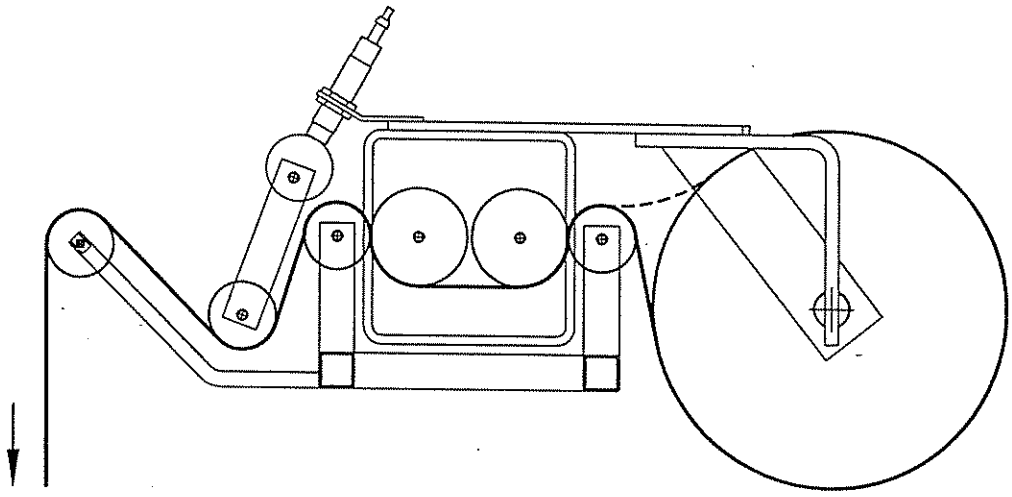


Fig. 2 CLOSED CRADLE

FILM QUICK THREADING

UPDATED FEB-15-99

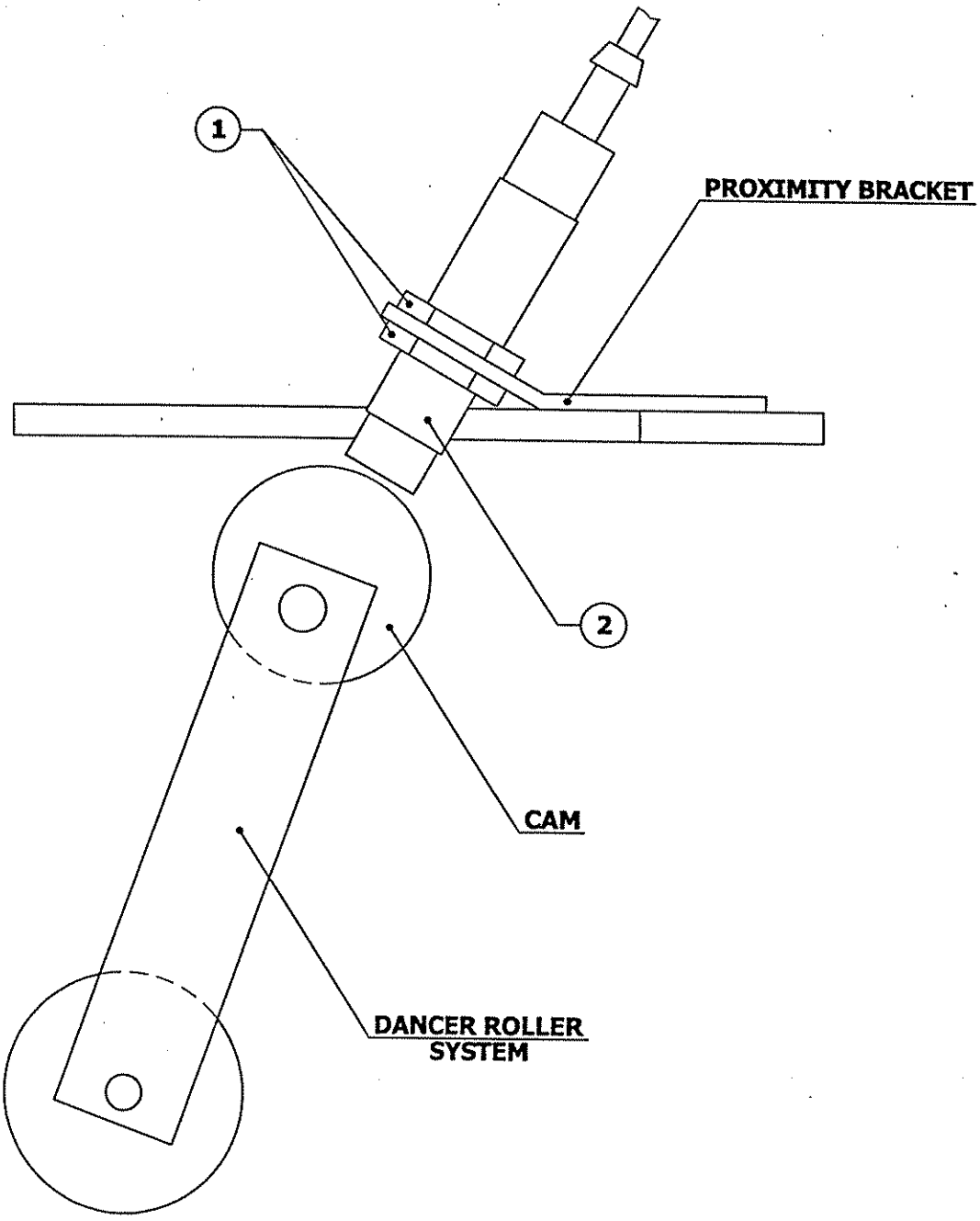
DWG #418180

PROXIMITY SENSOR ADJUSTMENT

Occasionally the Feed Back Proximity Sensor may need some adjustment. The position of the feed back proximity sensor against the cam is shown on drawing # 419139.

Adjustment instructions:

- remove the carriage cover
- unbolt the two nuts holding the proximity switch - item # 1
- turn the Proximity sensor - (item # 2) to create the gap between the cam and the front side of proximity sensor about 1/8 "
- tighten on the nuts securing the Proximity Sensor
- turn the trim pot SPAN (Board 336-8 or 336-9) adjust the moment when motor starts to turn when dancer roller moved from its home position up to 1 1/2".



PROXIMITY SENSOR
FEED BACK ADJUSTMENT

UPDATED FEB-15-99

DWG #419139

NEW FEATURES ON HL77-15.

I. Autoheight PE OFF/ON modes.

In order to display the actual status of autoheight photocell mode, - both, Top & Bottom Wraps Preset touch pads must be pressed simultaneously. At this moment, the display beside the Top Wrap Preset touch pad will display "P" (for word "Photocell") and the display beside the Bottom Wrap Preset touch pad will display either "E" (for word "Enable") or "d" (for word "Disable").

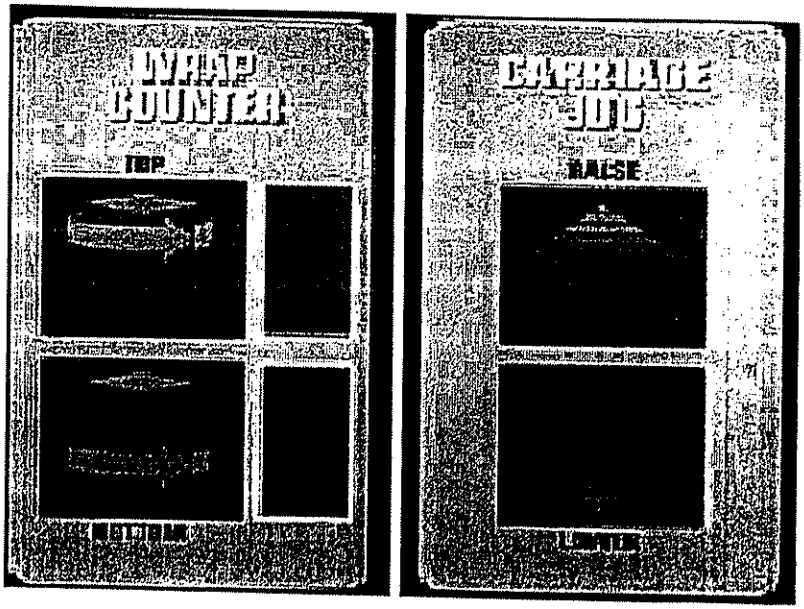
To change the status of autoheight photocell, both Top & Bottom Wraps Preset touch pads must be pressed simultaneously and held. The status can be changed to enable by pressing the Carriage Jog Raise touch pad or to disable by pressing Carriage Jog Lower touch pad.

II. Home Position of Turntable

Home position of turntable is memorized during the powerup of the machine. In order to set desired home position of turntable, follow steps described below:

a. machine must be in manual mode (not in wrapping cycle).
b. advance turntable to desired position by using Turntable Jog touch pad
c. cycle power (switch the power off and then switch it on)

Now, machine will keep and use this position as home until the next power off/on cycle.



MACHINE MAINTENANCE

All general information about machine maintenance is based on normal machine working conditions: indoors, moderate dust and low moisture environment, and maximum rotation of 32 RPM of turntable/rotary arm.

They should be regarded as guidelines, reviewed and corrected according to requirements of actual use and conditions.

MOTOR MAINTENANCE

An occasional inspection of the brushes should be made in order to establish a wear rate. Replacement brushes should be installed before old brushes wear to 9/16" long, measured on the long side. After replacing brushes run the motor near rated speed for at least 1/2 hour with no load to seat the new brushes.

Failure to properly seat the new brushes may cause commutator damage and rapid wear of the new brushes. If the commutator becomes rough, scored or out of shape, a competent motor shop should disassemble it and resurface the commutator.

With every third brush change, have a competent motor shop resurface the commutator and blow the carbon dust out of the motor.

REDUCER OIL CHANGE

All external cap screws and plugs on the reducing transmission should be checked for tightness after the first week. It is recommended to change the oil every six months or at least 1800 hours of operation, whichever comes first. When adding or changing oil, the transmission should never be filled above the oil level mark indicated, because leakage and overheating may occur.
Below is the list of the type of lubricant that should be used.

List of recommended reducer oils

Manufacturer	Lubricant
American Oil Co..	American Cyl Oil no:196-L
Cities Service Oil Co.	Citgo Cyl Oil 100-5
Gulf Oil Corp.	Gulf Senate 155
Mobil Oil Corp.	Mobil 600 W Suerr Cyl. Oil
Philips Oil Corp.	Andes S 180
Texaco Inc.	624 + 650T Cyl.Oil
Shell Oil Co.	Velvata Oil J82
Union Oil of Cal.	Red Line Worm Gear Lube 140

RING BEARING MAINTENANCE (when applicable)

The ring bearing (located under the turntable) should be re-lubricated internally and externally.

Internally: by injecting grease into all the lubrication nipples in succession until a collar of fresh grease appears around the perimeter of the ring. The re-lubrication interval suggested for these bearings, used in Stretch Wrapping Machinery is 750 hours, with a maximum period of 6 months. The lubricant should be fresh and applied in sufficient quantities to make sure all surfaces are lubricated.

Externally: by lubricating and wiping the chain drive with oily cloth.
The frequency of lubrication depends on entirely upon the usage of the machine and environment in which the machine is placed (dust, moisture etc.).
Machines working under extremely dirty conditions should be lubricated every 400 operating hours but at minimum, every 2 months. Longer lubrication intervals may occur only when machine is working under very clean and dry conditions but should be not be longer than 6 months.

List of recommended lubricants for the ring bearing lubrication

Manufacturer	Lubricant
BP	Energrease LS2
Castrol	Speeroll AP2
Esso	Beacon 2
Gulf	Crown Grease 2
Mobil	Mobilus 2
Shell	Avania Grease R2
Texaco	Glissando FT 2
Valvoline	LB - 2

TOWER RACEWAYS MAINTENANCE

The film distributor (carriage) is sliding on the plastic guides attached behind its back plate. The section of the tower on which the plastic guides move (raceways) should be cleaned and re-greased approximately every 600 hours of machine operation.

NOTICE: If the machine works in a dusty and corrosive environment, the raceways should be re-greased more often (at least every 100 hours).

CHAIN MAINTENANCE

To clean the chain, wipe it with an oily cloth every month. When machine is working in a dusty and damp environment, it may be necessary to repeat the cleaning operation more often.

As the chain lubricants please use the most common chain lubricants on the market.

With time, the chain will tend to stretch. A loose chain should be tightened at the chain tensioner, or by moving the reducer on its mounting plate.

NOTICE: Chain tension first adjustment must be done after the first two weeks of machine usage.

PNEUMATIC SYSTEM MAINTENANCE (when applicable)

The air supply system must be checked weekly and must be free from the moisture. In cold environments, it may be necessary to drain the air supply system daily..

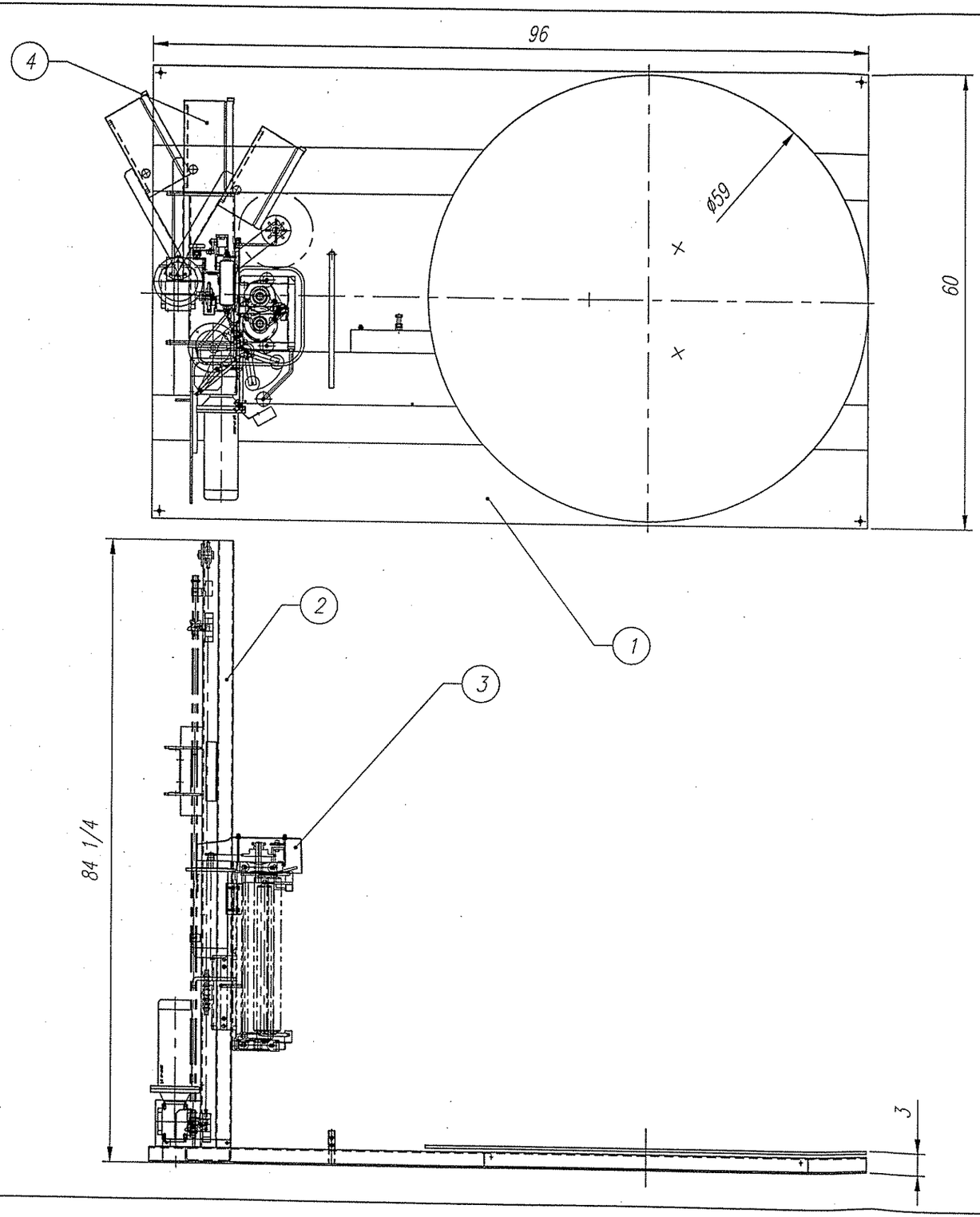
CAM FOLLOWER MAINTENANCE (when applicable)

The cam followers have deep grease pockets and do not need frequent relubrication. The portion of the tower on which the cam followers run, should be cleaned and regreased every 300 hours of operation. If the machine operates in a dusty or corrosive environment the tower should be relubricated more often.

SEMI-AUTOMATIC STANDARD ASSEMBLY PART LIST

NOTE:

- Quantities listed in order of part number.
- The names given to the parts are generic.



REPLACES 427955 B

No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
4	CONTROL PANEL 5412 ESCH 12 10 06 –	–	–	1	–
3	INSTA-THREAD LT CARRIAGE –	C	425219	1	96.2
2	HINGE TOWER 6 x 2 ASSEMBLY –	C	428978	1	183.8
1	L77-13C BASE ASSEMBLY –	C	426921	1	990.3

REMARKS: –

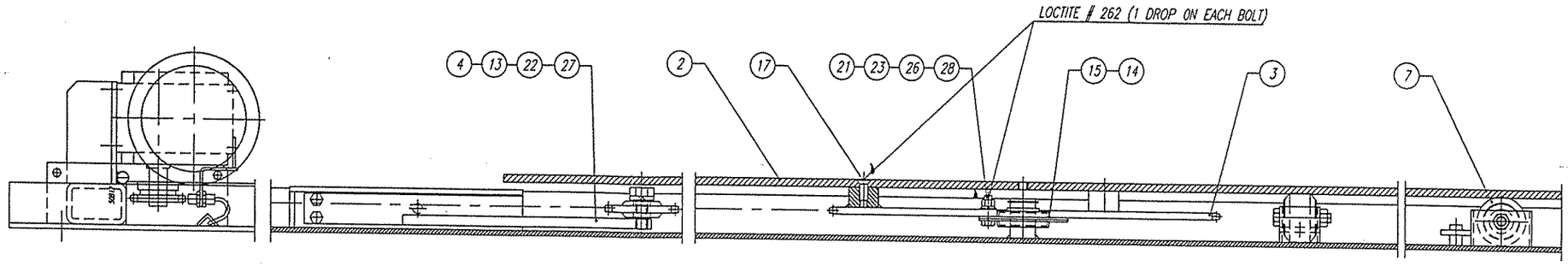
REMARKS: –

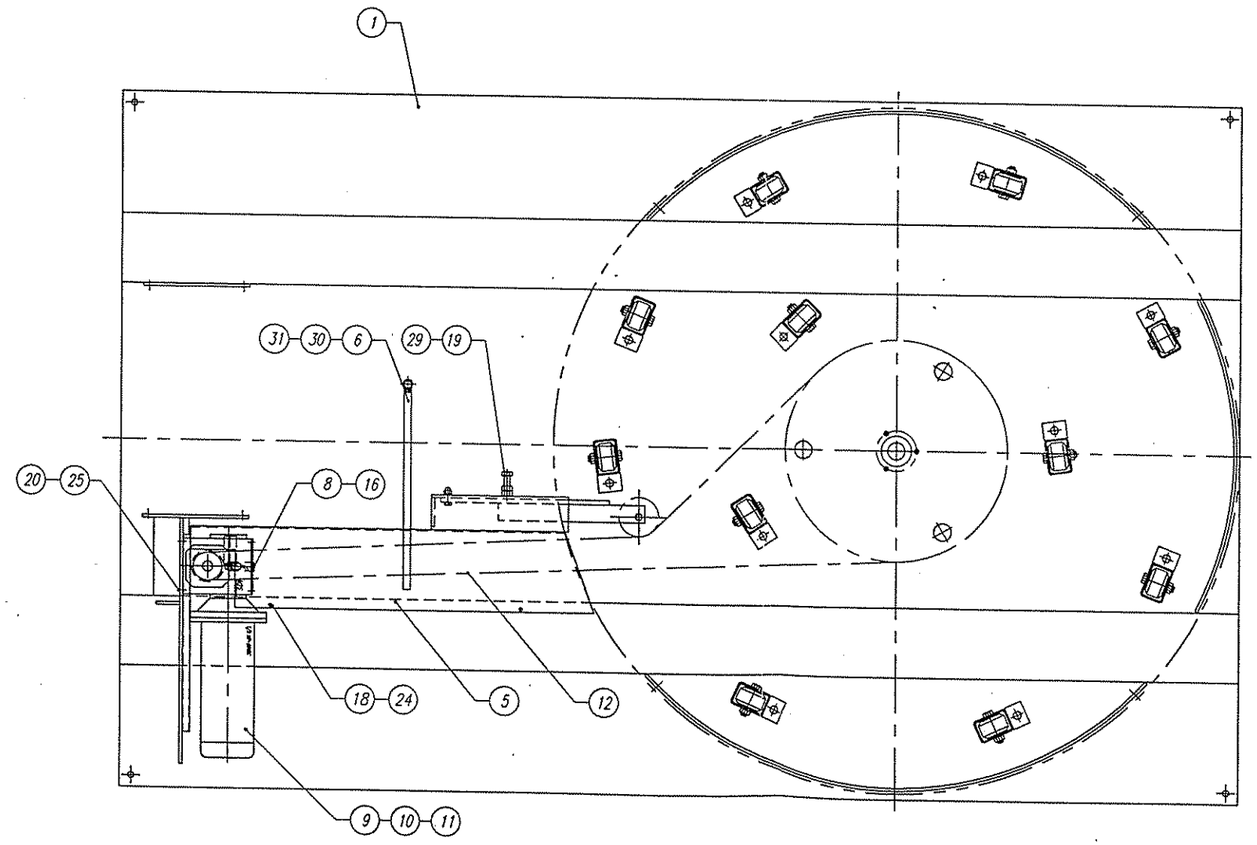
L77/14 WRAPPER LAYOUT

orion
PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (450) 667-9769

ASSEMBLY DWG.: –	JOB No.: STD	DRAWING No.: 428977
	CHECKED BY:	DRAWING SIZE: B
	DRAWN BY: M. G. GOLA	MACHINE TYPE: L77/14
	DATE: AUG-29-2000	SCALE: 1 : 16

1 : 4





31	HEX. NUT		013407	2	
30	HEX. HEAD SCREW		014157	2	
29	HEX NUT		011266	1	
28	HEX NUT		011128	3	
27	SPRING WASHER		012721	1	
26	SPRING WASHER		011390	3	
25	SPRING WASHER		012724	4	
24	SPRING WASHER		011393	2	
23	FLAT WASHER		010948	3	
22	HEX HEAD SCREW		010329	1	
21	HEX HEAD SCREW		012406	3	
20	HEX HEAD SCREW		010291	4	
19	HEX. HEAD SCREW FULLY THREADED		013989	1	
18	PAN PHILL		012049	2	
17	FLAT SOCKET SCREW		013842	3	
16	PROXIMITY SWITCH		013848	1	
15	STAMP HOUSING FLANGE BEARING		013654	1	
14	EXTERNAL RETAINING RING		013655	1	
13	IDLER SPROCKET		010008	1	
12	CHAIN		010009	1	
11	SPROCKET		010074	1	
10	REDUCER		015191	1	
9	EL. MOTOR		015240	1	
8	PROXIMITY SWITCH BRACKET	A	423499	1	
7	"DURA-GLIDE" CASTER 2.33" DIA. – ASSEMBLY	A	416055	11	
6	ROPING BAR	A	413868	1	
5	CHAIN GUARD	A	421338	1	
4	CHAIN TIGHTENER ARM	A	411592	1	
3	SPROCKET	A	406338	1	
2	59" DIA. TURNTABLE DISK (REVOLOGIC)	B	414904	1	
1	L66/14 H BASE– WELDING	C	422398	1	
No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT

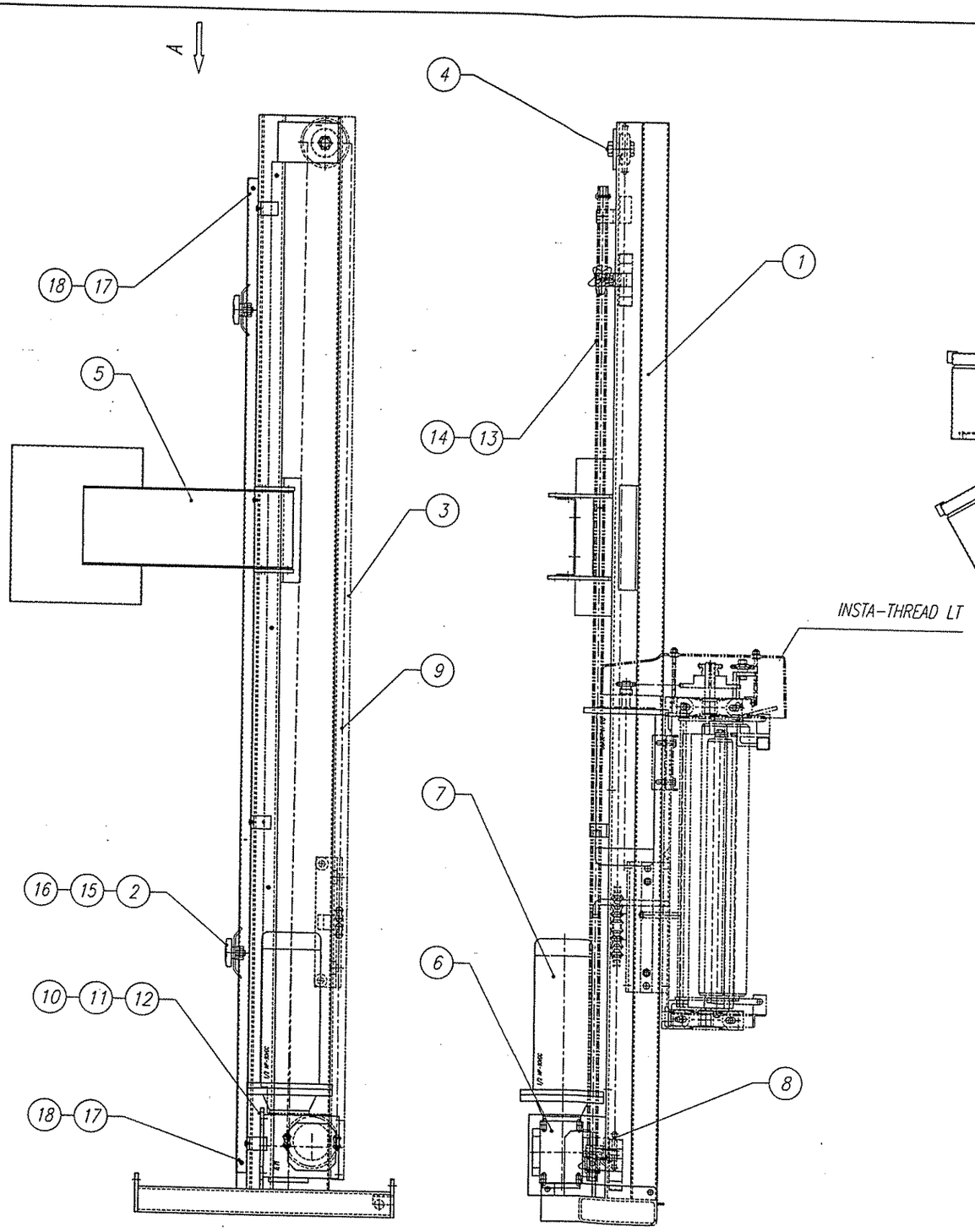
REMARKS: 12 RPM

REMARKS: –

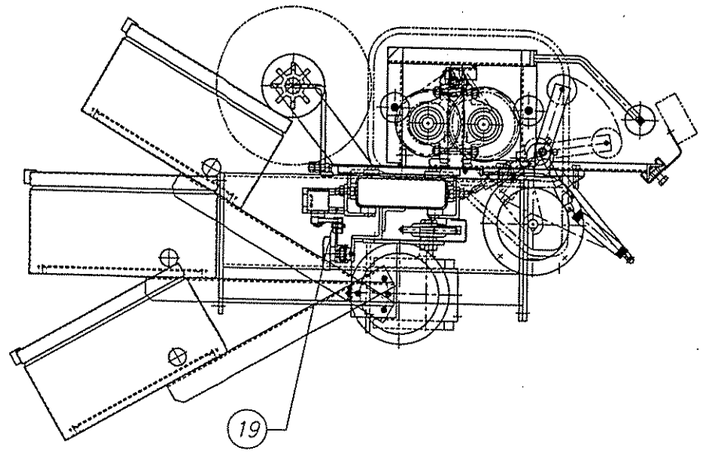
L77/13C H BASE ASSEMBLY

orion
PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG: 426735	DATE: FEB. 16/2000	SCALE: 1 : 8
	DRAWN BY: G. STACHURA	MACHINE TYPE: L77/13C
	CHECKED BY:	DRAWING SIZE: C
	JOB No.: STD	DRAWING No.: 426921



VIEW - A



No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
19	LIMIT SWITCH SPACER	A	428981	2	
18	PAN PHILL SCREW		012690	2	
17	HEX. NUT		012726	2	
16	CHANNEL GUIDE	A	427690	1	
15	BLACK KNOB		010092	2	
14	PAN PHILL SCREW		013463	4	
13	CHANNEL	A	428965	1	
12	WASHER	–	012725	4	
11	LOCK WASHER	–	012724	4	
10	HEX SCREW	–	010291	4	
9	CHAIN	–	010009	1	
8	SPROCKET	–	010235	1	
7	EL. MOTOR	–	015240	1	
6	REDUCER	–	015200	1	
5	CONTROL PANEL	–	–	1	
4	IDLER SPROCKET ASSEMBLY	A	420809	1	
3	CHAIN GUARD	A	428968	1	
2	STRIKER	A	427691	2	
1	HINGE TOWER 6 x 2 x .150 - WELDING	C	428979	1	

REMARKS: -

REMARKS: -

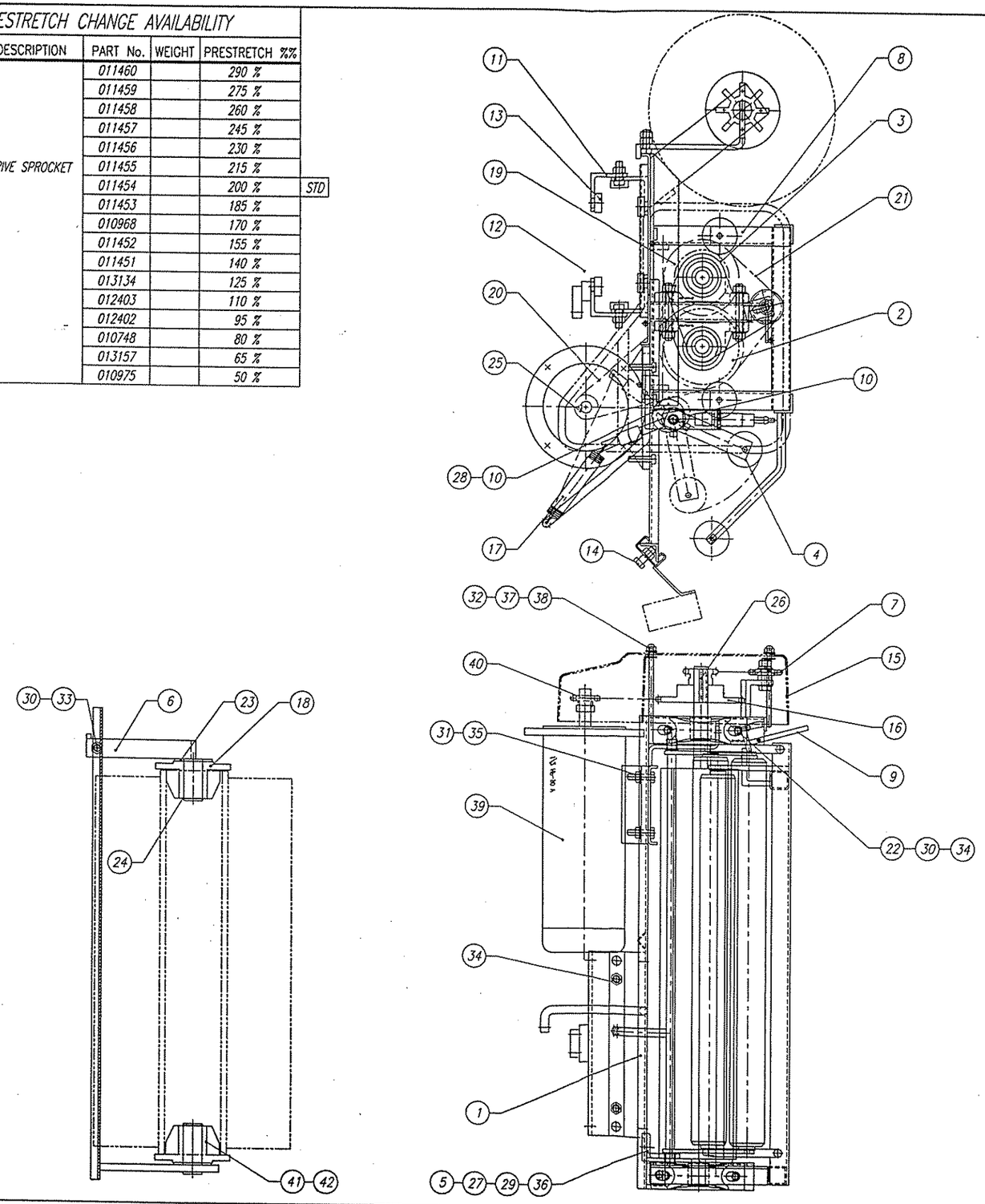
HINGE TOWER 6 x 2 x .150 - ASSEMBLY

orion
PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL: (514) 667-9769

DATE: AUG-29-2000		SCALE: 1 : 6
DRAWN BY: M. G. GOLA		MACHINE TYPE: H,L77/14
CHECKED BY:		DRAWING SIZE: C
ASSEMBLY DWG.: 428977 B	JOB No.: STD	DRAWING No.: 428978

PRESTRETCH CHANGE AVAILABILITY

No.	DESCRIPTION	PART No.	WEIGHT	PRESTRETCH %%	
19	DRIVE SPROCKET	011460		290 %	
		011459		275 %	
		011458		260 %	
		011457		245 %	
		011456		230 %	
		011455		215 %	
		011454		200 %	STD
		011453		185 %	
		010968		170 %	
		011452		155 %	
		011451		140 %	
		013134		125 %	
		012403		110 %	
		012402		95 %	
		010748		80 %	
		013157		65 %	
		010975		50 %	



No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
42	WASHER	A	425793	1	
41	BOTTOM SPOOL	A	425792	1	
40	SPROCKET	–	013928	1	
39	EL. MOTOR	–	015240	1	
38	RUBBER GROMMET 1/4 I.D.	–	–	3	
37	DOMED NUT	–	014195	3	
36	HEX NUT	–	012689	5	
35	HEX NUT	–	013407	4	
34	HEX NUT	–	012582	12	
33	HEX NUT	–	011128	2	
32	FLAT WASHER	–	012221	3	
31	FLAT WASHER	–	012725	4	
30	FLAT WASHER	–	014481	9	
29	LOCK WASHER	–	011393	2	
28	SOCKET HEAD CAP SCREW	–	010259	3	
27	HEX HEAD SCREW	–	011382	2	
26	SQ. KEY	–	010295	1	
25	SQ. KEY		010295	2	
24	SELF SEATING EXT. RETAINING RING	–	013860	2	
23	FLAT WASHER	–	012323	1	
22	PILLOW BLOCK	–	011192	4	
21	CHAIN	–	010583	1	
20	CHAIN	–	010583	1	
19	DRIVE SPROCKET	–	011454	1	
18	SPOOL	A	405855	1	
17	EXTENSION SPRING	B	403118	1	
16	DUAL SPROCKET	A	419649	1	
15	FIBERGLASS COVER	B	422323	1	
14	PHOTOCELL BRACKET	B	422594	1	
13	SLIDE BUTTON	A	420001	12	
12	CARRIAGE CHAIN ATTACHMENT ANGLE (5x2-TOWER)	A	420000	1	
11	CARRIAGE ATTACHMENT ANGLE (2"-TH'K TOWER)	A	419999	1	
10	PROXIMITY SENSOR CAM	A	413744	1	
9	CRADLE LOCK	A	421524	2	
8	CRADLE ROLLER ASSEMBLY	A	423088	1	
7	CHAIN TENSIONER	A	421547	1	
6	FILM TOP MANDREL	A	423087	1	
5	DANCER BOTTOM BRACKET	A	422182	1	
4	DANCER ROLLERS ASSEMBLY – 20 (FRL)	A	414194	1	
3	OMNISTRETCH RUBBER ROLLER 2 3/4 – 20	B	423086	1	
2	OMNISTRETCH RUBBER ROLLER 4 1/8 – 20	B	423085	1	
1	INSTA-THREAD LT BACK (6 x 2 -20 – FRL)	C	425218	1	

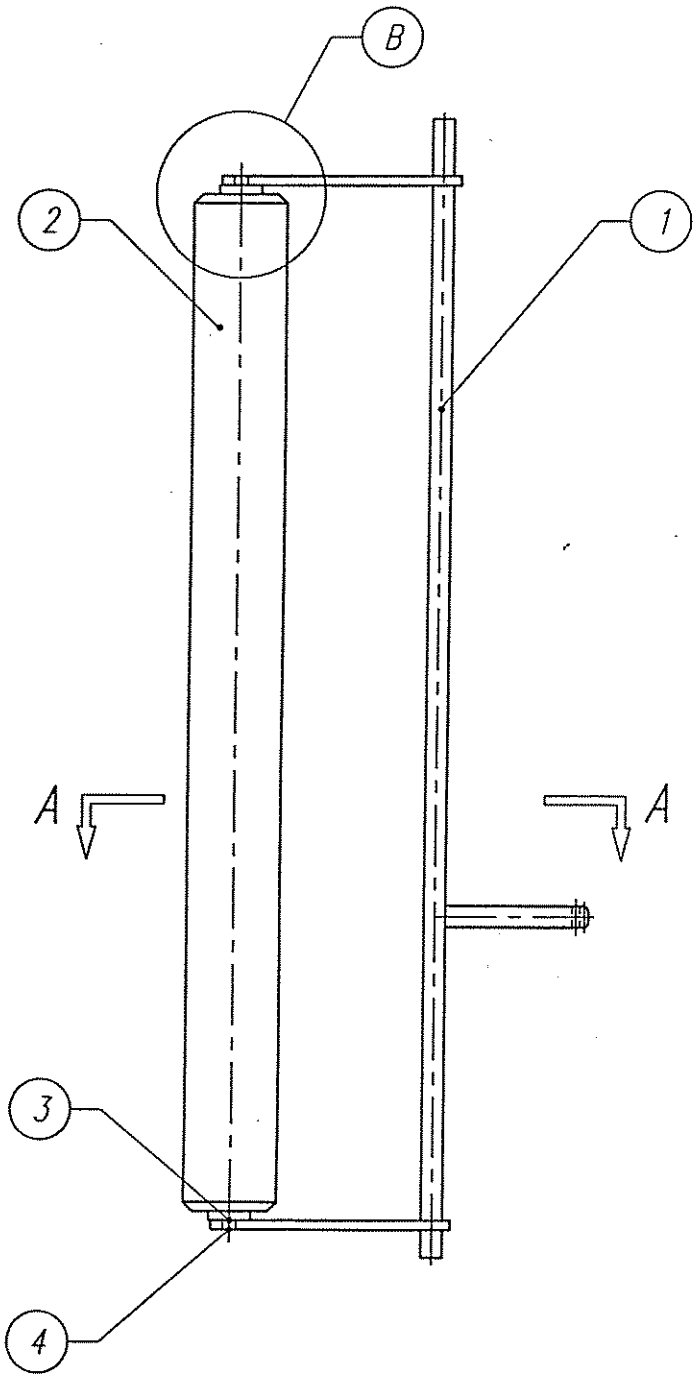
REMARKS: –

REMARKS: –

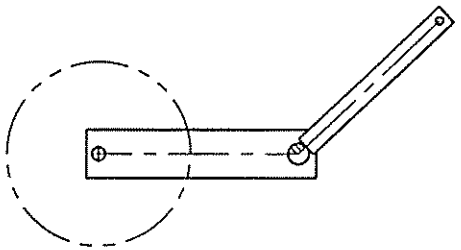
INSTA-THREAD LT – 20" (6x2-FRL)

orion
PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

	DATE: NOV-16-1999	SCALE: 1 : 4
	DRAWN BY: M. G. GOLA	MACHINE TYPE: H,L/14
	CHECKED BY:	DRAWING SIZE: C
ASSEMBLY DWG.: LAYOUT	JOB No.: STD	DRAWING No.: 425219

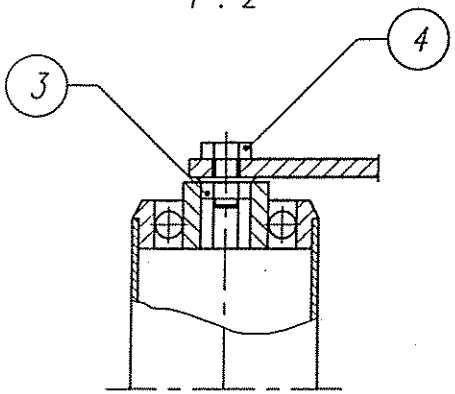


A - A



DETAIL "B"

1 : 2



No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
4	HEX HEAD SCREW		012475	2	
3	FLANGE NUT		014164	2	
2	ALUMINIUM ROLLER - 20	A	402789	1	
1	DANCER ROLLER CRADLE - 20 (FRL)	A	414195	1	

REMARKS:

REMARKS:

DANCER ROLLER ASSEMBLY - 20 (FRL)

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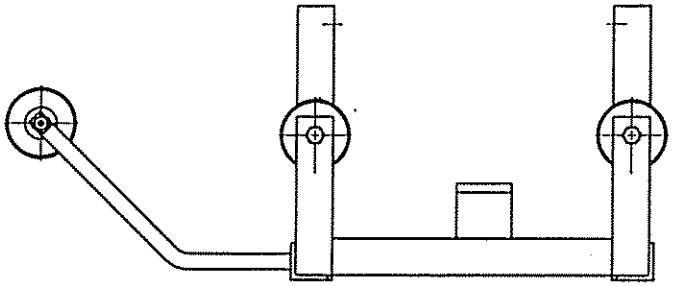
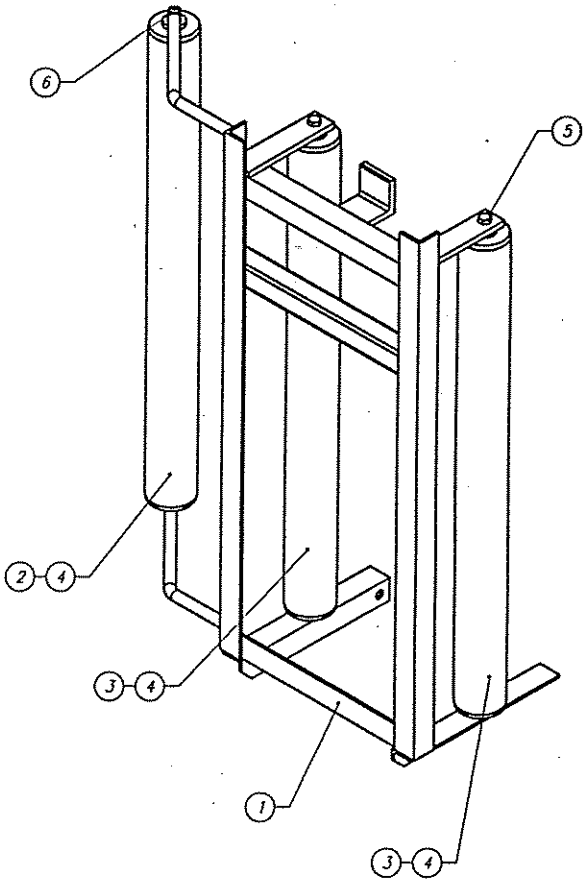
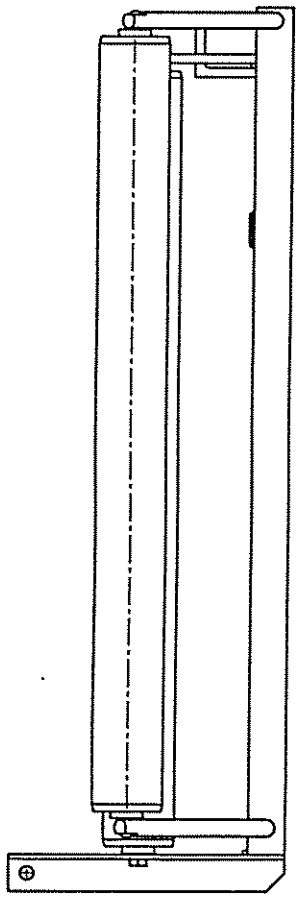
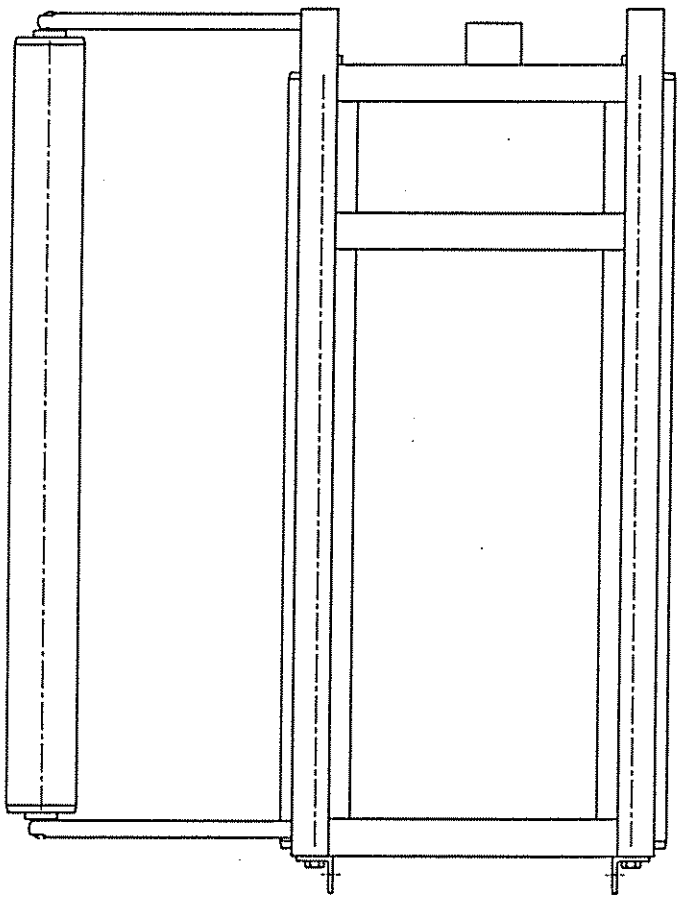
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG.:	DATE: SEP. 29/1998	SCALE: 1 : 4
	DRAWN BY: ROGER F.	MACHINE TYPE: ALL/12
	CHECKED BY:	DRAWING SIZE: A
	JOB No.: STD - 12.1	DRAWING No.: 414194









6	HEX SOCK BUT.HEAD SCREW		015021	2	
5	HEX HEAD SCREW		015009	4	
4	ALU. ROLLER (ECONOMY) 1.9 - 20		015185	3	
3	IDLE ROLLER SHAFT	A	423121	2	
2	IDLE ROLLER SHAFT	A	421232	1	
1	CRADLE ROLLER FRAME (20-FRL)	C	423089	1	
No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT

REMARKS:

REMARKS:

CRADLE ROLLER ASSEMBLY (20-FRL)

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QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG.: 423081	JOB No.: STD	DRAWING No.: 423088
DRAWN BY: ROGER F.	CHECKED BY:	MACHINE TYPE: H.I./13
DATE: MAR-10-1999		SCALE: 1 : 2.5
		DRAWING SIZE: C

MULTISTRETCH 336-6/7/9 MOTOR CONTROL BOARD CALIBRATION INSTRUCTIONS

Bias: (RV3) The **RV3** pot controls the system bias.

This control injects an offset voltage that adds or subtracts from the voltage reference defined by the external tension adjustment (film tension potentiometer); this will allow extremes of adjustment to be set to levels consistent with proper operation. Typically, the bias will be used to center the operation range in the linear portion of its characteristics.

Note: This adjustment is normally factory pre-set and should not require field adjustment. For reference, the factory test procedure calls for a setting of 1.3 volts DC at the cathode of Z1 (Zener Diode) achieved by adjusting the **RV3** pot. Check for voltage between the (-IN) and the pin located next to the bias trim-pot.

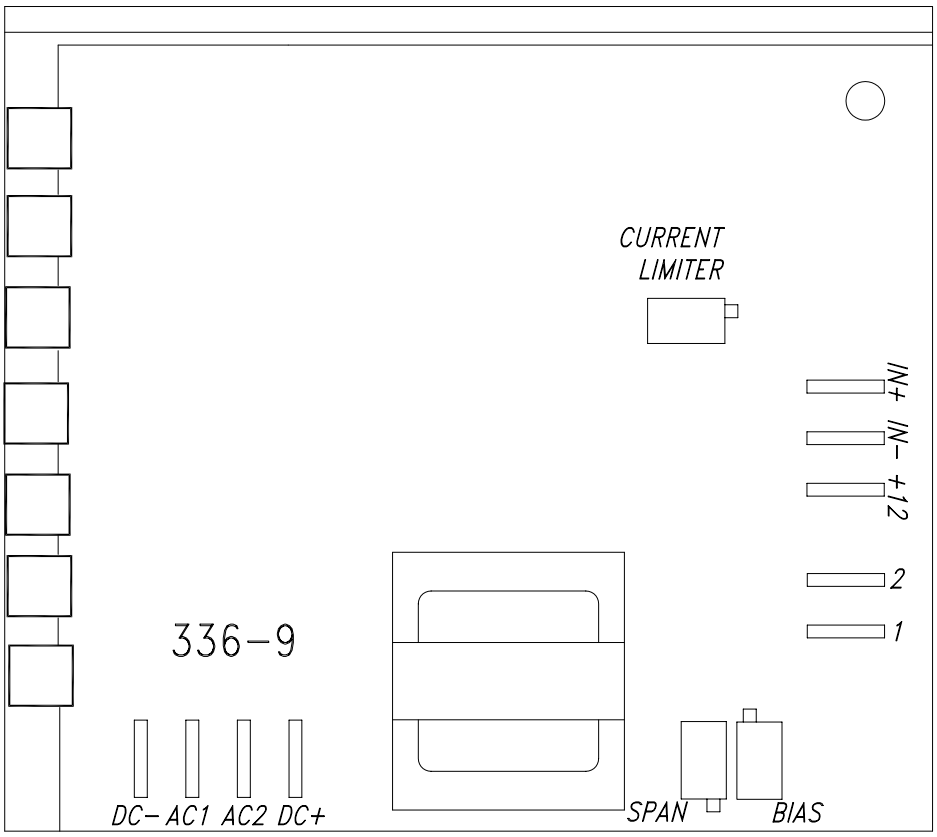
Span: (RV1) The **RV1** pot controls the systems loop gain.

The system loop gain may be adjusted if the motor continues to be energized when the dancer roller is unloaded and at rest. With the machine stopped, the pot should be adjusted to ensure that the motor is de-energized in this condition, and so that a light pull on the free end of the film causes the film to feed freely. Counter clockwise (CCW) adjustment of this pot will increase the response time, in effect softening the motor tension response plus decreasing the maximum motor speed attainable. Clockwise (CW) adjustment will decrease the response time, in effect sharpening the motor response time plus increasing the maximum motor speed attainable.

Current Limit: (RV4) The **RV4** pot controls the torque (amperage) that the 336 board will allow to the motor.

To protect the unit against damage should the motor stall, jam, or current demands exceed its rating, a current limiting circuit is included which keeps motor current at a safe level regardless of motor load or input from the Hall effect proximity switch.

This pot is factory pre-set to suit ½ HP motors. Should changes be required in the field, proceed as follows: Monitor the motor current. Turn the current limit **RV4** to minimum (full CCW). Stall the motor. Advance the pot slowly until the desired current is achieved. This should not exceed 125% of the motor nameplate rating.
Do not stall the motor for more than a few seconds, or damage may occur.



DC+: ARMATURE CONTROL

AC1: AC INPUT

AC2: AC INPUT

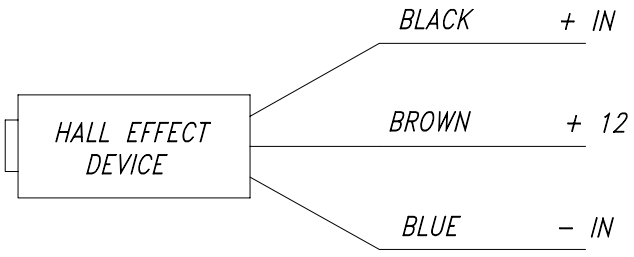
DC–: ARMATURE CONTROL

POTENTIOMETER

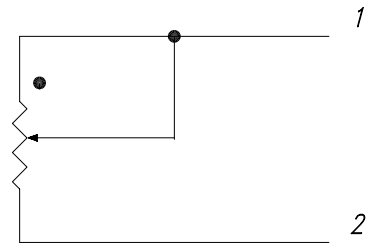
SPAN: HALL EFFECT SENSITIVITY CONTROL

BIAS: SYSTEM BIAS (FACTORY SET)

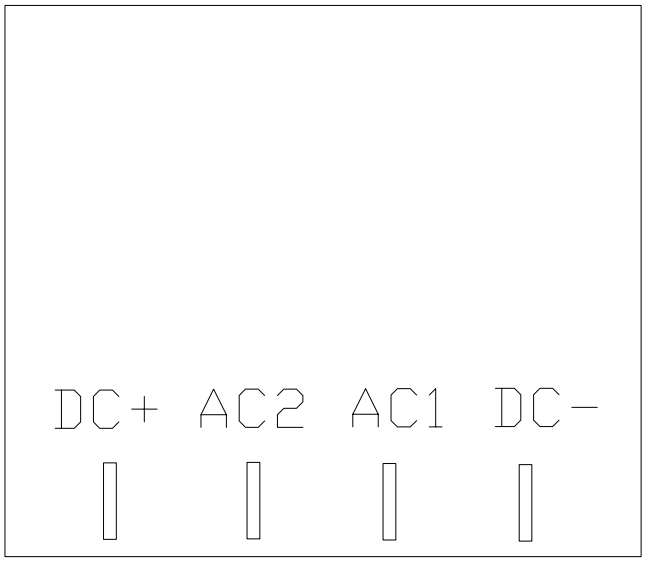
CURRENT LIMITER: (FACTORY SET)



FILM TENSION ADJUSTMENT
REMOTE POTENTIOMETER



336–9
MULTISTRETCH BOARD



DC - OUT
DC + OUT
AC2 IN
AC1 IN (NEUTRAL)

168-A CARRIAGE UP/DN SINGLE SPEED BOARD

TURNTABLE & TOWER MOTOR CONTROL BOARD ADJUSTMENTS

66 & 55 SERIES EQUIPMENT (850M & 850DM Board)

INTRODUCTION

The 850M and 850 DM Motor Control Boards are DC/SCR drives that are used in 66 & 55 series Orion stretch wrapping equipment. The following calibration instructions apply to all 66 & 55 series turntable and rotary tower type machinery, but it will be important to note specific reference to your particular Orion model for best calibration results.

The 850M and 850DM boards feature two selectable pre-set speeds (1 & 2), and four potentiometers (marked 1,2,A and D).

The instructions are in the suggested order of adjustment, and intended to be made after installation of the board in the control enclosure. Please refer to the attached sketch of the board for identification of the adjustment points.

INSTALLATION

This unit is equipped with an aluminum chassis, which serves as a heatsink. This should be oriented with the printed circuit board in a vertical plane for optimum convection cooling.

Connectors are to .250" quick-disconnect terminals. Standard units require 120 VAC supply. AC line attaches to terminals **AC1**, **AC2**. Motor Armature attaches to terminals **DC+**, **DC-**. The standard unit is suitable for permanent magnet shunt style DC motors with 90 V armature rating.

ADJUSTMENTS

Acceleration: (RV3) The pot marked **A** is the control for the acceleration or electronic soft start feature.

For an initial setting, turn the **A** pot fully counter-clockwise (CCW) until a faint "clicking" sound is heard, then approximately 2 turns (or revolutions) clockwise (CW). CW adjustment of this potentiometer softens the start and lengthens the time required for the turntable/tower to reach its preset speed.

Speed Control: (RV1) The pot marked **1** controls the turntable/tower jog speed*1*.

Simply activate the turntable/tower jog function, adjusting the jog speed (pot 1) as The turntable/tower rotates. This should be set for approximately 2 to 3 RPM. Please note that this setting should be made with a load on the turntable (turntable type models only). A CW turn increases the jog speed, while CCW decreases jog speed.

Speed Control: (RV2) The pot marked **2** is the control for the high speed*2* for the turntable/tower during the wrap cycle once acceleration is complete.

This speed can be as high as 12 RPM. However, you should note that if it is set too high, you may see chopping of the current to the turntable/tower drive motor which will cause pulsating, half-speed operation of the turntable/tower drive itself. If this is seen, please decrease the setting of pot **2**, until it is no longer in effect.

For best calibration results, it is recommended that you make this adjustment while the machine is in cycle. After starting a wrap cycle, set the film carriage speed control to the "0" (minimum) position. This will prevent the film carriage from rising and completing its cycle. Then simply adjust the high speed (pot **2**) as the turntable/tower rotates. A CW turn increases speed, a CCW turn decreases speed.

---

1 Speed Control 1 = Turntable/Tower Jog Speed
Selected by a 120 VAC signal applied from terminal (1) to (C)

2 Speed Control 2 = Turntable/Tower High Speed
Selected by a 120 VAC signal applied from terminal (2) to (C)

Deceleration: (RV4) The pot marked **D** is the deceleration control. Functionally, it is the opposite of acceleration, except that it is a more critical setting**,** in that our machine logic requires that we decelerate from speed 2 to speed 1 during the course of the final revolution of the turntable/tower before shutoff.

For an initial setting, start with the **D** pot set fully CCW. Then, cycling the machine; observe the transition to jog speed at the end of the cycle, prior to the stop of the turntable/tower at the home position. Gradually increase the **D** pot setting (CW) until the turntable/tower only jogs approximately 1/8 to 1/4 revolution before reaching home position. CW adjustment of this potentiometer quickens the stop and shortens the deceleration time required for the turntable/tower to settle to its preset jog speed. CCW softens the stop and lengthens the time required for the turntable/tower to settle to its preset jog speed.

Thus, the deceleration control is important in that if the deceleration time is too short, we will prematurely reach jog speed and jog an excessive amount of time to the home position before shutoff.

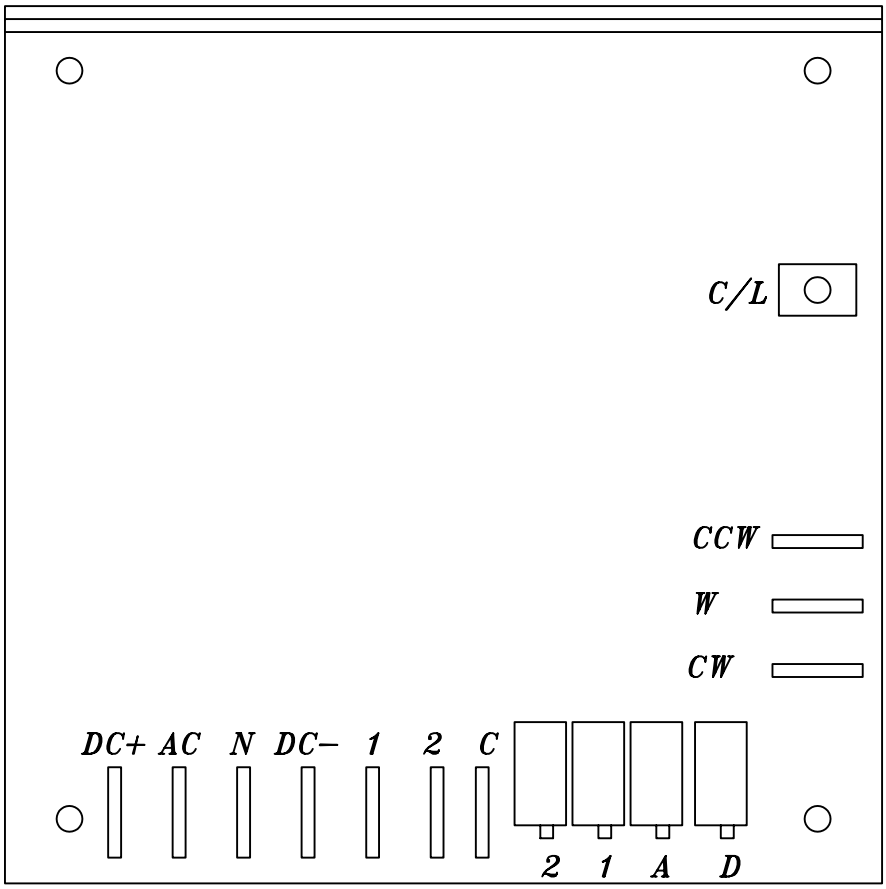
Conversely, if the deceleration time is set too long, the turntable/tower will not settle to the jog speed and thus will be going too fast to align properly and the momentum will take the turntable/tower beyond the start position. As you can imagine, any time the wrap speed is changed, you will need to make a corresponding change in the setting of the pot marked **D** (for deceleration).

Note: The 850DM requires a jumper from the **W** pin to the **CW** pin for speed 2 to operate.

TROUBLE SHOOTING & REPAIR

In most cases, repair will require parts replacement. If user intends to, and is equipped to perform repairs, spare parts are available from Orion Parts & Service.

Damage is usually visually evident on the 850M board. Replacing the obviously damaged board frequently restores operation. However, if damage is not evidently visible, swapping boards will determine if the board is at fault.



DC+: ARMATURE CONTROL.

AC: AC INPUT – LINE.

N: AC INPUT – NEUTRAL.

DC–: ARMATURE CONTROL.

1: CONTROL – LINE. JOG SPEED

2: CONTROL – LINE. WRAP SPEED

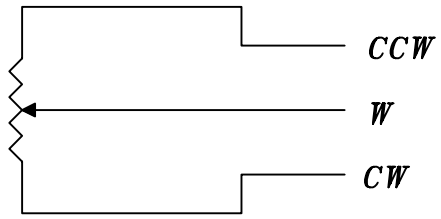
C: CONTROL – COMMON.
(REQUIRES A JUMPER TO "N")

MAX: MOTOR SPEED ADJUSTMENT.

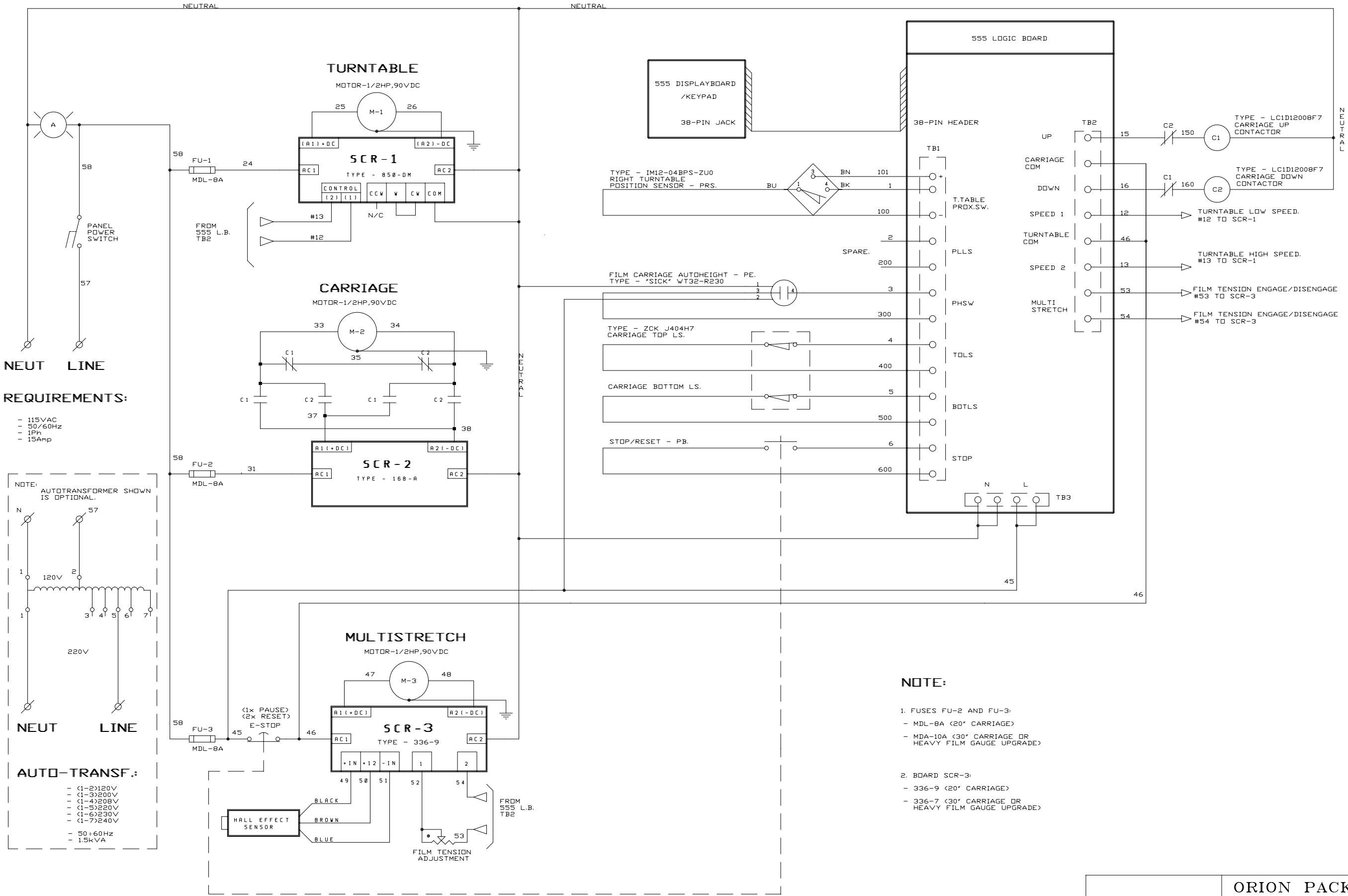
ACC: ACCELERATION ADJUSTMENT.

C/L: CURRENT LIMITER.
(FACTORY SET)

NOTE: WHERE A REMOTE POT IS NOT USED (CONVEYOR) "W" & "CW" ARE SHORTED.



850DM TWO SPEED 120VAC/90VDC MOTOR CONTROL BOARD



NOTE:

1. FUSES FU-2 AND FU-3:
   - MDL-8A (20" CARRIAGE)
   - MDA-10A (30" CARRIAGE OR HEAVY FILM GAUGE UPGRADE)

2. BOARD SCR-3:
   - 336-9 (20" CARRIAGE)
   - 336-7 (30" CARRIAGE OR HEAVY FILM GAUGE UPGRADE)

orion
PACKAGING INC.
2270 INDUSTRIEL BOUL., LAVAL
QUEBEC, CANADA, H7S 1P9
TEL: (450) 667-9769

PANEL SIZE 5412 ESCH161206
STICKER 500 038 (ENGLISH)
STICKER 500 043 (FRENCH)

ORION PACKAGING INC.

2270 INDUSTRIEL BLVD LAVAL, QUE., CANADA H7S 1P9
TEL: (450) 667-9769 FAX: (450) 667-6320
APPR. BY: J.B.S. DRAWN BY: S.MEUNIER

SCALE: NTS

TITLE: HL77-15 WITH TYPE-555 CONTROL BOARD

SIZE: D | DOCUMENT NO: JOB # STANDARD 302 211 | REV: 2

DATE: NOV-20-2000 | SHEET: 1 OF 1

FILENAME:: HL77-15.SCH | BASE: