

ATTENTION:

VERY IMPORTANT

Before unloading and unpacking the stretchwrapper read carefully section 5 of this manual for unloading and unpacking instructions.

Failure to do so may result in the forfeiture of the warranty.

ORION PACKAGING INC.

NOTICE

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

- 1) Serial Number
- 2) Model Number
- 3) Subassembly-Part Location

ORION PACKAGING INC.

H77  
Owner's Manual

ORION PACKAGING INC.  
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ORION PACKAGING SYSTEMS, INC.  
DISTRIBUTOR PRICE LIST - EFFECTIVE NOVEMBER 1, 1989

122537

ORION MODEL H-77

Spiral Semi-Automatic Medium Duty High Profile

Maximum Load Size	55"W x 55"L x 82"H (Recommended) 60"W x 60"L x 85"H (Theoretical)*
Weight Capacity	4,000 lbs. dynamic, 8,000 lbs. static
Utilities	115/1/60 15 Amp Electrical Service
Turntable	48" x 48" Octagonal Formed 3/8" Steel Friction Drive Floating Caster Design 11" Height Floor to Top of Turntable
Turntable Drive	10 RPM Fixed Turntable Speed 1/3 HP AC Drive Motor Friction Drive Wheel
Control Features	Electronic Film Force Control High/Low Brake Force Selection Separate Top and Bottom Wrap Selectors Variable Speed Film Carriage Control Film Carriage Raise/Lower Switch Turntable Jog Pushbutton Power On/Off Switch Current Overload Protection NEMA 12 Electrical Enclosure
Film Delivery	20" Orion EconoStretch Film Carriage Film Roll Diameter Compensation Electronic Film Tension Control Electromechanical Film Braking End of Cycle Film Force Release
Film Carriage Drive	#50 Roller Chain Carriage Lift 1/4 HP Elevator Drive Motor Variable Speed SCR Control Structural "H" Channel Guidance Precision Cam Follower Tracking
Structural Features	Forklift Portable Base Design All Structural Steel Construction Film Roping Bar 8" x 18 lb/ft. "H" Channel Mast
Est. Shipping Weight	750 lbs.

\*Theoretical is based upon removal of roping bar, and reflects maximum film web height attainable



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SEMI-AUTOMATIC MACHINE OPTIONS

PNEUMATIC TOP PLATENS

36" circular platen with 24" stroke.....  
36" circular platen with 36" stroke.....  
  
48" x 48" square platen with homing.....  
device, and 36" stroke  
48" x 48" square platen with homing.....  
device, and 48" stroke

TRANSFORMER

To accept 430/60 or 575/60.....  
For each additional conveyor section.....

DUAL TURNTABLE OPTION

L66.....  
H66.....  
L55/44.....  
H55/44.....  
L55S/44S.....

NOTE: Dual Turntable options includes second  
turntable with all drive components &  
controls, second auto-height photocell,  
and table selector switch.

NOTE: When a ring gear/pinion gear turntable  
drive is required, the cost of 2 ring  
gear options must be added to the dual  
turntable option price.

RING GEAR/PINION GEAR TURNTABLE DRIVE

H66.... (20" DIA.).....  
H55.... (25" DIA.).....  
H44.... (33" DIA.).....  
  
Central lubrication point for ring gear.....

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SEMI-AUTOMATIC MACHINE OPTIONS

PROGRAMMABLE LOGIC CONTROLLER OPTIONS

66/55 Series - Allen Bradley SLC-100.....  
44 Series - Allen Bradley SLC-150.....  
EEPROM ordered with machine.....  
EEPROM ordered after shipping of the machine.....

CYCLE COUNTER (inside control panel).....

TURNTABLE OPTIONS

0-12 RPM Variable Speed Turntable Drive for.....  
L/H 77 Models  
0-12 RPM Variable Speed Turntable Drive with.....  
Positive Alignment Feature for L/H 77 Models  
10,000 lb Capacity (H55/44).....  
8,000 lb Capacity (L55/44).....  
10,000 lb Capacity (L55/44).....  
Anti-Skid Surface.....  
72" dia. round, 3/8" with 4" skirt (H55/44).....  
72" dia. round, 1/2" (L44/44S, L55/55S).....  
72" dia. round, 1/2" (L66).....  
72" dia. round, 3/8" (L66).....  
60" dia. round, 1/2" (L66/55/44).....  
Reinforced Concentric Rings.....  
Remote Pull Switch.....  
Filler Plate (H77/66).....  
Filler Plate (H55/44).....

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SEMI-AUTOMATIC MACHINE OPTIONS

COLD TEMPERATURE OPTIONS (-20 F)

Heated Control Enclosure, Silicon Rubber Wiring.....  
and Special Lubricant in Reducers

CONVEYOR OPTIONS

IDLER ROLLER (NON-DRIVEN)

72" Dia. idler roller turntable for H66/55/44.....  
(On H-66, requires ring gear option and  
max. wt. 2,500 lbs) Rollers are 3.5" Dia.  
on 4.5" centers, with manual brake.

72" Dia. idler roller turntable for L55S/44S.....  
Rollers are 3.5" Dia. on 4.5" centers, with  
manual brake.

Pneumatic Roller Brake for "L" Series.....

Pneumatic Roller Brake for "H" Series.....

5' Length CONTOURED Idler Roller Conveyor,.....  
3.5" Dia. Rollers on 4.5" Centers, 50" Wide  
Roller Face.

5' Length STRAIGHT Idler Roller Conveyor,.....  
3.5" dia. rollers on 4.5" centers,  
50" wide roller face.

POWERED ROLLER

55 STYLE (Powered Roller Turntable)

76" Dia. powered roller TURNTABLE, Rollers.....  
rollers 3.5" dia. on 4.5" centers, all full  
length driven. Includes 1/2 hp AC drive,  
adjustable speed. Wall tubing 1/8"  
(H55/44 only - requires ring gear option)



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SEMI-AUTOMATIC MACHINE OPTIONS

44 STYLE (Powered Roller Turntable)

76" Dia. Powered Roller TURNTABLE, Rollers.....  
3.5" Dia. on 4.5" Centers, All Full Length  
Driven. Includes 1/2 hp DC Drive, Adjust-  
able Speed. Wall Tubing 3/16", Cast Iron  
Pillow Blocks. (NOTE: H55/44 only, requires  
RING GEAR OPTION)

55 STYLE (CONTOURED Powered Roller Conveyor)

5' Length CONTOURED Powered Roller Conveyor,.....  
3.5" Dia. Rollers on 4.5" Centers, 50"  
Effective Width; All Full Length Rollers  
Driven. Includes 1/2 hp AC Drive, Non-  
Reversing. Wall tubing 1/8"

44 STYLE (CONTOURED Powered Roller Conveyor)

5' Length CONTOURED Powered Roller Conveyor,.....  
3.5" Dia. Rollers on 4.5" Centers, 52"  
Effective Width, All Full Length Rollers  
Driven, Cast Iron Pillow Blocks.  
Includes 1/2 hp DC Drive, Variable  
Speed, with Soft Start.

Automatic Sequencing, Logic and Photocell.....  
For Powered Conveyor (Per Section) - Includes  
Photocell PLC Input and Output/Program.

Turntable Mechanical Home Position Lock.....  
(Pneumatic, Positive Lock)

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SEMI-AUTOMATIC MACHINE OPTIONS

FILM CARRIAGE OPTIONS

- Double #60 Chain Carriage Lift.....
- 20" Multistretch Retrofit Carriage.....  
(For Installation on Existing Machines)
- 30" Multistretch Retrofit Carriage.....  
(For Installation on Existing Machines)
- 30" Multistretch Carriage Upgrade from 20".....  
on H66/55/44 and L66/55/66.
- 30" Multistretch Carriage Upgrade from 20".....  
on M66/55/44.
- 30" Econostretch Carriage Upgrade on 77 .....  
Series from 20".

ELECTRONIC SCALE PACKAGE OPTION

Includes Heavy Duty Load Cells Incorporated.....  
into the Machine or Conveyor Frame, Protected  
from Lateral Shock, and a Digital Display of  
Load Weight, with RS-232C Port, Gross, Net  
Tare, Zero.

NOTE: On L-77 and L-66 models, scale option  
reduces machine capacity to 2500 lbs.,  
unless base reinforcement option is  
ordered.

Base Reinforcement on L-77 or L-66 models,.....  
when 4000 lbs capacity is desired with  
scale package.

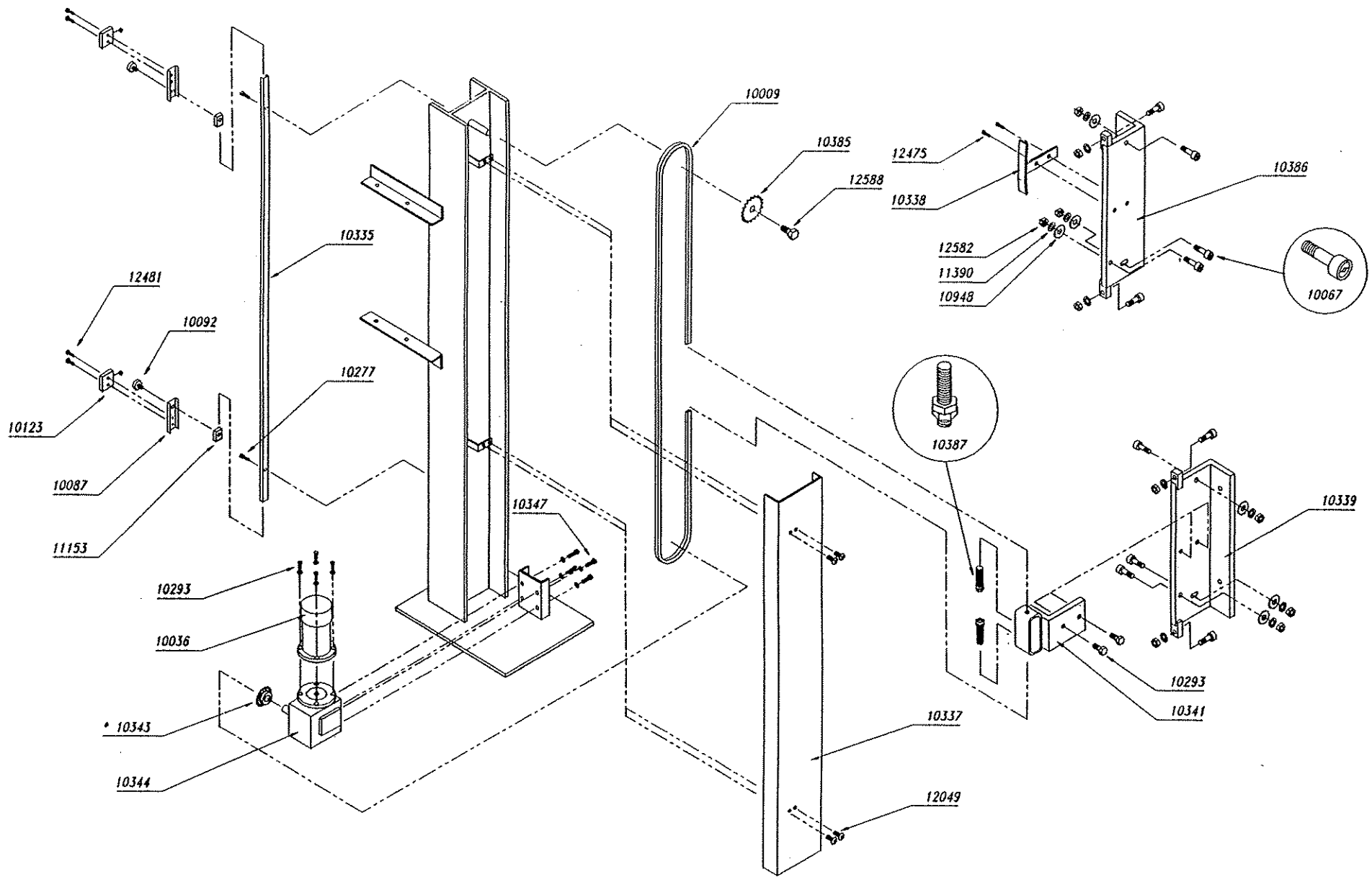
TOWER ASS'Y - PART LIST

ORION PART NO.	DESCRIPTION	Q-TY
10009	CHAIN # 50	1
10036	ELECTR. MOTOR, 1/2 HP, 90 VDC, 1750 RPM	1
10067	CAM FOLLOWER 3/4" CF12	10
10071	ACTUATOR, LIMIT SWITCH (STD)	1
10087	LIMIT SWITCH BRACKET	2
10092	KNOB, BLACK # 193	2
10123	LIMIT SWITCH XCK-2115	2
10277	1/4-20 x 1" LG. S.H.C.S.	2
10291	H.H. BOLT 5/16-18 UNC x 1" LG.	4
10293	3/8-16 x 1" LG. H.H. BOLT, GR.52C	6
10335	CHANNEL, DWG. # 220794 A	1
10337	TOWER CHAIN COVER FOR H & L 66 & 77	1
10339	RIGHT CARRIAGE HOLDER F/W8x18	1
10341	CHAIN TENSIONER, DWG. # 200-126 A	1
10343	SPROCKET, 50B14 x 7/8" BORE	1
10344	REDUCER BQ 175 50:1 ASS'Y-3	1
10385	IDLER SPROCKET, 16 TEETH, AG2416	1
10386	LEFT CARRIAGE HOLDER F/W8x18	1
10387	CHAIN TENSION SCREW 1/2-13 x 2 1/2" LG.	2
10948	FLAT WASHER, 3/8"	6
11153	CHANNEL GUIDE, DWG. # 220-518 A	2

TOWER ASS'Y - PART LIST

CONT.

ORION PART NO.	DESCRIPTION	Q-TY
11390	LOCK WASHER, 3/8" I.D.	10
12049	PAN PHILL 1/4-13 UNC x 1/2" LG.	4
12475	H.H.S. 1/4 UNC x 3/4" LG. GR. 5 ZN	2
12481	PAN PHILL 10-24 UNC x 1/2" LG. GR. 5 ZN	4
12582	3/8-20 UNF HEX NUT	10
12588	H.H. BOLT 5/8 UNC x 1 3/4" LG. GR. 5 ZN	1

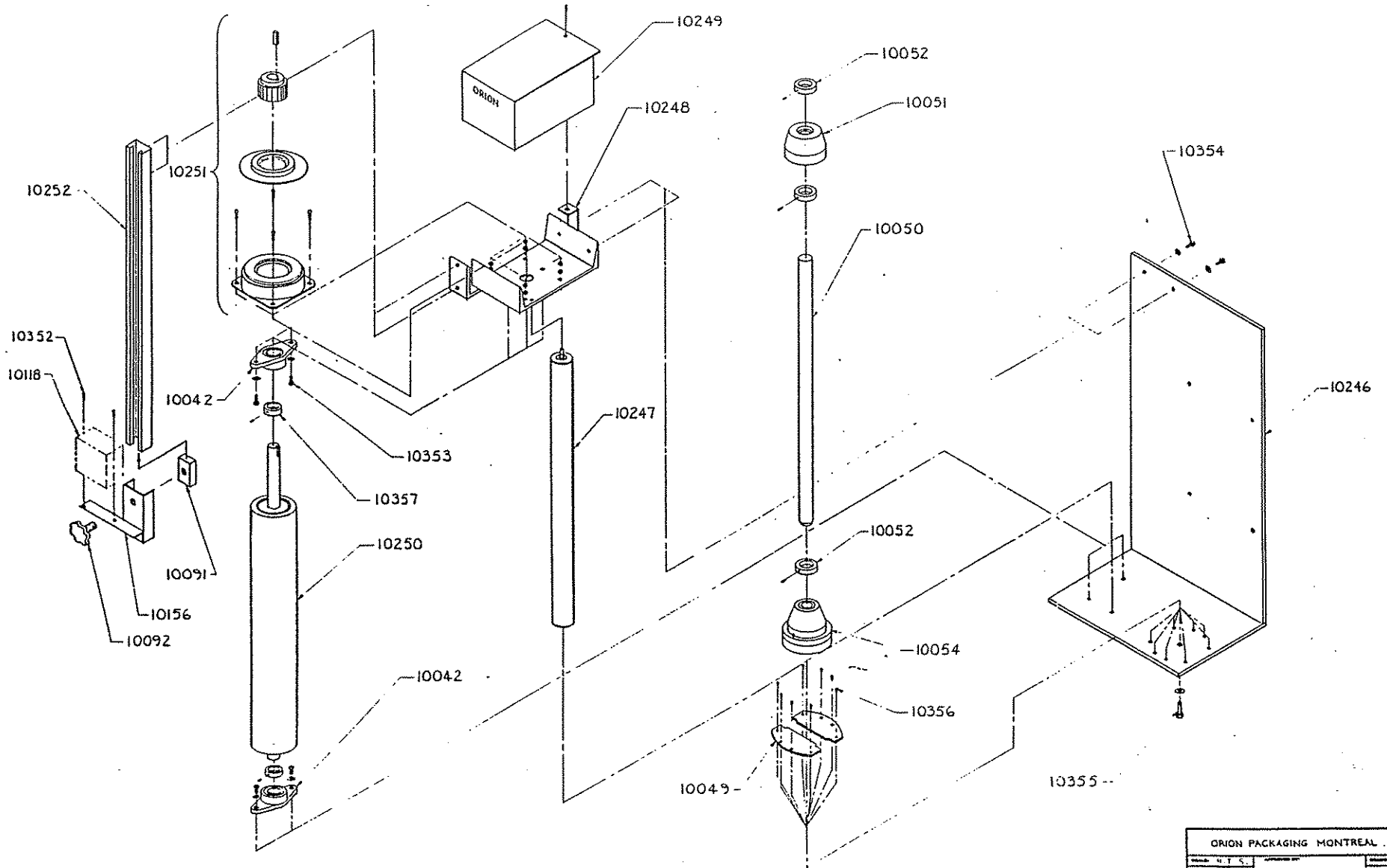


\* ITEM MAY VARY DUE TO MACHINE MODIFICATIONS

TOWER ASSEMBLY

SMALL CARRIAGE ASSY PARTS LIST

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
10042	3/4" FLANGED BEARING UNIT	2
10049	BRAKE PAD	2/set
10050	FILM SPOOL MANDREL	1
10051	TOP MANDREL	1
10052	1" COLLAR	3
10054	BOTTOM MANDREL	1
10091	CHANNEL GUIDE	1
10092	KNOB	1
10118	PHOTOSWITCH	1
10155	CHANNEL 20" LONG	1
10156	PHOTOSWITCH BRACKET	1
10246	20" CARRIAGE Frame x 13.5" LENGTH	1
10247	20" SNUB ROLLER	1
10248	TOP MOUNTING PLATE FOR BRAKE	1
10249	MULTI STRETCH MECHANISM COVER	1
10250	20" x 3" DIA. RUBBER ROLLER	1
10251	BRAKE ASSY B20	1
10252	SEE P/N 10155	
10291	3/8-16UNC X 1 HEX BOLT	7
10302	8-32UNC x 1/2 BHCS	8
10352	PHOTOSWITCH SCREWS	2
10353	SEE P/N 10291	4
10354	SEE P/N 10291	2
10355	SEE P/N 10291	1
10356	SEE P/N 10302	8
10357	3/4" COLLAR	2



ORION PACKAGING MONTREAL	
Made in U.S.A. Model: 3-1-AL Revision:	Drawing No.: Date:
SMALL CARRIAGE ASS'Y	
L77 H77	200 191

### 4.3 Base And Turntable Parts List

The exploded assembly drawing of the Small, Low Profile base is shown on drawing number 200 195.

Table 3 has the parts listed in order of part number. Note: the names given to the parts are generic.

TABLE 3

Base And Turntable Parts List

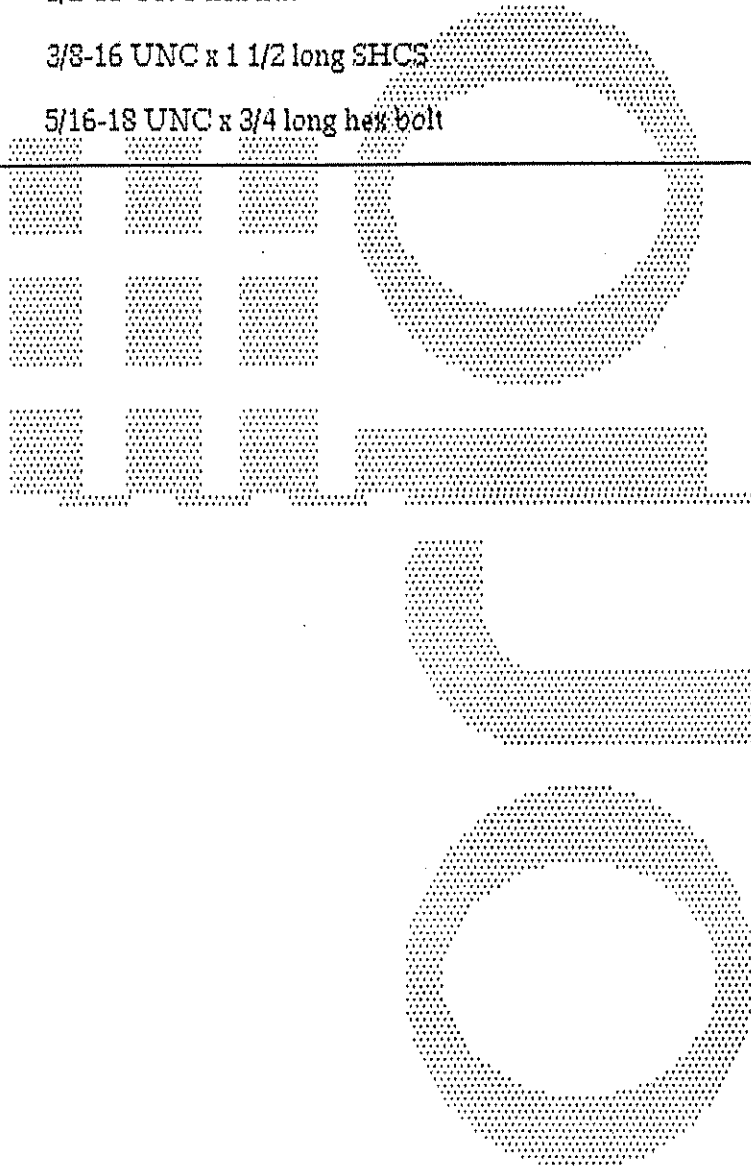
Part Number	Description	Quantity
10006	Turntable sprocket	1
10007	Center bearing unit	1
10008	Idler sprocket	1
10009	#50 Chain	1
10010	Cam follower (1 3/8" O.D.)	9
10035	Reducer	1
10124	Proximity switch	1
10222	Driver sprocket (H55)	1
10228	Motor (1/2 hp, DC)	1
10229	Turntable	1
10230	Roping bar	1
10231	Proximity switch bracket	1
10232	Chain tensioner	1
10233	Chain tensioning screw	1
10234	Small base	1
10368	3/8-16 UNC x 1 long hex bolt	4
10370	3/16 square key	2
10371	Chain cover	1

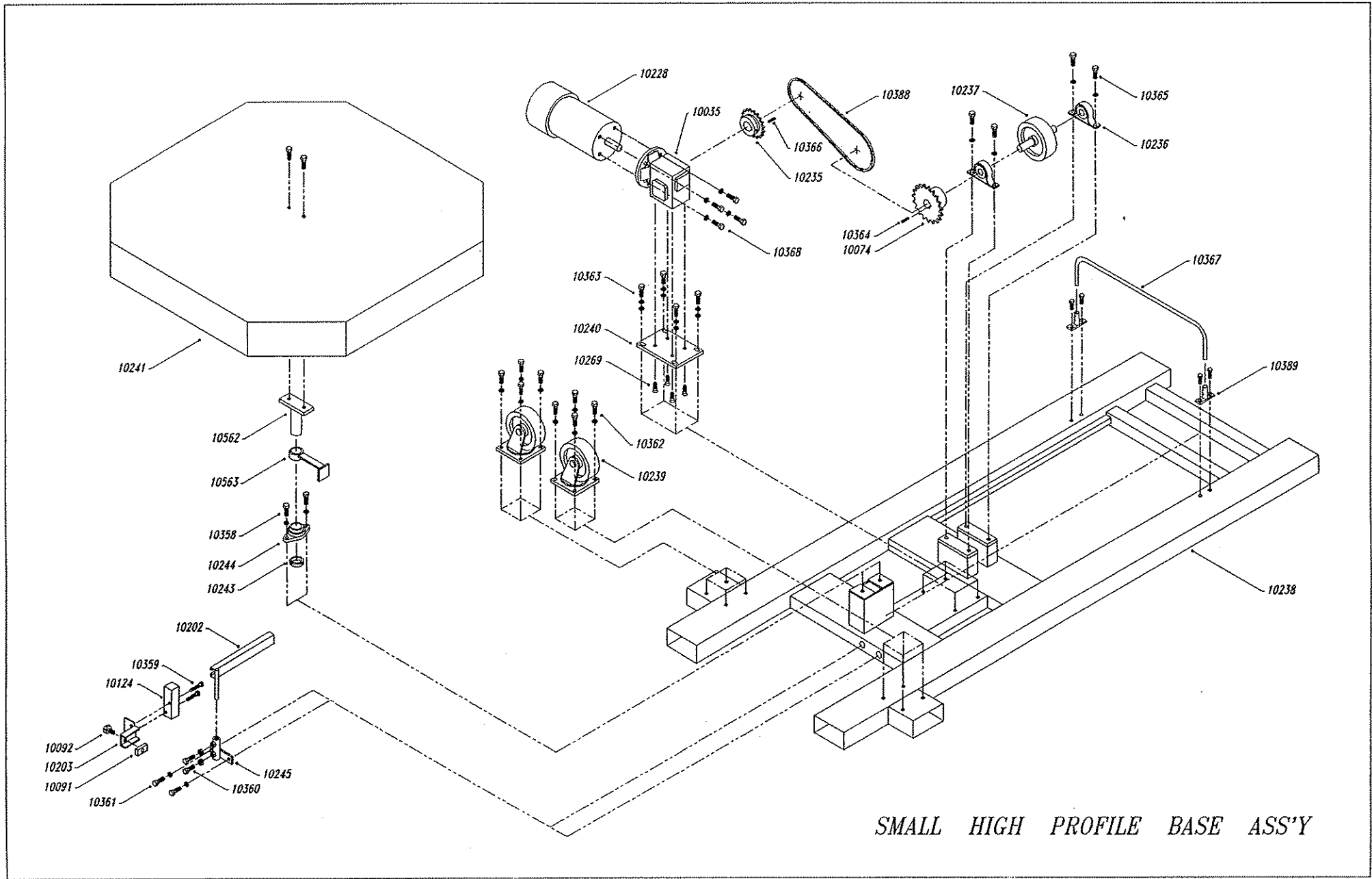




10372	1/4-20 UNC x 1 long CHCS	2
10373	3/8-16 UNC x 1 long CHCS	2
10374	5/8-11 UNC x 1 1/2 long hex bolt	1
10375	3/8-16 UNC x 1 long hex bolt	2
10376	10-24 UNC x 2 long BHCS	2
10377	10-24 UNC x 1/2 long SHCS	2
10379	3/8-16 UNC x 1 1/2 long hex bolt	4
10380	1/2-13 UNC hex nut	9
10381	3/8-16 UNC x 1 1/2 long SHCS	4
10382	5/16-18 UNC x 3/4 long hex bolt	4

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SMALL HIGH PROFILE BASE ASS'Y

## 5. MACHINE INSPECTION AND INSTALLATION

### 5.1 Inspection Upon Arrival

**CAUTION:** When unloading the stretchwrapper, care must be taken not to lift it by the turntable. The forks of the forklift should be inserted in the 6 inch slots behind the tower to lift the machine.

Before inspection, all packing and restraining blocks must be removed; these may include the blocks under the carriage and the bolts holding the ramp on the table.

**CAUTION:** When cutting the stretchwrap material covering the machine, care must be taken not to cut any of the electrical lines.

A visual inspection of all the electrical connections should be performed after unpacking the machine to check for loosened joints or broken connections. Any suspected shipping damage must be reported immediately to the freight carrier.

Items that are vulnerable to damage and must be inspected are the motor and transmission housings and connections at the base of the tower, and on the carriage, the photoswitch on the carriage, and the roping bar and stands.

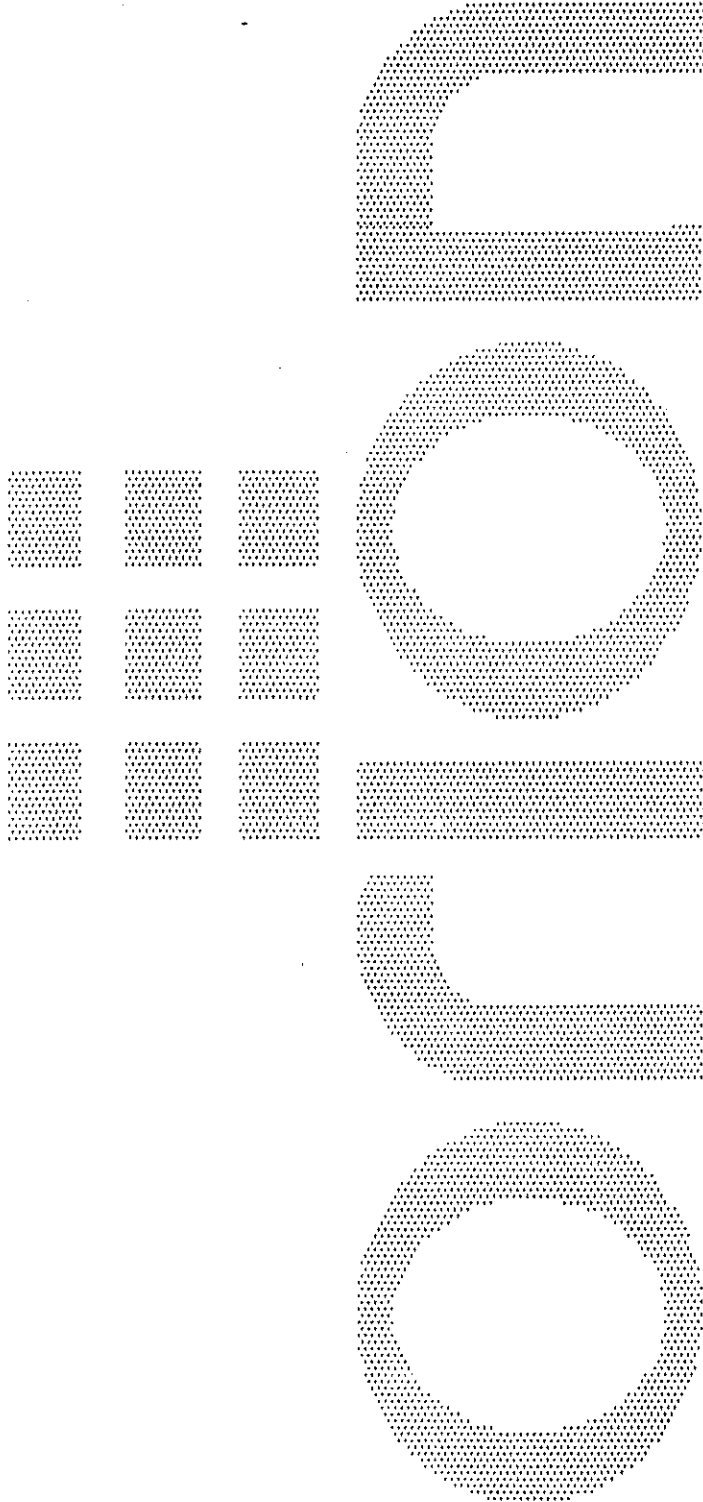
### 5.2 Machine Installation

After the visual inspection has been performed, the customer is required to provide the electrical power requirements as outlined in the specifications (sections 1, 2, and 3 of this manual).

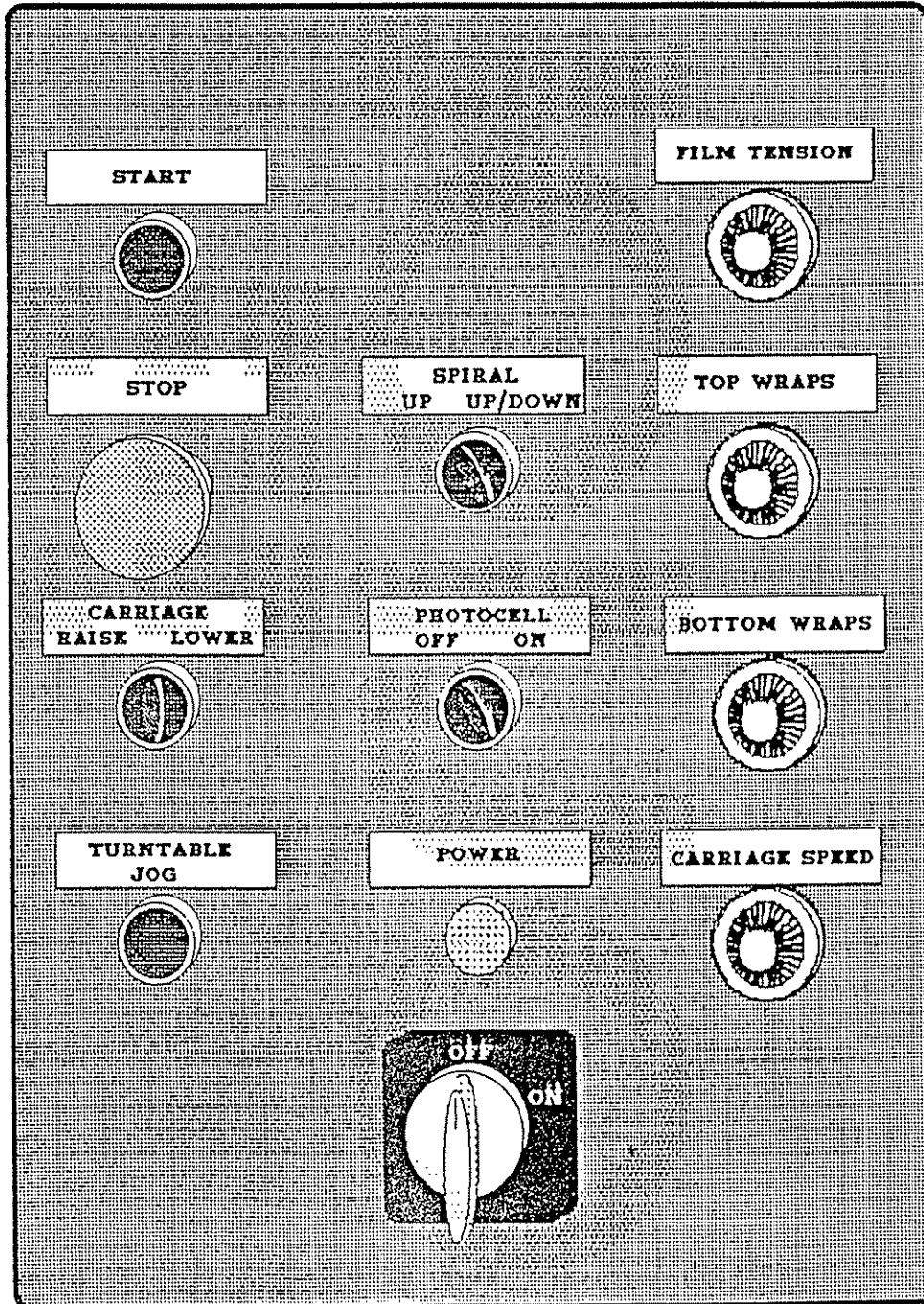
An electrical diagram is provided in the panel box. Only a qualified electrical technician or an Orion representative should effect any repairs on the machines.



Before operating the machine the oil pockets underneath the table should be checked and filled if any oil is missing (see section 8.4).



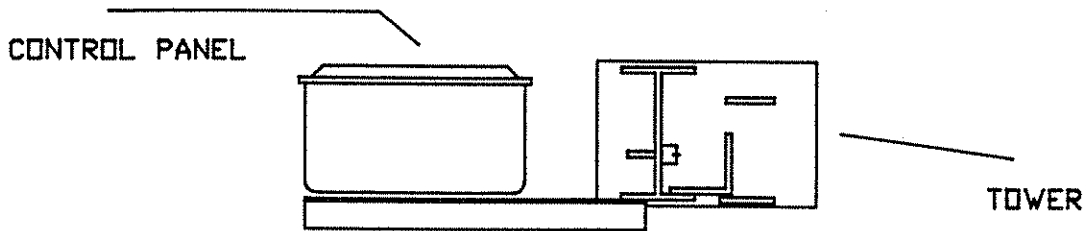
# MACHINE CONTROLS



NEW, TWO POSITION CONTROL PANEL MOUNT

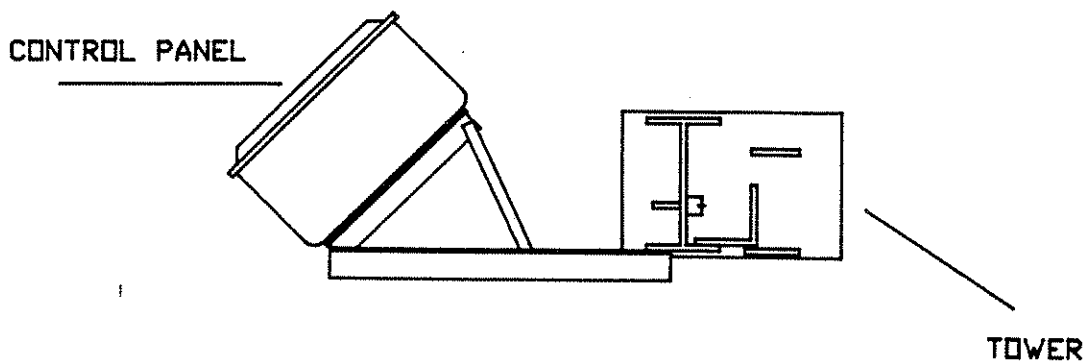
In order to facilitate access and manipulation, the Control Panel can be mounted in two positions:

- 1.- On the angle brackets aligned to the Tower.



- 2.- with the position bar (installed between upper angles), Control Panel can be rotated forward/ to the side.

(Additional screw attached to the tower's foot).



## 6.1 Power Switch

The Power Switch has two settings,

ON - Connects a 110 VAC power source to the machine,

OFF - Disconnects the power source.

## 6.2 Start And Stop Switches

The Start switch is used to start the cycle once the load is on the turntable. The cycle may be stopped at any time by pressing the Stop button.

NOTE: if the Stop button is pressed in the middle of the cycle, the carriage and turntable may be returned to their home positions by using the jog buttons before restarting the cycle.

## 6.3 Spiral Wrap Switch

The Spiral Wrap switch has two positions,

UP - In the UP position the cycle will end after completing the specified number of top wraps, therefore, the machine will only wrap the load once, going up.

UP/DOWN - In the UP/DOWN position the cycle is complete after the load is wrapped in both the up and down directions.

## 6.4 Turntable Jog Switch

The Turntable jog switch is a pushbutton switch that will turn the turntable in a clockwise direction (as viewed from the top) when the switch is held depressed. When the switch is released the turntable will stop.

The switch is inoperative during the wrap cycle.

## 6.5 Carriage Control Switch

The Carriage Control switch is a monostable three position switch with the following settings,

**RAISE** - Raises the carriage until the top limit switch on the tower is activated or until the photoswitch senses that the top of the load has been reached.

**LOWER** - Lowers the carriage until the bottom limit switch on the tower is activated.

The switch is normally in the middle position where the carriage remains stationary. Turning the switch to the RAISE or LOWER position will activate the carriage to move in its respective direction.

## 6.6 Photocell Switch

The Photocell switch has two settings,

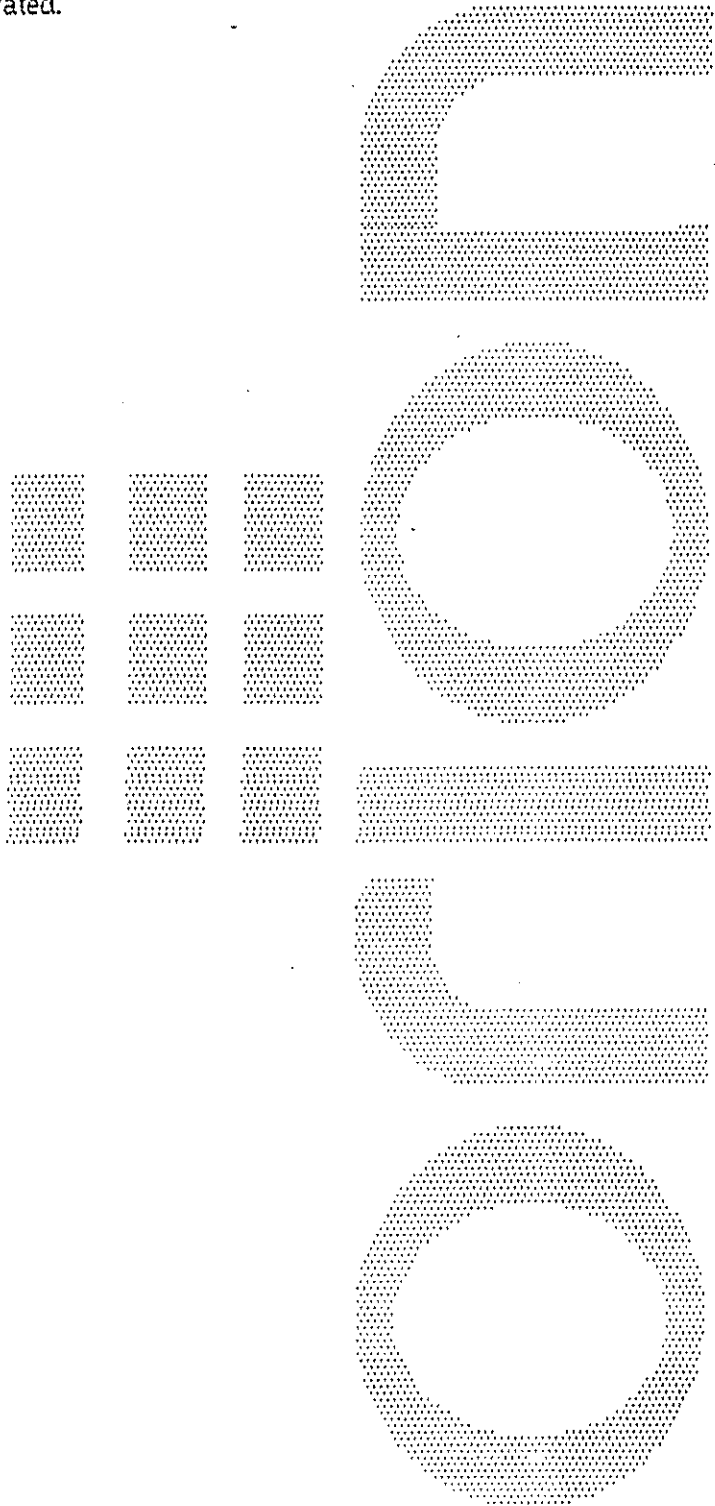
**ON** - When turned ON, the photocell senses whether or not the carriage has reached the top of the load. The carriage will stop and begin the top wraps sequence once the top of the load is reached. The carriage will always stop at the top of the load regardless of its height. The photoswitch's position on the track can be





adjusted in order to make the carriage pass the top of the load and overlap the top.

OFF - When turned OFF, the photocell is inoperative and the carriage will stop only once the top limit switch has been activated.



## 7. CYCLE CONTROLS

### 7.1 Film Tension

The film tension may be adjusted through the film tension control potentiometer. The pot has a range of tension from 0 to 10, 10 being the highest tension rating. This pot may be adjusted during the cycle.

CAUTION: Light loads may require lower tension settings than heavier loads.

The film tension is controlled through the dancer bar system. Occasionally the feedback potentiometer may need some adjustment. The adjustment of the feedback potentiometer can be performed while there is no film on the carriage. The bottom screw on the potentiometer coupling must first be loosened. Once the screw is loosened the potentiometer shaft must be turned until the prestretch motor just begins to hum but does not rotate, at which point the screw can be tightened. NOTE: the condition in which the motor hums but doesn't turn must be maintained even after the screw is tightened. If not, the adjustment procedure must be repeated.

### 7.2 Carriage Speed

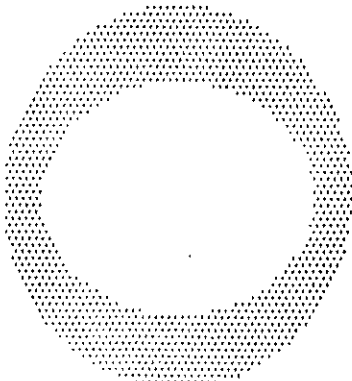
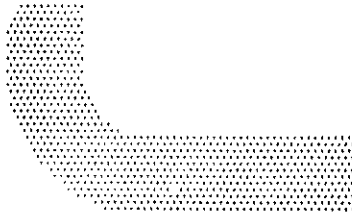
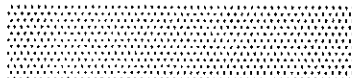
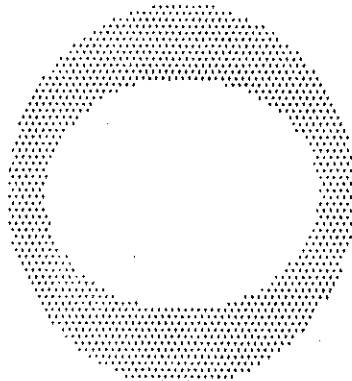
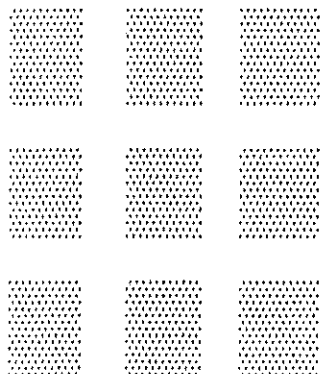
The carriage speed control can be used to control the amount of overlap the film will have on itself during a wrap.

The control potentiometer has settings from 0 to 10, the higher settings being the fastest. High settings will mean less film overlap because of faster carriage speed, and low settings will mean more film overlap because of lower carriage speeds.

### 7.3 Top And Bottom Wraps

There are two multi-position switches which control the number of wraps that may be put at the top and bottom of the load. Each switch has positions going from 1 to 10 corresponding to the number of wraps which may be applied at the top or bottom of the load.

These switches may be set before the cycle begins.



## MACHINE MAINTENANCE

### 8.1 Speed Reducer Maintenance

On the reducing transmission, after the first week all external cap screws and plugs should be checked for tightness. It is recommended to change the oil every six months or every 2500 hours of operation, whichever comes first. When adding oil the transmission should never be filled above the oil level mark indicated because leakage and overheating may occur. Below is a list of the type of lubricant that should be used.

Manufacturer	Lubricant
American Oil Co.	American Cyl. Oil No. 196-L
Cities Service Oil Co.	Citgo Cyl. Oil 180-5
Gulf Oil Corp.	Gulf Senate 155
Mobile Oil Corp.	Mobil 600 W Super Cyl. Oil
Phillips Oil Co.	Andes S 180
Texaco Inc.	624-650T Cyl. Oil
Shell Oil Co.	Valvata Oil JS2
Union Oil Of Cal.	Red Line Worm Gear Lube 140

Reducing transmissions are found on the carriage, and at the base of the tower.

### 8.2 Motor Maintenance

An occasional inspection of the brushes should be made in order to establish a maintenance schedule. 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 round, a competent motor shop should disassemble the motor 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.

### 8.3 Chain Maintenance

To clean and relubricate chains, wipe them with an oily cloth every month. If the environment is very dusty or damp, it may be necessary to clean and relubricate the chains more often.

With time the chains will tend to stretch. A loose elevator chain should be tightened at the chain tensioner as shown on drawing number 200-192. A loose turntable drive chain should be tightened by tightening the 1/2" dia. screw on the base, next to the turntable.

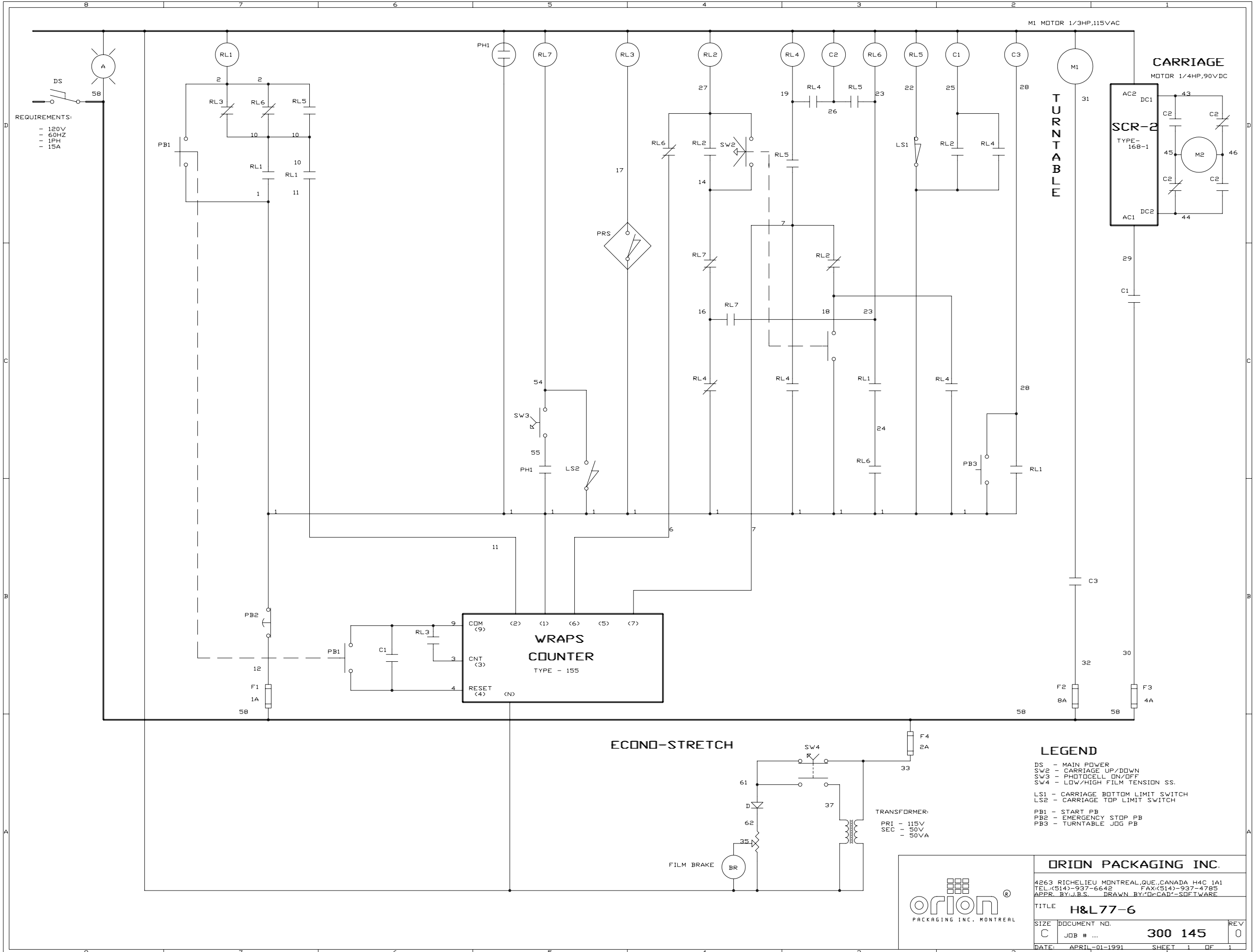
### 8.4 Cam Follower Maintenance

The cam followers behind the carriage have deep grease pockets and do not need frequent relubrication.

The portion of the tower on which the cam followers roll 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.

The cam followers under the turntable are wet with oil in order to keep the track properly lubricated. The oil pockets should be refilled every 200 hours of operation. The two oil pockets are found on the base, underneath the table.

APPENDIX  
A



REQUIREMENTS:  
 - 120V  
 - 60HZ  
 - 1PH  
 - 15A

**WRAPS COUNTER**  
 TYPE - 155

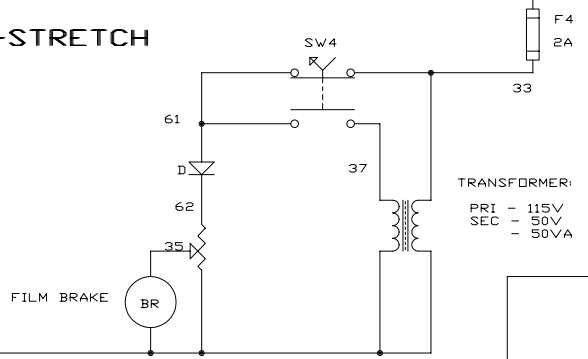
CDM (9) (2) (1) (6) (5) (7)  
 CNT (3)  
 RESET (4) (N)

**CARRIAGE**  
 MOTOR 1/4HP,90VDC

**SCR-2**  
 TYPE-168-1

AC2 DC1 43  
 C2 C2 45  
 M2 46  
 C2 C2 44  
 AC1 DC2

**ECONO-STRETCH**

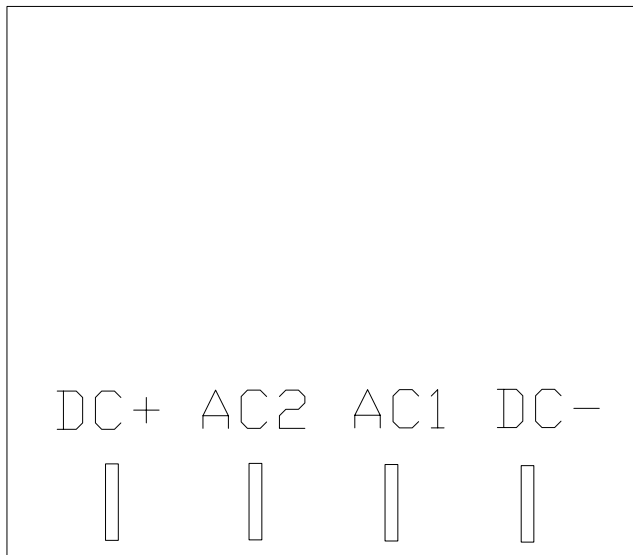


**LEGEND**

- DS - MAIN POWER
- SW2 - CARRIAGE UP/DOWN
- SW3 - PHOTOCELL ON/OFF
- SW4 - LOW/HIGH FILM TENSION SS.
- LS1 - CARRIAGE BOTTOM LIMIT SWITCH
- LS2 - CARRIAGE TOP LIMIT SWITCH
- PB1 - START PB
- PB2 - EMERGENCY STOP PB
- PB3 - TURNTABLE JOG PB



<b>ORION PACKAGING INC.</b>		
4263 RICHELIEU MONTREAL, QUE. CANADA H4C 1A1 TEL (514)-937-6642 FAX (514)-937-4785 APPR. BY: J.B.S. DRAWN BY: D.CAD - SOFTWARE		
TITLE <b>H&amp;L77-6</b>		
SIZE	DOCUMENT NO.	REV
C	JOB # ...	<b>300 145</b>
DATE: APRIL-01-1991	SHEET 1	OF 1



DC - OUT

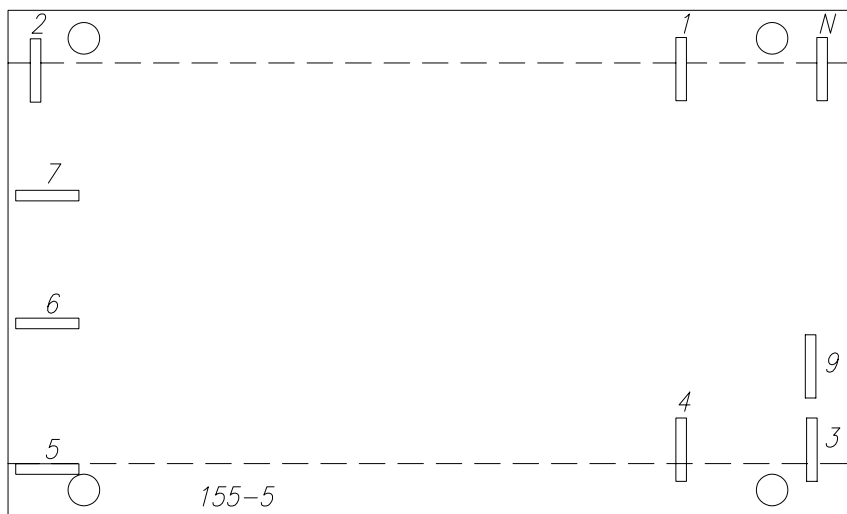
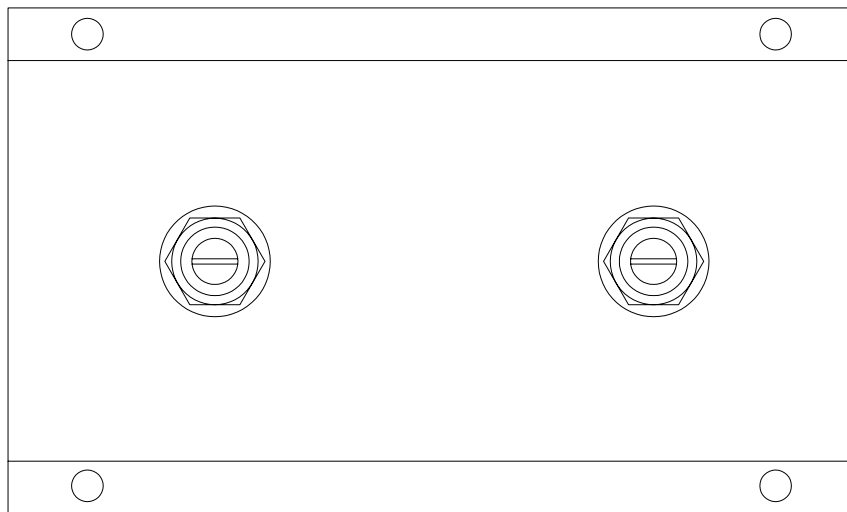
DC + OUT

AC2 IN

AC1 IN ( NEUTRAL )

168-A CARRIAGE UP/DN  
SINGLE SPEED BOARD





- 1: AC INPUT
- 2: AC INPUT
- 3: COUNT
- 4: RESET
- 5: OUTPUT PULSE AFTER 1-ST COUNT
- 6: OUTPUT T/W
- 7: OUTPUT B/W
- 8: N/A
- 9: COMMON
- N: NEUTRAL

155-5  
COUNTER BOARD