



ATTENTION:

VERY IMPORTANT

Before unloading and unpacking the machine, read 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



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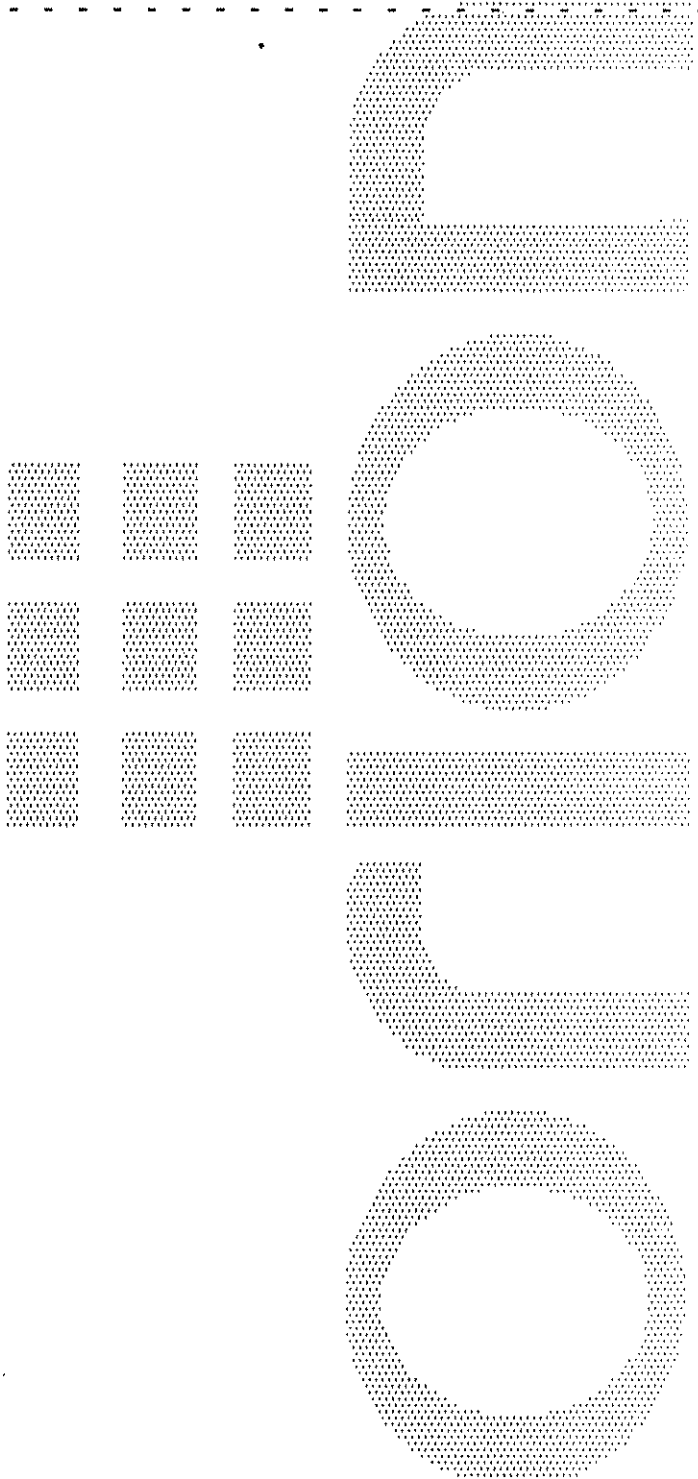
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APPENDIX 20



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

ORION MODEL L-77

Spiral Semi-Automatic Medium Duty Low Profile

Maximum Load Size	56"W x 56"L x 84"H (Recommended) 62"W x 62"L x 87"H (Theoretical)*
Weight Capacity	4,000 lbs. dynamic, 20,000 lbs. static
Utilities	115/1/60 15 Amp Electrical Service
Turntable	60" Diameter 3/8" Steel Plate Steel Cam Follower Support System Self Lubricating System with Reservoir 3" Height Floor to Top of Turntable
Turntable Drive	10 RPM Fixed Turntable Speed 1/3 HP AC Drive Motor #50 Roller Chain Drive with Tensioner Soft Start Clutch
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 Unique Steel Ring Cam Follower Support All Structural Steel Construction Film Roping Bar 8" x 18 lb.ft. "H" Channel Mast
Est. Shipping Weight	1,000 lbs.

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

HINGED TOWER (FOR TR)

All Series (Except "M")

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SEMI-AUTOMATIC MACHINE OPTIONS

AUTO-HEIGHT PHOTOCCELL

77 series.....

LOADING RAMPS FOR LOW PROFILES

L77/66.....

L55S/44S.....

L55/44.....

L66-72.....

MACHINE BASE EXTENSIONS (MAX. 3 FT)

H77/66 (per foot).....

L77/66 (per foot).....

H55/44 (per foot).....

L55/44 (per foot).....

L55S/44S (per foot).....

MACHINE MAST EXTENSIONS (MAX. 3 FT)

All Series (Except "M") (first foot).....
(each additional foot).....

M77/67/66 (per foot).....

M57/55 (per foot).....

M44 (per foot).....

HINGED TOWER (FOR TRANSPORT IN LOW TRUCKS)

All Series (Except "M").....

72" dia. round, 3/8"

60" dia. round, 1/2"

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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

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

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.

4. PARTS LISTS

4.1 Tower Parts List

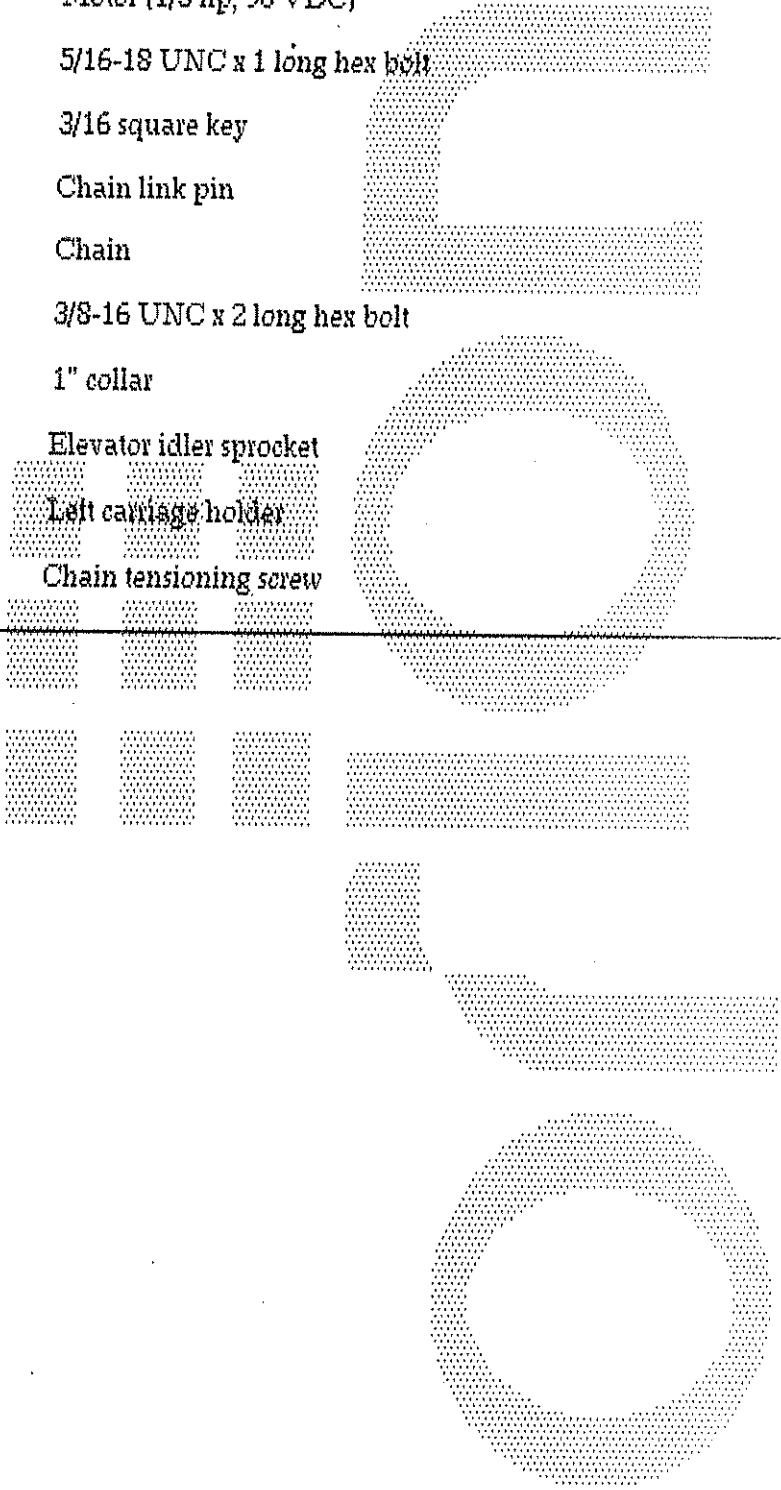
The exploded assembly drawing of the Small Tower is shown on drawing number 200 190. Table 1 has the parts listed in order of part number. Note: the names given to the parts are generic.

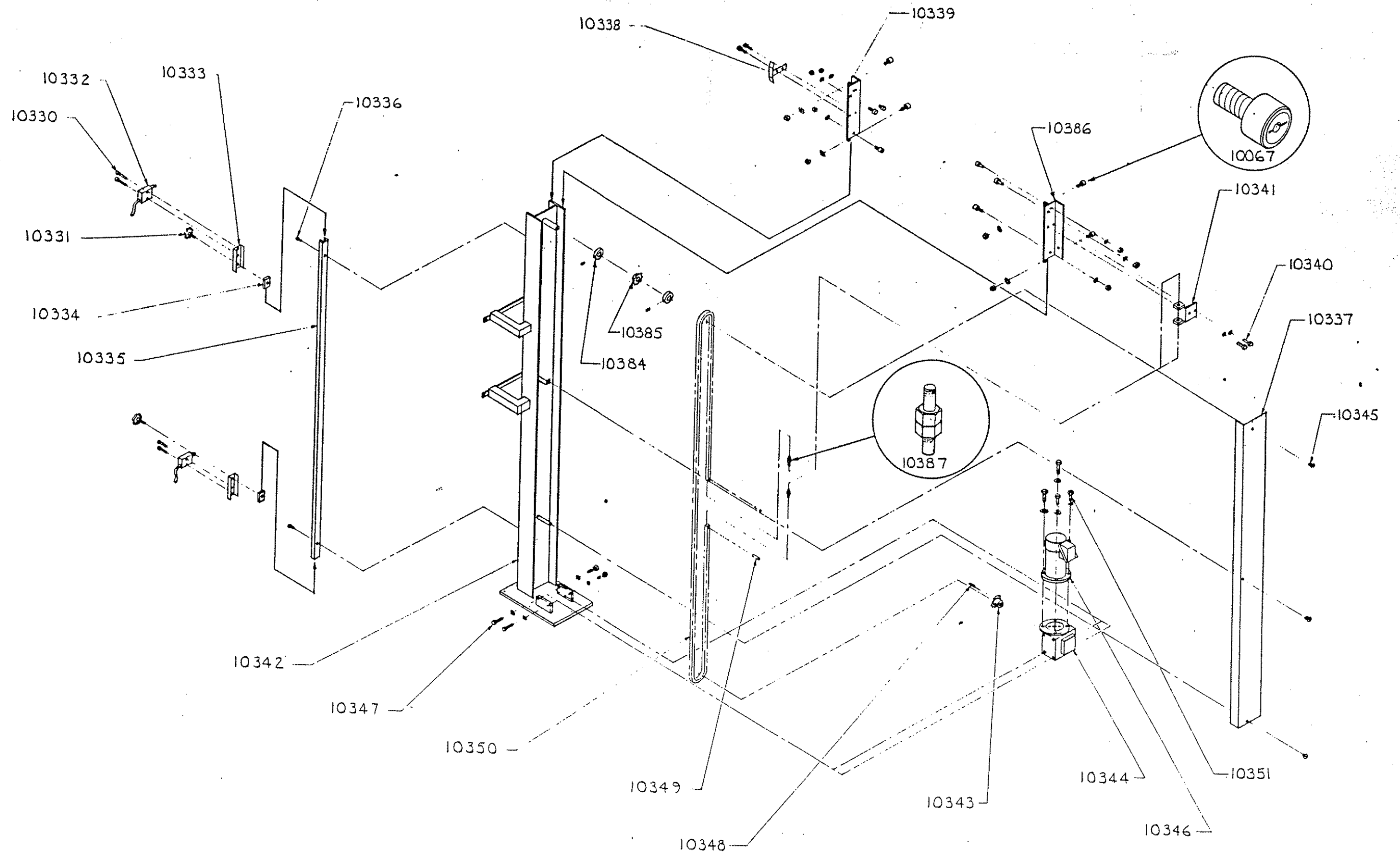
TABLE 1

Tower Parts List

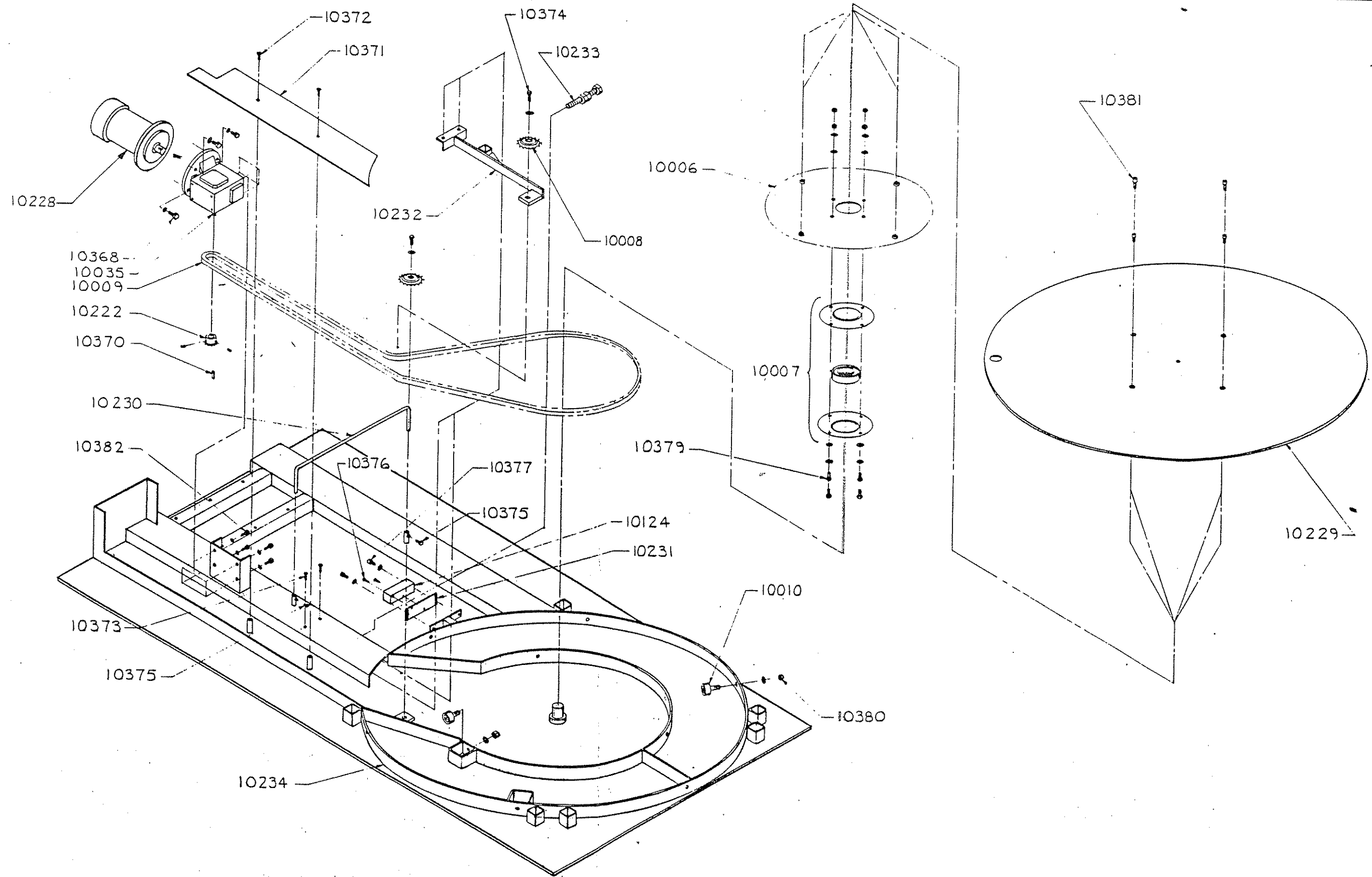
Part Number	Description	Quantity
10067	Cam follower (1/2 inch O.D.)	4
10330	10-24 UNC x 2 long SHCS	2
10331	Knob	2
10332	Limit switch	2
10333	Limit switch bracket	2
10334	Channel guide	2
10335	Channel	1
10336	1/4-20 UNC x 1/2 long SHCS	2
10337	Chain cover	1
10338	Limit switch actuator	1
10339	Right carriage holder	1
10340	3/8-16 UNC x 1 long hex bolt	2
10341	Chain tensioner	1
342	Tower	1
10343	Elevator driver sprocket	1

10344	Reducer (40:1)	1
10345	1/4-20 UNC x 1/2 long SHCS	3
10346	Motor (1/3 hp, 90 VDC)	1
10347	5/16-18 UNC x 1 long hex bolt	4
10348	3/16 square key	1
10349	Chain link pin	2
10350	Chain	1
10351	3/8-16 UNC x 2 long hex bolt	4
10384	1" collar	2
10385	Elevator idler sprocket	1
10386	Left carriage holder	1
10387	Chain tensioning screw	2

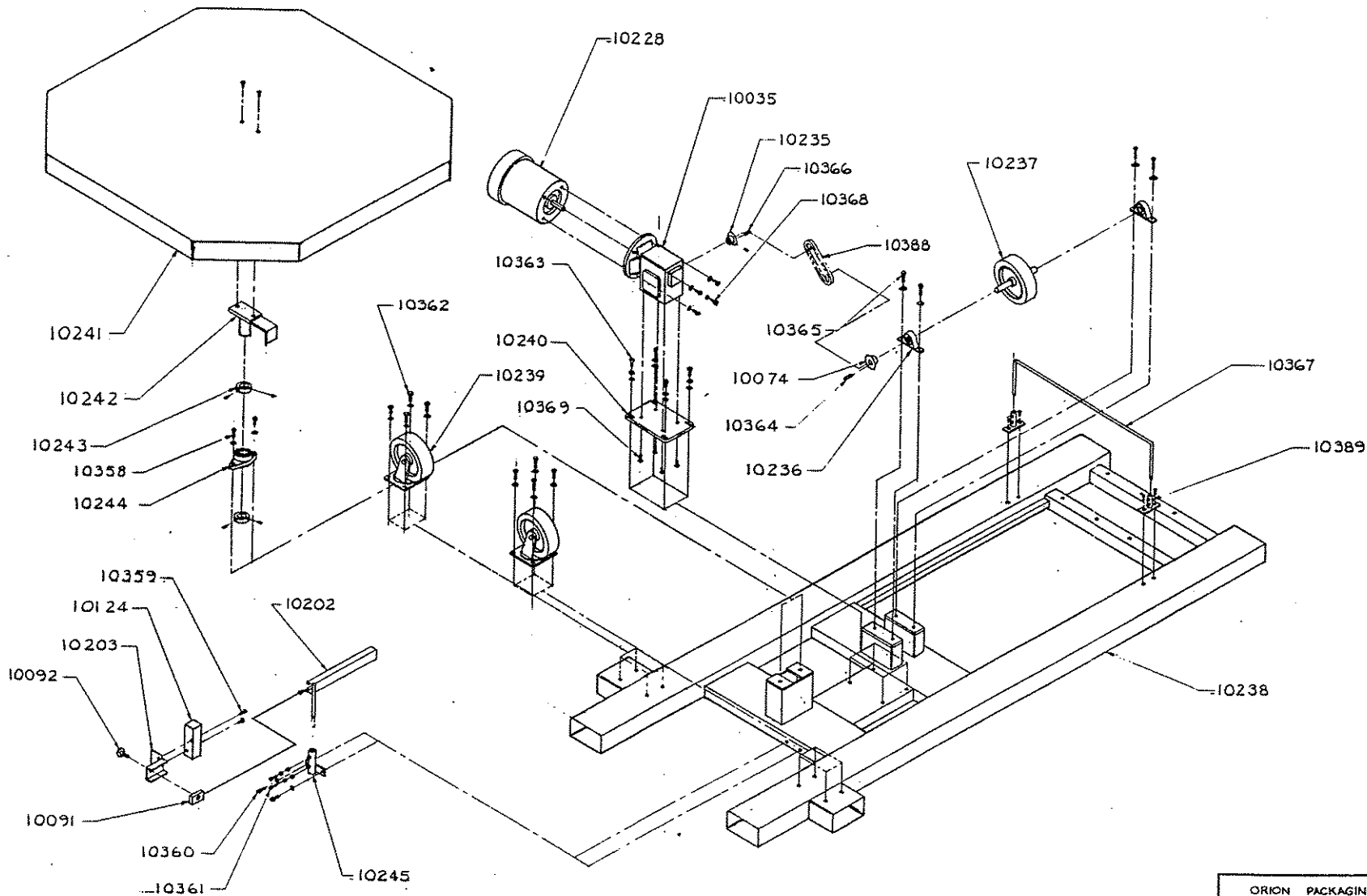




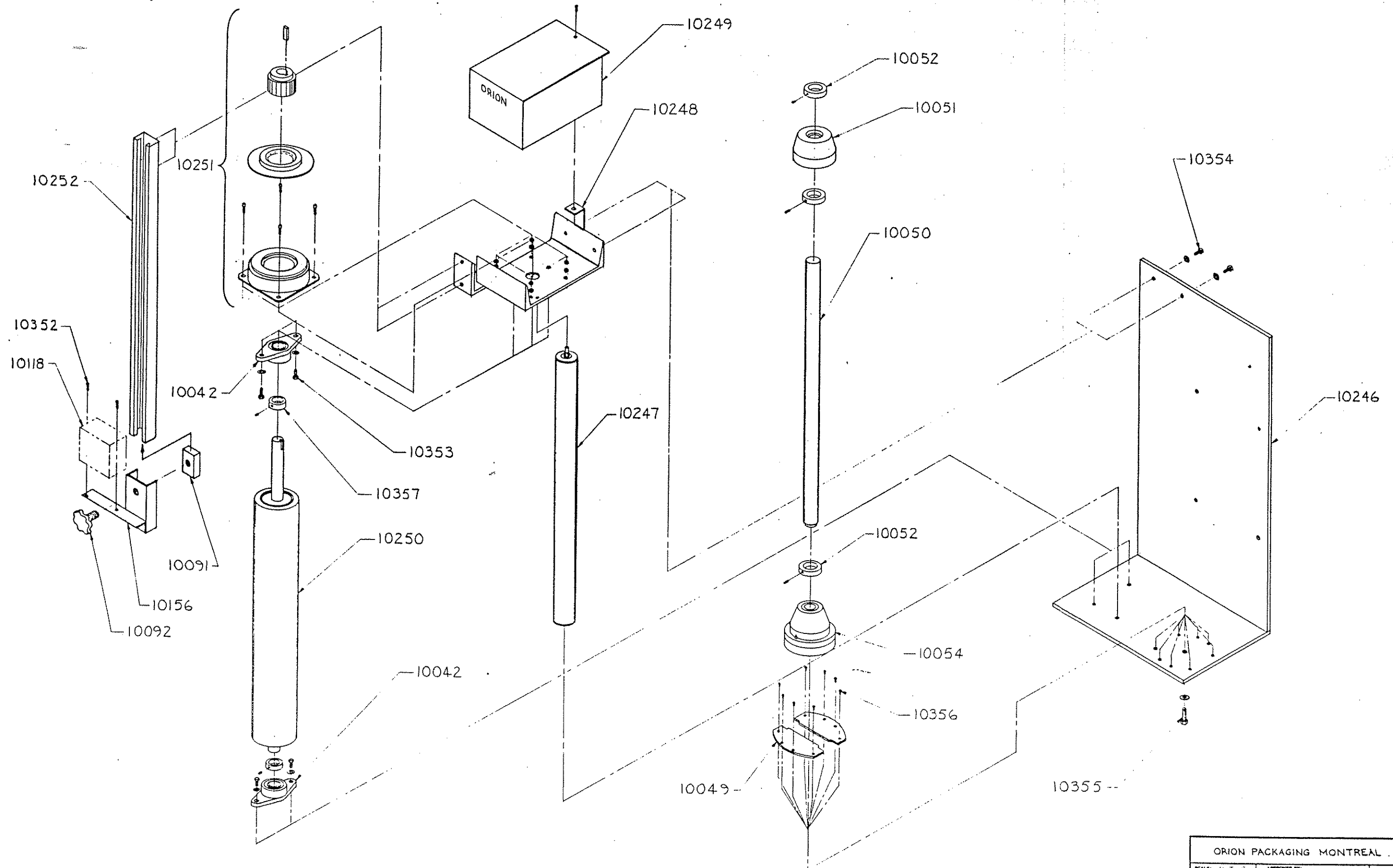
ORION PACKAGING		
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: VALENZUELA
DATE: 8-7-86		
SMALL TOWER ASS'Y		
H66 L66 H77 L77		DRAWING NUMBER 200-190



ORION PACKAGING MONTREAL		
SCALE: N.T.S.	APPROVED BY:	DRAWN BY VALENTIN
DATE: 1-7-86		REVISED
SMALL LOW PROFILE BASE ASS'Y		
L66 L77		DRAWING NUMBER 200 195



ORION PACKAGING MONTREAL		
Part No. N.T.3.	Revised By	Checked By VALLENTIN
Date: 10-7-66		
SMALL HIGH PROFILE BASE ASS'Y		
REV. 1	REV. 1	2.00 194



ORION PACKAGING MONTREAL		
SCALE: 1:1	APPROVED BY:	DRAWN BY: VALLA/PHI
DATE: 9-7-66		REVISED:
SMALL CARRIAGE ASS'Y		
L77 H77		DRAWING NUMBER: 200 191

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.

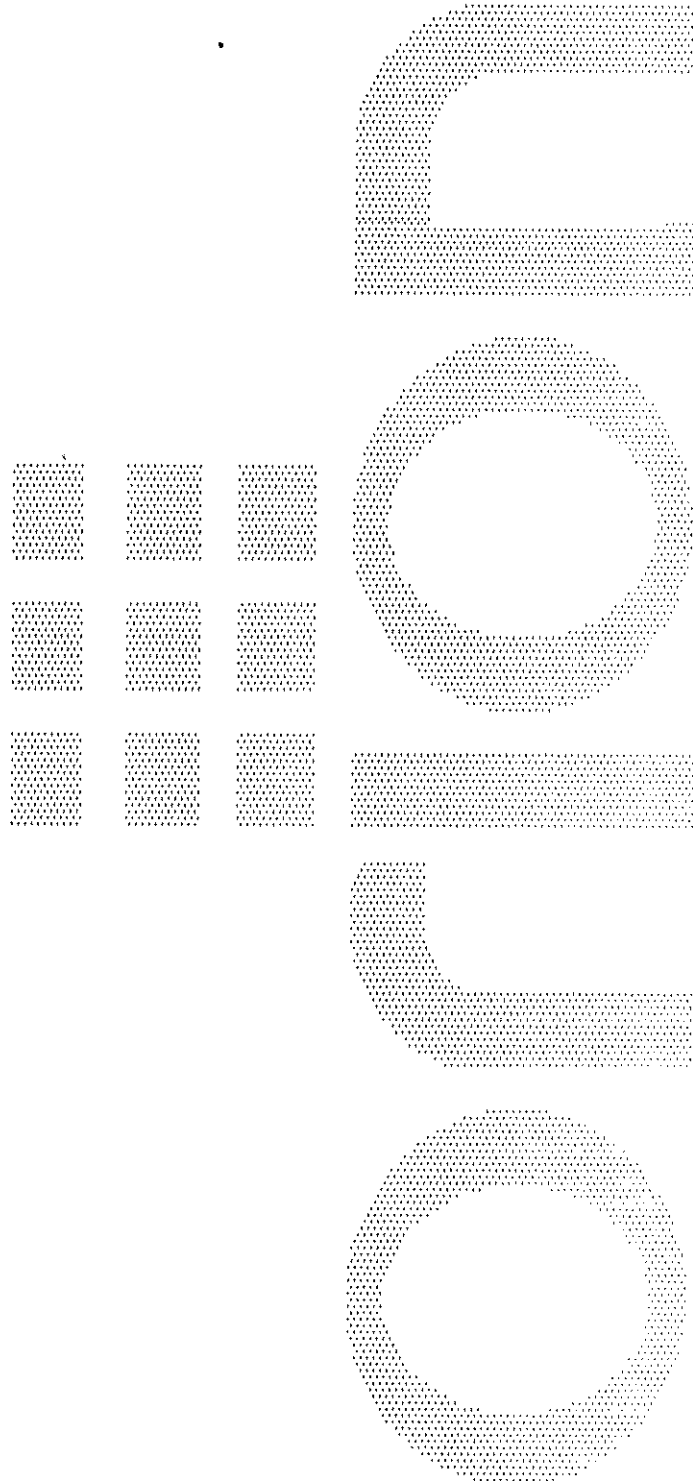
Items that are vulnerable to damage and must be inspected are the motor and transmission housings and connections at the base of the tower, and on the carriage, the photoswitch on the carriage, and the roping bar and stands.

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).

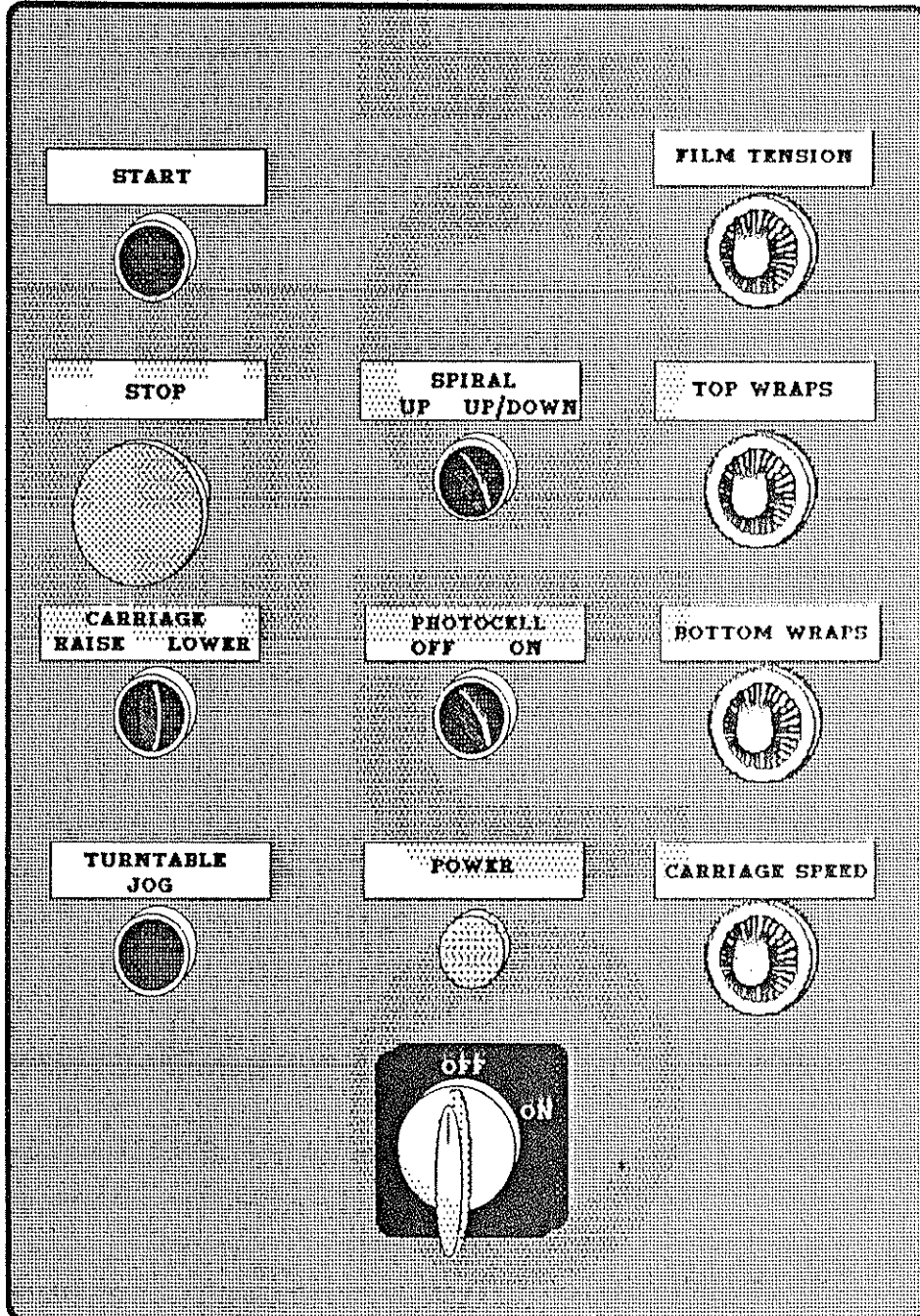
An electrical diagram is provided in the panel box. Only a qualified electrical technician or an Orion representative should effect any repairs on the machines.

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



6.

MACHINE CONTROLS



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.

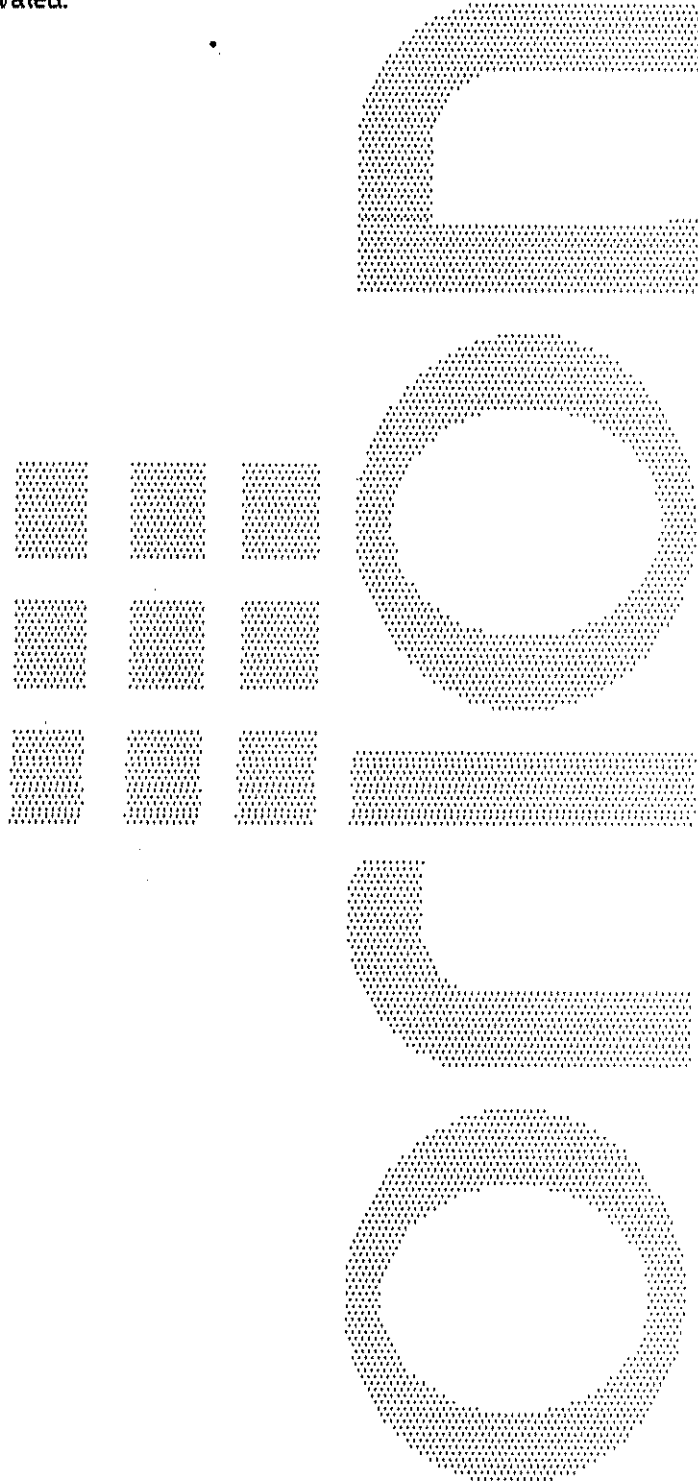
6.6 Photocell Switch

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

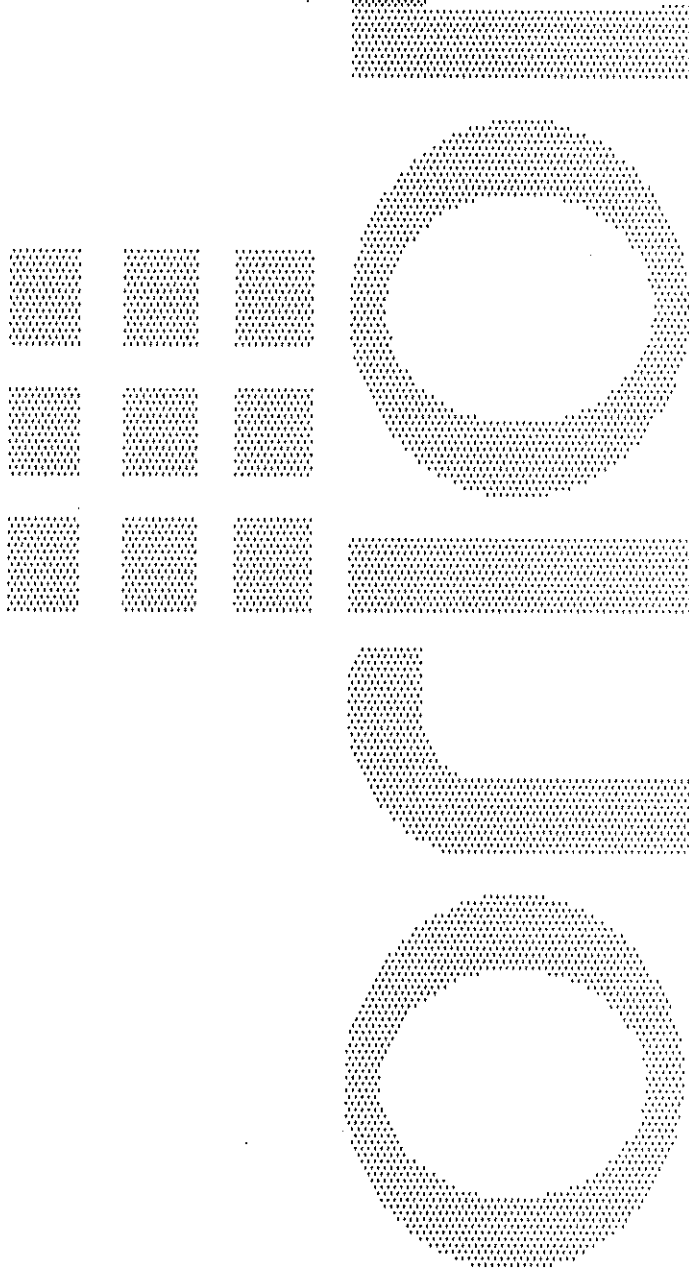
The carriage speed control can be used to control the amount of overlap the film will have on itself during a wrap.

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 5 150
Texaco Inc.	624-650T Cyl. Oil
Shell Oil Co.	Valvata Oil J82
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. 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.

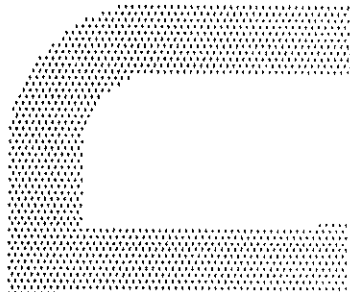
With time the chains will tend to stretch. A loose elevator chain should be tightened at the chain tensioner as shown on drawing number 200-192. A loose turntable drive chain should be tightened by tightening the 1/2" dia. screw on the base, next to the turntable.

8.4 Cam Follower Maintenance

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

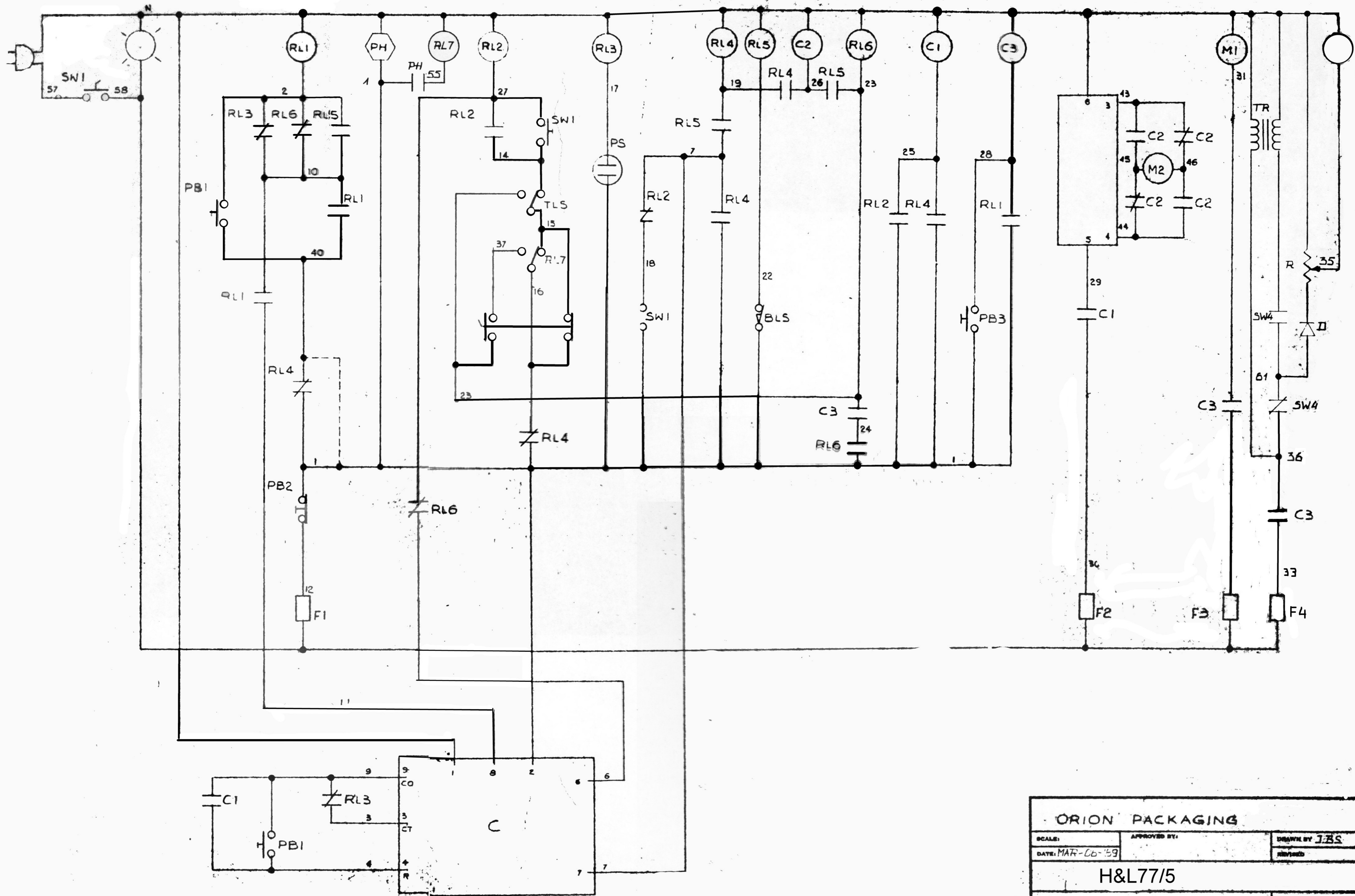
The portion of the tower on which the cam followers roll should be cleaned and regreased every 300 hours of operation. If the machine operates in a dusty or corrosive environment the tower should be relubricated more often.

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.

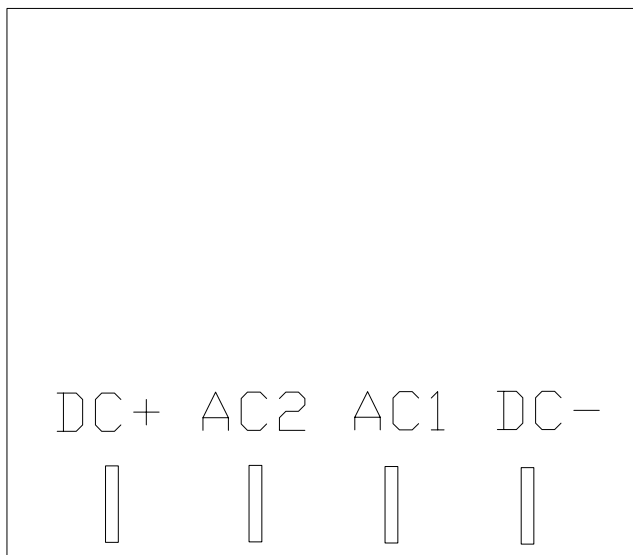


APPENDIX





ORION PACKAGING		
SCALE:	APPROVED BY:	DRAWN BY JBS
DATE: MAR-66-59		REVISED:
H&L7715		



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

168-A CARRIAGE UP/DN
SINGLE SPEED BOARD