

ORION PACKAGING  
H44  
STANDARD, HIGH PROFILE,  
STRETCHWRAPPER

OWNER'S MANUAL



100 Crescent Drive  
Collierville, TN 38017

PACKAGING SYSTEMS, INC.  
A PRO MACH OPERATING PARTNER

(800) 333-6556  
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## 1. H44 SPECIFICATIONS

Power requirements: 110 VAC, single phase, 60 Hz, 15 A

Machine floor space requirements: 48" x 96"

Distance from floor to top of table: 13 inches.

Turntable dimensions: 52" x 52"

Turntable drive: 3/4 hp, 90 VDC, TEFC, SCR controlled soft start and stop,  
ANSI #50 chain.

Carriage elevator drive: 1/2 hp, 90 VDC, TEFC, SCR controlled variable speed,  
35 fpm max, ANSI #50 chain.

Multistretch delivery system: 1/2 hp, 90 VDC, TEFC, SCR controlled force to  
load compensation by a dancer bar.

Maximum static load: 20 000 lbs.

Maximum dynamic load: 6 000 lbs.

Minimum load: 350 lbs.

Maximum pallet and load dimensions: 58" x 58" x 94"(h)

Machine dimensions: 52" x 96" x 93"(h)

Machine weight: 2057 lbs.

## 2. STANDARD FEATURES

The standard H44 stretchwrapper comes with Multistretch powered prestretch film delivery system accomodating up to 30" film without changing the film mandrel. It works with an active dancer system with quick response that regulates the prestretch feed in order to keep a constant film tension.

The master control panel features are,

- Film tension selector,
- Individual count selectors for top and botom wraps,
- Individual selectors for elevator up and down speed control,
- Electric eye OFF/ON,
- Top cover pause selector,
- Spiral up - up/down,
- Reinforce wrap, Turntable jog,
- Raise/Lower elevator control,
- High/Low turntable speed selector,
- Power OFF/ON
- Start,
- Stop,
- Circuit breaker protection.

The turntable has an adjustable speed of upto 16 rpm with an adjustable acceleration and deceleration independent of a high or low speed selection.

The stretchwrapper base is built of 10" welded steel tubing and has front and back forklift entry ports for ease of movement.

The turntable is supported by four solid steel casters turning on tapered roller bearings, each having a capacity in excess of 5000 lbs.

### 3. OPTIONS

The options available for the Standard, High Profile stretchwrapper are,

- Extended mast,
- Extended frame,
- Round table for in-ground installations,
- Dual turntable,
- Programmable logic controller,
- Heater option for cold environment application,
- Custom design features.

## 4. PARTS LISTS

### 4.1 Tower Parts List

The exploded assembly drawing of the Standard Tower is shown on drawing number 200 99. Table 1 has the parts listed in order of part number.

Note: the names given to the parts are generic.

TABLE 1

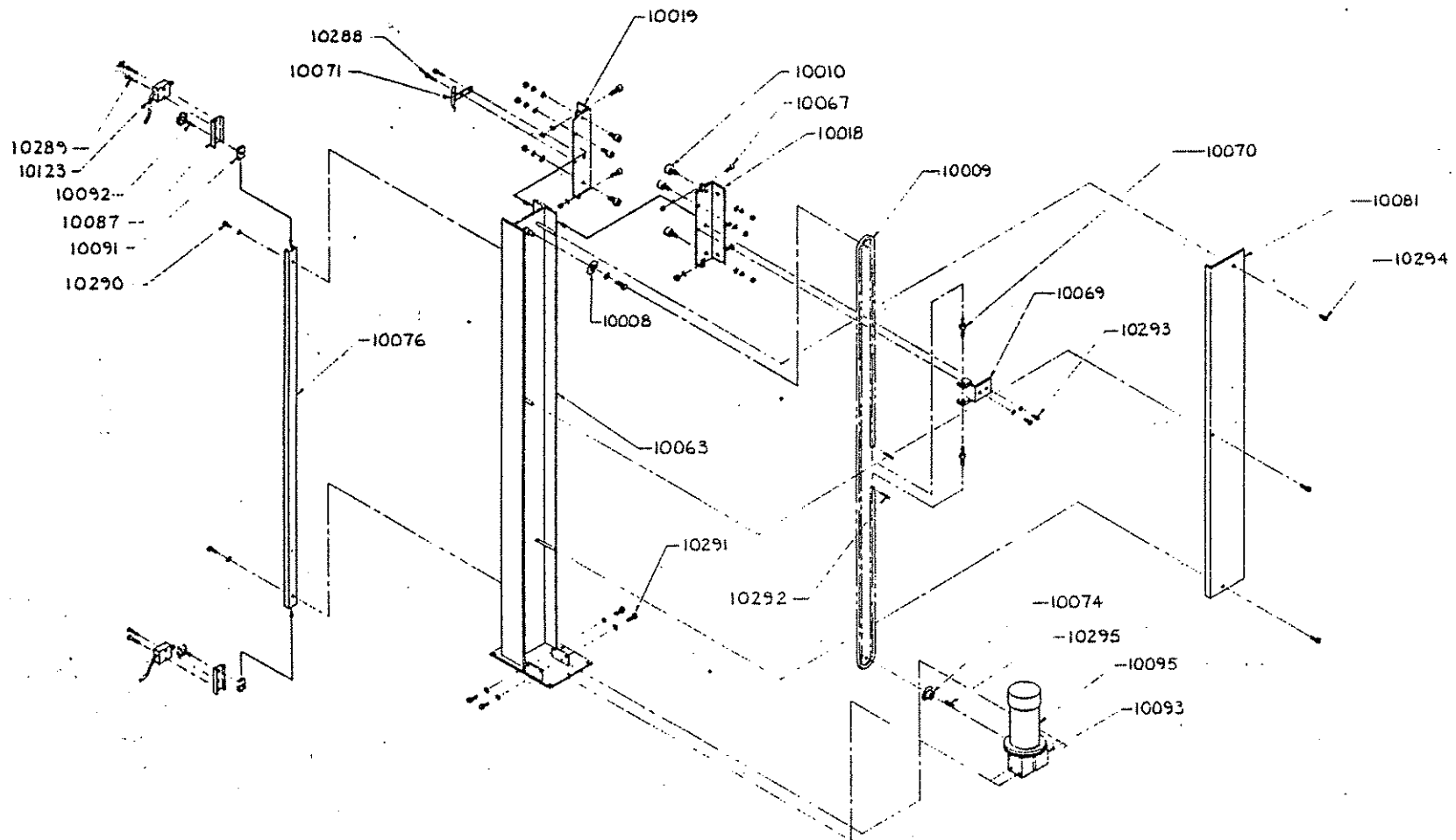
Tower parts list

Part number	Description	Quantity
10008	Idler sprocket	1
10009	#50 chain	1
10010	Cam follower (1 3/8 inch O.D.)	6
10018	Left carriage holder	1
10019	Right carriage holder	1
10063	Tower	1
10067	Cam follower (1/2 inch O.D.)	4
10069	Chain tensioner	1
10070	Chain tensioning screw	2
10071	Limit switch actuator	1
10074	Drive sprocket	1
10076	Limit switch channel	1
10081	Chain cover	1
10087	Limit switch bracket	3

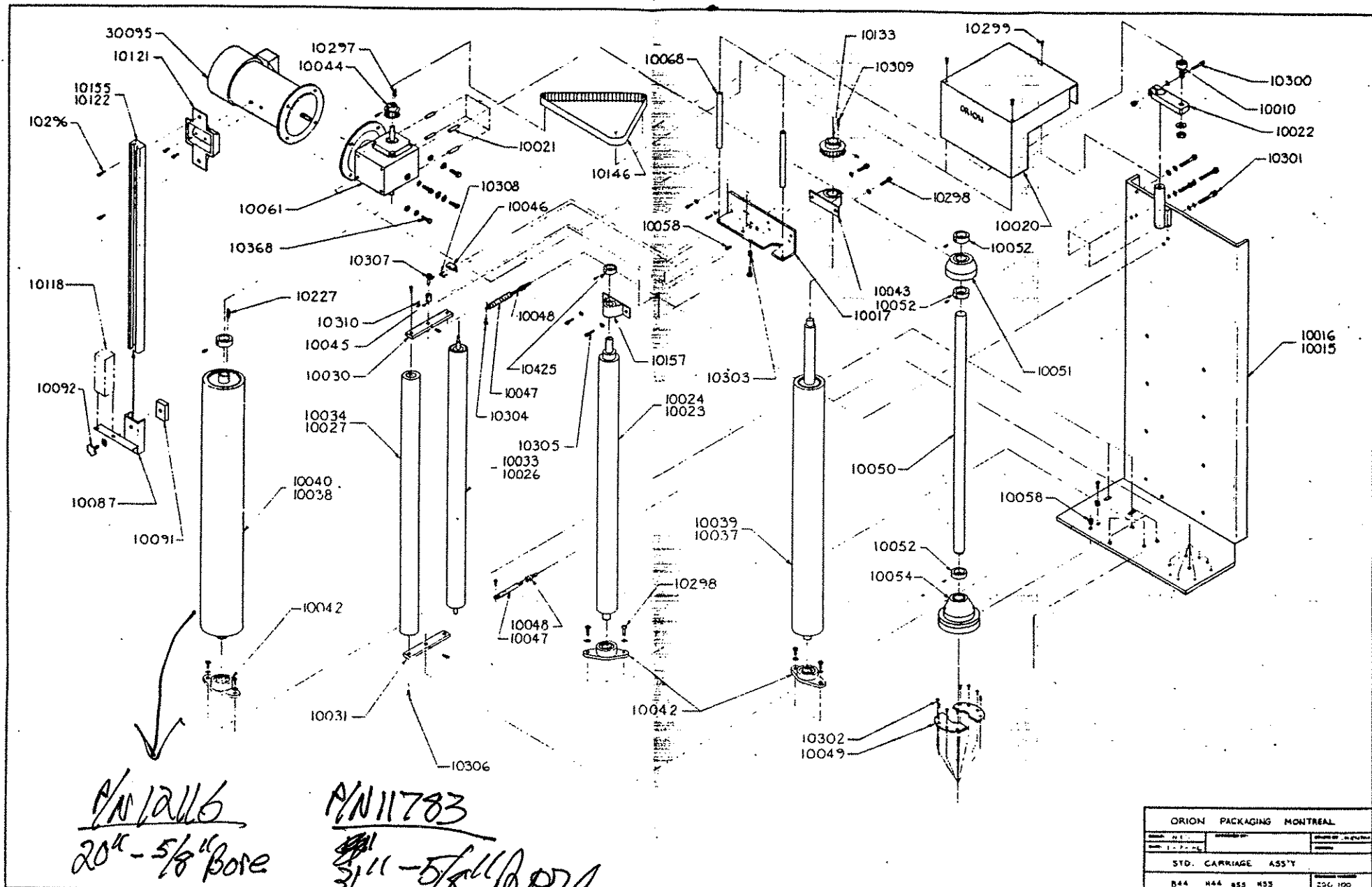
10091	Channel guide	3
10092	Knob	3
10093	Reducer	1
10095	Elevator motor (1/2 hp, 1750 rpm)	1
10123	Limit switch	3
10288	1/4-20 UNC x 1/2 SHCS	2
10289	Limit switch screw	6
10290	Channel screw (1/4-20 UNC x 1/2 SHCS)	2
10291	Transmission screw (3/8-16 UNC x 1 Hex bolt)	4
10292	Chain tensioner pin	2
10293	3/8-16 UNC x 3/4 Hex bolt	2
10294	Cover screw (1/4-20 UNC x 1/2 SHCS)	3
10295	3/16 inch square key	1

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ORION PACKAGING MONTREAL			
Part No.	10071	Quantity	1
Part No.	10076	Quantity	1
STD TOWER ASSY			
Part No.	10071	Quantity	1
Part No.	10076	Quantity	1



## 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. At this point 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 must be returned back to their home positions before restarting the cycle.

## 6.3 Top Cover Switch

The Top Cover switch has two positions,

WITH - In the WITH position the cycle will stop after one top wrap is completed, allowing the placement of a top sheet on the load, afterwhich the start button may be pressed to resume wrapping.

WITHOUT - In the WITHOUT position the cycle will not pause for the placement of a top cover.

#### 6.4 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.

#### 6.5 Reinf. Wrap/Table Jog Switch

This switch has three positions,

middle position - in this position the switch is inactive and the machine will operate normally.

Reinf. Wrap - when the switch is held in this position during operation the carriage will stop rising or descending in order to increase the number of wraps around the chosen section.

Table Jog - when the switch is held in this position the turntable will turn in a clockwise direction as viewed from the top.

## 6.6 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.

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.

Note: when the switch is activated to raise or lower the carriage, the carriage will not stop until either the top or bottom limit switch is activated respectively.

## 6.7 Table Speed Control Switch

The Table Speed Control switch has two settings,

LOW - The LOW setting may be used for wrapping unstable or very heavy loads that tend to fall apart when wrapped at higher speeds.

HIGH - The HIGH setting may be used for wrapping more stable loads.

Once the up wrap has been wrapped on the low speed setting, un-

stable loads may also be wrapped on the high speed setting by switching from LOW to HIGH after the top wraps are done.

#### 6.8 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.

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: Lighter loads may require lower tension settings than heavier loads.

### 7.2 Carriage Speed

There are two carriage speed controls on the panel,

CARRIAGE SPEED UP,

CARRIAGE SPEED DOWN.

The carriage speed controls can be used to control the amount of overlap the film will have on itself during a wrap. It is recommended to start with a RAPID upward wrap in order to stabilize the load early in the cycle.

The control potentiometers have 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.



## 8. 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.	Velvata Oil J82
Union Oil Of Cal.	Red Line Worm Gear Lube 140

Reducing transmissions are found under each conveyor unit, under the turntable, on the carriage, and at the base of the tower.

## 8.2 Motor Maintenance

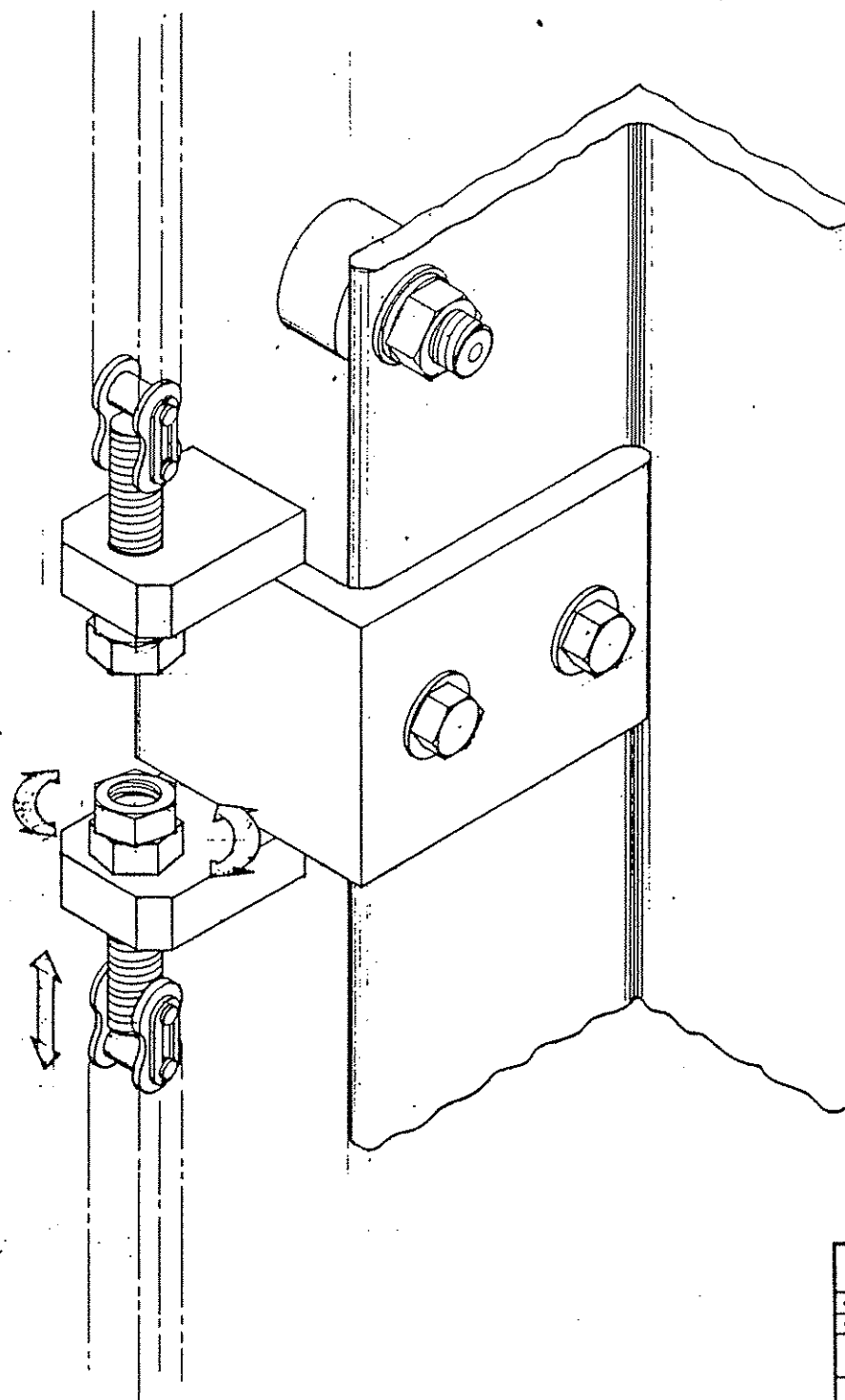
An occasional inspection of the brushes should be made in order to establish a wear rate. Replacement brushes should be installed before old brushes wear to 9/16" long, measured on the long side. After replacing brushes run the motor near rated speed for at least 1/2 hour with no load to seat the new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

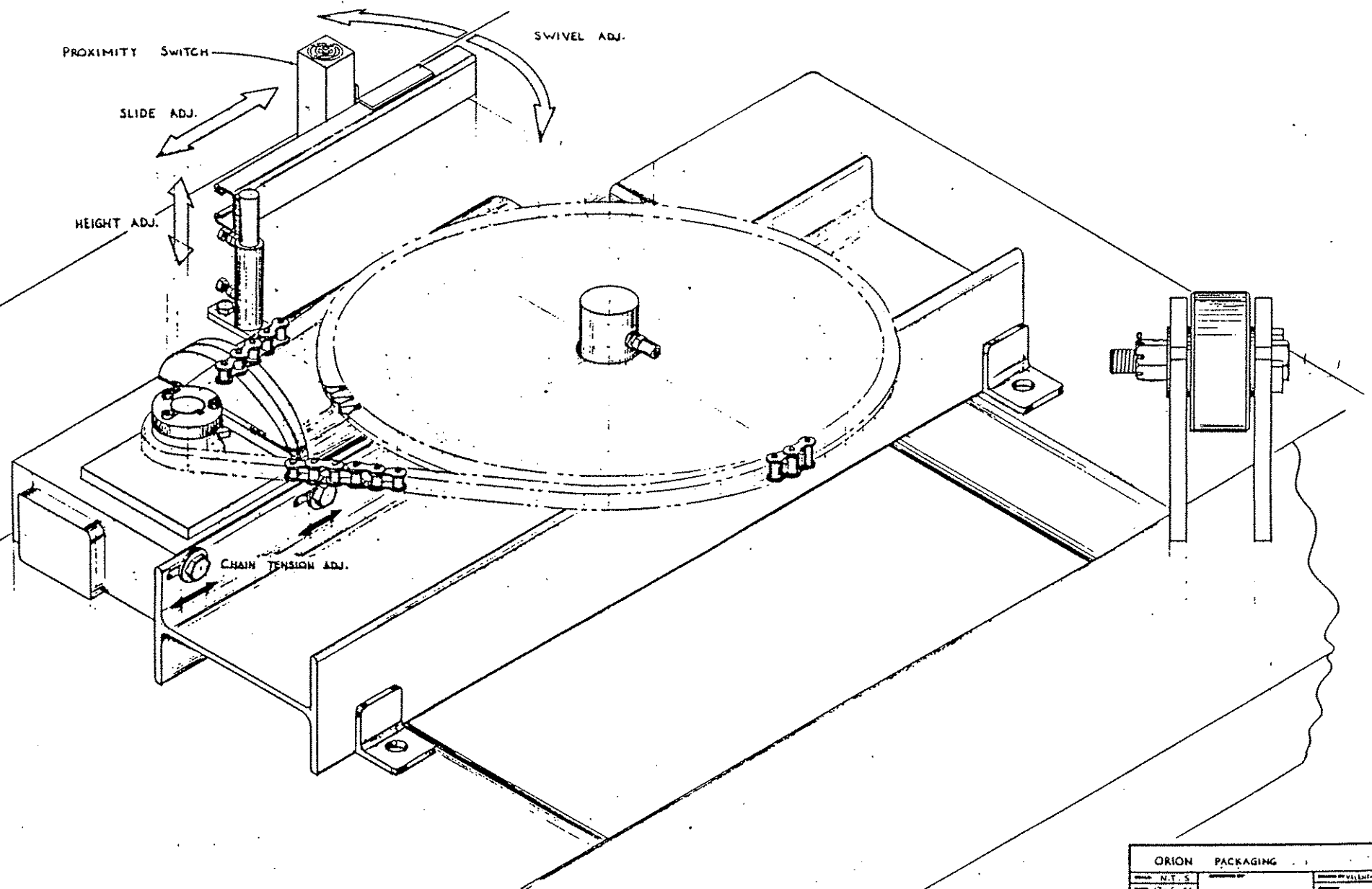
To clean and relubricate chains, wipe them with an oily cloth every month. If the environment is very dusty or damp, it may be necessary to clean and relubricate the chains more often.

With time, chain 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 at the drive console as shown on drawing number 200 97.

CHAIN TENSION  
ADJUSTMENT



ORION PACKAGING		
SCALE: N.T.S.	APPROVED BY:	DESIGNED BY: WLE/2/11/11
DATE: 10-7-86		REVISED
CHAIN TENSIONER ASS'Y		
		DRAWING NUMBER 200-192



ORION PACKAGING		
Model: N.T. 5	Revision: 01	Drawn by: V.S. Laffey
Date: 17-6-86		
TURNABLE ASSEMBLY		
Part Number: PA-44	Drawing Number: Z00-97	

## 4.2 CARRIAGE PARTS LIST

The exploded assembly drawing of the Standard carriage is shown on drawing number 200 100. Table 2 has the parts listed in order of part number.

Note: the names given to the parts are generic.

TABLE 2

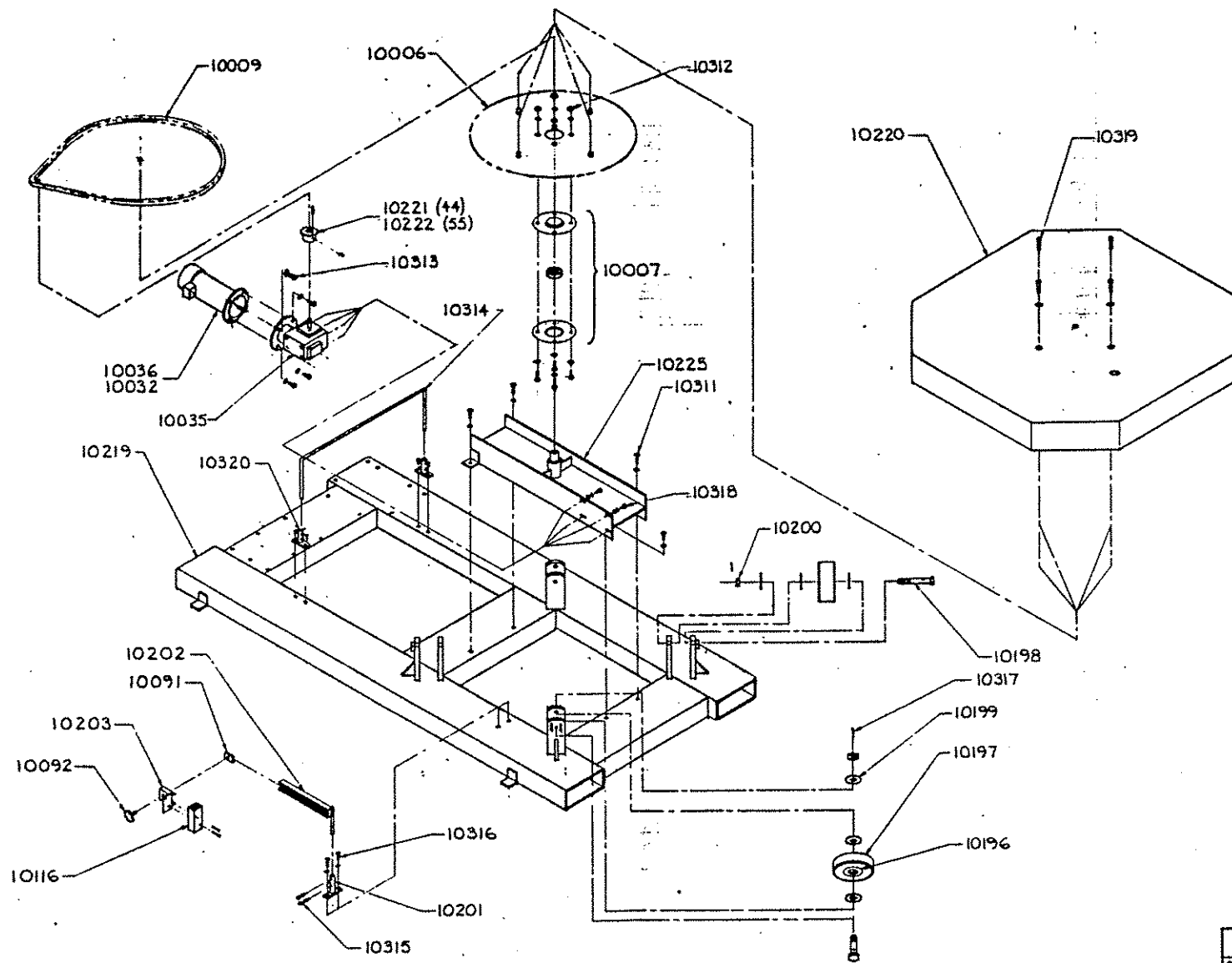
Carriage parts list

<u>Part number</u>	<u>Description</u>	<u>Quantity</u>
10010	Cam follower (1 3/8 inch O.D.)	1
10015	20" Carriage frame	1
10016	30" Carriage frame	1
10017	Roller bracket	1
10020	Multistretch mechanism cover	1
10021	Spacer	1
10022	Belt tensioner	1
10023	30" Pressure roller	1
10024	20" Pressure roller	1
10026	30" Center dancer roller	1
10027	30" Roller	1
10030	Top dancer lever	1
10031	Bottom dancer lever	1
10033	20" Center dancer roller	1
10034	20" Roller	1
10037	30" x 3" dia. rubber roller	1
10038	30" x 4" dia. rubber roller	1

10039	20" x 3" dia. rubber roller	1
10040	20" x 4" dia. rubber roller	1
10042	3/4" flanged bearing unit	2
10043	1" Pillow block	1
10044	Prestretch driver pulley	1
10045	Potentiometer coupling	1
10046	Potentiometer bracket	1
10047	Film tension spring	2
10048	Spring adjustment screw	2
10049	Brake pad	2
10050	Film spool mandrel	1
10051	Top mandrel	1
10052	1" Collar	6
10054	Bottom mandrel	1
10058	Bronze bushing	2
10061	Prestretch transmission (5:1 worm & gear)	1
10068	Cover bracket	2
10087	20" Photoswitch bracket (L.P.)	1
10091	Channel guide	1
10092	Knob	1
10118	Photoswitch (H.P.)	1
10121	Channel bracket	1
10122	30" Channel	1
10125	Photoswitch (L.P.)	1
10133	Prestretch driven pulley	1
10146	Timing belt	1
10155	20" Channel	1

10156	30" Photoswitch bracket (H.P.)	1
10157	3/4 inch pillow block	1
10227	3/16 inch square key	1
10296	Channel screw	2
10297	3/16 inch square key	1
10298	3/8-16 UNC x 1 long hex bolt	2
10299	Multistretch cover screw	3
10300	3/8-16 UNC x 2 long SHCS	1
10301	5/16-18 UNC x 2 1/2 long Hex bolt	4
10302	8-32 UNC x 1/2 long BHCS	8
10303	Bumper	2
10304	10-24 UNC x 3/4 long SHCS	2
10305	5/16-18 UNC x 3/4 long SHCS	2
10306	1/4-20 UNC x 3/4 long CHCS	2
10307	Feedback potentiometer	1
10308	10-24 UNC x 1/2 long SHCS	2
10309	1/4" square key	1
10310	10-24 UNC x 1 long SHCS	2
10368	3/8-16 UNC x 1 long hex bolt	4
10425	3/4" collar	1
30095	Prestretch motor (1/2 hp, 1750 rpm)	1

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ORION PACKAGING MONTREAL		
Model: 1000	Part No: 1000	Rev: 1000
Part: 1000	Part: 1000	Part: 1000
STD. HIGH PROFILE BASE ASSY		
Part: 1000	Part: 1000	Part: 1000



### 4.3 Base And Turntable Parts List

The exploded assembly drawing of the Standard, High Profile base is shown on drawing number 200 101. 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

<u>Part number</u>	<u>Description</u>	<u>Quantity</u>
10006	Turntable sprocket	1
10007	Center bearing unit	1
10009	#50 chain	1
10032	3/4 hp DC motor (H44)	1
10035	Reducer	1
10036	1/2 hp DC motor (H55)	1
10091	Channel guide	1
10092	Knob	1
10116	Proximity switch	1
10196	Tapered roller bearing	8
10197	Caster	4
10198	Caster shaft	4
10199	Caster washer	12
10200	Caster shaft nut	4
10201	Channel stand	1
10202	Proximity switch channel	1
10203	Proximity switch bracket	1

10219	Base	1
10220	Turntable	1
10221	Driver sprocket (H44)	1
10222	Driver sprocket (H55)	1
10225	Drive console	1
10311	1/2-13 UNC x 1 long hex bolt	4
10312	3/8-16 UNC x 1 1/2 long hex bolt	4
10313	3/8-16 UNC x 1 long hex bolt	4
10314	Roping bar	1
10315	3/8-16 UNC x 1 long hex bolt	2
10316	5/16-18 UNC x 1 long hex bolt	6
10317	Cotter pin	4
10318	5/16-18 UNC x 1 long hex bolt	4
10319	3/8-16 UNC x 1 1/2 long SHCS	4
10320	Roping bar stand	2

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## 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 10 x 4 structural tube steel members in the base to lift the machine.

Before inspection, all packing and restraining blocks must be removed; these may include the blocks under the carriage and the restraining bar over 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 under the turntable, at the base of the tower, and on the carriage.

## 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.

# 6. MACHINE CONTROLS

START



STOP



TOP COVER  
WITH WITHOUT



SPIRAL  
UP UP/DOWN



REINP. TABLE  
WRAP JOG



CARRIAGE  
RAISE LOWER



TABLE SPEED  
LOW HIGH



FILM TENSION  
V



TOP WRAPS  
V



BOTTOM WRAPS  
V



CARRIAGE SPEED  
UP V



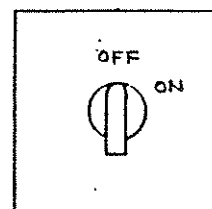
CARRIAGE SPEED  
DOWN V



PHOTO CELL  
ON OFF



POWER



#### 8.4 Cam Follower Maintenance

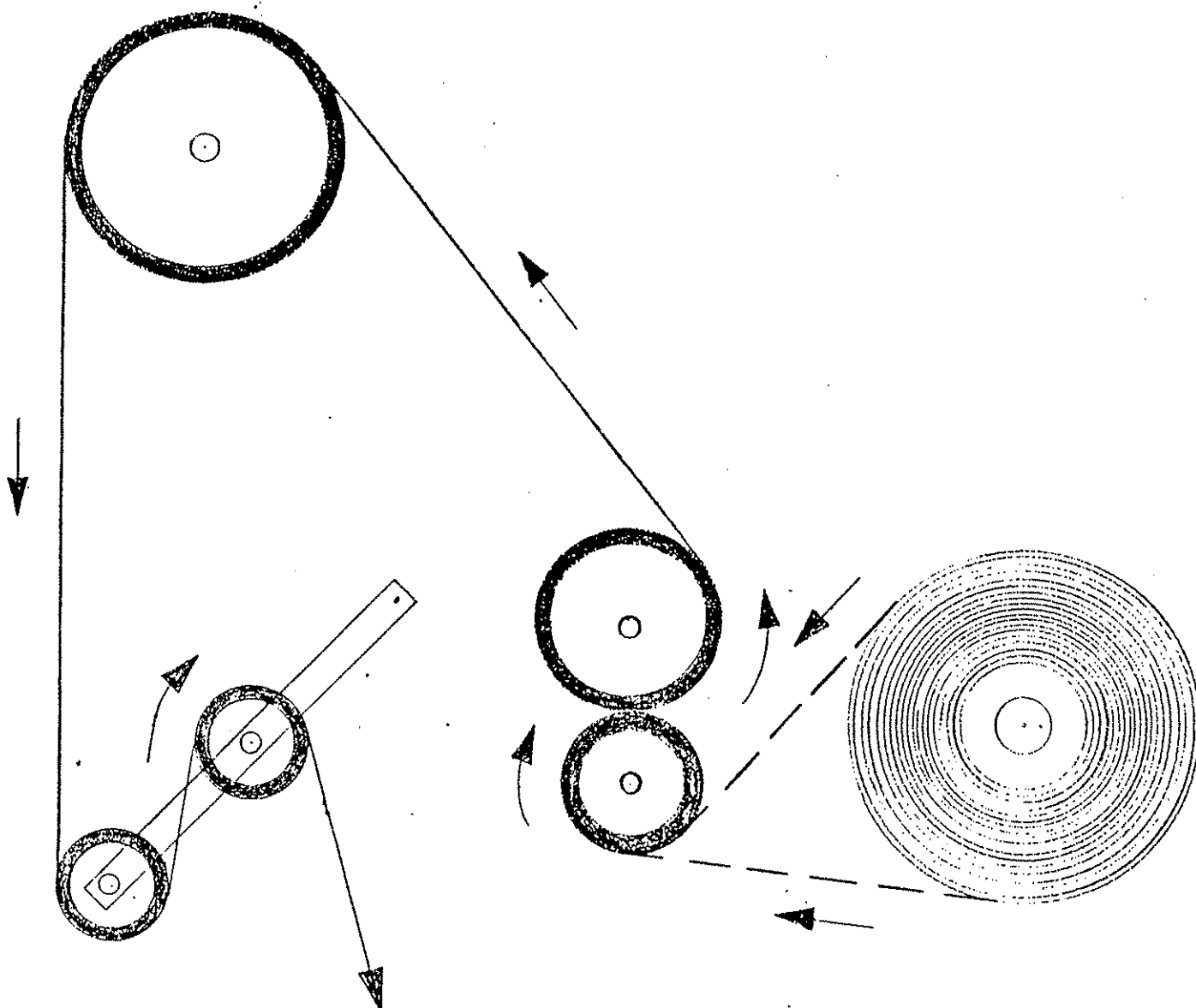
The cam followers behind the carriage, on the tower, have deep grease pockets and need not frequent relubrication.

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

#### 8.5 Caster Maintenance

The casters underneath the carriage must be relubricated every 200 hours of operation by injecting grease in the nipples and regreasing the surfaces of the casters. If the machine operates in a dusty or corrosive environment, the casters should be relubricated more often.

## APPENDIX



This diagram shows the pattern the film must take around the rollers.  
for the proper operation of the stretchwrapper.

**WARNING:** The machine must be disconnected from the power source before the film is fed through the rollers. Failure to do this may result in serious injury to the operator and damage to the machine.



# Lubrication

REDUCERS MAY BE FILLED TO THE PROPER LEVEL AT THE FACTORY WITH AGMA No. 8 compounded oil. AFTER INSTALLATION OF THE BREATHER PLUG, UNIT IS READY FOR USE. Before installing breather plug, refer to instruction tag and determine proper position according to reducer mounting.

We recommend an initial oil change after 250 hours of operation, then every six months or every 2500 hours of service under Class I Service. If fluctuating temperatures, humid, dirty or corrosive environment, oil changes should be made more frequently. Frequency can be established by oil sample analysis.

KEEP YOUR OIL CLEAN



## Doerr Electric replacement oil

To order oil, request:

Doerr part no. 00019001 — synthetic AGMA #7EP  
(-40°F to 150°F)

Doerr part no. 00019101 — AGMA #8 (50°F to 125°F)

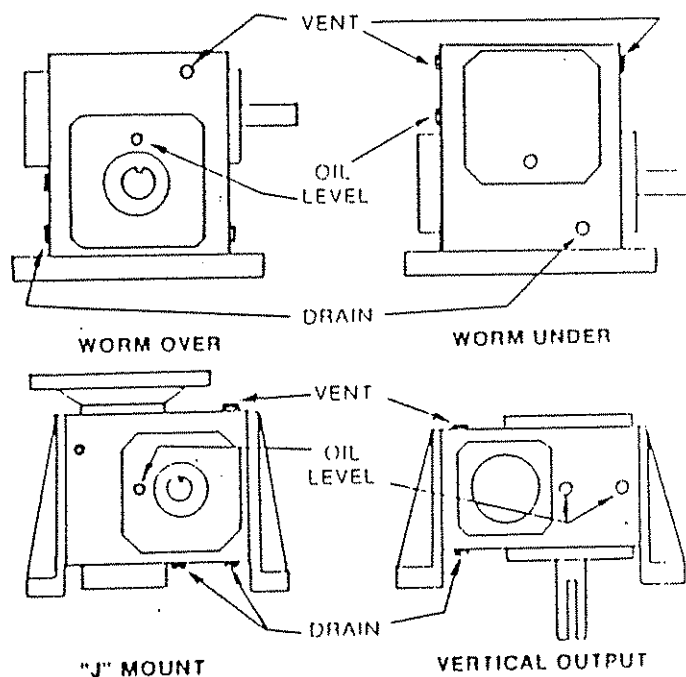
Oil is packed 12 one quart bottles per carton, minimum ship one carton.  
Contact DEC Service Dept. for order information.

### OIL CAPACITIES\*

UNIT TYPE	UNIT SERIES				
	138	148	208	232	252
Worm Over	14	20	27	49	8
Worm Under	17	22	28	49	7
Vertical Output	10	15	20	37	6
"J" Mount	13	18	23	38	6

\*Capacities in approximate ounces. On double reduction units determine capacity of both primary and secondary reducers.

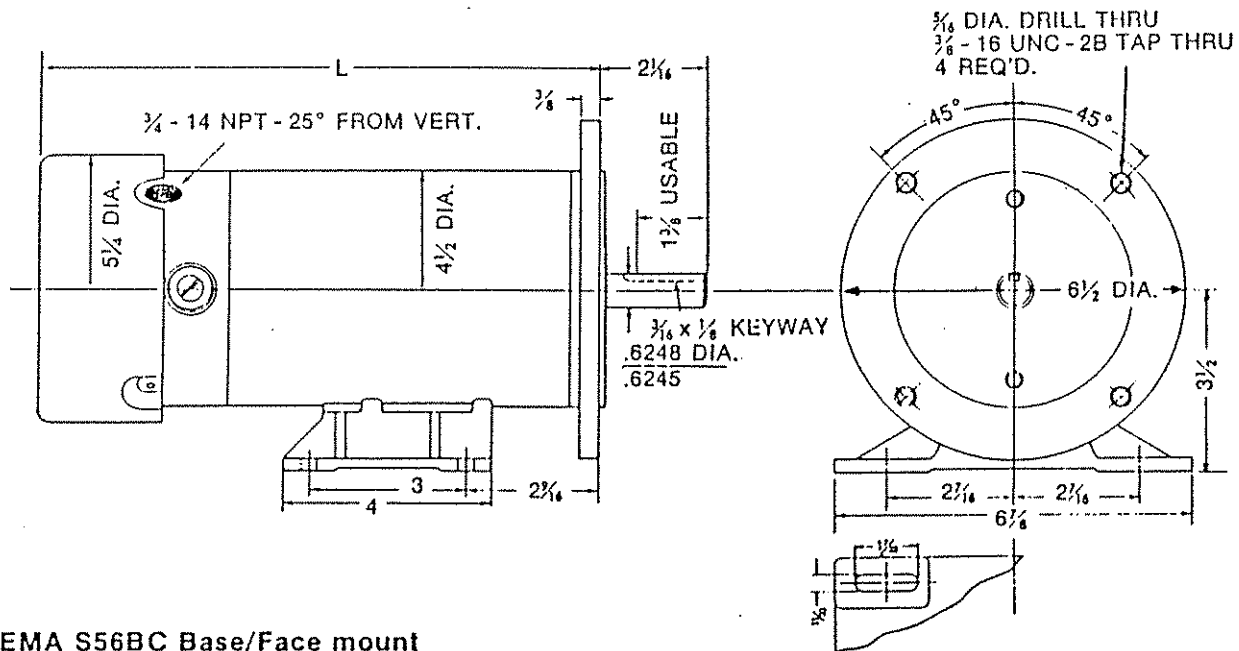
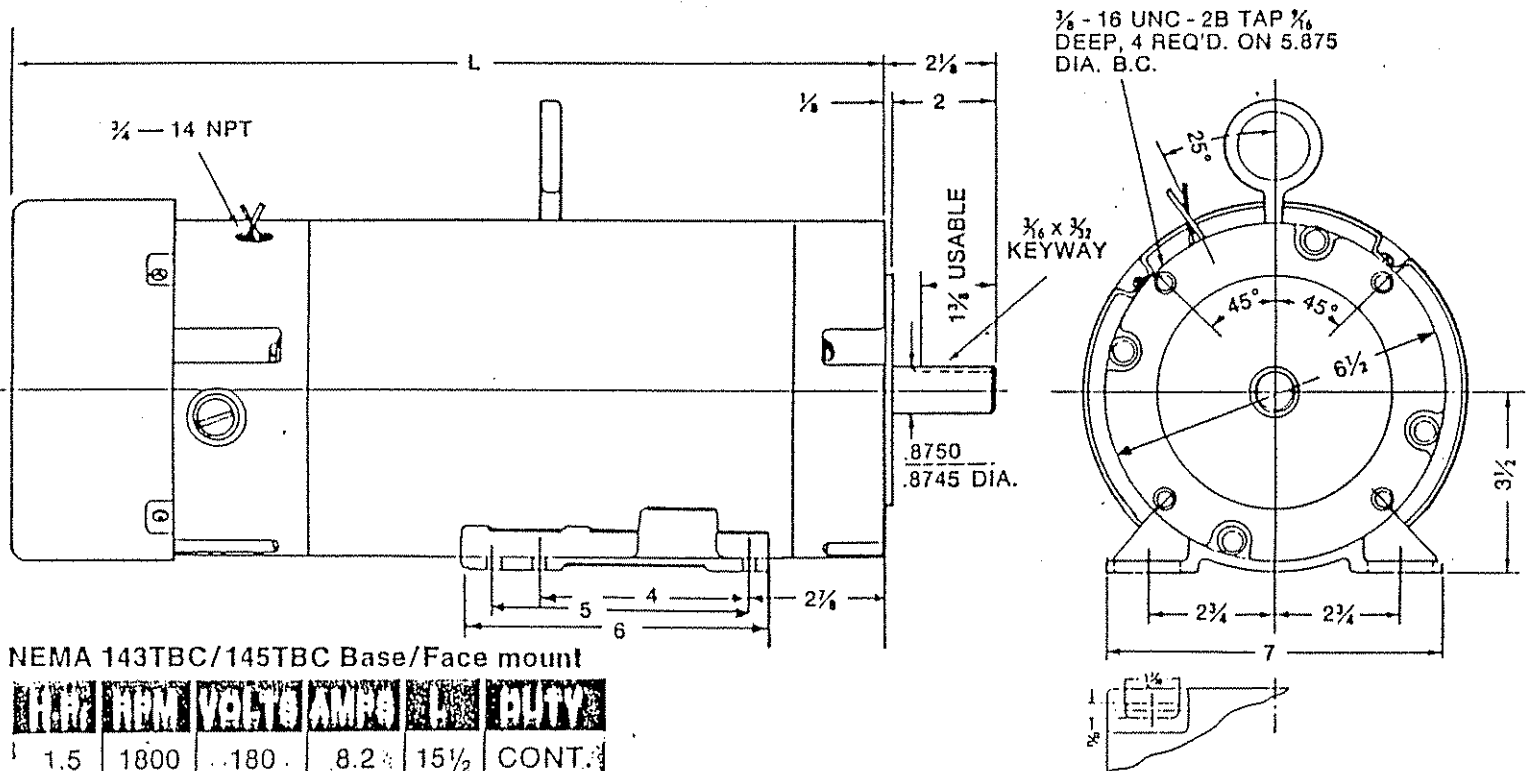
### OIL LEVELS\*



\*On double reduction units fill and vent each unit to levels shown.

# Motor dimensions

## TEFC P/M motor

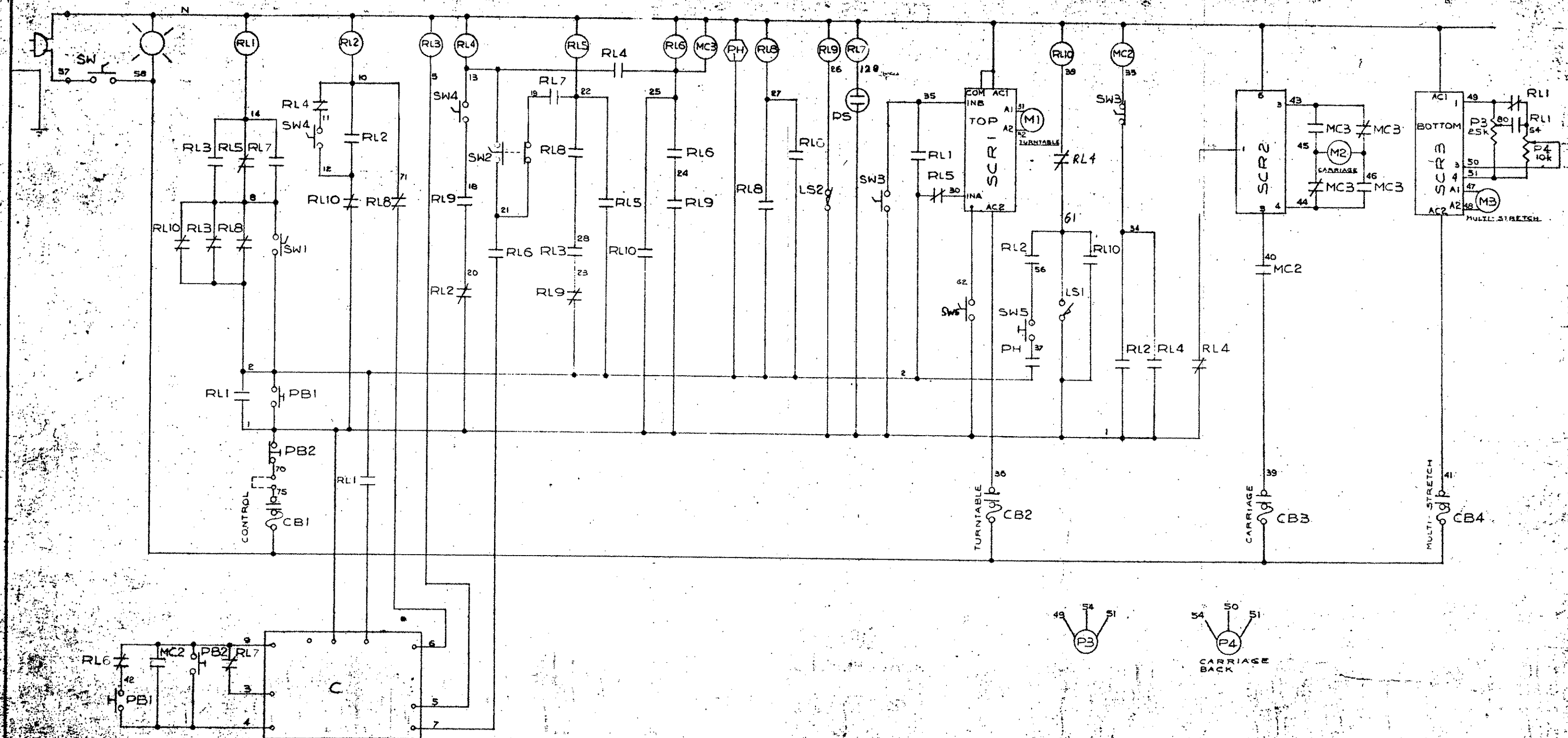


180 V.

H.P.	RPM	VOLTS	AMPS	L	DUTY
$\frac{1}{2}$	1725	180	2.8	10 $\frac{3}{4}$	CONT.
$\frac{3}{4}$	1725	180	3.5	12 $\frac{3}{4}$	CONT.
1	1725	180	5.35	14 $\frac{3}{4}$	CONT.

90 V.

H.P.	RPM	VOLTS	AMPS	L	DUTY
$\frac{1}{2}$	1725	90	5.35	10 $\frac{3}{4}$	CONT.
$\frac{3}{4}$	1725	90	8.1	12 $\frac{3}{4}$	CONT.
1	1725	90	10.6	14 $\frac{3}{4}$	CONT.



LS1- TOP LIMIT SWITCH (CARRIAGE)  
 LS2- BOTTOM LIMIT SWITCH (CARRIAGE)  
 PS - PROXIMITY SWITCH  
 PH - PHOTOCELL

ORION QUEBEC		
Model	Version	Revised
308.84		
LEH/44		