

**orion**

**PACKAGING SYSTEMS, INC.**

2270 Industriel, Montreal (Laval) Canada H7S 1P9 / Tél.: (514) 667-9769 Fax: (514) 667-6320



# INSTRUCTION MANUAL

FOR ALL INQUIRIES  
PLEASE CONTACT  
OUR LOCAL DISTRIBUTOR

FOR U.S. (ONLY)  
1-800-333-6556

Thank you for choosing ORION 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.

Please read this manual carefully and keep it handy. Following these simple operating instructions will insure the safe and efficient performance of this machine while simple maintenance procedures will guarantee a 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                         | 045223 |
| 2) SERIAL NUMBER                 |        |
| 3) SUBASSEMBLY ( see PART LIST ) |        |

**SAFETY:**

ORION'S stretch wrappers should be operated with caution and common sense as any other industrial equipment. To prevent injury and / or electrical shock, 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 performing any inspection, maintenance or repair work.

**ORION PACKAGING INC.**

# ORION MODEL H-78

045223

## Spiral Semi-Automatic Medium Duty High Profile

<b>Maximum Load Size:</b>	54"W x 54"L x 82"H (Recommended) 68"W x 68"L x 85"H (Theoretical)*
<b>Weight Capacity:</b>	3,500 lbs. Dynamic, 6,000 lbs. Static
<b>Utilities:</b>	115/1/60 15 Amp Service
<b>Turntable:</b>	48" x 48" Octagonal Formed Steel 5/16" Plate 3 Point Friction Drive Floating Caster Design 10 3/4" Height Floor to Top of Turntable
<b>Turntable Drive:</b>	0-10 RPM Variable Turntable Speed 1/3 HP DC Drive Motor Friction Drive Wheel
<b>Control Features:</b>	Electronic Film Force Control 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
<b>Film Delivery:</b>	20" Orion ECONO-Stretch Film Carriage Film Roll Diameter Compensation Electronic Film Tension Control Electromechanical Film Compensation End of Cycle Film Force Release
<b>Film Carriage Drive:</b>	#50 Roller Chain Carriage Lift 1/3HP Elevator Drive Motor Variable Speed SCR Control Structural "H" Beam Guidance UHMW** Carriage Guidance System
<b>Structural Features:</b>	Forklift Portable Base Design All Structural Steel Construction Film Roping Bar 6" x 12 lb./ft. "H" Beam

Estimated Shipping Weight: 1,050 lbs.

\*THEORETICAL IS BASED UPON REMOVAL OF THE ROPING BAR, AND REFLECTS MAXIMUM FILM WEB HEIGHT ATTAINABLE.

\*\*ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE

## **MACHINE UNLOADING INSPECTION & INSTALLATION**

### **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 or the conveyor, enter the forks under the frame.
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.
  - 2a. On the mongoose machines use the brackets welded on the top part of the machine.
3. Sit the machine down assuring uniform contact with the floor which is necessary to ensure correct and smooth operation.
  - 3a. Mongoose type machines (M66, M67) have to be attached on the bracket or on the stand (collapsible or anchored to the floor). The M55 has it's own supporting frame which allows the machine to stand independently.

### **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 rubber covering on the multistretch 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.

Items that are vulnerable to damage and must be inspected are as follows:

- motors and transmissions
- junction boxes
- electrical conduits
- proximity and limit switches
- photocells

3. Check under the turntable (H - series models only) 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 carriage to be sure that it is correctly aligned with the tower and 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 may be connected as specified on the diagrams supplied with the machine.

An electrical diagram is provided with each machine in the envelope attached to the panel box.

## **ASSEMBLY PROCEDURE**

The structural frames of the machine have to be installed on a levelled 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).

Conveyor sections (where applicable) have to be positioned, levelled\*\* and bolted to the floor. Any wiring which has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. It allows identification of the proper position of the infeed and outfeed conveyor sections. 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.

**CAUTION:** improper placement and alignment of the conveyor section(s) and/or electric photocells may lead to equipment malfunction and damage.

\* The tower deviation from vertical must not exceed 1/4" on the distance of 10 feet (angle: 0 degrees 6').

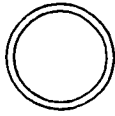
\*\* In the case of the conveyors, the roller deviation from the horizontal must not exceed 1/16 "on the distance 52" (angle: 0 degrees 4').



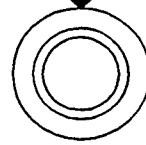
## **CONTROL PANEL**

In the case of the free standing panel (console) place it adjacent to the system and anchor firmly to the floor. Connect the liquid tide (rigid conduit) to the main junction box located on the wrapper main frame next to the tower (or tower home position in case of mongoose). The wires must be matched properly on both sides.

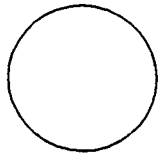
**START**



**FILM TENSION**



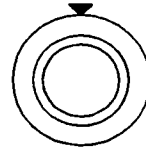
**STOP**



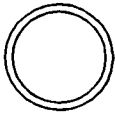
**SPIRAL UP UP/DOWN**



**TOP WRAPS**



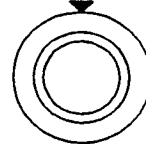
**TURNTABLE JOG**



**PHOTOCELL OFF ON**



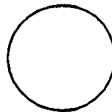
**BOTTOM WRAPS**



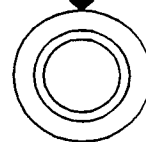
**CARRIAGE LOWER RAISE**



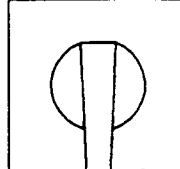
**POWER**



**CARRIAGE SPEED**



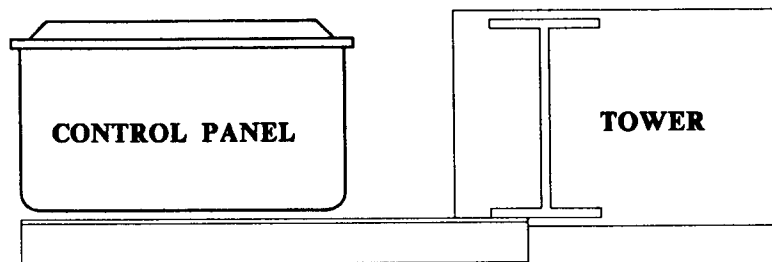
**POWER SWITCH**



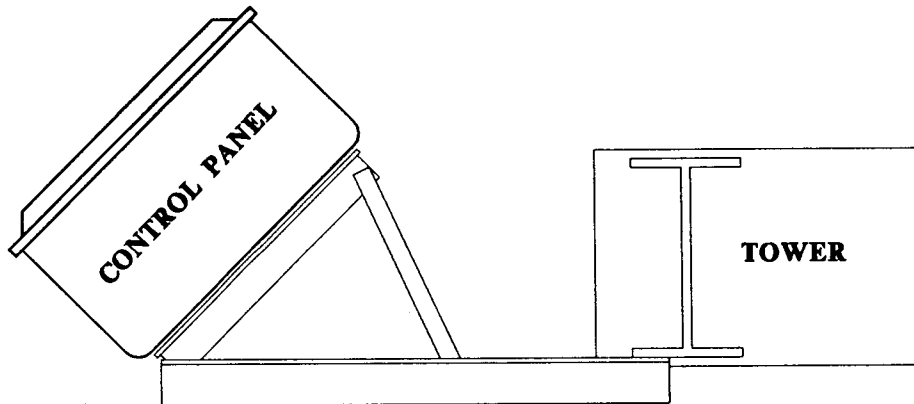
**WARNING!**  
DANGEROUS OR FATAL ELECTRIC SHOCKS MAY RESULT IF POWER TO THE MACHINE IS NOT DISCONNECTED BEFORE OPENING THE PANEL.  
DISCONNECT POWER TO THE MACHINE BEFORE OPENING PANEL.

PN-500014

**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 is attached to the tower's foot)**

## **CONTROL PANEL MOUNT TWO POSITIONS**

## **CYCLE CONTROLS**

The control panel layout is custom designed for each particular installation, however, common standard controls have been employed.

**CAUTION:** before proceeding be familiar with the EMERGENCY button and all functions, switches and pushbuttons.

## **POWER SWITCH**

The Power Switch has two settings:

ON - connects a power source to the machine (voltage depends on the machine type - see electrical diagram provided with the machine).

OFF - disconnects the power source.

## **START AND STOP SWITCHES (EMERGENCY STOP)**

The START switch is used to start the cycle once the load is on the turntable (or under the rotary arm). The cycle may be stopped at anytime by pressing the STOP button.

**NOTICE:** In case of emergency, use the STOP button which interrupts all the machine electrical circuits (except multistretch drive). If the STOP pushbutton is pressed in the middle of the cycle, the carriage and turntable may be returned to their home position by using the jog buttons before restarting the cycle.

## **SPIRAL WRAP SWITCH**

The SPIRAL WRAP switch has two positions:

UP - in this 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 this position the cycle will be completed after the load is wrapped in both the up and down directions.

NOTE: TOP WRAP FIRST (OPTIONAL)

The carriage raises faster at the beginning of the cycle to wrap the top of the load (see electrical diagram provided with the machine).

## **CARRIAGE CONTROL SWITCH**

The CARRIAGE CONTROL switch is a 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 attained.

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

## **TURNTABLE ( ROTARY TOWER ) JOG**

The turntable (rotary tower) jog switch is a pushbutton which will rotate the turntable (rotary arm) in a clockwise direction (as viewed from the top) when the switch is held depressed. When the switch is released the turntable (rotary tower) will stop. The switch is inoperative during the wrap cycle.

## **PHOTOCELL SWITCH**

The photocell switch has two settings:

**ON** - when turned ON, the photocell instructs the carriage to 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 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 when the top limit switch has been activated.

## **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 usefull range for most of the films used by our customers, 8 to 10 as a very high range which may break some films).

**NOTE:** Lighter loads may require lower tension settings then heavier loads.

Film tension is controlled through the dancer bar system. Occasionally the feed back proximity sensor may need some adjustment. Adjustment of feed back is shown on drawing # 001

Adjustment instructions:

- remove the carriage cover
- unbolt the two nuts holding the proximity switch -item # 1
- turn the proximity switch - item # 2 until the moment when the motor starts to turn (or hums)
- tighten on the nuts securing the proximity switch.

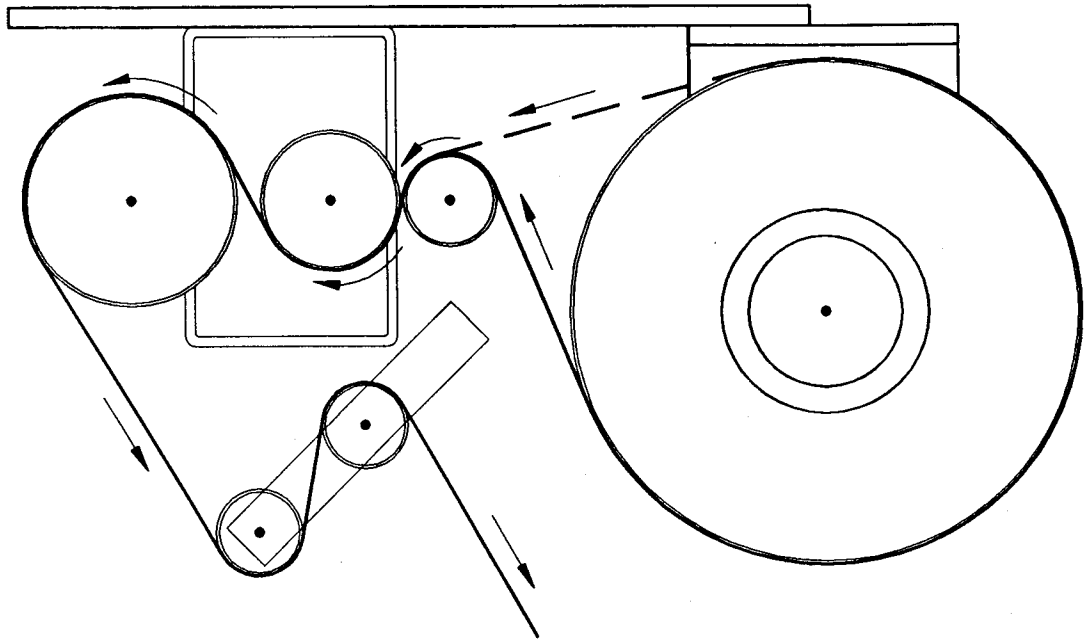
**NOTE:** The condition in which the motor hums but does not turn must be maintained even after all elements are tightened. If not, the adjustment procedure must be repeated.

## **TO LOAD THE FILM....**

The film roll can be loaded on the mandrel of the carriage 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. Put the roll of film on the mandrel and press down to insure penetration of spikes into the cardboard center of the film roll.
3. In the case of automatic machines, install the film cap on top of the roll to prevent upward movement.
4. Introduce the roping end of the film between the shafts of all rollers (as shown on the dwg.) and pull to pass it around all three rollers (pressure roller and both rubber rollers).
5. Pass the film between the two dancer (aluminium) rollers (in certain applications the film has to be passed around one or two additional position aluminium rollers).
6. When the film feeding is completed - turn the power switch ON
7. 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 or into the clamp mechanism (if machine is fully automatic).

The system is now ready to begin the first wrapping cycle.  
Proceed to page titled **SYSTEM START UP**.



**WARNING:**

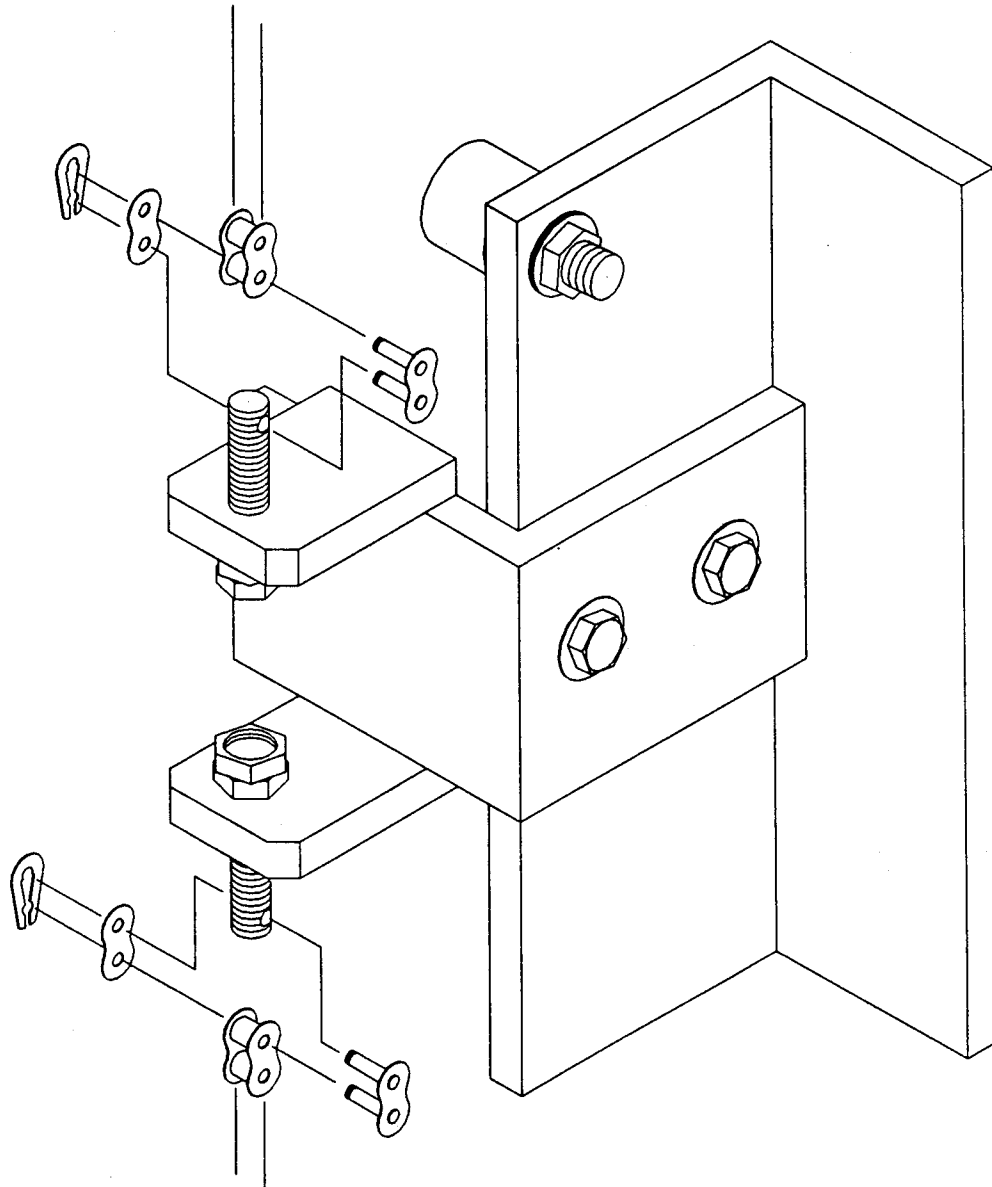
**DISCONNECT POWER BEFORE FEEDING FILM**

**FILM FEEDING PATTERN  
FOR STANDARD CARRIAGE**



**ATTENTION:**

**WHEN MOUNTING THE CARRIAGE LIFT CHAIN,  
PLEASE ENSURE, THAT THE CONNECTING  
LINK'S PIN IS INSERTED FROM THE TOWER SIDE**



**CHAIN TENSIONER ASSEMBLY**

## **SYSTEM START-UP**

Notice: It is advisable to test-run the equipment with several pallet loads before make the attempt to wrap with film. Please position a worker at the EMERGENCY STOP push button.

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

- pallet sensor eyes (automatic systems only)
- load height stop photoswitch (on the carriage)
- conveyor acceleration/deceleration
- turntable speed & jog speed
- turntable speed acceleration/deceleration
- turntable home position (rotary tower home position)
- film tail treatment devices (automatic systems).

## **MACHINE WRAPPING TEST**

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).

When there is no photocell, verify the top limit switch position.

## MACHINE MAINTENANCE

### REDUCER OIL CHANGE

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 25000 hours of operation, whichever ever 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:

<b>Manufacturer</b>	<b>Lubricant</b>
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 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

### 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 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.

## **CHAIN MAINTENANCE**

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

With time the chain will tend to stretch. A loose elevator and turntable (rotary arm) chain should be tightened at the chain tensioner, or by moving the reducer on the mounting plate.

## **CAM FOLLOWER MAINTENANCE**

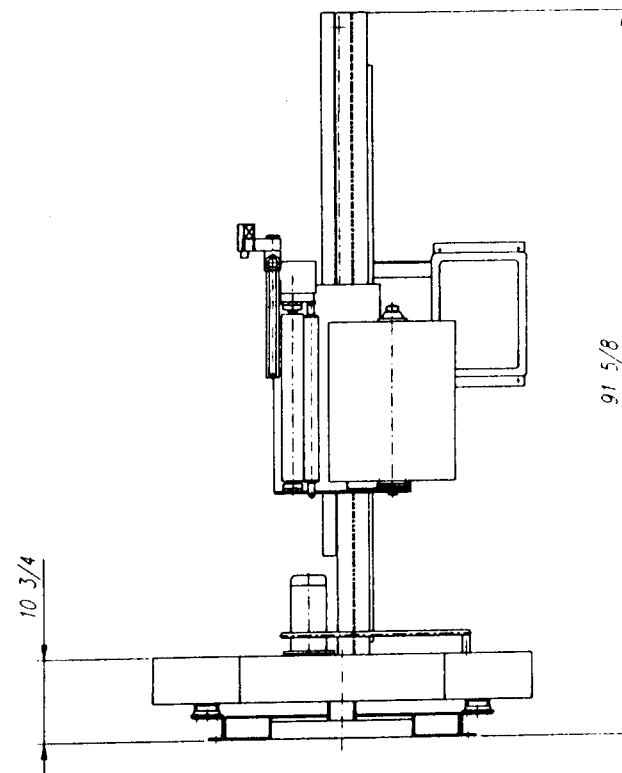
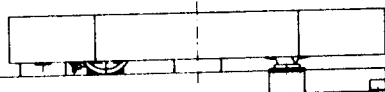
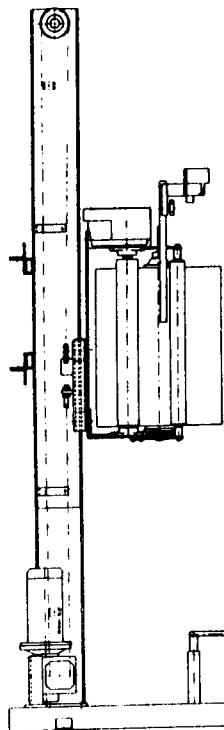
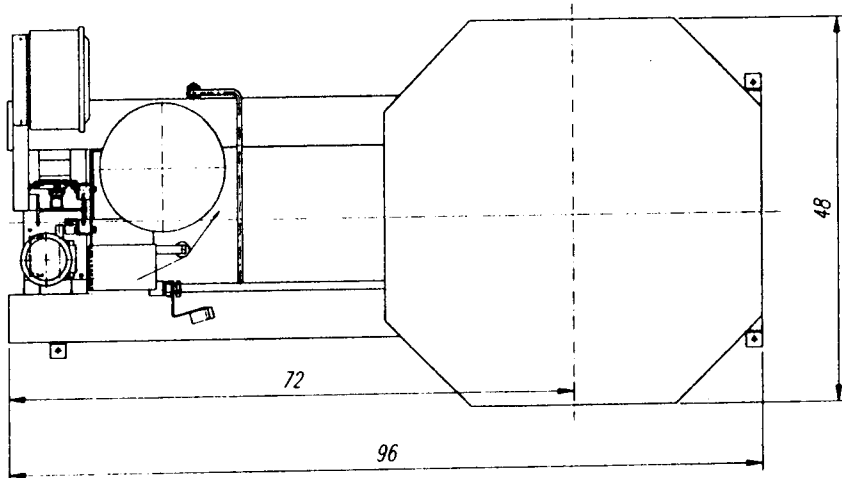
The cam followers behind the carriage have deep grease pockets and do not need frequent relubrication. The portion of the tower on which the cam followers run, should be cleaned and regreased every 300 hours of operation. If the machine operates in a dusty or corrosive environment the tower should be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

**SEMI-AUTOMATIC  
STANDARD ASSEMBLY  
PART LIST**


**Note :**

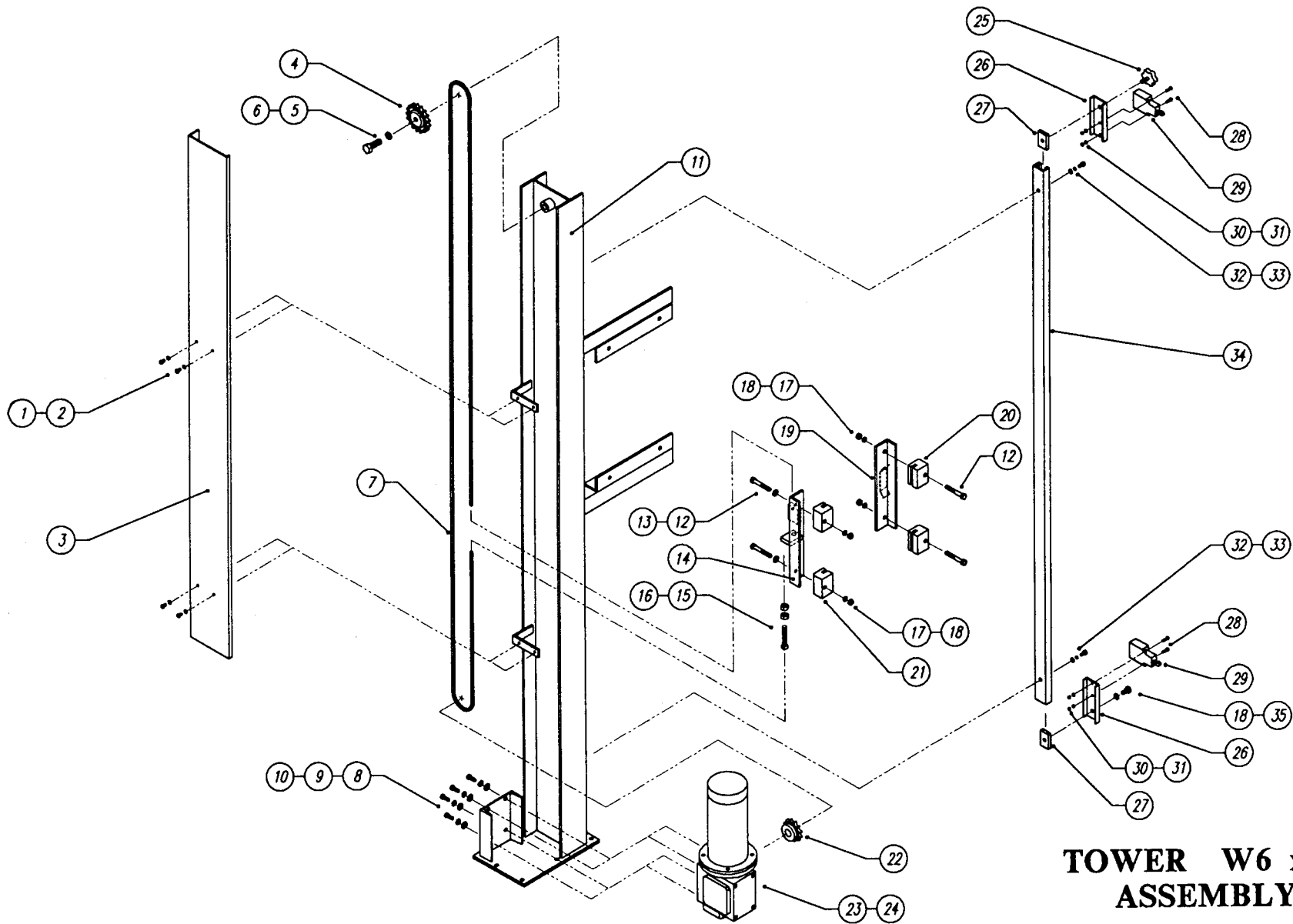
**\* Quantity listed in order of part number**

**\*\* The names given to the parts are generic**



HIGH PROFILE WRAPPER H78/9 - LAYOUT

 <b>orion</b> PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL. (514) 667-9769	DATE JUN 22-94	SCALE 1 : 16
	DRAWN BY MARIA MIERNIK	MACHINE TYPE H78/9
	CHECKED BY M W SORUCKI	DRAWING SIZE B
	ASSEMBLY DWG.	JOB No STD



**TOWER W6 x 12  
ASSEMBLY**

UPDATED FEB-23-94 # 404840

**TOWER W 6 x 12 ASS'Y  
PART LIST**

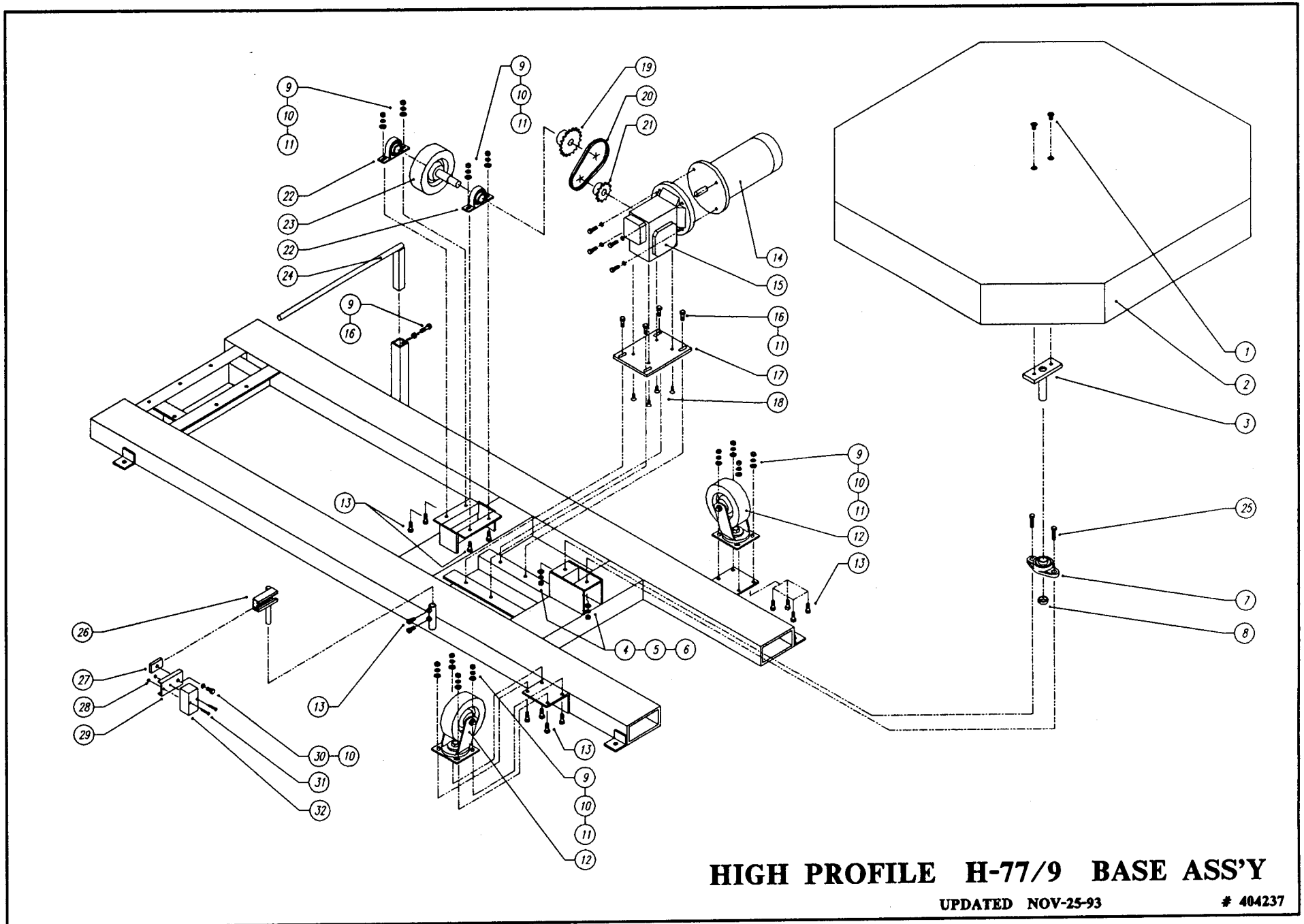
Updated Jun-30-94

Dwg. # 404840

NO.	ORION PART #	DESCRIPTION	Q- TY
1.	012049	PAN PHILL SCREW	4
2.	011393	SPRING WASHER	4
3.	404941	TOWER CHAIN GUARD	1
4.	010008	IDLER SPROCKET	1
5.	012847	HEX HEAD SCREW	1
6.	012721	SPRING WASHER	1
7.	010009	CHAIN	1
8.	012723	HEX HEAD SCREW	4
9.	012724	SPRING WASHER	4
10.	012725	FLAT WASHER	4
11.	404285	TOWER W6 x 12	1
12.	010401	HEX HEAD SCREW	4
13.	010948	FLAT WASHER	4
14.	406429	FILM CARRIAGE ATTACHMENT	1
15.	400892	TIGHTENER SCREW	1
16.	011266	HEX NUT	2
17.	011128	HEX NUT	4
18.	011390	SPRING WASHER	4
19.	405083	SLIDE BLOCK ALIGNING ANGLE	1
20.	405057	SLIDE BLOCK (TOP)	2
21.	405058	SLIDE BLOCK (BOTTOM)	2
22.	010094	SPROCKET	1
23.	010344	REDUCER	1
24.	010059	ELECTR. MOTOR	1
25.	010092	KNOB	1
26.	260816	LIMIT SWITCH HOLDER	2



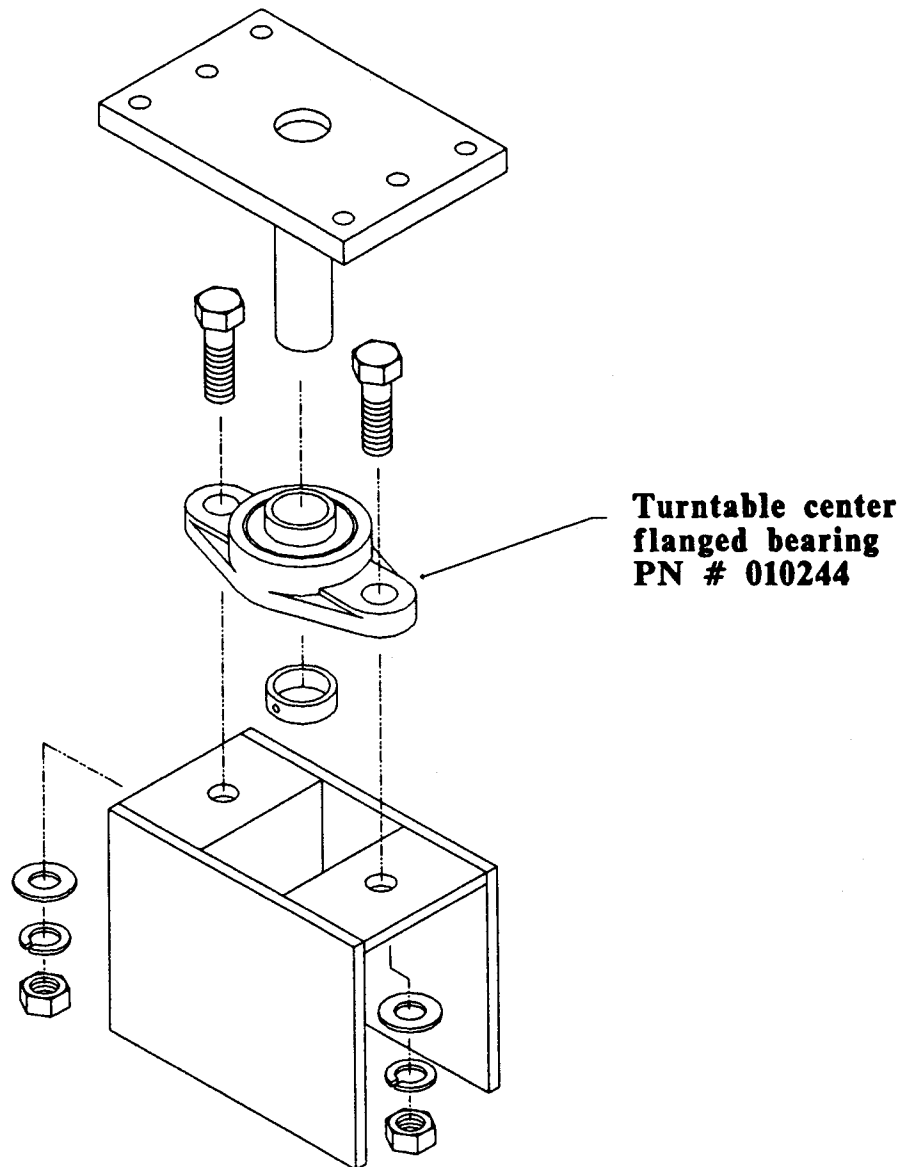
27.	220518	CHANNEL GUIDE	2
28.	012690	PAN PHILL SCREW	4
29.	010123	LIMIT SWITCH	2
30.	012726	HEX NUT	4
31.	012743	SPRING WASHER	4
32.	010257	SOCKET HEAD CAP SCREW	2
33.	012221	FLAT WASHER	2
34.	220794	LIMIT SWITCH CHANNEL	1
35.	012747	HEX HEAD SCREW	1



**HIGH PROFILE H-77/9 BASE ASS'Y**

UPDATED NOV-25-93

# 404237



## **WARNING !**

**When replacing turntable center flanged bearing (# 010244), please make sure that both bolts are placed head-up as shown on the drawing above.**

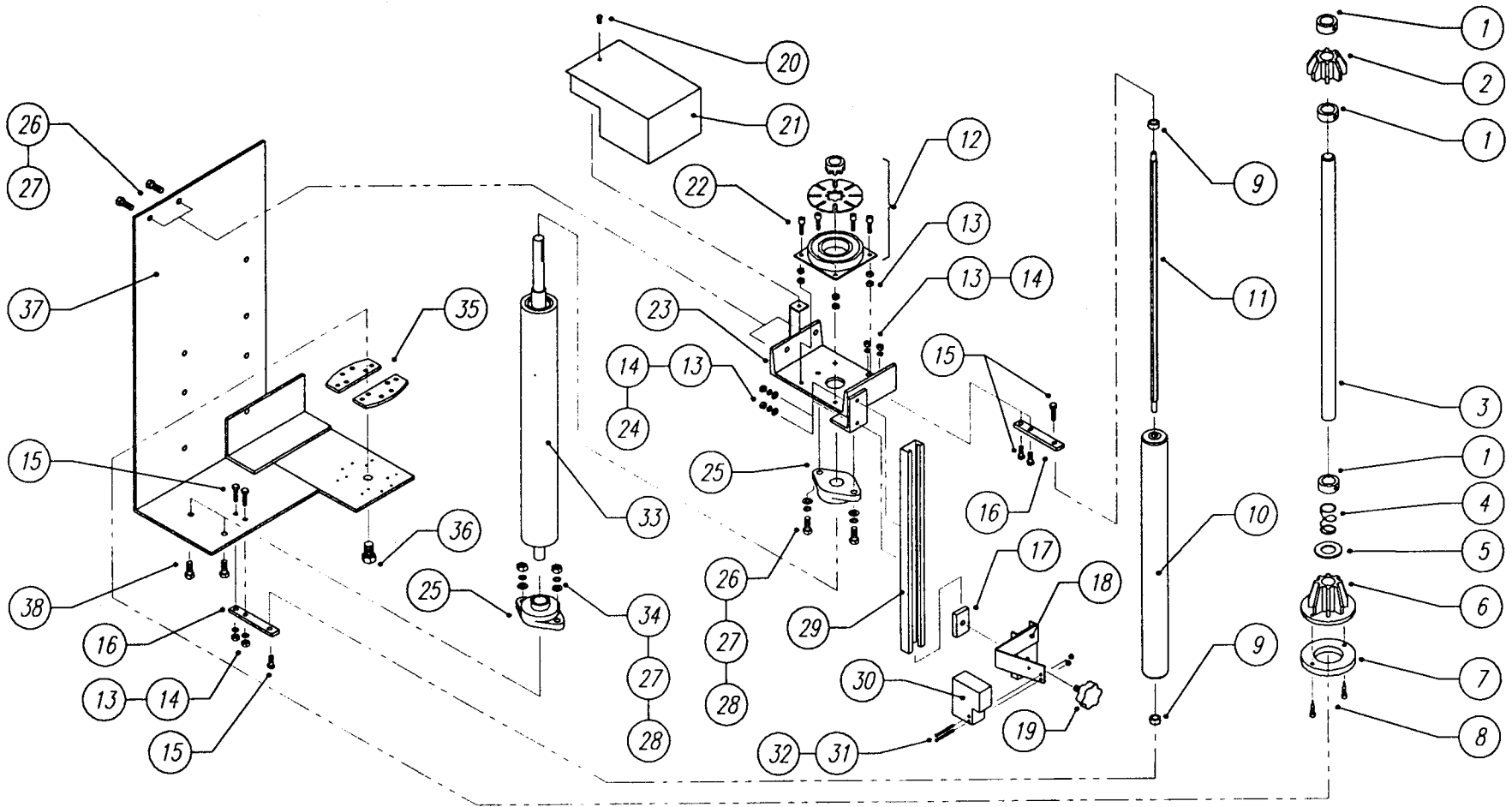
**Incorrect installation may affect clear rotation and cause damage to the machine.**

**FOR HIGH PROFILE H-66, H-77 & H-88  
BASE ASSEMBLY**

## HIGH PROFILE H78/9 BASE ASS'Y - PART LIST

DWG # 404237 updated March-29-94

NO.	PART #	DESCRIPTION	QTY
1.	010278	FLAT SOCKET CAP SCREW	2
2.	403023	TURNTABLE 48", OCTAGONAL	1
3.	404267	TURNTABLE SHAFT	1
4.	011266	HEX NUT	2
5.	012583	SPRING WASHER	2
6.	012584	FLAT WASHER	2
7.	010244	2-BOLT FLANGED BEARING	1
8.	010052	COLLAR	1
9.	011128	HEX NUT	17
10.	011390	SPRING WASHER	16
11.	010948	FLAT WASHER	16
12.	010876	SWIVEL CASTER	2
13.	010293	HEX HEAD SCREW	14
14.	010059	EL. MOTOR	1
15.	010093	REDUCER	1
16.	012406	HEX HEAD SCREW	5
17.	250237	REDUCER BASE	1
18.	012693	FLAT SOCKET CAP SCREW	4
19.	010235	SPROCKET	1
20.	010009	CHAIN	1
21.	010989	SPROCKET	1
22.	010043	PILLOW BLOCK BRG	2
23.	402542	DRIVE WHEEL 6" DIA. W/ SHAFT	1
24.	403516 403517	ROPING BAR (ECONOSTR W/FILM) ROPING BAR (ECONOSTR W/NET)	1
25.	010287	HEX HEAD SCREW	2
26.	401465	PROXIMITY SWITCH CHANNEL	1
27.	220518	CHANNEL GUIDE	1
28.	012726	HEX NUT	2
29.	260817	PROXIMITY SWITCH HOLDER	1
30.	012274	HEX HEAD SCREW	1
31.	012858	PAN PHILL SCREW	2
32.	010739	PROXIMITY SWITCH	1



**20" ECONOSTRETCH  
PART # 405732 - ASS'Y**

UPDATED JUN-01-94 # 404993

**20" ECONOSTRETCH  
PART # 405732 ASS'Y - PART LIST**

Updated Jun-01-94

Dwg. # 404993

NO.	ORION PART #	DESCRIPTION	Q-TY
1.	010052	COLLAR	3
2.	240100	TOP SPOOL	1
3.	400536	FILM MANDREL, 23 1/4" LG	1
4.	010891	COMPRESSION SPRING	1
5.	010199	FLAT WASHER	1
6.	240101	BOTTOM SPOOL	1
7.	402795	BRAKE DISK	1
8.	010886	STUD	2
9.	404967	PLASTIC TUBE SPACER	2
10.	402789	ALUMINUM ROLLER	1
11.	403612	PRESSURE ROLLER SHAFT	1
12.	010251	BRAKE	1
13.	012689	HEX NUT	12
14.	011393	SPRING WASHER	6
15.	012475	HEX HEAD SCREW	6
16.	404955	ROLLER BRACKET	2
17.	220518	CHANNEL GUIDE	1
18.	230721	PHOTOCELL BRACKET	1
19.	010092	BLACK KNOB	1
20.	012049	PAN PHILL SCREW	3
21.	220871	SMALL CARRIAGE BRAKE GUARD	1
22.	010277	SOCKET HEAD CAP SCREW	4
23.	404953	TOP MOUNTING PLATE	1
24.	012221	FLAT WASHER	2
25.	010042	FLANGE BEARING	2

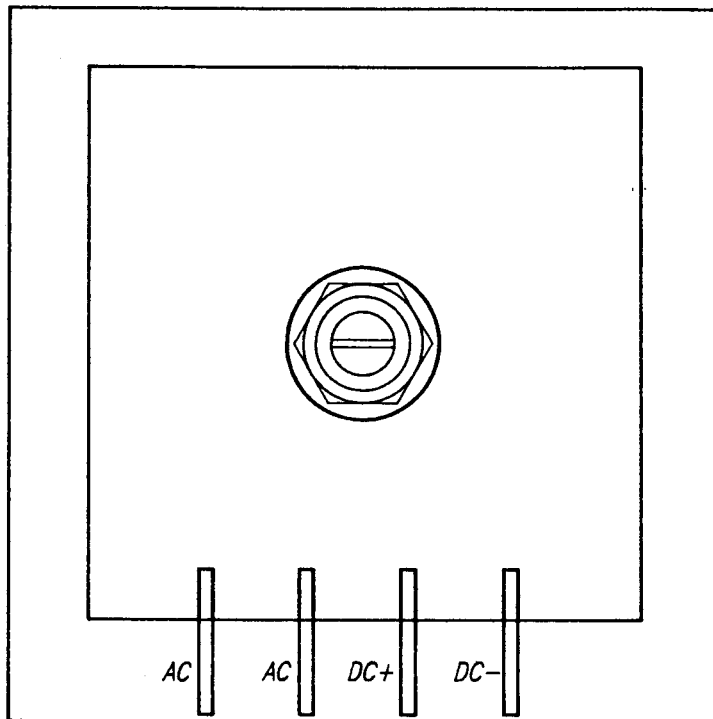
NO.	ORION PART #	DESCRIPTION	Q-TY
26.	010293	HEX HEAD SCREW	2
27.	011390	SPRING WASHER	6
28.	010948	FLAT WASHER	4
29.	404956	PHOTOCELL CHANNEL	1
30.	011495	PHOTOCELL	1
31.	012754	PAN PHILL SCREW	2
32.	012726	HEX NUT	2
33.	404954	RUBBER ROLLER, 2 3/4" DIA.	1
34.	011128	HEX NUT	2
35.	010049	BRAKE PAD	2
36.	011366	HEX HEAD SCREW	1
37.	405733	CARRIAGE FRAME FOR H78/9	1
	405734	CARRIAGE FRAME FOR L78/9	
38.	012752	HEX HEAD SCREW	2

## ELECTRICAL BOARDS' CHART FOR ORION STRETCHWRAPPERS

	168-5	168-A	336-7	750 MX	850 M	850 C	155-5	850 DM
L-78, H-78		X					X	X
L-77, H-77		X					X	X
M-66, M-67		X	X		X		X	
L-66, H-66		X	X		X		X	
M-55, L-55, H-55		X	X		X		X	
M-44, L-44, H-44	X		X	X			X	
*M-44,*L-44,*H-44	X		X	X				

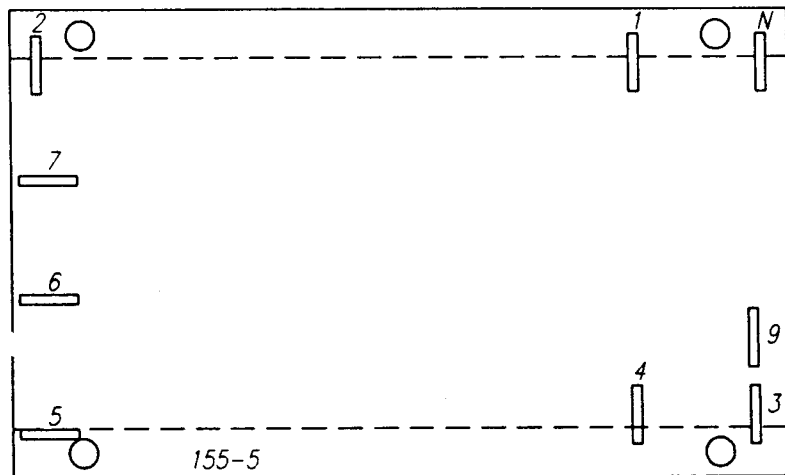
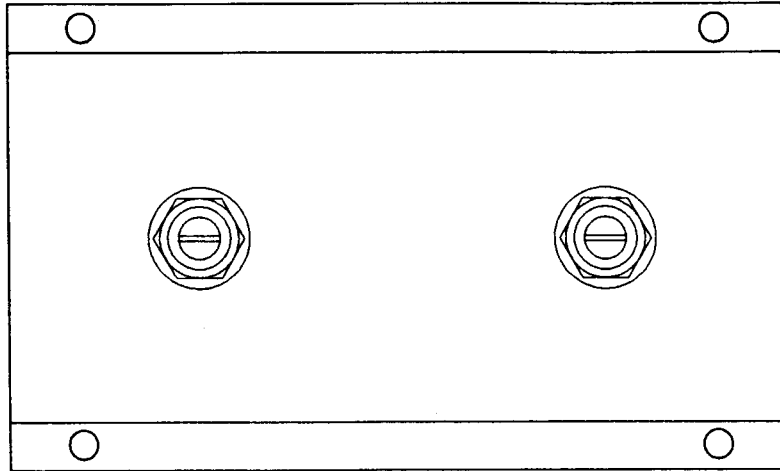
\* - PROCESSOR





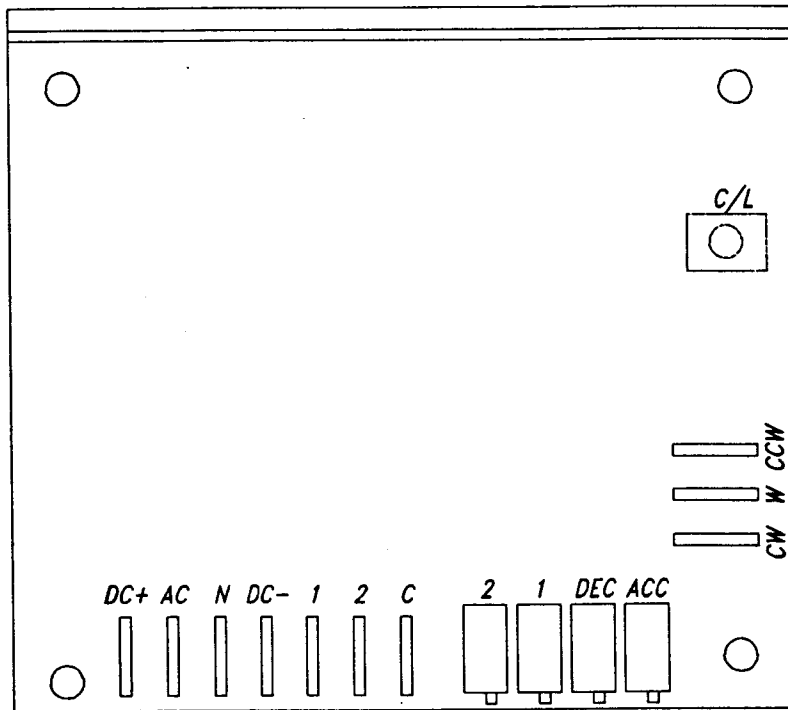
AC: AC INPUT  
AC: AC INPUT  
DC+: ARMATURE CONTROL  
DC-: ARMATURE CONTROL

168-A  
CARRIAGE 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



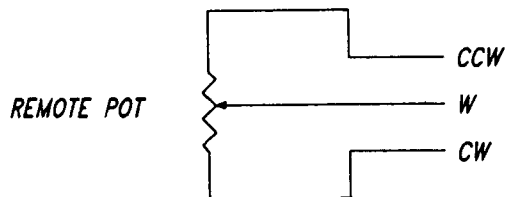
2-ND SPEED (HIGH)  
 REMOTE ADJUSTMENT.  
 (IF NOT USED - PUT JUMPER  
 BETWEEN "CW" & "W").

TERMINALS:

DC+: ARMATURE CONTROL  
 AC: AC (HOT) POWER INPUT  
 N: AC NEUTRAL  
 DC-: ARMATURE CONTROL  
 C: CONTROL COMMON  
 2: SPEED CONTROL (HIGH)  
 1: SPEED CONTROL (JOG)

POTENTIOMETERS:

2: HIGH SPEED ADJUSTMENT.  
 1: JOG SPEED ADJUSTMENT.  
 A: ACCELERATION ADJUSTMENT.  
 D: DECELERATION ADJUSTMENT.  
 C/L: CURRENT LIMIT.

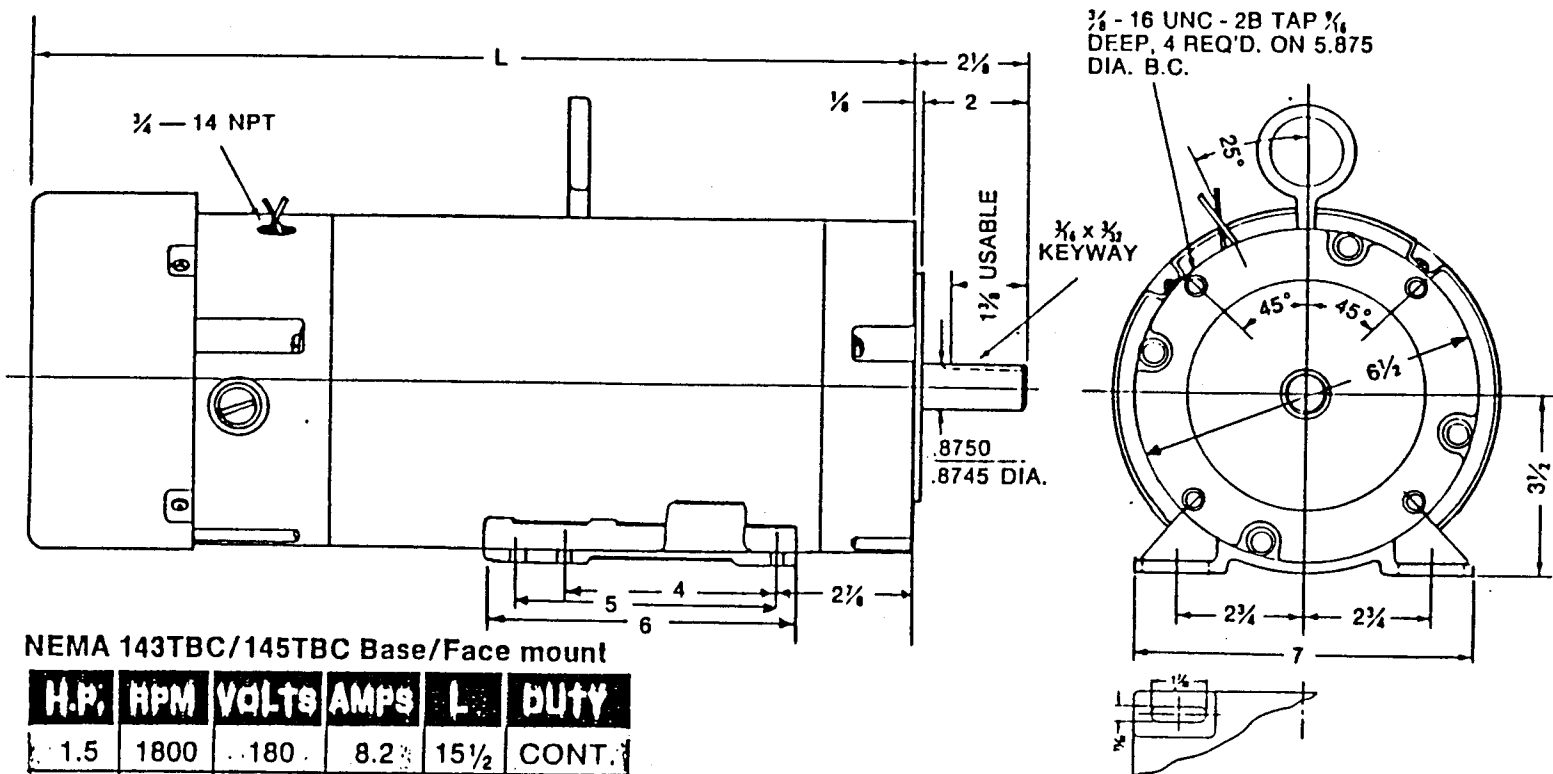


850DM 2 SPEED DC  
 MOTOR CONTROL BOARD

# APPENDIX

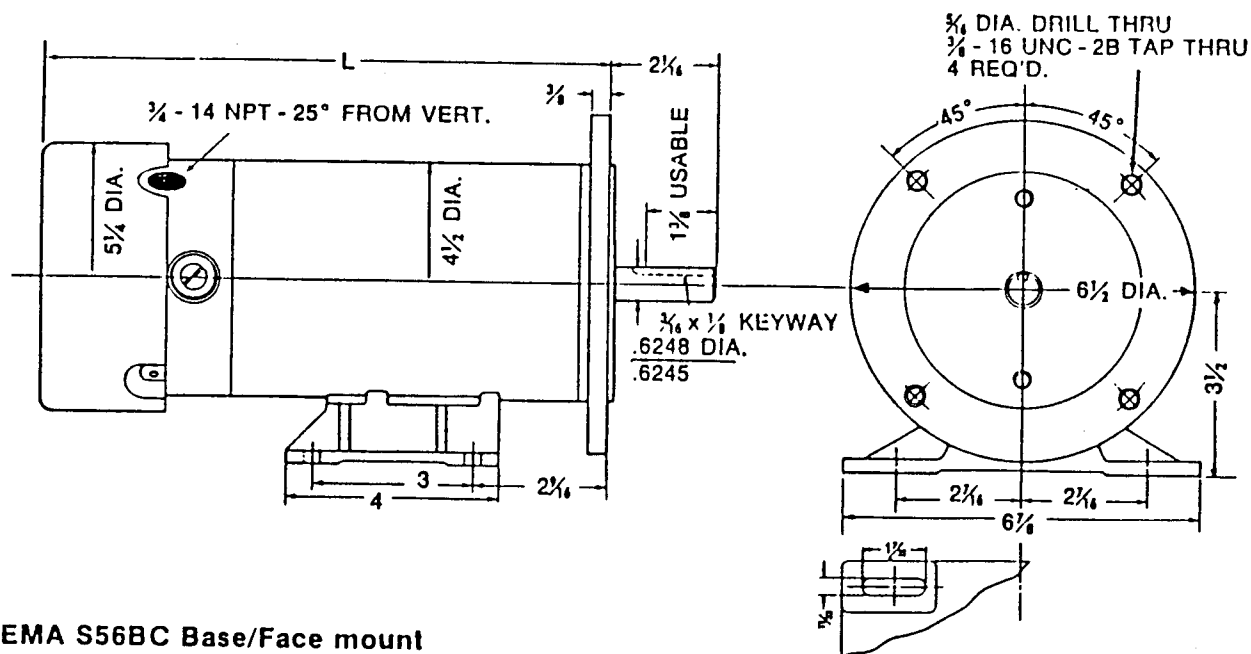
# Motor dimensions

## TEFC P/M motor



NEMA 143TBC/145TBC Base/Face mount

H.P.	H.P.M.	VOLTS	AMPS	L	DUTY
1.5	1800	180	8.2	15 $\frac{1}{2}$	CONT.
2	1800	180	11.6	16 $\frac{1}{2}$	CONT.



NEMA S56BC Base/Face mount

180 V.

H.P.	H.P.M.	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.	H.P.M.	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.

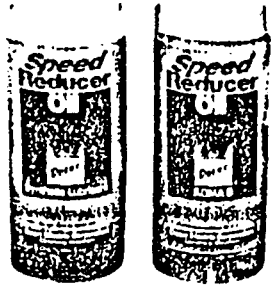
# lubrication

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.

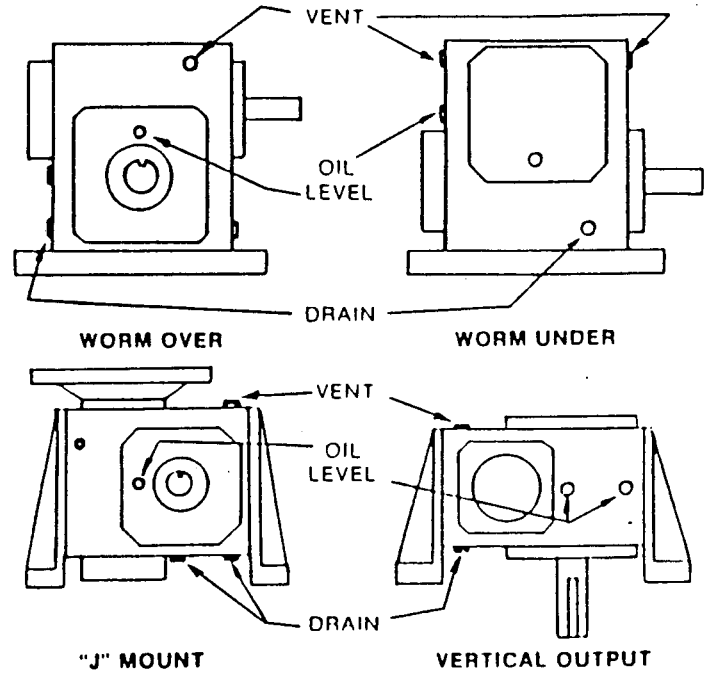
Contact DEC Service Dept. for order information.

### OIL CAPACITIES\*

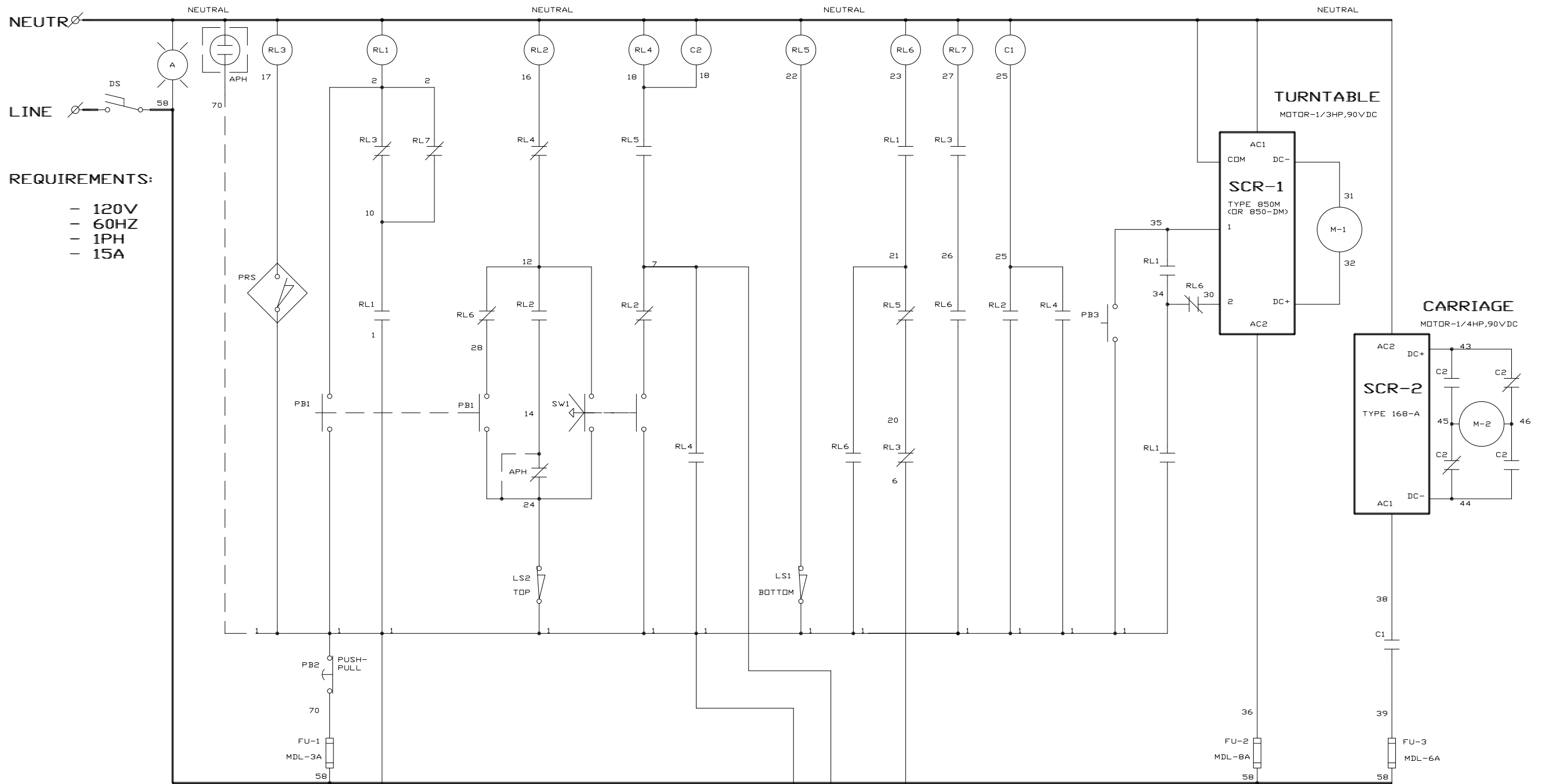
UNIT TYPE	UNIT SERIES				
	133	175	200	282	321
Worm Over	14	20	27	49	84
Worm Under	17	22	28	49	73
Vertical Output	10	15	20	37	63
"J" Mount	13	18	23	38	63

\*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.



**REQUIREMENTS:**

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

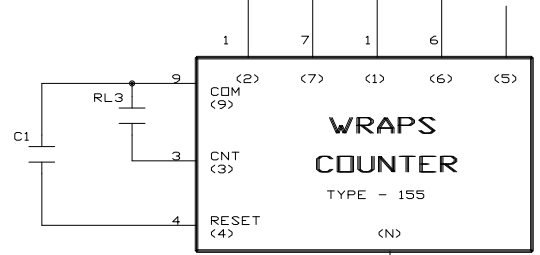
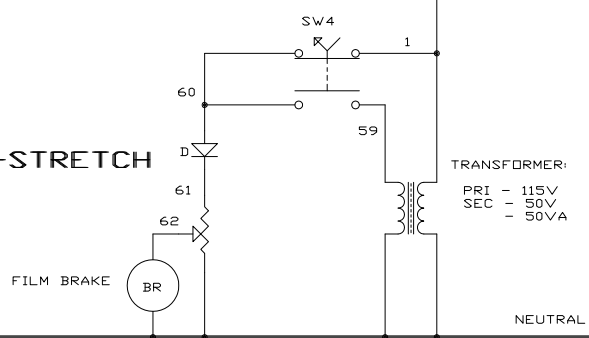
**TURNTABLE**  
MOTOR-1/3HP,90VDC

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

**LEGEND**

- DS - MAIN POWER OFF/ON
- SW1 - CARRIAGE UP/DOWN JOG - SW.
- SW2 - FILM TENSION LOW/HIGH - SS.
- LS1 - CARRIAGE BOTTOM LIMIT SWITCH
- LS2 - CARRIAGE TOP LIMIT SWITCH
- LS3 - MOTOR ENABLE/DISABLE LIMIT SWITCH
- PB1 - START PB
- PB2 - EMERGENCY STOP PB
- PB3 - TURNTABLE JOG PB
- PRS - TURNTABLE ALIGNMENT PROXIMITY SWITCH
- APH - CARRIAGE AUTOHEIGHT PH. (OPTIONAL)
- C1 - CARRIAGE DRIVER POWER CONTACTOR
- C2 - CARRIAGE REVERSE CONTACTOR

**ECONO-STRETCH**



<p>ORION PACKAGING INC. 2270 INDUSTRIEL BOUL., LAVAL QUEBEC, CANADA, H7S 1P9 TEL:(450) 667-9769</p>	<p><b>ORION PACKAGING INC.</b></p> <p>2270 INDUSTRIEL BLVD LAVAL, QUE., CANADA H7S 1P9 TEL: (450) 667-9769 FAX: (450) 667-6320 APPR. BY: J.B.S. DRAWN BY: J.B.S.</p>		<p>SCALE: <b>NTS</b></p>
	<p>TITLE: <b>H&amp;L78-9</b></p>		
<p>SIZE: <b>C</b></p>	<p>DOCUMENT NO: JOB # 3802</p>	<p><b>300 642</b></p>	<p>REV: <b>1</b></p>
<p>DATE: NOV-03-1993</p>	<p>SHEET: 1 OF 1</p>		<p>BASE:</p>
<p>FILENAME: HL78-9.DWG</p>		<p>FILENAME:</p>	