ORION
PACKAGING INC.
MONTREAL

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

O R I O N P A C K A G I N G I N C.

L-66/7S

OWNER'S MANUAL

ORION PACKAGING INC.
2270 Industrial
Laval, Quebec
H7S-1P9

Telephone: (514) 667-9769
Fax: (514) 667-6320

ORION PACKAGING INC.

DISTRIBUTOR PRICE LIST - EFFECTIVE AUGUST 28, 1991

072923

ORION MODEL L 66/7S

Spiral Semi-Automatic Medium Heavy Duty Low Profile With Surrounding Table

Maximum Load Size	48"W x 48"L x 84"H (Recommended) 54"W x 54"L x 87"H (Theoretical)*
Weight Capacity	4,000 lbs. dynamic, 20,000 lbs. static
Utilities	115/1/60 20 Amp Electrical Service
Turntable	59" Diameter 3/8" Steel Plate Steel Cam Follower Support System Self Lubricating System with Reservoir 3" Height Floor to Top of Turntable
Turntable Drive	0-12 RPM Variable Turntable Speed 1/2 HP DC Drive Motor #50 Roller Chain Drive with Tensioner Electronic Soft Start Positive Alignment Feature
Control Feature	Electronic Film Force Control Separate Top and Bottom Wrap Selectors Variable Speed Film Carriage Control Auto-Height Photocell w/On/Off Switch Film Carriage Raise/Lower Switch Turntable Jog Push Button Spiral Up or Up/Down Cycles Current Overload Protection NEMA 12 Electrical Enclosure
Film Delivery	20" Orion Multistretch Power Prestretch Electronic Film Tension Control End of Cycle Film Force Release Full Authority Film Dancer Bar #40 Chain/Sprocket Stretch Ratio Control 1/3 HP DC/SCR Film Drive
Film Carriage Drive	#50 Roller Chain Carriage Lift 1/3 HP Elevator Drive Motor Variable Speed SCR Control Precision Cam Follower Tracking

Structural Features	Forklift Portable Base Design Unique Steel Ring Cam Follower Support Steel Protection Ring Surrounding Table All Structural Steel Construction Film Roping Bar 8" x 18 lb/Ft "H" Channel Mast

Estimated Shipping Weight 1600 lbs.

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

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

SEMI-AUTOMATIC MACHINE OPTIONS

AUTO-HEIGHT PHOTOCELL

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").....

ORION PACKAGING INC.
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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.

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

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.....

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

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).....

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

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)

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

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, Adjustable 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.

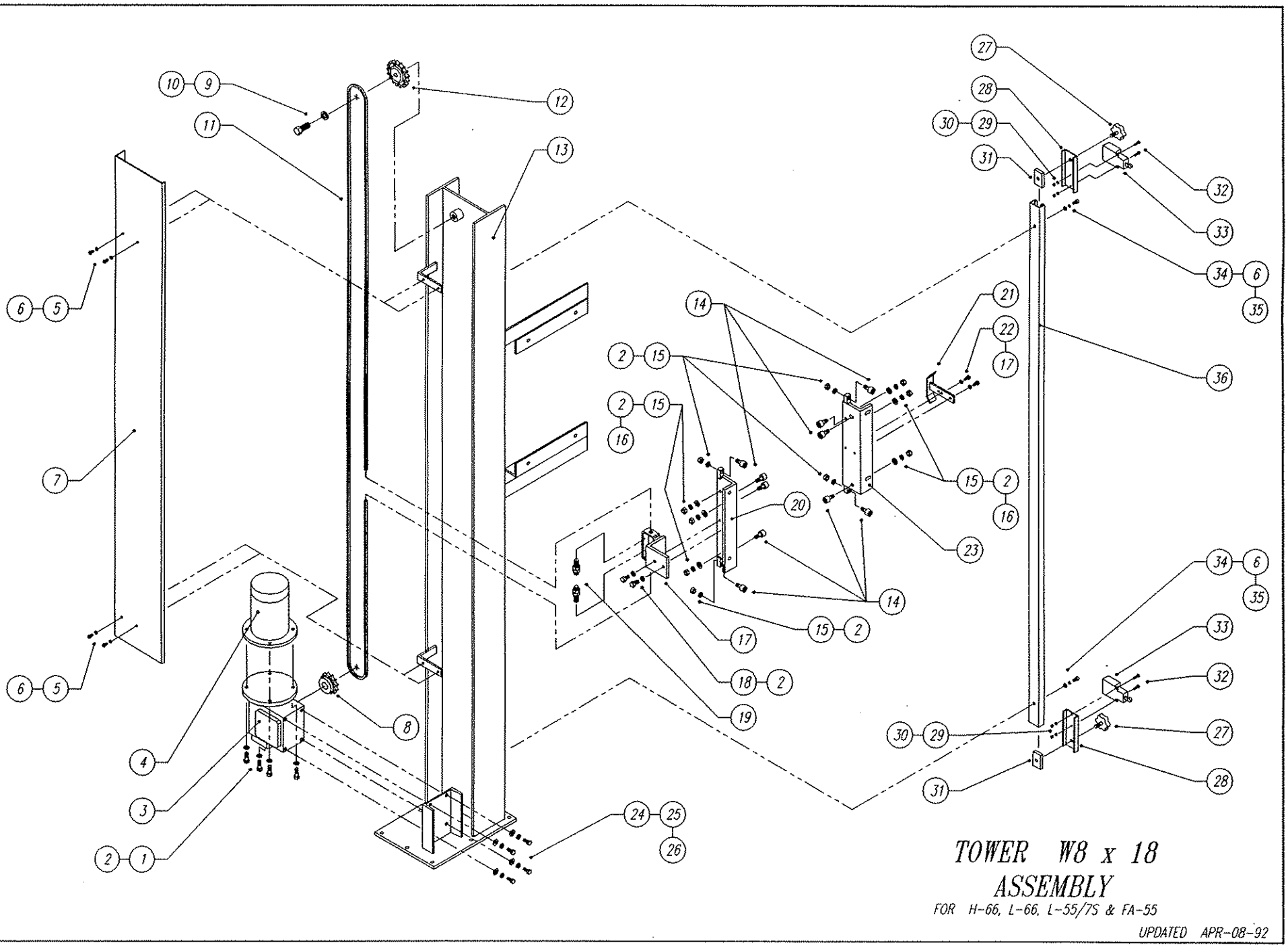
Turntable Mechanical Home Position Lock.....
(Pneumatic, Positive Lock)

PART LIST

FOR TOWER W8 x 18 ASSEMBLY

updated April-07-92

NO.	ORION PART NO.	DESCRIPTION	Q-TY
1.	010293	HEX HEAD SCREW	4
2.	011390	SPRING WASHER	16
3.	010344	REDUCER	1
4.	010059	ELECTR. MOTOR f/ L-66 & H-66	1
	010036	ELECTR. MOTOR f/ L-55/7s, H-55 & FA-55	1
5.	012049	PAN PHILL	3
6.	011393	SPRING WASHER	7
7.	012734	TOWER CHAIN COVER	1
8.	010343	SPROCKET	1
9.	010329	HEX HEAD SCREW	1
10.	012721	SPRING WASHER	1
11.	010009	CHAIN	1
12.	010008	IDLER SPROCKET	1
13.	012738	TOWER	1
14.	010067	CAM FOLLOWER	10
15.	012582	HEX NUT	10
16.	010948	FLAT WASHER	6
17.	011142	CHAIN TENSIONER	1
18.	012274	HEX HEAD SCREW	2
19.	010387	CHAIN TENSION SCREW	2
20.	010386	LEFT CARRIAGE HOLDER	1
21.	012739	LIMIT SWITCH ACTUATOR	1
22.	012722	HEX HEAD SCREW	2
23.	010339	RIGHT CARRIAGE HOLDER	1
24.	012723	HEX HEAD SCREW	4
25.	012724	SPRING WASHER	4
26.	012725	FLAT WASHER	4
27.	010092	KNOB	2
28.	010087	LIMIT SWITCH HOLDER	2
29.	012726	HEX NUT	2
30.	012743	SPRING WASHER	4
31.	011153	CHANNEL GUIDE	2
32.	012690	PAN PHILL	4
33.	010123	LIMIT SWITCH	2
34.	010257	SOCKET HEAD CAP SCREW	4
35.	012221	FLAT WASHER	2
36.	010335	LIMIT SWITCH CHANNEL	1

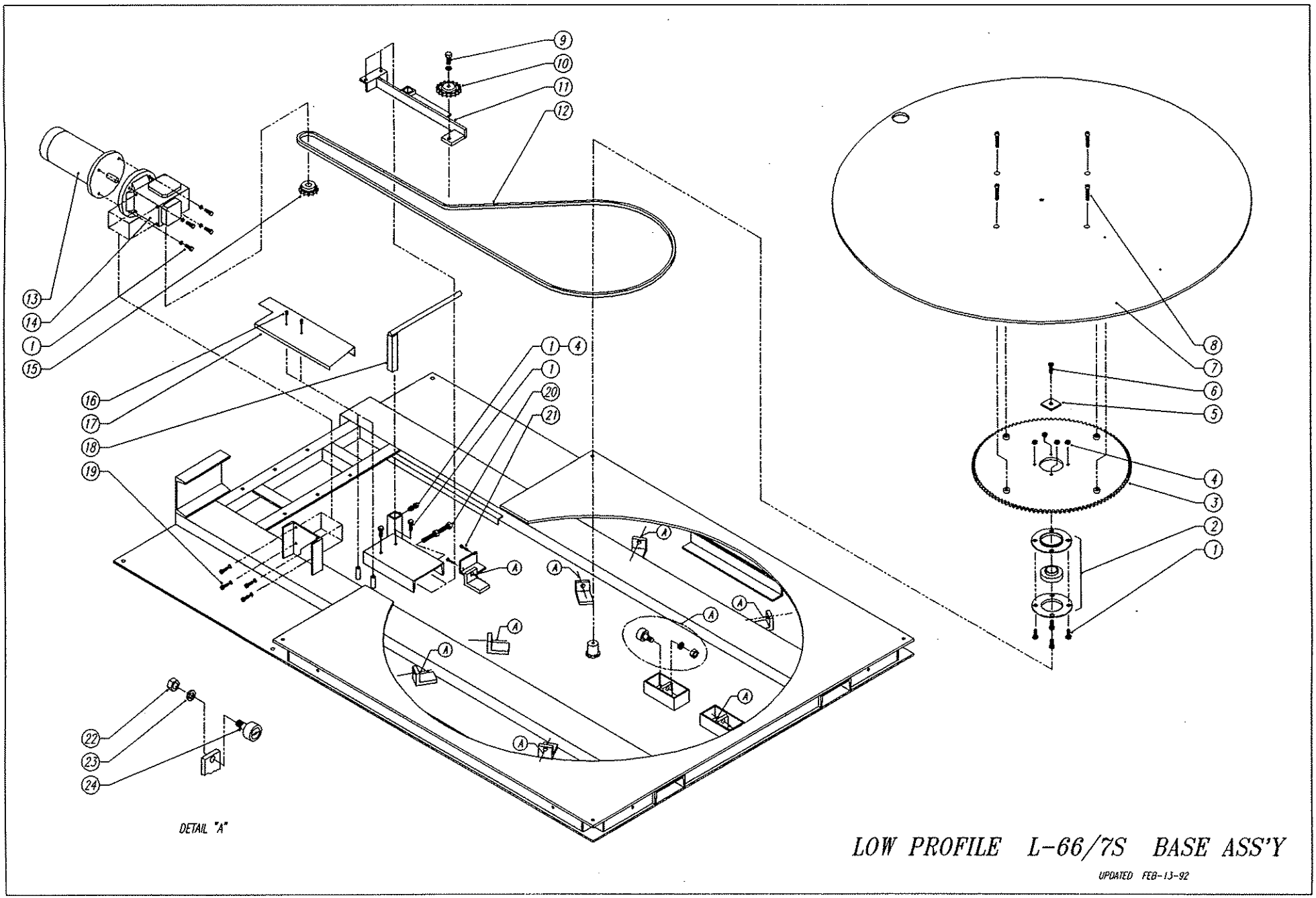

TOWER W8 x 18
ASSEMBLY
FOR H-66, L-66, L-55/7S & FA-55
UPDATED APR-08-92

PART LIST

FOR LOW PROFILE L-66/7S BASE ASS'Y

updated Feb-14-92

NO.	ORION PART NO.	DESCRIPTION	Q-TY
1.	010293	HEX HEAD SCREW	11
2.	010007	CENTRAL BEARING UNIT	1
3.	010006	TURNTABLE SPROCKET	1
4.	012477	HEX NUT	5
5.	010898	PLATE	1
6.	012591	FLAT SOCKET CAP SCREW	1
7.	012596	TURNTABLE DISK	1
8.	010319	SOCKET HEAD CAP SCREW	4
9.	010329	HEX HEAD SCREW	1
10.	010008	IDLER SPROCKET	1
11.	012667	CHAIN TENSIONER	1
12.	010009	CHAIN	1
13.	010036	ELECTR. MOTOR	1
14.	010093	REDUCER	1
15.	010435	SPROCKET	1
16.	012049	PAN PHILL	2
17.	012595	CHAIN GUARD	1
18.	012594	ROPING BAR	1
19.	010382	HEX HEAD SCREW	4
20.	010233	CHAIN TENSION SCREW	1
21.	012481	PAN PHILL	2
22.	011322	HEX NUT	9
23.	012601	LOCK WASHER	9
24.	012598	CAM FOLLOWER	9



DETAIL "A"

LOW PROFILE L-66/7S BASE ASS'Y

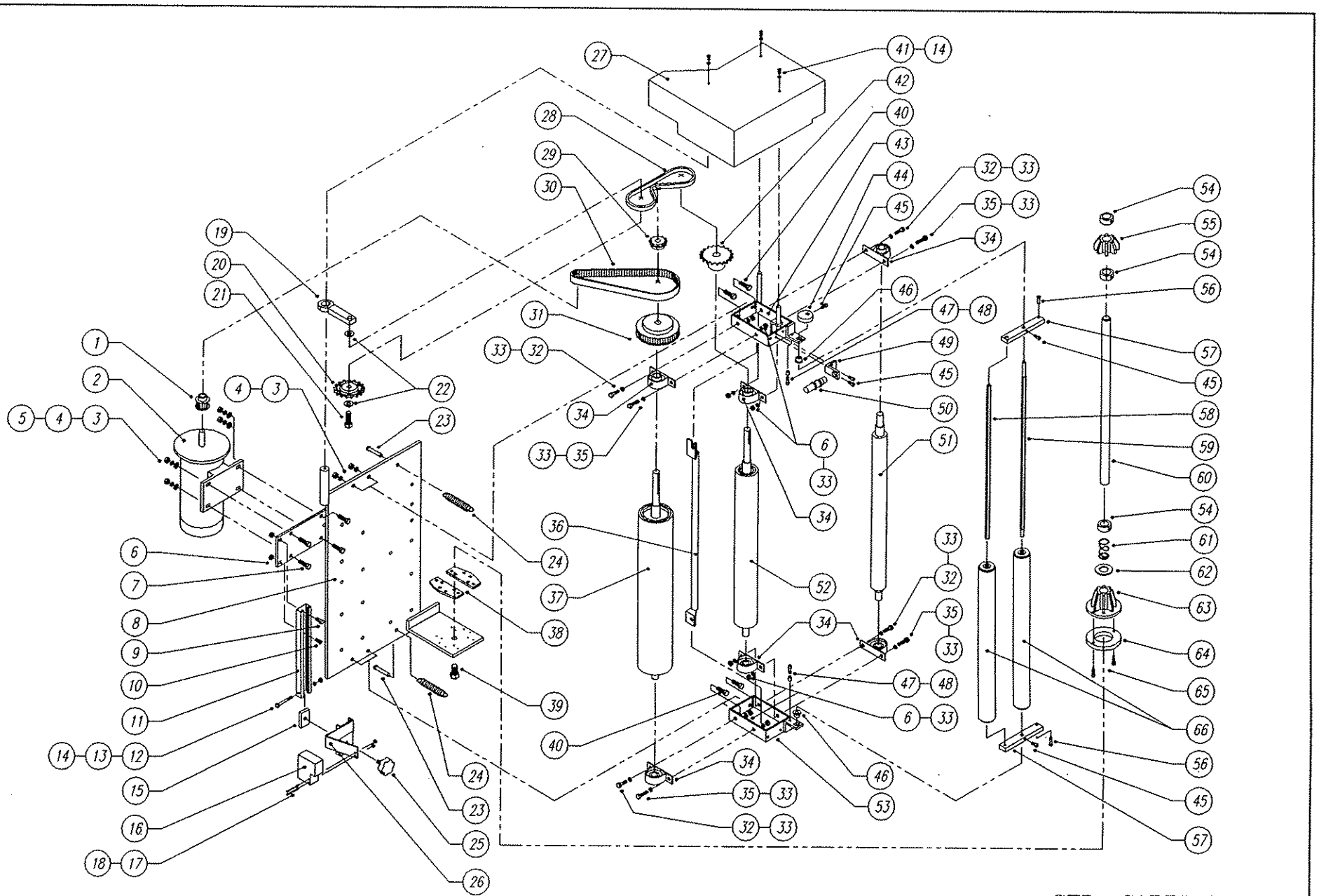
UPDATED FEB-13-92

STANDARD CARRIAGE ASS'Y - PART LIST

updated May-28-92

NO.	ORION PART NO.	DESCRIPTION	Q-TY
1.	011283	TIMING BELT PULLEY	1
2.	010059	ELECTR. MOTOR, FOR H,L-66	1
	010036	ELECTR. MOTOR, FOR H,L-55,44	1
3.	011128	HEX NUT	8
4.	011390	SPRING WASHER	8
5.	010948	FLAT WASHER	4
6.	012751	HEX NUT	10
7.	012752	HEX HEAD SCREW	4
8.	010825	BACK PLATE F/20" FILM	1
	011430	BACK PLATE F/30" FILM	1
9.	010382	HEX HEAD SCREW	1
10.	012693	FLAT SOCKET CAP SCREW	1
11.	011152	PHOTOCELL CHANNEL F/20" FILM	1
	011432	PHOTOCELL CHANNEL F/30" FILM	1
12.	012753	HEX HEAD SHOULDER SCREW	1
13.	012689	HEX NUT	1
14.	011393	SPRING WASHER	4
15.	011153	CHANNEL GUIDE	1
16.	011495	PHOTOCELL	1
17.	012754	PAN PHILL SCREW	2
18.	012726	HEX NUT	2
19.	011142	CHAIN TENSIONER	1
20.	011297	IDLER SPROCKET	1
21.	012482	HEX HEAD SCREW	1
22.	012584	FLAT WASHER	2
23.	012755	CLEVIS PIN	2
24.	010047	TENSION SPRING	2
25.	010092	KNOB	1
26.	012090	PHOTOCELL BRACKET	1
	012091	PHOTOCELL BRACKET F/R.H. ASS'Y	1
27.	011755	CARRIAGE COVER	1
28.	010583	CHAIN	1
29.	010975	DRIVE SPROCKET	1
30.	011151	TIMING BELT	1
31.	011003	PULLEY	1
32.	012723	HEX HEAD SCREW	4
33.	012725	FLAT WASHER	16
34.	010157	PILLOW BLOCK BEARING	6
35.	012757	HEX HEAD SCREW	4
36.	011412	SAFETY BAR F/20" FILM	1
	011413	SAFETY BAR F/30" FILM	1
37.	011406	RUBBER ROLLER 4" DIA. F/20" FILM	1
	011407	RUBBER ROLLER 4" DIA. F/30" FILM	1
38.	010049	BRAKE PADS	2
39.	012758	HEX HEAD SCREW	1
40.	010293	HEX HEAD SCREW	4

41.	012049	PAN PHILL SCREW	3
42.	011454	DRIVE SPROCKET	1
43.	011369	TOP BRACKET	1
44.	011477	PROXIMITY SENSOR CAM	1
45.	010257	SOCKET HEAD CAP SCREW	5
46.	010058	BRONZE BUSHING	2
47.	010286	SOCKET HEAD SHOULDER CAP SCREW	2
48.	010946	PLASTIC HOSE	2
49.	011476	PROXIMITY SENSOR BRACKET	1
50.	011470	PROXIMITY SENSOR	1
51.	011410	PRESSURE ROLLER F/20" FILM	1
	011411	PRESSURE ROLLER F/30" FILM	1
52.	011408	RUBBER ROLLER 2.66"DIA. F/20"FILM	1
	011409	RUBBER ROLLER 2.66"DIA. F/30"FILM	1
53.	011416	BOTTOM BRACKET	1
54.	010052	COLLAR	3
55.	010051	TOP SPOOL	1
56.	012756	CLEVIS PIN	2
57.	011370	LEVER	2
58.	011419	SHORT SHAFT F/20" FILM	1
	011420	SHORT SHAFT F/30" FILM	1
59.	011421	LONG SHAFT F/20" FILM	1
	011422	LONG SHAFT F/30" FILM	1
60.	010050	MANDREL SHAFT F/20" FILM	1
	011436	MANDREL SHAFT F/30" FILM	1
61.	010891	COMPRESSION SPRING	1
62.	010199	FLAT WASHER	1
63.	010838	BOTTOM SPOOL	1
64.	010887	MANDREL BRAKE DISK	1
65.	010886	SPIKE	2
66.	011371	DANCER ROLLER F/20" FILM	2
	011431	DANCER ROLLER F/30" FILM	2

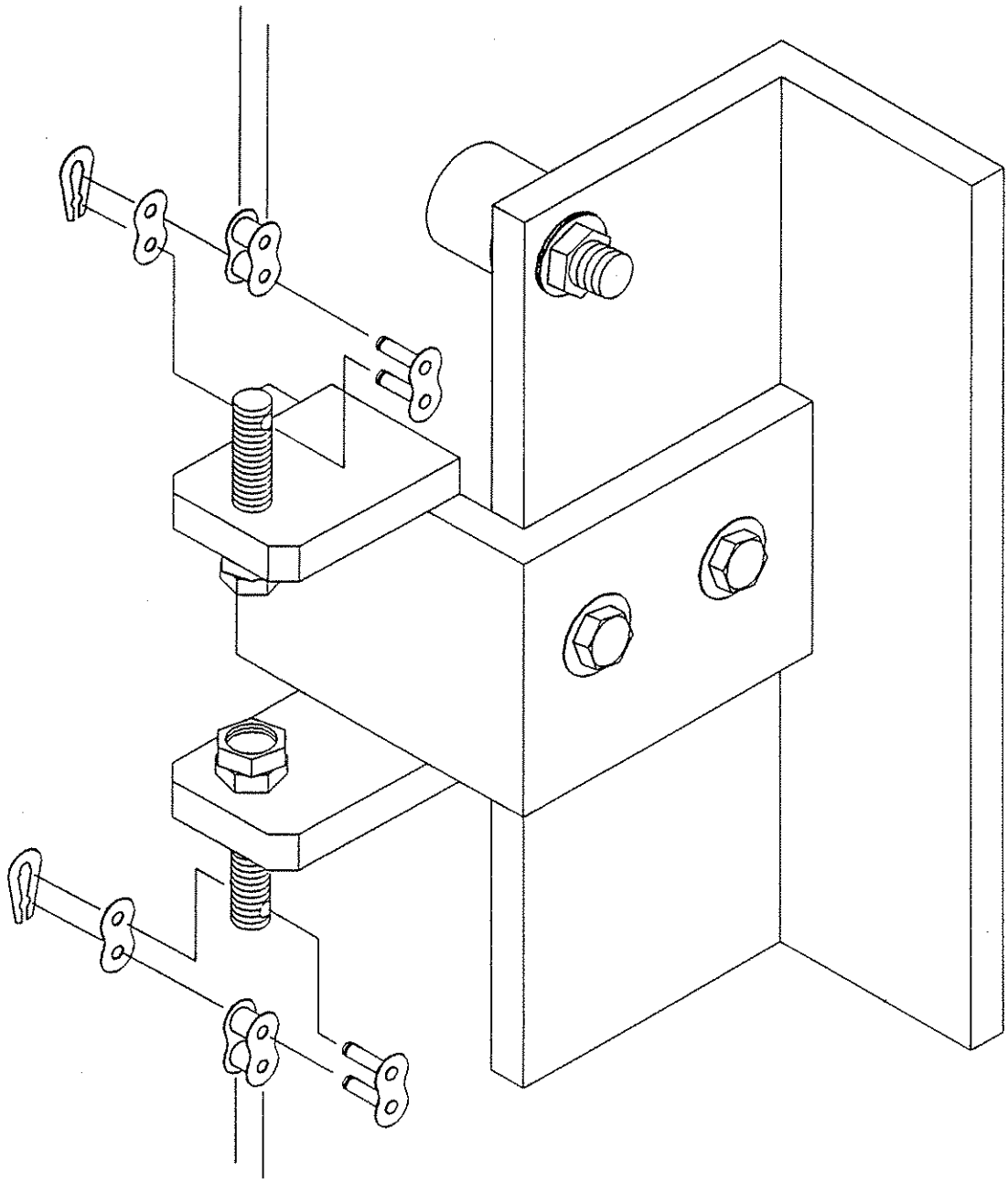


STD. CARRIAGE ASSEMBLY

UPDATED MAY-29-92

ATTENTION:

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



CHAIN TENSIONER 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.

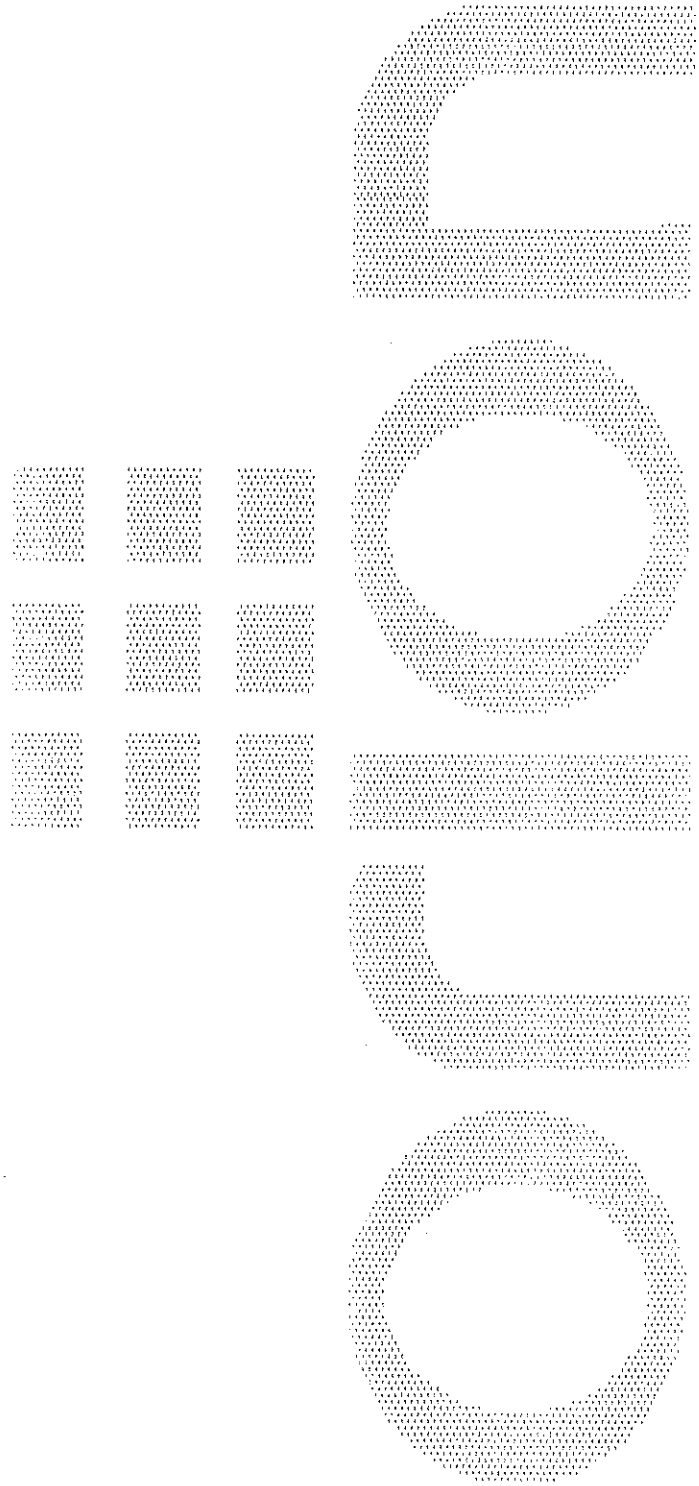
Items that are vulnerable to damage and must be inspected are the motor and transmission housings and connections at the base of the tower, and on the carriage, the photoswitch on the carriage, and the roping bar and stands.

5.2 Machine Installation

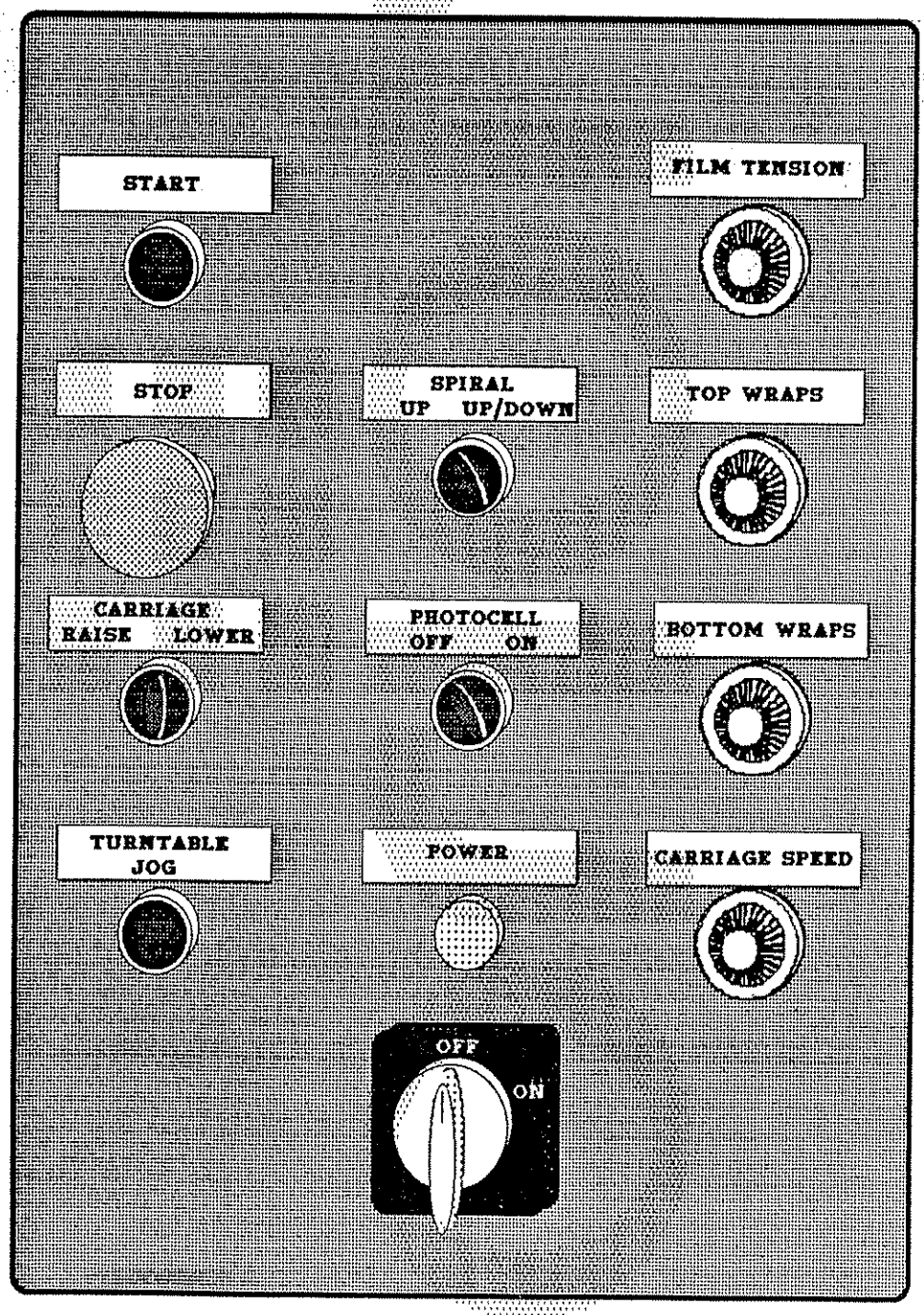
After the visual inspection has been performed, the customer is required to provide the electrical power requirements as outlined in the specifications (sections 1, 2, and 3 of this manual).

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).



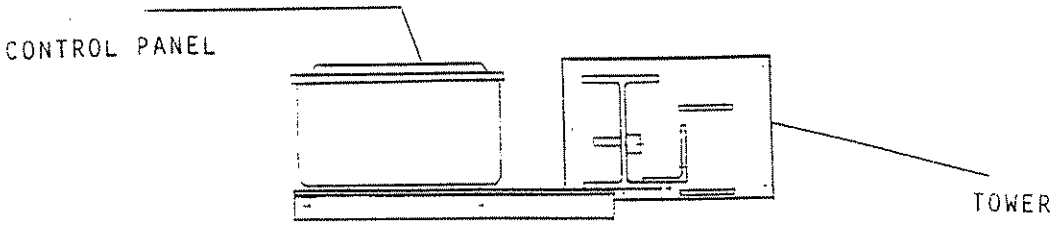
6. MACHINE CONTROLS



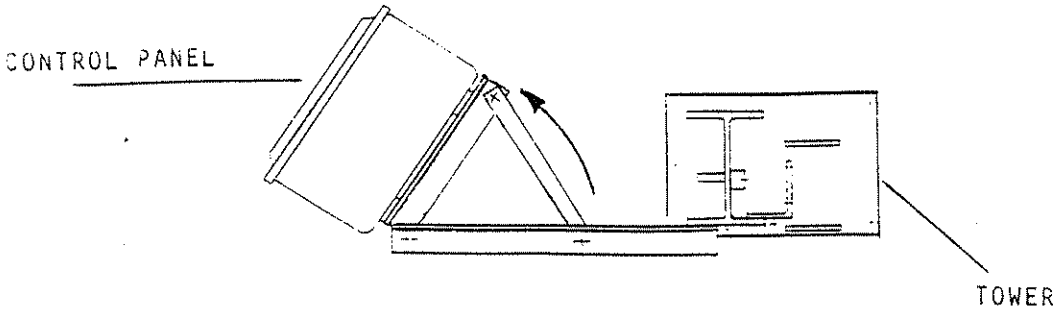
NEW, TWO POSITION CONTROL PANEL MOUNT

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 depresed. 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 positon 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.

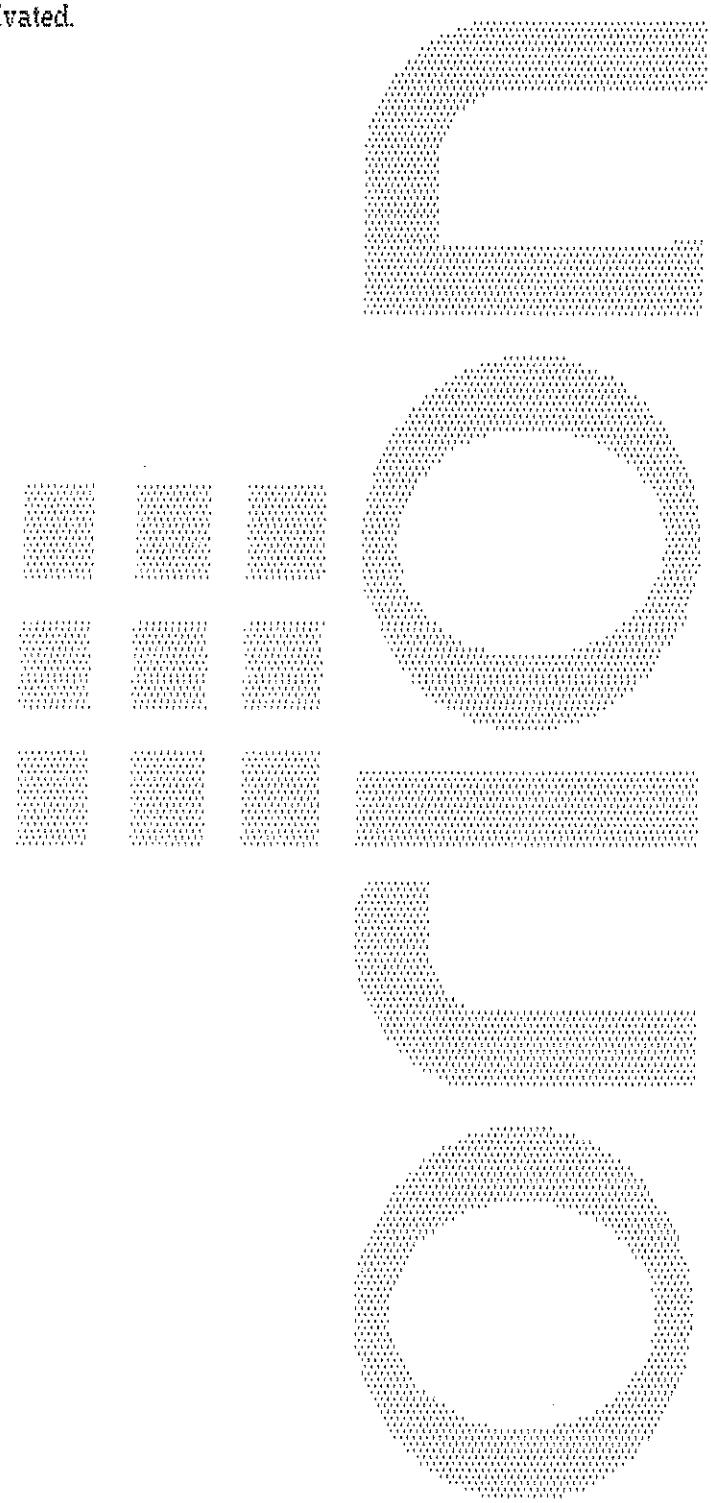
6.6 Photocell Switch

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

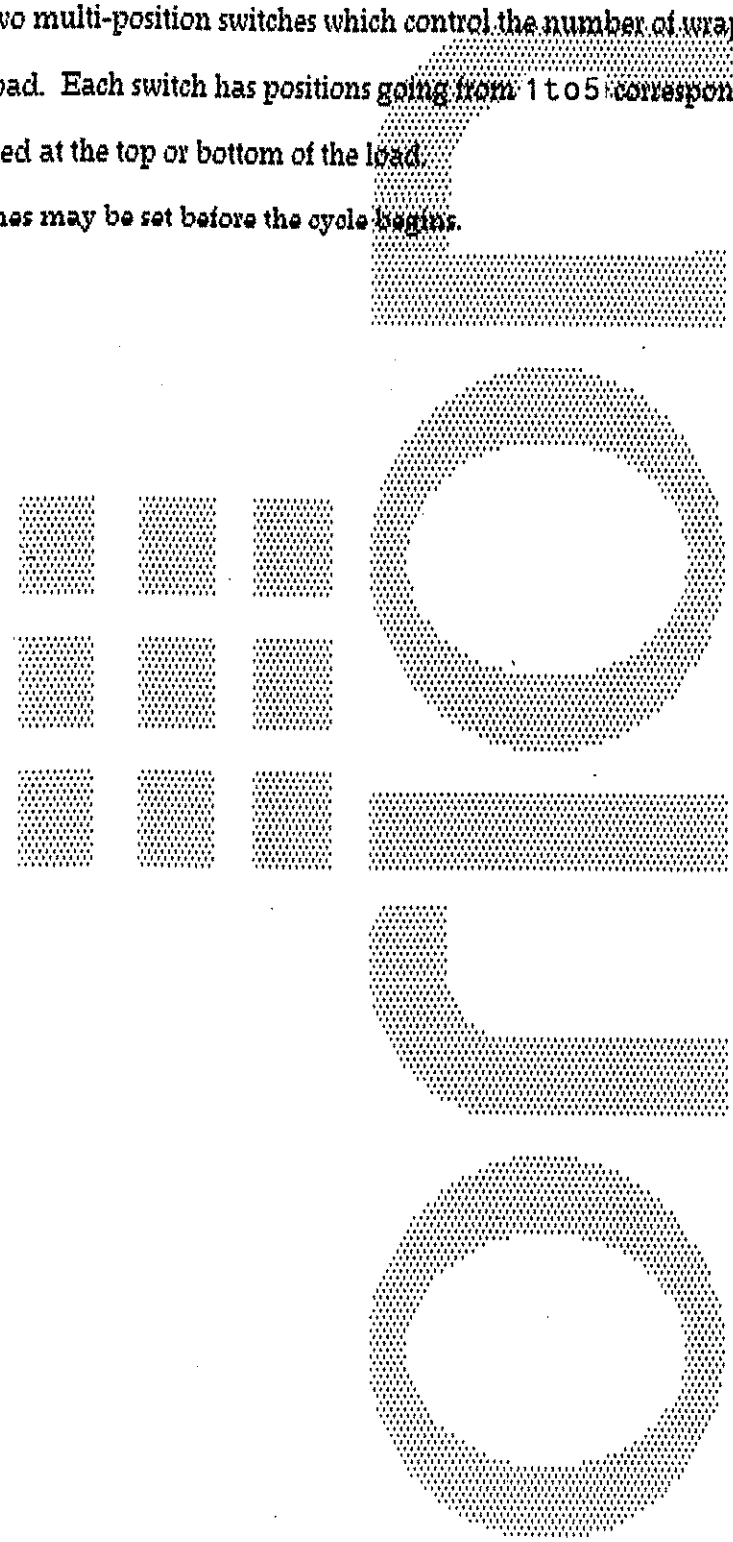
The carriage speed control can be used to control the amount of overlap the film will have on itself during a wrap.

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 5 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 on the carriage, and at the base of the tower.

8.2 Motor Maintenace

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 neccessary 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.

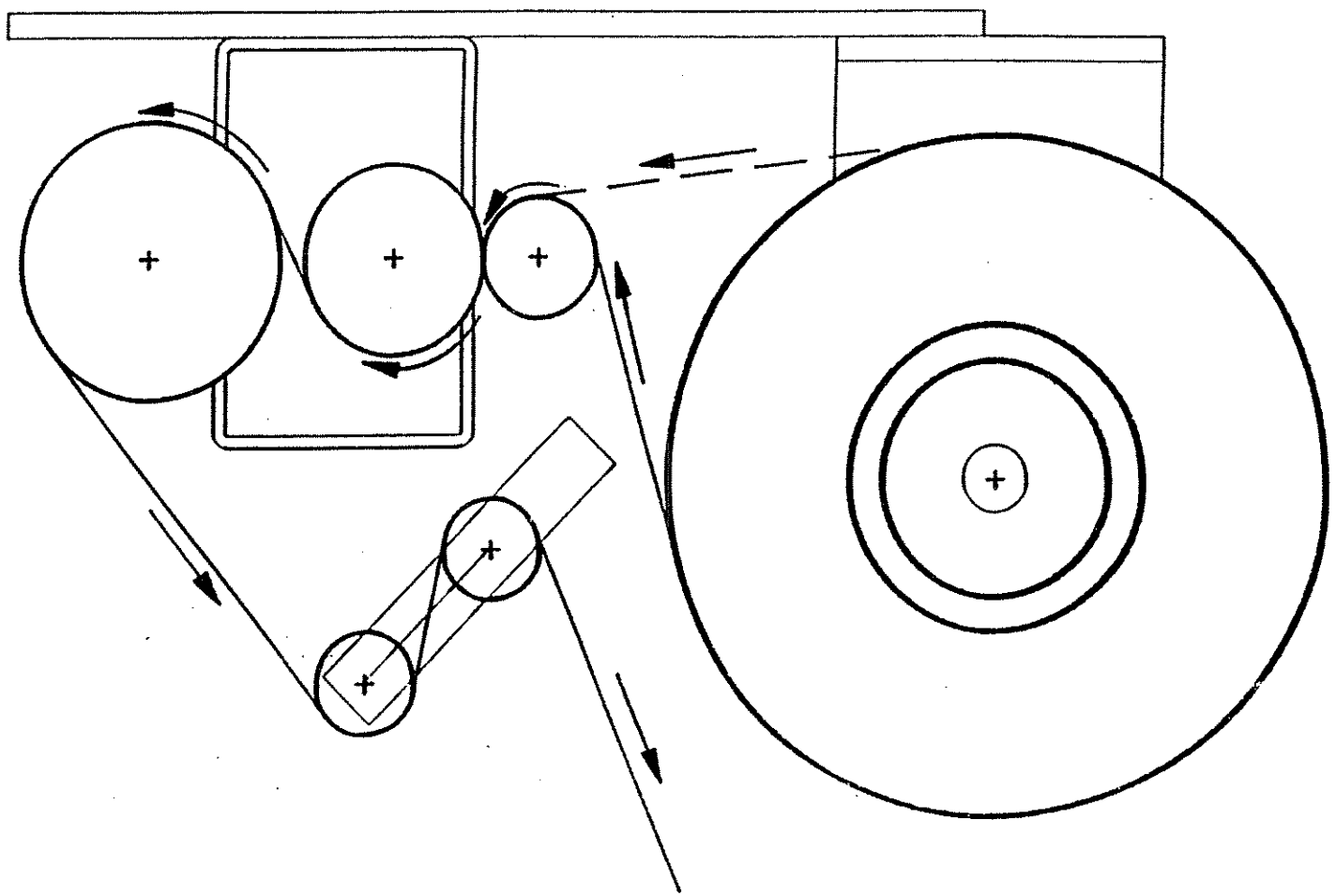
8.4 Cam Follower Maintenance

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.

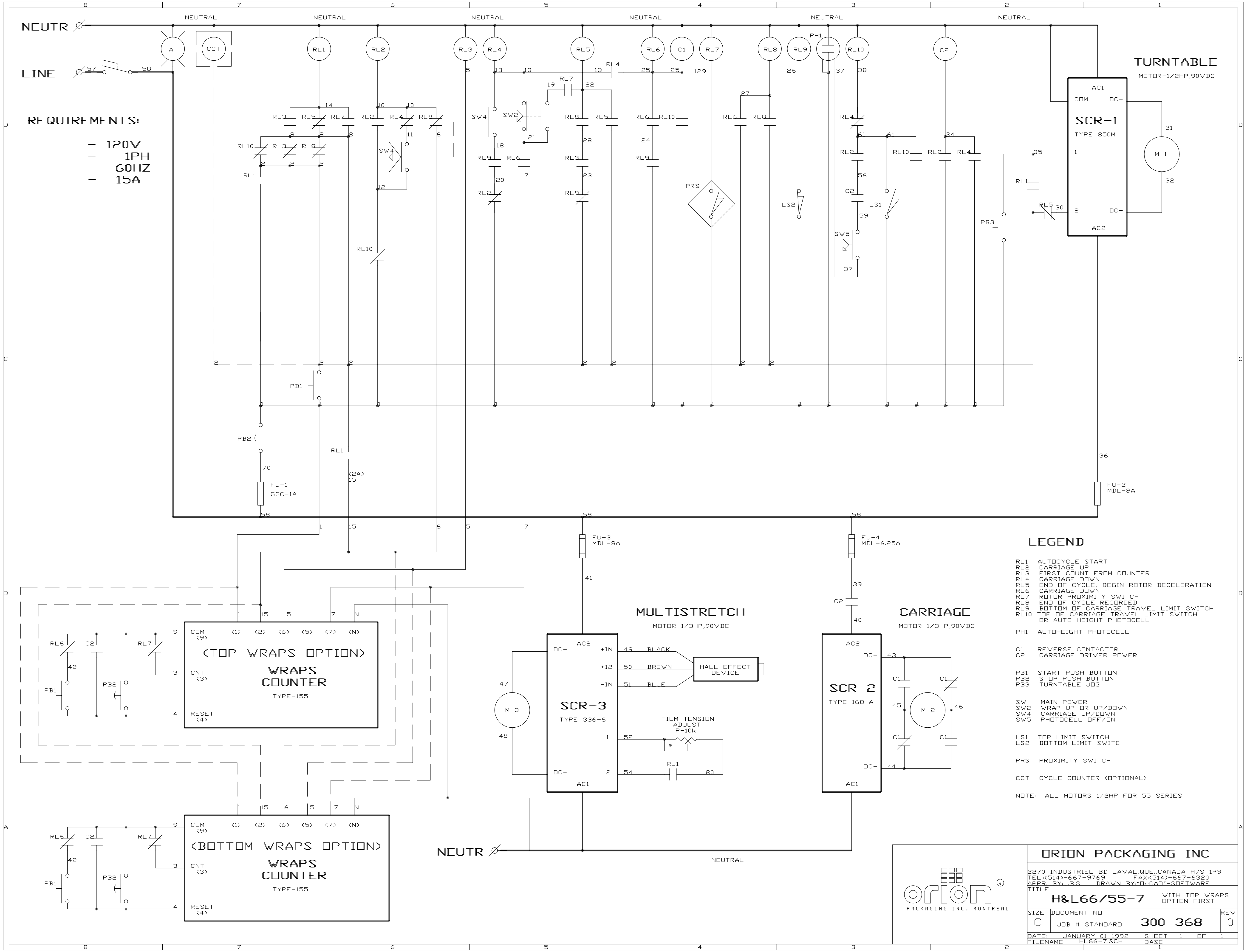
The cam followers under the turntable are wet with oil in order to keep the track properly lubricated. The oil pockets should be refilled every 200 hours of operation. The two oil pockets are found on the base, underneath the table.

FILM FEED PATTERN for the STANDARD CARRIAGE



WARNING: DISCONNECT POWER BEFORE FEEDING FILM

APPENDIX C



LEGEND

RL1 AUTOCYCLE START
RL2 CARRIAGE UP
RL3 FIRST COUNT FROM COUNTER
RL4 CARRIAGE DOWN
RL5 END OF CYCLE, BEGIN ROTOR DECELERATION
RL6 CARRIAGE DOWN
RL7 ROTOR PROXIMITY SWITCH
RL8 END OF CYCLE RECORDED
RL9 BOTTOM OF CARRIAGE TRAVEL LIMIT SWITCH
RL10 TOP OF CARRIAGE TRAVEL LIMIT SWITCH
OR AUTO-HEIGHT PHOTOCELL

PH1 AUTOHEIGHT PHOTOCELL

C1 REVERSE CONTACTOR
C2 CARRIAGE DRIVER POWER

PB1 START PUSH BUTTON
PB2 STOP PUSH BUTTON
PB3 TURNTABLE JOG

SW MAIN POWER
SW2 WRAP UP OR UP/DOWN
SW4 CARRIAGE UP/DOWN
SW5 PHOTOCELL OFF/ON

LS1 TOP LIMIT SWITCH
LS2 BOTTOM LIMIT SWITCH

PRS PROXIMITY SWITCH

CCT CYCLE COUNTER (OPTIONAL)

NOTE: ALL MOTORS 1/2HP FOR 55 SERIES

orion PACKAGING INC. MONTREAL

ORION PACKAGING INC.

2270 INDUSTRIEL BD LAVAL,QUE.,CANADA H7S 1P9
TEL.:(514)-667-9769 FAX:(514)-667-6320
APPR. BY:J.B.S. DRAWN BY:"OrCAD"-SOFTWARE

TITLE: H&L66/55-7 WITH TOP WRAPS OPTION FIRST		
SIZE: C	DOCUMENT NO.: JOB # STANDARD 300 368	REV: 0
DATE: JANUARY-01-1992	SHEET 1 OF 1	
FILENAME: HL66-7.SCH	BASE:	

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

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

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

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

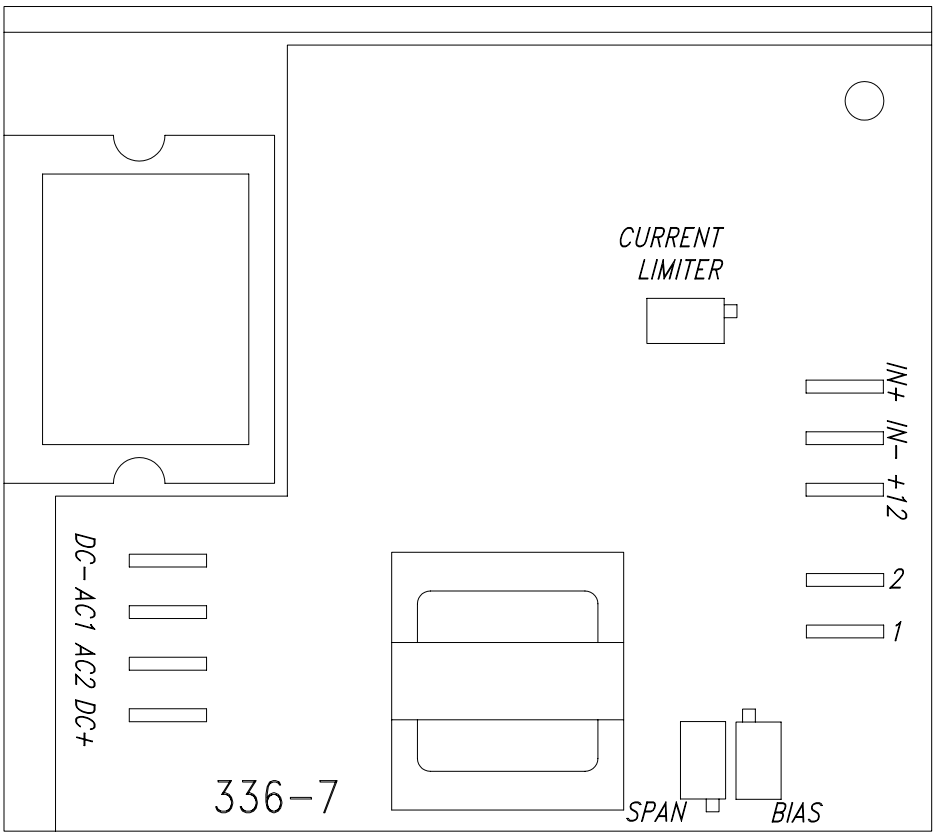
Span: (RV1) The **RV1** pot controls the systems loop gain.

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

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

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

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



DC+: ARMATURE CONTROL

AC1: AC INPUT

AC2: AC INPUT

DC−: ARMATURE CONTROL

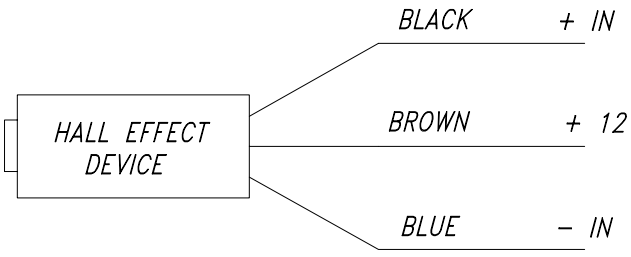
POTENTIOMETER

SPAN: HALL EFFECT SENSITIVITY CONTROL

BIAS: SYSTEM BIAS (FACTORY SET)

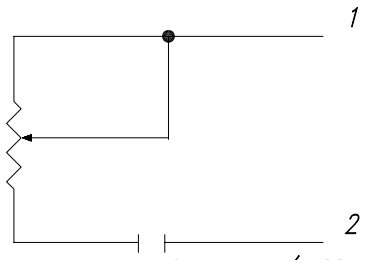
TRIP: END OR BROKEN FILM SENSING CIRCUITRY. TRIP LEVEL (FACTORY SET)

CURRENT LIMITER: (FACTORY SET)



FILM TENSION ADJUSTMENT

REMOTE POTENTIOMETER



tension on/off relay

336-7

MULTISTRETCH BOARD

TURNTABLE & TOWER MOTOR CONTROL BOARD ADJUSTMENTS

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

INTRODUCTION

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

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

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

INSTALLATION

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

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

ADJUSTMENTS

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

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

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

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

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

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

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

---

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

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

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

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

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

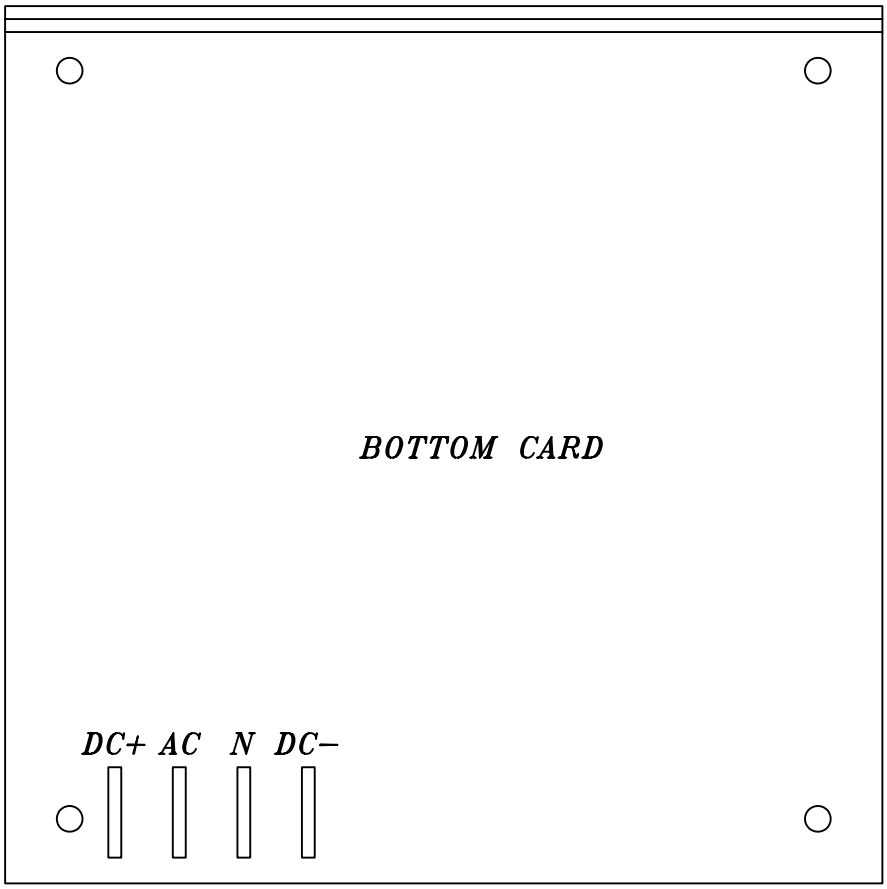
Conversely, if the deceleration time is set too long, the turntable/tower will not settle to the jog speed and thus will be going too fast to align properly and the momentum will take the turntable/tower beyond the start position. As you can imagine, any time the wrap speed is changed, you will need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

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

TROUBLE SHOOTING & REPAIR

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

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

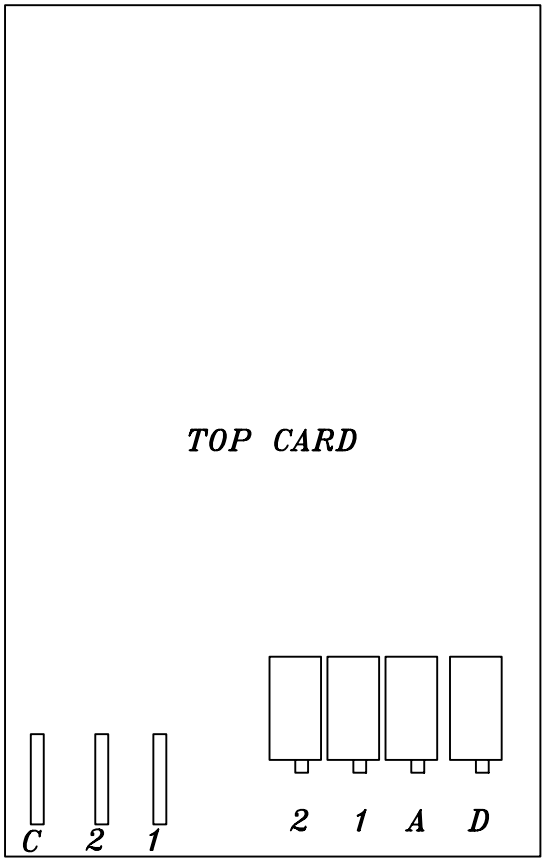


DC+: ARMATURE CONTROL.

AC: AC INPUT – LINE.

N: AC INPUT – NEUTRAL.

DC–: ARMATURE CONTROL.



1: CONTROL – LINE. LOW SPEED

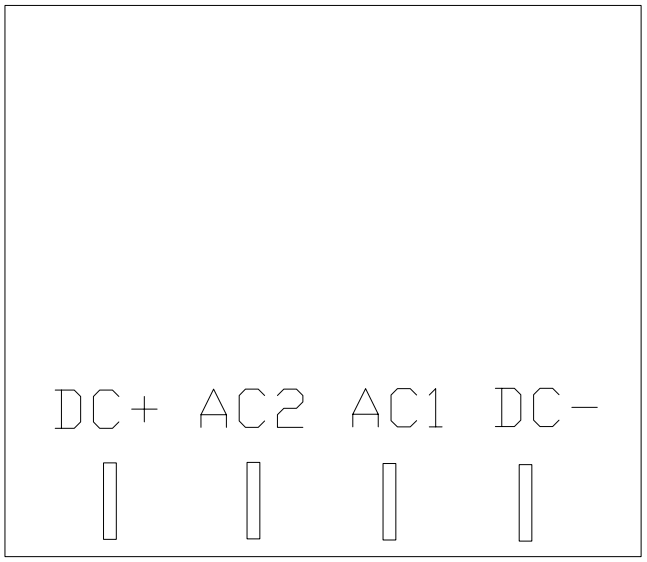
1: LOW SPEED ADJ.

2: CONTROL – LINE. HIGH SPEED

2: HIGH SPEED ADJ.

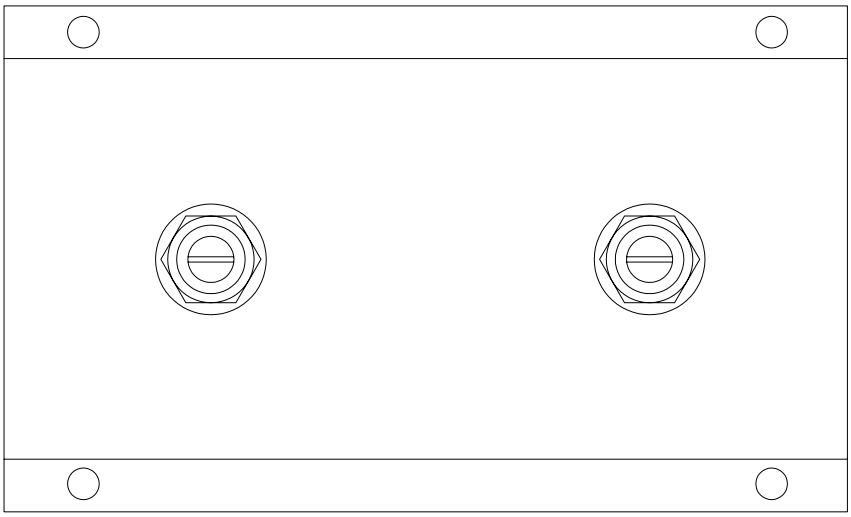
C: CONTROL – COMMON.
(REQUIRES A JUMPER TO "N")

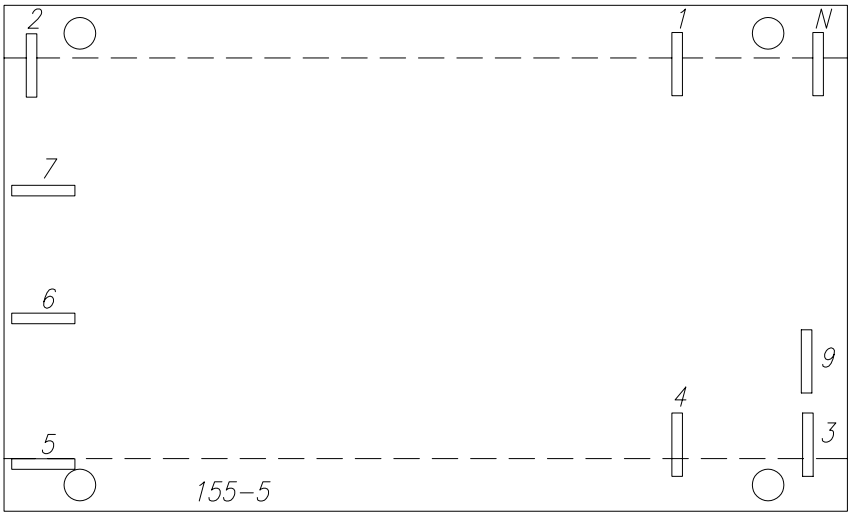
850M TWO SPEED 120VAC/90VDC MOTOR CONTROL BOARD



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

168-A CARRIAGE UP/DN SINGLE SPEED BOARD

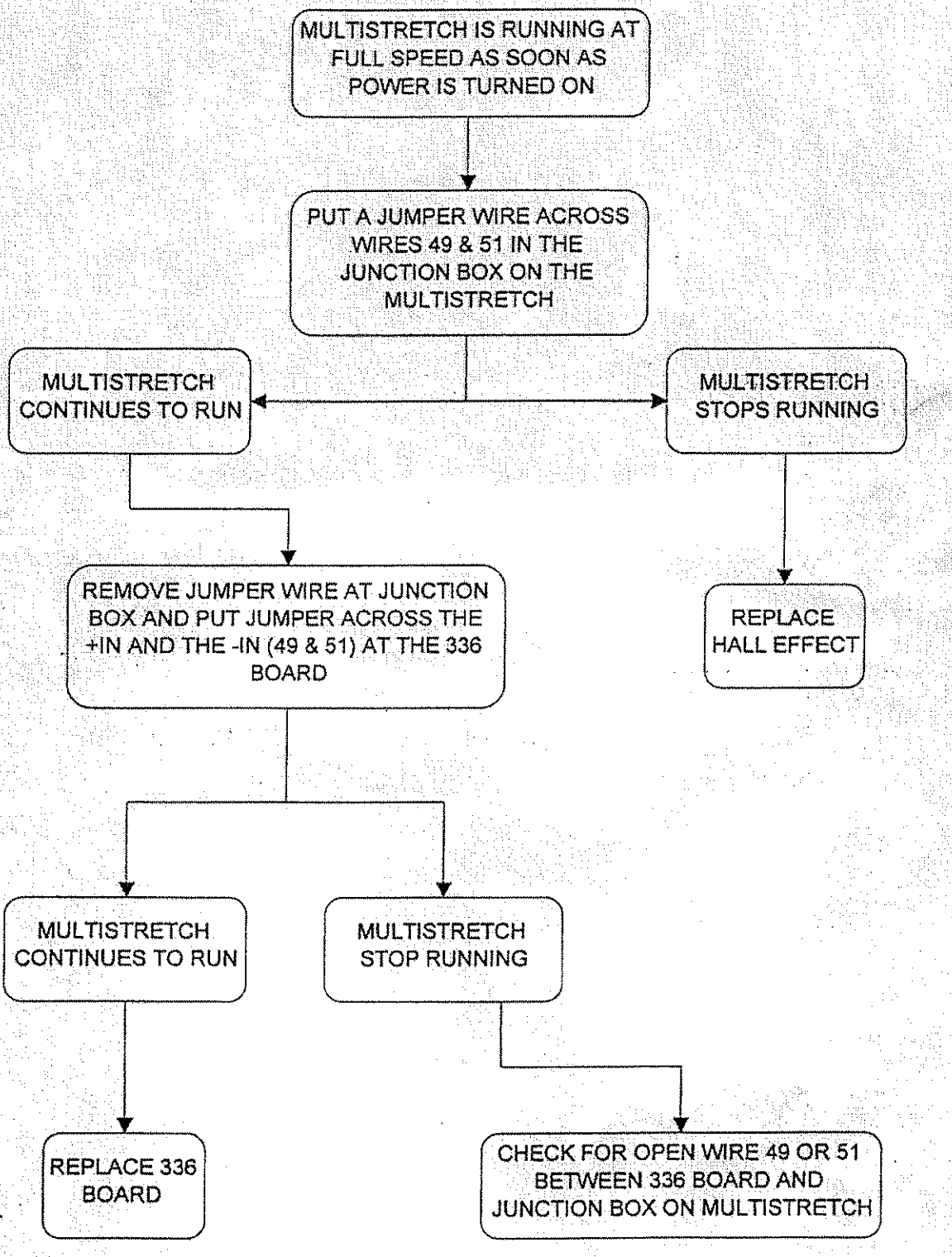




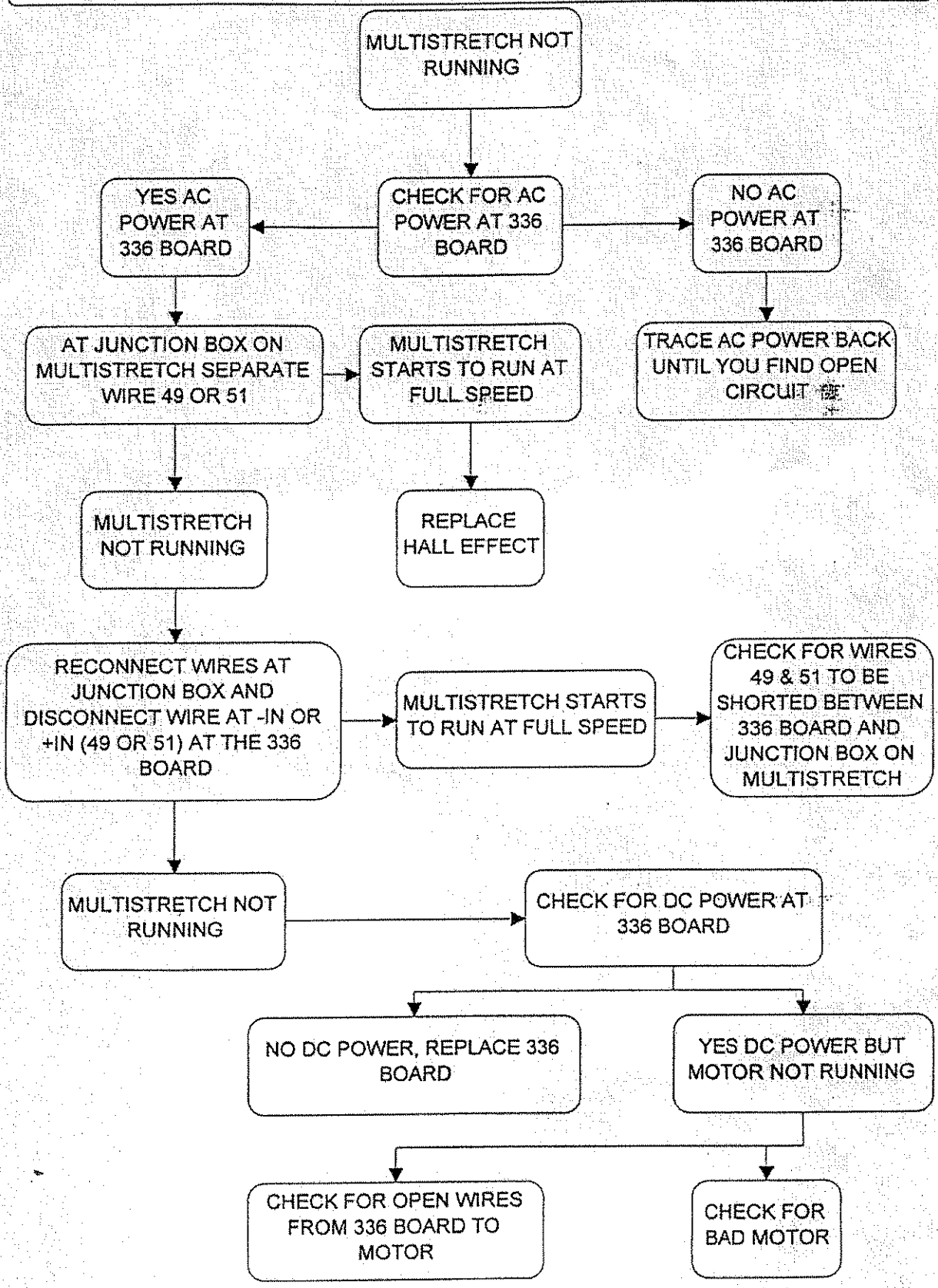
1: AC INPUT
2: AC INPUT
3: COUNT
4: RESET
5: OUTPUT PULSE AFTER 1-ST COUNT
6: OUTPUT T/W
7: OUTPUT B/W
8: N/A
9: COMMON
N: NEUTRAL

155-5
COUNTER BOARD

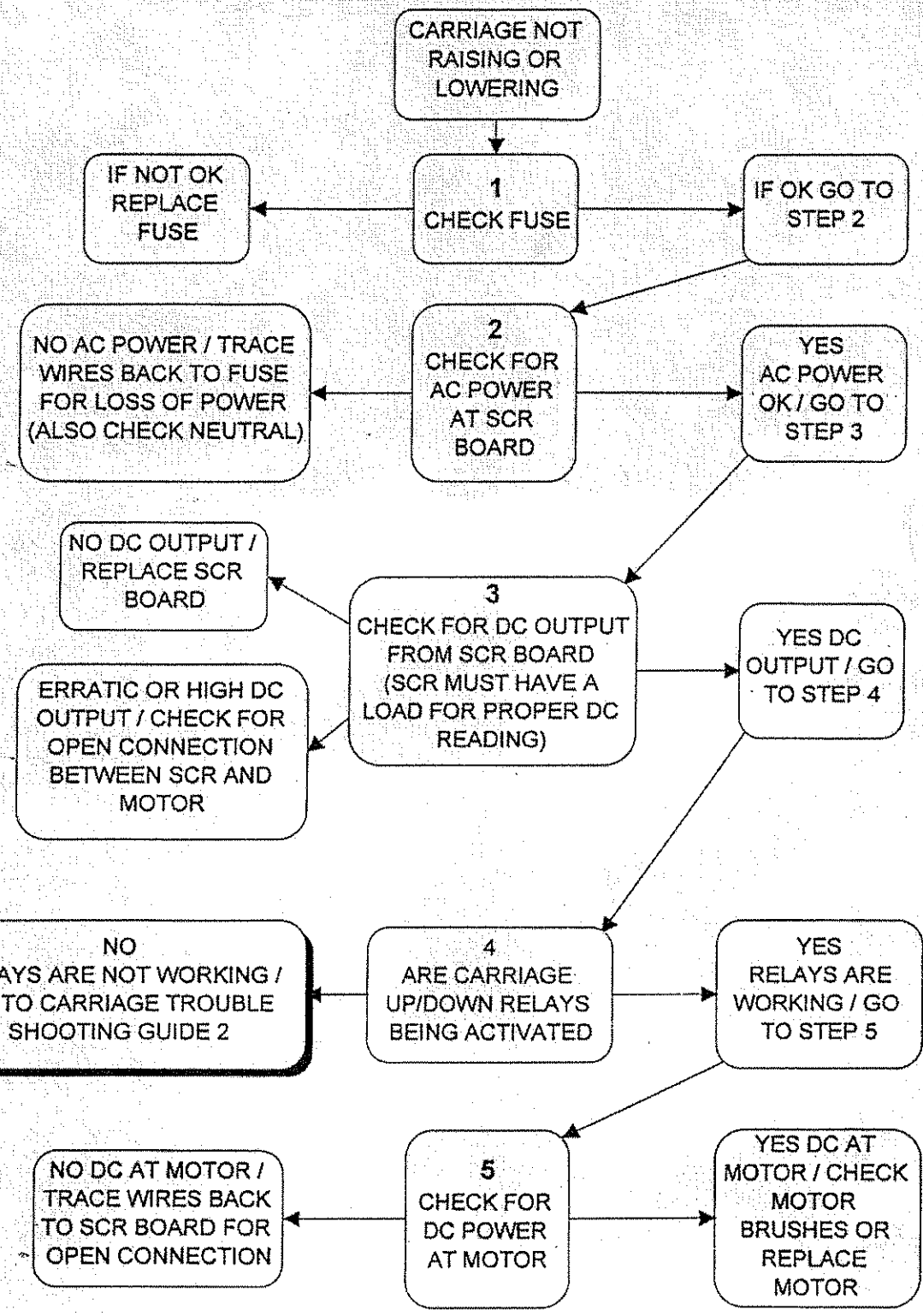
MULTISTRETCH TROUBLE SHOOTING GUIDE 1



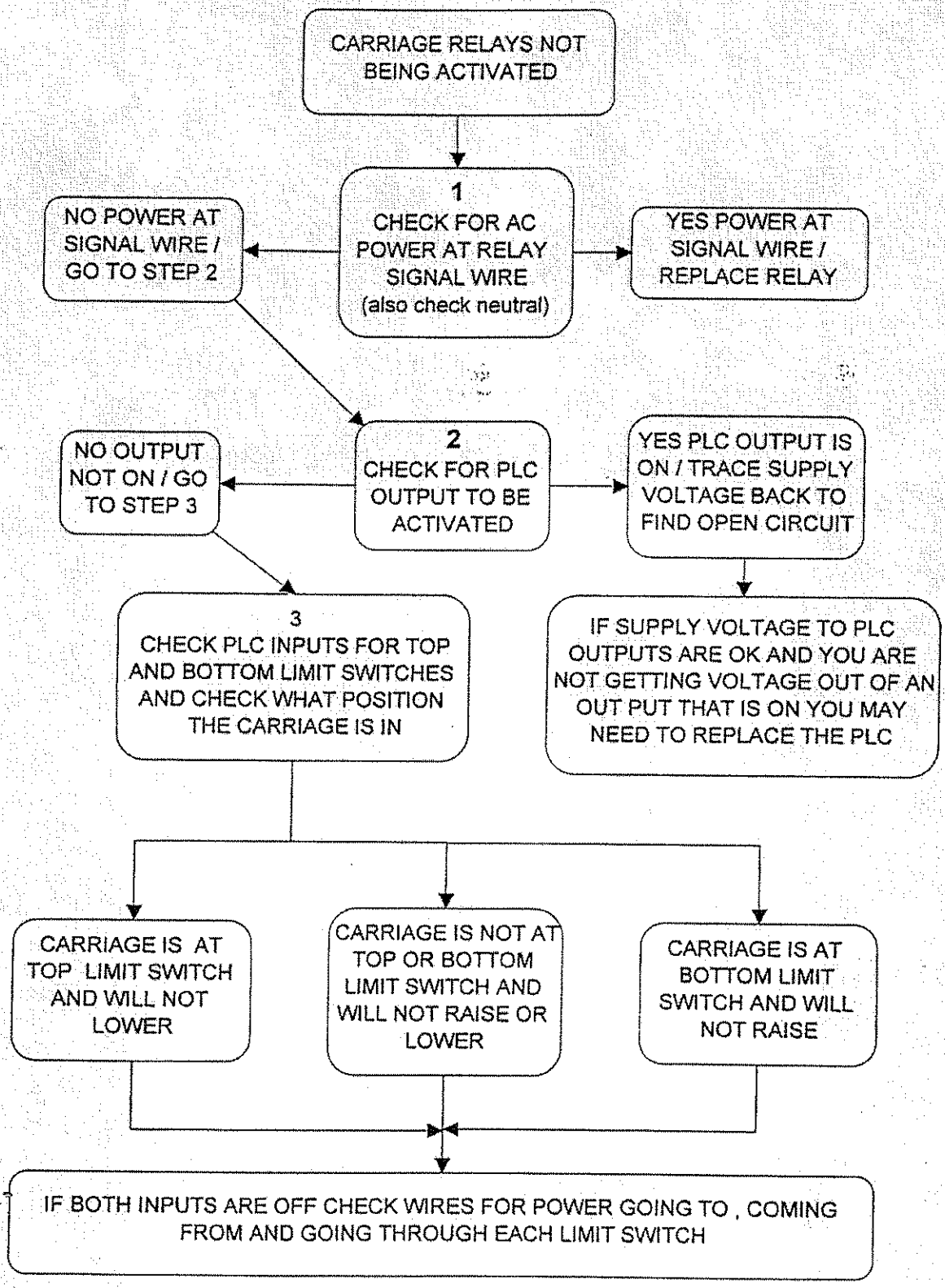
MULTISTRETCH TROUBLE SHOOTING GUIDE 2



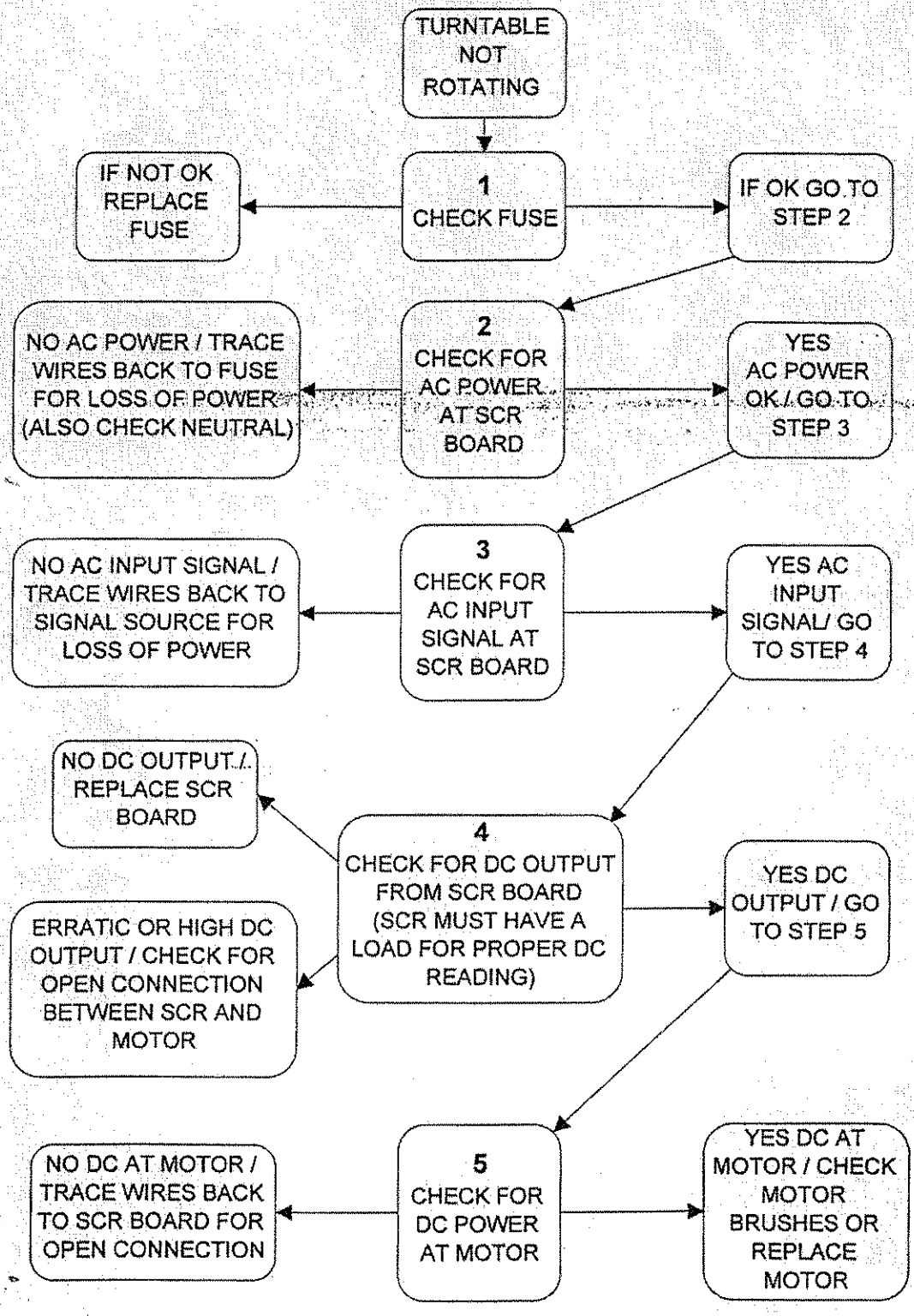
BASIC CARRIAGE RAISE / LOWER TROUBLE SHOOTING GUIDE 1



2
BASIC CARRIAGE RAISE / LOWER TROUBLE SHOOTING GUIDE



BASIC TURNTABLE TROUBLE SHOOTING GUIDE



- IF TURNTABLE RUNS AS SOON AS POWER IS TURNED ON THE MOTOR MAY HAVE AN INTERNAL SHORT TO GROUND.