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OPERATION MANUAL

For All Inquiries
Please Contact
Our Local Distributor

FOR U.S.A. (Only)
1-800-333-6556

Thank you for choosing ORION'S 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 and skills.

Please read this manual carefully and keep it handy. Following these simple operating instructions will insure the safe and efficient performance of this machine and simple maintenance procedures will guarantee 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**
- 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 a potential injury and/or electrical shocks, 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 all inspection, maintenance or repair work.

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 enter the forks under the frame or insert the forks in the tube brackets welded to the top of machine.
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.
3. Sit the machine down assuring uniform contact with the floor, which is necessary to ensure correct and smooth operation.

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/or polyurethane covering on the film carriage 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. Any transport damage cannot be claimed to Orion Packaging Inc.

Items that are vulnerable to damage and must be inspected:

- motors and transmissions (transmissions may require purge plugs which could have been unplugged for the transport purpose).
 - junction boxes
 - electrical conduits
 - proximity and limit switches
 - photocells
3. Check the turntable assembly 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 film carriage to be sure that it is correctly aligned with the tower
 - 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 shall be connected as specified on the diagrams supplied with the machine.

An electrical diagram is provided with each machine in the operating manual envelope attached to the panel enclosure.

ASSEMBLY PROCEDURE

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

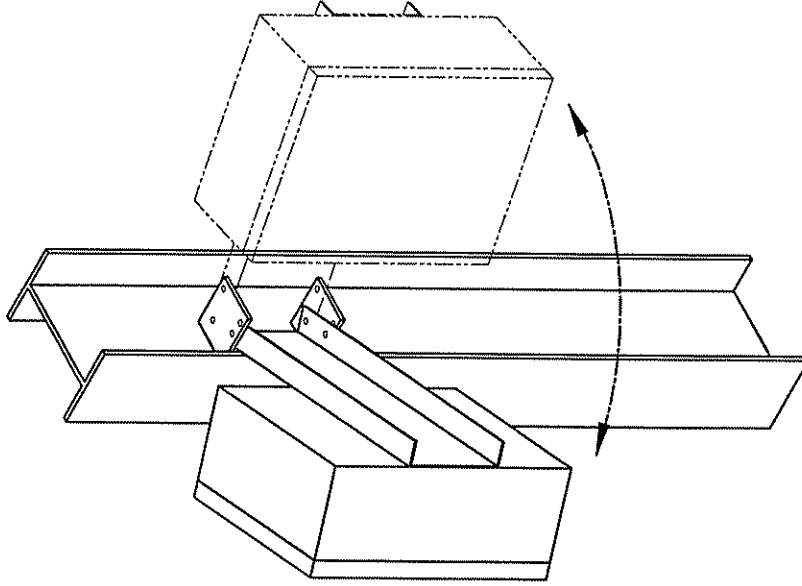
NOTE: Mongoose M66IS or M67IS the "Z" stand **must be bolted to the floor by the 5/8"** or stronger anchors

- Any wiring that has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. 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.
- The tower deviation from vertical must not exceed 1/4" on the distance of 10 feet (angle: 0 degree 6').
- The conveyor roller deviation from horizontal must not exceed 1/16" on the distance of 52" (angle: 0 degree 4').

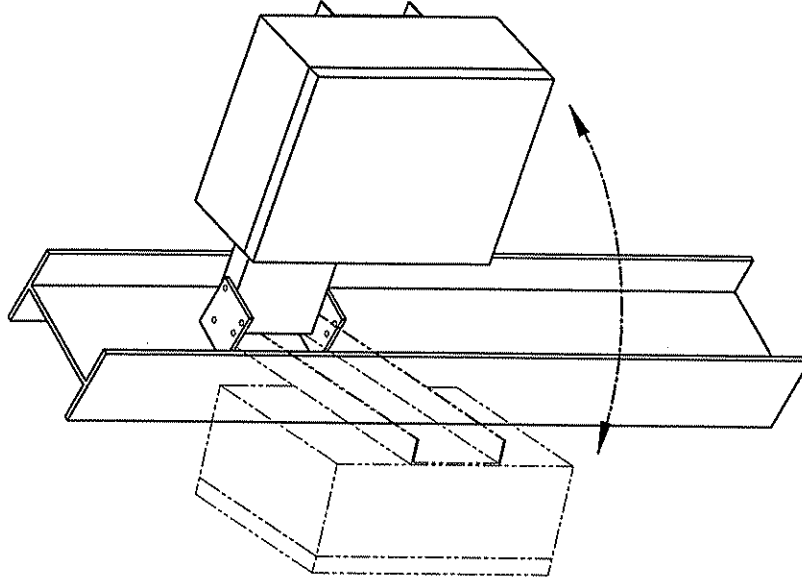
CONTROL PANEL

In the case of the free standing panel (console) place it adjacent to the system and anchor firmly to the floor. Connect the liquid tight (rigid conduit) to the main junction box located on the wrapper main frame next to the tower.

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



Position 1



Position 2

CONTROL PANEL MOUNT TWO POSITIONS

UPDATED FEB-15-99

DWG #418390

655**Orion Integrated Digital Wrapper**

OPERATING INSTRUCTIONS

Description



General Description

The system is an integrated control for a Stretch-Wrap machine. It includes three dc motor controls:

- Carriage with solid state reversing.
- Turn-table control, fully programmable via keyboard interface.
- Film Tension control, fully programmable via keyboard interface.

The Control comprises three principal sub-assemblies:

- Keyboard and display - for setting and viewing the system parameters. (Type 655.1)
- Microprocessor board (Type 655.2)
- Power Board / Chassis (Type number 656)

These items are mounted and wired in a Nema 12 enclosure mounted to the machine. The Membrane switch/display operator's interface is on the door of this enclosure.

Reference Drawings:

655.HU - Hook-up Drawing

656.GA - Power Chassis Assembly

655.GA - Digital Wrap Control General Assembly

Description of Sub-Assemblies

- **KEYBOARD AND DISPLAY Type 655.1**

This board contains 12 pushbuttons and 3 seven-segment displays (three digits). It is used to start an automatic wrapping cycle, or operate manually and to set and adjust the control parameters (carriage speed, tension, turntable speed,...).

The keyboard communicates with the microprocessor board through 40-pin connector (P1).

- **MICROPROCESSOR BOARD Type 655.2**

This board contains the control section of each drive: carriage, turntable and Film tension control section.

- **POWER BOARD (CHASSIS) Type 656**

This board contains the power section of each drive: Carriage, Turntable and Film Tension control section. The chassis serves as a Heat sink.

3. FILM TENSION CONTROL SECTION

The film tension drive is a solid state DC motor control specially designed for use in Constant Tension Mode on stretch-wrap packaging machines. The unit functions as a pay-off drive, unwinding the pre-stretched film as the table and pallet rotate, and continuously regulating tension as the diameter of the wrapped item changes. Since the typical pallet load is of square cross section, the effective diameter changes abruptly with rotation; the film tension is monitored by a tension-arm, held in place by spring pressure. As the film tension changes, the arm moves, rotating a cam, and the cam orientation is sensed by a Hall-Effect transducer. The transducer signal varies with the separation between its sensing head and the cam surface. The amplified transducer signal controls motor torque, increasing or decreasing it so as to restore the tension-arm to its previous position, and to maintain tension at its preset level. The system response is tailored so that these small corrections are smooth, continuous and largely imperceptible. The tension defaults to Minimum when the external Tension Adjustment circuit is opened. The control offers the feature of a film-break to be described later.

ADJUSTMENTS:

The film tension can be set by the operator using the digital interface, as described on page 4. In addition to the above-mentioned digital tension adjust, there are 3 trimming potentiometers on the microprocessor PCB (on the inside of the cabinet door) as follows:

ZERO (RV2)

This control injects an offset voltage, which adds or subtracts from the tension voltage reference; this will allow the *extremes* of adjustment from the digital interface to be set to levels consistent with proper operation. Typically, the "Zero" will be used to centre the operating range in the linear portion of its characteristics. This adjustment is normally made at the factory and should not require field adjustment. For reference, the factory test procedure calls for a voltage setting of 1.30 Volts DC at the cathode of Z1 (zener diode) relative to Circuit Common*, achieved by adjusting RV3. The machine should be stopped and the film removed for this adjustment.

Common is taken on the chassis inside the cabinet; - connect to end of R15 - large resistor in the Film Tension Section next to Fuse FU1, at the end adjacent to D12.

SPAN (RV1)

This controls the system loop gain, and may be adjusted if the motor continues to turn when the dancer arm is unloaded. The potentiometer should be adjusted to ensure that the motor is de-energised in this condition, with the machine stopped, and so that a light pull on the free end of the film causes it to feed freely.

CURRENT LIMIT

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 Tension arm. It is set at the factory to suit 1/2 HP motors.

FILM BREAK FEATURE

An on-board comparator and relay detect "film break" or "no-film" by monitoring armature voltage. Potentiometer RV3 adjusts the relay trip level.

CONNECTION

The Motor Armature attaches to terminals 47(+), 48(-) (may be Quick Disconnect or Amp Mate-n-Lock connector). The unit is suitable for permanent magnet shunt style DC motors with 90 V armature rating, rated at up to 3/4HP.

The Hall-Effect transducer connects to terminals +12 (Brown) IN+ (Black), IN- (Common) (Blue).

TURNTABLE CONTROL SECTION:

The turntable control is a DC Motor control designed for use as a table-drive on pallet wrapping machines, where long and repeatable acceleration and deceleration times, and remotely selectable pre-set speeds are required. The unit requires a 90 V armature, permanent magnet dc motor as output device.

CURRENT LIMIT

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. The current limit is set at the factory to suit 1/2 HP motors.

The motor Armature attaches to Quick Disconnect Terminals 25(+),26(-) or to an Amp 2 pin connector in later models. The unit is suitable for permanent magnet shunt style DC motors with 90 V armature rating, rated at up to 3/4HP.

CARRIAGE CONTROL SECTION:

The carriage control is a DC Motor control designed to operate in direct or reversing mode at pre-set speeds defined by the user through the keyboard section. The unit requires a 90 V armature, permanent magnet dc motor as output device.

Two Relays and a Dynamic braking Resistor (DBR) are used for motor reversing and braking. The brake resistor is bolted to the chassis beneath the PCB. The circuit is equipped with anti-plug protection.

CURRENT LIMIT

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. The current limit is set at the factory to suit 1/2 HP motors.

CONNECTION

The Motor Armature attaches to quick-disconnect terminals 33(+), 34(-), or to a 3 pin Amp Connector in later models. The unit is suitable for permanent magnet shunt style DC motors with 90 V armature rating, rated at up to 3/4HP.

Operation

Keyboard Description

The keyboard is used to control and monitor all the parameters of a Stretch Wrap Machine. It will also be used for in house calibration.

Pushbutton Description

- **START**
The Start pushbutton is used to start or continue a wrapping cycle.
- **E-STOP**
The Stop pushbutton is used to pause and stop a wrapping cycle before it is completed.
- **TURNTABLE JOG**
The Jog pushbutton is used to jog the turntable Manually at a preset speed .
- **CARRIAGE RAISE**
The Carriage up pushbutton is used to Manually move the carriage up.
- **CARRIAGE LOWER**
The Carriage down pushbutton is used to Manually move the carriage down.
- **WRAPS**
This pushbutton is used to program the number of top and bottom wraps that the turntable will perform during a cycle.
- **TENSION**
This pushbutton will set the tension of the wrapping film.
- **CARRIAGE SPEED**
This pushbutton is used to set the carriage up and down speed.
- **FUNCTION**
This pushbutton is used for in house programming and adjustments. Access is limited to authorized users by a password code.
- **SPIRAL**
This pushbutton is used to select between "up/down" and "up only" spiral wrapping patterns
- **PHOTOCELL**
This pushbutton is used to Enable and Disable the Photocell.
- **VALUE UP and DOWN Arrows**
Those pushbuttons are used to change the value of parameters displayed on the SSD.

FEATURES

Change-On-The-Fly

N.B. this feature works only when machine is running ... (During Cycle)

Now operator can adjust machine working parameters (carriage speeds, Photocell On/Off, tension, wraps numbers) during the cycle. Function parameters are allowed only when machine is stopped.

Changes are saved only at the end of the current machine cycle.

While editing, screen Displays the parameter being edited. Screen is refreshed 3 seconds later to display the present machine cycle state.

Pause/Stop

N.B. this feature works only when machine is running ... (During Cycle)

Now operator can put the machine in a pause state by pressing the **E-STOP** button **ONCE**. Machine conserves the present machine cycle parameter values. Screen displays **PAU** and Flashes while no edition is performed. Machine will remain in pause state until either:

- we press the **START** button: Machine will continue its interrupted cycle and Screen displays the present Machine cycle State.
- Or, we press **STOP** button. Machine will stop completely and Screen displays **End**. Machine is ready for a new wrapping cycle.

Photocell

N.B. this feature works only when machine is running ... (During Cycle)

Now we can use either CarriageUpLimit Mechanical Switch or the Photocell to detect carriage reaching the up limit. It is Normally Open. Photocell is Enabled or Disabled by Pushbutton PHOTOCELL . When enabled Photocell Led goes ON.

Parameter Editing & Saving

N.B. The following settings are available to the operator. Edition can be performed on-the-fly.

Select And Edit The Number Of Wraps

There are two settings for the number of wraps: the number of wraps executed at the bottom and top of the carriage travel.

Pressing once on the **Set # Wraps** pushbutton, will turn ON the **LED** located beside the bottom right corner of the pushbutton. This indicates that the bottom wrap variable is selected. By using the **Up** or **Down** arrows the value can be changed. The value will vary from 1 to 10.

To select the top wrap variable, the **Set # Wraps** must be pressed twice or until the **LED** located beside the top right corner is ON. By using the **Up** or **Down** arrows the value can be changed. The value will vary from 1 to 10.

For changes on-th-fly, a delay of 1 (one) second will be elapsed before New TOP/BOTTOM Wraps Settings will be effective

When the right values of top and bottoms wraps are selected, press the **Set # Wraps** pushbutton until the 2 **LED**'s are OFF.

Select And Edit The Tension Value

To select the tension variable, the **Set Tension** must be pressed. The **Set Tension LED**, located beside the top right corner of the pushbutton, must be ON. Once the pushbutton is pressed and the **LED** is ON, the **Up** and **Down** arrows can be used to change the value. The value will vary from 0 to 100 (0-100%).

Select And Edit The Carriage Speeds

There are two settings for the Carriage speed: the **Carriage Up** and the **Carriage Down** speeds.

By pressing once on the Carriage Speed pushbutton, The **LED** located beside the bottom right corner of the pushbutton will turn ON. This means that the Carriage speed down variable is selected. By using the **Up** or **Down** arrows the value can be changed. The value will vary from 0 to 100 (0-100%).

To select the **Carriage Up** variable, the **Carriage Speed** must be pressed twice or until the **LED** located beside the top right corner is ON. By using the **Up** or **Down** arrows the value can be changed. The value will vary from 0 to 100 (0-100%).

Parameter Saving

The new values are saved when **One** of the following events Occurs:

- Press JOG Pushbutton
- Press START Pushbutton
- 30 Sec. after we enter editing mode (no button pressed).

For changes made on-the-fly, new values will be saved at the end of the current machine cycle.

Select Function

The **Select Function** pushbutton is used to access "in shop" settings - such as Turntable speeds and acceleration, deceleration times, Offset and Gain of the tension control and the maximum speed of the carriage drive. Editing these parameters is allowed only when machine is stopped.

Because those parameters are not available to the operator, they are protected using a 3-digit password number (range form 0 to 250). (Present Password is _____). See Note Below.

When the **select function** push button is selected, the Screen displays **PSU** (asking the user to enter the password). Using the **up** and **down** arrows, the proper 3-digit number code must be selected: when it is selected, the **Select Function** pushbutton must be pressed again and the Function LED will start flashing.

Now the **In House Setting Menu** has been accessed. The parameters are identified by a 3-digit code Pxx where xx is a number between 0-12. Use the **up** and **down** arrows to select a parameter . Once the desired parameter is selected, Press **select function** button would be used to toggle between the Data and the Parameter mode. The **Up** or **Down** arrows would be used to set the right value (Data) in the Parameter. Once the value is entered, the **select function** pushbutton would be pressed again to return to the Select Parameter Mode. While editing Function Parameters, the Function LED continuously flashes.

NOTE: The password is available from the Authorized Orion Distributor.

Get Default Settings

N.B. this feature works only when machine is stopped ... (Off Cycle)

Now user can load a specific Default Settings Set by selecting the Function parameter P12. Screen displays DEF. The Old Machine Settings are lost.

• Present Default Settings

DESCRIPTION	Default Value	DATA RANGE
Top Wraps	02	From 1 to 10
Down Wraps	02	From 1 to 10
Tension	10	From 0 to 100
Carriage Speed Up	65	From 0 to 100
Carriage Speed Down	65	From 0 to 100
SpiralModeSelector	0	0 "UP/DOWN" or 1 "UP ONLY"
Table Speed High	78	From 0 to 100
Table Speed Low	06	From 0 to 100
Table Acceleration Time	10	From 0 to 100
Table Deceleration Time	10	From 0 to 100
Table Pulses Per Rotation	96	From 0 to 250
TopBottomWrapsFirst	0	0 "Top Wraps First" or 1 "Bottom Wraps First"

Revised May 15 2000

Exit Function

We have two possibilities to exit the Function Editing Mode:

- Once the editing is complete, the **select function** button would be pressed again and choose parameter P11 to exit Function Editing and return to the operator's menu. New values will be saved at this time.

If 30 seconds elapsed without any editing activity we will exit the Function editing mode, save the new values and return to the operator's menu.

Function parameters

DESCRIPTION	PARAMETER	DATA RANGE
Table Speed High	P00	From 0 to 100
Table Speed Low	P01	From 0 to100
TopBottom Wraps First	P02	0 " Top Wraps First" or 1 "Bottom Wraps First
Not Implemented	P03	0
Table Acceleration Time	P04	From 0 to100
Table Deceleration Time	P05	From 0 to 100
Table Pulses Per Rotation	P06	From 0 to 250
Not Implemented	P07	0
Not Implemented	P08	0
Not Implemented	P09	0
Not Implemented	P10	0
Exit	P11	When selected we exit Function
Get Default	P12	when Selected we load Default settings

Parameter Saving

New Settings are saved if they are changed and when **One** of the following events Occurs:

- Press JOG Pushbutton
- Press START Pushbutton
- 30 Sec. after we enter editing mode (no button pressed)

Moving The Carriage and Table Manually

To move the Carriage Up or Down using the **Carriage up** and **Down** pushbuttons or to **adjust the Turn Table** using the **JOG** pushbutton, the machine must be stopped. If a cycle is being processed, those two pushbuttons are disabled.

When the **Carriage Up** pushbutton is pressed, the carriage will go up until the pushbutton is released or the Carriage top limit switch is activated. Screen Displays **UP**.

When the **Carriage Down** pushbutton is pressed, the carriage will go down and it will stop only when it has reached the Carriage Down limit switch. Screen Displays **dn**.

A delay of one (1) **second** is elapsed before **carriage** can **reverse** direction.

When the **JOG** pushbutton is pressed, the **Table** turns at a **preset speed** until the button is released. Screen Displays **JOG**.

Display Screen

Display Contents

Screen	Description
End	Machine is stopped
PAU	Machine in a Pause after pressing STOP Button ONCE (Display will Flash).
UP	Carriage is Moving UP
dn	Carriage is Moving Down
PSU	asks user to enter password code to have access to Function parameters edition.
DEF	While getting default settings and then it displays the present machine state.
eXt	While exiting Function Parameters Edition then it displays present machine state.
Pxx	When selecting function parameter
xxx	When editing machine parameters values
JOG	When jogging the Turn Table Manually

Display Refresh

Display is refreshed every **3 seconds**. If we finished editing, it displays the present machine cycle state (PAU for a Pause State, End When Machine stopped, UP when Carriage moving UP, dn while Carriage moving Down, Wraps# when wrapping).

SELECT A WRAPPING PATTERN

N.B. this feature works only when machine is stopped ... (Off Cycle)

Now operator can select up to three (3) wrapping cycles by using the **SPIRAL** pushbutton and the Function parameter **P02**:

- Spiral Up Only
- Up/down with Top Wraps first
- and Up/Down with Bottom wraps first.

SPIRAL UP ONLY

Whatever selected "top wraps first" or "bottom wraps first", we have the following cycle:

1. Film carriage wraps bottom applying selected number of bottom wraps;
2. Film carriage moves to the top
3. Applies selected number of top wraps;
4. Turn table decelerates and stops in home position;

When the up only mode selected "SPIRAL LED" goes OFF.

SPIRAL UP/DOWN

When the Up/Down Mode Selected "SPIRAL LED" goes ON.

- If "top wraps first" selected (p02=0), we have the following cycle:
 1. Film carriage moves to the top
 2. Applies selected number of top wraps;
 3. Film carriage moves to the bottom;
 4. Applies selected number of bottom wraps;
 5. Turn table decelerates and stops in home position;
- If "bottom wraps first" selected (p02=1), we have the following cycle:
 1. Applies selected number of bottom wraps;
 2. Film carriage moves to the top
 3. Applies selected number of top wraps;
 4. Film carriage moves to the bottom;
 5. Turn table decelerates and stops in home position;

Safety : Film Broken

N.B. this feature works only when machine is running ... (During Cycle)

If the film is lost during cycle, Machine will be immediately* stopped and screen displays **FLM**.

* when we start a new cycle, machine waits three(3) seconds to conclude that film is gone.

In this state we can:

- move the carriage UP /DOWN manually
- JOG the Turn Table manually ...
- And start a New Cycle

Maintenance

The Three principal sub assemblies cover the operation. To assure continuity of operation, spares should be available of:

- The Keyboard display
- The Microprocessor Board
- The Power Chassis
- Replacing Sub Assemblies

The connections are all via plugs, and misconnection is unlikely or impossible, but in any case take note of the configuration when removing items.

Repair and Replacement should only be done by experienced personnel who are aware of the dangers of working on line-operated equipment. Power must be removed when changing sub-assemblies, and the technician should dissipate any static charges before handling parts, by touching the grounded cabinet.

The Power Sub-Assembly can be removed by undoing four screws securing the chassis to the backplate. Then, unplug the various Amp connectors, by squeezing the retaining ears on the side of the plugs. Unplug the two ribbon connectors, and the disconnect terminal in the centre of the PCB, and remove the unit. It can be replaced by reversing the procedure.

The Microprocessor board on the inside of the cabinet door is held in place by 11 #6 screws. When these are removed the microprocessor board can be unplugged from the keyboard/display by gently rocking and pulling it away. The keyboard display can be removed by releasing the 11 nylon hex threaded spacers holding it to the studs.

Board-Level Maintenance

In general, repair is beyond the scope of field service, without special equipment. However, the Power Chassis does contain replaceable items – the three motor fuses (MDA 10 Amp) the control fuse (AGC ½ Amp) and the Carriage Reversing Relays.

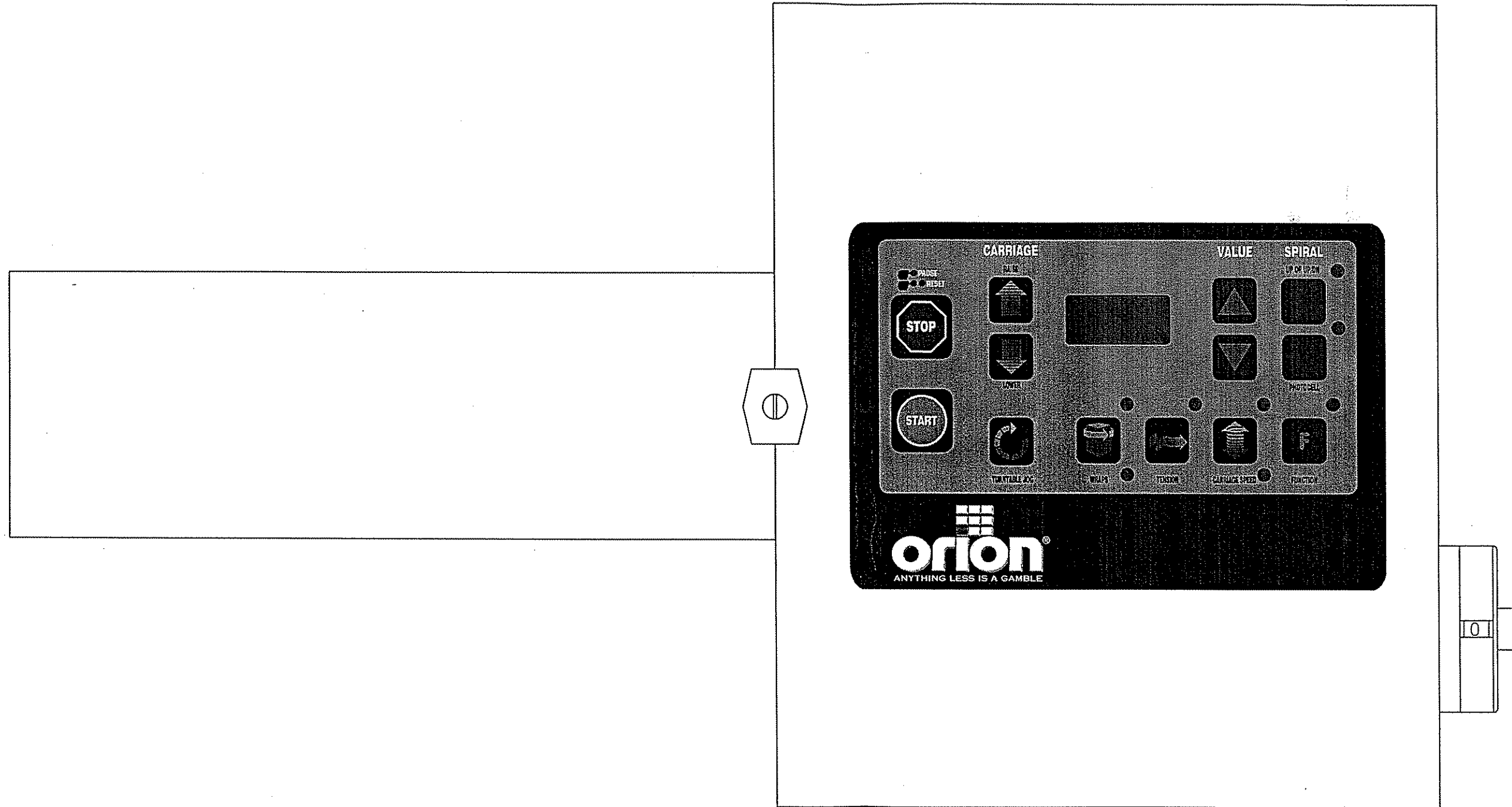
Trouble-Shooting

The Keyboard Display will give a fair indication of the trouble area. If the Turntable can be Manually Raised/Lowered, we would assume the Carriage Section to be Functional. If the Turntable can be Jogged, this too should be intact. If the Film Control responds to a light pull on the film, feeding freely, this section is OK. If only one of these functions does not respond, the fuses can be examined. If blown, they should be replaced only with the recommended types. If they immediately blow again, it is probable that one or more of the Power Devices is shorted. If the proper Devices are on hand they could be replaced. If there are problems Reversing the Carriage drive, and/or the Relays show signs of burned contacts, these should be replaced. If the Display is unlit, or does not respond to keyboard input, it is likely that the problem lies with the Microprocessor PCB.


There is also the possibility of problems with external limit switches, pulse pickups, or the Hall device. This should be apparent by problems with particular functions, failure to respond to limits, etc. Operating the devices manually and measuring the resistance of switches or the output of the pickup will assist in diagnosis. The Hall effect device calibration is described on Page 2. If there is no input from the Hall device this will be apparent when observing the input and moving the Hall Device.

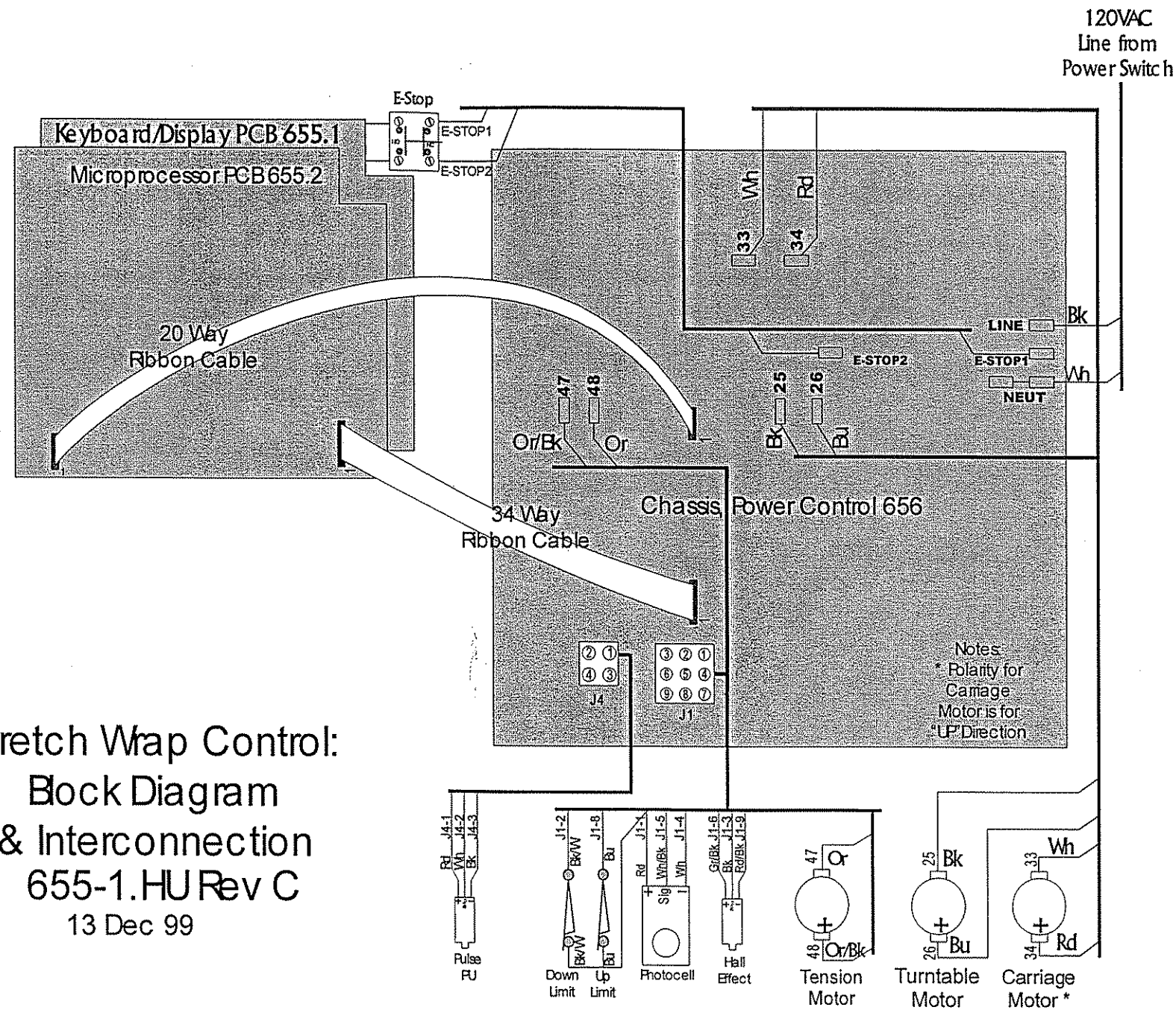
Spares

- Fuse MDA 10
- Fuse AGC 3
- Relay P&B K10P-11A15-120
- SCR Teccor S6020L (All Drives) Diode D6020L (All Drives)



5412 ESCH121006
 PANEL SIZE 12 X 10 X 06

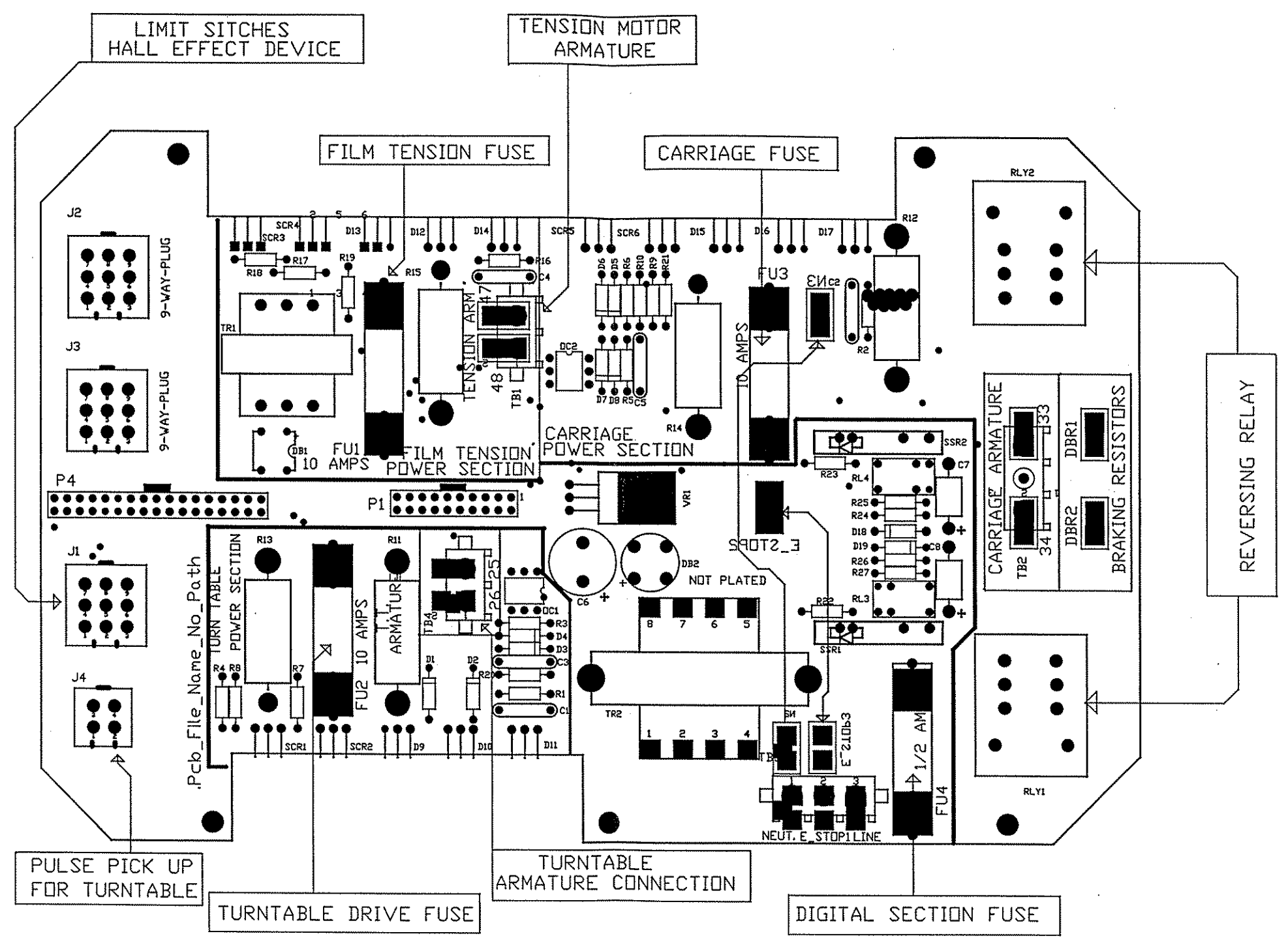
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Stretch Wrap Control:
Block Diagram
& Interconnection
655-1.HU Rev C
13 Dec 99



ORION PACKAGING INC.			
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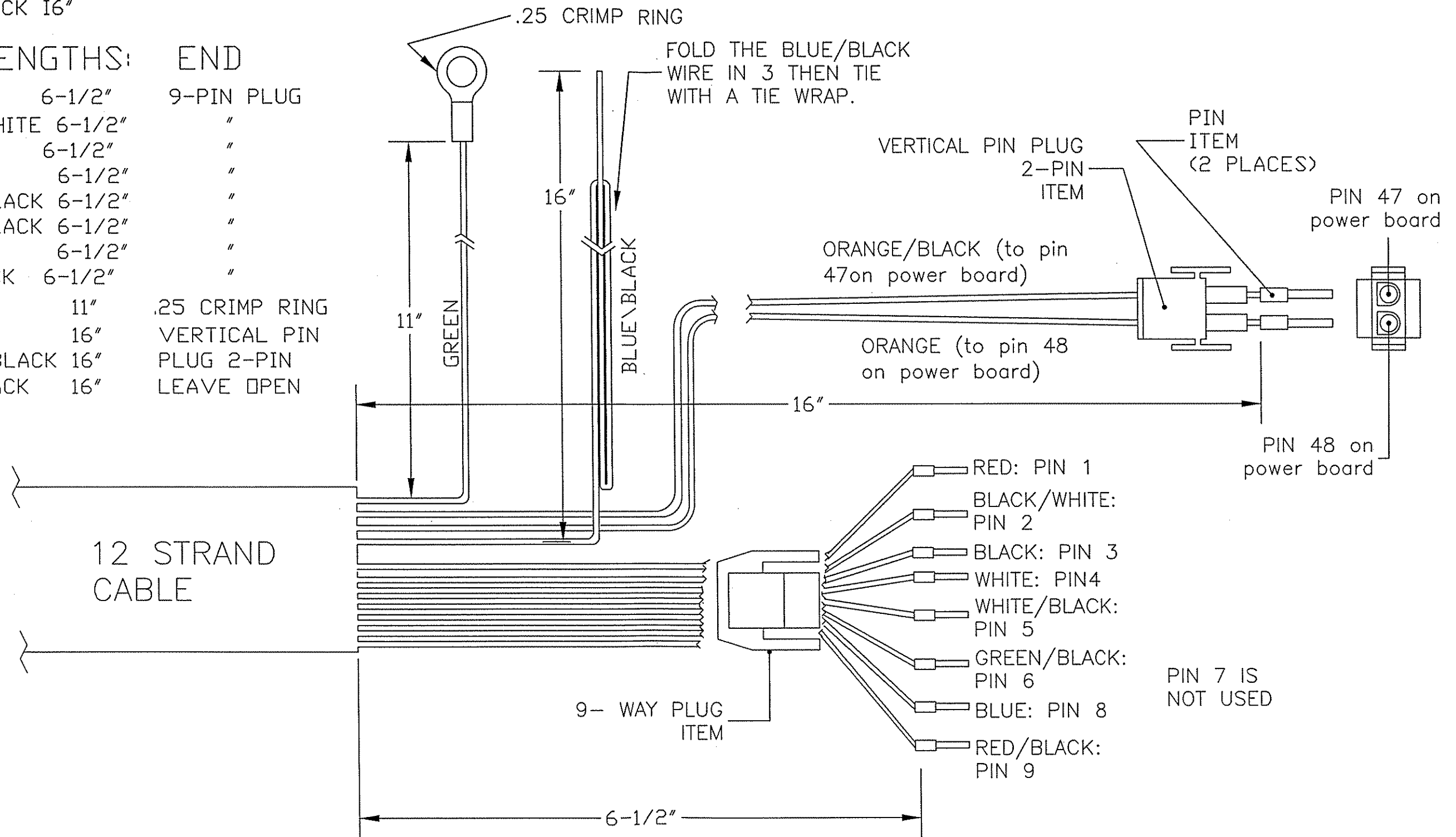



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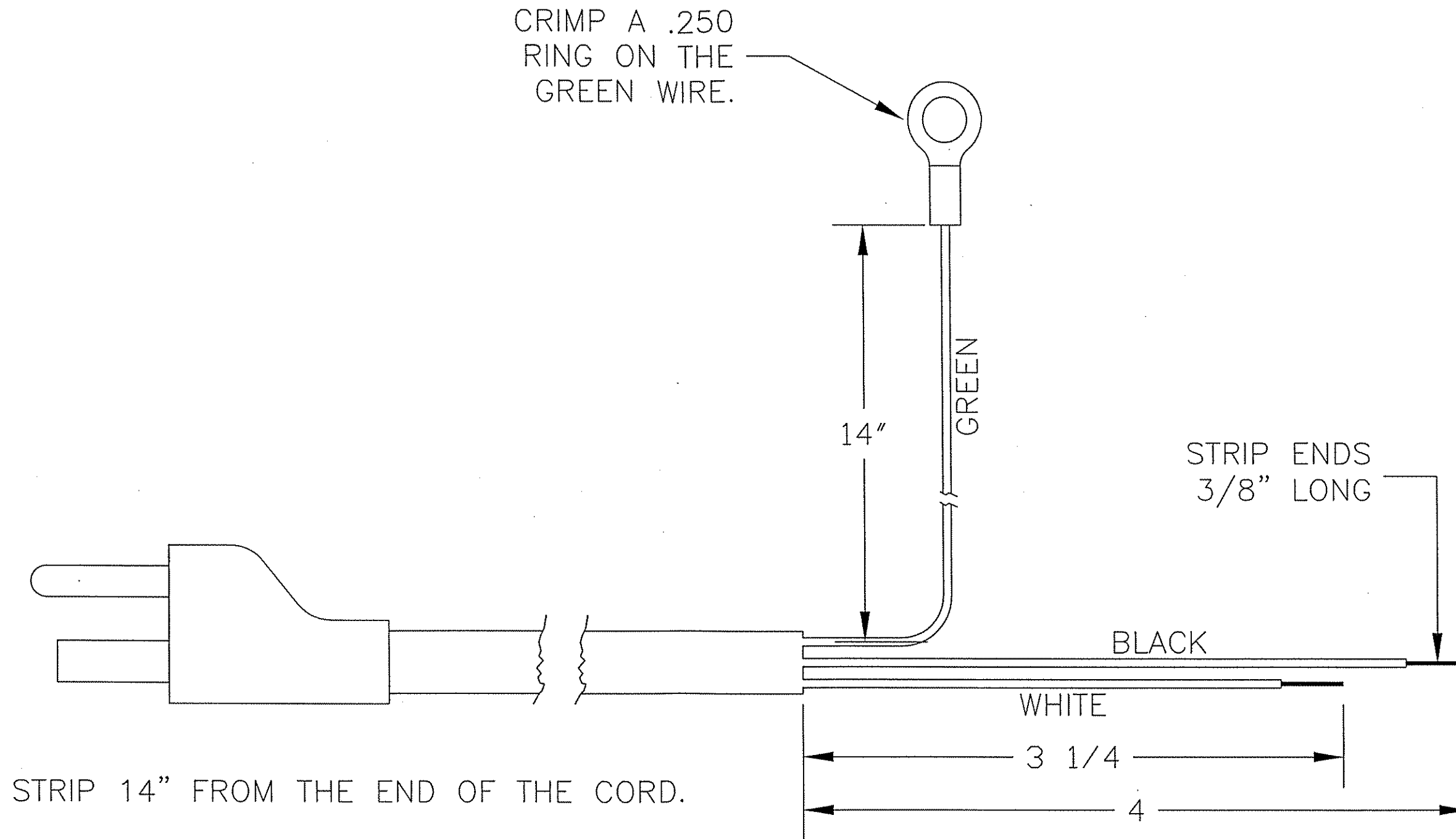
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SIZE: B	DOCUMENT NO: 301 981/3	REV: 1
DATE: MAY-11-2000	SHEET: 3 OF 7	
FILENAME: 665pc3rev6.DWG	BASE:	


TRIM THE OUTER INSULATION OF THE CABLE BACK 16"

WIRE LENGTHS:		END
RED	6-1/2"	9-PIN PLUG
BLACK/WHITE	6-1/2"	"
BLACK	6-1/2"	"
WHITE	6-1/2"	"
WHITE/BLACK	6-1/2"	"
GREEN/BLACK	6-1/2"	"
BLUE	6-1/2"	"
RED/BLACK	6-1/2"	"
GREEN	11"	.25 CRIMP RING
ORANGE	16"	VERTICAL PIN PLUG
ORANGE/BLACK	16"	PLUG 2-PIN
BLUE/BLACK	16"	LEAVE OPEN



 ORION PACKAGING INC. 2270 INDUSTRIEL BOUL., LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (514) 667-9769	ORION PACKAGING INC.		
	2270 INDUSTRIEL BLVD LAVAL, QUE., CANADA H7S 1P9 TEL: (514) 667-9769 APPR. BY: J.B.S.	SCALE: NTS	
	TITLE: HL77-14 "STD"		
	SIZE: B	DOCUMENT NO: 301 981/4	REV: 1
	DATE: MAY-11-2000	SHEET: 4 OF 7	
FILENAME: 655.CF.2.DWG	BASE:		

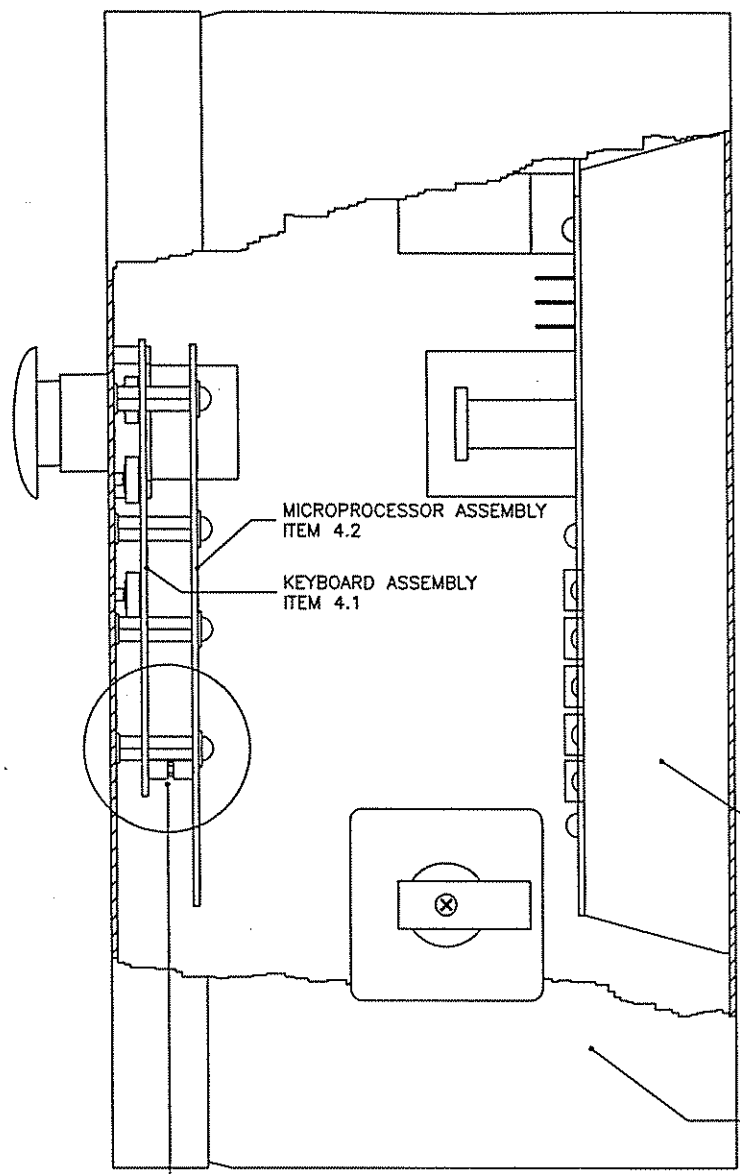
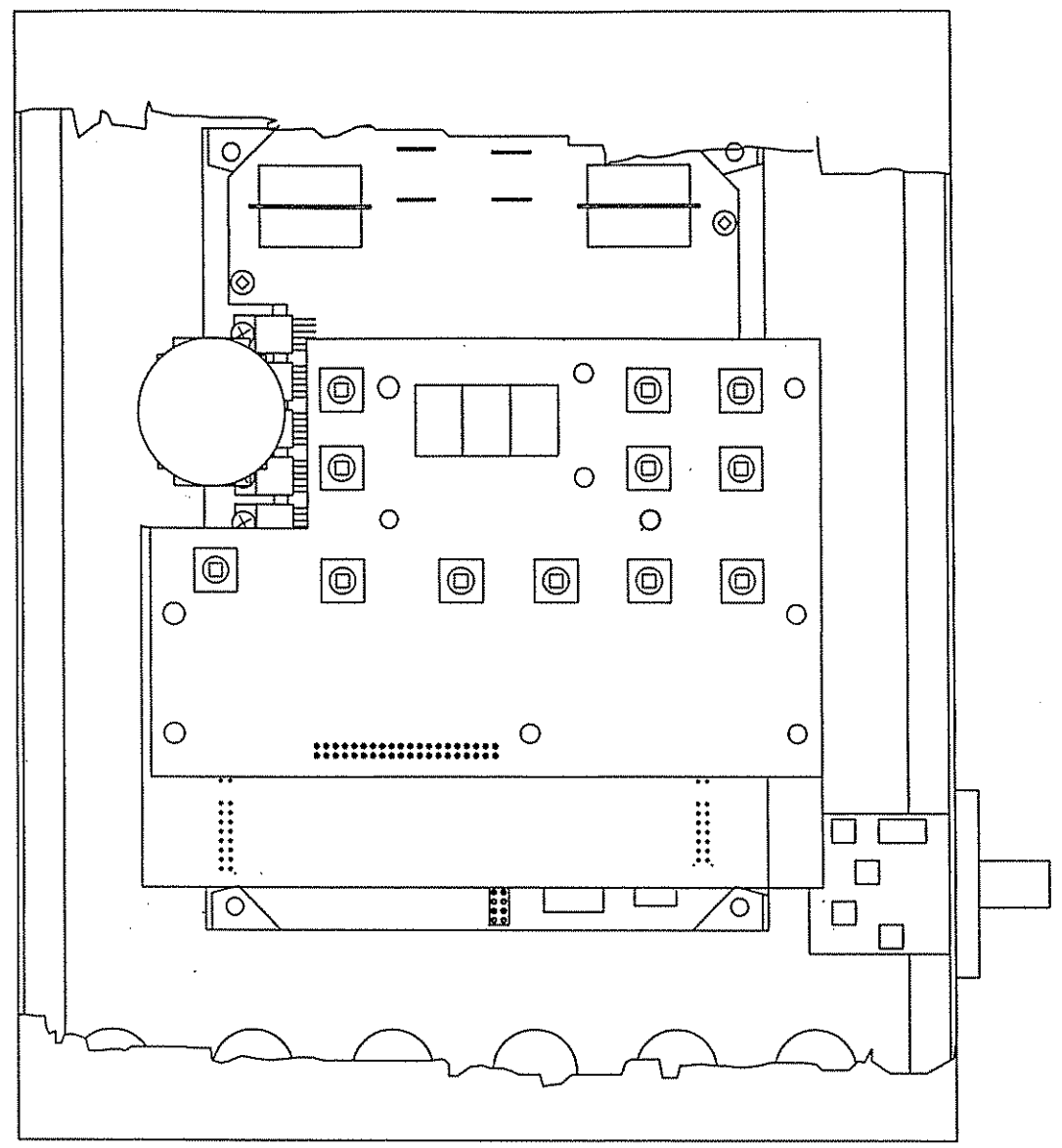


 <p>ORION PACKAGING INC. 2270 INDUSTRIEL BOUL., LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (514) 667-9769</p>	ORION PACKAGING INC.		
	2270 INDUSTRIEL BLVD LAVAL, QUE., CANADA H7S 1P9		SCALE: NTS
	TEL: (514) 667-9769	FAX: (514) 667-6320	
	APPR. BY: J.B.S.	DRAWN BY: J. ALEXANDER	
	TITLE: HL77-14 'STD'		
SIZE: A	DOCUMENT NO: 301 981/5	JOB # STD	REV: 1
DATE: MAY-11-2000	SHEET: 5 OF 7		
FILENAME: 655.CF.1.DWG	BASE:		

ASSEMBLY NOTES

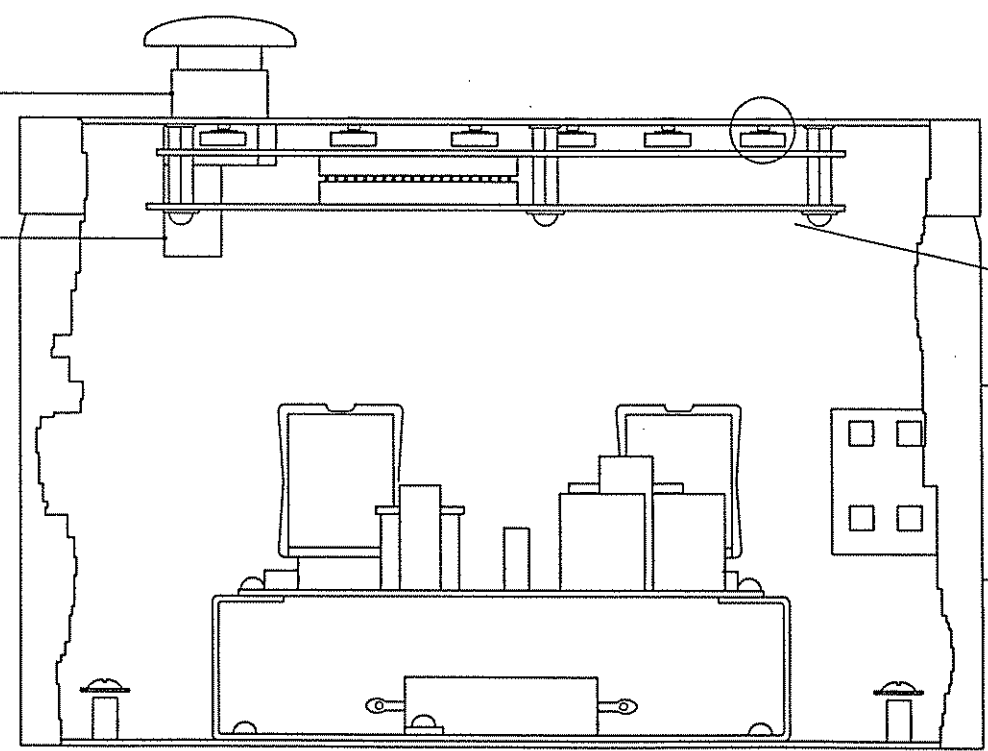
REFER TO THE MOUNTING INSTRUCTIONS PROVIDED WITH THE ON/OFF SWITCH BY THE MANUFACTURER.

ATTACH A PROTECTIVE DISC BETWEEN THE LABEL AND THE SWITCH.
PLACE A 1/32" SPACER BETWEEN THE 1/4" HEX SPACER AND THE ENCLOSURE.



MUSHROOM
PUSHBUTTON HD
ITEM 10.1

CONTACT
BLOCK
ITEM 10.2



MICROPROCESSOR ASSEMBLY
ITEM 4.2

KEYBOARD ASSEMBLY
ITEM 4.1

CHASSIS
ASSEMBLY
ITEM

ENCLOSURE
ITEM 1

SPACER
ITEM
(11 PLACES)

1/4" HEX SPACER
ITEM
(11 PLACES)

SCREW
ITEM
11 PLACES

1/2" HEX SPACER
ITEM
(11 PLACES)

WASHER
ITEM
(11 PLACES)

INSERT PINS OF THE KEYBOARD
PCB HEADER INTO THE SOCKET
OF THE MICROPROCESSOR PCB.

LABEL
ITEM 2

ENCLOSURE
ITEM 1

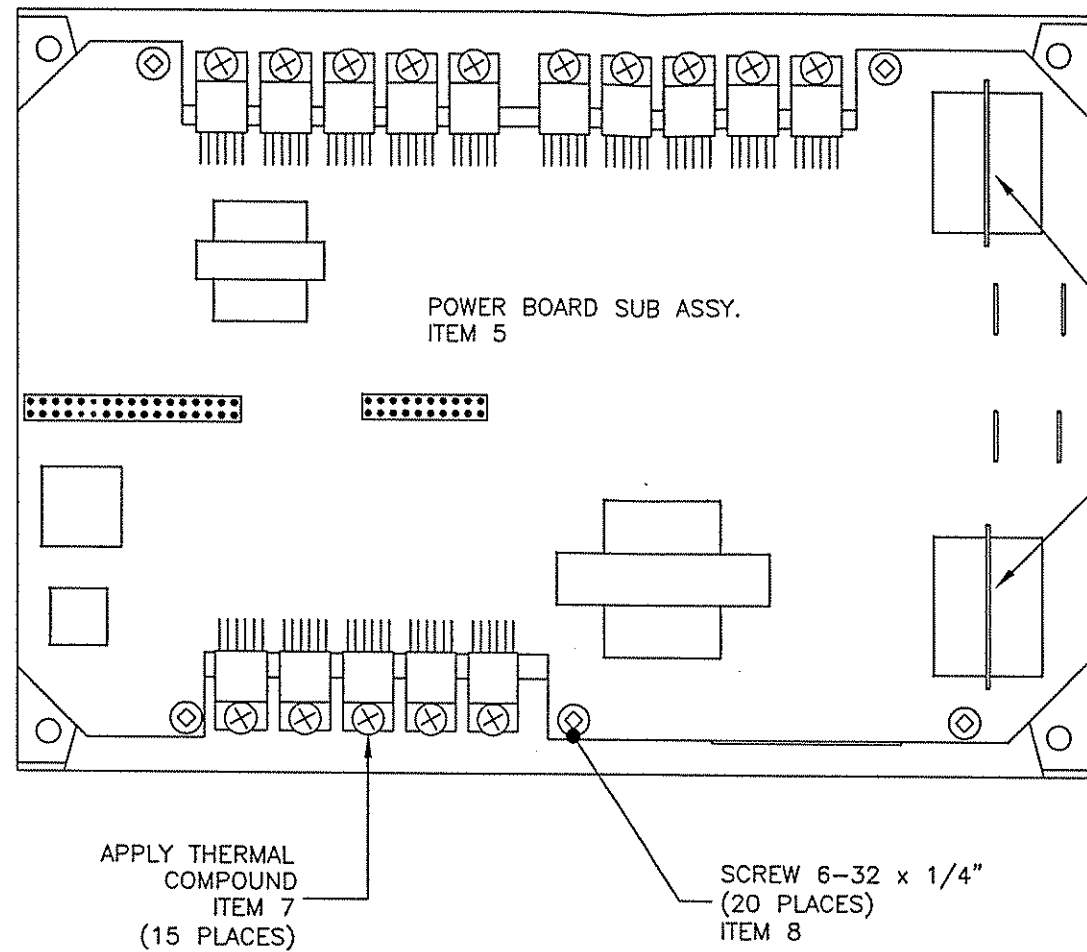
PROTECTIVE DISC
ITEM 2.1

KEYBOARD ASSEMBLY
ITEM 4.1

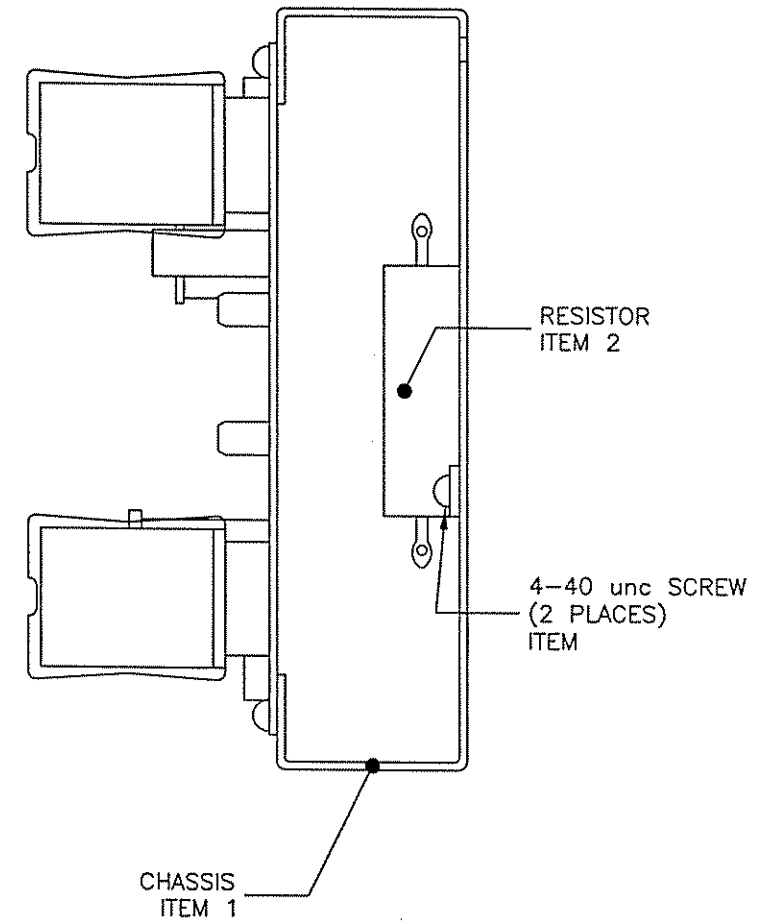
SWITCH
ITEM



ORION PACKAGING INC.		SCALE: 1:1
2270 INDUSTRIEL BLDG. LAVAL, QUEBEC, CANADA H7S 1P9	TEL: (514) 687-9768	FAX: (514) 687-9320
APPR. BY: J.S.S.	DRAWN BY: S. ALEXANDER	
TITLE: HL77-14 "PACKAGE CONTROL"		
SIZE: D	DOCUMENT NO: 301 981/6	REP: 1
DATE: MAY-11-2000	SHEET: 6 OF 7	
FILENAME: 655.CAD.DWG	BASE:	




INSTALL
RELAY
CLIPS

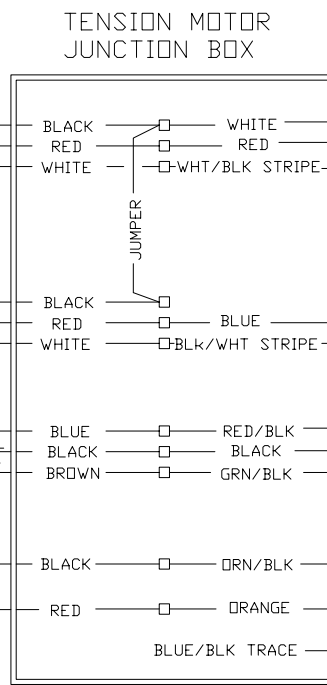
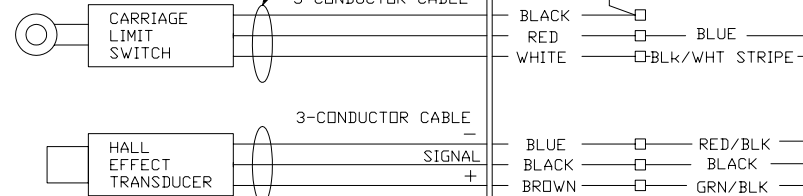
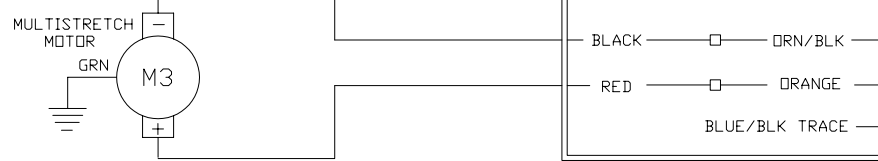
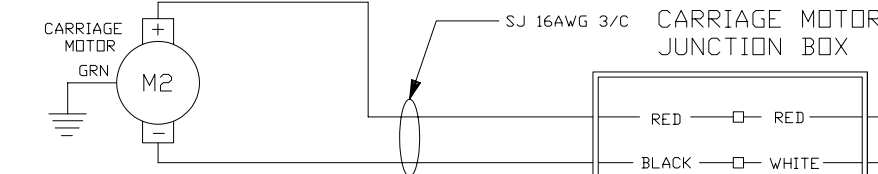
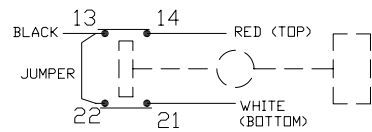
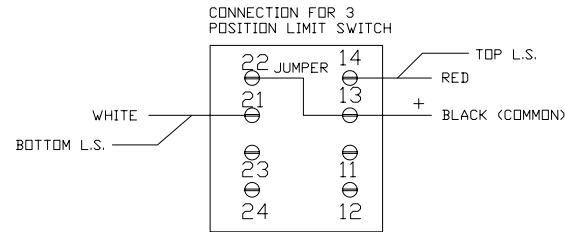
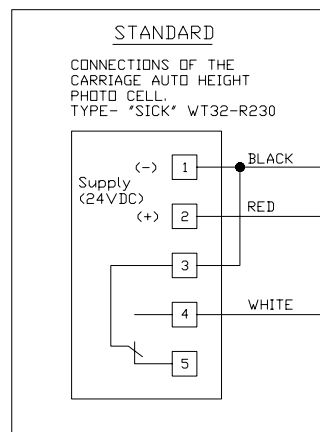
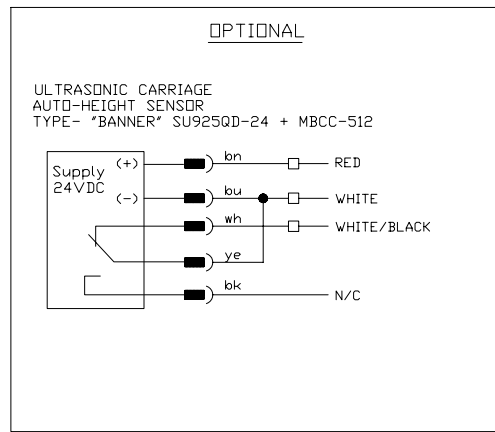


ASSEMBLY NOTES

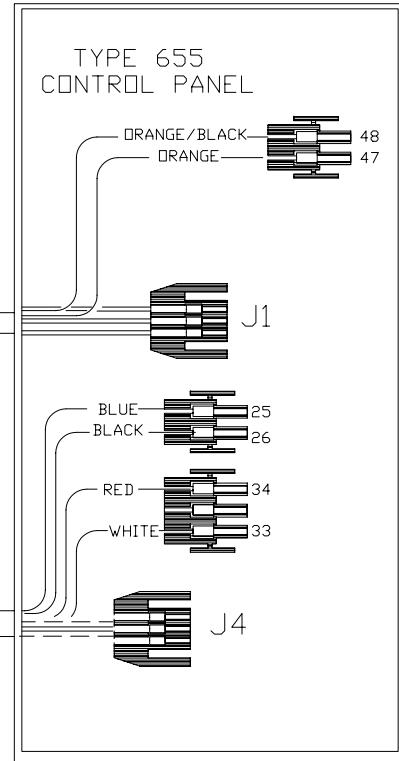
APPLY THERMAL COMPOUND BETWEEN THE CHASSIS AND SEMICONDUCTORS WHERE SEMICONDUCTORS ARE FASTENED TO THE CHASSIS BY SCREWS.

MAKE CERTAIN THAT THE RELAYS ARE HELD SECURELY IN PLACE BY THE CLIPS SUPPLIED WITH THE SOCKET.

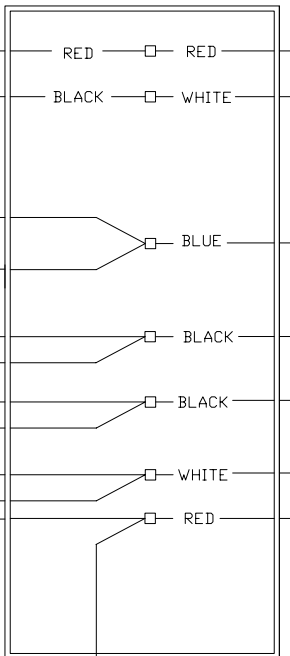
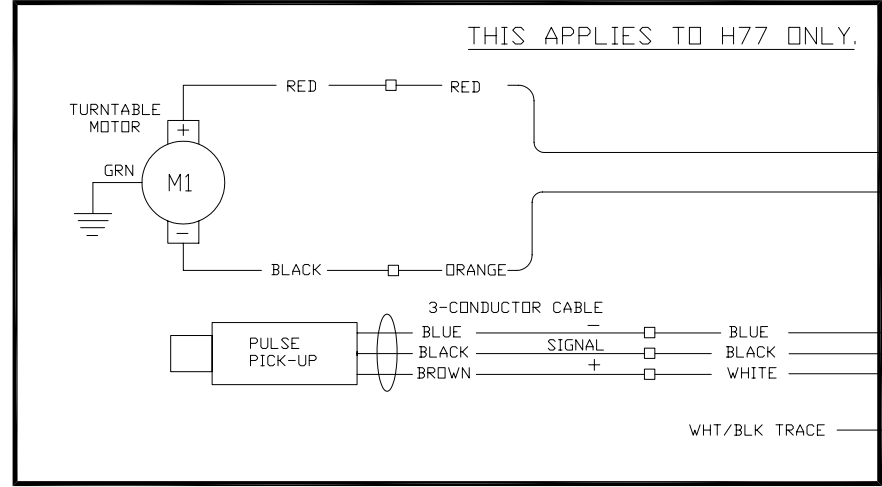
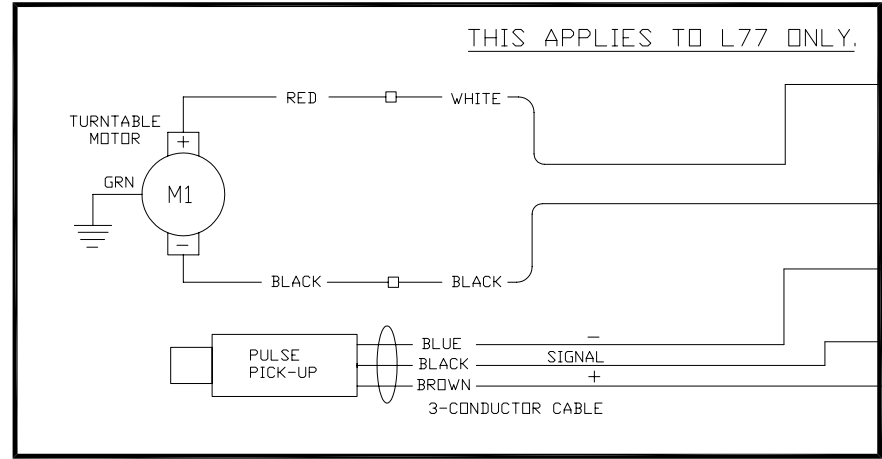
 <p>ORION PACKAGING INC. 2270 INDUSTRIEL BOUL., LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (514) 667-9769</p>		ORION PACKAGING INC.	
		2270 INDUSTRIEL BLVD LAVAL, QUE., CANADA H7S 1P9 TEL: (514) 667-9769 FAX: (514) 667-6320 APPR: BY: J.B.S. DRAWN BY: J. ALEXANDER	
SCALE:	1:1		
TITLE:	HL77-14		"STD"
SIZE:	DOCUMENT NO:	301 981/7	REV: 1
C	JOB # STD		
DATE:	MAY-11-2000	SHEET: 7 OF 7	
FILENAME:	656.GA.DWG	BASE:	



- CONNECTIONS FOR J1
- PIN 1: RED
 - PIN 2: BLACK/WHITE STRIPE
 - PIN 3: BLACK
 - PIN 4: WHITE
 - PIN 5: WHITE/BLACK STRIPE
 - PIN 6: GREEN/BLACK
 - PIN 7: NO CONNECTION
 - PIN 8: BLUE
 - PIN 9: RED/BLACK



- CONNECTIONS FOR J4
- PIN 1: BLACK
 - PIN 2: WHITE
 - PIN 3: RED
 - PIN 4: NO CONNECTION



PLEASE NOTE:
THESE DRAWING SUPERSEDES 655.hu.rev 5.dwg

DATE REVISED:	OCT-06-2000	7
DATE REVISED:	SEPT-25-2000	6
DATE REVISED:	SEPT-08-2000	5
DATE REVISED:	AUG-20-2000	4
DATE REVISED:	AUG-09-2000	3
DATE REVISED:	JULY-14-2000	2
DATE REVISED:	JUNE-20-2000	1



ORION PACKAGING INC.

2270 INDUSTRIEL BOUL. LAVAL, QUE. CANADA H7S 1P9
TEL: (514) 667-9769 FAX: (514) 667-8320
APPR. BY: J.B.S. DRAWN BY: J. ALEXANDER

SCALE: NTS

TITLE: HL77-14 STD

SIZE:	DOCUMENT NO:	301 981/2	REV:
C	JOB # STD		7
DATE:	SEE ABOVE	SHEET: 2 OF 7	
FILENAME:	655.HU.REV 7.DWG	BASE:	

LOADING THE FILM

The film roll can be loaded on the carriage mandrel 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. Swing up the top mandrel spool
3. Put the roll of film on the bottom mandrel
4. Install the top mandrel on top of the roll to prevent upward movement
5. Pull the handle marked PULL TO OPEN to open film distributor cradle
6. Pass the roped tail of the film through opening (as shown on the film quick threading pattern DWG. # 418180 Fig. 1)
7. Close the film distributor cradle by pushing bar marked PUSH TO CLOSE
8. When the film feeding is completed (Fig. 2) - turn the power switch on
9. 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.

The system is now ready to begin the first wrapping cycle.

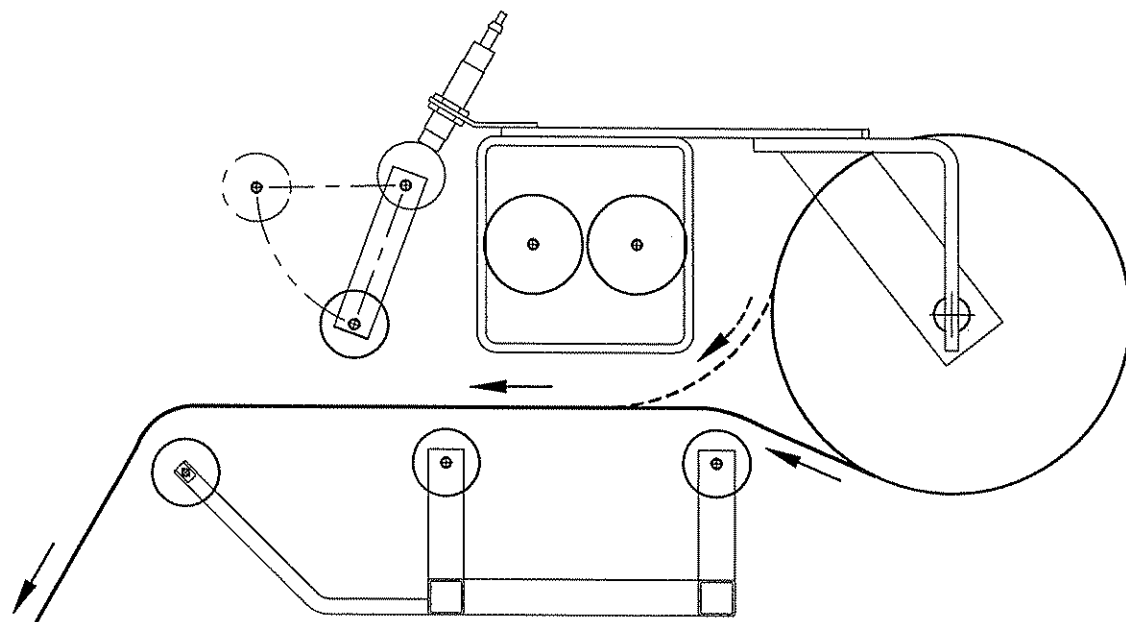


Fig. 1 OPEN CRADLE

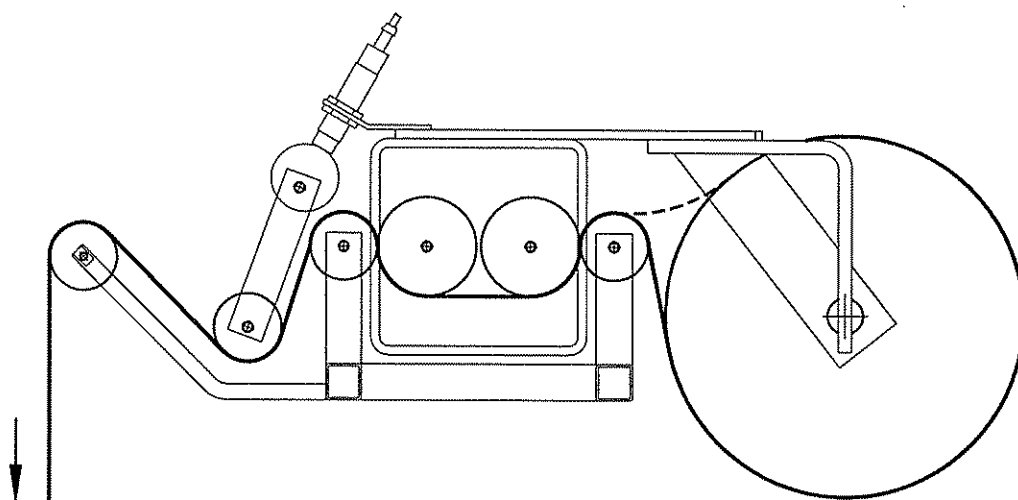


Fig. 2 CLOSED CRADLE

FILM QUICK THREADING

UPDATED FEB-15-99

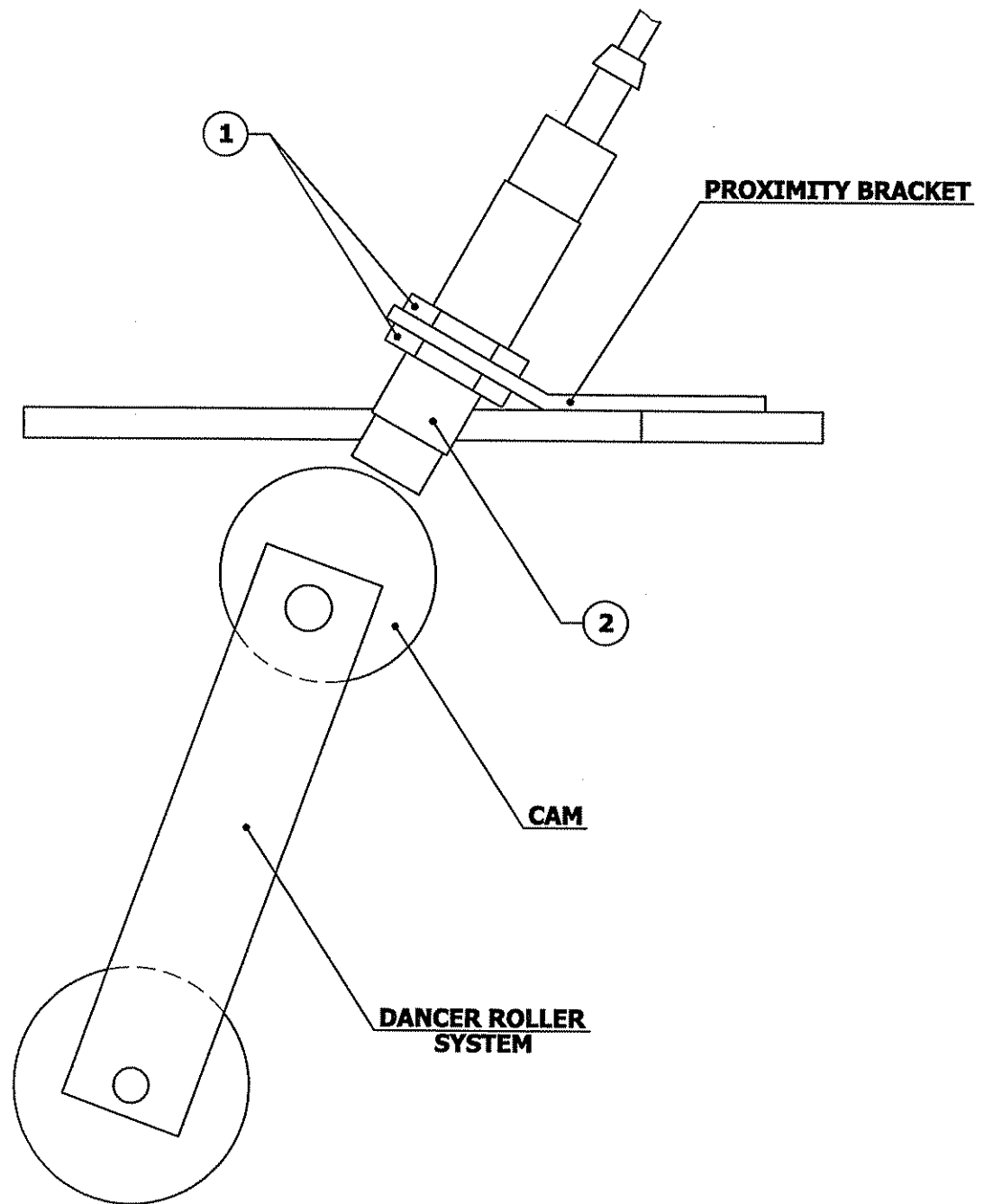
DWG #418180

PROXIMITY SENSOR ADJUSTMENT

Occasionally the Feed Back Proximity Sensor may need some adjustment. The position of the feed back proximity sensor against the cam is shown on drawing # 419139.

Adjustment instructions:

- remove the carriage cover
- unbolt the two nuts holding the proximity switch - item # 1
- turn the Proximity sensor - (item # 2) to create the gap between the cam and the front side of proximity sensor about 1/8 “
- tighten on the nuts securing the Proximity Sensor
- turn the trim pot SPAN (Board 336-8 or 336-9) adjust the moment when motor starts to turn when dancer roller moved from its home position up to 1 1/2”.



PROXIMITY SENSOR FEED BACK ADJUSTMENT

UPDATED FEB-15-99

DWG #419139

MACHINE MAINTENANCE

All general information about machine maintenance is based on normal machine working conditions: indoors, moderate dust and low moisture environment, and maximum rotation of 32 RPM of turntable/rotary arm.

They should be regarded as guidelines, reviewed and corrected according to requirements of actual use and conditions.

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 it 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.

REDUCER OIL CHANGE

All external cap screws and plugs on the reducing transmission should be checked for tightness after the first week. It is recommended to change the oil every six months or at least 1800 hours of operation, whichever comes first. When adding or changing oil, the transmission should never be filled above the oil level mark indicated, because leakage and overheating may occur.

Below is the list of the type of lubricant that should be used.

List of recommended reducer oils

Manufacturer	Lubricant
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 Corp.	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

RING BEARING MAINTENANCE (when applicable)

The ring bearing (located under the turntable) should be re-lubricated internally and externally.

Internally: by injecting grease into all the lubrication nipples in succession until a collar of fresh grease appears around the perimeter of the ring. The re-lubrication interval suggested for these bearings, used in Stretch Wrapping Machinery is 750 hours, with a maximum period of 6 months. The lubricant should be fresh and applied in sufficient quantities to make sure all surfaces are lubricated.

Externally: by lubricating and wiping the chain drive with oily cloth.

The frequency of lubrication depends on entirely upon the usage of the machine and environment in which the machine is placed (dust, moisture etc.).

Machines working under extremely dirty conditions should be lubricated every 400 operating hours but at minimum, every 2 months. Longer lubrication intervals may occur only when machine is working under very clean and dry conditions but should be not be longer than 6 months.

List of recommended lubricants for the ring bearing lubrication

Manufacturer	Lubricant
BP	Energrease LS2
Castrol	Speeroll AP2
Esso	Beacon 2
Gulf	Crown Grease 2
Mobil	Mobilus 2
Shell	Avania Grease R2
Texaco	Glissando FT 2
Valvoline	LB - 2

TOWER RACEWAYS MAINTENANCE

The film distributor (carriage) is sliding on the plastic guides attached behind its back plate. The section of the tower on which the plastic guides move (raceways) should be cleaned and re-greased approximately every 600 hours of machine operation.

NOTICE: If the machine works in a dusty and corrosive environment, the raceways should be re-greased more often (at least every 100 hours).

CHAIN MAINTENANCE

To clean the chain, wipe it with an oily cloth every month. When machine is working in a dusty and damp environment, it may be necessary to repeat the cleaning operation more often.

As the chain lubricants please use the most common chain lubricants on the market. With time, the chain will tend to stretch. A loose chain should be tightened at the chain tensioner, or by moving the reducer on its mounting plate.

NOTICE: Chain tension first adjustment must be done after the first two weeks of machine usage.

PNEUMATIC SYSTEM MAINTENANCE (when applicable)

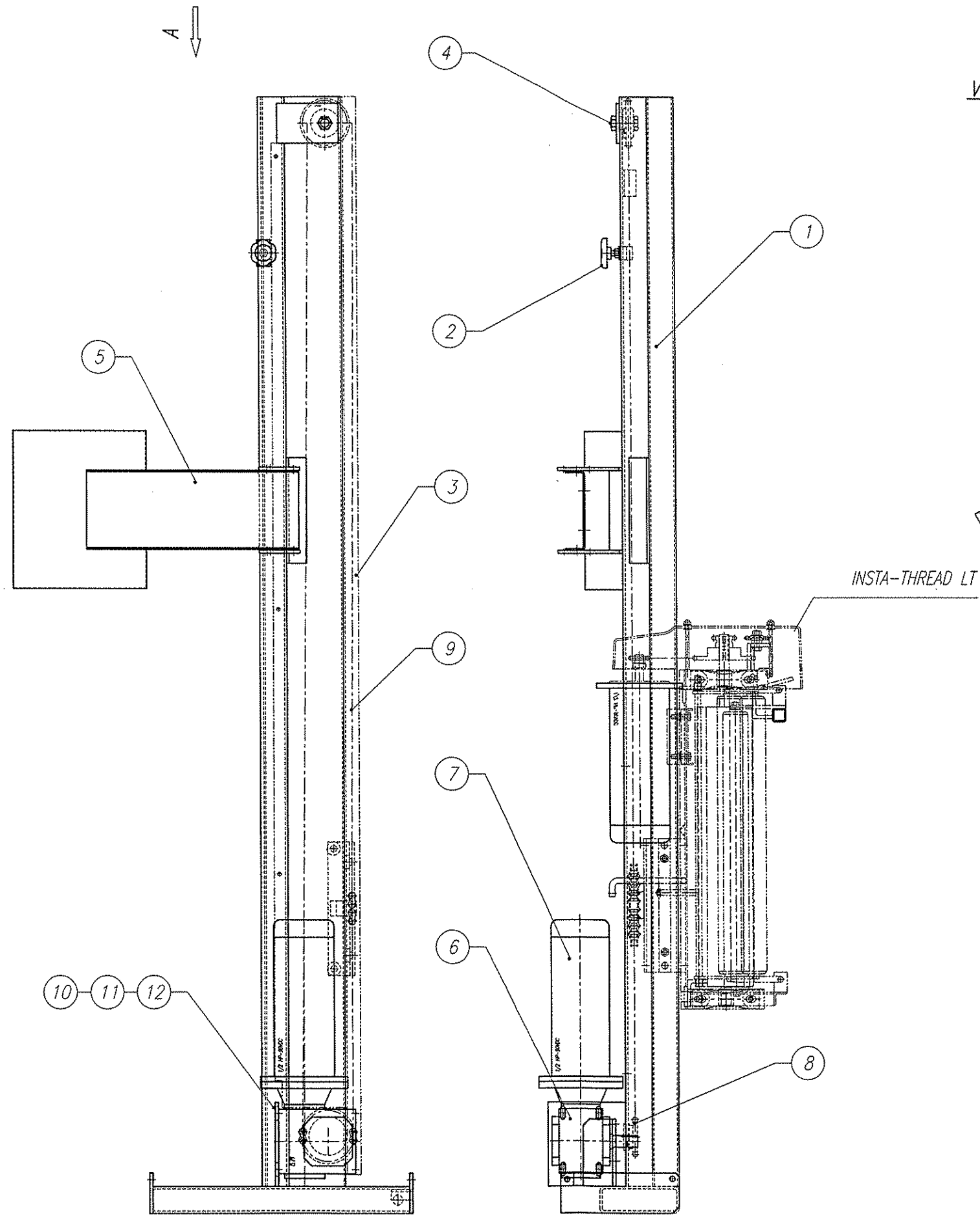
The air supply system must be checked weekly and must be free from the moisture. In cold environments, it may be necessary to drain the air supply system daily and lubricate using SAE #10 oil.

The air lubricator should be filled to approximately 3/4" of its full capacity.

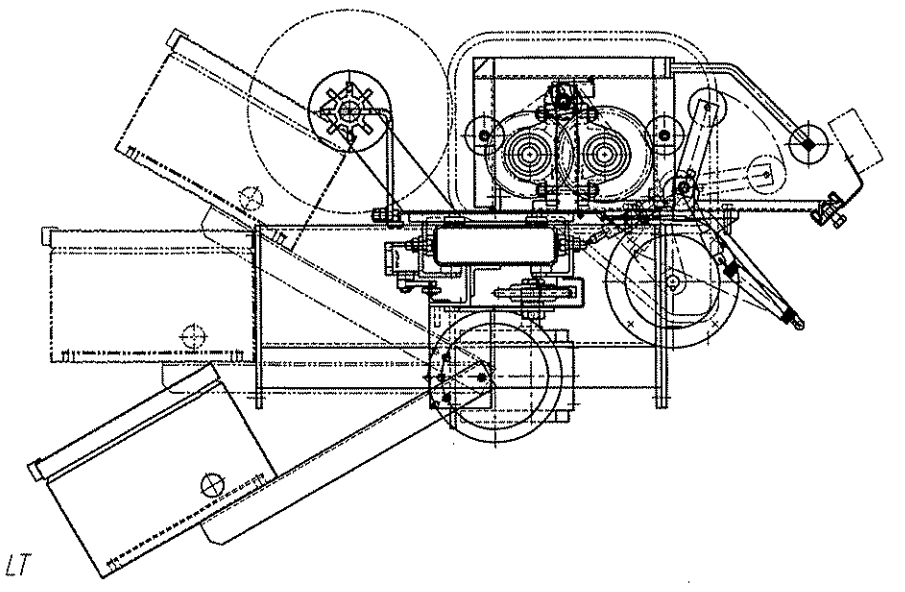
SEMI-AUTOMATIC STANDARD ASSEMBLY PART LIST

NOTE:

- Quantities listed in order of part number.
- The names given to the parts are generic.



VIEW - A



12	WASHER		012725	4	
11	LOCK WASHER		012724	4	
10	HEX SCREW		010291	4	
9	CHAIN		010009	1	
8	SPROCKET		010235	1	
7	EL.MOTOR		015240	1	
6	REDUCER		015200	1	
5	CONTROL PANEL			1	
4	IDLER SPROCKET ASSEMBLY	A	420809	1	
3	CHAIN GUARD	A	421023	1	
2	LIMIT SWITCH STRIKER - A	A	423349	1	
1	HINGE TOWER 6 x 2 x .150 - WELDING	C	426298	1	
No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT

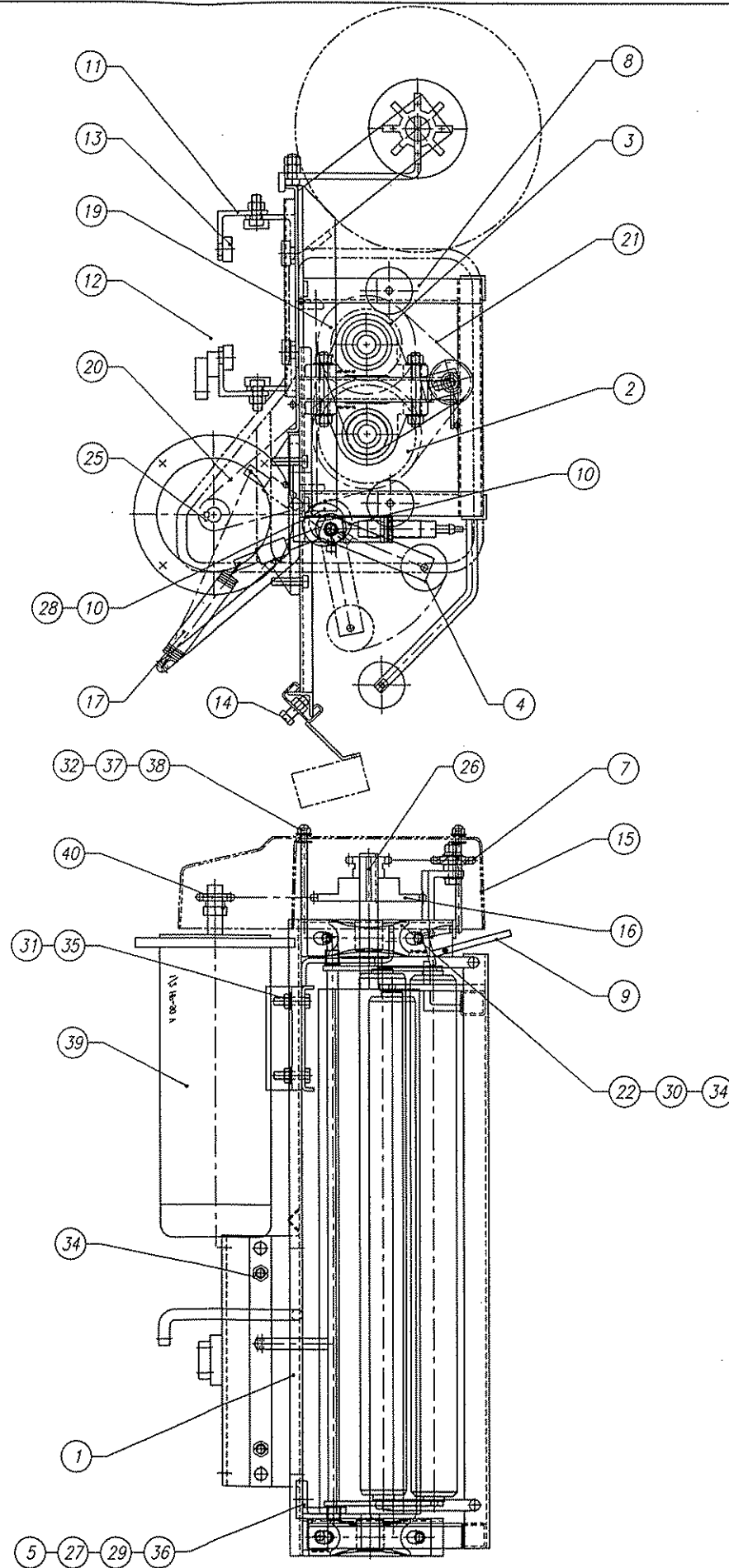
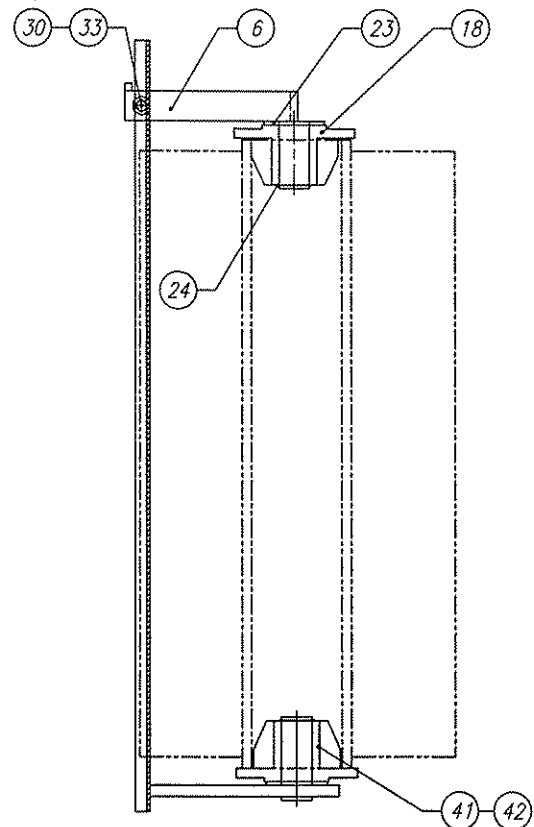
REMARKS:
REMARKS:

HINGE TOWER 6 x 2 x .150 - ASSEMBLY

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL.: (514) 667-9769</p>	DATE:	MAY-09-2000	SCALE:	1 : 6	
	DRAWN BY:	S. KUBICKA	MACHINE TYPE:	H,L77/14	
	CHECKED BY:		DRAWING SIZE:	C	
	ASSEMBLY DWG.:	427950 B	JOB No.:	STD	DRAWING No.:

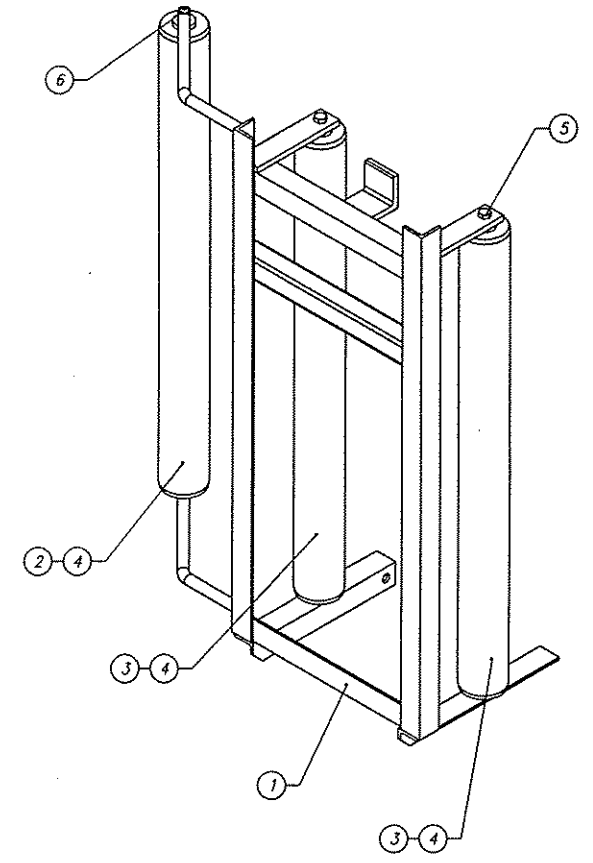
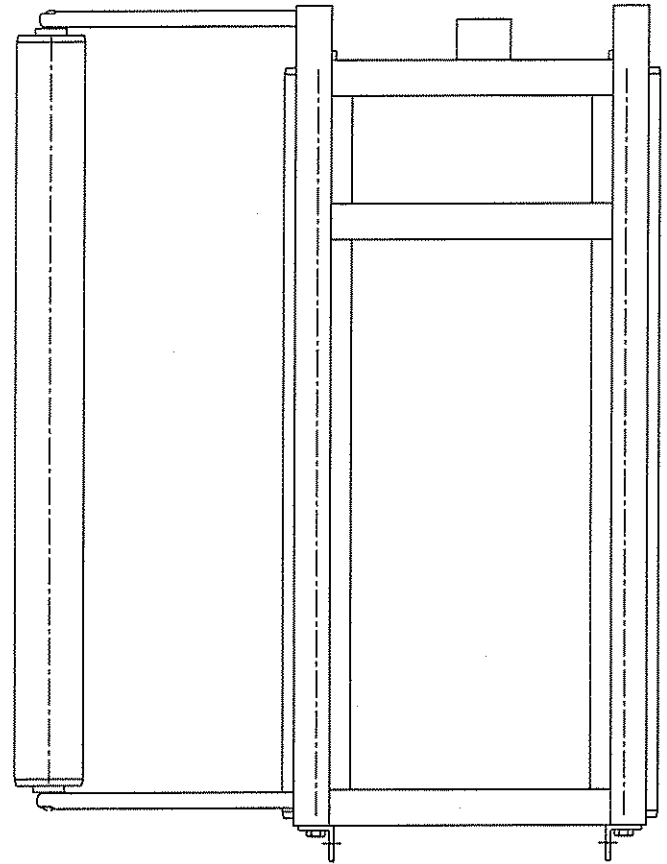
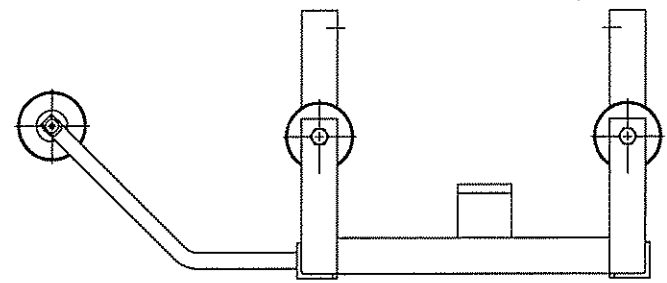
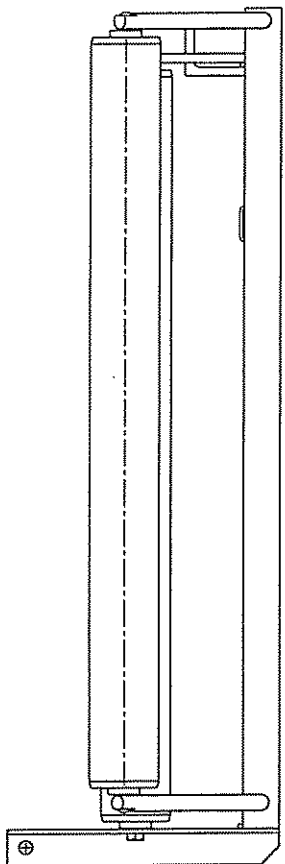
PRESTRETCH CHANGE AVAILABILITY				
No.	DESCRIPTION	PART No.	WEIGHT	PRESTRETCH %%
19	DRIVE SPROCKET	011460		290 %
		011459		275 %
		011458		260 %
		011457		245 %
		011456		230 %
		011455		215 %
		011454		200 %
		011453		185 %
		010968		170 %
		011452		155 %
		011451		140 %
		013134		125 %
		012403		110 %
		012402		95 %
		010748		80 %
013157		65 %		
010975		50 %		

STD



42	WASHER	A	425793	1	
41	BOTTOM SPOOL	A	425792	1	
40	SPROCKET	-	013928	1	
39	EL. MOTOR	-	015240	1	
38	RUBBER GROMMET 1/4 I.D.	-	-	3	
37	DOMED NUT	-	014195	3	
36	HEX NUT	-	012689	5	
35	HEX NUT	-	013407	4	
34	HEX NUT	-	012582	12	
33	HEX NUT	-	011128	2	
32	FLAT WASHER	-	012221	3	
31	FLAT WASHER	-	012725	4	
30	FLAT WASHER	-	014481	9	
29	LOCK WASHER	-	011393	2	
28	SOCKET HEAD CAP SCREW	-	010259	3	
27	HEX HEAD SCREW	-	011382	2	
26	SQ. KEY	-	010295	1	
25	SQ. KEY	-	010295	2	
24	SELF SEATING EXT. RETAINING RING	-	013860	2	
23	FLAT WASHER	-	012323	1	
22	PILLOW BLOCK	-	011192	4	
21	CHAIN	-	010583	1	
20	CHAIN	-	010583	1	
19	DRIVE SPROCKET	-	011454	1	
18	SPOOL	A	405855	1	
17	EXTENSION SPRING	B	403118	1	
16	DUAL SPROCKET	A	419649	1	
15	FIBERGLASS COVER	B	422323	1	
14	PHOTOCELL BRACKET	B	422594	1	
13	SLIDE BUTTON	A	420001	12	
12	CARRIAGE CHAIN ATTACHMENT ANGLE (5x2-TOWER)	A	420000	1	
11	CARRIAGE ATTACHMENT ANGLE (2"-TH'K TOWER)	A	419999	1	
10	PROXIMITY SENSOR CAM	A	413744	1	
9	CRADLE LOCK	A	421524	2	
8	CRADLE ROLLER ASSEMBLY	A	423088	1	
7	CHAIN TENSIONER	A	421547	1	
6	FILM TOP MANDREL	A	423087	1	
5	DANCER BOTTOM BRACKET	A	422182	1	
4	DANCER ROLLERS ASSEMBLY - 20 (FRL)	A	414194	1	
3	OMNISTRETCH RUBBER ROLLER 2 3/4 - 20	B	423086	1	
2	OMNISTRETCH RUBBER ROLLER 4 1/8 - 20	B	423085	1	
1	INSTA-THREAD LT BACK (6 x 2 -20 - FRL)	C	425218	1	

No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
REMARKS: -					
REMARKS: -					
INSTA-THREAD LT - 20" (6x2-FRL)					
 ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL.: (514) 667-9769		DATE:	NOV-16-1999	SCALE:	1 : 4
		DRAWN BY:	M. G. GOLA	MACHINE TYPE:	H,L/14
ASSEMBLY DWG.: LAYOUT		CHECKED BY:		DRAWING SIZE:	C
		JOB No.:	STD	DRAWING No.:	425219

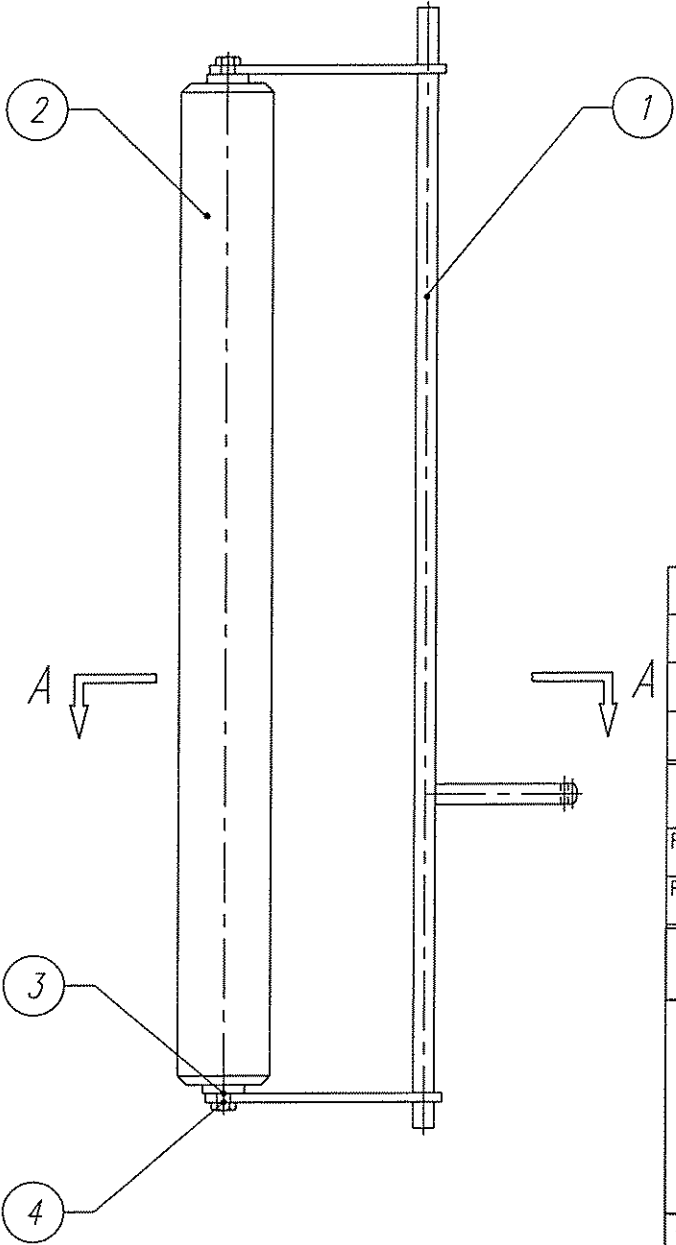


6	HEX SOCK BUTT HEAD SCREW	015021	2	
5	HEX HEAD SCREW	015009	4	
4	ALU. ROLLER (ECONOMY) 1.9 - 20	015185	3	
3	IDLE ROLLER SHAFT	A 423121	2	
2	IDLE ROLLER SHAFT	A 421232	1	
1	CRADLE ROLLER FRAME (20-FRL)	C 423089	1	

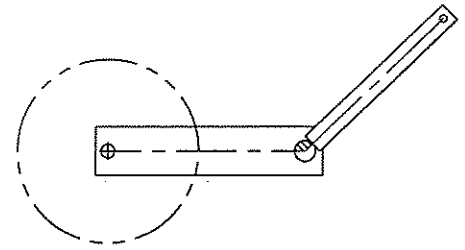
No.	DESCRIPTION	QTY	WEIGHT
REMARKS:			
REMARKS:			

CRADLE ROLLER ASSEMBLY (20-FRL)

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (514) 867-9769</p>	DATE:	MAR-10-1999	SCALE:	1 : 2.5	
	DRAWN BY:	ROGER F.	MACHINE TYPE:	HL/13	
	CHECKED BY:		DRAWING SIZE:	C	
ASSEMBLY DWG:	423081	JOB No.:	STD	DRAWING No.:	423088



A - A



4	HEX HEAD SCREW		012475	2	
3	FLANGE NUT		014164	2	
2	ALUMINIUM ROLLER - 20	A	402789	1	
1	DANCER ROLLER CRADLE - 20 (FRL)	A	414195	1	
No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT

REMARKS:

REMARKS:

DANCER ROLLER ASSEMBLY - 20 (FRL)

orion
 PACKAGING INC.
 2270 INDUSTRIEL, LAVAL
 QUEBEC, CANADA, H7S 1P9
 TEL.: (514) 667-9769

DATE: <i>SEP-17-99</i>	SCALE: <i>1 : 4</i>
DRAWN BY: <i>ROGER F.</i>	MACHINE TYPE: <i>ALL/12</i>
CHECKED BY:	DRAWING SIZE: <i>A</i>
ASSEMBLY DWG.: <i>-</i>	DRAWING No.: <i>414194</i>

JOB No.:
STD - 12.1

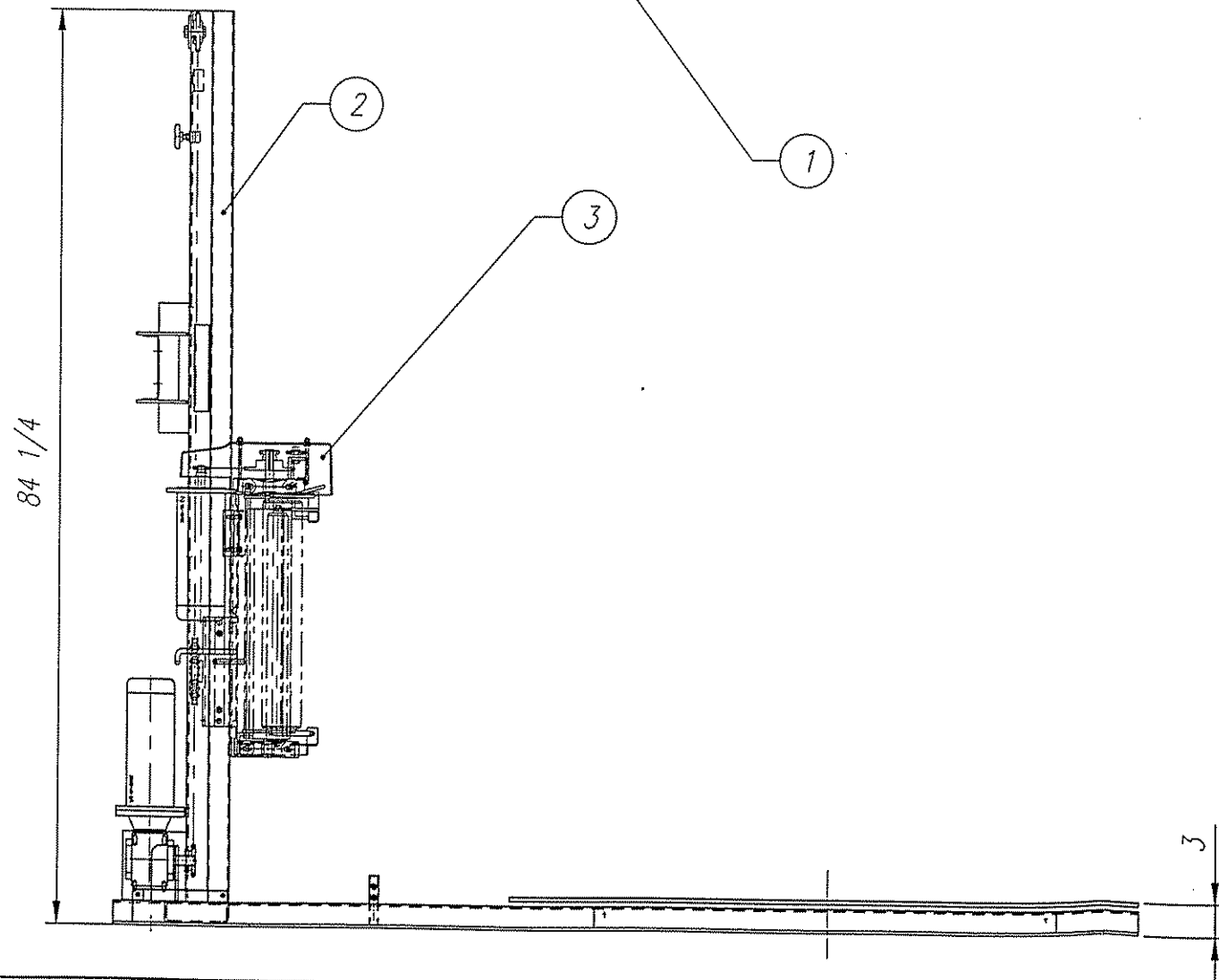
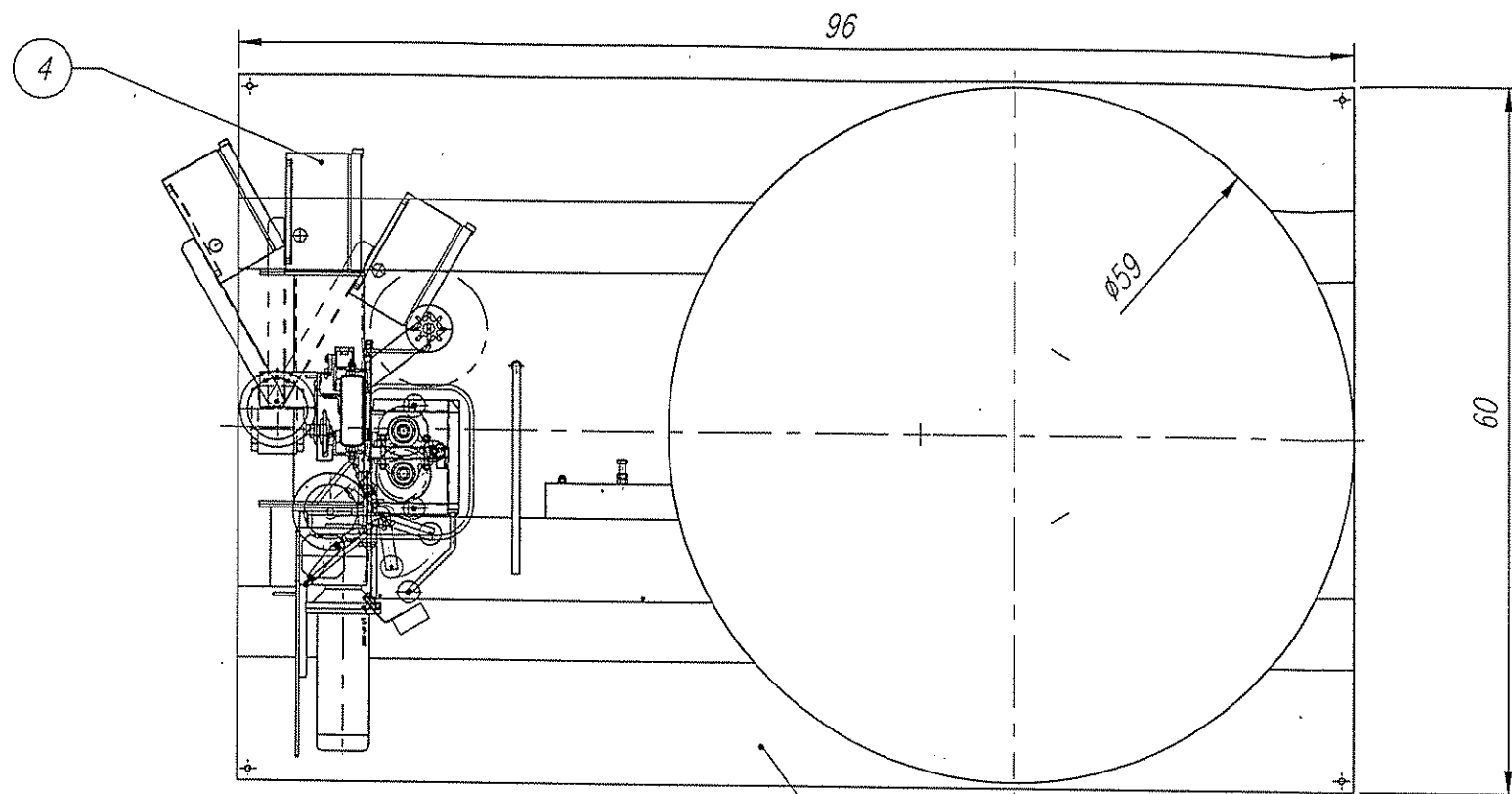
ORION PACKAGING SYSTEMS INC.
SEMI-AUTOMATIC SPECIFICATIONS - EFFECTIVE MARCH 15, 2000

ORION EPIC® SERIES MODEL L-77

Spiral Semi-Automatic Medium Duty Low Profile

Maximum Load Size	55"W x 55"L x 84"H
Weight Capacity	4,000 lbs. Dynamic, 20,000 lbs. Static
Utilities	115/1/60 15 Amp Service
Turntable	59" Diameter Structural Steel Plate Dura-Glide™ Turntable Support System Quiet in Operation, Maintenance Free 3" Height Floor to Top of Turntable
Turntable Drive	0-12 RPM Variable Turntable Speed Variable Speed Drive Motor Heavy Duty Chain Drive with Tensioner Electronically Adjustable Acceleration/Deceleration (Soft Start) Positive Alignment Feature
Control Features	CSA Approved, NEMA 12 Control Panel State-of-the-Art Logic Control User Friendly Microprocessor with Micro-Switch Keypad Revo-Logic™ Exact Wrap Counting Technology Electronic Film Tension Control Adjustment on the Panel Separate Top / Bottom Wrap Count Selectors with LED Count Display Variable Speed Film Carriage Up/Down Control Film Carriage Raise/Lower Switch (Manual) Photocell for Automatic Load Height Detection Turntable Jog Pushbutton
Film Delivery	20" Insta-Thread LT Powered Pre-Stretch Film Delivery System 200% Pre-Stretch Ratio Easy & Safe to Operate Self-Threading Carriage Design Electronic Film Tension Control Adjustment on the Panel Variable Speed Film Output (Non-Wearing Sensor) Heavy Duty Chain & Sprocket Ratio Control Adjustable Film Roping Bar on Chassis for Stronger Interlocking of Load and Pallet
Film Carriage Elevator Drive	Heavy Duty ANSI Chain Carriage Lift Variable Speed Drive Motor <u>Multi-Point UHMW Precision Carriage Guidance System</u>
Structural Features	100% Structural Steel Construction Throughout Easy Access to All Components Open Mechanical Design for Ease of Maintenance Forklift Portable Base Design Structural Steel Tube Mast Design Hinged Mast for Ease of Shipping, Portability
Estimated Shipping Weight	1,500 lbs.

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REPLACES 426735 B

4	CONTROL PANEL 5412 ESCH 12 10 06	-	-	-	1	-
3	INSTA-THREAD LT CARRIAGE	-	C	425219	1	96.2
2	HINGE TOWER 6 x 2 ASSEMBLY	-	C	427953	1	183.8
1	L77-13C BASE ASSEMBLY	-	C	426921	1	990.3
No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT	

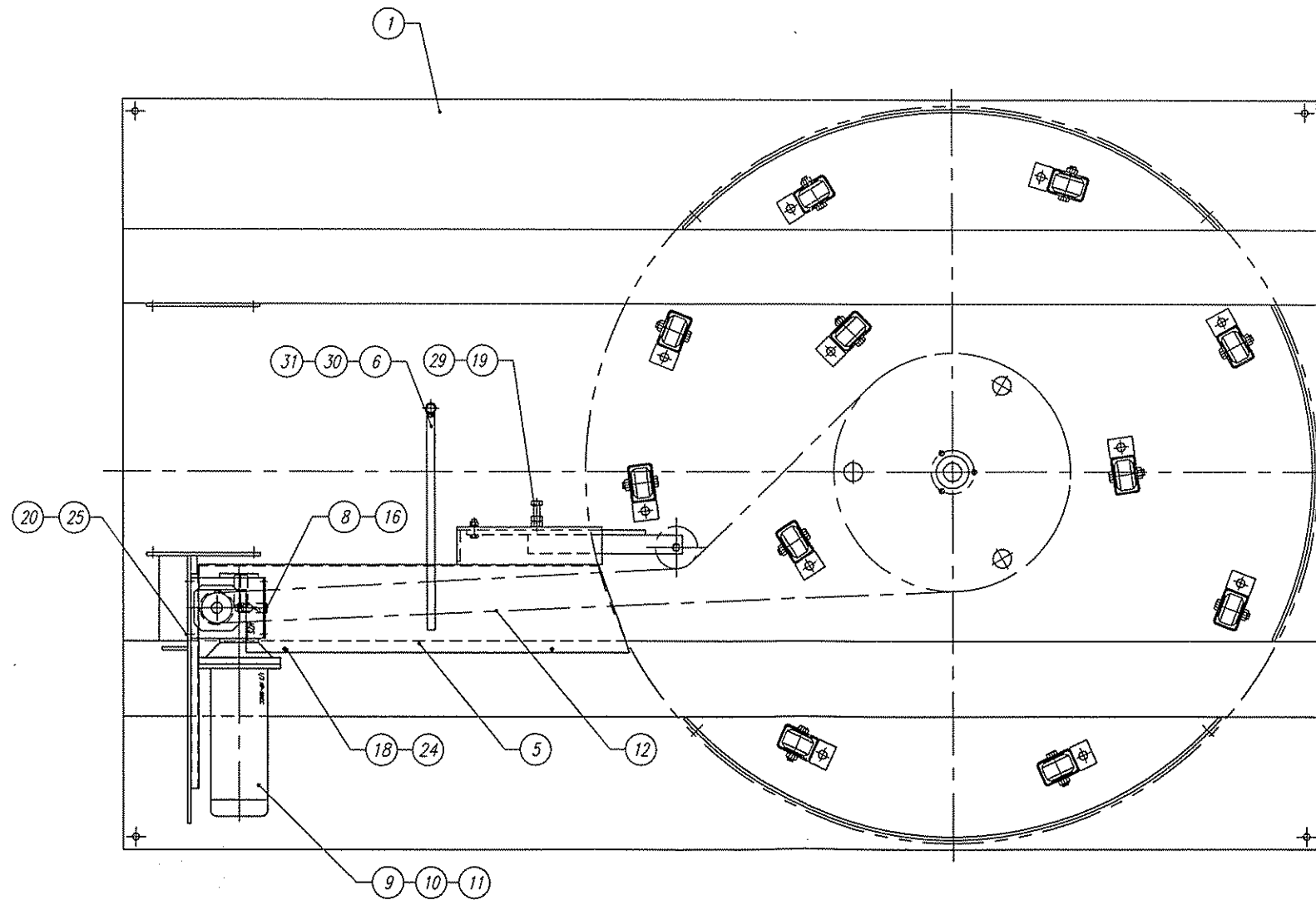
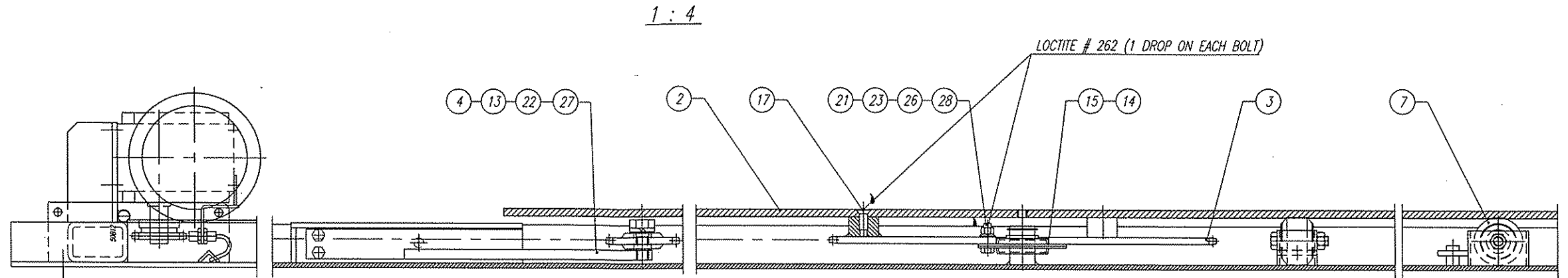
REMARKS: -

REMARKS: -

L77/14 WRAPPER LAYOUT

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL.: (450) 667-9769</p>	DATE: MAY-09-2000	SCALE: 1 : 16
	DRAWN BY: S. KUBICKA	MACHINE TYPE: L77/14
	CHECKED BY:	DRAWING SIZE: B
	ASSEMBLY DWG.: -	JOB No.: STD

ADR



31	HEX. NUT	013407	2		
30	HEX. HEAD SCREW	014157	2		
29	HEX NUT	011266	1		
28	HEX NUT	011128	3		
27	SPRING WASHER	012721	1		
26	SPRING WASHER	011390	3		
25	SPRING WASHER	012724	4		
24	SPRING WASHER	011393	2		
23	FLAT WASHER	010948	3		
22	HEX HEAD SCREW	010329	1		
21	HEX HEAD SCREW	012406	3		
20	HEX HEAD SCREW	010291	4		
19	HEX. HEAD SCREW	013989	1		
18	PAN PHILL	012049	2		
17	FLAT SOCKET SCREW	013842	3		
16	PROXIMITY SWITCH	013848	1		
15	STAMP HOUSING FLANGE BEARING	013654	1		
14	EXTERNAL RETAINING RING	013655	1		
13	IDLER SPROCKET	010008	1		
12	CHAIN	010009	1		
11	SPROCKET	010074	1		
10	REDUCER	015191	1		
9	EL. MOTOR	015240	1		
8	PROXIMITY SWITCH BRACKET	A 423499	1		
7	"DURA-GLIDE" CASTER 2.33" DIA. - ASSEMBLY	A 416055	11		
6	ROPING BAR	A 413868	1		
5	CHAIN GUARD	A 421338	1		
4	CHAIN TIGHTENER ARM	A 411592	1		
3	SPROCKET	A 406338	1		
2	59" DIA. TURNTABLE DISK (REVOLOGIC)	B 414904	1		
1	L66/14 H BASE - WELDING	C 422398	1		
No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT

REMARKS: 12 RPM

REMARKS: -

L77/13C H BASE ASSEMBLY

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL.: (514) 667-9769</p>	DATE:	FEB. 16/2000	SCALE:	1 : 8	
	DRAWN BY:	G. STACHURA	MACHINE TYPE:	L77/13C	
	CHECKED BY:		DRAWING SIZE:	C	
	ASSEMBLY DWG:	426735	JOB No.:	STD	DRAWING No.:

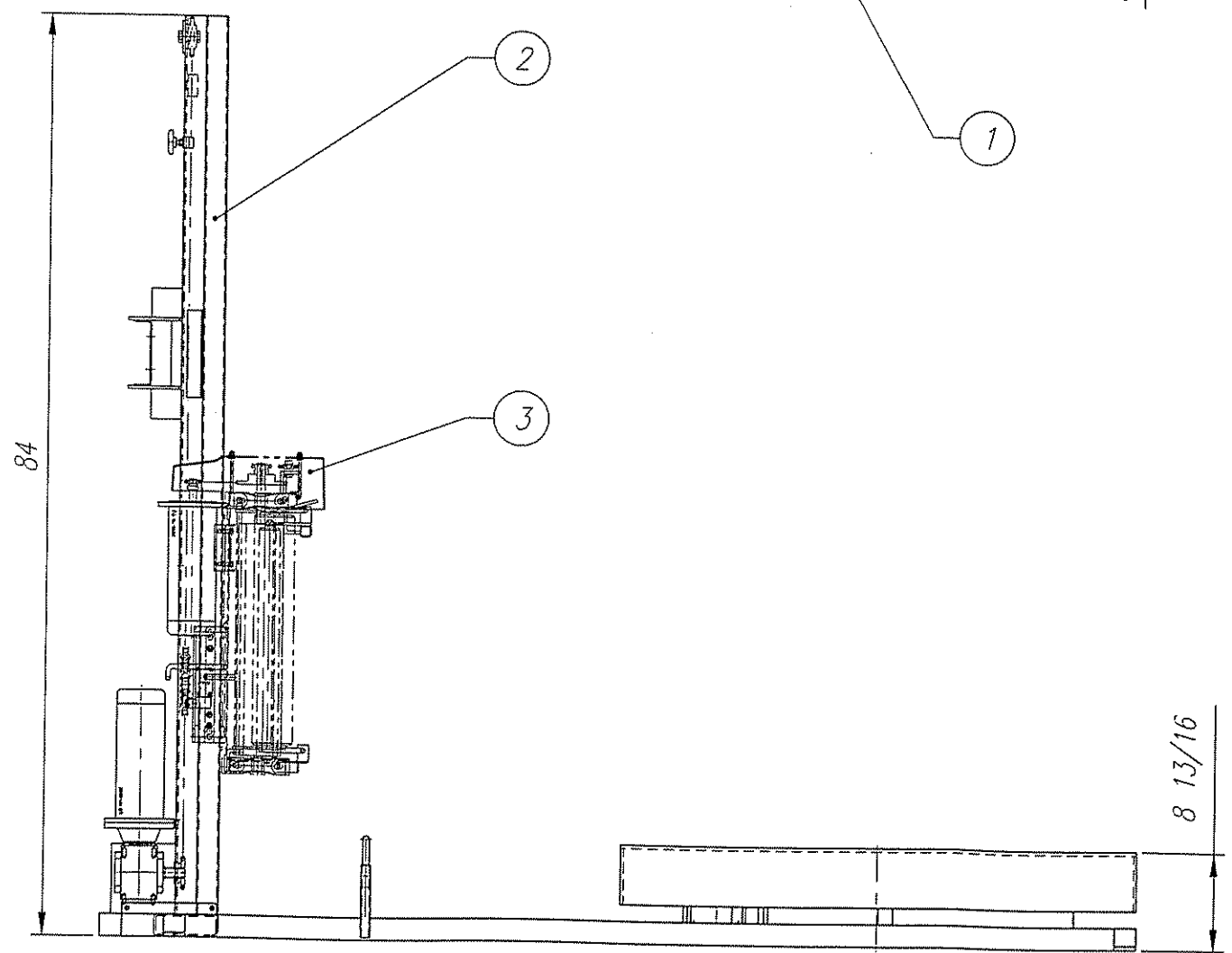
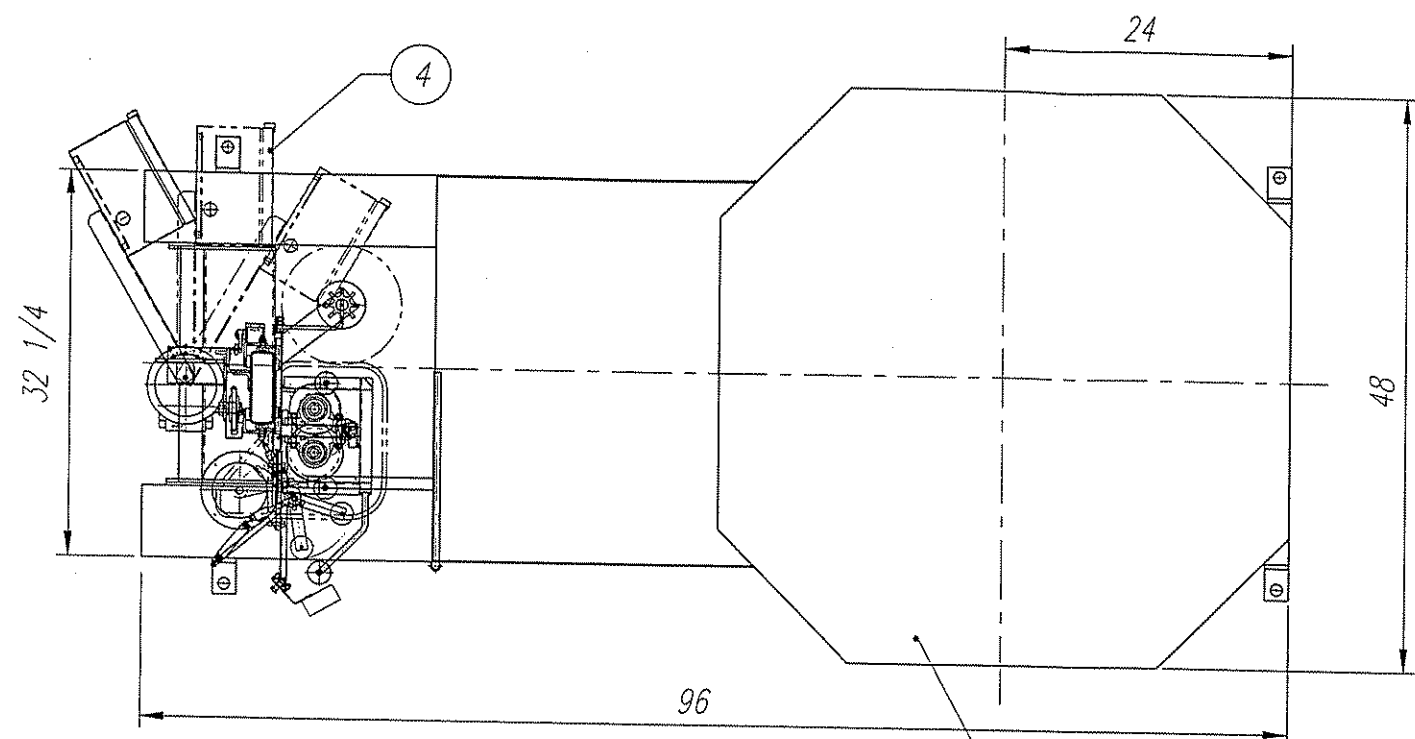
ORION PACKAGING SYSTEMS INC.
SEMI-AUTOMATIC SPECIFICATIONS - EFFECTIVE MARCH 15, 2000

ORION EPIC® SERIES MODEL H-77

Spiral Semi-Automatic Medium Duty High Profile

Maximum Load Size	55"W x 55"L x 82"H
Weight Capacity	4,000 lbs. Dynamic, 8,000 lbs. Static
Utilities	115/1/60 15 Amp Service
Turntable	48"x48" Structural Steel Plate Turntable with Welded Steel Skirt Dura-Glide™ Turntable Support System Quiet in Operation, Maintenance Free
Turntable Drive	0-12 RPM Variable Turntable Speed Variable Speed Drive Motor Electronically Adjustable Acceleration/Deceleration (Soft Start) Direct Heavy Duty Chain & Sprocket Drive Positive Alignment Feature
Control Features	CSA Approved, NEMA 12 Control Panel State-of-the-Art Logic Control User Friendly Microprocessor with Micro-Switch Keypad Revo-Logic™ Exact Wrap Counting Technology Electronic Film Tension Control Adjustment on the Panel Separate Top / Bottom Wrap Count Selectors with LED Count Display Variable Speed Film Carriage Up/Down Control Film Carriage Raise/Lower Switch (Manual) Photocell for Automatic Load Height Detection Turntable Jog Pushbutton
Film Delivery	20" Insta-Thread LT Powered Pre-Stretch Film Delivery System 200% Pre-Stretch Ratio Easy & Safe to Operate Self-Threading Carriage Design Electronic Film Tension Control Adjustment on the Panel Variable Speed Film Output (Non-Wearing Sensor) Heavy Duty Chain & Sprocket Ratio Control Adjustable Film Roping Bar on Chassis for Stronger Interlocking of Load and Pallet
Film Carriage Elevator Drive	Heavy Duty ANSI Chain Carriage Lift Variable Speed Drive Motor <u>Multi-Point UHMW Precision Carriage Guidance System</u>
Structural Features	100% Structural Steel Construction Throughout Easy Access to All Components Open Mechanical Design for Ease of Maintenance Forklift Portable Base Design Structural Steel Tube Mast Hinged Mast for Ease of Shipping, Portability
Estimated Shipping Weight	1,100 lbs.

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REPLACES 426296 B

TOTAL WEIGHT : 795.5 Lbs

4	CONTROL PANEL 5412 ESCH 12 10 06	-	-	1	-
3	INSTA-THREAD LT	C	425219	1	96.2
2	HINGE TOWER 6 x 2 x .150 ASSEMBLY	C	427953	✓ 1	183.8
1	H-77/13B H BASE ASSEMBLY	C	425343	✓ 1	515.5

No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
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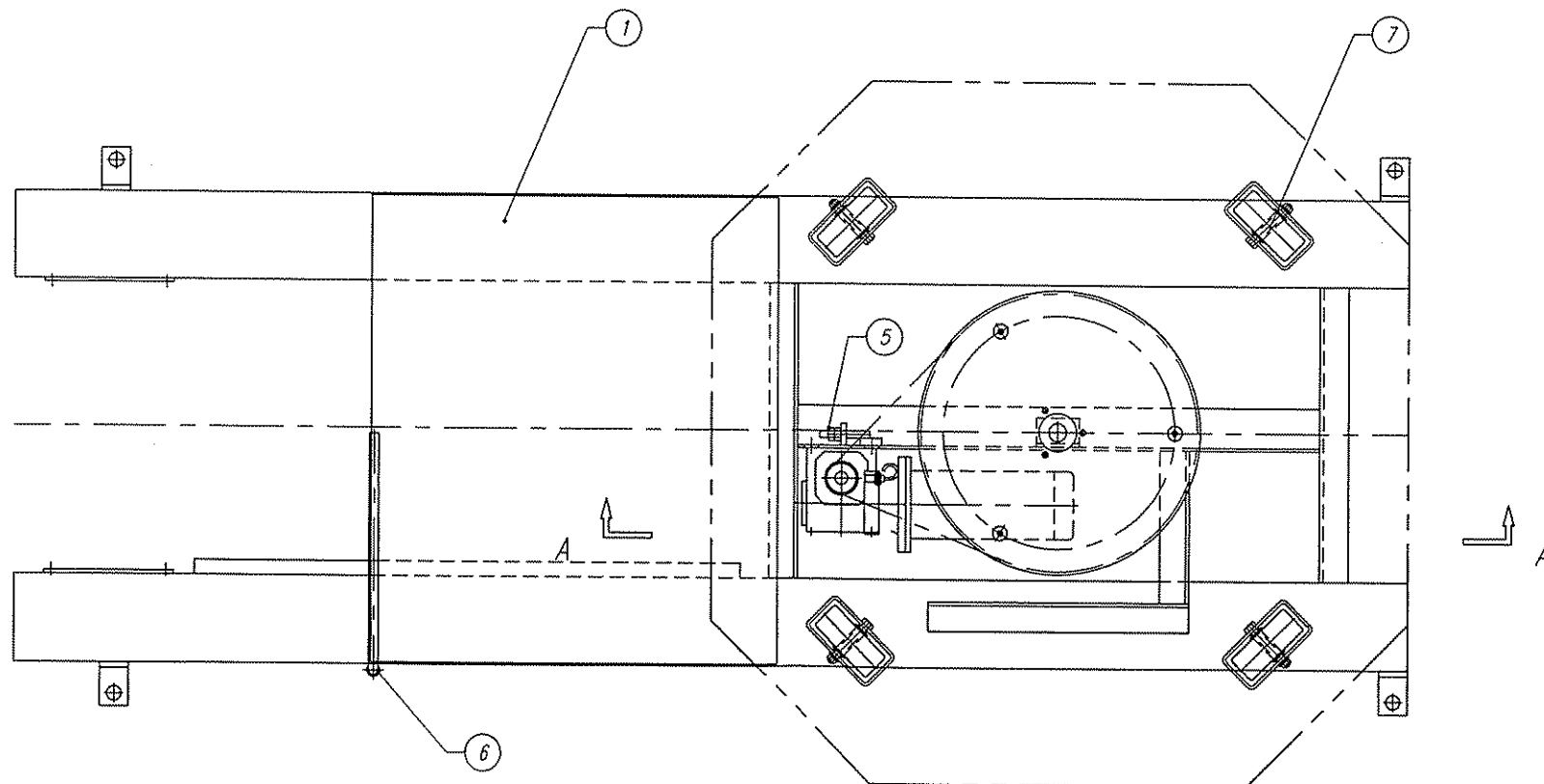
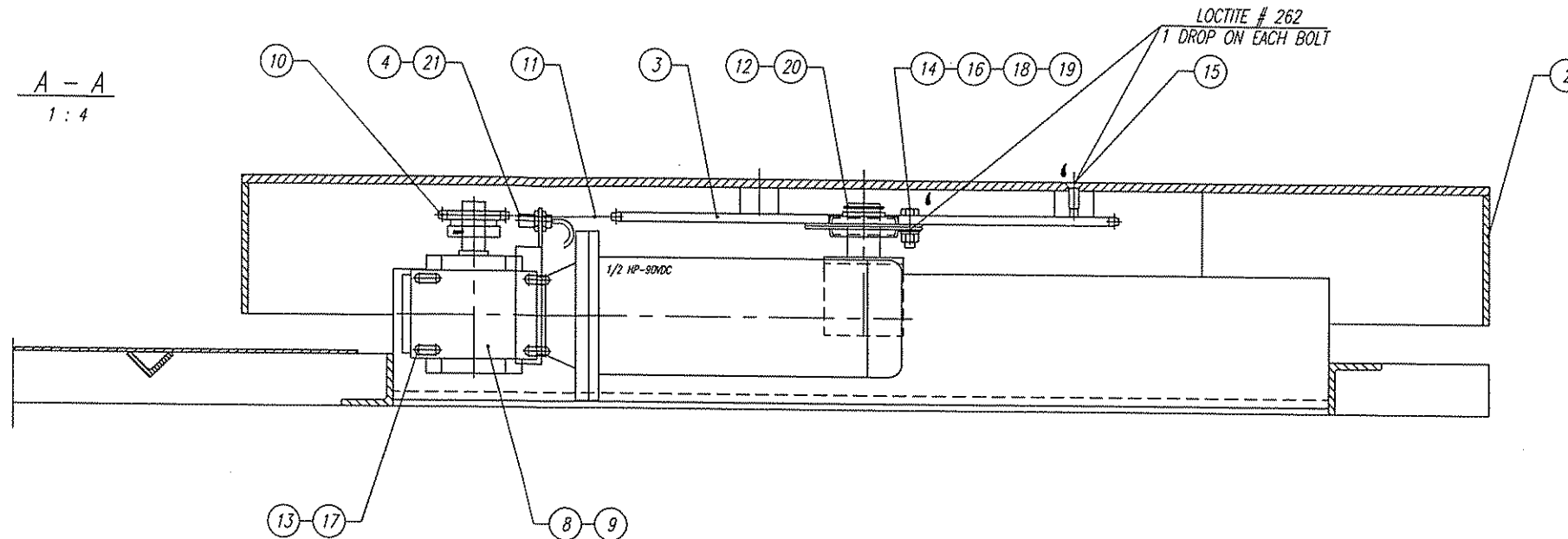
REMARKS: -
REMARKS: -

H77/14 H WRAPPER

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL.: (514) 667-9769</p>	DATE:	MAY-09-2000	SCALE:	1 : 16	
	DRAWN BY:	S. KUBICKA	MACHINE TYPE:	H77/14	
	CHECKED BY:		DRAWING SIZE:	B	
	ASSEMBLY DWG.:	LAYOUT	JOB No.:	STD	DRAWING No.:

REQ'D - 1 PCE

A - A
1 : 4



21	PROXIMITY SWITCH	-	1
20	SNAP RING	013655	1
19	HEX NUT	011128	3
18	SPRING WASHER	011390	3
17	SPRING WASHER	012724	4
16	FLAT WASHER	010948	6
15	FLAT SOCKET CAP SCREW	013363	3
14	HEX HEAD SCREW	012406	3
13	HEX HEAD SCREW	010291	4
12	STAMP HOUSING FLANGE BEARING	013654	1
11	CHAIN	010009	1
10	SPROCKET	010074	1
9	EL. MOTOR	010036	1
8	REDUCER	015191	1
7	SINGLE CASTER ASS'Y	B 425390	4
6	ROPING BAR	A 413868	1
5	CHAIN TIGHTENER (BQ-175)	A 412261	1
4	PROXIMITY SWITCH BRACKET	A 412316	1
3	SPROCKET	A 406338	1
2	TURNTABLE - 48" OCTAGONAL	A 422298	1
1	H-77/13B H BASE (WELDING)	C 425344	1

No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
REMARKS: 12 RPM TURNTABLE SPEED , 8 13/16" TURNTABLE HEIGHT					
REMARKS: -					

H-77/13B H BASE ASSEMBLY

 2270 INDUSTRIEL L'AVANT QUEBEC, CANADA, H7S 1P9 TEL.: (514) 667-9769	DATE:	OCT-04-1999	SCALE:	1 : 8	
	DRAWN BY:	M. G. GOLA	MACHINE TYPE:	H77/13B	
	CHECKED BY:		DRAWING SIZE:	C	
	ASSEMBLY DWG.:	425340 B	JOB No.:	STD	DRAWING No.:

APPENDIX