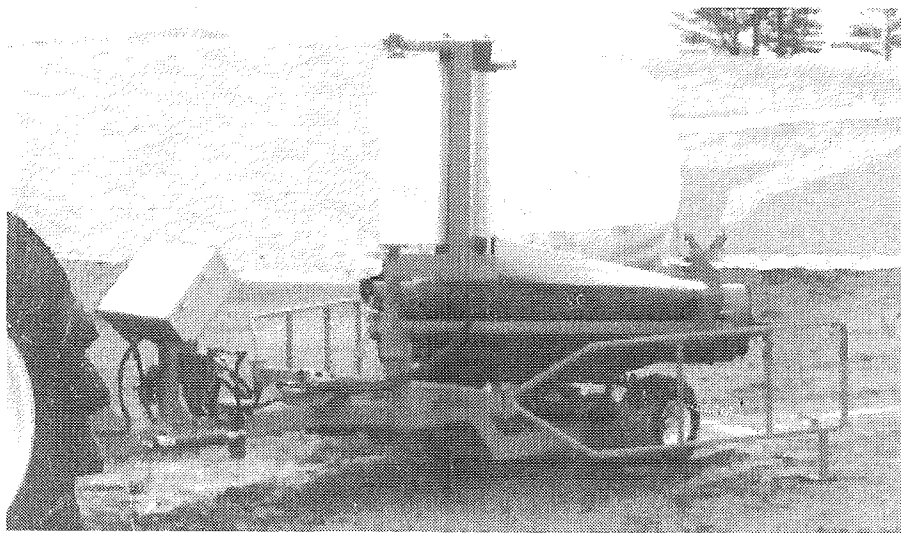


Salsco, INC.

L E A D E R B Y D E S I G N

OPERATORS AND PARTS MANUAL MODEL 09027 REMOTE CONTROL WRAPPER



SALSCO, INC.

105 School House Rd., Cheshire, CT 06410, 203/271-1682, 203/271-2596 (Fax), 1/800/872-5726

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STATEMENT OF FACT

You have just purchased the highest quality, most dependable Bale Wrapper on the market today. This unit has the ability to meet exact standards and perform for years with minimum down time. HOWEVER, it cannot read nor will it understand this manual, no matter how long you leave it on top of the machine. It is your responsibility to read and understand it. It is also your responsibility to be certain this information is passed along to anyone who is expected to operate this equipment. Should you choose not to read, understand and pass along the information provided you, please expect equipment failure and possible injuries to persons around this equipment.

For the safety of the operator, it is imperative that this manual is carefully read and understood.

Having read this manual, it is your responsibility to be sure that all new operators read and understand this manual, especially all the cautions stated.

As a manufacturer of equipment we have a responsibility to design a safe piece of equipment. **NOTE:** The important safeguards and instructions in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution, and care are factors which cannot be built into any product. These factors must be supplied by the person(s) caring for and operating this equipment.

REMEMBER - ONLY YOU CAN PREVENT ACCIDENTS!

DESCRIPTION

SALSCO REMOTE CONTROL BALE WRAPPER

features

- * **One Person Operation**
- * **Uses Tractor Hydraulics or Optional Power Pack**
- * **Trouble Free Cut & Tie**
- * **30" Pre-Tensioner, Full 55% Stretch**
- * **Wraps, Dumps and Resets from Push Button Controller**
- * **Counter can be Set for Exact Number of Wraps Per Bale**

SPECIFICATIONS

1/2" Steel Plate Construction
1/4" Wall Square Tubing Main Frame
2" Diameter Center Pin
Dual Drive Rolls
Four Bra Belts
Polyester Powder Coat Paint
Tensioner Set at full 55% Stretch
Fully Automatic Cut & Tie
Guide Wheels Adjustable for 4' or 5' Bales

OPTIONS

8 Hp Honda, Electric Start Power Pack

8 Hp Briggs & Stratton, Electric Start Power Pack

20" Pre-Tensioner

MANUFACTURED BY:

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Cheshire, CT 06410
203/271-1682,
1/800/872-5726,
203/271-2596 (fax)

THIS MANUAL COVERS MODELS: 09027, Remote Control Bale Wrapper with optional Power Pack. Please check your serial number tag for the complete model number and serial number of your machine.

This company reserves the right to discontinue, add improvements to, or change the design of any model or product at any time without obligation to improve existing machines, either by changing the design or adding new parts.

It has been and will continue to be the policy of Salsco to update existing machines at its own discretion. Whenever possible, new designs will be made in such a way, that they can be "retro fit" if so desired.

Record in the space provided below the model and serial number of this unit. Please retain these numbers for future reference.

When placing parts orders, please have this information available. Part numbers are listed in this manual.

SERIAL NUMBER

MODEL NUMBER

NOTE: BE SURE TO COMPLETE YOUR WARRANTY CARD AND RETURN A COPY TO SALSCO. THIS WILL INSURE IMMEDIATE PROCESSING OF ANY WARRANTY CLAIMS.

MAINTENANCE & OPERATING INSTRUCTIONS

MAINTENANCE:

- * Grease turntable once a month. Remove cover on center tube below bra belts, and grease bearing. Also check bevel gears for end-play and grease them with open gear lubrication. **NOTE:** Should this bearing need to be replaced for any reason, it should be roll pinned as it was from the factory.
- * Grease the four bearings at the end of table rolls weekly.
- * Check chain adjustment on chains under butterfly guard daily. **NOTE:** Tip dump table and look under guard to see if chains are loose. If they are, remove guard and adjust before wrapping.
- * While the table is in the dump position, clean out any hay, string, mesh etc. that may have accumulated around the main shaft and chain.
- * Check turn table chain for adjustment, at the same time.
- * Wheel bearings should be repacked yearly or as required. Check lug bolts and tighten if necessary. Grease bearings as needed. **NOTE:** Tires are not high speed tires and should not exceed towing speeds over 35 M.P.H.

OPERATION

* **READ THIS MANUAL!**

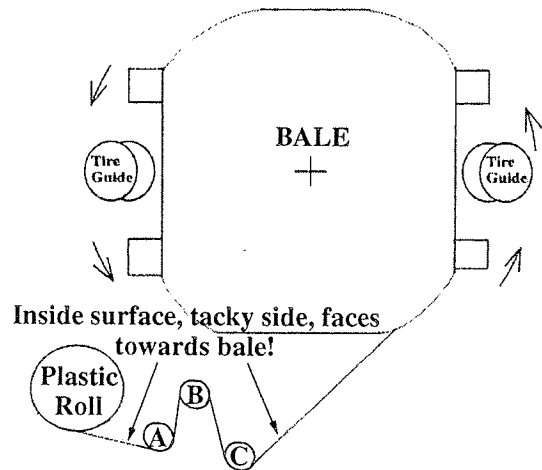
- * **CAUTION:** Machine may be shipped dry. Be aware that until the hydraulic system has oil and has been purged of all air, it may have a mind of its own. **STAND CLEAR!**
- * Move wrapper to wrapping location. Find level dry ground. Pick an area and locate the Remote Wrapper so that when the bale is dumped, it won't roll away. You will have much better results from the cut & tie if when you dump the bale, it stays put. Do not allow it to roll. **HINT:** This should be where you plan to store bales. It is a lot easier to move unwrapped bales rather than wrapped bales. Wrapped bales should be handled as little as possible to prevent damage to plastic and should be moved with a Salsco Bale Grabber or Bale Lifter. Wrapping area should be as level and dry as possible.

Connect hydraulic hoses to the tractor. When first connecting hydraulics to the tractor, be sure of the following things:

- 1) The key on the electric box is off.
 - 2) The tractor is at an idle.
 - 3) The table doesn't turn. **NOTE:** If it starts to turn clockwise by itself, you have the oil feed in the wrong way. **Change direction of oil flow now.**
 - 4) Once you have determined oil flow is correct, look at the rotational lock cylinder springs. If they are collapsed, disconnect the hydraulic lines, this system has oil pressure. Find another power source.
- * Connect the feed wires to tractor. Red is positive, black is negative.
 - * If you have a power pack unit it will have its own power source.
 - * To set this machine for 4' or 5' width bales, move wheel side bumpers in or out as required to achieve 4' or 5' dimension. Bra belts can also be adjusted.
 - * Turn flow valves in clockwise direction, all the way and then back out 1/8 of a turn. There are two on the machine. One on the rotational lock cylinder and one on the control valve.

MAINTENANCE & OPERATING INSTRUCTIONS (Cont.)

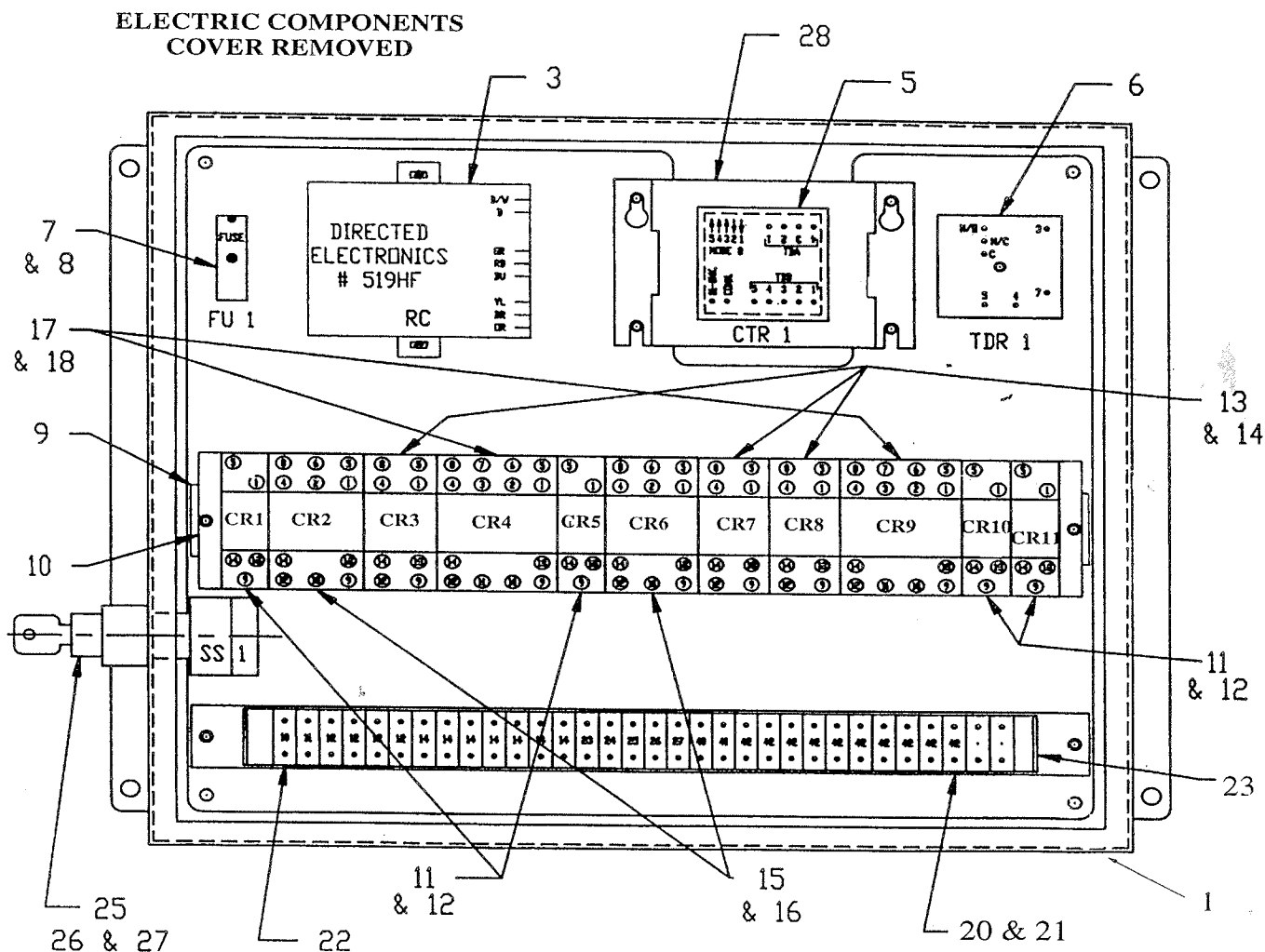
- * Open the electric box and turn the key on. Set the counter for 25 wraps as follows. Press "P1" and let it go. This will clear the screen for 1-15 seconds. Now press "P1" again till the number 5 appears in the window. Now press the button to the left of "P1" till the number 2 appears in the window, making the number 25. Now press "E" and then "R". You have just set the counter for 25 complete wraps. **NOTE: IF NO NUMBERS SHOW UP IN THE DISPLAY, THERE IS NO POWER. CHECK WIRE CONNECTORS AT TRACTOR AND BE SURE KEY IS ON. IF BOTH OF THESE CHECKS ARE POSITIVE AND THERE IS STILL NO POWER, CHECK THE MAIN FUSE. SHOULD THE MAIN FUSE BE GOOD AND STILL NO POWER, CALL THE FACTORY.**
 - * Place safety guards out to the side of the table.
 - * **CAUTION: Keep everyone clear while you're learning the operation of this unit.** Press the button marked III on the remote controller. The turntable should dump. If when you press the button, the table starts to dump and then stops, perhaps the proximity switch needs to be adjusted. **NOTE:** Press the button and release. Do not hold it down. If both of these are OK then increase the oil flow. First open flow valve, then increase speed of tractor. Once wrapper dumps, press the III button again and the bale wrapper will pivot back up to the load position. **NOTE:** When you press the button to dump, the cut & tie cylinder will come down first, gathering the plastic for the cut & tie. Dumping the turntable also resets the electric and the counter. You must always dump to reset the system.
 - * Place bale on wrapper, put film on the pre-tensioner. **NOTE:** Plastic can be threaded through A or B first, **HOWEVER**, it must come through C last. **ALSO**, be sure the tacky side is on the inside, facing the bale. Tie film to bale. If film is not in center of bale, raise or lower pre-tensioner to suit.
 - * Adjust cut & tie so that the top of the clamps is just below the film. You may have to adjust the height of the control bar as well. Be sure plastic is centered between cut & tie clamps.
 - * Now open the electric box to monitor counter and press the wrap button, # II. The machine should start to rotate. Watch the counter which was set for 25 and is counting down. If it takes 10 wraps to cover the bale once, then 20-21 is the number you should have on your counter. After the machine stops, you can change the counter for the number of wraps you need. **NOTE:** Also watch the rotation R.P.M. 20-22 per minute is fast enough. After adjusting counter, close and lock box.
 - * Press Button # III to dump bale and return table to load position. Pick up wrapped bale with your Salsco Grabber or Bale Lifter and stack in storage area. **CAUTION: Make sure no one is in the dumping area or near the wrapper when you are ready to dump & never dump down a hill. A runaway bale can cause serious damage.**
- HINT:** When storing bales, stack them on end, two high. They will hold their shape better, and take up less room. After wrapping is done, visually inspect bales. Should there be any rips or holes, now is the time to repair them with ag tape. Ask your plastic supplier.
- * After you have all adjustments made, you are ready to wrap!
 - * Press the dump button (turntable will return to the load position). Place another bale on the table, be sure everyone is clear and press start wrap button # II. The table will slow down for the last rotation and lock in place ready for dumping when all wraps are applied. Go get another bale while unit is wrapping.



Remote Control Electronic Box & Components Assembly

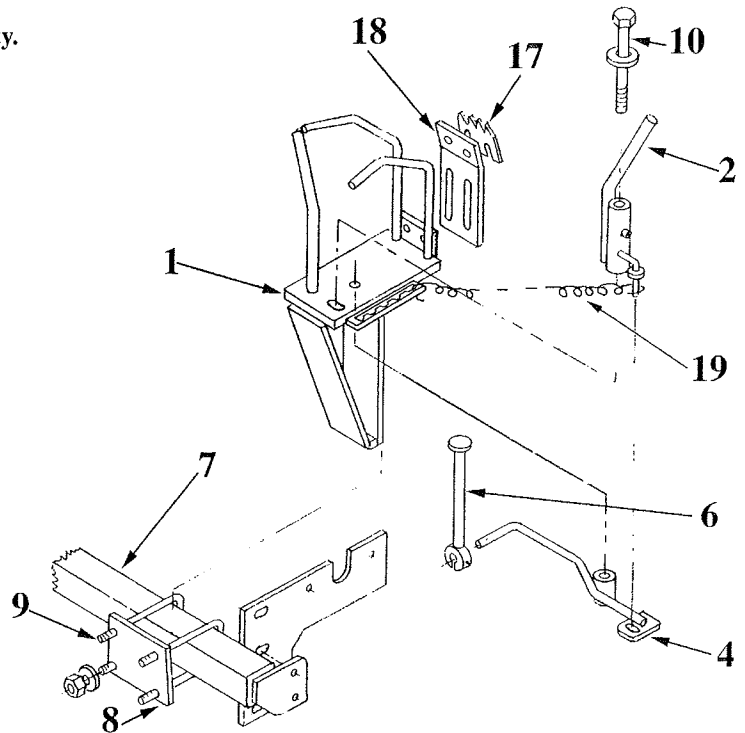
(See Page # 7 for Descriptions & Functions)

Item #	Description	Part # & Qty.	Item #	Description	Part # & Qty.
1	Cabinet, Electric Controls	0115086 - 1	16	Socket, Relay 3PDT	0315101 - 2
3	Receiver	0315088 - 1	17	Relay, 10 amp 4PDT	0315102 - 2
4	Transmitter, (Shown on page 7)	0315089 - 1	18	Socket, Relay 4PDT	0315103 - 2
5	Counter	0315090 - 1	19	Clip, Relay Hold-down	0315104 - 11
6	Timer	0315091 - 1	20	Mount, Terminal Block	0476188 - 1
7	Block, Fuse	0315092 - 1	21	Clamp, Channel	0315106 - 2
8	Fuse, 10 amp	0315093 - 1	22	Block, Terminal	0315107 - 32
9	Mount, Relay	0476187 - 1	23	End Section	0315108 - 1
10	Clip, End Metal	0315095 - 2	24	Jumper, Terminal	0315109 - 18
11	Relay, 10 amp SPDT	0315096 - 4	25	Switch, Selector	0315112 - 1
12	Socket, Relay SPDT	0315097 - 4	26	Block, Contact	0315113 - 1
13	Relay, 10 amp DPDT	0315098 - 3	27	Plate, Legend On/Off	0315114 - 1
14	Socket, Relay DPDT	0315099 - 3	28	Bracket, Counter Mounting	0206391 - 1
15	Relay, 10 amp 3PDT	0315100 - 2	29	Socket, Relay 8 Pin	0314073 - 3
			30	Numbers, Wire 1-33	0314073 - 3
			31	Numbers, Wire 34-36	0314073 - 3



Cut & Tie Assembly

Item #	Description	Part # & Qty.
1	Mount, Cut & Tie	0276189 - 1
2	Clamp, Pivot	0210073 - 1
4	Lever, Clamp Release	0233064 - 1
6	Rod, Release Actuator	0245026 - 1
7	Support, Cut & Tie	0277042 - 1
8	Clamp, Mount	0410074 - 1
9	U-Bolt, Square Bend	0346841 - 2
10	Bolt, Modified	0446455 - 1
16	Mount, Cut & Tie Support	0476193 - 2
17	Blade, Cut-Off	0405056 - 2
18	Mount, Cut & Tie Blade	0476211 - 1
19	Spring, Extension	0350024 - 1

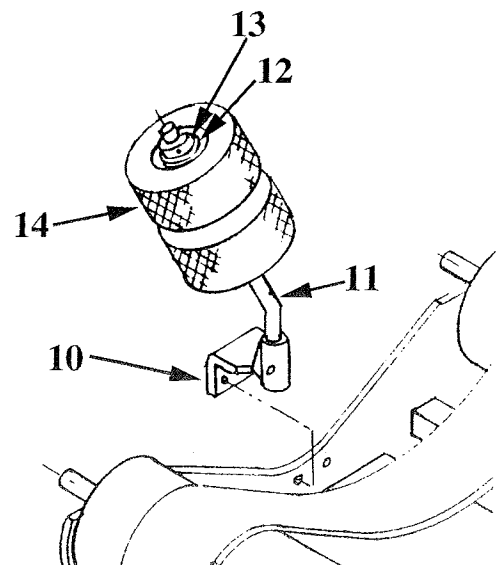


Below is a quick reference chart for various "Flat Head Cap Screws" and the torque recommendations.

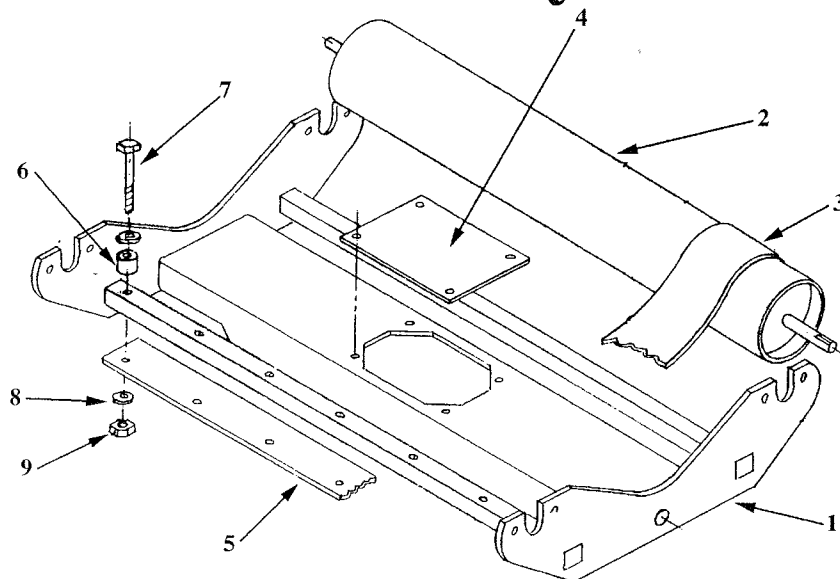
Bolt Size	Seating Torque Ft. - Lbs.	
	Coarse Thread	Fine Thread
1/4	8.3	9.2
5/16	16.7	18.3
3/8	29.2	33.3
7/16	46.7	52.1
1/2	70.8	83.3
5/8	141.7	158.3
3/4	250.0	266.7

Bale Guide Assembly

Item #	Description	Part # & Qty.
10	Bracket, Guide Wheel	0206199 - 2
11	Shaft, Guide Wheel	0448054 - 2
12	Washer, Flat	0353106 - 4
13	Collar, Set	0311006 - 4
14	Wheel, Bale Guide	0354008 - 4



Rolls & Frame Assembly

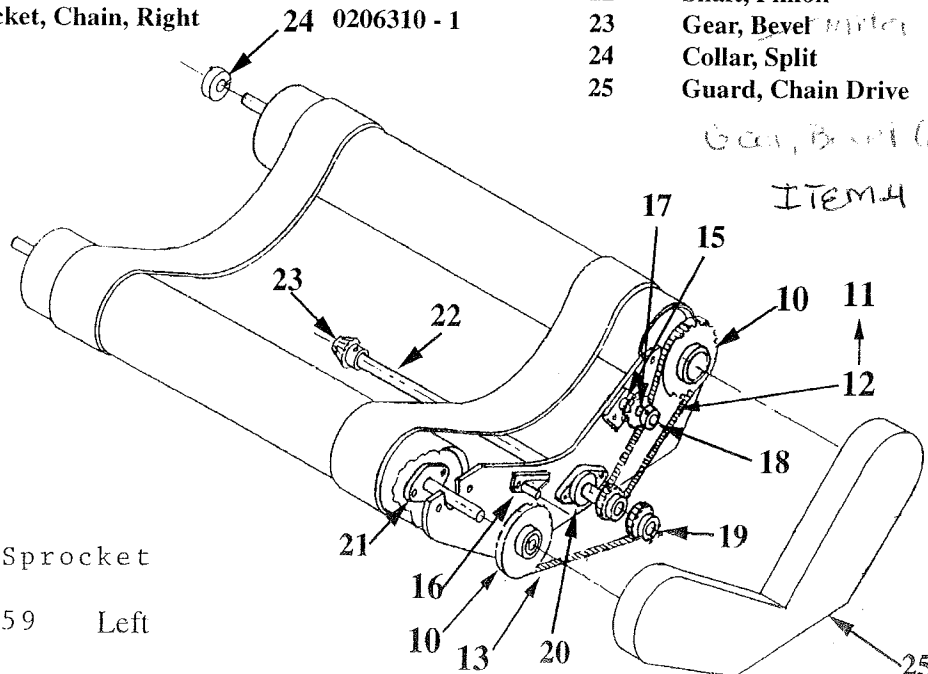


Item #	Description	Part # & Qty.
1	Frame, Rotating	0219121 - 1
2	Tube, Roller	0267064 - 2
3	Belt, Continuous	0304024 - 4
4	Cover, Frame Top	0471020 - 1
	Screws, Button Head	
	For Item # 4	0346082 - 4
5	Guard, Hay	0421068 - 2
	Washers, Fender	
	For Item # 5	0353205 - 6
6	Tube, PVC	0467088 - 16
7	Bolt, Hex Head	0346314 - 16
8	Washer, Flat	0353103 - 32
9	Nut, Lock	0338103 - 16

Rolls & Frame Sub-Assembly

Item #	Description	Part # & Qty.
10	Sprocket, Drive 20" Tens.	0351032 - 2
10	Sprocket, Drive 30" Tens.	0351034 - 2
11	Link, Master	0309006 - 3
12	Chain, Right Side, 20" Tens.	0309015 - 1
	Chain, Right side, 30" Tens.	0309044 - 1
13	Chain, Left Side, 20" Tens.	0309020 - 1
	Chain, Left Side, 30" Tens.	0309043 - 1
15	Bracket, Chain, Right	0206310 - 1

Item #	Description	Part # & Qty.
16	Bracket, Chain, Left	0206309 - 1
17	Sprocket, Idler, 20"/30" Tens.	0351011 - 2
18	Collar, Split	0311021 - 6
19	Sprocket, 20"/30" Tens.	0351005 - 2
20	Bearing, Flange	0303006 - 2
21	Bearing, Flange*	0303031 - 4
22	Shaft, Pinion	0448043 - 1
23	Gear, Bevel	0363002 - 1
24	Collar, Split	0311020 - 4
25	Guard, Chain Drive	0221106 - 1



Gear, Bevel (all steel) - 0363002

ITEM 4 (PAGE 9)

Right

2/97

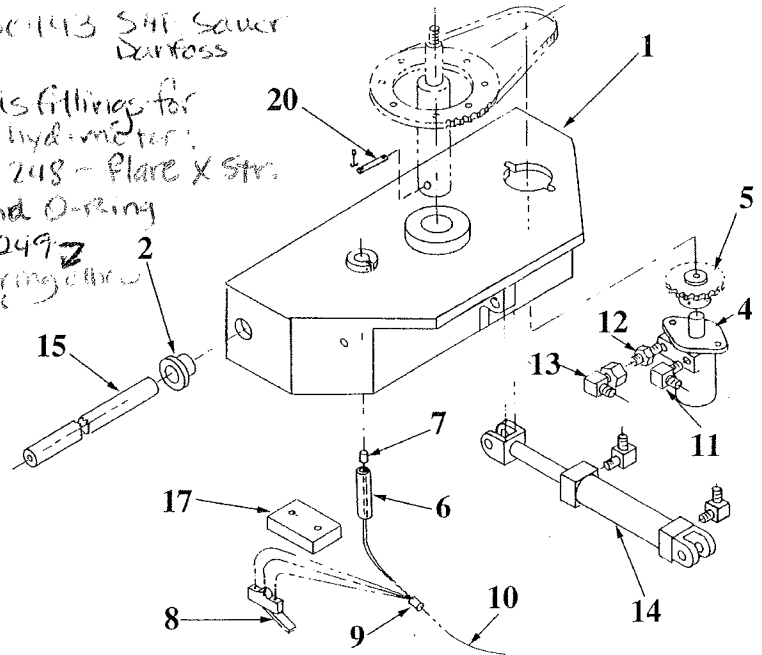
NOTE:
20"/30" Sprocket
Assembly
Pt. 0351059 Left
QTY. - 2

Pivot Housing Assembly

Item #	Description	Part # & Qty.
1	Housing, Pivot	0228052 - 1
5	Sprocket, Welded	0251027 - 1
4	Motor, Hydraulic	0330024 - 1
11	Adapter, 90°	0317049 - 3
12	Adapter	0317050 - 1
13	Adapter, 90°	0317006 - 1
14	Cylinder, Hydraulic	0330033 - 1
15	Shaft, Wheel	0119079 - 2
	Shaft, Wheel Lift Arm	(See lift arm dwg.)
2	Bushing, Bronze	0307005 - 2
20	Pin, Locking	0440040 - 1

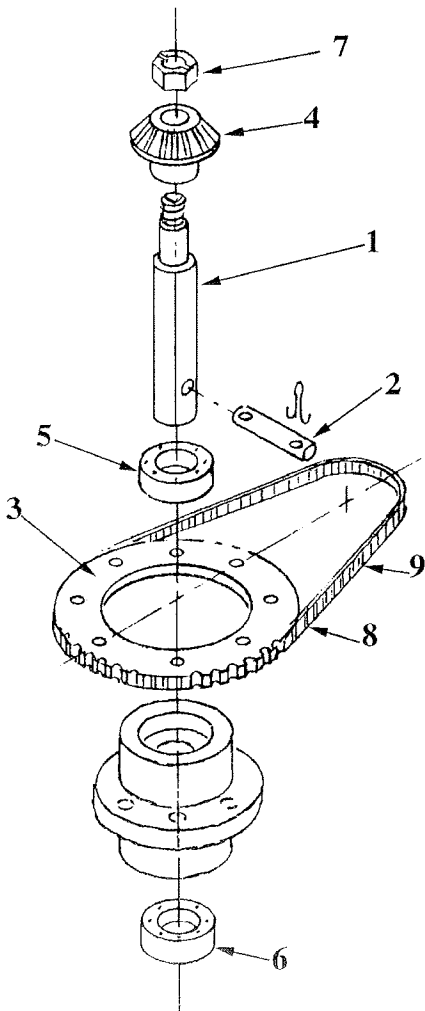
COUNTER PARTS

Item #	Description	Part # & Qty.
6	Tubing, Aluminum	0340028 - 1
10	Wire, Conductor	0315037 - 1
9	Nut, Wire	0315049 - 1
8	Switch, Snap Action	0315072 - 1
17	Box, Cable	0308017 - 1
7	Switch, Magnetic Contact	0315038 - 1



Magnetic Counter Assembly

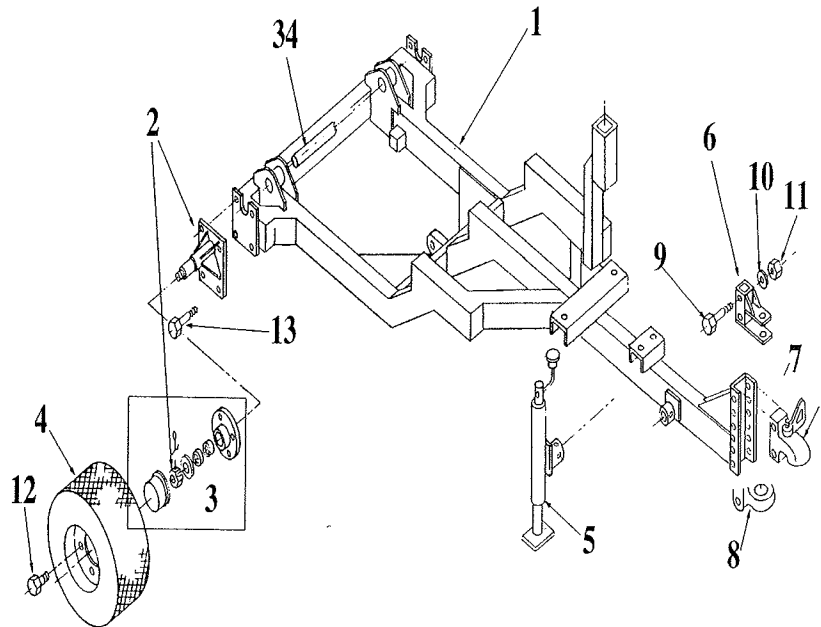
Pivot Housing Shaft Assembly



Item #	Description	Part # & Qty.
1	Shaft, Pivot	0448034 - 1
2	Pin, Locking	0440040 - 1
3	Sprocket, Altered	0451028 - 1
4	Gear, Altered Bevel	0451019 - 1
5	Bearing, Tapered Roller	0303038 - 1
6	Cone & Cup	0303038 - 1
7	Nut, Castle	0338210 - 1
8	Chain, #50 (56 pitches)	0309016 - 1
9	Link, Master #50	0309008 - 1

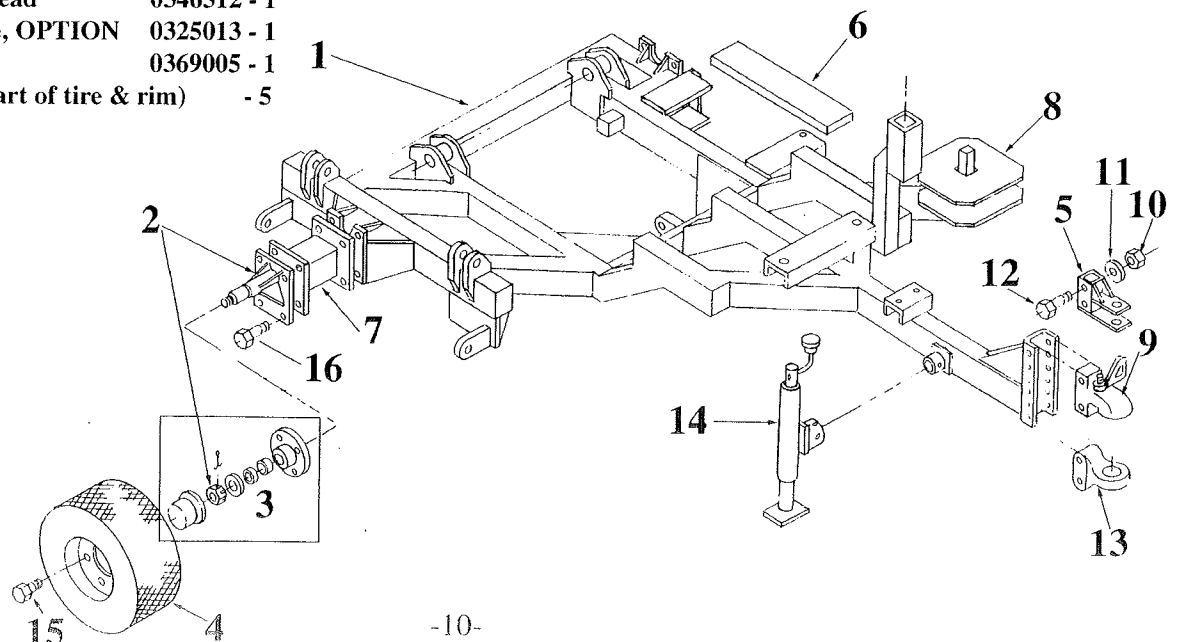
Item #	Description	Part # & Qty.
1	Frame, Econo-Wrap	0219078 - 1
2	Axle, Wheel	0202038 - 2
3	Hub Assembly	0329002 - 2
4	Tire & Rim	0354020 - 2
6	Hitch, 7/8" Hole	0125031 - 1
7	Coupler, Option	0325015 - 1
8	Lunette Eye, Option	0325013 - 1
11	Nut, Hex Lock	0338105 - 1
10	Washer, Flat	0353110 - 1
9	Bolt, Hex Head	0346512 - 1
5	Jack	0369005 - 1
12	Lug Bolt (part of tire & rim)	- 5
34	Shaft, Pivot Housing	0448077 - 1

Trailer Frame Assembly



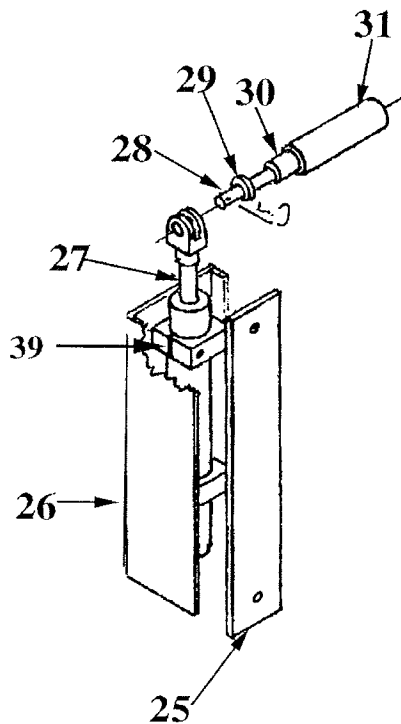
Item #	Description	Part # & Qty.
1	Frame, Econo-Lift	0219113 - 1
2	Axle, Wheel	0202038 - 2
3	Hub	0329002 - 2
4	Tire & Rim	0354020 - 2
5	Hitch, 7/8" Hole	0125031 - 1
6	Bar, Counter Weight	0470088 - 5
7	Adapter, Axle Ext.	0275022 - 1
8	Weight, OPTION	0476220 - 5
9	Coupler, OPTION	0325015 - 1
10	Nut, Hex Lock	0338105 - 1
11	Washer, Flat	0353110 - 1
12	Bolt, Hex Head	0346512 - 1
13	Lunette Eye, OPTION	0325013 - 1
14	Jack	0369005 - 1
15	Lug Bolt (part of tire & rim)	- 5

Trailer Frame Assembly Lift Arm Econo Wrap



Plastic Pull Down Cylinder Assembly

(Units with Lift Arm and Cut & Tie Only)



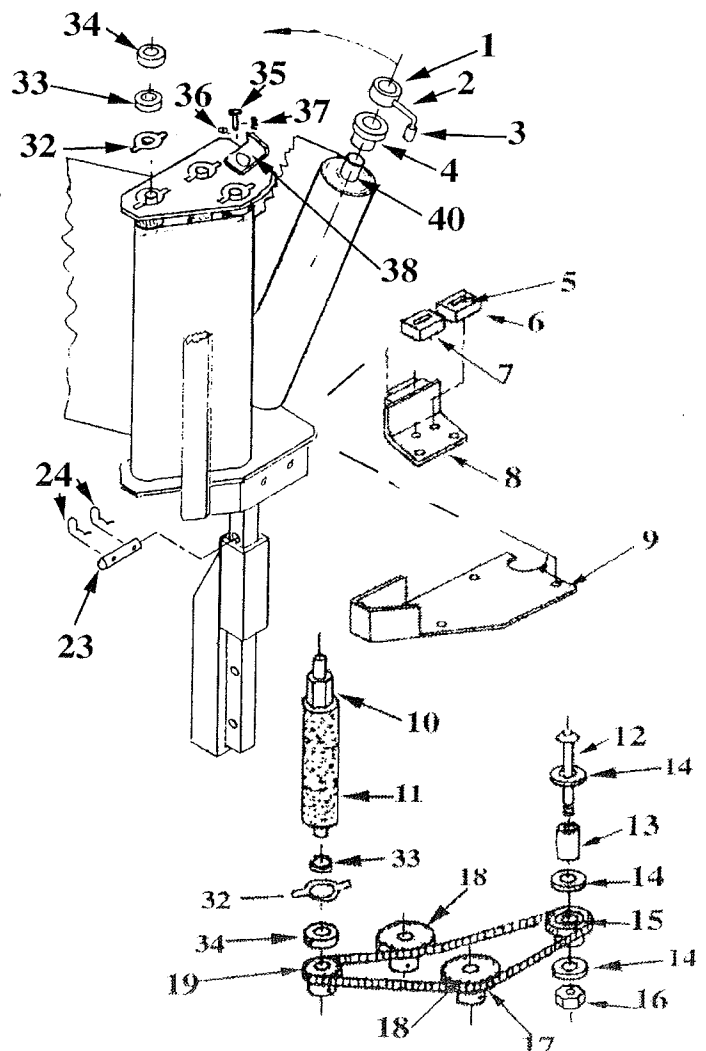
Item #	Description	Part # & Qty.
25	HOLDER, HYDRAULIC CYLINDER	0281002 - 1
26	GUARD, HYDRAULIC CYLINDER	0421110 - 1
27	CYLINDER, HYDRAULIC PULL DOWN	0330037 - 1
28	ROD, PLASTIC PULL DOWN	0245020 - 1
29	WASHER, FLAT	1/2" I.D. STOCK
30	TUBE, INNER	1/2" I.D. STOCK
31	TUBE, OUTER	0267073 - 1
39	BRACKET, PLASTIC PULL DOWN CYL.	0310045 - 2

20"/30" Tensioner Assembly

Item #	Description
1	COLLAR, SET
2	HANDLE, COLLAR
3	GRIP, PLASTIC
4	HOLDER, PLASTIC ROLL
5	BOX, COUNTER
6	COUNTER, WRAP MODULE
7	COUNTER, DUMP MODULE
8	MOUNT, COUNTER BOX
9	GUARD, PLASTIC DISPENSER
10	GUIDE, PLASTIC ROLL 20" Plastic
11	GUIDE, PLASTIC ROLL 30" Plastic
12	HOSE, GUIDE COVER 20" Plastic
13	HOSE, GUIDE COVER 30" Plastic
14	BOLT, CARRIAGE
15	TUBING, 5/8" I.D. X 1 3/8"
16	WASHER, FLAT
17	SPROCKET, IDLER
18	NUT, LOCK
19	CHAIN, PLASTIC WRAP
20	SPROCKET
21	SPROCKET
22	PIN, ARM LOCK
23	PIN, HITCH
24	FLANGETTE, BEARING
25	BEARING, INSERT
26	COLLAR, SET
27	BOLT, 3/8 X 16 X 2"
28	WASHER, SAE
29	SPRING
30	BRACKET, TILT SHAFT
31	SHAFT, PLASTIC ROLL HOLDER 20" Plastic
32	SHAFT, PLASTIC ROLL HOLDER 30" Plastic

Part # & Qty.

0311007 - 1
0423039 - 1
0332014 - 1
0181003 - 2
0280006 - 2
0315051 - 1
0315051 - 1
0276103 - 1
0221111 - 1
0422022 - 3
3
0327089 - 3
3
0346530 - 1
STOCK
0353110 - 3
0351011 - 1
0338105 - 1
0309017 - 1
0351002 - 2
0351018 - 1
0440039 - 1
0340006 - 2
0303005 - 12
0303023 - 6
0311006 - 6
0346207 - 1
0353127 - 2
1
0410078 - 1
0281025 - 1



Component & Relay Descriptions & Functions

101
WRAP 23
24

- FU1 - 15 Amp fuse to protect system components
- SS 1 - Off/On Selector Switch. Gives power to cabinet components
- RC - Three Channel Radio Receiver to receive radio signals from the hand held transmitter
- CTR 1 - Preset Counter. Compiles and counts down to "0" the number of wraps being applied to the bale
- TDR 1 - Time Delay Relay is initiated after the completion of preset counter to switch the wrap speed to one final additional slowdown wrap rotation
- CR 1 - Control Relay for emergency stop or the master relay
- CR 2 - Counter Relay for full speed wrap rotation. Energizes solenoid # 1. This relay will be energized the entire time the preset counter is counting down and for one additional rotation after the completion of the count
- CR 3 - Control Relay for slow speed single wrap rotation. Energizes solenoid # 2. This relay will be energized entire time the preset counter is counting down and for one additional rotation after the completion of the count.
- CR 4 - Control Relay which is tied directly to proximity switch # 1 which senses if the rotary table is in the home position
- CR 5 - Control Relay which is tied directly to proximity switch # 2 which senses when the Unload Forward position has been reached
- CR 6 - Control Relay which is tied directly to proximity switch # 3 which senses when the unload returned position has been reached
- CR 7 - Control Relay which shifts from the full speed wrap rotation to the slow speed single wrap rotation
- CR 8 - Control Relay for the "Unload Forward Cycle". Energizes solenoid # 3
- CR 9 - Control Relay for the "Unload Return Cycle". Energizes solenoid # 4. This relay is also used to reset the preset counter so that a new "Wrap Cycle" can be started
- CR 10 - Control Relay which is energized when the number II button is activated on the hand held transmitter
- CR 11 - Control Relay which is energized when the number III button is activated on the hand held transmitter

1) Emergency Stop (Button # I)

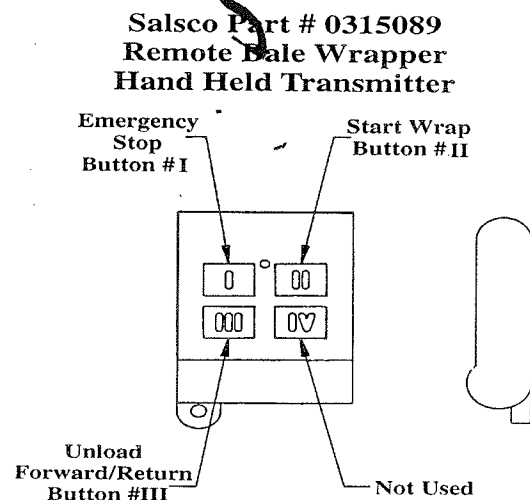
- a) Pressing this button sends a signal to the three channel receiver (RC) which will immediately stop the machine no matter where in the cycle.
- b) This will also reset the wrap counter (CTR 1) back to the reset valve therefore losing the present wrap count.
- c) The machine can be restarted to either start a complete new "Wrap Cycle" or return from the "Unload/Forward" position by pressing either button # II or # III.

2) Start Wrap (Button # II)

- a) Pressing this button sends a signal to the three channel receiver (RC) which will start the "Wrap Cycle".
- b) The machine will wrap the bale the number of times as set on the preset counter (CTR 1) plus one additional slow down wrap.
- c) The machine will automatically return to the "Home" or "Load/Unload" position upon completion of all wraps.

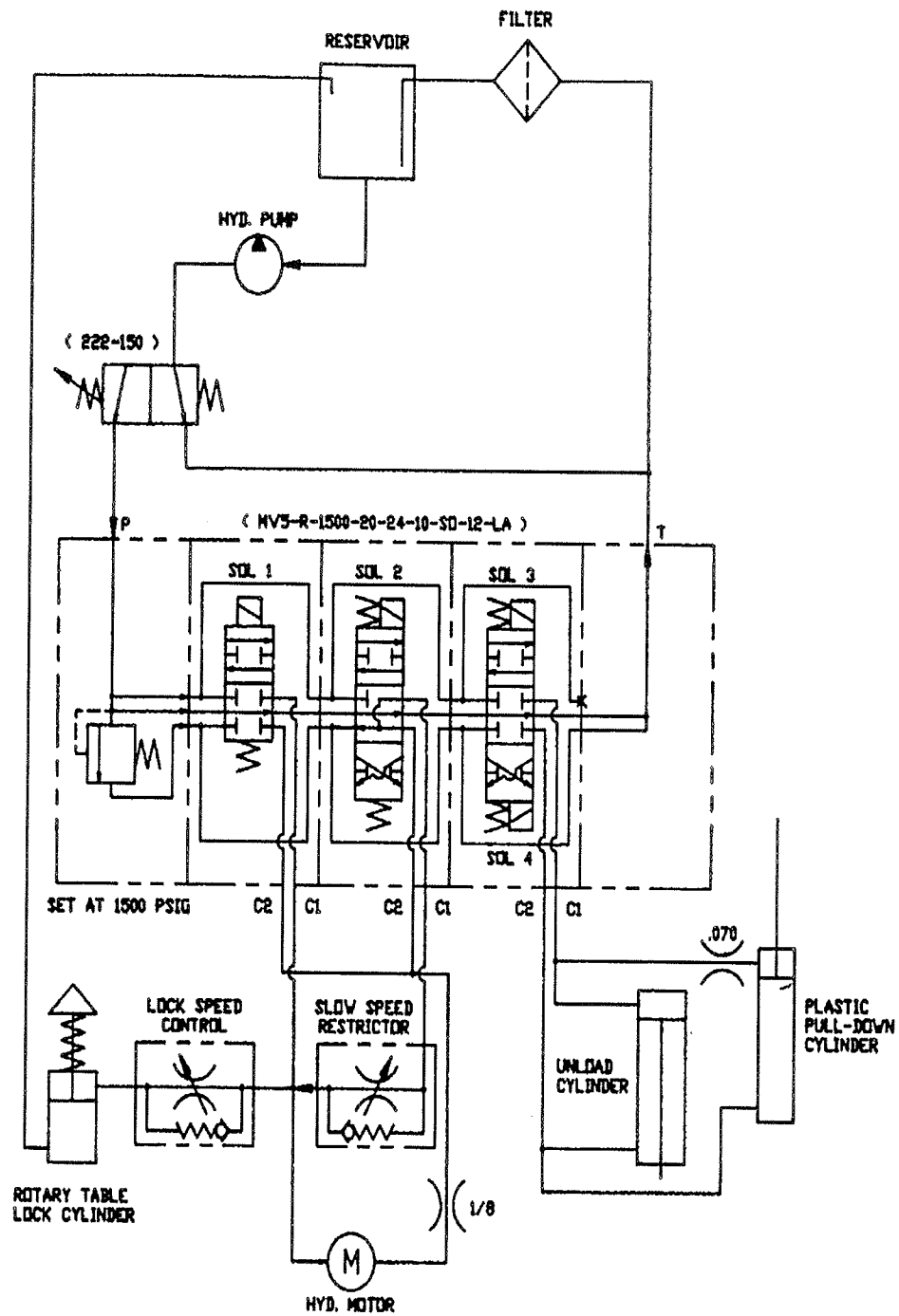
3) Unload Forward/Return (Button # III)

- a) Pressing this button sends a signal to the three channel receiver (RC) which will initiate the "Unload Cycle" only if the "Wrap Cycle" has been completed.
- b) Pressing this button either at the end of or at any time during the "Unload Cycle" will initiate the "Unload Return Cycle" which will bring the machine back to the home position.



ELECTRIC SCHEMATIC

HYDRAULIC SCHEMATIC - REMOTE CONTROL WRAPPER



INSTALLATION

If the unit is being used as a garage door interface, it should be mounted where a 110 VAC receptacle and the wires to the wall mounted garage door switch can both be easily accessed.

2-wire power plug

Black/white +12V power input: Connect to a constant source of +12V.

Black chassis ground: Connect to a paint-free metal point on the chassis of the vehicle.

NOTE: If unit is being used as a garage door interface, these wires will connect to an 110 VAC adaptor. If the unit came with an adaptor, these wires are prewired to it.

Channel 1 relay harness (3 wires, heavy gauge)

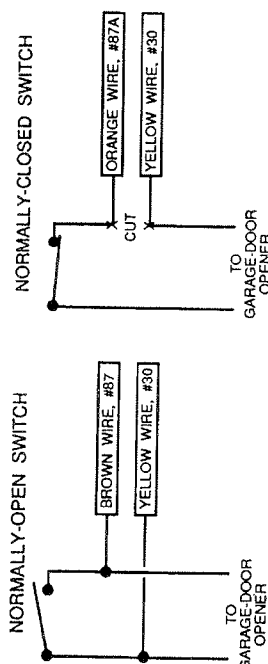
These wires are connected to the terminals of the onboard relay. When the module receives the code programmed into channel 1, this relay is activated.

Yellow: Relay common, terminal #30

Brown: Relay normally open, terminal #87

Orange: Relay normally closed, terminal #87a

To interface with a garage door opener, first determine if the opener's wall switch connects (normally open switch type), or disconnects (normally closed switch type) the wires. Most garage door openers use a normally closed switch. Once the switch type has been determined, interface with module as shown below.



Channels 2 and 3 harness (3 wires light gauge)

Green channel 2 (-) output: The module will output a negative pulse whenever the code controlling channel 2 is received. This output will continue as long as the transmission continues.

Red +12V constant output: This output is used to power the coil of any relays that are used with the channel 2 or 3 outputs.

Blue channel 3 (-) output: A (-) output will be supplied whenever the code controlling channel 3 is received, and will continue until the button is released.

IMPORTANT: These outputs are all 200 mA capable and should not be used to drive anything other than a relay or to supply a signal to a module (551T, 529T, 530T, etc).

If the red wire is used to power ANYTHING except the coil of a relay, damage to the module will result.

If the unit is being used as garage door interface, these outputs can be used in conjunction with a relay to control a second opener. If used in a vehicle, these outputs can trigger a 5511, or any other low current application.

*If no code is programmed into the unit, no output will be supplied. Please refer to **PROGRAMMING** section for details.



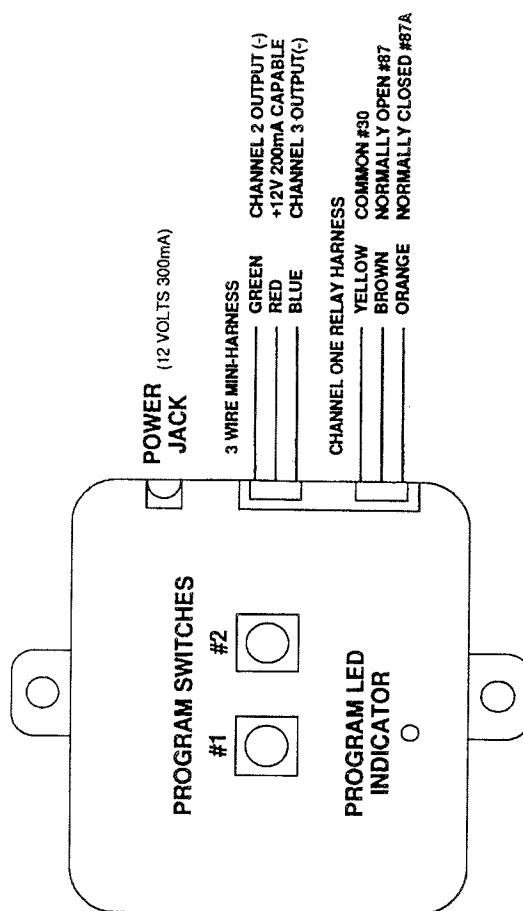
SECURITY & CONVENIENCE COMPONENTS 519HF THREE-CHANNEL RECEIVER

The 519HF is a three channel receiver that uses EEPROM to "learn" and be controlled by remote control. It uses a "rolling code" high frequency receiver (HF) section for improved range and greater security. It will learn up to four of DEI's rolling code HF transmitters. The memory of the unit will be retained during long power outages and once initial programming is completed, no additional programming should be required.

PROGRAMMING

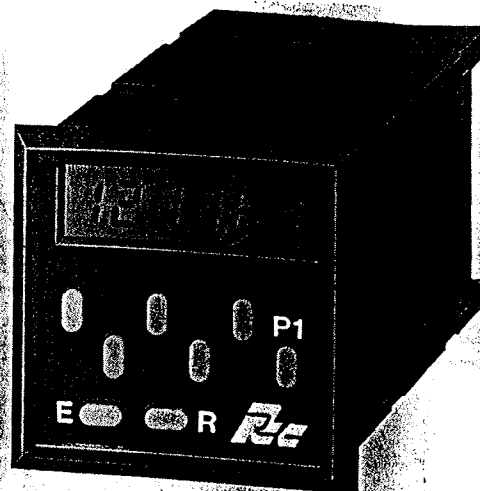
Once the unit is powered up, it is programmed using the two program buttons on top of the unit. To program channel 1, push and hold program button 1. The LED will flash in groups of one. While holding the program button, push the button on the transmitter that you desire to control channel 1. When the code is learned, the LED will light solid. If you will only be using the channel 1 output, programming of the other outputs is unnecessary.

To program the channel 2 output, push program button two and hold it. The LED will blink in groups of two. While holding the program button, press the button on the transmitter which will control channel two. When the code is learned, the LED will light steady. Programming channel 3 is done in the same manner by pushing both program buttons at the same time. The LED will flash in groups of three and light steady when the code is learned.



MODEL LNXCC - LYNX CONTACT INPUT COUNTER

- SINGLE PRESET
- 0.3" (7.6mm) HIGH, 6 DIGIT DISPLAY
- NON-VOLATILE MEMORY (E²PROM)
- DISPLAY SCROLLING
- FORM (C) RELAY OUTPUT
- SOLID-STATE CURRENT SINKING OUTPUT
- PROGRAMMABLE TIMED OUTPUT
- REMOTE RESET CAPABILITY
- SIMPLIFIED FRONT PANEL PROGRAMMING
- ABILITY TO LOCK OUT FRONT PANEL FUNCTIONS
- ON-LINE SELF-TEST
- AVAILABLE IN AC OR DC VERSIONS
- FRONT PANEL PROGRAMMABLE DECIMAL POINT
- SEALED FRONT PANEL CONSTRUCTION (NEMA 4X/IP65)



DESCRIPTION

The Lynx Contact single preset counter is an economical and reliable solution to single preset level requirements. This unit has a solid-state output and a Form C relay output. It can accept inputs from switch contact closures, NPN Open Collector output sensors, or most any other current sinking output sensor sold by RLC. It also features a full complement of control inputs, programmable timed output, non-volatile memory, and many other features which will satisfy most any single preset application.

The Lynx Contact Counter has two main counting actions, Reset to Zero (RTZ) and Reset to Preset (RTP). There are eight modes of operation for this unit.

All parameters are programmed through the front panel buttons. The unit has an internal non-volatile memory device which eliminates the need for battery back-up. When power is removed, this device maintains all data set-ups necessary for system operation. A Program Disable terminal is provided, which can be used to prevent accidental changes or tampering by unauthorized personnel to the preset or timed output value. The front panel reset button can also be enabled or disabled by a rear panel DIP switch. This counter also has an on-line self-test, which can be run at any time without missing counts or missing a preset value.

Power, input, and output connections are made via removable terminal blocks at the rear of the unit. DIP switches at the rear of the unit are used to set up the desired mode of operation.

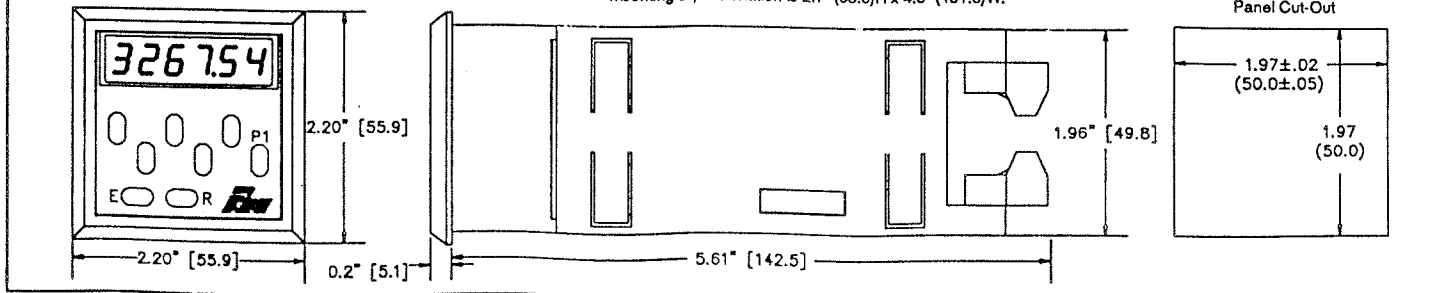
The Lynx Contact counter has a sealed high impact plastic bezel which meets NEMA 4X/IP65 specifications for wash-down and/or dust, when properly installed.

SPECIFICATIONS

- DISPLAY:** 6-digit, 0.3" (7.6mm) high LCD display.
- POWER REQUIREMENTS:**
AC Power Versions: 115VAC (±10%), 50/60Hz, 6VA
230VAC (±10%), 50/60Hz, 6VA
DC Power Versions: 11-14VDC @ 180mA.
21.5-30VDC @ 180mA.
- COUNT INPUT:** Switch contact closures or NPN Open Collector output sensors. (Current sinking type output sensors) Count threshold levels are $V_{IL} = 0.5V$, $V_{IH} = 3.8V$.
Current Sinking: Unit provides 10K Ω pull-up load for sensors with current sinking outputs. (Max. sensor current, 0.5mA.)
- MAXIMUM COUNT RATE:** 50Hz under all modes of operation. This unit will operate with VCM (E through H) modules.
- CONTROL INPUTS:** Active low ($V_{IL} = 0.5V$ max.), internally pulled up to 5VDC through a 10K Ω resistor ($I_{SNK} = 0.5mA$).
Remote Reset: Response time = 10msec. A low will reset the unit and deactivate the output.
Program Disable: A low inhibits the changing of the preset and timed output, as well as testing the output in self-test.
- OUTPUT:**
Solid-State: Current sinking NPN Open Collector Transistor. $I_{SNK} = 100mA$ max., $V_{OH} = 30VDC$ max., $V_{OL} = 1V @ 100mA$.
Relay: Form C contacts max. rating 5amps @ 120/240VAC, 28VDC (resistive load), 1/8H.P. @ 120VAC (inductive load). The operate time is 5 msec. nominal and the release time is 3 msec. nominal.
Relay Life Expectancy - 100,000 cycles at max. rating. (As load level decreases, life expectancy increases.)
Programmable Timed Output: The timed output can be programmed from 0.01 sec. to 99.99sec., $\pm 0.1\% + 10msec$. The timed output is set for 0.1 sec. at the factory.

DIMENSIONS "In inches (mm)"

Note: Recommended minimum clearance (behind the panel) for mounting clip installation is 2.7" (68.6)H x 4.0" (101.6)W.

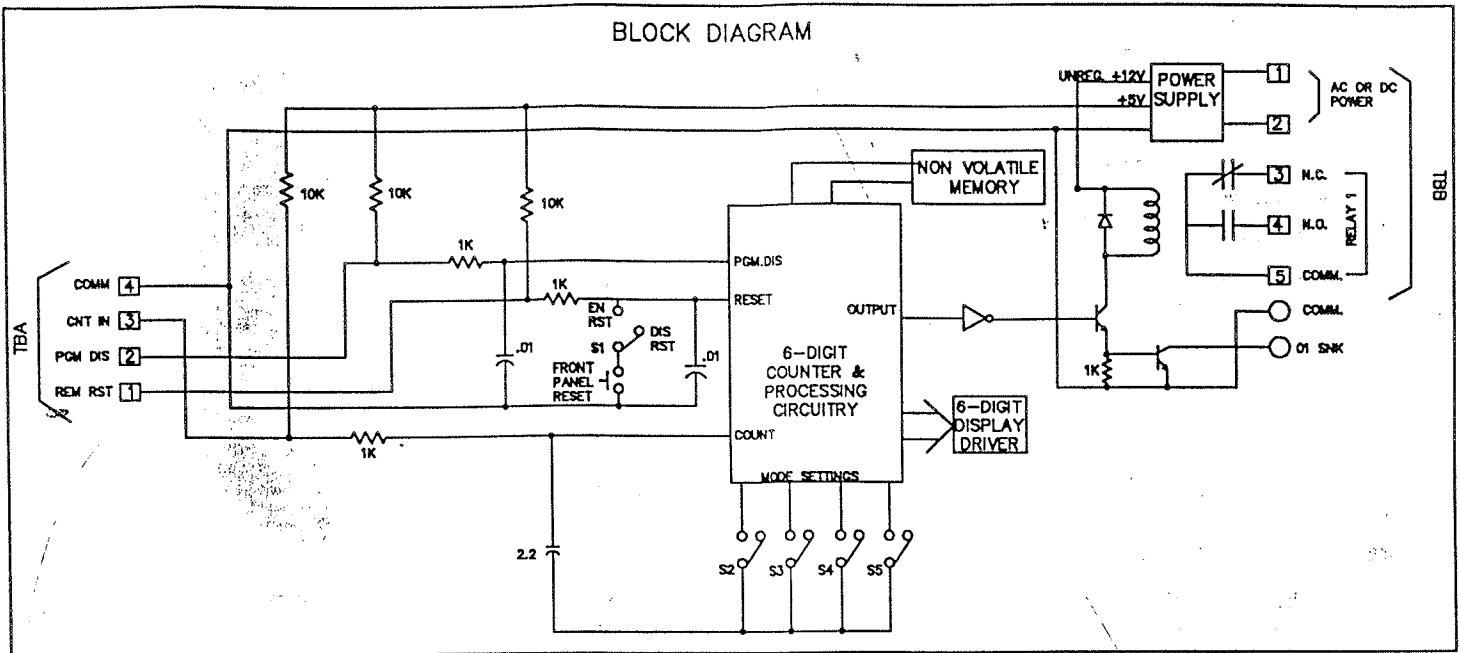


SPECIFICATIONS (Cont'd)

7. **MEMORY RETENTION:** Non-volatile E²PROM retains all programmed information when power is removed or interrupted. Power Cycles (ON/OFF): 100,000 minimum. Data Retention: 10 years minimum.
8. **INPUT, POWER, AND OUTPUT CONNECTIONS:** Removable terminal blocks.

9. **OPERATING TEMPERATURE RANGE:** 0°C to 50°C.
10. **STORAGE TEMPERATURE RANGE:** -40°C to 70°C
11. **CONSTRUCTION:** Black plastic front bezel with black plastic insert. Front panel meets NEMA 4X/IP65 requirements for wash-down and dusty environments, when properly installed. (Panel gasket, mounting clip, nut fasteners, and screws included with unit.)
12. **WEIGHT:** 0.8 lbs (0.36 kg).

BLOCK DIAGRAM



MODES OF OPERATION, DIP SWITCH SET-UP

Modes of operation and front panel reset enable are selected by five DIP switches located at the rear of the unit. DIP switch 1 is used to enable or disable the front panel reset button. DIP switches 2 through 5 are used to select the desired mode of operation. Mode settings of the switches are shown to the right of the text below.

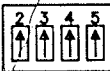
Note: During automatic reset, no counts will be missed if the count rate

does not exceed the maximum count rate specified. A manual reset, either from the front panel reset (if enabled) or remote reset, overrides any condition or state of the counter and begins the cycle again. Note: In modes four and twelve, the output may appear to be latched if the time delay is longer than the time required to count from the reset condition to the preset point.

MODES OF OPERATION FOR THE LYNX CONTACT PRESET COUNTER

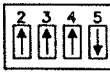
MODE 0 LATCH OUTPUT AT PRESET, MANUAL RESET TO ZERO

The unit counts from zero; when the preset value is reached, the output turns on and counts continue to accumulate. When a manual reset is performed, the count resets to zero and the output turns off.



MODE 1 TIMED OUTPUT AT PRESET, MANUAL RESET TO ZERO

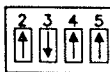
The unit counts from zero; when the preset is reached, the output turns on for the amount of time programmed and counts continue to accumulate. When a manual reset is performed, the unit resets to zero and starts the cycle again.



MODE 2 & 3 - ☆☆

MODE 4 TIMED OUTPUT AT PRESET, AUTOMATIC RESET TO ZERO AT PRESET

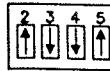
The unit counts from zero; when the preset is reached, the output turns on for the amount of time programmed. At preset, the unit automatically resets to zero and starts the counting cycle again.



MODE 5 - ☆☆

MODE 6 TIMED OUTPUT AT PRESET, AUTOMATIC RESET TO ZERO AFTER THE TIMED OUTPUT

The unit counts from zero; when the preset is reached, the output turns on for the amount of time programmed. At the end of the timed output, the unit automatically resets to zero and starts the cycle again.



MODE 7 - ☆☆

☆☆ - These modes are not applicable.

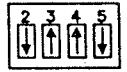
MODE 8 LATCH OUTPUT AT ZERO, MANUAL RESET TO PRESET

The unit counts down from preset; when zero is reached the output turns on and counts continue to accumulate. When a manual reset is performed, the unit resets to preset, the output turns off, and the cycle starts again.



MODE 9 TIMED OUTPUT AT ZERO, MANUAL RESET TO PRESET

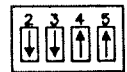
The unit counts down from preset; when zero is reached, the output turns on for the amount of time programmed and counts continue to accumulate. When a manual reset is performed, the unit resets to preset and starts the cycle again.



MODE 10 & 11 - ☆☆

MODE 12 TIMED OUTPUT AT ZERO, AUTOMATIC RESET TO PRESET AT ZERO

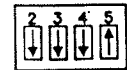
The unit counts down from preset; when zero is reached, the output turns on for the amount of time programmed. At zero, the unit automatically resets to preset and starts the counting cycle again.



MODE 13 - ☆☆

MODE 14 TIMED OUTPUT AT ZERO, AUTOMATIC RESET TO PRESET AFTER THE TIMED OUTPUT

The unit counts down from preset; when zero is reached, the output turns on for the amount of time programmed. At the end of the timed output, the unit automatically resets to preset and restarts the cycle.



MODE 15 - ☆☆

POWER-UP DIAGNOSTICS

Upon applying power, the Lynx contact counter performs an internal self-diagnostic test of all the stored data. If the tests do not agree, a "P" appears on the right side of the display. Normal operation of the unit will continue while the "P" is displayed. Press the "E" button to remove the "P" and check all data set-up values to be certain they are correct.

WIRING CONNECTIONS

There are certain considerations that should be observed when running the count and control signal wires. A length of wire can act like an antenna and the closer it is to a source of electrical noise, the more it becomes susceptible to that noise. When connecting and installing the input wires, the following guidelines should be followed. (*This is especially true of "electrically noisy" environments.*)

When wiring the unit, remove the terminal block and use the numbers on the label to identify the position number with the proper function. Strip the wire, leaving approximately 1/4" bare wire exposed (*stranded wires should be tinned with solder*). Insert the wire into the terminal and tighten down the screw until the wire is clamped tightly. Each terminal can accept up to one 14-gauge, two 18-gauge or four 20-gauge wire(s). After the terminal block is wired, install it into the proper location on the PC board. Wire each terminal block in this manner.

Caution: Terminal blocks should NOT be removed with power applied to the unit.

- A) The Input Common may be connected to machine ground (earth) only at one point, preferably a single, direct connection between a known good, earth ground and the Input Common Terminal.
- B) Never run count and control signal leads in the same conduit or race ways with conductors feeding motors, solenoids, SCR controls, heaters, etc. Ideally, signal wires should be run by themselves in a separate conduit.
- C) Signal leads within electrical enclosures should be routed as far away as possible from contactors, motor starters, control relays, transformers, and other similar components.
- D) When shielded wire is used, connect the shield to the signal common terminal of the Lynx counter and leave the other end of the shield unconnected and insulated from machine ground.

INPUT CONNECTIONS

Input connections are made on terminal block TBA, refer to numbers on the label to identify the position number with the proper function.

Terminal 1 - "REM.RST." (remote reset) When connected to common a manual reset is performed. The output turns off (if activated) and the count display is reset. As long as this terminal is low, the unit is held at reset.

Terminal 2 - "PGM.DIS." (program disable) When this terminal is not connected to common, the following values can be programmed using the front panel buttons:

Preset Value
Decimal Point Position
PTimed Output Value

Outputs can also be tested during self-test under this condition (See "Self-Test" description for further details). When connected to common, changing these values and testing the output is no longer possible.

Terminal 3 - "CNT.IN" (count input) When the signal is pulled low, a count will be registered. (See Count Input and Count Rates under the Specifications Section.)

Terminal 4 - "COMM." (common) This is the common line to which the sensor and other input commons are connected. (*Do NOT connect relay common or solid-state output common to this point.*)

POWER & OUTPUT CONNECTIONS

The input power and relay output connections are made to the bottom terminal block (TBB), and the solid-state output is connected to the polarized three-pin connector.

AC POWER WIRING

Primary AC power is connected to terminals 1 and 2 of TBB (marked VAC 50/60Hz). To reduce the chance of noise spikes entering the AC

line and affecting the unit, the power should be relatively "clean" and within the 10% variation limit. Drawing power from heavily loaded circuits, or from circuits that also power loads that cycle on and off (contactors, relays, motors, machinery, etc.), should be avoided.

DC POWER WIRING

The DC power is connected to terminals 1 and 2 of TBB. The DC plus(+) power is connected to TBB 1 and the minus(-) is connected to TBB 2.

OUTPUT WIRING

Terminals 3, 4, and 5 are used to connect to the output relay. (See Block Diagram)

The solid-state output connector has two wires on top of the connector housing.

Yellow wire - Solid-state output 1 (labeled 01 SNK.) internally connects to an NPN Open Collector transistor.

Black wire - common for the solid-state output. This terminal should NOT be used as the common for the input or control terminals.

FRONT PANEL FUNCTION DESCRIPTION

This unit employs eight front panel buttons for control and data entry. The button functions are as described below:

RESET "R": Resets the counter to either zero or preset, depending on the mode of operation selected. For this button to operate, the enable/disable reset switch at the rear of the unit must be set to the enable (EN.) position. Also it is used in conjunction with the preset button, to view and change the timed output value. When reset is activated, all processes are stopped or interrupted (*i.e. output turns off, display is reset, etc.*). This is the case under any mode of operation, in any data entry mode.

PRESET "P1": The preset value is displayed when the P1 button is pressed, and the Preset Value mode is accessed (See Program Preset Value). The value remains displayed for approximately 10 seconds after release of the button.

The preset button is also used, in conjunction with the reset button, to view and change the timed output value (See Program Timed Output Value section.)

ENTER "E": Used when programming the Preset Value or the Timed Output Value. After the desired value is obtained on the display, pressing the "E" button enters the value into the unit's internal memory and takes effect immediately. Also the "E" button can be used to exit self-test.

DISPLAY SCROLLING

To set the display to scroll, press and hold the "E" button and then press the left-most button on the front panel. To stop the scrolling, repeat the above step.

DISPLAY SCROLLING SEQUENCE

Single Preset
P1
Value of P1
Count Value

PROGRAM PRESET VALUE *

The factory default value is set to 500. To enter a different value, the operator must enter the Preset Value Programming Mode by performing the following steps.

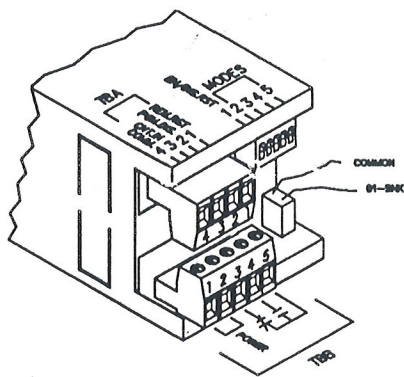
Note: During the displaying, changing, and entering of a new preset value, all functions of the unit are operational (*i.e. counting, resetting, outputs activating, etc.*)

FIRST: Press "P1". This displays the preset value, which remains displayed for approximately 10 seconds after release of the last button pushed. At this time, the preset display mode can be exited, without change, by pressing the "E" button.

SECOND: Once the preset value is displayed, a specific digit can be incremented by pressing the button directly beneath that digit. Pressing and holding the button down continuously scrolls the digit from 0 through 9, then back to 0 again. When the desired value for that digit is reached, release the button. Repeat this step until the desired preset value is obtained.

THIRD: Press the "E" button to enter the value into the unit's memory. As Soon As the "E" button is pressed, the new preset value takes effect. If the "E" button is not pressed within 10 seconds, the unit returns to normal display operation with the previous value retained.

* - To enter any new data into the Lynx, the "PGM.DIS." terminal must be deactivated (open or at +5VDC maximum).



PROGRAM TIMED OUTPUT VALUE *

The factory default Timed Output Value is 0.10 seconds, but can be programmed from 0.01 to 99.99 seconds. To enter a different value, the operator must enter the Timed Output Value Programming Mode by performing the following steps.

Note: During the displaying, changing, and entering of a new timed output value, all functions of the unit are operational (i.e. counting, resetting, outputs activating, etc.)

FIRST: Set S1 Reset EN./DIS. switch to the Down position (*Enable*).

SECOND: Press and hold the "P1" button and then press the "R" button.

The timed output value is displayed and remains displayed for approximately 10 seconds after release of the last button pushed. At this time, the timed output display mode can be exited, without change, by pressing the "E" button.

THIRD: Once the timed output value is displayed, a specific digit can be incremented by pressing the button directly beneath that digit. Pressing and holding the button down continuously scrolls the digit from 0 through 9, then back to 0 again. When the desired value for that digit is reached, release the button. Repeat this step until the desired timed output value is obtained.

FOURTH: Press the "E" button to enter the value into the unit's memory. **As Soon As** the "E" button is pressed, the new timed output value takes effect. If the "E" button is not pressed within 10 seconds, the unit returns to normal display operation with the previous value retained.

PROGRAM DECIMAL POINT *

The Lynx has the capability of displaying a decimal point in one of five positions. The decimal point selection can be done at any time without missing counts or preset outputs. The factory default for the Decimal Point Position is off. To turn a decimal point on, the operator must enter the Decimal Point Position Programming Mode by performing the following steps.

Note: During the displaying, changing, and entering of a new decimal point value, all functions of the unit are operational (i.e. counting, resetting, outputs activating, etc.)

FIRST: Press and release the left-most digit button on the front panel. This places the Lynx in the decimal point select mode.

SECOND: Press the digit button which corresponds to the desired decimal point position. A decimal point will appear to the right of the digit selected. If the right-most digit button (P1) is selected, the decimal point is turned off.

THIRD: At the time the decimal point is selected, the unit automatically returns to normal operation. No further action is required by the operator.

* - To enter any new data into the Lynx, the "PGM.DIS." terminal must be deactivated (open or at +5VDC maximum).

SELF-TEST

The self-test feature can be activated without affecting the count, missing a preset point, affecting the timed output durations, or interfering with control functions. This test verifies that all digits operate. Also, the DIP switch settings and the relay output can be tested.

If the output is not tested, the state of the output remains the same as it was prior to self-test. If the output is tested in self-test, the output will be off after exiting self-test.

Rapid advance of the self-test routine can be done by pressing and releasing any of the front panel buttons except for the "R" button. (*Pressing "R" at any time, except when entering the timed output mode, resets the unit.*)

To enter self-test, press the two left-hand digit buttons (*on the front panel*) simultaneously. At this time, the display will cycle all the digits on the display each for about half a second and in the sequence shown below.

DIGITS CYCLED ON THE DISPLAY

000000
111111
222222
333333
444444
555555
666666
777777
888888
999999

BLANK DISPLAY

101010
121212
323232
343434
545454
565656
767676
787878
989898

The next portion of self-test displays a group of four ones and zeros. The first three digits always appear as zeros. The fourth digit represents program disable (PGM.DIS). A zero represents a high at this terminal and a one represents a low. The second set of digits are the settings of the mode select switches. This pattern directly corresponds to the number representing the mode of operation. If the switches are changed while at this point in the self-test, the settings can be seen to change. These changes do not affect counter operation immediately, but any changes will take effect when self-test is exited. When the switch is "DOWN", the digit shows a one. When the switch is "UP", the digit shows a zero.

During the time the mode switch settings are displayed, the output can be tested. To activate the output, press the "P1" button. If no testing of the output is required, press the "E" button until the unit exits self-test (*the unit returns to normal display mode*). Also, if no activity occurs on the switches or the front panel button within 18 seconds after the unit pauses at the mode switch display, the unit automatically exits self-test.

Note: The "PGM.DIS." terminal must not be connected to common for the outputs to be activated during self-test.

CAUTION: The operator should use care when testing the outputs, so as not to cause any undesirable or hazardous conditions in the system.

INITIAL POWER-UP & FACTORY SETTINGS

When the unit is shipped from the factory, the values and the following modes are set as shown.

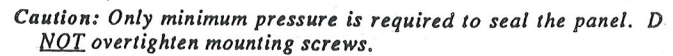
Preset 1 = 500
Count Value = 0
Timed Output Value(s) = 0.10 second

DIP SWITCH SETTINGS

All switches are set to the "UP" position except for the reset enable switch, which is "DOWN". With the switches set in these positions, the unit is operating in mode zero (*latch-on at preset, manual reset to zero*).

5

Insert the unit into the panel. As depicted in the drawing, install the two tinnerman nuts and two self-tapping screws onto the mounting clip. To install the mounting clip; hold the mounting clip with both hands so that the top corners rest on the index finger of each hand and the bottom corners rest on the middle finger of each hand. While doing this, place the thumb of each hand over the mounting screws. By pressing on the screws, flex the clip enough to slide it over the back end of the Lynx case until the clip snaps into the groove of the bezel. Tighten the two mounting screws.



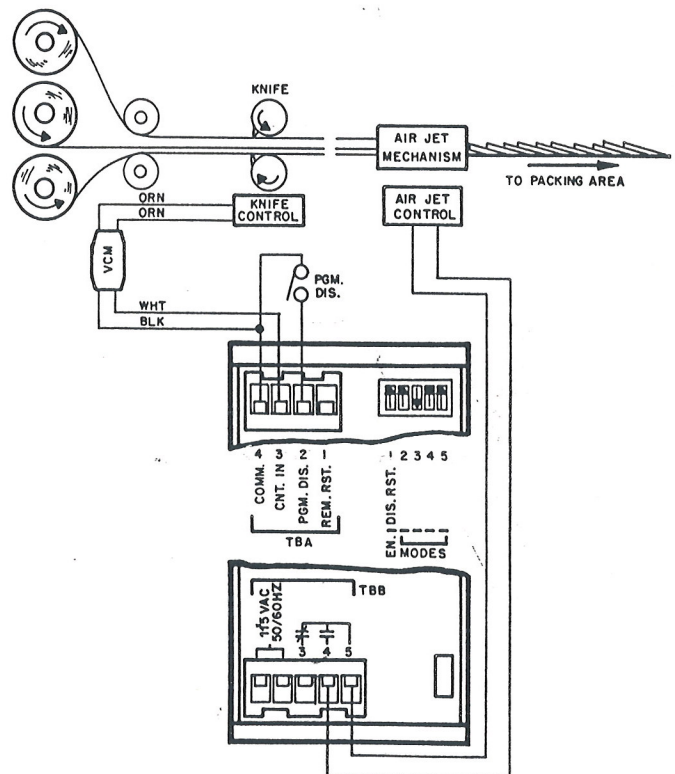
COUNTING AND CUTTING BUSINESS FORMS

The following is a list of the DIP switch settings and terminal connections to meet the process requirements.

TBA Connections	
Terminal 1 (REM.RST)	Unconnected
Terminal 2 (PGM.DIS)	Keyswitch
Terminal 3 (CNT.IN)	Output of VCM
Terminal 4 (COMM.)	Common of VCM

TBB Connections	
Terminals 1 & 2	Primary Power
Terminals 4 & 5 (Output)	Air jet control
Terminal 3	Not used

The preset number and output time duration are locked from further entry when the key switch connects the Program Disable ("PGM. DIS.") terminal to the "COMM." of the LYNX Contact Counter.



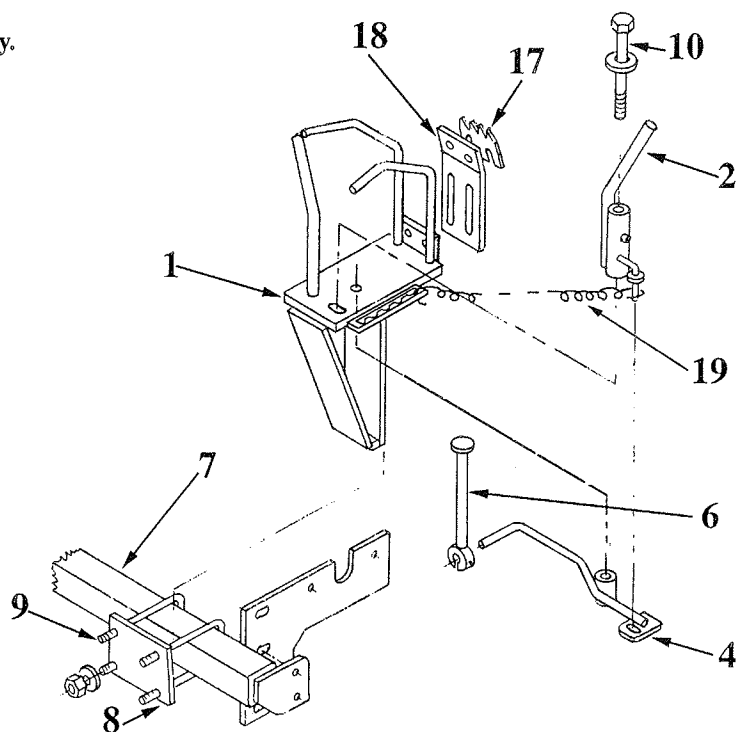
MODEL NO.	DESCRIPTION	PART NUMBERS FOR AVAILABLE SUPPLY VOLTAGES			
		12VDC	24VDC	230VAC	115VAC
LNXC0	Lynx Contact Input Counter	LNXC0020	LNXC0030	LNXC0010	LNXC0000
*LNXC1	Lynx Single Preset Counter	LNXC1020	LNXC1030	LNXC1010	LNXC1000
*LNXC2	Lynx Dual Preset Counter	LNXC2020	LNXC2030	LNXC2010	LNXC2000

For more information on Pricing, Enclosures & Panel Mount Kits, see the RLC Catalog or contact your local RLC distributor.

* For complete details on these versions of the Lynx counters, refer to Bulletin No. LNXC1/2.

Cut & Tie Assembly

Item #	Description	Part # & Qty.
1	Mount, Cut & Tie	0276189 - 1
2	Clamp, Pivot	0210073 - 1
4	Lever, Clamp Release	0233064 - 1
6	Rod, Release Actuator	0245026 - 1
7	Support, Cut & Tie	0277042 - 1
8	Clamp, Mount	0410074 - 1
9	U-Bolt, Square Bend	0346841 - 2
10	Bolt, Modified	0446455 - 1
16	Mount, Cut & Tie Support	0476193 - 2
17	Blade, Cut-Off	0405056 - 2
18	Mount, Cut & Tie Blade	0476211 - 1
19	Spring, Extension	0350024 - 1

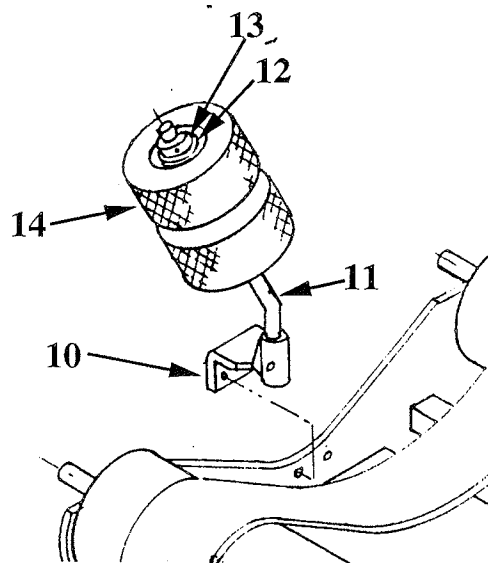


Below is a quick reference chart for various "Flat Head Cap Screws" and the torque recommendations.

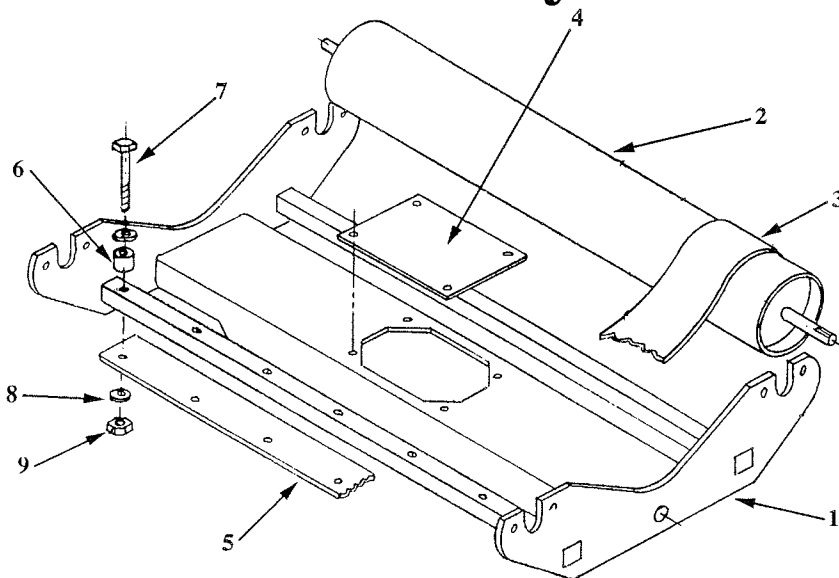
Bolt Size	Seating Torque Ft. - Lbs.	
	Coarse Thread	Fine Thread
1/4	8.3	9.2
5/16	16.7	18.3
3/8	29.2	33.3
7/16	46.7	52.1
1/2	70.8	83.3
5/8	141.7	158.3
3/4	250.0	266.7

Bale Guide Assembly

Item #	Description	Part # & Qty.
10	Bracket, Guide Wheel	0206199 - 2
11	Shaft, Guide Wheel	0448054 - 2
12	Washer, Flat	0353106 - 4
13	Collar, Set	0311006 - 4
14	Wheel, Bale Guide	0354008 - 4



Rolls & Frame Assembly

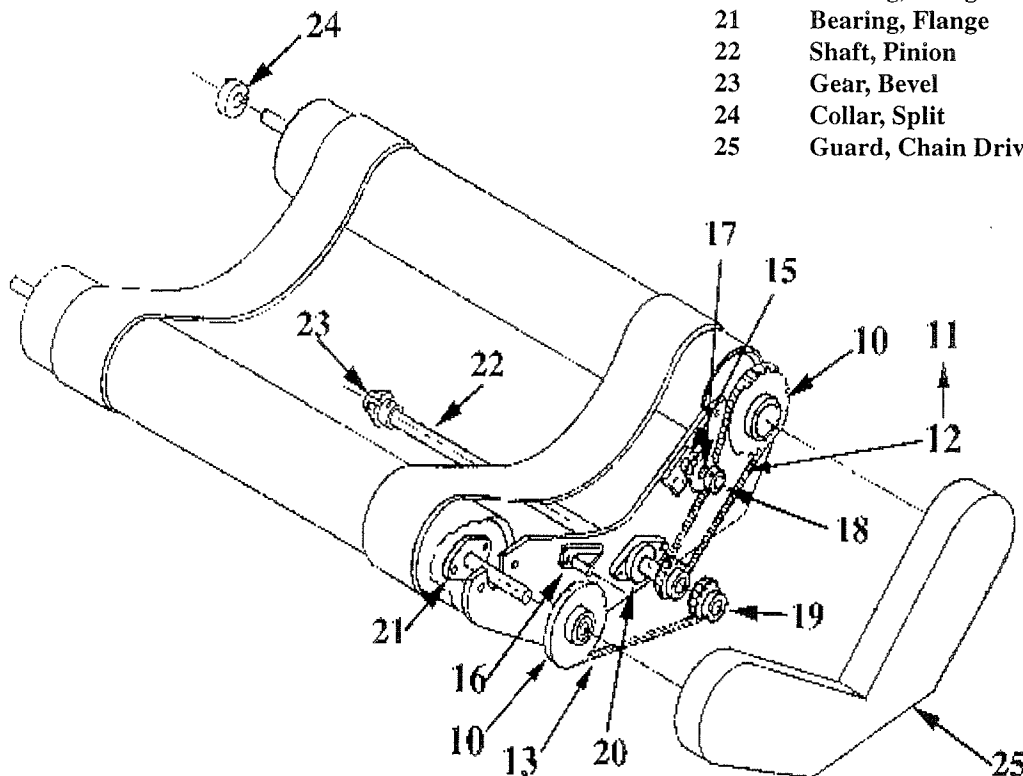


Item #	Description	Part # & Qty.
1	Frame, Rotating	0219121 - 1
2	Tube, Roller	0267064 - 2
3	Belt, Continuous	0304024 - 4
4	Cover, Frame Top	0471020 - 1
	Screws, Button Head For Item # 4	0346082 - 4
5	Guard, Hay	0421068 - 2
	Washers, Fender For Item # 5	0353205 - 6
6	Tube, PVC	0467088 - 16
7	Bolt, Hex Head	0346314 - 16
8	Washer, Flat	0353103 - 32
9	Nut, Lock	0338103 - 16

Rolls & Frame Sub-Assembly

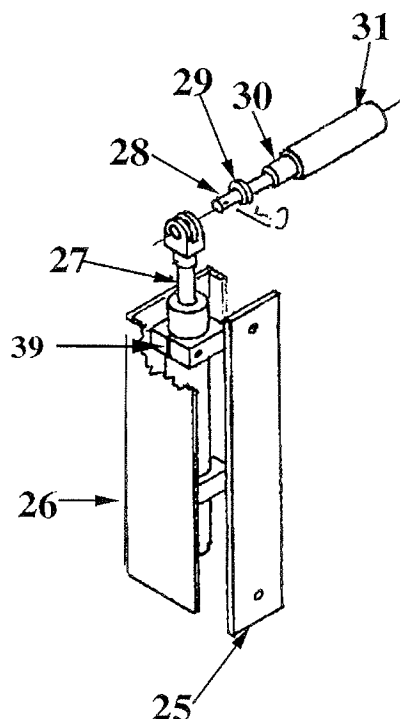
Item #	Description	Part # & Qty.
10	Sprocket, Drive 30" Tens.	0351034 - 2
11	Link, Master	0309006 - 3
12	Chain, Right Side, 30" Tens.	0309044 - 1
13	Chain, Left Side, 30" Tens.	0309043 - 1
15	Bracket, Chain, Right	0206310 - 1

Item #	Description	Part # & Qty.
16	Bracket, Chain, Left	0206309 - 1
17	Sprocket, Idler, 30" Tens.	0351011 - 2
18	Collar, Split	0311021 - 6
19	Sprocket, 30" Tens.	0351005 - 2
20	Bearing, Flange	0303006 - 2
21	Bearing, Flange	0303031 - 4
22	Shaft, Pinion	0448043 - 1
23	Gear, Bevel	0363002 - 1
24	Collar, Split	0311020 - 4
25	Guard, Chain Drive	0221106 - 1



Plastic Pull Down Cylinder Assembly

(Units with Lift Arm and Cut & Tie Only)



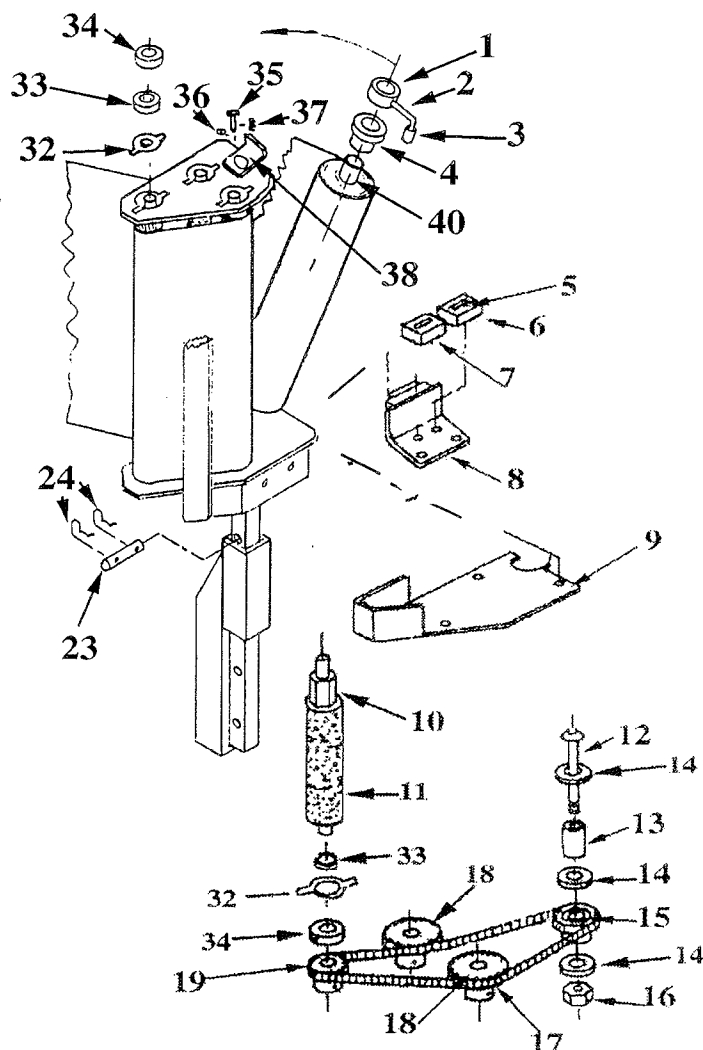
Item #	Description	Part # & Qty.
25	HOLDER, HYDRAULIC CYLINDER	0281002 - 1
26	GUARD, HYDRAULIC CYLINDER	0421110 - 1
27	CYLINDER, HYDRAULIC PULL DOWN	0330037 - 1
28	ROD, PLASTIC PULL DOWN	0245020 - 1
29	WASHER, FLAT	1/2" I.D. STOCK
30	TUBE, INNER	1/2" I.D. STOCK
31	TUBE, OUTER	0267073 - 1
39	BRACKET, PLASTIC PULL DOWN CYL.	2

30" Tensioner Assembly

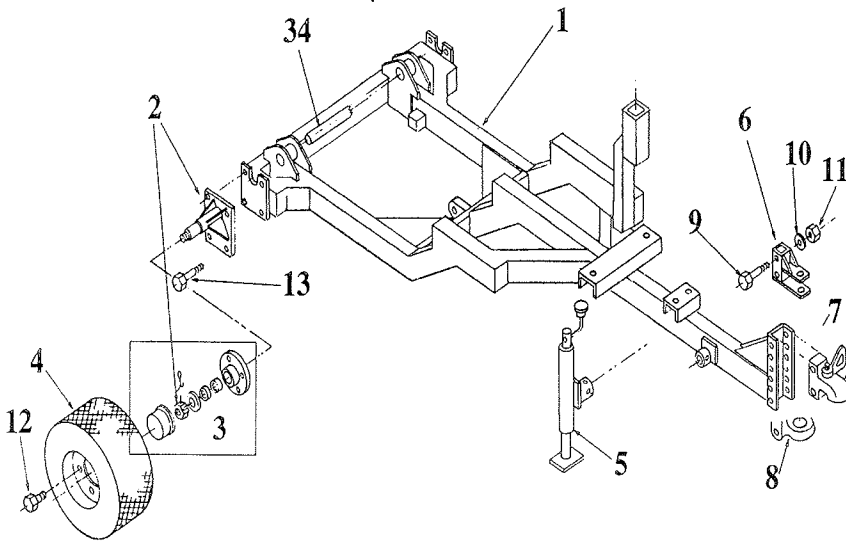
Item #	Description
1	COLLAR, SET
2	HANDLE, COLLAR
3	GRIP, PLASTIC
4	HOLDER, PLASTIC ROLL
5	BOX, COUNTER
6	COUNTER, WRAP MODULE
7	COUNTER, DUMP MODULE
8	MOUNT, COUNTER BOX
9	GUARD, PLASTIC DISPENSER
10	GUIDE, PLASTIC ROLL 30" Plastic
11	HOSE, GUIDE COVER 30" Plastic
12	BOLT, CARRIAGE
13	TUBING, 5/8" I.D. X 1 3/8"
14	WASHER, FLAT
15	SPROCKET, IDLER
16	NUT, LOCK
17	CHAIN, PLASTIC WRAP
18	SPROCKET
19	SPROCKET
23	PIN, ARM LOCK
24	PIN, HITCH
32	FLANGETTE, BEARING
33	BEARING, INSERT
34	COLLAR, SET
35	BOLT, 3/8 X 16 X 2"
36	WASHER, SAE
37	SPRING
38	BRACKET, TILT SHAFT
40	SHAFT, PLASTIC ROLL HOLDER 30" Plastic

Part # & Qty.

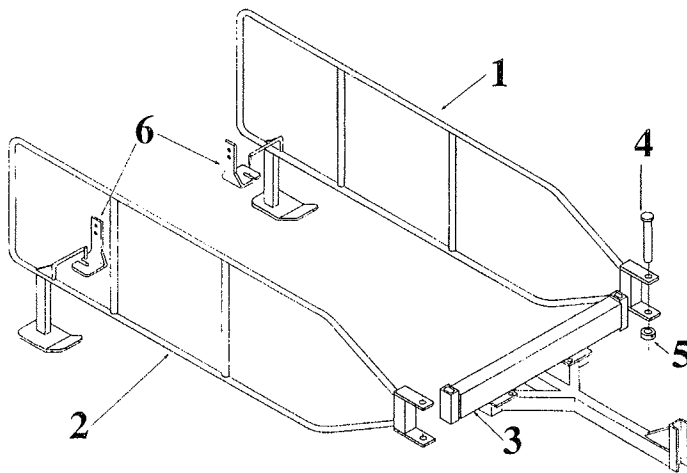
0311007 - 1
0423039 - 1
0332014 - 1
0181003 - 2
0280006 - 2
0315051 - 1
0315051 - 1
0276103 - 1
0221111 - 1
3
3
0346530 - 1
STOCK
0353110 - 3
0351011 - 1
0338105 - 1
0309017 - 1
0351002 - 2
0351018 - 1
0440039 - 1
0340006 - 2
0303005 - 12
0303023 - 6
0311006 - 6
0346207 - 1
0353127 - 2
1
0410078 - 1
1



Trailer Frame Assembly



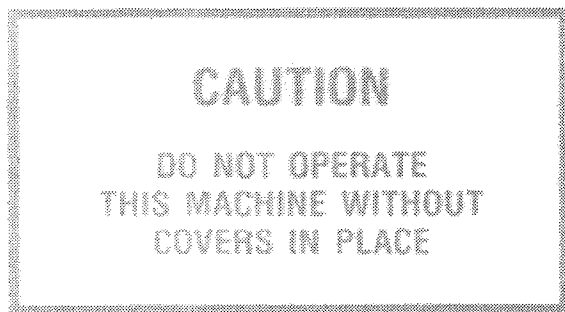
Item #	Description	Part # & Qty.
1	Frame, Econo-Wrap	0219078 - 1
2	Axle, Wheel	0202038 - 2
3	Hub Assembly	0329002 - 2
4	Tire & Rim	0354020 - 2
6	Hitch, 7/8" Hole	0125031 - 1
7	Coupler, Option	0325015 - 1
8	Lunette Eye, Option	0325013 - 1
11	Nut, Hex Lock	0338105 - 1
10	Washer, Flat	0353110 - 1
9	Bolt, Hex Head	0346512 - 1
5	Jack	0369005 - 1
12	Lug Bolt (part of tire & rim)	- 5
34	Shaft, Pivot Housing	0448077 - 1



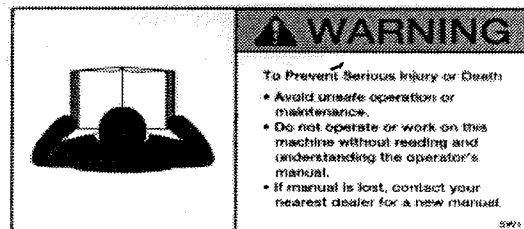
SAFETY GUARD

Item #	Description	Part # & Qty.
1	Guard, Safety, Right	0221157 - 1
2	Guard Safety, Left	0221158 - 1
3	Guard, Safety Mount	0221159 - 1
4	Pin, Guard Retainer	0240060 - 1
5	Collar, Split	0311001 - 2
6	Holder	0481014 - 2

SAFETY DECALS ARE AN IMPORTANT PART OF SAFE OPERATION OF ANY EQUIPMENT. SHOULD YOU NEED REPLACEMENT DECALS, PLEASE CONTACT YOUR SERVICING DEALER OR SALSCO DIRECT!



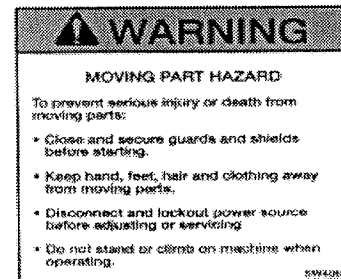
PART # 0314049



PART # 0314062



PART # 0314029



PART # 0314060

SAFETY - COMMON SENSE - CAUTION

WARRANTY POLICY

Your Salsco commercial or turf equipment product is a commercial type product and is normally manufactured and sold for commercial or industrial use. Salsco, will, for the original purchaser, for one (1) year from the date of purchase (90 days if used for rental purposes) repair, replace, free of charge, any part or parts found to be defective in material, workmanship or both. Any transportation charges to be borne by the purchaser.

If during the warranty period, the product does not function properly due to defect, simply contact Salsco and follow the warranty procedures listed below.

This warranty does not include incidental or consequential damages and is exclusive of any implied warranties. This warranty does not include normal maintenance parts, including, but not limited to spark plugs, filters, lubricants, etc.

This warranty does not include parts or components which are covered under the original manufacturers warranty, including, but not limited to engine and differential.

SALSCO WARRANTY PROCEDURE

In order for Salsco to process your warranty claims in a timely manner, you must follow the simple procedures listed below

1) MACHINE OR PART FAILURE

A) Call our service department for easy instructions on how to correct or repair the problem. Preventive maintenance will also be suggested

B) Fill in all information requested on warranty claim form:

C) List all parts used. Make sure part numbers are correct. You can obtain these from your manual. Any parts that you believe to be defective or any parts that break should be retained for possible inspection until after the warranty has been paid or parts have been replaced.

D) Should Salsco want to have parts returned to the factory, you will be given a return authorization number, which must be written on the outside of the package and on the enclosed paperwork. Transportation charges are to be borne by the purchaser. Salsco will not accept freight collect shipments.

CALL SALSCO'S SERVICE DEPARTMENT OR YOUR SERVICING DEALER BEFORE YOU TRY TO FIX ANY PROBLEM

WARRANTY CLAIM

IMPORTANT

NOTE: ALL OF THE INFORMATION REQUESTED IS REQUIRED TO PROCESS YOUR WARRANTY CLAIM. FAILURE TO PROVIDE ALL THIS INFORMATION WILL DELAY THE PROCESS CONSIDERABLY.

SALSCO, INC.
105 School House Rd.
Cheshire, CT 06410
203/271-1682; 1/800/872-5726
203/271-2596 (fax)

DATE MAILED: _____
DATE RECEIVED: _____

Owner _____ Phone # (____) _____
Address _____
Purchased From: _____ Phone # (____) _____
Address: _____
Date Purchased: _____ Invoice # _____ Date Failed: _____ Hrs. Used _____
Model # _____ Serial # _____

Probable cause of failure or problem: (word defective not sufficient)

Work performed/Comments on repair: _____

Labor hours requested: _____ Shop labor rate: _____ Effective date: _____
Warranty requested for the following parts: Return Auth # _____ (If applicable)

Part #	Description	Qty	Price Each	Invoice #

Preventive maintenance suggested and by whom: _____

FOR OFFICE USE ONLY

Dealer Delivery Report Rec. _____ Warranty Card Rec. _____ War. Claim # _____
Date Apr. _____ Parts Total: _____ Labor Total: _____ Apr. by _____
Date Rejected _____ Rejected by _____ Reason for Rejection _____

REVISED - 9/1/94

Salsco, Inc.

105 School House Rd.

Cheshire, CT 06410

203-271-1682

DEALER DELIVERY REPORT

			SERIAL NO.	
DEALER		CITY	STATE	ZIP
PURCHASER (Last Name or Company) (First Name) (Middle Name)		ADDRESS	CITY	STATE ZIP

The undersigned dealer warrants that the above-described machine was carefully inspected, adjusted and prepared for delivery before delivery to the purchaser; that both the operation and maintenance of the machine were explained to the purchaser; and that a copy of the Owner's Instruction Manual were given to the purchaser and his attention called to Our Warranty and any operating instructions included in the manual and caution notes.

Date: _____ Dealer: _____

Sign By: _____

Phone: _____

The undersigned purchaser certifies that the operation and maintenance of the above-described machine have been explained to him; acknowledges receipt of a copy of the Owner's Instruction Manual and Our Warranty Policy printed in said Instruction Manual and Caution Notes. I also understand that it is my responsibility to explain and make Salsco manuals available to new operators.

Date: _____ Purchaser: _____

Sign By: _____

Phone: _____

FACTORY COPY WHITE - DEALER'S COPY YELLOW - OWNER'S COPY PINK

FORM NO. 8204

MODEL -	SERIAL NO.
SALSCO LIMITED WARRANTY CARD	
1. DATE PURCHASED: _____	
2. PURCHASER: _____	
3. PURCHASER ADDRESS: _____	
4. DEALER: _____	
5. DEALER ADDRESS: _____	
6. WILL THIS EQUIPMENT BE USED COMMERCIALY? <input type="checkbox"/> YES <input type="checkbox"/> NO	
7. DID DEALER SERVICE THIS EQUIPMENT AND INSTRUCT YOU IN ITS CARE AND SAFE OPERATION? <input type="checkbox"/> YES <input type="checkbox"/> NO	
8. DID YOU RECEIVE AN "OPERATION & SERVICE MANUAL" AND SAFETY PAMPHLET? <input type="checkbox"/> YES <input type="checkbox"/> NO	
NOTICE	
SIGNED _____ Purchaser	
IMPORTANT: THIS CARD MUST BE FILLED OUT COMPLETELY AND MAILED TO THE FACTORY WITHIN 10 DAYS OF PURCHASE DATE, OR YOUR LIMITED WARRANTY WILL BE VOIDED.	
WHITE—DEALER YELLOW—OWNER CARD—FACTORY	

SERVICE RECORD

This schedule if kept properly will help track problems in the future.

[illegible]