

This is a copy of the printed manual

(**NOTICE** change lights and alternator to read as printed)



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**Tube.Line 5500
Owner's Manual**

Year 2004

Tube Line 5500

Tube Line 5500

New for 2004



Larger Fuel Tank 25 liter

Hand Fuel Pump to start fuel flow
when tank has run empty
Squeeze bulb until restriction is
felt.

Tank vent is a small plug in the
cap.

During use unscrew vent plug (it
will not fall off)



Tool Box with tool tray place of
capped plastic pipe for operator's
manual

New for 2003
Remote Control



The new remote control looks the same as the previous models looked; however instead of stopping the engine it only interrupts the wrap cycle in **automatic mode only.**

1. With the remote control; by pressing the start switch on the hand held unit the wrap cycle will be started and will go through the complete cycle and stop at the end of the stroke.
2. The cycle can be interrupted at any time during the cycle.



However: When using the table trigger to start the cycle: **the stop button will only stop the cycle**



when and if the bale is no longer on the trigger switch.

Notice! When a bale is on the table trigger the Stop button will have to be held in until the operator can switch the “auto/man” to “man”. To restart the cycle if the bale still sits on the trigger turn the “auto/man” switch to “auto” and the cycle will finish.



When the stop button is pushed with no bale on the trigger or with the trigger disconnected, the cycle will stop without the button being held in. To resume the cycle the start button can be pushed in.

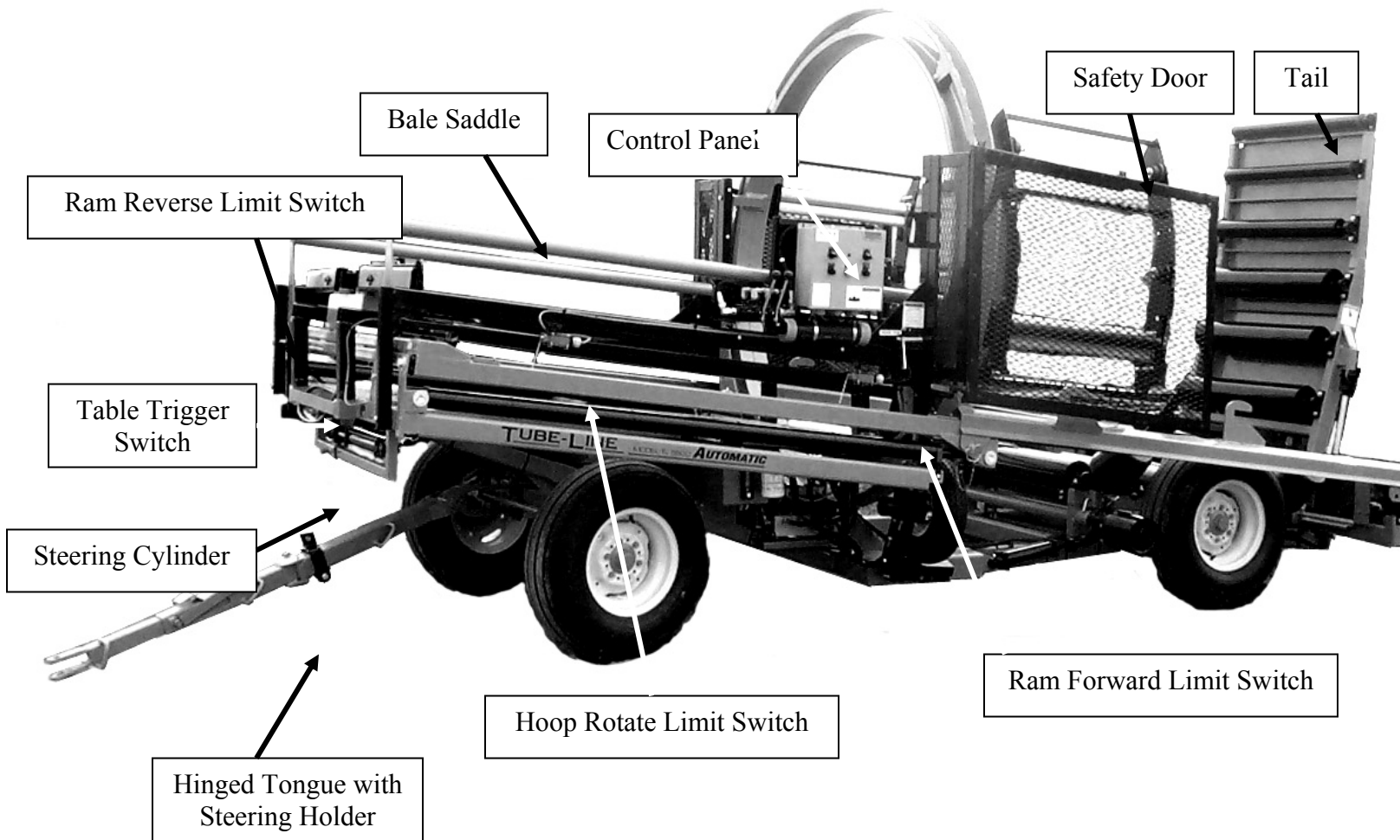


Caution

STOP ENGINE !!

Before Attempting to change or replace Plastic Film roll

Before Boosting the battery make sure the “auto/man” switch is on “**man**” as it is possible to blow the trace off the circuit board on the remote receiver if the switch is turned to “auto” and will **VOID the Warranty.**

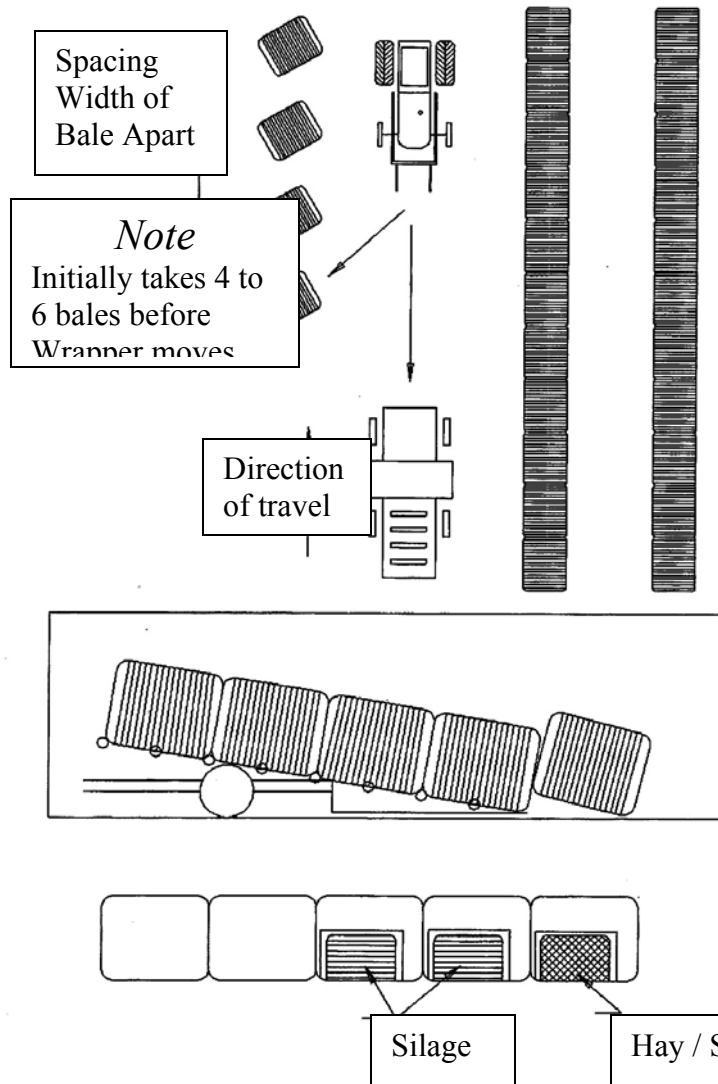


A decorative scroll graphic with a light gray background and a dark gray border. The scroll is unrolled, showing the text inside. The top and bottom edges of the scroll are rounded. The text is centered within the scroll.

Warranty and Limitation Of Liability

All Equipment is sold subject to mutual agreement that it is Warranted by the company to be free from defects of material and workmanship. But the company shall not be liable for special, indirect or consequential, damages of any kind under this contract or otherwise. The company's liability shall be limited exclusively to replacing or repairing without charge, at it's factory or elsewhere, at it's discretion. Any material, or workmanship defects which become apparent within one year from the date on which the equipment was purchased, and the company shall have no liability for damages of any kind. The buyer by the acceptance of the equipment will assume all

Tube Line Set up



If bales are brought to the site before wrapping, arrange them to allow easy access to bales and allow Wrapper plenty of room to move.

The First bale tips as the line forms and may be picked up when the row is well started.

A bale of hay or straw is added to protect the end of the line.

Operating the Model TL5500

Big Bale Silage

The objective of big bale silage is to provide high quality forage using a minimum of equipment. To do this, crop must be cut at the correct stage of maturity, wilted, baled tightly and wrapped air tight using a good quality stretch wrap.

The Tube-Line wrapper makes timely harvest possible by reducing the dependence on the weather. It is much easier to get weather to wilt silage than to make dry hay. This also extends the working day, as forage is at the correct moisture to bale earlier and later in the day.

Bales

Well-shaped firm bales are necessary for successful wrapping. Bales are best wrapped as soon as possible after baling. If bales are left unwrapped, they will sag and lose shape. Heating will start soon after baling and protein quality will be lost. It is desirable to wrap within four hours. In an emergency such as rain, bales can be left 12 to 16 hours.

Moisture

Successful silage can be made over a wide moisture range. In general, 40 to 50% moisture is satisfactory for dairy cows. Some beef farmers prefer 60 to 70% moisture as it limits intake. A good rule of thumb is to dry “Half-way to hay”. Drier silage gives you:

1. lighter bales to handle
2. more desirable fermentation with less odour
3. less freezing in the winter
4. higher dry matter intake

Wrapping Site

Select a site which will allow room to make an adequate bale row length. The Tube-Line is a very fast wrapper, but requires time to set up and move to a new line. There should be space for at least 50 or more bales in a row.

Select a site that is accessible in winter conditions and does not flood in the spring.

A firm surface is necessary for the successful operation of the Tube-Line. Avoid soft ground, as the wrapper will not move forward smoothly if it is sinking into the ground. Wrap on the level or up a slight grade.

A site that is free from grass and debris will be less likely to attract rodents that can damage the plastic.

Bale Size

ROUND BALES The Model TL5500 will wrap bales of up to 5½' wide and up to 5' high. It will wrap all sizes smaller than these dimensions as well.

Remember when making big bale silage, the bales will be heavier than dry hay. This puts extra strain on loading and transporting equipment. Also, bales will be heavier when feeding out and may have to be moved on wet ground or snow. As a result, most operators reduce silage bale diameters to 4-4½', even though the wrapper and baler will handle larger bales.

Square Bales

The Model TL5500 will wrap most sizes of square bales. The length should be reduced to 5'. This is to allow the bales to be placed on the bale receiver. This may also be the maximum length advisable to handle big square bales of silage.

Bales which are approximately 4' wide and 2' high can be stacked two high for wrapping.

Bales which are approximately 3' wide and 3' high do not stack well. These may be wrapped in a single tier of bales.

Big square bales must be wrapped manually, or with the remote control kit. When stacking two high, the first bale would activate the automatic device prior to loading the second bale.

Extra care must be taken to ensure that extra film is applied at the bale joints if the bales are uneven.

Recommended Operating Procedure

We suggest the following method of operating the TL5500 Tube-Line Wrapper.

- Park the wrapper where you want the end of the row to be, facing in the appropriate direction.
- Fold front section of tongue and insert bracket in hydraulic steering pin.
- Start the engine
- Undo tail tiebar hairpin and lay bar over rear axle and put hairpin back into place to prevent loss.

Caution: To Prevent Injury—Prior to lowering wrapper tail section, be sure to check that all bystanders are standing clear.

- Lower the tail section using the manual operating valve

Installation Of Plastic

Plastic from factory has a natural *tack* on inside. In event of plastic being stored for an extended period of time, the tack may migrate to opposite side. To test for *tacky* side, fold plastic inside to inside and pull apart. Fold opposite (top to top) to determine tackier side.

The roll of plastic should be installed with *tack* on inside of the plastic film next to the bale of silage. The plastic then passes over the slave roller and is threaded through the two metal rollers on the tensioner as shown in the diagram.

The two metal stretcher rollers rotate at different speeds. This causes the plastic to be stretched. It is very important that the plastic goes over the slow roller first and the faster roller second.

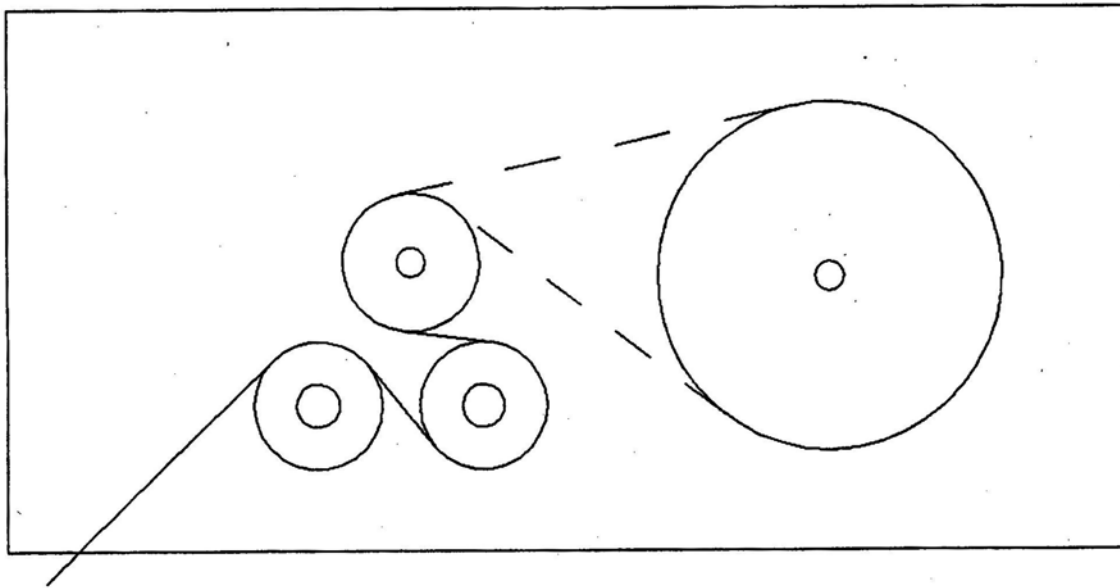
If there is any question on which is the faster roller:

1. Place a pen mark on each roller and rotate one roller one turn.
2. Check the location of the mark on the other roller.

If it has advanced further, then it is the fast roller.

If it has advanced less, then it is the slow roller.

When the plastic is installed correctly, it should stretch tight on the bale to form a smooth tube.



Trouble Shooting Plastic Installation

1. Wrinkles in the plastic with seams between layers easily visible.
Check to determine if plastic is properly routed through the metal tensioner rollers.
2. Plastic tears between tensioner and bale.

Reel holders not turning freely. Lubricate and turn manually until free.

Slave roller not turning freely. Lubricate and turn manually until free.

Poor quality plastic. Use a brand with a good tear resistance.

Tack build-up on rollers. Particularly in hot weather, the tack, which sticks the layers of plastic together, can build up on the rollers. Clean the tensioner with warm soapy water.

Plastic roll is too hot. In very hot weather the plastic can become soft if left in the sun for long periods of time. In these conditions, the spare rolls should be kept in the shade. After installation on the machine the roll can be parked under the row of wrapped bale if not used for an extended period of time. In extreme heat, the top position roll on twin tensioner machines can be covered to provide shade when not in use.

Roll of plastic catching on the bottom of the bale. If bales are misshapen, the roll of plastic may drag on the bottom of the bale, causing the plastic to break.

If wrapper is equipped with electric automation:

Switch the control to manual.

Caution: Prior to rotating hoop, check to be sure guards are in place and all persons are clear of hoop.

-Test the hydraulics by rotating the hoop and moving the bale ram back and forth.

-Install the roll of plastic according to Plastic Installation diagram.

Caution: Close guards after installing plastic to avoid injury.

Caution: Round bales are heavy and silage bales are even heavier. Use only authorized bale-handling equipment. Keep bales low when turning loader.

Bale Guide Bars

The bale guide bars are designed to align the bales as the bales are set on the wrapper. These bars should be adjusted to set firmly against the bale when the bale is placed on the wrapper. If bars are too far apart, the bales will not align and the plastic joints will not be tight.

If the guide bars are too close, the bales will not set down until they have entered the wrapping hoop. This will cause the row of bales to have a 'saw-toothed' appearance. Again, the seal between the bales will not be as tight.

Adjust the guide bars when a change is made in bale size.

To Wrap Bales with **Model TL5500A** (automatic)

Open the bale pusher and place the first bale on the table. Push this bale and two other bales through the hoop. This gives a stable end for the line. These bales can be picked up and placed on the wrapper later when the line is formed and wrapped later. Alternatively a bale of straw can be used to form a tight seal in addition to the plastic sheet or bag.

-Pull about 4' of plastic through each plastic stretcher and tie it under the twine on the third bale. Or tie it to the bracket at control panel (see picture on page 14).

-Place a single bale bag or a sheet of plastic on the next bale to form the end seal.

-With control panel switch "auto/man" set to "man" turn "forward" switch to advance bale without the plastic stretcher applying plastic.

-As the bale is pushed through the hoop, start the plastic dispenser rotating to apply plastic by pushing in the "Rotate" button.

-When the ram hits the switch at the end of stroke forward motion on cylinder will stop, "this switch can be moved on the slider arm to accommodate your needs. More about this later."

-With switch set to "man", the switch buttons have to be turned and/or pushed and held, when you let them go the function will stop.

-Turning, reverse switch will retract the ram and open the bale pusher to accommodate the next bale.

-After you have wrapped a few bales in this way, switch "auto/man" switch to "auto" and place bale onto bale table. As bale depresses the table trigger the ram will start automatically. Adjust front slider switch to start the wrap cycle where you prefer.



-To stop cycle after the cycle has started in the automatic mode turn **auto/man** switch to "man". (or if you have the optional remote kit, push **stop** switch to stop the wrap cycle.) After you have rectified the problem finish the rest of cycle in the "man" mode and then return to "auto" mode.

-For safety reasons safety switches are installed in doors. In “auto” the safety doors must be closed for machine to function properly.

Steering

The wrapper is equipped with hydraulic steering. The purpose of this is to keep the wrapper operating in a straight line or direct the wrapper around obstacles. If the ground is uneven or the wrapper is operated on a side hill then it can drift out of line. The loader operator is usually able to detect if the wrapper is not moving in the desired direction. Also the steering can be used to go around obstacles in the wrapping path. Do not make sharp turns as this prevents the bales from being tightly packed together. With the automatic wrapper the steering speed can be adjusted with the needle valve at the manifold block.

-When starting the row, align the wrapper in the desired direction for the row and ensure the steering is in the center position.

With - Optional Remote Control-

With optional remote control the machine can be controlled with the hand held unit. The table trigger switch should be unplugged. Then the control panel, "man/auto" switch on "auto", bale can be placed on table without cycle starting. After the bale has been placed, and you want the cycle to start, press the start button on the hand unit. The machine will now go through the complete wrap cycle and stop at the end of the cycle. Two of the remote buttons are used to control right and left steering. The fourth button is the remote cycle stop.

-**Notice-** The on/off switch on the control panel will turn off the electric current to the control panel and will also Stop the Engine.

-Slider Switches-

Adjust the front slider switch to start the rotate motor when the bales have made contact. By adjusting the slider switch at the rear of the slider bar, which will stop the ram and wrap motor, and reverse the ram cylinders. Adjust it so that the junction of the 2 bales are in the wrap chamber. It is possible to adjust the front slider switch so the wrap will start just before the bales start moving through the wrap chamber, thereby putting extra plastic on the joint of bale.

The brake is operated by using the brake hydraulic valve. Moving hydraulic lever will cause oil pressure to apply brakes on the rear wheel. Increase pressure to the point where the bales are packed firmly together. Close brake ball valve to maintain positive pressure on brakes.

Open ball valve and **RELEASE BRAKES** WHEN THE ROW IS FINISHED AND PRIOR TO TRANSPORTING THE WRAPPER!!

To Wrap Bales with **Model TL5500** (with the manual hydraulics)

Open the bale pusher and place the first bale on the table. Push this bale and two other bales through the hoop. This gives a stable end for the line. These bales can be picked up and placed on the wrapper later when the line is formed and wrapped later. Alternatively a bale of straw can be used to form a tight seal in addition to the plastic sheet or bag.

- Pull about 4' of plastic through each plastic stretcher and tie it under the twine on the third bale. Or tie it to the plastic loop bracket at the control panel, see picture on page 14.

- Place a single bale bag or a sheet of plastic on the next bale to form the end seal.

- Set the selector valve to 'bale only'. This will allow the bale to be moved without the plastic stretcher applying plastic.

- Place this bale on the table. Push it to the hoop.

- As the bale is pushed through the hoop, start the plastic dispenser rotating to apply plastic by operating the 'wrap' valve.

- The bale should be advanced 4" for each rotation of the plastic dispenser. This will apply 4 to 5 layers of plastic.

- Until the operator is familiar with the operation of the wrapper, it is best to advance the bale about 4", do a wrap of plastic, advance the bale, do a wrap, etc. When the operator is familiar with the machine, set the flow valve so that the correct amount of plastic is applied as the bale is moved forward.

- Set the selector valve to 'both'. This will start the plastic when the bale is being pushed.

If there is a space between the bale after it is loaded and the previous bale,

- Set selector valve to 'Cylinder Only'

- Advance the bale until it contacts the previous bale

- Then move the selector valve to 'Both'

If the bales do not line up then put on extra wrap at junction of the bales to ensure a good seal.

- Careful application of an adequate amount of plastic is critical to give a good quality product. Careless application of plastic will result in losses.

Continually watch the row for dark "window" indicating that not enough plastic has been applied.

Use Of The Operating Brake

The Model TL5500 is equipped with an operating brake. It is essential that bales be packed tightly together to ensure that the silage is sealed and will keep well. If the bales are not securely packed end to end, air can enter between the bales and cause spoilage.

It is best to choose a wrapping site where the wrapper operates on the flat or slightly up hill. If the ground is very hard and causes very little rolling resistance, or the wrapper must be operated down hill, then the brake must be used to pack bales.

The brake is operated by using the brake hydraulic valve. Moving hydraulic lever will cause oil pressure to apply brakes on the rear wheel. Increase pressure to the point where the bales are packed firmly together. Close brake ball valve to maintain positive pressure on brakes.

Open ball valve and RELEASE BRAKES WHEN THE ROW IS FINISHED AND PRIOR TO TRANSPORTING THE WRAPPER.

Completing The Row

- When the desired row length has been reached, place a bale bag on the bale to seal the end.
- Continue to apply stretch wrap until the bag is completely wrapped.

Pushing off the bales from wrapper

- The automatic wrapper will have to be switched to manual position for pushing bale off.



Caution: The use of automatic setting when pushing off bales will increase the risk of injury.

- To push off the bales

Open the bale pusher

- Remove the lynch pins from the front of push plate arms, unfold the arms to extend the push plate.
- Remove the lynch pins from the top of arms and swing the X bars onto the pins, replace the lynch pins to secure the X bar.

#1 Push bale through wrapper by using the forward button and wrap button with automatic machine or with manual machine with lever in “both” mode until you have enough plastic on bale.

Continue pushing bale through wrap chamber until you have reached the end of stroke.

#2 Retract the bale pusher.

#3 Refold the push plate arms and secure with lynch pins at front of arms.

#4 Pull the pins out at the back end of ram guides and insert them through the holes in bracket at rod end of ram cylinders.

#5 Open the safety doors, Remove 2 x 3 tube from engine side of wrapper and lay across the top of pushoff channel.

#6 Close pusher a second time to push bales off the wrapper.

#7 Open the pusher and move 2 x 3 tube to the next set of hooks and repeat until the bales are pushed off.

#8 Open the bale pusher, store 2 x 3 tube in bracket with lock pin.

#9 Remove push channel pins at rod end of ram cylinders and reinsert them at the back end of ram guides.

#10 Fold up tail end of roller table using the “tail” valve and secure with tie bar.

#11 Undo steering, unfold tongue and insert lockpin.

#12 Check to make sure the brakes are released before driving away.



CAUTION:

Before moving the wrapper any distance close fuel valve at the engine. As the machine is towed it will bounce and shake, and the carburetor float will let too much fuel into the engine and washing the cylinder walls down and ending up in the engine oil.

DO NOT TOW BALE WRAPPER AT SPEEDS OVER 35KPH.

Daily Maintenance:

Lubricate all grease points

Apply liberal amounts of grease to the pusher slides daily.

NOTE: PLASTIC STRETCHER IS TO BE GREASED ONLY ONCE PER SEASON!

When wrapping in hot weather there can be a build-up of adhesive on the plastic stretcher. This can cause the plastic to break. If there is a build-up of adhesive. Wash stretcher with soap and water.

Wrapping Straw

The TL5500 wrapper can be used to weather protect straw.

Only two layers of plastic are necessary.

If straw is dry, it may be wrapped continuously without spaces. Straw that has some moisture is best wrapped with spaces in the plastic.

After wrapping:

After wrapping inspect rows of silage regularly to ensure there is no damage occurring from birds, rodents or livestock.

Feeding Out:

With the TL5500, bales can be picked by a loader without cutting the plastic. The plastic breaks away between bales and can be removed from the side of the bales before dropping the bales in the feeder.

Tube-Line wrapped bales do not spoil as the line is fed. Unlike long bags of bales, the stretch wrap prevents air from moving past the bales and causing the bales at the far end to heat. As the next bale is undisturbed it will not spoil for one to two days in warm weather and for at least a week in cooler weather.

Disposal Of Plastic

Users of bale wrappers are encouraged to collect all plastic to prevent it from becoming an environmental problem. If there is a high temperature incinerator in your area, the plastic can be safely burned without producing hazardous by-products.

Plastic, although bulky, is inert in a landfill and will not pollute ground water.

Manufacturers are making serious efforts to economically recycle silage plastic. Use a recycling service when available, collect and dispose all plastic. Unsightly used silage film will encourage complaints.

The design of Tube-Line Bale Wrappers is protected under Canadian Patent 1285862 and USA Patent 4793124.

Edited 10/25/2002 for Model year 2003

TUBE-LINE 5500

Hydraulic Pump

Prince Model # SP20A11A9HR
.677 cu in/rev
side ports inlet port 1 1/16-12 O-ring
 outlet port 7/8-14 O-ring
mounting 2 bolt 'A' flange
shaft 5/8 keyed
rotation clockwise

Manual Valve

Prince model RD5300RD532CCCAA5A4B1
Tandem center
Spring center to neutral from work position
Work ports blocked in neutral
Prince model LS3000 LS-3010-01
4 way 3 position
pressure release detent spring center to neutral
3/4 NPTF In\Out ports
1/2 NPTF Work ports

Electric Hydraulic Valve

Continental tandem centre 12 volt DC VS12MBLGB75
Continental single centre 12 volt DC VS12M1AGB75L
Prince 2 spool monoblock RD522CCAA5A4B1
Prince Power Beyond Plug #8 SAE 66028001

Hydraulic Motor

Charr Lynn 101-1004
1" keyed straight shaft
1/2" pipe ports
9.7 cu in/rev displacement
4 bolt flange

Hydraulic Filter 10 micron

Stauff – SF6520
Gresen – F22001
Fram – P1653-A
Fleetguard – HF6510
Cross – 1A9021

Hydraulic Oil

SAE # 10 Hydraulic Oil
10 US gal

Notes

Electric Solenoid valves can be manually operated by pushing a small punch into the end of spool and holding it in.



Caution Stay Away From Hoop When Engine Is Running

Inside of Control Panel , control relays are numbered CR1 to CR5 from left to right. Relay CR1 is wired to table trigger. CR1 will activate solenoid valve to extend ram cylinder. CR2 is wired to switch at the front slider, when ram is extended to this switch CR2 will close, energizing the wrap motor valve. Ram cylinder will extend and wrap motor will turn until ram comes in contact with slider switch at rear, then CR1 and CR2 will turn off and CR3 will turn on. Wrap motor will stop and ram cylinder will retract until ram cylinder trips limit switch at front end of table. All controls will then turn off.

Testing can be done by pushing trigger plate and wait until machine goes through cycle, or you can push small square button on the front of relay 1 and let machine go through cycle.

When control relays are activated a small light goes on inside the relay.

When running machine through the cycle and wrapper motor or the cylinders do not work, check flowcontrol valve to see if flow is going to both motor and cylinder. Engine is stopped by grounding ignition, in case of ignition failure make sure that stop switch wire is not grounded to frame and engine switch is not in stop position.

Steering is controlled by switch right/left on control panel through CR4 and CR5 activating coil A or B on steering solenoid valve.

Tube-Line 5500

Manual Hydraulic Sequence of Operation

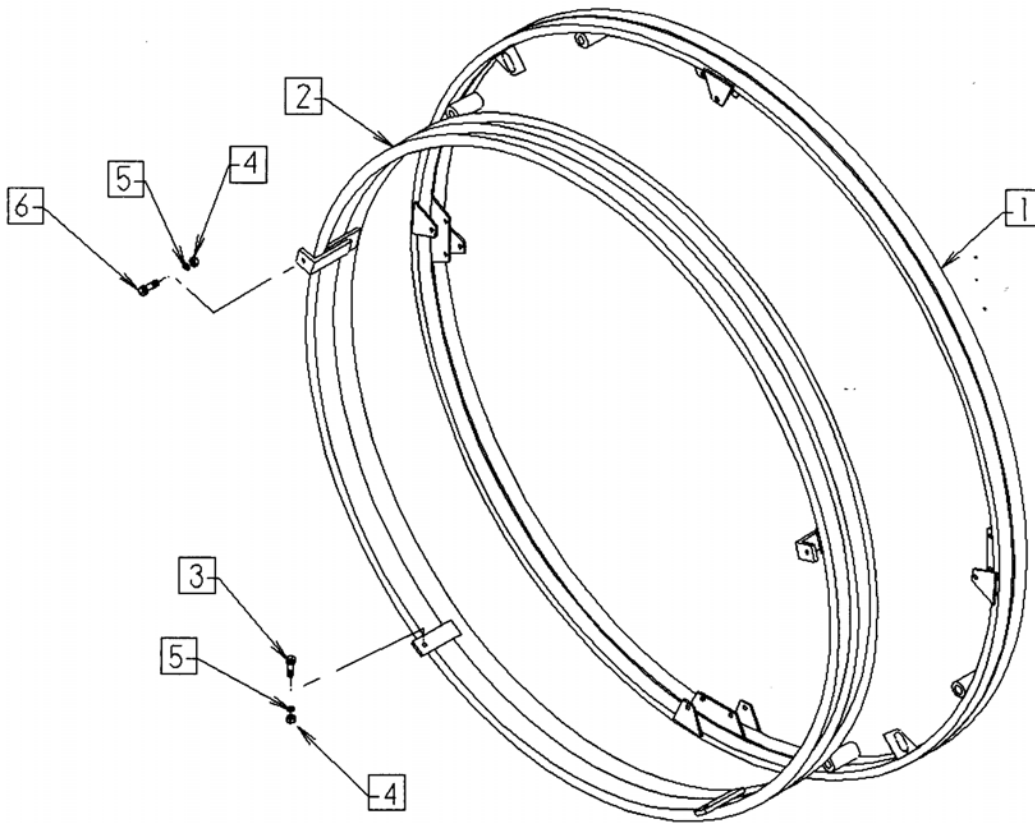
- 1 With valves in neutral position, engine running hydraulic fluid is pumped through valve bank and returned to reservoir.
- 2 Brakes, tail and steering are standard hydraulic cylinder operation.
- 3 Wrap cycle – push wrap valve in, detent will hold valve in position, fluid flows from valve through flowcontrol and is split into 2 circuits, one circuit will go to ram cylinders and the other will go to hydraulic motor. These circuits are proportioned with the lever on flowcontrol valve. With the selector valve handle in “Both” position flow will go to cylinder and motor. By changing flowcontrol handle, the cylinders will speed up or slow down accordingly. At the same time motor will change speed inversely to cylinder ie. when cylinder slows down motor will speed up.
- 4 Selector valve is used to bleed either cylinder or motor flow back to tank, or block both circuits causing both cylinder and motor to operate. ie. With handle in wrap only position the fluid that would normally go to the cylinder will flow back to tank. With handle in ram only position motor fluid will go to tank.
- 5 Wrap cycle – pull wrap valve out, detent will hold valve in position, fluid will flow from valve port causing cylinder to retract. Fluid from other end of cylinder will return through check valve, at flowcontrol back through valve stack and to tank.
- 6 Check valve at motor lets motor freewheel in one direction without cavitating. Relief valve at motor return acts as a restrictor valve to keep motor from turning when ram cylinder is retracting.

Tube-Line 5500

Electric Hydraulic Sequence of operation

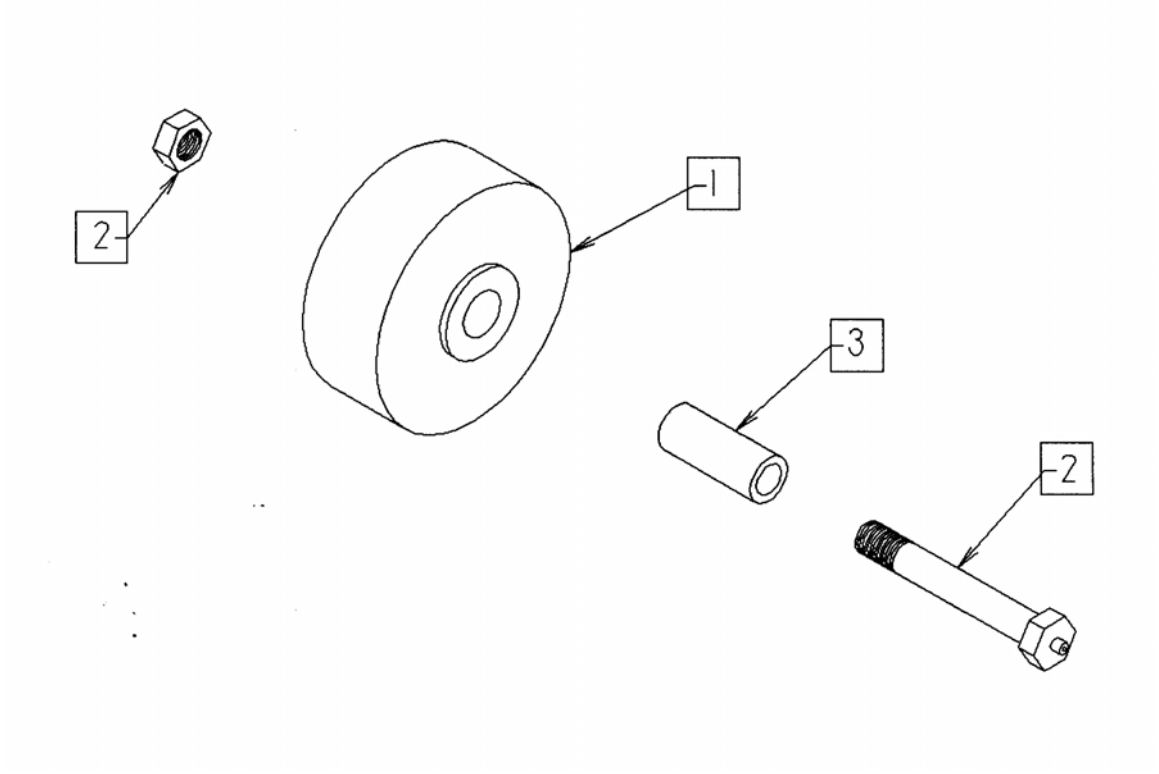
- 1 With valves in neutral position, control panel on/off switch in off position, engine running fluid is pumped through valve stack and returned to reservoir.
- 2 Brakes and tail are standard hydraulic cylinder operation.
- 3 Wrap cycle fluid flows from power beyond port on 2 spool valve to flowcontrol, and is split into 2 circuits one circuit goes to double solenoid valve for ram cylinder, the other circuit goes to single solenoid valve for hydraulic motor. By moving flowcontrol handle more or less fluid will flow to cylinder or motor ie. as more fluid flows to cylinder less fluid will flow to motor and vise-versa.
- 4 Electric control panel- "Man-Auto" switch turned to "Man". Turn "On/Off" switch to On, then red LED will light up indicating 12V power is at control circuits, with engine running. Turn "Forward" switch in to energize solenoid A on double solenoid valve. Ram cylinder will extend. Turn "Reverse" switch to energize solenoid B on same valve. Ram cylinder will retract. Push Rotate button in and hydraulic motor will turn. "For/Rev and Push" buttons have to be held to operate, by releasing them action will stop. Engine throttle has linkage to slow engine down when ram is all the way to the front. Spring on linkage will speed engine up as soon as Ram cylinder starts to extend.
- 5 When "Man/Auto" switch is turned to Auto, "For/Rev and Rotate" switches no longer function. Depress trigger switch located on bale table, Ram hydraulic valve is energized. The ram cylinder will extend and engine will speed up. When ram extends to front slider switch, this switch will energize the single solenoid valve and turning the wrap motor. When ram is extended to the limit switch at the end of stroke, single solenoid valve and double solenoid valve "A" will turn off. Solenoid B will energize causing ram cylinder to retract until it trips limit switch at the front end of bale table, solenoid "B" will turn off, the ram cylinder will stop and engine will idle down.
- 6 Steering is done by steering switch, right/left activating steering double solenoid valve A or B. This valve will work in either manual or automatic mode.

Hoop



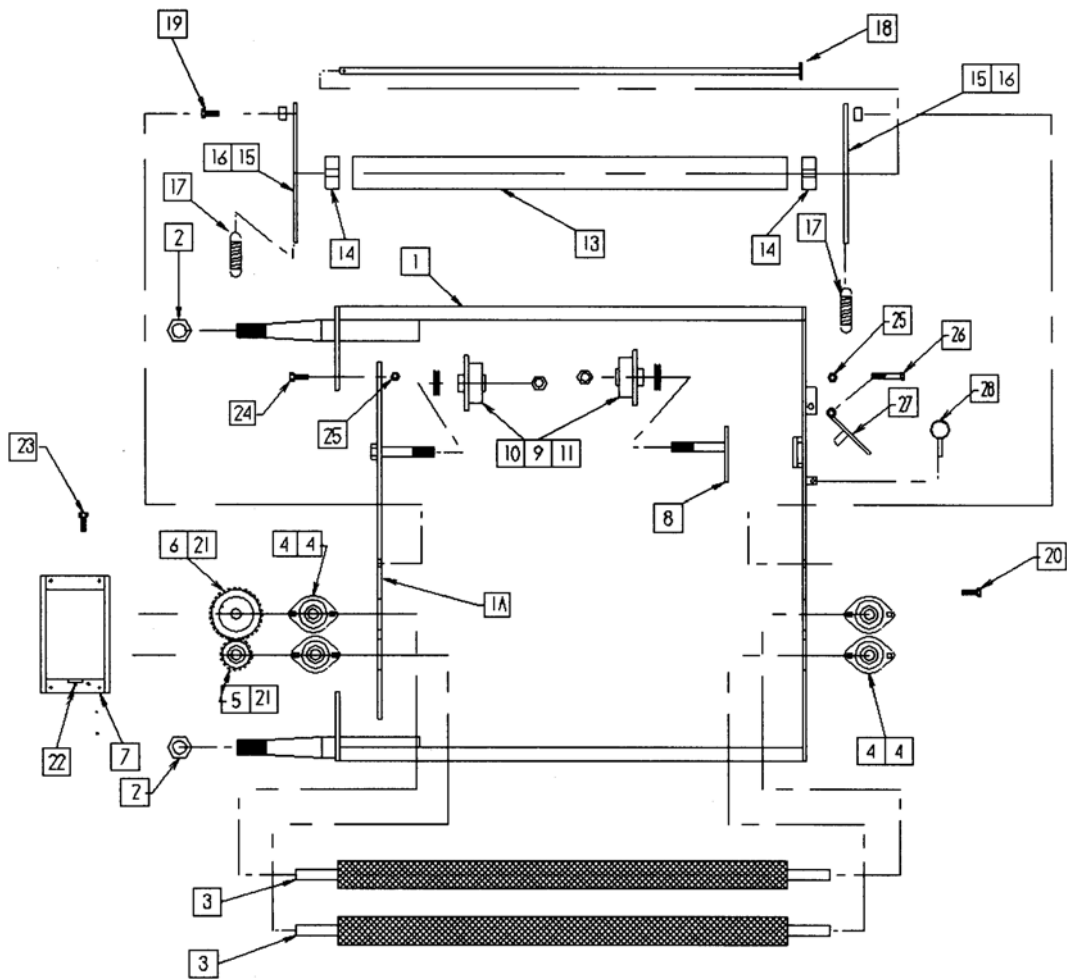
<i>Item #</i>	Description
1	Outer Ring
2	Inner Ring
3	5/8 x 2 Bolt
4	5/8 Nut
5	5/8 Lockwasher
6	5/8 x 3 1/2 Bolt

Hoop Wheels



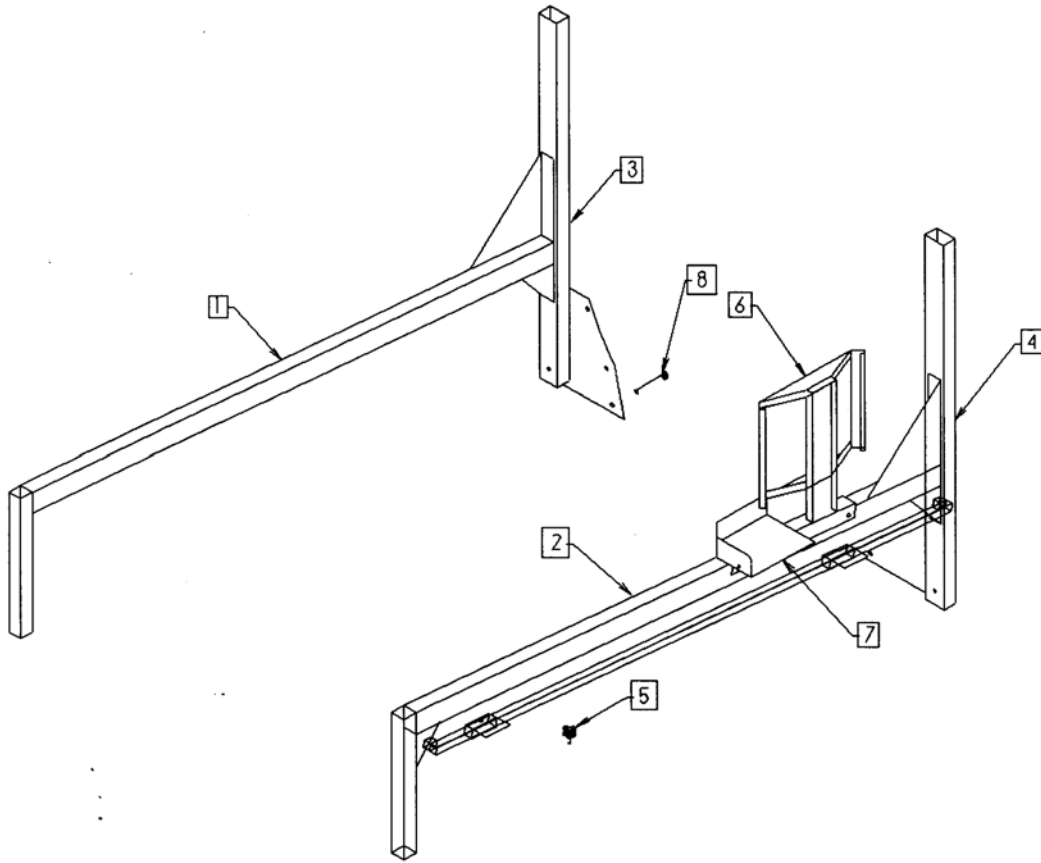
<i>Item #</i>	<i>Description</i>
1	4 inch Wheel
2	Axle Bolt / Locknut
3	Spanner

Plastic Wrap Carrier



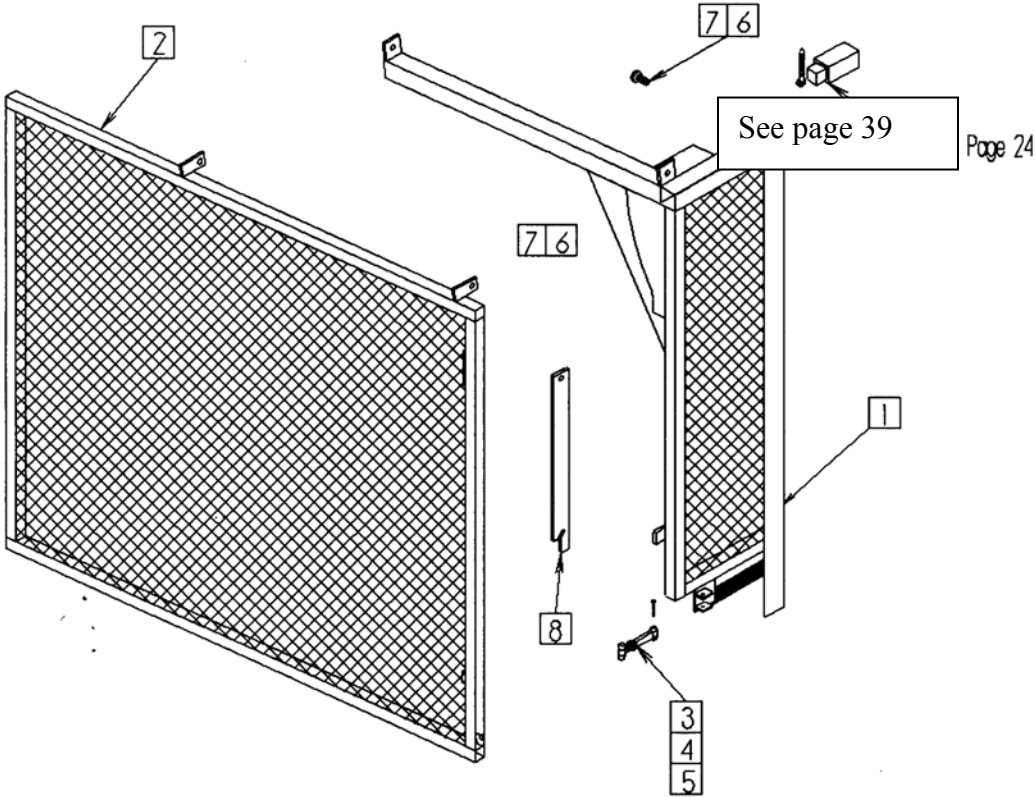
Item #	Description	Item #	Description
1	Main Wrap Bracket	15	ABS Bracket
1A	Main Wrap Side Insert	16	Spacer
2	1-14 UNF Casselnut	17	Spring
3	Tensioner Roller	18	Axle Shaft
4	3/4 inch Bearing	19	1/2 x 2 Bolt
5	Small Gear	20	5/16 Carriage Bolt
6	Large Gear	21	3/16 Keystock
7	Gear Cover	22	Grease Fitting
8	Spool Holder	23	10-24 x 3/4 Bolt
9	Plastic Wrap Spool	24	3/8 x 1 #5 Bolt
10	5/8 Flat Washer	25	3/8 Locknut
11	5/8 Nylocknut	26	3/8 x 2 1/2 Bolt
13	ABS Pipe	27	Latch
14	HMWPVC Bearing	28	3/16 Linch Pin

Hoop Brace Assembly



<i>Item #</i>	<i>Description</i>
1	Right Hand Hoop Brace
2	Left Hand Hoop Brace
3	Right Hand Hoop Post
4	Left Hand Hoop Post
5	Switch Adjuster Screw
6	Automatic Control Panel Mount
7	Manual Control Panel Mount
8	1/2 x 4 1/2 Bolt

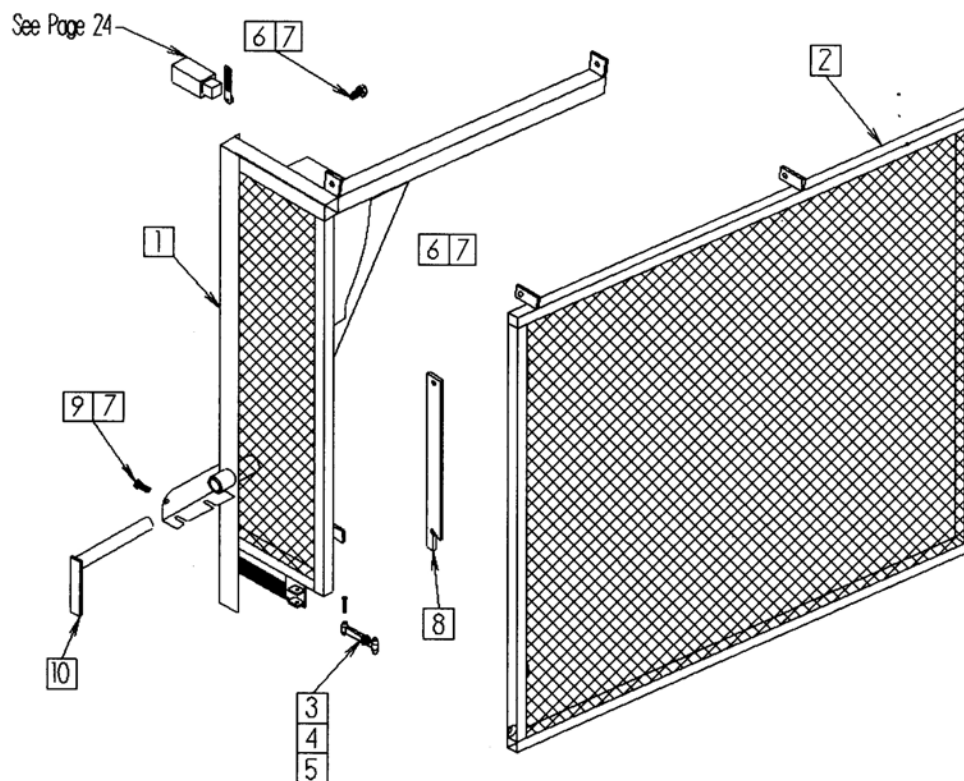
Right Hand Safety Guard



<i>Item #</i>	<i>Description</i>
1	Safety Guard Bracket
2	Safety Door
3	Rubber Latch
4	Latch Pin
5	Cotter Pin
6	3/8 x 1 1/4 Hinge Bolt
7	3/8 Locknut
8	Door Stay

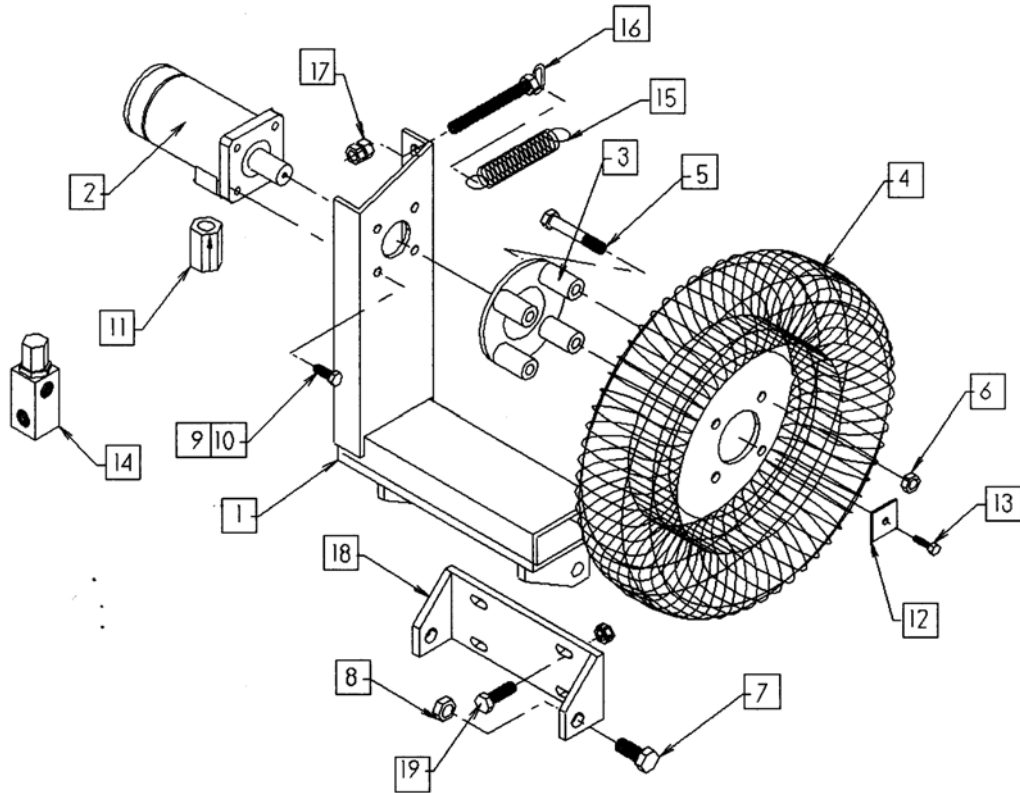
Left Hand Safety Guard

See page 39



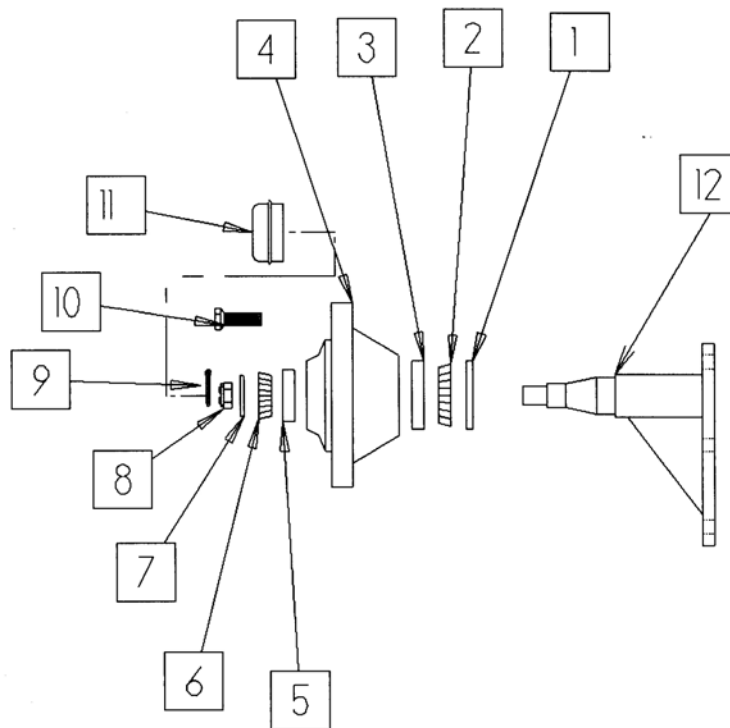
<i>Item #</i>	<i>Description</i>
1	Safety Guard Bracket Left Side
2	Safety Door Left Side
3	Rubber Latch
4	Latch Pin
5	Cotter Pin
6	3/8 x 1 1/4 Hinge Bolt
7	3/8 Locknut
8	Door Stay
9	3/8 x 1 Bolt
10	Hoop Lock Pin

Hoop Drive Wheel



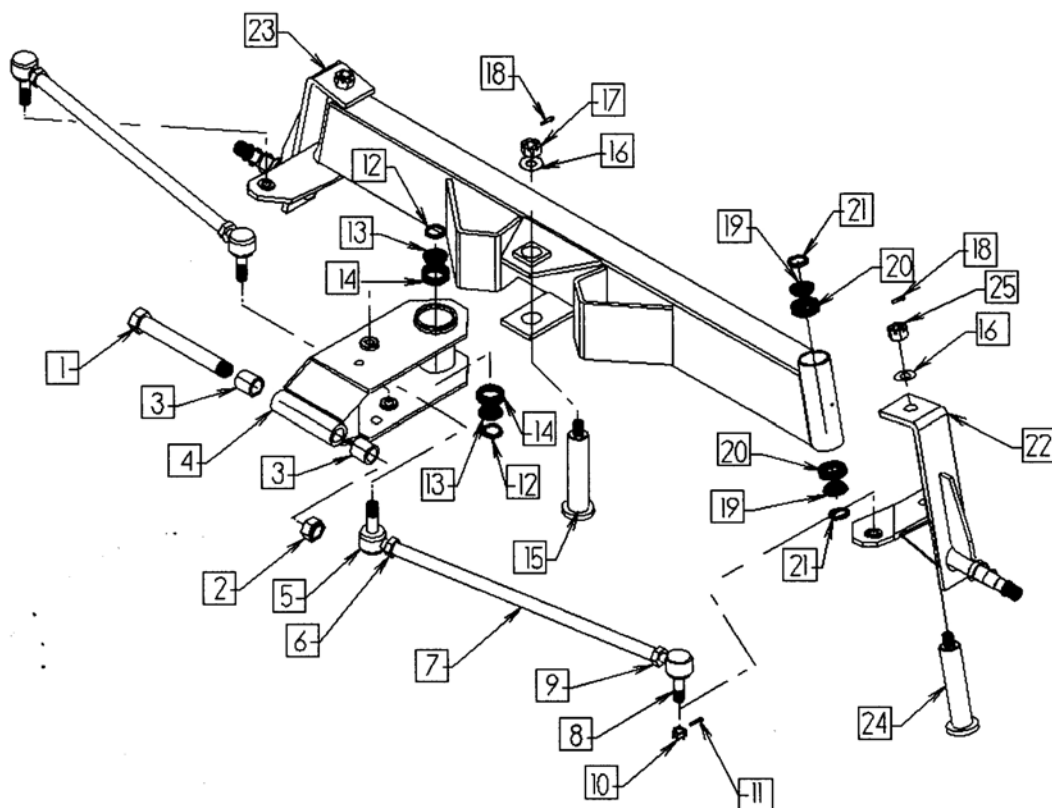
<i>Item #</i>	<i>Description</i>
1	Drive Wheel Base
2	Hydraulic Motor
3	Motor Hub
4	Drive Wheel
5	1/2 x 3 UNF Bolt
6	1/2 Wheel Nut
7	5/8 x 1 1/2 Bolt
8	5/8 Locknut
9	3/8 x 3/4 Bolt
10	3/8 Lockwasher
11	Checkvalve (manual only)
12	Wheel Washer
13	1/4 x 1 Bolt c/w Lockwasher
14	Relief Valve (manual only)
15	Wheel Tensioner Spring
16	Spring Tensioner Bolt
17	1/2 Nuts
18	Drive Wheel Base Bracket
19	3/8 x 1 1/2 Bolt c/w nut, washer & lockwasher

Axle / Spindle / Hub



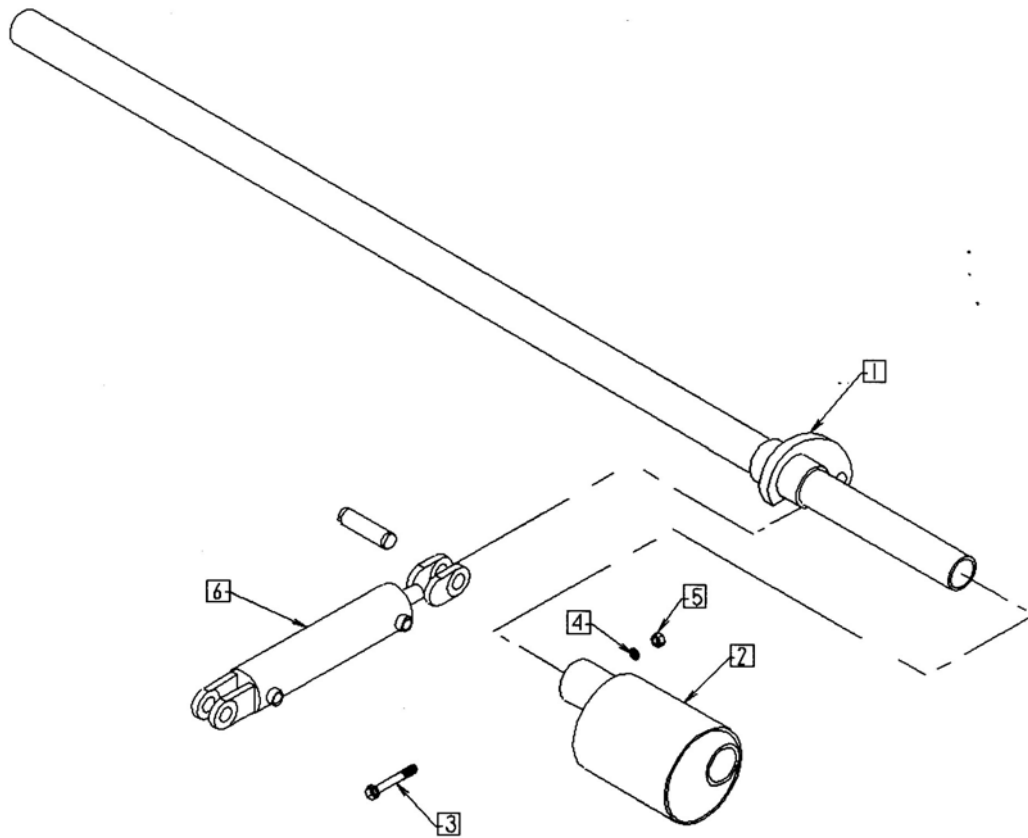
<i>Item #</i>	<i>Description</i>
1	Seal
2	Inner Bearing
3	Inner Bearing Race
4	Hub
5	Outer Bearing Race
6	Outer Bearing
7	Flat Washer
8	Wheel Nut
9	Cotter Pin
10	Wheel Stud
11	Dust Cap
12	Spindle

Front Axle



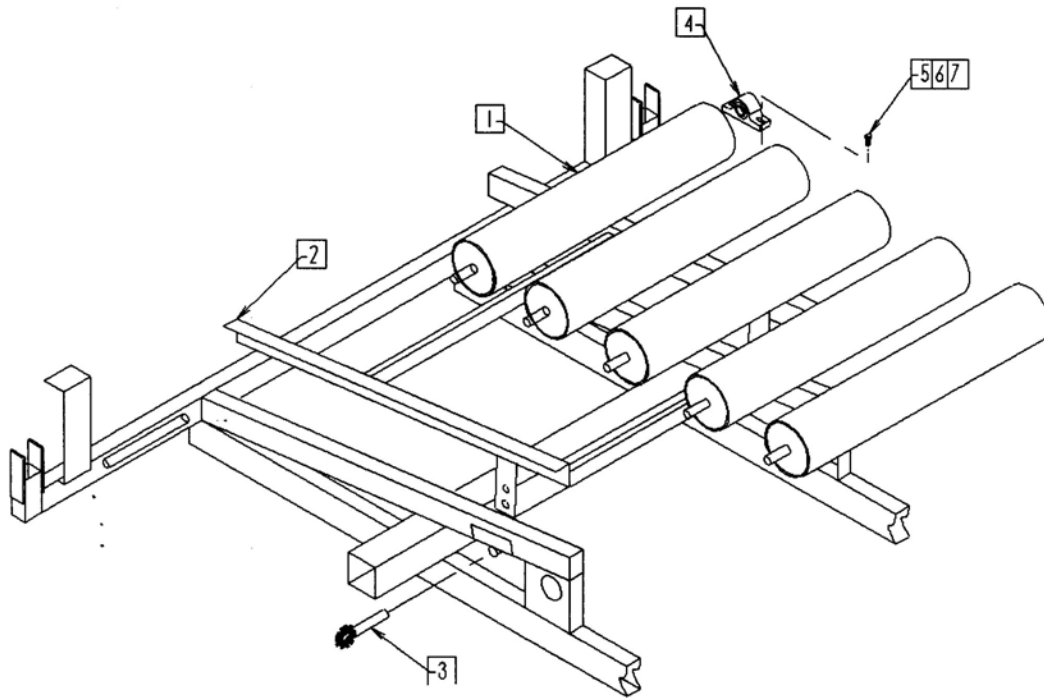
<i>Item #</i>	<i>Description</i>	<i>Item #</i>	<i>Description</i>
1	7/8 x 8 Bolt	13	Tongue Bracket Timkin Bearing
2	7/8 Locknut	14	Tongue Bracket Timkin Cup
3	Tongue Bracket Bushing	15	Tongue Bracket Pin
4	Tongue Bracket Assy	16	13/16 Flatwasher
5	Tie Rod End Right Thread	17	Tongue Bracket Nut
6	¾ Jam Nut (NF RH)	18	3/16 x 2 Cotter Pin
7	Tie Rod	19	Spindle Bearing Timkin Cone
8	Tie Rod End Left Thread	20	Spindle Bearing Timkin Cup
9	¾ Jam Nut (NF LH)	21	Spindle Bearing Seal
10	9/16 NF Slotted Hex Nut	22	Left Side Spindle Assy
11	1/8 Cotter Pin	23	Right Side Spindle Assy
12	Tongue Bracket Seal	24	Spindle Pin

Brakes



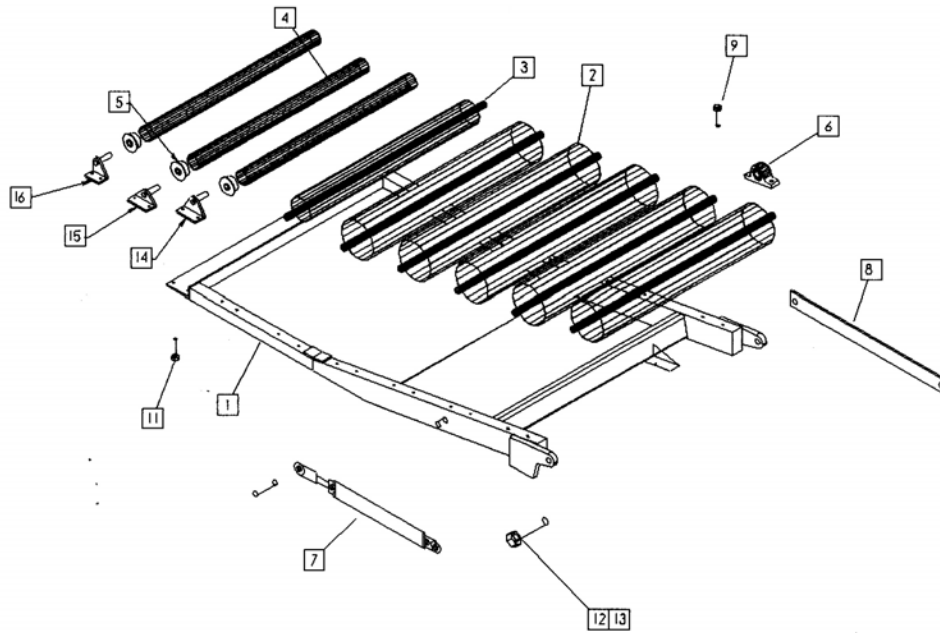
<i>Item #</i>	Description
1	Rocker Tube
2	Brake Eccentric
3	½ x3 ½ Bolt
4	Lockwasher
5	½ Nut
6	2 ½ x 8 Hydraulic Cylinder

Rear Roller



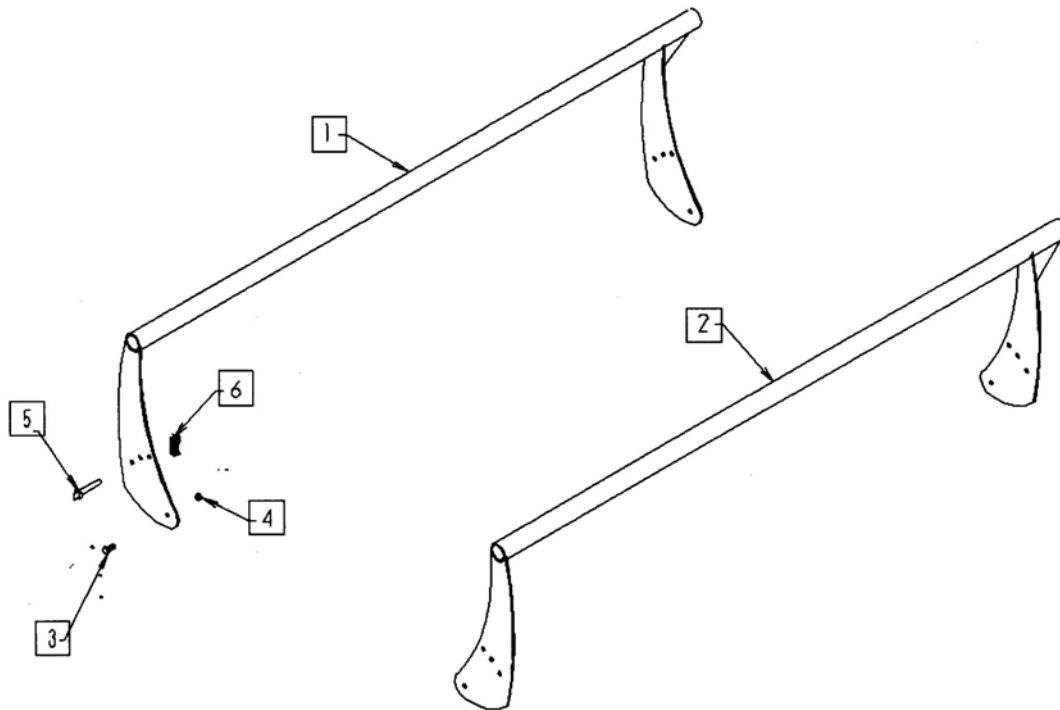
<i>Item #</i>	<i>Description</i>
1	Large Roller
2	Riser Frame
3	Riser Lock Pin
4	1" Bearing
5	3/8 x 1 1/2 Bolt
6	3/8 Lockwasher
7	3/8 Flatwasher

Tail



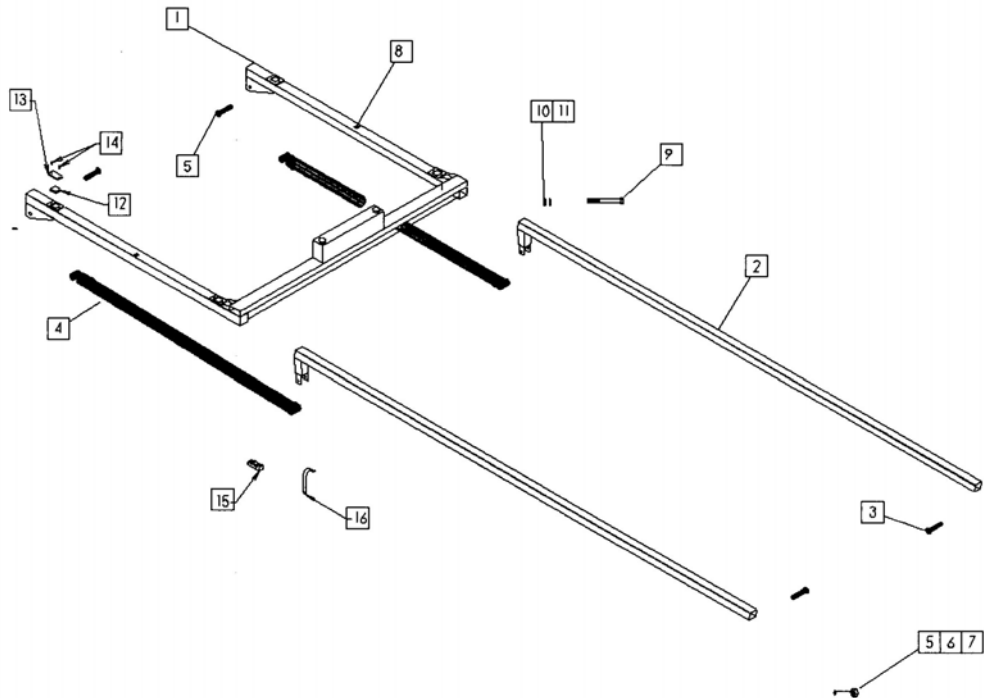
<i>Item #</i>	<i>Description</i>
1	Tail Base
2	Large Roller
3	4" Roller
4	Small Roller
5	3/4" Bearing
6	1" Bearing
7	3 x 12 Hydraulic Cylinder
8	Tail Tie Bar
9	3/8 x 1 1/2 Bolt
11	5/16 x 1 1/2 Bolt
12	1 x 4 Bolt
13	1" Nylocknut
14	1 st Small Roller Bracket
15	2 nd Small Roller Bracket
16	3 rd Small Roller Bracket Right
17	3 rd Small Roller Bracket Left

Bale Saddle



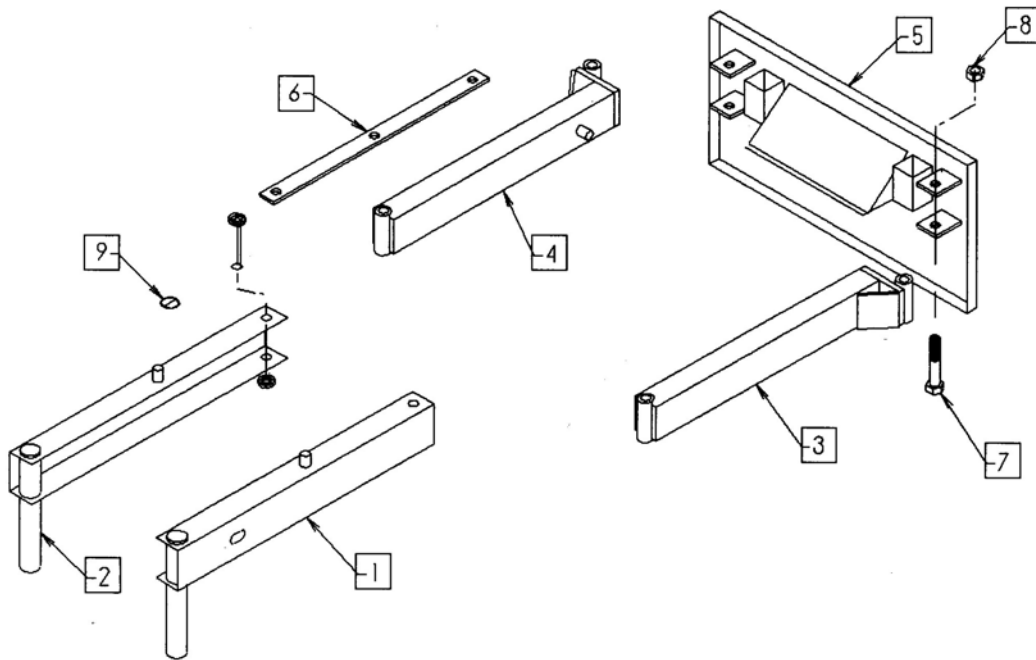
<i>Item #</i>	<i>Description</i>
1	Bale Saddle (Right Side)
2	Bale Saddle (Left Side)
3	$\frac{1}{2}$ x 1 $\frac{1}{4}$ Bolt
4	$\frac{1}{2}$ Locknut
5	$\frac{1}{2}$ " Pin
6	$\frac{3}{16}$ Linch Pin

Ram



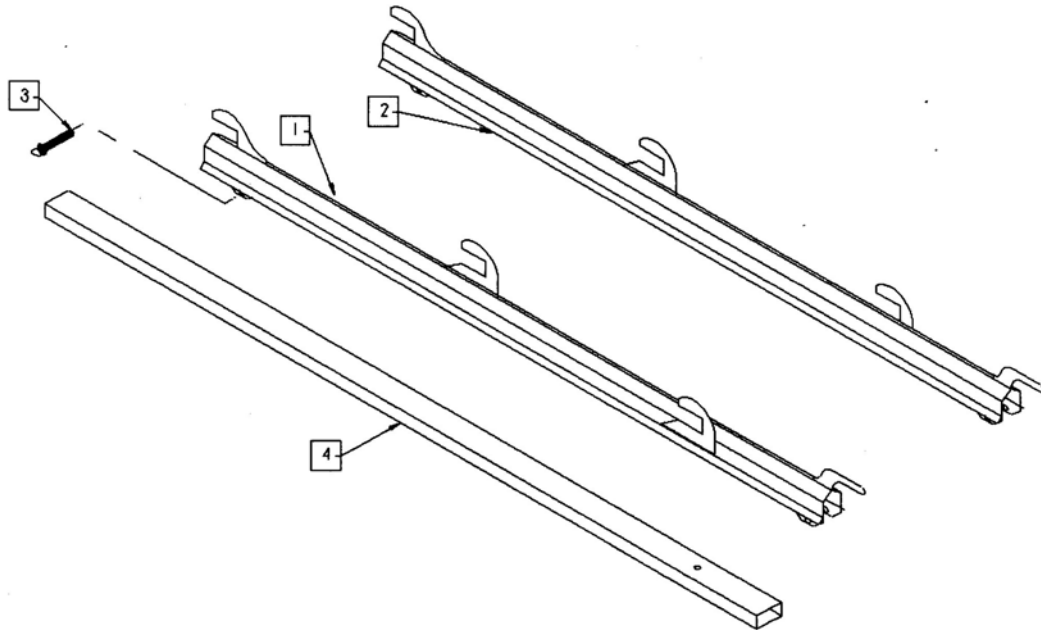
Item #	Description
1	Ram
2	Ram Guide
3	Cylinder Pin
4	Ram Cylinder
5	3/4 x 2 Bolt
6	3/4 Lockwasher
7	3/4 Flatwasher
8	1/4 - 28 Grease Fitting
9	1/2 x 2 Bolt
10	1/2 Nut
11	1/2 Lockwasher
12	1/2 x 2 x 2 HMWPVC Slider Block
13	Slider Block Retainer
14	1/4 x 1/2 Hex Socket Cap Screw
15	Cylinder Support Block
16	Cylinder Clamp

Push Off



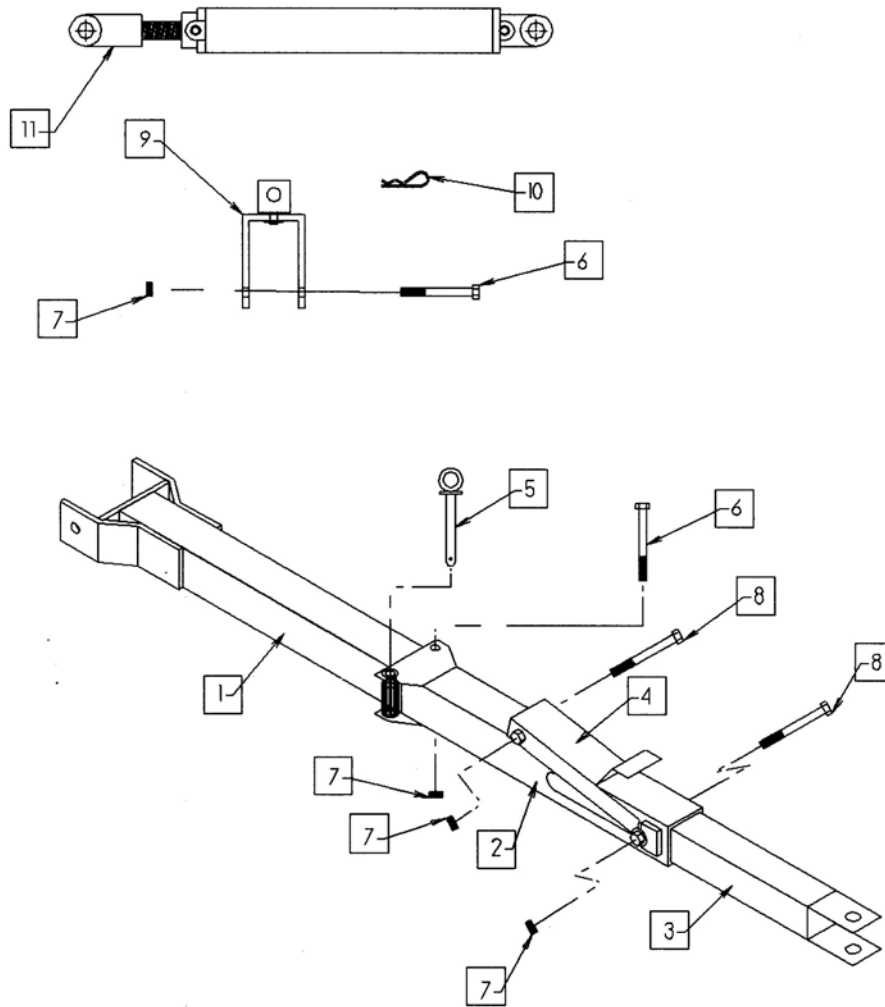
<i>Item #</i>	<i>Description</i>
1	Left Front Arm
2	Right Front Arm
3	Left Rear Arm
4	Right Rear Arm
5	Push Plate
6	X Bar
7	$\frac{3}{4}$ x 5 Bolt
8	$\frac{3}{4}$ Locknut
9	$\frac{3}{16}$ Linch Pin

Push Off Channel



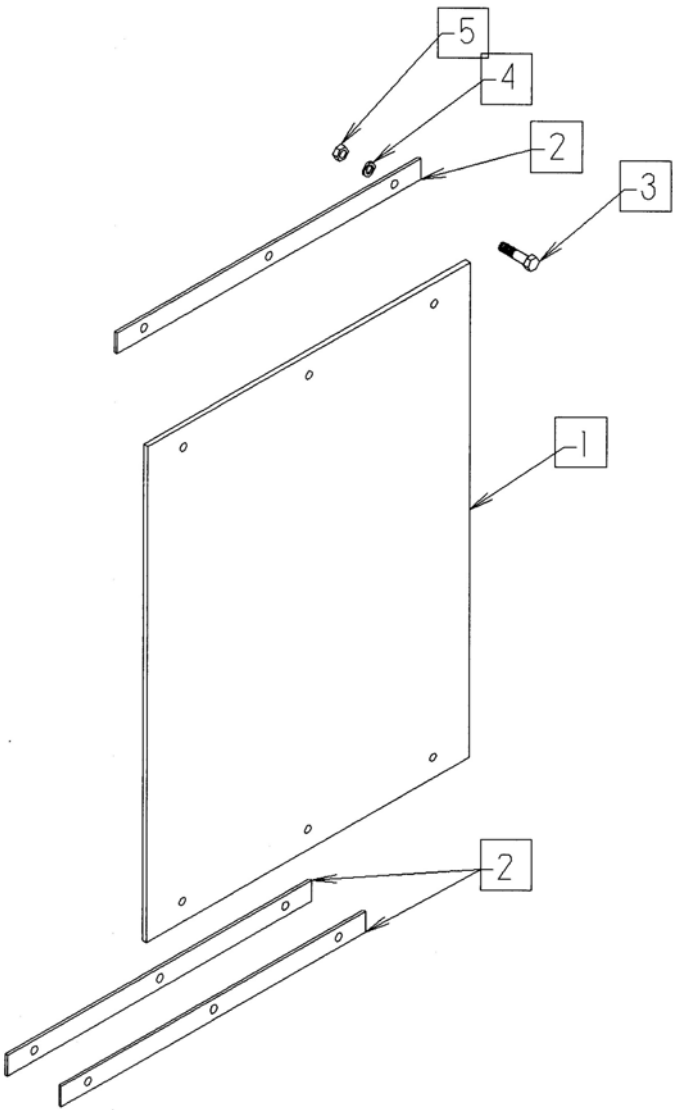
<i>Item #</i>	<i>Description</i>
1	Right Hand Push Channel
2	Left Hand Push Channel
3	Lock Pin
4	Push Off Tube

Tongue



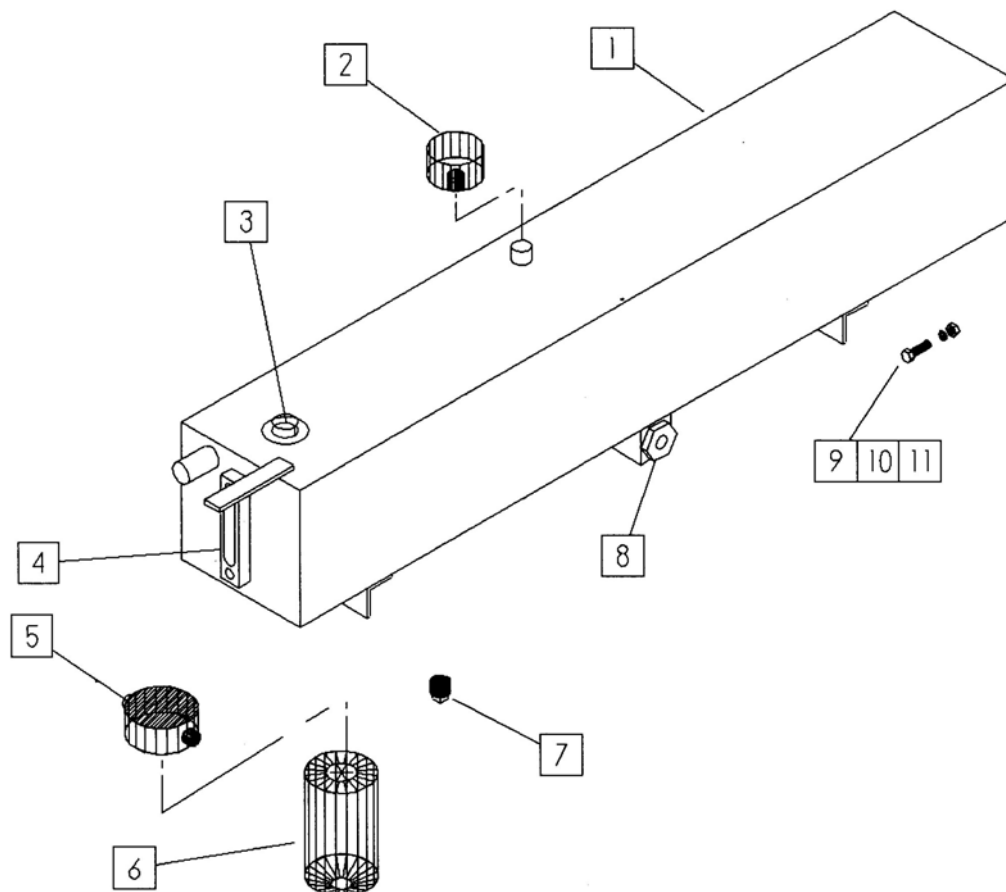
<i>Item #</i>	<i>Description</i>	<i>Item #</i>	<i>Description</i>
1	Main Tongue	7	5/8 Locknut
2	Swinging Tongue	8	5/8 x 4 1/2 Bolt
3	Sliding Tongue	9	Tongue Holder
4	Tongue Latch	10	Hair Pin
5	Tongue Pin	11	2 x 16 Hydraulic Cylinder
6	5/8 x 5 Bolt		

Mud Flap



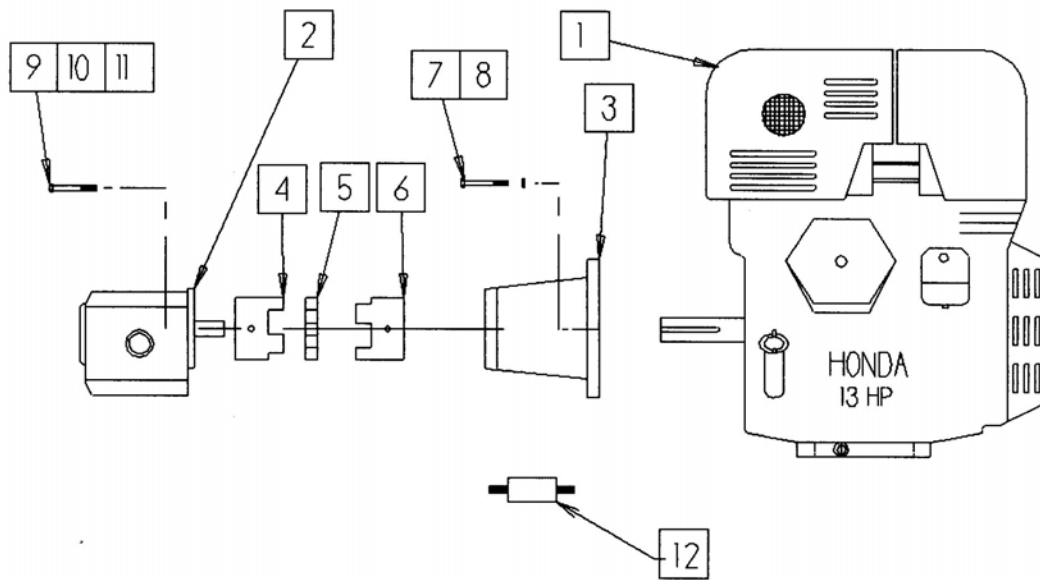
<i>Item #</i>	<i>Description</i>
1	Mud Flap
2	Metal Strip
3	Bolt
4	Lockwasher
5	Nut

Hydraulic Tank



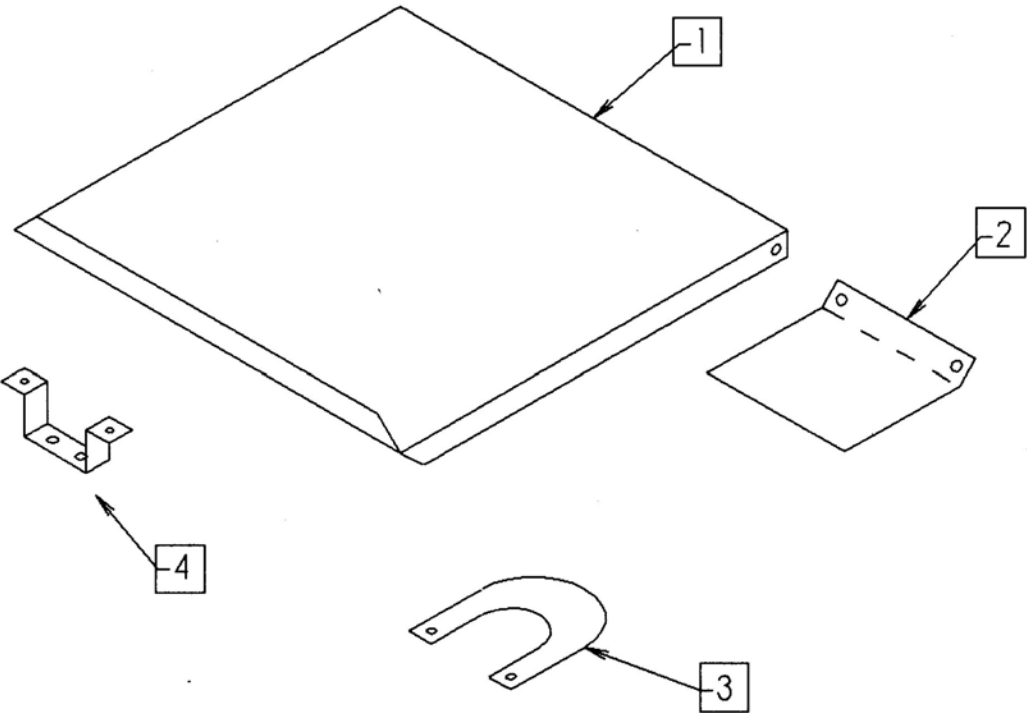
<i>Item #</i>	<i>Description</i>	<i>Filter</i>	<i>Cross Ref</i>
1	Hydraulic Tank	Stauf	SF6520
2	Breather Cap	Gresen	F22001
3	Filler Plug (1 ¼ pipe)	Fram	P1653-A
4	Sight Gauge	Fleetguard	HF6510
5	Filter Base	Cross	1A9021
6	10 micron filter		
7	Magnetic Plug		
8	Suction Filter		
9	3/8 x 1 Bolt		
10	3/8 Lockwasher		
11	3/8 Nut		

Pump / Motor



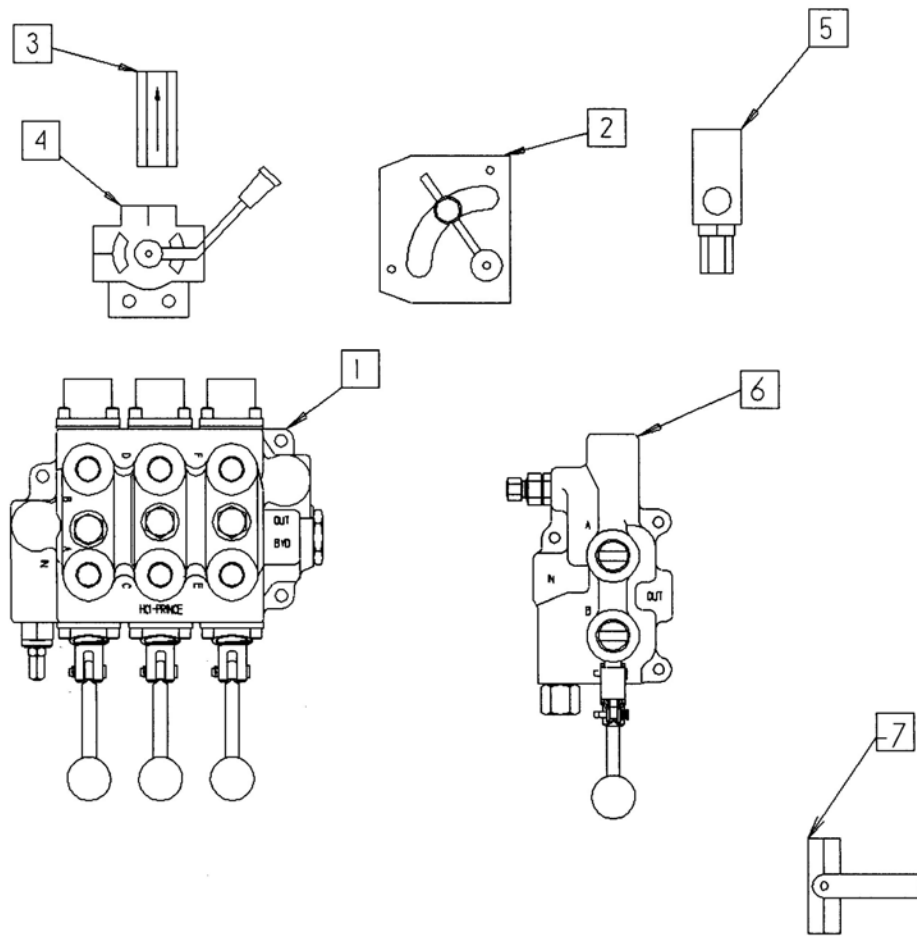
<i>Item #</i>	<i>Description</i>	<i>Item #</i>	<i>Description</i>
1	13 HP Honda Engine	7	3/8 x 1 Bolt
2	Hydraulic Pump	8	3/8 Lockwasher
3	Engine – Pump Adaptor	9	3/8 x 1 ¼ Bolt
4	Love Joy Coupling (pump)	10	3/8 Lockwasher
5	Coupling Spacer	11	3/8 Flatwasher
6	Love Joy Coupling (engine)	12	Fuel Filter

Engine Cover & Manual Decal Plate



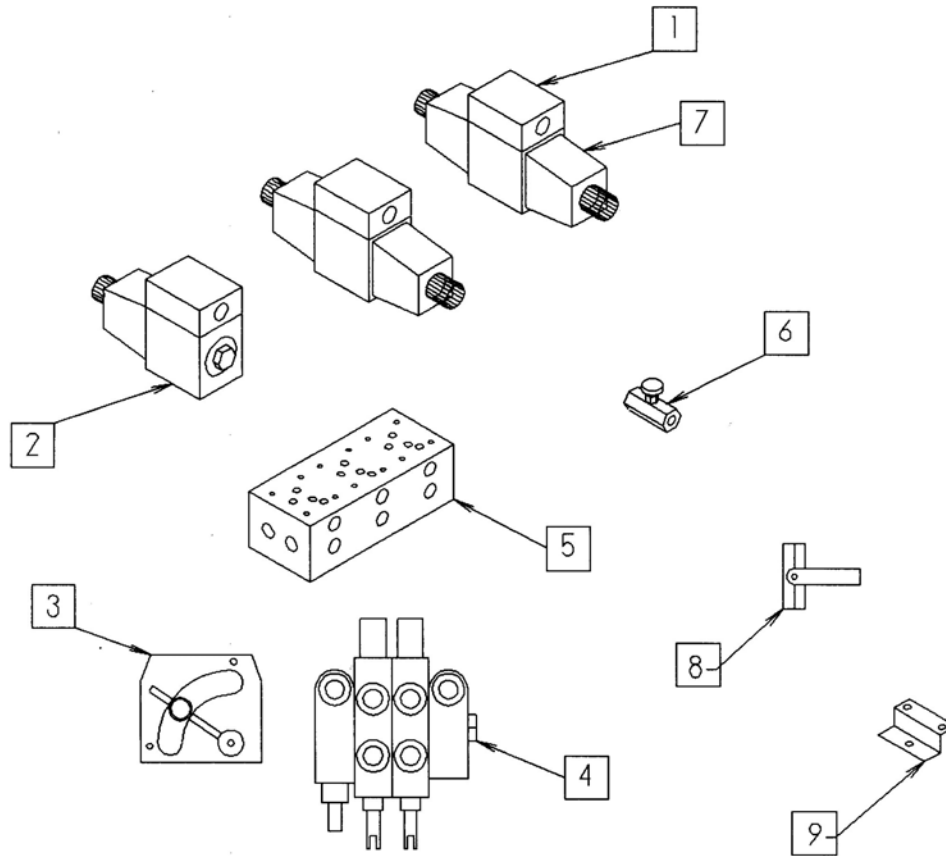
<i>Item #</i>	<i>Description</i>
1	Engine Cover
2	Valve Decal Plate
3	Selector Valve Decal Plate
4	Selector Valve Decal Plate Bracxket

Manual Valve Bank



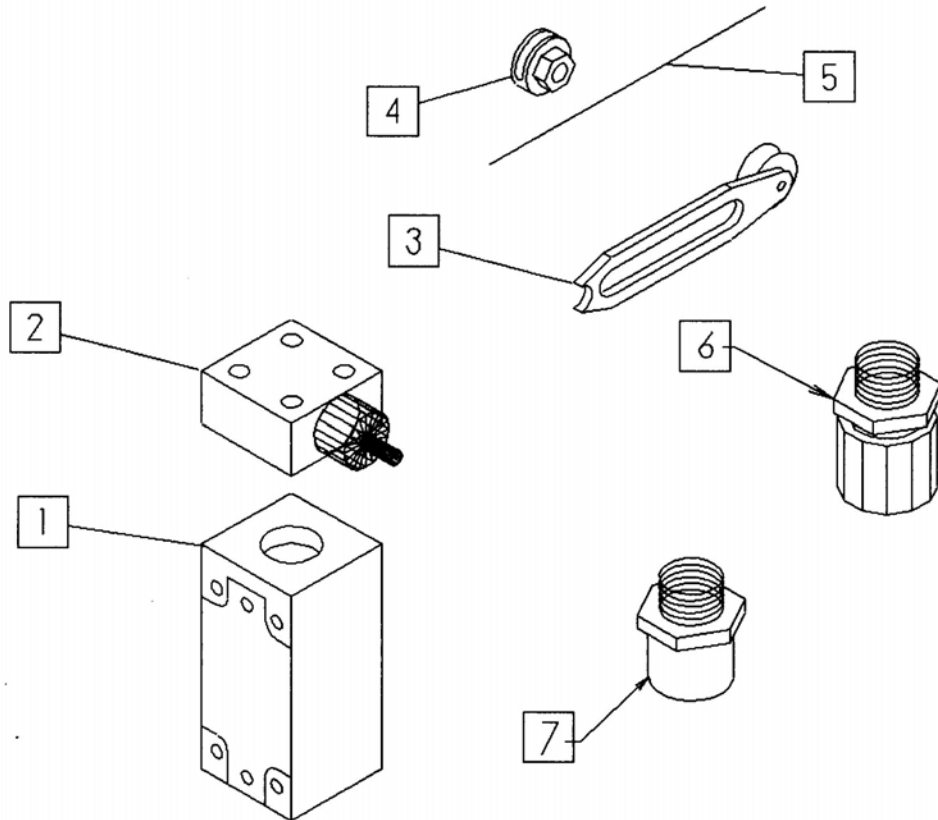
<i>Item #</i>	<i>Description</i>
1	RD5300 Valve
2	RD- 150 -08 Flow Control
3	1/2 " Check Valve
4	Selector Valve
5	Relief Valve
6	LS3010-1 Valve
7	Ball Valve

Automatic Valve Bank



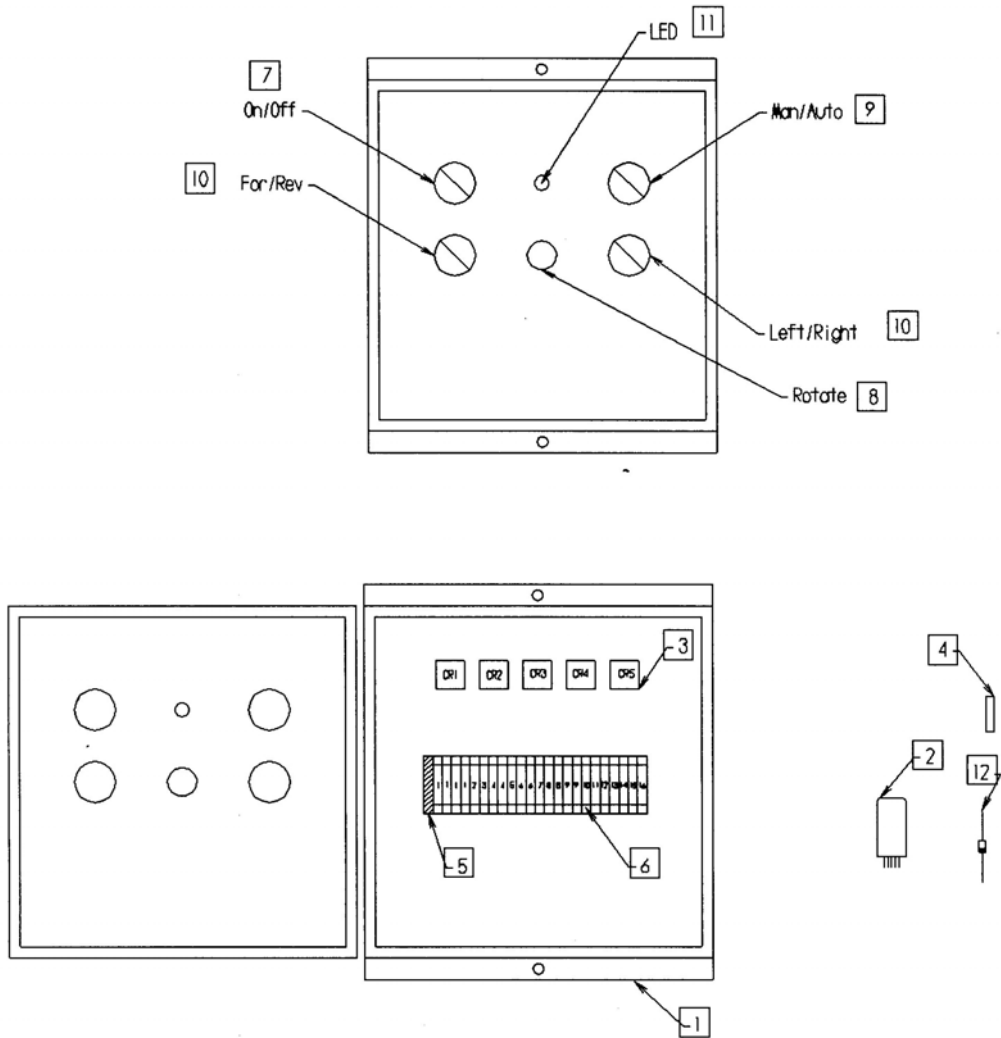
<i>Item #</i>	<i>Description</i>
1	Tandem Center 12 volt DC Valve
2	Single 12 volt DC Valve
3	RD-150-08 Flow Control
4	2 Spool Mono Block Valve
5	3 Station Manifold
6	Steering Speed Control Valve
7	Valve Coil
8	Ball Valve
9	Manifold Mount

Limit Switch



<i>Item #</i>	<i>Description</i>
1	Body
2	Actuator
3	Arm
4	Wire Clamp
5	Wire Arm
6	PVC Box Connector
7	Metric to pipe Adaptor

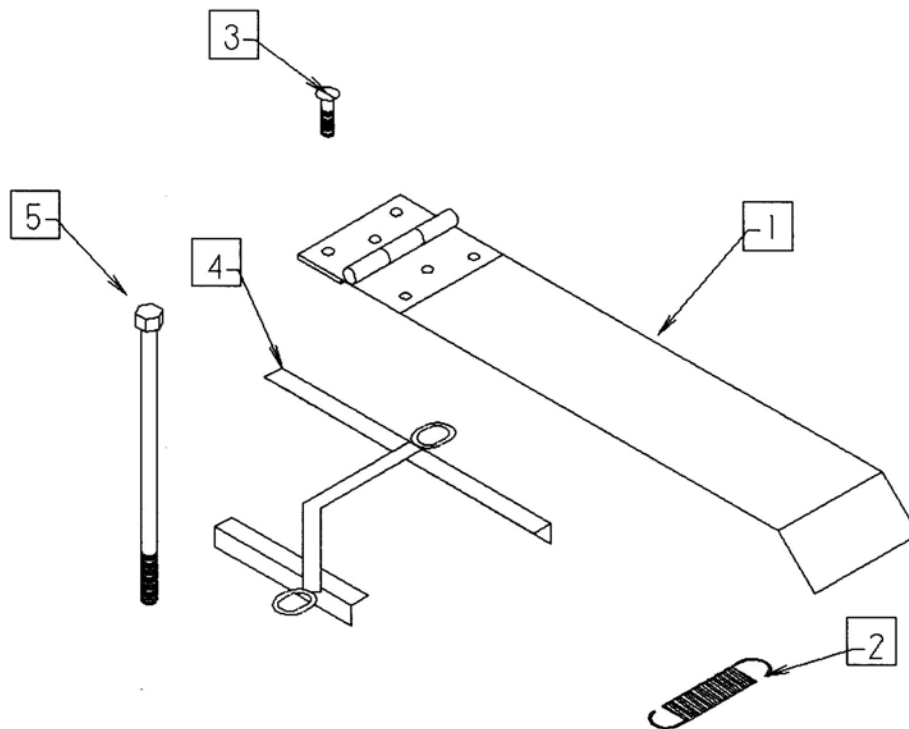
Control Panel



On / Off switch is also the Engine STOP

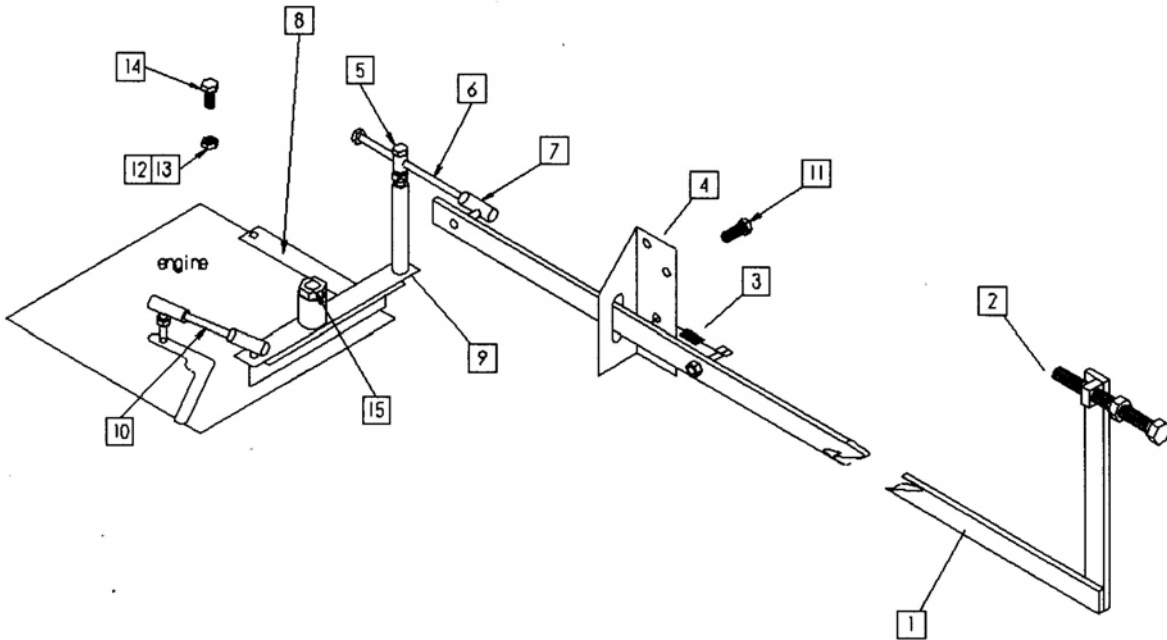
<i>Item #</i>	<i>Description</i>	<i>Item #</i>	<i>Description</i>
1	Control Panel Assy	7	On /Off Switch
2	Control Relay	8	Rotate Switch (push button)
3	11 Pin Base	9	Man/Auto Switch (dial type)
4	15 Amp Fuse	10	Ram & Steering (dial type)
5	DIN Rail Fuse Holder	11	LED
6	DIN Rail Terminal Block	12	Diode

Table Trigger & Battery Bracket



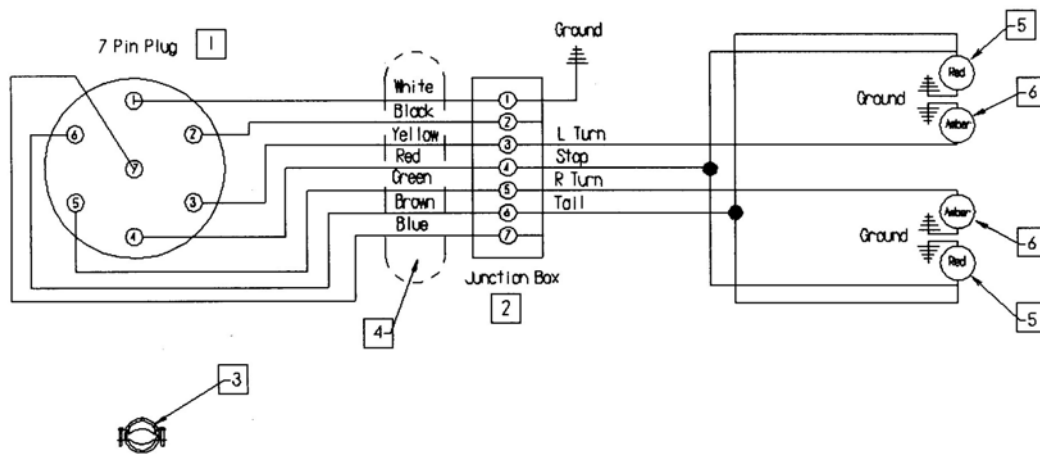
<i>Item #</i>	<i>Description</i>
1	Trigger Plate
2	Trigger Spring
3	1/4 x 1 Stove Bolt / Nut / Lockwasher
4	Battery Holddown
5	5/16 x 7 Bolt / Nut / Lockwasher

Throttle Linkage



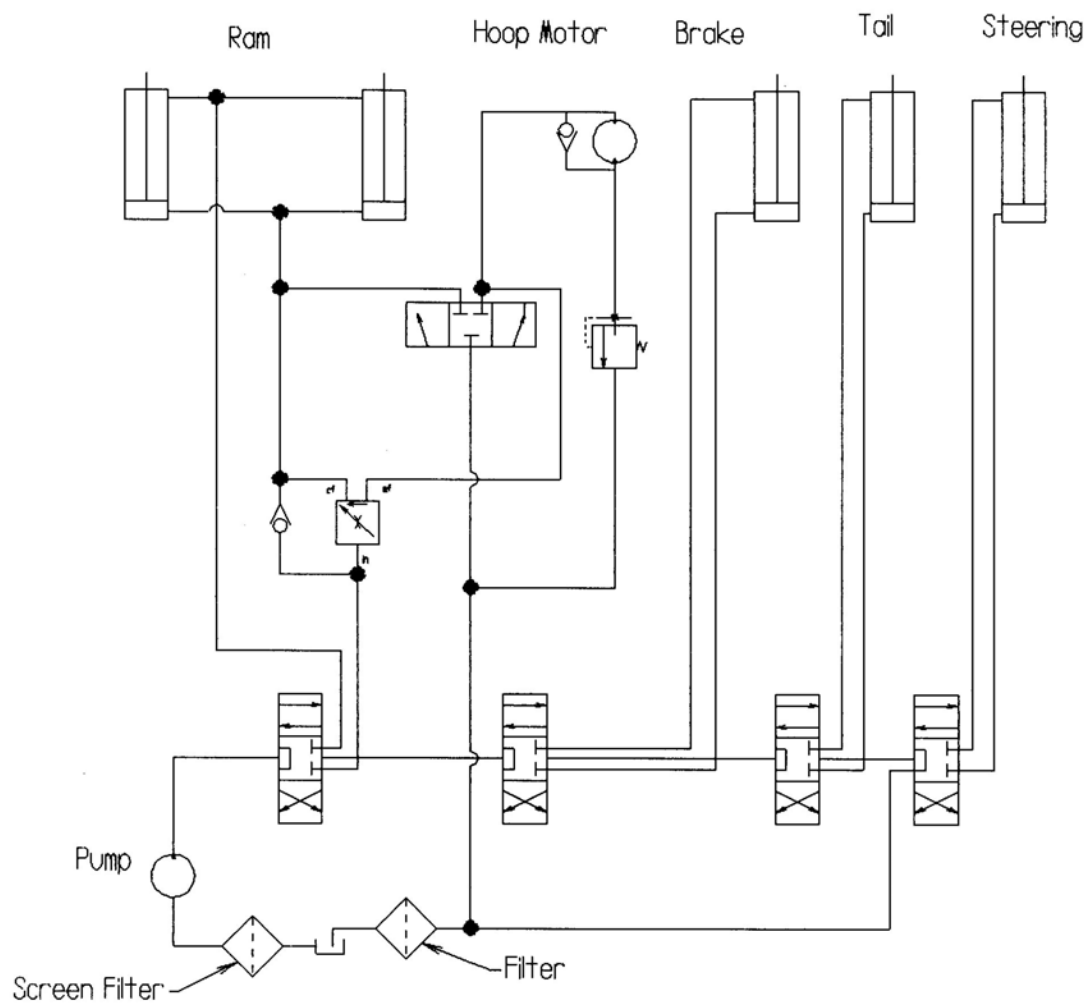
<i>Item #</i>	<i>Description</i>
1	Main Throttle Arm
2	Adjusting Bolt
3	Throttle Arm Spring
4	Arm Bracket
5	Throttle Linkage Pivot
6	1/4 x 5 UNF Bolt
7	Throttle Ball Joint
8	Engine Bracket
9	Rocker Bar
10	1/4 x 4 UNF Threaded Rod c/w Nuts
11	5/16 x 2 Bolt
12	5/16 Nut
13	5/16 Lockwasher
14	5/16 x 1 Bolt
15	1/2" Locknut

Running Lights

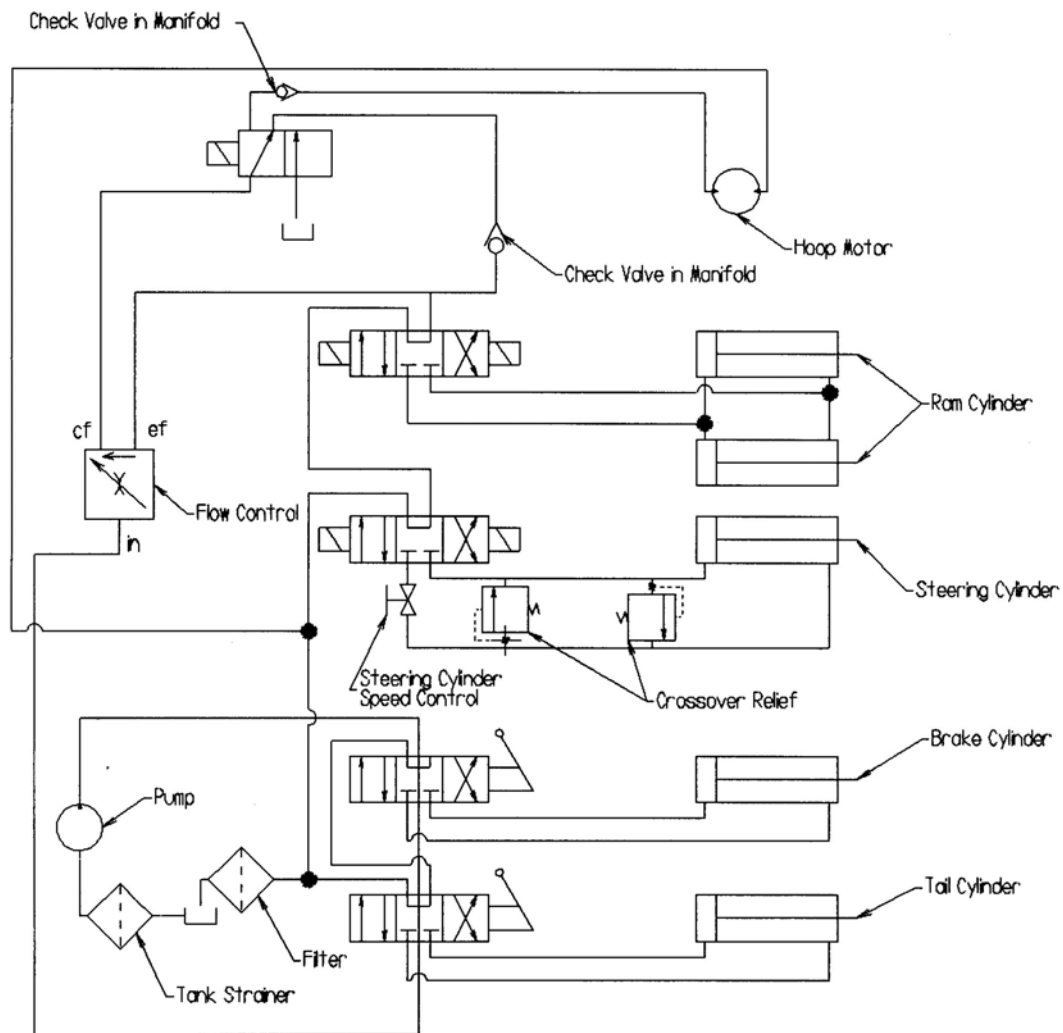


<i>Item #</i>	<i>Description</i>
1	7 Pin Plug
2	Junction Box
3	Strain Relief
4	7 Wire Conductor
5	Red Lamp
6	Amber Lamp

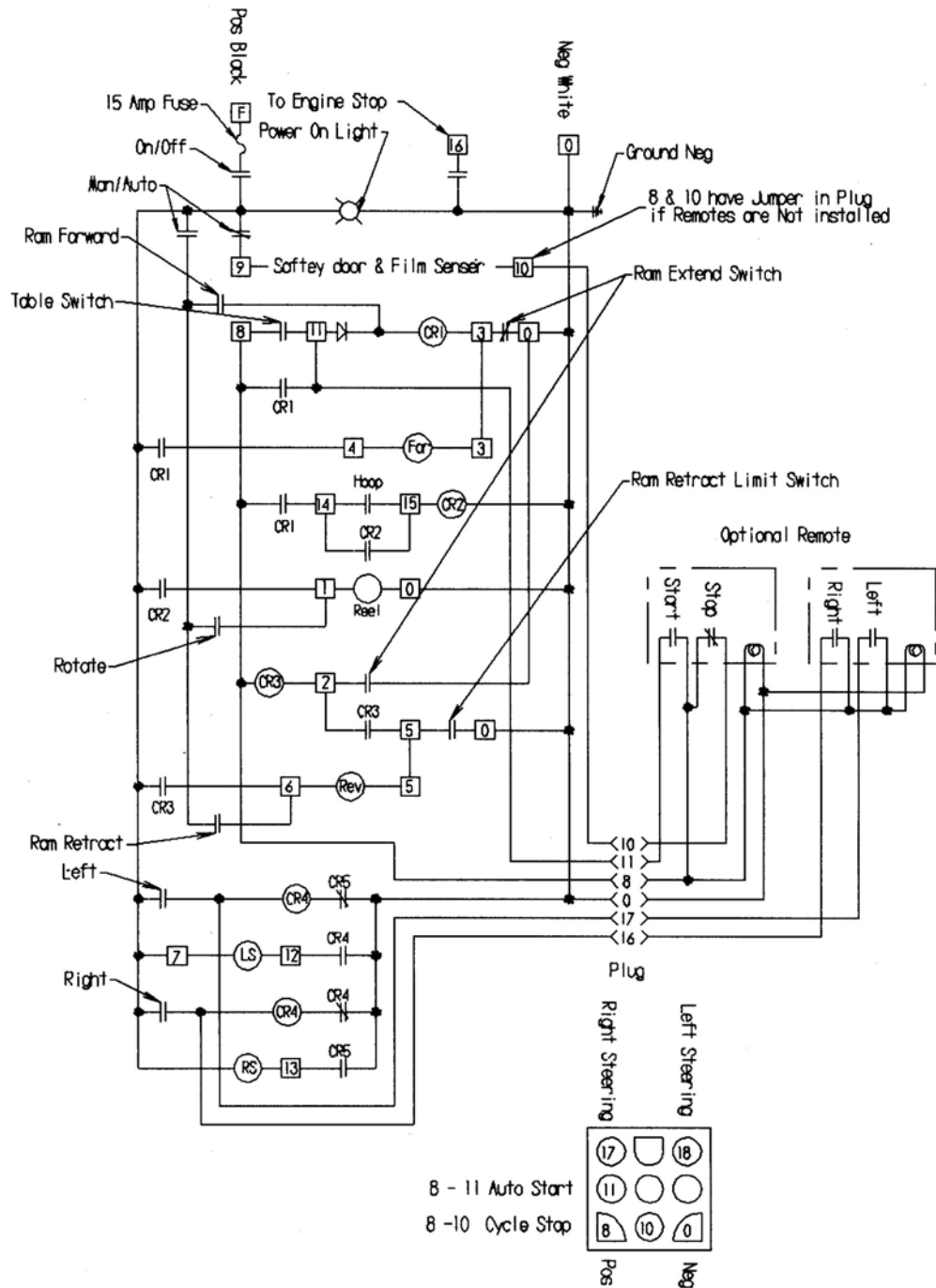
Manual Hydraulic Schematic



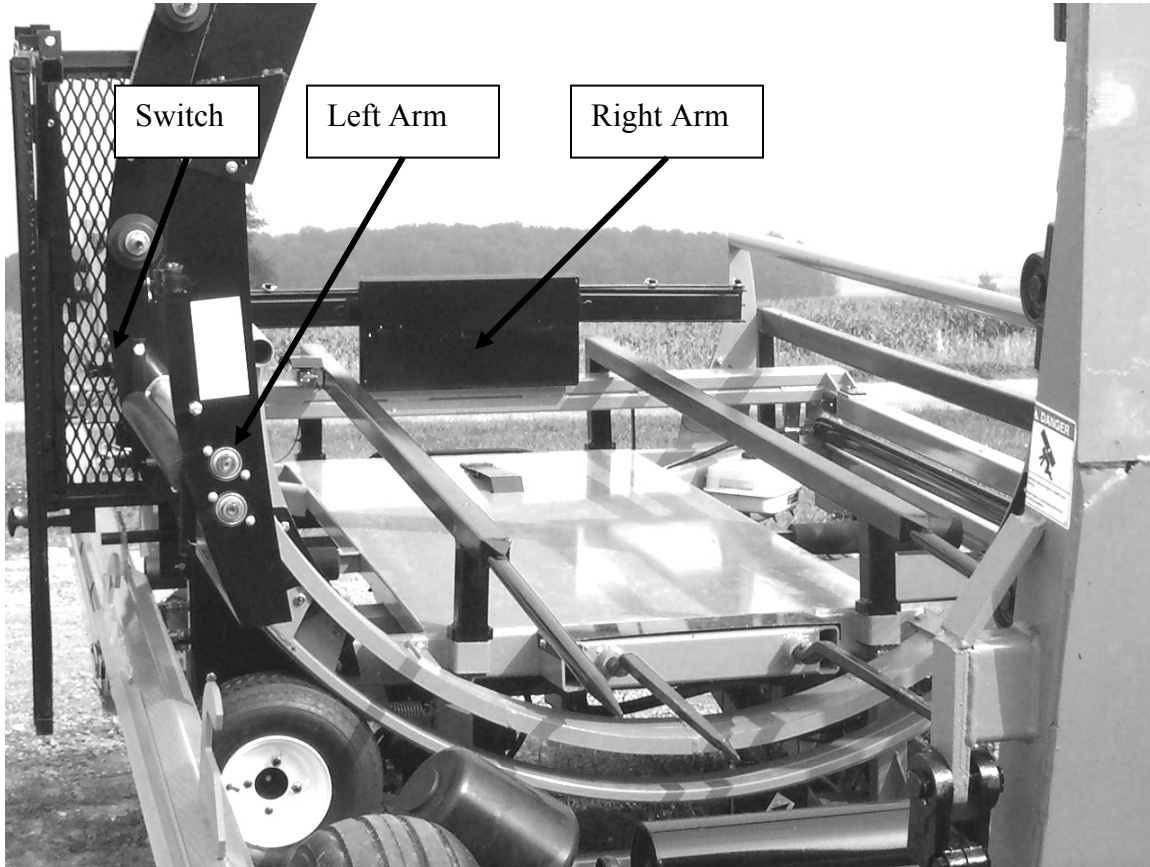
Electric Hydraulic Schematic



Electric Control Panel Schematic

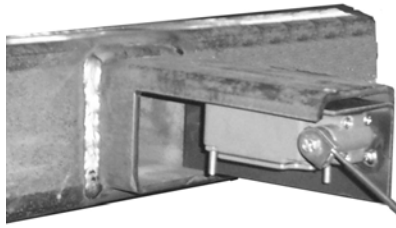


Riser Kit

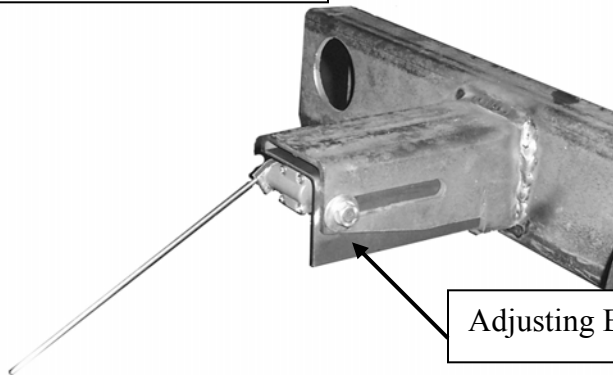


Item #	Description
1	Right Arm
2	Left Arm
3	Complete Switch Assembly c/w Mount
4	Trigger Plate
5	Trigger Spring
6	Limit Switch (page 39)
7	Front Tie Down pins

Film Sensor



Wire adjustment. Wire should stick through and touch the top of bracket to keep other end from dropping down too far



Adjusting Bolt

Installation

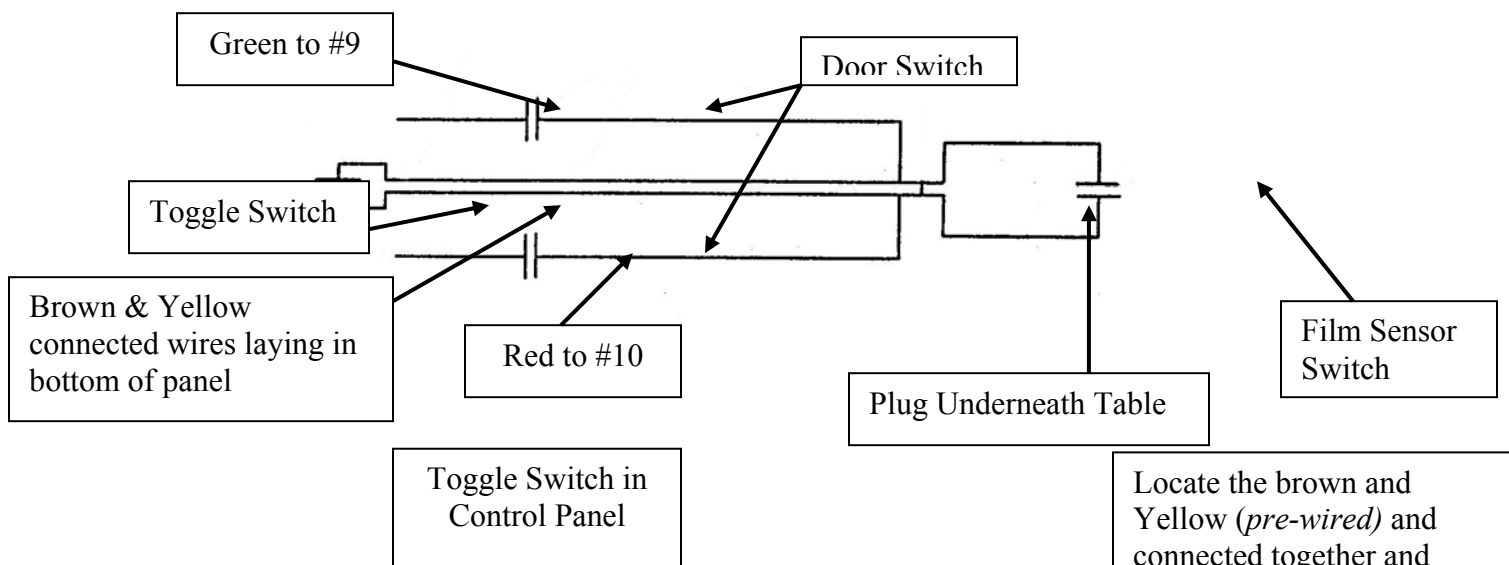
This machine is pre-wired for film switch. To install, locate 2 wire plug underneath the table between the bale spears. Remove the plug, and plug film switch into it.

Install toggle switch into the bottom of the control panel as shown. With this switch the film sensor can be disabled in the "auto" position.

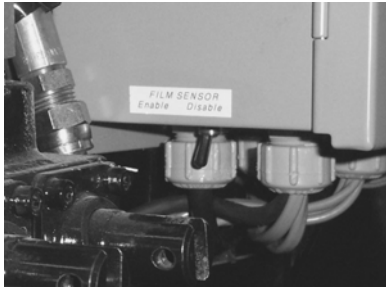


Notice in "man" the sensor and the safety doors do not work.

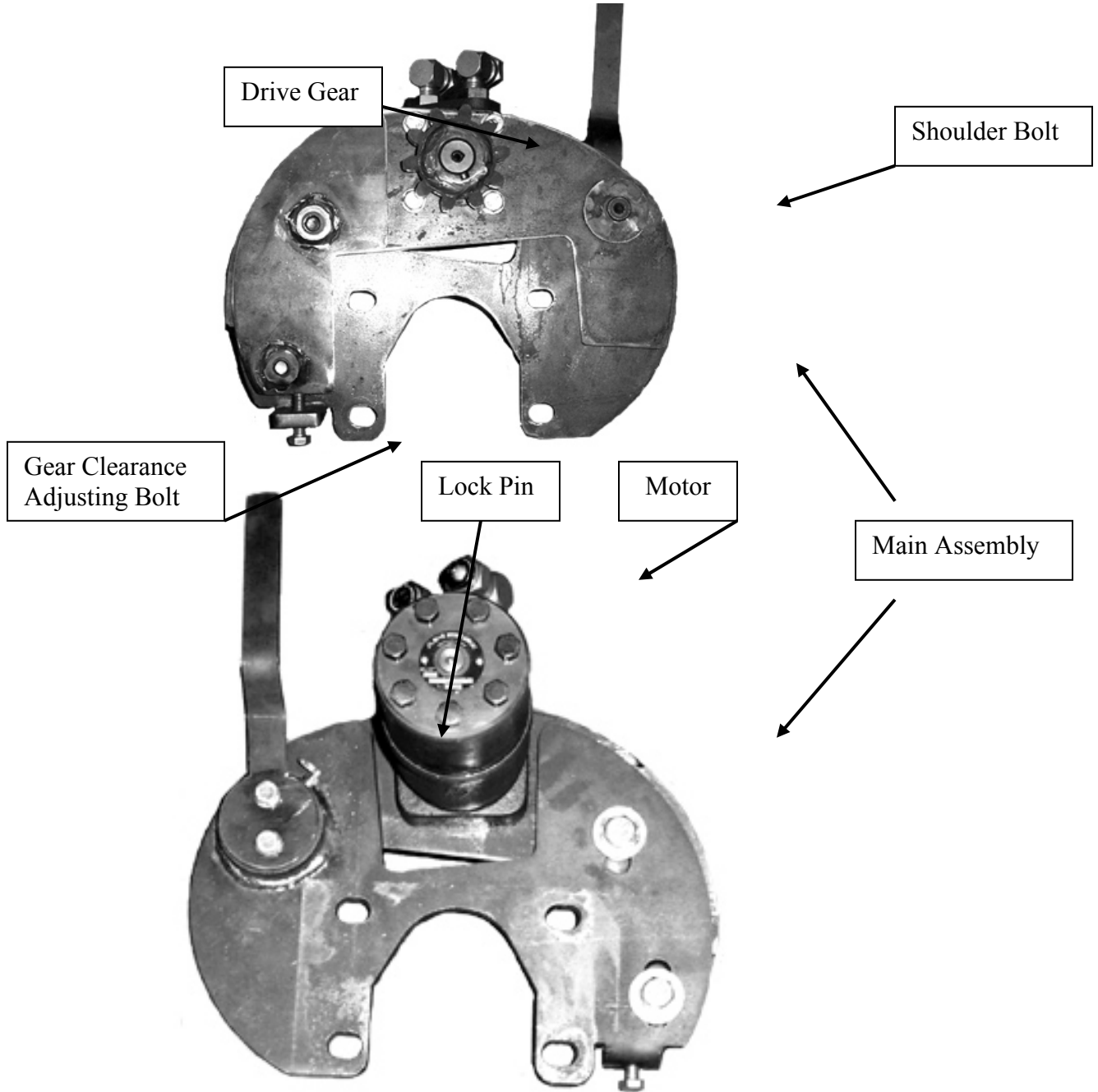
Adjust the wire arm with no plastic in the machine, make sure the wire does not interfere with the plastic roll assy. When plastic is in the machine it will hold the wire up causing the switch to close. Make sure the switch closes with the wire parallel to the bale spears. Wire can be shortened to suit your needs. The switch bracket can also be adjusted back and forth so only one layer of plastic holds the wire up, if more than one layer contacts the plastic then the unbroken roll is holding it in place and defeat's the sensor.



Locate the brown and Yellow (*pre-wired*) and connected together and laying in the bottom of the control panel. Remove the connector and fasten to toggle switch, this is not polarity sensitive.

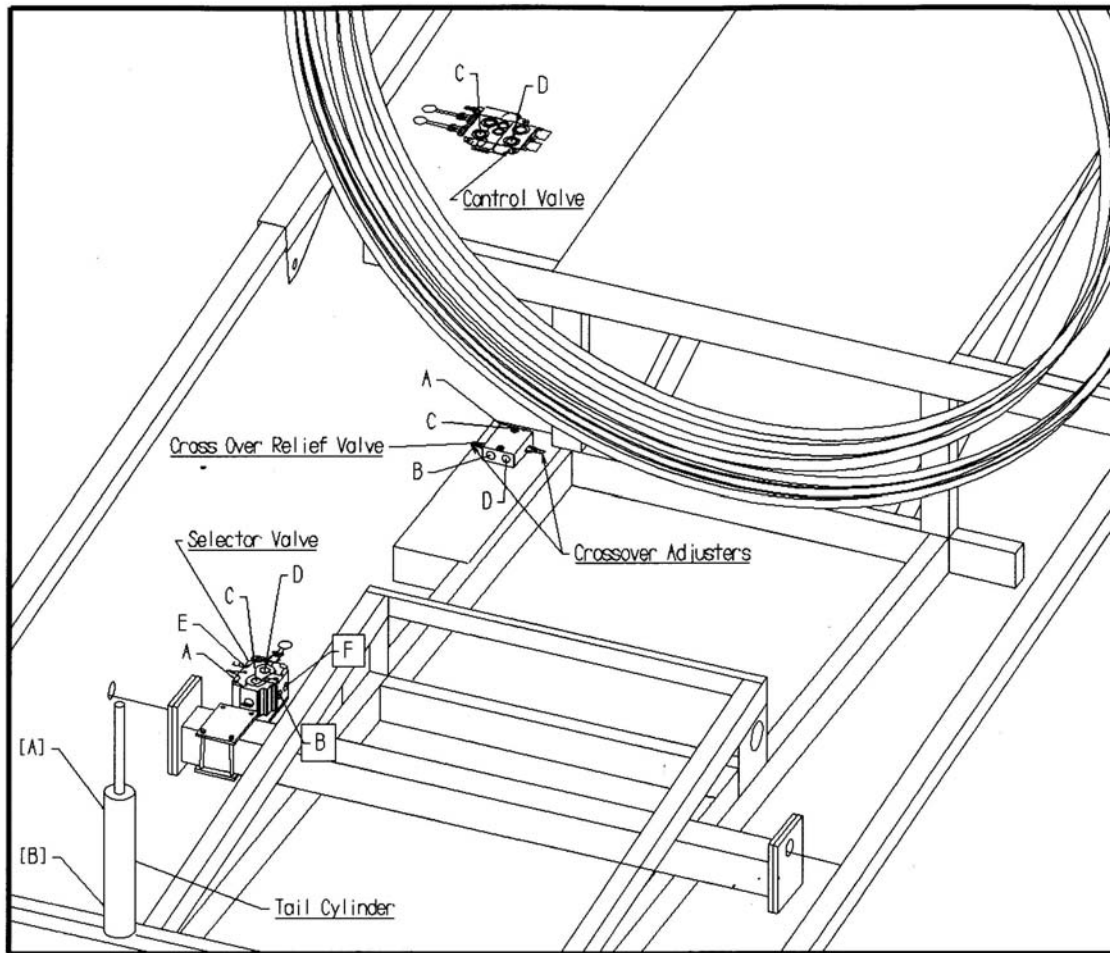


Wheel Drive



Item #	Description
1	Rim with Gear (not shown)
2	Main Assembly
3	Shoulder Bolt
4	Gear

Wheel Drive Hydraulic Valve Locations



<i>Item #</i>	<i>Description</i>
1	Crossover Relief Valve
2	Selector Valve
3	Selector Valve Mount
4	Mount Clamp

Wheel Motor Hydraulics

Remove wheel from Rear left hub, and unbolt the spindle assy.

Mount the hydraulic motor assy on the outside of spindle bracket with the longer 1/2 bolts.

Install the new rim with gear welded on the inside.

After rim is installed adjust gear so that the backlash is at a minimum but allowing the gear to turn freely.

To do this engage handle to top, loosen bolts **A** and move plate up or down by adjusting height bolt and retighten bolts.

After adjustment is OK, lock height adjustor bolt with jam nut.

Mount crossover relief valve on base of hoop wheel motor bracket with 2 pc 5/16 bolts.

Ports A and C should be facing to the front.

Mount selector valve on 1/4 x 4 1/4 plate with 2 pc 3/8 bolts.

Fasten selector valve bracket on bottom of axle beam with smaller plate on top of axle and bolt with long 3/8 bolts through plates. Clamping assy. on to axle.

Remove Hydraulic lines from port C and D on control valve.

Install 3/8 in. line x 84 from port D on control valve to port A on Crossover relief valve.

Install 3/8 in. line x 84 from port C on control valve to port C on Crossover relief valve.

Install 3/8 in. line x 60 from port B on crossover valve to port D on Selector Valve.

Install 3/8 in. line x 60 from port D on crossover valve to port C on selector valve

Install 3/8 in. line x 14 from port E on selector valve to Bottom port on Motor.

Install 3/8 in. line x 14 from port A on selector valve to Top port on Motor.

Install 1/4 in. line x 64 from port F on selector valve to Bottom port on Tail Cylinder.

Install 1/4 in. line x 64 from port B on selector valve to Top port on Tail Cylinder.

DO NOT ADJUST RELIEF VALVE -Preset at factory 1700 psi

To Use The Wheel

-The control valve that is used to raise and lower the tail will now also be used to drive the wheel through the selector valve. By shifting the selector valve you can select between the wheel motor and tail cylinder.

-By leaving selector valve in tail position crossover valve will function somewhat as a float valve.

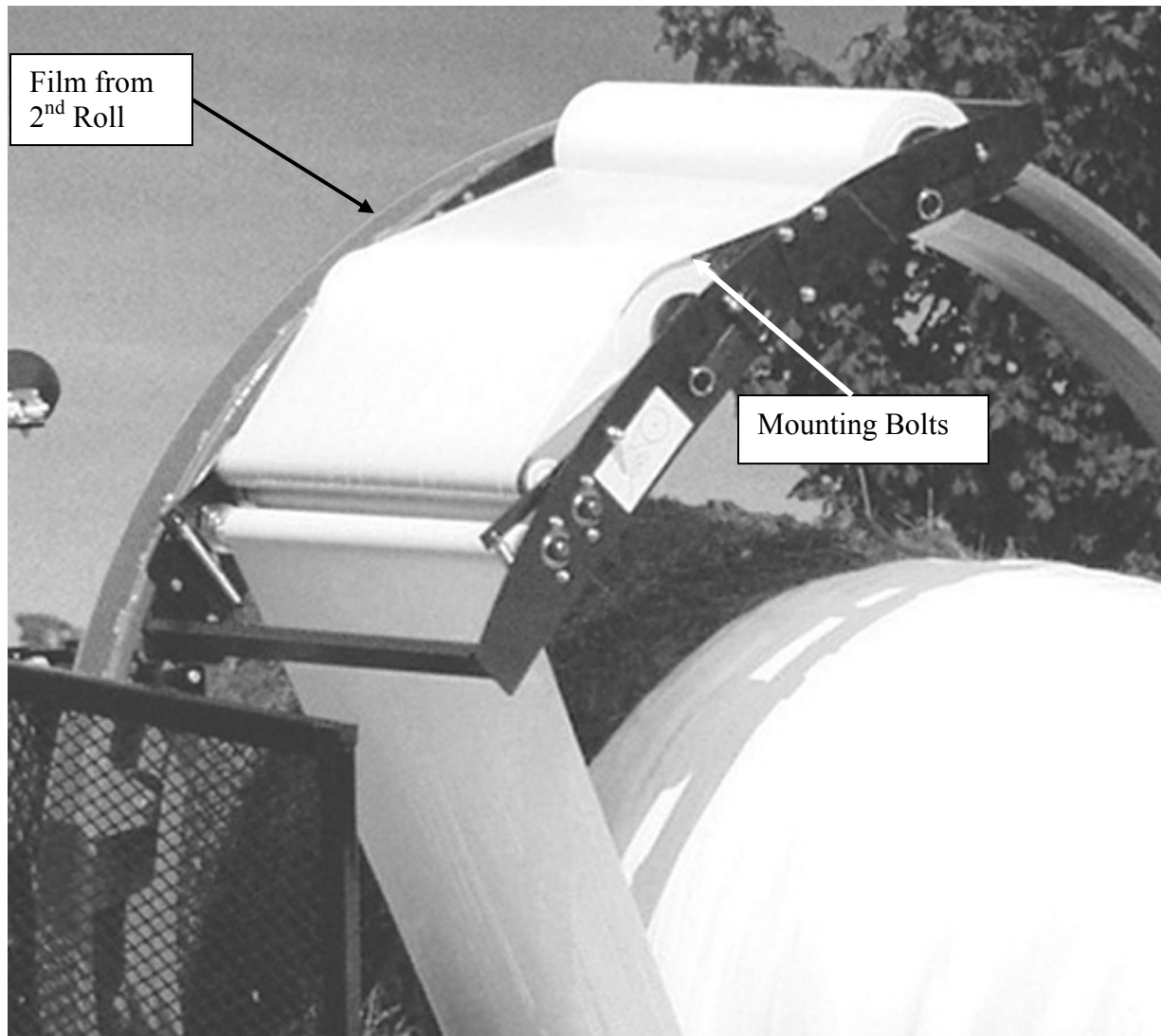
-To engage the wheel motor, swing the handle beside the motor all the way up to the top position until the lock pin (if used) snaps in.

Notice: Do not force the handle. If the gears do not mesh, try to turn the small gear a little bit with the hydraulic valve and try again.

-To disengage pull lock pin out (if used) and swing handle all the way down.

Coat Motor Gear Lightly with grease before installing

Twin Wrap Kit



Note

The film from the 2nd roll goes over top of the first roll and through the tension rolls together with the first film from the first roll.

Item #	Description
1	Twin Wrap Frame
2	Plastic Wrap Spool

3	3/8 x 1 Bolts, nut lockwasher
4	Spool Holder

Model TL5500 & TL6500

Re: Mounting Accessories (year 2003)

Remote Package consists of Pause –Cycle stop, Start – start wrap cycle,
Steering – Right/Left

1: Installing Remote Package

Bolt receiver assembly to inside rear right of control box with connector plug at bottom. Thread the two long loose wires through the rear of control box. Tape these wires to some of the other wires, so they can not get caught in the machinery, as these wires are the antenna wires for the receivers. Remove the jumper between term #8 and #10. Plug the connector together at the bottom of the panel.

2: To align the frequency from the transmitter or the “hand unit” push the remote button on transmitter and at the same time push “smart button” on the receiver inside the gray control panel, green indicator light will flash to indicate that receiver has locked on. Release the remote switch. Do the same for all the buttons on control. If for any reason you want to change the arrangement of the buttons, you will have to erase the code in the receiver. To erase the code press the “smart button” and hold in until the green indicator light turns off (about 6 seconds). All codes the receiver has learned are erased. You can then redo the aligning of the buttons as you prefer. The white arrows show the default relationship between the receiver and the hand unit.

3: When using the remote start of ram, unplug the wire from the switch at the table trigger to disable the switch. Secure the end of wire somewhere so it does not get tangled in the steering of the wrapper, make sure the plug will not short out to the frame.

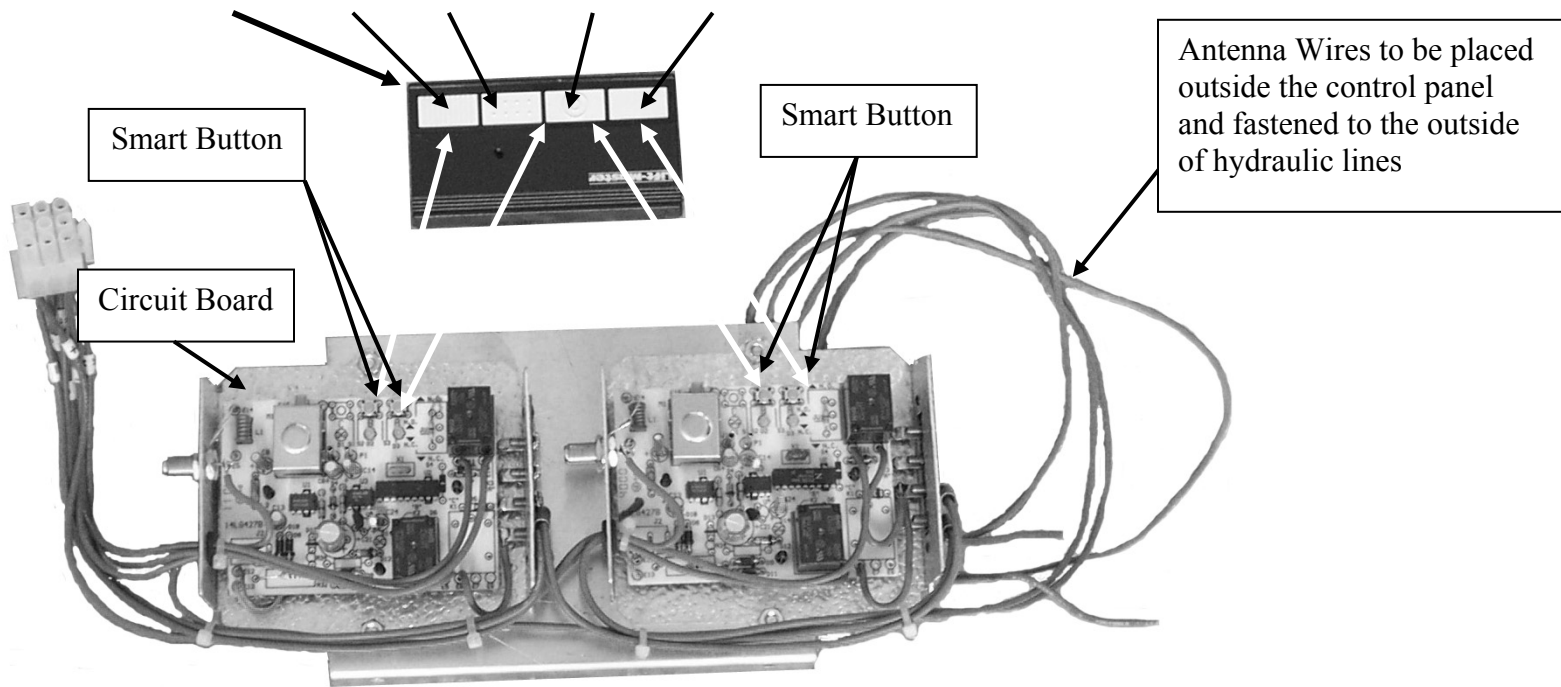
Transmitter

Stop

Start

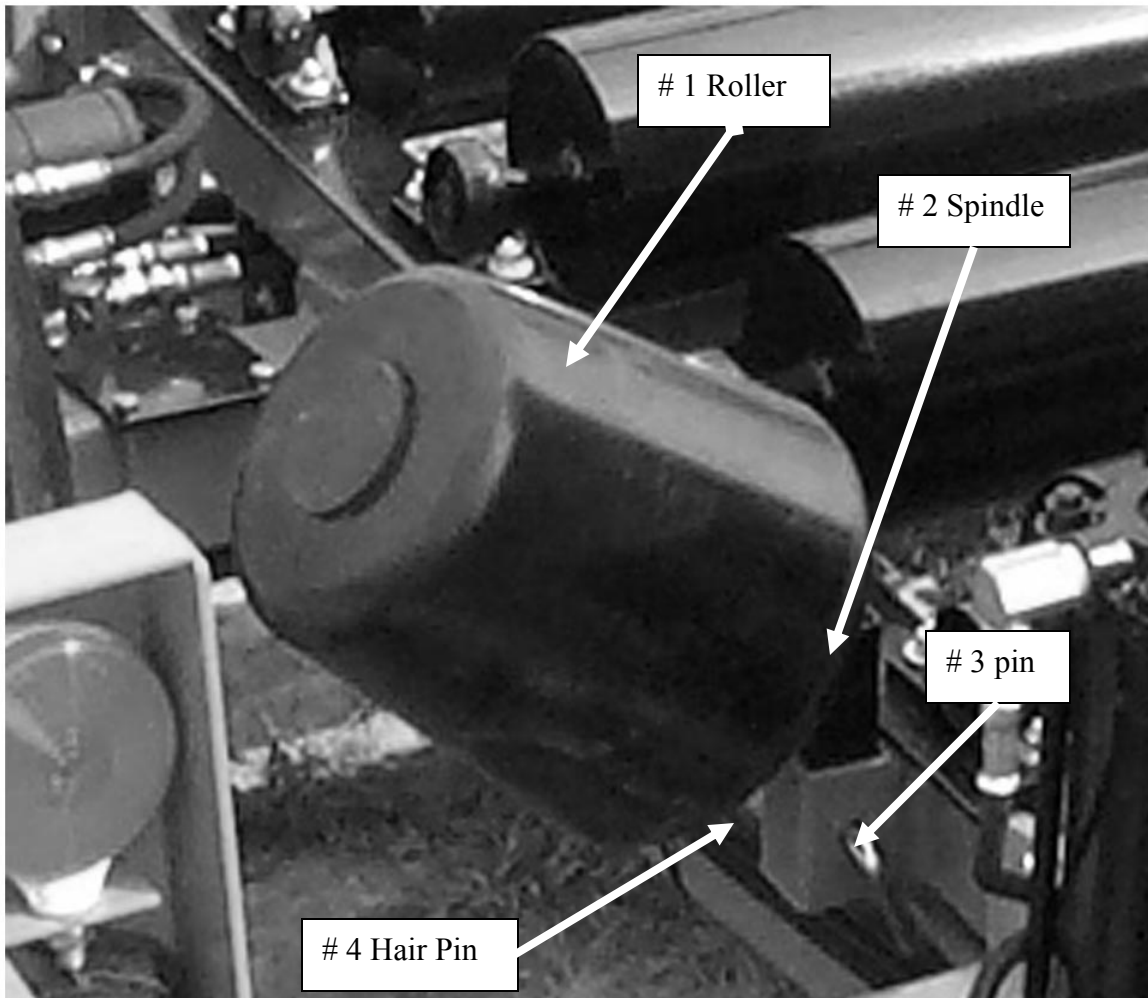
Left

Right



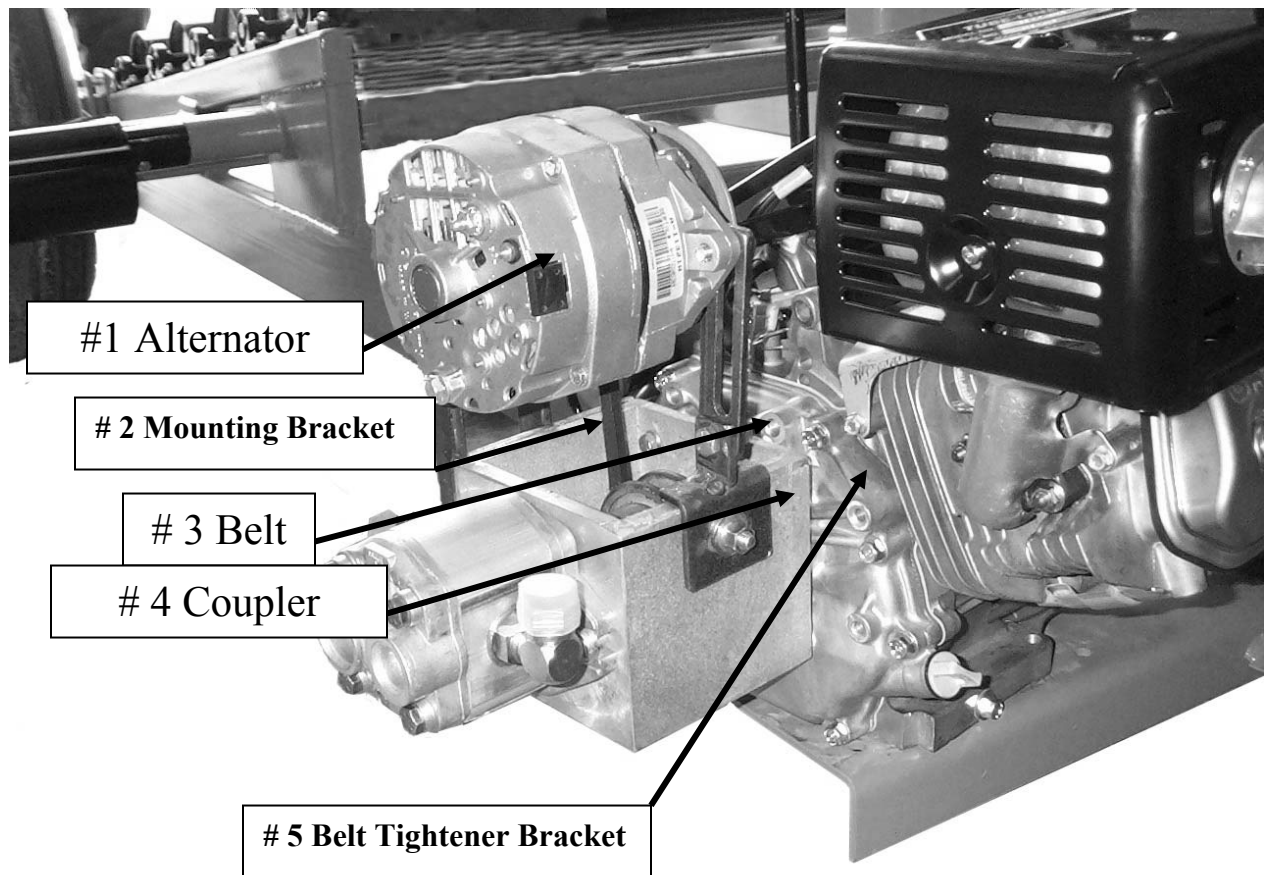
Guide Roller Kit

Kit consists of two rollers and are used on the lower side to keep the bales from rolling off to one side.



Item #	Description
1	Roller
2	Spindle
3	Pin
4	Hair Pin

Alternator Light Package



Item #	Description
1	<i>Automotive type 40 amp Alternator single wire</i>
2	Pivot Bracket
3	Belt
4	Adapted Lovejoy Coupler Pully
5	Belt Tighener Bracket

This is a photo of the alternator before the engine was fastened down. The kit includes the different pump mount, pulley fastened on coupling, alternator and mount.

The on/off switch can be located on the control panel, facing the front in the middle of box. We use a toggle switch and the panel has to be drilled for the switch.

The lights are mounted on top of the safety doors.


Lights



Customer supplies own light brackets mounted on top of side guards.

Light package consists of 3 lights and one on/off toggle switch.

Usually the lights are mounted with 2 lights facing to the rear and 1 facing to the front.

The toggle switch can be mounted by drilling a $\frac{1}{2}$ " hole into the side of the control panel,  be careful that you don't damage wires on the inside. Install the switch and wire it into the top of fuse block. By wiring it this way the lights are fused through the control panel.

The Alternator is a one-wire model and the only wire needed is a 10 ga wire to the positive battery wire.

Page #	Ref #	Part #	Qty	Description
16	1	550-100-001	1	Hoop Outer Ring
16	2	550-100-002	1	Hoop Inner Ring
16	3	550-200-116	2	Mounting Bolt 5/8 x 2
16	4	599-100-004	2	5/8 Nut
16	5	599-100-005	2	5/8 Lockwasher
16	6	599-100-003	2	Mounting Bolt 5/8 x 3 1/2
17	1	500-200-014	8	4" Wheel
17	2	500-100-015	8	Axle Bolt \ Locknut
17	3	550-200-016	8	Spanner
18	1	550-100-089	2	Main Wrap Bracket
18	1A	550-200-090	2	Main Wrap Side Insert
18	2	550-100-005	4	1-14 UNF Castellated nut
18	3	550-100-006	4	Tensioner Roller
18	4	550-100-007	8	3/4 Flange Bearing
18	5	550-100-008	2	Small Gear
18	6	550-100-009	2	Large Gear
18	7	550-100-010	2	Gear Cover
18	8	550-200-115	2	Spool Holder
18	9	550-200-012	4	Wrap Spool
18	10	550-100-013	8	5/8 Flatwasher
18	11	550-100-014	4	5/8 Nylocknut
18	13	500-100-022	2	Plastic Pipe
18	14	500-100-021	4	Plastic Bearing
18	15	550-100-016	4	Bracket
18	16	550-100-017	4	Spacer
18	17	500-100-135	4	Spring
18	18	550-100-018	2	Axle Plastic Roller
18	19	550-100-003	2	1/2 x 2 Bolt c/w Locknut
18	20	550-100-019	16	5/16 Carriage Bolt
18	21	550-100-020	4	3/16 Keystock
18	22	550-100-021	2	Grease Fitting
18	23	599-100-006	4	10-24 x 3/4 Machine Bolt
18	24	550-200-100	8	3/8 x 1 #5 bolt
18	25	550-200-101	8	3/8 locknut
Page #	Ref #	Part #	Qty	Description
18	26	550-200-102	2	3/8 x 2 1/2 bolt
18	27	550-200-103	2	Latch
18	28	550-200-104	2	3/16 lynch pin
19	1	599-100-100	1	Right Hoop Brace
19	2	599-100-101	1	Left Hoop Brace
19	3	599-100-102	1	Right Hoop Post
19	4	599-100-103	1	Left Hoop Post

19	5	599-100-104	2	Switch Adjuster Screw
19	6	599-100-105	1	Automatic Control Panel Mount
19	7	599-100-106	1	Manual Control Mount
19	8	599-100-110	4	1/2 x 4 1/2 Bolt
20	1	599-100-022 R	1	Right Side Safety Door Bracket
20	2	599-100-024 R	1	Right Safety Door
20	3	500-100-041	1	Rubber Latch
20	4	500-100-040	1	Pin
20	5	500-100-042	1	Cotter Pin
20	6	500-100-119	3	3/8 x 1 1/4 Bolt
20	7	550-100-026	3	3/8 Locknut
20	8	550-100-027	1	Door Stay
21	1	599-100-023 L	1	Left Side Safety Door Bracket
21	2	599-100-025 L	1	Left Safety Door
21	3	500-100-041	1	Rubber Latch
21	4	500-100-040	1	Pin
21	5	500-100-042	1	Cotter Pin
21	6	500-100-119	3	3/8 x 1 1/4 Bolt
21	7	550-100-026	3	3/8 Locknut
21	8	550-100-027	1	Door Stay
21	9	500-100-176	1	3/8 x 1 Bolt
21	10	550-200-050	1	Hoop Lock Pin
22	1	500-100-049	1	Drive Wheel Base
22	2	500-100-050	1	Hydraulic Motor Char Lynn 101-1004
22	3	500-100-051	1	Motor Hub
Page #	Ref #	Part #	Qty	Description
22	4	500-100-052	1	Drive Wheel
22	5	500-100-053	4	1/2 x 3 UNF Bolt
22	6	500-100-054	4	1/2 Wheel Nut
22	7	500-100-055	2	5/8 x 1 1/2 Bolt
22	8	500-100-056	2	5/8 Locknut
22	9	500-100-057	4	3/8 x 3/4 Bolt
22	10	500-100-038	4	3/8 Lockwasher
22	11	500-100-059	1	Check Valve (maual model only)
22	12	500-100-060	1	Wheel Washer
22	13	500-100-061	1	1/4 x 1 Bolt & Lockwasher
22	14	500-101-222	1	Relief Valve (manual model only)
22	15	500-101-231	1	Wheel Tensioner Spring
22	16	500-101-232	1	Spring Tensioner Bolt
22	17	500-100-076	2	1/2 Nut
22	18	550-100-090	1	Base Bracket
22	19	599-100-031	4	3/8 x 1 1/2 Bolt

23	1	500-100-063	4	Inner Seal
23	2	500-100-064	4	Inner Bearing
23	3	500-100-065	4	Inner Bearing Race
23	4	500-100-066	4	Hub
23	5	500-100-067	4	Outer Bearing Race
23	6	500-100-068	4	Outer Bearing
23	7	500-100-069	4	Flatwasher
23	8	500-100-070	4	Castellated Nut
23	9	500-100-071	4	Cotter Pin
23	10	500-100-072	20	Wheel Stud
23	11	500-100-073	4	Dust Cap
23	12	550-200-001	4	Rear Spindle Assy
24	1	500-100-152	1	7/8 x 8 Bolt
24	2	500-100-153	1	7/8 Locknut
24	3	550-111-012	2	Bushing (1-1/8 x 7/8 x 1-1/2)
24	4	550-221-008	1	Tongue Bracket
24	5	550-111-006	2	Rod End R Thread
24	6	550-111-003	2	3/4 Jam Nut (NF RH)
Page #	Ref #	Part #	Qty	Description
24	7	550-221-001	2	Tie Rod
24	8	550-111-007	2	Rod End L Thread
24	9	550-111-002	2	3/4 Jam Nut (NF LH)
24	10	550-111-004	4	9/16 NF Slotted Hex Nut
24	11	550-111-005	4	1/8 x 1 Cotter Pin
24	12	550-111-011	2	Tongue Bracket Seal CR20952
24	13	550-111-010	2	Bearing Cone (13686)
24	14	550-111-009	2	Bearing Cup (13620)
24	15	550-221-013	1	Tongue Timkin Pin
24	16	550-111-014	3	13/16 Flat Washer
24	17	550-111-015	3	3/4 Slotted Hex Nut
24	18	550-111-016	3	3/16 x 2 Cotter Pin
24	19	550-200-080	4	Spindle Bearing Cone L44643
24	20	550-200-081	4	Spindle Bearing Cup L44610
24	21	550-200-082	4	Spindle Bearing Seal CR523696
24	22	550-100-083	1	Left Spindle
24	23	550-100-084	1	Right Spindle
24	24	550-100-085	2	Spindle Timkin Bolt
25	1	550-100-028	1	Brake Rocker Tube
25	2	550-100-029	2	Brake Eccentric
25	3	500-100-113	2	1/2 x 3 1/2 Bolt
25	4	500-100-075	2	1/2 Lockwasher
25	5	500-100-076	2	1/2 Nut
25	6	500-100-082	1	2 1/2 x 8 Hydraulic Cylinder

26	1	500-100-086	5	Large Roller
26	2	599-100-007	1	Riser Frame
26	3	550-100-050	2	Lock Pin
26	4	550-100-030	10	1" Bearing
26	5	599-100-031	20	3/8 x 1 1/2 Bolt
26	6	500-100-038	20	3/8 Lockwasher
26	7	500-100-190	20	3/8 Flatwasher

27	1	550-100-033	1	Tail Base
27	2	500-100-086	5	Large Roller

Page #	Ref #	Part #	Qty	Description
27	3	500-100-099	1	4" Roller
27	4	550-200-106	3	2 7/8" Roller
27	5	500-100-092	6	3/4" Tube End Nylatron Bearing
27	6	550-100-030	12	1" Bearing
27	7	599-100-107	1	3 x 12 Hydraulic Cylinder
27	8	599-100-035	1	Tail Tiebar
27	9	599-100-031	28	3/8 x 1 1/2 Bolt
27	11	550-100-037	4	5/16 x 1 1/2 Flathead Bolt
27	12	599-100-008	2	1 x 4 Bolt
27	13	599-100-009	2	1" Nylocknut
27	14	550-200-002	2	First Small Roller Bracket
27	15	550-200-003	2	2nd Small Roller Bracket
27	16	550-200-004	1	Last Right Roller Bracket
27	17	550-200-005	1	Last Left Roller Bracket

28	1	550-100-038 R	1	Bale Saddle (Right Side)
28	2	550-100-039 L	1	Bale Saddle (Left Side)
28	3	500-100-125	8	1/2 x 1 1/4 Bolt
28	4	500-100-114	4	1/2 Locknut
28	5	550-200-107	4	1/2" Pin
28	6	550-200-108	4	3/16" Lynch pin

29	1	599-100-040	1	Ram
29	2	550-100-041	2	Ram Guide
29	3	550-100-042	4	Cylinder Pin
29	4	550-100-043	2	Hydraulic Cylinder
29	5	550-100-044	2	3/4 x 2 Bolt
29	6	550-100-045	2	3/4 Lockwasher
29	7	550-100-046	2	3/4 Flatwasher
29	8	500-100-145	2	1/4-28 Grease Fitting
29	9	500-100-139	2	1/2 x 4 Bolt
29	10	500-100-076	2	1/2 Nut
29	11	500-100-075	2	1/2 Lockwasher
29	12	599-100-109	4	1/2 x 2 x 2 HMWPVC
29	13	599-100-010	4	Slider Retainer

29	14	599-100-011	8	1/4 x 1/2 Hex Socket Bolt
Page #	Ref #	Part #	Qty	Description
29	15	550-200-109	2	Cylinder support Brkt
29	16	550-200-110	2	Cylinder Clamp
30	1	599-100-012	1	Push Off Left Front Arm
30	2	599-100-013	1	Push Off Right Front Arm
30	3	599-100-014	1	Push Off Left Rear Arm
30	4	599-100-015	1	Push Off right Rear Arm
30	5	599-100-016	1	Push Plate
30	6	599-100-017	2	X Bar
30	7	599-100-018	4	3/4 x 5 Hinge Bolt
30	8	599-100-019	4	3/4 Nylocknut
30	9	599-100-020	4	3/16 Linch Pin
31	1	599-100-047	1	Right Side Push Channel
31	2	599-100-048	1	Left Side Push Channel
31	3	550-100-050	3	Lock Pin
31	4	550-100-048	1	Push Off Tube
32	1	550-100-051	1	Main Tongue
32	2	550-100-052	1	Swinging Tongue
32	3	550-100-053	1	Sliding Tongue
32	4	500-100-151	1	Tongue Latch
32	5	500-100-154	1	Tongue Pin
32	6	500-100-155	2	5/8 x 5 Bolt
32	7	500-100-056	4	5/8 Locknut
32	8	500-100-157	2	5/8 x 4 1/2 Bolt
32	9	500-100-160	1	Tongue Holder
32	10	500-100-112	1	Hair Pin
32	11	500-100-103	1	2 x 16 Hydraulic Cylinder
33	1	550-100-054	2	Mud Flap
33	2	500-100-164	4	Metal Strip
33	3	500-100-165	12	5/16 x 1 Bolt
33	4	500-100-092	12	5/16 Lockwasher
33	5	500-100-093	12	5/16 Nut

Page #	Ref #	Part #	Qty	Description
34	1	500-100-168	1	Hydraulic Tank
34	2	500-100-169	1	Breather Cap
34	3	500-100-170	1	Filler Plug 1 1/4 Pipe
34	4	500-100-171	1	Sight Gauge
34	5	500-100-172	1	Filter Base
34	6	500-100-173	1	10 Micron Filter
34	7	500-100-174	1	Magnetic Drain Plug

34	8	500-100-175	1	Suction Filter
34	9	500-100-176	4	3/8 x 1 Bolt
34	10	500-100-038	4	3/8 Lockwasher
34	11	500-100-039	4	3/8 Nut
35	1	500-100-179	1	13 HP Honda Engine (rope start QA)
35	1	500-100-180	1	13 HP Honda Engine (electric start QNE)
35	2	500-100-181	1	Hydraulic Pump Prince # SP20A11A9HR
35	3	500-100-182	1	Engine - Pump Adapter
35	4	500-100-183	1	Love Joy Coupling (Pump Side)
35	5	500-100-184	1	Coupling Spacer
35	6	500-100-185	1	Love Joy Coupling (Engine Side)
35	7	500-100-176	4	3/8 x 1 Bolt
35	8	500-100-038	4	3/8 Lockwasher
35	9	500-100-188	2	3/8 x 1 1/4 Bolt
35	10	500-100-038	2	3/8 Lockwasher
35	11	500-100-190	2	3/8 Flatwasher
35	12	550-200-111	1	Fuel filter
36	1	500-100-196	1	Engine Cover
36	2	500-100-197	1	Valve Stack Decal Plate
36	3	500-100-198	1	Selector Valve Decal Plate
36	4	500-100-199	1	Selector Valve Decal Plate Bracket
37	1	500-200-192	1	Prince RD532CCCAA5A4B1
37	2	500-100-193	1	Flow Control Prince RD-150-08
37	3	500-100-194	1	1/2" Check Valve
37	4	500-100-195	1	Selector Valve
37	5	500-101-222	1	Relief Valve Prince RD18375
Page #	Ref #	Part #	Qty	Description
37	6	500-200-193	1	Prince # LS3010-1
37	7	550-200-112	1	Ball Valve
38	1	500-100-200	2	Continental Tandem Center 12 VDC VS12MBLGB75L
38	2	500-100-201	1	Continental Single Center 12 VDC VS12M1AGB75L
38	3	500-100-193	1	Flow Control Prince RD-150-08
38	4	550-100-055	1	2 Spool Monoblock Valve c/w Power Beyond
38	5	550-100-056	1	Triple Manifold Block
38	6	550-200-006	1	Steering Speed Control (needle valve)
38	7	550-200-007	5	12 VDC 48W Valve Coil
38	8	550-200-112	1	Ball Valve
38	9	550-200-113	2	Manifold mount
39		550-100-060		Limit Switch Assembly
39	1	550-100-057	1	Limit Switch Body
39	2	550-100-058	1	Limit Switch Actuator

39	3	550-100-059	2	Limit Switch Arm
39	4	550-100-082	2	Wire Clamp
39	5	599-100-049	2	Wire Arm
39	6	550-100-086	12	PVC Box Connector
39	7	550-200-086		Metric to Pipe Adaptor
40	1	550-200-061	1	Control Panel
40	2	500-100-221	5	Control Relay
40	3	500-100-223	5	11 pin Relay Base
40	4	550-100-079	1	15 amp Fuse
40	5	550-150-083	1	Din rail Fuse Holder
40	6	550-150-084	20	Din rail Terminal Block
40	7	550-100-074		Panel on/off --pre 2003 -- Dial Switch
40	8	550-100-075	1	Panel Rotate Push Button
40	9	550-100-076	2	Panel on/off Hand/Auto Dial Switch
40	10	550-100-077	2	Panel Ram and Steering Dial Switch
40	11	550-100-078	1	LED (light emitting diode)
40	12	550-150-085	1	Diode 1N5406 3 amp 600 V (100 V will work)
41	1	500-100-208	1	Trigger Plate
41	2	550-100-062	1	Trigger Spring
Page #	Ref #	Part #	Qty	Description
41	3	500-100-210	2	1/4 x 1 Stove Bolt c/w Nut & Lockwasher
41	4	500-100-211	1	Battery Holdown
41	5	500-100-212	2	5/16 x 7 Bolt c/w Nut & Lockwasher
42	1	599-100-063	1	Main Throttle Arm
42	2	599-100-064	1	Adjusting Bolt
42	3	550-100-069	1	Throttle Spring
42	4	599-100-065	3	Arm Bracket
42	5	550-100-067	3	Link Pivot
42	6	599-100-066	1	1/4 x 5 bolt c/w nut
42	7	550-100-065	3	Ball Joint
42	8	599-100-067	1	Engine Bracket
42	9	599-100-068	1	Rocker Bar
42	10	599-100-069	1	1/4 x 4 UNF Threaded Rod c/w 2 nut
42	11	500-100-165	6	5/16 x 1 Bolt
42	12	500-100-093	9	5/16 Nut
42	13	500-100-092	9	5/16 Lockwasher
42	14	599-100-070	3	5/16 x 1 1/2 Bolt
42	15	500-100-114	1	1/2 Locknut
43	1	550-200-117	1	7 Pin Plug
43	2	550-200-118	1	Junction Box
43	3	550-200-119	1	Strain Relief

43	4	550-200-120	1	7 Wire Conductor
43	5	550-200-121	2	Red Lamp
43	6	550-200-122	2	Amber Lamps
49	1	550-200-130	1	Right Arm
49	2	550-200-131	1	Left Arm
49	3	550-200-231	1	Switch mount
49	4	550-200-232	1	Trigger Plate
49	5	550-100-062	1	Spring
49	6	550-100-060	1	Limit Switch (check page 39)
49	7	550-200-233	2	Front tie Down Pin

Page #	Ref #	Part #	Qty	Description
50	1	550-200-234	1	Swich Bracket
50	1	550-100-060	1	Limit Saitch (check page 39)
50	1	550-200-235	1	Toggle Switch
51	1	550-200-134	1	Rim with Gear (not shown)
51	2	550-200-135	1	Main Assembly
51	3	550-200-1.36	1	Shoulder Bolt
51	4	550-200-237	1	Gear
51	5	550-200-138	1	Hydraulic Motor
51	6	550-200-236	1	Lock Pin
52	1	550-200-120	1	Crossover Relief Valve
52	2	550-200-121	1	Selector Valve
52	3	550-200-122	1	Selector Valve Mount
52	4	550-200-123	1	Mount Clamp
54	1	550-200-139	2	Twin Wrap Frame
54	2	550-200-140	4	Plastic Wrap Spool
54	3	550-200-141	10	3/8 x 1 Bolt c/w Nut lockwasher
54	4	550-200-115	4	Spool Holder
55	1	550-200-238	2	Roller
55	2	550-200-239	2	Spindle
55	3	550-200-233	2	Pin
55	4	500-100-112	2	Hair Pin
57	1	500-200-240	1	40 Amp Single wire Automotive Alternator
57	2	500-2000-241	1	Pivot Bracket
57	3	500-200-242	1	Belt A23
57	4	500-200-243	1	Modified Lvoejoy Coupler Pulley
57	5	500-200-244	1	Belt Tightener Bracket

Tube Line 5500

Wiring

