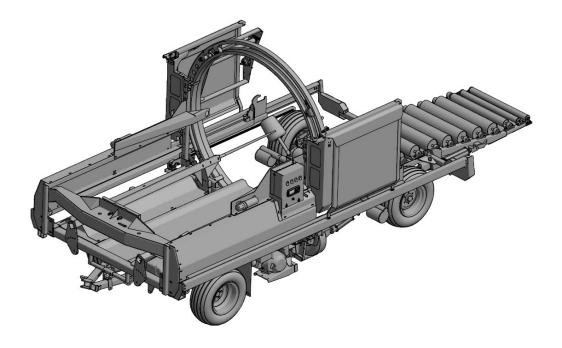
Tube-Line Bale Wrapper TL 5500ECV





Operator's Manual

36211 (08/22/14)

Serial # Decal

Serial Number

The implement serial number is located on the front of the frame. This number helps us to track changes and improvements and must be mentioned when ordering parts or requesting service. For your convenience, a space has been provided inside the front cover of this manual to record the serial number, model number, purchase date, and dealer name.

Model # :	
Serial # :	
Date Purchased :	
Dealer Name :	

Operator's Manual

Thank you for choosing the Tubeline TL5500ECV Bale Wrapper. Our hope is that it will give you many years of productive service. This machine is designed to wrap a continuous line of round bales in a film of plastic.

Please read and understand this manual and the machine before operation.

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 materials 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 its factory or elsewhere, at its 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 liability for any damages, which may result from the use or misuse by his employees or others.

Warranty coverage is null and void unless Warranty Registration form has been completely filled in and is on file at Tube-Line Manufacturing Ltd.

Safety

Take note! This safety alert symbol is found throughout this manual to call your attention to instructions involving yourself and others working around the machine.

Failure to follow these instructions can result in injury or death!



This symbol means

- Attention! Become Alert! Your Safety is involved!

Signal Words are used in this book.

Caution: Indicates a potentially hazardous situation that may result in injury. **Warning:** Indicates a potentially hazardous situation that could result is serious injury or death.

Danger: Indicates a hazardous situation that needs to be avoided. It is you the operator that needs to be aware of these dangers.

If you have any questions not answered in this manual, please contact your dealer or Tubeline Manufacturing Ltd.

6455 Reid Woods Drive, R. R. #4 Elmira Ontario, Canada N3B 2Z3 Email : sales@tubeline.ca Fax : (519)-669-5808 Tel : (519)-669-9488

Safety Guidelines

Safety of the operator is one of our main concerns, however we do hear of some accidents that could have been avoided if some precautions had been taken. To avoid personal injury study the following precautions and insist those working with you or for you, follow them.

In most cases the pictures will have the shielding in place, in some they may be removed, only to show a view behind the shield.

Keep all the shields, safety doors in place. If they become faulty and fail to work replace them. They are for your safety, do not operate the equipment with them removed.

Replace any decals that may be missing or that are not readable. Location of the decals is indicated in this manual.

Do not operate this machine while under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment should not be operated by children, or with those unfamiliar with the operation of the machine. Do not allow persons to operate this machine until they have read this manual and/or were instructed by a qualified person.

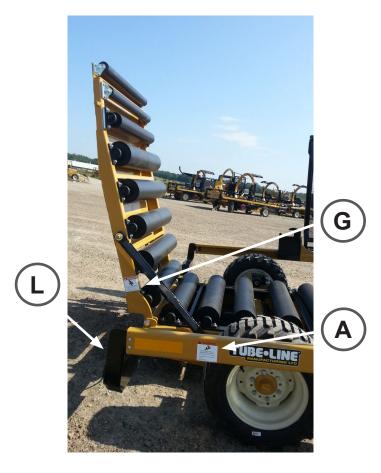
Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

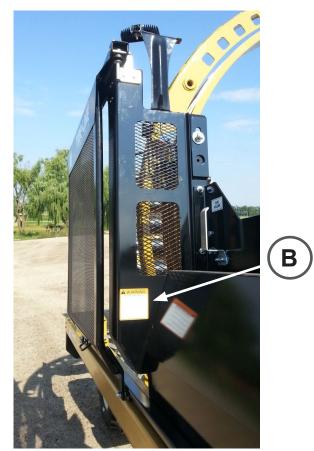
If the bale seems to be larger then the hoop do not try to force the material through as the film spools may touch the bale and break the plastic. If is stalls halfway through you can't back up, you will have to pull the bale apart by hand.

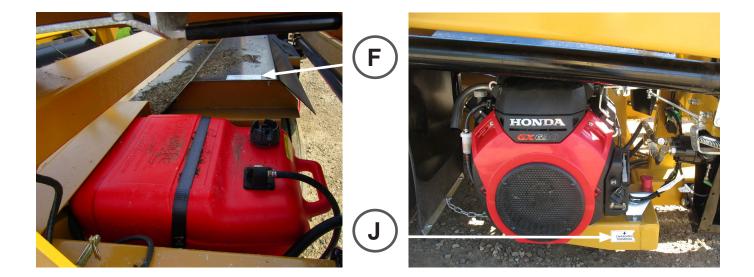
Lighting and Marking

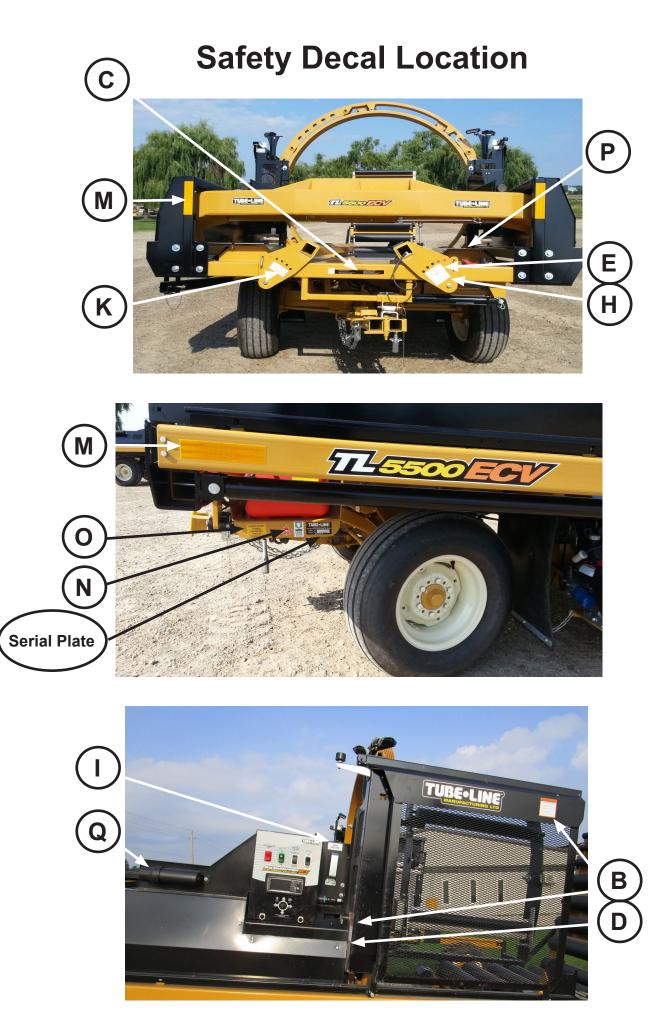
This machine is equipped with lights and reflectors as required by the most stringent government and ASAE specifications. They should work with the tractor 7-pin connector.

Safety Decal Location









ITEM – A PART # - DE23846



ITEM – B PART # - DE23845



• Do not stand or climb on machine when operating.

#DE23845

ITEM – C PART # - DE23942



A WARNING

Do not exceed this implement's maximum transport speed of 32km/h (20mph)

Exceeding this speed may result in loss of control during transport or braking and serious injury or death.

Transport only with a properly ballasted tractor and a properly attached safety tow chain. Do not transport with a motor vehicle. Reduce speed and use additional caution when on inclines, towing under adverse surface conditions, and turning. #DE23942

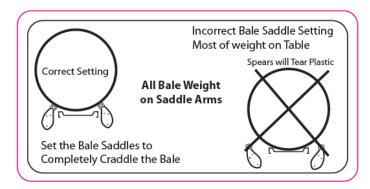


WARNING

High-Pressure hydraulic oil leaks can penetrate skin resulting in serious injury, gangrene, or death.

- Check for leaks with cardboard; never use hand.
- Before loosening fittings: lower load, release pressure, and be sure oil is cool.
- · Consult a physician immediately if skin penetration occurs.

ITEM – D PART # - DE23847



ITEM – E PART # - DE23959

ITEM – G PART # - DE23939

ITEM – F PART # - DE23971

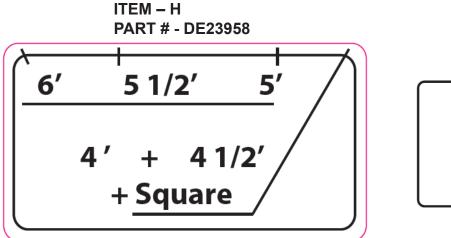
For Wrapping and Storage

Be sure <u>Vent Cap</u> on tank is <u>Loose</u>

#DE23971



 Stand clear to avoid being struck by arm being lowered.



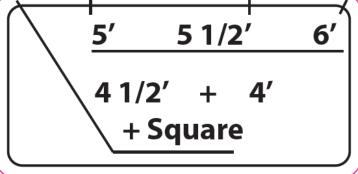
ITEM – I PART # - DE30881



ITEM – J PART # - DE30880



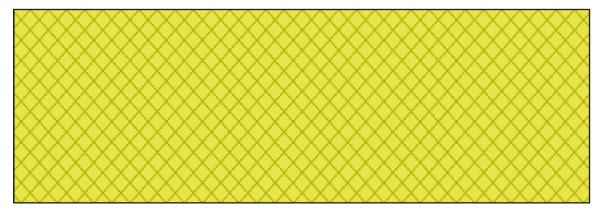
ITEM – K PART # - DE23957



ITEM - L (Back of Machine) PART # - DERED



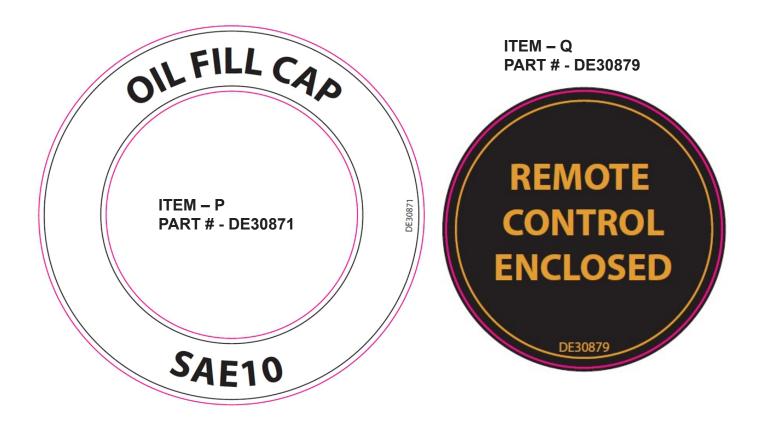
ITEM – M (Both Sides & Front of the Machine) PART # - DEAMBER





ITEM – O PART # - DE23941

CANADA PATENT 1285862 USA PATENT 4793124





- Keep safety signs clean and legible at all times Replace safety signs that are missing or illegible Decals are available through your dealer •
- •



Remember

Your best assurance against accidents or damage to the machine is to know how it operates. If you do not understand a portion of the manual or a function of the wrapper, please contact your dealer or an experienced operator.



Before Operation

- Carefully study and understand the manual or be trained by an experienced operator.
- Do not wear loose clothing that may get caught in moving parts.
- Visually inspect the machine to make sure no parts are loose or missing.
- Be sure that no tools are left on the machine.
- Make sure no hay is lying on the engine and that the cooling fins are not clogged with dust and hay (this could cause a fire)
- Do not hurry the learning process. Be familiar with one part before trying the next part.
- Practice by running the machine through its paces, first in Manual Mode with no bales in the machine until you are comfortable and familiar with the operation. After you become familiar with the operation, switch the machine to Auto Mode. Use a pole to push the table switch down to start the cycle.
- Do not reach in and push the switch paddle down by hand.



Never ride on the machine while being used or transported. Never climb on the table or inside the wrap chamber with the Engine running. Turn control panel to "man" or stop the engine when changing plastic rolls. Never leave it in "auto" as your helper may set a new bale on the table or press the start button on the remote.

Installation of Plastic



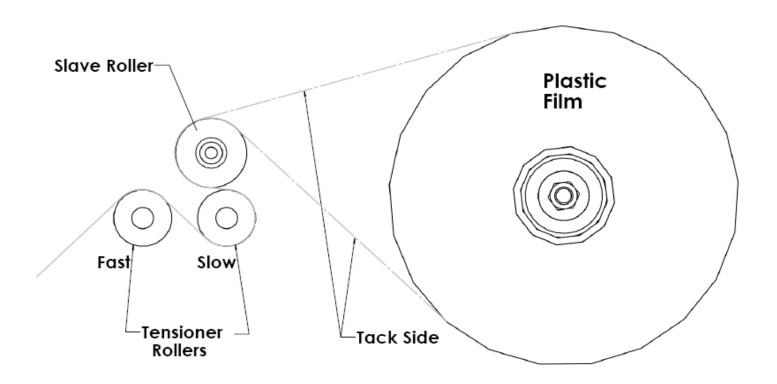
Danger! Stop Engine Before attempting to install plastic !

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

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

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

If there is a question of which is the faster roller turn one roller by hand and watch the speed of the other roller. You should be able to determine which roller is slower and which one is faster. 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 the layers is easily visible.

Check to determine if the plastic is properly routed through the Tensioner rollers.

- 2. Plastic tears between the Tensioner and the bale.
- See if film spool holders are turning freely. If not, lubricate and turn by hand until free.

Or

Check to see if the slave roller is turning freely. If not, lubricate and turn by hand until free.

Or

Test the Tensioner rollers. If not turning freely loosen the bolts holding the bearing and see if this makes a difference. It may be that the bearings are too constricted, in this case re-tighten the bearings and loosen the locking collar on the roller shaft. This will allow the shaft to slide in the bearing; re-tighten the bearing collar afterwards. The gears can also be meshed too tightly, this can be fixed by slightly loosening one set of bearing bolts and using a hammer and punch, lightly tap the bearing away from the other roller.

Caution - Do NOT hammer on the aluminum stretch rollers.

Or

Poor guality plastic film may also cause tears. Use a higher guality brand if this is the case.

Or

- Tack build up on the rollers can also cause tears, particularly in hotter climates. Clean the Tensioner with warm soapy water.
- Prolonged exposure to direct sunlight has caused the plastic film roll to become soft. In these conditions the spare rolls should be kept in a coller shaded area. After plastic film rolls have been installed on the machine, on can be parked on the bottom and a cover can be placed on the top one.

Or

Or

Rolls of plastic may catch on the bottom of the bale. If bales are miss-shaped the roll of plastic may ٠ catch on the bottom of the bale, causing the plastic to break.

Bale Guide Bars / Riser

The bale guide bars are designed to aling the round bales as they are set on the wrapper. These bars should be adjusted to the narrow setting to wrap round bales up to 5' in diameter. For larger bales, use the wide setting

Caution ! It is important that the bale sit firmly on the deck, as the bale spears should deflect the hay somewhat. Failure to do this may cause the plastic to stick to the spears and tear the plastic inside the bale.

Big Bale Silage

The objective og big bale silage is to provide high guality 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 high quality stretch wrap.

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

Bales

Firm well-shaped bales are necessary for successful wrapping, using a hard-core baler. Bales are best wrapped as soon as possible after baling. If bales are left unwrapped they will sag and loose shape. Heating will start soon after baling and protein quality will be lost. It is desirable to wrap within four (4) hours. In an emergency, such as impending rain, bales can be left for 12 - 16 hours. **Bale Size**

Round Bales - The TL5500ECV will wrap bales up to 5' x 5 $\frac{1}{2}$ ' It will wrap all sizes smaller than this 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 diameter to 4-4 ½', even though the wrapper will handle larger size.

Square Bales - The TL5500ECV 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 reciever. This is also the maximum length advisable to handle big square bales of silage.

Wrapping Straw

The TL5500ECV wrapper can be used to weather protect straw. Only two layers of plastic are necessary. If the straw is. it may be wrapped continually without spaces. Straw ithat some moisture is best wrapped with spaces in the plastic.

Moisture

Successful silage can be made over a wide moisture range. In general, 40 - 50 % moisture is satisfactory for dairy cattle. Beef farmers may prefer 60 - 70 % moisture as it lowers consumption. 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 fewer odors

- 3. Less freezing in the winter
- 4. Higher dry matter intake

Wrapping Site

- Select a site that will allow room to make an adequate bale row length. The TL5500AX2 is a very fast wrapper, however it requires time to set-up and move to a new line. There should be space for at least 50 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 wrapper. Avoid soft ground, as the wrapper will not move forward smoothly if it is sinking into the ground. Wrap on level ground or on a slight uphill grade.
- A site free from grass and debris will be less likely to attract rodents that can damage the plastic.





We suggest the following method of operating the TL5500ECV Tubeline Wrapper

- Park the wrapper where you want the end of the row to be, facing in the appropriate direction with wrapper in up position.
- Apply parking brake and fold in the first section of the tongue and fasten the bracket into the hydraulic steering slider with the pin that held the tongue.

To Wrap Bales with Model TL5500ECV

Before the first bale that will stay on the line is placed on the wrapper, place an end cap on the bale. (Check with your plastic supplier for suggestions.)

- Pull about 4 ft of plastic through each stretcher and tie it under the twine on the bale, or tie it in the slots on the hoop brace (both sides)
- Start the machine by starting the engine under the table on the left hand side. You may need to choke it on the first use.
- You will see a control panel mounted above the engine, turn the ON/OFF switch to ON, you should see the control panel and the ON/OFF switch light up.
- With the control panel set to Manual Mode press the Ram REV button to advance the bale without the plastic stretcher applying plastic.
- As the bale is pushed through the hoop, start the hoop rotating to apply plastic by pushing the "Rotate" button (with the Ram REV button)
- When the ram hits the switch at the end of the stroke the forward motion on the cylinder will stop. More about this later.
- With the wrapper set to Manual Mode the panel buttons will have to be pushed and held, if you let them go the function will stop.
- Pressing the Ram FWD will retract the ram and open the bale pusher to accommodate the next bale.
- Wrap the 1st few bales in Manual Mode until the first bale overhangs the rear of the machine by 6 inches. Lower machine to the ground and **disengage parking brake**, if equipped with a power drive, **disengage the hydraulic lever**.
- **Note!** You may want to leave some weight on the wheels until the wrapper starts moving to avoid bales from sliding on the ground.
- After you have wrapped a few bales in this way, press the Auto/Manual button to set Auto Mode and place bale on the bale table. As the bale depresses the table trigger ram will start automatically.

Danger - The use of automatic setting when pushing off bales can cause severe injury or death.

Warning

To stop the cycle: after the cycle has started in Automatic Mode, press the Auto/Manual button for Manual Mode (or if you have the optional remote kit, push the Stop button on the hand unit to stop the cycle.

For safety reasons, safety switches are installed in the doors. In Auto Mode the safety doors must be closed for the machine to work. In Manual Mode these switches reduce hoop and ram switches.

Steering

This wrapper is equipped with hydraulic steering. The purpose of this is to keep the wrapper operating in a straight line or to direct the wrapper around obstacles. If the ground is uneven or the wrapper is operated on the side of a 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. When steering around obstacles in the wrapping path do not make sharp turn as this prevents the bales from being tightly packed together.

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

Brake

The brake is operated by pressing the "Brake" button on your display. Moving the joystick to the left applies oil pressure to the brakes on the rear wheel. Increase pressure to the point where the bales are firmly packed together. Close the brake valve to maintain positive pressure on the wheels and FULLY RELEASE BRAKES when the row is finished and prior to transporting the wrapper.

Optional- Remote Control

With the remote control the machine can be controlled with a hand held 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 all the electric current to the Control Panel and also Engine Stop. When stopping the machine, switching the engine to OFF is advised. This will avoid draining the battery.

Pushing the Last Bale Off the Wrapper

The wrapper must be in Manual Mode to push the last bale off.

To push off the last bale :

- Open the bale pusher by pivoting the handle under the ram to the opposite side of that machine.
- Start pushing the bale through the wrapper by using the reverse button and wrap button on the control panel. Continue pushing the bale through the wrap chamber until you have reached the end of the stroke.
- Retract the bale pusher
- Open the safety doors, remove 2 x 3 tube from the Hydraulic tank side of the wrapper and lay it across the top of the pushoff brackets (lower pushoff to other side if machine is equipped with optional folding pushoff).
- Open the bale pusher, store the 2 x 3 tube in bracket, secure with lock pin
- Undo steering, unfold tongue and insert lock pin.
- Make sure the brakes are released before driving away.



Post Operation

Remember to turn off the control panel when turning off the machine, if the green ON/OFF switch is lit on your control panel, it indicates the control panel is still powered. Leaving the control panel on for long periods of time will drain your battery. Also if you have the engine start turned to electric only remember to turn the engine off and remove the key.

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

Feeding Livestock

When its time to take a bale off a row all that is needed is a loader tractor. You can pick up bales without cutting the plastic, as the plastic will break away between bales and can be removed from the side of the bales before dropping the bales in the feeder.

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 and spoil.

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. Plastic, although bulky, is inserted in a landfill and will not pollute the ground water. Manufactures are making serious efforts to economically recycle silage plastic. Use recycling services when available. Please do not burn the plastic! Collect and dispose all plastic in an Environmentally Friendly manner.

Remember the air and the ground that you contaminate is your visible footprint for many generations!

Unsightly used silage film will encourage complaints.



Control Screen Operation

After the machine is started and the control panel screen is on you should see either a manual or automatic screen. The following screens show the different functions of the TL5500ECV.

Please note that functionality will vary with different installed features.

Auto Home Screen

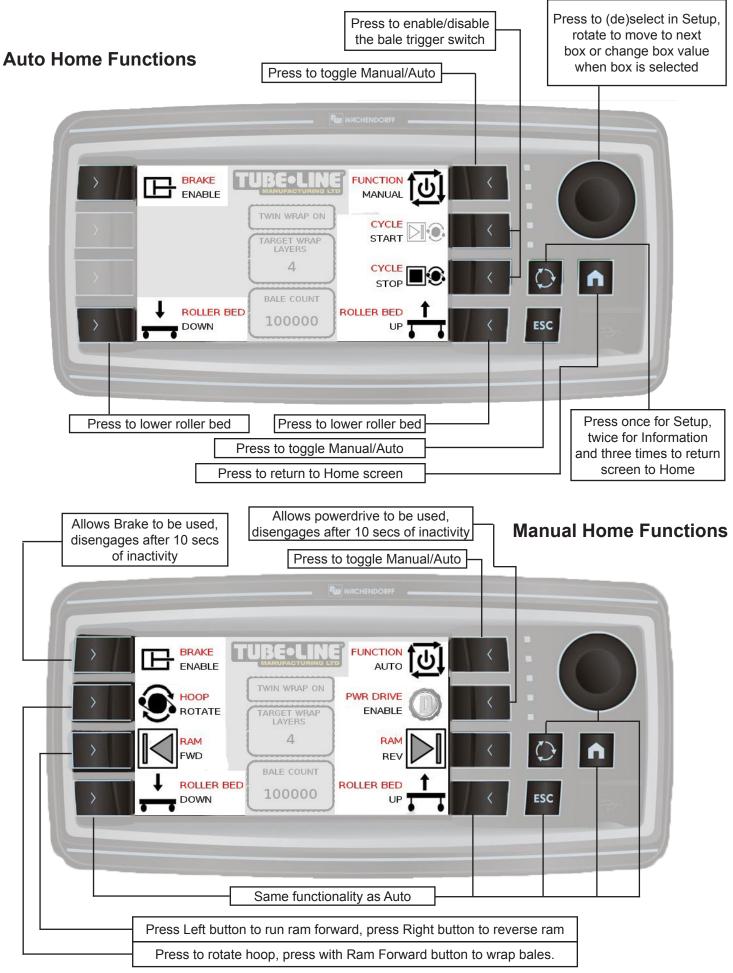
BRAK	
> 	TARGET WRAP LAYERS 4 CYCLE
>	

Manual Home Screen

HOOP
ROTATE RAM FWD ROLLER BED DOWN ROLLER BED DOWN ROLLER BED DOWN ROLLER BED COMPANY RAM REV COMPANY RAM REV COMPANY RAM REV COMPANY RAM REV COMPANY ROLLER BED COMPANY ROLLER C



Error Message : If, while operating, you see one of these errors where the Tubeline decal is, stop the machine and check that the doors are fully closed and that the film has not ripped or is empty.



Setup Screen

	<u>SETU</u>	<u>IP</u>		<	. /	
TWIN WRAP	YES	36	AUTO WRAP BALE WIDTH [IN]			
TARGET WRAP LAYERS	10	42	AUTO WRAP BALE OPENING [IN]	<		
FILM SENSOR	DISABLED	6	AUTO HOOP START DELAY [IN]	<	\bigcirc	n
POWER DRIVE TIMER [s]	10	6	BALE COUNT ADJUST	<	ESC	

Information Screen

>		INFOR	MATION		<	: /	
	TOTAL BALES MACHINE LIFETIME	100000	LEFT DOOR	CLOSED -		- (
	ECU VERSION	REV X. 00000	RIGHT DOOR	CLOSED			1
>	DISPLAY VERSION	REV X. 00000	BALE IN SWITCH	BALE NOT DETECTED	<		\checkmark
	REMOTE STEER	INACTIVE	FILM SENSOR	FILM NCT DETE			
>	REMOTE STEER RIGHT	INACTIVE	RAM HOME SWITCH	RAM NOT HOME	<	07	
	REMOTE CONTROL	INACTIVE	HOOP PRESSURE	2500		~	
	REMOTE CONTROL	ACTIVE	JOYSTICK X [mV]	4500			
>	RAM POSITION (INCHES)	0.24	JOYSTICK Y [mV]	500	<	ESC	- Sec

In the setup screen you may change settings to customize the wrapping operation.

- Switch Twin Wrap box to "YES" if you have installed this option (4 rolls instead of normal 2) Target Wrap Layers : Change amount from 2-20 layers per bale •
- •
- Disable the film sensor as needed •
- •
- Add more time before power drive auto disengages Change to different preset bale widths (36",48",60") •
- Change to different complete ram travel length (default is 42")
- Change to different length the ram will travel before the hoop starts rotating (default is 6")
- Set Bale Count Adjust to zero at start of new job •

Control Panel



Trouble Shooting / Maintenance



Be Safe, never ride on the machine while being used or transported. Never climb on the table or inside the wrap chamber with the Engine running.

Use Manual Mode or stop the engine when changing plastic rolls. Never leave it in Auto Mode as your helper may set a new bale on the table or press the start button on the remote.

Installation of Plastic

Procedures for maintenance, repairs or plastic rolls replacement :

- 1. Push the Emergency Button
- 2. Remove the key from the motor (has to be kept by the end user to avoid accident)
- 3. Do the required maintenance / repairs

Turn control panel off to avoid wasting battery if repairs are lengthy

Plastic Installation

- 1. Wrinkles in the plastic with seams between layers easily visible. Check to determine if the plastic is properly routed through the Tensioner rollers.
- 2. Plastic tears between the Tensioner and the bale. Film spool holders: not turning freely. Lubricate and turn by hand until free. Slave roller not turning freely. Lubricate and turn by hand until free.
- 3. Tensioner rolls not turning freely : Loosen the bolts holding the bearing and check if this makes a difference. It may be that the bearings have too much end pressure, in this case re-tighten the bearings and loosen the locking collar on the roller shaft this will allow the shaft to slide in the bearing; re-tighten the bearing collar. The gears can also be meshed too tight; this can be fixed by slightly loosening one set of bearing bolts. Using a hammer and punch, lightly tap the bearing away from the other roller.

Caution - Do not use a hammer on the aluminum stretcher rolls.

- 4. Poor quality plastic: Use a brand with good tear resistance.
- 5. Tack build up on the rollers, particularly in hot weather : Clean the Tensioner with warm soapy water.
- 6. 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 the rolls have been installed on the machine one can be parked on the bottom and a cover can be placed on the top one Rolls of plastic may catch on the bottom of the bale. If bales are misshaped the roll of plastic may drag on the bottom of the bale, causing the plastic to break.



Danger! Stop engine before attempting to install plastic.

Transportation / Storage

Brake

The TL5500ECV is equipped with a manual parking brake in rear left wheel. If the wrapper is equipped with optional POWER DRIVE, the power drive is engaged and used as a parking brake.

Notice - Make sure BRAKE IS DISENGAGED before transporting the wrapper.

Caution

Before moving the wrapper any distance close the fuel valve at the engine! As the machine is towed it will bounce and shake, as it does this the carburetor float will let too much fuel into the system. Raw fuel can get into the engine cylinder and wash the cylinder walls down and end up in the engine oil.

OBSERVE MAXIMUM TRANSPORT SPEED

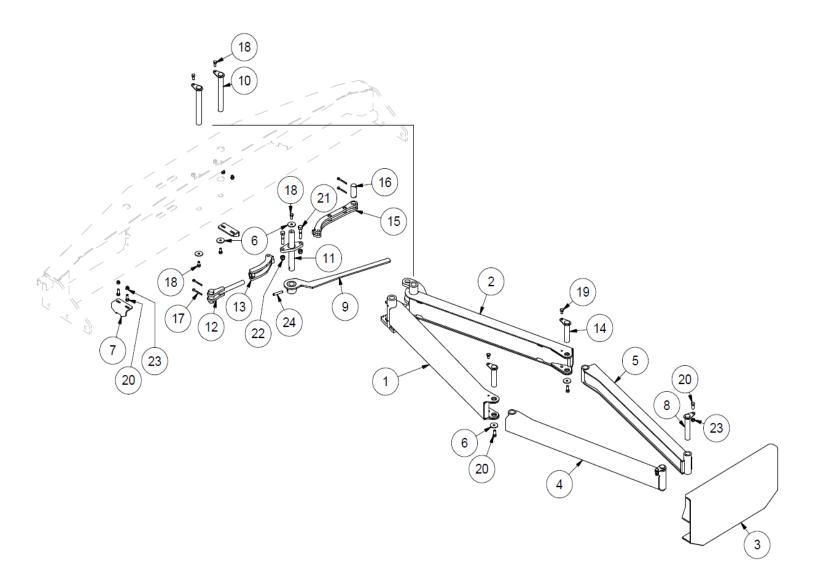
The maximum transport speed for this implement is 32 km/h (20 mph). Some tractors are capable of operating at speeds that exceed the maximum transport speed of this implement. Regardless of the maximum speed capability of the tractor being used to tow this implement, do not exceed the implement's maximum transport speed. Exceeding the implements maximum transport speed can result in: - Loss of control of the tractor/implement combination - Reduced or no ability to stop during braking - Implement tire failure - Damage to the implement structure or its components Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and when on inclines. Do not attempt transport if the fully loaded implement weighs more than 1.5 times the weight of the tractor.

Tires

Proper tire pressure is 36 psi and should be maintained at all times. On the rear axle replace tire with the same type and brand if possible. If this is not practical then replace with a tire that has the same outside diameter.

TL5500ECV Parts Lists & Breakdowns

TL5500ECV Front Pushoff

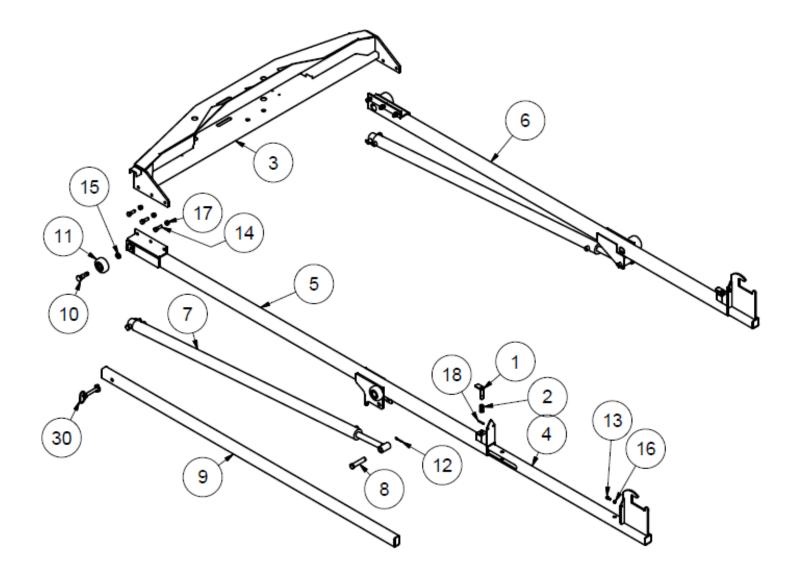


To order complete ram assembly (includes 30927, see next page), use part #: 31935

TL5500ECV Front Pushoff

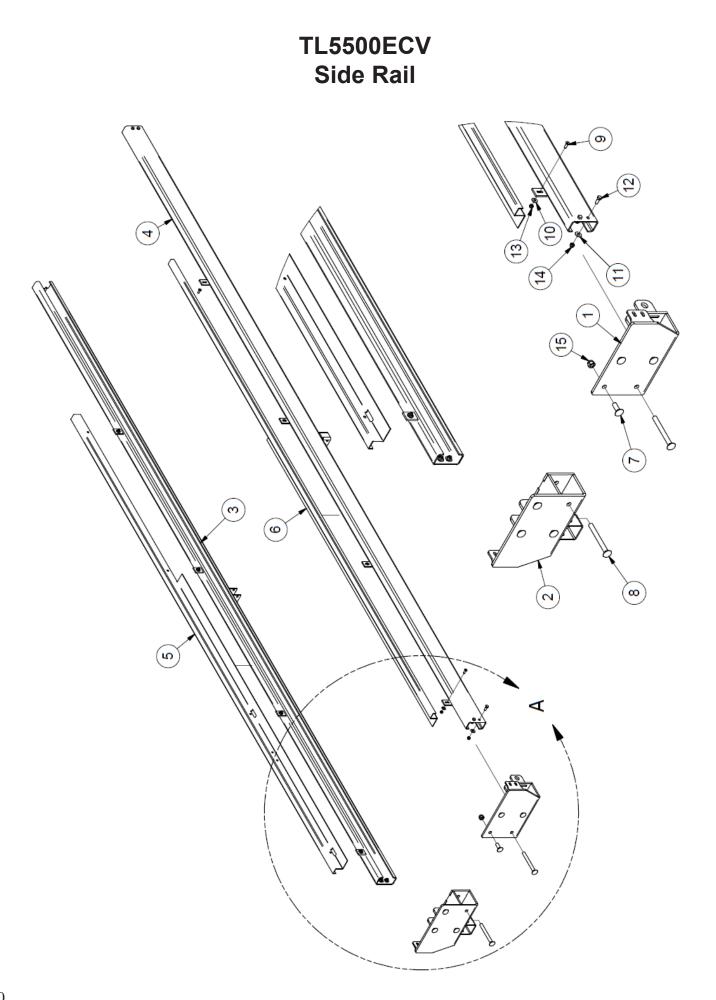
Item	Qty	Part #	Desciption
1	1	30455	Left Large Arm
2	1	30456	Right Large Arm
3	1	30459	Push Plate
4	1	30457	Left Small Arm
5	1	30462	Right Small Arm
6	5	30924	Pin Washer
7	2	30958	Handle Holder
8	2	30980	Last Pushoff Plate Pin
9	1	30981	Last Pushoff Handle
10	2	30982	Pushoff Middle Pin
11	1	30983	Linkage Pivot
12	1	30985	Linkage Adjuster
13	1	30986	Pivot Adjuster
14	2	30988	Arm Joint Pin
15	1	30989	Solid Pivot Arm
16	2	30993	Ram Linkage Mount Pin
17	4	Obtain Locally	CP .188 X 2 Cotter Pin
18	5	Obtain Locally	HB .375 X .75 Hex Bolt
19	2	Obtain Locally	HB .375 X .5 Hex Bolt
20	8	Obtain Locally	HB .375 X 1 Hex Bolt
21	2	Obtain Locally	HB .5 X 2.25 Hex Bolt
22	2	Obtain Locally	LN .5 Lock Nut
23	6	Obtain Locally	LN .375 Lock Nut
24	1	Obtain Locally	RP .375 X 2 Roll Pin

TL5500ECV Ram



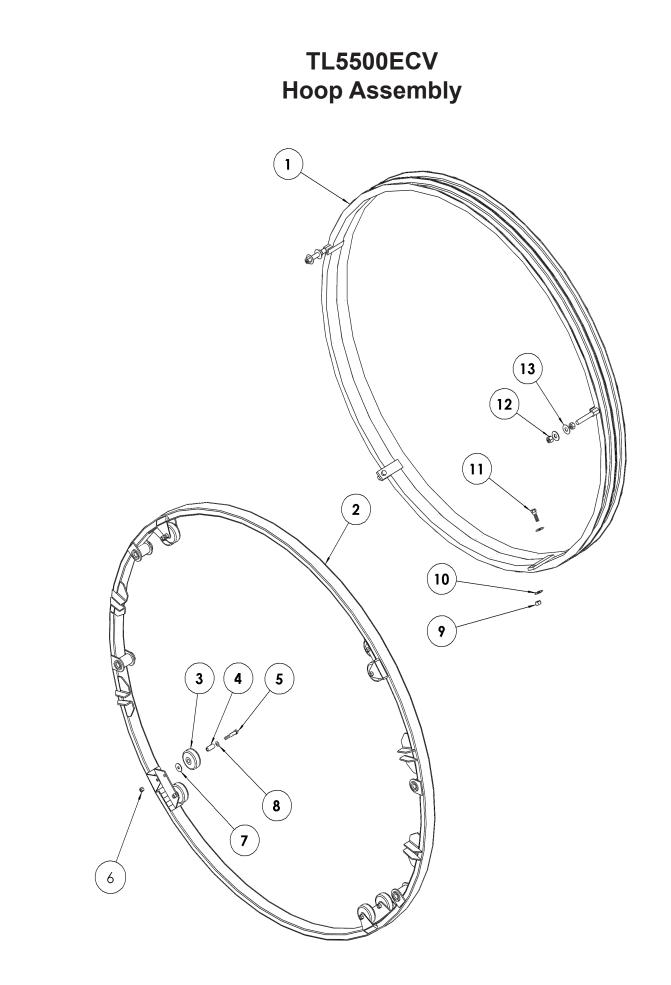
TL5500ECV Ram

Item	Qty	Part #	Desciption
1	2	27230	Pushoff Latch Pin
2	2	27566	Last Pushoff Spring Pin
3	1	30899	Ram
4	2	31397	Rear Extension
5	1	31398	Left Side Ram Tube
6	1	31399	Right Side Ram Tube
7	2	TL550-100-043	Ram Cylinder
8	4	TL550-100-042	Ram Cylinder Pin
9	1	TL500-301-048	Pushoff Tube
10	4	TL5X2-301-156	Ram Wheel Axle
11	4	TLWHEEL0205	Ram Wheel
12	4	Obtain Locally	CP .188 X 2 Cotter Pin
13	4	Obtain Locally	HB .375 x 1 Hex Bolt
14	6	Obtain Locally	HB .625 x 2 Hex Bolt
15	4	Obtain Locally	HJN .75 Hex Jam Nut
16	4	Obtain Locally	LN .375 Lock Nut
17	6	Obtain Locally	LN .625 Lock Nut
18	2	Obtain Locally	RP .25 x 2 Roll Pin
	2	TLSPK25	Ram Cylinder Seal Kit



TL5500ECV Side Rail

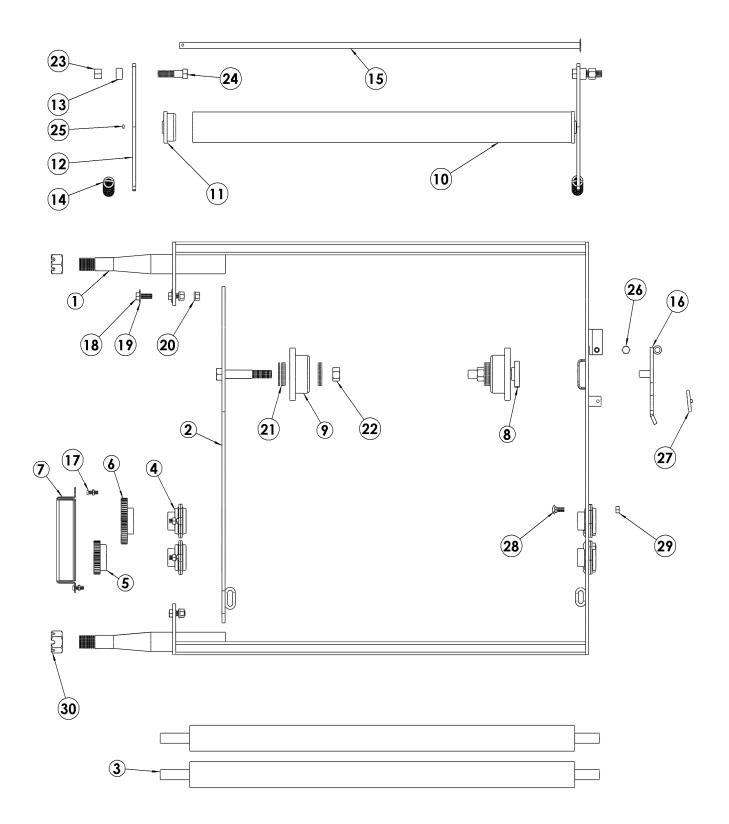
Item	Qty	Part #	Description
1	1	32728	Left Front Corner
2	1	32729	Right Front Corner
3	1	TL5X2-301-170	Right Side Rail
4	1	TL5X2-301-171	Left Side Rail
5	1	TL5X2-301-172	Right Door Track
6	1	TL5X2-301-176	Left Guard Track
7	4	Obtain Locally	CB .625 x 1.75 Carriage Bolt
8	4	Obtain Locally	CB .625 x 6 Carriage Bolt
9	8	Obtain Locally	FCSHS .313 x 1 Flathead Bolt
10	8	Obtain Locally	FW .313 Flatwasher
11	4	Obtain Locally	FW .375 Flatwasher
12	8	Obtain Locally	HB .375 x 1 Hex Bolt
13	8	Obtain Locally	LN .313 Lock Nut
14	4	Obtain Locally	LN .375 Lock Nut
15	8	Obtain Locally	LN .625 Lock Nut



TL5500ECV Hoop Assembly

Item	Qty	Part #	Description
1	1	TL550-100-002	Inner Hoop
2	1	TL550-301-001	Outer Hoop
2A		TL5X2-500-101	Complete Outer Hoop (Items 2-8)
3	8	TL500-200-014	4" Hoop Wheel
3A		TL5X2-500-102	Complete 4" Hoop Wheel
4	8	TL550-200-016	Spanner
5	8	TL500-100-015	Axle Bolt
6	8	Obtain Locally	LN 1/2-20 Steel Locknut
7	8	Obtain Locally	FW 1/2 Fender Washer
8	8	Obtain Locally	SAE 1/2 Washer
9	2	Obtain Locally	LN 5/8-11 Locknut
10	4	Obtain Locally	FW 5/8 Flat Washer
11	2	Obtain Locally	HB 5/8-11 X 2 Gr.5 Hex Bolt
12	4	Obtain Locally	LN 3/4-10 Locknut
13	4	Obtain Locally	FW 3/4 Flat Washer

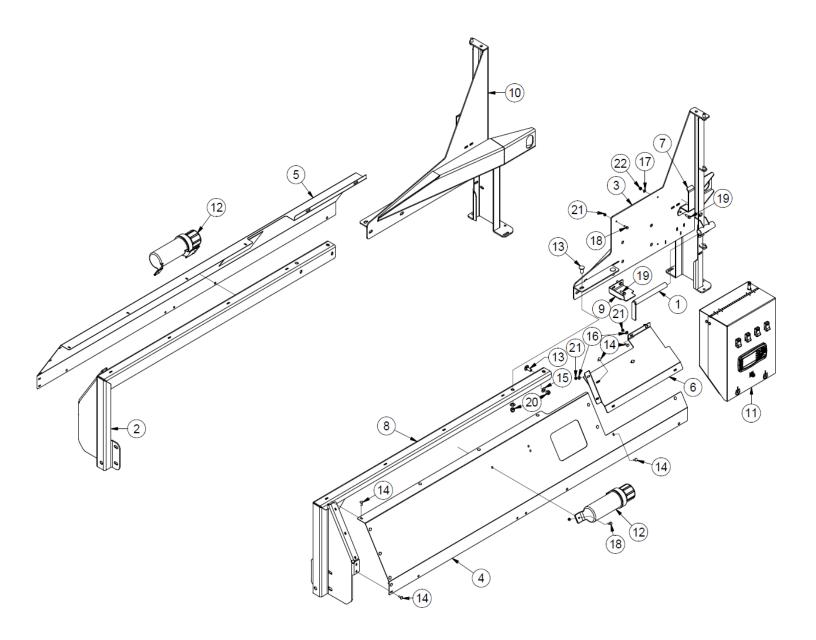
TL5500ECV Wrap Carrier



TL5500ECV Wrap Carrier

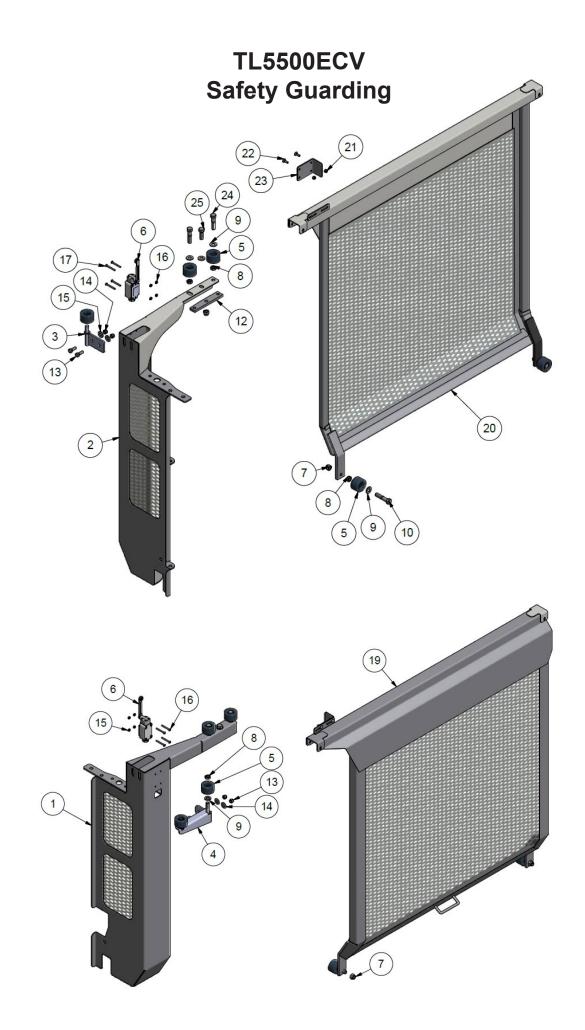
Item	Qty	Part #	Description
1A	2	TL550-100-072	Complete Wrap Carrier
1	2	TL550-100-089	Main Wrap Bracket
2	2	TL550-200-090	Main Wrap Side Insert
3	4	TL550-100-006	Tensioner Rollers
4	4	TL550-100-007	³ ⁄ ₄ Bearing c/w Flange
5	2	TL550-100-008	Small Gear
6	2	TL550-100-009	Large Gear
7	2	TL550-100-010	Gear Cover
8A		TL5X2-500-103	Spool Holder c/w Parts (Ref # 8,9,21,22)
8	2	TL550-200-115	Spool Holder
9	4	TL550-200-012	Plastic Wrap Spool
10A	2	TL5X2-500-104	Slave Roller c/w End cap (Ref # 10,11)
10	2	TL550-100-022	ABS Pipe
11	4	TL500-100-021	HMWPVC Plastic End Cap
12	4	TL550-100-016	Slave Roller Mount Bracket
13	4	TL550-100-017	Spacer
14	4	TL500-100-135	Tensioner Spring
15	2	TL550-100-018	Slave Roller Axle Shaft
16	2	TL550-200-103	Spool Latch
17	8	Obtain Locally	10-24 x 3/4 Bolt c/w nut & Lockwasher
18	8	Obtain Locally	3/8-16 x 1 Bolt Gr.5
19	8	Obtain Locally	3/8 Flatwasher
20	10	Obtain Locally	3/8-16 Locknut
21	20	Obtain Locally	5/8 Flatwasher
22	4	Obtain Locally	5/8-11 Locknut
23	4	Obtain Locally	1/2-13 Locknut
24	4	Obtain Locally	1/2-13 x 2 Bolt Gr.5
25	2	Obtain Locally	1/8 Cotter Pin
26	2	Obtain Locally	3/8-16 x 2 1/2 Bolt Gr.5
27	2	Obtain Locally	3/16 Linch Pin
28	16	Obtain Locally	5/16-18 x 3/4 Carr Bolt
29	16	Obtain Locally	5/16-18 Locknut
30	4	Obtain Locally	1"-14 UNF Slotted Nut

TL5500ECV Hoop Brace



TL5500ECV Hoop Brace

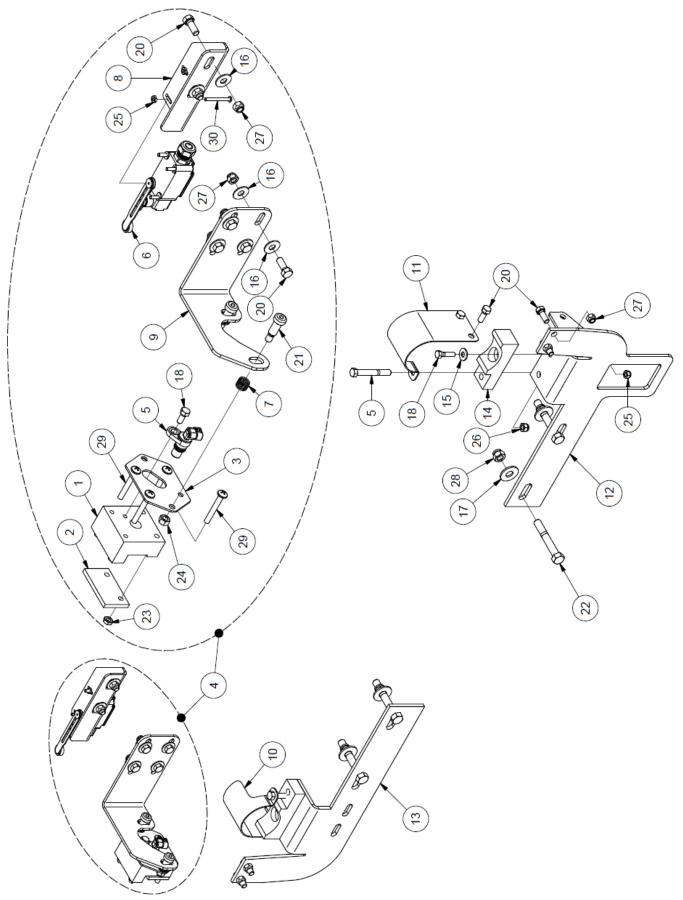
Item	Qty	Part #	Description
1	1	25667	Hoop Lock Pin
2	1	32788	Right Front Hoop Brace
3	1	33361	Control Panel Mount
4	1	35387	Left Side Shield
5	1	35388	Right Side Shield
6	1	35606	Control Panel Shield
7	2	35621	Tape Holder
8	1	35634	Left Rear Hoop Brace
9	1	35638	Hoop Lock
10	1	35640	Right Rear Hoop Brace
11	1	36043	Control Panel
12	2	TL5X2-201-111	Manual Holder
13		Obtain Locally	CB .5 X 1.25 Carriage Bolt
14		Obtain Locally	CB .25 X .75 Carriage Bolt
15		Obtain Locally	FW .5 Flatwasher
16		Obtain Locally	FW .25 Flatwasher
17		Obtain Locally	FW .313 Flatwasher
18		Obtain Locally	HB .313 x 1 Hex Bolt
19		Obtain Locally	HB .24 x .75 Hex Bolt
20		Obtain Locally	LN .25 Locknut
21		Obtain Locally	LN .5 Locknut
22		Obtain Locally	LN .313 Lock Nut



TL5500ECV Safety Guarding

ltem	Qty	Part #	Description
1	1	TL5X2-100-025	Left Safety Guard
2	1	TL5X2-100-024	Right Safety Guard
3	1	TL5X2-301-103	Right Top Door Roller Bracket
4	1	TL5X2-301-120	Left Top Door Roller Bracket
5	6	TL5X2-301-121	Door Roller
6	2	TL550-100-060	Limit Switch
7	6	Obtain Locally	1/2-13 Locknut
8	8	Obtain Locally	1/2-13 Jam Nut
9	4	Obtain Locally	1/2 SAE Flatwasher
10	4	Obtain Locally	1/2-13 x 2 1/2 Bolt Gr.5
11	1	TL550-200-050	Hoop Lock Pin
12	1	Obtain Locally	5/16-18 Locknut
13	1	Obtain Locally	5/16-18 x 1 Bolt Gr.5
14	4	Obtain Locally	3/8-16 x 1 1/4 Bolt Gr.5
15	4	Obtain Locally	3/8-16 Locknut
16	4	Obtain Locally	3/8 Flatwasher
17	8	Obtain Locally	10-24 Nut
18	8	Obtain Locally	10-24 x 1 3/4 Bolt Gr.5
19	1	31562	Left Door Weldment
20	1	33222	Right Door Weldment
21	4	Obtain Locally	1/4 Lock Nut
22	4	Obtain Locally	1/4 x 3/4 Carriage Bolt
23	2	25062	Door Switch Tab
24	4	Obtain Locally	HB 1/2-13 x 4 Bolt
25	2	Obtain Locally	HB 1/2-13 x 1.5 Hex Bolt

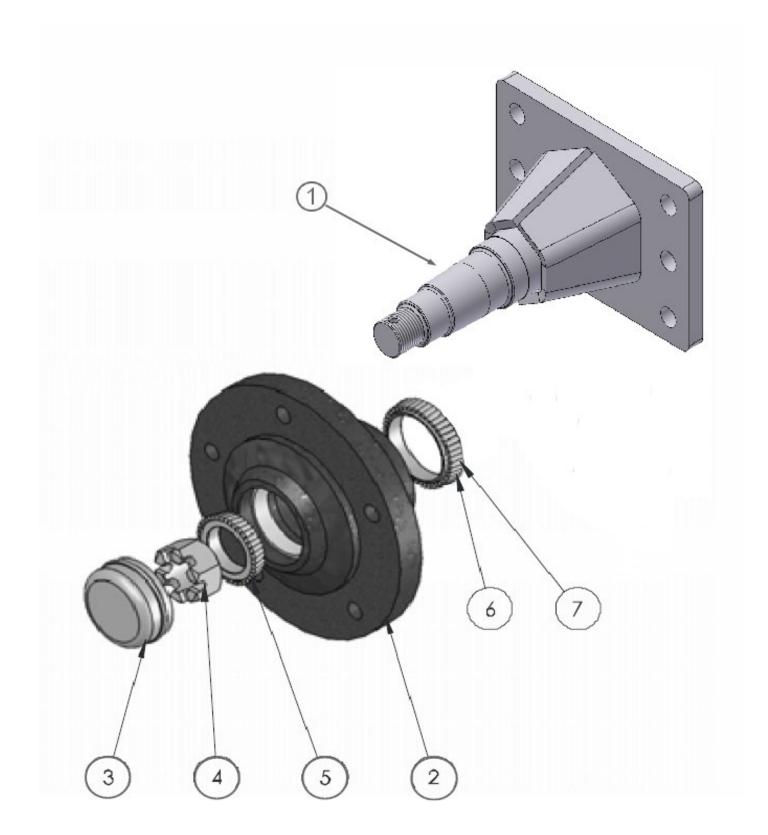
TL5500ECV Cylinder Support



TL5500ECV Cylinder Support

Item	Qty	Part #	Description
1	1	31712	Sensor Guide Block
2	1	31713	Sensor Guide Strip
3	1	31714	Speed Sensor Spacer
4	1	32510	Complete Speed Sensor
5	1	32632	Speed Sensor
6	1	32633	Switch
7	2	36034	Spring
8	1	36096	Sensor Mount
9	1	36098	Speed Sensor Bracket
10	1	TL5X2-100-132	Left Cylinder Clamp
11	1	TL5X2-100-133	Right Cylinder Clamp
12	1	TL5X2-301-130	Right Ram Cylinder Mount
13	1	TL5X2-301-131	Left Ram Cylinder Mount
14	2	TL550-200-109	Rubber Clamp
15	2	Obtain Locally	FW .313 Flat Washer
16	12	Obtain Locally	FW .375 Flat Washer
17	4	Obtain Locally	FW .5 Flat Washer
18	1	Obtain Locally	HB .313 x .75 Hex Bolt
19	2	Obtain Locally	HB .313 x 1.25 Hex Bolt
20	14	Obtain Locally	HB .375 x 1 Hex Bolt
21	2	Obtain Locally	HB .5 x 1 SS Shoulder Screw
22	4	Obtain Locally	HB .5 x 3.5 Hex Bolt
23	4	Obtain Locally	HN .313 Hex Nut
24	12	Obtain Locally	HN .375 Hex Nut
25	4	Obtain Locally	HJN 10-24 Hex Jam Nut
26	2	Obtain Locally	LN .313 Lock Nut
27	6	Obtain Locally	LN .375 Lock Nut
28	4	Obtain Locally	LN .5 Lock Nut
29	4	Obtain Locally	MS .313 x 2.25 Machine Screw
30	4	Obtain Locally	MS 10 x 1.75 Machine Screw

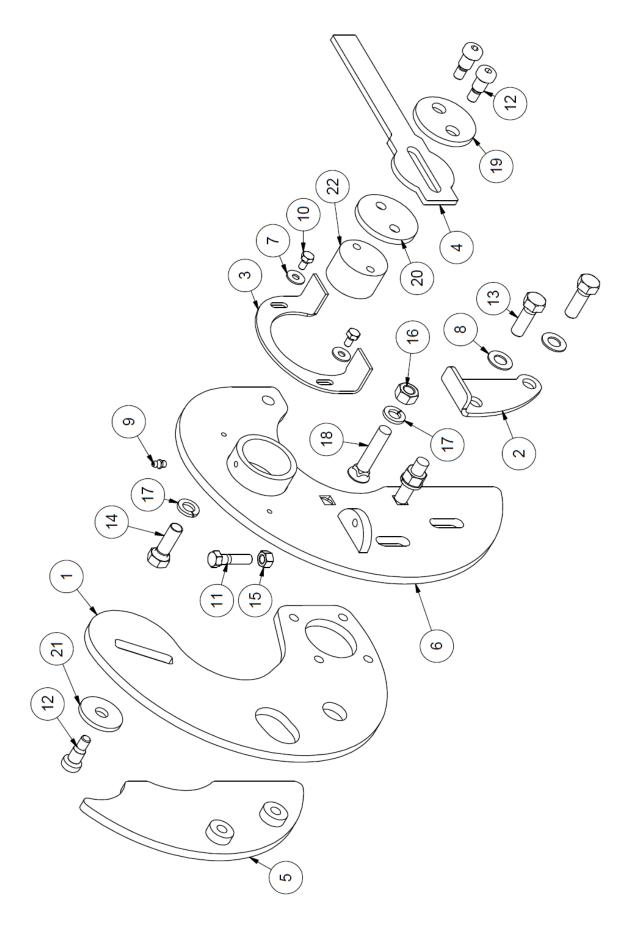
TL5500ECV Axle-Spindle-Hub



TL5500ECV Axle-Spindle-Hub

Item	Qty	Part #	Description
1	1	TL550-200-001	Spindle (serial # up to 11R012)
1	1	TL109-100-356	Spindle (serial # after 11R012)
2	1	TL500-100-066	Hub
3	1	TL500-100-073	Dust Cap
4	1	TL500-100-070	Castellated Nut
5	1	TL500-100-068	Outer Bearing
6	1	TL500-100-064	Inner Bearing
7	1	TL500-100-063	Inner Seal

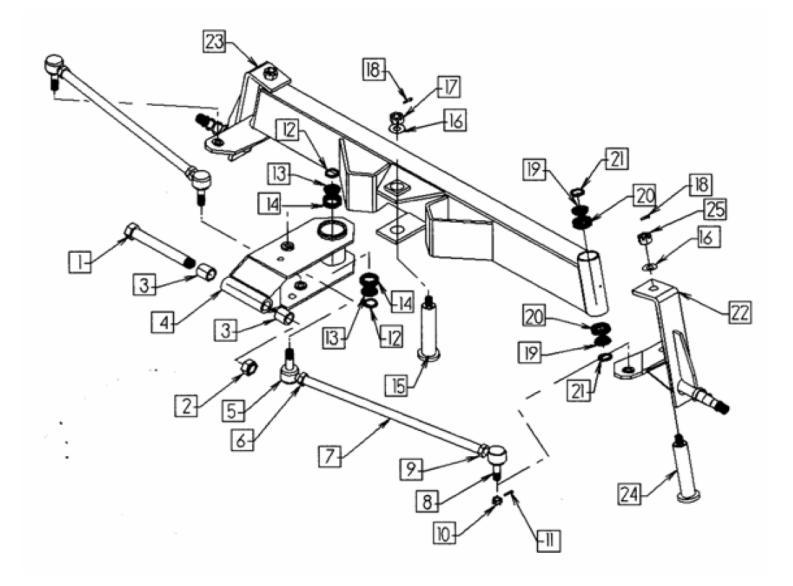
TL5500ECV Power Drive Bracket



TL5500ECV Power Drive Bracket

ltem	Qty	Part #	Description
1	1	25116	Drive Engaging Plate
2	1	25119	Outside Plate Guide
3	1	25121	Handle Lock
4	1	25122	Handle
5	1	25123	Bolt-On Plate
6	1	25124	Main Bracket
7	2	Obtain Locally	FW .25 Flat Washer
8	2	Obtain Locally	FW .5 Flat Washer
9	1	Obtain Locally	.25 Grease Zerk
10	2	Obtain Locally	HB .25 X .5 Hex Bolt
11	1	Obtain Locally	HB .375 X 1.5 Hex Bolt
12	3	Obtain Locally	HB .375 X .625 SS Socket Head Shoulder Screw
13	2	Obtain Locally	HB .5 X 1.5 Hex Bolt
14	1	Obtain Locally	HB .5 X 1.5 UNF Hex Bolt
15	1	Obtain Locally	HN .375 Hex Nut
16	2	Obtain Locally	HN .5 Hex Nut
17	3	Obtain Locally	LW .5 Lock Washer
18	2	Obtain Locally	PB .5 X 2.5 Plow Bolt
19	1	WHEEL2012	Outside Handle Washer
20	1	WHEEL20121	Inside Handle Washer
21	1	WHEEL2013	Inside Cam Washer
22	1	WHEEL9	Eccentric

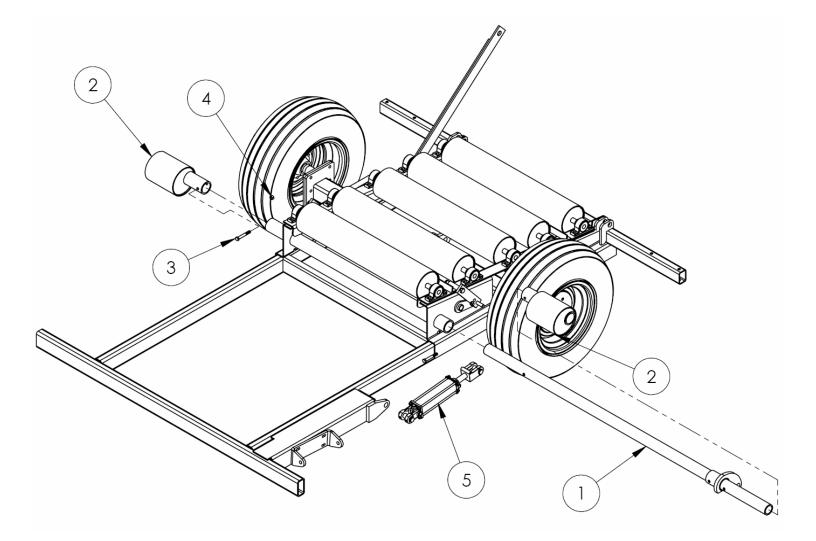
TL5500ECV Front Axle



TL5500ECV Front Axle

Item	Qty	Part #	Description
1	1	TL500-100-152	7/8 x 8 Bolt
2	1	TL500-100-153	7/8 Locknut
3	2	TL550-111-012	Tongue Bracket Bushing
4	1	TL550-221-008	Tongue Bracket Asm
5	2	TL550-111-006	Tie Rod End Right Thread
6	2	TL550-111-003	¾ Jam Nut (NF RH)
7	2	TL550-220-001	Tie Rod
8	2	TL550-111-007	Tie Rod End Left Thread
9	2	TL550-111-002	¾ Jam nut (NF LH)
10	4	TL550-111-004	9/16 NF Slotted Hex Nut
11	4	TL550-111-005	1/8 Cotter Pin
12	2	TL550-111-011	Tongue Bracket Seal
13	2	TL550-111-010	Tongue Bracket Timkin Bearing
14	2	TL550-111-009	Tongue Bracket Timkin Cup
15	1	TL550-221-013	Tongue Bracket Pin
16	3	TL550-111-014	13/16 Flatwasher
17	1	TL550-111-015	Tongue Bracket Nut
18	3	TL550-111-016	3/16 x 2 Cotter Pin
19	4	TL550-200-080	Spindle Bearing Timkin Cone
20	4	TL550-200-081	Spindle Bearing Timkin Cup
21	4	TL550-200-082	Spindle Bearing Seal
22	1	TL550-100-083	Left Side Spindle Assy
23	1	TL550-100-084	Right Side Spindle Assy
24	2	TL550-100-085	Spindle Pin
25	2	TL500-100-070	1" Fine Thread Castle Nut

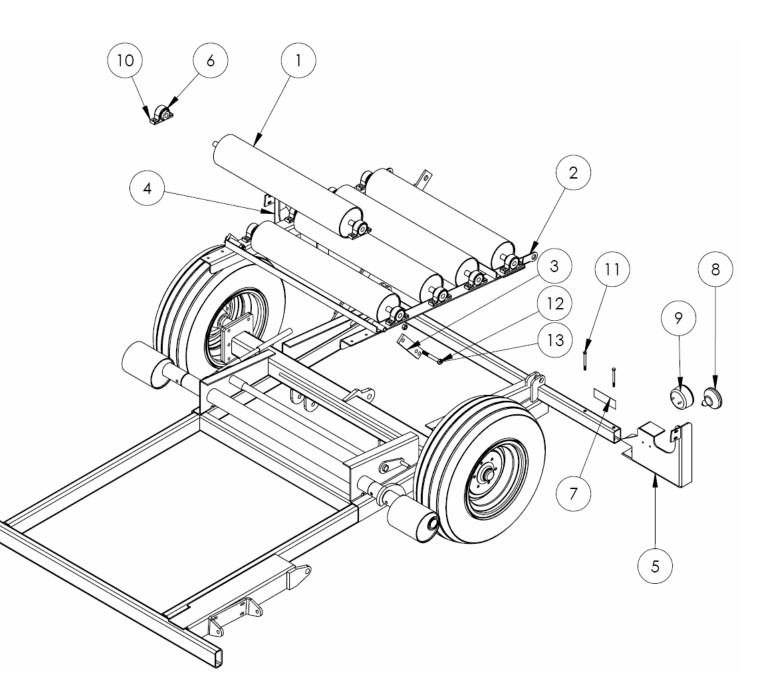
TL5500ECV Brake



TL5500ECV Brake

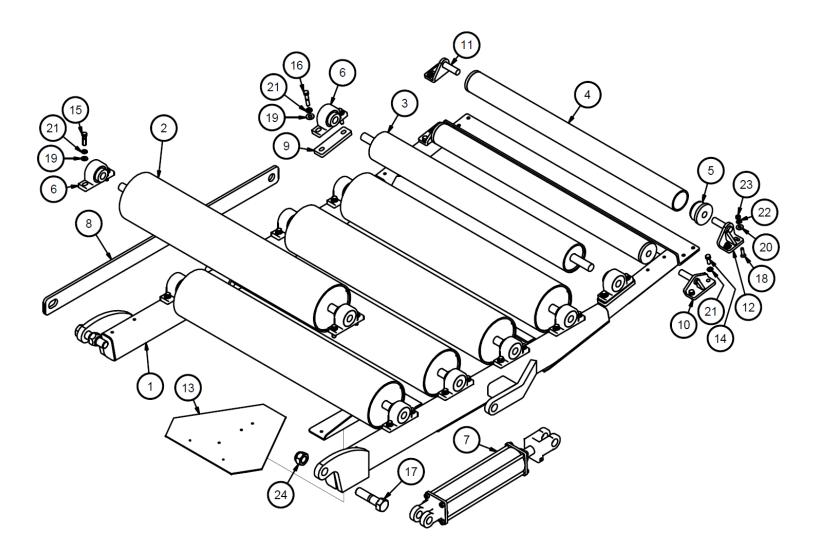
ltem	Qty	Part #	Description
1	1	TL5X2-100-028	Rocker Tube
2	1	TL550-100-029	Brake Eccentric
3	1	Obtain Locally	HB .5 x 3.5 Hex Bolt
4	1	Obtain Locally	LN .5 Locknut
5	1	TL500-100-082	Hydraulic Cylinder

TL5500ECV Roller Bed



TL5500ECV Roller Bed

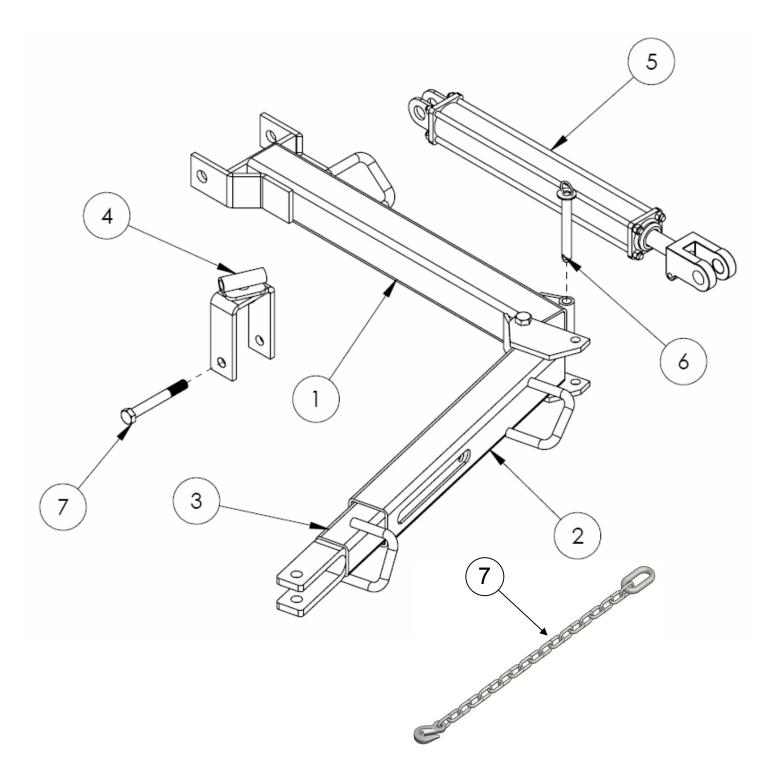
Item	Qty	Part #	Description
1	5	TL500-100-086	Large Roller
2	1	TL5X2-301-007	Riser Frame
3	1	TL5X2-301-030	Riser Link
4	1	TL5X2-100-031	Right Rear Light Bracket
5	1	TL5X2-100-032	Left Rear Light Bracket
6	10	TL5X2-100-030	1" Bearing
7	2	TL5X2-100-033	Red Reflector
8	2	TL500-100-034	Amber Light
9	2	TL500-100-035	Red Light
10	20	Obtain Locally	HB .375 x 1 Hex Bolt
11	4	Obtain Locally	HB .375 x 4 Hex Bolt
12	1	Obtain Locally	HB .625 x 4 Hex Bolt
13	2	Obtain Locally	LN .625 Lock Nut
14	2	WHETL11-15-8	Galaxy Tire 11L-15
15	12	TL500-100-072	Wheel Bolt .563 x 1.75



TL5500ECV Tail

Item	Qty	Part #	Description
1	1	TL550-100-033	Tail Base
2	5	TL500-100-096	Large Roller
3	1	TL500-100-099	4" Roller
4	2	31384	2.875 Roller
5	4	TL550-100-092	.75" Nylon Bearing
6	12	TL550-100-030	1" Bearing
7	1	TL550-100-107	3" x 12" Cylinder
8	1	TL599-100-035	Tail Tie Bar
9	2	TL5X2-500-125	.5" Spacer
10	2	TL550-200-003	#2 Small Roller Bracket
11	1	TL550-200-004	#3 Small Right Roller Bracket
12	1	TL550-200-005	#3 Small Left Roller Bracket
13	1	DESMV	SMV Sign
14	20	Obtain Locally	HB .375 X 1.25 Hex Bolt
15	4	Obtain Locally	HB .375 X 1.5 Hex Bolt
16	4	Obtain Locally	HB .375 X 2 Hex Bolt
17	2	Obtain Locally	HB 1 X 4 Hex Bolt
18	4	Obtain Locally	FHSCS .313 X 1.5 Flathead Bolt
19	28	Obtain Locally	FW .375" Flat Washer
20	4	Obtain Locally	FW .313" Flat Washer
21	28	Obtain Locally	LW .375" Lock Washer
22	4	Obtain Locally	LW .313" Lock Washer
23	4	Obtain Locally	LN .313" Lock Nut
24	2	Obtain Locally	LN 1" Lock Nut

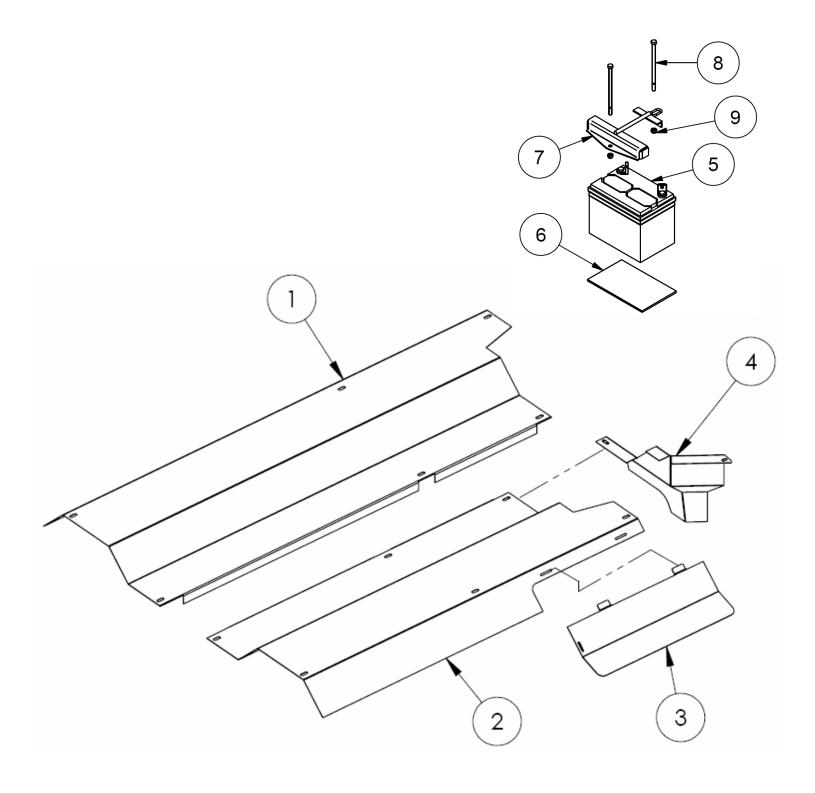
TL5500ECV Front Corner - Steering



TL5500ECV Front Corner - Steering

ltem	Qty	Part #	Description
1	1	TL550-100-051	Main Tongue
2	1	TL550-100-052	Swinging Tongue
3	1	TL550-100-053	Sliding Tongue
4	1	TL500-301-160	Tongue Holder
5	1	TL500-100-103	2 x 16 Cylinder
6	1	TL500-100-154	Tongue Pin
7	1	25262	10,000 lbs Safety Chain
	1	TL109-100-354	Steering Cylinder Seal Kit

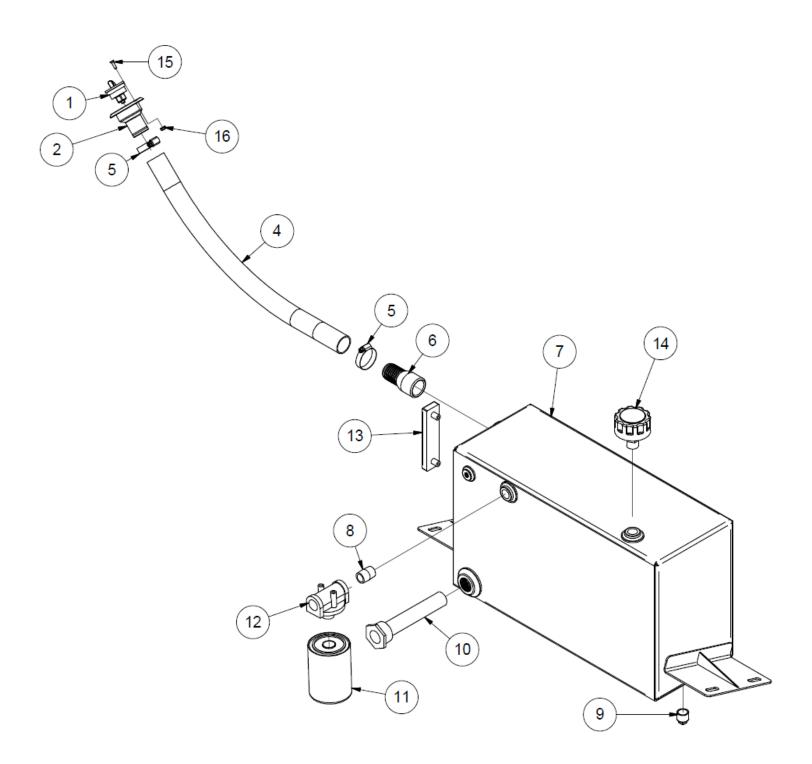
TL5500ECV Fenders - Engine Shield



TL5500ECV Fenders - Engine Shield

ltem	Qty	Part #	Description
1	1	TL5X2-301-101	Right Fender
2	1	TL5X2-301-100	Left Fender
3	1	TL5X2-301-145	Rear Engine Shield
4	1	TL5X2-301-146	Engine Side Shield
6	1	TLBATSP35	12V Battery
6	1	TL5X2-007-101	Rubber Battery Pad
7	1	TL500-301-221	Battery Hold-Down
8	2	Obtain Locally	HB .313 x 6 Hex Bolt
9	2	Obtain Locally	LN .313 Lock Nut

TL5500ECV Oil Tank

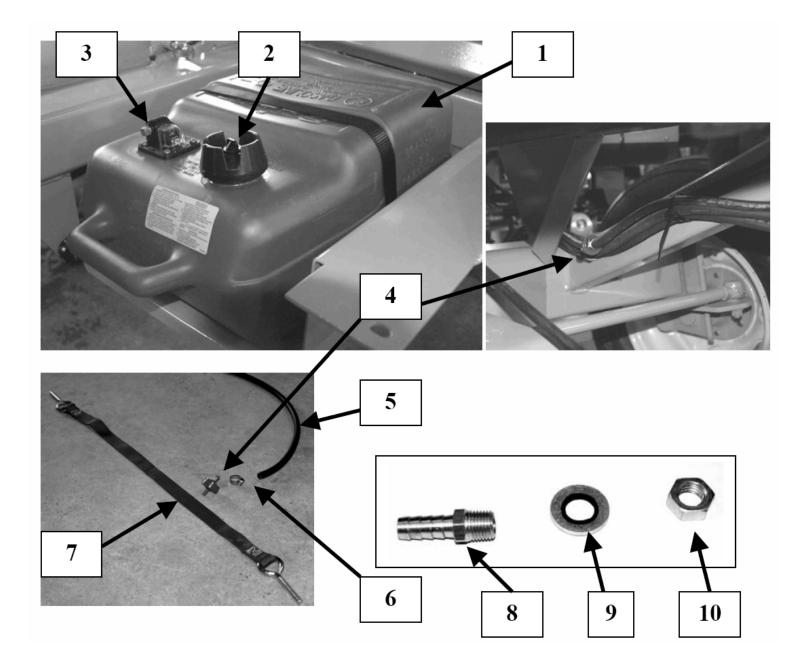


TL5500ECV Oil Tank

Item	Qty	Part #	Description
1	1	30868	Oil Fill Cap
2	1	30869	Oil Fill Body
3	1	30870	Complete Oil Fill
4	1	30883	Oil Fill Tube
5	2	30884	2" Gear Clamp
6	1	30894	Oil Fill Barbed Fitting
7	1	35743	Hydraulic Oil Tank
8	1	PI .75 Nipple	Plumbing Fitting
9	1	TL500-100-174	Magnetic Plug
10	1	TL500-100-175	Suction Strainer
11	1	TL500-100-173	10 Micron Filter
12	1	TL500-100-172	Filter Base
13	1	TL500-100-171	Sight Gauge
14	1	TL500-100-169	Breather Cap
15	3	Obtain Locally	FHSCS 10-24 X .75 Flat Head Socket Cap Screw
16	3	Obtain Locally	HFN 10-24 Hex Flange Nut

Filter Cross Reference		
Filter	Reference	
Stauf	SF6520	
Gresen	F22001	
Fram	P1653-A	
Fleetguard	HF6510	
Cross	1A9021	

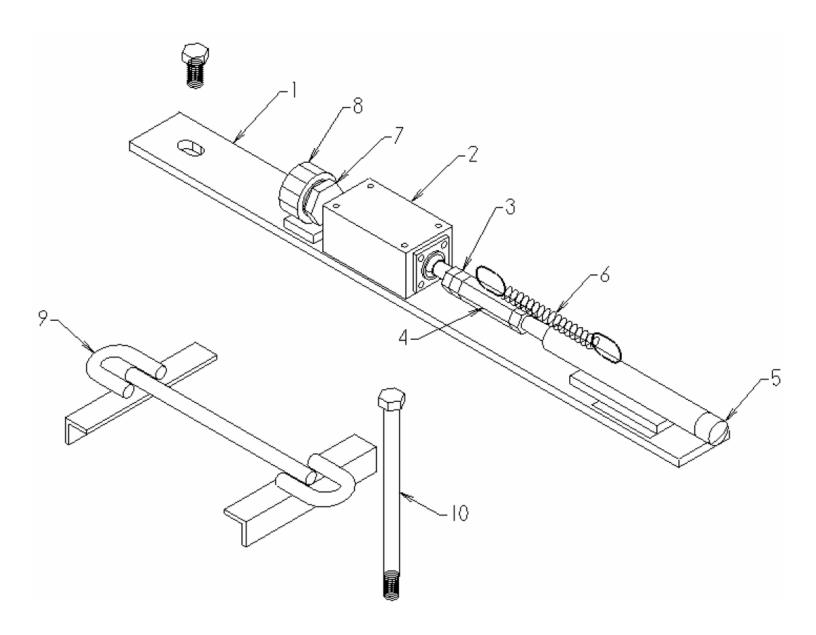
TL5500ECV Fuel Tank



TL5500ECV Fuel Tank

Item	Qty	Part #	Description
1	1	TL550-204-100	Fuel Tank
2	1	TL550-204-101	Vented Cap
3	1	TL550-204-103	Fule Gauge Cap
4	1	TL550-200-111	Fuel Filter
5	1	TL5X2-301-107	Fuel Line
6	1	TL550-204-109	Hose Clamp
7	1	TL550-204-110	Tie Down Strap
8	1	TL5X2-201-108	Hose Adaptor
9	1	TL5X2-201-109	Sealing Washer
10	1	TL5X2-100-234	Adaptor Nut

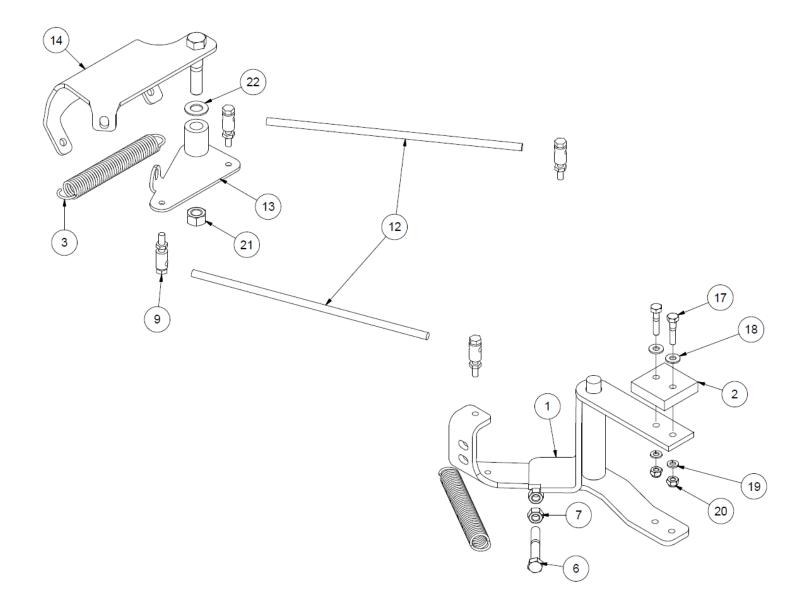
TL5500ECV Bale Switch



TL5500ECV Bale Switch

Item	Qty	Part #	Description
1	1	TL5X2-100-220	Switch Base
2	1	TL5X2-100-221	Switch
3	1	TL500-100-046	HB .375 x 1 Hex Bolt
4	1	TL5X2-100-222	HN .375 Coupling Nut
5	1	TL5X2-100-223	Push Rod
6	1	TL500-100-062	Spring
7	1	TL550-200-086	Adaptor, Metric to Imperial
8	1	TL550-100-086	PVC Box Connector
9	1	TL500-301-221	Battery Hold-down
10	1	TL500-100-212	Battery Bolts

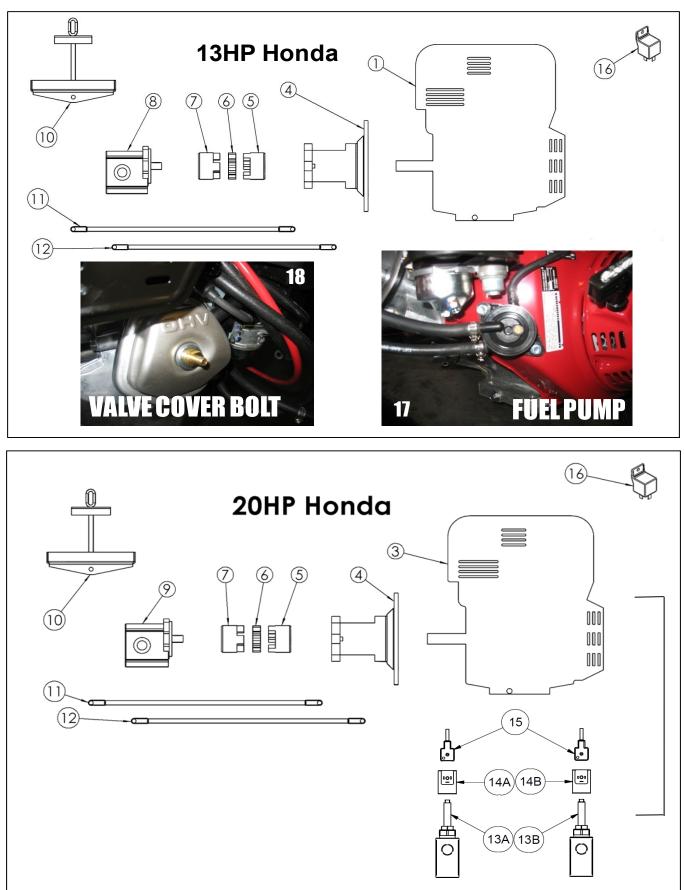
TL5500ECV Throttle Linkage



TL5500ECV Throttle Linkage

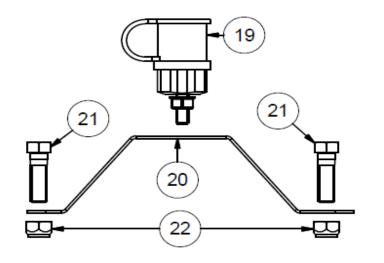
Item	Qty	Part #	Description
1	1	TL5X2-500-154	Main Link (Use for 20HP from Serial # 11R001- current)
2	1	TL5X2-100-232	Striker Block
3	1	TL550-100-069	Throttle Spring
4		TL550-100-065	Ball Joint
5	1	TL5X2-100-231	Control Rod
6	2	Obtain Locally	3/8-16 x 2 1/2 Bolt Gr.5
7	2	Obtain Locally	3/8-16 Jam Nut
8	1	TL599-100-067	13 HP Engine Throttle Base
9		TL550-100-067	Linkage Pivot
10	1	TL599-100-069	1/4-28 UNF Rod x 4
11	1	TL5X2-100-230	13 HP Swing Link
12	2	TL5X2-500-155	1/4-28 UNF Rod x 9 1/2
13	1	TL5X2-500-156	20 HP Swing Link
14	1	TL6X2-120-001	20 HP Engine Throttle Base
15	1	TL6X2-120-004	20 HP Control Rod
16	1	TL5X2-500-157	20 HP Main Link
17	2	Obtain Locally	1/4-20 x 1 1/4 Bolt Gr.5
18	2	Obtain Locally	1/4 Flatwasher
19	2	Obtain Locally	1/4 Lockwasher
20	2	Obtain Locally	1/4-20 Nuts
21	1	Obtain Locally	1/2 Steel Type Lock Nut
22	1	Obtain Locally	1/2 SAE Washer

TL5500ECV Engines

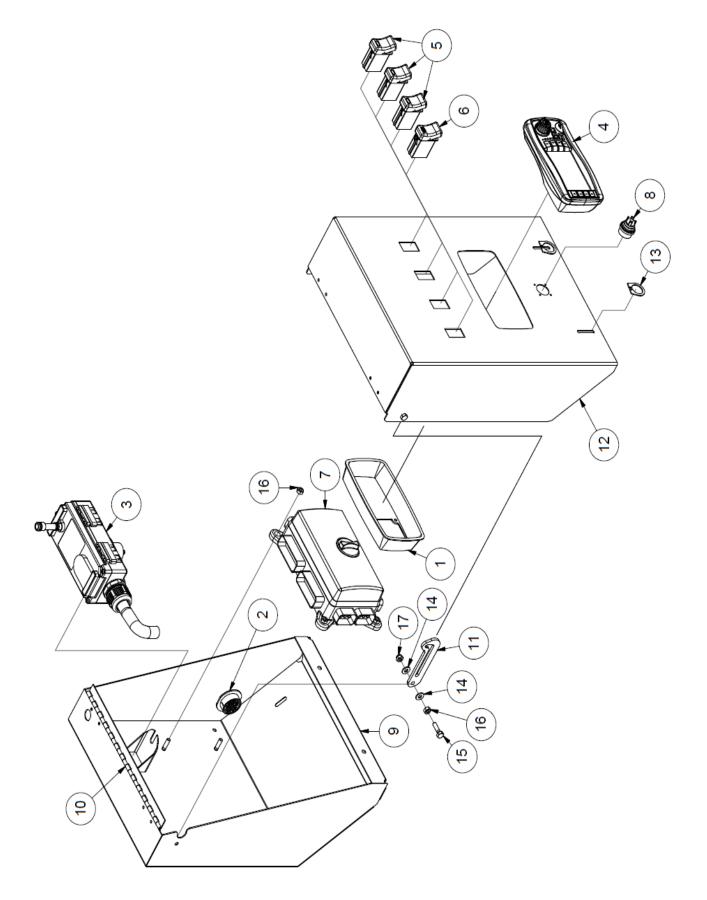


TL5500ECV Engines

Item	Qty	Part #	Description
1		TL5X2100200	13 HP HONDA ELECTRIC START
3		TL6X2100200	20 HP Honda Engine Electric Start
4	1	TL500100182	Engine – Pump Adapter
5	1	TL500100183	Love Joy Coupling Engine Side
6	1	TL500100184	Coupling Spacer
7	1	TL500100185	Love Joy Coupling Pump Side
8	1	TL500100181	Hydraulic Pump Casappa # PLP20-112
9	1	TL5X2101181	Hydraulic Pump Casappa # PLP20-14
10	1	TL500301221	Battery Hold Down
11	1	TL5X2500159	Red Battery Cable
12	1	TL5X2500160	Black Battery Cable
13A	1	TL6X2102202	Dump Valve Base (up to serial # 13R004)
13B	1	31545	Dump Valve Base (Serial # 13R005-current)
14A	1	TL6X2102204	Dump Valve Solenoid (up to serial # 13R004)
14B	1	31546	Dump Valve Solenoid (Serial # 13R005-current)
15	1	31505	Dump Valve Wiring Harness
16	1	TL500100220	35 amp Relay (mounted on 13hp & 20hp Honda)
17	1	TL25649	Fuel Pump (13hp only)
18	1	TL25591	Valve Cover Bolt (13hp only)
	1	30872	Battery Boost Cable
19	1	30873	Battery Boost Post
20	1	31379	Battery Boost Mount
21	2	Obtain Locally	HB 7/16 x 2 Hex Bolt
22	2	Obtain Locally	LN 7/16 Lock Nut



TL5500ECV Control Panel

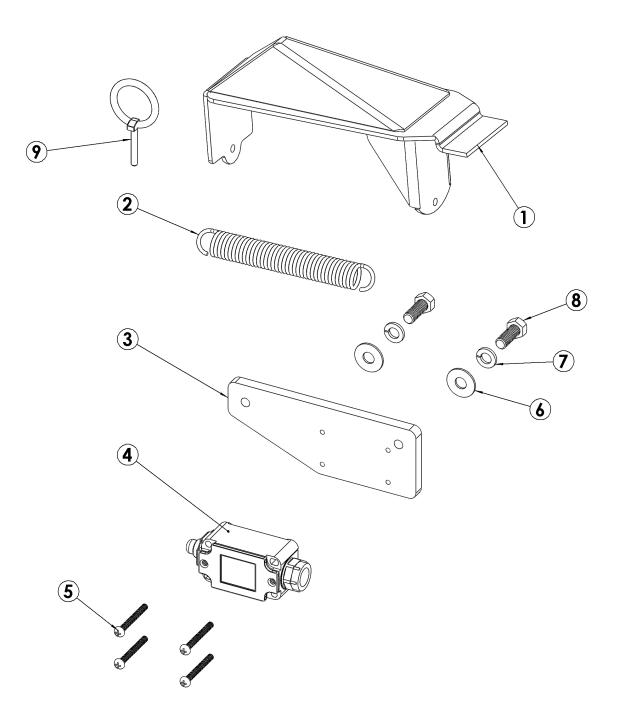


TL5500ECV Control Panel

Item	Qty	Part	Description
1	1	32630	Display Mount
2	1	32642	Control PAnel Harness
3	1	32648*	Remote Antenna
4	1	32652	Display Screen
5	3	33322	Function Switch
6	1	33323	E-Stop Switch
7	1	33324	Fuse Box
8	1	33325	Steering Joystick
9	1	35610	Control Panel Box
10	2	35633	Hinge
11	1	35637	Control Panel Link
12	1	36044	Control Panel
13	2	36268	Camlock
14	4	Obtain Locally	FW .25 Flat Washer
15	2	Obtain Locally	HB .25 x 1 Hex Bolt
16	6	Obtain Locally	HN .25 Hex Nut
17	2	Obtain Locally	LN .25 Lock Nut

*Optional, see page 88 for more details

TL5500ECV Table Trigger



TL5500ECV Table Trigger

Item	Qty	Part #	Description
1	1	TL5X2-500-152	Trigger
2	1	TL550-100-069	Spring
3	1	TL5X2-500-153	Table Switch Mount Plate
4	1	TL5X2-100-221	Push Button Limit Switch
5	4	Obtain Locally	10-24 x 1 ½ Bolt
6	2	Obtain Locally	3/8 Flat Washer
7	2	Obtain Locally	3/8 Lock Washer
8	2	Obtain Locally	3/8-16 x 1 Bolt Gr.5
9	1	Obtain Locally	3/16 Linch Pin

Intentionally Blank

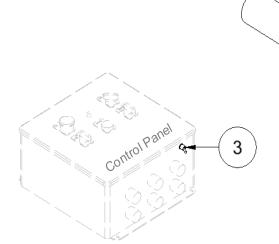
TL5500ECV Optional Additions

- Film Sensor
- Single Power

Drive

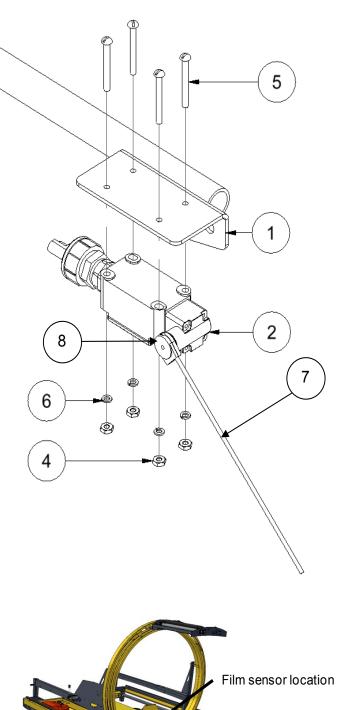
- Dual Power Drive
 - Night Lights
 - Guide Rollers
 - Twin Wrap Kit
 - Power Jack
- Remote Control

TL5500ECV Film Sensor



Sensor wire must be adjusted so that only one layer of plastic is covering the end of the wire while wrapping. Adjustment can be made on the bracket and on the sensor wire. The end of the sensor wire behind the switch can be bent to allow the wire in front of the switch to drop down far enough to trip the switch when no plastic is present.





TL5500ECV Film Sensor

Item	Qty	Part #	Description
	1	TLPSSK-ECV	Complete Kit
1	1	TLFSB2007	Film Sensor Bracket
2	1	32635	Film Sensor Limit Switch (Complete)
3	1	TL550-200-235	Toggle Switch
4	4	Obtain Locally	10-24 Hex Nut
5	4	Obtain Locally	10-24 x 1.75 Machine Screw
6	4	Obtain Locally	#10 Lock Washer
	2	Obtain Locally	12" Wire (Terminal 18 & 19)
7	1	TL550-100-049	Wire Arm
8	1	TL550-100-082	Wire Clamp

Installation

• Install film sensor bracket

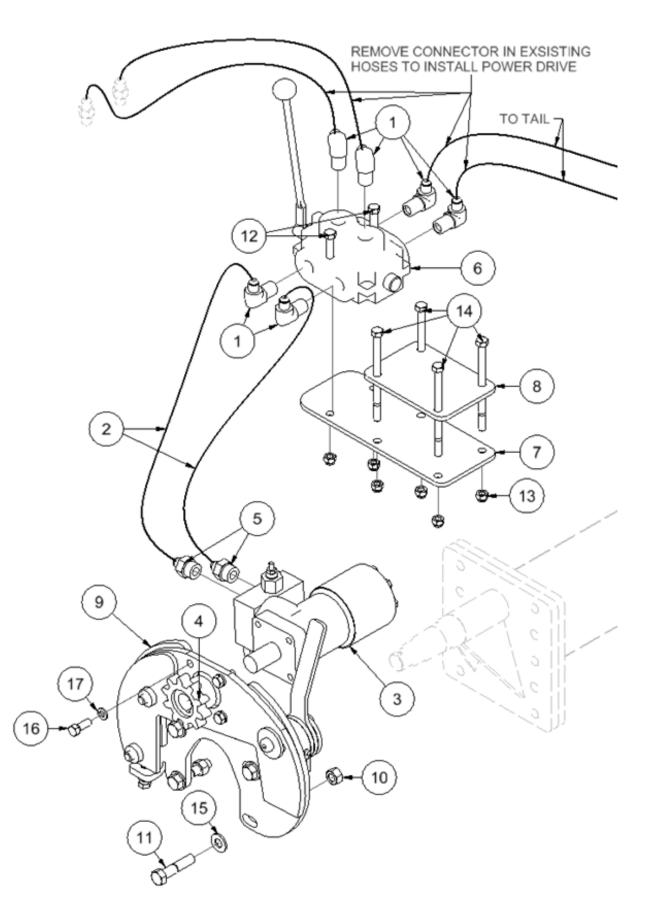
- Locate the wire labeled film sensor (pre-wired machine)
- Remove the plug and connect to film sensor switch
 - Install toggle switch in the control panel
- Remove the jumper wire between terminal 18 & 19
- Connect wires from toggle switch to terminal 18 & 19

Wire Adjustment (Use measurements as initial guide only)

- Measure length of wire from the hoop face (see previous page)
 - 9.5" wire = approx. 3" between wraps = 8-9 layers per bale
- 9.5" wire should stop hoop rotation just after an empty tensioner passes the wire
 - Lengthen wire 3" for 4 layers of wrap or 1.5" for 6 layers
 - Shorten wire by 1.5" for 10 layers per bale

As a guide, if the hoop stops before an empty tensioner passes the film sensor wire, the wire is **too short** and if the hoop **does not** stop with one empty tensioner the film sensor is **too long**.

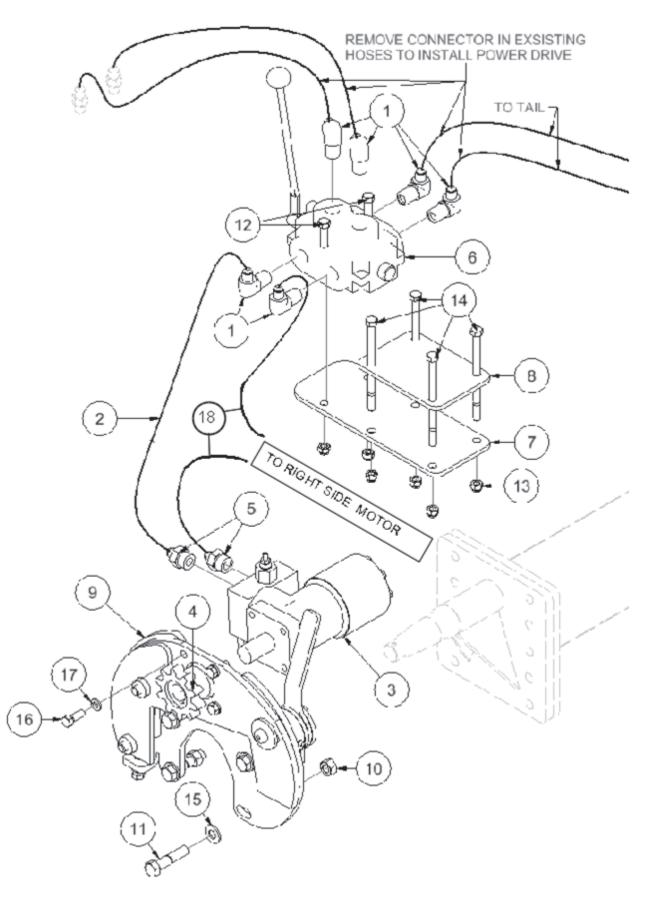
TL5500ECV Single Power Drive



TL5500ECV Single Power Drive

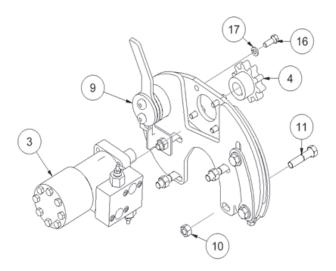
Item	Qty	Part #	Description
1	6	HF2501-6-8	Hydraulic Fitting
2	1	25113	HH14-6AT1(6FJX)
3	1	TL500-200-138	Hydraulic Motor
4	1	28772	Sprocket
5	2	HF6400-6-10	Hydraulic Fitting
6	1	VALDS1A1E	Selector Valve
7	1	TLWHEEL13	Selector Valve Mount
8	1	TLWHEEL13A	Selector Valve Mount
9	1	TLWHEEL32	Power Drive Assembly
10	4	Obtain Locally	HH .5 Hex Nut UNF
11	4	Obtain Locally	HB .5 x 2.25 Hex Bolt UNF
12	2	Obtain Locally	HB .375 x 3 Hex Bolt
13	6	Obtain Locally	LN .375 Lock Nut
14	4	Obtain Locally	HB .375 x 5.5 Hex Bolt
15	4	Obtain Locally	FW .5 Flatwasher
16	4	Obtain Locally	HB .375 x 1 Hex Bolt
17	4	Obtain Locally	LW .375 Lockwasher

TL5500ECV Dual Power Drive

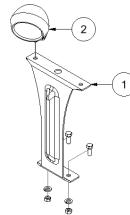


TL5500ECV Dual Power Drive

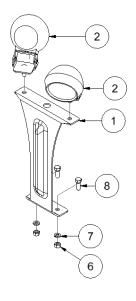
Item	Qty	Part #	Description
1	6	HF 2501-6-8	Hydraulic Fitting
2	1	25113	HH14-6AT1(6FJX)
3	2	TL550-200-138	Hydraulic Fitting
4	2	28772	Sprocket
5	4	HF 6400-6-10	Hydraulic Fitting
6	1	VAL DS1A1E	Selector Valve
7	1	TLWHEEL13	Selector Valve Mount
8	1	TLWHEEL13A	Selector Valve Mount
9	2	TLWHEEL32	Power Drive Assembly
10	8	Obtain Locally	HN .5 Hex Nut UNF
11	8	Obtain Locally	HB .5 x 2.25 Hex Bolt UNF
12	2	Obtain Locally	HB .375 x 3 Hex Bolt
13	6	Obtain Locally	LN .375 Lock Nut
14	4	Obtain Locally	HB .375 x 5.5 Hex Bolt
15	8	Obtain Locally	FW .5" Flat Washer
16	8	Obtain Locally	HB .375 x 1 Hex Bolt
17	8	Obtain Locally	LW .375 Lock Washer
18	2	24114	HH64-6AT1(6FJ,6FJX)

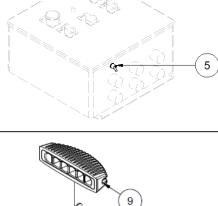


TL5500ECV **Night Lights**



TLNWLK (Halogen)





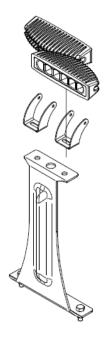
9

8

6

10

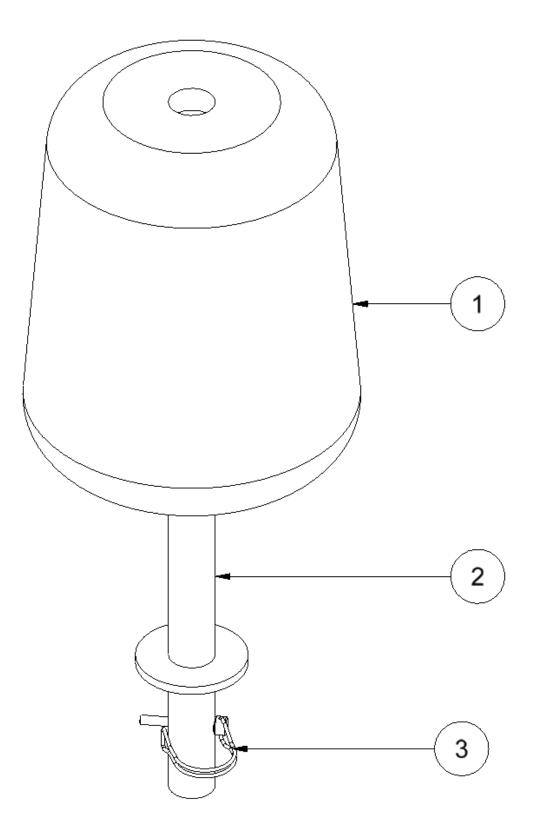
TLNWLKLED (LED)



TL5500ECV Night Lights

Item	Qty	Part #	Description
		TLNWLK	Complete Halogen Kit
		TLNWKLED	Complete LED Kit
1	2	TL5X2-100-301	Light Bracket
2	3	TL64931B	Light
3	1	Obtain Locally	15 AMP Fuse
4	1	Obtain Locally	Fuse Holder
5	1	Obtain Locally	Toggle Switch
6	4	Obtain Locally	HN .375" Hex Nut
7	2	Obtain Locally	LW .375 Lock Washer
8	4	Obtain Locally	HB .375 x 1 Hex Bolt
9	3	33237	LED Light
10	3	33223	LED Light Bracket

TL5500ECV Guide Roller

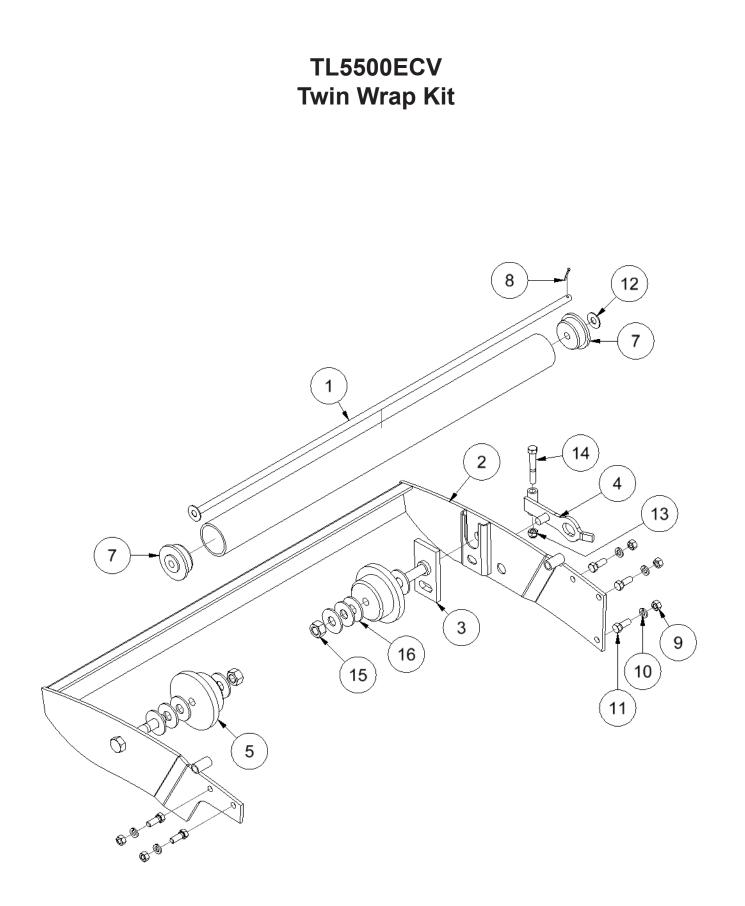


TL5500ECV Guide Roller

Item	Qty	Part #	Description
		TLGR	Guide Roller Kit
1	2	TL550-301-238	Roller
2	2	TL550-301-239	Spindle
3	2	TL550-301-233	Lock Pin

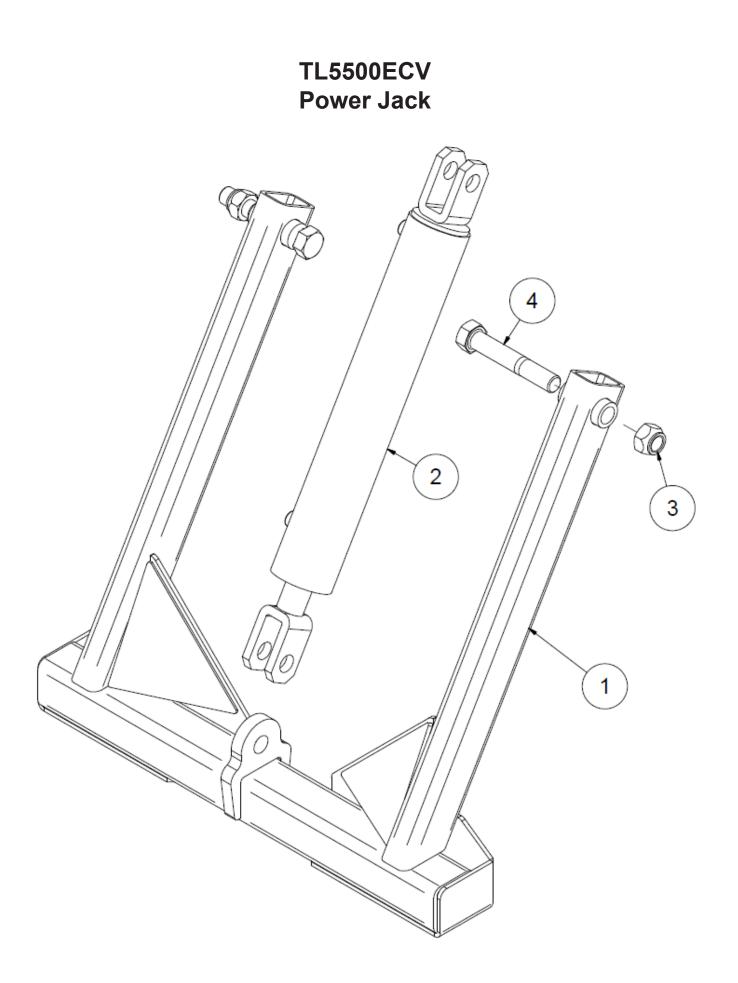
Guide Roller Location





TL5500ECV Twin Wrap Kit

ltem	Qty	Part #	Description
		TLTWK	Twin Wrap Kit
1	1	TLTWROD	Idler Axle
2	1	TL550-200-139	Twin Wrap Frame
3	1	TL550-200-115	Spool Holder Bracket
4	1	TL550-200-103	Spool Holder Latch
5	2	TL550-200-012	Wrap Spool Holder
6	1	TL550-100-022	Plastic Idler
7	2	TL16P40D	Idler End Caps
8	1	Obtain Locally	CP .125 Cotter Pin
9	5	Obtain Locally	HN .375 Hex Nut
10	5	Obtain Locally	LW .375 Lockwasher
11	5	Obtain Locally	HB .375 x 1 Hex Bolt
12	2	Obtain Locally	FW .438 Flatwasher
13	1	Obtain Locally	LN .375 Lock Nut
14	1	Obtain Locally	HB .375 x 2.5 Hex Bolt
15	2	Obtain Locally	HN .625 Hex Nut
16	8	Obtain Locally	FW .625 Flatwasher



TL5500ECV Power Jack

ltem	Qty	Part #	Description
1	1	TLJ1000	Power Jack
2	1	TL5X2-100-207	3.5 x 8 Cylinder*
3	2	Obtain Locally	LN 1" Lock Nut
4	2	Obtain Locally	HB 1" x 6" Hex Bolt

*Comes with Pins and Clips

TL5500ECV Remote Control

Part # : TLBHHCX2HD



Installation

Bolt receiver assembly (see page 68) to inside top of control box with connector plug towards the left side of the control panel.

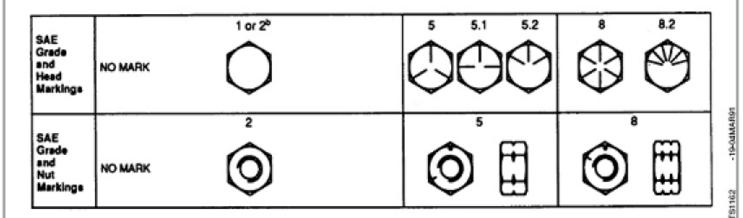
Notice : All remote control units use the same frequency, no programming is required.

- ON/OFF Turns handheld unit on or off
- **START** Starts the wrap cycle. (Unplug the table switch if you prefer to start each cycle with this button. This will not restart the hoop if cycle is broken after the hoop start was triggered.

• **STOP** - Stops the wrap cycle. If the table switch is not unplugged and it has a bale holding it down, it is nessecary to hold stop until the circuit is broken by switching to manual mode at the control panel.

- LEFT Steer the machine left.
- **RIGHT** Steers the machine right.

UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES



	Grade 1				Grade 2 ^b				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
Size	Lubricated*		Drya		Lubricated		Dry*		Lubricated®		Dry*		Lubricated		Drya	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	400	300	510	375	400	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

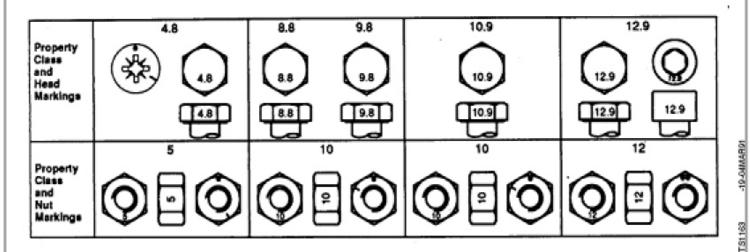
* "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

^b Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length. Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

METRIC BOLT AND CAP SCREW TORQUE VALUES



		Clas	s 4.8		Class 8.8 or 9.8				Class 10.9				Class 12.9			
Size	Lubricated*		Drya		Lubricated		Drya		Lubricated		Drya		Lubricateda		Drya	
	N·m	lb-ft	N-m	Ib-ft	N⊦m	lb-ft	N⊦m	lb-ft	N-m	lb-ft	N·m	lb-ft	N·m	lb-ft	N·m	lb-ft
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	255	320	240	400	300
MIG	100	10	120	92	190	140	240	1/5	215	200	000	200	020	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
Hor	200	050	405	040	0.00	477	005	600	0.05	075	4450	050	4075	000	4050	4000
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

* "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication. Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

