

Congratulations on your wise investment into the Super Lawn Truck System! You are about to increase profits by leaps and bounds using the single most labor efficient transportation and equipment storage system on the market! This owner's manual and the cab/chassis owner's manual (example: Isuzu, Fuso, & GMC) should be read before operating your Super Lawn Truck System. This will prevent accidents, explain safe operation and maximize the life of your system.

Please note: your SLT product may not include all components covered in this manual. Hydraramp™ and Hydra-Ramp™ are terms used to describe the hydraulically operated loading ramps that double as rear doors on the Super Lawn Truck system.

Table of Contents

Section One

- **Operating Your Super Lawn Truck Hydra-Ramp™ System**
- Using the Hydra-Ramp™
- Lowering the Hydra-Ramp™
- Raising the Hydra-Ramp™
- Maintaining Your Hydra-Ramp™ System
- Hinges

Section Two

- **Use of the Super Lawn Truck Onboard Fuel Transport System**
- Turning On the System
- Turning Off the System
- Maintaining Your Fuel System

Section Three

- **Hand and Power Tool Storage System**
- Using your Hand and Power Tool Storage System
- Maintenance Requirements
- Using Your Irrigation Parts Storage System
- Using Your Underbody Tool Storage System

Section Four

- Dovetail & Manually Operated Ramps

Section Five

- Debris Dumper

Section Six

- Warranty Information

Section Seven

- Contact Information

Section Eight

- Troubleshooting Guides

Section 1

Operating Your Super Lawn Truck (Hydraramp) Hydra-Ramp™ System

Before operating your Super Lawn Truck Hydra-Ramp™ System, be sure to remove the lock or device securing the door. It may be necessary to close the door completely before attempting to remove the lock or securing device. This is necessary due to the leak-down of the hydraulic cylinders over periods of non-use. This is completely normal and should not cause concern.

Using the Hydra-Ramp™

CAUTION!!! The hydra-ramp™ is not designed to be a lift-gate. DO NOT attempt to lift equipment vertically with the hydra-ramp. DO NOT attempt to lift the rear of the vehicle with the Hydra-Ramp system. Failure of the hydra-ramp due to misuse will be reason to void all warranties.

This ramp is designed to accommodate lawn equipment not exceeding 1500 lbs. (unless otherwise labeled) in weight to be driven into the rear of the truck. Caution should be taken when walking or driving into the rear of the truck. The slope of the ramp can be slippery during wet weather. Wear only rubber-soled shoes for maximum traction when walking up and down the hydra-ramp system.

CAUTION!!! ALWAYS INSTRUCT ALL PEOPLE TO AVOID WALKING OR STANDING UNDER THE HYDRAULIC RAMP DURING OPERATION! This can be a dangerous mechanical device and your personal safety is your responsibility.

Lowering the HR Series (two piece folding) Hydra-Ramp™

After removing the lock or safety pin, the area under the ramp should be cleared of any people or objects. To engage the hydraulic pump, press the power button located on the frame to which the control valves are mounted. This power button must be held down for continuous power. To let down the main gate, actuate the power button and press in the left control valve. As the main gate reaches the approximate halfway point in its descent, it will be necessary to unfold the fold-gate. Pump still actuated, release the main gate valve and pull the lever adjacent to it. Fold-gate may now be fully extended. When fold-gate is fully extended, continue to let the main gate descend until it contacts the ground.

Raising the HR Series (two piece folding) Hydra-Ramp™

When you are ready to secure your Hydra-Ramp™/Rear Door, actuate the hydraulic pump and pull out the main gate control valve to begin closing the main gate. As the gate reaches the approximate halfway point of its ascent, you should fold the fold-gate by releasing the main gate valve and press in the fold-gate valve until the fold-gate is completely folded. Now you may continue closing the main gate until it firmly and flushly fits up to your van body. ***Lock or securing device must be put into place before your Super Lawn Truck leaves the job-site.***

Lowering the Eco Series (one piece) Hydraramp

After removing the lock or safety pin, the area under the ramp should be cleared of any people or objects. To engage the hydraulic pump, press the down power button located on the wired remote control attached to the hydraulic pump. This power button must be held down for continuous power. Continue to let the main gate descend until it contacts the ground.

Raising the Eco Series (one piece) Hydraramp

When you are ready to secure your Hydraramp/Rear Door, press the up power button located on the wired remote control attached to the hydraulic pump. Continue closing the gate until it fits firmly and flush up to your van body. ***Lock or securing device must be put into place before your Super Lawn Truck leaves the job-site.***

CAUTION!! CAUTION!! CAUTION!! CAUTION!!

WHEN WORKING ON OR SERVICING THE HYDRARAMP SYSTEM, BE SURE THAT THE LOCKING DEVICES SECURING THE DOOR ARE IN PLACE!! OR, THE RAMP IS IN THE DOWN POSITION – ALL THE WAY DOWN, RESTING ON THE GROUND. Disconnecting hydraulic lines can allow the ramp to fall resulting in serious injury or death.

Maintaining Your Hydra-Ramp™ System

Super Lawn Trucks has designed the Hydra-Ramp™ System to be virtually maintenance free. However, there are a few items that must be checked periodically. Hydraulic oil level must periodically be checked to ensure proper operation of the hydraulic pump.

For HR Series - Using the main gate lever press “in”, this will cause the main gate to “float” down – DO NOT PRESS PUMP SWITCH with the main gate down and the fold gate closed. This should be checked using the dipstick located in the top of the hydraulic reservoir. The dipstick should be touching the fluid. Also, hydraulic hoses should be checked once per month for cuts or cracks, which could cause the hose to rupture. Grease fittings located on the base of each hydraulic cylinder should be lubricated once per year. We recommend changing the hydraulic oil every two years. If you follow these simple maintenance steps, your Hydra-Ramp™ System will give years of dependable service.

For Eco Series - Using the wired remote control, press “down”. With the ramp in the full down position visually inspect that the hydraulic reservoir is half full. Also, hydraulic hoses should be checked once per month for cuts or cracks, which could cause the hose to rupture. Grease fittings located on the base of each hydraulic cylinder should be lubricated once per year. We recommend changing the hydraulic oil every two years. If you follow these simple maintenance steps, your Hydra-Ramp System will give years of dependable service.

Hinges

Hinges are pre-greased with permanent grease. Therefore, occasional greasing is **NOT** required.

Ramp Surface Coating

The anti-slip coating on your hydra-ramp will wear down over time. Loading wheeled equipment, spinning tires, dragging materials across the surface can remove or damage the coating. We recommend recoating the hydra-ramp every two years or anytime the surface area of the steel is exposed or it becomes slippery. Use only epoxy based safety step coating provided by SLT. Coating process includes embedding sand to increase anti-slip function. We can ship the product to you and you can apply the product with a brush.

Section 2

Use of the Super Lawn Truck Onboard Fuel Transport System

These tanks are designed for transport of fuel and meet guidelines established as of date of manufacture. Super Lawn Trucks has made all efforts to comply with federal laws regarding the manufacture of fuel tanks. They are never to be hooked into the fuel system of the vehicle. Federal, state and local laws vary regarding the proper documentation required to store and transport fuel in a commercial vehicle. You are responsible for obeying all laws regarding safe fuel transport, storage and dispensing.

Turning On the Fuel Storage and Dispensing System

To operate your fuel system, you must first turn your master switch to the “on” position. This master switch is located on the front dash of the truck usually just to the left and under the steering wheel. It is a toggle switch with an amber or green light that glows when it is in the “on” position. This safety switch is designed to prevent accidental activation of the system by small children or prevent easy access to gas inventory. After turning the switch to the “on” position, locate the two-position toggle switch directly above the tank you wish to receive fuel from. Flip this switch to the “on” position. This will engage the 12-volt fuel pump. Then remove the hose from which you need fuel and actuate the gas nozzle located on the end of the fuel hose.

Turning Off the Fuel System

To turn the fuel system off, release the gas nozzle. Turn the two-position toggle switch to the “off” position and replace the fuel hose and nozzle back into the proper holder. Lastly, turn the “master switch” to the “off” position.

IMPORTANT – DO NOT LEAVE THE PUMP RUNNING WITHOUT PUMPING FUEL. THIS WILL CAUSE THE PUMP TO BURN UP AND THE WARRANTY WILL THEN BE VOID. LEAVING THE PUMP ON WITHOUT PUMPING FUEL CAN CAUSE PUMP FAILURE IN AS LITTLE AS 5 MINUTES. THE PUMP HAS A 15 MINUTE ON 30 MINUTE OFF DUTY RATING. See the pump manufacturer(s) owner’s manual for more details on operation of the pump unit.

Maintaining Your Fuel System

It is recommended that you drain your fuel system once per year to remove any debris and water. To accomplish this task, simply remove the plug located in the bottom (or rear) of the tank and allow dirty fuel to drain into a catch pan. This fuel can be disposed with your waste oil. Also located on your fuel system is one inline fuel filter (pre-mix labeled tanks). This fuel filter should also be replaced once per year to maximize fuel filtering and flow. These filters are available through your Super Lawn Truck dealer. Replace hoses or dispensing nozzles anytime they have holes, cracks, cuts, or leaks.

NOTE - THE FUEL STATION SYSTEM POWER SOURCE HAS AN IN-LINE FUSE HOLDER (20 AMP) LOCATED BETWEEN THE BATTERY AND FUEL PUMP. PLEASE REFER TO THE WIRING DIAGRAM AND TROUBLESHOOTING GUIDE FOR SERVICE OR REPAIRS TO THE FUELING STATION.

Section 3

Hand and Power Tool Storage System

Enclosed Truck Body

Your enclosed truck body is manufactured using steel, aluminum, wood, and other products. The body system is designed to offer many years of service to store, protect, transport, and organize your gear. To maximize body life on both the SLT Eco and Pro Series bodies we recommend the following:

- Tighten u-bolts under the body below truck frame once per year.
- Wash the exterior of the truck body using soap and water. This is especially helpful to extend body life in high-salt environments.
- Clean the interior of the truck body using broom, blower, compressed air, and dry or damp cloth.
- We recommend daily cleaning and removal of debris.
- We recommend repainting of the body interior walls once per year to keep the tool storage area neat and clean looking. This makes an impression on your team that your tools should be respected and cared for. We use flat latex contractor grade white paint on interior walls.
- You may utilize water or a pressure washer on the interior of the truck body for occasional cleaning.
- **CAUTION:** If you transport fertilizer products, clean and remove any spilled product immediately. Fertilizer is highly corrosive and can cost major damage to aluminum and steel components. If you use water to clean a fertilizer spill, you can accelerate corrosion.
- In the event you discover spilled fertilizer and find that corrosion has begun on aluminum or steel, treat affected with a rust or corrosion neutralizer product by following label directions. Paint or patch affected area to prevent further corrosion.
- Inspect roof and patch any leaks with an exterior waterproof caulk. A small roof leak can lead to premature rotting of wood components.
- Train drivers to stay away from drive thru lanes at banks, restaurants, car washes, low garages, etc. Vehicle height varies from truck to truck, but most SLT models have a body height of 10' 6". New drivers MUST be trained before operation.
- Most enclosed truck bodies force the driver to operate the vehicle without a rear-view mirror. Prior to vehicle operation train drivers to adjust each side mirror for best view and learn to operate the truck using side mirrors.
- Utilize door locks for security when supplied with the truck body.
- Visually inspect doors, wall components, shelves, and tool storage devices. Tighten fasteners to prevent failure or shorten product life.

Using Your Hand and Power Tool Storage System

The Super Lawn Truck Hand and Power Tool Storage System is one of the most durable and versatile pieces of equipment on the market. Designed to be flexible to your individual needs, this system is adjustable and can be rearranged in just a few minutes. This storage system accepts and stores neatly and efficiently many different brands of hand and power tools. SLT installs the hand and power tool storage components based on our experience in the industry and customer input. We believe you will find the tool storage system has been arranged to maximize productivity and to utilize space in an efficient manner. However, if necessary, you may adjust

the location of installed components. To arrange your hand and power tools, Super Lawn Trucks suggests looking into your van body and visualizing your equipment and how you will use it. The tools that you use the most frequently will generally be better located towards the rear of the truck, while lesser-used items will be better located towards the front of the van body. **Place hand tools on the sidewalls on the body interior to maximize tool life and maximize floor space for wheeled equipment. Keep a written inventory of all tools assigned to the truck. There is a special clip board or document holder for a tool inventory list, MSDS sheets, or service manuals for tools.**

Safety

Wheeled equipment should be secured to the floor or sidewalls prior to transport. Utilizing recessed D-Rings, E-Track, or similar devices to secure your load just makes good sense from a safety standpoint and may be required by some DOT standards.

Using Your Irrigation Parts Storage System

Utilizing your Irrigation Parts Storage System allows you to store irrigation fittings or small hardware in a very neat and organized manner. With dozens of adjustable bins and plenty of extra item storage space, this cabinet easily stores most irrigation parts and more. Now your team will be fully stocked and prepared to perform irrigation repairs or service calls immediately and on-site with no man-hours invested in costly travel time. Inspect fasteners or connecting screws monthly. If any fastener appears loose, tighten immediately. You may clean the cabinet with a damp or dry cloth. There is very little maintenance required on your irrigation cabinet.

Using Your Underbody Tool Storage System

The Underbody Tool Storage Box provides a crew additional storage for tools necessary to perform field repairs on their equipment. It also serves well as storage for items such as two-cycle oil, lunch boxes, and other items that a crew may need. The key for the box is placed on the key ring of the truck or inside the Underbody Tool Storage Box at the time of delivery. Inspect the locking device as you open and close the box. If you notice the door of the box becoming loose, you may tighten the bolts on the door lock mechanism. The rubber seal on the toolbox door can dry rot or lose flexibility over time. This can lead to a seal that is not watertight. Keep the rubber seal clean to prevent tears or damage to the door seal. The paint coating will help prevent corrosion. Wash the tool boxes in high salt road conditions to prevent corrosion. Re-paint surface areas that become scratched or damaged from use.

Section 4

Using the Dove Tail Extension

CAUTION!!! The dove tail extension is not designed to carry cargo or equipment. DO NOT attempt to carry any cargo or equipment at any time on the dove tail extension. Failure to follow this guide can cause serious injuries and misuse will be reason to void all warranties.

This loading ramp is designed to accommodate loading lawn equipment not exceeding 1500 lbs. in weight to be driven into the rear of the truck. Caution should be taken when walking or driving into the rear of the truck. The slope of the ramp can be slippery during

wet weather. Wear only rubber-soled shoes for maximum traction when walking up and down the dove tail and ramp system.

CAUTION!!! ALWAYS INSTRUCT ALL PEOPLE TO AVOID WALKING OR STANDING UNDER or NEAR THE RAMP DURING OPERATION! This can be a dangerous mechanical device and your personal safety is your responsibility.

Lowering the Ramp

Find an area to park the truck that is flat and void of slopes. The area under the ramp should be cleared of any people or objects. Remove the locking pin(s) while holding onto the ramp. Lower the ramp gently toward the ground. **DO NOT DROP THE RAMP!** The spring assist on the ramp will lose strength over time. This makes the ramp feel like it is getting heavier and it will fall faster. Dropping the ramp can cause premature failure of the ramp, hinges, springs, rear tail lights and expanded metal components. Once firmly on the ground, you may walk up the ramp or drive equipment up the ramp.

Raising the Ramp

When you are ready to secure your Ramp, make sure that all equipment is loaded securely inside the cargo body. Using strength from your legs, lift the gate to the upright position. Place the locking pins into the locked position. ***Lock or securing device must be put into place before you drive your Super Lawn Truck. Failure to secure the ramp with locking device can cause serious injury.***

CAUTION!! CAUTION!! CAUTION!! CAUTION!!

WHEN WORKING ON OR SERVICING THE RAMP SYSTEM, BE SURE THAT THE LOCKING DEVICES ARE SECURE OR, THAT THE RAMP IS IN THE DOWN POSITION - DOWN, RESTING ON THE GROUND.

Roll Up Rear Door

The roll-up rear door is designed to be closed at all times while the truck is in operation. Never drive your SLT truck with the rear roll-up door in the open position. This will shorten door life and damage door hinges.

Maintaining Your Dove Tail/Ramp System Super Lawn Truck has designed the Ramp System to be virtually maintenance free. However, there are a few items that must be checked periodically. Inspect the locking devices to make sure all welds are secure and working properly. We have applied an anti-slip epoxy coating to the dovetail area to reduce exposure to slipping. We recommend recoating the ramp every 2 years or anytime you notice that the ramp coating has begun to wear down to the steel checker plate surface. Inspect springs and replace when they become weak or break from repeated use. Inspect welds on expanded metal coverings and re-weld when broken. Inspect lights, wiring and light brackets daily. Repair any non-working light before driving your SLT truck.

Section 5

Using the Debris Dumper

CAUTION!!! The debris dumper is designed to carry prunings, grass clipping or mulch not to exceed 2000 lbs in total weight. Overloading the debris dumper with soil, rock or heavy cargo can overweight the vehicle and cause serious damage to your vehicle or personnel. Failure to follow this guide can cause serious injuries, or death and misuse will be reason to void all warranties.

This debris dumper is designed to remain in the down position resting level on the truck frame during transport. Never attempt to drive the vehicle with the debris dumper in the upright or dumping position. Caution should be taken when operating the debris dump. The debris that is being dumped could expose the operator to injury. Always use caution when dumping debris.

CAUTION!!! ALWAYS INSTRUCT ALL PEOPLE TO AVOID WALKING OR STANDING UNDER OR NEAR THE DEBRIS DUMPER DURING OPERATION! THIS CAN BE A DANGEROUS MECHANICAL DEVICE AND YOUR PERSONAL SAFETY IS YOUR RESPONSIBILITY.

Raising the Debris Dumper

You may load debris from either side of the dumper using labor with buckets, trash cans, tarps or other containers. Continue to load until you reach the top of the bin or you reach 2000 lbs. When you are ready to dump your debris, make sure that all people and equipment are clear from the dump area. The dump area is on the passenger side of the vehicle in front of the truck main body and behind the cab. Make sure you are on a flat and level area. Dumping on slopes can cause product failure. You should open the swinging cargo doors 90 degrees from the closed position on the passenger side of the debris dump only. Locate the debris dumper control area just under the truck body to the rear position of the debris dumper. With one finger, press pump engage button. Then pull the hydraulic control arm per the instructions on the label. Continue to hold the pump engage button and continue to pull the hydraulic control arm until the debris dump has emptied the load or until it has reached the maximum tip height. If the load does not dump completely, restore the dump to the original transport position. Loosen any debris by hand or with a shovel and repeat the process above.

CAUTION!! CAUTION!! CAUTION!! CAUTION!!
Never attempt to work on the debris dumper without a safety system in place. Only personnel trained in servicing hydraulic systems and mechanical dumps should attempt to work on the debris dump. You are responsible for your own safety.

Lowering the Debris Dumper

With one finger, press pump engage button. Then push the hydraulic control arm per the instructions on the label. Continue to hold the pump engage button and continue to push the hydraulic control arm until the debris dump has returned to the level position completely resting on the frame of the truck. Close and latch the swinging cargo doors prior to moving the truck.

CAUTION!! CAUTION!! CAUTION!! CAUTION!!

WHEN WORKING ON OR SERVICING THE DEBRIS DUMPER SYSTEM, BE SURE THAT THE LOCKING DEVICES ARE SECURE OR, THAT THE DEBRIS DUMPER IS IN THE DOWN POSITION - DOWN, RESTING ON THE FRAME OF THE TRUCK.

Maintaining Your Debris Dumper Super Lawn Truck has designed the Debris Dumper to be virtually maintenance free. However, there are a few items that must be checked periodically. Inspect the locking devices to make sure all welds are secure and working properly. There are grease zerks on the hydraulic piston pivot ends that should be greased once per month or anytime a pressure washer has been used around the scissor lift mechanism. There is a safety bar installed under your debris dumper. This safety bar should be put in the upright position and the majority of the weight of the debris dumper should be relieved from the hydraulic piston to allow for free flow of grease into the grease zerks. Put 1-3 pumps of grease with a grease gun per zerk.

NEVER USE THE SAFETY BAR AS THE SOLE SUPPORT TO HOLD THE DEBRIS DUMPER IN PLACE WHILE SERVICING THE HYDRAULIC SYSTEM OF THE DEBRIS DUMPER.

Inspect all welds and hydraulic hoses monthly. Replace when the parts show excessive wear, leak or become cracked. Your judgment should be to always keep safety on your mind when using or servicing the debris dumper.

Section 6

WARRANTY INFORMATION

TRUCK, CAB AND CHASSIS

ENGINE	TIRES	LIGHTS
BATTERIES	CROSS-MEMBERS	INSTRUMENTS
TRANSMISSION	FRAME RAILS	BRAKES
AXLES	ENGINE EMISSIONS	ALIGNMENTS

***CHECK OWNER'S MANUAL OR SEE YOUR LOCAL DEALER FOR DETAILS.
ROADSIDE WARRANTY PROGRAMS ARE SUPPLIED BY THE VEHICLE
CAB/CHASSIS ORIGINAL EQUIPMENT MANUFACTURER (OEM) AND SHOULD BE
UTILIZED IF YOU HAVE ANY PROBLEM WITH YOUR VEHICLE DURING THE
OPERATIONAL WARRANTY PERIOD.***

YOU CAN LOCATE YOUR NEAREST ISUZU DEALER BY GOING TO ISUZUVC.COM

MORGAN VAN BODY

www.morgancorp.com

***ONE YEAR WARRANTY – SEE Morgan Van Body OWNER'S MANUAL FOR DETAILS
FIVE YEAR STRUCTURAL WARRANTY – SEE OWNER'S MANUAL FOR DETAILS***

SUPER LAWN TRUCK SYSTEM

Your Powerful Guarantee

When you make a purchase from Super Lawn Trucks (SLT), you can be confident that we will stand behind our products. Since 1998 we have been designing, building, and delivering some of the most dependable and durable truck products direct to commercial business owners. We provide this powerful guarantee in writing so you will understand why clients across North America choose SLT to be their truck equipment company of choice. We guarantee that:

- We build SLT products for daily, repetitive commercial use.
- We will always stand behind our products.
- We will be prepared to answer your questions about our products on a prompt basis.
- We will respond to your calls, concerns, or inquiries on the day you call us. Our business hours are 8 AM – 5 PM EST M-F.
- SLT will replace or repair any SLT manufactured product that does not perform as intended for a period of 12 full months after delivery. This warranty covers the costs for parts, ground shipping, and labor to install parts or make repairs for the first 12 full months.
- For 24 months SLT will replace or repair any SLT manufactured product that does not perform as intended. This warranty covers the costs of the parts only.
- We will provide you unique warranty coverage that can't be found elsewhere.
- When you purchase a complete SLT package consisting of a new truck, new body, and SLT manufactured accessories, we will buy it back from you within sixty days of notice for any reason based on the following schedule: 60 days to 1 year from date of purchase- 50% of original purchase price, 1 year to 2 years- 40% of original purchase price, 2 years to 3 years- 30% of original purchase price, 3 years to 4 years- 20% of original purchase price, 4 years to 5 years- 10% of original purchase price. This portion of the warranty is available for original owners who purchase products directly from SLT. This warranty is void if the vehicle has been wrecked, altered, or suffered damage from contaminated fuel, corrosive materials, or abuse.
- We are confident that your business success will be enhanced when you add your first Super Lawn Truck system. SLT will offer vehicle marketing services to any original purchaser of a complete SLT package consisting of a new or used truck, body, and SLT manufactured accessories for a period of up to 6 months at no charge. Vehicle marketing services consists of listing any SLT purchased commercial products through our normal marketing channels. In other words, if you don't want us to buy it back from you, we will offer your SLT system for sell through our normal channels at the price you desire for the first 6 months at no charge whatsoever.
- When you purchase your SLT system, you gain access to membership in the SLT Training and Education Network. This membership includes discounted online, audio, video, and print materials to help you grow your business while avoiding mistakes. This membership also provides discounts to future seminars, workshops, and private consulting services offered by the SLT Training & Education Company.

Not covered by Warranty:

The buy-back warranty does not apply to one-of-a-kind, custom engineered trucks.

The buy-back warranty does not apply to vehicles that are in default of financed payments or lease contracts.

Deterioration caused by corrosive, hazardous or unsafe cargo.

Defects in Chassis and or the Power Unit.

Defect in Products not manufactured by SLT.

Deterioration due to normal wear and tear.

Tightening of U-bolts.

Deterioration or damage due to misuse , abuse, failure to follow recommended maintenance procedures outlined in SLT's Owner's Manual or Warning Labels, acts of nature, including, but not limited to hurricanes, tornadoes, winds, snow, hail, floods or fire, or other contingencies beyond the control of SLT.

Repairs and / or modifications made without the approval of SLT.

Mounting or re-mounting not performed by a SLT authorized service center.

It shall be Customer's responsibility to contact SLT or an Authorized SLT Repair Center before any repairs are made which are covered by or affect this warranty, in order to secure SLT's approval.

Approval/ Authorization numbers provided by SLT pursuant to a warranty claim are voided if not used within 60 days of issuance. SLT shall, at its option, provide a factory or local representative to inspect the equipment prior to issuing such approval.

SLT reserves the right to make changes or improvements in design or product without thereby obligating itself to make the same changes or improvements upon its product previously manufactured. SLT's warranty is void if SLT's original equipment parts are not used in repairs and / or if the repair was not performed by SLT or by an Authorized SLT Repair Center.

Without regard to the nature of the claim asserted, SLT shall not be responsible nor otherwise be held liable for cargo loss, loss of use, property damage, other commercial (economic) loss, or other direct, indirect, incidental, consequential, or special damages alleged to have been caused by any product delivered thereunder.

This agreement is subject to the laws of the State of GA.

Customer's sole and exclusive remedy for any claim arising out of (a) breach of contract, (b) any defects in products or workmanship, (c) breach of any warranty hereunder, (d) SLT's negligence in performing hereunder, or (e) any other claim arising hereunder whether in tort, strict liability, or otherwise, shall be limited to the repair or replacement of such products, at SLT's option, within the period set forth herein, and shall be deemed waived unless such claim is made in accordance with the following procedures: (1) Customer shall give SLT written notice of such defect, including a description of product and defect, within (30) days after such defect is, or ought to have been, discovered; and (2) if and after SLT requests it's return for inspection and or replacement and such product is returned to SLT within ten (10) days with freight prepaid by the customer. Upon receipt of proper notice from Customer and return to SLT (if requested, as provided hereunder), SLT shall be obligated to repair or replace such product only if, after SLT's inspection, such product is found to SLT's satisfaction (a) to be defective, (b) not to have been manufactured in a workmanlike manner, or (c) not to have been manufactured in accordance with written specification or drawing, if and supplied by Customer to SLT. Customer shall have no other equitable or other remedy at law available to it.

Thank you for your business!

Tony Bass, President, CEO & Founder

Super Lawn Trucks



Section 7

CONTACT INFORMATION

Our Company takes great pride in our commitment to offer quality products and services. Our goal is to ensure that you receive the best customer service available.

To contact our office, just use any of the following numbers or e-mail addresses. Our knowledgeable staff will be able to answer any questions you may have regarding our products and services.

SUPER LAWN TRUCKS, INC. WORLD HEADQUARTERS

1610 Peach Parkway
Fort Valley, GA 31030

TOLL –FREE
866-923-0027

OFFICE
478-822-9704

FAX
478-822-9707

TONY BASS
President
tony@superlawntrucks.com

WEBSITE
www.superlawntrucks.com
www.usedsuperlawntrucks.com
www.superboxtruckramps.com
www.supercontractortruck.com
www.solarlawntruck.com

Section 8

TROUBLESHOOTING GUIDES

Vehicle

If you have an operational failure of the power unit of the vehicle (engine, power train, electrical system, etc), contact the roadside warranty phone number located inside the vehicle owner's manual or your nearest brand dealer. The owner's manual is provided with your vehicle.

Hydra-Ramp Troubleshooting

SLT Eco Series Hydra-Ramp

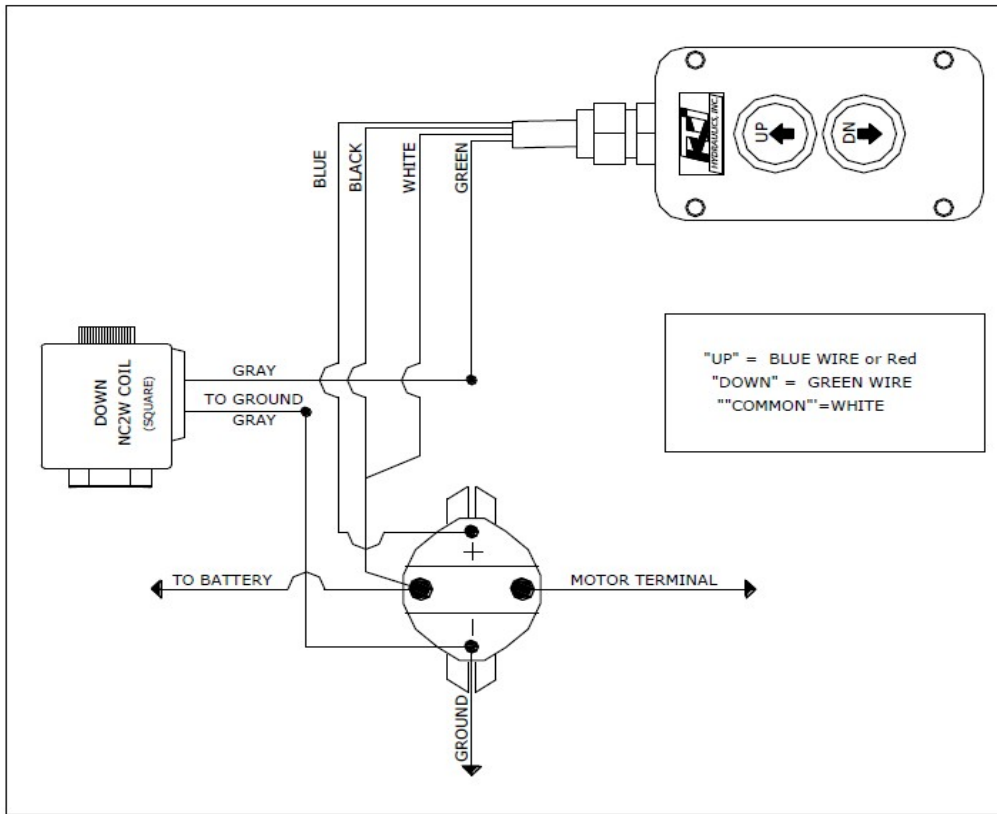
Ramp will not raise, pump DOES run.

Possible Cause # 1	Closed Flow Control Valves
Action	Slowly turn the flow control valve located on the pump counter clockwise. There are two flow control valves on the Eco series power unit. Colder climates will thicken the hydraulic fluid. Make small adjustments, and then test results by pushing the up button on the power unit control switch.
Possible Cause # 2	Solenoid Valve Problem
Action	Inspect wire connections at each solenoid valve on pump. The valve system will not work properly if a wire connection is broken.
Possible Cause # 3	Low Hydraulic Fluid
Action	If the ramp will partially raise, you may not have enough hydraulic fluid in the tank reservoir. This condition will be obvious because hydraulic fluid will be leaking, a hose has been replaced and fluid was lost, or the power unit may have just been replaced and fluid was lost. The reservoir fluid level should be checked with the ramp in the down position. The tank should be approximately $\frac{3}{4}$ full. DO NOT OVERFILL. Note: This is a very rare problem.
Possible Cause # 4	Blockage in Hydraulic Line
Action	Inspect hoses to make certain there is no kink in the hydraulic lines. Remove hydraulic lines from pump and cylinder, and purge them with compressed air. If hose is blocked or shows any sign of cuts, scrapes, or damage, replace hose. Note: This is a very rare problem.
Possible Cause # 5	Cylinder Seal Blown
Action - CAUTION	Ramp must be on the ground or locking device in place before any hydraulic connection is ever disconnected. The ramp could fall causing serious injury or death. Remove hose from one end of the hydraulic cylinder. Point hose end into a catch pan. DO NOT HOLD FINGERS OR HANDS OVER HIGH PRESSURE HYDRULIC FLUID HOSE OPENINGS. DO NOT LOOK INTO THE HOSE DURING PUMP OPERATION. If hydraulic fluid pumps out of the loose hose end when the pump is engaged, have the seal or hydraulic cylinder replaced. Note: This is a very rare problem.
Possible Cause # 6	Defective Hydraulic Pump or Internal Flow Problem
Action	The hydraulic pump has failed. Replace complete power unit.

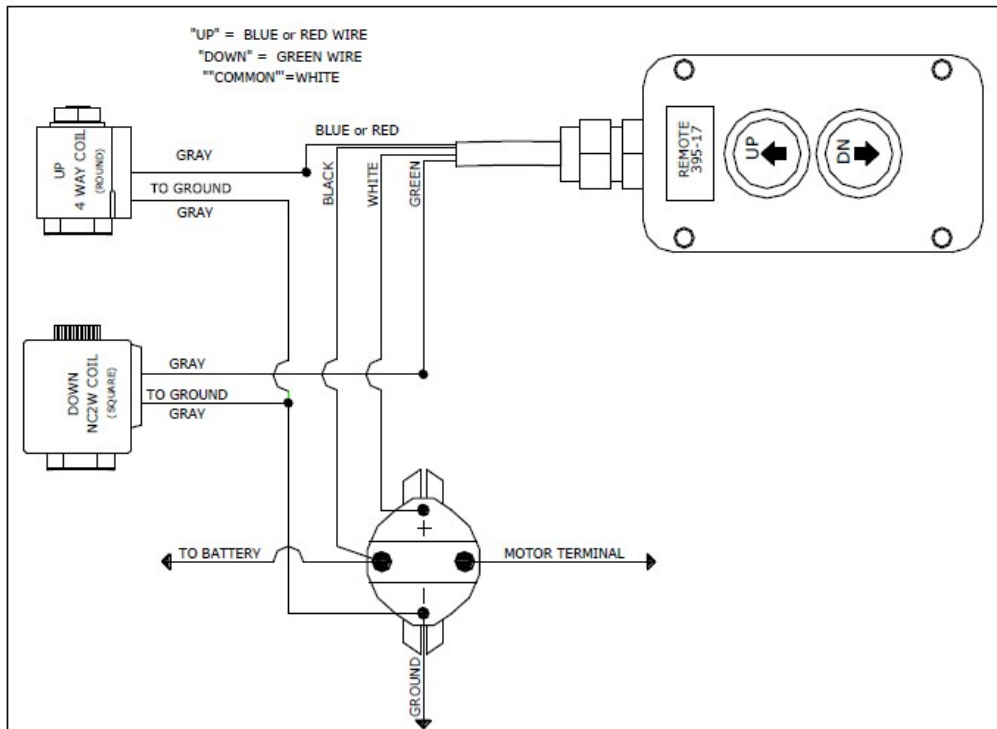
Ramp will not raise, pump DOES NOT run.

Possible Cause # 1	Power Source Not Adequate
Action	Using a voltmeter, determine the voltage at the pump motor solenoid terminals. If there is not 12 Volts at the pump motor solenoid, check the voltage of the truck battery/batteries. You may have a dead battery. If the battery is not dead (the truck will start), then check the wiring connection for the power unit at the battery. Inspect wiring from the battery to the pump motor solenoid. We must verify power to the pump motor first.
Possible Cause # 2	Pump Motor Solenoid Bad
Action	Using a voltmeter, check the voltage to the solenoid. If there is 12 Volts to the solenoid, engage (push) the push button. Check voltage leaving the solenoid (the large wire going from the solenoid to the electric motor). If there is no voltage in that wire, replace the solenoid.
Possible Cause # 3	Brushes in Pump Bad
Action	Using a small hammer, lightly tap on the pump housing while engaging the pump. If the pump begins to activate, the power unit (electric motor) needs to be re-built or replaced. Note: The pump may only operate once or may operate several more times. If this gets you going, plan to replace or service the unit quickly. Be sure to put the Hydra-Ramp in the closed position and insert a lock in the pin to ensure safety.
Possible Cause # 4	Push Button Switch Bad
Action	Using a voltmeter, check the voltage to the pump motor solenoid when the “up” push button on the push button unit (wired remote control) is pushed. Repeat test pushing the “down” button. If current comes into the pump motor solenoid, but does not exit the solenoid with either “up” or “down” button pushed, inspect wire connections at the pump motor solenoids, then inside the wired remote control and reconnect. If connections are adequate and still no power, go to possible cause #2, #3, or #5. If you can eliminate the possibility of a bad pump motor solenoid or pump motor as outlined in possible cause #3 & #4 above, then replace the push button switch unit.
Possible Cause # 5	Defective Hydraulic Pump Motor or Internal Flow Problem
Action	The electric motor or hydraulic pump connections may have failed. Replace complete power unit. Call 866-923-0027 to order.

Single Acting Wiring Diagram



Double Acting Wiring Diagram



Low Voltage & Battery Issues

Low Voltage causes high amp draw which equals increased heat & reduced rpm of DC Motor. Many times low voltage will actually be poor ground condition. Low voltage will cause carbon buildup on contacts of start solenoid, coils on directional valve to fail & melt the resin on the field windings of dc motor (you will smell it & see the smoke when this happens).

Low Voltage can be caused by improper sized wire, poor connections, corrosion, auxiliary battery not being charged or possible blown fuse on charge wire.

Trick: By attaching one end of jumper cables to the negative side of the battery & the other to the aluminum manifold, you can improve the ground condition. This is a fast way to check for poor ground

Possible Cause	Not Building Pressure	Motor Not Running	Cylinder Won't Extend	Cylinder Won't Retract	Won't Hold Load	Excessive Heat From Unit	Aeration of Hydraulic Fluid	Reservoir Overflows	Cylinder Extends With Unit Not Operating	Struggles to Lift Load	Load Bounces When Cylinder Retracts	Start Solenoid Just Clicks-Motor Not Engaging	Won't Lift Load (DC Motor Under Load)	Won't Lift Load (DC Motor Not Under Load)	Won't Lower	Start Solenoid Stays On	Cylinder won't Retract Motor Under Load
Low Battery Voltage		0	0	0		0		0		0		0					
Poor Ground Condition		0	0	0		0		0		0		0					
Check Hand Control												0			0		0
Debris in Load Holding Valve					0												
Thermal Pressure Lock			0														0
Coil Not Energizing			0	0								0			0		0
Bad Seals in Cylinder	0										0						0
Loose Inlet				0			0	0			0						0
Packing on Cylinder Rod Worn Out			0		0				0		0				0		0
Hoses Connected Backwards											0						
Pump Not Priming	0		0														
Clogged Orifice				0											0		0
Rust In Motor		0															
Bad Diode				0													0
Check For Additional Valving On or Connected to Cylinder					0												
Directional Valve Not Shifting Properly			0	0						0					0		0
Bad Start Solenoid												0			0	0	
Dirty Contacts in Hand Control			0	0								0	0				

Quick Reference Guide covers the most common problems.
(if we have missed a step please let us know)

Symptoms & Solutions

Not Building Pressure –

- a. Gear pump not priming

D/A Remove relief valve operate pump for a few seconds until fluid comes out of port replace relief valve.

S/A Same as double acting but remove check valve

- b. Loose inlet on gear pump
- c. Bad O-rings on relief valve or directional valve

Motor Not Running -

- a. Check Power to Start Solenoid
- b. Check for Power to DC Motor
- c. Check for Rust in DC Motor if a. & b. checked out ok

Cylinder Won't Extend –

- a. Check Voltage @ Start Solenoid when trying to run Power Unit
(Voltage May be below 9.5 volts)

- b. Check to see if power unit is bypassing over the relief valve
- c. Improper fluid in reservoir (viscosity too high)
- d. Check Directional Valve Section D/A
- e. Check Packing on Cylinder Section

Cylinder Won't Retract –

- a. Check to see if coil on load holding valve is activating
- b. Check Directional Control Valve D/A
- c. Pilot operated check valve not opening D/A
- d. Low voltage or poor ground D/A

Excessive Heat From Unit –

- a. Low Battery
- b. Poor ground

Reservoir Overflows –

- a. Low Battery D/A
- b. Poor Ground D/A
- c. Air in hydraulic system
- d. Too small of reservoir

Struggles to Lift Load –

- a. Low battery
- b. Poor ground
- c. Gear pump sucking air
- d. Directional valve half shifting D/A
- e. Debris in relief valve □ Start Solenoid Just Clicks-Motor Not Engaging –

- a. Carbon buildup on contacts in start solenoid
- b. Rust inside motor

- c. Loose wire from start solenoid to DC motor
- d. Cracked housing on start solenoid

□ Won't Lift Load (DC Motor Not Under Load)

- a. Low fluid level
- b. Loose inlet on gear pump (air being introduced into hydraulic System)
- c. Gear pump not priming

D/A Remove relief valve operate pump for a few seconds until fluid comes out of port replace relief valve.

S/A Same as double acting but remove check valve

d. Worn out packing on cylinder

☐ Start Solenoid Stays On

a. Low battery or poor ground caused start solenoid to weld on (replace start solenoid & check Battery & ground)

☐ Cylinder won't Retract Motor Under Load D/A only

a. Low Battery

b. Poor Ground

c. Coil on load holding valve not energizing

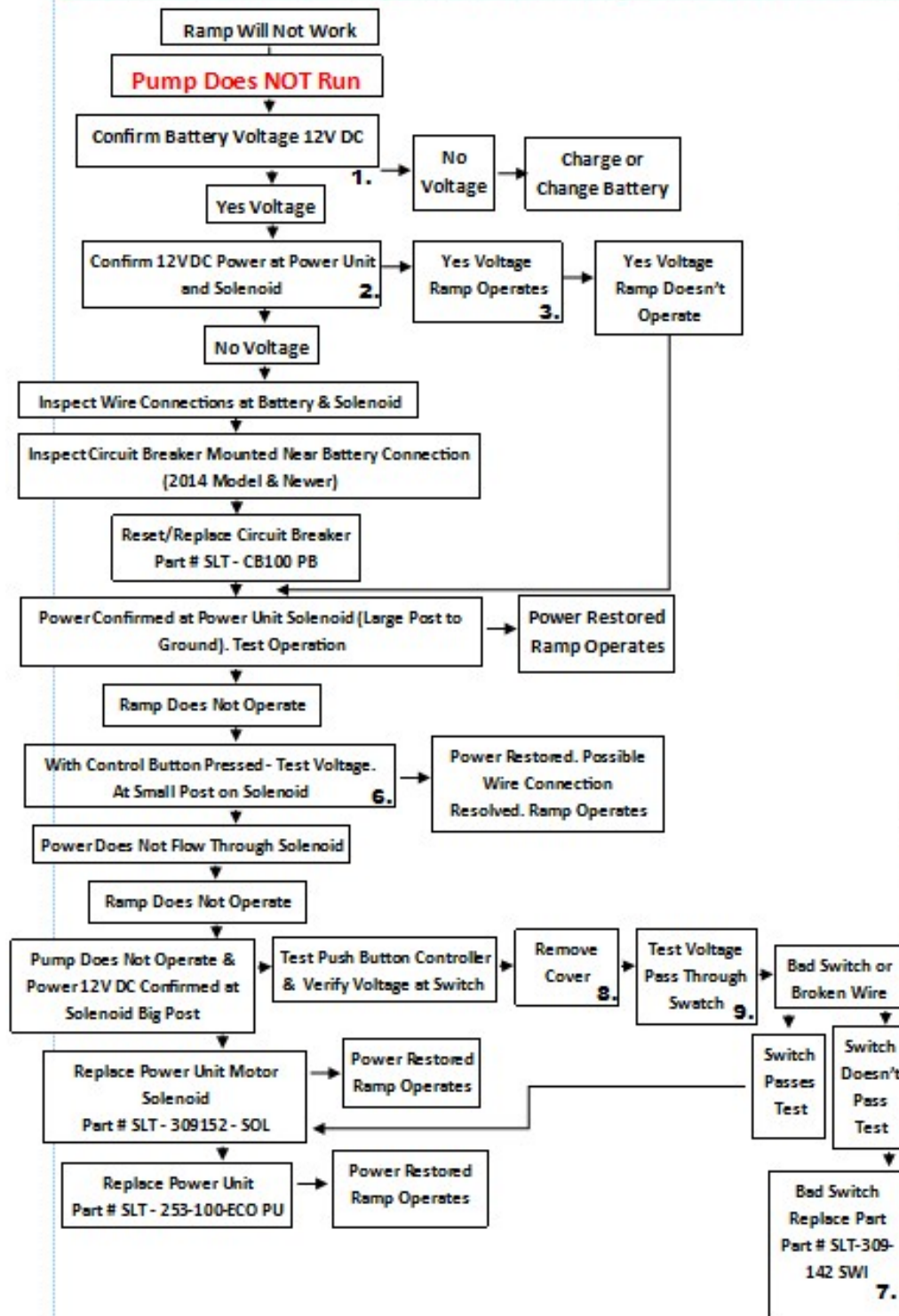
d. Directional control valve not returning to spring offset position

e. Bad packing in cylinder

Note: D/A notes solutions are for double acting hydraulic circuit

Power units without model number & serial number will not be covered under warranty, when calling please have model number and serial number of the power unit.

Eco Series Hydra-Ramp Troubleshoot Guide

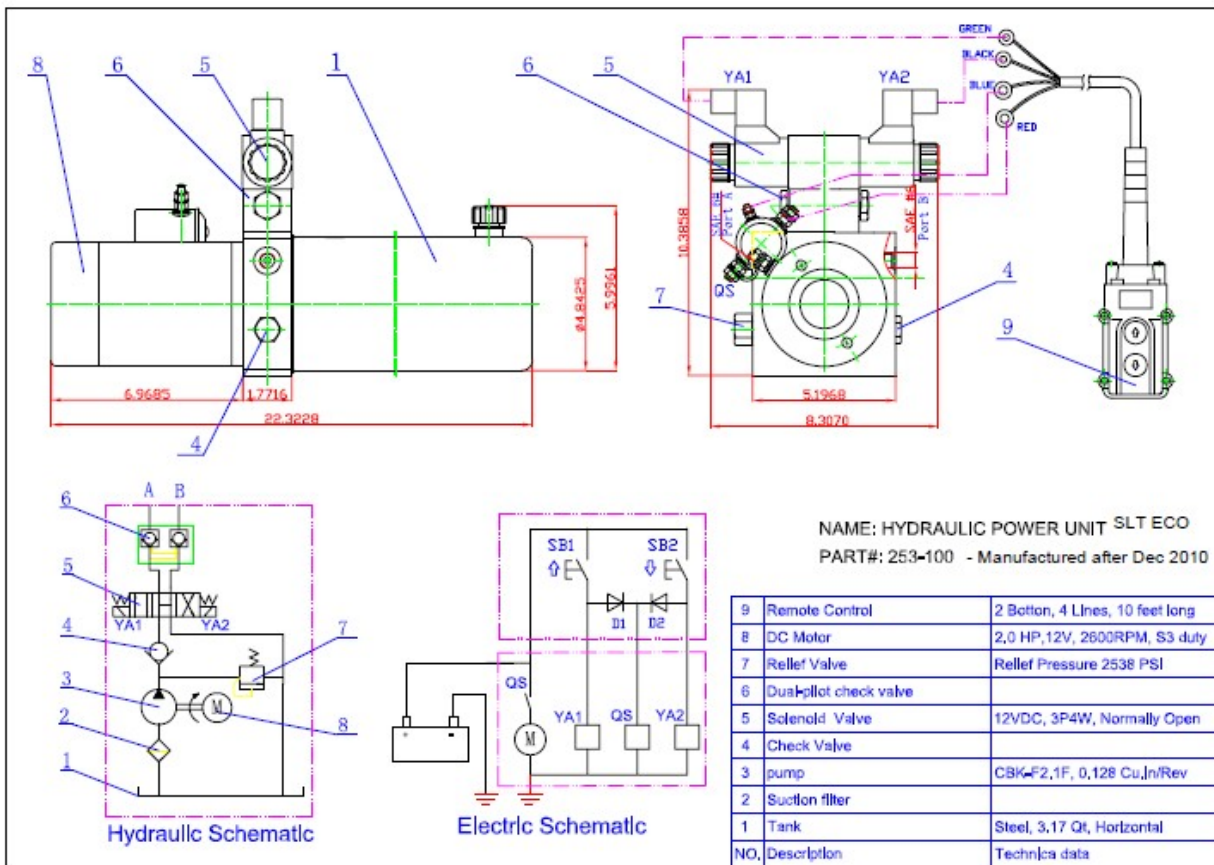


Ramp will not lower.

Potential Cause # 1	Locking pin on the ramp/door mechanism is in place.
Action	Remove locking pin or door lock prior to attempting to lower the gate.
Potential Cause # 2	Closed Flow Control Valves.
Action	Slowly turn the flow control valves located on the pump counter clockwise. Colder climates will thicken the hydraulic fluid. See section above “ramp will not raise, pump does run”.
Potential Cause # 3	No electrical power to the pump/power unit.
Action	Check voltage at the power unit. Possible dead battery or loose wire connection at battery. See section above “ramp will not raise, pump does not run”.
Potential Cause # 4	Obstruction at cylinder or ramp unit.
Action	Make certain that optional receiver hitch assembly is removed, trailer is unhooked from truck, or other obstacles are away from the ramp operating area.

Hydraulic leak.

Potential Cause # 1	Seal on the hydraulic cylinder is bad.
Action	Replace the hydraulic cylinder or replace hydraulic cylinder seal with seal kit. If problem persists, the cylinder may need replacing.
Potential Cause # 2	Seal on the hydraulic cylinder is bad due to abrasions on cylinder shaft.
Action	Replace the hydraulic cylinder with an exact matching cylinder. Parts are available by calling 866-923-0027.
Potential Cause # 3	Hydraulic hose fitting is bad.
Action	Try tightening the hydraulic hose fitting. If problem persists, replace the hose and fitting.



SLT Eco Series DC/Hydraulic Power Unit Diagram

SLT Pro - HR Series Hydra-Ramp

Two-Hydraulic Cylinder Loading Ramp

Troubleshooting Guide

Ramp will not raise, pump does run.

Possible Cause # 1	Closed Flow Control Valve
Action	Slowly turn the flow control valve located on the pump counter clockwise. Colder climates will thicken the hydraulic fluid.
Possible Cause # 2	Low Hydraulic Fluid
Action	If the ramp will partially raise, you may not have enough hydraulic fluid in the tank reservoir. This condition will be obvious because hydraulic fluid will be leaking, a hose has been replaced and fluid was lost, or the power unit may have just been replaced and fluid was lost. While the pump is running, you may hear cavitations, which is the sound of air being picked up by the pump. Air in a hydraulic system can be dangerous. The reservoir fluid level should be checked with the ramp in the down position and the fold gate folded collapsing both hydraulic cylinders. The tank should be approximately $\frac{3}{4}$ full. DO NOT OVERFILL.
Possible Cause # 3	Cylinder Seal Blown
Action - CAUTION	Ramp must be on the ground or locking device in place before any hydraulic connection is ever disconnected. The ramp could fall causing serious injury or death. Remove hose from one end of the hydraulic cylinder. Point hose end into a catch pan. DO NOT HOLD FINGERS OR HANDS OVER HIGH PRESSURE HYDRULIC FLUID HOSE. DO NOT LOOK INTO THE HOSE DURING PUMP OPERATION. If hydraulic fluid pumps out of the loose hose end when the pump is engaged, have the seal or hydraulic cylinder replaced. Note: This is a very rare problem.
Possible Cause # 4	Blockage in Hydraulic Line
Action - CAUTION	Inspect hoses to make certain there is no kink in the hydraulic lines. Ramp must be on the ground or locking device in place before any hydraulic connection is ever disconnected. The ramp could fall causing serious injury or death. If hydraulic lines are ever disconnected at any location in the system, you must bleed the lines by operating the ramp a complete cycle at least 10 times to remove the air from the system. Remove hydraulic lines from pump and cylinder, and purge them with compressed air. If hose is blocked or shows any sign of cuts, scrapes, or damage, replace hose. Note: This is a very rare problem.
Possible Cause # 5	Manual Control Valve Failure
Action -	Ramp must be on the ground or locking device in place before any

CAUTION	hydraulic connection is ever disconnected. The ramp could fall causing serious injury or death. Remove (or loosen) the hydraulic line from pump port flow-out and determine if fluid is leaving the pump unit. Reconnect (or tighten) line to control valve. Remove hydraulic connection at main cylinder and test flow by powering pump unit and actuating the control valve for the main cylinder. If fluid does not exit the control valve, replace the unit. Note: This is a very rare problem. DO NOT HOLD FINGERS OR HANDS OVER HIGH PRESSURE HYDRULIC FLUID HOSE. DO NOT LOOK INTO THE HOSE DURING PUMP OPERATION.
Possible Cause # 6	Hydraulic Pump Failure
Action	Replace the hydraulic pump or entire power unit.

Ramp will not raise, pump does NOT run.

Possible Cause # 1	Power Source Not Adequate
Action	Using a voltmeter, determine the voltage at the pump solenoid terminals. If there is not 12 Volts DC, check the wiring to the battery and also check the voltage of the battery/batteries. You may have a dead truck battery.
Possible Cause # 2	Push Button Switch Bad
Action	Using a voltmeter, check the voltage at the back of the switch. 12 Volts should come in on one side of the switch. When you press the button, 12 volts should go out of the switch. If power does not continue through the switch, when the push button is engaged (pushed in), replace the push button switch.
Possible Cause # 3	Pump Motor Solenoid Bad
Action	Using a voltmeter, check the voltage to the solenoid to make sure 12 volts enters the solenoid. If there is voltage to the solenoid, engage (push) the push button switch. Check for power going out of the motor solenoid to the pump motor. If there is no voltage in that wire, replace the solenoid.
Possible Cause # 4	Brushes in Pump Motor Bad
Action	Using a small hammer, lightly tap on the pump housing while engaging the pump. If the pump begins to activate, the power unit (electric motor) needs to be re-built or replaced. Note: The pump may only operate once or may operate several more times. If this gets you going, plan to replace or service the unit quickly. Be sure to put the Hydra-Ramp in the closed position and insert a lock in the pin to ensure safety.
Possible Cause # 5	Power Unit Failure
Action	Replace the entire power unit.

Ramp will not lower.

Potential Cause # 1	Closed Flow Control Valves.
Action	Slowly turn the flow control valves located on the pump counter clockwise. Colder climates will thicken the hydraulic fluid.
Potential Cause # 2	Safety pin or locks must be removed for operation.

Action	Prior to ramp operation, remove safety pins or locks from the ramp lock plate(s).
Potential Cause # 3	Obstruction at cylinder or ramp unit.
Action	Make certain that optional receiver hitch assembly is removed, trailer is unhooked, or other obstacles are away from the ramp operating area.

Hydraulic leak.

Potential Cause # 1	Seal on the hydraulic cylinder is bad.
Action	Replace seal with seal kit. If problem persists, the cylinder may need replacing. Parts are available by calling 866-923-0027.
Potential Cause # 2	Seal on the hydraulic cylinder is bad due to abrasions on cylinder shaft.
Action	Replace the hydraulic cylinder with an exact matching cylinder. Parts are available by calling 866-923-0027.
Potential Cause # 3	Hydraulic hose fitting is bad.
Action	Try tightening the hydraulic hose fitting. If problem persists, replace the hose and fitting.

Raising or Lowering an Eco Series Hydra-Ramp™ if Hydraulics Fail

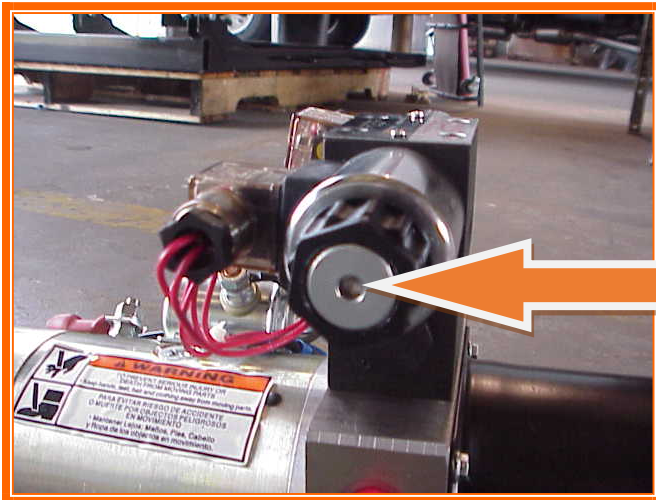
The electromagnetic cartridge valve has a small push button in the center. If it is pushed in with a screw driver or small punch...it will release the valve. Be **VERY CAUTIOUS** here. This ramp weighs over 500 lbs. It is **NOT** designed to be lifted by hand. We strongly recommend using a forklift or front end loader to manually raise the ramp. The Eco-Series Hydra-Ramp™ can be raised using this technique.

Below is a photo of the solenoid valve. There are two on each ECO Ramp power unit; one valve for the up-side of the cylinder and one for the down-side of the cylinder.

DANGER - the ramp weighs over 500 lbsyou could be injured or possible death.



Depress the manual cartridge valve control using a small screw driver. Press hard to fully release the valve. There is a manual release on each side of the cartridge valve.



Fuel Station Troubleshooting Guide

Fuel Pump(s) Will Not Come On	
Potential Cause # 1	Dead battery on truck
Action	Test to see if vehicle will start. If not, charge or replace battery.
Potential Cause # 2	Master switch inside the cab is turned off.
Action	Turn on master switch inside cab. The switch is located on the front dash and has an amber or green power indicator light that will glow when power is activated.
Potential Cause # 3	Switch at fuel station is turned off.
Action	Turn on the switch at the tank location.
Potential Cause # 4	No power is getting to the pump switch.
Action	Turn on master switch inside cab. Turn on the switch at the tank. Using a volt meter, test for 12 volt power at the back of the tank switch. If there is no power to either side of the switch, inspect inline fuse.
Potential Cause # 5	Fuse has blown.
Action	Locate the inline fuse between the battery and the pump switch. There are multiple fuses on multi-fuel tank sets. Replace fuse with matching fuse size as labeled. The main fuse is a standard automotive two pole 20 amp fuse.
Potential Cause # 6	Toggle switch has gone bad.
Action	Using a volt meter, test voltage coming into the toggle switch at the tank. If power comes in one side but will not go out the other side after turning on, replace the toggle switch.
Potential Cause # 7	Pump has overheated.
Action	If you determine that 12 volt power is in fact going to the pump, but it will not come on, the thermo sensor may have shut the pump off to protect it. Make sure the toggle switch is off. Turn the pump off for 30 minutes and test again.
Potential Cause # 8	Pump has overheated and internal damage has occurred.
Action	If pump is left on by accident, it will damage the pump gears causing swelling and sluggish operation or complete pump lock-up. You can test by loosening the top access plate (4 bolts). Loosen each bolt about ¼ to ½ turn. Turn on the pump switch. If the pump comes on, request a “gear kit” to rebuild the fuel pump. Note: This pump is marked as manufactured by GPI. It is typically installed on the larger volume fuel tanks.
Potential Cause # 9	Pump has failed and internal damage has occurred.
Action	If all steps above have been completed and the pump will not operate, you will need to replace the pump. Call 866-923-0027 to order.

Fuel Gauge Does Not Work

Potential Cause # 1	Empty fuel tank
Action	Add or remove fuel and observe movement of fuel gauge. This gauge works manually and has no electric parts.
Potential Cause # 2	Fuel gauge float stuck
Action	With the tank empty of fuel, you may be able to take a probe, or flexible wire and move the float up and down. If problem persists, replace the fuel gauge.
Potential Cause # 3	Fuel gauge failure
Action	Replace the fuel gauge. In order to do this, the fuel tank must be removed from the fuel tank mounting rail on certain models. Disconnect power from battery before removing fuel tank assembly from the truck body mounting rails. On certain models, you may be able to remove the bolts from the front of the fuel tank assembly and loosen the bolts on the rear of the tank assembly to create a tilt and enough space to unscrew and then replace the fuel gauge.

Wiring Diagram for SLT Fuel Station – 2 Tank Configuration

