

SERIES RL4000D1 LIGHT TOWER OPERATION/SERVICE & PARTS MANUAL

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TO THE OPERATOR

DO NOT ATTEMPT TO SETUP, OPERATE, OR WORK ON THE LIGHT TOWER UNLESS YOU HAVE READ AND STUDIED THIS MANUAL AND THE ENGINE AND GENERATOR MANUALS CAREFULLY. READING THESE MANUALS WILL TEACH YOU HOW TO SAFELY SETUP, OPERATE, AND PROPERLY MAINTAIN THE TOWER AND ITS COM-PONENTS.

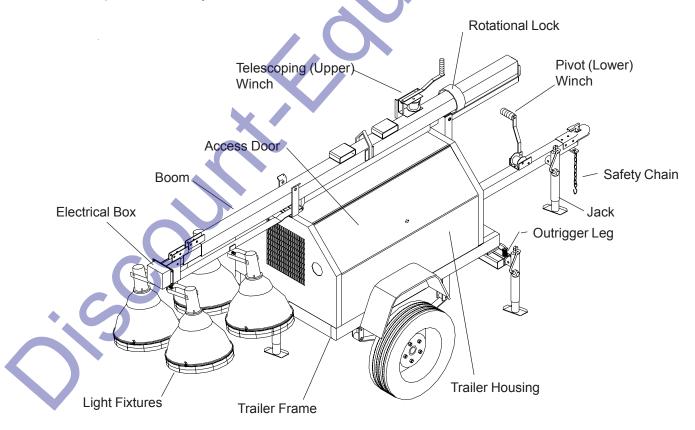
REMEMBER THAT YOU ARE THE KEY TO SAFETY. GOOD SAFETY PRACTICES NOT ONLY PROTECT YOU, BUT ALSO THOSE WORKING AROUND YOU. MAKE THIS MANUAL A WORKING PART OF YOUR SAFETY PROGRAM.

An operator should never use drugs, alcohol or any other substance which can change his alertness or coordination.

Do not work on this equipment when mentally or physically fatigued.

This manual is compiled from information available and current at time of approval for printing. Terex reserves the right to improve its products without giving prior notice or incurring any obligation.

If this manual becomes lost, order a new one from Terex so future operation and maintenance personnel may read these instructions.



SAFETY ALERT SYMBOLS



MEANS: ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED

THIS SAFETY SYMBOL IS USED FOR IMPORTANT SAFETY MESSAGES. WHEN YOU SEE THIS SYMBOL, FOLLOW THE SAFETY MESSAGE TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE.

UNDERSTANDING SIGNAL WORDS

A signal word - DANGER, WARNING or CAUTION is used with the safety alert symbol.



NOTICE

DANGER Identifies the hazard or unsafe practice that will result in severe injury or death.

WARNING Identifies the hazard or unsafe practice that could result in severe injury or death.

CAUTION Identifies the hazard or unsafe practice that could result in minor injury or property damage.

NOTICE Identifies important installation, operation or maintenance information.



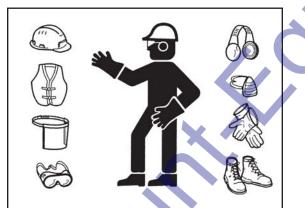
AWARNING DO NOT SETUP OR OPERATE THE LIGHT TOWER WITHOUT READING THIS OPERATOR'S MANUAL.

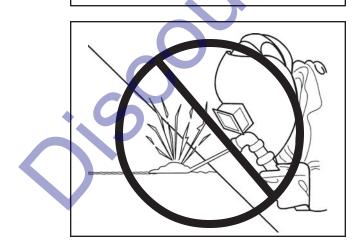
DO NOT WORK ON OR OPERATE THE LIGHT TOWER WHILE UNDER THE INFLU-ENCE OF PERFORMANCE IMPAIRING DRUGS OR ALCOHOL.



SAFETY ALERT SYMBOL

Stop and take time to read ALL Safety alert messages. Follow the safety messages to avoid personal injury or property damage.





ACCIDENT PREVENTION

Use protective clothing and safety equipment. Always wear approved safety equipment such as gloves, safety boots, safety hard hat, goggles, ear protection, and dust masks when necessary.

Wear protective clothing that is snug and belted where required.

Always wear a hard hat when operating the light tower!

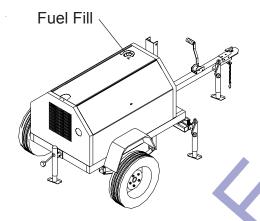
UNAUTHORIZED WELDING

AWARNING WELDING CAN CAUSE STRUCTURAL FAILURE OR PERSONAL INJURY.

DO NOT weld on any structural member.

Any unauthorized welding or repair procedure will void the warranty.







AWARNING FUELING

ALWAYS handle fuel with care. It is highly flammable.

ALWAYS stop engine before refueling. Fill fuel tank outdoors.

Be sure the fuel supply has a positive shutoff valve.

DO NOT replace fuel lines with materials different from those supplied as original equipment.

ACAUTION FIRES CAN CAUSE SEVERE PERSONAL INJURY OR MACHINE DAMAGE.

Prevent fires by keeping the light tower and its surrounding area clean.

DO NOT refuel while smoking or when near open flame or sparks.

DO NOT refuel the engine when it is hot. Allow to cool for several minutes before refueling.

DO NOT spill fuel inside the engine compartment.

If fuel has leaked, wipe it up and have leak repaired before next use.

Have a fire extinguisher nearby. Be sure the extinguisher is properly maintained and be familiar with its use. Extinguishers rated ABC by the NFPA are appropriate for all applications.

AWARNING EXHAUST GASES ARE TOXIC. DO NOT USE IN-DOORS UNLESS PROPERLY VENTILATED OR AN EXHAUST SCRUBBER IS USED.

Check exhaust system regularly for leaks and ensure that the exhaust manifolds are secure and not warped.

Make sure the unit is well ventilated.

AWARNING ELECTRICAL SAFETY

This equipment utilizes high voltage circuits. Always exercise extreme caution when trouble shooting or repairing any electrical circuit.

The electrical circuits in this light tower complete their paths back to the generator within the equipment. The neutral conductor at the generator is bonded to the equipment frame. Ground wires within the system are also bonded to the equipment frame.

Always ground the unit when possible.

A grounding lug has been added to the trailer frame for your convenience.

Disconnect electrical power and turn off engine before removing protective covers on high voltage electrical closures.

Beware of a cut or damaged power cord. Have a qualified electrician replace immediately.

When troubleshooting indicates a malfunction in the high voltage AC system, pass the task to a qualified and trained electrician.

AWARNING DO NOT TOUCH HOT PARTS

The exhaust manifold and tail pipe are very hot. Parts of the engine are also hot. Use protective gloves when handling hot parts.

The light fixtures become very hot during operations. To avoid burns, always allow any fixture to cool before handling.

AWARNING BATTERY HAZARDS

Lead acid batteries can be dangerous. The sulfuric acid in the battery can cause severe skin and eye burns. The hydrogen gas emitted during charging can explode if an arc or flame is present.

DO NOT smoke while servicing the battery.

DO NOT allow tools to touch battery terminals and create an arc.

Disconnect the negative terminal of the battery when working on the engine or other parts to prevent accidental arcing. Disconnect the negative cable at the end away from the battery.

DO NOT remove the vent caps when charging the battery

Always wear eye protection when servicing the battery.

If acid gets on skin or eyes, immediately flush under running water and obtain medical attention.

METAL HALIDE LAMPS PRODUCE SHORTWAVE ULTRAVIOLET RADIATION AND CAN CAUSE SERI-OUS SKIN AND EYE BURNS OR INFLAMMATION IF THE OUTER ENVELOPE OF THE LAMP IS BRO-KEN OR PUNCTURED.

DO NOT use where people will remain close to the lamps for more than a few minutes unless adequate shielding or other safety precautions are used.

KEEP ALL BODY PARTS AND CLOTHING AWAY FROM MOVING PARTS

Loose jackets, shirts, sleeves, and especially neckties should not be worn while working on or running the unit.

Only remove guards or protective devices from unit temporarily to gain access for maintenance. Always replace guards immediately after servicing. Never remove guards while unit is operating.

Keep your hands away from moving parts, particularly clear of the radiator fan and alternator belts when the engine is running.

ACAUTION BEWARE OF TRAFFIC HAZARDS

Stand clear of traffic when starting or checking the unit along the road.

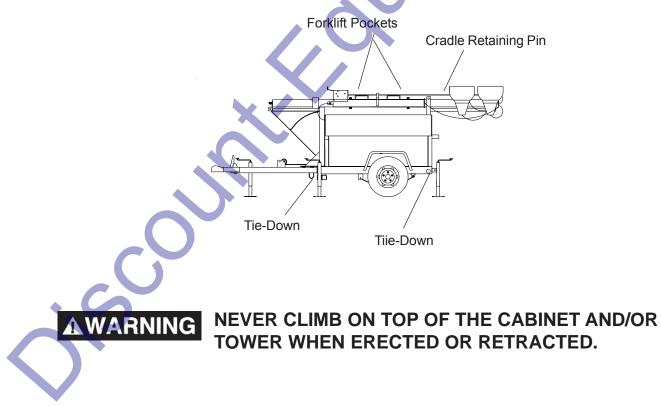
Check the fuel tank, oil pan, and fuel and oil lines for leaks that would spill fuel or oil on the road.

Check fasteners and mounting brackets periodically to insure all are tight and nothing is in danger of falling off during transit.

ACAUTION Be careful when lifting. Never suspend any other equipment from the shipping tie downs.

Use the lifting eye or forklift pockets on the tower for lifting the trailer and tower assembly only (with tower and cabinet).

Make sure any tie-downs at the bottom of the trailer are released, and the cradle retaining pin is inserted and secured, prior to lifting.



RECEIPT OF DELIVERY CHECKLIST

The tower will be serviced, tested and ready for operation upon delivery. Terex recommends the following checks:

- () Insure there is no freight handling damage which should be charged against the carrier
- () Make sure the telescoping boom is secure.
- () Make sure the crosshead assembly is secure.
- () Check the front and rear jacks for security and proper operation.
- () Check the outriggers for security and proper operation.
- () Check that the tires are not damaged, under inflated or that any lugs are loose.
- () Check the engine/generator for obvious damage, loose connections, or leaks.
- () Check the control panel for damage or loose connections.
- () Check the boom wires for obvious damage or loose connections.
- () Check the light fixtures for damage to the lamps, lenses, reflector or etc.
- () Check the winches, cables and pulleys for damage and proper operation.
- () Check the exhaust system for damage.
- () Check all fluid levels; battery, radiator, and engine oils.
- () Insure manuals are in the pocket provided inside the unit.

Transport & Towing

1) Using the front leveling jack, securely attach the light tower to the transporting vehicle.

2) Insure that the coupler is properly secured to the towing vehicle and attach the safety chains.

AWARNING ALWAYS USE THE PROPER TRAILER HITCH AND SAFETY CHAINS. OBEY ALL LOCAL OR STATE D.O.T. LAWS WHEN TOWING A LIGHT TOWER.

AWARNING FAILURE TO PROPERLY SECURE THE TRAILER TO THE TOWING VEHICLE MAY RESULT IN SERI-OUS INJURY OR DEATH.

3) Retract and rotate the front leveling jack into its stowed position.

4) Check the tires for proper inflation (32psi) and verify the lug nuts are tight.

5) Position all outriggers and jacks into the stowed or travel position.

6) Verify that the fixtures are secure and ready for transport.

7) Secure all loose locking pins and retainers.

8) Make sure all doors are closed and tightly locked.

9) Remove tire chocks.

Towing of a Terex light tower is approved with the light fixtures in place on the crosshead assembly for all off road terrain and highway towing as long as the following speed limits are followed: Highway towing- 45 MPH max Off road towing- 10 MPH max Severe damage may occur from excessive speeds. Damage created by abuse will void the manufacturer's warranty.

SETUP

- A. Move the light tower to desired location keeping the following in mind:
 - The light tower should not be placed where those working under the light are either a. Forced to look into the light regularly.
 - b. Forced to work with there backs to the light (shadows will block the light from the work area).
 - 2) The area where the tower is positioned should be relatively level for safe and proper operation of the unit.
 - 3) The light tower should be located on the same level or on ground higher than the work area.

B. Use tire chocks in front of and behind each tire whenever possible. Always use tire chocks on an incline.

- C. Disconnect the towing chain.
- D. Unhitch from the towing vehicle as follows:
 - 1) Rotate the tongue jack into position (90 degrees), release the hitch pin and raise the tongue off the towing vehicle.
- E. Level the trailer, using the jacks as follows:
 - 1) Extend the front outriggers until the outrigger pins lock into place. Rotate the jack on each outrigger into vertical position and lock into place.
 - 2) Rotate the rear jack and lock into the vertical position.
 - 3) Start at the highest jack position. Rotate the jack handle until the jack foot touches the ground.
 - 4) Raise the other jacks to level trailer.



OUTRIGGERS ARE NOT DESIGNED TO LIFT THE TIRES OFF THE GROUND.



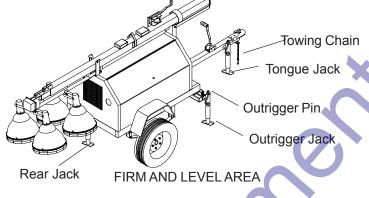
Insure that all jacks are down to prevent the tower from tipping over backwards when raised.



NEVER ATTEMPT TO MOVE THE TOWER WHILE THE LEVELLING JACK ARE DOWN. SERIOUS MACHINE DAMAGE WILL RESULT.

SETUP

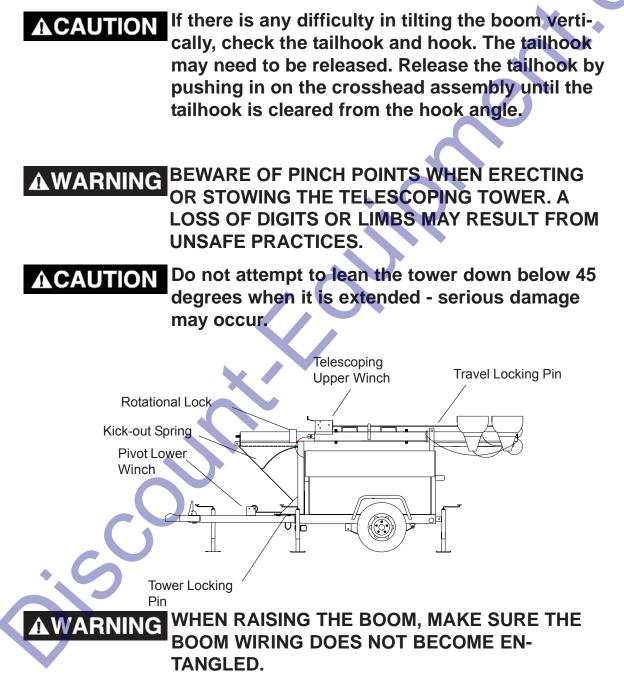
- F. When applicable, drive grounding rod into earth. (Grounding rod not included)
 - 1) Drive the rod into the ground and secure the grounding wire to the lug located on the trailer frame.



- G. When applicable, install the floodlights on the crossarm.
 - 1) Remove the light fixtures from their packing boxes and install them on the crossarm with the lens facing the ground.
 - 2) The cord on the fixture should be on the side closest to the trailer so the cord entry is beneath the fixture when the tower is raised (this reduces moisture problems and insures the water weep hole in the fixture is down).
 - 3) Set the vertical aim for each light fixture by adjusting the light fixtures and tightening the lower bolt.
 - 4) Set the spread between the fixtures horizontally by adjusting the fixtures and tighten ing the mounting nut.
 - 5) The light fixtures may be left on the unit when towed around the job site. They can be removed and stowed for highway towing.
 - 6) Plug each fixture into the receptacles provided. Plug into the numbered receptacles in a clockwise rotation starting at the upper or 1:00 o'clock position. This makes trouble shooting easy without lowering the tower.

If Tungsten Halogen lamps are used, the cord must be routed and secured away from the fixture. Failure to do so may result in cord burnthrough and short circuit due to the high fixture temperature.

- H. Raising the tower as follows:
 - 1) Remove the tower travel locking pin from the cradle at the rear of the cabinet.
 - 2) Remove the tower locking pin from the tower base. Using the lower pivot winch, raise the tower to the vertical position. Reinsert the tower locking pin into the tower base.



SETUP

AWARNING THE AUTOMATIC BRAKE MUST BE WORKING ON THE UPPER TELESCOPING WINCH. THE WINCH SHOULD NOT ALLOW THE TOWER TO DROP DOWN WHEN THE HANDLE IS RELEASED.

AWARNING UNDER NO CIRCUMSTANCES SHOULD THE TOWER BE REPOSITIONED WHEN THE BOOM IS IN A VERTICAL POSITION.

4) Release the tower rotational lock and adjust the lights to the desired area. Once positioned correctly, retighten the rotational lock.

OPERATING INSTRUCTIONS

STARTING THE ENGINE/GENERATOR SET

Insure the light switches are turned "off". This prevents the engine from starting under load and prevents electrical equipment from being damaged.

1) Unlock and open the access doors.

CAUTION

2) Check the oil, fuel, and coolant levels.

3) Check that the tower has been properly grounded.

4) Place the key into the ignition switch and preheat the unit for 10-30 seconds.

ACAUTION Never preheat for more than 30 seconds, damage may be done to the heating elements.

4) Turn the key switch towards the start side of the key switch. On most units this is towards the right.

ACAUTION To avoid start damage, never operate the starter for more than 45 seconds.

5) Start the engine and listen for any unusual sounds or vibrations. Should unusual sounds be detected, contact Terex Light Construction Service Manager.

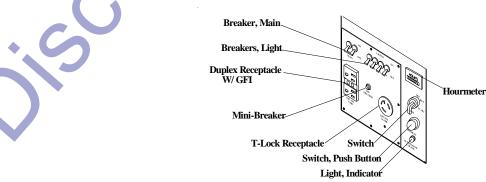
6) Once the engine has been started and running smoothly, place the light switches in the "ON" positions, **one at a time**.

7) Check each flood light for proper operation.

8) Close and latch the access doors.

NOTICE

Vaporous lights require a warm up period of 5-10 minutes before they will produce a full output.



OPERATING INSTRUCTIONS

LIGHT TOWER AUXILIARY POWER:

1) One 15 amp, 125 VAC GFI receptacle is provided for auxiliary power.

2) Total auxiliary power cannot exceed main circuit breaker rating. Each lamp operating consumes 9.5 amps of 110 volt power.

3) Before plugging in auxiliary power cords, feed them up through the trailer frame and attach to receptacles. Close the cabinet doors to protect control panel and other components from weather.

SHUTDOWN PROCEDURES:

1) Place all light switches into their "OFF" position.

2) Allow the engine to run for 1 to 5 minutes under no load, then turn the unit "OFF".

AC generator may become damaged.

NOTICE

After being shut down, the lights must be allowed to cool down before trying to restart the lights. This cool down period can be between 10-25 minutes, depending on the ambient temperature.

LOWERING THE TOWER:

1) Using the upper telescoping winch, telescope the tower down to its fully retracted position.



CAUTION

The boom should lower smoothly and evenly to its lowest position. If it does not, contact a qualified mechanic.

Insure the coil cord does not become entangled with the lower tower sections.

OPERATING INSTRUCTIONS

2) Loosen the rotational lock and rotate the tower into its nesting position. The upper telescoping winch should be pointing forward, towards the tongue.

3) Remove the travel locking pin (located on cradle).

4) Remove the tower locking pin (located on tower base).

5) Using the lower pivot winch, lower the tower into the cradle.

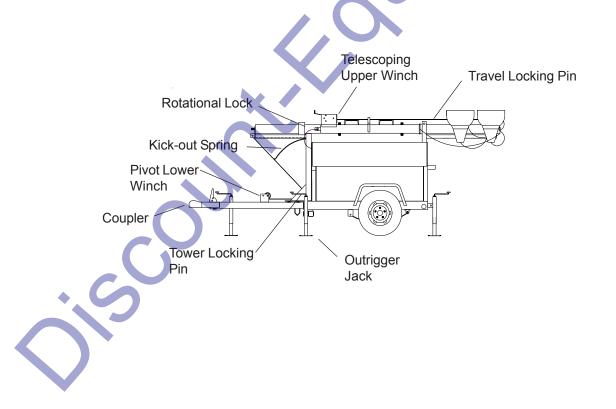
6) Verify that the tailhook is "latched" or hooked over the tower cradle. This prevents the tower sections from telescoping out while traveling.

7) Replace the travel locking pin.

8) If required, remove the light fixtures and crosshead assembly.

9) Secure all locking pins and verify that the tailhook is properly latched.

10) Close and lock both doors.



MAINTENANCE

MINIMUM MAINTENANCE PROCEDURES:

The following maintenance intervals are only suggested by Terex. You should always check your engine owner's manual for specific information. Should you find any discrepancies between the Terex Manual and the Engine Manufacturer's Manual always follow the Engine Manufacturer's Manual.

Twice Daily:

-Check the crankcase oil and fill as required.

Daily:

-Check the engine and generator for any loose bolts, connections, and fittings. -Check the coolant levels and fill as required.

Note: Use a 50% solution of water and antifreeze for the engine coolant.

Weekly:

-Check the air cleaner and clean as required. -Inspect the radiator fins for damage or clogging.

Bi-weekly:

-Check the engine oil quality and change as required.

Bi-Monthly or every 250 hours:

-Change the engine crankcase oil.

Six months or every 500 hours:

-Replace the oil filter.

-Check valve clearances (consult Manufacturer's Manual)

-Check electrical components and clean as required.

-Check electrical wiring for chafing, wear and replace as needed.

Yearly or every 1,000 hours:

-Clean or replace the fuel filter.

-Clean or replace the fuel pump strainer, if equipped.

-Check the head and manifold bolts for tightness.

MAINTENANCE

CLEANING:

The Light Tower employs various electronic controls that may be damaged by liquid spray washing or high pressure washing. Follow these procedures to prevent any damage to these components.

A WARNING DO NOT SPRAY WATER INTO THE UNIT WHILE IT IS RUNNING. THIS MAY RESULT IN INJURY OR DEATH BY ELECTRIC SHOCK.

Exterior Cleaning:

1. The exterior housing may be washed by most conventional cleaners and methods.

2. The exterior housing may be waxed using any conventional automotive wax.

Interior Cleaning:

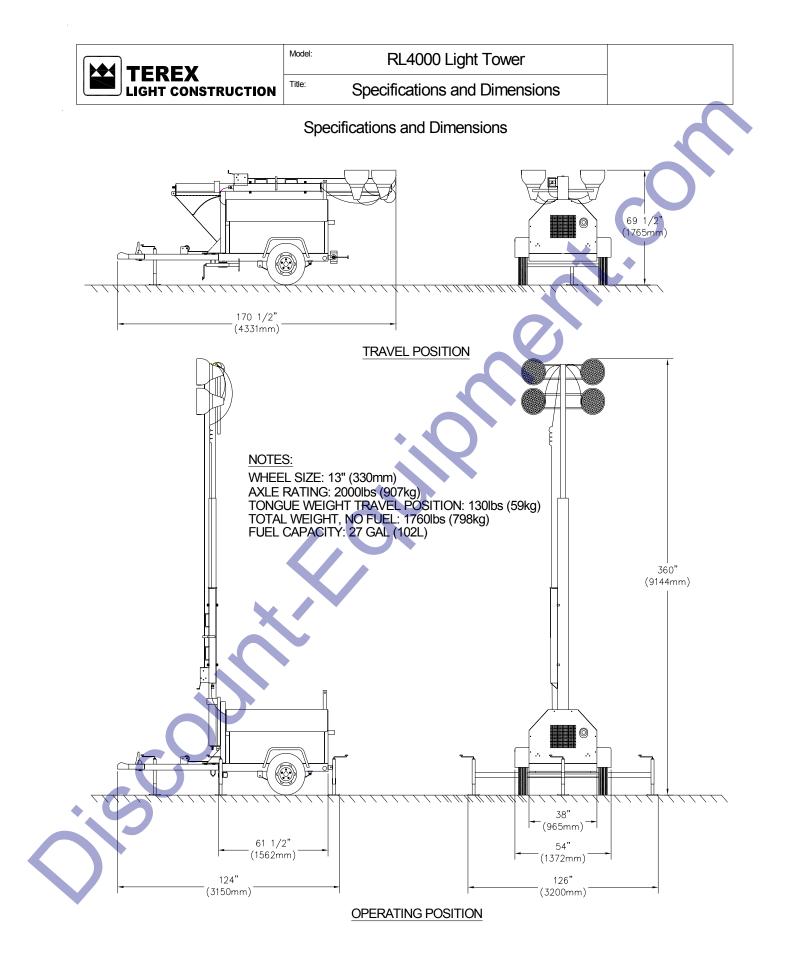
1. Using a damp cloth covered with a mild soap, carefully clean around any electric controls, generator, and thermostats.

2. The base and housing foam may be cleaned with a damp cloth covered with mild soap.

Light Fixture Cleaning:

1. The light fixtures and bulbs may be cleaned using any window cleaner.

A WARNING THE LIGHT FIXTURES ARE VERY HOT, ALLOW TO COOL BEFORE PERFORMING ANY CLEANING TO THE FIXTURE, BULBS OR LENSES.



TROUBLE SHOOTING GUIDE

The engine and generator are set at the factory. These units are tested and set to 1800 RPM at 60 HZ for proper operation in the field. These units should never require additional adjustments in the field. Adjustments should only be made by a qualified service technician, otherwise the manufacturer's warranty may become void.

TROUBLE	POSSIBLE CAUSE	REMEDY
1.Boom will not rise to	a.Yoke pin is in place	a.Remove yoke pin
the operating position.	b.Defective cable	b.Have a trained
	or pulley	mechanic examine and
		repair as needed
	c.Tailhook is latched	c.Loosen boom cable
		and push in crosshead
		assembly
	d.Defective winch	d.Have a trained
		mechanic examine
		and replace as needed
2.Boom will not telescope.	a.Defective winch	a.Have a trained
		mechanic examine
		and replace as needed
	b.Broken cable or pulley	b.Have a trained
		mechanic examine
		and replace as needed
3.Engine will not turn over	a.Dead battery	a.Check the battery voltage or
	· · · · ·	loose cables
	b.Engine has seized due to loss	b.Have a trained
	of fluids	mechanic examine and
		repair as needed
4.Engine turns over but will	a.Empty fuel tank	a.Fill tank with #2 diesel fuel
not start	b.Clogged fuel lines or filter	b.Check and clean the fuel
		system as needed
	c.Leaking fuel lines or a loss	c.Replace any leaking fuel lines
	of prime	and tighten connections
	d.Heater elements burned out	d.Replace heater elements
	e.Fuel line solenoid is not open	e.Replace fuel line solenoid
5.Engine runs rough	a. Clogged or leaking fuel system	a.Replace fuel lines, tighten all
		connections, inspect the pickup
	×	tube and inspect the fuel filter
	b.Clogged exhaust system	b.Clear the exhaust system
	c.Clogged air filter	c.Clear air filter
	d.Clogged or stuck fuel injectors	d.Have a trained
		mechanic examine
	e.Valve clearances are out of	e.Have a trained
	adjustment or the valve spring	mechanic examine
	may be damaged	
	f.Defective governor or fuel pump	f.Have a trained
		mechanic examine
6.Engine runs but produces a	a.Crankcase oil level is too high	a.Drain oil to its proper level
dense smoke	b.Low compression	b.Have a trained mechanic
		inspect for broken or seized
		rings. Inspect valve clearances

TROUBLE SHOOTING GUIDE

7.Engine overheats	a.Blocked cooling air intakes	a.Inspect the front and rear intakes
		and clear as needed
	b.Low coolant levels	b.Replace the coolant with a 50%
	b.eow cooldin levels	water/coolant solution
	c.Radiator fins have become	c.Clear the radiator fins
	clogged d.Fan belt is loose	d Tighton for holt
		d.Tighten fan belt
3.Engine runs but the battery	a.Alternator has failed	a.Have a trained mechanic inspect
voltage is low		the alternator
9.Engine runs but the light will	a.Circuit breakers are tripped	a.Reset the circuit breaker
not operate	b.Loose connections in the wiring	b.Have a trained electrician inspect
	system	the ballast box wiring system
	c.Burned out bulb	c.Replace the bulbs as needed
	d.Defective capacitor	d.Have a trained electrician inspect
	(Leroy Somers Generator)	the capacitor
	e.Defective rectifier	e.Have a trained electrician inspect
	(Newage generator)	the rectifier
	f.Defective AC generator	f.Have a trained electrician inspect
		the generator
	g.Engine speed is too low	g.Have a trained mechanic inspect
		the engine speed and reset to
		1800rpm @ 60hz
	h.Defective ballast and capacitors	h.Have a trained electrician inspect
		the ballast and capacitors
10.Unusual noise coming from	a.The generator has a defective	a.Have a trained electrician inspect
he generator	bearing or damaged fan blade	the generator
11.Lamp will not start	a.Lamp loose in socket	a.Inspect lamp base to see if there
		is arcing at center contact button.
		Tighten lamp. Check socket for
		damage. Replace if needed.
•	b.Floodlight plugs not tight	b.Check plug and receptacle. Tighte
	b. Hoodinght plugs hot tight	if needed
	c.Defective ballast	c.Interchange ballast plugs. If lamp
	C.Delective ballast	starts, replace ballast. Check for
		•
		swollen capacitors, charred wiring,
		core and coil, or other signs of
	11 11	excessive heat.
	d.Low voltage	excessive heat. d.Check line voltage at ballast input.
	d.Low voltage	excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of
602	d.Low voltage	excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load
602	d.Low voltage	excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove
602		excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove external load.
SOL	d.Low voltage e.Improper ballast	excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove external load. e.The ballast name plate data should
SOL		 excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load. Increase supply voltage or remove external load. e.The ballast name plate data should agree with the line voltage and lamp
SOL		excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove external load. e.The ballast name plate data should
SOL		 excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load. Increase supply voltage or remove external load. e.The ballast name plate data should agree with the line voltage and lamp
	e.Improper ballast	 excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove external load. e.The ballast name plate data should agree with the line voltage and lamp used. If not, replace the ballast.
	e.Improper ballast	excessive heat. d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load Increase supply voltage or remove external load. e.The ballast name plate data should agree with the line voltage and lamp used. If not, replace the ballast. f.Operating position should agree

TROUBLE SHOOTING GUIDE

12.Lamp starts slowly (arc does not strike when switchis first turned on	a.Defective lamp	a.Lamp may glow for an extended period of time. Replace after checking voltage and ballast
13.Circuit breaker trips on lamp startup	a.Short circuit or ground	a.Check wiring against diagram. inspect for shorts or ground. Fix as needed.
14.Lamp light output low	a.Normal lamp depreciation	a.Replace lamp
	b.Dirty lamp or fixture	b.Clean lamp and fixture
	c.Defective ballast	c.Interchange ballast plugs. If lamp
		starts, replace ballast. Check for
		swollen capacitors, charred wiring,
		core and coil, or other signs of
		excessive heat.
	d.Wrong voltage	d.Check line voltage at ballast input.
		Voltage should be within 10% of
		rating when operating at normal load.
		Check wiring connections for voltage
		loss. Check socket contact point.
	e.Improper ballast	e.Check ballast name plate against
		lamp data
15.Lamp colors different	a.Normal lamp depreciation	a.Replace lamp
	b.Dirty lamp or fixture	b.Clean lamp and fixture
	c.Wrong lamp	c.Check data on lamps and replace
		as needed.

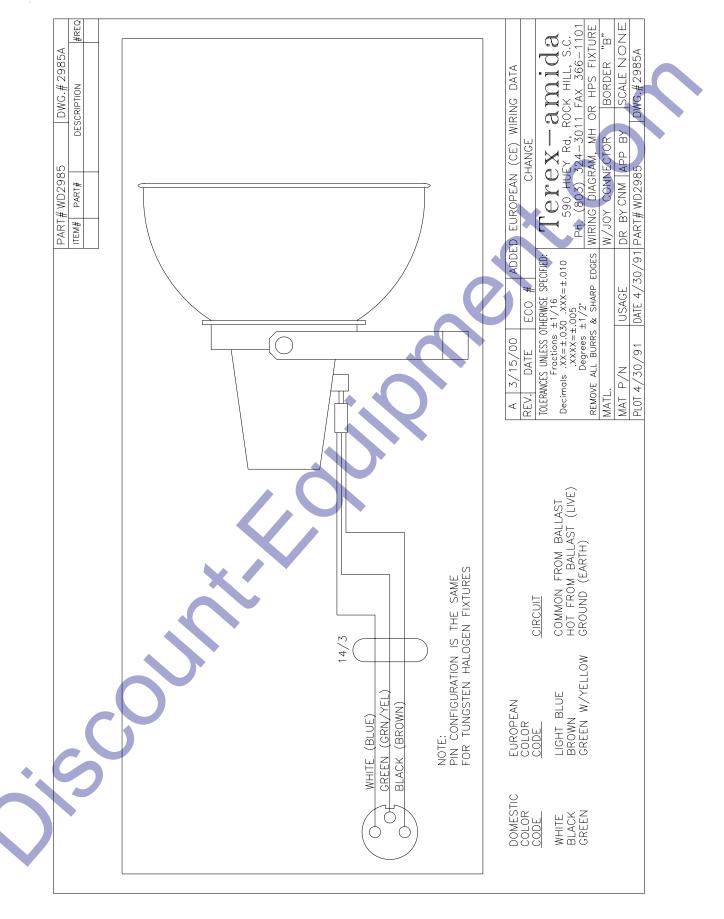
IF YOU FEEL AN ELECTRIC SHOCK AT ANY TIME WHILE OPERATING THIS UNIT, SHUT IT DOWN IMMEDIATELY! HAVE THE UNIT INSPECTED BY A TRAINED ELECTRICIAN.

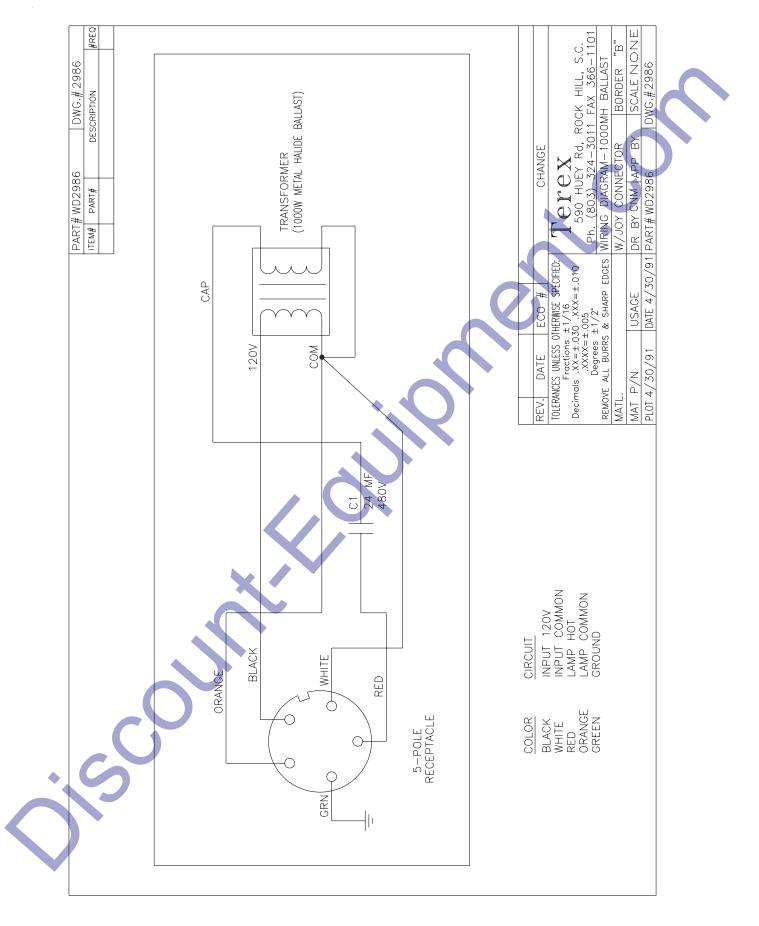
DO NOT OPEN FIXTURES WHILE LIGHT CIRCUIT IS "ON".

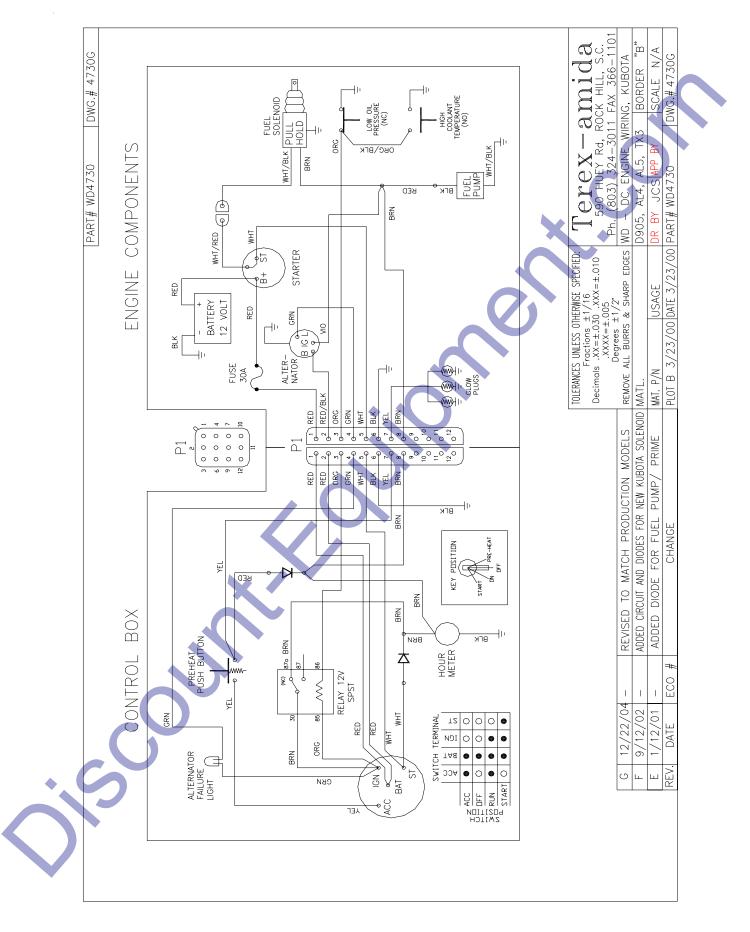
A DANGER

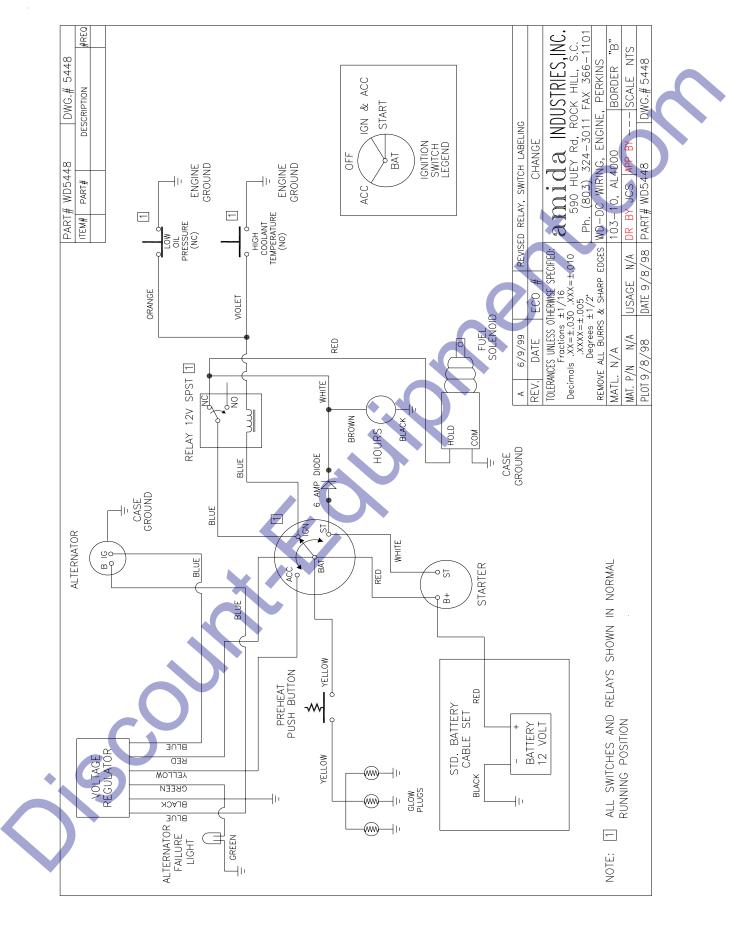
A DANGER

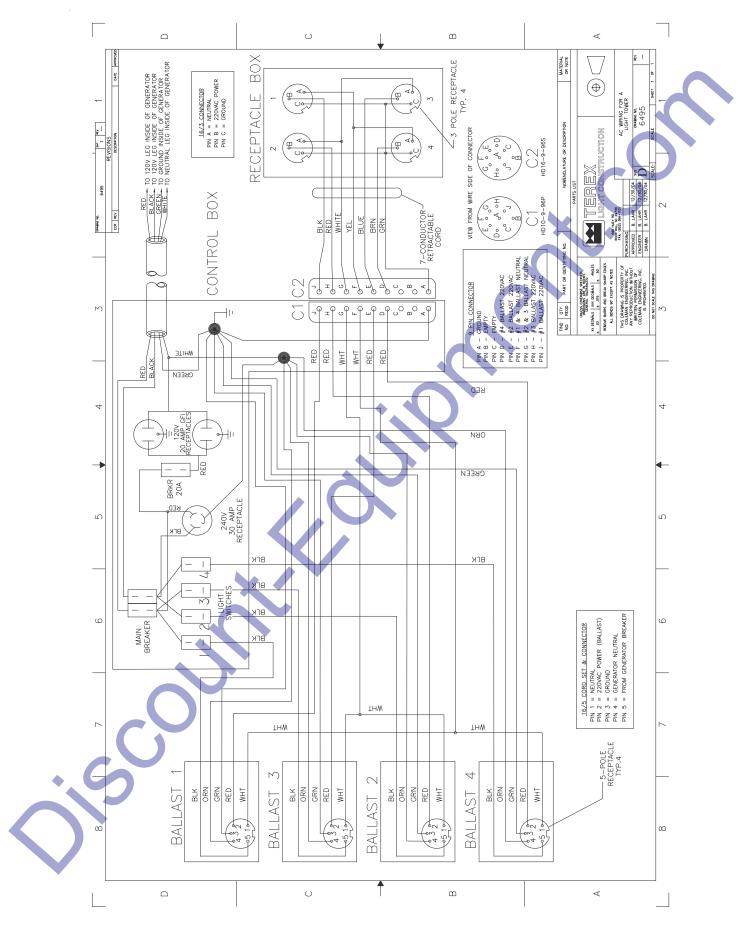
NO USER SERVICEABLE PARTS INSIDE! THIS IS ONLY A GUIDE. UNIT TO BE SERVICED BY A QUALIFIED ELECTRICIAN!

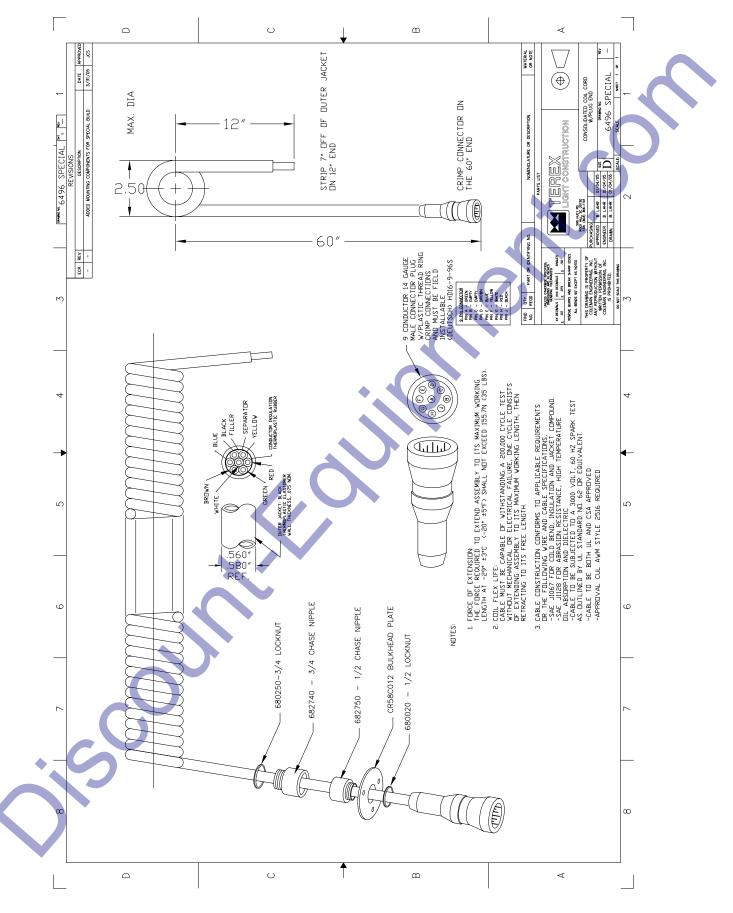


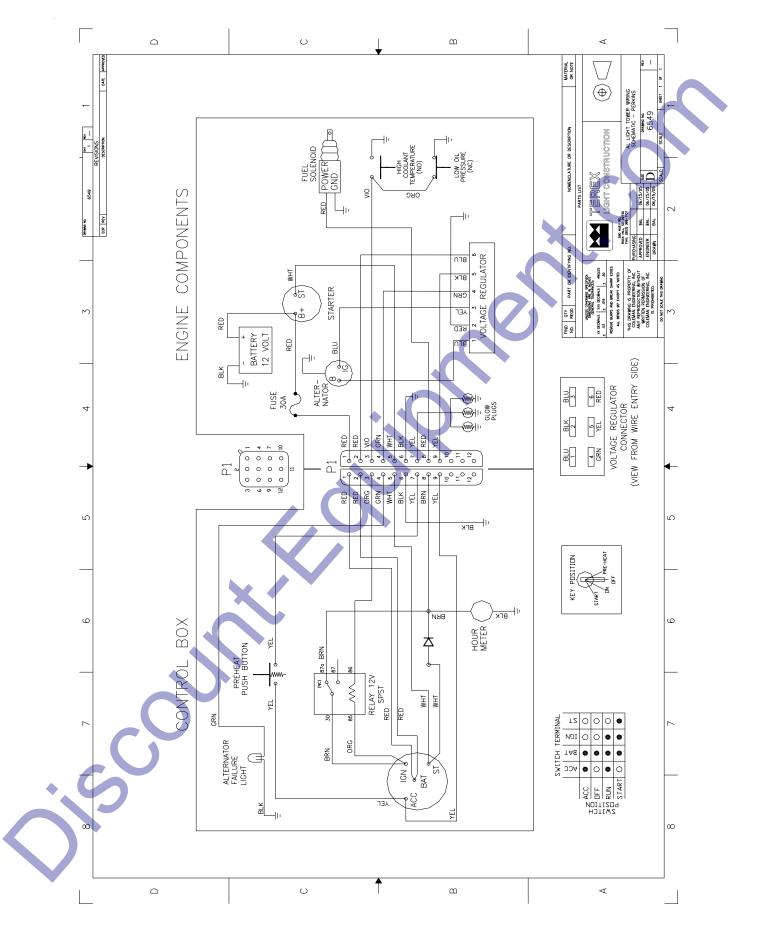












IMPORTANT

WHEN REQUESTING TECHNICAL HELP AND ORDERING REPLACEMENT PARTS THE MODEL AND SERIAL NUMBER ARE NECESSARY.

REFER TO THE TEREX SERIAL NUMBER TAG ON THE UNIT FOR CORRECT MODEL NUMBER AND SERIAL NUMBER.

MODEL NUMBER IDENTIFIC					
<u>Sample:</u>					
Light Tower Product Line		RL4	060 D 4	4 MH C	CE
Tower Series			75		
RL4000 (RL4) = 30 Foo	t Basic Tower with double winch				
	t Basic Tower with in-cabinet light age and door insulation				
	t Deluxe Hydraulic Tower w/optiona ure and Complete Instrumentation	l Acoustic	2		
xW Rating(060 is 6.0 kW)					
Diesel (D)					
Number of Lights					
Гуре of Lights HPS = High Pressure So MH = Metal Halide	dium				
TH = Tungsten Haloge					
European Version (AL4000 Only	y)				_

RECOMMENDED ENGINE OIL & FUEL

KUBOTA D905 DIESEL ENGINE

Engine oil should be MIL-L-2104C or have properties of API classification of CD grades or higher.

Change the type of engine oil according to the ambient operating temperature:

Above 77°F (25°C) 32°F to 77°F (0 to 25°C)

Below $32^{\circ}F(0^{\circ})$

Use #2 diesel fuel.

SAE 20

SAE 30

SAE 10W SAE 10W-30

NOTES:

- 1. The temperatures in the table are the ambient temperatures at the time when the engine is started. If the running ambient temperatures are much higher than the starting temperatures, a compromise must be struck and a higher viscosity oil used. Multi-grade oils overcome the problem, provided they possess a suitable specification.
- 2. MIL-L-2104B or MIL-L-2104C or API CD must also be used if the sulfur content of the fuel exceeds 0.5%.
- 3. Always use a reputable brand of diesel fuel. The sulfur content should be below 0.5% (higher sulfur content would require more frequent oil changes). Observe strict cleanliness when filling the fuel tank.
- 4. Check the engine oil level before starting the engine or more than five minutes after it has been stopped. Remove the dipstick, wipe clean, reinsert it, take it out again, and check the oil level. If the oil level is too low, remove the oil filler cap and add new oil until the FULL line on the dipstick is reached.

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CRITERIA FOR REPLACEMENT OF WIRE ROPE – TEREX-AMIDA LIGHT TOWERS

The wire ropes used to raise and lower the masts on a TEREX Light Tower are probably some of the most important mechanical parts used in day-to-day operation of the machinery. It is therefore very important that the cables be inspected on a frequent basis (once a month) for wear and tear, and immediately in the event of possible damage due to operator error in using the winch, or possible damage from other equipment.

NORMAL WEAR AND TEAR

When used properly, the wire ropes should give years of trouble-free service, depending on how often the masts are raised and lowered. The rule of thumb at TEREX is that if the tower is raised and lowered an average of once per day, that the cables should be replaced every two years of service.

NORMAL INSPECTION

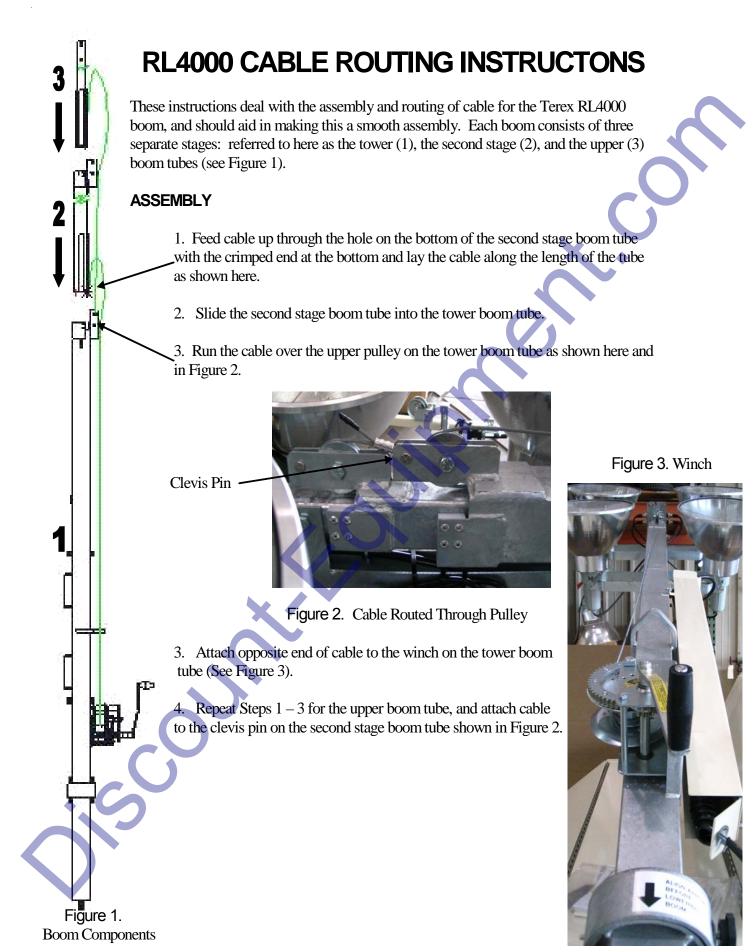
The wire ropes are constructed of 7 strands of 19 plow steel wires each twisted together, and then the assembly galvanized to resist corrosion. Using a wadded-up cloth or heavy leather gloves (to avoid being pricked by a broken wire), run a hand up and down a length of the cable. If any exterior wires are broken, they will lift up from main body of the cable and become visible. For any given 1 foot of cable length; if there are 4 or more wires each, on any 2 or more strands broken, the suspect rope should be replaced immediately.

OPERATOR ERROR – OTHER MACHINERY DAMAGE

One of the most common reasons for failure of a Light Tower wire rope is due to operator error in using the winch, or damage to the cable by tools or other machinery. The most common operator error happens when the mast is telescoping down. When the upper telescoping lock engages, the operator does not pull the lower pivot lock out (located on the tower base) and keeps on cranking the winch. This results in the cable becoming loose around the drum due to the tower not pivoting down. This can result in three problems: the loose cable can get trapped underneath itself, resulting in a sudden or partial "drop" of the mast when the loose section releases at a later time, thus damaging the cable; or the cable can jump off the winch drum and be damaged by the gears of the winch. The loose cable can also cause the drum to spin to take up the slack cable. If there is enough friction in the threaded parts of the winch, the drum can cause the crank handle to start spinning. This can cause the tower to "freefall" and the results can be catastrophic for anyone standing underneath the tower. A spinning crank handle can also break bones. Other reasons damage can occur are due to some outside force such as forklift blade nicking or crushing a cable when moving a unit, or an accidental blow or damage by a hand tool, etc.

DAMAGE INSPECTION

If any nicks (partial strand cut through), kinks (permanent bends), or weld spatter on the cable (from field service) are observed, the suspect wire rope should be changed immediately. If there is a crushed spot somewhere on the wire rope, it should be replaced only if the width of the crushed spot exceeds 1-1/4 times the nominal diameter of the cable (5/16" on a 1/4" cable, and 7/32" on a 3/16" cable), or if there are broken wires at the point of damage.



GENERAL INFORMATION-PARTS MANUAL

INTRODUCTION

This manual contains parts ordering information for the Terex RL 4000 light tower.

IDENTIFICATION of PARTS

All parts are identified with a part number and brief description. If there are multiple quantities of the part required, the quantity required will be shown along with part number and description. If no quantity is given it is assumed that there is only one part required.

NOTES and DESIGNATIONS

This manual is compiled from information available and current at time of approval for printing. Terex reserves the right to improve its product without notice to follow its policy of constantly striving to manufacture a better product.

ILLUSTRATIONS

The illustrations in this manual are intended to show typical construction of the various parts. In some instances the shapes or details of the parts illustrated may not exactly represent their actual appearance. However, they will serve to show the servicing methods explained or help to identify parts performing the same function.



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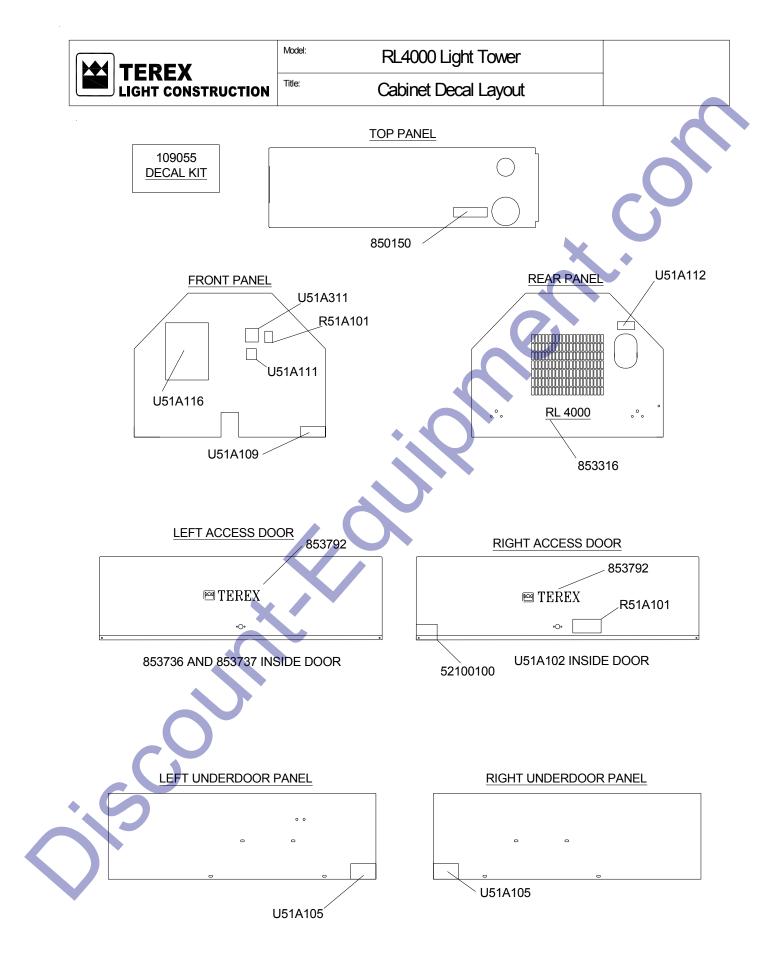
Need parts? Check out our website at www.discount-equipment.com

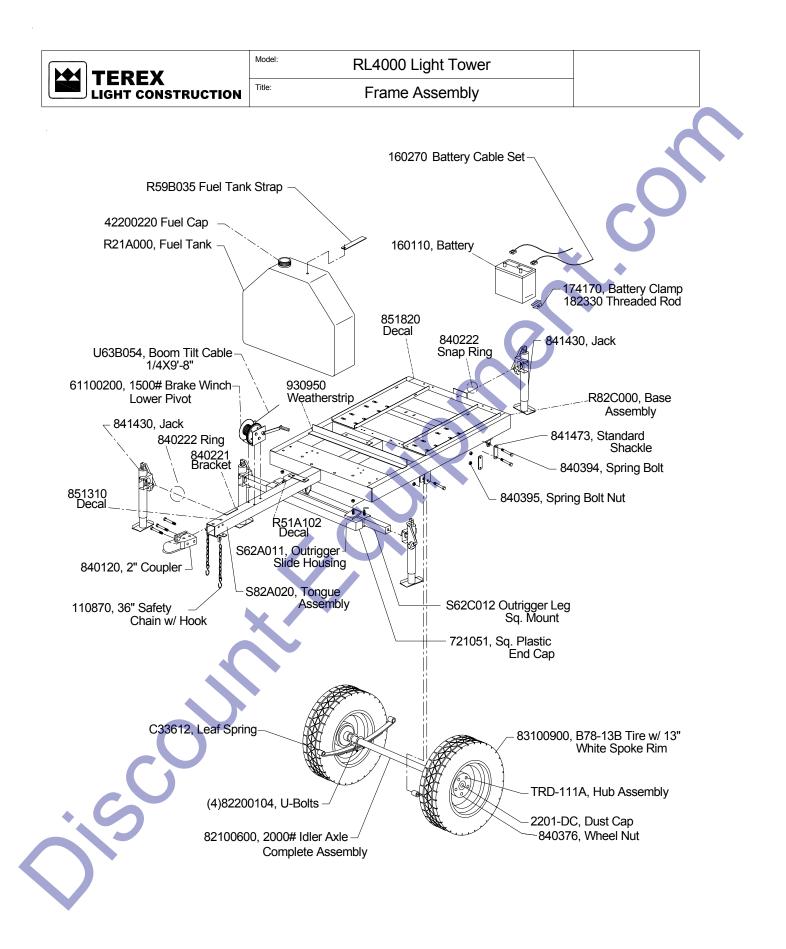
Can't find what you need?

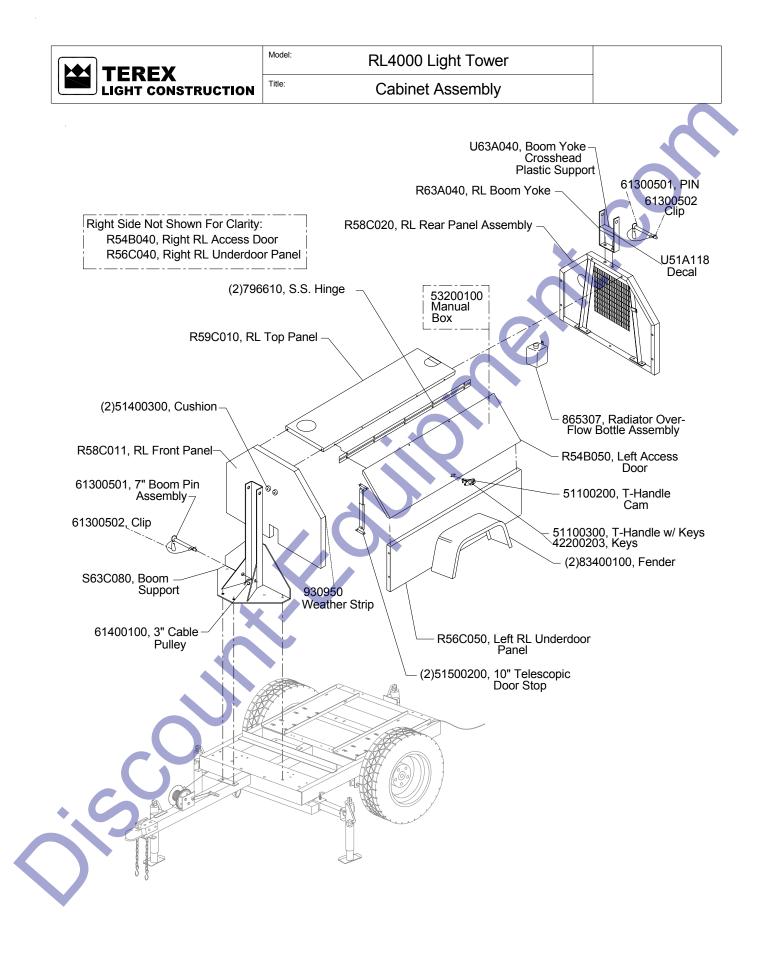
Click on this link: <u>http://www.discount-equipment.com/category/5443-parts/</u> and fill out the request form.

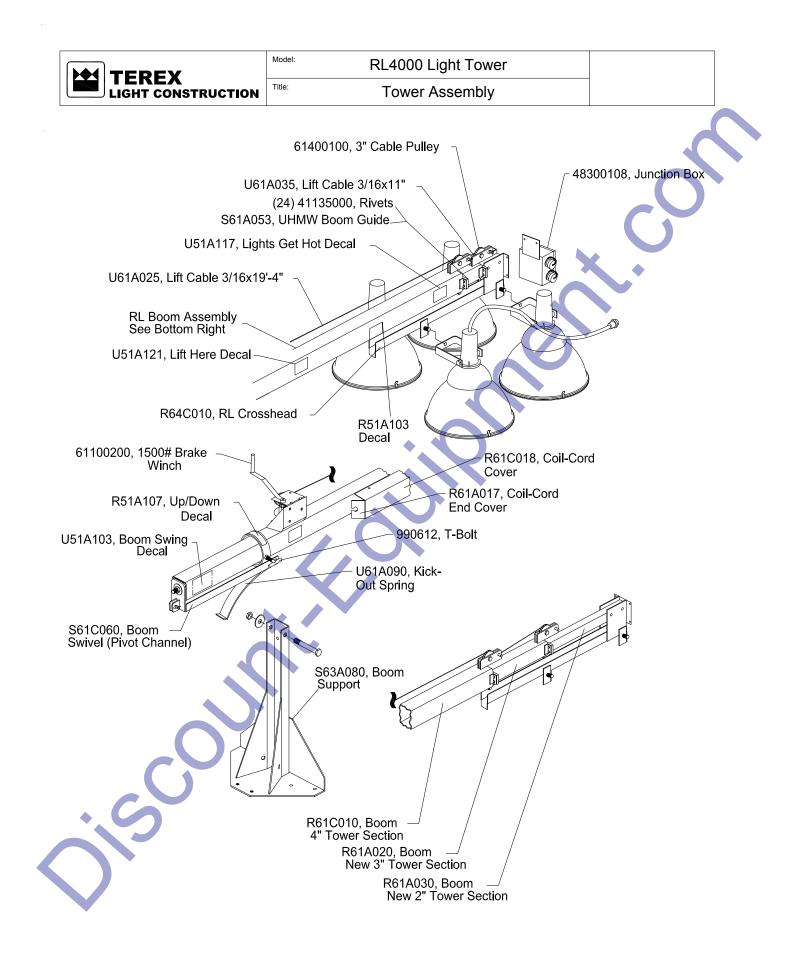
Please have the machine model and serial number available in order to help us get you the correct parts. One of our experienced staff members will get back to you with a quote for the right part that your machine needs.

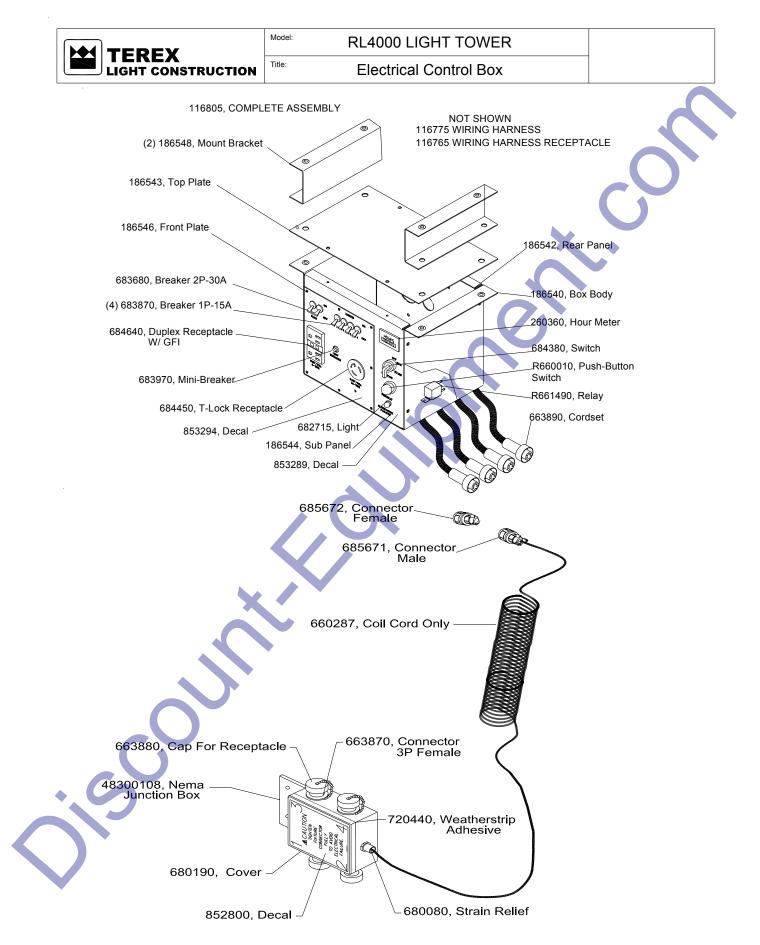
We sell worldwide for the brands: Genie, Terex, JLG, MultiQuip, Mayco, Toro/Stone, Diamond Products, Magnum, Airman, Mustang, Power Blanket, Nifty Lift, Atlas Copco, Chicago Pneumatic, Allmand Brothers, Essick, Miller Spreader, Skyjack, Lull, Skytrak, Tsurumi, Husquvarna/Target, Whiteman-Concrete/Mortar, Stow-Concrete/Mortar, Baldor, Wacker, Sakai, Snorkel, Upright, Mi-T-M, Sullair, Neal, Basic, Dynapac, MBW, Weber, Bartell, Bennar Newman, Haulotte, Ditch Runner, Blaw-Knox, Himoinsa, Best, Buddy, Crown, Edco, Wyco, Bomag, Laymor, Terremite, Barreto, EZ Trench, Takeuchi, Basic, Bil-Jax, Curtis, Gehl, Heli, Honda, ICS/PowerGrit, Puckett, Waldon, ASV, IHI, Partner, Imer, Clipper, MMD, Koshin, Rice, Gorman Rupp, CH&E, Cat Pumps, Comet, General Pump, Giant,AMida, Coleman, NAC, Gradall, Square Shooter, Kent, Stanley, Tamco, Toku, Hatz, Kohler, Robin, Wisconsin, Northrock, Oztec, Toker TK, Rol-Air, Small Line, Wanco, Yanmar

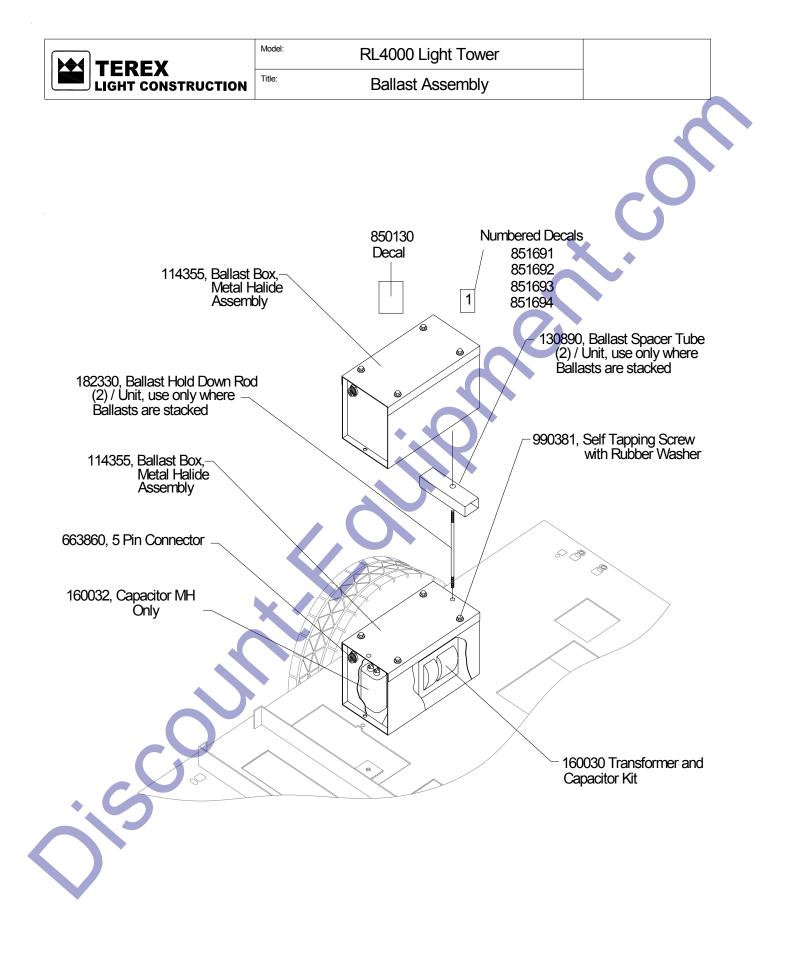












	Model: RL4000 Ligh		
	Title: Fixture Assembly		
20 32 31 1837384040233			
		NOTE: FOR COMPLETE ORDER PART# Image: Solid stress of the solid stresolid stress of the solid stress of the solid stress	OTY. 057-05-80643) 1 VH RES 1 VH PH TI ZC 2 TOR 1 07" HH MS SS 2 PEENED 1 3- B60198) 1 WS L TT
	13 13 13 13 13 15 19 36 30 27	Bit Classifier 833524 13 VULCANIZED GASKET SIL COMBINATION 833524 13 VULCANIZED GASKET SIL COMBINATION 833573 15 CLAMP BAND #19.5" AL 833573 17 HANDLE FOR 1/2-13 E 833574 19 SCREW 8-32 X 1 HH 663850 20 CORD #16-3 SIOW 105 833577 23 SCREW 8-32 X 5/8" F 991650 24 SPLIT WASHER 1/2 SS 990675 25 RIVETS 91/8" ALUM. 3, 160071 26 28 LAMP, 1000 WATT META 833578 27 709034 29 EURO CONNECTOR TERN 683950 31 SEAL RING.755" ID - 680020 32 LOCKNUT 1/2	JCONE - 1 UMINUM 1 3OLT (DWG) (OPTIONAL) 1 Table 1
		833581 36 FIBER WASHER 833582 37 FIBERGLASS SLEEVE 2- 833583 38 LBL WET LOCATION/EXT 39 39 833584 40 LBL 105C SUPPLY CON 833585 41 LBL FIXTURE CSA - NF 995970 42 WASHER 1/2 EXTER. TC	ERIEUR 1 D. 1 RTL/C 1

