



POW'R LITE
(PL6000L and PL6000K)
Portable Light Tower

Installation & Operating Manual

**WARNING:
CALIFORNIA PROPOSITION 65 WARNING:**

Engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects and other reproductive harm.

**WARNING:
CALIFORNIA PROPOSITION 65 WARNING:**

Battery posts, terminals and related accessories are known to the state of California to cause cancer, birth defects and other reproductive harm.

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Section 1

Product Safety Information

Safety Notice

Be sure that you are completely familiar with the safe operation of this equipment. This equipment may be connected to other machines that have rotating parts or parts that are controlled by this equipment. Improper use can cause serious or fatal injury. Always disconnect all electrical loads before starting the light tower.

Installation and repair procedures require specialized skills with electrical generating equipment and liquid cooled engine systems. Any person that installs or repairs this light tower must have these specialized skills to ensure that this generating unit is safe to operate. Contact Baldor for repairs or any questions you may have about the safe installation and operation of this system.

The precaution statements are general guidelines for the safe use and operation of this light tower. It is not practical to list all unsafe conditions. Therefore, if you use a procedure that is not recommended in this manual you must determine if it is safe for the operator and all personnel in the proximity to the light tower and connected loads. If there is any question of the safety of a procedure please contact Baldor before starting or stopping the light tower.

This equipment contains high voltages. Electrical shock can cause serious or fatal injury. Only qualified personnel should attempt the start-up procedure or troubleshoot this equipment.

This equipment may be connected to other machines that have rotating parts or parts that are driven by this equipment. Improper use can cause serious or fatal injury. Only qualified personnel should attempt the start-up procedure or troubleshoot this equipment.

- System documentation must be available to anyone that operates this equipment at all times.
- Keep non-qualified personnel at a safe distance from this equipment.
- Only qualified personnel familiar with the safe installation, operation and maintenance of this device should attempt start-up or operating procedures.
- Always stop engine before making or removing any connections.
- Always stop engine and allow it to cool before refueling.

Responsibility

When your light tower is delivered, it becomes the responsibility of the owner/operator to prevent unsafe conditions and operation of the equipment. Some responsibilities include (but are not limited to) the following:

1. It is the responsibility of the owner/operator to ensure that this equipment is correctly and safely installed.
2. It is the responsibility of the owner/operator to ensure that this equipment, when installed fully complies with all federal, state and local codes.
3. It is the responsibility of the owner/operator to ensure that any person operating this equipment has been properly trained.
4. It is the responsibility of the owner/operator to ensure that any person operating this equipment has access to all manuals and information required for the safe use and operation of this equipment.
5. It is the responsibility of the owner/operator to ensure that it is properly maintained and safety inspected at regular scheduled intervals.
6. It is the responsibility of the owner/operator to ensure that any person who has not been trained on the safe use of this equipment does not have access to this equipment.

Read This Manual Thoroughly

If you do not understand any concept, any procedure, any safety warning statement, any safety caution statement or any portion of this manual, contact Baldor or your nearest authorized Baldor representative. We are happy to make sure you understand the information in this manual so that you can safely enjoy the full use of this light tower.

Symbols



This symbol is shown throughout the manual to indicate a connection to ground reference point.



Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.



Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

Precaution Statements Used In This Manual

There are three classifications of precautionary statements used in this manual. The most critical is a **WARNING** statement, then the **Caution** statement and the least critical is the Note statement. The usage of each statement is as follows:

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

Caution: Indicates a potentially hazardous situation which, if not avoided, could result in damage to property.

Note: Additional information that is not critical to the installation or operation.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS – This manual contains important instructions for the light tower that should be followed during installation, operation and maintenance.

For ease of reading, the Warning statements are divided into four categories: Operation, Burn, Installation, and Maintenance.

Operation

WARNING: If the trailer is not properly secured to the tow vehicles tow hitch, the trailer may separate from the tow vehicle and cause severe injury or property damage. Always ensure that the tow hitch and trailer tongue are properly connected, in good working condition and that safety chains are properly connected from the trailer to the tow vehicle.

WARNING: Never allow a person to ride in or on a trailer that is being towed. All states prohibit passengers in towed vehicles. A person can fall off and be struck by another vehicle or run over by the towed trailer. Failure to observe this warning can result in death.

WARNING: Before using a tow vehicle, verify that the vehicle is designed for the load. Using a vehicle that is too small is very dangerous. Be certain that it can handle the M.G.T.W. (Maximum Gross Trailer Weight) and the tongue weight for safe towing and braking.

WARNING: For a new trailer, the wheel lug nuts should be tightened to the proper torque specification before use, after 25 miles of operation and every 100 miles of operation thereafter. Failure to check the lug nuts for proper tightness can result in an accident due to a wheel falling from the trailer.

WARNING: Never operate a trailer or tow vehicle that has a loose, missing or broken lug nut. The trailer is designed for safe operation with all lug nuts installed and all at the proper torque rating. Operating the trailer with one or more broken or missing lug nuts greatly increases the load on the remaining nuts and can cause failure of the remaining nuts that can result in an accident due to a wheel falling from the trailer.

WARNING: Maximum safe highway speed for towing the light tower is 55 miles per hour. Excessive speed or improper towing may result in an accident or damage.

WARNING: When erecting or stowing the mast assembly, be aware of the pinch points such as where the tower structures join or where the cable and winch are located. Careless operation can result in injury. Keep extremities away from moving parts to avoid injury.

WARNING: Before erecting the mast assembly, be certain that the outriggers are properly set to stabilize the light tower and that they are secure and are not damaged. Erecting the mast without setting the outriggers can cause the light tower to tip over when raising the mast.

WARNING: Before erecting the mast assembly, be certain that there are no overhead wires. Contact with overhead wiring presents an electrical shock hazard that may cause severe injury or death.

WARNING: Before erecting the mast assembly, be certain that there are no overhead obstructions that the mast will hit when raising it. Hitting an object (tree limb etc.) may damage the mast or cause the light tower to tip over and may result in injury or property damage.

Continued on next page.

Operation Warning Statements Continued

- WARNING:** The mast assembly must remain in the stowed position until the outriggers are properly set to stabilize the trailer . Erecting the mast without setting the outriggers can cause the light tower set to tip over when raising the mast.
- WARNING:** Never attempt to move the POW'R LITE when the mast is in the vertical position. All Outrigger and trailer jacks must remain in position and the trailer level until the mast is in its' stowed position. Failure to follow this warning may result in severe injury and property damage if the trailer tips over.
- WARNING:** Never move or reposition a light tower when the mast is extended or in the vertical position. Unless the mast is in its stowed position, it may contact overhead wires or cause the light tower to be unbalanced or tip over.
- WARNING:** Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death. For storage or refueling handle fuel with care and only in clean, approved, properly marked safety fuel containers.
- WARNING:** Do not overfill the fuel tank. Only fill the tank to within 1/2" of the top of the tank to allow space for fuel expansion. Overfilling of tank may cause fuel to spill out onto engine and cause fire or explosion.
- WARNING:** Clean up fuel spills by wiping completely dry before starting engine. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Make sure the fuel cap is completely and securely closed after refueling to prevent spillage. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Never operate this light tower in a manner other than as described in this manual. Operation in any manner not described in this manual should be considered unsafe and should not be attempted. Never start the engine unless you have first verified that the installation and operation of the light tower are as described in this manual.
- WARNING:** Be sure that you are completely familiar with the safe operation of this equipment. This equipment may be connected to other machines that have rotating parts or parts that are controlled by this equipment. Improper use can cause serious or fatal injury.
- WARNING:** Exhaust fumes/gases are extremely dangerous and can cause severe illness or death. Never breathe exhaust fumes produced by a running engine. Only run the engine outdoors where ventilation is plentiful. Exhaust gases contain carbon monoxide, a colorless, odorless and extremely dangerous gas that can cause unconsciousness or death. Symptoms of carbon monoxide poisoning include: dizziness, nausea, headaches, sleepiness, vomiting or incoherence. If you or anyone else experiences these symptoms, get out into fresh air immediately. Stop the engine and do not restart the engine until it has been inspected and if necessary repaired or reinstalled in a well ventilated area.
- WARNING:** Hot exhaust gasses must never be directed toward anything that may catch fire or explode.
- WARNING:** This light tower must not be used on or near any forest covered, brush covered, or grass covered land unless the engine's exhaust system is equipped with a spark arrestor. The spark arrestor must be maintained in effective working order by the operator.
- WARNING:** Never move a light tower that is running. Hazards are caused by moving a light tower that is running.
- WARNING:** Always wear safety glasses with side shields and hearing protection when working near the light tower.
- WARNING:** Some parts of this light tower rotate during operation. Rotating parts can present extreme danger if clothing or body extremities are caught by the rotating part and can cause serious or fatal injury. Never touch a part of the light tower until the engine has been stopped and all rotating parts are completely stopped. Also, disconnect the battery terminals to prevent accidental engine rotation during servicing.
- WARNING:** Be sure that you understand how to stop the engine quickly in case of an emergency situation. Become familiar with the controls and safety systems provided with this light tower.
- WARNING:** Improper operation may cause violent motion of connected equipment. Be certain that unexpected movement will not cause injury to personnel or damage to equipment.
- WARNING:** Never operate the light tower indoors or in a poorly ventilated area such as a tunnel or cave. Exhaust fumes are extremely dangerous to all personnel that are in or in contact with that area.

Continued on next page.

Operation Warning Statements Continued

- WARNING:** Never allow children or pets to be in the area where the light tower is running. The light tower and the equipment being powered by the light tower may cause injury or death.
- WARNING:** Never operate the light tower unless all guards, covers, shields and other safety items are properly installed.
- WARNING:** Never permit anyone to operate the light tower without proper instructions. Be sure to keep a copy of this manual with the unit so that all users can be properly informed of its safe operation.
- WARNING:** Do not put hands, feet, tools clothing or other objects near rotating parts such as drive shaft, pulley, belt etc. Rotating parts cause extremely dangerous situations because they can catch loose clothing or extremities and cause serious or fatal injury.
- WARNING:** When operating this light tower remain alert at all times. Never operate machinery when physically or mentally fatigued, or while under the influence of alcohol, drugs or medication.
- WARNING:** Never operate the engine when the air cleaner is removed. An engine backfire can cause serious burns.
- WARNING:** Never “jump start” a light tower to start the engine. If the battery charge is insufficient to start the engine, charge or replace the battery and try to restart. Jump starting a battery can cause the battery to explode and cause severe injury or death to anyone in the area.
- WARNING:** High voltage is present whenever engine is running. Electrical shock can cause serious or fatal injury. Never operate electrical equipment while standing in water, on wet ground or with wet hands, feet or shoes or while barefoot.
- WARNING:** High voltage is present whenever the engine is running. Electrical shock can cause serious or fatal injury.
- WARNING:** Do not smoke near light tower during operation or while refueling. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Stop engine and allow engine to cool before refueling. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Never store an engine with fuel in its tank indoors or in an enclosed, poorly ventilated area where gasoline fumes could reach an ignition source and cause an explosion. Fumes may reach an open flame, electrical spark or pilot light as on a furnace, water heater, clothes dryer, etc. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Operate the light tower only on a level surface. If the light tower is tilted during operation, fuel spillage may result. Gasoline and diesel fuel are flammable and can cause fire, explosions, injury or death.
- WARNING:** Keep light tower at least three feet away from buildings and other structures.
- WARNING:** Keep light tower away from flammable or hazardous materials (trash, rags, lubricants, explosives, paints etc.) and grass or leaf build up.
- WARNING:** Keep a fire extinguisher near the light tower during use. An extinguisher rated “ABC” by the National Fire Protection Association is appropriate.

Burn

- WARNING:** Light fixtures become extremely hot during use. To prevent severe burns, do not touch light fixtures, bulbs or other components until they have cooled and no longer present a burn hazard. Wear protective clothing when placing the tower in the stowed position after use and do not allow any person to touch the light fixtures.
- WARNING:** Do not touch the hot exhaust parts. In addition to a severe burn, the sudden involuntary jerk of the hand or body part caused by contact with high voltage or a hot surface can result in injury to yourself or others.
- WARNING:** Parts of this light tower are extremely hot during and after operation. To prevent severe burns, do not touch any part until you have first determined if the part is hot. Wear protective clothing and after use allow sufficient time for parts to cool before touching.

Continued on next page.

Warning Statements Continued

Installation

- WARNING:** Installation and servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- WARNING:** Installation and repair procedures requires specialized skills with electrical generating equipment and small engine systems. Any person that installs or performs repairs must have these specialized skills to ensure that the light tower is safe to operate. Contact Baldor for installation or repairs.
- WARNING:** Be sure all wiring complies with the National Electrical Code (NEC) and all regional and local codes or CE Compliance. Improper wiring may cause a hazardous condition and exposure to electrical hazards can cause serious injury or death.
- WARNING:** Be sure the system is properly grounded before applying power. Do not apply AC power before you ensure that grounds are connected. Electrical shock can cause serious or fatal injury. NEC requires that the frame and exposed conductive surfaces (metal parts) be connected to an approved earth ground. Local codes may also require proper grounding of light tower systems.
- Warning:** Do not connect the generator output neutral to the frame or local ground. The generator output is isolated from ground. NEC and local codes require that the generator output remain isolated from local ground reference.
- WARNING:** Place protective covers over all rotating parts such as drive shaft, pulley, belt etc. Rotating parts cause extremely dangerous situations because they can catch loose clothing or extremities and cause serious or fatal injury.
- WARNING:** Unauthorized modification of a light tower may make the unit unsafe for operation or may impair the operation of the unit. Never start a light tower that has been modified or tampered with. Be sure that all covers and guards are properly installed and that the unit is safe before starting the engine. If you are unsure, contact Baldor before starting the engine.
- WARNING:** When transporting a light tower secure the unit to prevent movement during transport.
- WARNING:** Never connect this light tower to any buildings electrical system unless a licensed electrician has installed an approved transfer switch. The National Electrical Code (NEC) requires that connection of a generator to any electrical circuit normally powered by means of an electric utility must be connected by means of approved transfer switch equipment so as to isolate the electrical circuit from the utility distribution system during operation. Failure to isolate the electrical circuits by such means may result in injury or death to utility power workers due to backfeed of electrical energy onto the utility lines.
- WARNING:** Circuit overload protection must be provided in accordance with the National Electrical Code and local regulations.
- WARNING:** Check Ground Fault Circuit Interrupt (GFCI) receptacles monthly by using the "Test" and "Reset" buttons.

Maintenance

- WARNING:** Installation and servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- WARNING:** Disconnect the battery's ground terminal before working in the vicinity of the battery or battery wires. Contact with the battery can result in electrical shock when a tool accidentally touches the positive battery terminal or wire. The risk of such shock is reduced when the ground lead is removed during installation and maintenance.
- WARNING:** A battery presents a risk of fire and explosion because they generate hydrogen gas. Hydrogen gas is extremely explosive. Never jump start a battery, smoke in the area around the battery or cause any spark to occur in the area around the battery.
- WARNING:** Do not mutilate the battery or dispose of a battery in a fire. The battery is capable of exploding. If the battery explodes, electrolyte solution will be released in all directions. Battery electrolyte solution is caustic and can cause severe burns and blindness. If electrolyte contacts skin or eyes, immediately flush the area with water and seek medical attention quickly.

Continued on next page.

Maintenance Statements Continued

- WARNING:** A battery presents a risk of electrical shock hazard and high short circuit current. Electrical shock can cause serious or fatal injury. Never wear jewelry, watch or any metal objects when in the area around the battery.
- WARNING:** The battery electrolyte is a dilute sulfuric acid that is harmful to the skin and eyes. It is electrically conductive and corrosive. If electrolyte contacts the skin, flush the area immediately with water and wash it off using soap and water. If electrolyte contacts the eyes, immediately flush the eye thoroughly with water and seek medical attention quickly.
- WARNING:** Before cleaning, inspecting, repairing, refueling or performing any maintenance to the light tower, always be sure the engine has stopped and that all rotating parts have also stopped. After stopping, certain components are still extremely hot so be careful not to get burned.
- WARNING:** Before servicing the light tower, be sure to disconnect the battery terminals to prevent accidental engine rotation or starting.
- WARNING:** Inspect all wiring frequently and replace any damaged, broken or frayed wiring or wires with damaged insulation immediately. Electrical shock can cause serious or fatal injury.
- WARNING:** Disconnect all electrical wires and load devices from light tower power outlets before servicing the light tower. Electrical shock can cause serious or fatal injury. Always treat electrical circuits as if they are energized.
- WARNING:** Check fuel tank, fuel line, and connections monthly for fuel leaks. Gasoline is flammable and can cause fire, explosions, injury or death. If a leak is found, replace only with approved pipe or components.
- WARNING:** Never store an engine with fuel in its tank indoors or in an enclosed, poorly ventilated area where gasoline fumes could reach an ignition source and cause an explosion.

Caution Statements

- Caution:** Never start the engine with any of the lights on, or with any electrical load connected, as damage to the light tower may result.
- Caution:** Never stop the engine with any of the lights on, or with any electrical load connected, as damage to the light tower may result.
- Caution:** Careless handling or storage of the light fixtures can damage the fixtures, lenses, and/or bulbs.
- Caution:** Do not overfill the engine oil. Serious damage to the engine can result from overfilling the oil.
- Caution:** Never use explosive engine starting fluids. Please read the engine manual and unit placards carefully before starting the engine. Starting fluids are not compatible with the preheat cycle.
- Caution:** Do not operate preheat for more than 30 seconds or the heating element may be damaged.
- Caution:** Do not engage the starter motor for more than 60 seconds at a time or damage may result.
- Caution:** Before towing, be sure that the jack and outriggers are properly and securely stowed for travel to prevent trailer damage.
- Caution:** Do not apply high voltage to windings (start the light tower) in a moisture-saturated condition. Moisture can cause insulation breakdown, making it necessary to return the light tower to the factory for repair, and consequent expense and loss of time.
- Caution:** Use only original equipment or authorized replacement parts. Using the correct parts will assure continued safe operation as designed.
- Caution:** Do not tamper with or change the engine speed. Engine speed is factory set to produce the correct voltage and output frequency.
- Caution:** Never operate the engine without a muffler and spark arrestor. The engine is designed to have the correct exhaust components installed. Operating without these components can present a fire hazard, cause excessive exhaust gases and cause damage to engine.
- Caution:** Operate the light tower only on a level surface. Operation of the light tower on an incline or slope may degrade engine lubrication and result in engine failure.
- Caution:** Always fill fuel tank with clean fresh fuel before use. Never leave fuel in tank for long storage periods. Old fuel becomes stale and can damage the fuel system causing the engine not to start. Always drain the fuel tank after use before storage.

Section 2 General Information

Thank you for purchasing your Baldor Generator Set. This manual contains information you need to safely and efficiently install and operate your generator set. During the preparation of this manual every effort was made to ensure the accuracy of its contents. This manual describes only very basic engine information. A separate owner's manual for the engine is supplied with this unit for your use. Please refer to the engine manual for information relative to engine operation, maintenance, recommendations and additional safety warnings.

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Baldor Generators have earned the reputation of being high quality and dependable. We take pride in this fact and continue to keep our quality standards high on our list of priorities. We are also constantly researching new technological ideas to determine if they could be used to make our generator sets even better.

Baldor makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of fitness for any particular purpose. The information in this document is subject to change without notice. Baldor assumes no responsibility for any errors that may appear in this document.

Limited Warranty

Baldor Generators will replace or repair free of charge any part or parts of the generator of their manufacture that are defective in workmanship and materials for a period of time as set forth in the Warranty Period chart below. All Baldor products requiring warranty service shall be transported or shipped freight pre-paid, at the risk of the party requiring warranty service, to a Baldor Generator repair facility, or to Baldor Generators' Customer Service Department in Oshkosh, Wisconsin. Written notification of the alleged defect in addition to a description of the manner in which the Baldor generator is used, and the name, address and telephone number of the party requiring warranty service must be included. Baldor is not responsible for removal and shipment of the Baldor product to the service center or for the reinstallation of the Baldor product upon its return to the party requiring warranty service. Problems with Baldor products can be due to improper maintenance, faulty installation, non-Baldor additions or modifications, or other problems not due to defects in Baldor workmanship or materials. If a Baldor Generator repair facility determines that the problem with a Baldor product is not due to defects in Baldor workmanship or materials, then the party requesting warranty service will be responsible for the cost of any necessary repairs. EXCEPT FOR THE EXPRESSED WARRANTY SET FORTH ABOVE, BALDOR GENERATORS DISCLAIMS ALL OTHER EXPRESSED AND IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WHETHER OR NOT SIMILAR IN NATURE TO ANY OTHER WARRANTY PROVIDED HEREIN, SHALL EXIST WITH RESPECT TO THE GOODS SOLD UNDER THE PROVISIONS OF THESE TERMS AND CONDITIONS. ALL OTHER SUCH WARRANTIES ARE HEREBY EXPRESSLY WAIVED BY THE BUYER. UNDER NO CIRCUMSTANCES SHALL BALDOR GENERATORS BE LIABLE OR RESPONSIBLE IN ANY MANNER WHATSOEVER FOR ANY INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR ANTICIPATED PROFITS RESULTING FROM THE DEFECT, REMOVAL, REINSTALLATION, SHIPMENT OR OTHERWISE. This is the sole warranty of Baldor Generators and no other affirmations or promises made by Baldor Generators shall be deemed to create an expressed or implied warranty. Baldor Generators has not authorized anyone to make any representations or warranties other than the warranty contained herein.

Warranty Period

Generator Series	Labor*	Parts
Portable Products (Premier, Powerchief, DG Series, K Series)	1 Year	3 Years
Towable Products (TS)	1 Year or 3,000 Hours Whichever comes first	3 Years or 3,000 Hours Whichever comes first
POW'R LITE Light Towers	1 Year or 3,000 Hours Whichever comes first	3 Years or 3,000 Hours Whichever comes first Excluded from any warranty coverage regardless of time period: Light Fixture, Lamps and Ballasts
3600 RPM Standby Systems (Some AE Models)	1 Year or 1,000 Hours Whichever comes first	3 Years or 1,000 Hours Whichever comes first
1800 RPM Standby Systems (Some AE Models, DLC, GLC)	1 Year or 3,000 Hours Whichever comes first	3 Years or 3,000 Hours Whichever comes first
Industrial Standby Systems	1 Year or 1,000 Hours Whichever comes first	2 Years or 1,000 Hours Whichever comes first
Industrial Prime Power Systems	1 Year or 1,000 Hours Whichever comes first	1 Year or 1,000 Hours Whichever comes first
International	1 Year or 1,000 Hours Whichever comes first	1 Year or 1,000 Hours Whichever comes first

*For products covered under labor coverage, travel expenses will be allowed up to 7 hours straight labor or 300 miles, whichever occurs first and only applies to permanently wired and mounted products (AE, DLC, GLC, IDLC).

No warranty registration card is necessary to obtain warranty on Baldor Generators.

You must save the purchase receipt. Proof of purchase, date, serial number and model number will be required for all portable and Towable products to qualify for any warranty consideration.

For all other products, a start-up inspection form/warranty registration must be completed in its entirety and submitted to Baldor Generators within 30 days of start-up to qualify for any warranty consideration.

Section 3 Receiving & Installation

Receiving & Inspection When you receive your light tower, there are several things you should do immediately.

1. Observe the condition of the light tower and report any damage immediately to the carrier that delivered your system.
2. Verify that the part number of the system you received is the same as the part number listed on your purchase order.
3. If the system is to be stored for several weeks before use, be sure that it is stored in a location that conforms to published storage temperature and humidity specifications.

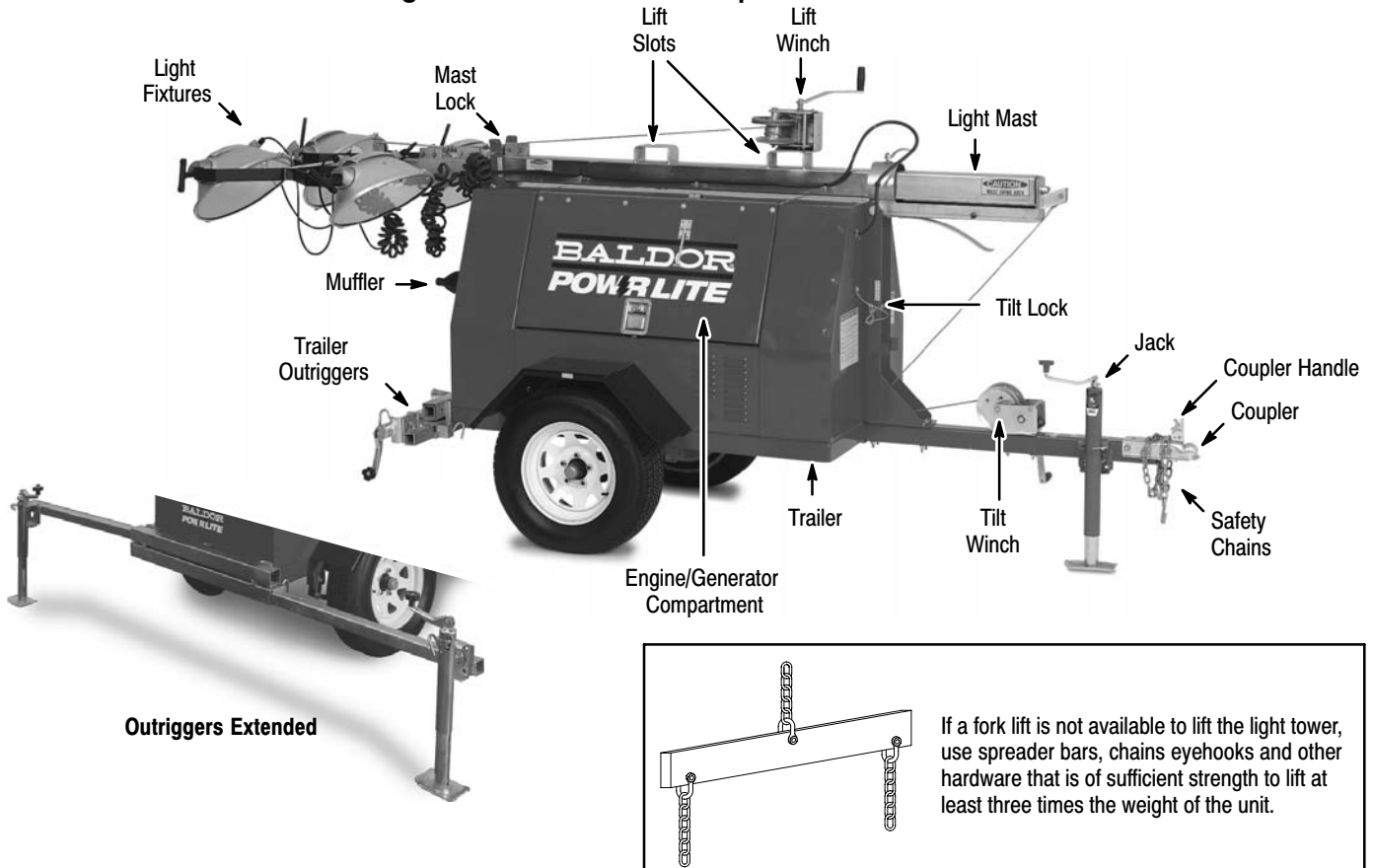
Lifting the Light Tower When lift or hoist equipment is used to lift the light tower and move it to position, be careful not to contact overhead wires or other obstacles. The unit can weigh as much as 2,000 lbs. Be sure lift or hoist equipment has appropriate tires for the terrain to avoid becoming stuck or tipping over. The lift slots are designed for use with a fork lift. A spreader bar and chains (see Figure 3-1) can also be used.

Installation The light tower is delivered completely assembled, tested and ready for use. No assembly is required. However, before putting the light tower to use the system should be completely checked to ensure it is ready for operation. See Figure 3-1.

The light tower (unit) has six major systems that will be checked individually before use, these are:

1. Trailer
2. Engine/Generator
3. Trailer Stabilization System
4. Light Mast
5. Light Fixtures
6. Electrical Systems

Figure 3-1 POW'R LITE Component Identification



These checks should be performed before first service, after 25 hours of operation and every 100 operating hours thereafter.

Trailer Checks Single axle trailer with leaf springs and two tires.

1. Verify that the hitch mechanism on the trailer opens and closes freely and is securely fastened to the trailer tongue.
2. Verify that the safety chains are securely fastened to the trailer tongue.
3. Verify that the trailer lighting connector and harness are present and are not damaged.
4. Verify that tail lights are not broken or damaged.
5. Verify that the trailer tires are properly inflated (32 psi).
6. Verify that the lug nuts for each wheel are properly torqued to 90 lb-ft.
7. Verify that the enclosure is securely fastened to the trailer frame.
Ensure that all bolts, nuts and other hardware are tight and not missing.

Engine/Generator Checks A 3-cylinder liquid cooled diesel engine and 4 pole, brushless, 6,000 watt generator.

1. Refer to the engine manual for maintenance check procedures to ensure all fluid levels are correct before each use.
2. Verify that electrical receptacles, switches and circuit breakers are not damaged.

Trailer Stabilization Checks Consists of 2 rear mounted outrigger assemblies and the jack on the trailer tongue.

1. Verify that the jack rotates and locks into position.
2. Ensure that all bolts, nuts and other hardware are tight and not missing.
3. Verify that the rear outriggers extend and rotate into position.
4. Ensure that the lock mechanisms operate correctly.

Light Mast Checks A 4 section 30 foot mast can be rotated 360 degrees.

1. Ensure that all bolts, nuts and other hardware are tight and not missing.
2. Verify that the cables for Tilt and Lift winches are not frayed or damaged.
3. Verify that the Tilt and Lift winches are not damaged.
4. Verify that the Tilt Lock and Mast Lock hardware is present and not damaged.

Light Fixtures Checks

1. Ensure that all bolts, nuts and other hardware are tight and not missing.
2. Verify that the electrical cables are not frayed or damaged.
3. Verify that the light bulbs, covers and other hardware are not damaged.

Electrical Systems Checks

Verify that the wiring cables, switches etc. are not damaged.

Electrical Connections Class 1 wiring methods must be used for field wiring connections to terminals of a class 2 circuit. It is the responsibility of the owner/operator to arrange for these procedures to be performed by a licensed electrical contractor and ensure conformance to all applicable codes including local codes peculiar to your municipality/city/county and state. Wire size and insulation type should be as required by NEC (National Electrical Code) and local codes.

Warning: **Never connect this light tower to the electrical system of any building unless a licensed electrician has installed an approved transfer switch. The national electrical code (NEC) requires that connection of a generator to any electrical circuit normally powered by means of an electric utility must be connected by means of approved transfer switch equipment to isolate the electrical circuit from the utility distribution system when the unit is operating. Failure to isolate the electrical circuits by such means may result in injury or death to utility power workers due to backfeed of electrical energy onto the utility lines.**

Intended Use The intended purpose of this light tower is to provide portable lighting where main utility power supply is not available. It is not intended to connect to a building's wiring system.

Protection **Single Phase** circuit protection is provided within the light tower.

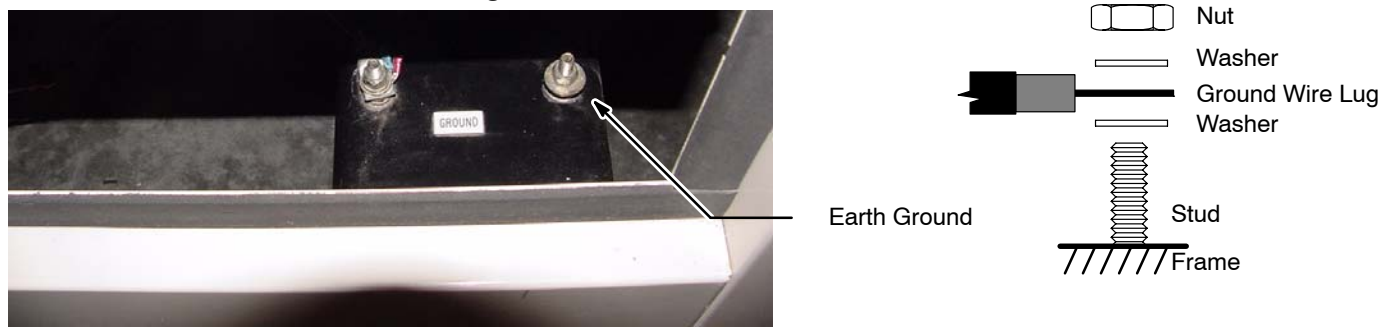
Electrical Outlets The electrical panel provides a duplex 120V, 20A grounded outlet. Both receptacles may be used at the same time as the Light Mast provided the total electrical load does not exceed the generators rated output. GFCI (Ground Fault Circuit Interrupter) provides ground fault protection.

Frame Ground Connection

WARNING: **Be sure the system is properly grounded before applying power. Do not apply AC power before you ensure that grounds are connected. Electrical shock can cause serious or fatal injury. NEC requires that the frame and exposed conductive surfaces (metal parts) be connected to an approved earth ground. Local codes may also require proper grounding of light tower systems.**

The NEC requires that the frame and exposed metal surfaces be at local ground reference potential to avoid electrical shock hazard. A local ground reference may require a driven earth ground conductor at the job site. Make the ground connection as shown in Figure 3-2. Use the appropriate size wire as required by NEC and local codes.

Figure 3-2 Frame Ground Connection



Battery Connections

WARNING: Removal, installation and servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

WARNING: Do not mutilate the battery or dispose of a battery in a fire. The battery is capable of exploding. If the battery explodes, electrolyte solution will be released in all directions. Battery electrolyte solution is caustic and can cause severe burns and blindness. If electrolyte contacts skin or eyes, immediately flush the area with water and seek medical attention quickly.

WARNING: A battery presents a risk of electrical shock hazard and high short circuit current. The following precautions are to be followed when working on batteries:

1. Remove watches, rings, necklaces and all other metal objects.
2. Use tools with insulated handles.
3. Wear rubber gloves and boots.

WARNING: The battery electrolyte is a dilute sulfuric acid that is harmful to the skin and eyes. It is electrically conductive and corrosive. The following precautions are to be followed when working on batteries:

1. Wear full eye protection (safety glasses or goggles) and protective clothing.
2. Where electrolyte contacts the skin, flush the area immediately with water and wash it off using soap and water.
3. Where electrolyte contacts the eyes, immediately flush the eye thoroughly with water and seek medical attention quickly.
4. Spilled electrolyte is to be washed down with an acid neutralizing agent. A common practice is to use a solution of one pound (500 grams) bicarbonate of soda to one gallon (four liters) of water. The bicarbonate solution is to be added until evidence of reaction (foaming) has ceased. The resulting liquid is to be flushed with water and the area dried.

WARNING: A battery presents a risk of fire because they generate hydrogen gas. Hydrogen gas is extremely explosive. Never jump start a battery, smoke in the area around the battery or cause any spark to occur in the area around the battery. The following precautions are to be followed when working on batteries:

1. Do not smoke when near batteries.
2. Do not cause flame or spark in battery area.
3. Discharge static electricity from body before touching batteries by first touching a grounded metal surface.

WARNING: Disconnect the battery's ground terminal before working in the vicinity of the battery or battery wires. Contact with the battery can result in electrical shock when a tool accidentally touches the positive battery terminal or wire. The risk of such shock is reduced when the ground lead is removed during installation and maintenance.

Procedure: The correct type battery must be installed in the battery compartment provided. Installation and servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions.

Keep unauthorized personnel away from batteries.

1. Open access doors and locate battery tray.
2. Remove the old battery.
3. Install the new battery.
4. Connect the positive lead to the positive (+) battery terminal.
5. Connect the negative lead to the negative (-) battery terminal.
6. Do not lay tools or metal parts on top of batteries.

Section 4 Operation

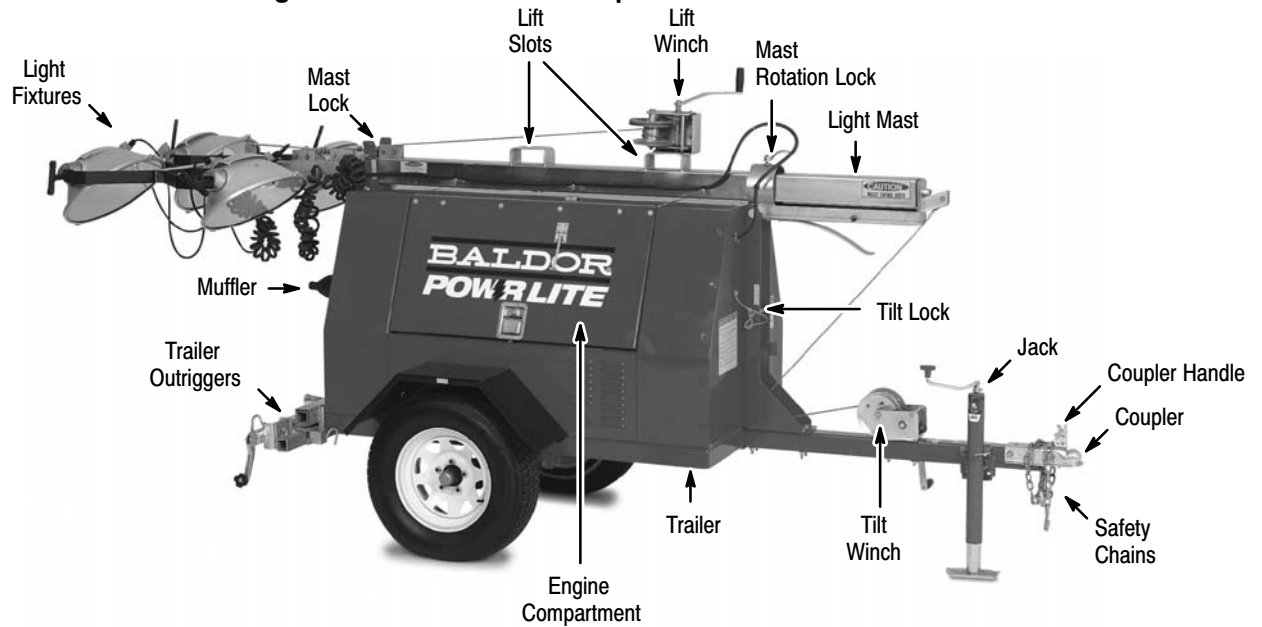
Preoperational Checklist

Before the POW'R LITE is put into service, the items in Table 4-1 must be checked.

Table 4-1 Pre-Operation Checklist

<input type="checkbox"/>	Check unit for obvious structural damage.
<input type="checkbox"/>	Make sure light mast is secure.
<input type="checkbox"/>	Check that light fixtures are secured in place.
<input type="checkbox"/>	Check that front and rear jacks are secure into position and operate properly.
<input type="checkbox"/>	Inspect tires for damage.
<input type="checkbox"/>	Make sure tires are inflated to 32 psi and that lug bolts are tightened to 90 lb-ft.
<input type="checkbox"/>	Inspect engine/generator parts for any obvious damage or loose parts.
<input type="checkbox"/>	Inspect control panel for damage or loose fasteners.
<input type="checkbox"/>	Inspect mast wiring for cuts, abrasions, and loose connections.
<input type="checkbox"/>	Check light fixtures for lamp, reflectors, and lens damage.
<input type="checkbox"/>	Inspect both winches, cables, cable clamps, and pulleys for damage and proper operation.

Figure 4-1 POW'R LITE Component Identification



WARNING: If the trailer is not properly secured to the tow vehicle's tow hitch, the trailer may separate from the tow vehicle and cause severe injury or property damage. Always ensure that the tow hitch and trailer tongue are properly connected, in good working condition and that safety chains are properly connected from the trailer to the tow vehicle.

WARNING: Never allow a person to ride in or on a trailer that is being towed. All states prohibit passengers in towed vehicles. A person can fall off and be struck by another vehicle or run over by the towed trailer. Failure to observe this warning can result in death.

WARNING: Before using a tow vehicle with a trailer mounted light tower, verify that the vehicle is designed for the load. Using a vehicle that is too small is very dangerous. Be certain that it can handle the M.G.T.W. (Maximum Gross Trailer Weight) and the tongue weight for safe towing and braking.

WARNING: For a new trailer, the wheel lug nuts should be tightened to the proper torque specification before use, after 25 miles of operation and every 100 miles of operation thereafter. Failure to check the lug nuts for proper tightness can result in an accident due to a wheel falling from the trailer.

WARNING: Never operate a trailer or tow vehicle that has a loose, missing or broken lug nut. The trailer is designed for safe operation with all lug nuts installed and all at the proper torque rating. Operating the trailer with one or more broken or missing lug nuts greatly increases the load on the remaining nuts and can cause failure of the remaining nuts that can result in an accident due to a wheel falling from the trailer.

WARNING: Maximum safe highway speed for towing the light tower set is 55 miles per hour. Excessive speed or improper towing may result in an accident or damage.

Caution: Before towing, be sure that the jack and outriggers are properly and securely stowed for travel to prevent trailer damage.

Towing Instructions

See Figure 4-1 for component identification.

1. Mast must be stowed and locked (mast lock pin installed).
2. Ensure that all light fixtures are properly secured to the mast.
3. If outrigger jacks are extended, rotate rear jacks up 90 degrees and lock into position. Pull Outrigger Locks and slide outriggers in all the way until Outrigger Locks are locked.
4. Shut all doors on the engine compartment housing and latch the locks.
5. If the light fixtures are mounted on the mast, reposition the light fixtures on the stowed mast so the four light glass fronts are tilted away from the objects that may be propelled from the tires during transportation.
6. Back the tow vehicle to within a few inches of the trailer coupler.
7. Be sure the Coupler Handle is in the "UP" (open) position.
8. Adjust the trailer jack for the height of the ball hitch on the tow vehicle.
9. Back the tow vehicle so the trailer coupler is directly over the tow vehicle ball hitch.
10. Lower the trailer so the trailer coupler rests securely on the ball hitch of the tow vehicle.
11. Move the Coupler Handle to the horizontal position and lock it in place to securely hold the ball hitch of the tow vehicle. If this is not done properly, the trailer may become unhitched when it is towed.
12. Retract the front jack, pull the jack pin and rotate the jack 90 degrees from vertical to the horizontal position, making sure the self-locking pin reseats and the jack is secured to the tow bar (stowed position).
13. Connect safety chains, making sure to cross them. If a safety chain is too long, simply twist it a few turns to shorten the chain before attaching to the tow vehicle.
14. Connect the trailer light connector to the tow vehicle.
15. Test the trailer lights to ensure they are operational.
16. Check tires for 32 psi inflation.
17. Check wheel lug nuts for correct tightness, 90 lb-ft torque.
18. Verify that all jacks, outriggers, pins, cables, and light fixtures are in their proper place and/or are secured.
19. Release the trailer wheel parking brake if equipped (optional equipment) and if set.

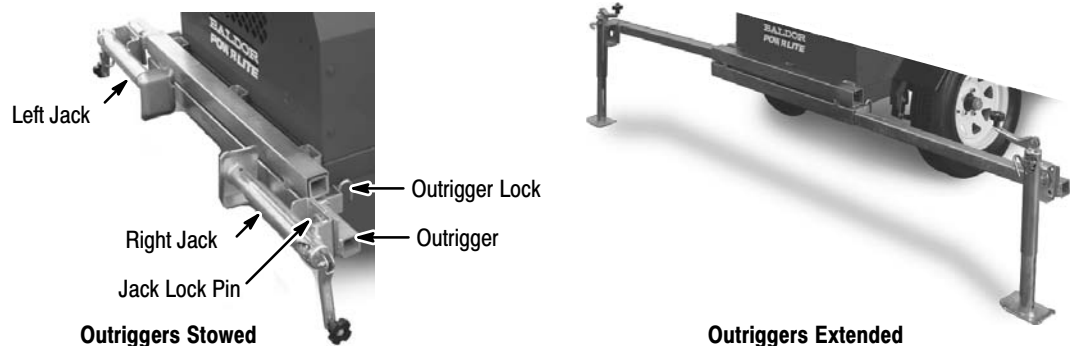
WARNING: The mast assembly must remain in the stowed position until the outriggers are properly set to stabilize the trailer. Erecting the mast without setting the outriggers can cause the light tower set to tip over when raising the mast.

Trailer Setup

See Figure 4-1 for component identification. Carefully read all instructions before starting.

1. Locate a suitable, level location ($\pm 5\%$ incline maximum). Do not use the POW'R LITE on grades that are greater than 5%. Also be sure there are no overhead wires or obstructions.
The POW'R LITE is balanced so the majority of the weight rests on the tow bar (front Jack). If on an incline, the safest way to position the trailer is to have the tow bar facing down the incline (front of the trailer lower than the rear of the trailer).
2. Apply and check the parking brake if equipped (optional equipment).
3. Disconnect the safety chains and the trailer light connector from the tow vehicle.
4. Pull the pin on the front jack and rotate the jack 90 degrees to the vertical position. Lock the jack in the vertical position using the pin to secure it.
5. Move the Coupler Handle to the vertical position to release the ball hitch.
6. Use the jack to raise the trailer coupler from the ball hitch of the tow vehicle.
7. The tow vehicle can now be moved away from the POW'R LITE.

Figure 4-2 Trailer Outrigger



8. Pull the Outrigger Lock for the right jack and fully extend the right outrigger. Lock the outrigger into position using the Outrigger Lock.
9. Pull the Jack Lock Pin for the right jack and rotate the jack to the vertical position. Lock the jack in its vertical position using the Jack Lock Pin.
10. Repeat steps 8 and 9 for the left outrigger and jack.
11. With the rear trailer stabilization in its fully extended position (Figure 4-2 right view), adjust the three jacks to level the trailer. All three jacks must be in firm contact with the ground and the trailer must be level so the light tower will be vertical when raised.

Light Tower Setup See Figure 4-1 for component identification.

WARNING: When erecting or stowing the mast assembly, be aware of the pinch points such as where the tower structures join or where the cable and winch are located. Careless operation can result in injury. Keep extremities away from moving parts to avoid injury.

WARNING: Before erecting the mast assembly, be certain that the outriggers are properly set to stabilize the unit and that they are secure and are not damaged. Erecting the mast without setting the outriggers can cause the unit to tip over when raising the mast.

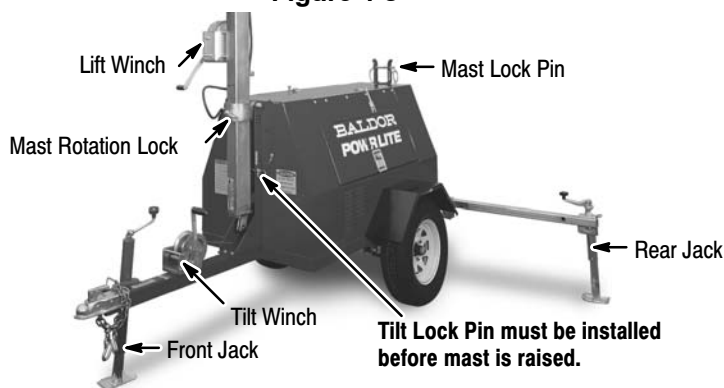
WARNING: Before erecting the mast assembly, be certain that there are no overhead wires. Contact with overhead wiring presents an electrical shock hazard that may cause severe injury or death.

WARNING: Before erecting the mast assembly, be certain that there are no overhead obstructions that the mast will hit when raising it. Hitting an object (tree limb etc.) may damage the mast or cause the unit to tip over and may result in injury or property damage.

WARNING: Never move or reposition a light tower when the mast is extended or in the vertical position. Unless the mast is in its stowed position, it may contact overhead wires or cause the light tower to be unbalanced or tip over.

1. With the Light Mast in its' stowed position, install or reposition the four light fixtures to the desired placement when the tower is raised.
2. Pull the Mast Lock pin so the mast is no longer secured in the stowed position.
3. Pull the Tilt Lock pin so it is not in the way when the mast is raised.
4. Use the Tilt Winch to raise the mast to the vertical position.
5. Install the Mast Lock pin.

Figure 4-3



6. Secure the mast in the vertical position by inserting and locking the the Tilt Lock pin, Figure 4-3. **The Tilt Lock pin must be installed and the mast secured in the vertical position before the mast is raised.**
7. Use the Lift Winch to raise the mast to the desired height. The winch is self-braking and will lock in place automatically.
8. To rotate the lights to the desired position, loosen the Mast Rotation Lock on the collar of the mast, rotate the mast to the desired position and tighten the Mast Rotation Lock.

The light tower is now setup for operation.

WARNING: Light fixtures become extremely hot during use. To prevent severe burns, do not touch light fixtures, bulbs or other components until they have cooled and no longer present a burn hazard. Wear protective clothing when placing the tower in the stowed position after use and do not allow any person to touch the light fixtures.

Caution: Careless handling or storage of the light fixtures can damage the fixtures, lenses, and/or bulbs.

POW'R LITE Operation

To prevent engine damage, the following checklist should be followed before starting the unit.

Caution: Do not overfill the engine oil. Serious damage to the engine can result from overfilling the oil.

Prestart Checklist:

1. Unlock and open the engine compartment doors.
2. Check the engine crankcase oil and add oil if required. Do not overfill. Overfilling engine crankcase with oil can cause serious engine damage.
3. Check the radiator coolant level and coolant if required. The radiator cap is accessible by an opening in the rear panel of the engine compartment just below the Mast Lock.
4. Check and verify that battery cables are not corroded, not frayed and secure.
5. Check diesel fuel level and add if necessary. Never allow the engine to run out of fuel.

Caution: Never start the engine with any of the lights on, or with any electrical load connected, as damage to the light tower may result.

Caution: Do not operate preheat for more than 30 seconds or the heating element may be damaged.

Caution: Do not engage the starter motor for more than 60 seconds at a time or damage may result.

Caution: Never use explosive engine starting fluids. Please read the engine manual and unit placards carefully before starting the engine. Starting fluids are not compatible with the preheat cycle.

Engine Start Procedure:

6. Make sure all light and auxiliary switches are in the OFF position.
7. On the control panel, push the preheat button for 15–30 seconds if required, then push the start button until engine starts, releasing the button immediately.
8. After the engine starts, listen for unusual noises, “knocks”, or vibration. If anything appears to be operating abnormally, shut the engine down immediately.
9. When the engine reaches operating speed and is operating smoothly, the lights may be turned on, one at a time, allowing a second between each switch.
10. Observe each floodlight for proper operation.

Flood Light Operation:

11. When the engine reaches operating speed and is operating smoothly, turn on one light and wait one second turn on another light and wait one second etc. until the flood lights are all on.
12. Observe the operation of each flood light and replace defective bulbs if required. To change a bulb, refer to Section 5 of this manual.

Note: Vaporous flood lights may require 5 to 15 minutes to warm up and produce full light output.

Operating Checks:

13. Gauges have been provided on the control panel and should be monitored periodically.
14. Check diesel fuel level and shut off the engine and add if necessary. Check engine oil each time fuel is added. Never allow the engine to run out of fuel.

Engine Stop Procedure:

Caution: Never stop the engine with any of the lights on, or with any electrical load connected, as damage may result.

1. Turn all floodlight switches to the OFF position.

Note: After turning OFF a light, do not attempt to turn the light ON until after a 10–25 minute cool down period. Turning a light OFF then ON may damage the light bulb.

2. If the engine has been operating for several hours under load, allow it to operate unloaded for at least five minutes to cool down.
3. Turn the engine switch to the OFF position.

WARNING: Light fixtures become extremely hot during use. To prevent severe burns, do not touch light fixtures, bulbs or other components until they have cooled and no longer present a burn hazard. Wear protective clothing when placing the tower in the stowed position after use and do not allow any person to touch the light fixtures.

WARNING: When erecting or stowing the mast assembly, be aware of the pinch points such as where the tower structures join or where the cable and winch are located. Careless operation can result in injury. Keep extremities away from moving parts to avoid injury.

WARNING: The mast should come down slowly and smoothly. If slack develops in the cable or the mast “hangs up”, stop immediately. Crank the winch in the reverse direction to take up slack in the cable, and determine the cause of the problem if possible. Try to lower the mast again. If the problem persists do not continue, call for assistance. Cable slack can allow the light tower to fall unexpectedly which may result in injury or damage.

Light Tower Stow Procedure See Figure 4-1 for component identification.

1. Use the Lift Winch to lower the light tower to its' lowest vertical position. The mast should come down slowly and smoothly. If slack develops in the cable or the mast “hangs up”, stop immediately. Crank the winch in the reverse direction to take up slack in the cable, and determine the cause of the problem if possible. Try to lower the mast again. If the problem persists do not continue, call for assistance.
2. Loosen the Mast Rotation Lock and rotate the light mast so the lights face the rear of the trailer. Tighten the Mast Rotation Lock. (There is an indicator mark on the mast that will line up with the mast bracket indicator when the light fixtures are in the transport position. This allows the mast, when lowered to the horizontal transport mode, to rest on the brackets on the top of the engine compartment.)
3. Remove the Mast Lock pin so it will not interfere with the mast when it is tilted.
4. Make sure the Tilt Winch cable is tight.
5. Remove the Tilt Lock pin.
6. Use the Tilt Winch to lower the mast to the horizontal position being careful not to pinch the electrical light cables.
7. Install the Mast Lock pin.
8. Install the Tilt Lock pin.
9. Adjust the light fixtures as needed for transport so the four light glass fronts are tilted away from the objects that may be propelled from the tires during transportation.

The mast is now in the stowed position for transport.

Trailer Setup for Towing

1. Adjust the two rear jacks to their shortest length.
2. Pull the Jack Lock Pin for the right jack and rotate the jack to the horizontal position. Lock the jack in this position using the Jack Lock Pin.
3. Pull the Outrigger Lock for the right jack and push the right outrigger fully in. Lock the outrigger using the Outrigger Lock.
4. Repeat steps 2 and 3 for the left outrigger and jack.

The Trailer Outriggers are stowed and should appear as shown in Figure 4-2 left view. Refer to **Towing Instructions** to connect the POW'R LITE to the tow vehicle.

Section 5

Troubleshooting and Maintenance

WARNING: Before cleaning, inspecting, repairing, refueling or performing any maintenance, always be sure the engine has stopped and that all rotating parts have also stopped. After stopping, certain components are still extremely hot so be careful not to get burned.

WARNING: Before servicing the light tower, be sure to disconnect the spark plug wires to prevent accidental engine rotation or starting.

WARNING: Installation and servicing of batteries is to be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

WARNING: Disconnect the battery's ground terminal before working in the vicinity of the battery or battery wires. Contact with the battery can result in electrical shock when a tool accidentally touches the positive battery terminal or wire. The risk of such shock is reduced when the ground lead is removed during installation and maintenance.

Maintenance

The following are general maintenance recommendations. The engine must be stopped and all electrical load devices removed from the light tower plugs or terminals before any maintenance is performed.

- General Checks**
1. Inspect the fuel system for leaks. Replace defective components immediately.
 2. Inspect and replace any fuel line that shows signs of deterioration.
 3. Inspect all fuel clamps to ensure they are tight and no leaks exist.
 4. Make sure the fuel cap fits snugly on the fuel tank and that the fuel tank does not leak.
 5. Inspect the condition of AC outlets for damage and replace if damaged.
 6. Test all GFCI (Ground Fault Circuit Interrupter) receptacles daily by pressing the test button on the receptacle during operation. Ensure that the GFCI trips and no voltage is present at the receptacle. Replace any GFCI receptacle that fails the test.
 7. Inspect the external wire cables (extension cords) and connectors to be used for cuts, frayed insulation, or loose connections. Repair or replace any problems prior to using the unit.
 8. Inspect bolts and nuts for tightness. Vibration can cause nuts or bolts to loosen.

Change Engine Oil

Refer to engine manual for manufacturers recommendation for oil and filter change intervals and type of oil to use and procedures.

Check Air Cleaner (Left side cover)

Refer to engine manual for manufacturers recommendation for cleaning and replacement intervals and procedures.

Flood Light Bulb Replacement

WARNING: Light fixtures become extremely hot during use. To prevent severe burns, do not touch light fixtures, bulbs or other components until they have cooled and no longer present a burn hazard. Wear protective clothing when placing the tower in the stowed position after use and do not allow any person to touch the light fixtures.

Refer to Section 4 of this manual for the procedures if you are not familiar with these steps.

1. Stop the generator.
2. Lower the mast.
3. Tilt the mast down to the stowed position.
4. Wait until the fixtures and bulbs have cooled sufficiently and replace the defective bulb.

Cleaning

Keeping the light tower clean is an important part of good operation. If dirt buildup is not removed, the light tower will run hotter than normal and its life is reduced.

The following are general guidelines for cleaning.

1. Clean the light tower and remove any and all dust, dirt, or other foreign material.
2. Inspect and clean the cooling air intake and exhaust louvers of the enclosure. Make sure they are clean. Remove dirt or any buildup that may restrict the cooling air flow.
3. Clean the light tower and its components with a damp cloth or sponge. Never use a water hose or pressure washer as this may damage electrical components.
4. Inspect and replace any control panel components that are broken or not working properly (receptacles, circuit breakers, switches, etc.)
5. Inspect and clean all engine linkages so they operate properly.

MAINTENANCE SCHEDULE

MAINTENANCE OPERATION	MAINTENANCE INTERVAL						
	10 hours or DAILY	50 hours	125 hours	250 hours	500 hours	1000 hours	2500 hours
OIL LEVEL CHECK (D)	.						
COOLANT LEVEL CHECK (D)	.						
FAN/ ALTERNATOR BELT INSPECTION (•)	.						
AIR FILTER ELEMENT CHECK (DRY TYPE) (*)	see note						
AIR FILTER CHECK (OIL BATH TYPE) (**)	.						
RADIATOR CORE INSPECTION (⊙)	.						
FLUID LEAK INSPECTION- GENERAL (•)	.						
SAFETY GUARD INSPECTION (•)	.						
OIL REPLACEMENT- INITIAL ONLY-(see RECOMMENDED OIL TYPE)		.					
OIL FILTER REPLACEMENT - INITIAL ONLY		.					
OIL REPLACEMENT- (see RECOMMENDED OIL TYPE)			.				
OIL FILTER REPLACEMENT				.			
FUEL FILTER REPLACEMENT				.			
COOLANT HOSE INSPECTION				.			
FAN/ ALTERNATOR BELT TENSION ADJUSTMENT				.			
VALVE ADJUSTMENT					.		
FAN/ ALTERNATOR BELT REPLACEMENT					.		
FUEL INJECTION SYSTEM ADJUSTMENT					.		
CLEAN FUEL TANK (⊙)						.	
COOLANT REPLACEMENT (***)						.	
REPLACE TIMING BELT							.

(D) Add fluid(s) as required

(•) After inspection, adjust, repair or replace as required

(⊙) Clean as often as required

(*) Replace air filter after air filter restriction switch indication or one(1) year. Lombardini does not recommend the removal of air filter elements for purposes of inspection.

(**) Service oil bath filter element (upper and lower) as required. Replace reservoir oil as required.
NOTE: In dusty conditions, service the oil bath air filter every four(4) hours.

(***) Replace coolant every 1000 hours or 2 years

Recommended Maintenance Intervals

The following minimum maintenance intervals are only suggestions by Power Manufacturing. As with any new piece of equipment, the operator should consult the ENGINE MANUAL and/or ENGINE OPERATION MANUAL for additional information. Should there be any discrepancies, the ENGINE MANUAL should always be followed first.

Twice Daily: Check engine oil level and fuel level and add as required.

Daily: Check engine/generator for loose bolts and fittings.

Semi-weekly: Check engine oil quality and change as required.

Weekly: Check engine air clearer and clean or replace as required.

Semi-monthly Or Every 250 Hours Of Operation: Change engine oil and filter. Check cooling fan belt and adjust as required.

Monthly: Inspect all cables and winches. Check cables for fraying and cable bolts for corrosion and tightness. Check lighting lead wires.

Six Months Or Every 500 Hours Of Operation: Check valve clearances (see Engine Manual). Also apply grease to the mast collar grease fitting.

Yearly Or Every 1000 Hours Of Operation: Clean fuel pump strainer. Replace fuel filter. Check head bolts and manifold bolts for security, tighten as required (see Engine Manual). Replace air cleaner element. Grease trailer bearings.

TROUBLESHOOTING CHART

POSSIBLE CAUSE	SYMPTOM													
	Engine will not crank	Engine does not start	Engine starts, but stops	Poor acceleration	Unsteady RPM	Black smoke	White smoke	Blue smoke	Low oil pressure	Oil level rising	Excessive oil consumption	Wet exhaust	Overheating	Engine knocks
Low fuel level		•	•		•									
Fuel supply/ return lines clogged		•	•	•	•									
Clogged fuel tank vent			•		•									
Fuel pump faulty		•	•							•				
Fuel entrained with air		•	•	•	•					•				
Unit injector(s) faulty/ worn		•	•	•	•	•	•			•		•		
Unit injector settings incorrect		•	•	•	•	•	•					•	•	•
Injection pump rack sticking		•		•	•									
Oil level too high				•	•	•		•				•	•	•
Improper oil viscosity											•	•	•	
Oil diluted by fuel									•	•	•	•	•	
Oil pressure relief valve faulty									•					
Oil pick-up tube clogged									•					
Oil pump air entrained at pick-up tube									•					
Glow plugs faulty		•					•							
Glow plug controller faulty		•												
Glow plug relay inoperable		•												
Starter defective	•													
Battery voltage too low	•													
Battery / battery cable connections corroded	•													
Key switch defective	•													
Air filter clogged		•		•	•	•					•	•	•	
Excessive idle / light load operation							•	•			•	•		
Incomplete engine run-in								•			•	•		
Engine overloaded		•	•	•	•	•					•	•		
Excessive parasitic load	•	•				•								
Valve lash insufficient / excessive		•					•	•						•
Injection timing out of spec- advanced		•					•	•			•			•
Injection timing out of spec- retarded		•		•		•								
Governor linkage adjustment incorrect		•	•	•	•									
Governor spring fatigued or defective		•		•	•									
Idle rpm too low		•	•											
Piston rings worn or stuck		•					•	•			•	•		
Piston worn or damaged		•					•	•			•	•	•	•
Cylinders worn or damaged		•					•	•			•	•	•	•
Valves / valve guides worn		•					•	•			•	•		
Valves sticking		•	•	•	•		•	•			•	•		
Bearings (main / rod) worn									•				•	•
Governor / governor linkage malfunction		•	•	•	•	•								
Cylinder head gasket damaged		•					•						•	
Thermostat stuck or malfunctioning													•	
Engine seized	•													
Radiator clogged (external or internal)													•	
Coolant pump faulty													•	
Turbocharger faulty				•	•	•	•				•	•	•	

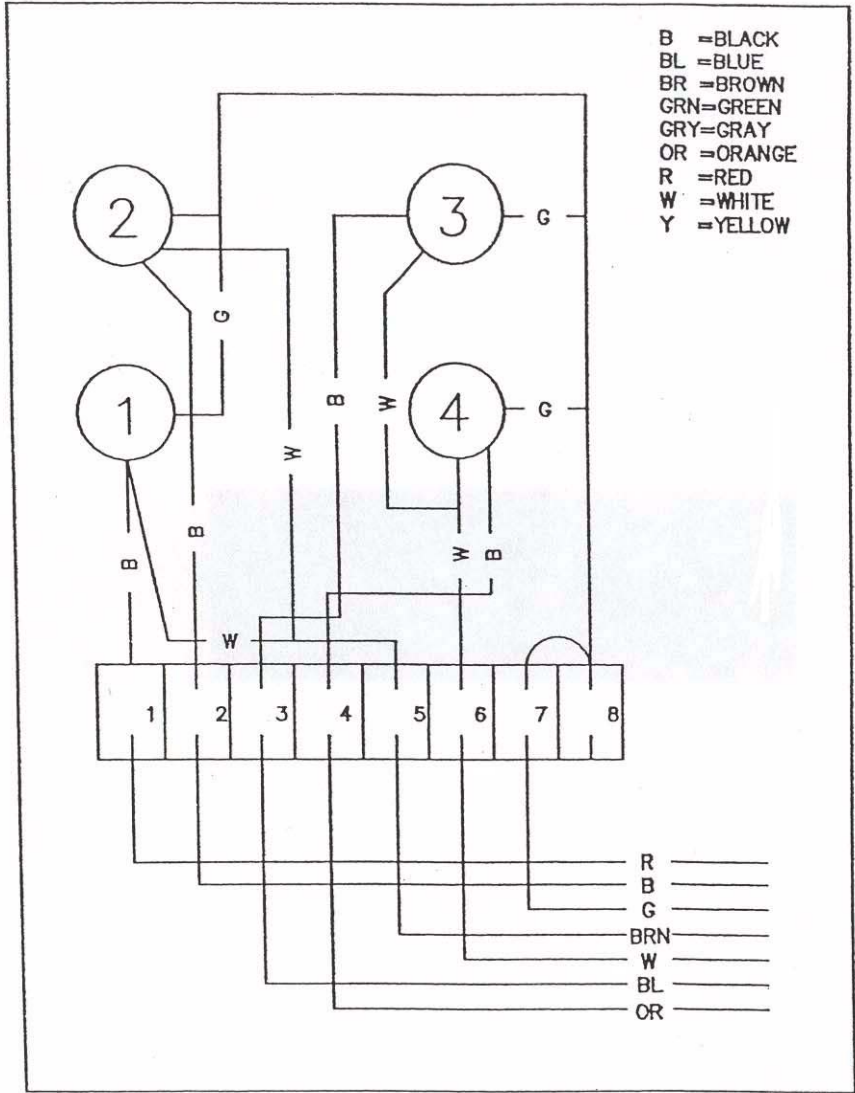
POW'R LITE Troubleshooting Guide

Table 5-1 Troubleshooting Guide

Problem	Possible Cause	Remedy
Mast will not raise to operating position.	Pin #1 still in place. Defective winch or cable.	Remove pin. Have winch and cable examined by a qualified mechanic. Replace if required.
Mast will not telescope to desired height.	Defective winch or broken cable.	Have winch and cable examined by a qualified mechanic. Replace if required.
Mast will not rotate.	Bolt/nut on bottom of mast may be too tight. Mast rotation collar needs to be greased.	Back off on nut setting slightly and try to rotate mast. Apply grease to grease fitting.
Engine will not turn over.	Loose battery cables or dead battery. Engine seized due to loss of oil.	Recharge or replace battery. Check battery cable at battery terminals and starter for tightness. Have unit inspected by qualified mechanic.
Engine turns over but will not start.	Fuel tank empty. Clogged fuel filter. Fuel line connections leaking. Heater plug element burned out. Suspect contaminated fuel.	Fill tank and bleed fuel system. Replace filter, use winter grade fuel (weather cold). Bleed out air. Tighten all fuel fittings and bleed air from fuel system. Replace heater plug. The fuel tank has a drain valve on the bottom side of the trailer. Drain and replace the fuel.
Engine difficult to start.	Battery charge low or cables loose. Motor oil too thick in cold winter. Clogged fuel filter or fuel cloudy in cold weather. Fuel line connections leaking.	Replace/recharge battery. Tighten cable connections. Use proper winter grade oil. Replace filter and bleed air from System. Use winter grade diesel in cold weather. Tighten all fuel fittings and bleed air from fuel system.
Rough running engine with low power output.	Clogged fuel filter or leaking fuel line connections. Exhaust system clogged. Air filter clogged. Fuel injectors nozzles clogged or stuck. Valve clearance needs adjusting or valve springs broken. Governor or injector pump defective.	Tighten all fuel fittings and bleed air from fuel system. Check muffler and exhaust manifold, clear any obstructions. Replace air filter. Have unit checked by trained mechanic. Have unit checked by trained mechanic. Have unit checked by trained mechanic.
Engine runs but produces excessive thick smoke.	Crankcase oil level too high. Compression low.	Drain oil level to full mark on dipstick. Have trained mechanic check unit for broken or seized rings or improper valve clearances.
Engine runs but battery voltage low.	Battery charger or alternator failure.	Have trained mechanic repair or replace.
Engine runs but lights do not come on.	Circuit breakers tripped or light switches in "OFF" position. Loose connections in light wiring. Loose connection in ballast box wiring. Bulbs burned out. Defective AC generator. Engine speed too low. Defective ballast.	Check circuit breaker, press reset button if tripped, turn on light switches. Check junction box connections for security. Have a trained electrician inspect ballast box and wiring. Replace bulbs. Have a trained electrician inspect generator. Have a trained mechanic check unit and, if necessary, reset engine speed to 1800 RPM or 60 HZ. Have a trained electrician inspect the ballast system.
Unusual noises coming from the generator.	Generator bearing or cooling fan defective.	Have a trained mechanic inspect the generator.
An electric shock occurs when the light tower or housing is touched.	Short circuit in wiring system.	IMMEDIATELY stop using the light tower. IMMEDIATELY have the unit inspected by a trained mechanic.

Figure 5-4 Flood Light Mast Wiring

FLOOD LIGHT MAST



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