



MAXI-LITE®

AS3000

AUSTRALIAN STANDARD

OPERATOR'S

MANUAL

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RECORD IMPORTANT INFORMATION

Recording the equipment information will help, when placing an order for replacement parts and/ or decals.

Company Equipment No: _____

Unit model No: _____

Unit Vin: _____

Engine Model No: _____ Serial No: _____

Generator Model No: _____ Serial No: _____

Accessories: _____

⚠ WARNING

**CALIFORNIA
PROPOSITION 65**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

⚠ WARNING

**CALIFORNIA
PROPOSITION 65**

Battery post, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

TABLE OF CONTENTS

INTRODUCTION	6
ABOUT THIS MANUAL	6
SAFETY	7-11
SAFETY DEFINITIONS	7
SAFETY PRECAUTIONS	7
SAFETY LABELS	11
TRAILERING, TRANSPORTING AND LIFTING	12-19
PREPARING THE UNIT FOR DELIVERY OR RENTAL	12
CHECK LIST	12
BEFORE TRAILERING/ TRANSPORTING	13
SHUTDOWN-PREPARE FOR TRAILERING	13
TOWER LIGHTS-STOWAGE FOR TRAILERING—VERTICAL	14
TOWER LIGHTS-STOWAGE FOR TRAILERING—LAYDOWN	15
TOWER LIGHTS-REMOVAL FOR TRAILERING/TRANSPORTING (OPTIONAL)	16
TRAILER/TOWING	16
TRAILER COMPONENT IDENTIFICATION	16
TOWING VEHICLE AND HITCH CONSIDERATIONS	17-18
LIFTING THE LIGHT TOWER	18
TRANSPORTING ON A TRAILER	19
GENERAL SERVICE INFORMATION	20-27
EQUIPMENT IDENTIFICATION-VERTICAL	20
EQUIPMENT IDENTIFICATION-LAYDOWN	21
MODELS AND SERIAL NUMBERS	22
TRAILER	22
GENERATOR	22
ENGINE	22
SPECIFICATIONS (STANDARD AND OPTIONAL)	22
OVERALL DIMENSIONS	23
TRAILER	24
LIGHT TOWER-VERTICAL	24
LIGHT TOWER-LAYDOWN	24

TABLE OF CONTENTS

TOWER LIGHTS	25
GENERATOR	25
CAT C1.1	26
OPTIONAL ACCESSORY EQUIPMENT	27
OPERATION	28-38
PRE-OPERATION SETUP	28
WORK SITE CONSIDERATIONS	28
PRE-OPERATION CHECK LIST	28
LEVELING AND STABILIZING THE TRAILER	29
INSTALLING THE GROUND ROD	30
ENGINE OPERATION	31
PRE-START CHECKS	31
ENGINE CONTROL PANELS	31
STARTING THE ENGINE	31
STOPPING THE ENGINE	31
EMERGENCY STOP SWITCH	32
BATTERY DISCONNECT SWITCH	32
AUTOMATIC ENGINE SHUTDOWN SYSTEM	32
TOWER AND LIGHT OPERATION-VERTICAL	32
TOWER AND LIGHT OPERATION-LAYDOWN	32
LIGHTBAR AND LIGHT FIXTURE ADJUSTMENT-VERTICAL	33
LIGHTBAR AND LIGHT FIXTURE ADJUSTMENT-LAYDOWN	34
RAISING AND LOWERING THE LIGHT TOWER-VERTICAL	34-35
RAISING AND LOWERING THE LIGHT TOWER-MANUAL LAYDOWN	35-36
RAISING AND LOWERING THE LIGHT TOWER-ELECTRIC LAYDOWN	36-37
ELECTRIC WINCH AUXILIARY HANDLE	37
LIGHT CONTROL PANEL	38
SHUTDOWN PROCEDURE	38
SHUTDOWN	38
MAINTENANCE	39-44

TABLE OF CONTENTS

ENGINE	39
CHANGING AND ADDING ENGINE OIL	39
ENGINE FILTERS	39
ELECTRICAL SYSTEM	39
BALLAST PANEL	39-40
HYDRAULIC PUMP	40
HYDRAULIC OIL SPECIFICATIONS	40
ADDING HYDRAULIC OIL	40
PRIMING THE HYDRAULIC PUMP	40
LIGHT TOWER AND LAMPS	41
CHANGING LAMPS	41
TRAILER	41
FRAME	41
GREASE POINTS	42
TRAILER WHEELS AND TIRES	42
WHEEL BEARINGS	42-43
TRAILER LIGHTING	43
LONG-TERM STORAGE	43
CLEANING	44
CLEANING AND DRAINING THE TRAILER BILGE	44
TROUBLESHOOTING	45
TRUBLESHOOTING CHART	45
MAINTENANCE RECORD	46
WIRE SCHEMATICS	47-50
CAT C1.1 ENGINE	47
60Hz BALLAST AND GENERATOR 16/8 CORD	48
50Hz BALLAST AND GENERATOR 16/8 CORD	49
HYDRAULIC PUMP	50
TAILLIGHTS	51
WARRANTY	52

INTRODUCTION

ABOUT THIS MANUAL

TAKE TIME TO READ THIS MANUAL THOROUGHLY

This instruction manual provides necessary instructions for the **MAXI-LITE AS3000** light tower.

The information found in this manual is in effect at the time of printing. Allmand Bros Inc. may change contents without notice and without incurring obligation.

Any reference in this manual to left or right shall be determined by looking at the trailer from the rear.

If you are uncertain about any of the information in the manual, contact Allmand service department at 1-800-562-1373, for clarification.



SAFETY

SAFETY DEFINITIONS

Safety statements are one of the primary ways to call your attention to potential hazards. Follow the precautions listed throughout the manual before operation, during operation and during periodic maintenance procedures for your safety, the safety of others and to protect the performance of equipment. Keep the decals from becoming dirty or torn and replace them if they are lost or damaged. Also, if a part needs to be replaced that has a decal attached to it, make sure to order the new part and decal at the same time.



This safety alert symbol appears with most safety statements. It means attention,

become alert, your safety is involved! Read and abide by the message that follows the safety alert symbol.

DANGER

Indicates a hazardous situation which, if not avoided, **will** result in death or serious injury.

WARNING

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

CAUTION

Indicates a hazardous situation which, if not avoided, **could** result in minor or serious injury.

NOTICE

Indicates a situation which can cause damage to the equipment, personal property and/or the environment, or cause the equipment to operate improperly.

NOTE: provides key information to make procedures easier or clearer.

SAFETY PRECAUTIONS

There is not substitute for common sense and careful practices. This information contains general safety precautions and guidelines that must be followed to reduce risk to personal safety. Special safety precautions are listed in specific procedures. Read and understand all of the safety precautions before operating or performing repairs or maintenance. This safety section cannot cover every situation that may occur that is incidental to the use of the equipment.

If you are uncertain about any of the information in the manual, contact Allmand service department at 1-800-562-1373, for clarification.

SAFETY

DANGER

The safety statements that follow have **DANGER** level hazards.

ELECTROCUTION HAZARD



- Always check overhead wires and obstructions before raising or lowering the light tower. Allow 10.6 m (35 feet) of clearance.

- High voltage is present when engine is running. Never attempt to service electrical components while engine is running.
- Do not operate the light tower if the insulation on the electrical cord or other electrical wiring is cut or worn or if bare wires are exposed. Repair or replace damaged wiring before starting the engine.

WARNING

The safety statements that follow have **WARNING** level hazards.

UNSAFE OPERATION HAZARD

- Never permit anyone to install or operate the equipment without proper training.
- Read and understand this Operator's Manual, the Engine Operator's Manual before operating or servicing the light tower to ensure that safe operating practices and maintenance procedures are followed.
- Safety signs and decals are additional reminders for safe operating and maintenance techniques.

FALL HAZARD

- Never carry riders on the equipment

MODIFICATION HAZARD

- Never modify the equipment without written consent of the manufacturer. Any modification can effect the safe operation of the equipment.

EXPOSURE HAZARD



- Always wear personal protective equipment, including appropriate clothing, gloves, work shoes, and eye and hearing protection, as required by the task at hand.

ROLLOVER HAZARD

- Do not raise, lower or use light tower unless all outriggers and jacks are positioned on firm ground.
- Never move or reposition the light tower while the light tower is extended in the vertical position.

EXPLOSION HAZARD



- While the engine is running or the battery is charging, hydrogen gas is being produced and can be easily Ignited. Keep the area around the battery well ventilated and keep sparks, open flame and any other form of ignition out of the area.
- Always disconnect the negative (-) battery cable before servicing equipment.
- Only use the starting procedure as described in the *Engine Operator's Manual* to start the engine.
- Never charge a frozen battery. Always slowly warm the battery to room temperature before charging.

SAFETY

FIRE AND EXPLOSION HAZARD

- Diesel fuel is flammable and explosive under certain conditions.
- Never use a shop rag to catch the fuel.
- Wipe up all spills immediately.
- Never refuel with the engine running.
- Store any containers containing fuel in a well ventilated area, away from any combustibles or sources of ignition.

WARNING

The safety statements that follow have **WARNING** level hazards.

EXHAUST HAZARD



- All internal combustion engines create carbon monoxide gas during operation and special precautions are required to avoid carbon monoxide poisoning.
- Never block windows, vents or other means of ventilation if the equipment is operating in an enclosed area.
- Always ensure that all connections are tightened to specifications after repair is made to the exhaust system.

ALCOHOL AND DRUG HAZARD



- Never operate the light tower while under the influence of alcohol or drugs, or when ill.

ENTANGLEMENT / SEVERE HAZARD



- Always stop the engine before beginning service.
- If the engine must be service while it is operating, remove all jewelry, tie back long hair and keep hands, other body parts and clothing away from moving/rotating parts.
- Verify that all guards and covers are attached properly to the equipment before starting the engine. Do not start the engine if any guards are or covers are not properly installed on the equipment.
- Attach a "Do Not Operate" tag near the key switch while performing maintenance on the equipment.

PIERCING HAZARD



- Avoid skin contact with high pressure hydraulic fluid or diesel fuel spray caused by a hydraulic or fuel system leak such as a broken hydraulic hose or fuel injection line. High pressure hydraulic fluid or fuel can penetrate your skin and result in serious injury. If you are exposed to high pressure hydraulic fluid or fuel spray, obtain prompt medical treatment.
- Never check for a hydraulic fluid or fuel leak with your hands. Always use a piece of wood or cardboard.

SAFETY

FLYING OBJECT HAZARD



- Always wear eye protection when cleaning the equipment with compressed air or high pressure water. Dust, flying debris, compressed air, pressurized water or steam may injure your eyes.

COOLANT HAZARD



- Wear eye protection and rubber gloves when handling engine coolant. If contact with the eyes or skin should occur, flush eyes and wash immediately with clean water.

BURN HAZARD



- light fixtures and some of the engine surfaces become very hot during operation and shortly after shutdown.
- Keep hands and other body parts away from hot engine surfaces.
- Handle hot components, such as light fixtures, with heat resistant gloves.

CAUTION

The safety messages that follow have CAUTION level hazards.

TOOL HAZARD

- Always use tools appropriate for the task at hand and use the correct size tool for loosening or tightening equipment parts.

SLIP HAZARD

- Immediately clean up any spilled liquid on the shop floor.
- Clean up accumulated dirt and debris on the shop floor at the end of each shift.

NOTICE

The safety statements that follow have NOTICE level .

- Any part which is found defective as a result of inspection or any part whose measured value does not satisfy the standard or limit MUST be replaced.
- Always tighten components to the specified torque. Loose parts can cause equipment damage or cause it to operate improperly.
- Follow the guidelines of the EPA or other governmental agencies for the proper disposal of hazardous materials such as engine oil, diesel fuel and engine coolant.
- Only use replacement parts specified. Other replacement parts may effect warranty coverage.
- Clean all accumulated dirt and debris away from the body of the equipment and its components before you inspect the equipment or perform preventative maintenance procedures or repairs. Operating equipment with accumulated dirt and debris will cause premature wear of equipment components.
- Never dispose of hazardous materials by dumping them into a sewer, on the ground, or into groundwater or waterways.
- Retrieve any tools or parts that may have dropped inside of the equipment to avoid improper equipment operation.
- If any alert indicator illuminates during equipment operation, stop the engine immediately. Determine the cause and repair the problem before continuing to operate the equipment.



SAFETY

SAFETY LABELS



Refer to these representations of the safety warning decals used on the **MAXI-LITE AS3000** light tower to insure correct ordering if replacement becomes necessary.



090002

MEN

DIESEL

090034



101404



090399



TRAILERING, TRANSPORTING AND LIFTING

PREPARING THE UNIT FOR DELIVERY OR RENTAL

The **MAXI-LITE AS3000** light tower should be operated properly and maintained properly for maximum service life. Never deliver or put machine into service with known defects or missing instructions or decals. Always instruct the customer in proper operation and safety procedures as described in this *Operator's Manual*. Always provide the manual with the equipment for proper and safe operation.

CHECK LIST

- Visually inspect the equipment to ensure that all instructions and decals are in place and legible.
- Inspect the light tower locking bar latch assembly which locks the light tower in the vertical position for proper operation.
- Check the hitch assembly and safety chains.
- Check the outriggers and jacks to make sure they operate properly.
- Inspect the light assemblies for damage and test for proper operation.
- Inspect the electrical wiring for signs of damage.

- Check ground rod cable and the ground lug. Make sure they are clean, undamaged and functional.
- Inspect tires to insure good condition and proper inflation.
- Check engine oil, fuel, engine coolant levels and hydraulic fluid levels, if equipped.
- Check to make sure the *Light Tower Operator's Manual*, *Engine Operator's Manual* and the *Generator Operator's Manual* are with the equipment.
- Inspect the machine physically for damage and repair if necessary.

NOTICE

See appropriate section of the *Engine Operator's Manual* and *generator Operator's Manual* for additional pre-operation checks.

After completing the pre-operation check list, operate the tower through a complete operation cycle, following the operating instructions in the **MAXI-LITE AS3000** *Operator's Manual*.

⚠ WARNING

UNSAFE OPERATION HAZARD

Never permit anyone to install or operate the equipment without proper training.

⚠ DANGER

ELECTROCUTION HAZARD

Do not operate the light tower if the insulation on the electrical cord or other electrical wiring is cut or worn or if bare wires are exposed. Repair or replace damaged wiring before starting the engine.

**ALWAYS READ AND
UNDERSTAND THE
INSTRUCTIONS FIRST.**

TRAILERING, TRANSPORTING AND LIFTING

BEFORE TRAILERING OR TRANSPORTING

Before trailering, transporting or lifting, read *Safety* on page 7.

Perform the following before trailering / transporting:

- Lower the light tower and shut down the tower lights and the engine; See *Shutdown-prepare for trailering* on page 13.
- Visually inspect the trailer and equipment for damage. Repair or replace any components as needed before trailering.

NOTICE

Visually inspect the light mounting brackets and hardware for loose fasteners or damaged brackets. Repair any problems before trailering.

- Check the trailer lights for proper operation
- Inspect the tires to insure good condition and proper inflation.
- Inspect trailer springs and undercarriage for damage or loose parts.
- Check the hitch assembly and safety chains.
- Ensure the outriggers and jacks are properly stowed.
- Ensure the ground rod and cable are disconnected and properly stowed.
- Clean any spills from inside the trailer bilge area around the outside of the trailer; they may have occurred during operation.
- Ensure all compartment doors are closed and securely locked.

SHUTDOWN - Prepare for trailering

1. With the tower lights off, lower the light tower to the full DOWN position; See *Raising and lowering the light tower* on page 34-37.

NOTICE

See appropriate section of the Engine Operator's Manual and generator Operator's Manual for additional pre-operation checks.

2. Turn the engine off . Refer to your *Engine Operator's Manual* for stopping procedure.
3. Adjust the light bar and light fixtures for trailering; See *Tower Lights-Stowage for trailering* on page 16.
4. Secure the light cords into the hook on the rear tower support.(Laydown Tower Only)
5. Disconnect the ground rod cable rod the ground lug. Remove the ground rod from the earth and clean and secure the ground rod and cable in the trailer.
6. Close, secure and lock all compartment doors.

NOTICE

Be sure each outrigger jack is securely latched in transporting position by installing the outrigger lock pins before transporting.

7. Raise each outrigger stabilizer jack and rotate into trailering position (horizontal with outrigger bar).
8. Retract each outrigger bar and secure in the stowed position with latch pin.

TRAILERING, TRANSPORTING AND LIFTING

VERTICAL TOWER LIGHTS - Stowage for Trailering

The light bar and fixtures must be stowed before trailering or transporting.

1. Ensure lights are off and tower is lowered to the full DOWN position; See *Raising and Lowering the Light Tower* on page 34-37.

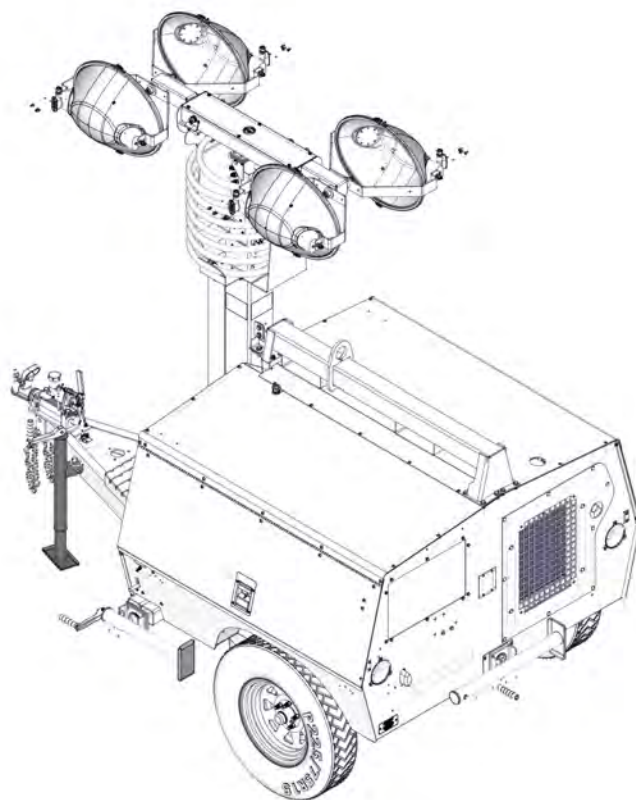
WARNING

BURN HAZARD

The light fixtures become extremely hot during use. Always use caution and heat-resistant gloves when handling the lights or allow the lights to cool down before handling.

2. Release the light bar park pin by pulling the ring and turning it 90° so that the pin remains in the retracted position.
3. Rotate the light bar into the trailering/ transporting park position (inline with the trailer) and engage the park pin by twisting the park pin ring until the plunger is released and the pin engages and locks into the hole in the light bar.
4. Reposition the light fixtures for trailering/ transporting by pulling them down into the lowest position and face the fixtures toward the center of the trailer. (**See Right**)

If lights are to be removed for trailering/ transporting, See *Tower Lights - Removal for Trailering/ Transporting* on page 16.



TRAILERING, TRANSPORTING AND LIFTING

LAYDOWN TOWER LIGHTS - Stowage for Trailering

The light bar and fixtures must be stowed before trailering or transporting.

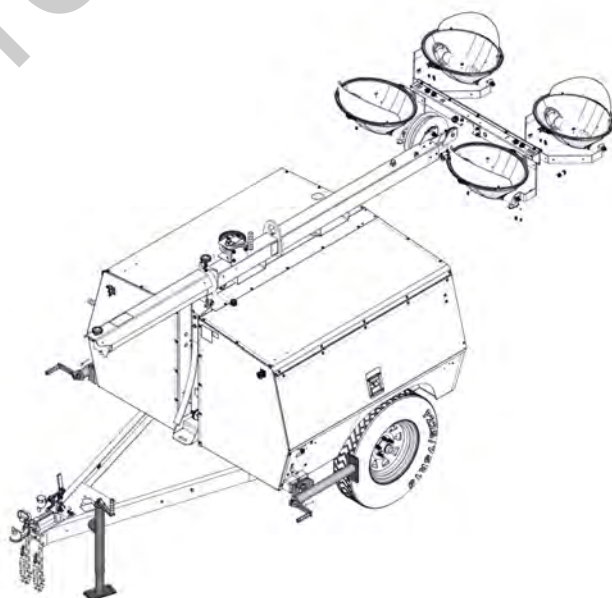
⚠ WARNING

BURN HAZARD

The light fixtures become extremely hot during use. Always use caution and heat-resistant gloves when handling the lights or allow the lights to cool down before handling.

1. Ensure lights are off and tower is lowered to the full DOWN position: See *Raising and Lowering the Light Tower* on page 34-37.
2. Rotate the light bar into the trailering/ transporting park position (inline with the front of the trailer) and tighten the tower lock knob.
3. Lower the tower into the rear tower support and engage tower lock.
4. Reposition the light fixtures for trailering/ transporting by facing the fixtures toward the mast (See right)

If lights are to be removed for trailering/ transporting, See *Tower Lights -Removal for trailering/ transporting (optional)* on page 18.



TRAILERING, TRANSPORTING AND LIFTING

TOWER LIGHTS - Removal for Trailering/ Transporting (optional)

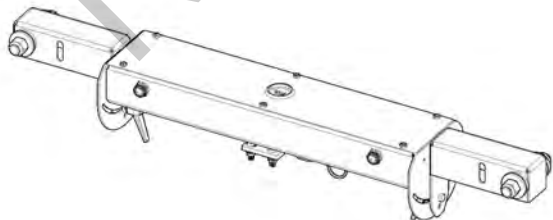
Your light tower may be equipped with lights that can be removed for trailering/ transporting or for theft protection.

WARNING

BURN HAZARD

The light fixtures become extremely hot during use. Always use caution and heat-resistant gloves when handling the lights or allow the lights to cool down before handling.

1. Ensure lights are off and tower is lowered to the full DOWN position; See Raising and Lowering the light tower on page 35-37 .
2. Disconnect the electrical cord from each light fixture.
3. While supporting the light fixture, remove the nut and washer for each assembly fastening the main light fixture bracket to the light bar.
4. Store each light fixture to avoid any damage during transport



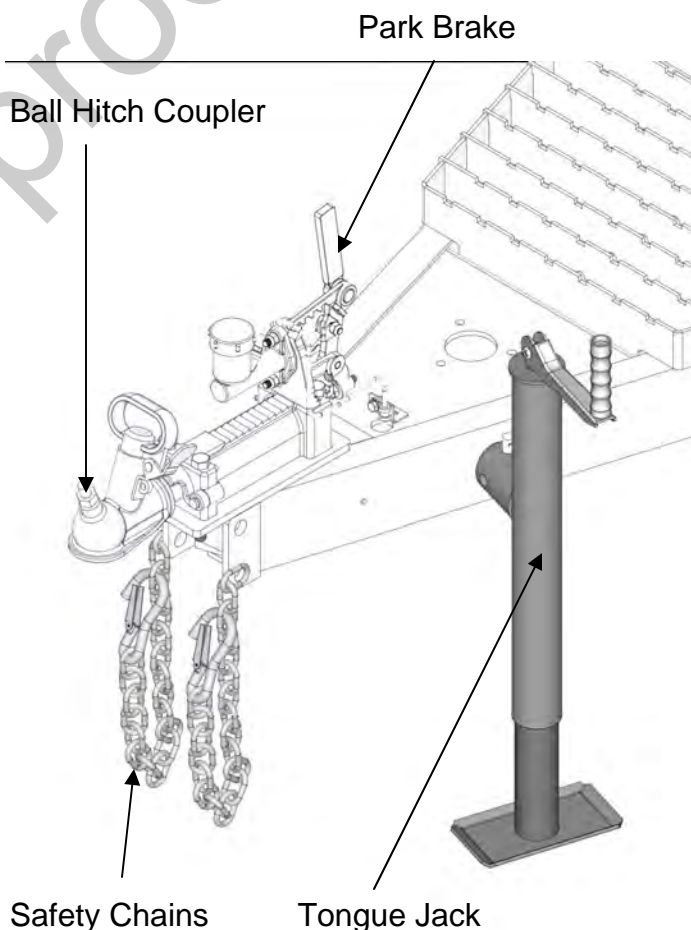
TRAILERING / TOWING

Before trailering / towing the light tower trailer, read *Before Trailering / Transporting* on page 13 and read *Safety* on page 7.

NOTICE

Maximum highway speed is 80 km/h (50 mph) and maximum off highway speed is 16 km/h (10 mph). Do not exceed these limits or damage to light tower may occur.

Trailer Component Identification



TRAILERING, TRANSPORTING AND LIFTING

Towing Vehicle and Hitch Considerations

⚠ WARNING

CONTROL HAZARD

Never pull a trailer load that exceeds the vehicle's towing capacity.

The towing vehicle must be able to safely pull the full trailer load. Never pull a trailer load that exceeds the vehicle's towing capacity. The vehicle must have a towing hitch that is capable of safely handling the trailer load and tongue weight of the trailer.

Before trailering, always check your vehicle owners manual for maximum towing/ trailering load specifications and maximum gross vehicle weight specifications that include the fully loaded trailer.

⚠ WARNING

CONTROL HAZARD

A vehicle hitch that is underrated or improperly installed can lead to loss of control of the trailer and/ or the vehicle. Never use a hitch size or rating that does not match the trailer coupler specifications.

Connecting the Trailer Hitch Coupler and Lights

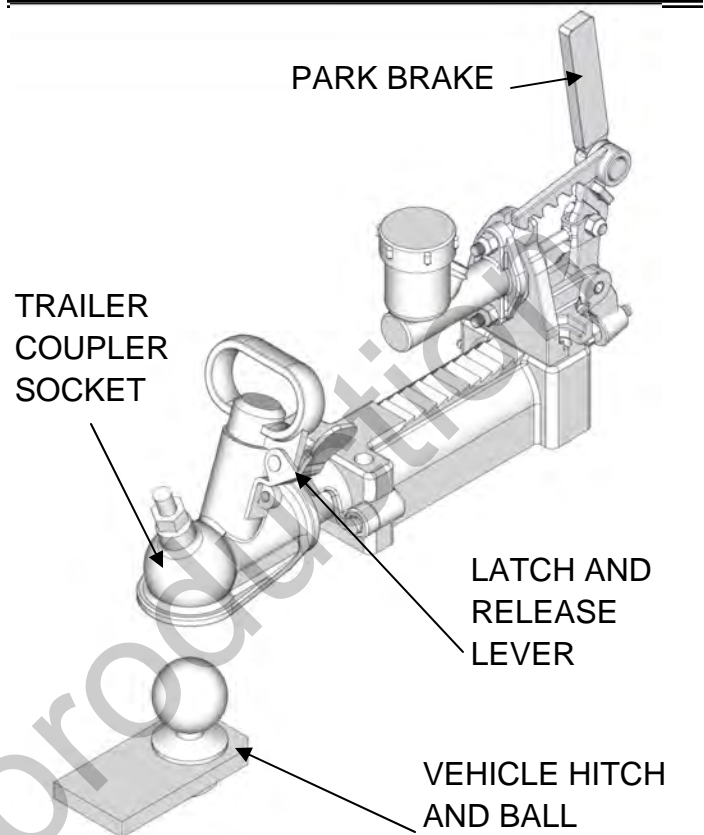
The trailer is equipped with a trailer coupler for a 50mm (2 inch) ball hitch.

⚠ WARNING

CONTROL HAZARD

Ensure the coupler bolts are tightened before trailering.

Hitch and Coupler



NOTICE

Safety chains must be rated at the same or greater weight capacity as the trailer's GVWR.

The trailer's safety chains prevent the trailer from completely detaching from the vehicle when underway. In the event the trailer separates from the vehicles hitch and ball.

1. Connect the trailer coupler to the tow vehicle's hitch and ball. Make sure the coupler is securely attached to the tow vehicle's hitch.

⚠ WARNING

CONTROL HAZARD

Attach the safety chains properly and securely between the towing vehicle and the trailer before trailering. Never allow the chains to drag on the ground when trailering.

TRAILERING, TRANSPORTING AND LIFTING

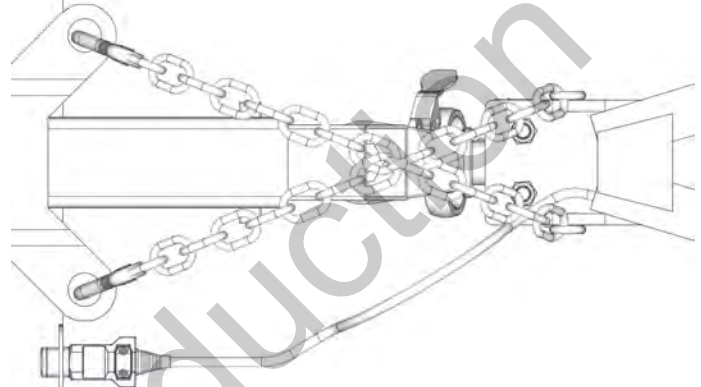
2. Connect the safety chains to the vehicle's hitch frame and crisscross the chains under the trailer tongue to prevent the tongue from dropping to the road if the trailer separates from the hitch ball. Rig the chains as tight as possible with enough slack to permit free turning.
3. Connect the 7-pin light connector from the trailers harness to the vehicles harness.

NOTICE

Do not allow excessive harness slack or the harness can be damaged from scraping on the ground.

4. Ensure there is adequate slack in the harness to prevent binding or disconnection when turning.
5. Before trailering, check all lights for proper operation.

BOTTOM VIEW OF HITCH AND COUPLER



PROPER CHAIN CONNECTION

LIFTING THE LIGHT TOWER

The approximate fully loaded weight of the light tower and trailer is:

Vertical tower - 1,271.4 kg (2,803lbs)

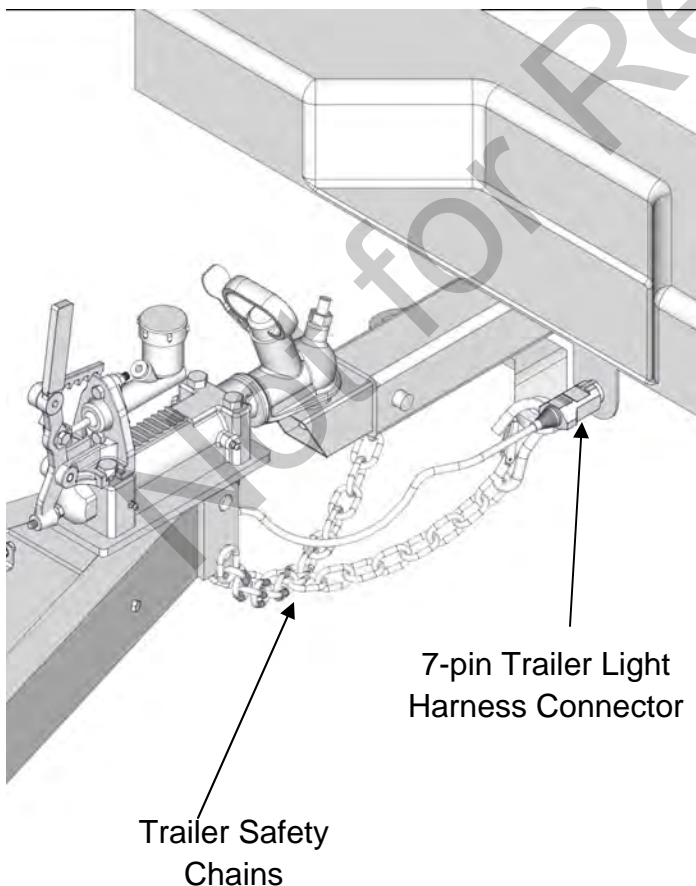
Laydown tower - 1,173.9 kg (2,588 lbs)

The **MAXI-LITE AS3000** light tower is equipped with top forklift pockets and a lifting eye for lifting or hoisting.

WARNING

ROLLOVER HAZARD

Before lifting, lower the light tower and shut down tower lights and the engine: See SHUT-DOWN-prepare for trailering.



TRAILERING, TRANSPORTING AND LIFTING

⚠ WARNING

CRUSH HAZARD

Always make sure the lifting device you are using is in good condition and is rated for the maximum capacity of the task to safely lift the light tower trailer.

⚠ WARNING

CRUSH HAZARD

Always acquire assistance when using a forklift, crane or hoist and when loading and unloading.

⚠ WARNING

CRUSH HAZARD

Only use the lifting eye on the lifting bar to lift or hoist the unit with a hoist or crane.

⚠ WARNING

CRUSH HAZARD

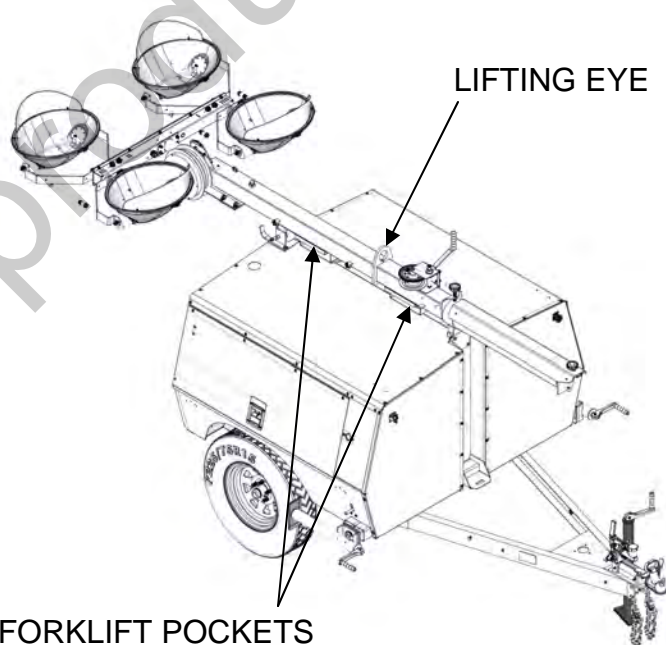
Do not stand or walk under the unit when lifted and keep others away.

⚠ WARNING

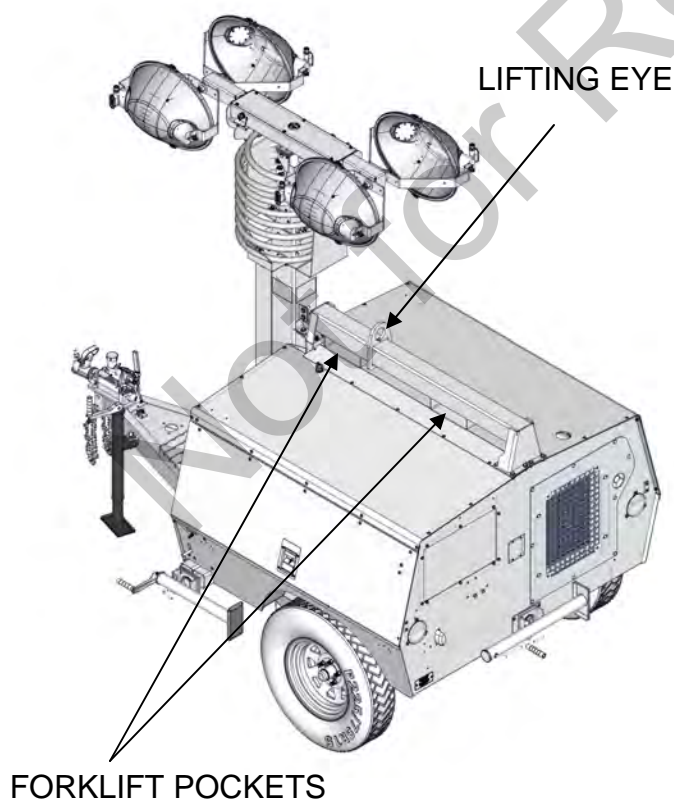
CRUSH HAZARD

Always use shackles or a locking type hook when lifting.

LIFTING ATTACHMENT POINTS - Laydown Tower



LIFTING ATTACHMENT POINTS - Vertical Tower

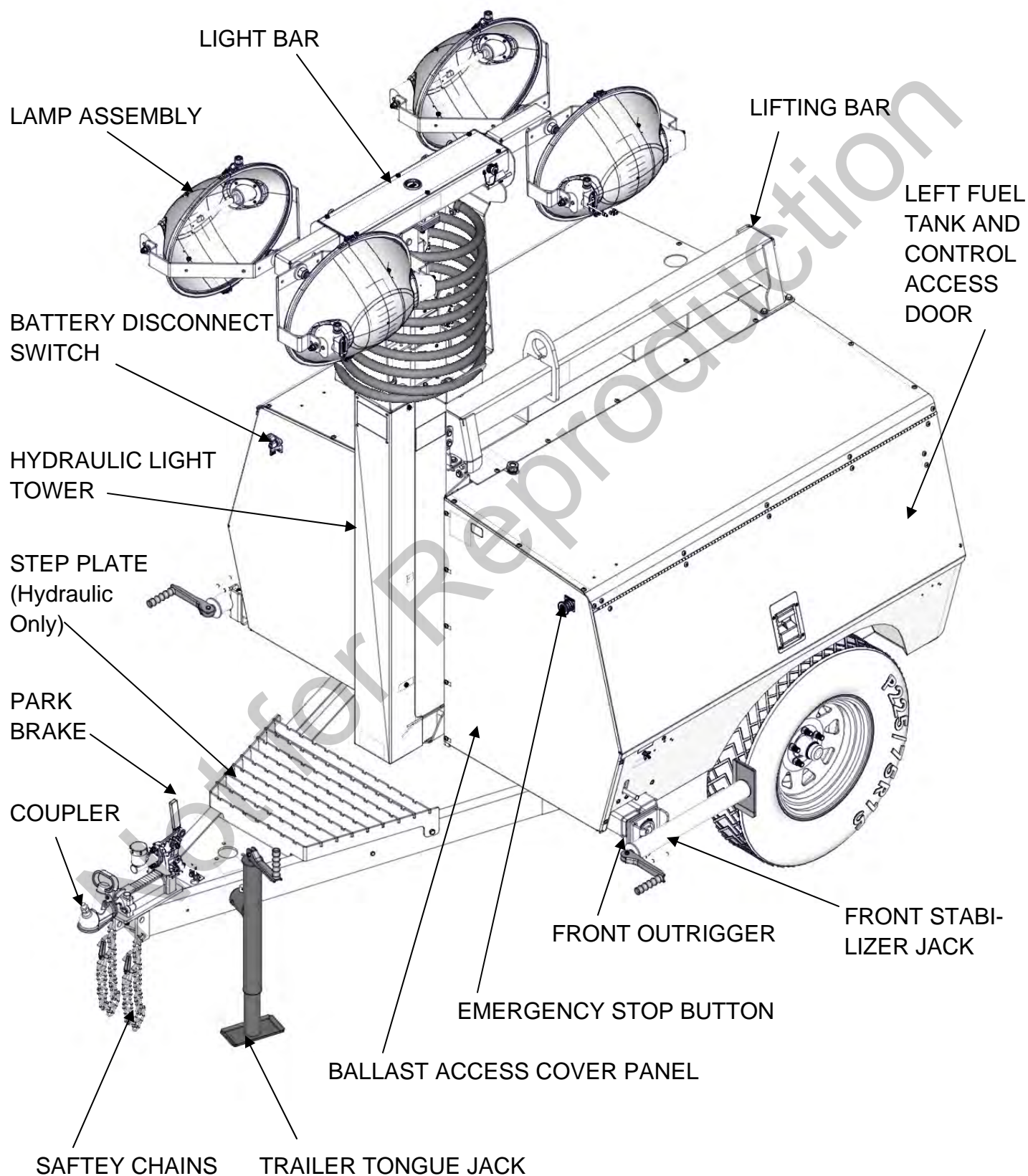


TRANSPORTING ON A TRAILER

When transporting the light tower trailer on a truck or a trailer, always secure the unit using properly rated tie-down chains or straps connecting the light tower frame using tie-down loops to the towing trailer. The operator of the towing vehicle is responsible for securing the load properly.

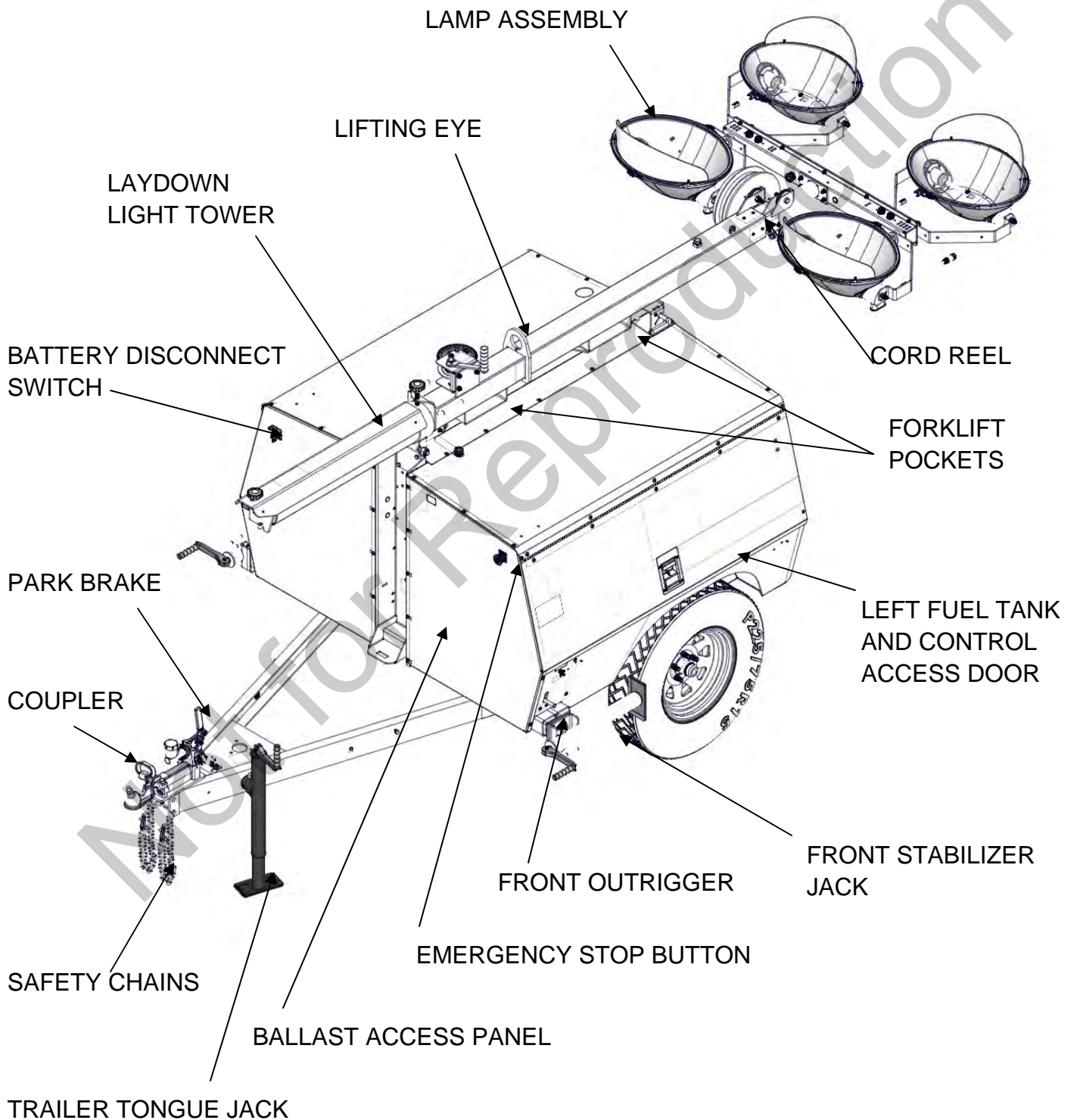
GENERAL SERVICE INFORMATION

EQUIPMENT IDENTIFICATION- VERTICAL TOWER



GENERAL SERVICE INFORMATION

EQUIPMENT IDENTIFICATION- LAYDOWN TOWER



GENERAL SERVICE INFORMATION

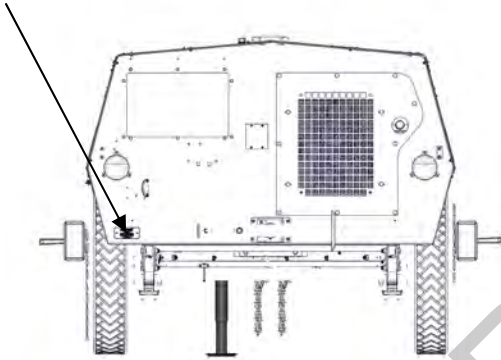
MODEL AND SERIAL NUMBERS

Model and serial number information is required for product support and repair parts. The following descriptions show model and serial number locations of the primary components.

Trailer

All **MAXI-LITE AS3000** light tower trailers have a serial number plate attached to the rear panel .

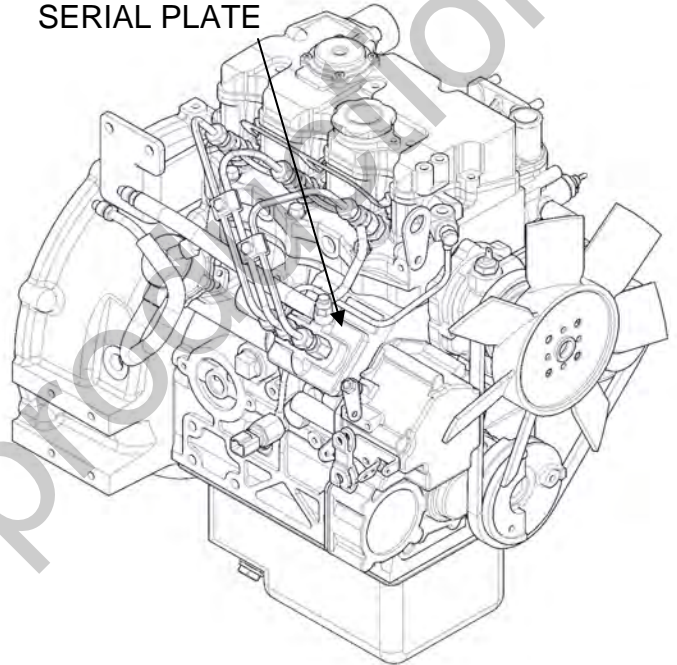
TRAILER
SERIAL PLATE



Engine

The CATERPILLAR engine has a serial number plate attached on the upper right side of the engine block above the fuel injection pump.

SERIAL PLATE

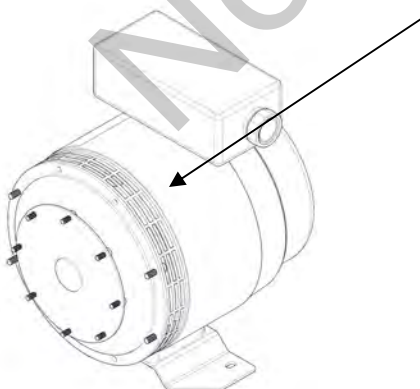


CAT ENGINE C1.1

Generator

The generator has a serial number plate attached to the side of the housing.

STAMPED SERIAL PLATE



MARATHON

SPECIFICATIONS (STANDARD AND OPTIONAL FEATURES)

Refer to the Engine Operator's Manual or the Generator Operator's Manual for specific Engine or Generator specifications.

GENERAL SERVICE INFORMATION

Overall Dimensions

	Hydraulic Tower	Laydown Tower
Height Light Tower Lowered	2.34 m (7 Ft 8 in.)	1.7 m (5 ft. 7in.)
Height Light Tower Raised	7.8 m (25 ft 6in.)	9.14 m (30 ft.)
Width (outriggers retracted)	1.9 m (74 in.)	1.95 m (76 ft. 3/4 in.) Manual Winch
		1.87 m (74 in.) Electric Winch
Width (outriggers extended)	3.91 m (12 ft 10 in.)	3.91 m (12 ft. 10 in.)
Length w/o Fixtures	3.14 m (10 ft 4 in.)	4.1 m (13 ft. 6 in.)
Length with Fixtures	3.14 m (10 ft 4 in.)	4.5 m (14 ft. 9 in.)
Dry Weight (4 lights)	1,036 kg (2,503 lbs.)	1,038 kg (2,288 lbs.)

GENERAL SERVICE INFORMATION

Trailer

Hitch Coupler	Fixed height
	50 mm (2 in.) ball
Max. Road Speed (paved road)	60 mph (97 km/h)
Max. Off - road Speed	20 mph (32 km/h)
Number of Axles	1
Axle Rating	5000 lbs. (907.1 kg)
Tire Size & Rating	ST 225/75 D15
Max Tire Pressure	448 kPa (65 PSI)
Door Locks	Standard
Trailer Lights:	Stop, Turn, Running
Trailer Light Connector	7 - Pin Plug
Lifting Eye	Standard
Tie - Down Rings	Standard
Side Forklift Pockets	Standard
Top Forklift Pockets	Standard
Number of Stabilizers	4
Number of Outrigger	
Stabilizers	2
Tongue Jack	Standard
Ground Rod	Standard

Light Tower– Vertical

Sections	6
Hydraulic Cylinder	Standard
Vertical	Optional
Max Wind Load	85.3 km/h (57 mph)
Light Bar Rotation	360°
Cord Reel	Optional

Light Tower– Laydown

Sections	3
Hydraulic Cylinder	N/A
Rear Tower Support	Standard
Max Wind Load	85.3 km/h (53 mph)
Light Fixture Rotation	360°
Cord Reel	Standard
Manual Winch	Standard
Electric Winch	Option

GENERAL SERVICE INFORMATION

Tower Lights

SHO - HD 1250W Metal Halide (lumen rating: 150,000)	Standard
SHO - HD 1000W Metal Halide (lumen rating: 110,000)	Optional
SHO - HD 1000W and 1250W Metal Halide	Warm - up time: 2-4 minutes
SHO - HD 1000W and 1205W Metal Halide	Re - start time: 10 to 15 minutes
Four Fixtures	Standard (sealed for all weather use)
Light Fixture Weight	15 lbs (6.75 kg)
Individual Light Switches	
1000W Light Switch (2 per 4 lights)	Standard
1000W Light Switch (4 per 4 lights)	Optional
1250W Light Switch (2 per light)	Standard
Individual Ballast (1 ballast per light)	Standard

Generator

7.5 kW	Standard
8 kW	Optional

GENERAL SERVICE INFORMATION

Bore	77mm (3.03 in.)
Stroke	81mm (3.19 in.)
Displacement	1100cc (69 cu. In.)
Power @ 1800 rpm	11.9 kW (14.3 bhp)
Power Output	3% per 304.8m (1000 ft.) above 109.7m (360 ft.)
Derating	1% per 10° above 25°C (77° F)
Note: Horse power ratings are established in accordance with Society of Automotive Engineers Small Engine Test Code - J1349 GROSS	
Fuel System	Cassette type fuel injected diesel
Starting System	12VDC Negative Ground
Electrical System	12VDC Negative Ground
Battery Type	Group 24
Battery Rating	550 CCA
Number of Batteries	1
Compression Ratio	22:01
Weight	87 kg (191 lbs.)
Oil Capacity	3.7 L (3.9 qts.)
Lubrication	Forced lubrication by Pump
Oil Filtration	Cartridge Type
Cooling System	Pressurized radiator forced circulation with water pump
Low Oil Pressure Engine Shutdown	Standard
High Engine Temperature Shutdown	
Glow Plug Cold Start Assist	
Fuel	Use a clean No. 2 Diesel fuel oil (SAE J313 JUN87) according to ASTM D975 Do not use alternative fuel, because its quality is unknown or it may be inferior in quality, kerosene, which is very low in cetane rating, adversely affects the engine. Refer to the Engine Operator's Manual for more detailed fuel requirements.
Engine Oil	Use a high quality engine oil of API (American Petroleum Institute) service class CC/CD/CE. Refer to the Engines Operator's Manual for a more detailed engine oil requirements.
Fuel Tank	189 L (50 gal.)
Cooling System	See Engine Operator's Manual
Engine Oil	See Engine Operator's Manual

GENERAL SERVICE INFORMATION

OPTIONAL ACCESSORY EQUIPMENT

- Saf -T-Visor™
- Electric Winch Tower
- Hydraulic Tower
- LSC100™ Light Sequence Commander
- Heavy Duty Battery (700 CCA)
- Battery Heating Pad
- Engine Block Heater
- Sound Attenuation package
- Four or Six Metal Halide or High Pressure Sodium Lamps (5,000, 6,000 or 7,000 Watts Total)
- 7-Blade RV Taillight Connector
- 189 L (50 gal.)
- Bulldog Hitch (ball/pintle)
- Quick - Disconnect Lamp Fixtures
- Battery Disconnect switch
- Emergency Stop Switch

OPERATION

PRE-OPERATION SETUP

Work site safety considerations

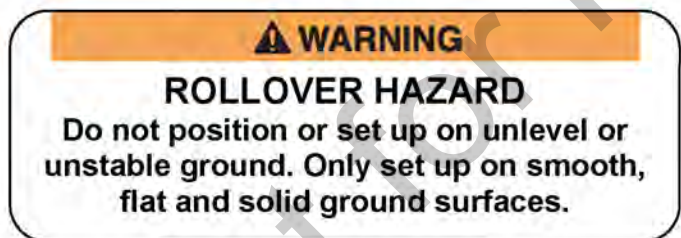
Overhead Obstructions

Position the light tower trailer where there are no overhead obstructions. Ensure that there is sufficient clearance from structures, trees and wires before raising the light tower.



Ground Surface

Check the ground conditions where you intend to set up the light tower trailer. The ground must offer firm, stable footing for the outriggers and jacks. The area must be flat and level.



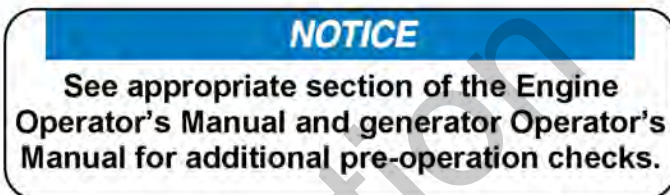
Wind

The light tower will remain operational in sustained winds up to 92 km/h (57 mph) when properly positioned on firm level ground, with the outriggers and jacks properly positioned, and the light tower fully raised.



Pre - Operation Check list

Always perform the following checks before traveling to the work site and before operation. Repair or replace any components as required before operation.



- Visually inspect the equipment to ensure that all instructions and decals are in place and legible.
- Inspect the light tower locking bar latch assembly, which locks the light tower in the vertical position for proper operation. (Laydown Tower only).
- Check the hitch assembly and safety chains.
- Check the outriggers and jacks to make sure they operate properly.
- Inspect the light assemblies for damage and test for proper operation.



- Inspect the electrical wiring for signs of damage.
- Check the ground rod cable and ground lug. Make sure they are clean, undamaged and functional.
- Inspect the tires to ensure good condition and proper inflation.

OPERATION

- Check engine oil, fuel, engine coolant levels and hydraulic fluid levels, if equipped.
- Check to make sure the *Light Tower Operator's Manual*, *Engine Operator's Manual* and *Generator Operator's Manual* are with the equipment.
- Physically inspect the machine for damage and repair if necessary.

After completing the pre-operation check list, operate the light tower through a complete operation cycle.

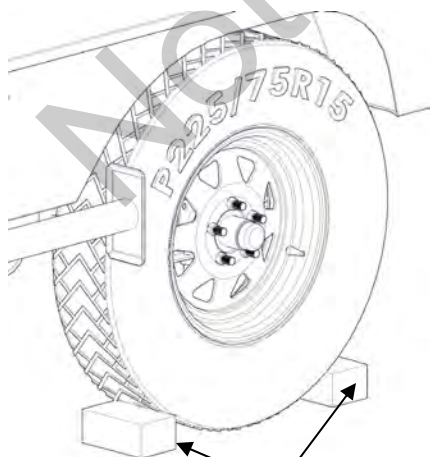
Leveling and Stabilizing the Trailer

⚠ WARNING

ROLLOVER HAZARD

Do not set up on unlevel or unstable ground. Only set up on smooth, flat and solid ground surfaces. Always level the light tower trailer before raising the light tower.

1. Position the **MAXI-LITE AS3000** on an adequate site: See *Work Site Safety Considerations* on page 28.
2. Block each wheel on each side with a suitable wheel chock.
3. Set park brake.



Wheel Chock Blocks

PARK BRAKE



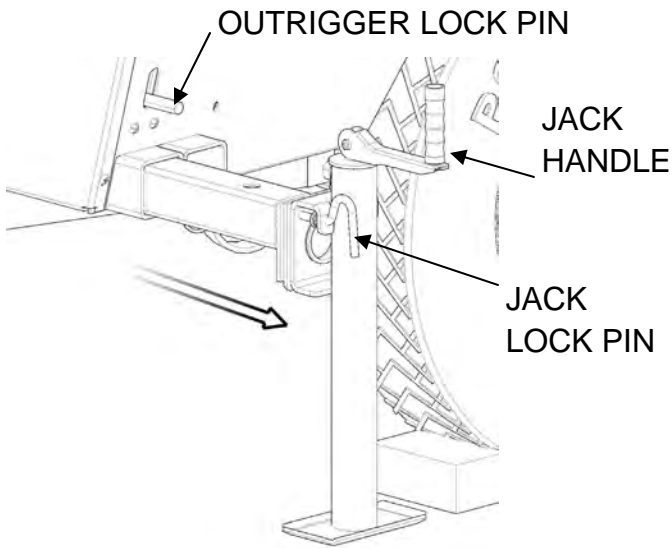
⚠ WARNING

ROLLOVER HAZARD

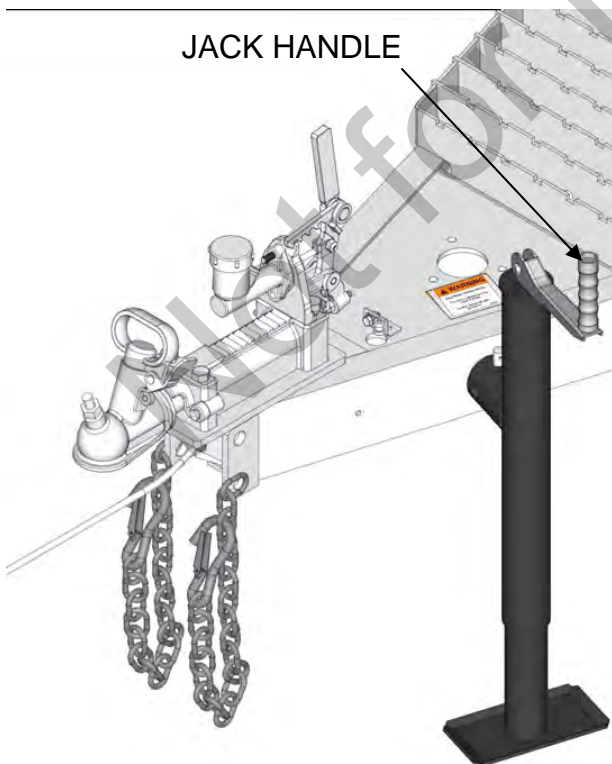
All stabilizer jacks must be supported by a flat, level solid ground surface.

OPERATION

3. Extend the front outrigger stabilizers out and lock in place.



4. Rotate the rear stabilizer jack perpendicular with the ground and lock in place.
5. Adjust each front stabilizer jack and the tongue jack to achieve proper leveling. Turning the handles clockwise will raise the jacks and counterclockwise will lower the jacks.

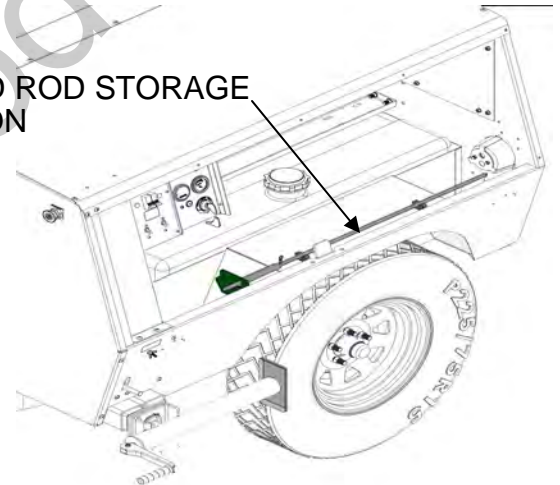


Installing the Ground Rod

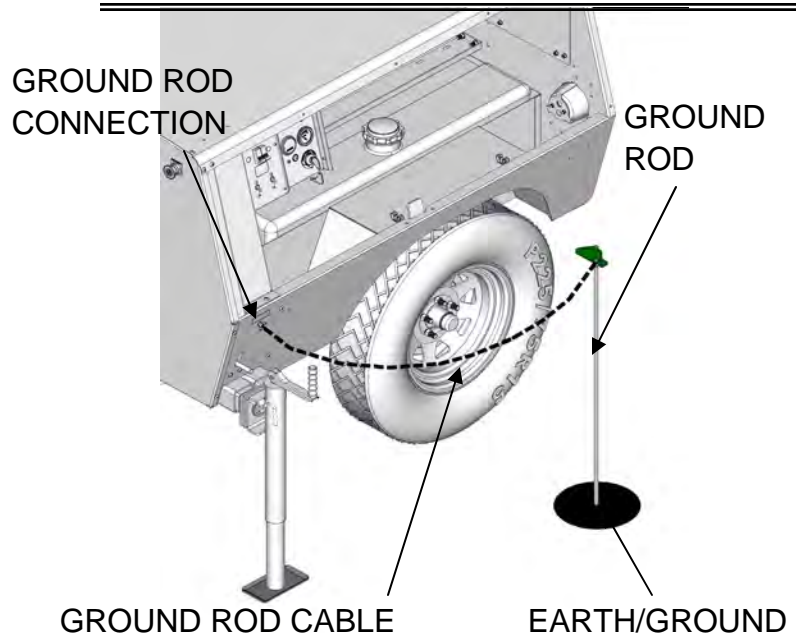
The ground rod is a safety device that may reduce the chance of personal injury from stray electrical current. Allmand recommends using the ground rod. However, it is the user's responsibility to determine the requirements and/or applicability of local, state or national electrical code which governs the use of the ground rod.

Drive the ground rod fully into the ground using a hammer. Attach the supplied cable to the rod and then attach the cable to the ground lug on the unit. Make sure the cable connections are tightened.

GROUND ROD STORAGE LOCATION



GROUND ROD CONNECTION



OPERATION

ENGINE OPERATION

Before starting the engine or operating the light tower, review *Safety* on page 7.

The Allmand **MAXI-LITE AS3000** light tower is powered by a diesel engine and generator unit.

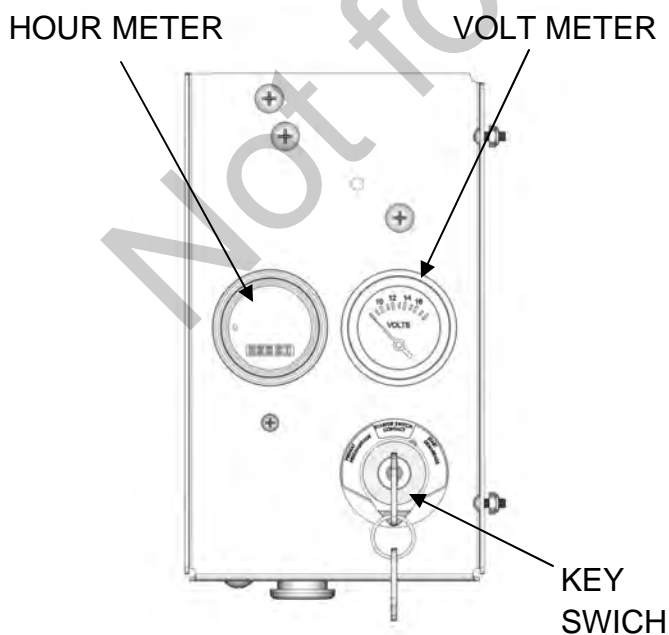
Pre– Start Checks

1. Check the engine oil and add oil if required. Fill the engine with the proper grade of lubricating oil: refer to *Engine Operator's Manual* for oil specifications.
2. Check and add diesel fuel as required.
3. Ensure that the air cleaner is firmly attached and air cleaner seals and hose clamps are properly sealed. Air cleaner element should be checked and replaced if necessary.

Engine Control Panel

The engine control panel consists of the engine start/stop key or button, hour meter.

CAT C1.1 control panel



Starting the Engine

The Starting procedure is different depending on the engine model used. Refer to your *Engine Operator's Manual* for the starting procedure.

Cold - Weather Starting

The cold-weather Starting procedure is different depending on the engine model used. Refer to your *Engine Operator's Manual* for the cold-starting procedure.

If Engine has Run Out of Fuel

1. Refill the fuel tank.
2. Refer to your *Engine Operator's Manual* for the starting procedure.

NOTICE

Do not operate starter for more than 10 seconds without allowing 30 seconds to pass between starting attempts. Possible starter damage could result from excessive heat caused by cranking the engine too long.

NOTICE

If the engine develops sufficient speed to disengage the starter but does not keep running (a false start), the engine rotation must be allowed to come to a complete stop before attempting to restart the engine.

If starter is engaged while the flywheel is rotating, the starter pinion and flywheel ring gear may clash, resulting in damage to the starter or flywheel ring gear.

Stopping the Engine

The engine stopping procedure may differ depending on the engine model. Refer to your *Engine Operator's Manual* for engine stopping procedures.

OPERATION

Emergency Stop Switch

The **MAXI-LITE AS3000** light tower trailer is equipped with an emergency Stop switch. Which will cut the power to the engine in case of an emergency. The switch must be reset in order to restart the engine.

Battery Disconnect

The light tower trailer is supplied with a lockable battery shut off switch. The switch disconnects the power from the battery to all electrical components. The switch must be in the ON position to start the engine.

Automatic Engine shutdown System

The engine is equipped with an automatic engine shutdown system to prevent excessive engine damage in the event of a low oil or overheat condition. For additional information, refer to your *Engine Operator's Manual*.

Low Oil Pressure Shutoff

Should a low oil pressure condition occur, the oil pressure sending unit breaks the circuit between the circuit between the battery and the fuel solenoid, allowing the spring load to immediately move the fuel control to the shutoff position.

High Coolant Temperature Shutoff

Should a high coolant temperature condition occur, the temperature sending unit breaks the circuit between the battery and the fuel solenoid, allowing the spring load to immediately move the fuel control to the shutoff position.

TOWER AND LIGHT OPERATION VERTICAL

Before operating the tower lights, review *Safety* on page 7.

The vertical tower is raised and lowered by a hydraulic pump actuating a six section telescoping mast.

WARNING

ROLLOVER HAZARD

Before raising, lowering or operating the tower lights, the trailer must be set up, properly leveled and stabilized and ground rod installed; See *Pre-Operation Setup*.

WARNING

CRUSH HAZARD

Allow adequate clearance around and above trailer when raising or lowering the light tower. Ensure that there are no obstructions or persons near the light tower when raising or lowering the light tower.

TOWER AND LIGHT OPERATION LAYDOWN

Before operating the tower lights, review *Safety* on page 7.

The laydown light tower is raised and lowered by a manual winch actuating a three section telescoping mast.

WARNING

ROLLOVER HAZARD

Before raising, lowering or operating the tower lights, the trailer must be set up, properly leveled and stabilized and ground rod installed; See *Pre-Operation Setup*.

WARNING

CRUSH HAZARD

Allow adequate clearance around and above trailer when raising or lowering the light tower. Ensure that there are no obstructions or persons near the light tower when raising or lowering the light tower.

OPERATION

Light Bar and Light Fixture Adjustment-Vertical

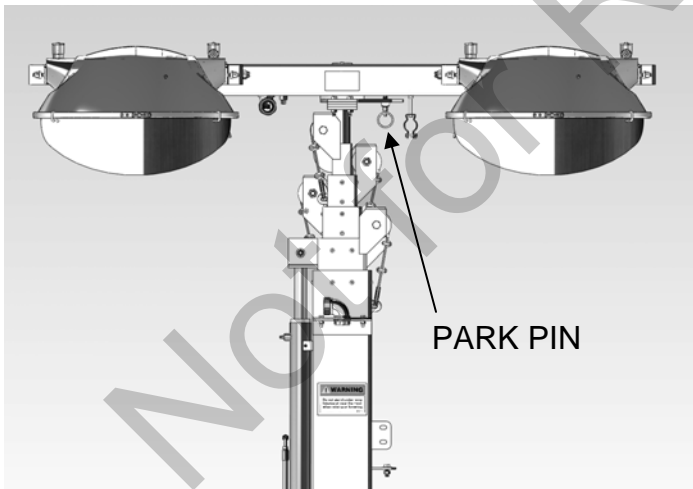
Lights– Work Site Adjustment

The light bar and light fixtures must be adjusted to the desired work angle before raising the light tower.



With the light tower fully lowered and the lights off, the light bar assembly and light fixtures can be manually rotated into the desired position.

To adjust the light bar, release the light bar park pin by pulling the ring and turning it 90° so that the pin remains in the retracted position.

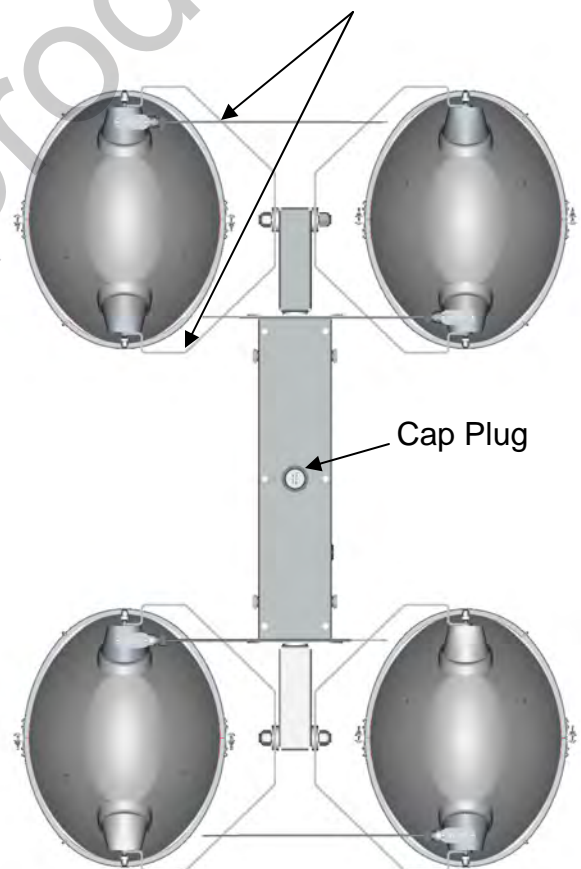


With the light bar park pin released, the light bar is designed to be manually rotated with enough resistance so that the bar will stay in the desired position once the operator has directed the lights on the work zone.

If the light bar rotates too easily or does not stay in position, remove the cap plug from the center of the light bar cover and tighten the nut to achieve the desired resistance and replace the cap plug.

To adjust each light fixture, manually swivel each light fixture at its base into the desired working position.

GRASP THE LIGHT HERE TO ADJUST



The light bar and light fixtures must be stowed properly for trailering or transporting. See *Tower Lights-Stowage for trailering-Vertical* on page 14.

OPERATION

Light Bar and Light Fixture Adjustment-Laydown

Lights– Work Site Adjustment

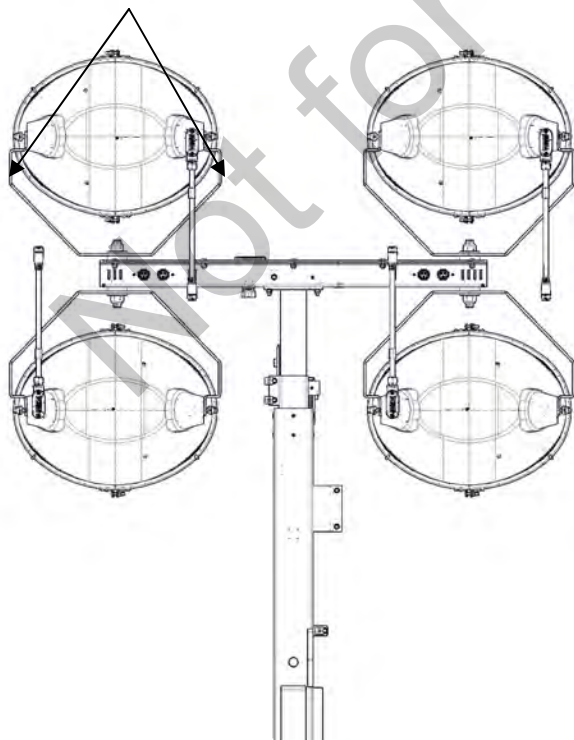
The light bar and light fixtures must be adjusted to the desired work angle before raising the light tower.



With The Light tower fully lowered and the lights off, the light fixtures can be manually rotated into the desired working position.

To adjust each light fixture, manually swivel each light fixture at its base into the desired position.

GRASP THE LIGHT HERE TO ADJUST

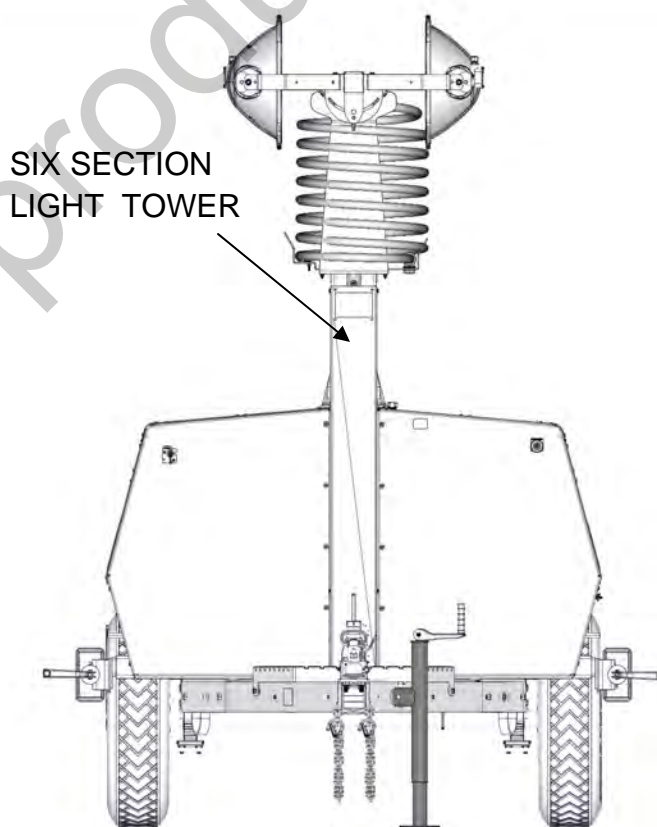


The light bar and light fixtures must be stowed properly for trailering or transporting. See *Tower Lights– Stowage for trailering-Laydown* on page 15.

Raising and Lowering the Vertical Tower

Light Tower

The Hydraulically actuated light tower uses 12VDC Battery power to operate. The light tower may be raised and lowered as needed without the engine running.



Raising

Before raising the light tower, visually inspect the equipment for worn or damaged parts and replace or repair as necessary.

OPERATION

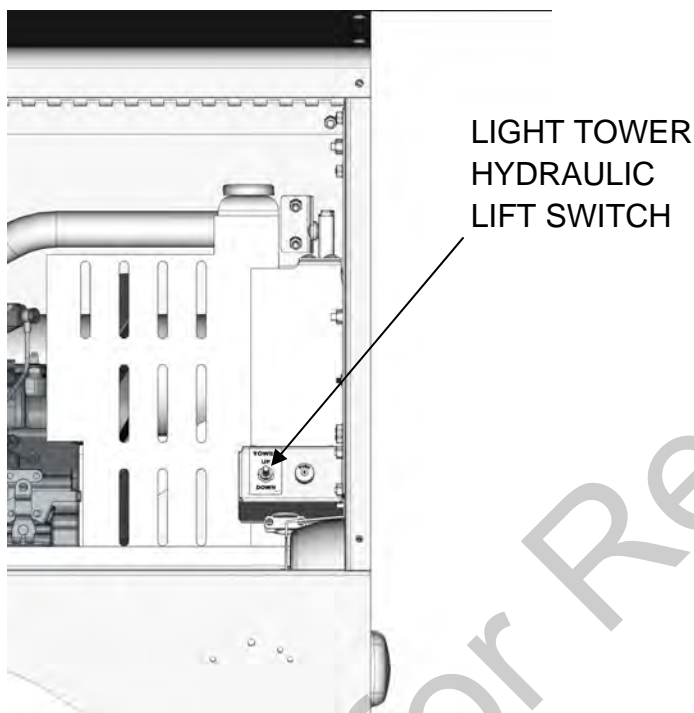
1. Before raising the light tower, adjust the tower lights to the desired work position; see *Light Bar and Light Fixture Adjustment-Vertical* on page 32.
2. Turn the lights off; see *Light Control Panel* on page 38.
3. Press the light tower lift switch up to raise the light tower to the desired height.

Raising and Lowering the Manual Winch Light Tower– Laydown

Manual Winch Light Tower

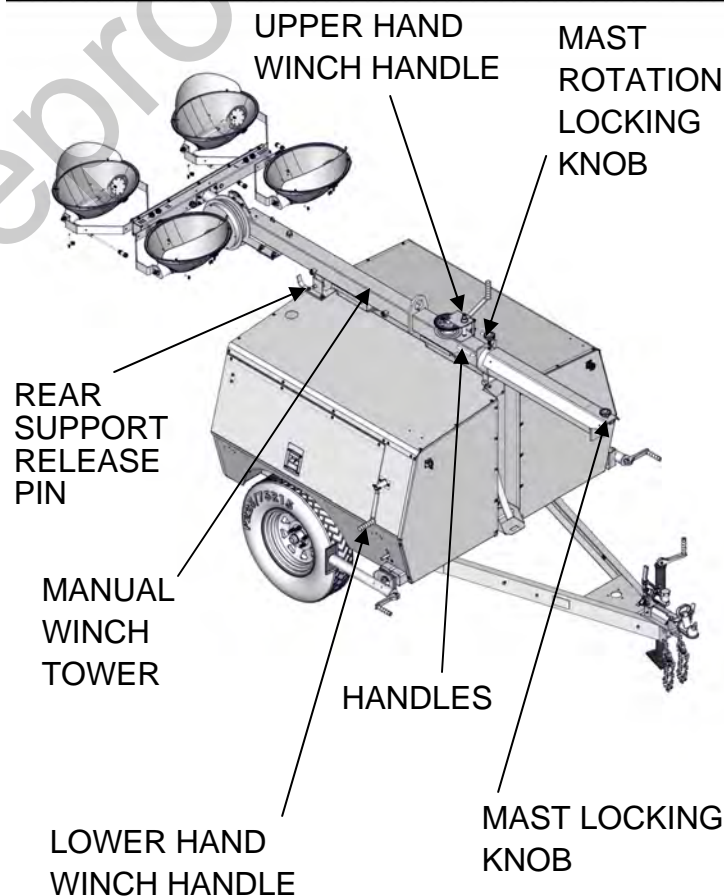
The manual winch tower can be raised and extended by operating two hand crank winches. One winch, mounted with the handle extending through the left side of the trailer frame, raises and lowers the mast from horizontal towing position to the vertical position and back. The second winch mounted on the tower extends and retracts the telescoping sections.

Before raising the light tower, visually inspect the equipment for worn or damaged parts and replace or repair as necessary.



Lowering

1. Turn the lights off; see *Light Control Panel* on page 38.
2. Press the tower light hydraulic lift switch down to lower the light tower to the desired height or to the full DOWN position.
3. When tower reaches the bottom, run switch for three additional seconds to ensure that the tower is at its lowest possible position.
4. Stop engine.



OPERATION

Raising

1. Before raising the light tower, adjust the tower lights to desired position; see *Light Bar and Light Fixture Adjustment-Laydown* on page 34.
2. Turn the lights off; see *Light Control Panel* on page 38.
3. Release the pin that secures the mast to the rear mast support.
4. Operate the hand crank on the left side of the trailer to raise the mast from horizontal to vertical.
5. Engage automatic mast locking pin.
6. Operate the hand crank winch on the tower clockwise to raise the lights vertically.
7. To rotate lights to desired position, turn mast rotation locking knob counterclockwise and turn the tower with handles provided.

Lowering

1. Turn lights off; see *Light Control Panel* on page 38.
2. Loosen mast rotation locking knob and rotate tower until the handles are parallel with the front of the trailer and retighten mast rotation locking knob.
3. Operate hand crank winch on tower counterclockwise to lower the lights to the lowest vertical position.
4. Operate lower hand crank winch on the left side of the trailer clockwise to take up any slack in the cable.
5. Disengage automatic mast locking pin.
6. Operate the lower hand crank on the left side of the trailer counterclockwise to lower the mast into the horizontal towing position.

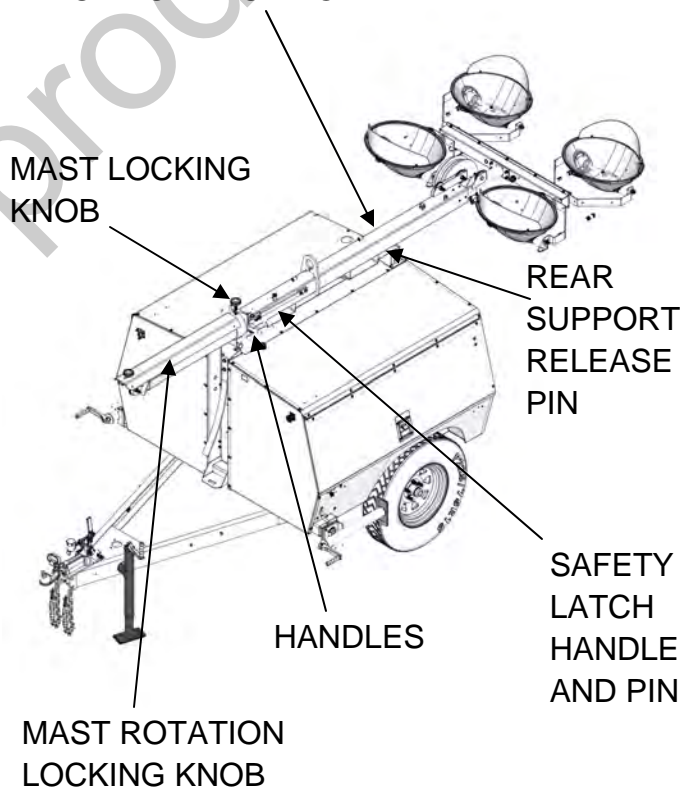
7. Secure light cords into hook on the rear mast support.
8. Secure rear mast support release pin. Locking the mast to the rear mast support for towing.

Raising and Lowering the Electric Winch Light Tower– Laydown

Electric Winch Light Tower

The electric winch tower can be raised and extended by operating a single electric switch mounted on the light switch control panel.

ELECTRIC WINCH TOWER

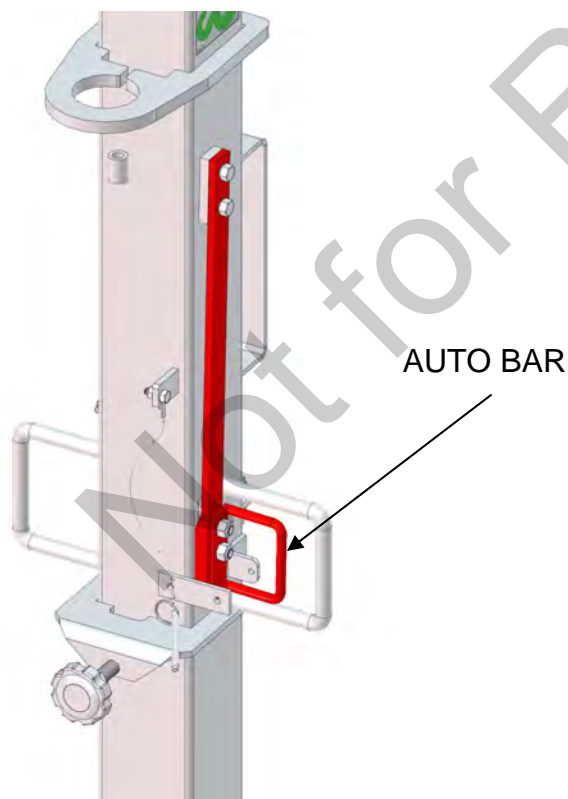


Before raising the light tower, visually inspect the equipment for worn or damaged parts and replace as necessary.

OPERATION

Raising

1. Before raising the light tower, adjust the tower lights to the desired work position; see *Light Bar and Light Fixture Adjustment-Laydown* on page 34.
2. Start engine. Refer to your *Engine Operator's Manual* for starting procedure.
3. Switch the 120V circuit breaker switch to the ON position .
4. Release the pin that secures the mast to the rear tower support.
5. Push the toggle switch to the UP position to raise the tower from horizontal to vertical.
6. Turn lower black knob counterclockwise and engage latch in strike plate. Retighten knob.
7. Remove Safety Latch pin
8. Release the latch by squeezing the auto bar handle and push the toggle switch to the UP position to raise the lights.



9. To rotate the lights. Turn upper black knob counterclockwise to loosen. Use handles and turn to desired position.

Lowering

1. If required, start engine. Refer to your *Engine Operator's Manual* for starting procedure.
2. Turn the lights off; see *Light Control Panel* on page 38.
3. Loosen upper black knob. Rotate tower by handles until handles are parallel with the front of the trailer. Retighten knob.
4. Push toggle switch to the DOWN position to lower the light to the lowest vertical position until the safety latch "clicks".
5. Push toggle switch to the UP position to lessen slack in the cable.
6. Turn lower black knob counterclockwise and lift to release the latch pin from the strike plate. Retighten the lower knob with the latch disengaged from the strike plate.
7. Push toggle switch to the DOWN position to lower the mast into a horizontal towing position.
8. Secure cord onto hook on the rear tower support.
9. Secure rear support release pin, locking mast to rear tower support for towing.

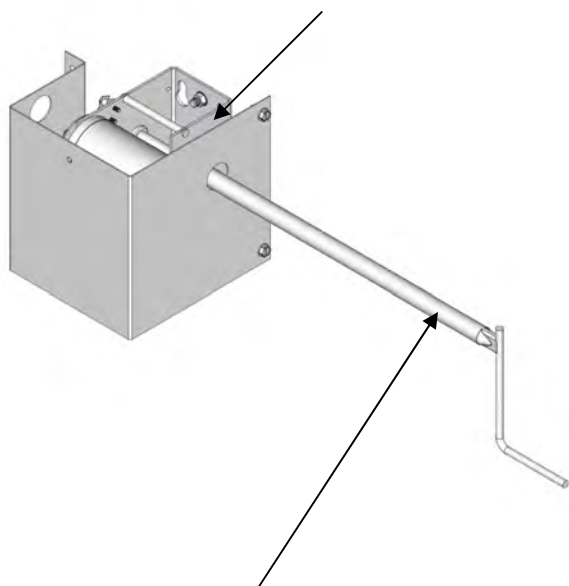
AUXILIARY HANDLE - Electric winch

NOTE: An emergency crank handle is provided for use in the event of a power failure.

1. Remove electrical power from the winch.
2. Insert the handle so that it completely engages with the drive shaft. The handle can be cranked in either direction with the clutch in the engaged position.
3. Always remove the emergency handle after use to avoid damage.

OPERATION

ELECTRIC WINCH



EMERGENCY CRANK HANDLE

Lights On

NOTICE

Before turning the lights on, the engine **MUST** be running and should be allowed to reach normal operating temperature.

Turn the light breaker switches to the ON position. One to four lights may be used

Lights Off

Turn all light breaker switches to the OFF position.

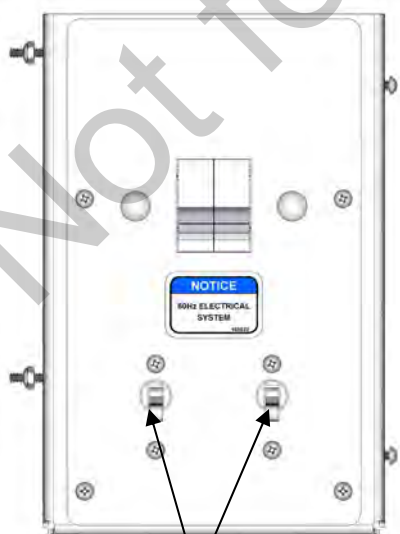
NOTICE

Failure to turn off lights before stopping the engine **MAY** result in generator damage and void warranty.

Light Control Panel

The tower light control panel consist of the breaker switches.

The four light fixtures are controlled and protected by four breaker switches located on the light control panel.



LIGHT BREAKER SWITCHES

SHUTDOWN PROCEDURE

Shutdown

When shutting down the light tower perform the following procedures.

1. With the lights off, lower the light tower to the full DOWN position; see *Raising and Lowering the Light Tower* on page 35-37.
2. Turn the engine off. Refer to your *Engine Operator's Manual* for stopping procedure.

MAINTENANCE

Before performing any maintenance procedures, read *Safety* on page 7.

Scheduled maintenance prevents unexpected downtime, and helps extend the life of the light tower. Proper maintenance and care of your light tower and trailer is a must for safe and reliable operation. Use the following maintenance and care guidelines in addition to those scheduled by your shop's preventative maintenance schedule.

Where equipment is operated under severe conditions (very dusty, extreme heat or cold, etc.), affected items should be serviced more frequently.

ENGINE

Refer to the *Engine Operator's Manual* for all engine scheduled maintenance procedures.

Changing and Adding Engine Oil

NOTICE

Follow the guidelines of the EPA or other governmental agencies for the proper disposal of hazardous materials such as engine oil, diesel fuel and engine coolant. Consult the local authorities or reclamation facility.

Use a high-quality engine oil of API (American Petroleum Institute) service class CC/CD/CE. Refer to the *Engine Operator's Manual* for detailed engine oil specifications and service procedures.

All models can be equipped with the remote oil drain.

Engine Filters

Refer to the *Engine Operator's Manual* for air, oil and fuel filter service procedures.

ELECTRICAL SYSTEM

Refer to the *Generator Operator's Manual* for all general scheduled maintenance procedures.

Ballast Panel

The ballast panel is located on the left, front side of the light tower trailer. The ballast panel can be accessed by removing the left front panel. The ballast panel contains four tower light lamp ballast and four capacitors. For additional wiring information, see schematics or contact Allmand Bros. or your Allmand dealer.

⚠ WARNING

ELECTROCUTION HAZARD

Only qualified electricians should service or perform replacement procedures. Ballast and capacitors are capable of discharging high voltage. Always use appropriate personal safety clothing and gear when servicing electrical equipment.

⚠ WARNING

ELECTROCUTION HAZARD

High Voltage is present when engine is running. Never attempt to service electrical components while engine is running.

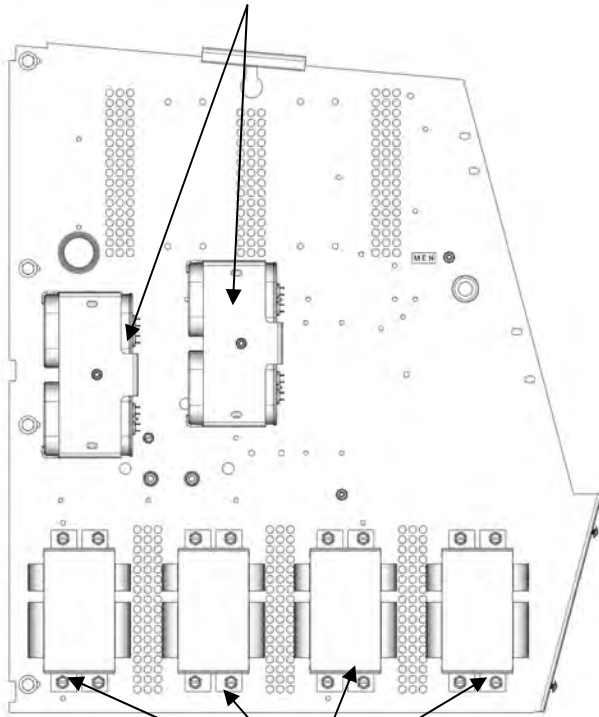
⚠ WARNING

ELECTROCUTION HAZARD

Do not operate the light tower if the insulation on the electrical wiring is cut or worn, or if bare wires are exposed. Repair or replace damaged wiring before starting the engine.

MAINTENANCE

CAPACITORS



LAMP BALLAST

Adding Hydraulic Oil

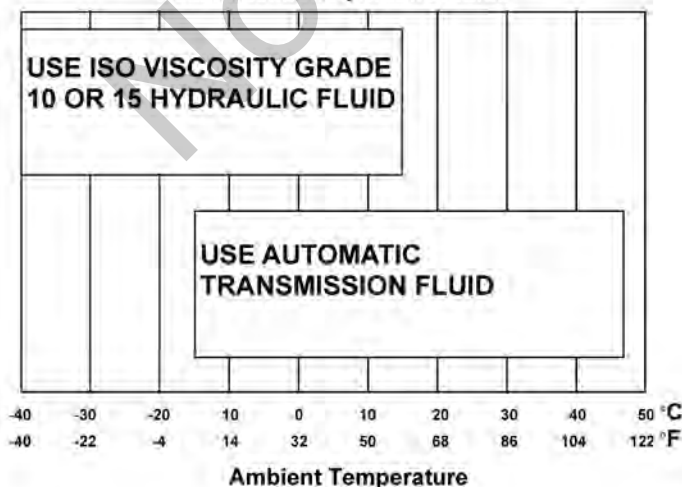
Fill the reservoir with an iso viscosity grade 10 or 15 hydraulic fluid or any clean hydraulic fluid having a viscosity index that is suitable for the climate conditions in which the unit will be operated. Standard units are supplied with automatic transmission fluid (ATF), and arctic units are supplied with iso viscosity 10 or 15 hydraulic fluid.



HYDRAULIC PUMP

Hydraulic Oil Specification

108 SERIES HYDRAULIC POWER UNIT
Recommended Hydraulic Fluids



Priming the Hydraulic Pump

The ports are marked on the hydraulic power unit casting: 'UP' and 'DN'. When facing the power unit with the motor up, plug the right hand, or 'DN' port. Jog the motor until oil flows from the left hand or 'UP' port. The pump is now primed. Connect the hose or tubing to the 'UP' port and tighten. Connect the other hose end to the blind end of a fully retracted hydraulic cylinder. With the hose fitting loose, operate the power unit until oil (and no air) bleeds from the fitting. Tighten the fitting. Refill the reservoir.

MAINTENANCE

LIGHT TOWER AND LAMPS

Changing Lamps

⚠ WARNING

BURN HAZARD

The light bulbs and the fixtures become extremely hot during use. Allow the bulbs and fixtures to sufficiently cool down before changing bulbs or severe burn may occur.

1. Turn off the lights and shut off the engine. Allow the bulbs and fixtures to cool.
2. Lower the light tower to the full DOWN position.
3. Loosen the lens channel screws to allow the removal of the lens channel.

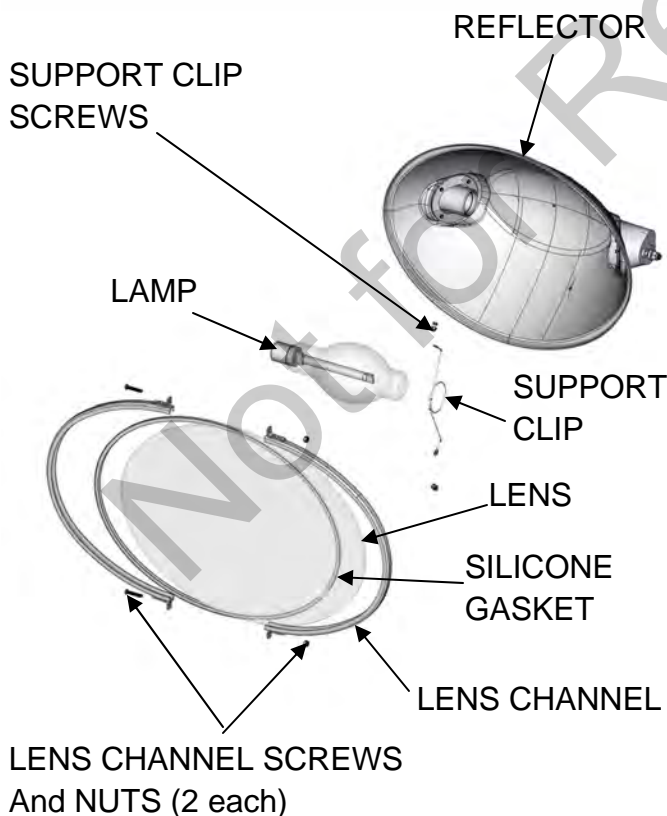
4. Remove the silicone gasket and lens.
5. Remove the support clip screws and support clip.
6. Carefully remove the old lamp and install the correct replacement lamp.
7. Clean reflector and lens.
8. Install support clip and screws.
9. Install the silicone gasket and lens; replace if damaged or as needed.
10. Install lens channel and screws.
11. Test the new lamp to ensure proper operation.

TRAILER

Proper maintenance and care of your trailer is a must for safe and reliable operation. Follow these maintenance and care guidelines in addition to those scheduled by your shop equipment maintenance schedule.

Frame

1. Check the coupler for proper operation, and for corrosion or damage replace as needed.
2. Inspect the lifting bar for corrosion or damage and replace as needed.
3. Inspect the axle, springs and undercarriage for wear and damage and replace as needed.
4. Inspect the outrigger bars, front and rear stabilizer jacks and locking mechanisms for proper operation and wear and damage and replace as needed/
5. Inspect the safety chains for wear, corrosion or damage and replace as needed.



MAINTENANCE

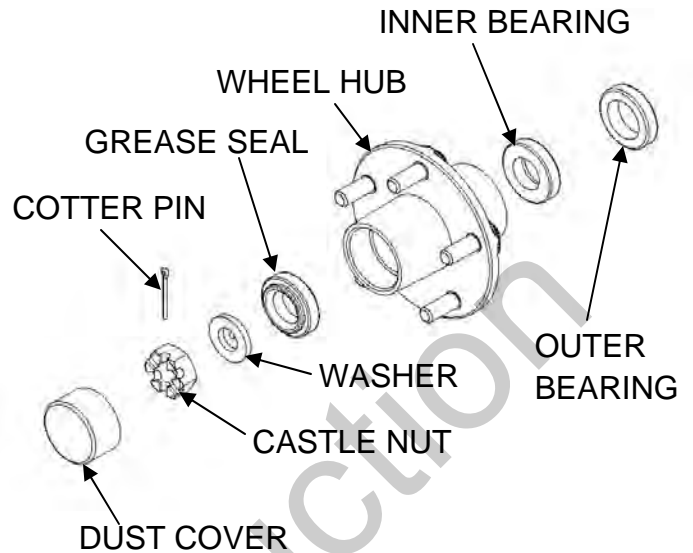
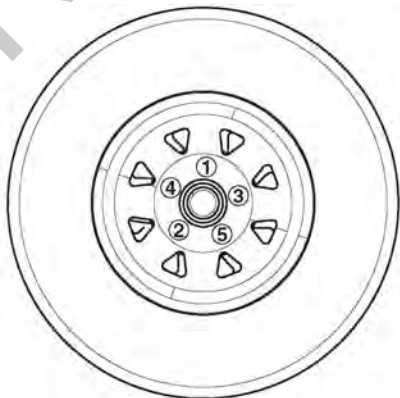
Grease Points

Use N.G.L.I. consistency #2 high-temperature anti-friction bearing lubricating grease for all trailer mechanical pivot points.

Trailer Wheels and Tires



1. Check the tires for any cracks, cuts or damage. Repair or replace the damaged tires before towing.
2. Check the air pressure of the trailer tires when cold. The correct air pressure for the tire is specified on the tire. Never over or under inflate tires.
3. Check the wheel rims for any cracks or damage.
4. Make sure all the lug nuts are in place. Never tow the trailer with missing or improperly tightened lug nuts.
5. Check that the lug nuts are tightened properly. The correct torque for the lug nuts is 90 lb-ft (122N-m).
6. When torquing the lug nuts, always use a crisscross pattern.



Wheel Bearings

Wheel bearings require periodic maintenance. More frequent service may be required under extremely dust or damp operating conditions. The best protection against failure is to keep the wheel bearings clean and fully lubricated.

When replacing or repacking wheel bearings, always:

- Use a high quality wheel bearing grease.
- Avoid mixing grease types.
- Clean all components thoroughly of all grease and inspect for damage and wear. Replace as needed.
- Always use a new grease seal and cotter pin.
- Keep all components clean during assembly.
- Replace any component that is operationally questionable.
- Pack grease into the bearing before installing it.

MAINTENANCE

- Always replace bearings and races as a set. Never mix bearings and races. Bearing part numbers are sometimes found on the bearing races; always use the correct bearing set.
- Do not over or under tighten the bearing nut. Wheel bearings should only be tightened by hand (spin the wheel while tightening). Back off the nut to insert the cotter pin. The wheel should spin freely but without play.
- Pack some grease in the inner hub area and dust cap and ensure the dust cap fits tightly.

Trailer Lighting



Keep the lights in proper working order.

- Check that all lights operate properly.
- Check the trailer lights and harness for damage or wear and replace as needed.
- Ensure the harness is secured into the trailer and does not hang down onto the ground.
- Check the taillight housing assemblies for leaks. Use silicone or rubber sealant to seal the lens or harness or replace the housing assembly. Dielectric grease will help protect the sockets and prevent their corrosion.
- When replacing bulbs, ensure the proper bulb is used and use a small amount of Dielectric grease in the sockets to prevent corrosion.

For trailer light wiring schematic information, See *Tail lamp* wiring schematic on page 50.

LONG TERM STORAGE

Proper maintenance is required when the light tower and trailer will be stored or removed from operation for long periods of time.

Refer to the *Engine Operator's Manual* and the *Generator Operator's Manual* for all engine and generator long term storage procedures.

1. Lower the light tower to the full DOWN position.
2. Make any repairs necessary to ensure the equipment is fully functional upon returning the unit back into commission.
3. Clean and wash the frame and body panels. Apply an anticorrosion coating to all Surfaces where applicable.
4. Clean any oil or liquid spills inside the engine compartment.
5. Clean all electrical wiring and components by hand using a non-corrosive cleaner.
6. Clean the light tower and light fixture assemblies.
7. Disconnect and remove battery.
8. Use suitable cover to protect the light tower and trailer.
9. Properly support the trailer axle on jack stands or other suitable supports to allow the tires to remain off the ground during storage.

MAINTENANCE

CLEANING

Keeping the light tower clean is important to ensure proper operation. Dirt and dust buildup acts as an insulator and may cause the engine, generator and light assemblies to operate at excessively high temperatures.

Use the following guidelines:

- Use caution when using compressed air or water/steam pressure washers. Do not pressure clean electrical components as this may damage electrical equipment.
- Clean the light tower and remove all dust, dirt or other foreign material.
- 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.
- Clean the light tower and its components with a damp cloth or sponge.
- Inspect and clean all engine linkages so they operate properly.

Cleaning and Draining the Trailer Bilge

The Allmand **MAXI-LITE AS3000** light tower trailers have a fuel containment tray option, designed to catch fuel, oil or coolant spills. Should a spill occur, position a suitable container beneath the unit and remove the containment tray drain plug. After the fluid has been drained, re-install the drain plug and dispose of the fluid properly in accordance with EPA or other governmental guidelines.

Before performing any troubleshooting procedures, read *Safety* on page 7.

For engine and generator troubleshooting, see the *Engine Operator's Manual* and *The Generator Operator's Manual* or contact Allmand Bros. Service Department or your Allmand dealer.

⚠ WARNING

ELECTROCUTION HAZARD

Only qualified electricians should service or perform replacement procedures. Ballast and capacitors are capable of discharging high voltage. Always use appropriate personal safety clothing and gear when servicing electrical equipment.

⚠ WARNING

ELECTROCUTION HAZARD

High Voltage is present when engine is running. Never attempt to service electrical components while engine is running.

⚠ WARNING

ELECTROCUTION HAZARD

Do not operate the light tower if the insulation on the electrical wiring is cut or worn, or if bare wires are exposed. Repair or replace damaged wiring before starting the engine.

Always follow the electrical component manufacture specifications for voltage and test procedures.

TROUBLESHOOTING

TROUBLESHOOTING CHART

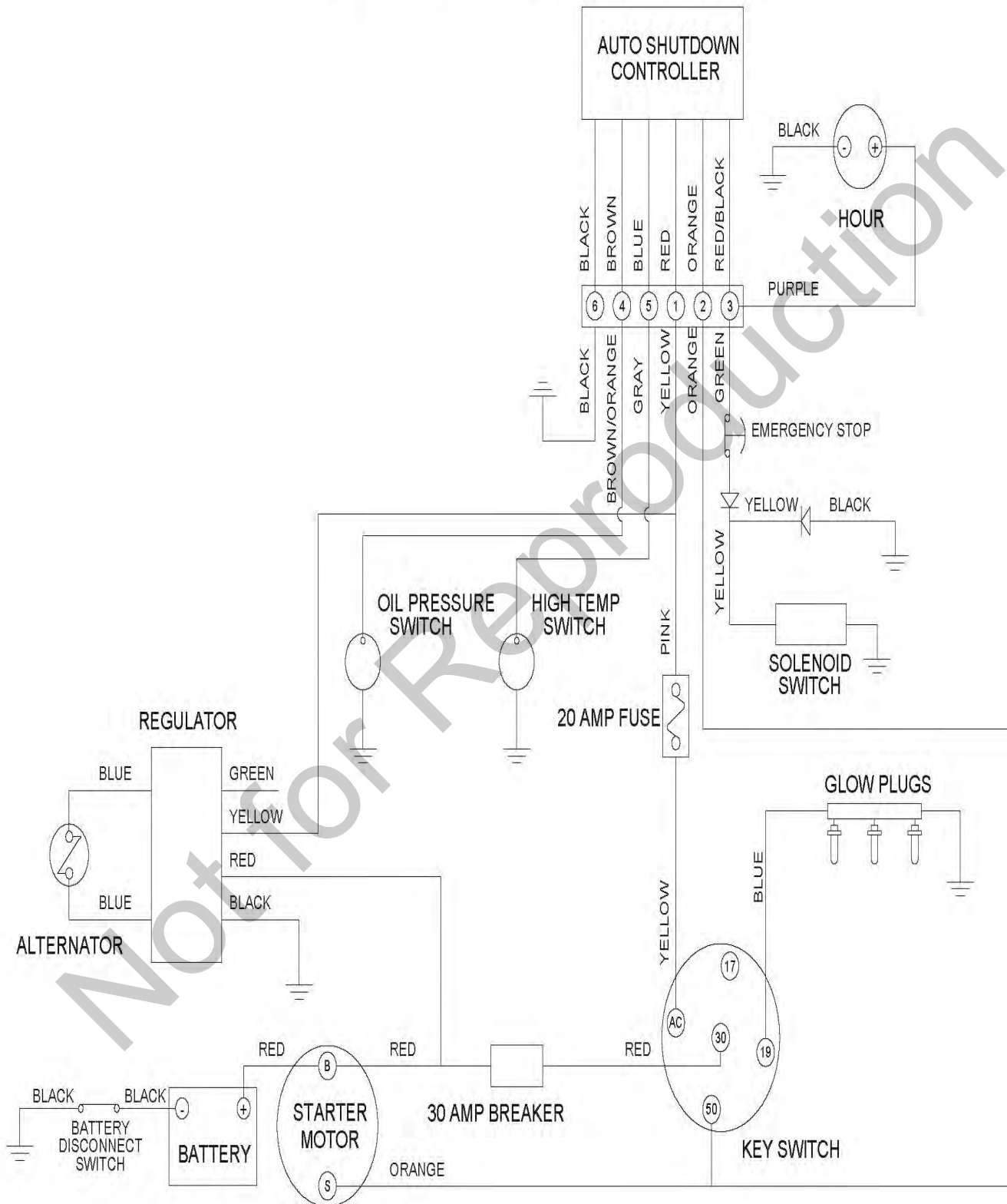
PROBLEM	POSSIBLE CAUSE
	1. The lamp or lamps are burned out or broken or not screwed in securely.
	2. Low electrical system voltage. Check volts and engine speed.
	3. Too much power is being drawn from the auxillary outlets.
	4. A circuit breaker or breakers are defective.
NO LIGHT	5. A capacitor or transformer has failed.
(ONE OR MORE	6. Plug and socket at light bar not securely pushed together and locked.
LIGHTS)	7. A loose connection in the back of the lamp socket in the lamp holder.
	8. If the lamps have been on before. Lamps are not allowed time to cool after last being lit. You must allow 15 minutes between the time the lights are shut off and the time they are restarted.
	9. A wrong style replacement lamp (requiring a different ballast) has been installed.
	10. Corrosion has occurred on the lamp bases.

MAINTENANCE RECORD

[illegible]

SCHEMATICS

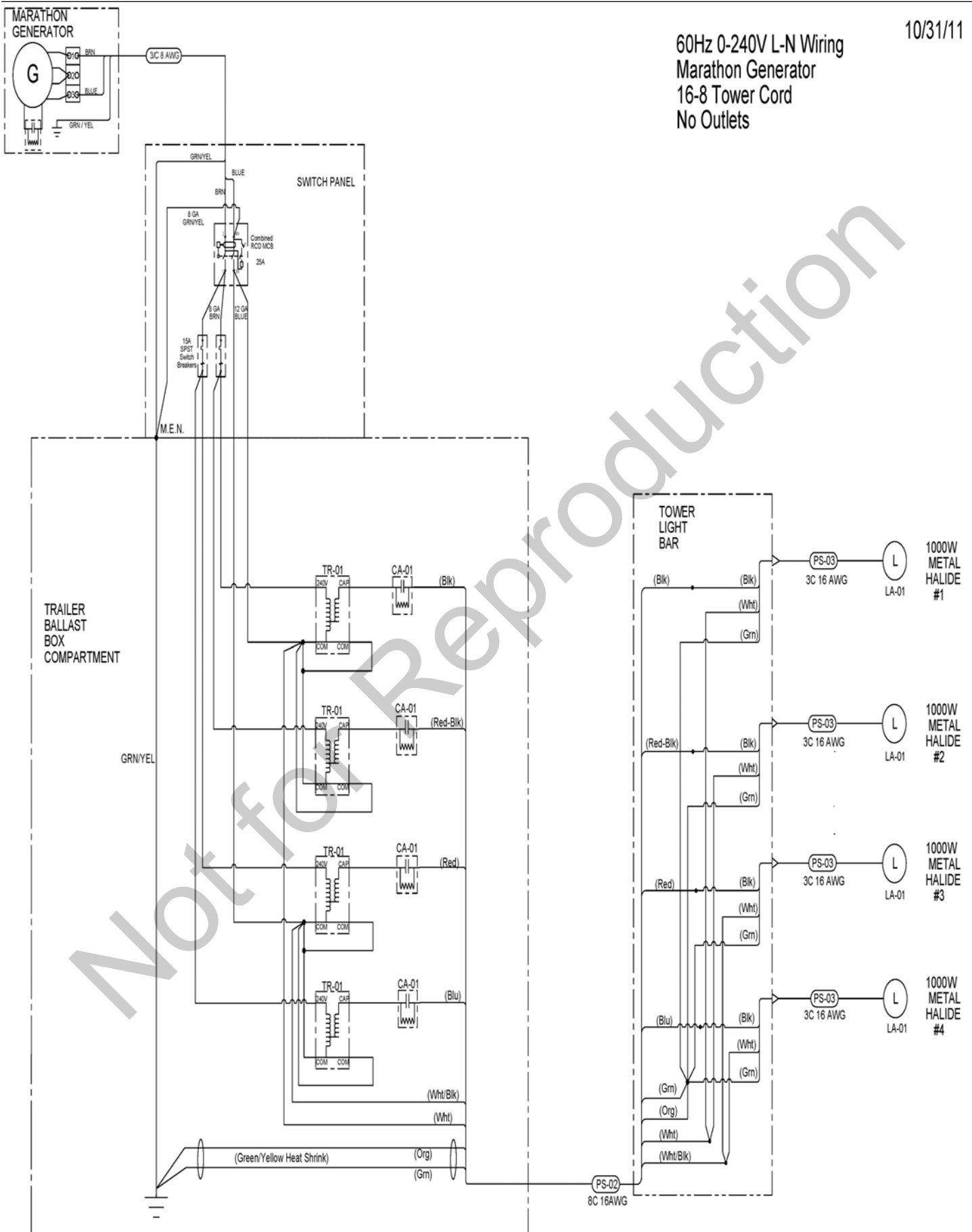
CAT C1.1 ENGINE WIRING HARNESS



SCHEMATICS

10/31/11

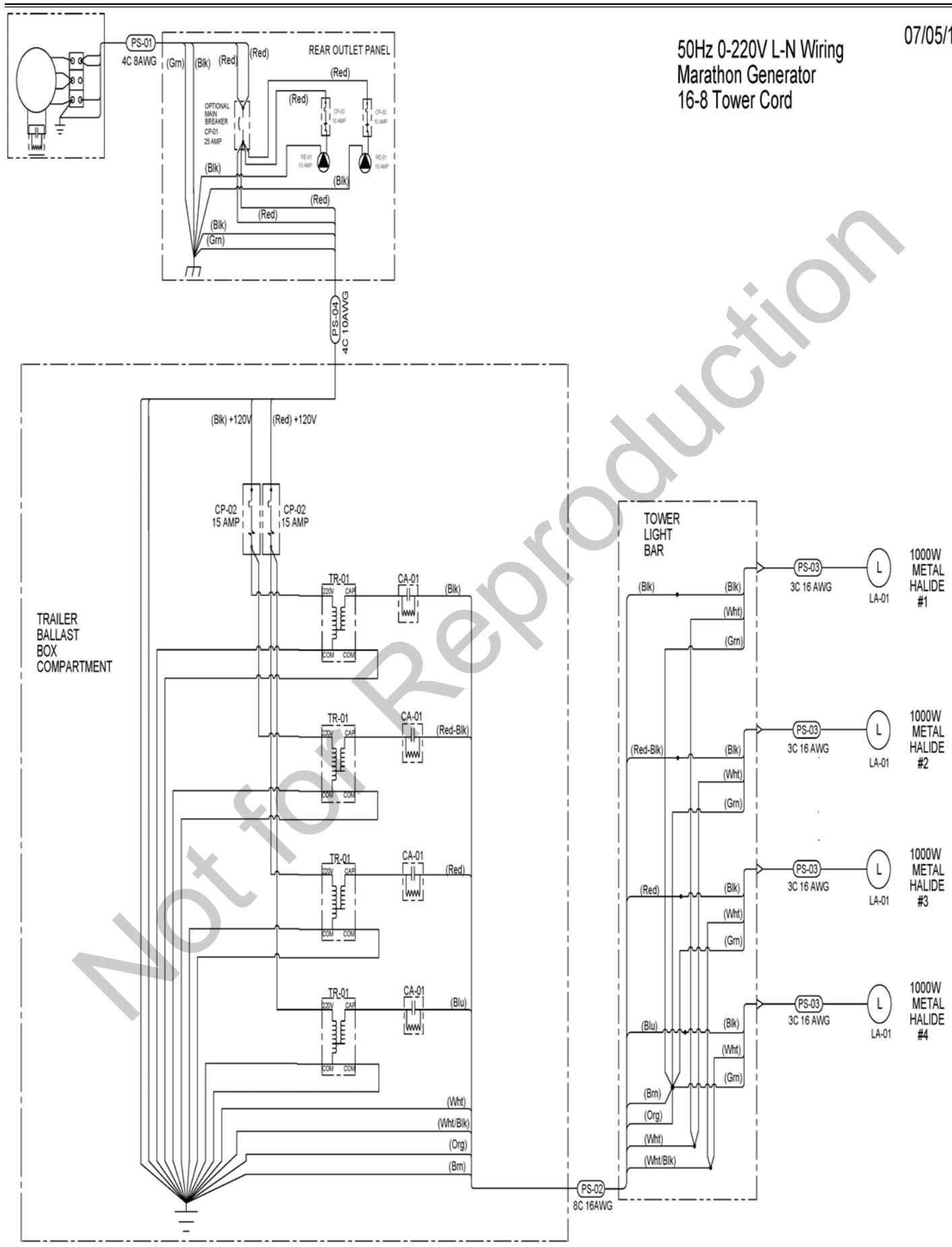
60Hz 0-240V L-N Wiring
Marathon Generator
16-8 Tower Cord
No Outlets



SCHEMATICS

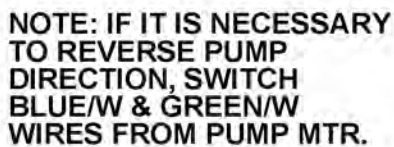
07/05/11

50Hz 0-220V L-N Wiring
Marathon Generator
16-8 Tower Cord



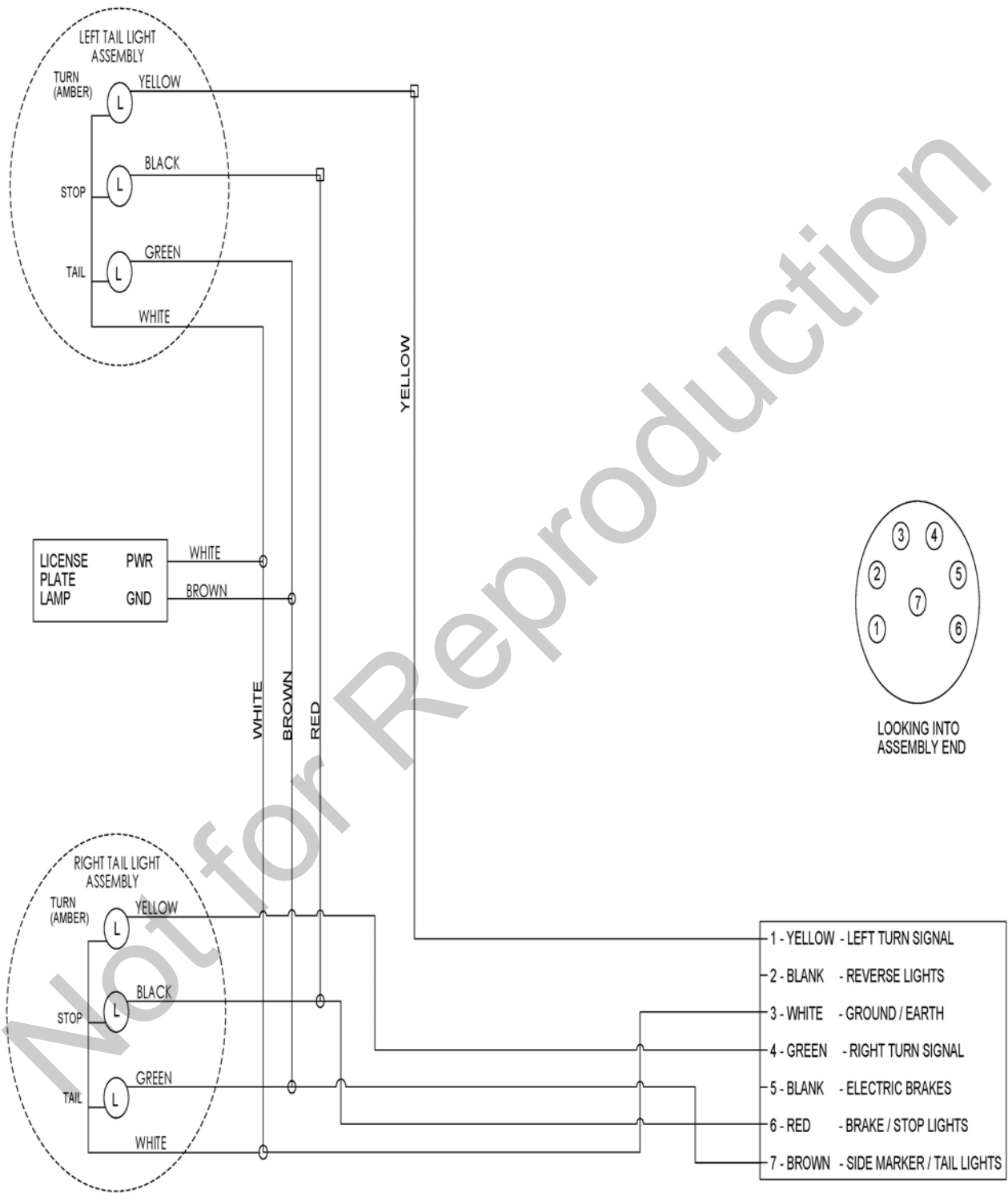
MAXI

8/10/09



SCHEMATICS

TAIL LIGHT WIRING



WARRANTY

ALLMAND LIGHTING SYSTEMS LIMITED WARRANTY UNITED STATES and U.S. TERRITORIES

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR PURPOSE AND ANY EXCEPTIONS ARE DESCRIBED IN THE PUBLISHED LIMITED WARRANTY ADDENDUM, AVAILABLE UPON REQUEST.

COMPONENTS, SUB-ASSEMBLIES, AND DEVICES MANUFACTURED BY OTHER MANUFACTURERS ARE NOT COVERED BY THIS WARRANTY. ALL WARRANTY INFORMATION FROM SUCH OTHER MANUFACTURERS IS PROVIDED WITHIN OR ACCOMPANIES THESE GOODS.

Subject to the foregoing, the manufacturer, Allmand Bros. Inc., hereby warrants all light towers manufactured by Allmand Bros. Inc. after April 1, 2008 to be free from defects in material and workmanship for a period of (2) years after delivery to the original purchaser. The first year warranty would include parts and labor. The second year warranty would be limited to parts manufactured by Allmand Bros. Inc. and components warranted by the original equipment manufacturer for more than 12 months. Additionally, Allmand Bros. Inc. hereby warrants all replacement parts supplied by Allmand Bros. Inc. to be free from defects in material and workmanship for a period of 90 days after date of invoice. Delivery shall be deemed for the purposes of this warranty to have occurred no later than five days following the date of sale agreement or invoice unless the purchase agreement or invoice specifically states a later delivery date in which case such delivery date shall control. The original purchaser shall be deemed to be a person who places the goods or products in actual use, and any person holding such goods solely for wholesale or retail sale purposes shall not constitute an original purchaser. PROVIDED, any leasing of these goods or other use beyond normal demonstration of same shall be deemed to be in use by an original purchaser and all warranty periods shall commence at the time of such use. During the warranty period any defective goods or parts hereof shall be repaired or replaced at manufacturer's discretion. In the event it is necessary to return such goods or parts to the factory, all transportation charges shall be prepaid. The manufacturer shall in no event pay mileage expenses, but will warrant outbound ground freight. The manufacturer shall in no event be responsible for down time and or lost revenue.

The obligations of the manufacturer is solely to repair or replace defective goods or parts or to refund the cost of the same if it is determined by the manufacturer that repair or replacement will not return the goods to proper working order or utility. **THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND MANUFACTURER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES. THE OBLIGATIONS OF THE MANUFACTURER HEREUNDER SHALL IN NO WAY EXCEED THE PRICE OF THE EQUIPMENT OR PART UPON WHICH SUCH LIABILITY IS BASED.**

The warranty shall not extend to tires, lamps, batteries, or parts that have been altered, changed, damaged, or improperly installed, repaired, operated or maintained. Provided, this exclusion shall not apply to installations, repairs or other work done at the manufacturer's plant or under direct manufacturer's supervision. The Operator's Manual, to the extent covered therein, is deemed to set forth the proper procedures for operation, repair, installation, and maintenance of these goods.

No representative, dealer or distributor of the company is authorized to make any changes or exceptions to this warranty unless expressly authorized in writing from the manufacturer. All warranty claims must be filed within thirty (30) days of the failure.

ALLMAND LIMITED WARRANTY 1YR. LIGHTING SYSTEMS 5/08

WARRANTY

LIGHTING SYSTEMS LIMITED WARRANTY ADDENDUM

THIS IS AN ADDENDUM TO THE BASIC ALLMAND LIMITED WARRANTY OF TWO (2) YEARS AFTER DELIVERY TO THE ORIGINAL PURCHASER.

The following manufacturers limited warranty policy warrants their components to be free from defects in material and workmanship from date of manufacture as follows (see specific manufacturer's warranty for details):

CATERPILLAR	TWO (2) YEAR LIMITED	2000 HOURS
KUBOTA	THREE (3) YEAR LIMITED	3000 HOURS
LOMBARDINI	THREE (3) YEAR LIMITED	3000 HOURS
ISUZU 3CD	TWO (2) YEAR LIMITED	2000 HOURS
ISUZU 4LE	FIVE (5) YEAR LIMITED	5000 HOURS

ADVANCE BALLAST	TWO (2) YEAR LIMITED	--
MARATHON	TWO (2) YEAR LIMITED	1000 HOURS
MECC ALTE	ONE (1) YEAR LIMITED	--
STAMFORD	ONE (1) YEAR LIMITED	--
LIGHT TOWER ASSEMBLY	TEN (10) YEARS	FAILURE TO OPERATE DUE TO CORROSION

No representative, dealer, or distributor of the company is authorized to make any changes or exceptions to this warranty unless expressly authorized in writing from the manufacturer. All warranty claims must be filed within thirty (30) days of failure.

Please call the Allmand Service and Warranty Department for specific manufacturer's warranty terms and schedules. All warranties are subject to change without notice.



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LIGHTING SYSTEMS LIMITED WARRANTY ADDENDUM

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The following manufacturers limited warranty policy warrants their components to be free from defects in material and workmanship from date of manufacture as follows (see specific manufacturer's warranty for details):

CATERPILLAR	TWO (2) YEAR LIMITED	2000 HOURS
KUBOTA	THREE (3) YEAR LIMITED	3000 HOURS
LOMBARDINI/KOHLER	THREE (3) YEAR LIMITED	3000 HOURS
ISUZU 3CD	TWO (2) YEAR LIMITED	2000 HOURS
ISUZU 4LE	FIVE (5) YEAR LIMITED	5000 HOURS

ADVANCE BALLAST	TWO (2) YEAR LIMITED	--
MARATHON	ONE (1) YEAR LIMITED	--
MECC ALTE	ONE (1) YEAR LIMITED	--
STAMFORD	ONE (1) YEAR LIMITED	--
ATHLON	ONE (1) YEAR LIMITED	--
LIGHT TOWER ASSEMBLY	TEN (10) YEARS	FAILURE TO OPERATE DUE TO CORROSION

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