TEREX®

Operator's Manual

RL4
Vertical Mast

ANSI/CSA
North America
South America
Asia

with
Maintenance
Information

First Edition
Second Printing
Part No. 1266664

Important

Read, understand and obey these safety rules and operating instructions before operating this machine. Only trained and authorized personnel shall be permitted to operate this machine. This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact us.

Contact Us:

Internet: www.terex.com

E-mail: awp.techpub@terex.com

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Introduction

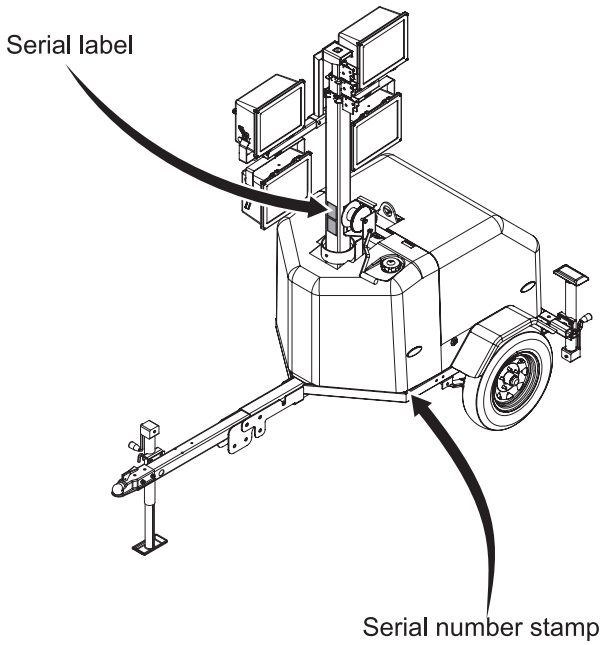
About this manual

Terex appreciates your choice of our machine for your application. Our number one priority is user safety, which is best achieved by our joint efforts. This book is an operation and daily maintenance manual for the user or operator of a Terex machine.

This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact Terex.

Product Identification

The machine serial number is located on the serial label.



Intended Use

This machine is intended to be used only to provide lighting and electrical power to a work site. Use of this product in any other way is prohibited and contrary to its intended use.

Bulletin Distribution and Compliance

Safety of product users is of paramount importance to Terex. Various bulletins are used by Terex to communicate important safety and product information to dealers and machine owners.

The information contained in the bulletins is tied to specific machines using the machine model and serial number.

Distribution of bulletins is based on the most current owner on record along with their associated dealer, so it is important to register your machine and keep your contact information up to date.

To ensure safety of personnel and the reliable continued operation of your machine, be sure to comply with the action indicated in a respective bulletin.

Introduction

Contacting the Manufacturer

At times it may be necessary to contact Terex. When you do, be ready to supply the model number and serial number of your machine, along with your name and contact information. At minimum, Terex should be contacted for:

Accident reporting

Questions regarding product applications and safety

Standards and regulatory compliance information

Current owner updates, such as changes in machine ownership or changes in your contact information. See Transfer of Ownership, below.

Transfer of Machine Ownership

Taking a few minutes to update owner information will ensure that you receive important safety, maintenance and operating information that applies to your machine.

Please register your machine by visiting us on the web at www.genielift.com or by calling us toll free at 1-800-536-1800.



Danger

Failure to obey the instructions and safety rules in this manual will result in death or serious injury.

Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

Know and understand the safety rules before going on to the next section.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

☑ You read, understand and obey the manufacturer's instructions and safety rules—safety and operator's manuals and machine decals.

☑ You read, understand and obey employer's safety rules and worksite regulations.

☑ You read, understand and obey all applicable governmental regulations.

☑ You are properly trained to safely operate the machine.

Introduction

Hazard Classification

Decals on this machine use symbols, color coding and signal words to identify the following:



Safety alert symbol—used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER Indicates a hazardous situation that if not avoided, will result in death or serious injury.

⚠ WARNING Indicates a hazardous situation that if not avoided, could result in death or serious injury.

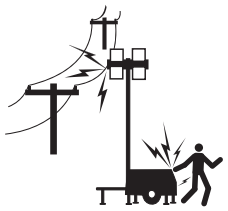
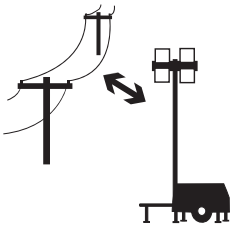
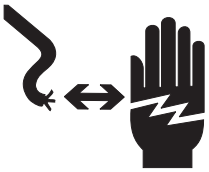
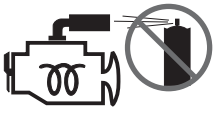
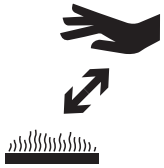
⚠ CAUTION Indicates a hazardous situation that if not avoided, could result in minor or moderate injury.

NOTICE Indicates information considered important, but not hazard related (e.g. messages related to property damage)

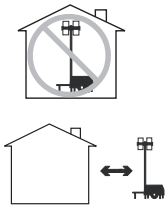
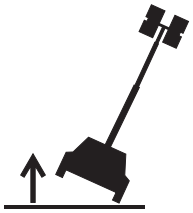
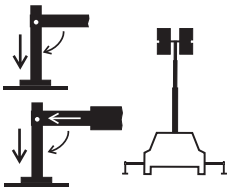
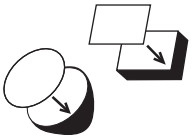
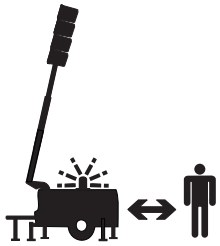
Safety Sign Maintenance

Replace any missing or damaged safety signs. Keep operator safety in mind at all times. Use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

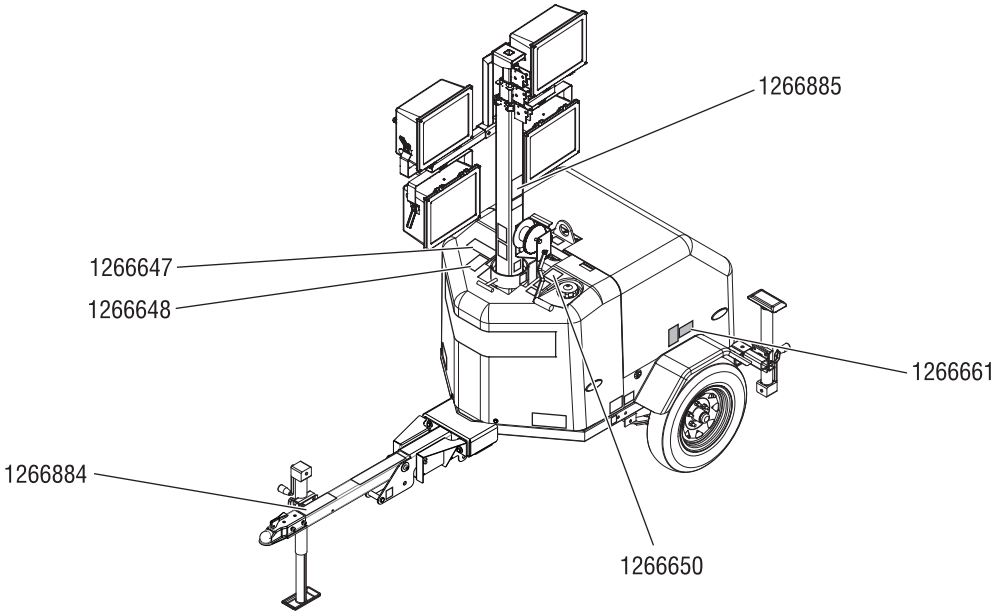
Symbol and Hazard Pictorials Definitions

 Read the operator's manual	 Electrocution hazard	 Stop engine	 Earth ground	 Electrocution hazard
 Maintain required clearance	 Explosion / Burn hazard	 Disconnect battery Read the service manual	 Keep away from moving parts	 Keep away from moving parts
 Explosion / Burn hazard	 Explosion / Burn hazard	 Corrosive acid.	 Explosion hazard	 Do not use high energy starting aids on machines equipped with glow plugs or grid heater.
 No smoking	 No flame	 No flame	 Burn hazard	 Stay clear of hot surfaces and components

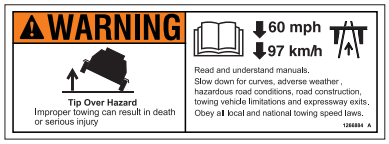
Symbol and Hazard Pictorials Definitions

 Burn hazard, hot components	 Shattering glass hazard	 Carbon Monoxide hazard	 Do not use light tower indoors	 Wear protective clothing
 Lifting point	 Tie-down point	 Tip-over hazard	 Deploy outriggers before raising mast	 Tip-over hazard, tow speed
 Keep protective barriers in place	 Electrocution/ entanglement hazard	 Electrocution/ entanglement hazard	 Flashing beacon indicates engine may start at any time	 Access by trained and authorized personnel only

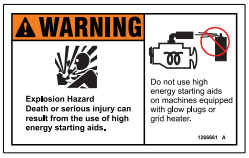
General Safety



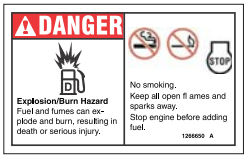
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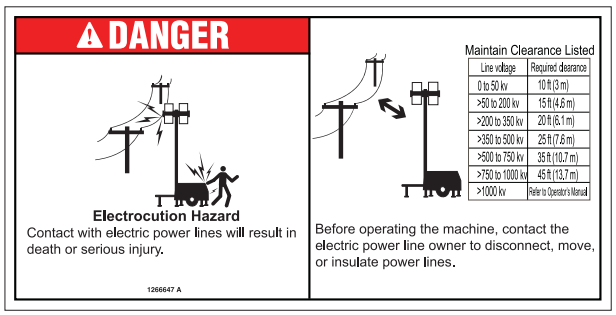
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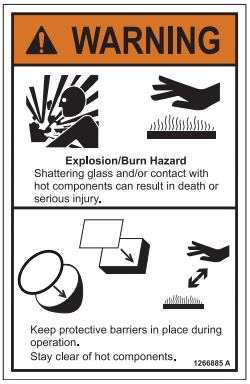
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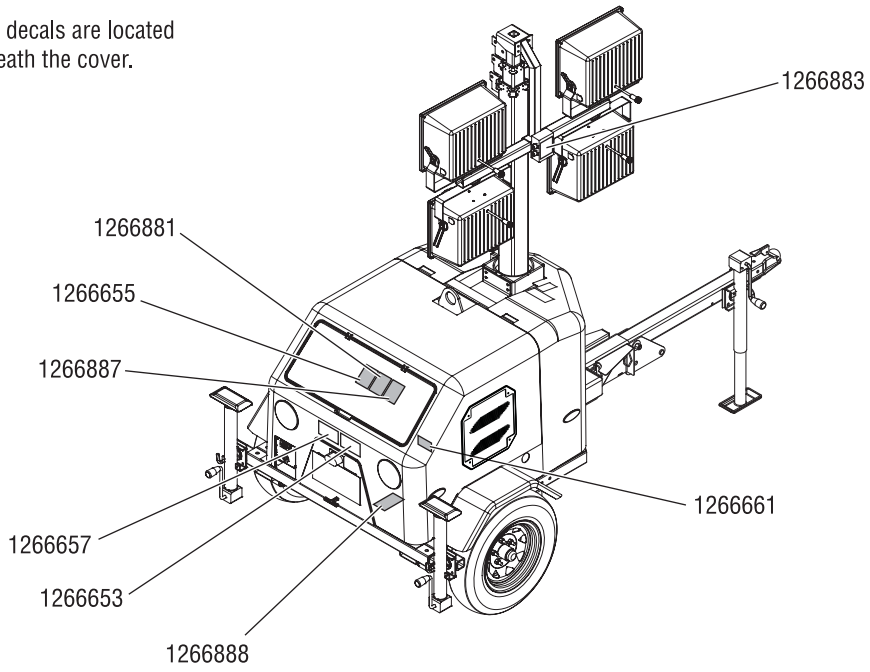


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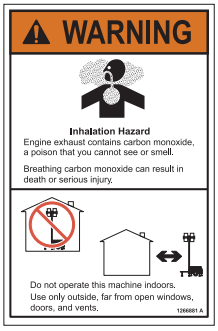


General Safety

Shaded decals are located underneath the cover.



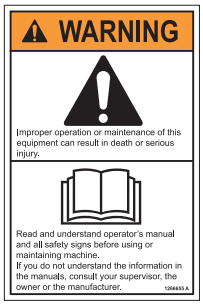
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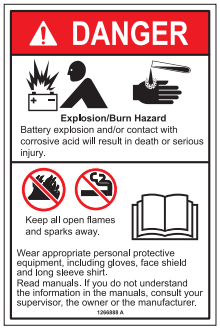
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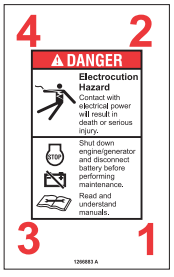
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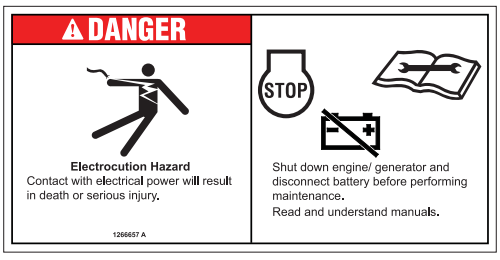
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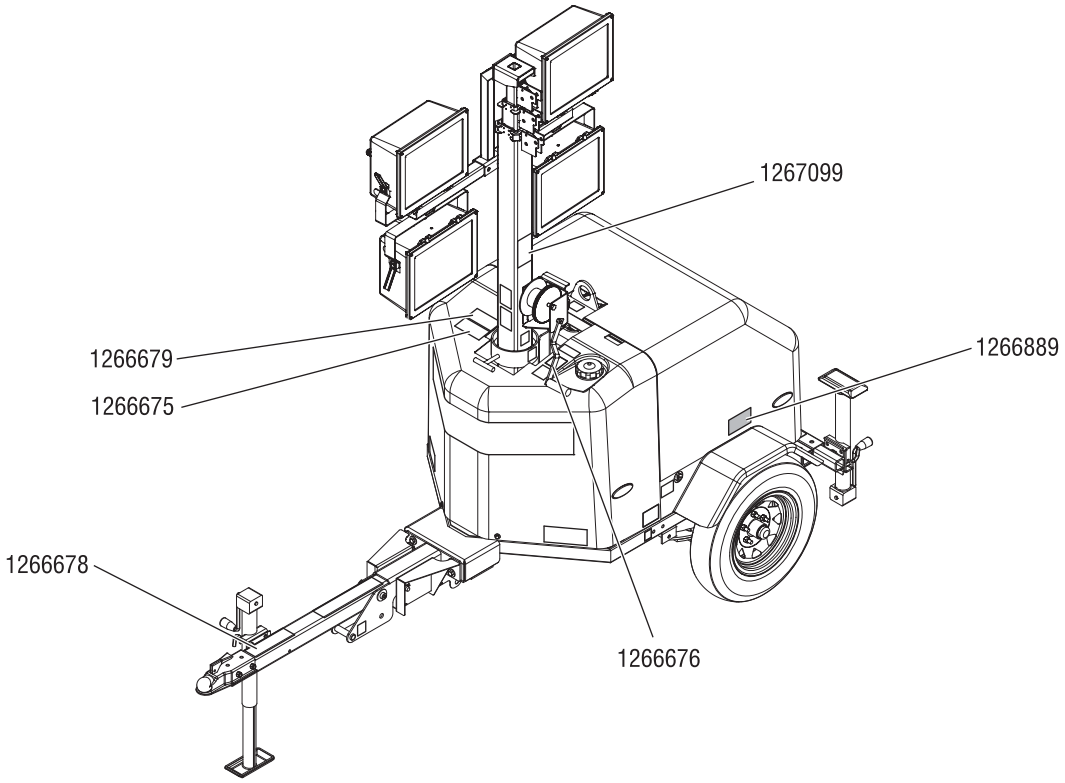
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General Safety



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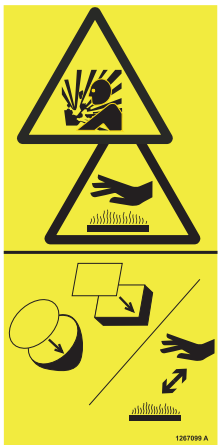
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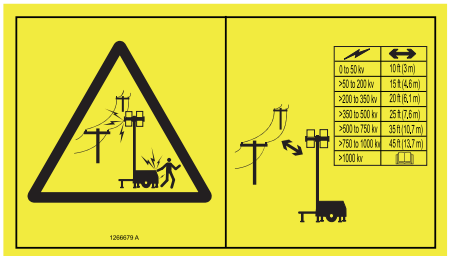
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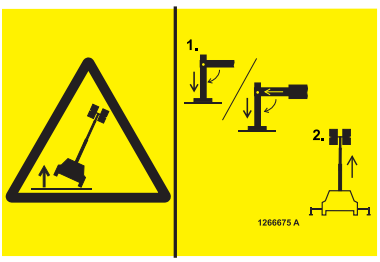
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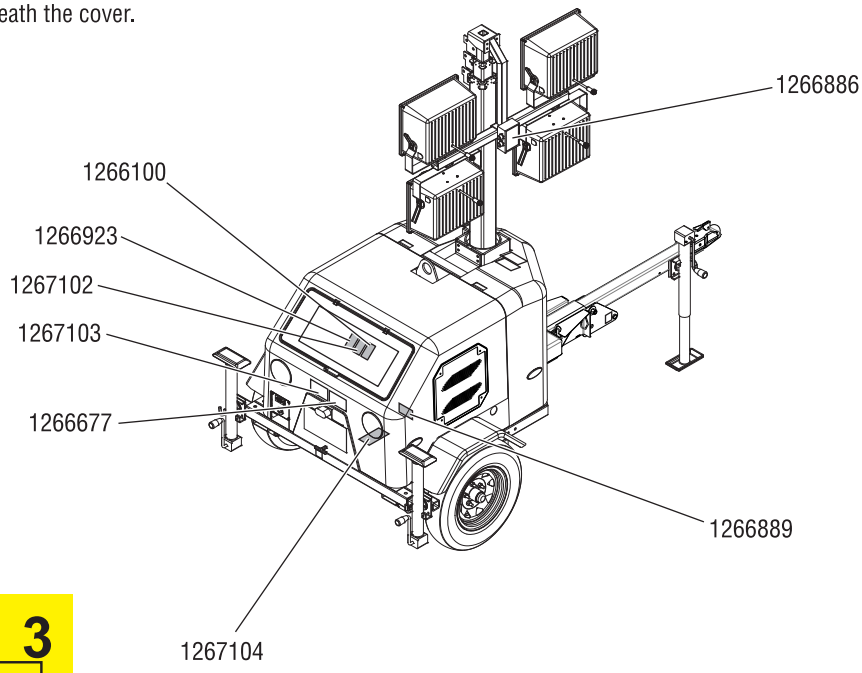


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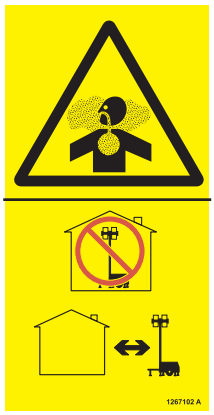
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Work Area Safety

⚠ Electrocution Hazards

This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.

Before operating the machine, contact the electric power line owner to disconnect, move, or insulate power lines.

Obey all local and governmental regulations regarding required clearance from electrical power lines. At a minimum, the required clearance contained in the chart below must be followed.

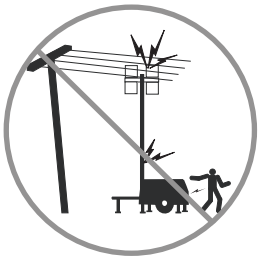
Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.05 m
>50 to 200KV	15 ft	4.60 m
>200 to 350KV	20 ft	6.10 m
>350 to 500KV	25 ft	7.62 m
>500 to 750KV	35 ft	10.67 m
>750 to 1000KV	45 ft	13.72 m
over 1000KV		see below

For power lines over 1000kV, the minimum clearance distance must be established by the utility owner or operator or by a registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Allow for mast movement, electrical line sway or sag, and beware of strong or gusty winds.

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.



Keep away from the machine if it contacts energized power lines. Personnel must not touch or operate the machine until energized power lines are shut off.

Do not connect wires directly to the generator. Connect auxiliary equipment only to the power outlets provided.

Do not perform service or replace the lamps with the engine/generator running or batteries connected.

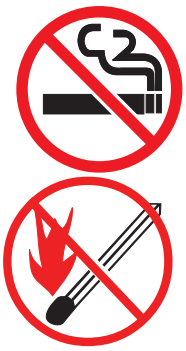
This machine should be grounded in accordance with all local electrical codes. Consult the local electrical codes or authority having jurisdiction in the area where the machine will be used for specific requirements.

There is a permanent conductor between the generator (static winding) and the frame.

Work Area Safety

⚠ Explosion and Fire Hazards

Do not start the engine if you smell or detect liquid petroleum gas (LPG), gasoline, diesel fuel or other explosive substances.



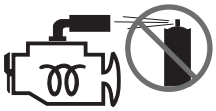
Stop engine before adding fuel.

Do not refuel the machine while it is hot. Allow to cool for several minutes before refueling.

Do not spill fuel inside the engine compartment.

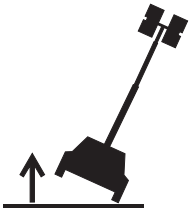
Refuel the machine and charge the battery only in an open, well-ventilated area away from sparks, flames and lighted tobacco.

Do not operate the machine in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.



Do not use high energy starting aids on machines equipped with glow plugs or grid heater.

⚠ Tip-over Hazards



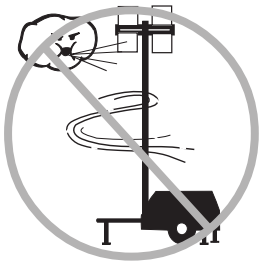
Do not raise the mast unless all outriggers are properly deployed, the foot pads are in firm contact with the ground and the machine is level.

Do not set the machine up on a surface where it cannot be leveled using only the leveling jacks.

Do not hang objects from the lights or the mast.

Do not use the mast to raise material or personnel.

Do not move the machine unless the mast is lowered to the stowed position.



Do not raise the mast when wind speeds may exceed 60 mph / 97 km/h. Do not alter or disable machine components that in any way affect safety and stability.

Work Area Safety

Do not alter or disable machine components that in any way affect safety and stability.

Do not adjust or stow the outriggers when the mast is raised.

Be sure the tires are in good condition and the lug nuts tightened.



Do not place ladders or scaffolds against any part of the machine.

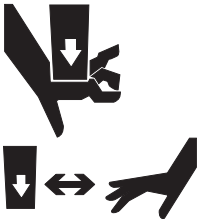
Do not use the machine on a moving or mobile surface or vehicle.

⚠ Crushing Hazard



Do not lower the mast unless the area below is clear of personnel and obstructions.

Keep hands and fingers away from any potential pinch points.



⚠ Collision Hazards

Check the work area for overhead obstructions or other possible hazards.

Ensure that the collision area around the mast and light fixtures is clear before rotating the mast.

Stay clear of moving mast.

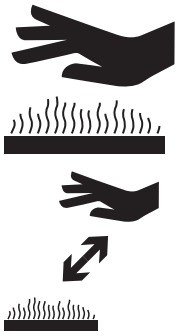
Always use the light fixture bar rotation lock before replacing light fixtures.

⚠ Burn Hazards

Stay clear of hot components and surfaces.

Allow machine to cool before servicing.

Do not use the machine if the protective barrier on any of the lamps is broken or punctured. Metal halide lamps produce shortwave ultra-violet radiation and can cause serious skin burns or eye inflammation if the protective barrier is not in place.



Do not touch the lamp fixtures while they are turned on. Turn the lamps off and allow them to cool before touching.

Do not touch hot parts of the engine or tailpipe, Use protective gloves when handling hot parts.

Work Area Safety

⚠ Bodily Injury Hazard

Breathing carbon monoxide can result in death or serious injury. Do not use the machine indoors. Use only outside, far from open windows, doors and vents.

Do not breathe exhaust fumes.

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

Do not work on this equipment when under the influence of drugs or alcohol.

Stay clear of belts and fan when engine is running.

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

Do not grasp the cable.

Use proper lifting techniques when lifting and positioning the tongue of the machine.

Always replace the protective lamp cover after replacing the lamp bulbs. Keep protective barriers in place during operation.

Read manuals. If you do not understand the information in the manuals consult your supervisor, the owner or the manufacturer.

⚠ Fall Hazards

Do not climb or stand on any part of the light tower during maintenance or operation.

⚠ Traffic Hazards

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

⚠ Damaged Machine Hazards

Do not use a damaged or malfunctioning machine.

Do not use a machine with a worn, frayed, kinked or damaged cable.

Conduct a thorough pre-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.

Be sure all maintenance has been performed as specified in this manual and the appropriate Terex service manual.

Be sure the operator's manual is complete, legible and in the storage container located on the machine.

Be sure all decals are in place and legible.

Do not modify or alter the light tower without the prior written permission of the manufacturer.

Work Area Safety

⚠ Component Damage Hazards

Do not turn the lights on unless the engine is running. Always turn the lights off before shutting down the engine.

Do not tow the light tower while the lamps are hot. Hot lamps will break if moved.

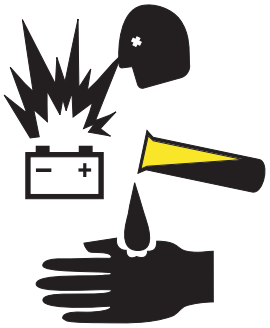
Do not replace lamp bulbs with any bulbs other than those specified on the machine and in this manual.

Note: Lamp bulbs contain mercury (Hg). Dispose of lamp bulbs according to local, state and federal laws.

Be sure lamp fixture connections are properly tightened before turning lights on.

⚠ Battery Safety

Burn Hazards



Batteries contain acid. Always wear appropriate personal protective equipment, including gloves, face shield and long sleeve shirt when working with batteries.

Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

Do not use any battery charger greater than 12V to charge the battery.

Do not remove the vent caps from the battery when charging.

Do not expose the batteries or the charger to water or rain during charging.

Explosion Hazards



Keep sparks, flames and lighted tobacco away from batteries. Batteries emit explosive gas.

Do not contact the battery terminals or the cable clamps with tools that may cause sparks.

Electrocution/Burn Hazards

Avoid contact with electrical terminals.

Inspect the power cord for damage prior to each use.

Replace any damaged cord before operating.

Do not allow the power cord to become caught or crushed while raising, lowering or rotating the mast.

Avoid electrical shock from contact with battery terminals. Remove all rings, watches and other jewelry.

Lifting Hazard

Use the appropriate number of people and proper lifting techniques when lifting batteries.

Work Area Safety

⚠ Towing Hazards

Read, understand and obey all of your tow vehicle manufacturer's recommendations, warnings and instructions before towing this machine.

Do not tow the machine unless the mast is retracted to the stowed position and is secured.

Do not tow the machine unless rear outriggers and all jacks have been retracted and stowed.

Do not overload your tow vehicle. Check the manufacturer's Gross Vehicle Weight Rating (GVWR). To obtain the gross vehicle weight, add the tongue weight of the trailer to the vehicle weight (including vehicle, passengers and cargo).

Do not load cargo on the machine. The light tower is not designed to carry any extra cargo.

Be sure the hitch is securely attached to the tow vehicle.

Be sure the safety chains are securely attached to the tow vehicle. Safety chains should be crossed below hitch.

Be sure that all driving lights are operational.

Be sure all hitch components, lights and mirrors and methods of attaching the trailer to the tow vehicle conform to local, state and federal regulations.

Do not tow the machine on public roads unless it meets all governmental regulations for towing.

Do not exceed 60 mph / 97 km/h. Obey all local and national towing speed laws.

Be sure to chock the wheels when parking on a hill.

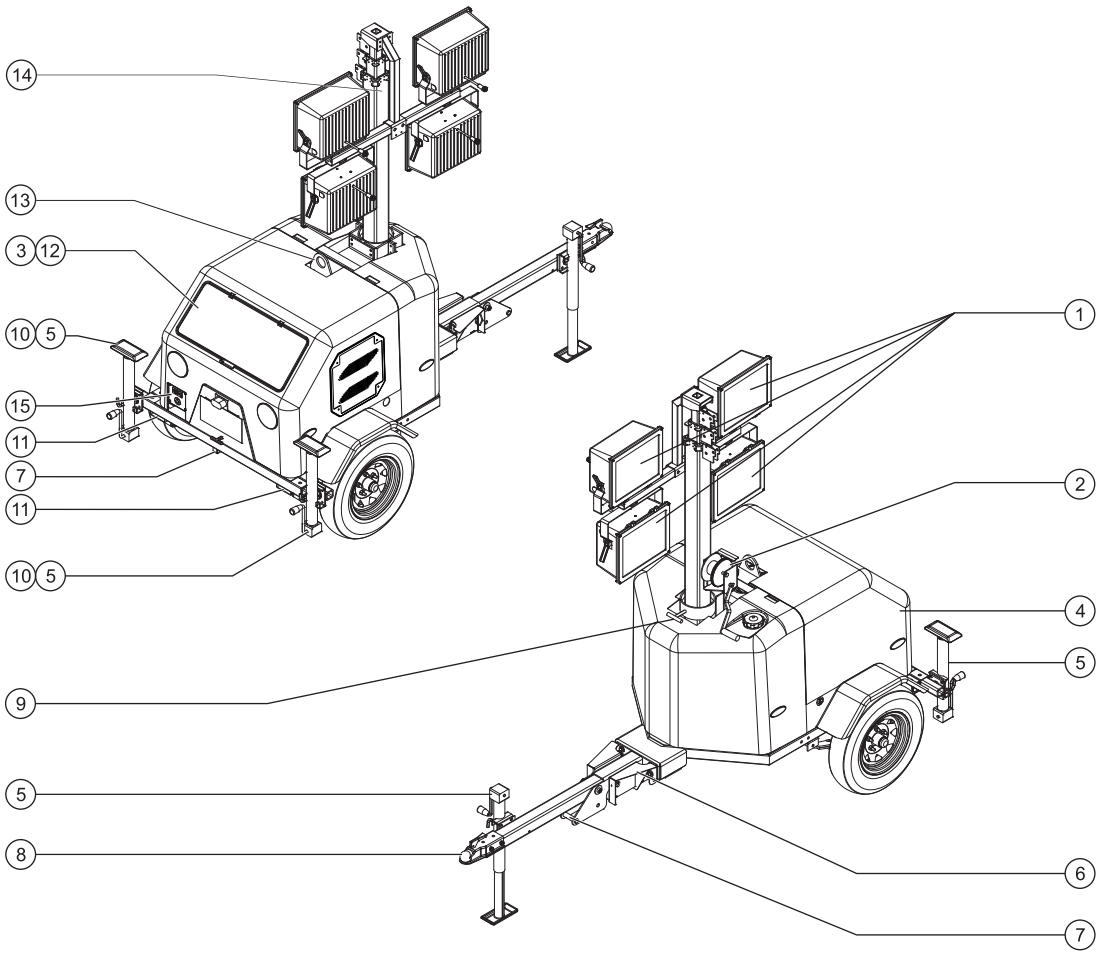
Use extreme care and slow speeds while towing across uneven terrain, debris, holes or drop-offs.

Note: Do not tow machine when engine is running! This can cause severe engine/radiator damage and WILL NOT BE COVERED UNDER WARRANTY!

Lockout After Each Use

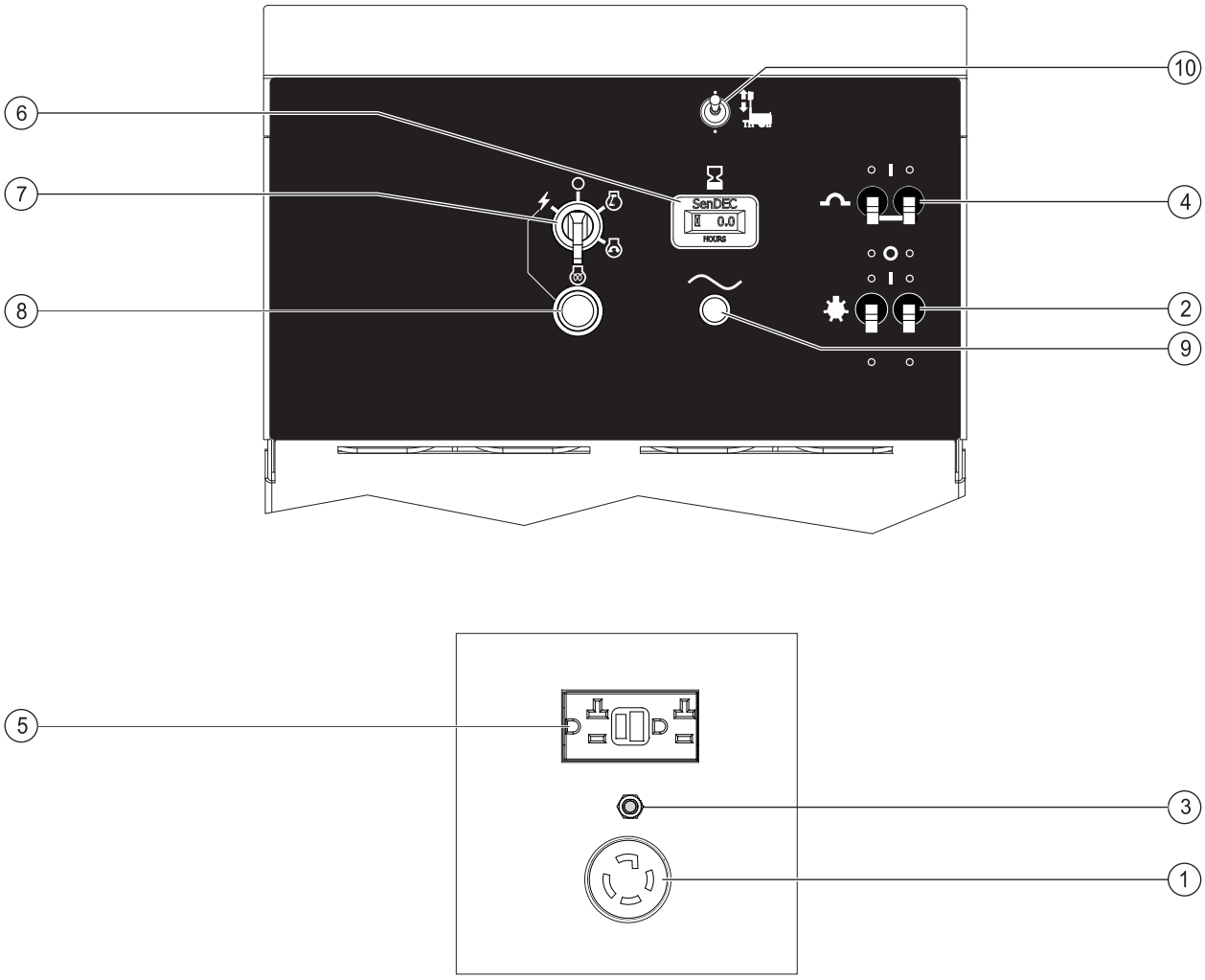
When leaving the machine unattended, secure from unauthorized use. Unauthorized personnel may attempt to operate the machine without proper instruction, creating an unsafe condition.

Legend



1 Lamps
2 Winch
3 Control panel (located under access door)
4 Manual storage (located inside cabinet)
5 Leveling jack
6 Kickstand
7 Tie-downs
8 Tongue with trailer hitch
9 T-handle for mast rotation lock
10 Outrigger
11 Forklift pockets
12 Control panel access door
13 Lifting eye
14 Mast
15 GFCI and T-lock receptacle panel

Controls



Control Panel - Standard

1 T-lock receptacle, 240V/30A

2 Light switch

Move the light switch up to turn on the lights. Move the light switch down to turn off the lights.

3 Circuit breaker for GFI receptacle

4 Main circuit breaker

Move the main circuit breaker switch up on the control panel before turning the individual light switches on or before attempting to use the convenience receptacles.

Controls

5 Duplex receptacle with GFI, 120V/20A

Convenience duplex receptacle with Ground Fault Interrupter (GFI).

6 Hour meter

The hour meter displays the number of hours the machine has operated.

7 Ignition switch for engine

Turn the ignition switch to the prime position and hold the engine prime button down to prime the engine.

Hold the prime button down and turn the ignition switch to the start position to start the engine.

Turn the ignition switch to the off position to turn the engine off.

8 Engine prime button

With the ignition switch in the run position, press and hold the prime button for 15 seconds before starting the engine. Release the prime button when the engine starts.

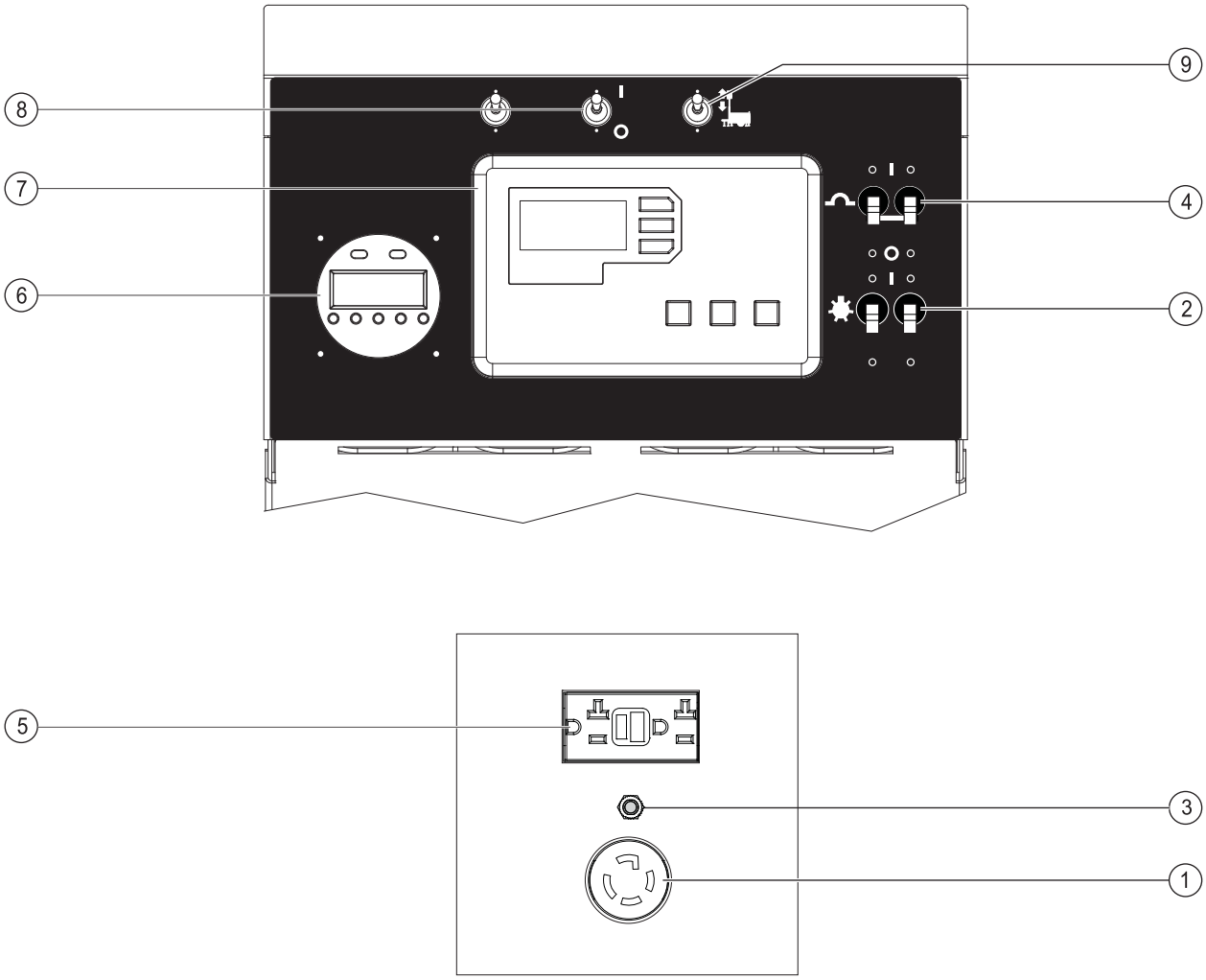
9 Alternator failure light

Light on indicates that the engine's DC alternator isn't producing enough voltage.

10 Raise/lower switch (if equipped with electric winch)

Move the switch up to raise and extend the mast. Move the switch down to retract and lower the mast.

Controls



Control Panel - DynaGen

1 T-lock receptacle, 240V/30A

2 Light switch

Move the light switch up to turn on the lights. Move the light switch down to turn off the lights.

3 Circuit breaker for GFI receptacle

4 Main circuit breaker

Move the main circuit breaker switch up on the control panel before turning the individual light switches on or before attempting to use the convenience receptacles.

Controls

5 Duplex receptacle with GFI, 120V/20A

Convenience duplex receptacle with Ground Fault Interrupter (GFI).

6 Timer

The timer is used to automatically start the engine and turn on the lights at a preset time.

7 DynaGen controller

The DynaGen controller digitally controls and monitors the engine functions.

8 Auto start mode control switch

Placing the switch in the UP position will select the timer function and when placed in the DOWN position this will select the photocell function. The MID/OFF position is used for manual starting of the engine. When the photocell is turned on, the lights will go on at dusk and go off at daylight.

9 Raise/lower switch (if equipped with electric winch)

Move the switch up to raise and extend the mast. Move the switch down to retract and lower the mast.

Inspections



Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

Know and understand the pre-operation inspection before going on to the next section.

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items.

If damage or any unauthorized variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before going on to the function tests.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Inspections

Pre-operation Inspection

- ❑ Be sure that the operator's manual is complete, legible and in the storage container located on the machine.
- ❑ Be sure that all decals are legible and in place. See Inspections section.
- ❑ Check for engine oil leaks and proper fluid level. Add oil if needed. See Maintenance section.
- ❑ Check for engine coolant leaks and proper coolant level. Add coolant if necessary. See Maintenance section.
- ❑ Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.
- ❑ Check for proper tire pressure and lug nut torque. Add air to tires if needed. See Maintenance section.

Check the following components or areas for damage, improperly installed or missing parts and unauthorized modifications:

- ❑ Electrical components, wiring and electrical cables
- ❑ Mast components
- ❑ Latches and pins
- ❑ Tires and wheels
- ❑ Trailer lights and reflectors
- ❑ Outriggers, leveling jacks and foot pads
- ❑ Winch
- ❑ Nuts, bolts and other fasteners
- ❑ Lamp fixtures, connections and bulbs
- ❑ Cable (kinks, frays and abrasions)
- ❑ Safety chains
- ❑ Engine and related components
- ❑ Fuel tanks
- ❑ Generator
- ❑ Grounding rod and lug

Check entire machine for:

- ❑ Cracks in welds or structural components
- ❑ Dents or damage to machine
- ❑ Excessive rust, corrosion or oxidation

- ❑ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ❑ Be sure the that the battery is in place and properly connected.
- ❑ After you complete your inspection, be sure that all compartment covers are in place and latched.

Inspections



Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

Know and understand the function tests before going on to the next section.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Function Test Fundamentals

The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

Inspections

Function Tests

Lowering the tongue for use or towing

This light tower is equipped with a deployable tongue to maximize shipping units. Before towing or setting this machine up for operation on a work site for the first time follow the steps below. If the tongue has already been deployed properly proceed to the next section.

⚠ Crush/Pinch hazard. Keep hands and fingers away from any potential crush or pinch points during procedure.

1 Support the tongue so that it does not fall and remove the tongue locking clip and pin (1) shown and retain.

2 Rotate the tongue down into the light tower operating and towing position.

3 Re-install the locking clip and pin removed in step 1 to the new position (3). This will secure the tongue for light tower operation and towing.

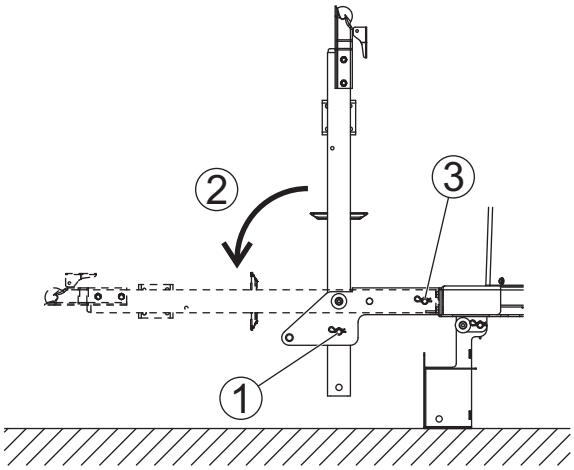
4 Pull the jack release pin and rotate the tongue jack into vertical position.

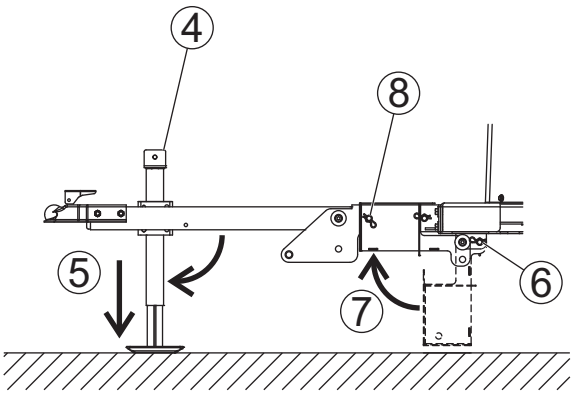
5 Turn the leveling jack handle to lower the front outrigger foot pad and raise the tongue of the machine until the kickstand is not contacting the ground.

6 Remove the kickstand locking clip and pin (6) shown and retain.

7 Rotate the kickstand up into the light tower operating and towing position.

8 Re-install the locking clip and pin removed in step 6 to the new position (8). This will secure the kickstand for light tower operation and towing.





Inspections

Raising the tongue for storage or shipping

1 Remove the locking clip and pin from located in position (8). This will allow the kickstand to swing down into the vertical position.

2 Re-install the locking clip and pin into position (6).

3 Turn the leveling jack handle to fully raise the front outrigger foot pad.

4 Pull the jack release pin and rotate the tongue jack into horizontal position.

5 Remove the locking clip and pin located in position (3). This will allow the tongue to be raised.

6 Raise the tongue into the light tower storage and shipping position.

7 Re-install the locking clip and pin removed in position (3) into position (1). This will secure the tongue for storage and shipping.

Setup

1 Position the light tower at the desired work site.

2 Chock the wheels.

3 Disconnect the trailer lights and the safety chains.

4 Open the latch on the trailer hitch.

5 Pull the release pin on the tongue jack and rotate into vertical position.

6 Turn the leveling jack handle to lower the front outrigger foot pad and raise the tongue of the machine enough to clear the tow vehicle.

7 Release the spring pin on the side outriggers and slide them out into the deployed position. Make sure the outriggers are locked in place. Rotate the leveling jack into vertical position.

8 Turn the leveling jack handles to level the machine. Level the machine using only the leveling jacks

Note: the outriggers are not designed to lift the tires of the unit off the ground.

9 Ground the light tower according to your local electrical code. A grounding rod is supplied inside the cabinet and a grounding lug is provided on the front of the machine, near the bottom.



Note: This machine should be grounded in accordance with all local electrical codes. Consult the local electrical codes or authority having jurisdiction in the area where the machine will be used for specific requirements.

Test Machine Functions (models with manual winch)

By raising and lowering the mast back to the stowed position, the following functions will be tested: **winch, mast extension and mast rotation.**

10 Turn the winch handle clockwise until the mast raises approximately 2 feet / 60 cm.

⊙ Result: A clicking sound should be heard as the mast raises.

11 Release the winch handle.

⊙ Result: The winch brake should hold the mast.

12 Continue to turn the winch handle clockwise until the mast reaches full vertical position.

⊙ Result: The mast sections should raise smoothly, free of hesitation or binding.

13 Turn the T-handle to release the mast rotation lock.

Inspections

14 Rotate the mast clockwise and then counterclockwise as far as it will go in either direction.

⊙ Result: The mast should rotate smoothly and easily in both directions.

15 Rotate the mast to line up the arrows on the front of the mast.

16 Tighten the T-handle to secure the mast.

17 Attempt to rotate the mast in both directions.

⊙ Result: The mast should not rotate.

18 Begin lowering the mast to the stowed position by turning the winch handle counterclockwise.

⊙ Result: No clicking sound should be heard when the winch handle is turned.

Test Machine Functions (models with optional electric winch)

By raising and lowering the mast back to the stowed position, the following functions will be tested: **winch, mast extension and mast rotation.**

19 Move the raise/lower switch up until the mast raises approximately 2 feet / 60 cm.

⊙ Result: The mast sections should raise smoothly, free of hesitation or binding.

20 Release the raise/lower switch.

⊙ Result: The winch brake should hold the mast.

21 Continue to raise the mast until the mast reaches full vertical position.

⊙ Result: The mast should raise smoothly, free of hesitation or binding.

22 Turn the T-handle to release the mast rotation lock.

23 Rotate the mast clockwise and then counterclockwise as far as it will go in either direction.

⊙ Result: The mast should rotate smoothly and easily in both directions.

24 Rotate the mast to line up the arrows on the front of the mast.

25 Tighten the T-handle to secure the mast.

26 Attempt to rotate the mast in both directions.

⊙ Result: The mast should not rotate.

27 Move the raise/lower switch down until the mast is in the fully retracted position.

⊙ Result: The mast should lower smoothly, free of hesitation or binding.

Test the Lights

28 Make sure the circuit breakers and the light switches are in the off position.

Note: Be sure the lamp fixture connections are properly tightened before turning the lights on.

29 Start the engine. See Starting the Engine in the Operating Instructions section.

30 Turn the main circuit breakers to the on position.

31 Turn the light switches to the on position.

⊙ Result: The lights should come on.

Note: It can take up to 20 minutes for the lights to reach full intensity. If the lights are turned off and turned back on while they are still warm, they will not light up again for 20-30 minutes.

Note: Make sure the circuit breaker and the light switches are turned off before shutting down the engine.

Inspections



Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

4 Inspect the workplace.

Know and understand the workplace inspection before going on to the next section.

5 Only use the machine as it was intended.

Workplace Inspection Fundamentals

The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up and operating the machine.

Workplace Inspection Checklist

Be aware of and avoid the following hazardous situations:

- ❑ drop-offs or holes
- ❑ bumps, floor obstructions or debris
- ❑ sloped surfaces
- ❑ unstable or slippery surfaces
- ❑ overhead obstructions and high voltage conductors
- ❑ hazardous locations
- ❑ inadequate surface support to withstand all load forces imposed by the machine
- ❑ wind and weather conditions
- ❑ the presence of unauthorized personnel
- ❑ other possible unsafe conditions

Inspections

Inspection for Decals with Words

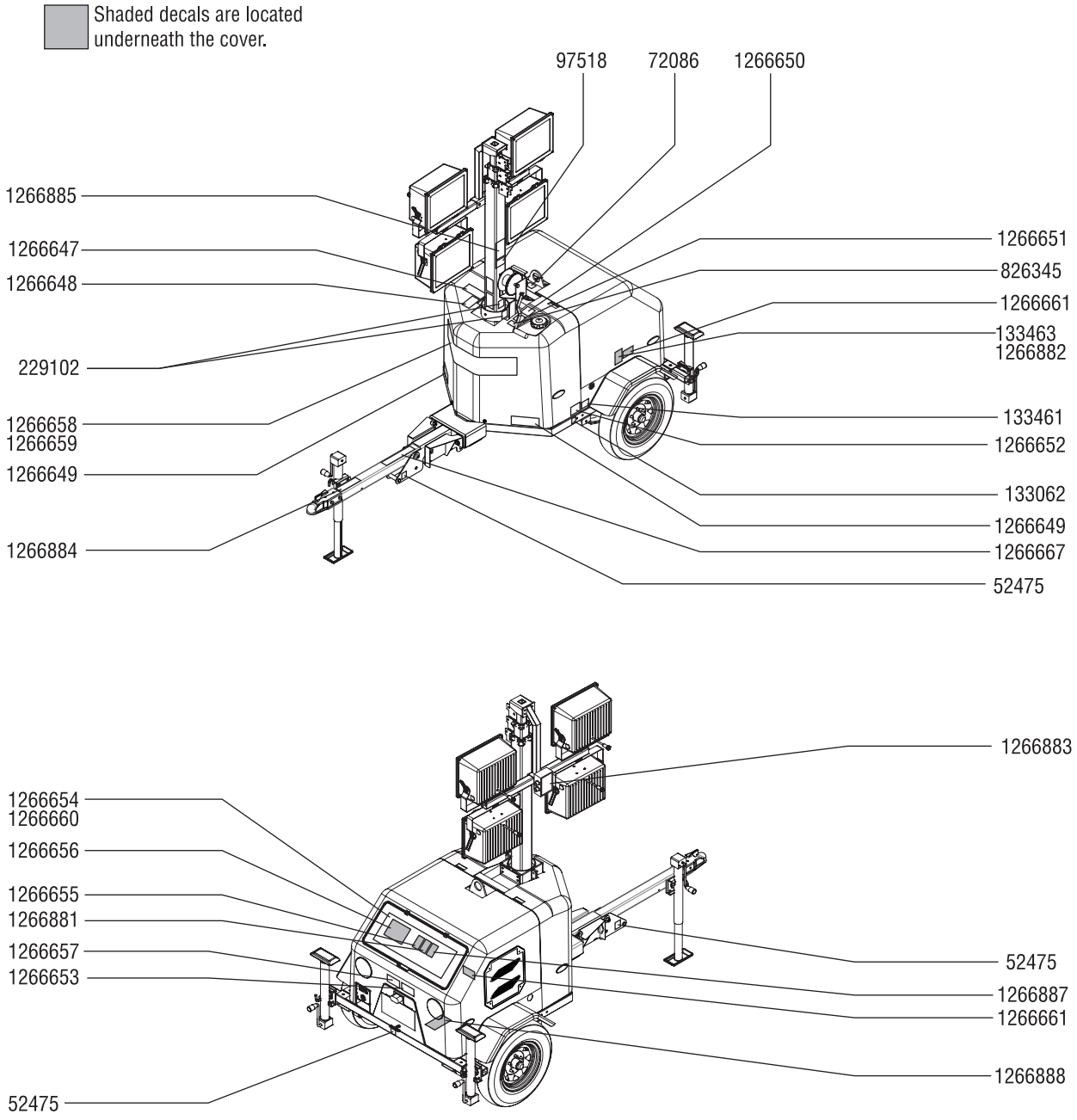
Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Qty
52475	Label – Transport Tie-down	4
72086	Label – Lifting Point	1
97518	Instruction – Lamp Disposal	1
133062	Label – Ground	1
133461	Instruction – Tire Specifications	2
229102	Label - Arrow	2
1266647	Danger – Electrocution hazard	1
1266648	Warning – Tip-over Hazard, Outriggers	1
1266649	Cosmetic – Terex Logo, RL4	2
1266650	Danger – Explosion Hazard	1
1266651	Label – Diesel	1
1266652	Label – Transport Diagram	1
1266653	Danger – Electrocution hazard	1
1266654	Cosmetic – Terex Logo, RL4, Rear door	1
1266655	Warning – Improper Operation	1
1266656	Instructions – Operating Instructions	1
1266657	Danger – Electrocution hazard	1
1266658	Cosmetic – Terex Logo, front fairing	1
1266659	Cosmetic – Genie Logo, front fairing	1
1266660	Cosmetic – Genie Logo, RL4, Rear door	1
1266661	Warning – Explosion Hazard	1
1266667	Instructions – Tongue deployment instructions	1
1266881	Danger – Inhalation Hazard	1
1266883	Danger – Electrocution Hazard	1
1266884	Warning – Tow Speed	1
1266885	Warning – Explosion/Burn hazard	1
1266887	Danger – Auto-start Hazard	2
1266888	Danger – Explosion Hazard, Battery	1

Shading indicates decal is hidden from view, i.e. under covers

Inspections



Inspections

Inspection for Decals with Symbols

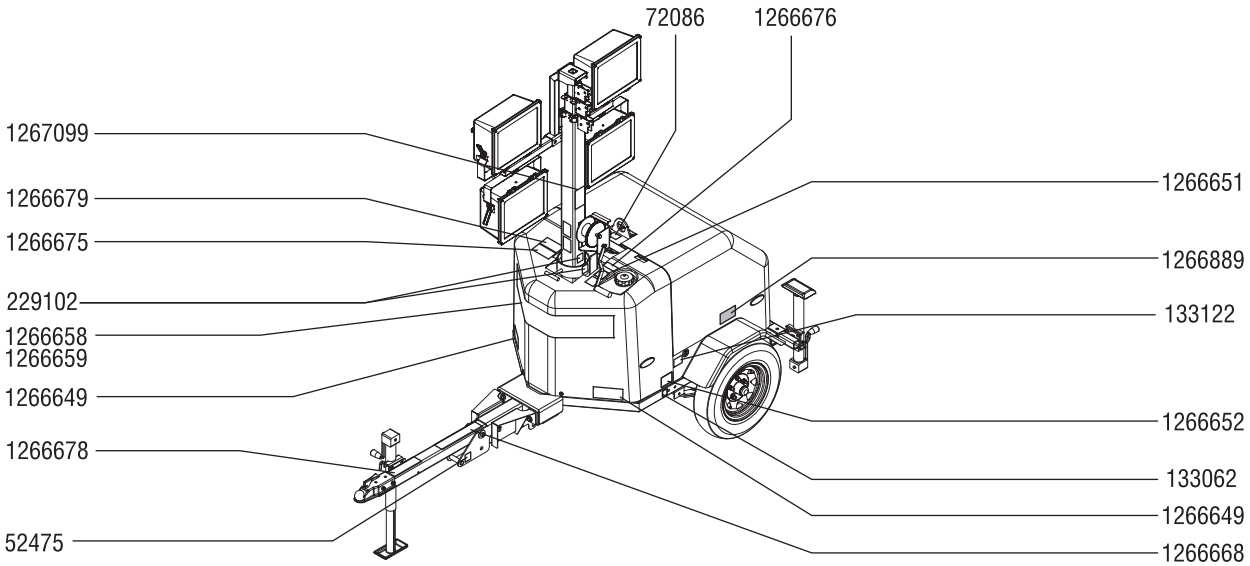
Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

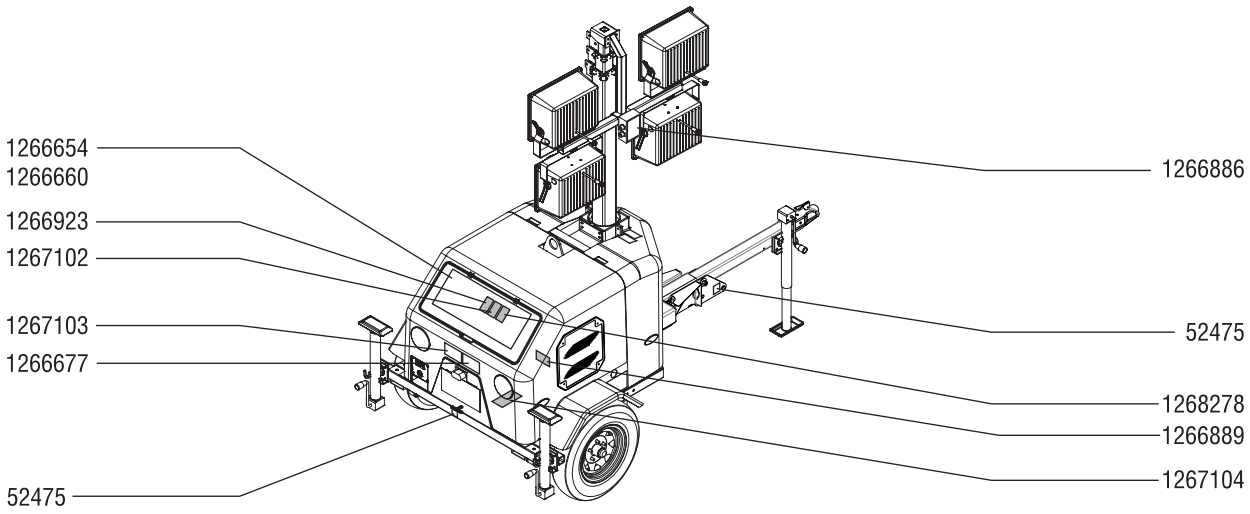
Part No.	Decal Description	Qty
52475	Label – Transport Tie-down	4
72086	Label – Lifting Point	1
133062	Label – Ground	1
133461	Instruction – Tire Specifications	2
229102	Label - Arrow	2
1266649	Cosmetic – Terex Logo, RL4	2
1266651	Label – Diesel	1
1266652	Label – Transport Diagram	1
1266654	Cosmetic – Terex Logo, RL4, Rear door	1
1266658	Cosmetic – Terex Logo, front fairing	1
1266659	Cosmetic – Genie Logo, front fairing	1
1266660	Cosmetic – Genie Logo, RL4, Rear door	1
1266668	Instructions – Tongue deployment instructions	1
1266675	Warning – Tip-over Hazard, Outriggers	1
1266676	Label – Explosion Hazard	1
1266677	Warning – Burn Hazard	1
1266678	Label – Tow Speed	1
1266679	Danger – Electrocution Hazard	1
1266886	Label – Electrocution Hazard	1
1266889	Warning – Explosion Hazard	1
1266973	Label – Read the Manual	1
1267099	Warning – Explosion/Burn Hazard	1
1267102	Danger – Inhalation Hazard	1
1267103	Label – Electrocution hazard	1
1267104	Label – Battery/Charger Safety	1

Shading indicates decal is hidden from view, i.e. under covers

Inspections

Shaded decals are located underneath the cover.





Operating Instructions



Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Fundamentals

The Operating Instructions section provides instructions for each aspect of machine operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's manual.

Only trained and authorized personnel should be permitted to operate a machine. If more than one operator is expected to use a machine at different times in the same work shift, they must all be qualified operators and are all expected to follow all safety rules and instructions in the operator's manual. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

Operating Instructions

Lowering the tongue for use or towing

This light tower is equipped with a deployable tongue to maximize shipping units. Before towing or setting this machine up for operation on a work site for the first time follow the steps below. If the tongue has already been deployed properly proceed to the next section.

⚠ Crush/Pinch hazard. Keep hands and fingers away from any potential crush or pinch points during procedure.

1 Support the tongue so that it does not fall and remove the tongue locking clip and pin (1) shown and retain.

2 Rotate the tongue down into the light tower operating and towing position.

3 Re-install the locking clip and pin removed in step 1 to the new position (3). This will secure the tongue for light tower operation and towing.

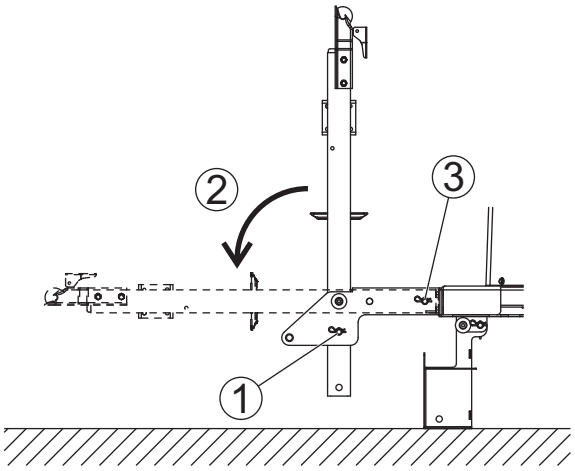
4 Pull the jack release pin and rotate the tongue jack into vertical position.

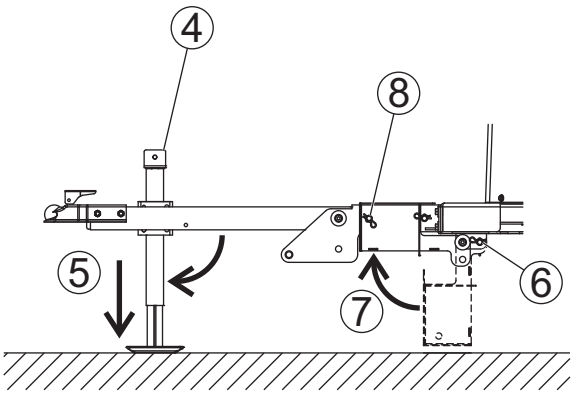
5 Turn the leveling jack handle to lower the front outrigger foot pad and raise the tongue of the machine until the kickstand is not contacting the ground.

6 Remove the kickstand locking clip and pin (6) shown and retain.

7 Rotate the kickstand up into the light tower operating and towing position.

8 Re-install the locking clip and pin removed in step 6 to the new position (8). This will secure the kickstand for light tower operation and towing.





Operating Instructions

Raising the tongue for storage or shipping

1 Remove the locking clip and pin from located in position (8). This will allow the kickstand to swing down into the vertical position.

2 Re-install the locking clip and pin into position (6).

3 Turn the leveling jack handle to fully raise the front outrigger foot pad.

4 Pull the jack release pin and rotate the tongue jack into horizontal position.

5 Remove the locking clip and pin located in position (3). This will allow the tongue to be raised.

6 Raise the tongue into the light tower storage and shipping position.

Re-install the locking clip and pin removed in position (3) into position (1). This will secure the tongue for storage and shipping.

Setup

1 Position the light tower at the desired work site.

2 Chock the wheels.

3 Disconnect the trailer lights and the safety chains.

4 Open the latch on the trailer hitch.

5 Pull the release pin on the tongue jack and rotate into vertical position.

6 Turn the leveling jack handle to lower the front outrigger foot pad and raise the tongue of the machine enough to clear the tow vehicle.

7 Release the spring pin on the side outriggers and slide them out into the deployed position. Make sure the outriggers are locked in place. Rotate the leveling jack into vertical position.

8 Turn the leveling jack handles to level the machine. Level the machine using only the leveling jacks

Note: the outriggers are not designed to lift the tires of the unit off the ground.

9 Ground the light tower according to your local electrical code. A grounding rod is supplied inside the cabinet and a grounding lug is provided on the front of the machine, near the bottom.



Note: This machine should be grounded in accordance with all local electrical codes. Consult the local electrical codes or authority having jurisdiction in the area where the machine will be used for specific requirements.

Starting the Engine

Note: The main circuit breaker and the light switches must be off before starting the engine.

Note: There must be fuel in the fuel tank in order to start the engine.

Engine Start - Standard Control Panel

1 Turn the ignition switch to the prime position and hold the engine prime button down to prime the engine.

2 Hold the prime button down and turn the ignition switch to the start position to start the engine.

3 Release the prime button when the engine starts.

Operating Instructions

Engine Start - DynaGen Control Panel (manual start)

1 Place the +12 VDC Power Toggle Switch in the ON Position.

2 Place toggle switch in the MID/OFF position.

3 The DynaGen TG350 will start and run a diagnostics.

4 Once complete, press the start push button on the TG350 Module.

5 The engine will start.

6 Push the off button on the TG350 module to stop the engine.

Engine Start - DynaGen Control Panel (auto start)

1 Place the +12 VDC Power Toggle Switch in the ON Position.

2 The DynaGen TG350 will start and run a diagnostics.

3 Use the toggle switch to select either the timer UP or the photocell DOWN to control the starting of the engine.

4 Press the auto push button on the TG350 Module.

5 The DynaGen TG350 module will then await a start signal from either the selected Photocell or selected timer.

6 Using the photocell requires no special set-up. The device is a "dusk till dawn" sensor.

7 To properly set up the timer and functions it must be programmed prior to use. Refer to the DynaGen TG350 manual located in the document manuals storage for detailed programming instructions.

Extending the Mast

1 Turn the winch handle clockwise until the mast reaches vertical position.

2 Turn the T-handle to release the mast rotation lock.

3 Rotate the mast to the desired postion.

4 Tighten T-handle to secure mast in the desired position.

Retracting the Mast

1 Rotate the mast to align the arrows on the mast before retracting.

2 Tighten T-handle to secure mast in the desired position.

3 Turn the winch handle counter clockwise until the mast is in the stowed position.

Rotating the Mast

1 Turn the T-handle to release the mast rotation lock.

2 Rotate the mast to the desired position.

3 Tighten the T-handle to secure the mast in the desired position.

Operating Instructions

Operation of Lights

Note: The engine must be running before the lights are turned on.

1 Be sure the position of the lights is adjusted before raising the mast.

2 Start the engine

3 Turn on the main circuit breaker switches on the control panel.

4 Turn on the lights using the individual light switches.

Note: Lights can take up to 20 minutes to reach full intensity.If the lights are turned off and turned back on again while still warm, they will not light up again for 20 to 30 minutes.

5 Turn the lights off by turning the circuit breaker switches to the off position.

6 Make sure the lights are turned off before engine is shut down.

Electrical Outlets

Electrical outlets are located on the roadside, rear of the cabinet.

Air Shutoff System (if equipped)

Auto air shutoff system

1 When the auto air shutoff system detects a fuel-rich environment the engine will shutdown.

2 To reset the system, remove the machine from the fuel-rich environment.

E-Stop system

1 If needed, push in the fuel cutoff system Emergency Stop button located on the front of the machine.

2 Pull out the Emergency Stop button on the front of the machine to reset the system.

After Each Use

Select a safe parking location—firm level surface, clear of obstruction and traffic. Retract mast and stow outriggers before moving machine.

Remove the key or lock cabinet door.

Operating Instructions

Towing

1 **CAUTION: SHUT ENGINE OFF BEFORE MOVING THE LIGHT TOWER! Failure to do so can cause severe engine/radiator damage and WILL NOT BE COVERED UNDER WARRANTY!**

2 Rotate the light bar perpendicular to the tongue of the machine and tighten the T-handle, into the notch, to secure and align the arrows.

3 Fully lower the mast to the stowed position.

4 Make sure the covers are closed and secured.

5 Retract the outrigger leveling jacks and pull the spring pins, on each jack, rotate and secure them into the horizontal travel position.

6 Pull the spring pins on each outrigger and slide them into the stowed and secured position.

7 Raise the tongue of the machine by turning the tongue jack handle.

8 Position the transport vehicle under the coupler on the tongue of the machine.

9 Open the latch on the coupler.

10 Turn the tongue jack handle to lower the tongue.

11 Close the latch on the coupler.

12 Turn the tongue jack handle to raise the jack wheel. Pull the spring pin on the tongue jack and rotate and secure it into the horizontal travel position.

13 Attach safety chains. Chains should be crossed below hitch.

14 Connect and test the trailer lights.

Towing Information

Driving a vehicle/trailer combination is different from driving a vehicle alone.

Inspect all connections at each stop.

All tires must be properly inflated. Do not overinflate the tires. Tire pressures go up during driving. Checking the tire pressure when the tires are warm will give you an inaccurate pressure reading.

Increase the distance between your vehicle and the vehicle in front of you to twice the normal following distance when towing a trailer. Allow more following distance in adverse weather.

Slow down for downgrades and shift your transmission into a lower gear.

Slow down for curves, adverse weather, hazardous road conditions, road construction, towing vehicle limitations and expressway exits.

Heavy winds, excessive speed, load shifting or passing vehicles can cause a trailer to sway while driving. If this occurs, do not brake, speed up or turn the steering wheel. Turning the steering wheel or applying the brakes can cause the vehicle and trailer to jackknife. Let up on the gas pedal and keep the steering wheel straight.

If the vehicle and/or trailer travels off the paved road, hold the steering wheel firmly and let up on the gas pedal. Apply the brakes carefully and gradually. Do not turn sharply. Slow down to under 25 mph / 40 km/h. Gradually turn the steering wheel to get back on the road. Proceed with caution when entering traffic.

When passing other vehicles, be sure to leave enough room for the extra length of the trailer. You will need to go much farther beyond the passed vehicle before you can return to your lane.

Avoid sudden movements when turning.

Transport and Lifting Instructions

Observe and Obey:

- ☑ Terex Corporation provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected pursuant to US Department of Transportation regulations, other localized regulations, and their company policy.
- ☑ Terex customers needing to containerize any Terex product should source a qualified freight forwarder with expertise in preparing, loading and securing construction and lifting equipment for international shipment.
- ☑ The transport vehicle must be parked on a level surface.
- ☑ The transport vehicle must be secured to prevent rolling while the machine is being loaded.
- ☑ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. See the serial label for the machine weight.
- ☑ Common sense and planning must be applied to control the movement of the machine when lifting it with a crane or forklift.

Securing to Truck or Trailer for Transit

Before loading the light tower onto a trailer refer to "Raising the tongue or storage and shipping" in the "Operating Instructions" section of this manual.

Rotate the light bar parallel to the tongue of the machine and tighten the T-handle, into the notch, to secure.

Fully lower the mast to the stowed position.

Fully retract, raise and lock all outrigger jacks and outriggers.

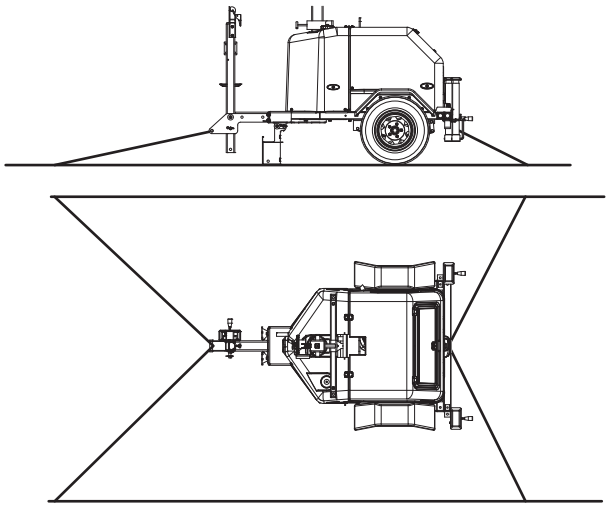
Close and secure the cabinet doors.

Inspect the entire machine for loose or unsecured items.

Use the three tie-down points for anchoring down to the transport surface.

Use a minimum of four chains to secure the light tower.

Adjust the rigging to prevent damage to the chains.



Transport and Lifting Instructions

Observe and Obey:

- ☑ Only qualified riggers should rig the machine.
- ☑ Only certified crane operators should lift the machine and only in accordance with the applicable crane regulations.
- ☑ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial label for the machine weight.

Lifting the Machine with a Crane or Forklift

Fully lower the mast to the stowed position.

Rotate the light bar perpendicular to the tongue of the machine and tighten the T-handle, into the notch, to secure and align the arrows.

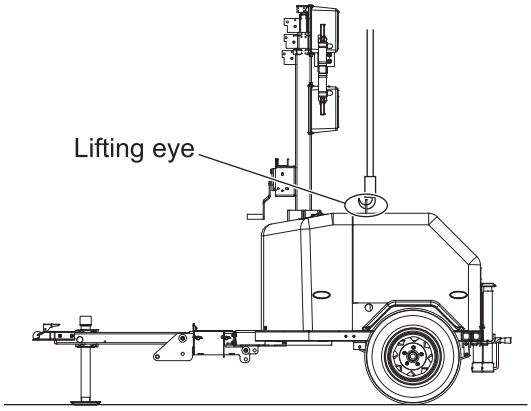
Fully retract, raise and lock all outrigger jacks and outriggers.

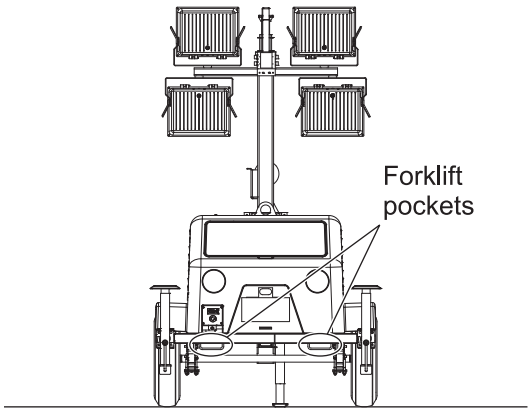
Close and secure the cabinet doors.

Inspect the entire machine for loose or unsecured items.

Use the lifting eye to lift the machine using a crane.

Use the designated forklift pockets to lift the machine using a forklift.





Maintenance



Observe and Obey:

- ☑ Only routine maintenance items specified in this manual shall be performed by the operator.
- ☑ Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications and the requirements specified in the responsibilities manual.
- ☑ Use only Terex approved replacement parts.
- ☑ If this machine is equipped with the autostart feature ensure that the toggle switch is in the middle, or OFF, position before performing any maintenance.

Maintenance Symbols Legend

The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.



Indicates that tools will be required to perform this procedure.



Indicates that new parts will be required to perform this procedure.

Check the Engine Oil Level



Maintaining the proper engine oil level is essential to good engine performance and service life. Operating the machine with an improper oil level can damage engine components.

Note: Check the oil level with the engine off.

1 Check the oil level dipstick. Add oil as needed.

Kubota D-1105 Engine	
Oil type	10W-30
Oil type - cold conditions	5W-20
Kohler KDW-1003 Engine	
Oil type	10W-30
Oil type - cold conditions	5W-20

Maintenance

Check the Engine Coolant Level



Maintaining the engine coolant at the proper level is essential to engine service life. Improper coolant level will affect the engine's cooling capability and damage engine components. Daily checks will allow the inspector to identify changes in coolant level that might indicate cooling system problems.

⚠ Burn hazard. Beware of hot engine parts and coolant. Contact with hot engine parts and/or coolant may cause severe burns.

Note: Do not remove the radiator cap.

1 Check the fluid level in the coolant recovery tank. Add fluid as needed.

⊙ Result: The fluid level should be at the FULL mark.

Refer to the engine manufacturer's operator manual.

Check the Batteries



Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

⚠ Electrocution hazard. Contact with hot or live circuits may result in death or serious injury. Remove all rings, watches and other jewelry.

⚠ Explosion/burn hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water. Keep all open flames and sparks away.

1 Wear appropriate personal protective equipment including gloves, face shield and long sleeve shirt.

2 Be sure that the battery cable connections are tight and free of corrosion.

3 Be sure that the battery hold-down bracket is in place and secure.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate the corrosion on the battery terminals and cables.

Maintenance

Check the Tire Pressure



- ⚠ Bodily injury hazard. An over-inflated tire can explode and may cause death or serious injury.
- ⚠ Collision hazard. An excessively worn tire can cause poor handling and continued use could result in tire failure.
- ⚠ Tip-over hazard. Do not use temporary flat tire repair products.

Maintaining the tires and wheels in good condition is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

1 Check the tire surface and sidewalls for cuts, cracks, punctures and uneven or excessive tread wear. Replace the tire if uneven or excessive tread wear is found.

2 Check each wheel for damage, bends and cracks. Replace the wheel if any damage is found.

Note: Tires and wheels must be replaced with tires and wheels of the specifications listed.

3 Check each tire with an air pressure gauge. Add air as needed.

4 Check the torque of each lug nut.

Tire Specifications, U.S.		
Tire Size	ST175/80D13	Load B
Lug nut torque	80 ft/lbs	108 Nm
Tire pressure (cold)	35 psi	241 kpa

Scheduled Maintenance

Maintenance performed quarterly, annually and every two years must be completed by a person trained and qualified to perform maintenance on this machine according to the procedures found in the service manual for this machine.

Machines that have been out of service for more than three months must receive the quarterly inspection before they are put back into service.

Specifications

RL4 (Vertical Mast)		
Height, stowed	8 ft 6 in	2.60 m
Length, stowed	7 ft 0 in	2.14 m
Width, stowed	4 ft 9 in	1.45 m
Extended mast height	23 ft 5 in	6.68 m
Total weight, no fuel	1461 lbs	662 kg
(Machine weights vary with option configurations. See serial label for specific machine weight.)		
Tongue weight	203 lbs	92 kg
Tire size, U.S.	ST175/80D13	Load C
Engine type		
6 kW		Kubota 16.9 hp
7 kW		Kubota 16.9 hp
8 kW		Kubota 16.9 hp
6 kW		Kohler 10.7 hp
Fuel capacity, standard	45 gallons	170 liters
Run time, standard unit		
(45 gallon tank-Kohler KDW1003-Full load)		110 hrs
Generator options		Coliseum 6 kW, 60 Hz
		Coliseum 7 kW, 50 Hz
		Coliseum 8 kW, 60 Hz
Total lighting wattage Four lights		4000 watts
Replacement bulbs		1000 watts Type BT-37 Metal Halide
Tower rotation		359 degrees non-continuous
Maximum towing speed	60 mph	97 km/h
Maximum wind speed	62 mph	100 km/h
Sound level (dba rating)	71 dba @	23 ft / 7 m

Continuous improvement of our products is a Terex policy. Product specifications are subject to change without notice or obligation.

Reporting Safety Defects

Terex
18340 NE 76th Street
PO Box 97030
Redmond, WA 98073-9730

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to Terex Corporation.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in any individual problems between you, your dealer or Terex Corporation.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (366-0123 in Washington DC area) or write to:

NHTSA
U.S. Department of Transportation
400 7th Street SW, (NSA-11)
Washington DC 20590

You can also obtain information about motor vehicle safety from the Hotline.

California Proposition 65

Warning

The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Towing Checklist (use at each stop)

Before Towing

- Travel lock is securely locked in place
- Towing hitch is properly secured to tow vehicle
- Safety chans (if required) are properly attached and secure (chains are crossed below hitch)
- All lights are connected and working
- Tires are properly inflated

Before Driving

- Fasten safety restraints
- Properly adjust mirrors

On the Road

- Do not exceed 60 mph / 97 km/h. Obey all local and national towing speed laws
- Check connections and tire pressure at each stop
- Slow down for hazardous conditions
- Allow extra distance for following and passing other vehicles

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