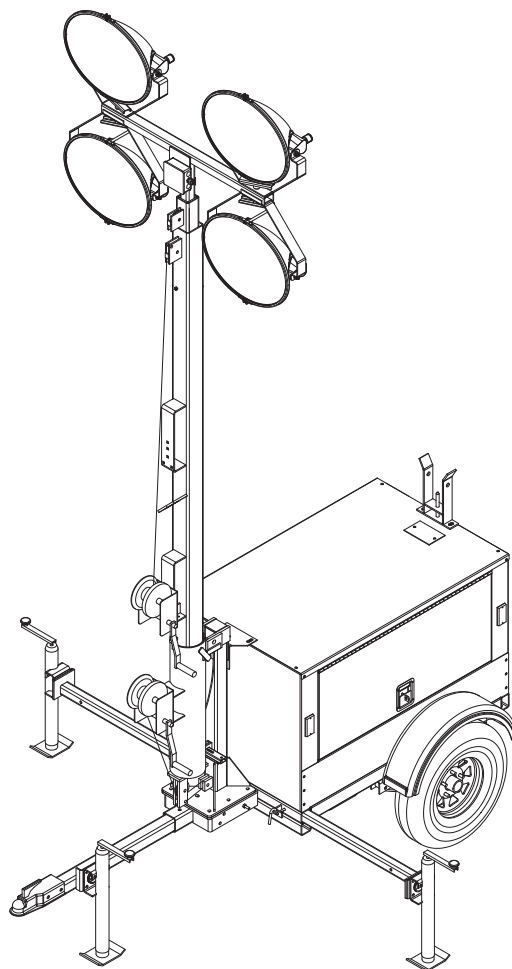


Owner's Manual

Light Tower

MLT3060M • MLT3060K



For technical assistance contact:
www.generacmobileproducts.com
Technical Support
1-800-926-9768

SAVE THIS MANUAL FOR FUTURE REFERENCE

Use this page to record important information about your Light Tower

Unit Model Number	
Unit Serial Number	
Engine Model Number	
Engine Serial Number	
Generator Model Number	
Generator Serial Number	

Record the information found on your unit data label on this page. See unit serial number location (**Component Locations**). The label plate is affixed to the inside partition, to the left of the control panel console.

Engine and generator serial numbers are located on separate data plates affixed to the engine and generator respectively.


When contacting a Generac Mobile Products Authorized Dealer about parts and service, always supply the complete model number and serial number of the unit.

Operation and Maintenance: Proper maintenance and care of the Light Tower ensures a minimum number of problems and keeps operating expenses at a minimum. It is the operator's responsibility to perform all safety checks, to verify that all maintenance for safe operation is performed promptly, and to have the equipment checked periodically by a Generac Mobile Products Authorized Dealer. Normal maintenance, service and replacement of parts are the responsibility of the owner/operator and, as such, are not considered defects in materials or workmanship within the terms of the warranty. Individual operating habits and usage may contribute to the need for additional maintenance or service.

 **WARNING**

CANCER AND REPRODUCTIVE HARM
www.P65Warnings.ca.gov

(000393a)

 **WARNING**

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65Warnings.ca.gov/diesel. (000394)

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Section 1: Safety Rules & General Information

Introduction

Thank you for purchasing a Generac Mobile Products LLC product. This unit has been designed to provide high performance, efficient operation, and years of use when maintained properly.

The information in this manual is accurate based on products produced at the time of publication. The manufacturer reserves the right to make technical updates, corrections, and product revisions at any time without notice.

Read This Manual Thoroughly



WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

If any section of the manual is not understood, contact your nearest Generac Mobile Products Authorized Dealer, or contact Generac Mobile Products Technical Service at 1-800-926-9768 or www.generacmobileproducts.com with any questions or concerns.

The owner is responsible for proper maintenance and safe use of the equipment. Comply with regulations the Occupational Safety and Health Administration (OSHA) has established, or with equivalent standards. Also, verify that the unit is applied, used, and maintained in accordance with the manufacturer's instructions and recommendations. Do nothing that might alter safe application/usage and render the unit in noncompliance with the aforementioned codes, standards, laws, and regulations.

Save these instructions for future reference. This manual contains important instructions for the unit that should be followed during setup, operation and maintenance of the unit and battery. ALWAYS supply this manual to any individual that will use this machine.

How to Obtain Service

When the unit requires servicing or repairs, contact a Generac Mobile Products Authorized Service Dealer (ASD) for assistance. Service technicians are factory-trained and are capable of handling all service needs. For assistance locating a dealer, visit www.generacmobileproducts.com/parts-service/find-service. When contacting a ASD about parts and service, always supply the complete model number and serial number of the unit as given on its data decal located on the unit. Record the model number and serial numbers in the spaces provided on the inside front cover of this manual.

Safety Rules

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all inclusive. If using a procedure, work method or operating technique that the manufacturer does not specifically recommend, verify that it is safe for others. Also make sure the procedure, work method or operating technique utilized does not render the equipment unsafe.

Throughout this publication, and on tags and decals affixed to the unit, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

DANGER

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

(000001)

WARNING

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

(000002)

CAUTION

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

(000003)

NOTE: Notes contain additional information important to a procedure and will be found within the regular text of this manual.

These safety alerts cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

General Hazards



⚠ DANGER

Asphyxiation. Running engines produce carbon monoxide, a colorless, odorless, poisonous gas. Carbon monoxide, if not avoided, will result in death or serious injury. (000103)



⚠ WARNING

Hearing Loss. Hearing protection is recommended when using this machine. Failure to wear hearing protection could result in permanent hearing loss. (000107)



⚠ WARNING

Moving Parts. Keep clothing, hair, and appendages away from moving parts. Failure to do so could result in death or serious injury. (000111)



⚠ WARNING

Hot Surfaces. When operating machine, do not touch hot surfaces. Keep machine away from combustibles during use. Hot surfaces could result in severe burns or fire. (000108)

⚠ WARNING

Equipment damage. Only qualified service personnel may install, operate, and maintain this equipment. Failure to follow proper installation requirements could result in death, serious injury, and equipment or property damage. (000182a)

⚠ WARNING

Risk of injury. Do not operate or service this machine if not fully alert. Fatigue can impair the ability to service this equipment and could result in death or serious injury. (000215)



⚠ WARNING

Risk of burns. Allow engine to cool before draining oil or coolant. Failure to do so could result in death or serious injury. (000139)

Explosion and Fire Hazards



⚠ DANGER

Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Add fuel in a well ventilated area. Keep fire and spark away. Failure to do so will result in death or serious injury. (000105)



⚠ WARNING

Risk of Fire. Unit must be positioned in a manner that prevents combustible material accumulation underneath. Failure to do so could result in death or serious injury. (000147)



⚠ WARNING

Risk of Fire. Hot surfaces could ignite combustibles, resulting in fire. Fire could result in death or serious injury. (000110)

Trailer Hazards

⚠ WARNING

Personal injury. Trailer must be securely coupled to the hitch with the chains correctly attached. Uncoupled or unchained towing could result in death or serious injury. (000233a)

⚠ WARNING

Personal injury. Do not operate unit during transport. Doing so could result in death, serious injury, or property damage. (000231a)

⚠ WARNING

Crushing hazard. Verify unit is properly secured and on level ground. An unsecured unit can suddenly roll or move, causing death or serious injury. (000234a)

⚠ WARNING

Property or Equipment Damage. Tighten wheel lug nuts after first 50 miles to factory specifications. Failure to do so could result in death, serious injury, property or equipment damage. (000235)

Electrical Hazards



⚠ DANGER

Electrocution. In the event of electrical accident, immediately shut power OFF. Use non-conductive implements to free victim from live conductor. Apply first aid and get medical help. Failure to do so will result in death or serious injury. (000145)



⚠ DANGER

Electrocution. Water contact with a power source, if not avoided, will result in death or serious injury.

(000104)



⚠ DANGER

Electrocution. Contact with bare wires, terminals, and connections while generator is running will result in death or serious injury.

(000144)



⚠ DANGER

Electrocution. Verify electrical system is properly grounded before applying power. Failure to do so will result in death or serious injury.

(000152)



⚠ DANGER

Electrocution. Do not wear jewelry while working on this equipment. Doing so will result in death or serious injury.

(000188)



⚠ DANGER

Electrocution. DO NOT use the unit if electrical cord is cut or worn through. Doing so will result in death or serious injury.

(000263a)

Battery Hazards



⚠ DANGER

Electrocution. Do not wear jewelry while working on this equipment. Doing so will result in death or serious injury.

(000188)



⚠ WARNING

Explosion. Batteries emit explosive gases while charging. Keep fire and spark away. Wear protective gear when working with batteries. Failure to do so could result in death or serious injury.

(000137a)



⚠ WARNING

Explosion. Do not dispose of batteries in a fire. Batteries are explosive. Electrolyte solution can cause burns and blindness. If electrolyte contacts skin or eyes, flush with water and seek immediate medical attention.

(000162)



⚠ WARNING

Risk of burn. Do not open or mutilate batteries. Batteries contain electrolyte solution which can cause burns and blindness. If electrolyte contacts skin or eyes, flush with water and seek immediate medical attention.

(000163a)

⚠ WARNING

Environmental Hazard. Always recycle batteries at an official recycling center in accordance with all local laws and regulations. Failure to do so could result in environmental damage, death or serious injury.

(000228)

Fuel Hazards



⚠ DANGER

Explosion and fire. Fuel and vapors are extremely flammable and explosive. No leakage of fuel is permitted. Keep fire and spark away. Failure to do so will result in death or serious injury.

(000192)



⚠ DANGER

Risk of fire. Allow fuel spills to completely dry before starting engine. Failure to do so will result in death or serious injury.

(000174)

- **DO NOT** fill fuel tank near an open flame, while smoking, or while engine is running. **DO NOT** fill tank in an enclosed area with poor ventilation.
- **DO NOT** operate with the fuel tank cap loose or missing.

Engine Safety

Internal combustion engines present special hazards during operation and fueling. Failure to follow the safety guidelines described below could result in severe injury or death. Read and follow all safety alerts described in the engine operator's manual. A copy of this manual was supplied with the unit when it was shipped from the factory.

- **DO NOT** run engine indoors or in an area with poor ventilation. Make sure engine exhaust cannot seep into closed rooms or ventilation equipment.
- **DO NOT** clean air filter with gasoline or other types of low flash point solvents.
- **DO NOT** operate the unit without a functional exhaust system.
- Shut the engine down if any of the following conditions exist during operation:
 - Abnormal change in engine speed.
 - Loss of electrical output.
 - Equipment connected to the unit overheats.
 - Sparking occurs.
 - Engine misfires or there is excessive engine/generator vibration.
 - Protective covers are loose or missing.
 - Ambient air temperature is above 120°F (49°C).

Operating Safety

Positioning the Unit



⚠ DANGER

High Voltage. Verify area above unit is clear of overhead wires and obstructions. Contact with high-voltage power lines will result in death or serious injury. (000260a)



⚠ WARNING

Burn hazard. Never operate lights with a damaged or missing lens cover. Lamps are hot and pressurized while in use. Unprotected lamps can shatter, causing severe injury. (000277)

- The area immediately surrounding the unit should be dry, clean, and free of debris.
- Position and operate unit on a firm, level surface.
- If the unit is equipped with a frame grounding stud, follow the National Electrical Code (NEC), state, and local regulations when connecting.

Starting the Unit



⚠ DANGER

Electrocution. **DO NOT** use the unit if electrical cord is cut or worn through. Doing so will result in death or serious injury.

(000263a)

⚠ WARNING

Equipment damage. Do not attempt to start or operate a unit in need of repair or scheduled maintenance. Doing so could result in serious injury, death, or equipment failure or damage.

(000291)

Raising and Lowering the Mast



⚠ WARNING

Electrocution. Do not set up or operate this unit if severe weather is expected. Lightning strikes can kill or cause severe injury even if you are not touching the unit. (000296)



⚠ WARNING

> 60 mph Do not set up the unit if high winds are expected. High winds can cause the unit to tip or fall, causing severe injury or machine damage. (000297)

⚠ WARNING

Personal injury or equipment damage. Do not raise or lower the mast while the unit is operating. Doing so can break the lenses and cause the lamps to shatter. (000279)

⚠ WARNING

Personal Injury. Stop immediately if the mast hangs up or the winch cable develops slack. Excess slack could cause the mast to collapse, resulting in personal injury or equipment damage. (000265)

⚠ WARNING

Tipping hazard. Extend the outriggers and level the unit before raising the mast. Keep the outriggers extended while the mast is up. Failure to do so could cause the unit to tip and fall and could result in death or serious injury. (000266)



⚠ WARNING

Burn hazard. Lamps become extremely hot while in use. Allow 10–15 minutes for cooling before handling or lowering mast. Touching a hot lens or fixture can cause severe burns. (000278)

(000278)

- Keep area around the unit clear of people while raising and lowering the mast.
- **ALWAYS** lower the mast when not in use.
- The tower extends up to 30 ft (9.14 m). Make sure area above trailer is open and clear of overhead wires and obstructions.
- If for any reason any part of mast hangs up or winch cable develops slack while raising or lowering tower, **STOP** immediately! Contact a Generac Mobile Products Authorized Service Dealer.
- **NEVER** remove safety pin or pull mast locking pin while tower is up.

Service Safety

This unit uses high voltage circuits capable of causing serious injury or death. Only a qualified and licensed electrician should troubleshoot or repair problems occurring in this equipment.

- Before servicing the unit, verify the Control Power switch and circuit breakers are in the OFF (O) position, and the negative (-) terminal on the battery is disconnected. **DO NOT** perform even routine service (oil/filter changes, cleaning, etc.) unless all electrical components are shut down.
- **ALWAYS** use extreme caution when servicing this unit in damp conditions. Do not service the unit if your skin or clothing is wet. Do not allow water to collect around the base of the unit.
- **DO NOT** wash the unit with high pressure hoses, power washers, or steam cleaners. Water may collect in the unit, causing damage to electrical parts.
- Replace all missing and hard to read decals. Decals provide important operating instructions and warn of dangers and hazards.
- Wear heavy leather gloves when handling winch cables. Never let cables slip through bare hands.
- Only use mild soap and water to clean the lens covers. Other chemicals may damage the lens covers.
- Make sure slings, chains, hooks, ramps, jacks and other types of lifting devices are attached securely and have enough weight-bearing capacity to lift or hold the equipment safely. Always remain aware of the position of other people around you when lifting the equipment.

Towing Safety

Towing a trailer requires care. Both the trailer and vehicle must be in good condition and securely fastened to each other to reduce the possibility of an accident. Some states require that large trailers be registered and licensed. Contact your local Department of Transportation office to check on license requirements for your particular unit.

Hitch and Coupling

- Verify the hitch and coupling on the towing vehicle are rated equal to, or greater than, the trailer's Gross Vehicle Weight Rating (GVWR).
- Verify the trailer hitch and the coupling are compatible. Make sure the coupling is securely fastened to the vehicle.
- **DO NOT** tow trailer using defective parts. Inspect the hitch and coupling for wear or damage.
- Connect safety chains in a crossing pattern under the tongue.
- Before towing the trailer, verify the weight of the trailer is equal across all tires. On trailers with adjustable height hitches, adjust the angle of the trailer tongue to keep the trailer as level as possible.

Running Lights

Verify directional and brake lights on the trailer are connected and working properly

Wheels and Tires

- Check trailer tires for wear and proper inflation.
- Verify wheel lug nuts are present and tightened to the specified torque.

Safe Towing Techniques

- Practice turning, stopping and backing up in an area away from heavy traffic prior to transporting the unit.
- Maximum recommended speed for highway towing is 45 mph (72 km/h). Recommended off-road towing speed is 10 mph (16 km/h) or less, depending on terrain.
- When towing, maintain extra space between vehicles and avoid soft shoulders, curbs and sudden lane changes.

Reporting Trailer Safety Defects

If you believe your trailer 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 notifying Generac Mobile Products LLC.

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 an individual problem between you, your dealer, or Generac Mobile Products LLC.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-888-327-4236 (TTY:1-800-424-9153), go to <http://www.safercar.gov>; or write to:

Administrator
NHTSA
1200 New Jersey Avenue S.E.
Washington, DC 20590

You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

Safety and Operating Decals

See [Figure 1-1](#) through [Figure 1-4](#). This unit features numerous safety and operating decals. These decals provide important operating instructions and warn of dangers and hazards. The following diagrams illustrate decal locations and descriptions.

Replace any missing or hard-to-read decals and use care when washing or cleaning the unit. Decal part numbers can be found in the parts manual at www.generacmobileproducts.com.

13	Instruction–Align Before Tilting Mast Down
14	Danger–Lower Mast Before Tilting, Do Not Position Light Tower Under Power Lines
15	Forklift Pockets
16	Single Point Lift Location
17	Warning–Secure Mast Before Lifting or Towing
18	Instruction–Engine Operation
19	Danger–High Winds and Storms, Overhead Obstructions
20	Danger–Do Not Move Unit With Tower Up
21	Warning–Read Manual Before Operating Unit
22	Warning–Verify Circuit Breaker is OFF Before Starting Unit
23	Tie-Down Point
24	Secure Mast
25	Consult Manual
26	Warning–Pinch Point
27	Danger–Diesel Fuel, Asphyxiation, No Open Flame
28	Ultra Low Sulfur Fuel Only
29	Grounding Stud
30	Warning–Fire and Explosion
31	Warning–Moving Parts
32	Warning–Hot Surface, Moving Parts

ID	Description
1	Warning–Stand Clear When Mast is Being Tilted
2	Warning–Hot Surface
3	Warning–Ultraviolet Radiation
4	Instruction–Raise Mast Manual Winch
5	Instruction–Raise Mast Electric Winch
6	Instruction–Mast Control Electric Winch
7	Danger–Do Not Remove
8	Danger–Electrocution
9	Instruction–Keep Tension on Cables
10	Mast Junction Box Wiring
11	Warning–Hot Surface, Fire and Explosion
12	Instruction–Towing Instructions

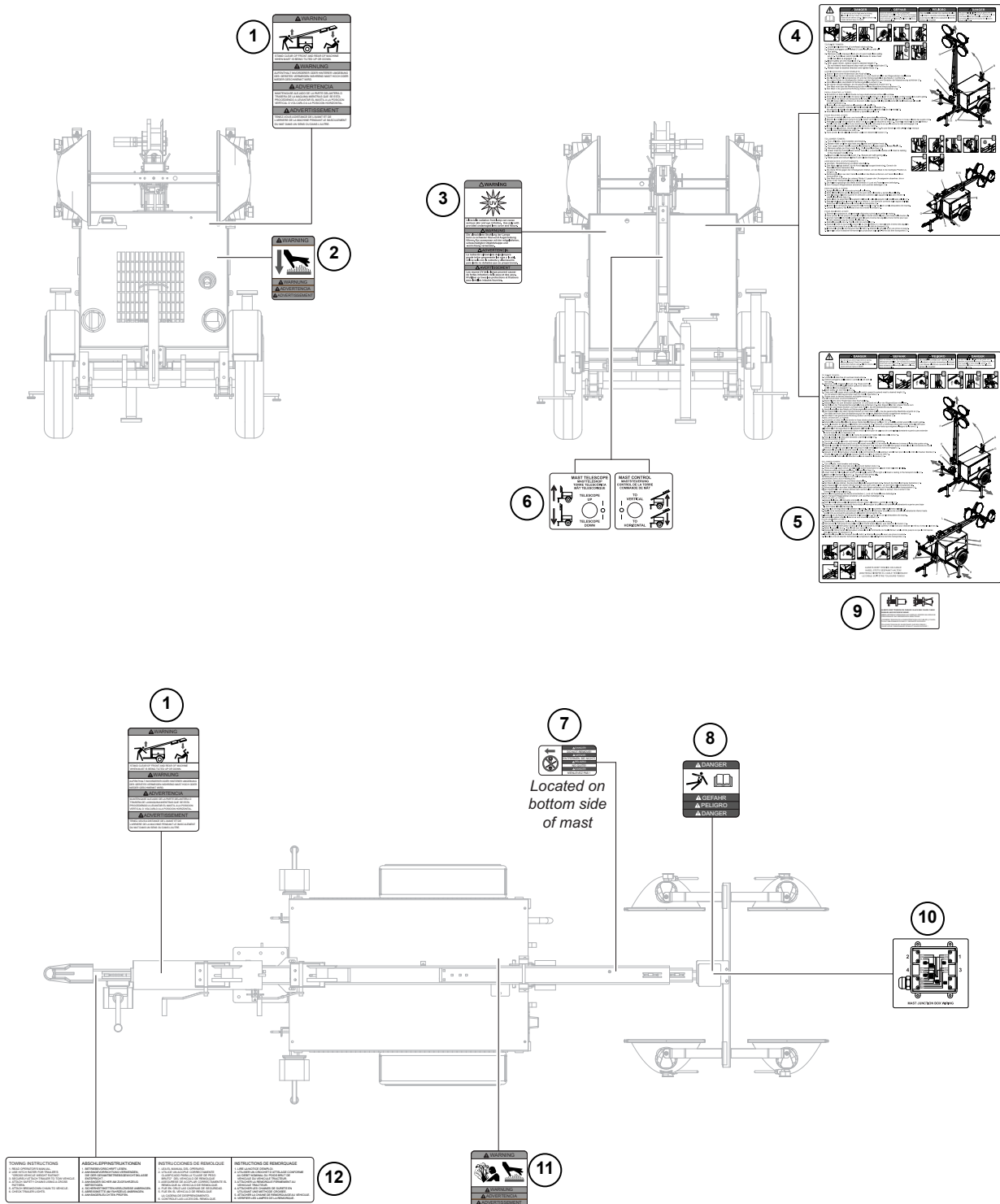


Figure 1-1. Decals - Front, Rear and Top

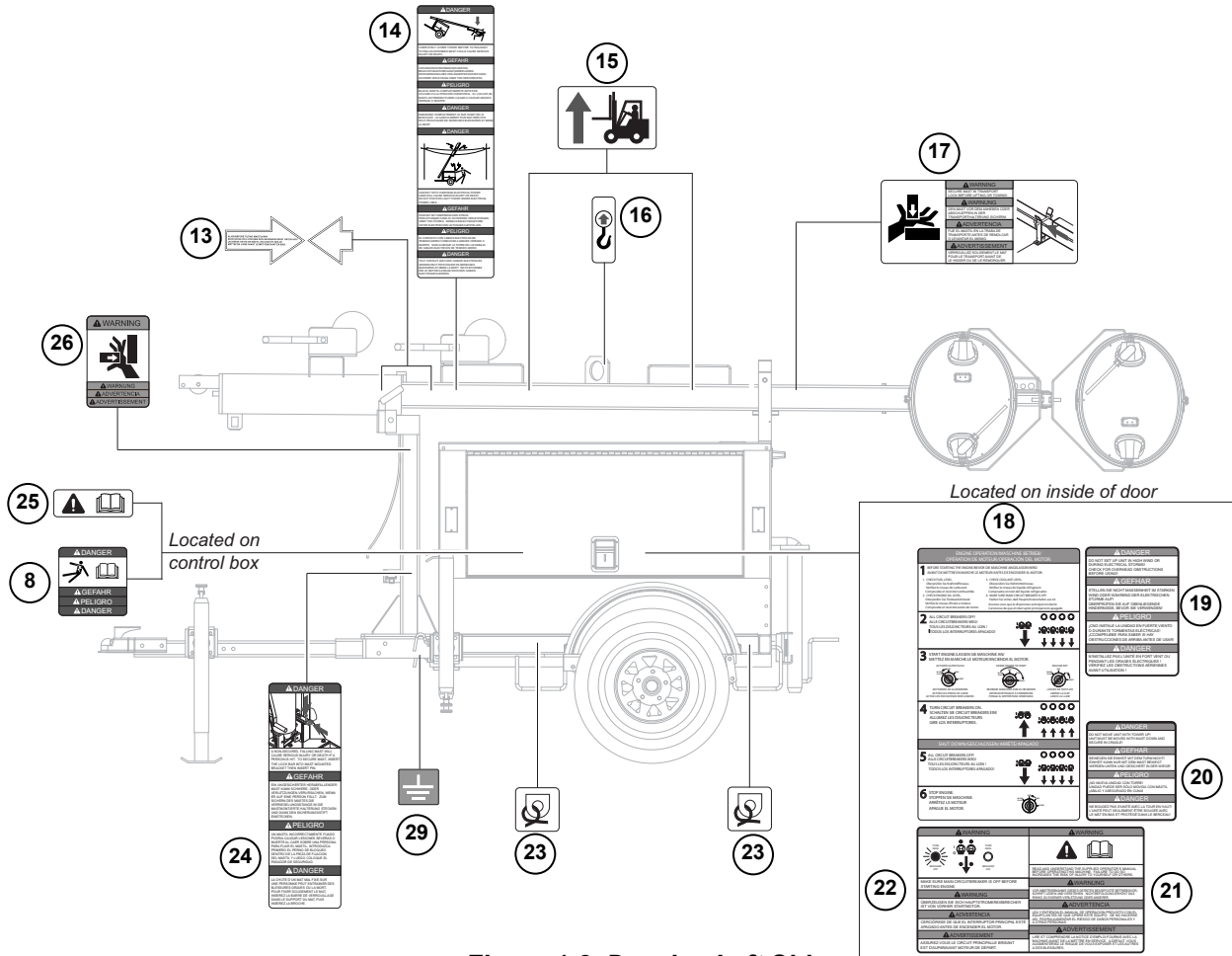


Figure 1-2. Decals - Left Side

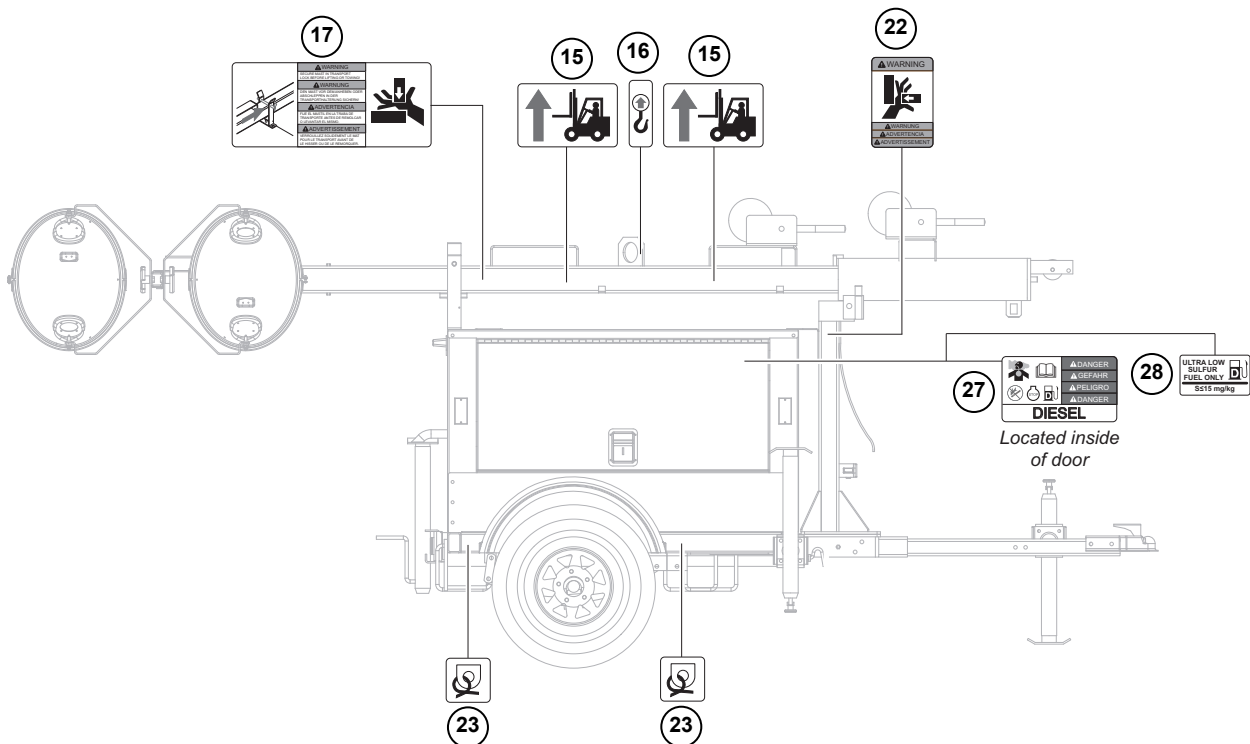


Figure 1-3. Decals - Right Side

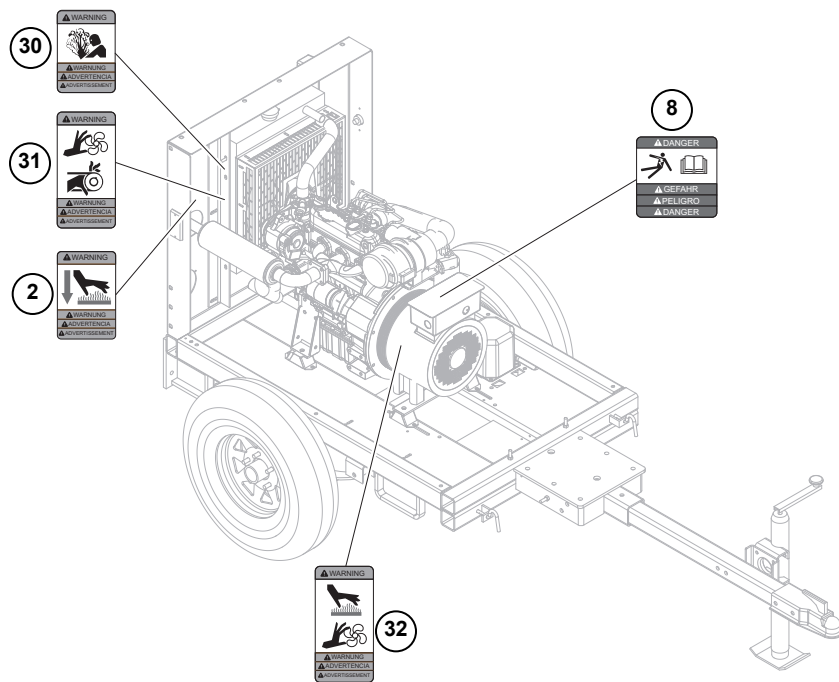
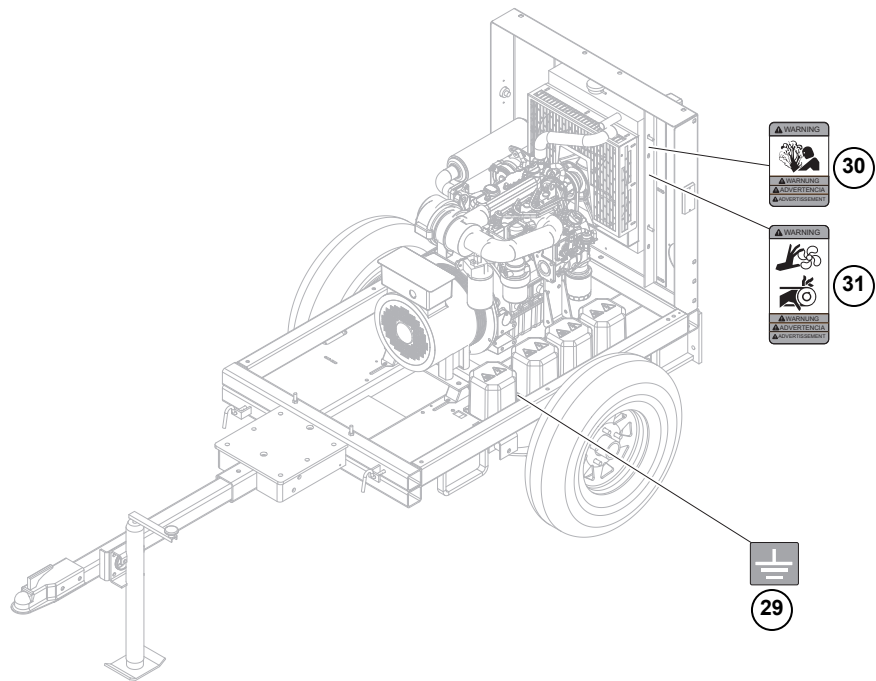


Figure 1-4. Decals - Inside Unit

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Section 2: General Information

Specifications

DESCRIPTION	UNITS	MLT3060M	MLT3060K
Engine			
EPA Tier	—	4f	4f
Fuel Consumption—Full Load	gph (Lph)	0.59 (2.22)	0.67 (2.54)
Battery Type—Group Number	—	24	24
Battery Voltage	quantity per unit	12V (1)	12V (1)
Battery Rating	amp-hours	440 CCA	440 CCA
Generator			
Model	—	201CSA5411	201CSA5411
Output - Standby	kW (kVA)	6.0 (6.0)	6.0 (6.0)
Output Voltage	volts	120/240, single phase	120/240, single phase
Output Amperes 120V (240V)	amperes	50 (25)	50 (25)
Frequency Hz	Hertz	60	60
Weights			
Dry Weight	lbs (kg)	1640 (744)	1657 (752)
Operating Weight	lbs (kg)	1856 (842)	1873 (850)
Capacities			
Fuel Tank Volume	gal (L)	30 (114)	30 (114)
Usable Fuel Volume	gal (L)	30 (114)	30 (114)
Coolant (including engine)	qt (L)	4.5 (4.3)	4.8 (4.5)
Oil (including filter)	qt (L)	3.8 (3.6)	5.4 (5.1)
AC Distribution			
Circuit Breaker Size	amperes	30	30
Trailer			
Hitch—Standard	—	2 in. Ball	2 in. Ball
Maximum Tire Pressure	psi (kPA)	50 (345)	50 (345)
<i>Specifications are subject to change without notice.</i>			

Unit Serial Number Locations

See [Figure 2-1](#) to locate the unit ID tag and Vehicle Identification Number (VIN) tag on the unit. Important information, such as the unit serial number, model number, VIN and tire loading information are found on these tags. Record the information from these tags so it is available if the tags are lost or damaged. When ordering parts or requesting assistance, you may be asked to provide this information

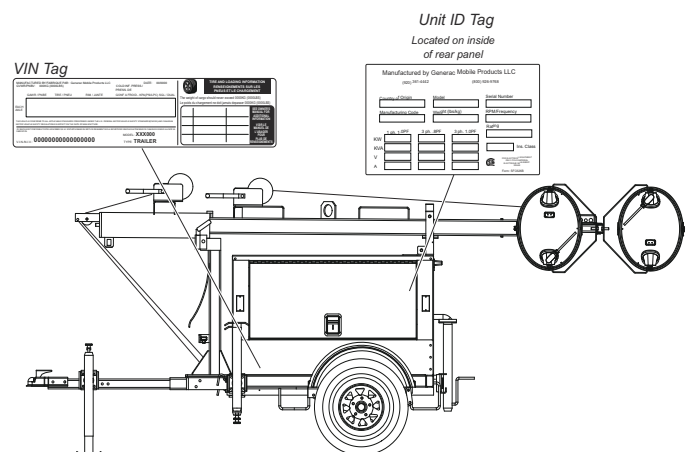


Figure 2-1. Serial Number Locations

Unit Dimensions

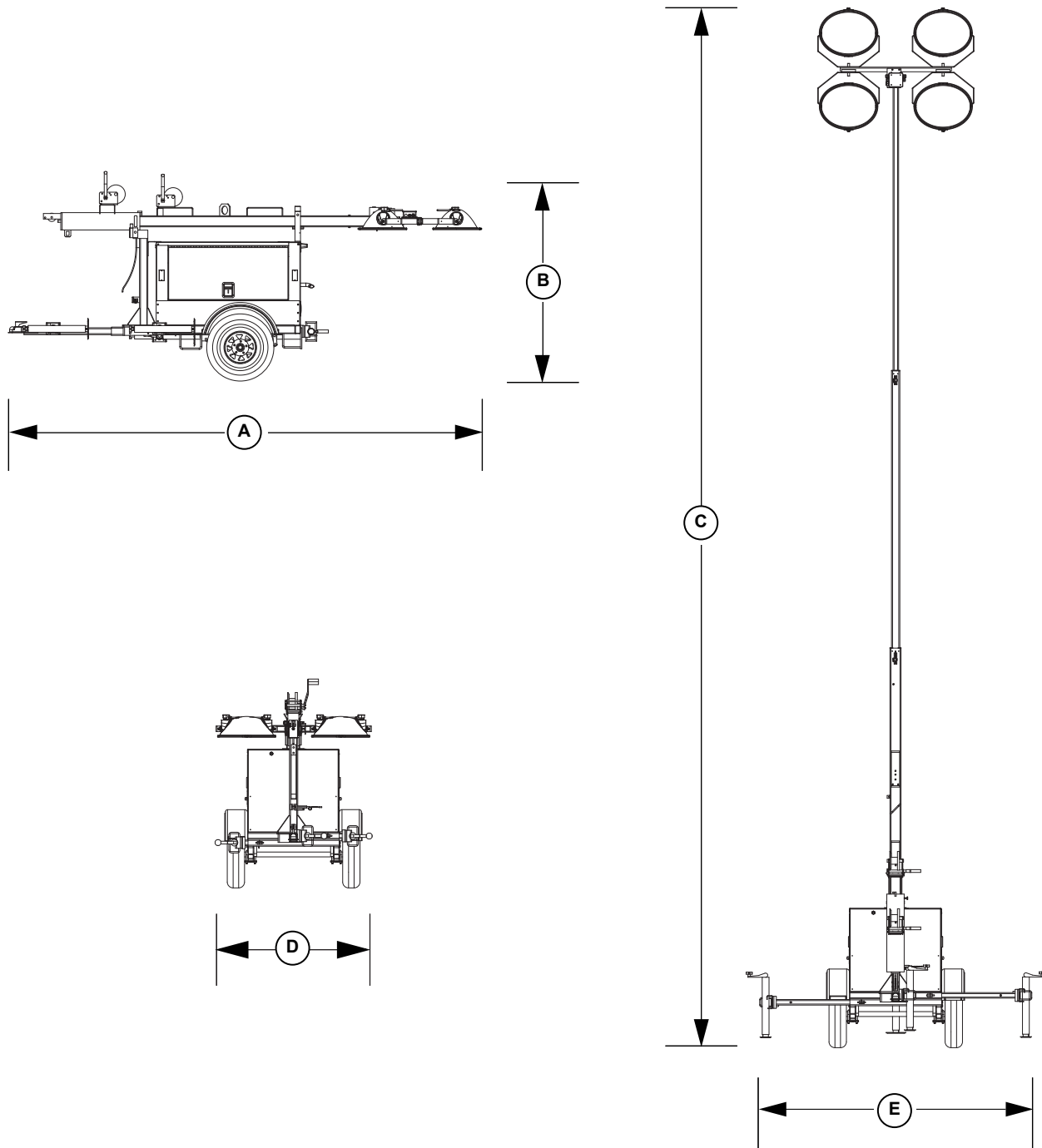


Figure 2-2. Unit Dimensions

	A	B	C	D	E
MLT3060M/K	170 in. (4.32 m)	68 in. (1.73 m)	30 ft (9.14 m)	49 in. (1.25 m)	98 in. (2.49 m)

Specifications are subject to change without notice.

Component Locations

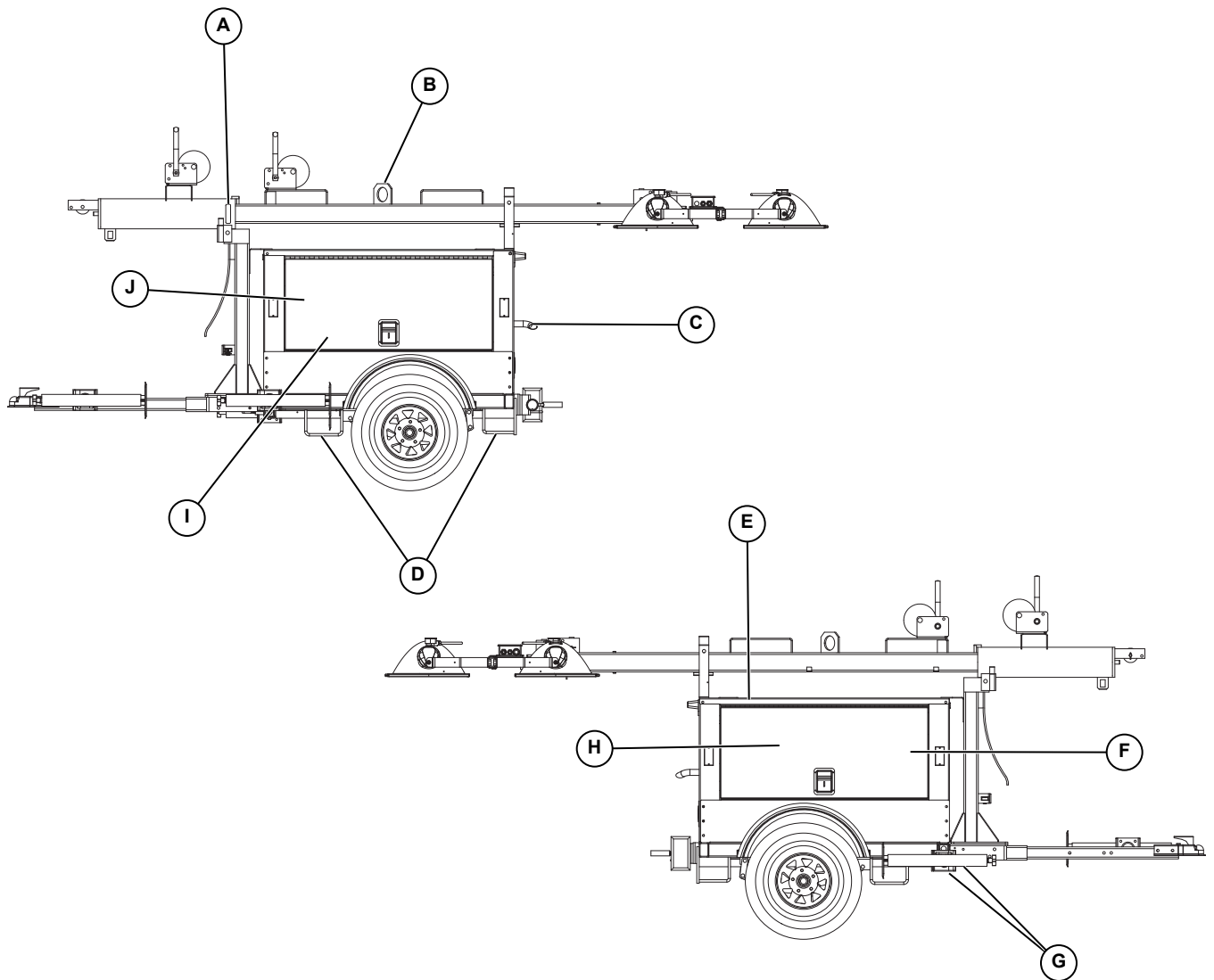


Figure 2-3. Component Locations

- | | | | |
|----------|--------------------|----------|---------------|
| A | Mast Rotation Knob | F | Fuel Fill |
| B | Central Lift Point | G | Outriggers |
| C | Engine Exhaust | H | Engine Access |
| D | Forklift Pockets | I | Battery |
| E | Radiator Access | J | Control Box |

Control Panel

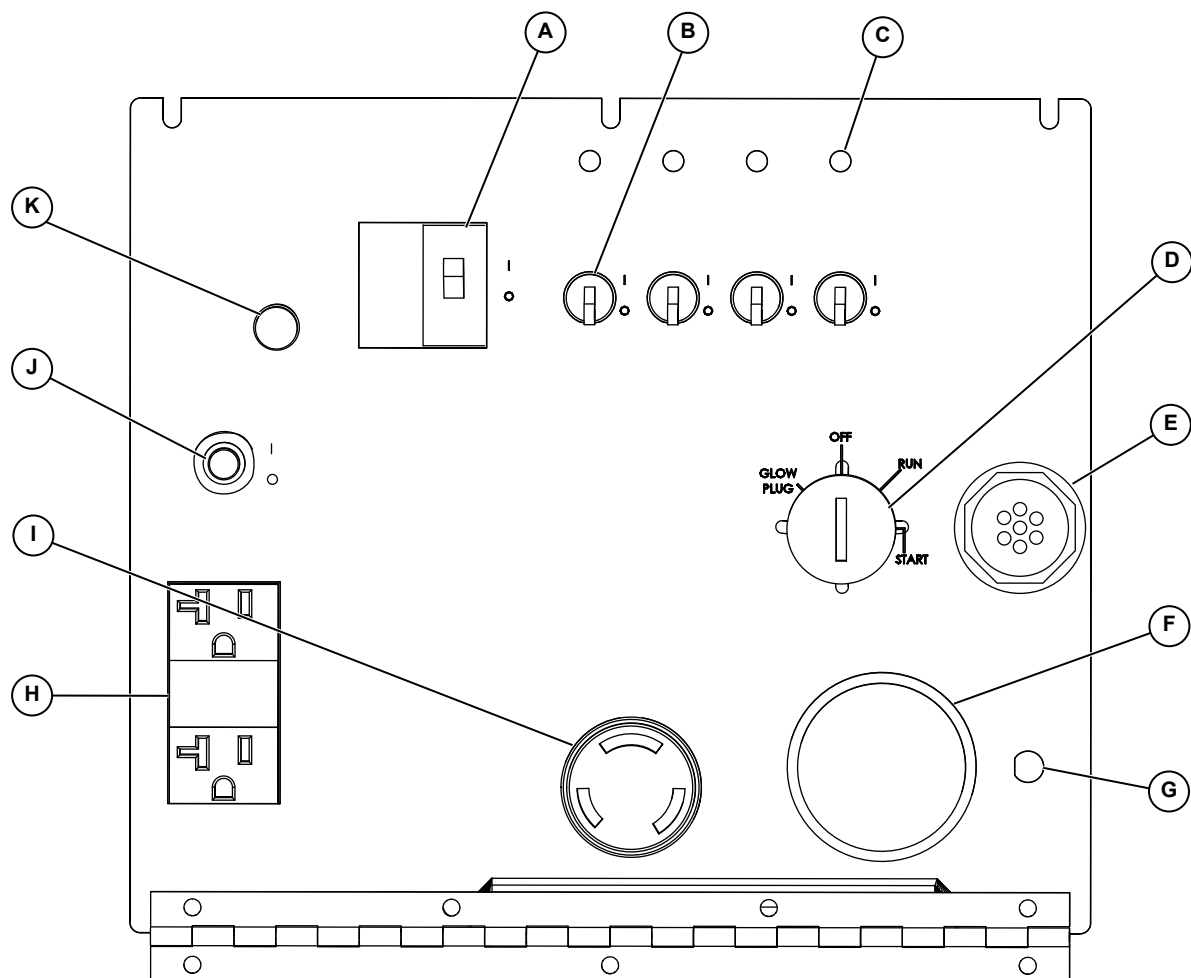


Figure 2-4. Control Panel

Control Panel Features and Functions

(A) Main Circuit Breaker

240V/30A breaker which disconnects power from the lights and control panel.

(B) Light Switches (4)

One circuit breaker is supplied for each light.

(C) Ballast Indicator Lights

Indicates power from the ballast to each light.

(D) Engine Start Switch

Keyed switch operates glow plugs, starts and stops engine.

(E) Glow Plug Indicator (If Equipped)

Indicates operation of the engine glow plugs. (Mitsubishi engines only).

(F) Engine Hour Meter

Keeps track of engine hours for service.

(G) DC Breaker

10A circuit breaker for the engine electrical system.

(H) 120V GFCI Outlet

120V/20A GFCI outlet supplies power for accessories connected to the generator when the engine is running and the main circuit breaker is ON (I).

(I) 240V Twist-Lock Outlet

240V/30A outlet supplies power for accessories connected to the generator when the engine is running and the main circuit breaker is ON (I).

(J) 120V Breaker

120V/20A circuit breaker for the 120V GFCI outlet.

(K) Circuit Breaker Indicator Light

Indicates the main circuit breaker must be opened (switched OFF) before starting engine.

PowerZone–DLA (If Equipped)

The PowerZone–DLA is an AUTO start controller that monitors the unit and indicates operational status and fault conditions. The controller can be programmed to automatically start or stop based on time schedule, fault condition, or load demand.

The controller constantly monitors vital generator and engine functions for a number of preprogrammed alarm and fault conditions. When a fault condition occurs, the

engine will be shut down automatically and the LCD window will show the fault that caused the shutdown. To resume operation, the fault condition must be corrected.

This controller also records a history of unit performance, which may be viewed at any time and will not be lost when the controller is powered down.

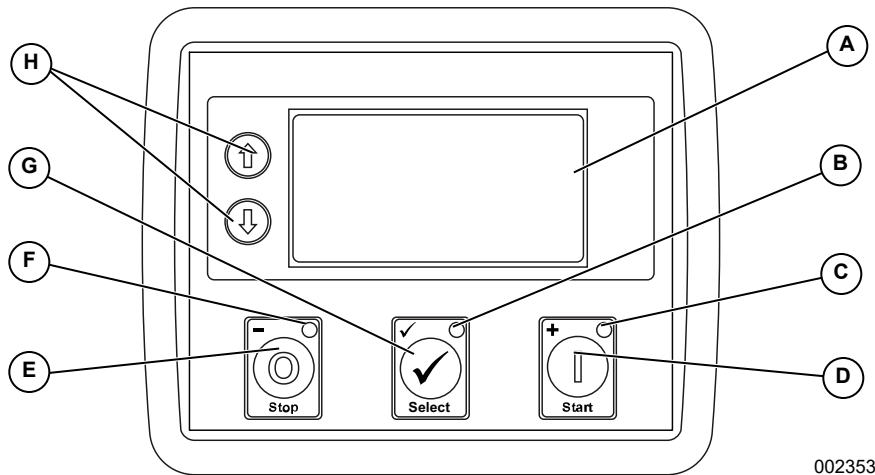


Figure 2-5. PowerZone–DLA Layout

Controller Features and Functions

(A) Display Window

This window displays the various operating screens. By viewing these screens, the operator can monitor both the engine and generator status while the unit is running.

(B) Select LED

This LED illuminates when the unit is running in AUTO mode.

(C) Start LED

This LED illuminates when the unit is running in MANUAL mode.

(D) Start Button

This button starts the engine if there are no shutdown errors and the engine is in “ready to start” status.

(E) Stop Button

This button shuts down the unit and puts the controller into STOP mode, whether in MANUAL mode or AUTO mode.

NOTE: To prevent damage to the generator and connected equipment, remove all loads from the generator by opening all circuit breakers (switch OFF [O]) before pressing the Stop button.

(F) Stop LED

This LED illuminates when the unit is in STOP mode and flashes when an Electrical Trip and Shutdown Fault has occurred.

(G) Select Button

This button confirms entries chosen in the various edit menus and screens.

(H) Menu Navigation

These buttons (↑, ↓) are used to navigate through the various operator screens.

Operator Screens

See [Figure 2-6](#). The operator screens display the most relevant and critical information an operator will need to properly configure and use the unit. From these six screens, the operator can access information necessary to operate the unit under normal conditions.

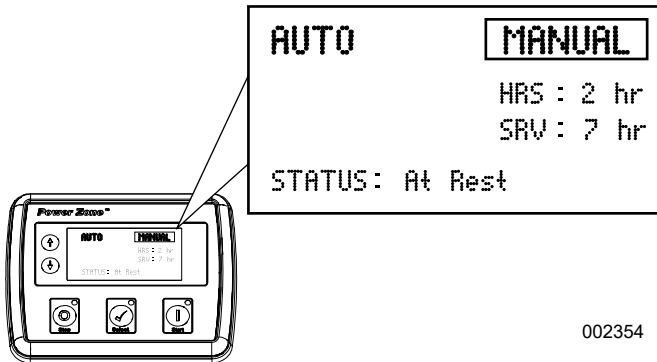


Figure 2-6. Operator Screens Location

Home Screen

See [Figure 2-7](#). The Home screen is the default screen of the controller and displays after the controller is powered up and the unit management software is loaded. It displays the controller mode, total operating hours, hours left until the next service interval, engine operating status, and engine RPM. If the unit is in AUTO mode, the Home screen may also display whether the scheduler or “dusk to dawn” are enabled.

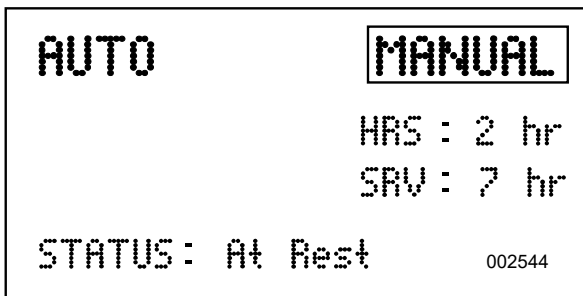
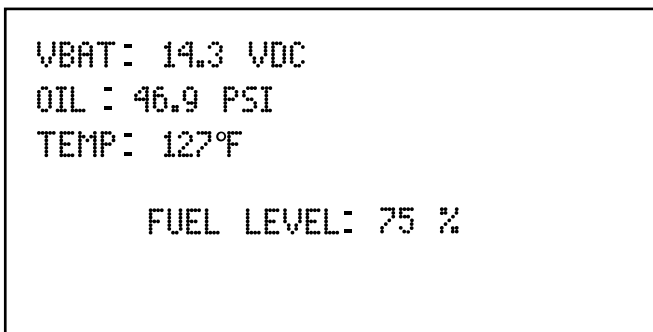


Figure 2-7. Home Screen

Engine Screen

- See [Figure 2-8](#). Displays battery voltage, oil pressure, coolant temperature and fuel level.



002355

Figure 2-8. Engine Screen

- VBAT: Displays the engine battery voltage. A normal reading is 12-14V on 12 volt systems and 24-26V on 24V systems (with the engine running).
- OIL: Displays engine oil pressure. Normal operating pressure is between 35-80 psi (241-552 kPa).
- TEMP: Displays engine coolant temperature. Normal operating temperature of the unit is between 100-230°F (38-110°C).
- FUEL LEVEL: Displays remaining fuel level as a percentage of usable fuel tank capacity.

Lights Screen

See [Figure 2-9](#). The Lights screen enables the operator to turn the lights ON and OFF. See [Light Operation](#) or [Light Operation \(With PowerZone Controller, If Equipped\)](#) for more information.

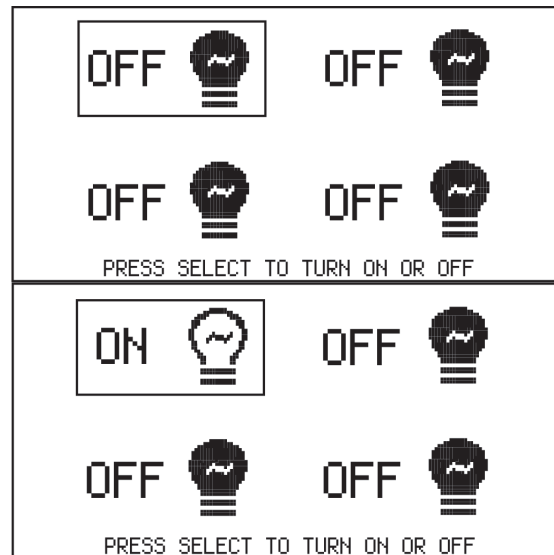


Figure 2-9. Lights Screen

Scheduler Screen

See [Figure 2-10](#). Enables the operator to program specific times for the lights to turn ON and OFF. Once programmed, the Scheduler will start the engine and illuminate the lights until the designated shutdown time.

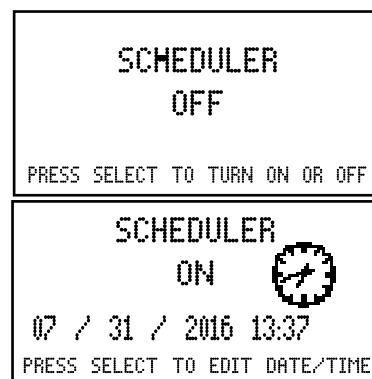


Figure 2-10. Scheduler Screen

NOTE: This feature will only work in AUTO mode.

Maintenance Screens

See **Figure 2-11**. The information displayed on the maintenance screens can be used to identify, diagnose and troubleshoot unit shutdown conditions and poor unit performance.

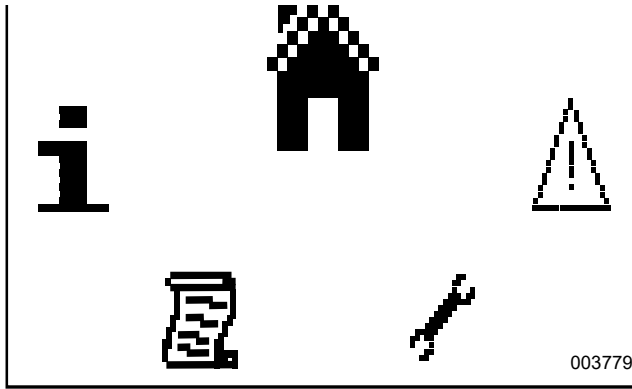


Figure 2-11. Maintenance Screens

Icon	Description
	Home screen
	Alarms screen
	Maintenance screen
	Event log screen
	About screen

To enter the navigation menu, use the following procedure:

1. Press both the ↑ and ↓ buttons simultaneously.
2. To select the required icon, press the ↑ button to cycle right and the ↓ button to cycle left until the desired operator screen section is reached.
3. Once the desired icon is at the top, press the Select (✓) button to enter that operator screen section.

NOTE: Every time the operator screens are entered, the home icon will be located at the top of the screen.

Alarms Screen

See **Figure 2-12**. The Alarms (⚠) screen displays all the alarms, warnings, and engine Diagnostic Trouble Code (DTC) faults. When an alarm occurs, the controller automatically switches to this screen and remains there until the alarm is cleared. The Stop LED also flashes.

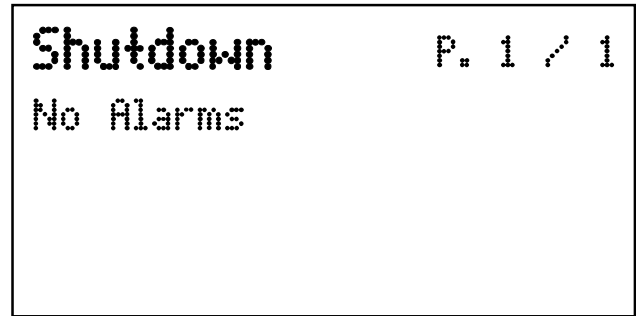


Figure 2-12. Alarms Screen

- **Warnings** are non-critical alarm conditions and do not affect the operation of the unit. They serve to draw attention to an undesirable condition. By default, warning alarms are self-resetting when the fault condition is removed.
- **Electrical trips** stop the generator in a controlled manner. On initiation of the electrical trip condition, the controller de-energizes all the outputs, including the lights, to remove the load from the generator. Once this has occurred, the controller starts the cooling timer and allows the engine to cool off-load before shutting down the engine.
- **Shutdown alarms** stop the generator immediately. On initiation of the shutdown condition, the controller de-energizes all the outputs, including the lights, to remove the load from the generator. Once this has occurred, the controller shuts the unit down immediately to prevent further damage.
- **DTC faults** are displayed by the controller.

Table 2-1. Possible DTC Faults

Fault	DTC Description
Check Engine Fault	A fault not recognized by the controller has been detected. Contact the engine manufacturer for support.
Low Oil Pressure	Engine oil pressure has fallen below its configured low oil pressure alarm level.
Underspeed	Engine speed has fallen below its configured underspeed alarm level.
Overspeed	Engine speed has risen above its configured overspeed alarm level.

Table 2-1. Possible DTC Faults

Fault	DTC Description
Low Fuel Level	Engine's fuel level has fallen below its configured low fuel level alarm.
Battery Under/Over Voltage	Engine's DC supply has fallen below or risen above its configured alarm level.

To view the active alarms, repeatedly press the ↑ and ↓ buttons until the LCD window displays the alarm.

Continue to press the ↑ and ↓ buttons to cycle through the alarms.

To exit the alarm screen, press the ↑ and ↓ buttons simultaneously to enter the navigation menu. Once entered, cycle to the desired operator screen.

NOTE: The alarm condition must be corrected before a reset will take place. If the alarm condition remains, it is not possible to reset the unit. The exception to this is the Low Oil Pressure alarm and similar 'active from safety on' alarms, as the oil pressure is low with the engine at rest.

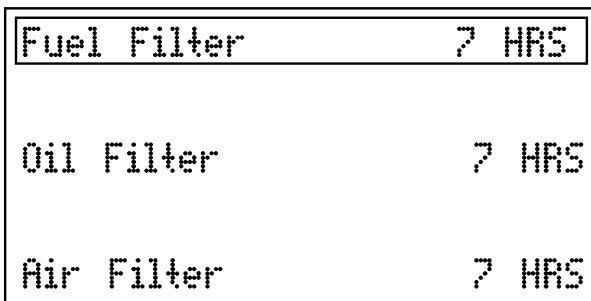
To clear alarms that stop the generator, see [Resetting the Maintenance Alarms \(If Equipped\)](#).

NOTE: The LCD backlight is ON if the unit has sufficient voltage while the unit is turned ON, unless the unit is cranking. In this case, the backlight is turned OFF.

If the controller is left in STOP mode for a period of inactivity, the controller enters POWER SAVE mode. To 'wake' the controller, press the Stop (O) button.

Maintenance Screen

See [Figure 2-13](#). The Maintenance screen (🔧) displays the maintenance alarms configured into the controller. The three alarms are for servicing the fuel filter, oil filter, and air filter.



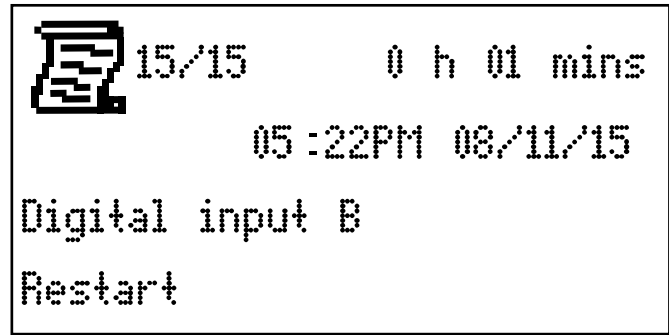
003781

Figure 2-13. Maintenance Screen

Event Log Screen

See [Figure 2-14](#). The controller's event log (📄) displays a list of the last 15 recorded electrical trips or shutdown events and the engine hours at which they occurred. Once the log is full, any subsequent electrical trip or

shutdown alarm overwrites the oldest entry in the log. Therefore, the log always contains the most recent shutdown alarms.



003782

Figure 2-14. Event Log Screen

To view the event log:

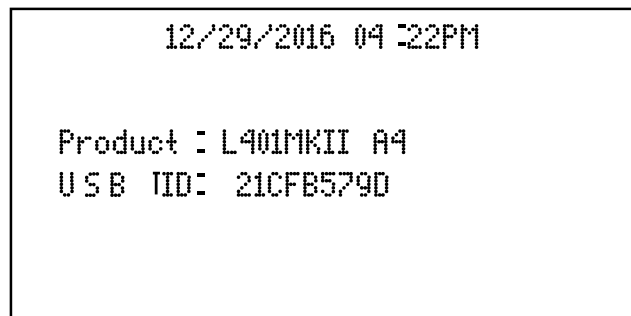
1. Press both ↑ and ↓ buttons simultaneously to display the navigation menu.
2. Cycle to the event log section and press the Auto button to enter.
3. Repeatedly press the ↑ or ↓ buttons until the LCD window displays the desired event.

Continuing to press down the ↑ or ↓ buttons will cycle through past alarms. Eventually the most recent alarm will display and the cycle begins again.

To exit the event log, press the ↑ and ↓ buttons simultaneously to enter the navigation menu. Once entered, cycle to the desired operator screen.

About Screen

See [Figure 2-15](#). The About (ℹ️) screen contains information about the controller such as the controller's date and time, the product and USB identification number, and the application and engine version.



003783

Figure 2-15. About Screen

Section 3: Operation

Light Tower Setup

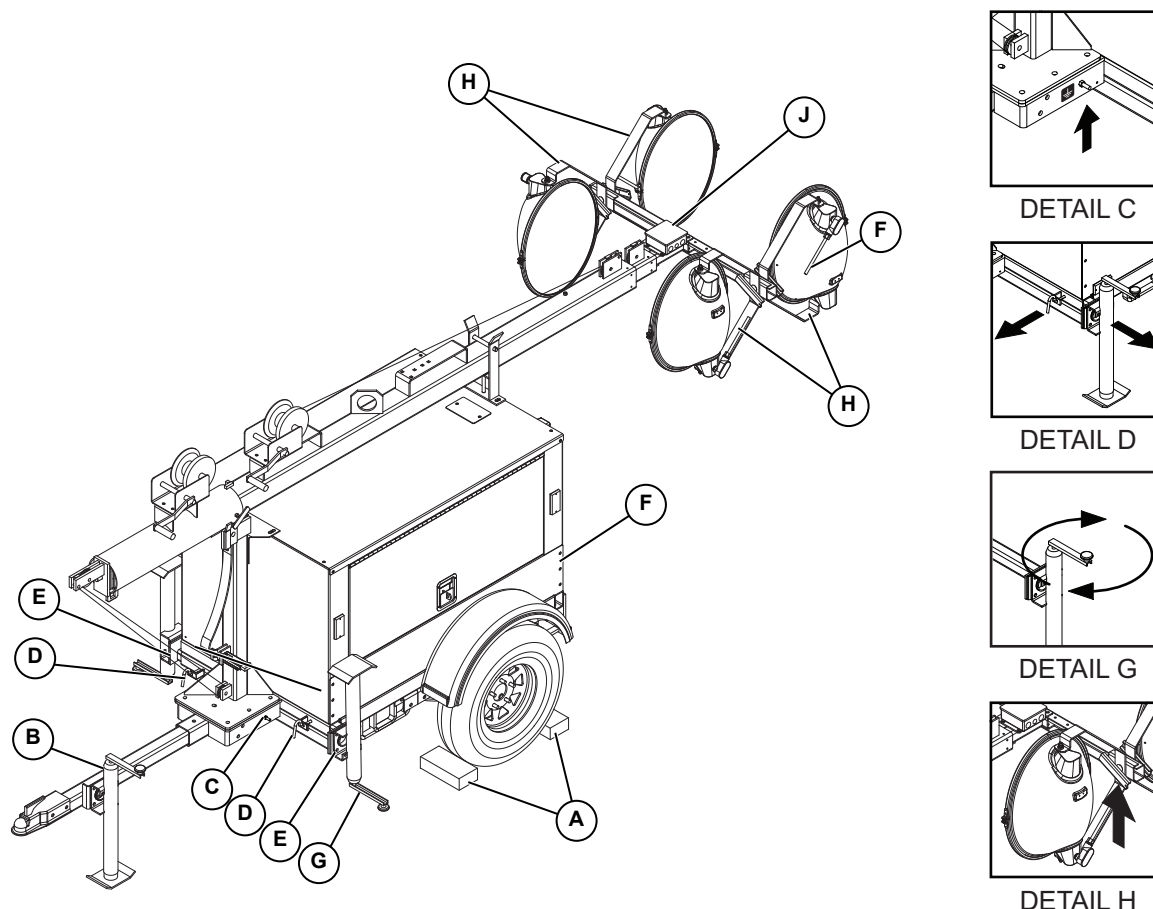


Figure 3-1. Set Up Outriggers and Jacks

003789



⚠ DANGER

High Voltage. Verify area above unit is clear of overhead wires and obstructions. Contact with high-voltage power lines will result in death or serious injury.

(000260a)

1. For maximum light coverage, position the unit at ground level or in a spot higher than the area being illuminated by the lamps.
- NOTE:** The mast extends up to 30 ft (9.14 m).
2. See **Figure 3-1**. Place the unit on firm ground that is relatively flat, and then block the wheels (A) to keep it from moving. This will make it easier to level the unit.
 3. Pull the locking pin (B) on the tongue jack and rotate the jack 90°. Reinstall the locking pin. Turn the jack handle clockwise to raise the trailer tongue off of the towing vehicle.

4. A grounding stud (C) is located on the control box. For grounding requirements, follow the National Electrical Code (NEC), state, and local regulations.
5. See Detail E. Pull the locking pin (D) on the outrigger (E) and pull each outrigger out until the spring loaded locking pin snaps back into place. Pull the locking pin on the outrigger jack and rotate each jack 90° so the jack pad is facing down. Reinstall the locking pin.
6. Pull the locking pin on the rear jack (F) and rotate the jack 90°. Reinstall the locking pin. Rotate the jack handle clockwise to start leveling the trailer (see Detail G). Adjust all four jacks by rotating their handles (G) clockwise until they are firmly in contact with the ground and the trailer is as level as possible.
7. See Detail H. Before raising the mast, it may be necessary to adjust the lamps. The lamps may be adjusted up, down, left or right by simply aiming them in the desired direction.

Prestart Checklist

Before starting the unit, all items in the prestart checklist must be completed. This checklist applies to both manual and remote starting of the unit.



WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

- Verify all maintenance procedures are up to date. For more information, refer to **General Maintenance** and **Table 4-1**.
- The unit must be level.
- The unit must be dry. Look for water inside or near the unit; dry if needed.
- For grounding requirements, follow the National Electrical Code (NEC), state and local regulations.
- Verify the main circuit breaker is OFF (O).
- Verify all circuit breakers are OFF (O).
- Inspect all electrical cords; repair or replace any that are cut, worn, or bare.
- Verify all winch cables are in good condition and centered on each pulley. Do not use if cables are kinked or beginning to unravel.
- Check oil, coolant, and fuel levels. For more information, refer to **General Maintenance**.
- Verify battery connections are secure.
- Turn the battery disconnect switch ON, if equipped.
- Check the engine fan belt tension and condition.
- Check the engine fan belt guard.
- Check the engine exhaust system for loose or rusted components.
- Verify all covers are in place and secure.

Raising the Mast

1. Set up and level the unit. See **Light Tower Setup**.

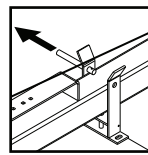
WARNING

Tipping hazard. Extend the outriggers and level the unit before raising the mast. Keep the outriggers extended while the mast is up. Failure to do so could cause the unit to tip and fall and could result in death or serious injury. (000266)

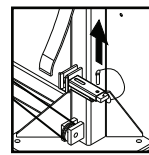


DANGER

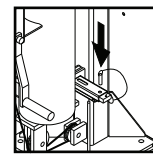
Electrocution. DO NOT use the unit if electrical cord is cut or worn through. Doing so will result in death or serious injury. (000263a)



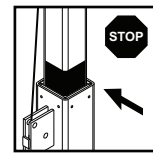
DETAIL A



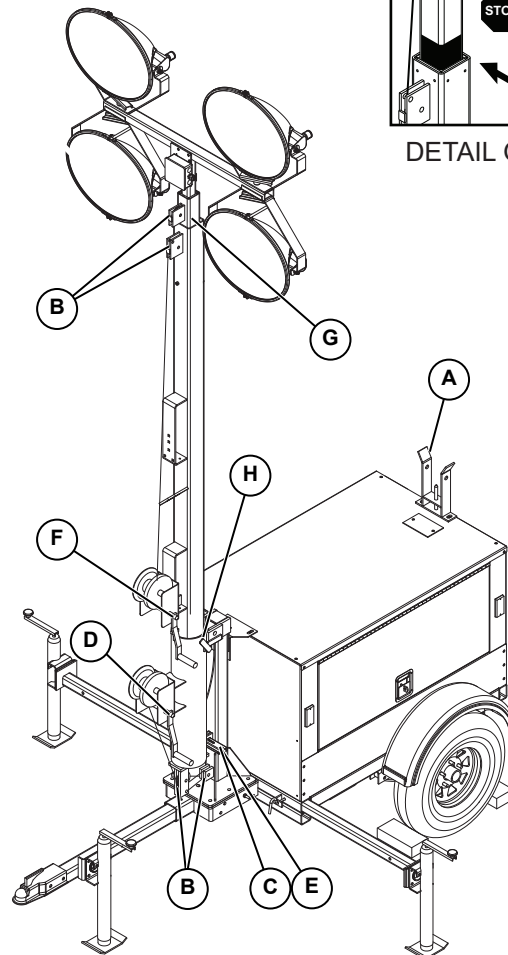
DETAIL C



DETAIL E



DETAIL G



003790

Figure 3-2. Pulley Locations

2. See **Figure 3-2**. Remove mast cradle locking pin from mast cradle (A).
3. Check the mast cables for excessive wear or damage. Verify the cables are properly centered in each pulley (B). Check the electrical cord for damage.
4. Remove the safety pin from the mast lock bar (C). Using the handle for the lower mast winch (D), raise the mast until it is vertical and the tab on the mast is positioned into the mast lock. The mast lock bar should snap into place automatically. Secure the lock with the safety pin (E).
5. Rotate the mast by loosening the mast rotation knob (H) at the bottom of the mast. Turn the mast until the lights face in the desired direction, and then tighten the mast rotation knob to secure the mast in position.
6. Use the winch (F) to slowly extend the mast, making sure that the coiled electrical cord is extending at the top sections of the mast. STOP extending the mast when the colored mark (G) on the second mast section is visible as seen in Detail G.



Tipping hazard. Do not extend the mast beyond the colored mark on the second mast section. The unit can become unstable and tip or fall, causing injury.

(000262)



Personal Injury. Stop immediately if the mast hangs up or the winch cable develops slack. Excess slack could cause the mast to collapse, resulting in personal injury or equipment damage.

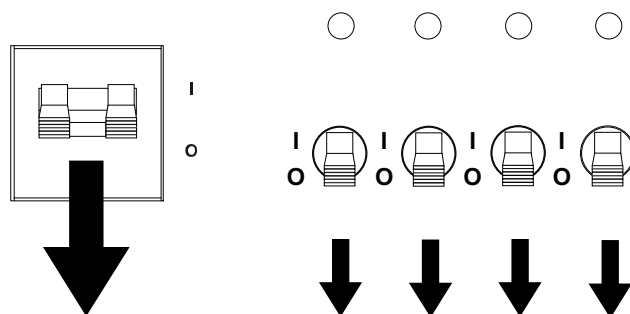
(000265)

IMPORTANT NOTE: Contact a Generac Mobile Products Authorized Dealer immediately if the mast hangs up or the winch cable develops slack.

Starting the Unit

NOTE: If the engine was run out of fuel or the fuel tank was drained, it may be necessary to bleed the fuel lines before starting. Refer to the engine manual supplied with the unit.

1. See **Figure 3-3**. Verify the main circuit breaker and individual circuit breakers for each of the lights are OFF (O).

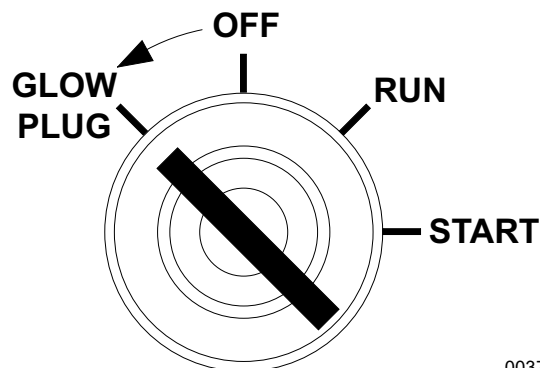


003791

Figure 3-3. Circuit Breakers in OFF (O) Position

NOTE: When the red “turn main breaker OFF” light is illuminated, the main circuit breaker must be turned OFF (O).

2. See **Figure 3-4**. Turn the key on the Engine Start switch to the left and hold in GLOW PLUG position for 10-15 seconds, or until glow plug indicator turns red.



003792

Figure 3-4. Activate Glow Plug

NOTE: The MLT3060K is not equipped with a glow plug indicator.

- See [Figure 3-5](#). As soon as it is glowing, turn the key to the right START position until the engine cranks and starts running.

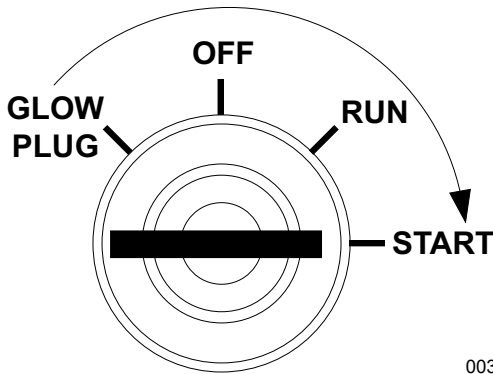


Figure 3-5. Crank Engine

003793

- See [Figure 3-6](#). Release the key, it will move to RUN.

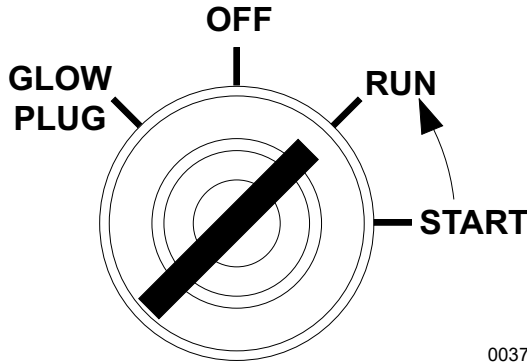


Figure 3-6. Release Key

003794

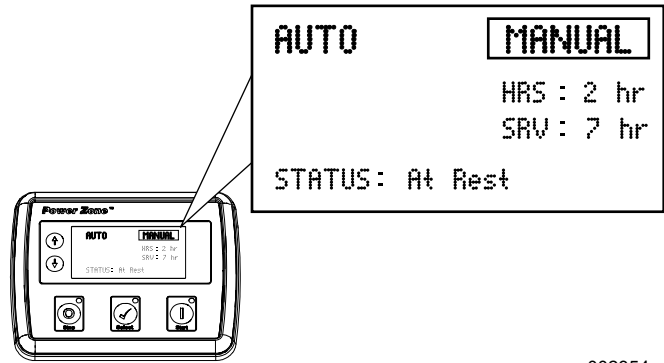
Preparing for Start-Up (with PowerZone Controller, If Equipped)

NOTE: If the engine was run out of fuel or the fuel tank was drained, it may be necessary to bleed the fuel lines before starting. Refer to the engine manual supplied with the unit.

Select AUTO or MANUAL Mode

See [Figure 3-7](#). Using the arrows on the PowerZone–DLA, select either AUTO or MANUAL on the Home screen.

- AUTO mode is required for programming automatic start and stop times (see [Scheduler Screen](#)).
- MANUAL mode is used for on-demand control of the lights and convenience outlets.



002354

Figure 3-7. Select AUTO or MANUAL Mode

Manually Starting the Unit

STOP mode is the default start-up setting for all units equipped with the PowerZone–DLA. Use the following procedure to start the generator in MANUAL mode.

- Verify the 240VAC outlet breaker is switched OFF (O).
- Switch the main circuit breaker ON (I).
- Verify that the Load Sense switch is OFF.
- When the controller powers up, the Home screen displays on the LCD screen and the Stop LED illuminates to indicate that the controller is in STOP mode. Press the Start button to initiate the startup procedure. Assuming there are no existing engine faults, the engine will start and the Start LED will illuminate.

NOTE: The engine can be started from any screen. It may take a few seconds for the engine to run smoothly and reach its governed operating speed.

- If the engine does not start after the first cranking attempt, the engine will pause for 15 seconds to allow the starter to cool. The controller backlight will go out. The engine will make two more attempts to start for a total of three crank cycles.
- If the engine does not start and run within three starting cycles, the LCD screen will display the “Fail to Start” alarm. The starting sequence can be repeated after the starter cools for at least two minutes. Pressing the Stop (O) button will clear the alarm and reset the controller.
- Once the engine starts, engine speed will increase to 1800 rpm. The engine may hunt or change speeds until operating speed is reached. After a few minutes at operating speed, the Home screen will display the mode of the unit, the engine status, the engine RPM, and any active program (Scheduler or Dawn to Dusk) in AUTO mode.

8. Check the generator for excessive noise or vibration and any leaking coolant, oil, or fuel before applying loads.
9. Once the engine is running, allow it to reach normal operating temperature turning on the outlet breaker.
10. Switch the export outlet breaker ON (I). Then add any loads attached to the outlets. You will notice a change in engine sound when a load is applied to the unit.

Light Operation



WARNING

Burn hazard. Never operate lights with a damaged or missing lens cover. Lamps are hot and pressurized while in use. Unprotected lamps can shatter, causing severe injury. (000277)



WARNING

Burn Hazard. Allow bulb fixture to cool 10-15 minutes before handling or lowering mast. Failure to do so could result in serious injury. (000358)

1. See **Control Panel** for the following steps. Switch the main circuit breaker ON (I).
2. Turn each individual light switch ON (I), one at a time.

NOTE: The ballast indicator lights will turn ON and continue to get brighter as the lights warm up, and then remain ON. This confirms power is coming from the ballasts to the lights.

If an indicator light does not turn ON, the ballast may need to be serviced. If the indicator light turns ON and stays lit but the related light is not illuminated, check the bulb or the mast wiring. See **Troubleshooting the Lights**.

The lights require a warm up period of 5-15 minutes before they reach full output. If the lights are shut down, they require a cool down period of approximately ten minutes before they can be switched ON again.

The light tower uses four 1100W bulbs. When checking or replacing the bulbs, wipe them with a clean cloth to avoid leaving any grease, oil residue or fingerprints on the glass. Any residue can create a hot spot on the bulb, causing premature bulb failure.

Light Operation (With PowerZone Controller, If Equipped)

See **Figure 3-8**. The lights are turned ON and OFF using the PowerZone-DLA. To view the light screen, press the ↑ button three times from the Home screen.

NOTE: The lights can only be turned ON and OFF while the unit is running in MANUAL mode. They operate automatically in AUTO mode.

1. Once the engine is up to temperature and running smoothly, switch the main circuit breaker ON (I).

To turn the light(s) ON, press the Select (✓) button. To turn the light(s) OFF, press the Select (✓) button.

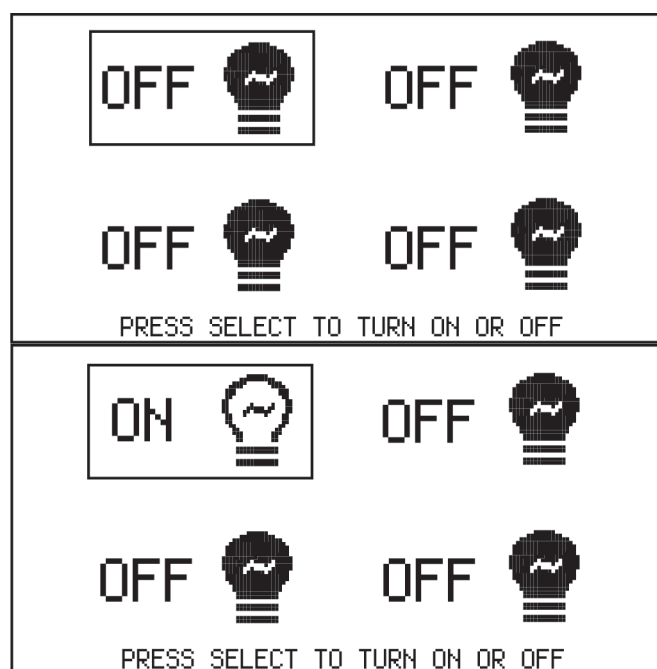


Figure 3-8. Lights Screen



WARNING

Burn hazard. Lamps become extremely hot while in use. Allow 10–15 minutes for cooling before handling or lowering mast. Touching a hot lens or fixture can cause severe burns. (000278)

Engine Derating

All units are subject to derating for altitude and temperature. Derating reduces the available power for operating tools and accessories connected to the receptacles. Typical reductions in performance are 2-4% for every 1000 ft (305 m) of elevation and 1% per 10°F (5.6°C) increase in ambient air temperature over 72°F (22°C).

Wet Stacking

The unit is powered by a diesel engine. Diesel engines are subject to “wet stacking” if lightly loaded. Wet stacking occurs when an engine is run at less than 30% of its full load capacity, causing unburned fuel to accumulate in the exhaust system. Wet stacking can be detected by continuous black exhaust when the unit is under a constant load. It can also cause fouling of injectors and buildup on engine valves. Diesel engines operate properly when applied loads are between 30% and 100% capacity. Appropriate generator sizing is determined by the anticipated load.

If the unit is in a wet stack condition, load the unit heavily for five hours or until the exhaust is clear.

Customer Convenience Outlets

See **Figure 3-9**. The unit is equipped with two convenience outlets for powering accessories or tools from the generator. Power is supplied to the outlets any time the engine is running and the 240VAC outlet breaker is switched ON (I). Each outlet has an individual circuit breaker, located on the control box. See **Control Panel**.

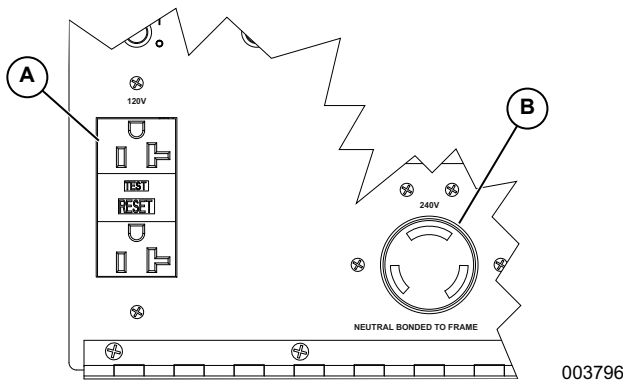


Figure 3-9. Location of Outlets

A	120V GFCI Outlets
B	240V Twist-lock Outlet

See **Figure 3-9**. The circuit breakers are labeled with the corresponding voltage for the receptacle they protect.

With all of the lights OFF, full generator power output is available to the receptacles.

NOTE: All equipment or load panels connected to the generator **MUST** be properly grounded. If these appliances do not have grounded plugs, a ground wire **MUST** be added between the equipment and the grounding stud on the receptacle panel per the National Electrical Code (NEC), state, and local regulations.

Shutting Down the Unit

Check with personnel using power supplied by the unit and let them know the power is going to be turned off. Verify the power shutdown will not create any hazards by accidentally turning off equipment that needs to remain running (pumps, compressors, lights, etc.).

1. Remove all loads from the outlets.
2. Switch the individual circuit breakers for each light OFF (O).
3. Switch the main circuit breaker OFF (O).
4. Turn the Engine Start switch OFF (O).

NOTE: Disconnect the battery if the unit is to be stored for an extended period. Refer to the engine operator’s manual for additional extended storage procedures.

Shutting Down the Unit (with PowerZone Controller, If Equipped)

Check with personnel using power supplied by the unit and let them know the power is going to be turned off. Verify the power shutdown will not create any hazards by accidentally turning off equipment that needs to remain running (pumps, compressors, lights, etc.).

1. Remove all loads from the outlets.
2. Turn the lights OFF using the controller.
3. Switch the outlet breaker OFF (O).
4. Press the Stop (O) button.
5. After the unit shuts down, switch the main circuit breaker OFF (O).

NOTE: Disconnect the battery if the unit is to be stored for an extended period. Refer to the engine operator’s manual for additional extended storage procedures.

Automatic Shutdown

This unit is equipped with a low oil pressure and high coolant temperature automatic shutdown system. This system will automatically shut off the fuel supply to stop the engine if oil pressure drops too low or the engine exceeds normal operating temperature. Return the main circuit breaker to the STOP position to reset the unit after the cause of shutdown has been determined.

Lower Radiator Hose Heater (If Equipped)

The lower radiator hose heater is designed to prevent engine coolant from freezing in extreme cold weather conditions. While the heater is designed to be operated overnight if necessary, two to five hours of heating just prior to starting is usually sufficient for proper engine starting.

NOTE: Use the lower radiator hose heater only in its designated location. Improper use can damage the engine.

Perform the following steps when operating a unit equipped with a lower radiator hose heater.

1. Verify the unit is level so as to maintain proper orientation of the heater while it is in operation.
2. Verify the cooling system is full of the proper mixture of water and engine coolant before each heater use.
3. Use only an undamaged, outdoor rated, three-prong grounded 120VAC extension cord with a minimum amperage rating of 10A. Connect the cord to a properly grounded 120VAC, GFCI outlet.
4. Before starting the engine, unplug the extension cord from the power first, then unplug the heater cord set from the extension cord.

Spark Arrester (If Equipped)

A spark arrester, installed on the MLT exhaust, may be required by code in certain municipalities. Check with the local authority having jurisdiction to determine whether or not a spark arrester must be installed on the unit before operation.

Lowering the Mast

1. Shut down the lights and engine. See [Shutting Down the Unit \(with PowerZone Controller, If Equipped\)](#). Allow the lights to cool 10-15 minutes before lowering the mast.
2. Loosen the mast rotation knob. Rotate the mast until the white arrows are aligned and the metal stop tabs are touching. Tighten the mast rotation knob.
3. Turn the upper mast winch handle counterclockwise to collapse the mast to its lowest position. Ensure the coiled electrical cord does not get caught in, or pinched by, the mast while it is being lowered.

WARNING

Personal Injury. Stop immediately if the mast hangs up or the winch cable develops slack. Excess slack could cause the mast to collapse, resulting in personal injury or equipment damage.

(000265)

IMPORTANT NOTE: Contact an Generac Mobile Products Authorized Dealer immediately if the mast hangs up or the winch cable develops slack.

4. Release the mast lock by pulling the safety pin on the mast lock and pulling the lock bar free. Turn the handle of the lower mast winch counterclockwise until the mast rests in the transport cradle.

NOTE: If the mast lock bar does not pull free, activate the lower winch slightly to relieve pressure on the mast bar.

5. After the mast is completely down, insert the mast cradle locking pin and secure it with the safety pin.
6. If the unit is going to be moved, remove the lights from the mast and stow for transportation. See [Removing the Lights for Transportation](#).

Removing the Lights for Transportation

On units equipped with quick disconnect fittings for the lights, disconnect the power cords from the junction box at the top of the mast. Replace the dust caps on the junction box. On hard wired units, remove the junction box cover, located on the top of the mast, and disconnect ONLY the mast light wires from the connectors. To release the mast light wires from the connectors, flip the locking levers down and pull out the appropriate wires.

Remove the lights by removing the nylock nut that holds the light fixture bracket to the cross tube. Attach the lights to the storage brackets (if equipped) located on the mast tube on either side of the central lift point.

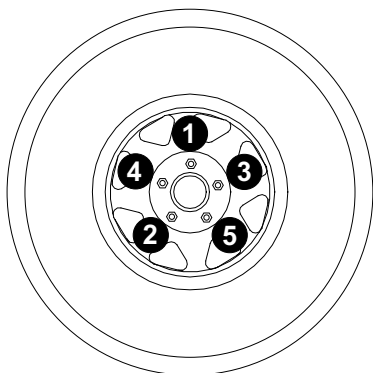
NOTE: When installing the lights for use, verify the star washer is in place between the trunnion and T-handle.

Towing the Unit

Once the engine is shut down and the mast and lights are properly stowed, follow these steps to prepare the unit for towing.

1. Raise the outrigger jacks completely and release the locking pins to rotate them up into the travel position. Verify the locking pins snap into place. Release the outrigger locking pins and slide the outriggers into the trailer frame until the locking pins snap into place.
2. Use the tongue jack to raise or lower the trailer onto the hitch of the towing vehicle. Lock the hitch coupling and attach the safety chains or cables to the vehicle. Remove the tongue jack locking pin and rotate the jack into the travel position. Replace the locking pin.
3. To ensure proper operation of the jacks, lubricate the grease fittings located on the leveling jacks. See [Jack Maintenance](#). For maintenance interval information, see to [Table 4-1](#).
4. Connect any trailer wiring to the tow vehicle. Check for proper operation of the directional and brake lights.
5. Verify the enclosure is properly latched.
6. Check for proper inflation of the trailer tires. For maximum tire pressures, see [Specifications](#).

7. See **Figure 3-10**. Check the wheel lugs. Tighten or replace any lugs that are loose or missing. If a tire has been removed for axle service or replaced, tighten the lugs, in the order shown, to the following specifications:



003754

Figure 3-10. Tightening Wheel Lugs

- a. Start all lug nuts by hand.
- b. First pass: tighten to 20-25 ft-lbs (27-33 Nm).
- c. Second pass: tighten to 50-60 ft-lbs (67-81 Nm).
- d. Third pass: tighten to 90-120 ft-lbs (122-162 Nm).

NOTE: After the first road use, re-torque the lug nuts in sequence.

8. Maximum recommended speed for highway towing is 45 mph (72 km/h). Recommended off-road towing speed is not to exceed 10 mph (16 km/h) or less, depending on the terrain.

Tying the Unit Down

When securing the unit for transportation, verify the equipment being used to fasten the unit is in good condition and has sufficient strength to hold the unit in place during transport.

See **Figure 3-11**. Use the tie-down points (A) as shown.

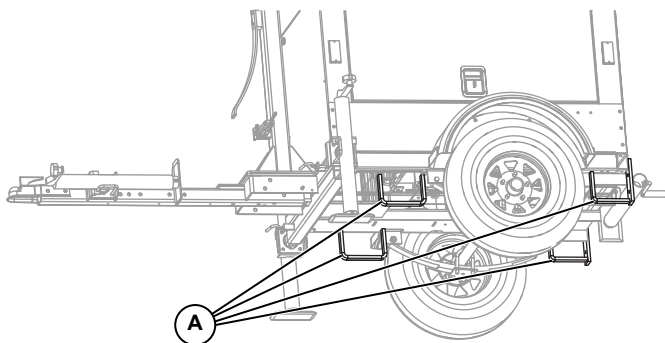
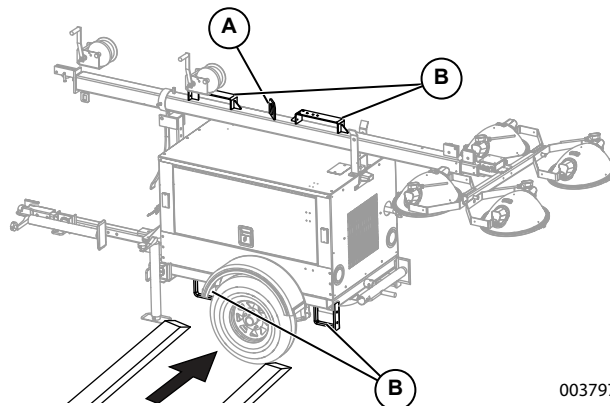


Figure 3-11. Tie-Down Points

Lifting the Unit

Follow these steps to prepare the unit for lifting:

1. Verify the equipment being used to lift the unit is in good condition and has sufficient capacity. For approximate weights, see **Specifications**.
2. Close and lock all hoods and doors.
3. See **Figure 3-12**. Stow the mast and lights in the travel position as shown.
4. Always remain aware of people and objects around the unit while preparing, maneuvering, and lifting the unit.
 - When lifting the unit, attach any slings, chains or hooks directly to the central lift point (A).
 - Use the forklift pockets (B) with care. Lift only from the side. Avoid approaching the unit at an angle, as this can permanently damage the forklift pockets, tires, or cabinet. Verify the forklift tines are clear of any obstructions before lifting.



003797

Figure 3-12. Lift Points

Section 4: Maintenance

Emissions Information

For warranty information, refer to the diesel engine manual supplied with this unit.

Daily Walk-Around Inspection

Perform a walk-around inspection of the unit before starting the unit. Inspect for conditions that could hinder performance or safety, such as (but not limited to) oil, coolant, and fuel leakage, blocked vents, loose or missing hardware, and improper electrical connections.

Inspect fan belt for cracks, fraying, or stretching. Verify the belt is properly seated in pulley grooves. Replace the belt according to the manufacturer's recommendations.



Equipment Damage. Failure to perform a daily inspection could result in damage to the unit.

(000306)

General Maintenance

Poorly maintained equipment can become a safety hazard. Periodic maintenance and occasional repairs are necessary for equipment to operate safely and properly over a long period of time. Never perform routine service (oil and filter changes, cleaning, etc.) unless all electrical components are shut off.

Regular maintenance improves performance and extend engine/equipment life. Generac Mobile Products LLC recommends all maintenance be performed by a Generac Mobile Products Authorized Dealer (GMP ASD). Regular maintenance, replacement or repair of emissions control devices and systems may be performed by any repair shop or person of the owner's choosing. However, to obtain emissions control warranty service free of charge, the work must be performed by a GMP ASD or authorized Mitsubishi engine dealer depending on the repair. See emissions warranty.

Preparing for Service

Before servicing the unit, follow the instructions below.

1. If unit is equipped with the PowerZone controller, verify the main circuit breaker is OFF. Otherwise, verify the key switch is in the OFF position.
2. Verify the circuit breakers are switched OFF (O).
3. Disconnect the negative (-) terminal on the battery.
4. Attach a "Do Not Start" sign to the control panel. This will notify everyone that the unit is being serviced and will reduce the chance of someone trying to start the unit.

Cleaning the Unit

Clean the unit after each use to remove dust, grease, mud, or spilled fuel or oil. Use soft, clean rags to wipe the cabinet exterior and control panel. Low-pressure compressed air (less than 40 PSI [276 kPa]) can be used to remove dust and debris from the cabinet interior.

This unit contains sensitive electronic components that can be damaged by high pressure and heat. Therefore, do not wash the unit with a high pressure hose or power washer. Do not wash the engine block or fuel tank with a power washer or steam cleaner.

Inspecting the Unit

- If the unit is stored outside, check for water inside the cabinet and generator before each use. If wet, dry the unit thoroughly before starting.
- Inspect condition of electrical cords. **DO NOT** use the unit if insulation is cut or worn through.
- Verify winch cables are in good condition and centered on each pulley. **DO NOT** use a cable that is kinked or starting to unravel.
- Verify safety pins for the mast lock rod and mast lock bar are present and secured with a chain. Verify mast lock bar spring is not broken or missing. Check the operation of the mast lock bar.
- Verify wheel lugs are present and properly tightened. Refer to [Towing Safety](#).
- Check coolant level daily. Normal operating level is between the FULL and ADD markings on the overflow jug. See engine operator's manual for coolant recommendations and proper mixture.
- **After engine is stopped and completely cool**, coolant may be added to the coolant overflow jug.
- Check oil level daily. See engine operator's manual for appropriate oil specification. Verify oil is correct for special operating conditions such as a change in season or climate.
 - **DO NOT** start the unit if the engine oil level is below the ADD mark on the dipstick.
 - Operating level is in the cross-hatch pattern between FULL and ADD on the dipstick.
 - Add oil only if oil level is below the ADD mark on the dipstick. **DO NOT OVERFILL.**
- Check fuel level.
- If the unit is connected to a remote start or transfer switch, verify the remote switch is off and tagged.

NOTE: If the engine was run out of fuel or the fuel tank was drained, it may be necessary to bleed the fuel lines. See the engine operator's manual supplied with the unit.

Basic Maintenance Schedule

Refer to the original equipment manufacturer's operating manual for a complete list of maintenance requirements. Failure to comply with the procedures as described in the engine operator's manual will nullify the warranty, decrease performance and cause equipment damage or premature equipment failure. Maintenance records may be required to complete a warranty request.

Use the schedule in the following tables as a guide for regular maintenance intervals. For additional or replacement copies of the engine operator's manual, contact a Generac Mobile Products Authorized Dealer.

Table 4-1. Basic Maintenance Guide - MLT3060M

Item	Daily	50 Hours	250 Hours	400 Hours	500 Hours	750 Hours	1000 Hours	As Required
Check Oil Level	◆							
Check Coolant Level	◆							
Check Fuel Level	◆							
Check Tire Pressure	◆							
Inspect Wheel Bearings	◆							
Check All Electrical Connections	◆							
Inspect Radiator Fins For Debris; Clean As Required	◆							
Inspect Light Tower Winch For Proper Operation	◆							
Fuel Tank—Drain Water		◆						
Check Air Cleaner		◆						
Belt And Belt Tension—Inspect And Adjust			◆					
Replace Fuel Filter				◆				
Drain And Clean Fuel Tank					◆**			
Check Glow Plugs					◆			
Lubricate Leveling Jacks					◆			
Replace Engine Oil And Filter							◆*	
Tighten Bolts And Nuts On The Engine							◆*	
Replace Heated Fuel Filter (If Equipped)							◆	
Inspect Engine Starting Battery							◆	
Clean, Check And Replace Air Cleaner Element								◆
Fuel System—Bleed Air								◆
Fuel/Water Separator—Drain Water								◆

* Perform after the initial 50 hours of operation, then on the regularly scheduled interval indicated in the schedule above.

** Certain conditions may require the fuel tank to be drained and cleaned more often. When operating in extremely dusty conditions, clean the fuel tank as often as necessary.

Table 4-2. Basic Maintenance Guide - MLT3060K

Item	Daily	50 Hours	100 Hours	200 Hours	400 Hours	500 Hours	1000 Hours	Yearly
Check Oil Level	◆							
Check Coolant Level	◆							
Check Fuel Level	◆							
Check Tire Pressure	◆							
Inspect Wheel Bearings	◆							
Check All Electrical Connections	◆							
Inspect Radiator Fins For Debris; Clean As Required	◆							
Inspect Light Tower Winch For Proper Operation	◆							
Check Fuel Pipes and Clamp Bands		◆						
Clean Air Filter Element			◆					
Clean Fuel Filter			◆					
Check Fan Belt Tightness			◆					
Fuel/Water Separator—Drain Water			◆					
Check Radiator Hoses and Clamp Bands				◆				
Check Intake Air Line				◆				
Replace Fuel Filter Cartridge					◆			
Clean Fuel/Water Separator					◆			
Lubricate Leveling Jacks						◆		
Remove Sediment in Fuel Tank						◆		
Replace Fan Belt						◆		
Replace Engine Oil And Filter							◆*	
Replace Air Filter Element								◆**

* Change the engine oil and oil filter after the initial 50 hours of operation, then at the appropriate interval thereafter.

** Replace the air cleaner element yearly, or after six cleanings, whichever occurs first.

Resetting the Maintenance Alarms (If Equipped)

The PowerZone–DLA displays a warning message when the unit is due for maintenance or service. The maintenance or service interval is set at 750 hours of engine running time. Once the unit has been serviced, the maintenance alarm reminder needs to be reset.

1. With the unit shut down, switch the main circuit breaker ON (I). After initialization, the controller will toggle automatically to the Home screen.
2. Press \uparrow and \downarrow simultaneously to enter the navigation menu.
3. See Press \uparrow or \downarrow to move \blacktriangleright to the top of the screen. Press \checkmark to enter the Maintenance screen.
4. Press \uparrow or \downarrow to highlight the desired alarm that needs to be reset. Press \checkmark to start reset.
5. Enter the pin 4444. To do this, press \checkmark and then \uparrow or \downarrow to adjust the first number of the maintenance pin. Press \checkmark to continue to the next number.

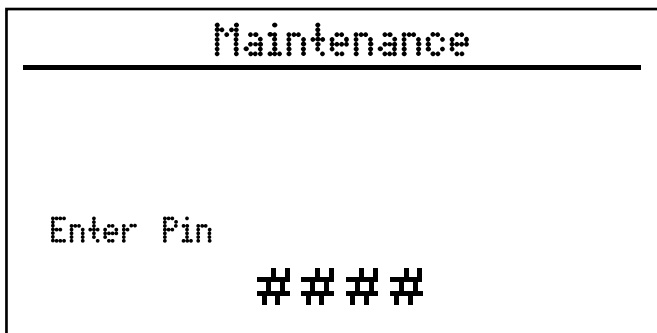


Figure 4-1. Entering Maintenance Pin

Winch Use, Operation and Maintenance

Prior to Use

- Inspect rope or cable and replace if damaged.
- Check mounting hardware for proper torque and tighten if necessary.
- Gears, ratchet pivot point and shaft bushings must be kept lubricated with a thin film of oil or grease.

Raising the Lights

1. The cable must be securely fastened to the object being lifted and to the winch drum.
2. Verify the cable and cable attachments are not damaged. Contact Generac Mobile Products to order a replacement cable if necessary.
3. Referring to the “Lift / Let Down” decal on the winch, turn handle according to the specified direction to lift. The ratchet MUST make a loud clicking sound while winding the cable.

Lowering the Lights

Referring to the “Lift / Let Down” decal on the winch, turn handle according to the specified direction to lower. No clicking will be heard.

Maintenance

Perform the following procedures at least annually:

1. The winch gears and bushings must be kept lubricated. Apply a thin film of grease to the gear teeth, and oil the bushings as needed.
2. The ratchet pawl pivot point must be kept lubricated with a thin oil.

NOTE: Do not get oil or grease on the brake mechanism.

Jack Maintenance

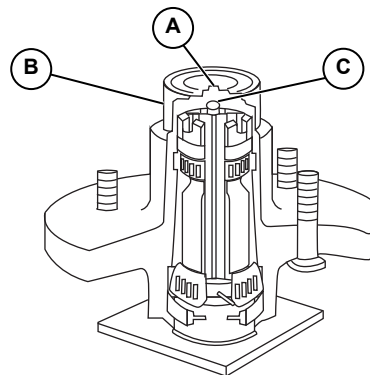
Before each use, check each jack foot for damage and remove any mud or debris. The jacks must be clean and in good operating condition to properly support the unit.

Trailer Wheel Bearings

The minimum recommended lubrication is every 12 months or 12,000 miles (19,312 km). More frequent lubrication may be required under extremely dusty or damp operating conditions.

NOTE: Use only high quality grease made specifically for wheel bearings, such as Valvoline W615 or equivalent.

See [Figure 4-2](#). To lubricate the wheel bearings:



002540

Figure 4-2. Wheel Bearing Cross Section

1. Remove rubber plug (A) from metal end cap (B).
2. Attach a grease gun fitting to Zerk grease fitting (C).
3. Pump grease into the Zerk fitting until fresh grease is visible around the nozzle of the grease gun.
4. Wipe any excess grease from the axle hub with a clean cloth and replace the rubber plug.

Every six months, or depending on usage, check for play in each bearing by jacking up the trailer, then trying to rock the wheel. If further assistance is required, contact Generac Mobile Products Technical Service at 1-800-926-9768.

Section 5: Troubleshooting

General Troubleshooting

Some of the more common problems are listed in the table below. This information is intended to be a check or verification that simple causes can be located and fixed. It does not cover all types of problems. Refer to the OEM engine operator's manual for additional troubleshooting information. Procedures that require in-depth knowledge or skills should be referred to a Generac Mobile Products Authorized Dealer.



WARNING

Risk of burns. Allow engine to cool before draining oil or coolant. Failure to do so could result in death or serious injury.

(000139)

Problem	Possible Cause	Solution
Unit cranks, but will not start	Fuel level low. Fuel flow obstructed. Fuel solenoid inoperable. Air in fuel system. Restricted air filter. Glow plug(s) inoperable.	Check fuel level in tank. Verify fuel pump operation. Verify fuel solenoid operation. Inspect air filter for blockage. Bleed air from fuel system. Inspect fuel supply hose from tank to fuel filter for cracks and abrasion. Check for gelled fuel in fuel system in cold weather, especially at fuel filter. Refer to OEM engine operator's manual for additional information.
Unit starts, but stumbles and dies	Ambient temperature too low. Intake heater inoperable.	Check if ambient temperature is within unit limits. Check engine air inlet heater functionality.
High coolant temperature shutdown	Low coolant level. Blockage in radiator. Debris on radiator face. broken coolant pump belt. cooling fan inoperable.	Allow engine to cool, then check coolant level in radiator. Add coolant if needed. Inspect radiator surroundings for blockage and remove any foreign matter. Inspect for visible leaks. Verify tension of water pump drive belt. Remove load on generator and restart engine. Verify coolant temperature and shut engine down immediately if it starts to overheat.
Low oil pressure shutdown	Oil level low. Oil pump inoperable.	Check oil level. Add oil if necessary.
Unit stalls when export power is used	Load exceeds unit rating.	Turn outlet breaker ON and load sense switch OFF, confirm generator output is 60hz + or - 2hz. Reapply load.
The lights are flashing	Dusk-to-dawn sensor adjustment needed. Generator frequency too low.	Adjust the dusk-to-dawn sensor to increase or decrease light received. Turn off main breaker. Check if AC frequency is >40hz.

If problems persist, contact Generac Mobile Products at 1-800-926-9768 for assistance.

Troubleshooting the Lights



WARNING

Burn hazard. Lamps become extremely hot while in use. Allow 10–15 minutes for cooling before handling or lowering mast. Touching a hot lens or fixture can cause severe burns.
(000278)

IMPORTANT NOTE: Only a qualified electrician should troubleshoot or repair electrical problems occurring in this equipment. Contact Generac Mobile Products Technical Service at 1-800-926-9768 for assistance if you have any questions, or if problems persist.



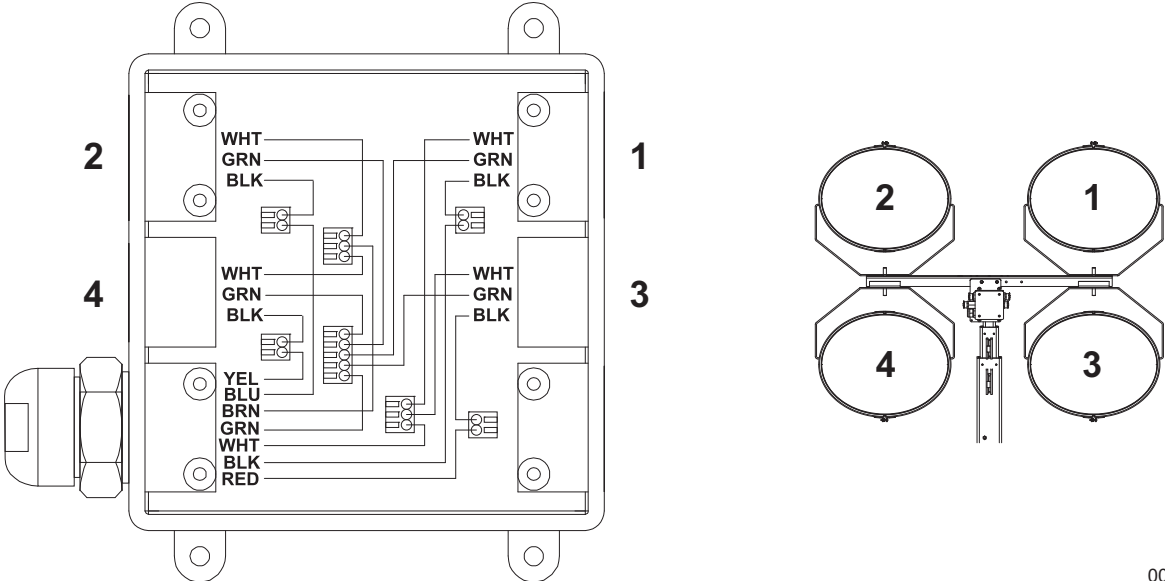
WARNING

Electrocution. Potentially lethal voltages are generated by this equipment. Render the equipment safe before attempting repairs or maintenance. Failure to do so could result in death or serious injury.
(000187)

Problem	Possible Cause	Solution
Mast Lights Off, Checking Outside the Control Box	Light fixture is too hot. Faulty lamp connection. Lamp broken. Loose lighting connections. Damaged or loose electrical cord.	Allow light to cool 10-15 minutes before restarting. Check that the lamp is tight in the socket. Check for broken arc tube or outer lamp jacket, broken or loose components in lamp envelope, or blackening/deposits inside tube. Check the connections inside the mast junction box and each mast light housing/socket. Check the mast electrical cord for damage and check the cord connections inside the control box.
Mast Lights Off and Ballast Indicators on Control Panel Are Off	Loose lighting connections. Generator output incorrect. Low transformer output.	Check the connections inside the control box and inside each ballast box. Check the incoming voltage to the ballast by checking the available voltage on the GFCI receptacle. Incoming voltage should be 120V +/- 5V. If voltage is incorrect, the engine speed may need to be adjusted or generator may require service. The voltage from the transformer should read approximately 400VAC as the light “strikes” (induces an arc), then drop and slowly rise back up to stabilize at 240-260VAC. On hard wired models, remove the mast junction box cover and insert the wire probes into the connector blocks for the light and ground. If proper voltage is not achieved, perform capacitor check to determine if the capacitor or coil needs to be replaced.
Mast Lights On But the Light Output is Low	Fixture and/or lens is dirty. Lamp worn due to normal use. Damaged or loose electrical connections. Generator output incorrect. Low transformer output.	Clean reflective surface inside fixture and both inside and outside surface of glass lens. Use mild soap and water to clean lens. Other chemicals may have an adverse effect on the glass. Replace lamp. Check the mast coil cord, mast junction box and mast light connections. Check the incoming voltage to the ballast. Incoming voltage should be 120V +/- 5V. If the voltage is incorrect, the engine speed may need to be adjusted or the generator may require service. The voltage from the transformer should read approximately 400VAC as the light “strikes” (induces an arc), then drop and slowly rise back up to stabilize at 240-260VAC. On hard wired models, remove the mast junction box cover and insert the wire probes into the connector blocks for the light and ground. If proper voltage is not achieved, perform capacitor check to determine if the capacitor or coil needs to be replaced.
One or more lights do not turn on	Light breaker tripped. Lights not turned on.	Check light breakers. Check electronic control to see if lights are on. Turn lights on.

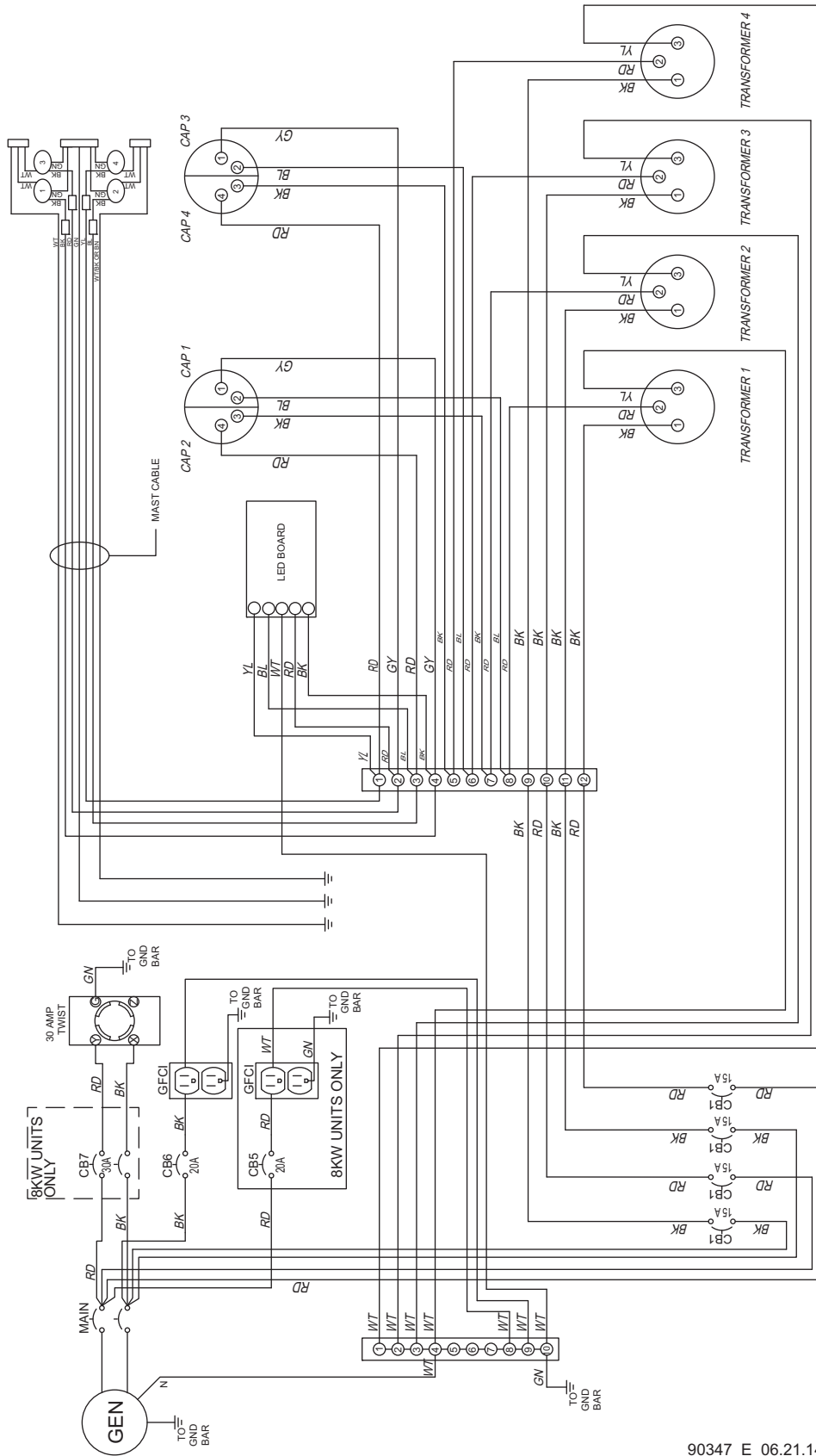
Section 6: Wiring Diagrams

Mast Junction Box Wiring and Light Connections



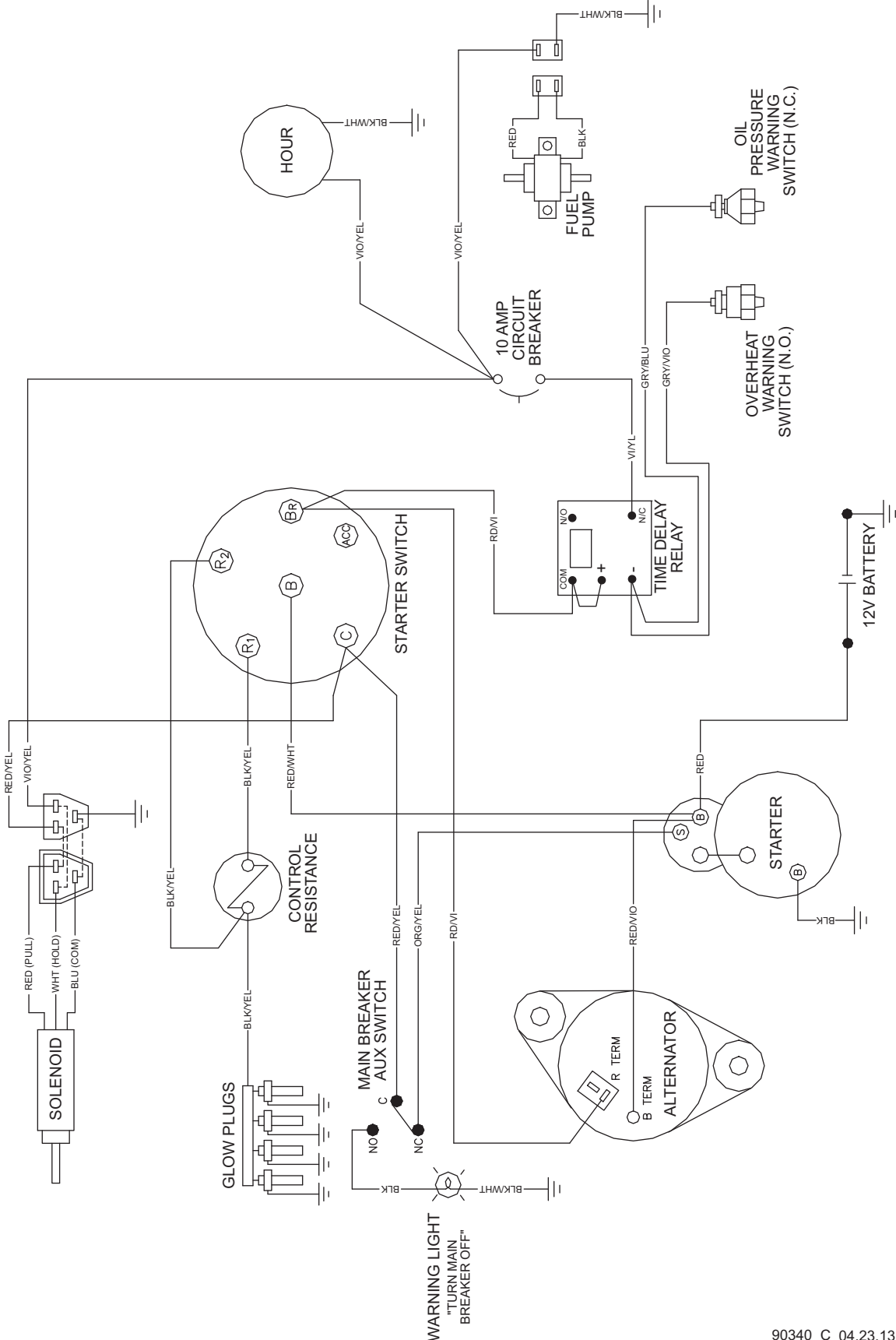
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AC Wiring



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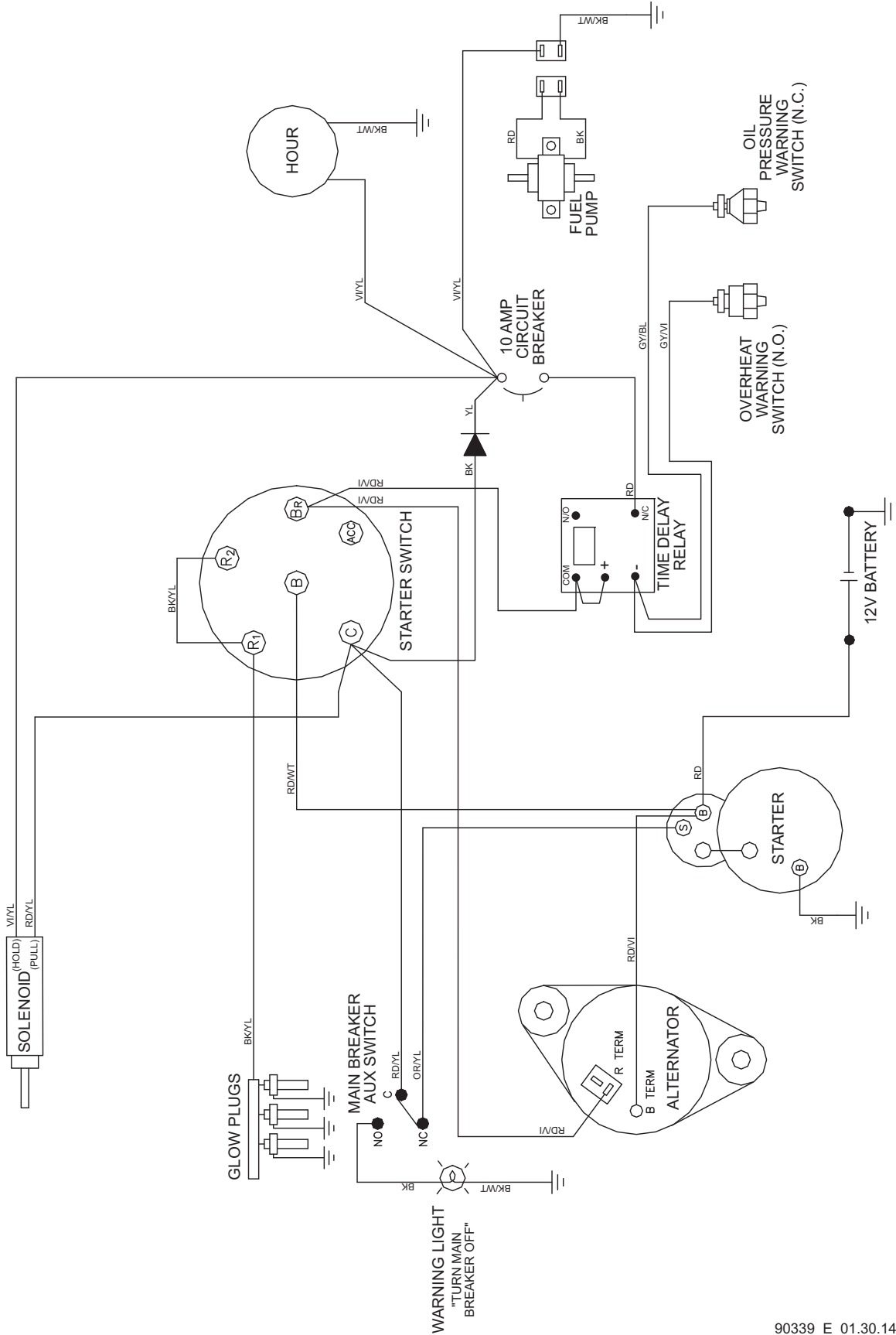
DC Wiring—MLT3060M



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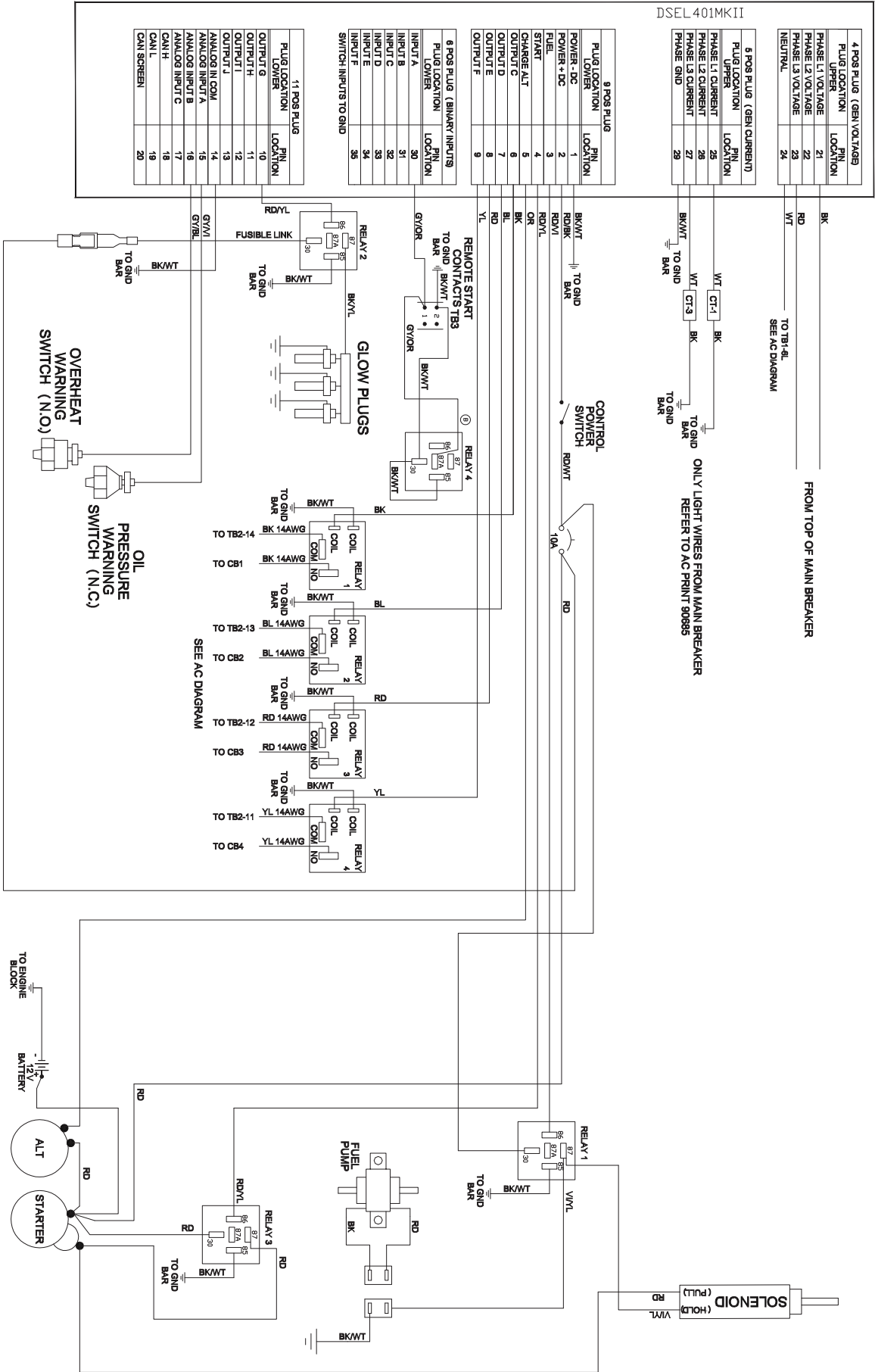
DC Wiring—MLT3060K

After serial number: 0900090

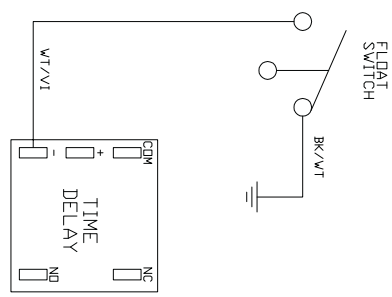
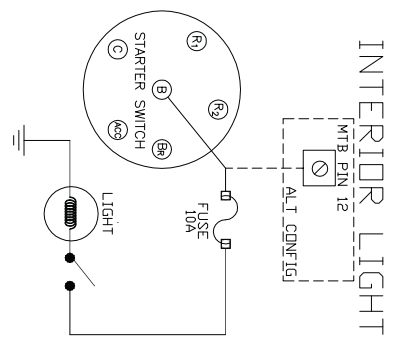
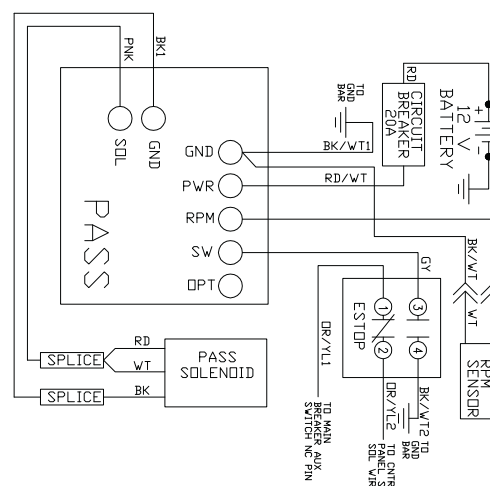
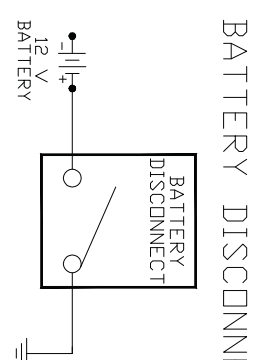
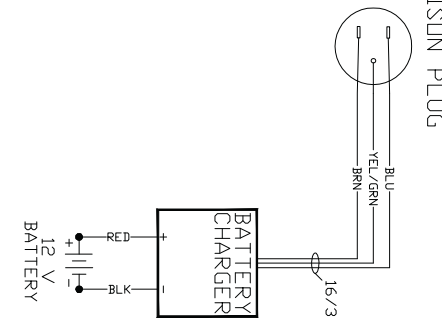
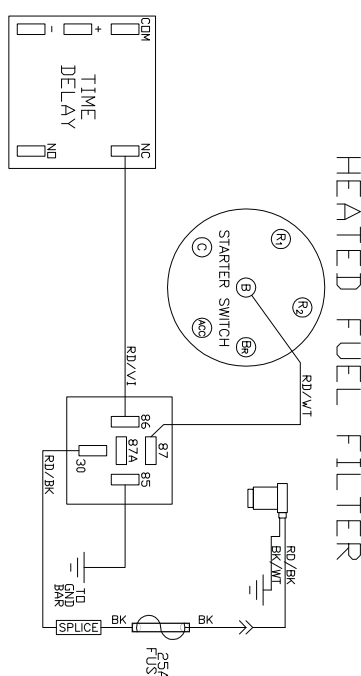


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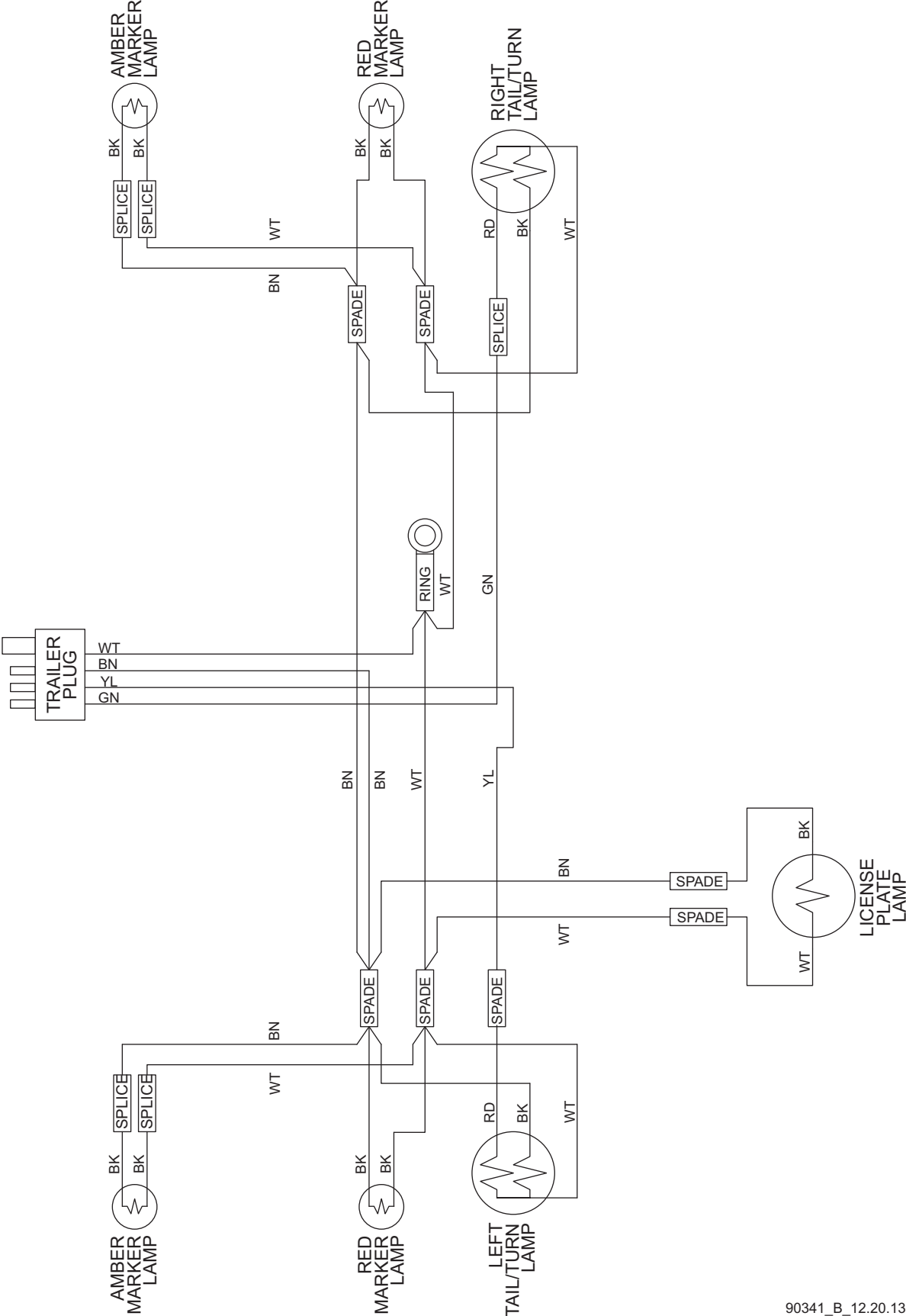
DC Wiring—Power Zone Controller



DC Wiring for Optional Equipment

<p>LOW FUEL SHUTDOWN</p> 	<p>INTERIOR LIGHT</p> 
<p>POSITIVE AIR SHUTDOWN 6-20kW</p> 	<p>BATTERY DISCONNECT</p> 
<p>BATTERY CHARGER</p> 	<p>HEATED FUEL FILTER</p> 

Trailer Wiring



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Generac Mobile Products, LLC
215 Power Drive, Berlin, WI 54923
GeneracMobileProducts.com | 800-926-9768 | 920-361-4442