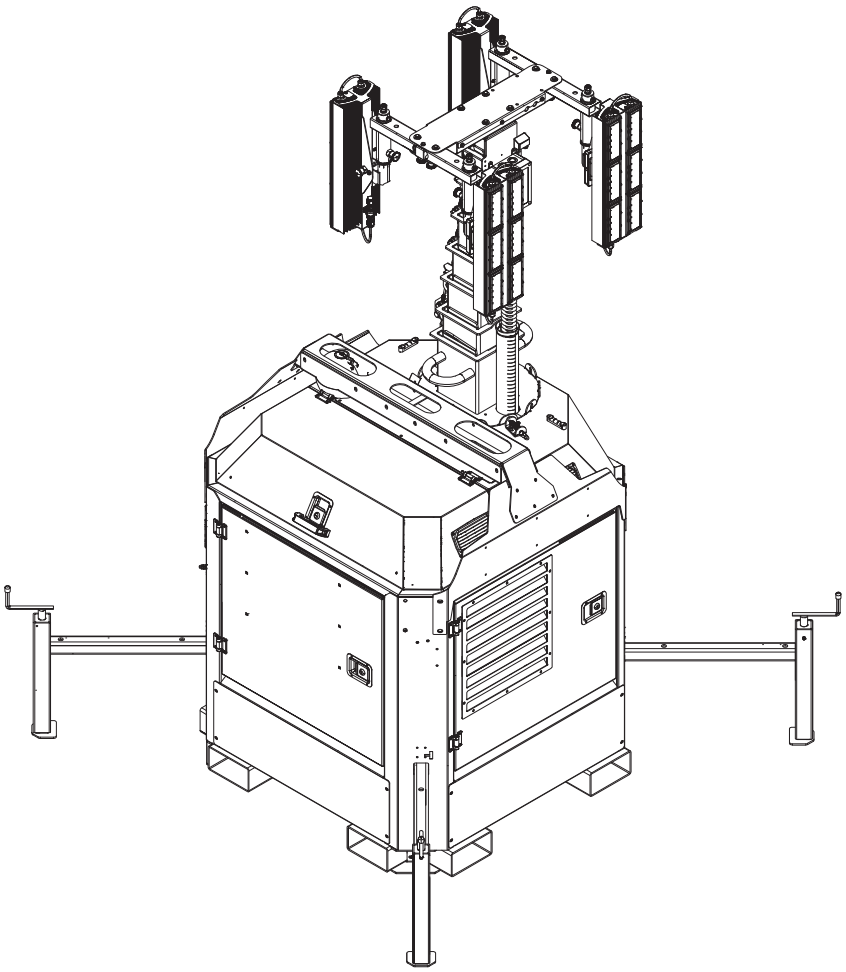
GENERAC | MOBILE

Owner's Manual

Light Tower

SLT-D CSA Models



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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 unit

Unit Model No.	
Unit Serial No.	
Engine Model No.	
Engine Serial No.	
Generator Model No.	
Generator Serial No.	
Date Purchased	

Record the information found on your unit data label on this page. See ***Unit and Serial Number Locations***.

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

When contacting a Generac Mobile Authorized Service Dealer (GMASD) 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 unit 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 GMASD. 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: Introduction and Safety

Introduction

Thank you for purchasing a Generac Mobile 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 GMASD, or contact Generac Mobile 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 GMASD 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 GMASD 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 permanant 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

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

⚠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)

⚠WARNING

Explosion and Fire. Do not smoke while refueling unit. Failure to do so could result in death, serious injury, or property or equipment damage. (000284a)

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)

Always recycle batteries in accordance with local laws and regulations. Contact your local solid waste collection site or recycling facility to obtain information on local recycling processes. For more information on battery recycling, visit the Battery Council International website at: ***http://batterycouncil.org***.

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:
  - Noticeable 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 113°F (45°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 the 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)

> 50 mph
(80 km/h)

⚠WARNING

Tipping hazard. 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. (000594a)

⚠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)

- 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). Verify area above unit 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 GMASD.

Service Safety

⚠WARNING

Accidental start-up. Disconnect negative battery terminal before servicing to prevent accidental engine rotation. Failure to do so could result in death or serious injury. (000148a)

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.

Safety and Operating Decals

See ***Figure 1-1*** through ***Figure 1-2***. 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.***

ID	Description	ID	Description
1	LED Floodlights Installed on this Machine Can't Work Anymore if Dismounted or Stolen	14	Diesel Fuel Tank Cap Open the Door
2	Stopping Point to Prevent Rotation of Mast	15	Electrical Grounding Stud
3	Warning - Pinch Points	16	Danger Possible Spillage of Corrosive Substances
4	Danger - Electric Shock Hazard, Consult Manual, Do Not Clean/Lubricate While Unit is in Use, Extinguish Fire With Chemical Extinguishers Only	17	Emergency Stop Button
5	Warning – Extracted Stabilizers	18	Maximum Wind Stability 50 mph (80 km/h)
6	Forklift and Tie-Down Point	19	Oil Control Level
7	Read the Manual	20	Refilling Oil
8	Operating Instructions	21	Danger: Do Not Open When Engine is Hot
9	Lifting Point	22	Radiator Cap
10	High Temperature, Exhaust Gas—Maintain Safe Distance	23	Battery Switch ON/OFF
11	Danger - Using a generator indoors can kill you in minutes. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.	24	External Fuel Tank
12	California Proposition 65 Alert	25	Warning - Do Not Use Step without Engaging Safety Pins. Step weight limit is 308 lbs (140 kg). Do Not Exceed Limit
13	Warning - Stop Engine Before Refueling. Use Only Diesel Fuel.	26	Neutral bonded to frame

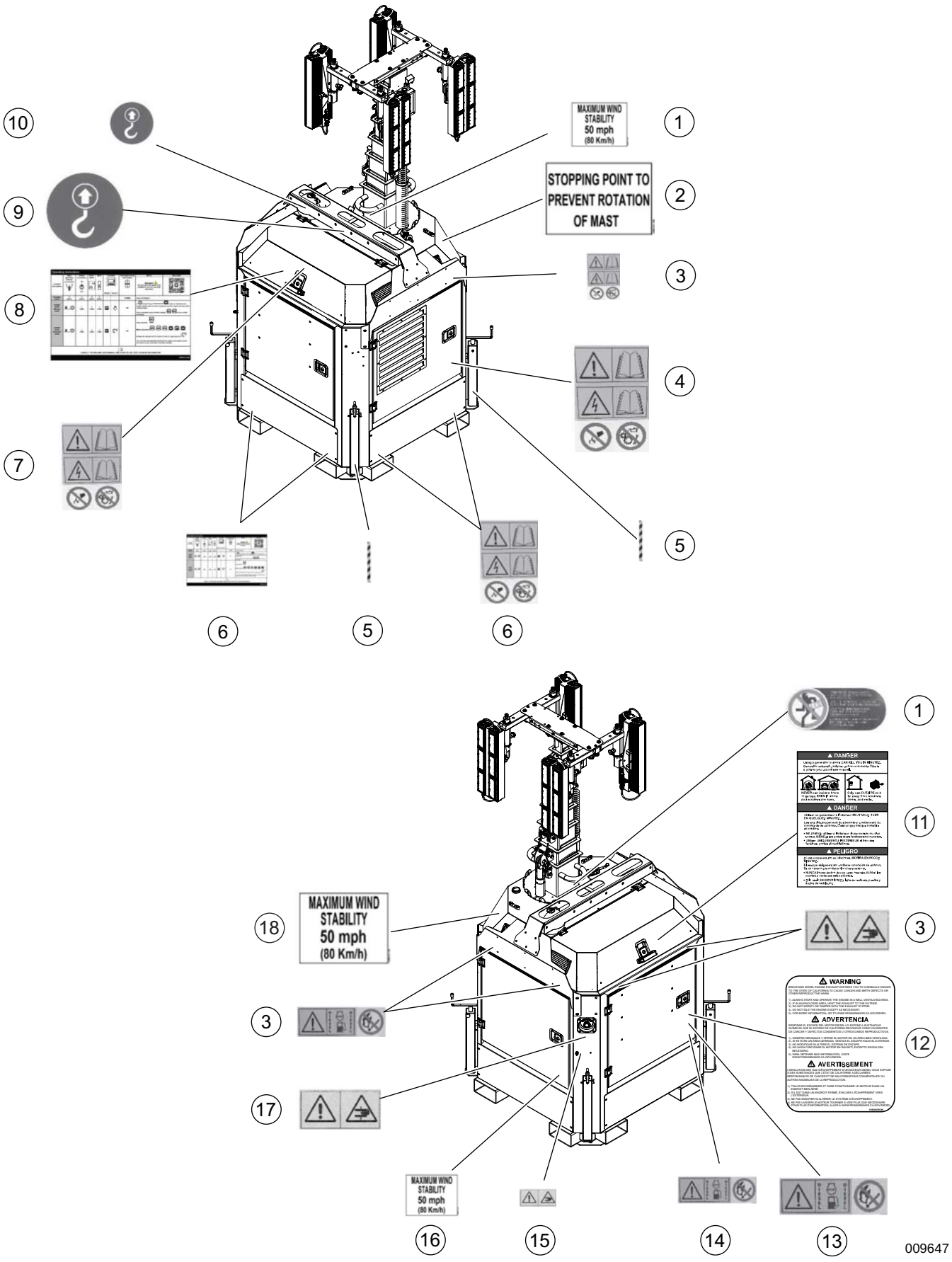

Figure 1-1. Decal Locations (1 of 2)

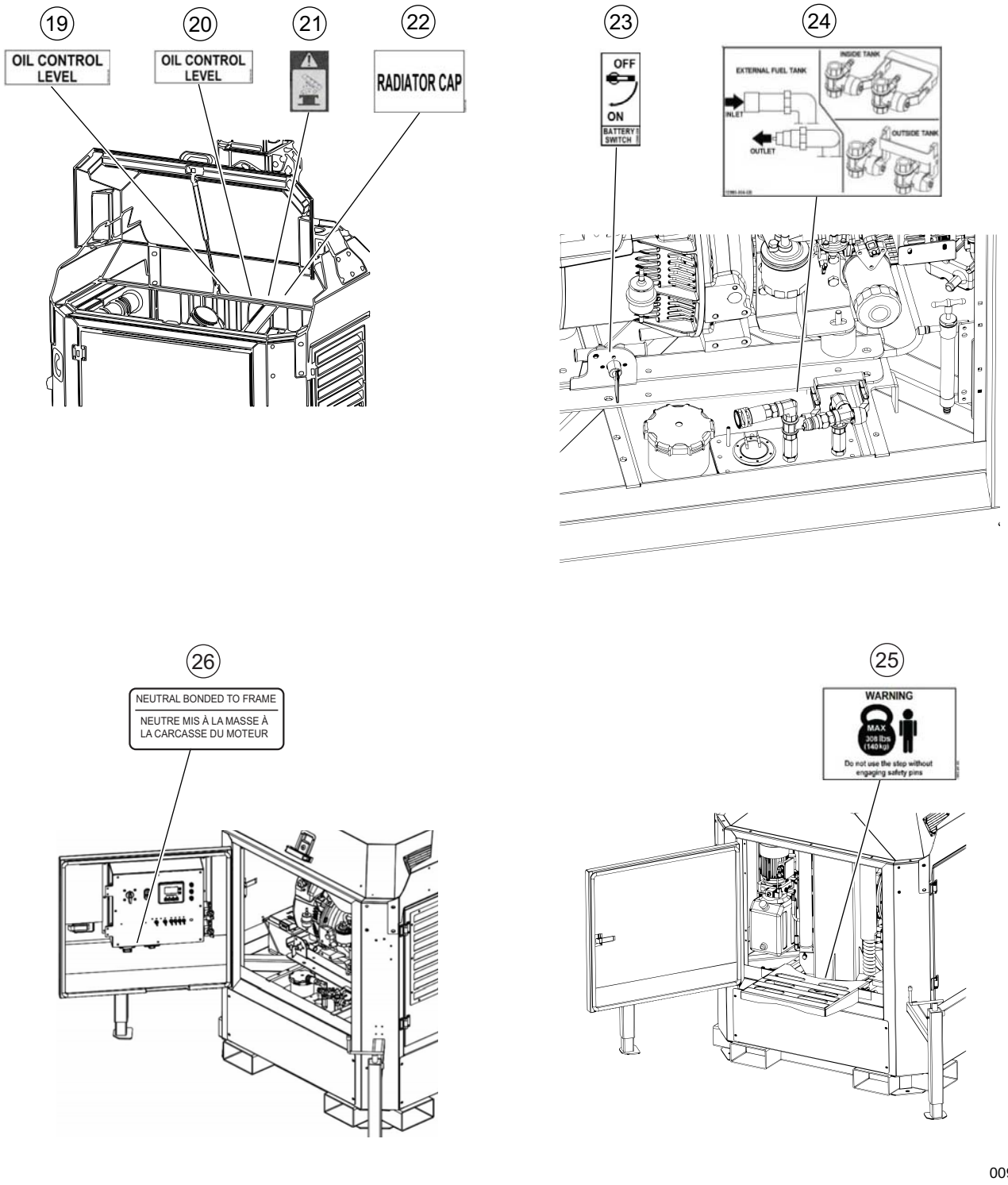

Figure 1-2. Decal Locations (2 of 2)

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Specifications

Description	UOM	SLT-D5	SLT-D6	SLT-D7
Engine				
Make (Model)	—	Kubota® (Z482 EPA)	Kubota (Z482 EPA)	Kubota (Z482 EPA)
Cylinders	qty	2	2	2
Displacement	in^3 (L)	29.23 (0.48)	29.23 (0.48)	29.23 (0.48)
Power—Standby	hp (kW)	6.0 (4.5)	6.0 (4.5)	6.0 (4.5)
Operating Speed	rpm	1,800	1,800	1,800
Cooling	—	Water	Water	Water
Fuel	—	Diesel	Diesel	Diesel
Starting	—	Electrical	Electrical	Electrical
Fuel Consumption—Full Power	gph (Lph)	0.33 (1.25)	0.33 (1.25)	0.33 (1.25)
Fuel Consumption—Lights Only	gph (Lph)	0.21 (0.81)	0.21 (0.81)	0.21 (0.81)
Liquid Containment (110%)	—	Yes	Yes	Yes
Battery—Voltage	V	12	12	12
Capacities				
Oil—Sump	qt (L)	2.65 (2.5)	2.65 (2.5)	2.65 (2.5)
Coolant—Radiator	qt (L)	2.96 (2.8)	2.96 (2.8)	2.96 (2.8)
Fuel—Total	gal (L)	70 (265)	70 (265)	70 (265)
Alternator				
Make (Model)	—	Linz® (Alumen SB)	Linz (Alumen SB)	Linz (Alumen SB)
Generator				
Model	-	Synchronous	Synchronous	Synchronous
Output	kVA	4.2	4.2	4.2
Output Voltage	V	120/240, 1 Ø	120/240, 1 Ø	120/240, 1 Ø
Insulation Class	—	H	H	H
Mechanical Protection	—	IP 23	IP 23	IP 23
Electric Motor				
Input	V, Hz	240, 60 ±10%	240, 60 ±10%	240, 60 ±10%
Power	kW	3.7	3.7	3.7
Poles	—	4	4	4
Duty Factor	—	S1	S1	S1
Gear Pump				
Maximum Pressure	psi (bar)	3,046 (210)	3,046 (210)	3,046 (210)
Factory Setting Pressure	psi (bar)	2,610 (180)	2,610 (180)	2,610 (180)
Emergency Action System	—	Manual	Manual	Manual
Hydraulic Fluid				
Reservoir Capacity	gal (L)	1.32 (5.0)	1.32 (5.0)	1.32 (5.0)
Fluid Type	—	ISO 6734-4 mineral oil	ISO 6734-4 mineral oil	ISO 6734-4 mineral oil
Fluid Temperature Range	°F (°C)	-22 (-30) to 176 (80)	-44 (-42) to 176 (80)	-44 (-42) to 176 (80)

Specifications continued on next page.

Description	UOM	SLT-D5	SLT-D6	SLT-D7
Mast				
Winch	—	Hydraulic	Hydraulic	Hydraulic
Sections	qty	7	7	7
Range of Motion—Rotation	degrees	340	340	340
Wind Rating	mph (km/h)	50 (80)	50 (80)	50 (80)
Lighting (LED)				
Lights—Power	W	4×320	4×320	4×320
Total Brightness	lm	184,000	184,000	184,000
Weight				
Dry	lb (kg)	2,192 (994)	2,192 (994)	2,192 (994)
Operating	lb (kg)	2,672 (1,213)	2,672 (1,213)	2,672 (1,213)

Specifications are subject to change without notice.

Unit Dimensions

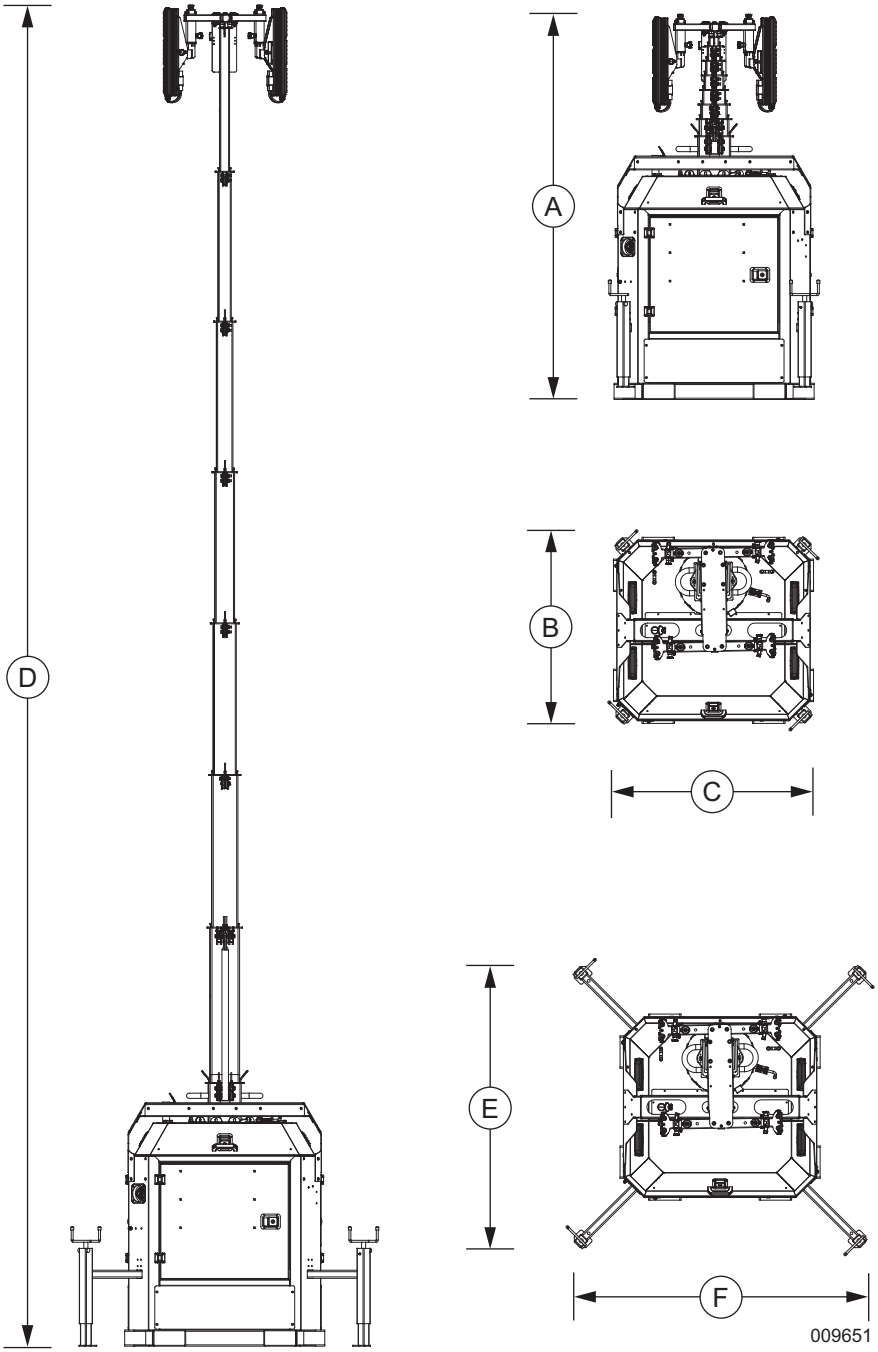

Figure 2-1. Unit Dimensions

A	B	C	D	E	F
104.7 in (2.66 m)	49.6 in (1.26 m)	48.43 in (1.23 m)	27.55 ft (8.4 m)	68.3 in (1.735 m)	70.5 in (1.79 m)

Unit and Serial Number Locations

Refer to ***Figure 2-2*** to locate the unit serial number and the nameplate. 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.

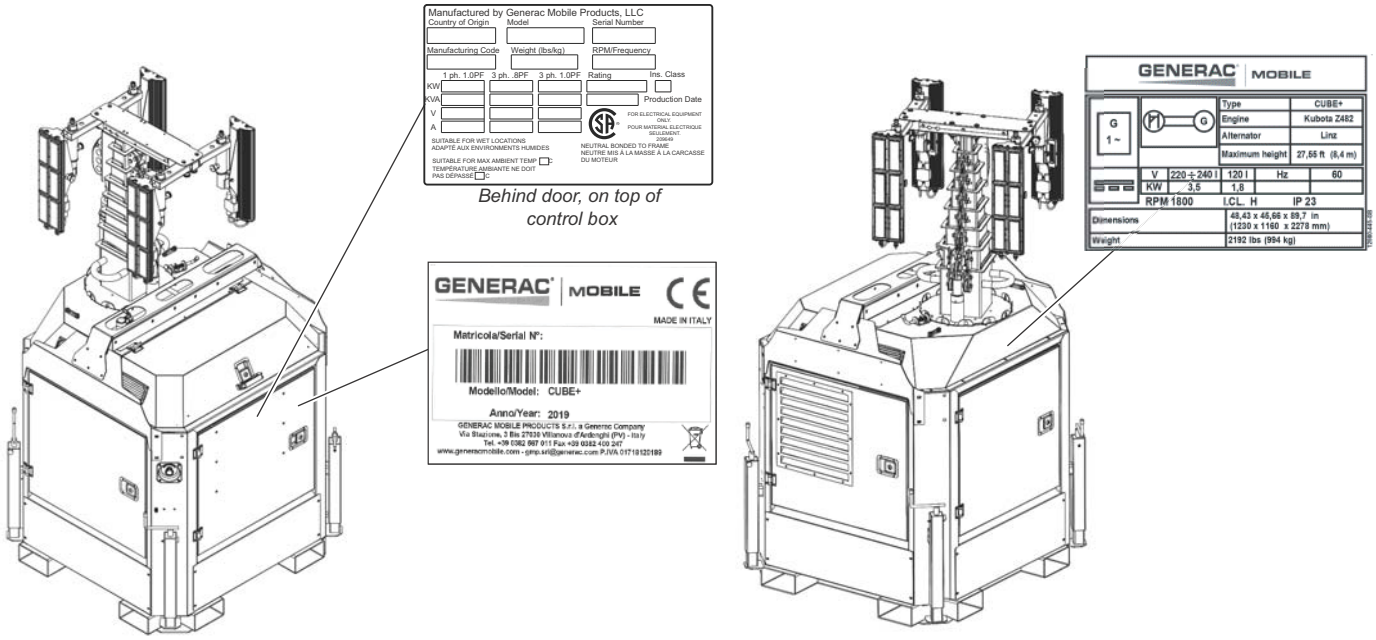

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Figure 2-2. Serial Number Locations

Component Locations

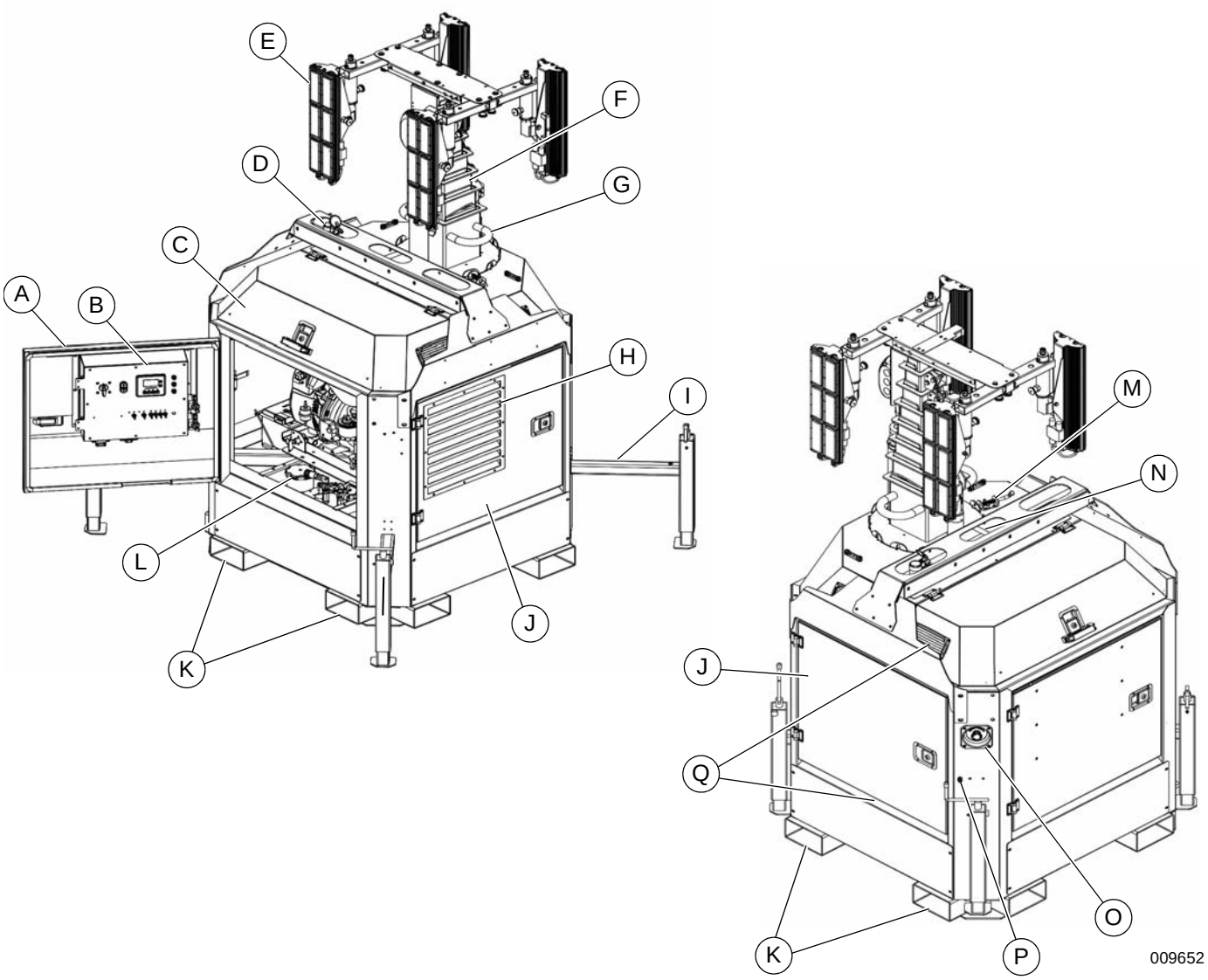


Figure 2-3. Exterior and Interior Components

- **A** Control panel and engine access door
- **B** Control panel
- **C** Radiator and engine access door
- **D** Engine exhaust
- **E** LED light fixture (4 locations)
- **F** Mast
- **G** Mast rotation handle (2 locations)
- **H** Air outlet vent
- **I** Outrigger with jack (4 locations)
- **J** Engine access door
- **K** Forklift pockets
- **L** Fuel fill
- **M** Mast rotation-blocking pin
- **N** Lifting point
- **O** Emergency stop button
- **P** Grounding stud
- **Q** Air inlet vent

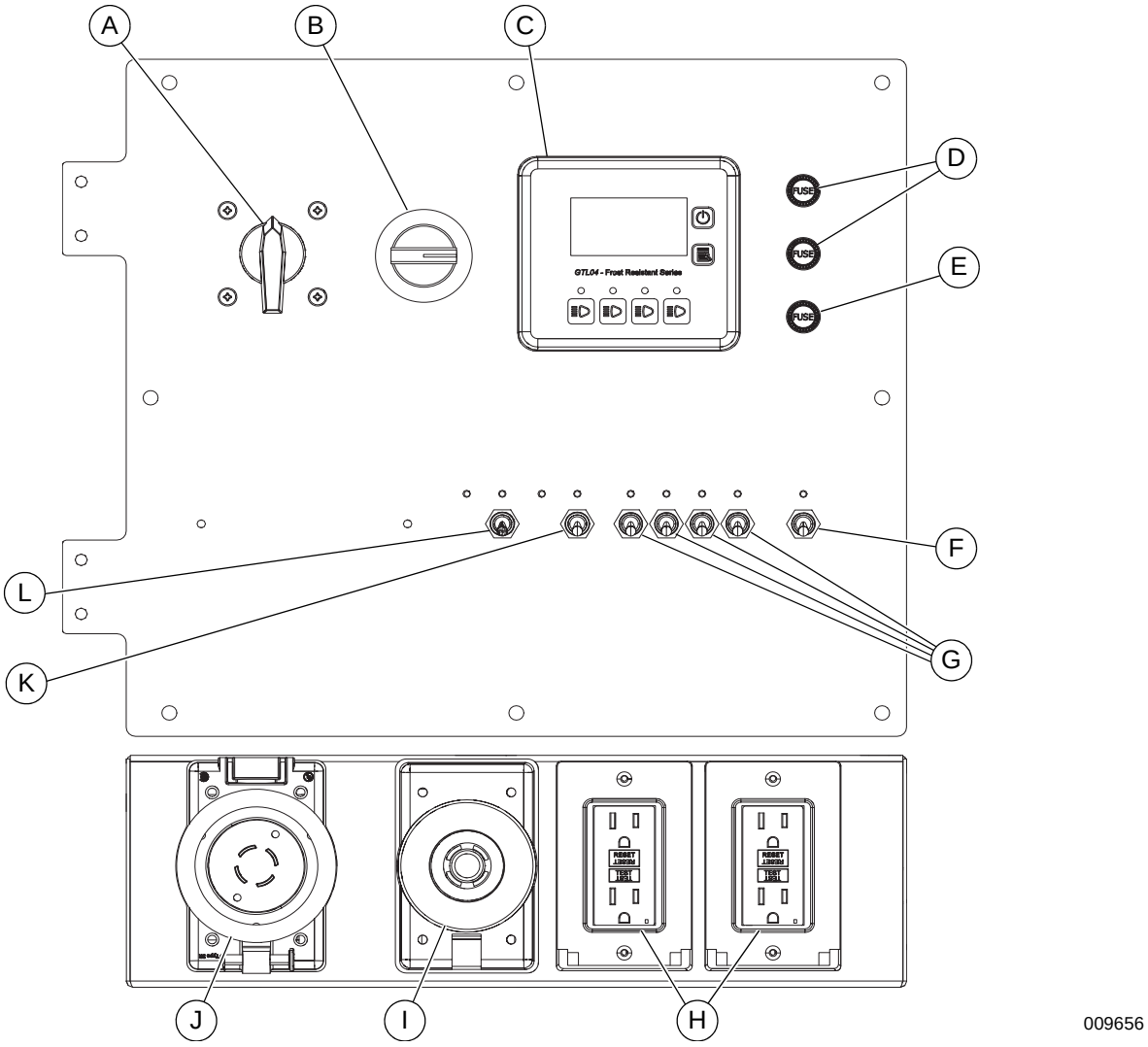


Figure 2-4. Control Panel (Top) and Connection Panel (Bottom) Components

(A) Utility/Off/Generator selector

Allows operator to select power source. Utility requires 120/240 VAC, 20 A power be connected to shore power input (J).

(B) Mast switch

Raises and lower mast.

(C) Controller

See ***Controller*** for features and functions.

(D) 2 A AC fuse

(E) 10 A DC fuse

(F) 10 A coolant heater control circuit breaker (if equipped)

(G) LED lamps circuit breakers

Individual 5 A circuit breakers.

(H) 120 VAC, 15 A, GFCI convenience receptacle (5-15R)

To connect auxiliary equipment. Includes a Ground Fault Circuit Interrupter (GFCI) test and reset button. Requires a NEMA 5-15P connection.

(I) Shore power output (120/240 VAC, 20 A)

Provides a 120/240 VAC, 20 A connection point for exporting power to an additional light tower. Requires a L14-20P connection.

(J) Shore power input (120/240 VAC, 20 A)

Provides a connection point for 120/240 VAC, 20 A shore power input. Requires a L14-20 connection.

(K) 5 A hydraulic motor circuit breaker

(L) Main circuit breaker

15 A resettable main circuit breaker for LED lights and output receptacles.

Controller

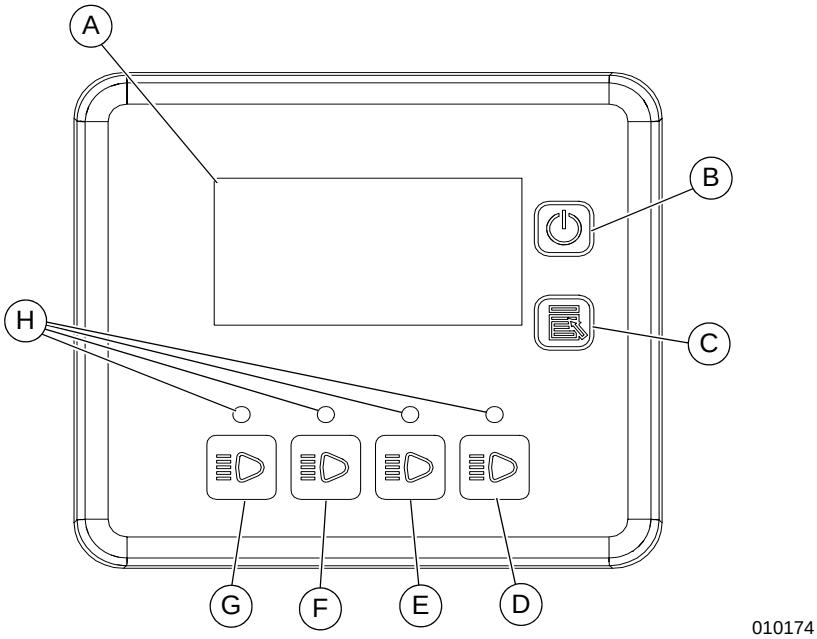


Figure 2-5. Controller—Model GTL01

(A) Screen

(B) Start/Stop Button

Controls unit startup and shutdown. Also resets active alarms.

NOTE: Does not function when unit is in Automatic mode.

(C) Mode Button

Switches controller mode between manual (MANUAL) and automatic (AUTO).

- MANUAL mode is distinguished by full operator control of unit start-up and shut-down functions.
- AUTO mode is distinguished by automation of unit start-up and shut-down. See ***Setting Light Sensor*** and ***Setting the Timer*** for more information.

NOTE: In AUTO mode, the Start/Stop button does not function.

(D) Lamp 4 On/Off Button

Controls power to lamp 4. Also performs on-load testing when the unit is set to Automatic mode. Pushing button switches lamps 1–4 to ON, and they will remain ON as long as the button is depressed. Upon releasing Lamp 4 On/Off button, lamps 1–4 and the engine will shut OFF. The unit will remain in Automatic mode waiting for a start request.

(E) Lamp 3 On/Off Button

Controls power to lamp 3.

(F) Lamp 2 On/Off Button

Controls power to lamp 2.

(G) Lamp 1 On/Off Button

Controls power to lamp 1. Also accesses the Operator menu.

(H) Lamp Status Indicator Light (4 Locations)

Indicates On/Off status of corresponding lamp.

- Blinks during lamp On/Off procedure.
- Illuminates steadily when lamp is on.

Accessing Operator Menu

NOTE: The Operator menu is accessible only when the unit is in Manual mode and the lamps and engine are OFF.

Use the Operator menu to:

- Adjust light sensor settings
- Adjust timer settings
- Set the system clock and language

To access the Operator menu:

1. See ***Figure 2-6***. Press and hold Lamp 1 On/Off button (F) until the password screen appears.

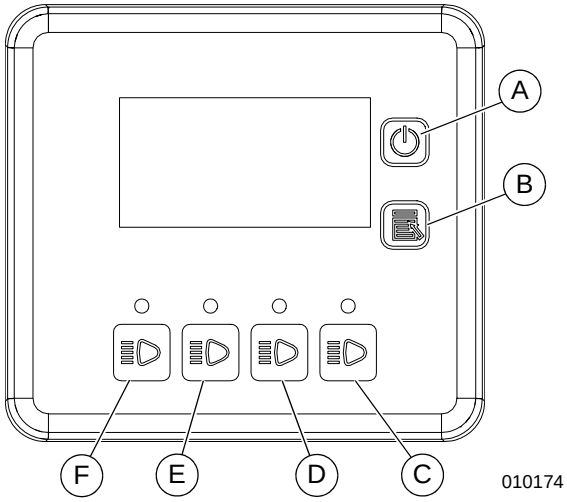


Figure 2-6. Controller Password Screen

2. Enter the password by pressing controller buttons in the following sequence:
   - Lamp 2 On/Off button (E)
   - Lamp 3 On/Off button (D)
   - Lamp 4 On/Off button (C)
   - Start-Stop button (A)
   - Manual-Automatic button (B)
   - Start-Stop button (A)

Navigating Operator Menu

1. Use the Start/Stop button (A) and Manual-Automatic button (B) to scroll through the menu list and highlight the desired sub-menu.
2. Press the Lamp 2 On/Off button (E) to enter the highlighted sub-menu.
3. Use the start-stop button (A) and Manual-Automatic button (B) to highlight the desired setting.
4. Press the Lamp 2 On/Off button (E) to access the lighted setting.
5. Use the Start-Stop button (A) and Manual-Automatic button (B) to adjust the setting.
6. Press the Lamp 2 On/Off button (E) to confirm the setting.
7. Press the Lamp 1 On/Off button (F) to return to the previous menu.

Setting Light Sensor

This preset automatically turns the unit ON or OFF based on ambient lighting.

When ambient lighting drops below a user-programmable lux threshold, a delay timer starts. The delay timer is expressed in seconds and prevents the unit from switching ON and OFF unintentionally. If after the delay time has expired the ambient light remains less than the threshold value, the unit will automatically start.

When the ambient lighting exceeds the light sensor's lux threshold value, the unit will shut OFF after the delay period has expired.

To set the light sensor preset:

NOTE: See ***Navigating Operator Menu*** for information on accessing and adjusting settings.

1. Access the Operator menu.
2. Access the Light Sensor menu.
3. Within the Light Sensor menu, adjust the following:
   - Set Enable to Yes.
   - Set Threshold to the desired Lux value.
   - Set Delay to the desired seconds.
4. Exit the Light Sensor and Operator menus.
5. Set the unit to Automatic mode using the controller Manual/Auto button.

NOTE: When Automatic mode is selected, the default manual mode icon will be replaced by the light sensor icon: .

Setting the Timer

This preset automatically turns the unit ON at a user-defined time. The unit will remain ON until a delay period set by the user elapses. When the delay period elapses the unit will shut OFF.

The unit allows for up to 14 scheduled timers. Within the Timer menu these presets are named: Program 1-14. In each program it is possible to set the day and time the unit starts and the duration of operation.

To set a Program:

NOTE: See ***Navigating Operator Menu*** for information on accessing and adjusting settings.

1. Access the Operator menu.
2. Access the Timer menu.
3. Access the desired Program.
4. Within the Program menu, adjust the following:

- Set Enable to Yes.
- Set the Beginning At to the desired start time. Available values are 00:00 to 23:59.
- Set Duration to the desired duration of operation. Available values are 00:00 to 99:59.
- Set Day to the desired day of operation. Available values are Monday through Sunday.

5. Exit the Program and Timer menus.
6. Set the unit to Automatic mode using the controller Manual/Auto button.
7. Use the controller Manual/Auto button to set the unit to Automatic mode.

NOTE: When Automatic mode is selected, the default manual mode icon  will be replaced by the timer icon:  .

Setting the Clock

NOTE: See ***Navigating Operator Menu*** for information on accessing and adjusting settings.

1. Access the Operator menu.
2. Access the Clock menu.
3. Access the desired Program.
4. Within the Clock menu, adjust the following:
   - Set Hours to the current time.
   - Set Minutes to the current time.
   - Set Day to the current day.
   - Set Month to the current month.
   - Set Year to the last two digits of the current year.
5. Exit the Clock and Operator menus.

Resetting Maintenance Alarms

When a maintenance fault occurs, a maintenance alarm icon will appear on the controller screen identifying the fault. See ***Table 2-1***.

Table 2-1. Maintenance Alarms

Icon	Description
	**Low oil pressure** Engine oil pressure has fallen below its configured low oil pressure alarm level.
	**High temperature engine coolant** Engine coolant temperature has risen above its configured temperature alarm level.
	**Low fuel level** Engine fuel level has fallen below its configured low fuel level alarm.

Table 2-1. Maintenance Alarms

	**Battery charger fault** Battery has failed to charge.
	**Fail to stop** The engine continues to run after instructed to stop.
	**Fail to start** The engine has failed to start after the configured number of start attempts.
	**Over voltage/frequency** Engine DC supply has risen above its configured alarm level.
	**Under voltage/frequency** Engine DC supply has fallen below its configured alarm level.

To clear the alarm, the fault must be resolved and the alarm reset. See ***General Troubleshooting*** for help on diagnosing and correcting maintenance issues.
To clear the alarm:

NOTE: See ***Navigating Operator Menu*** for information on accessing and adjusting settings.

1. Access the Operator menu.
2. Access the Maintenan. OK menu.
3. Set Maintenan. OK to YES.
4. Exit the Maintenan. OK and Operator menus.

Cold-Weather Components (If Equipped)

See ***Figure 2-7***. This unit is equipped with one or more cold-weather components for cold-weather operation.

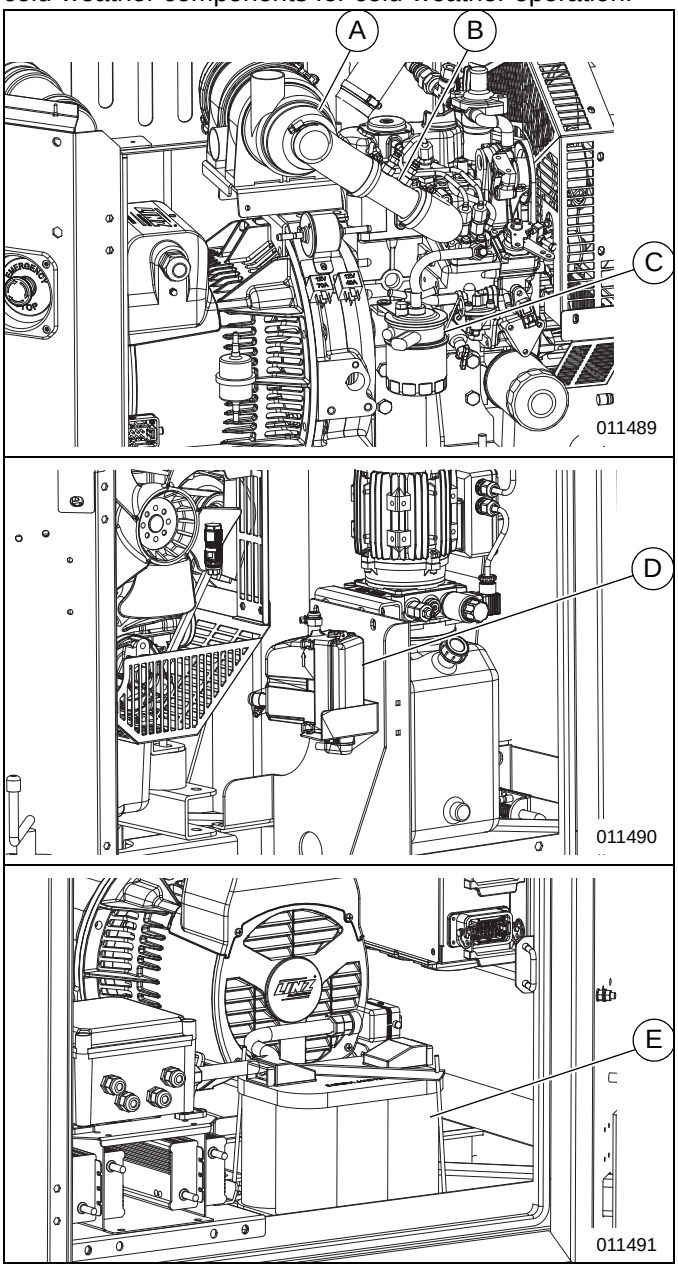


Figure 2-7. Cold-Weather Components (If Equipped)

Item	Component	Unit Model		
		SLT-D-5	SLT-D-6	SLT-D-7
A	Positive air shutdown			♦
B	Intake air heater	♦	♦	♦
C	Heated fuel filter		♦	♦
D	Coolant heater		♦	♦
E	720 CCA battery		♦	♦
—	60/40 coolant		♦	♦

Diffused Lighting (If Equipped)

See ***Figure 2-8***. This unit may be equipped with diffused lighting.

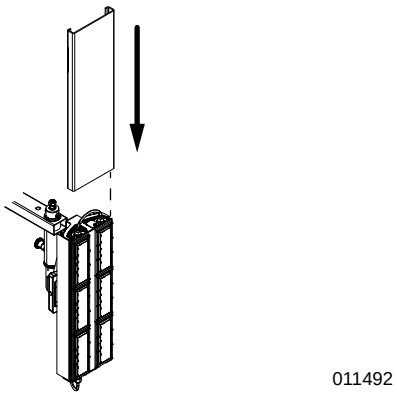


Figure 2-8. Diffused Lighting Lens Installation

Fuel Recommendations

⚠ DANGER

Explosion and Fire. Fuel and vapors are extremely flammable and explosive. Keep fire and spark away. Failure to do so will result in death or serious injury. (000168)

⚠ DANGER

Explosion and Fire. Do not overfill fuel tank. Overfilling may cause fuel to leak and ignite or explode, resulting in death or serious injury. (000204)

This unit is designed to operate on diesel fuel. Follow these guidelines:

- Use only ultra-low-sulfur diesel fuel.
- When temperatures are at or below freezing, use No. 1D diesel fuel.
- When temperatures are above freezing, use No. 2D diesel fuel.
- In some areas of the country, climatized fuel—a mixture of 1D and 2D, may also be used

IMPORTANT NOTE: DO NOT use home heating oil or bio-diesel fuel.

IMPORTANT NOTE: Comply with all laws regulating the storage and handling of fuels.

See ***Specifications*** for fuel tank capacity.

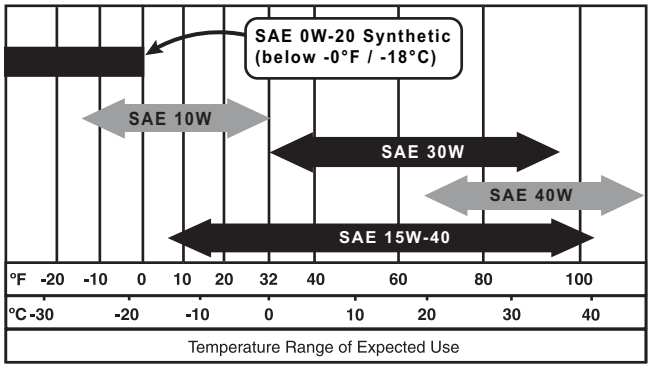
Engine Oil Recommendations

To maintain the product warranty, the engine oil should be serviced in accordance with the recommendations of this manual. For service interval, see ***Basic Maintenance Schedule***.

⚠CAUTION

Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage.

(000135)



Coolant Recommendations

⚠DANGER

Risk of poisoning. Do not use mouth to siphon coolant. Doing so will result in death or serious injury.

(000149)

⚠WARNING

Risk of burns. Do not open coolant system until engine has completely cooled. Doing so could result in serious injury.

(000154)

⚠CAUTION

Risk of overheating. Do not use any chromate base rust inhibitor with propylene glycol base antifreeze, boosters, or additives. Doing so will cause overheating and possible equipment damage. (000165a)

Improper coolant can damage the engine cooling system. Use demineralized water or distilled water for best results. Hard water causes scale deposits, which reduces cooling efficiency and raises internal temperatures, possibly leading to engine damage. Use an anti-corrosive to prevent rot in summer and anti-freeze to prevent freezing in winter.

Contact a GMASD or refer to the applicable engine service manual for engine coolant recommendations. See table below for mixtures:

Freezing Point °F (°C)	-12 (-24)	-34 (-36)	-54 (-48)	-90 (-67)
Water (% Volume)	50	40	40	40
Anitfreeze (% Volume)	50	60	60	60*

Hydraulic Fluid Recommendations

⚠DANGER

Hydraulic Fluid Injection. High-pressure, high-temperature hydraulic fluid can pierce skin and cause severe burns. Do not check for leaks with hands. Seek immediate medical attention in case of accident. Failure to protect body accordingly will result in death or serious injury. (000239)

Type: ISO 6743-4 Mineral Oil

See ***Specifications*** for tank and system capacities.

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Operation Configuration

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. Verify electrical system is properly grounded before applying power. Failure to do so will result in death or serious injury. (000152)

DANGER

Electrocution. Water contact with a power source, if not avoided, will result in death or serious injury. (000104)

DANGER

Asphyxiation. Do not connect any engine-powered equipment or fired air heaters to theconvenience receptacle(s), even with properventilation. Carbon monoxide, if not avoided, will result in death or serious injury. (000353)

NOTE: For grounding requirements, follow local, state, oil and gas or petrochemical plant grounding, MSHA, OSHA, CSA, IEC, IEEE, NFPA, ABS Marine, and Maritime guidelines, as applicable. See ***Component Locations*** for grounding stud location.

Before setting up the light tower, determine if the unit requires utility input power, or if the unit will provide (export) power to another light tower.

- If utility input power is required, connect a 120/240 VAC, 20 A power supply, with an L14-20P connection, to the control panel shore power input.
- If export power is required, connect a 120/240 VAC, 20 A power supply, with an L14-20P connection, to the control panel shore power output.

NOTE: Shore power cables are not supplied with units shipped from the factory; they must be supplied by the owner/operator.

Connecting Two Units

Cable Specifications		
Maximum Distance	Cable Size	Extension Cord
450 ft (137.16 m)	10/4	L14-20P --- L14-20R
300 ft (91.4 m)	12/4	L14-20P --- L14-20R

See ***Figure 3-1***. Supply power from unit 1 to unit 2 by connecting a cable (A) as illustrated.

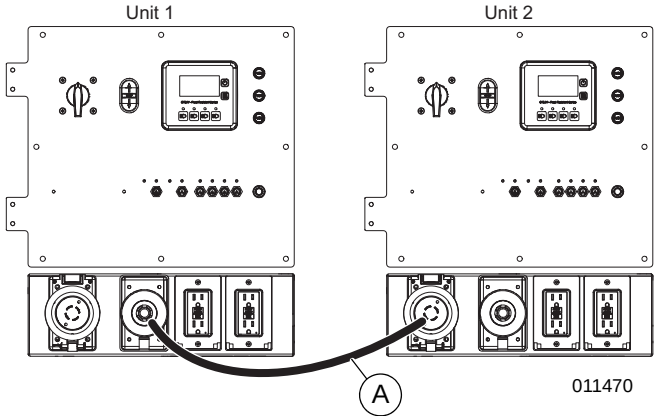

Figure 3-1. Connecting Two Units

Connecting Utility or Generator to One Unit

Cable Specifications		
Maximum Distance	Cable Size	Extension Cord
450 ft (137.16 m)	10/4	L14-20P --- L14-20R
300 ft (91.4 m)	12/4	L14-20P --- L14-20R

See ***Figure 3-2***. Supply power from a public utility, or from an appropriate generator, to a unit by connecting a cable (A) as illustrated.

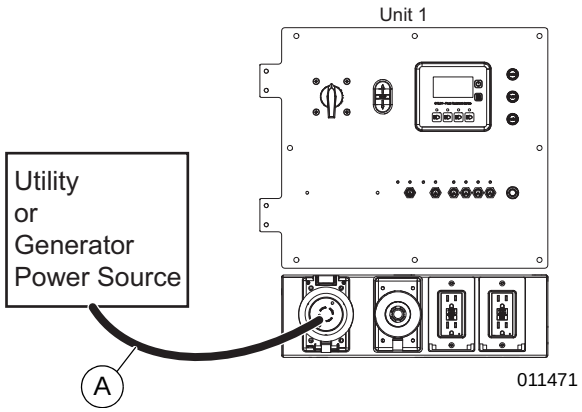

Figure 3-2. Connecting Utility or Generator to a Unit

Connecting Utility or Generator to Two Units

Cable Specifications		
Maximum Distance	Cable Size	Extension Cord
150 ft (45.7 m)	10/4	L14-20P --- L14-20R
100 ft (30.5 m)	12/4	L14-20P --- L14-20R

See ***Figure 3-3***. Supply power from a public utility, or from an appropriate generator, to two units by connecting cables (A) as illustrated.

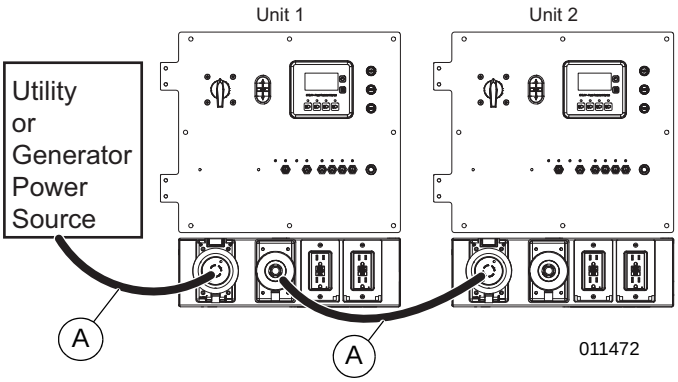

Figure 3-3. Connecting Utility or Generator to Two Units

Unit Setup

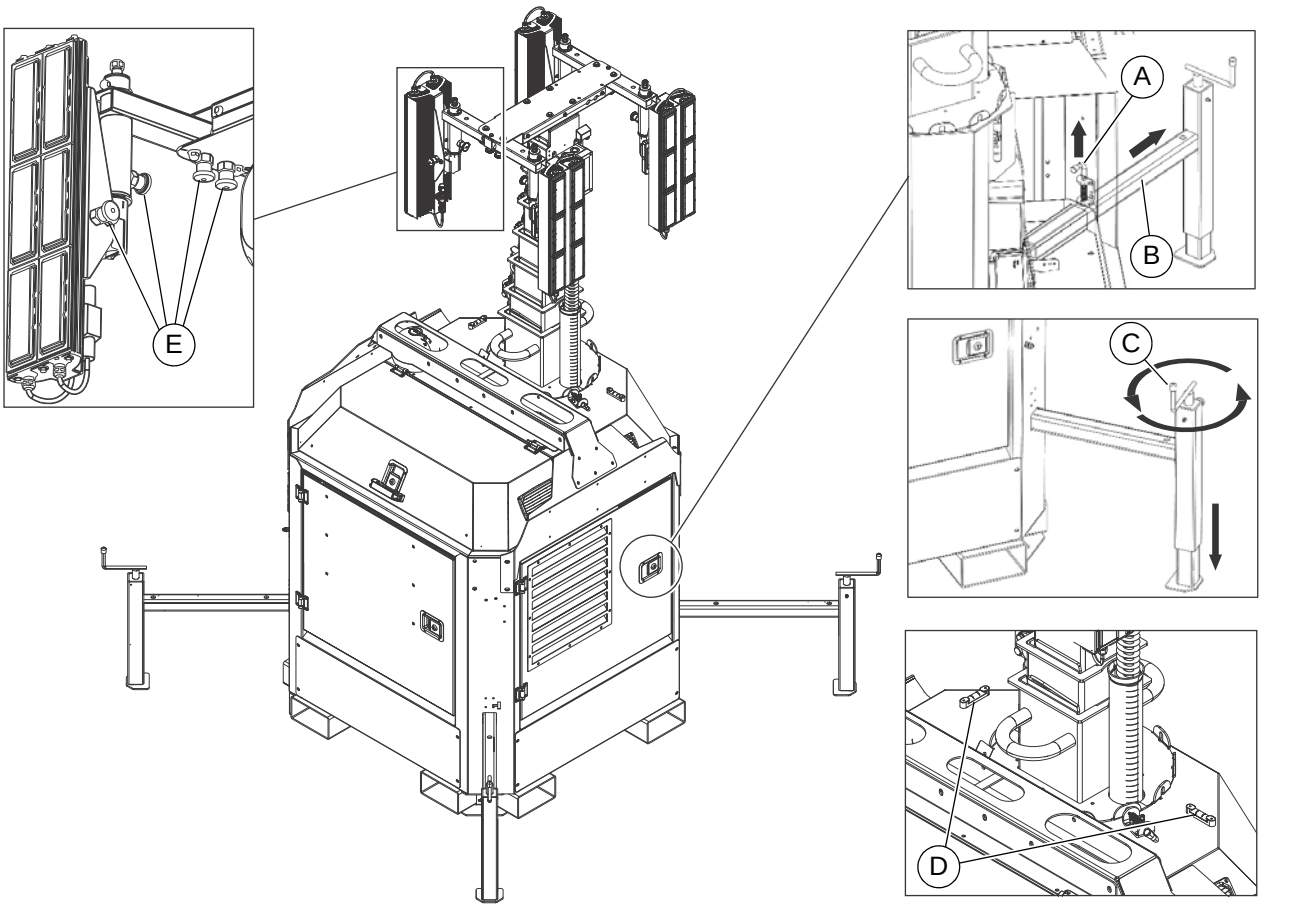

Figure 3-4. Unit Setup Components

⚠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

> 50 mph (80 km/h)

Tipping hazard. 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. (000594a)

1. For maximum light coverage, position the unit at ground level or higher than the area being illuminated.
2. Place unit on firm ground that is relatively flat.
3. See ***Figure 3-4***. Open all access doors. For each outrigger, pull locking pin (A) and extract outrigger (B) until the spring-loaded locking pin snaps into place.
4. Rotate each jack handle (C) counterclockwise to start leveling the unit. Adjust all four jacks by rotating their handles counterclockwise until they are firmly in contact with the ground.
5. Continue adjusting jacks until bubble-levels (D) indicate unit is level.
6. Before raising the mast, adjust the lamps. The lamps may be adjusted up, down, left, or right by pulling knobs (E) and moving the light to the desired position.

NOTE: The unit is equipped with an auxiliary foldout step to assist in lamp setup. See ***Using the Auxiliary Foldout Step***.

7. Verify knobs (E) are locked in place.

Using the Auxiliary Foldout Step

⚠WARNING

Tipping hazard. The step weight limit is 308 lbs (140 kg). Do not exceed weight limit. Exceeding weight limit could result in death, serious injury, or propery or equipment damage. (000593)

The unit is equipped with a axillary foldout step for use when adjusting lamp position during setup. To use step:

1. See ***Figure 3-5***. Open engine inspection door (A).

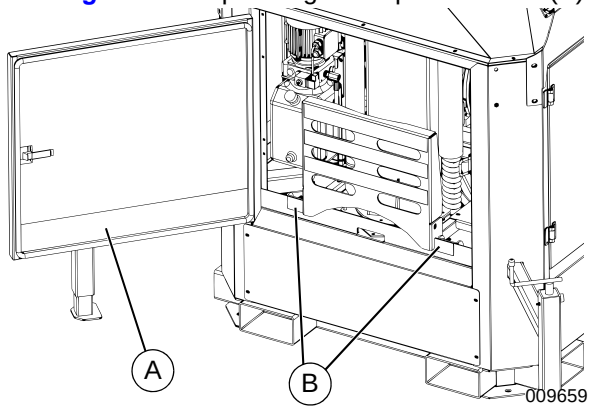

Figure 3-5. Foldout Step—Stowed Position

2. Locate safety pins (B) on each side of the step.
3. See ***Figure 3-6***. Disengage each safety pin by first pulling and then rotating the pin.

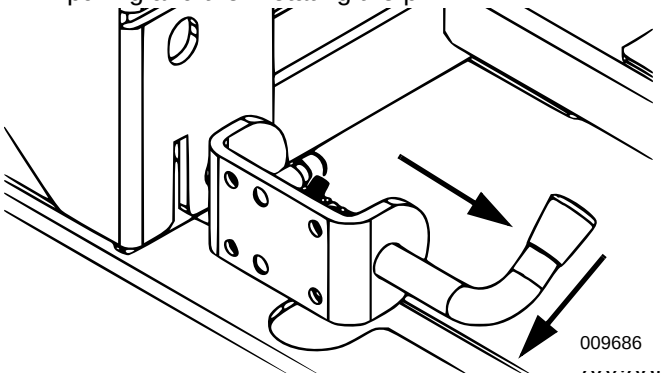

Figure 3-6. Disengaging Safety Pins

4. See ***Figure 3-7***. Flip step into deployed position, as illustrated (A).

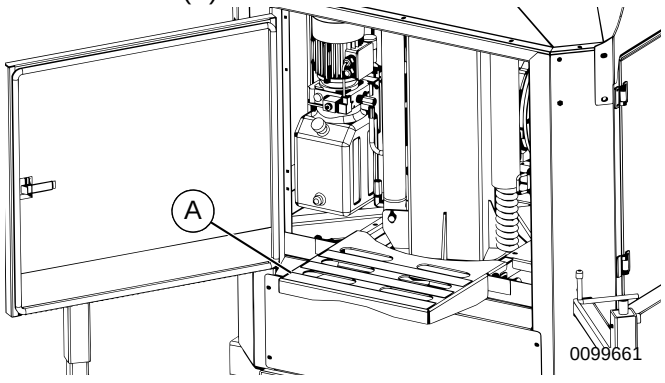

Figure 3-7. Foldout Step—Deployed Position

⚠WARNING

Personal injury. Never use step without safety pins engaged. Using step without safety pins engaged could result in death or serious injury.

(000592)

5. See ***Figure 3-8***. Engage each safety pin by first rotating and then pushing the pin into the locked position.

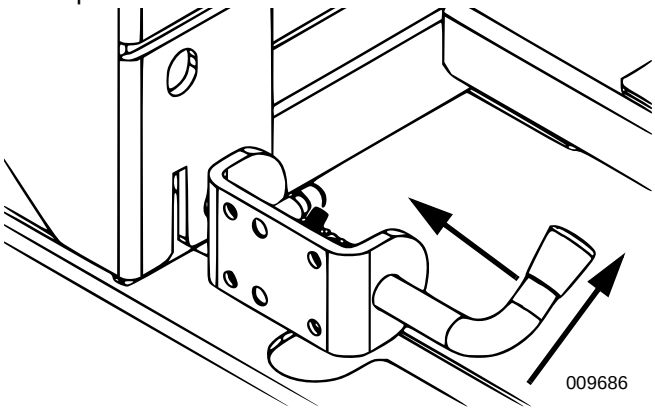

Figure 3-8. Engaging Safety Pins

6. To return foldout step to the stowed position, first disengage safety pins, then flip step into stowed position, then engage safety pins.

NOTE: Safety pins must be engaged when step is in the stowed position.

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. See ***Maintenance***.
- ❒ Perform a walk-around inspection. See ***Daily Walk-Around Inspection***.
- ❒ Verify the unit is level.
- ❒ Verify the unit is dry. Look for water inside or near the unit; dry if needed.
- ❒ For grounding requirements, follow National Electrical Code (NEC), state, and local regulations.
- ❒ Verify the control power switch is in the OFF (O) position.
- ❒ Verify all circuit breakers are in the OFF (O) position.

- ❒ 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

⚠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

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)

1. Set up and level the unit. See ***Unit Setup***.
2. See ***Figure 3-9***. Inspect mast cables for excessive wear or damage. Verify cables are properly centered in each pulley (A).
3. Turn ON main circuit breaker and turn ON all control panel circuit breakers.
4. Use Utility/Off/Generator Selector to select the desired power source.
5. Use controller to start the machine. See ***Starting the Unit***.
6. Loosen mast rotation knob (B) and use handle (C) to orientate the light in the desired direction.

NOTE: Verify mast rotation knob (B) has been tightened after any adjustments.

7. Press and hold the mast raising and lowering switch upward to telescope the mast to the desired height.

NOTE: While telescoping, verify the mast coil-cord extends to the top sections of the mast.

8. Stop extending mast when colored mark (D) on the second mast section is visible.

IMPORTANT NOTE: Contact a GMASD immediately if the mast hangs up or the winch cable develops slack.

⚠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

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)

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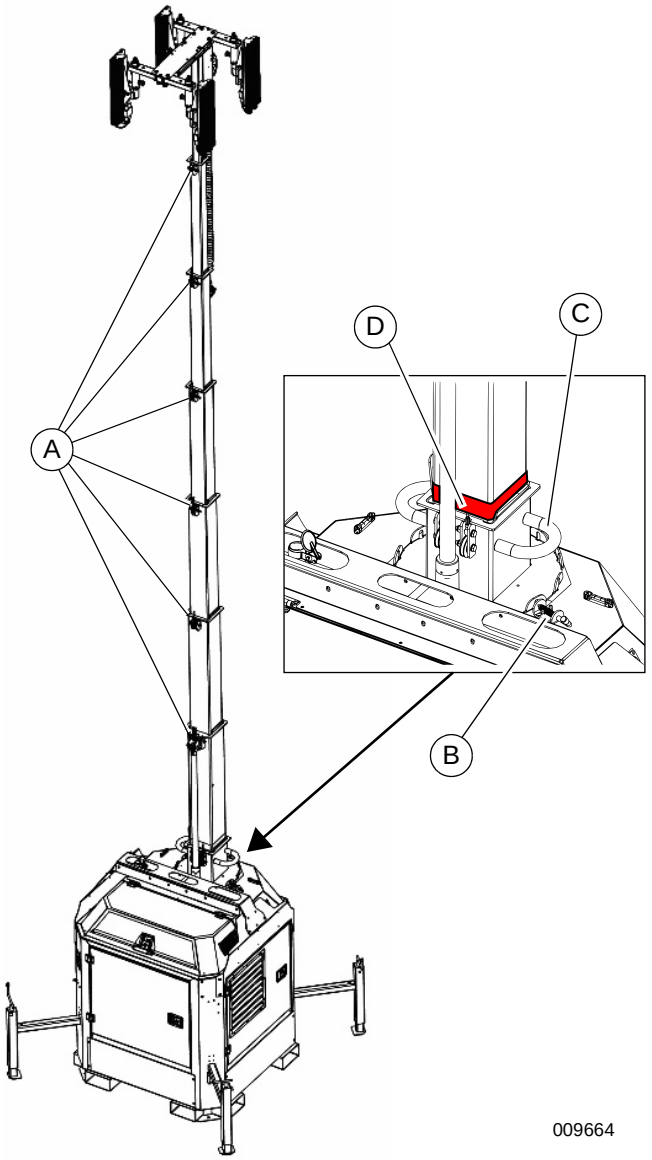

Figure 3-9. Raising the Mast

Automatically Lowering the Mast

⚠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)

1. Verify engine is ON.
2. Switch all lights to OFF.
3. Press down and hold the mast switch until mast is completely 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 a GMASD immediately if the mast hangs up or the winch cable develops slack.

Manually Lowering the Mast

⚠WARNING

Personal injury. Turn hydraulic release valve slowly. Failure to do so could cause the mast to descend quickly and could result in death, serious injury, or property or equipment damage.

(000595)

In the event of power failure while the mast is in the raised position, the mast can be manually lowered with the hydraulic release valve.

IMPORTANT NOTE: Do not use this procedure unless absolutely necessary.

1. See ***Figure 3-10***. Slowly turn hydraulic release valve (A) counterclockwise.

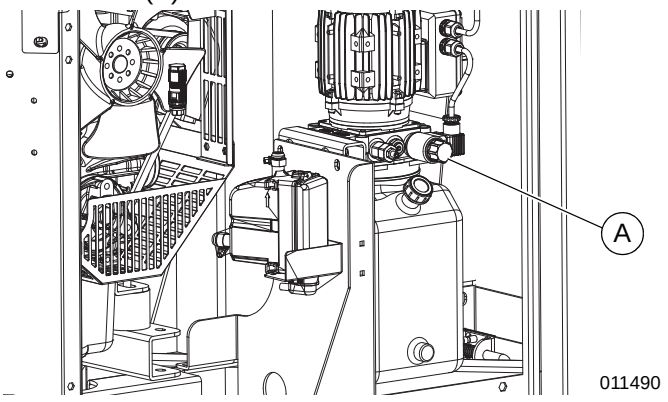

Figure 3-10. Hydraulic Release Valve

IMPORTANT NOTE: The mast descent speed is determined by the rate the hydraulic release valve is turned.

2. When the mast is completely lowered, turn the hydraulic release valve clockwise until tight.

Starting the Unit

1. Turn Utility/Off/Generator selector on control panel to the desired power source. See ***Component Locations*** for location.
   - Generator powers the light tower using the unit generator/engine.
   - Utility powers the light tower using the power source connected to the control panel power inlet. See ***Operation Configuration*** for more information.

NOTE: When using utility power, the mains utility voltage and frequency are displayed on the controller screen, and all engine icons, inputs, alarms, and procedures are disabled.

2. Turn ON main circuit breaker and all control panel circuit breakers.
3. Use the controller Manual/Auto button to select the desired mode.
   - Manual mode is the system default. In Manual mode, the user manually turns the light tower ON and OFF. When Manual mode is selected the Manual mode icon will appear on the controller screen:  .
   - Automatic mode automates light tower control based on presets. The Light Sensor preset turns the unit ON/OFF when ambient light reaches a threshold. The Timer preset turns the unit ON/OFF based at a user-defined time. When Automatic mode is selected, the default Manual mode icon  will be replaced by Automatic mode icons:  for Light sensor, and  for Timer. See ***Setting Light Sensor*** and ***Setting the Timer*** for more information.
4. Press the controller Start/Stop button to start the engine.

NOTE: During startup, the unit will perform a series of routine system checks before the light tower can be used. The controller indicates the light tower is ready for use when the engine icon  stops blinking and turns solid.

5. Use the control panel Mast switch to raise the mast to the desired height.
6. Use the controller Lamps 1-4 On/Off buttons to switch the desired lamps ON.

NOTE: The lamps do not turn ON simultaneously. There is a delay between lights. The status LED above the lamp switch will blink during this delay, and stop blinking when the lamp switches OFF.

Customer Convenience Receptacles

NOTE: See ***Figure 3-11***. The unit is equipped with convenience receptacles for powering accessories or tools. When the engine is running, the receptacles are powered.

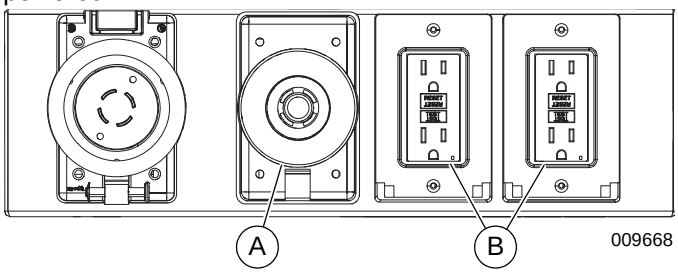

Figure 3-11. Customer Convenience Receptacles

The standard receptacle panel is equipped with:

- One 120/240 VAC, 20 A, L14-20R (A)
- Two 120 VAC, 15 A, GFCI, 5-15R (B)

When all lights are OFF, full generator power is available to the receptacles.

IMPORTANT NOTE: All electrical loads connected to the unit 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.

Receptacle Circuit Breakers

Each receptacle is equipped with a circuit breaker, located on the control panel. Each circuit breaker is labeled with the voltage of the receptacle it protects. See ***Component Locations***.

Engine Derating

All units are affected by 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 1,000 ft (305 m) of elevation and 1% per 10 ºF (5.6 ºC) increase in ambient air temperature over 72 ºF (22 ºC).

Shutting Down the Unit

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

1. Remove all loads from receptacles.
2. Turn all lamps OFF.
3. Lower the mast using Mast switch.
4. Press the controller Start/Stop button to stop the engine.
5. Turn Utility/Off/Generator to the OFF (O) position.
6. If the unit is to be stored for an extended timeframe, disengage the battery using the battery disconnect switch.

NOTE: The engine icon 

will blink during shutdown and turn solid when the shutdown procedure is complete.

Battery Disconnect Switch

See ***Figure 3-12***. The unit is equipped with battery disconnect switch (A). This switch removes the battery from the electrical circuit without disconnecting the battery cables.

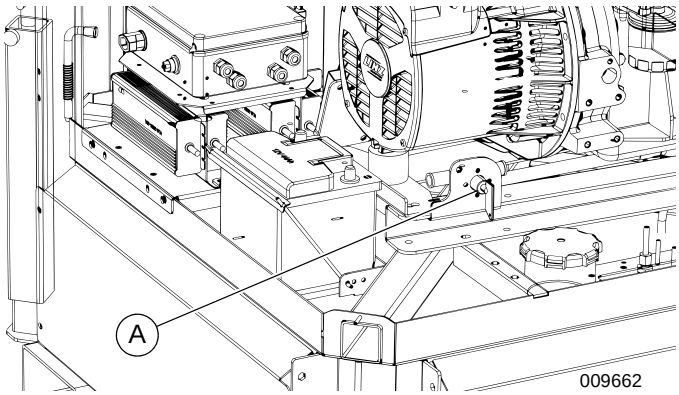

Figure 3-12. Battery Disconnect Switch

- Before starting the unit, turn the switch to the ON position.
- When storing the unit for an extended time, turn the battery switch to the OFF position.

External Fuel Tank Connection

Connect an external fuel tank as follows.

1. See ***Figure 3-13***. Verify exchange lever (A) is in the closed position, as illustrated.

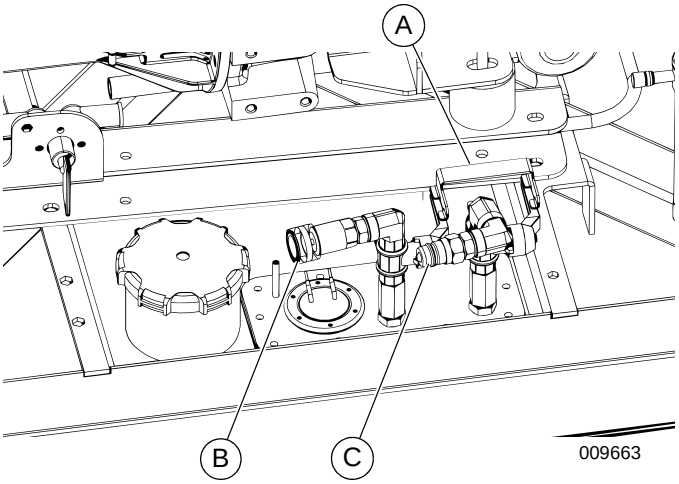

Figure 3-13. Connecting External Fuel Tank

2. Connect external fuel line with a BSPP 3/8 in. female quick-disconnect fitting to fuel inlet (B).
3. Connect external fuel tank hose with a BSPP 3/8 in. male quick-disconnect fitting to fuel outlet (C).
4. Pull exchange lever (A) into the engaged position.

Emergency Stop Switch

⚠CAUTION

Equipment Damage. The emergency stop switch is not to be used to power down the unit under normal operating circumstances. Doing so could result in equipment damage. (000246b)

See ***Figure 3-18***. The unit is equipped with one emergency stop (E-stop) switch. The red button is clearly marked EMERGENCY STOP.

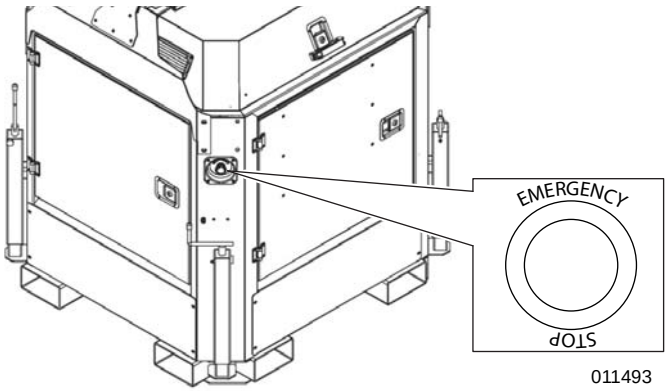

Figure 3-14. E-Stop Switch

When the generator is running in generator mode, the emergency stop switch opens the fuel circuit, stopping fuel flow to the engine. The result is shutdown of the engine, lights, and customer convenience receptacles. The fuel circuit remains open until the switch is deactivated.

- To activate the E-stop, push the button until it locks down.
- To deactivate the E-stop, twist the button until it unlocks and pops up.

NOTE: When the emergency stop switch is active, a warning beacon  illuminates on the controller screen.

Positive Air Shutdown (If Equipped)

See ***Figure 3-15***. This unit may be equipped with a positive air shutdown (A) on the air intake. This device automatically stops the engine if overspeed is detected.

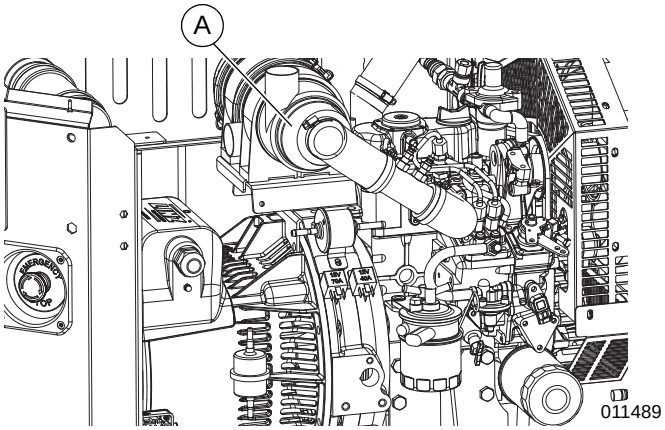

Figure 3-15. Positive Air Shutdown

The controller activates the system based on ECU sensor data, shutting down the engine and cutting power to the lights and receptacles.

To reset the positive air shutdown, an engine re-start is necessary. Proceed as follows:

1. Complete the shut down process. See ***Shutting Down the Unit***.
2. Start the unit. See ***Starting the Unit***.

Coolant Heater (If Equipped)

See ***Figure 3-16***. The coolant heater (A) helps keep the coolant warm in extreme cold temperatures. While the heater is designed to be operated overnight if necessary, 2–5 hours of heating just prior to starting is usually sufficient for proper engine starting.

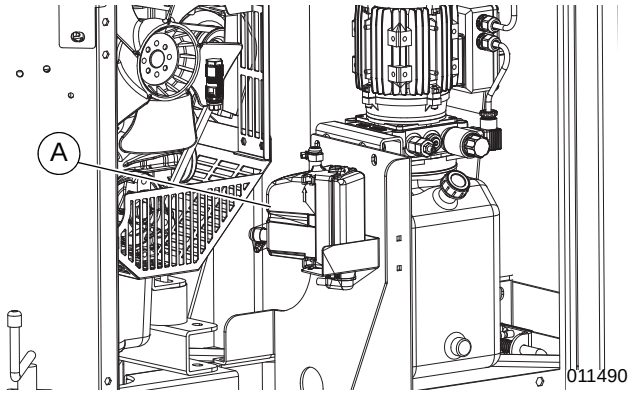

Figure 3-16. Coolant Heater

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

Proceed as follows when operating a unit equipped with a lower radiator hose heater.

1. Verify the unit is level to maintain correct orientation of the heater while it is in operation.
2. Verify the cooling system is full of the correct mixture of water and engine coolant before each heater use.
3. Plug in Inlet Shore Power (using L14-20R extension cord) and switch to Mains/Utility mode on Selector Switch.

NOTE: The coolant heater is self regulated. It switches on when coolant temperature is below 100 °F (38 °C).

Heated Fuel Filter (If Equipped)

See ***Figure 3-17***. The heated fuel filter (A) prevents diesel fuel from gelling in extremely cold temperatures. Heating cycles are automatically controlled by the component thermostat.

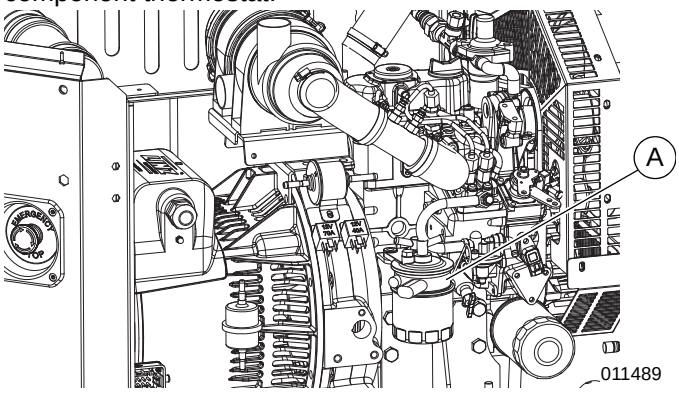

Figure 3-17. Heated Fuel Filter

Lifting the Unit

Proceed as follows 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 3-18***. Stow the mast and lights in the travel position, as shown.

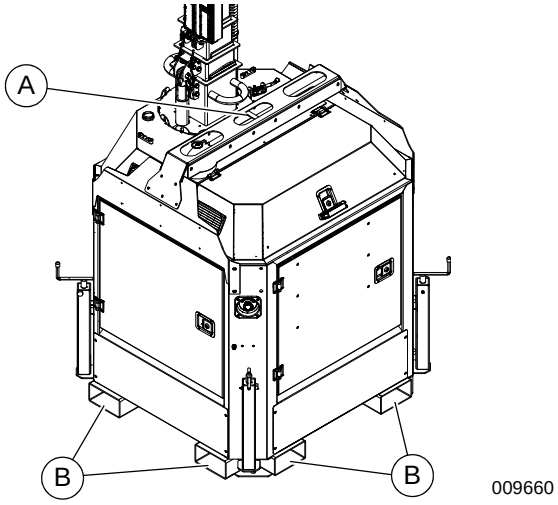

Figure 3-18. Travel Position, Lifting Points

4. Always remain aware of people and objects around the unit while preparing, maneuvering, and lifting the unit.

- Before lifting the unit, attach any slings, chains, or hooks directly to central lift point (A).
- Use forklift pockets (B) with care. Lift only from the side or the rear. Avoid approaching the unit at an angle, as this can permanently damage the forklift pockets or cabinet. Verify any obstructions are clear of the forklift tines before lifting.

Storing the Unit

- Disengage the battery with the battery disconnection switch if the unit is to be stored for an extended period.
- See the OEM engine manual for extended storage guidelines.

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Emissions Information

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

Daily Walk-Around Inspection

⚠CAUTION

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

(000306)

Perform a walk-around inspection of the unit every day before starting the unit. Look for conditions that could hinder performance or safety, such as (but not limited to):

- Oil/coolant/fuel leakage
- Blocked vents
- Loose/missing hardware
- Loose or broken electrical connections

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

General Maintenance

Incorrectly maintained equipment can become a safety hazard. In order for equipment to operate safely and correctly over a long period of time, periodic maintenance and occasional repairs are necessary. **DO NOT** perform routine service (oil and filter changes, cleaning, etc.) unless all electrical components are shut off.

Regular maintenance will improve performance and extend engine/equipment life. Generac Mobile recommends all maintenance work be performed by a GMASD. Regular maintenance, replacement, or repair of the 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 GMASD or authorized Kubota engine dealer depending on the repair. See the emissions warranty.

Preparing for Service

Before servicing the unit, follow the instructions below.

1. Verify the control power switch is OFF.
2. Verify the circuit breakers are OFF.
3. Disconnect the negative (-) terminal on the battery.
4. Attach a "Do Not Start" sign to the control panel to signify that the unit is being serviced and reduce the chance of unwanted operation.

Cleaning the Unit

⚠CAUTION

Equipment damage. Never spray water to clean unit. Do not introduce water into generator widings, terminals, or fuel system during the cleaning process. Doing so will result in equipment damage. (000325a)

Always 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 also 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. **DO NOT**:

- wash with a high pressure hose or power washer.
- wash engine block or fuel tank with a power washer or steam cleaner. Water may enter the cabinet and collect in the generator windings or other electrical parts, causing damage.

Inspecting the Unit

- If the unit is stored outside, inspect 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.
- Check coolant level daily. See ***Adding Engine Coolant***.
- Check oil level daily. See ***Engine Oil Procedures***.
- Inspect condition of hydraulic pushing cylinder. Check for rubbing, leaks, or corrosion.
- Inspect connections and hoses that transport hydraulic oil from the tank to the cylinder. Check for leaks or damage and verify connections are tight.

NOTE: If the engine was run out of fuel or the fuel tank was drained, it may be necessary to purge the fuel lines. Refer to the engine operator's manual.

Basic Maintenance Schedule

Refer to the engine 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.

Basic Maintenance Schedule—Kubota Engine

Item	Daily	50 Hr	100 Hr	200 Hr	400 Hr	500 Hr	Every Year	800 Hr	1,000 Hr	1,500 Hr	3,000 Hr	Every Two Years
Check oil level	♦											
Check coolant level	♦											
Check fuel level	♦											
Check hydraulic oil level	♦											
Check all electrical connections	♦											
Inspect radiator fins for debris, clean as required	♦											
Inspect light tower mast for proper operation	♦											
Check fuel pipes and clamp bands		♦[5]										
Clean air cleaner element			♦[5]									
Check fan belt tightness			♦									
Check radiator hoses and clamp bands				♦								
Replace fuel filter element					♦[5]							
Clean water jacket						♦						
Lubricate leveling jacks						♦						
Remove sediment in fuel tank						♦						
Replace fan belt						♦[4]						
Replace air filter element							♦[2, 5]					
Check valve clearance								♦				
Replace engine oil and oil filter									♦[1]			
Check fuel injection nozzle pressure										♦[3, 5]		
Check injection pump											♦[3, 5]	
Check fuel injection timing											♦[3, 5]	
Replace battery												♦
Replace radiator hoses and clamp bands												♦
Replace fuel pipes and clamp bands												♦[3, 5]
Change radiator coolant (L.L.C.)												♦

1 Change the engine oil and oil filter after the initial 50 hours of operation, then at the appropriate interval thereafter.
2 Replace the air cleaner element yearly, or after six cleanings, whichever occurs first.
3 Consult Kubota dealer for this service.
4 Replace only if necessary.
5 Registered as emission-critical part by Kubota in the U.S. EPA nonroad emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the engine according to the above instruction.

Adding Fuel

⚠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)

⚠DANGER

Explosion and Fire. Do not fill fuel tank past full line. Allow for fuel expansion. Overfilling may cause fuel to spill onto engine causing fire or explosion, which will result in death or serious injury.

(000214)

⚠WARNING

Explosion and Fire. Do not smoke while refueling unit. Failure to do so could result in death, serious injury, or property or equipment damage.

(000284a)

NOTE: Never allow dust, foreign matter or water to enter fuel tank.

1. Place unit on a firm, level surface in a well ventilated area.
2. Verify unit is OFF and cooled for a minimum of two minutes.
3. See ***Figure 4-1***. Remove fuel fill cap (A).

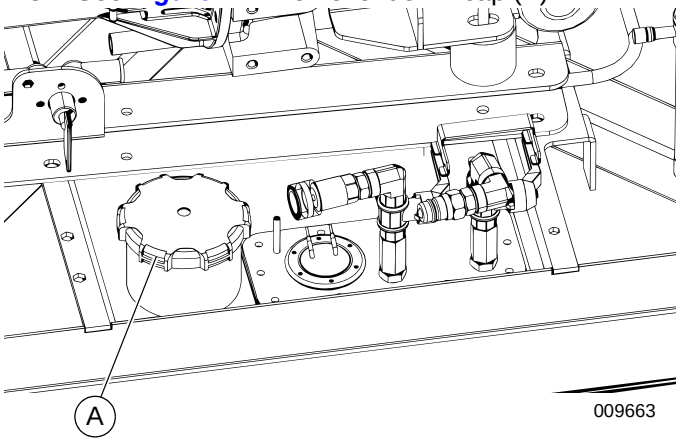

Figure 4-1. Fuel Fill Cap

4. Fill tank with diesel fuel to 0.25 in (6.4 mm) from the bottom of fill neck to allow for fuel expansion. See ***Resetting Maintenance Alarms***.
5. Install fuel fill cap.

IMPORTANT NOTE: Allow spilled fuel to evaporate before starting unit.

Engine Oil Procedures

⚠WARNING

Skin irritation. Avoid prolonged or repeated contact with used motor oil. Used motor oil has been shown to cause skin cancer in laboratory animals. Thoroughly wash exposed areas with soap and water.

(000210)

Draining Engine Oil

NOTE: Drain the oil when the engine is warm. Warm oil drains quickly and completely.

1. See ***Figure 4-2***. Remove engine oil drain cap (A) from pump and attach rubber hose to oil drain.

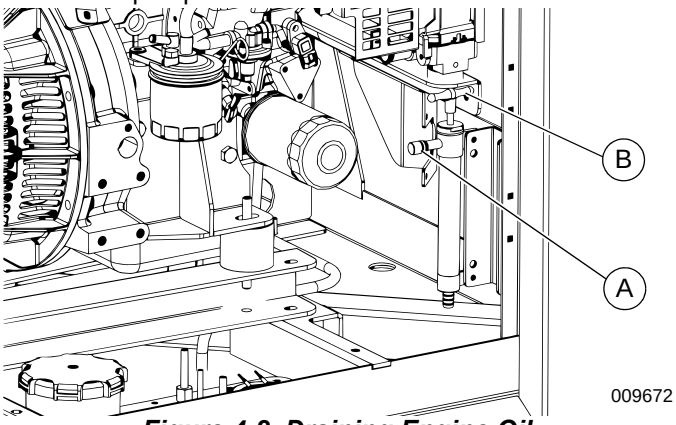

Figure 4-2. Draining Engine Oil

2. Place other end of hose in an appropriate disposal container.
3. Operate hand pump (B) to pump oil from engine into the waste container.
4. Remove rubber hose and install oil drain cap (A).

Adding Engine Oil

⚠CAUTION

Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage.

(000135)

NOTE: DO NOT start unit if engine oil level is below the MIN mark on the dipstick.

NOTE: Verify oil level often during filling process to ensure overfilling does not occur.

1. Remove cap from oil fill port.
2. Add engine oil through oil fill port. See ***Engine Oil Recommendations***.
3. Add 2 qt (1.8 L) of oil and wait one minute for oil to settle.

4. Check dipstick and continue adding a few ounces of oil at a time, rechecking the dipstick until the oil reaches the fill mark. Do not overfill.
5. Install dipstick.
6. Install cap to oil fill port.

Checking Engine Oil Level

NOTE: DO NOT start unit if engine oil level is below the MIN mark on the dipstick.

NOTE: Check engine oil level before starting or more than 5 minutes after stopping the engine.

1. See ***Figure 4-2***. Remove dipstick (A) and wipe clean.

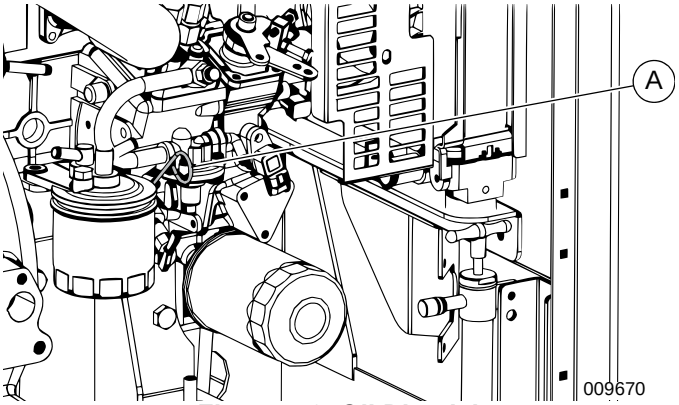

Figure 4-3. Oil Dipstick

2. Insert dipstick completely into filler neck.
3. Remove dipstick and verify oil level is between the MIN and MAX marks.
4. If oil level is below MIN, add engine oil. See ***Adding Engine Oil***.

Adding Engine Coolant

DANGER

Risk of poisoning. Do not use mouth to siphon coolant. Doing so will result in death or serious injury.

(000149)

WARNING

Risk of burns. Do not open coolant system until engine has completely cooled. Doing so could result in serious injury.

(000154)

CAUTION

Risk of overheating. Do not use any chromate base rust inhibitor with propylene glycol base antifreeze, boosters, or additives. Doing so will cause overheating and possible equipment damage. (000165a)

If coolant level is below the filler neck, add coolant according to the following procedure.

NOTE: For applicable coolant types, see ***Coolant Recommendations***.

1. Verify engine is stopped and cooled.
2. See ***Figure 4-4***. Remove radiator fill cap (A).

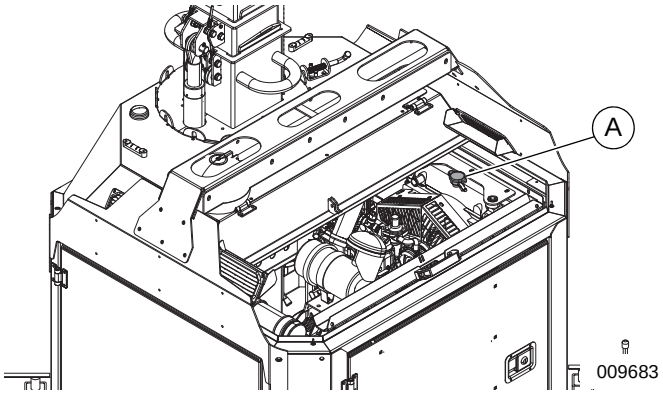

Figure 4-4. Radiator Fill

3. Fill radiator slowly with coolant until coolant comes up to the filler neck.
4. Replace radiator fill cap.
5. Operate engine approximately five minutes at a low idle speed to bleed air in the coolant circuit.

NOTE: Coolant level will drop.

6. Stop engine and, once cooled, replenish coolant.

Adding Hydraulic Fluid

See ***Figure 4-1***. Before each use, check the hydraulic fluid level in the hydraulic gear box (A).

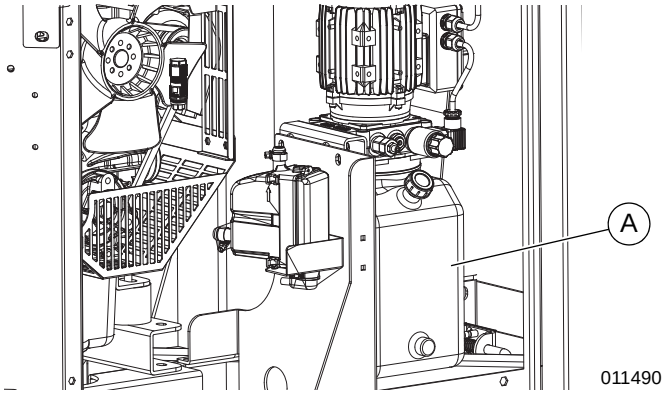

Figure 4-1. Hydraulic Gear Box

Visually inspect the fluid level in the box. Add fluid if the level is under half full. Perform check at least 30 minutes after the engine has stopped and with telescopic mast lowered.

- Gear box capacity: 1.32 gal (5 L).
- See ***Hydraulic Fluid Recommendations*** for acceptable hydraulic fluid types.

Lubrication

- Lubricate rollers with a low temperature/high speed bearing grease.
- Lubricate mast sections with a light lubricating oil. During frequent use, lubricate every three months.
- Lubricate stabilizer Zerk fittings with grease gun.
- Lubricate cable with a wire rope lubricant.

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Section 5: Troubleshooting

General Troubleshooting

⚠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)

⚠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)

⚠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)

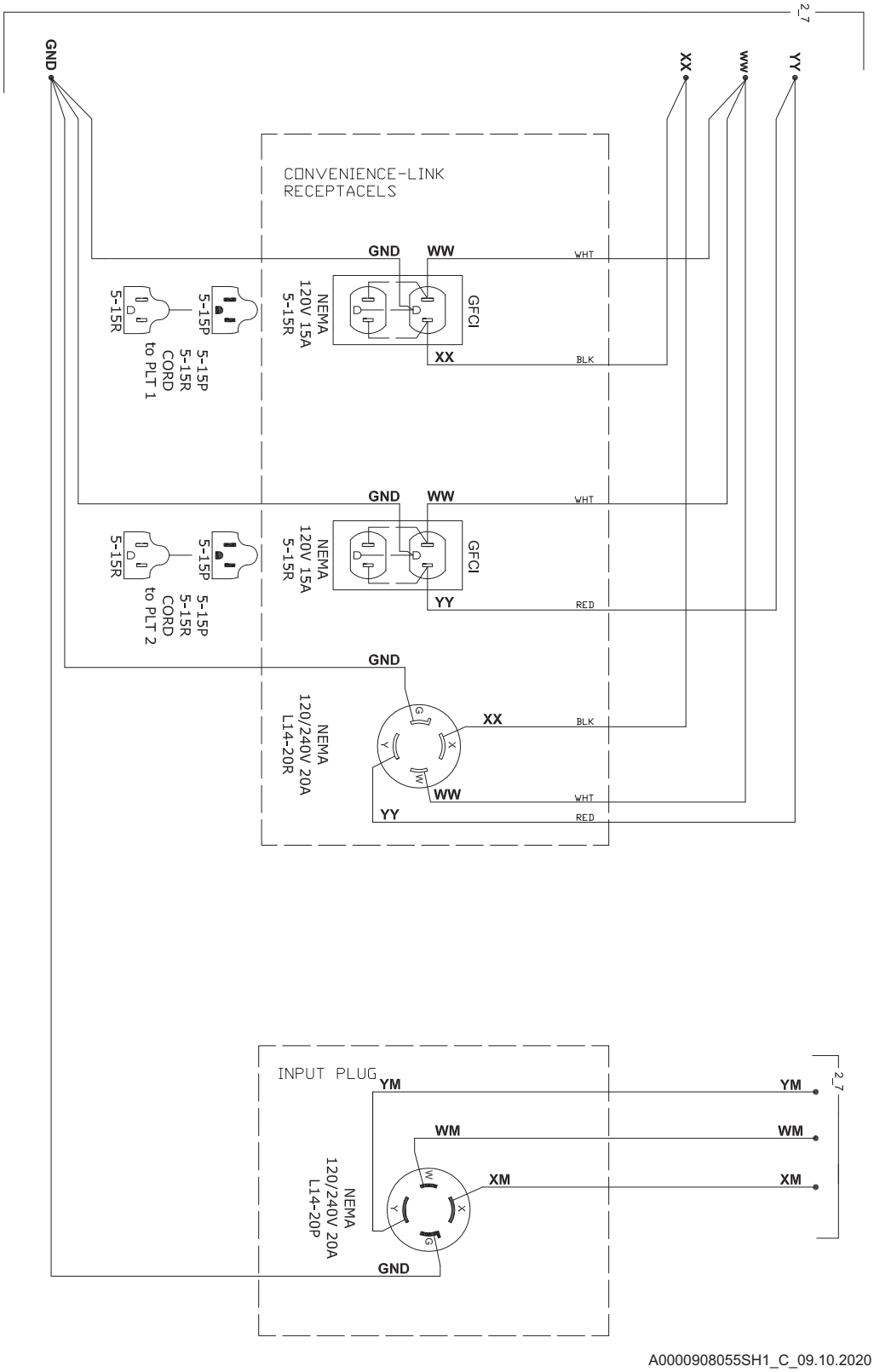
Some of the more common problems are listed in the following table. This information is intended to be a check or verification that simple causes can be located and fixed. It does not cover all types of problems. Refer to the OEM engine operator's manual for additional troubleshooting information. Procedures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

Problem	Possible Cause	Solution
Low oil pressure shutdown	Low oil level	Verify oil level on dipstick. Add oil, if needed.
	Oil leaking from engine	Inspect engine for leaks.
	Oil pressure switch failure	Refer to OEM engine operator's manual to identify corrective action.
High coolant temperature shutdown	Low coolant level	Allow engine to cool. Check coolant level in radiator. Add coolant level if needed.
	Blockage in radiator	Inspect radiator shroud and ducting for blockage and remove any foreign matter.
	Leakage in coolant hoses, engine block, or water pump	Inspect for visible leaks. Verify tension of water pump serpentine drive belt. Remove load on generator and restart engine. Verify coolant temperature and shut engine down immediately if it starts to overheat. Refer to the OEM engine operator's manual for additional information on engine overheating.
	Faulty thermostat	Contact a GMASD to replace.
	Water pump failure	Contact a GMASD to replace.
	Incorrect mix/frozen radiator	Thaw radiator with an external heat source. Flush coolant system with correct coolant mixture.
Engine cranks but does not start	Low fuel level	Check fuel level in tank. Verify fuel pump operation.
	Restricted air filter	Inspect air filter for blockage. Refer to OEM engine operator's manual for additional information.

Problem	Possible Cause	Solution
Mast lights off, checking outside control box	Light fixture too hot	Allow lights to cool 10–15 minutes before restarting.
	Loose lighting connections	Inspect connections inside mast junction box. Inspect each mast light housing/socket.
	Damaged or loose electrical cord	Inspect mast electrical cord for damage. Check cord connections inside control box.
	Faulty generator capacitor	Measure capacitance of generator capacitor. If measurement is outside rating (indicated on capacitor), replace capacitor.
Mast lights off, checking inside control box	Loose lighting connections	Inspect connections inside control box.
	Generator output incorrect	Check incoming voltage to ballast driver by checking available voltage on the GFCI receptacle. Incoming voltage should be 120V ± 5V. If voltage is incorrect, the generator may require service.
Controller does not work	Battery disconnected	Connect battery switch.
	Battery discharged	Recharge battery.
	Battery defective	Replace battery.
	Starting motor does not work	Contact a GMASD.
	Emergency stop button is pressed	Turn stop button in clockwise direction.
	Disconnected cables in the electrical system	Visually inspect for disconnected cable. Use wiring diagram for reference.
Output voltage unstable.	Irregular engine speed	Contact a GMASD.
	Alternator defective	Replace alternator.
Machine stops with battery charge signal lamp ignited	Battery defective	Replace battery.
	Engine alternator failure	Contact a GMASD.
After refueling, fuel level monitor does not move	Lever sensor does not work.	Check the lever sensor and its relative electrical connection. If sensor is blocked, replace.
Mast switch does not work	Defective electrical connection	Check electrical connection.
	Hydraulic gear box does not work	Check for tripped circuit breaker. Reset circuit breaker.
		Check hydraulic pump electrical system.
		Check oil inside hydraulic pump. Refill if necessary.
		Replace hydraulic pump. Contact a GMASD.
	Hydraulic pump has failed	Slowly turn hydraulic release valve in counter clockwise direction.
	Temperature too low to operate hydraulic pump	Wait until ambient temperature is above -20 °F (-29 °C).

IMPORTANT NOTE: There is a permanent conductor between the generator (stator winding) and the frame—neutral bonding.

SLT-D-5 Wiring Diagrams



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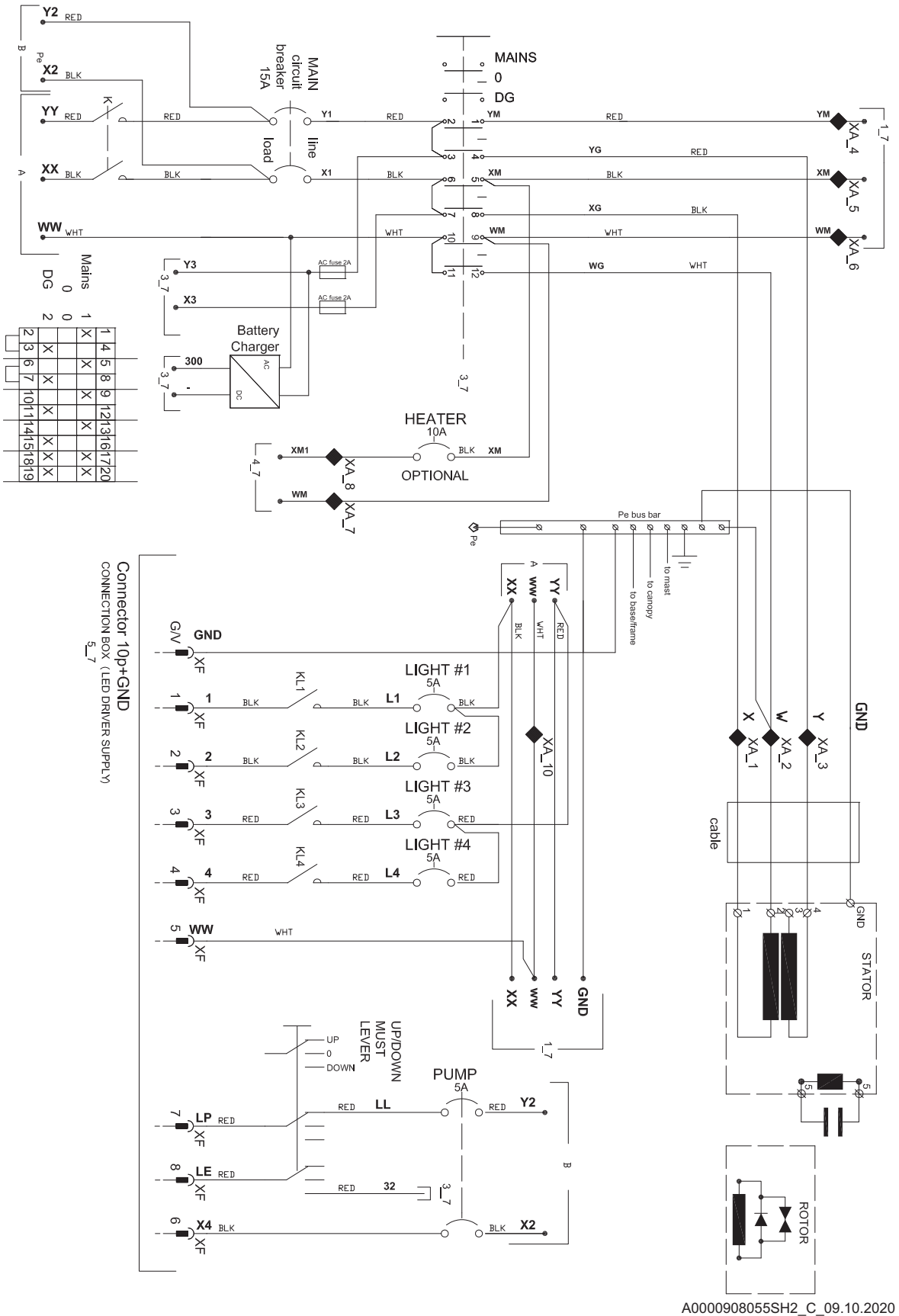

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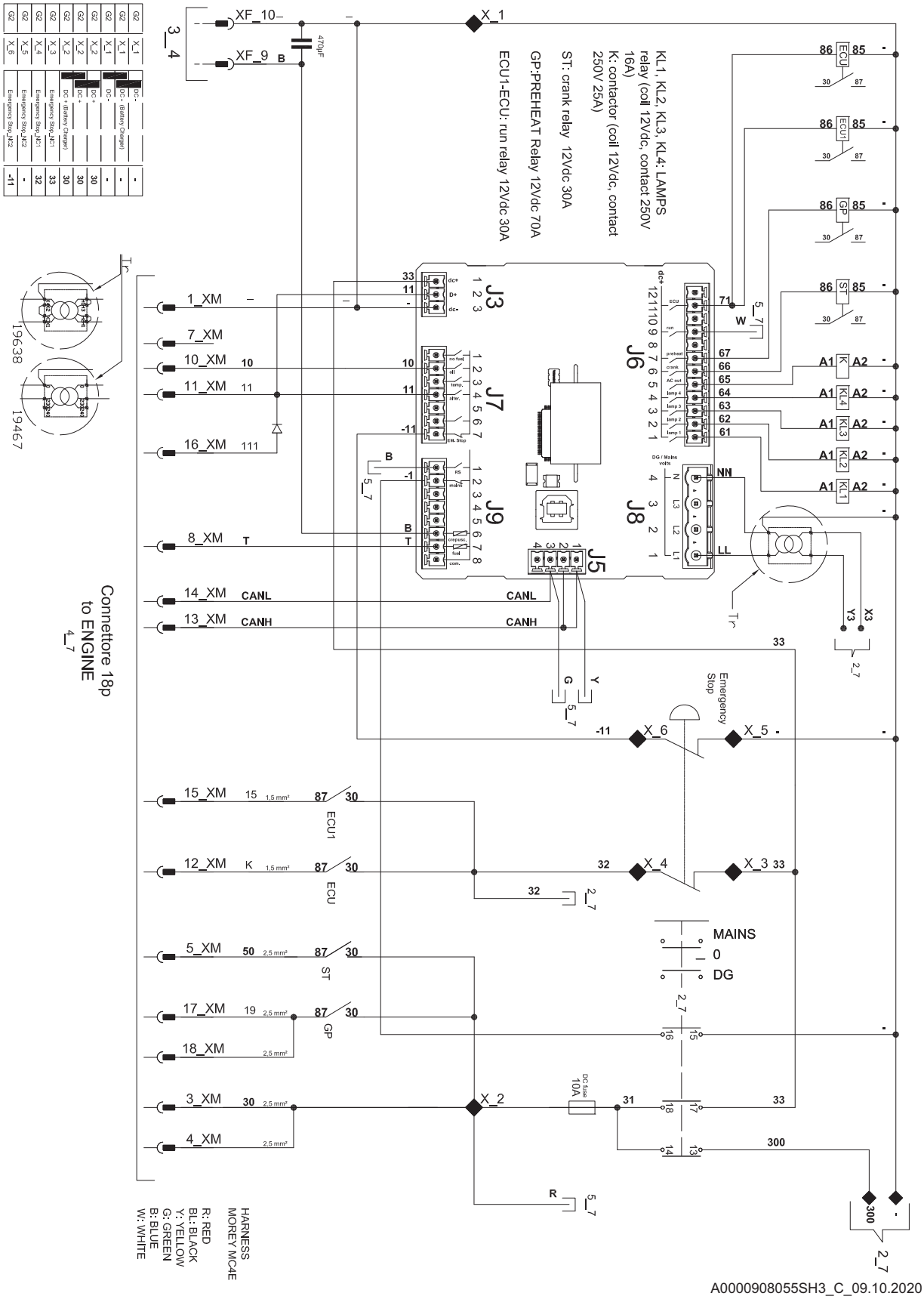
KL1, KL2, KL3, KL4: LAMPS relay (coil 12Vdc, contact 250V 16A)
K: contactor (coil 12Vdc, contact 250V 25A)
ST: crank relay 12Vdc 30A
GP:PREHEAT Relay 12Vdc 70A
ECU1-ECU: run relay 12Vdc 30A
Connettore 18p to ENGINE
4_7
HARNESS MOREY MC4E
R: RED
BL: BLACK
Y: YELLOW
G: GREEN
B: BLUE
W: WHITE
MAINS
0
DG
Emergency Stop
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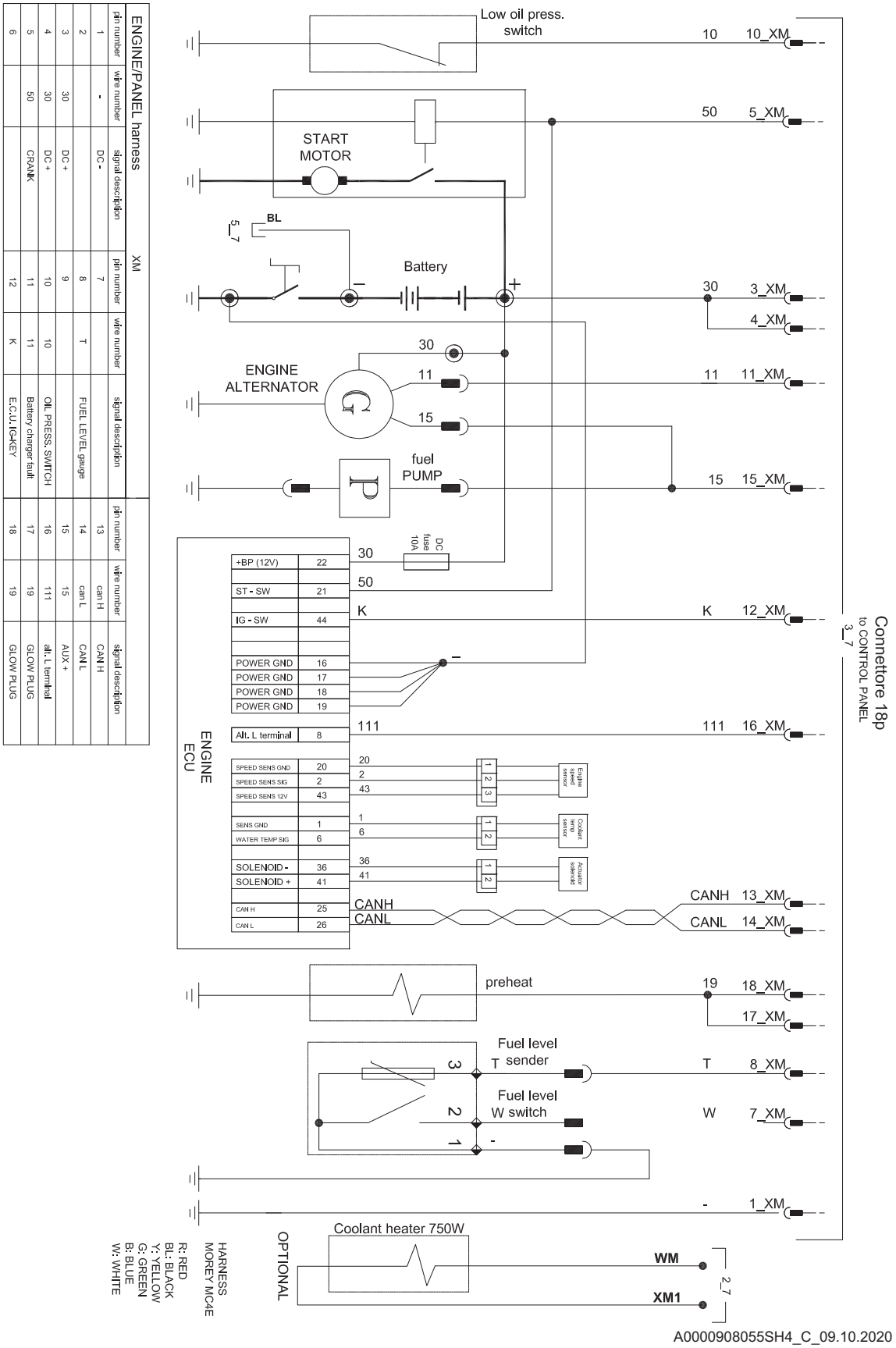

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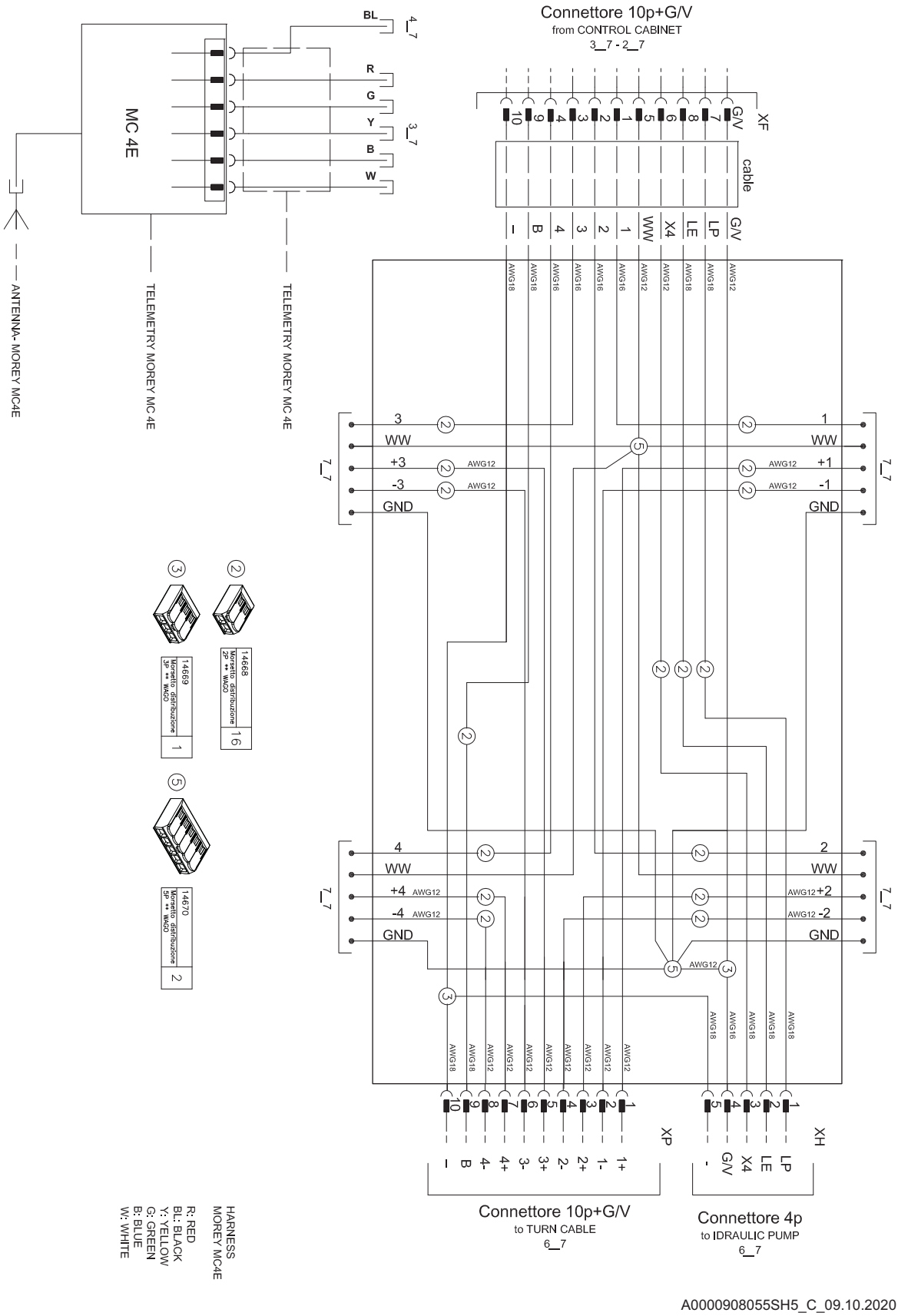
Connettore 10p+G/V
from CONTROL CABINET
3__7 - 2__7
XF
cable
G/V
LP
LE
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WW
1
2
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AWG12
AWG16
AWG18
MC 4E
BL
R
G
Y
B
W
4__7
3__7
ANTENNA- MOREY MC4E
TELEMETRY MOREY MC 4E
TELEMETRY MOREY MC 4E
3
WW
+3
-3
GND
1
WW
+1
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7__7
4
WW
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GND
2
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GND
14669
Morsetto distribuzione 3P ** WAGO
1
14668
Morsetto distribuzione 2P ** WAGO
16
14670
Morsetto distribuzione 5P ** WAGO
2
XP
XH
1+
1-
2+
2-
3+
3-
4+
4-
B
–
G/V
X4
LE
LP
Connettore 10p+G/V
to TURN CABLE
6__7
Connettore 4p
to IDRAULIC PUMP
6__7
HARNESS
MOREY MC4E
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BL: BLACK
Y: YELLOW
G: GREEN
B: BLUE
W: WHITE
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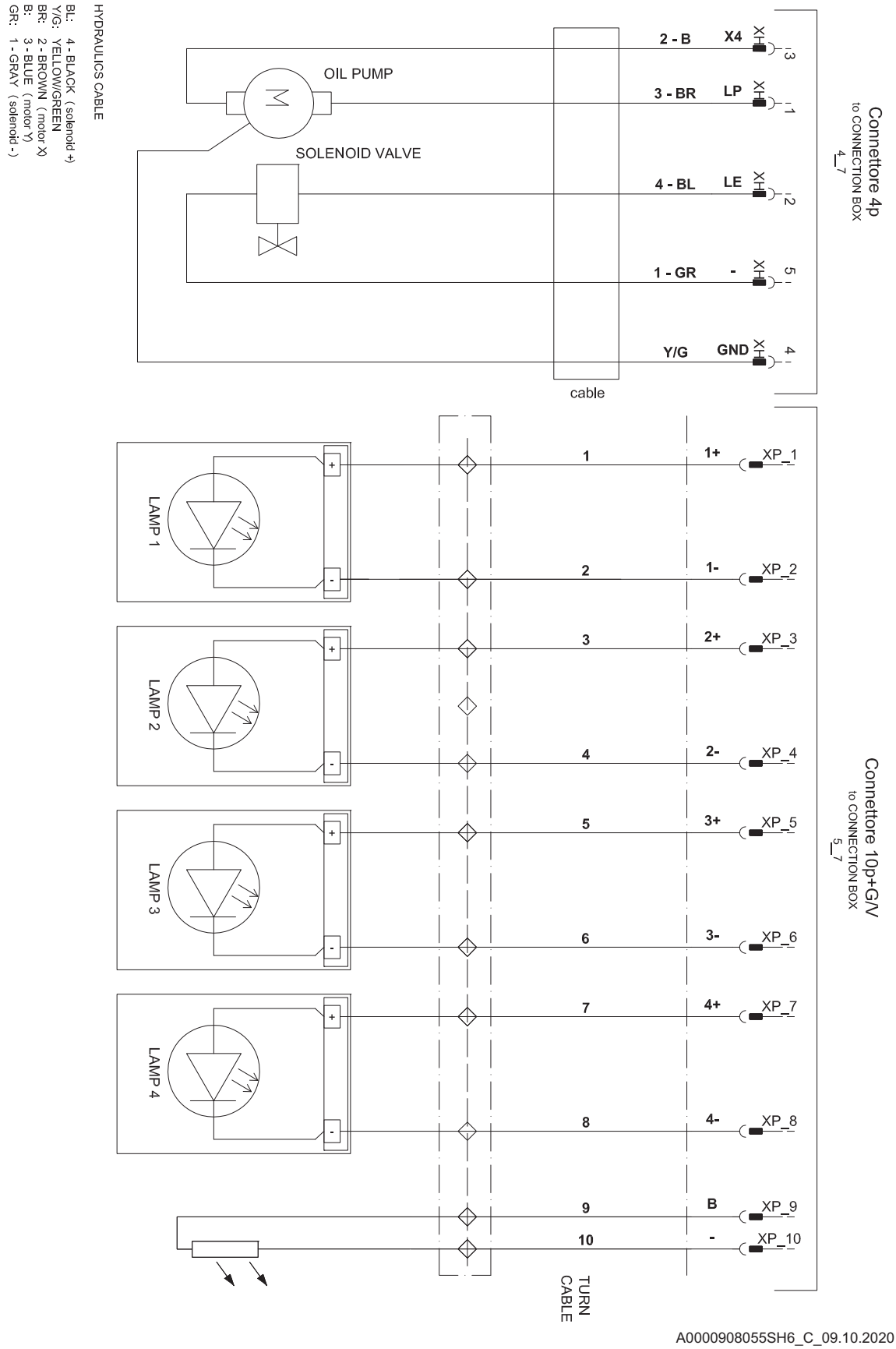

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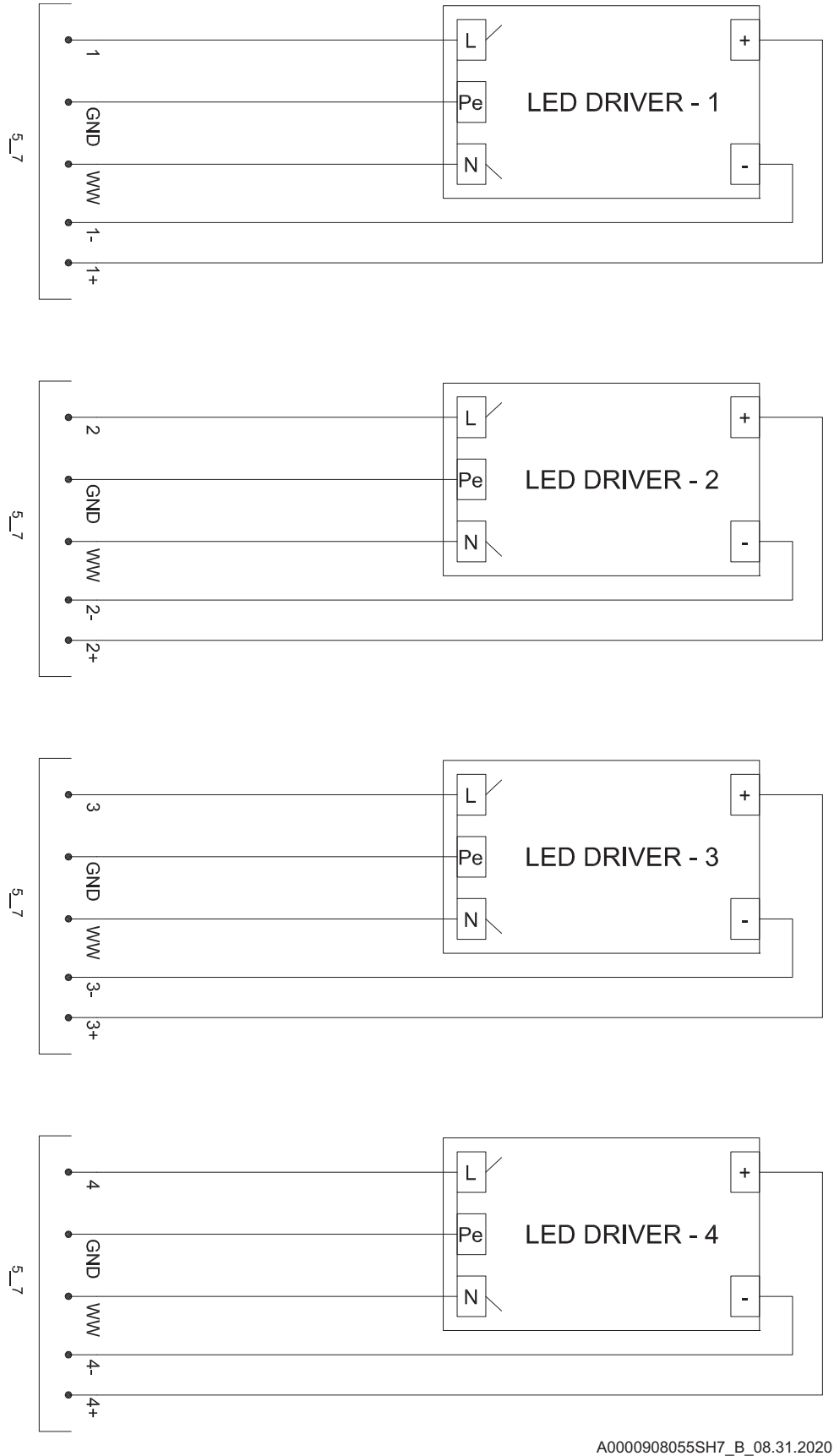

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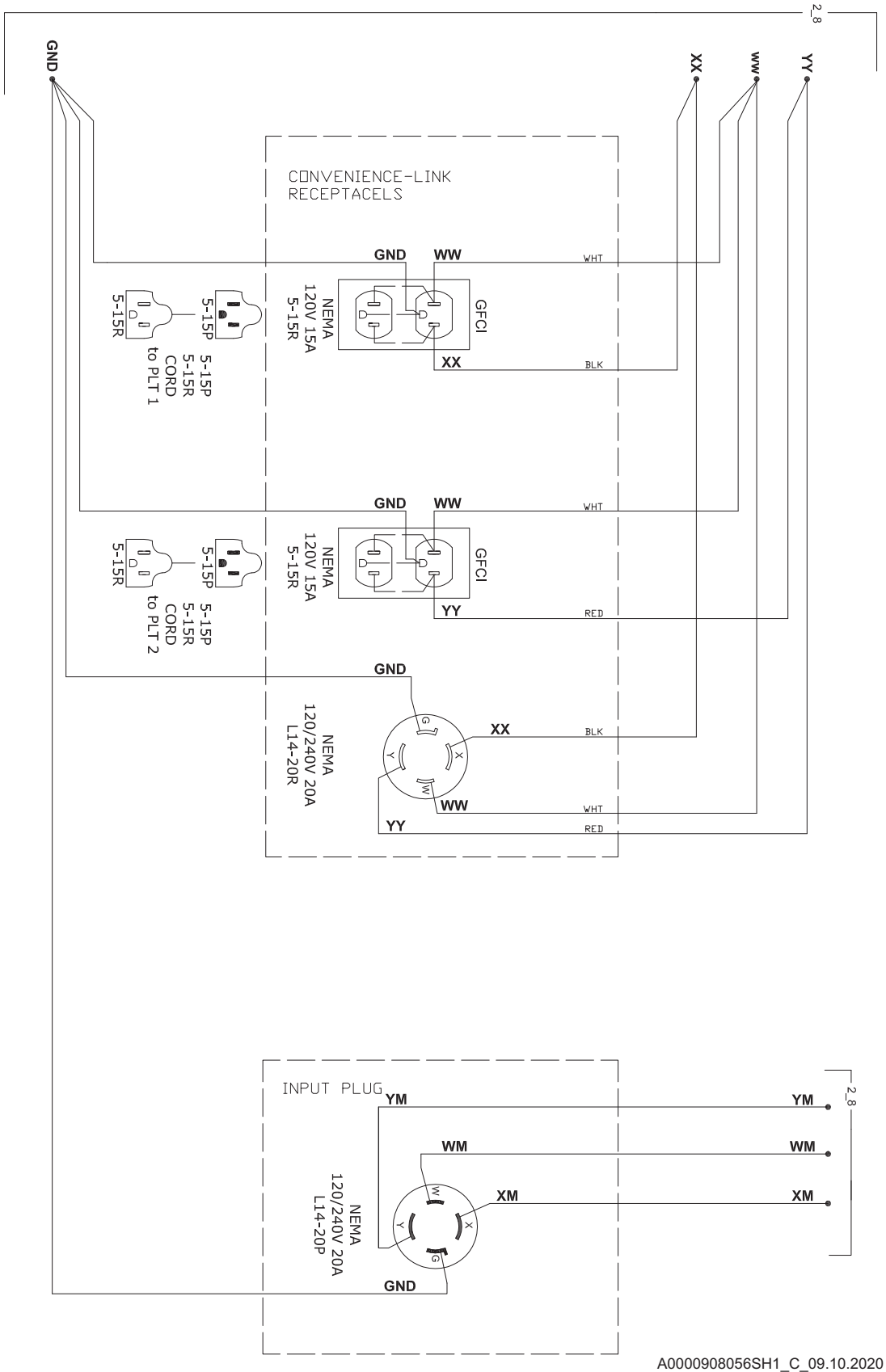
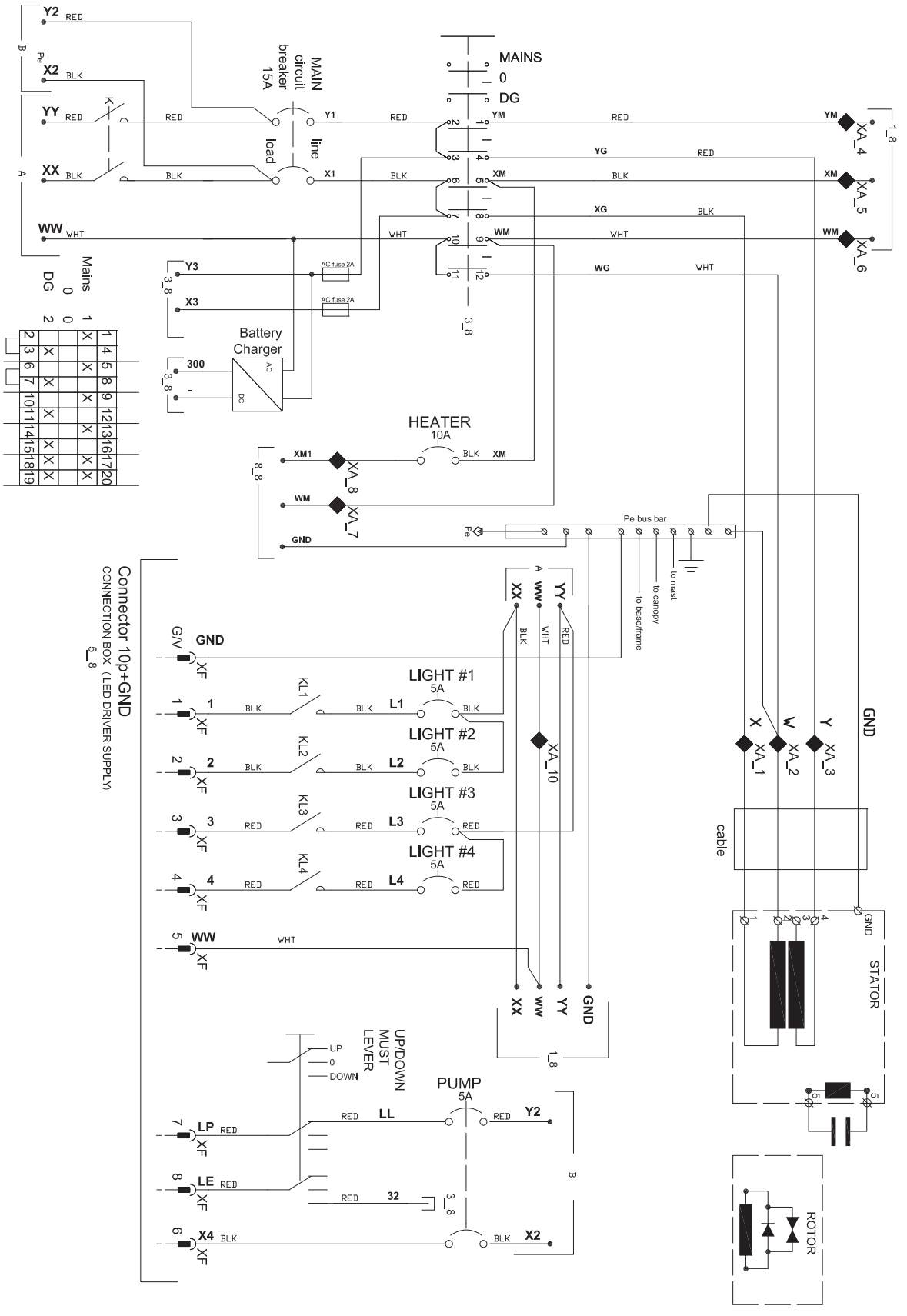
SLT-D-6 and SLT-D-7 Wiring Diagrams





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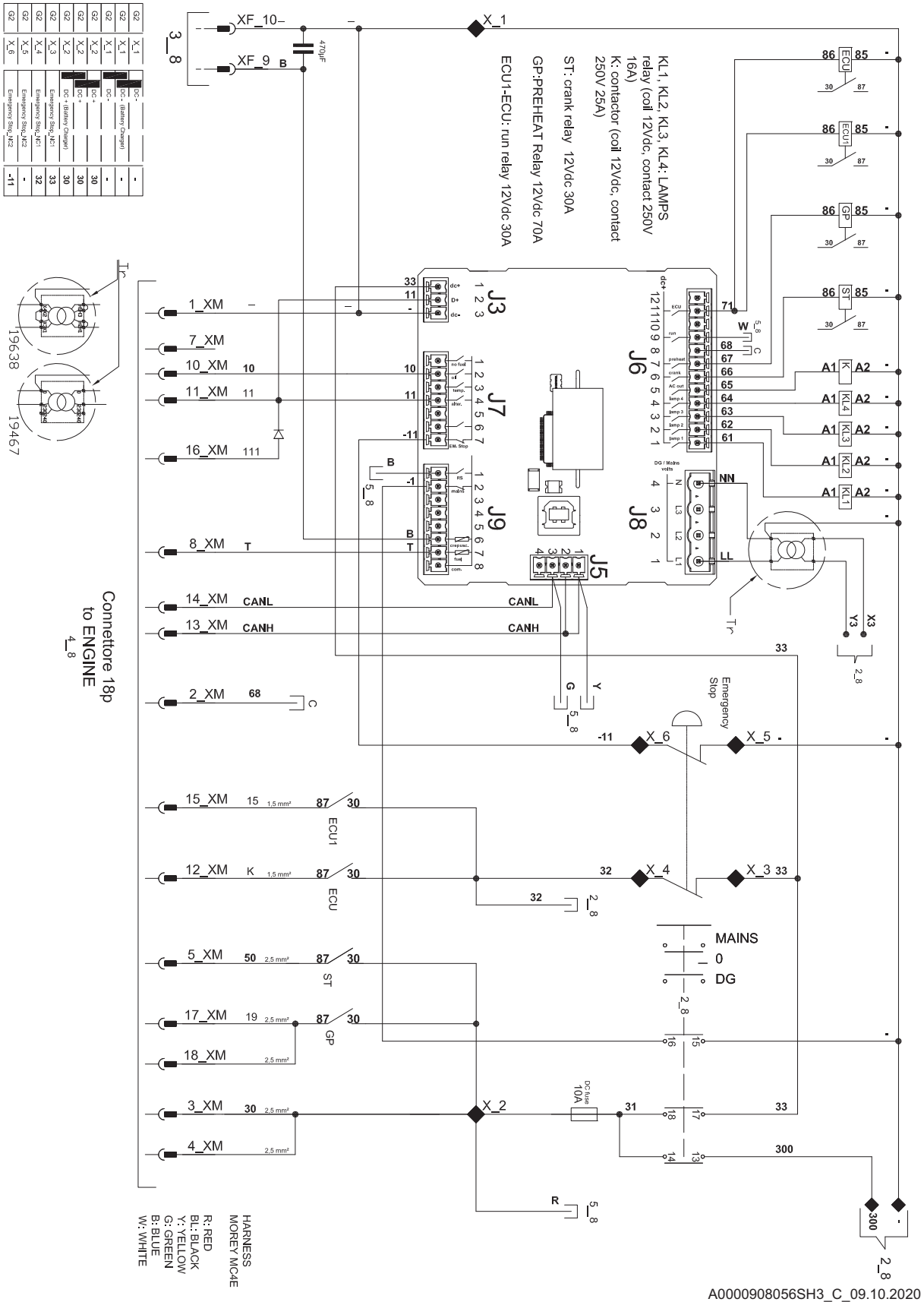
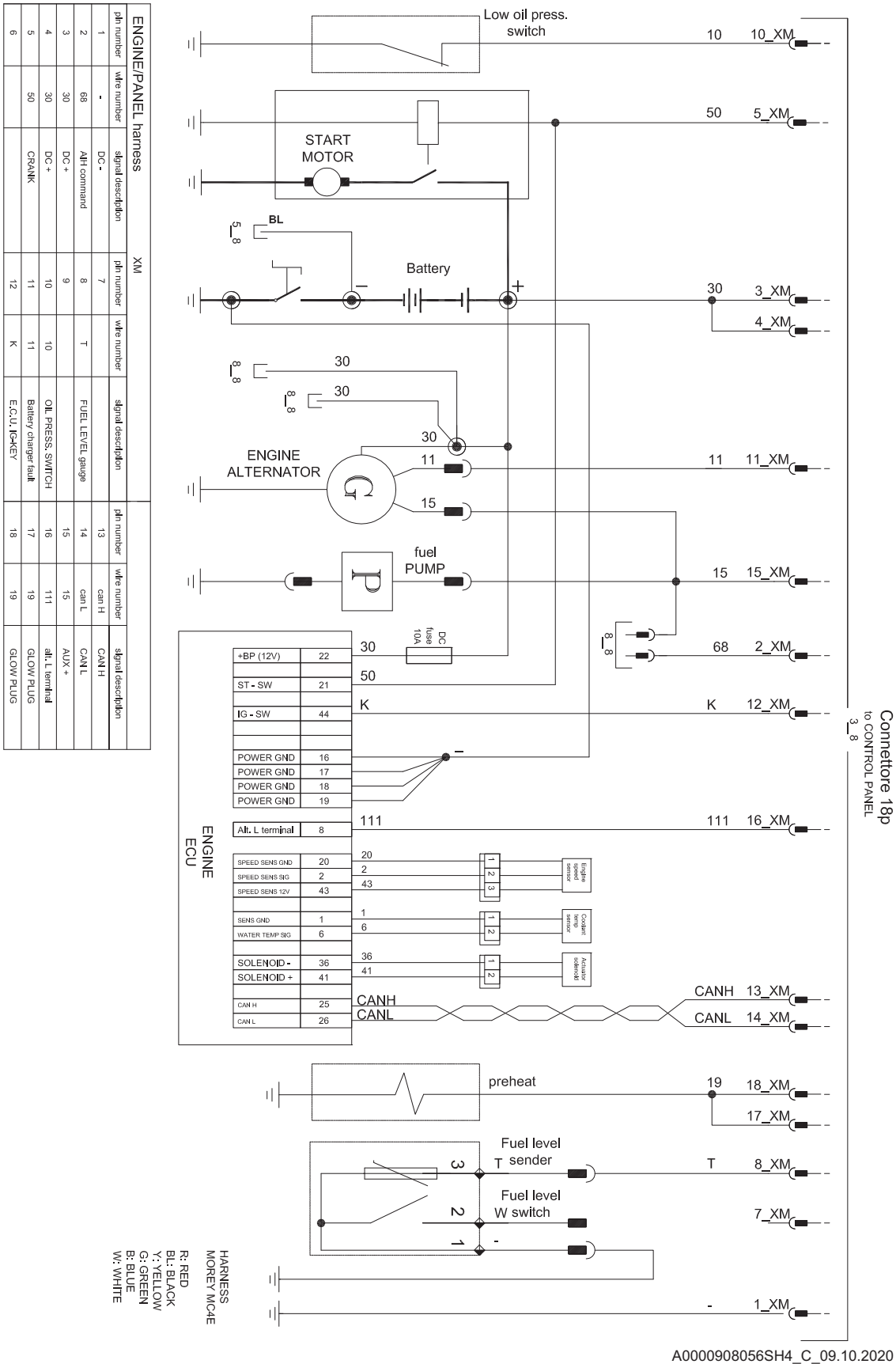
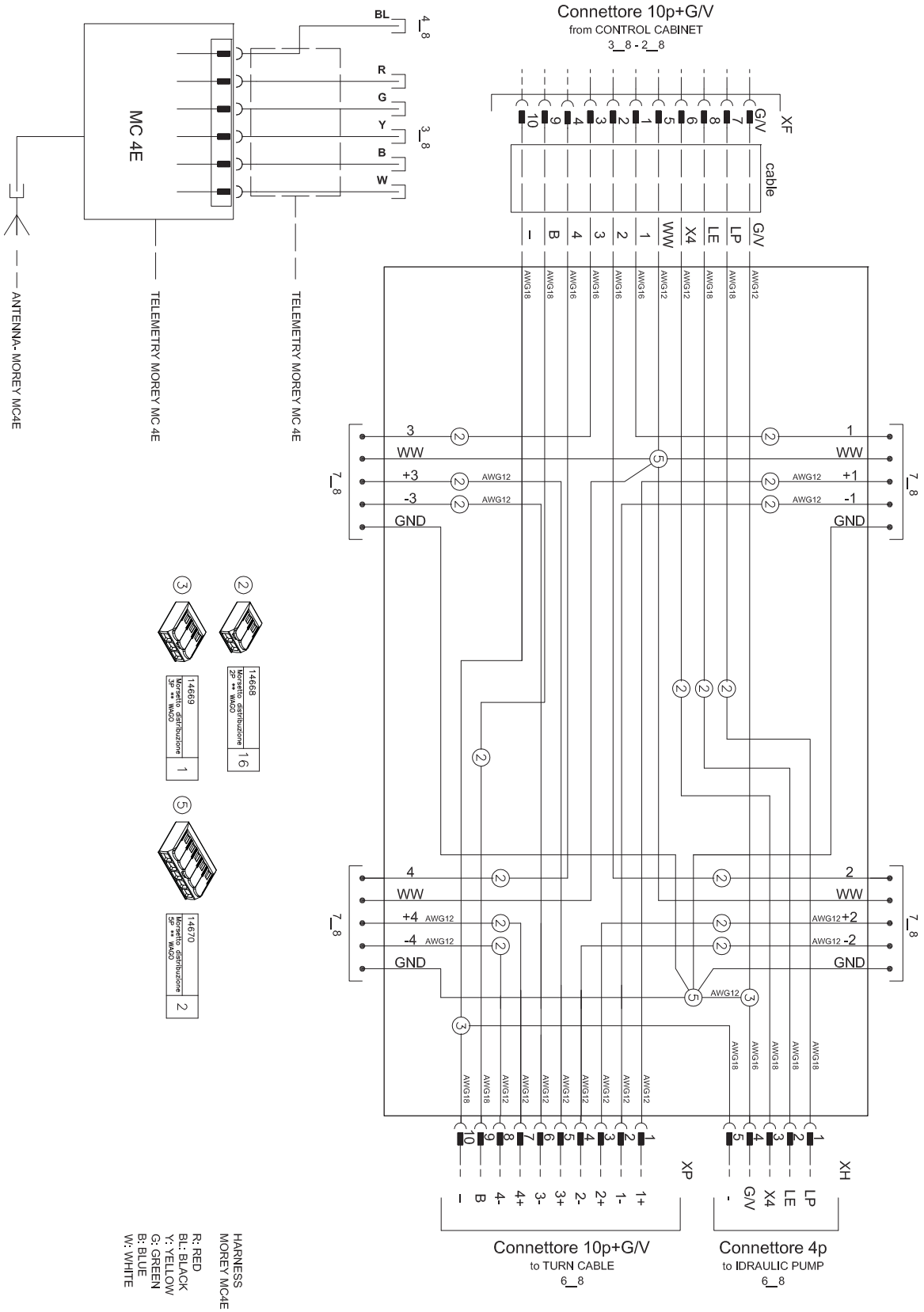

KL1, KL2, KL3, KL4: LAMPS relay (coil 12Vdc, contact 250V 16A)
K: contactor (coil 12Vdc, contact 250V 25A)
ST: crank relay 12Vdc 30A
GP:PREHEAT Relay 12Vdc 70A
ECU1-ECU: run relay 12Vdc 30A
Connettore 18p to ENGINE
MAINS
0
DG
Emergency Stop
HARNESS MOREY MC4E
R: RED
BL: BLACK
Y: YELLOW
G: GREEN
B: BLUE
W: WHITE
A0000908056SH3_C_09.10.2020


ENGINE/PANEL harness
XM
pin number
wire number
signal description
DC -
AIH command
DC +
DC +
CRANK
OIL PRESS. SWITCH
Battery charger fault
E.C.U. IG-KEY
CAN H
CAN L
AUX +
alt. L terminal
GLOW PLUG
GLOW PLUG
Low oil press. switch
START MOTOR
BL
Battery
ENGINE ALTERNATOR
fuel PUMP
DC fuse 10A
ENGINE ECU
+BP (12V)
ST - SW
IG - SW
POWER GND
Alt. L terminal
SPEED SENS GND
SPEED SENS SIG
SPEED SENS 12V
SENS GND
WATER TEMP SIG
SOLENOID -
SOLENOID +
CAN H
CAN L
Engine speed sensor
Coolant temp. sensor
Actuator solenoid
CANH
CANL
preheat
Fuel level T sender
Fuel level W switch
HARNESS MOREY MC4E
R: RED
BL: BLACK
Y: YELLOW
G: GREEN
B: BLUE
W: WHITE
Connettore 18p
to CONTROL PANEL
3_8
A0000908056SH4_C_09.10.2020



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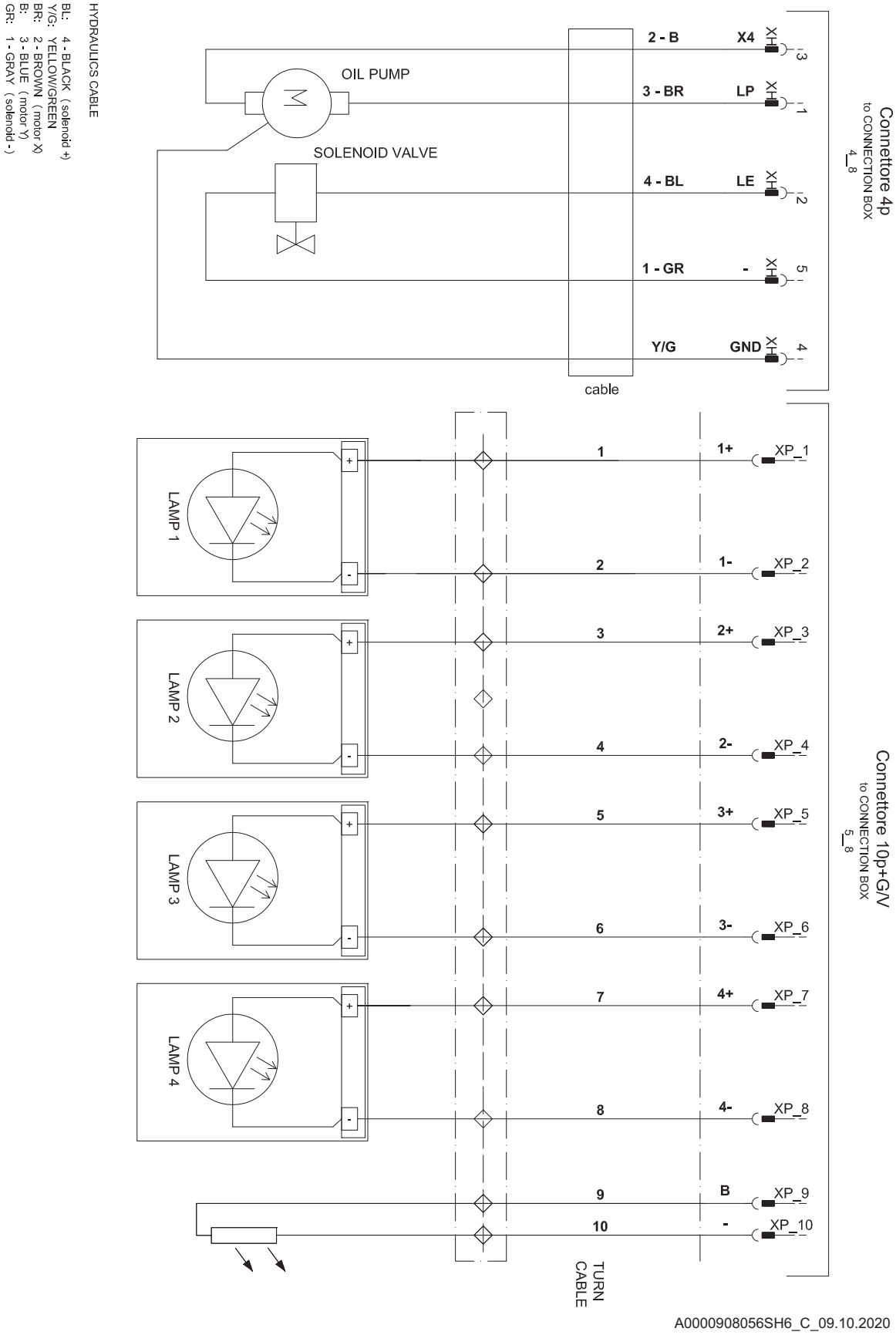

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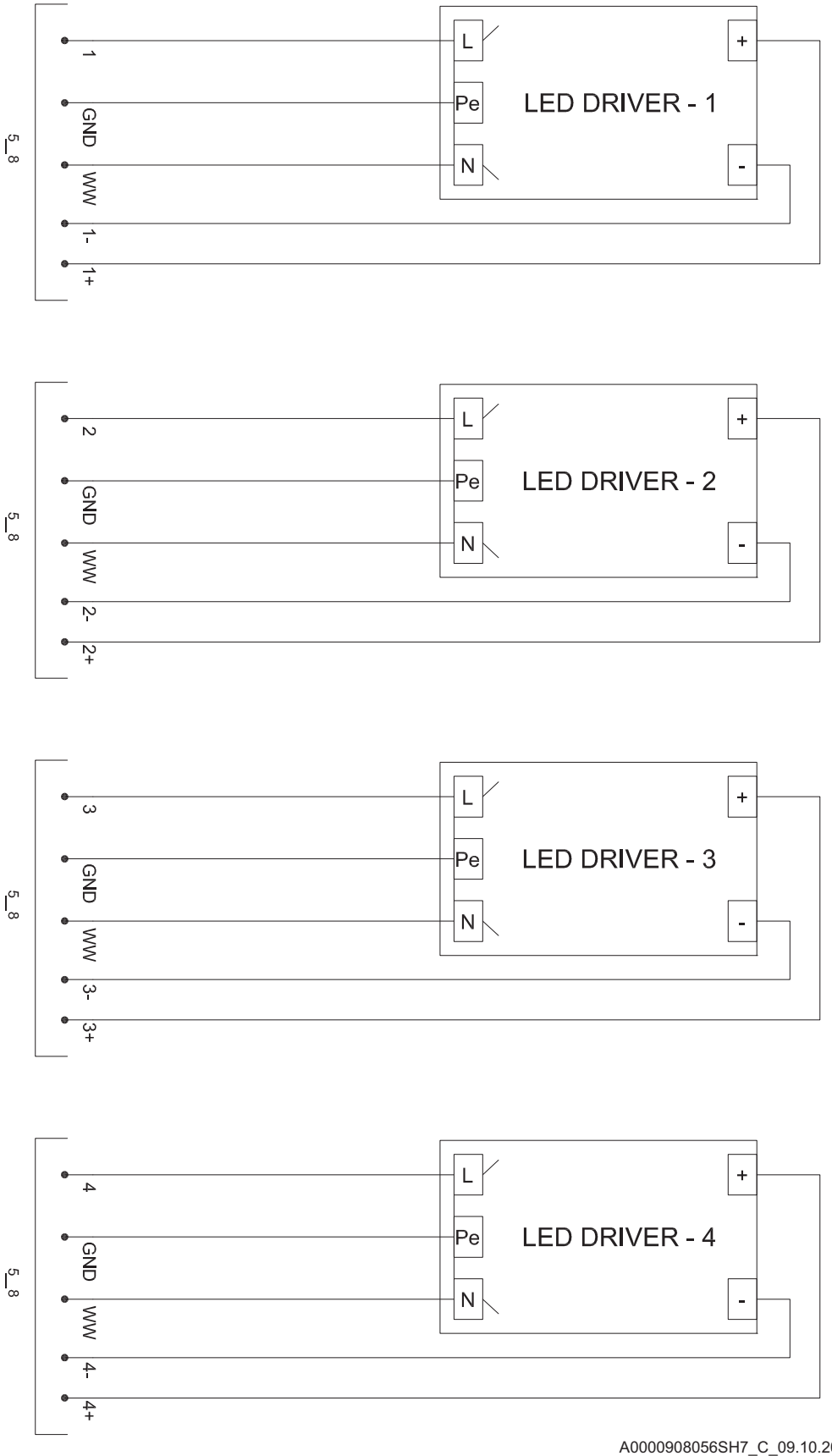

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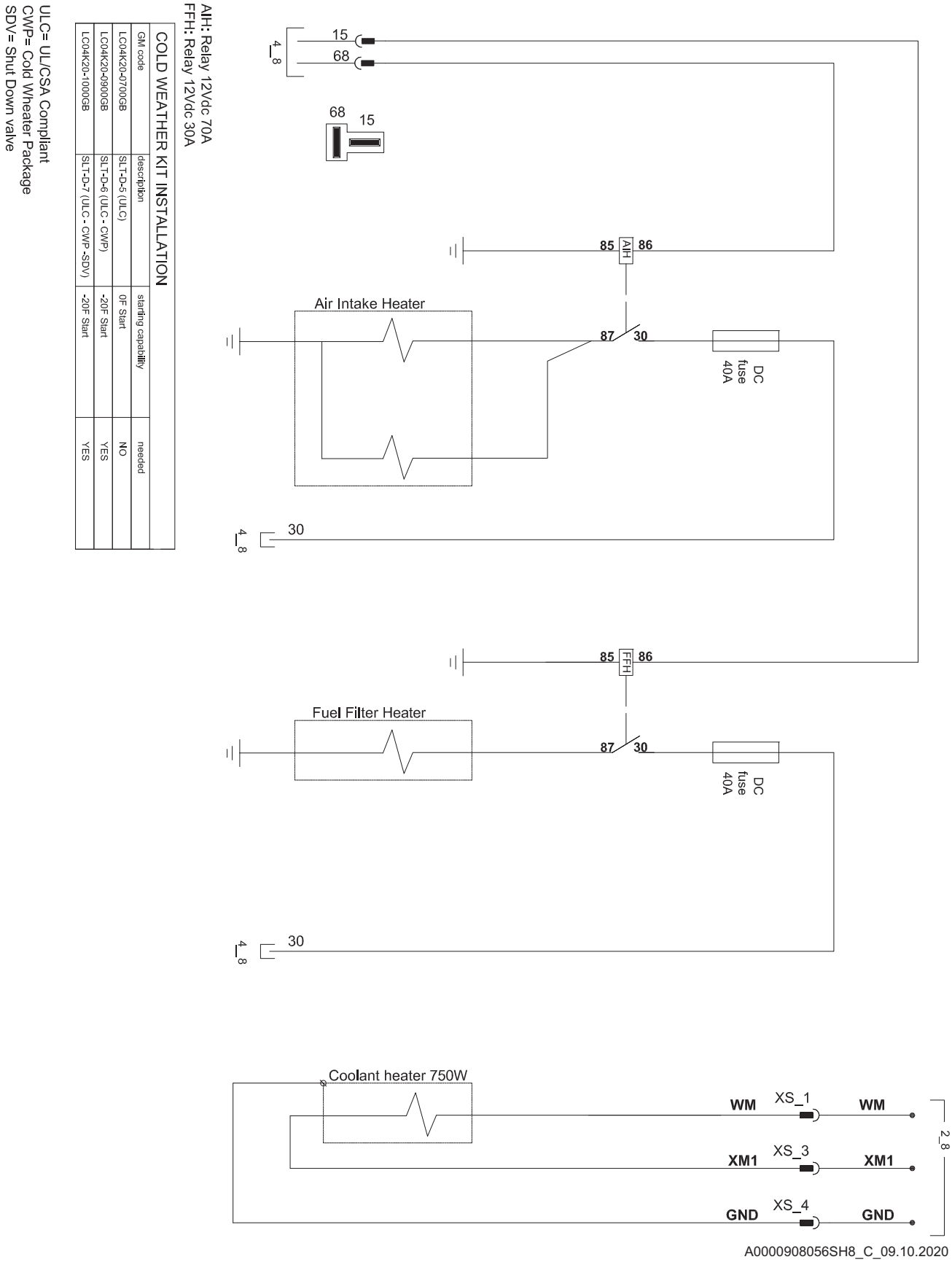
ULC= UL/CSA Compliant
CWP= Cold Wheater Package
SDV= Shut Down valve
AIH: Relay 12Vdc 70A
FFH: Relay 12Vdc 30A
COLD WEATHER KIT INSTALLATION
GM code
description
starting capability
needed
LC04K20-0700GB
SLT-D-5 (ULC)
0F Start
NO
LC04K20-0900GB
SLT-D-6 (ULC - CWP)
-20F Start
YES
LC04K20-1000GB
SLT-D-7 (ULC - CWP -SDV)
-20F Start
YES
15
68
4_8
68
15
85
AIH
86
Air Intake Heater
87
30
DC fuse 40A
4_8
30
85
FFH
86
Fuel Filter Heater
87
30
DC fuse 40A
4_8
30
Coolant heater 750W
WM
XS_1
WM
XM1
XS_3
XM1
GND
XS_4
GND
2_8
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