THERMAL INTELLIGENCE



BASECAMP

BASECAMP OPERATIONS MANUAL

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1. Introduction

Welcome and thank you for being a customer of **THERMAL INTELLIGENCE.** We are looking forward to the success that **BASECAMP** will bring you and your worksite. Whatever you need we are here to help – Thermal Intelligence prides itself on providing you with detailed technical support for your BASECAMP.

The safe & efficient operation of BASECAMP requires that any individuals maintaining the unit read and understand the information contained in this Operations Manual.

The BASECAMP is intended to provide heat on outdoor worksites and in other outdoor applications. Using the machine for any other purpose could permanently damage the machine or seriously injure the operator or other persons on the work site. Machine damage caused by misuse is not covered under warranty.

BASECAMP has been designed and built in accordance with the latest global safety standards and its ultra-efficient design has been awarded the Green Seal Certification of Environmental Innovation for its revolutionary ultra-efficient temporary heating, power generation, and lighting products. BASECAMP has been carefully engineered to eliminate hazards as best as possible, and to increase operator safety. However, some risks may remain even after protective measures have been taken. On this machine, they may include exposure to:

- exhaust emissions
- hot surfaces such as exhaust vents and air outlet
- fuel and fuel fumes when refuelling

To protect yourself and others, thoroughly read and understand the safety information presented in this manual before operating the machine.

1.1 BASECAMP Identification

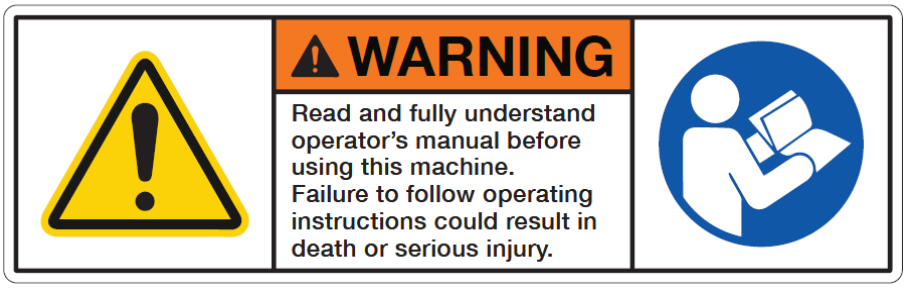
- A decal listing the Serial Number is located on the inside of the control panel door. For reference, record the serial number in the space provided below. You will need the last four digits of the serial number when requesting parts, service, and support.

Serial Number: _____

1.2 Contact Information

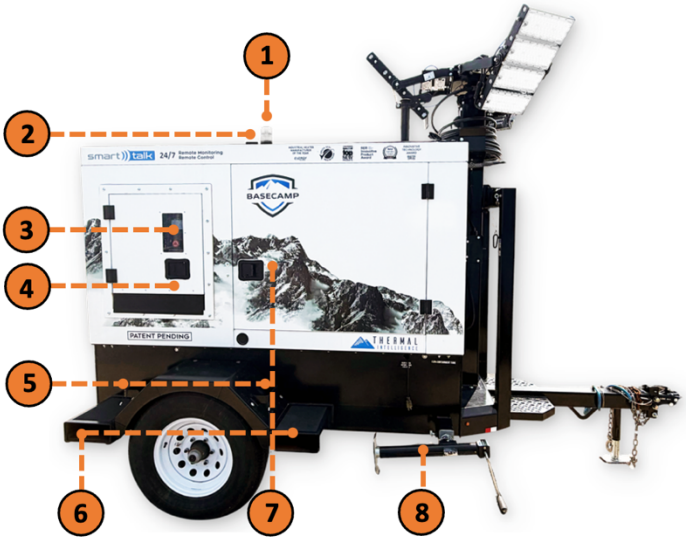
- Phone: 1 (855) 554-4344
- The main technical support phone line is staffed Monday–Friday 8:00 AM to 4:30 PM MST excluding holidays.
- After Hours Support:
    - Calls received outside of regular hours are directed to the On-Call Technician. After-hours support is reserved for issues that cannot wait until the next business day for resolution. If no answer, please leave a message and we will get back to you as soon as possible.
- Email: basecamp@thermalintell.com
    - Feel free to email us at any time with product performance or technical questions. Please include the Serial Number of your BASECAMP if you have a specific question about your machine so we can better help you.
- Support Request Form
    - To best support you and your BASECAMP, please use the following form to submit parts inquiries/orders or to request specific mechanical/electrical repair and maintenance support – be sure to add any relevant images to help us assist you:
        - https://thermalintelligence.com/basecamp-support-request/
    - For additional troubleshooting, field support and maintenance videos visit our website:
        - https://thermalintelligence.com/support-content

Thermal Intelligence is committed to the continual development and improvement of our products. We pride ourselves on providing you with the safest, most efficient and most reliable source of Heat, Power, and Lights.

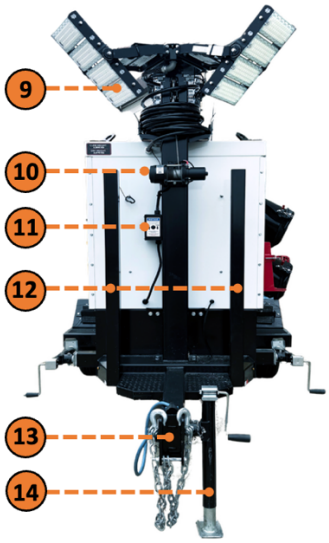


2. Exterior Component Locations

Passenger Side (Right)



Front of Unit



Driver's Side (Left)



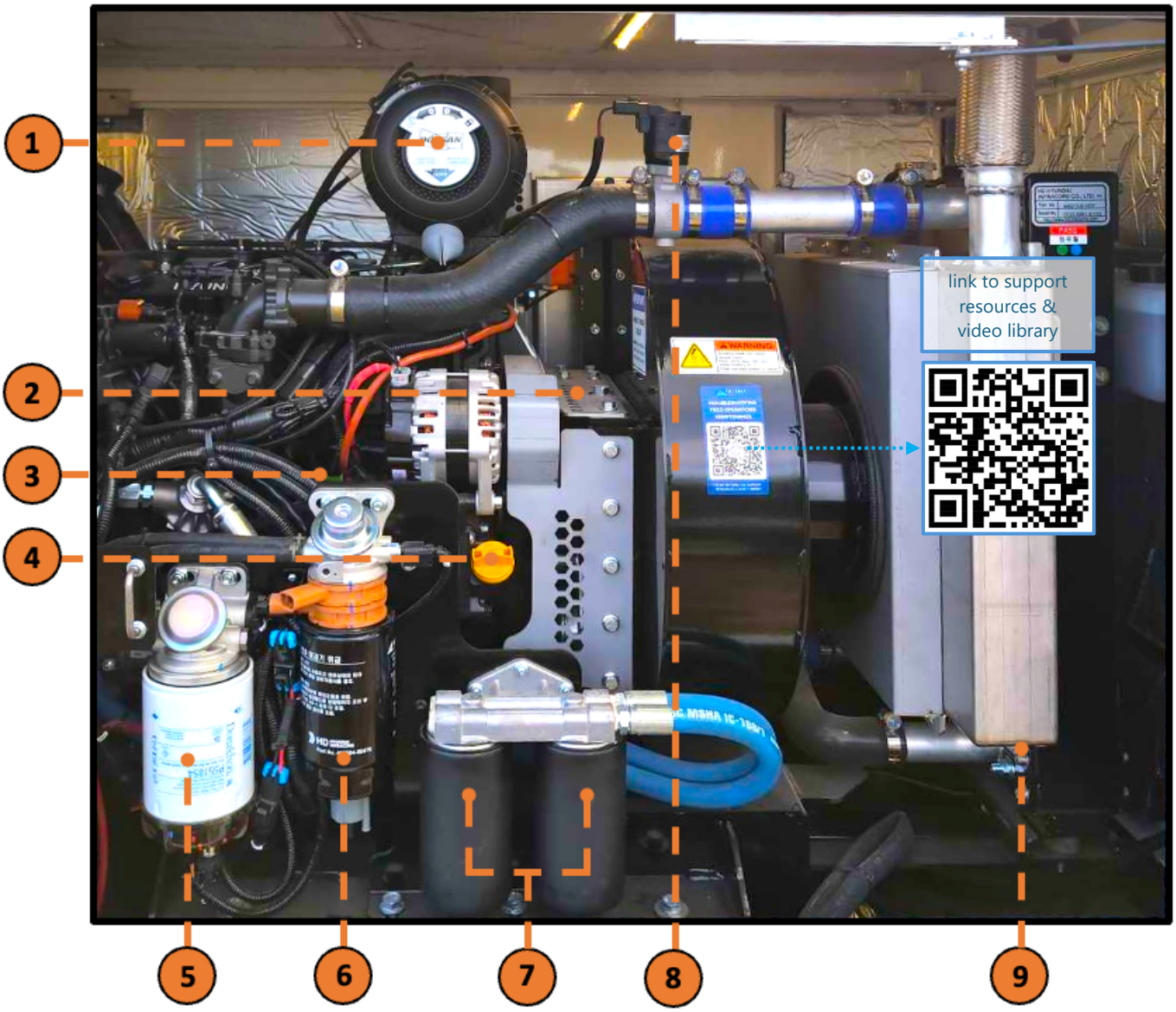
Rear of Unit



1. Tri-Colour Beacon Light
2. SmartTalk Antenna
3. Emergency Shut Down Button
4. Control Panel
5. Wheel Chocks (both sides)
6. Forklift Pockets
7. Right Side Panel Access
8. Outrigger Stabilizers
9. LED Lights
10. Light Mast Winch
11. Light Mast Switch
12. Ducting Storage Posts
13. Interchangeable Hitch
14. Fixed Stabilizer
15. Heater Outlet
16. Heater Intake (Recirculation Port)
17. Fire Extinguisher
18. VIN, Serial Number, Tire & Loading Information
19. Left Side Panel Access
20. Transport Tie Down Points (both sides)
21. Lifting Eye Lugs (all corners)
22. Rear Cold Air Intake
23. Diesel Fuel Filler Cap
24. Containment Tank Drain (with Internal Fuel Drain)
25. Fixed Stabilizer

3. Interior Component Locations

3.1 Passenger Side (Right)



1. Air Filter Housing
2. Fan Belt
3. Oil Dip Stick
4. Oil Fill
5. Fuel Water Separator
6. Fuel Filter
7. Oil Filters
8. Positive Air Shutoff Valve
9. Exhaust Heat Exchanger Drain

3.2 Driver's Side (Left)



4. Heater Outlet
5. Heater Inlet
6. Unit Battery

1. Engine ECM / Relays
2. Fuel Tank Cap/Inlet (access on outside of rear of unit)
3. Consumables Shelf & Manuals

4. Safety

4.1 General Safety Information

- It is required that anyone towing, operating, or maintaining this equipment read and understand this manual.
- This manual was written specifically for the safe operation and maintenance of this equipment. Your safety and the safety of others depend on the proper and safe use of this equipment. Do not modify or alter this equipment or any of its components without written authorization from Thermal Intelligence.
- Thermal Intelligence is constantly working to improve its products. We reserve the right to make improvements or changes to subsequent models, with no obligation to make these changes or additions to previous models.
- Thermal Intelligence cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual and decals affixed to the unit are, therefore, not all inclusive. If using an 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.

4.2 Operator Safety

- The following safety items are for the safe operation of the unit. Failure to meet or exceed any of the following safety procedures will result in damage to the heater and/or property damage as well as serious injury or death.
    - Keep the area around the BASECAMP clear.
    - Never smoke when refuelling.
    - The operator must wear approved personal protective equipment (PPE), especially for the eyes, ears, and hands.
    - Never remove safety guards, shields, or switches when operating the BASECAMP.



    - During operations the unit can have extremely hot surfaces. Be very careful not to touch heat transfer surfaces, heat exchanger, engine, or engine exhaust surfaces.
    - Always use caution around the rotating shafts and engine. Loose clothing or hair can be pulled into the shafts or engine causing serious injury or death.



5. Transportation

5.1 Transportation Safety

- Trailer Towing Can Be Hazardous:
  - BASECAMP is equipped with electronic trailer brakes. Allow for increased braking distance due to weight.
  - Reduce speed under adverse weather, road, or terrain conditions.
  - Avoid sudden lane changes, U-turns, etc.
  - Sudden maneuvers may cause tipping, rollover, jackknifing or sliding of the trailer and, without warning, loss of control of the towing vehicle may result.

5.2 Towing with Vehicle

- The BASECAMP can never be transported while the engine is running.
- Ensure that the BASECAMP has been shut off, the breakers are all in the off position and the Master Battery Connect Switch has been turned off (the control panel should be off).
- Open the fuel door at the rear of the unit and make sure the fuel cap is properly secured.
- Walk around the unit ensuring that side and rear jacks are all retracted and properly secured as well as all doors are fully closed. Secure ducting on ducting posts.
- Ensure that the light tower has been fully lowered.
- Once the BASECAMP's hitch has been secured to the towing vehicle, remove all wheel chocks, and place them back in the storage position.
- Finally, attach the breakaway chains, emergency brake cable, and electrical cable, and test for brake and light function.
- Inflate tires to 65 psi & check wheel lug nuts; tighten to 80 ft-lb.
- Towing Vehicle:
  - Check that the towing vehicle is rated to tow the load.
  - Check that the towing vehicle is in serviceable condition.



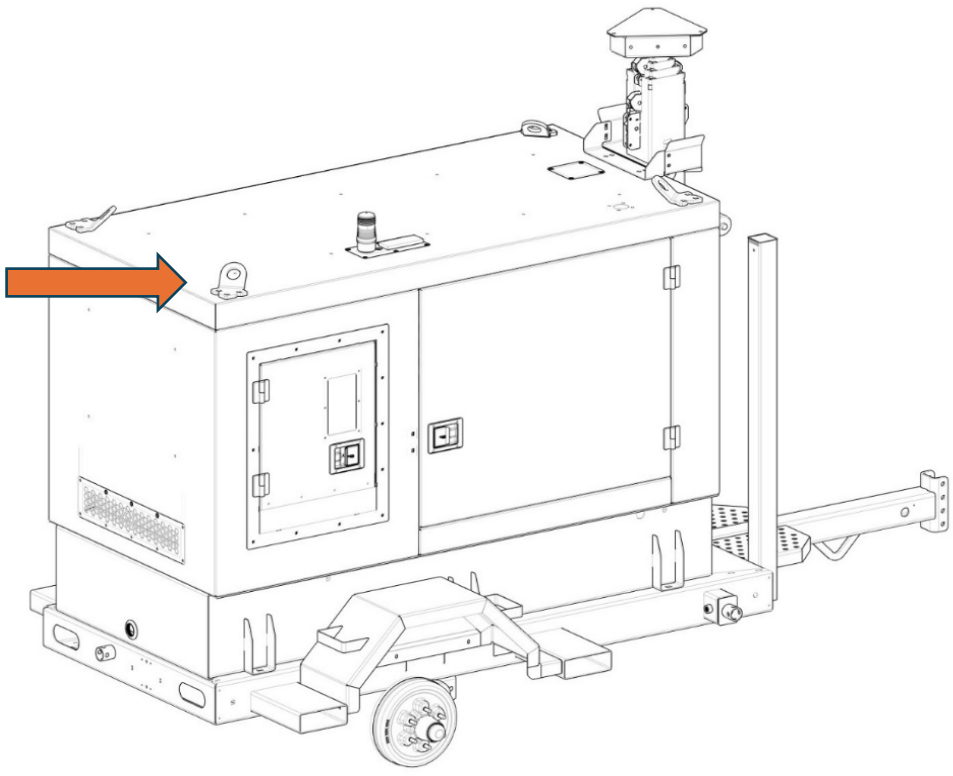
  - Do any necessary service/maintenance on the towing vehicle before towing.

5.3 Transport on Flat Bed

- **IMPORTANT NOTE:** The BASECAMP can only be transported with the hitch facing the front of the trailer. If placed backwards, air can enter through the rear air inlet causing the cabinet to overpressure and blow the doors open while moving.
- The BASECAMP can never be transported while the engine is running.
- The unit can be lifted by a forklift from either side using the fork pockets.
- Arrange the unit(s) on the flatbed, leaving enough room for movement between units, especially the overhead lights if transporting multiple BASECAMP units.
- Make sure overhead lights are secure within the bracket before loading.
- Secure the unit using the chains through the fork pockets, and the front D-ring.
- Safety clips for the ducting should be on, all doors should be latched, light mast in its down resting position.

5.4 Vertical Lifting by Crane

- The lifting eye lugs are made only for vertical lifting. DO NOT transport with a crane.
- Use a four-point sling with the lifting eye lugs.
- Attach a sling to all (4) lifting eye lugs or the unit may rotate freely. A freely spinning load poses a danger to equipment and the people involved. If a lift requires a unit to rotate, be sure to use a tagline.
- Extra care must be used in environments with power lines near or overhead as the tagline will conduct electricity.
- Lifts should be completed slowly and gradually.



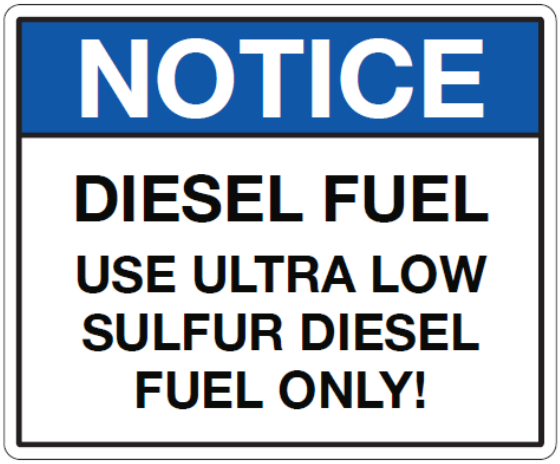
6. Pre-Operation

6.1 Daily Walk Around Inspection

- Look for conditions that could hinder performance or safety, such as oil, coolant, fuel leakage, blocked vents, loose or missing hardware and electrical connections.
- Inspect both fan and alternator belt.
- Coolant levels should be checked daily.
- Check electrical battery, connectors, and ground points.
- Check flexible rubber hoses for deterioration.
- Check hoses are not twisted, crushed, or kinked.
- Check there are no cracks or corrosion.

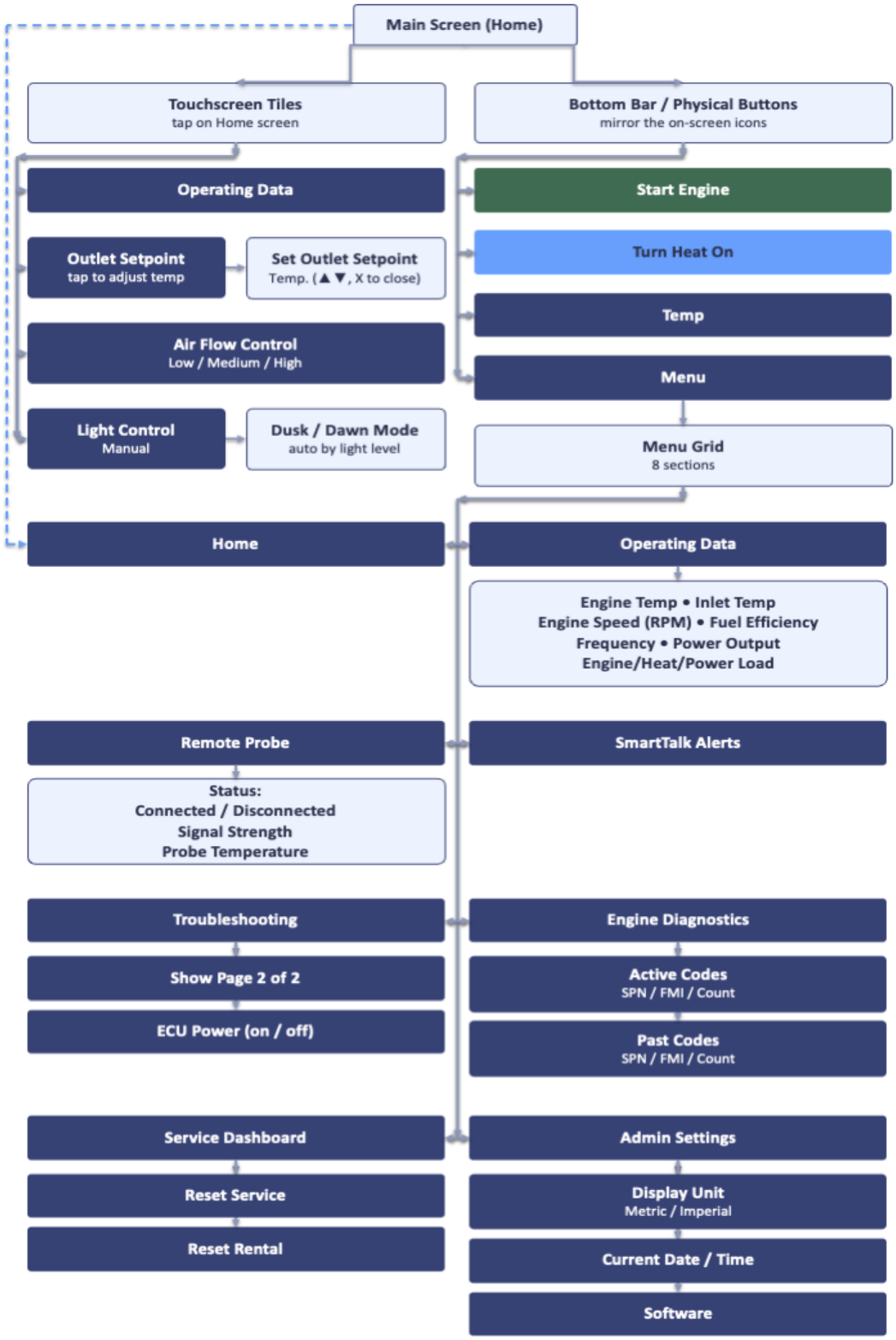
6.2 Refuelling Safety

- Clean up any spilled fuel immediately.
- Refill the fuel tank in a well-ventilated area.
- Replace the fuel tank cap after refuelling.
- Do not smoke.
- Do not refuel the engine near sparks or open flames.



7. Operating

7.1 Controller Operation Flow Chart



7.2 Controller Navigation

Please Note: Screen images are representative only. Displayed values and units of measure (i.e. metric or imperial) will vary depending on user-selected preferences. Procedures remain the same unless otherwise specified.

1 Turn on the main battery disconnect; this will power on the controller and load the main menu.





2 Press the **START STOP** button to start the unit – you may see a **REMOVE PORT COVERS FOR UNIT OPERATION** screen to prompt removal for optimal starting – press **START STOP** again. You will then see a Glow Plug Delay prompt at the bottom of the screen, after doing so, followed by STARTING and finally WARMING UP before the unit becomes fully operational. The warm-up delay is temperature-dependent and will lock out the heating capabilities of the unit until the warm-up phase is completed.





7.2 Controller Navigation (continued)

3 By pressing the touchscreen **TURN HEAT ON/OFF** you can toggle the heat control from on to off.





4 By pressing the touchscreen **LIGHT CONTROL MANUAL** button, you can toggle between **MANUAL** and **DUSK/DAWN** settings for the light mast flood lights. In **DUSK/DAWN** the lights will come on automatically 2 hours before sunset and turn off 2 hours after sunrise.



5 Returning to the Main Screen, users may select **OPERATING DATA** from the upper right corner. This will bring you to a secondary screen offering detailed unit operating information.





7.2 Controller Navigation (continued)

6	From any screen, selecting MENU will navigate the user to a secondary screen providing additional viewable options.



7	In the **REMOTE PROBE** menu you can view if your remote probe is connected and confirm the signal strength.



8	The **SMART TALK** screen allows users to view Smart Talk Alerts history, while **ENGINE DIAGNOSTICS** provides fault code information.





7.2 Controller Navigation (continued)

9 In the **SERVICE DASHBOARD** users can view service and rental hours as well as reset said values after service or before rental.



10 In the **TROUBLESHOOTING** menu, you can view all detailed operating data on one screen.





11 In the **ADMIN SETTINGS** menu, you can switch between Imperial & Metric units as well as confirm Current Date/Time and Software Version.



7.3 Unit Start-Up

- Ensure the BASECAMP is level and wheel chocks are placed under the wheels for stability.
- Remove both port covers from the inlet/outlet chutes.
- Turn the Master Battery Disconnect to the **ON** position, the control panel will go through a booting sequence before taking you to the main screen.
- If no alarms are present, press the **START** button on the unit. After a glow plug countdown, the unit will start up.
    - If it is cold outside the unit may go through a pre-warming phase before saying **FULL OPERATION** at the bottom of the screen.

7.4 Unit Start-Up – Winter

- In temperatures below freezing, diesel fuel will coagulate and cause problems with starting the machine. The engine will require preheating. Preheating can be achieved using the installed 120V block heater or by using a heater or other heat source indoors.
    - In temperatures between 32°F (0°C) and -58°F (-50°C) the machine should be preheated using the block heater. Plug the block heater into a 120V outlet. Let the engine warm for 2.5 hours minimum.
    - After preheating, the machine can be started normally.

7.5 Heat Function



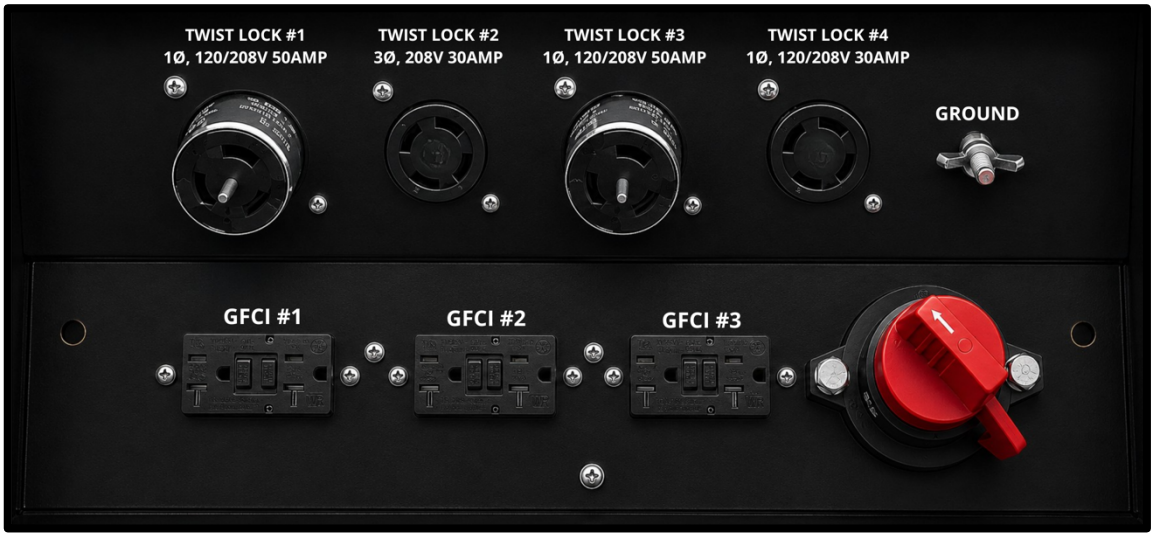
- Once the control panel says FULL OPERATION, users can turn on the main breaker and then press the "Heat On/Off" button.
- The default heat setpoint is 80°C or 176°F.
- Users can choose to set the temperature as high as 100°C or 212°F.
- The BASECAMP will ramp up the engine load to attempt to hit your desired output temperature. Keep in mind the BASECAMP does a 100°C or 180°F temperature rise over ambient.
- If users want more specific temperature control in their space, then we recommend using a BASECAMP Wi-Fi Remote Probe.

7.6 Heater & Engine Shutdown

- Do NOT use the Emergency Stop to turn off the machine.
- Press the HEAT ON/OFF button to disengage the heat.
- Shut off all the breakers including the upper main breaker.
- Press the START button to stop the engine. Allow the engine to cool down, you will see a timer and message stating, COOL DOWN. Once the cooldown period has ended, the BASECAMP will shutdown.
- Turn the Master Battery Switch to the OFF position to shut down the control panel to avoid any unnecessary battery drain.

7.7 Generator Usage

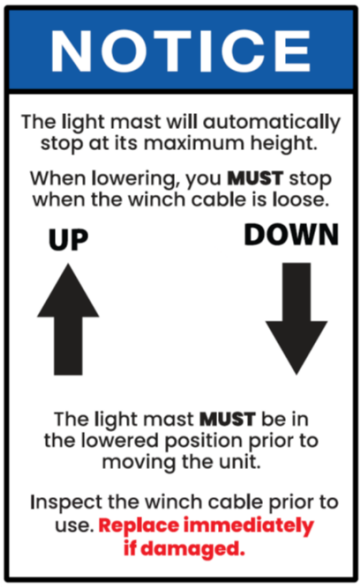
- Once the BASECAMP is running and at full operation, users may turn on the Main Breaker to access the power distribution.
- Simply match your required power with the outlet label on the BASECAMP, plug into the socket and turn on the corresponding breaker.
- The unit will automatically and instantly divert power from heat generation (if in use) and provide electricity as necessary.
- If the heat is engaged and the BASECAMP has not reached the desired setpoint, all remaining power is directed at the heating elements to ensure that the unit remains under a full heat generation load.
    - Having the BASECAMP lights turned on does not negatively affect the available power generation.
- Utilizing all available power distribution will result in the heater operating at 60% of its normal peak capability. Airflow is not affected.
    - Using air recirculation in this scenario is recommended.



7.8 Light Tower

- The BASECAMP is equipped with (3) 480-watt LED lights providing 230,000 Lumens.
- The breaker switches for the lights can be turned on once the BASECAMP is running and the main breaker is turned to the on position.
- On the main screen of the control panel users have further control with the ability to turn the lights to a Dusk/Dawn setting where lights will turn on approximately (2) hours before dusk and turn off (2) hours after dawn.
- Before raising the light mast, first extend the side outriggers and securely deploy all four jacks for stability.
- The up/down switch is used to raise the light mast to the desired height or until the upper limit switch is tripped and the mast extends no further. Do not solely rely on the upper limit switch.

- When lowering the light mast, you must stop when the winch cable is loose.
- The light mast can be raised and lowered on the battery; however, Thermal Intelligence recommends having the unit running during mast operation to eliminate unnecessary battery drain.
- The BASECAMP must be transported with the light mast in the fully lowered position.
- Light Tower Maintenance:
    - Inspect mast/winch cables regularly. Replace immediately if damaged.
    - Lubricate cables after every wash with a dry wire rope lubricant.
    - Never stand directly under the lights when raising or lowering mast.



7.9 Connecting Ducting

- If using a coil-style duct, bunch up as much of the duct as possible before securing the clamp. This will ensure an airtight seal and maximum airflow down the duct.
- If using a soft cuff style duct, then simply secure using the included buckle and tighten before securing the ducting clamps.
- It is recommended that ducting is secured before turning on the BASECAMP as it is easier to work while no air is flowing, however, if not practical hook up ducting while the unit is running.
- The high static pressure of the BASECAMP means it can push air a long distance. To ensure that as much air gets to the destination as possible, always confirm that ducting connections are fully secure.
- When using a ducting splitter, it is again recommended that connections are made while the BASECAMP is off. Always place the output duct inside the splitter to not impede airflow.
- Once the air is flowing, check to make sure the splitter is properly open to allow for equal airflow.
- If hooking up more than one splitter and wanting to have equal air flow at all output points it is necessary to restrict air at the first and second outlets by closing the opening to less than 12".



7.10 Wi-Fi Remote Probe

- Plug the Remote Probe into any 120V outlet within 50' of BASECAMP. Place away from metal structures for better signal strength.
- The control panel screen will update with the Remote Probe temperature & control once properly connected.
- Select the desired Remote Probe temperature on the screen based on the heating requirements of the Remote Probe location.
- Unplug the Remote Probe to return to output temperature setpoint options.

7.11 Tri-Colour Beacon Light

- BASECAMP is equipped with a tri-colour beacon that indicates the operating status of the unit:
    - The green light turns on whenever the engine is running.
    - The yellow light turns on whenever there's a fault which doesn't shut down the machine. Example: Fuel level dips below 20% or Air Filter Restriction.
    - The red light turns on if there is a critical error, which shuts the unit down.

8. Maintenance

8.1 Maintenance Overview

- Top-level maintenance is provided in this section. For detailed engine maintenance procedures please refer to the Engine Owner's Manual:

8.2 Maintenance Safety

- The following safety items are to protect the operator and BASECAMP during maintenance. Failure to meet or exceed any of the following safety procedures will result in damage to the unit, towing vehicle, other vehicles, property damage as well as serious injury or death.
    - Place wheel chocks in front and behind the BASECAMP wheels to prevent accidental movement during maintenance.
    - The area around the unit must be cleared of all unauthorized personnel.



    - Wear approved protective clothing and safety glasses.
    - No loose clothing or hanging jewelry. Long hair must be secured.
    - Never weld or modify the BASECAMP unless approved by Thermal Intelligence.

- Do not replace any parts or tires except for parts from Thermal Intelligence or tires with the same rating as the original equipment and meet the specifications listed in Section 13.
- Always use the correct tools when performing repairs or routine maintenance.

- Using improper or inadequate tools can cause damage to the BASECAMP or injury to the operator.

8.3 Engine Service & Maintenance Intervals

- All BASECAMP units are equipped with an extended service interval tank allowing for 2,500-hour service intervals.
  - Oil and oil filter changes to be completed every 2,500 hours.
  - Fuel Filters & Fuel Water Separator Filter are to be changed every 2,500 hours.
  - Depending on the running conditions, the fuel filters may need to be changed sooner.
- For any other service and maintenance intervals, please refer to the engine manuals.

NOTE: The manual can be accessed here: https://thermalintelligence.com/basecamp-user-manuals/

8.4 Maintenance Tasks

8.4.1 Change Engine Oil

- Place the container under the drain port or connect a hose to the drain port leading to the container.
- Remove the plug from the oil drain.
- Open the drain valve to drain.
- Drain the oil immediately to be sure all the oil and suspended contaminants are removed from the engine.
- Close the drain valve once completed.

8.4.2 Change Air Filters

- Replace air filters every 2,500 hours. Depending on the operating environment, air filters may need to be replaced more frequently.
- Follow instructions on filter housing to open the housing.
- Replace inner and outer filters if heavily soiled.
- Write current engine hours on filters when replacing.
- Replace the housing and reattach the clamps.

8.4.3 Change Fuel Filter

- Remove the spin-on fuel filter with a filter wrench and collect escaping fuel.
- Install:
  - Do not pre-fill. The fuel filter can result in debris entering the fuel system and damaging fuel system components. Lubricate the O-ring seal with a small amount of diesel.

- Install the filter on the filter head.
    - Write current engine hours on the filter when replacing.
- Tighten the filter until the gasket contacts the filter head surface.
- Tighten the fuel filter an additional ¾ turn after contact or consult the filter manufacturer's instructions.
- Prime fuel system after filter installation.

WARNING
- The fuel pump's high-pressure fuel lines and fuel rail contain very high-pressure fuel
- Never loosen any fittings while the engine is running
- Personal injury and property damage can result.

- Operate the engine and check for leaks.

8.4.4 Fuel/Water Separator



- Draining Water (regularly check for water in a base container and drain as necessary):
    - Shut down the engine.
    - Place a suitable container underneath.
    - Loosen drain plug.
    - Drain until pure fuel runs out.
    - Tighten drain plug.
- Changing the Pre-filter insert:
    - Shut down the engine.
    - Place a suitable container underneath.
    - Loosen the drain plug and drain the liquid.
    - Disassemble filter insert.
    - Clean any dirt off the sealing surfaces.
    - Wet the sealing surfaces of the filter cartridge with fuel and screw back onto the filter head, clockwise.
    - Tighten the drain plug.
    - Prime the fuel system. See below.

8.4.5 Priming the BASECAMP

- The filter primer pump is located above the fuel water separator on the Control Panel side of the BASECAMP.
- First, press the Primer pump several times until it becomes too hard to press in. Cycle the BASECAMP power on and off using the main battery disconnect then press the start button. If the

unit still doesn't start, then re-press the primer pump until it is hard then continue to press the pump button while the starter is turning over.

- If BASECAMP still doesn't start you may have an air-locked fuel line or a fuel leak. If no leaks are present, using a 10mm wrench open the fuel line bleed screw located on the fuel filter (not on the water separator) and see if any diesel fuel comes out.
    - If no fuel comes out, then press the primer pump until you see diesel come out of the bleed screw (be sure to have a soaker pad underneath the screw to catch any diesel). Once diesel comes out of the screw, tighten it back up and press the primer pump until it becomes hard.
- Try re-starting the engine. If there was air in the lines this process may need to be completed several times. If the BASECAMP still does not start and there are no other codes on the control panel, contact Thermal Intelligence.

8.4.6 Oil Filter

- Remove:
    - Clean the area around the oil filter head.
    - Use an oil filter wrench to remove the filter.
    - Clean the gasket surface of the filter head.
    - The O-ring can stick on the filter head. Be sure it is removed before installing the new filter.
- Install:
    - Use clean oil to coat the gasket surface of the filter.
    - Apply a light film of lubricating oil to the gasket sealing surface before installing the filter.
    - Be careful that no debris is poured into the filter. If using an oil supply with a metallic or plastic seal under the cap, be careful to peel the seal back. Punching the seal with a knife or sharp object can create debris in the oil container.
    - Mechanical overtightening of the filter can distort the threads or damage the filter sealing element seal. Install the filter on the oil filter head. Tighten the filter until the gasket contacts the filter head surface. Tighten ¾ turn after the gasket contacts the filter head.

8.4.7 Adding Coolant & Coolant Check



- If the coolant level is below the filler neck, coolant must be added.
- Verify engine is stopped and cooled.
- Remove the radiator cap.
- Fill the radiator slowly with coolant until it comes up to the filler neck.
- Coolant can be added inside the enclosure or from the roof access panel.
- Operate the engine for approximately five minutes to bleed the air in the coolant circuit.
- Coolant level will drop.
- Stop the engine and once cooled, there should be approximately 1" of coolant in the reserve tank.

8.4.8 Engine Oil Check



- If the engine was running, wait ten minutes before proceeding.
- Remove the dipstick and wipe it dry with a lint-free and clean cloth.
- Insert the clean dipstick. Verify the dipstick is fully seated.
- Remove the dipstick and look at the oil level on both sides. The lower of the two readings is the correct oil level.
- Add oil (if necessary) to adjust the level.

8.4.9 Battery Check



- Battery maintenance checklist should be performed monthly. Always wear approved eye protection when working with batteries and wash hands after handling.
- Inspect battery posts and cables for tightness and corrosion.
- Tighten and clean cables and posts as necessary. If required, use a battery contact cleaner.
- Coat the battery posts with dielectric grease, after tightening and cleaning.
- Load test the battery annually.

8.4.10 Exhaust Heat Exchanger Check and Drain



- BASECAMP has a wet stack prevention program built into the unit; the exhaust heat exchanger can see an excess build-up of fluids.
- It is recommended that the 3/8" hex inspection bolt is removed at least once a year and the bottom of the exchanger is inspected for fluids.
- The BASECAMP should be off when the bolt is removed. If the exchanger is cool to the touch, users may insert a finger into the exchanger to check for fluid.
    - It is normal to feel small amounts of condensation when inserting your finger into the exchanger.
- If fluid is present, allow drainage until empty.

8.4.11 Blower Belt Replacement (Fan Belt)

- For ease of access remove the intercooler to manifold pipe (will be either 10mm or 8mm).
- Remove the (12) bolts on the side belt guard of the blower and use a 9/16” wrench.
- Then remove the (1) vibration dampener bolts using a 13mm wrench.
- Remove the belt guard.
- Slightly loosen (do NOT remove) the (4) blower fan bearing bolts using an 11/16" wrench.
- Loosen the tensioner bolt by loosening the 1/2” bolt located on the top of the blower bracket until the belt is loose enough to remove (prybar may be needed to assist). If it doesn't move freely with a prybar, further loosen the tensioner bolt.
- Place a crescent wrench on the tensioner arm and apply pressure to remove tension from the belt.
- While holding the crescent wrench, remove the belt, ensuring that you do not have to roll it or kink it to take it off as this will damage your new replacement belt during the installation.
- Install replacement belt. It should not need to be forced on.
- Put the unit back together in reverse order.

8.4.12 Blower Belt Tension

- Test belt tension and record value for future records.
- Loosen 7/16 Nyloc nuts on the blower bearing.
- Loosen 1/2 lock nut on the tensioner.
- Use a crescent wrench on the tensioner arm to remove tension and adjust the 1/2" tensioner bolt till adequate tension is applied to the belt.
- When retightening bearing 7/16 Nyloc nuts, tension will increase significantly.



- Final running tension (without the tensioner touching the belt) should be 80 LBS.

WARNING Over-tensioned fan belts may result in premature failure of related components.

8.4.13 Light Tower Maintenance

- Inspect mast/winch cables regularly. Replace immediately if damaged.
- Lubricate cables after every wash with a dry wire rope lubricant.

8.4.14 LED Light Lens Adjustment

- Utilizing a 13mm wrench users may adjust the individual light lenses to the desired angle.
- For adjusting the entire bracket assembly up or down you will require a 16mm (outside) and 17mm (inside) to loosen the bracket and adjust the angle.

9. Seasonal

9.1 Off-Season Maintenance

- Unplug the block heater from the 120V outlet. This is done so that the unit can still be plugged in periodically and the onboard battery tender can charge the battery without the block heater running. **Plug the block heater back in before the start of next season.**
- Remove the containment drain plug on the rear of the unit to drain any excess water, or potential diesel from overfilling. This should be done at least twice per year.
- Check the exhaust heat exchanger as noted in Section 8.4.10.
- Check Oil levels and ensure the oil level is at the "Full" line on the dipstick.
- Check the fuel system for leaks.
- Check the Alternator belt for proper tension.
- Check the Fan belt for proper tension
- Check the Coolant and add if necessary.
- Do a visual check of all fasteners to ensure they remain tight.
- Check the light mast winch cable for damage and replace it if necessary. Apply dry lubricant.
- Open the electrical panel and inspect electrical connections, checking for potential shorts or bare/loose wires.
- Open the generator junction box and inspect connections and wiring for damage.
- Ensure ducting caps are on to avoid debris/rodents entering the unit.

9.2 Seasonal Checklist

- Check oil.
- Test the control panel for proper operation.
- Check the radiator for corrosion and damage.
- Check engine hoses and exhaust clamps; tighten or replace them as needed.
- Check wiring harnesses for damage; replace as needed.
- Check the battery; replace as needed.
    - Disconnect for storage; connect for operation.
- Check the engine fan belt; replace it if necessary.
- Check engine coolant; replace if necessary.
- Check the air filter; replace if necessary.
- Check the fuel filter; replace if necessary.
- Check tire pressure.
- Inspect for loose bolts and nuts.
- Inspect safety guards and shields.

10. Recommended Filter & Fluids

10.1 Filters

- Air Filter - Inner
  - Hyundai – Item #400504-00391
  - (Option) Fleetguard – #AF26118
- Air Filter - Outer
  - Hyundai – Item #400504-00390
  - (Option) Fleetguard – #AF26117
- Engine Oil Filters x 2
  - AMSOIL – Part #EA026
- Fuel Filter - Primary
  - Hyundai – Item #400504-00606
  - (Option) Doosan Bobcat – #400504-00580
- Fuel Filter/Water Separator
  - Donaldson – Item #P551854
- Alternator Belt
  - Parts Avatar – Item #6PK1195
  - (Option) Bando Rib-Ace 6PK 1196
- Fan Belt
  - Optibelt RBK – Item #8 PK 800 TM

10.2 Fluids

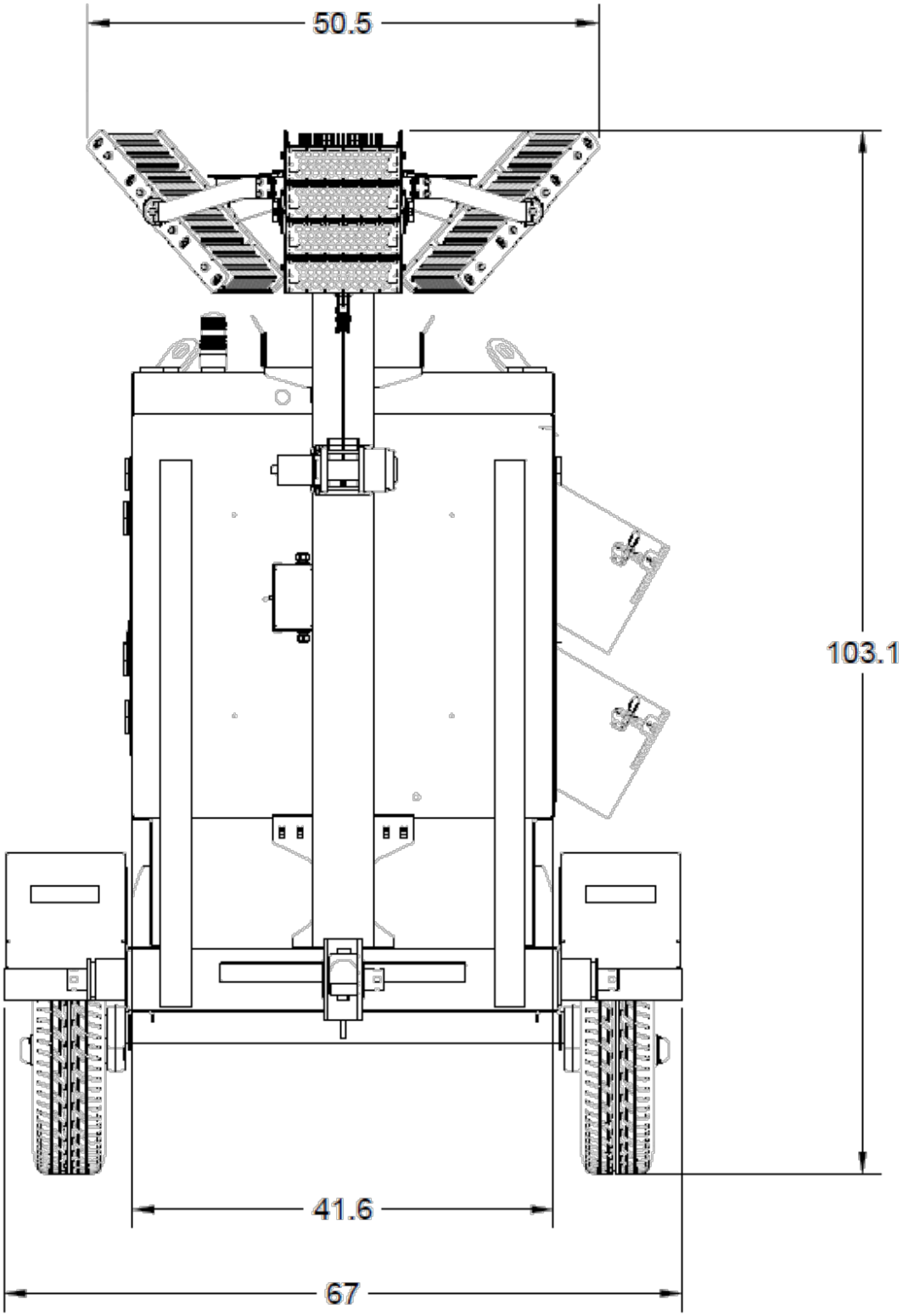
- Engine Oil
  - Refer to the Engine Manual for precise oil specifications.
  - BASECAMP is shipped with CK4-compliant 5W-40 diesel engine oil.
- Engine Coolant
  - Refer to the Engine Manual for precise coolant specifications.
  - BASECAMP is shipped with diesel engine coolant compliant with the following industry specifications: ASTM D3306, ASTM D4985, ASTM D6210 and TMC of ATA RP 329/330.

11. Technical Specifications

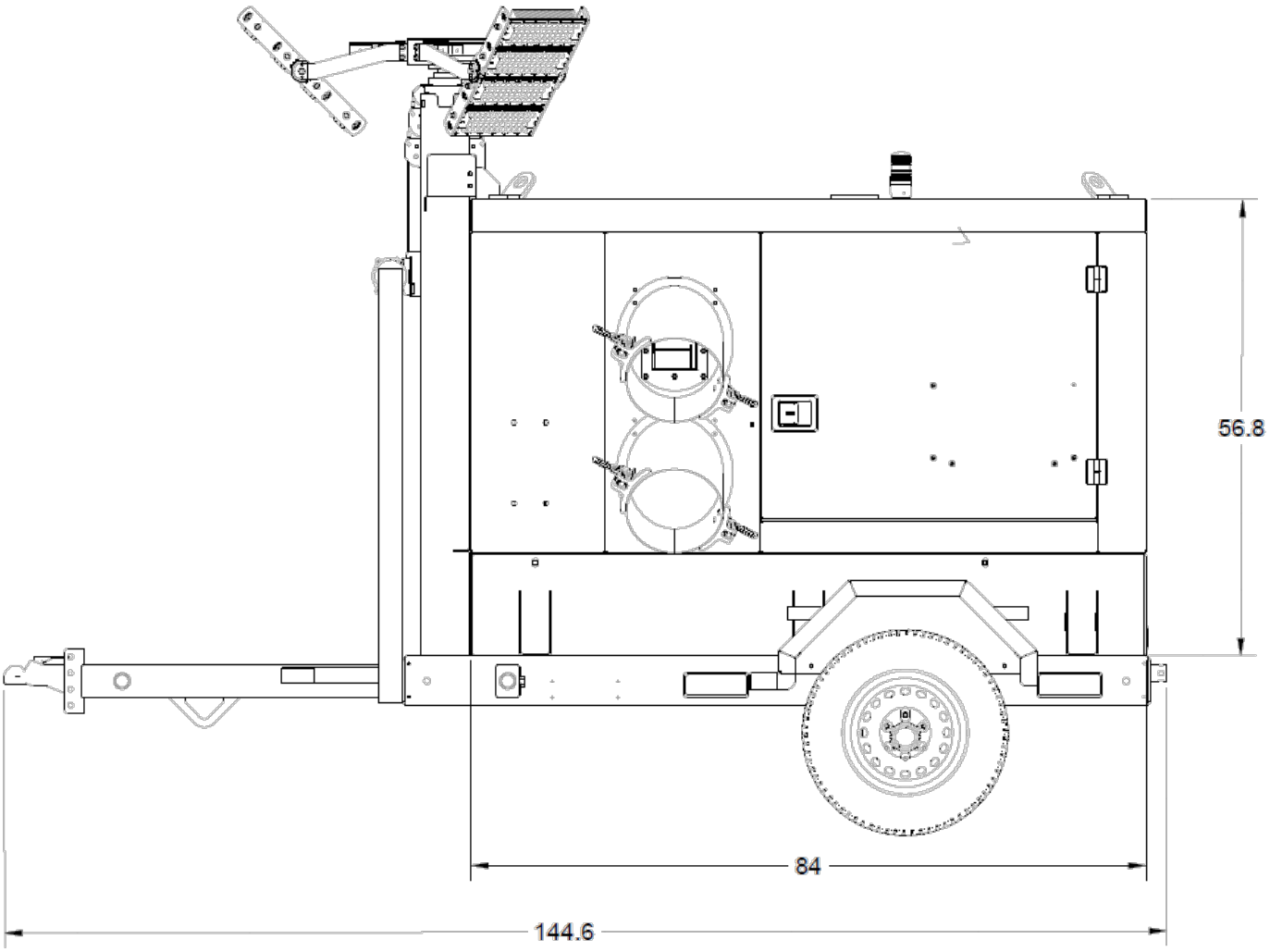
Fuel Type	Diesel
Dimensions	12'5" L x 5'6" W x 8'6" H | 3.78 m L × 1.68 m W × 2.59 m H
Curb Weight	5,511 lbs | 2,500 kg
Dry Weight	4,550 lbs | 2,070 kg
Engine	Hyundai 2.4L Tier 4 Final
Fuel Capacity	119 US Gallons | 450 Litres
Oil Capacity	15.8 US Gallons | 60 Litres
Coolant Capacity	2.85 US Gallons | 10.8 Litres
Minimum Run Time	36 Hours
Power Generation	36 kW of continuous power
Power Plugs	(2) Twist Locks – 30 Amp (2) Twist Locks – 50 Amp; (3) GFI – 20 Amp 120V
Light Output	230,000 Lumens
Temp Rise	180°F | 100°C
Static Pressure	15 Inch WC
BTU Equivalent	910,000
SCFM	4,000+

12. Dimensions

12.1 Front View



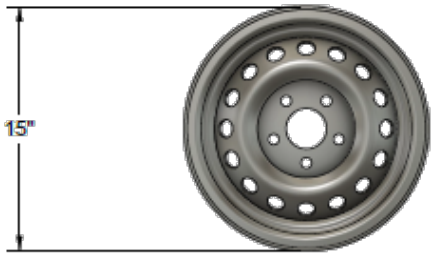
12.2 Side View



13. Tire & Rim Specifications

13.1 Rims

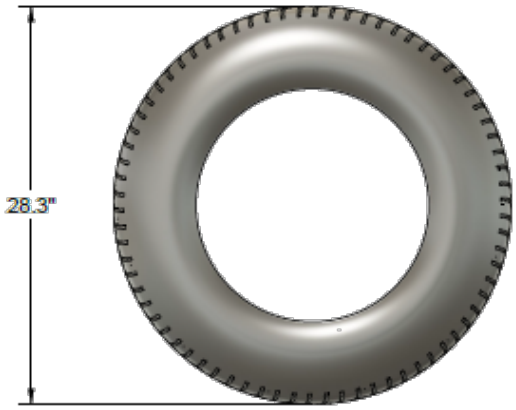
- Size: 15"x6"
- Bolt Pattern: 5x4.5"
- Maximum Load Rating: 2,830 lbs





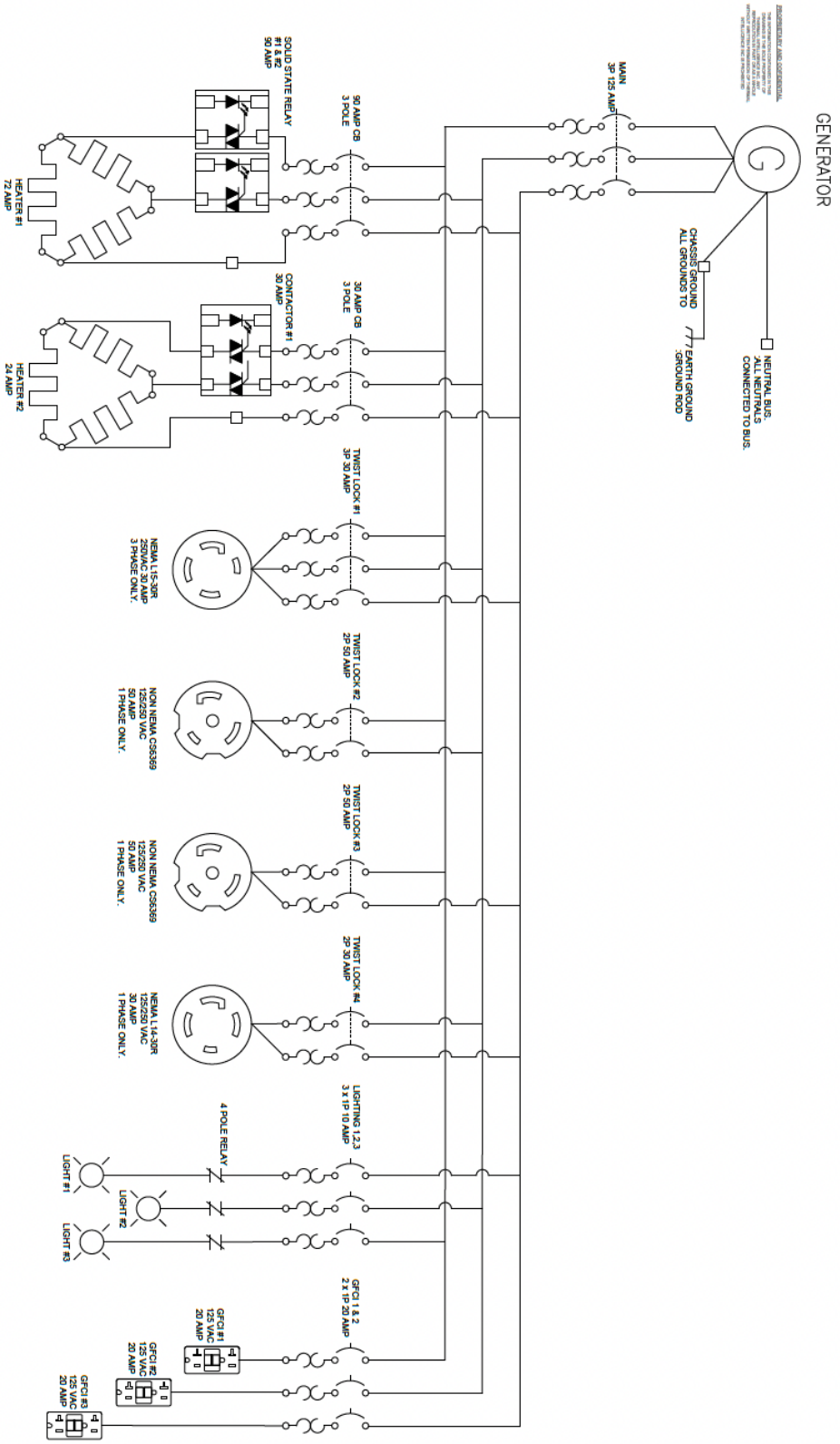
13.2 Tires

- Size: ST 225/75 R15 Tubeless
- Load Rating "E" 10 Ply
- Max Load: 2,830 lbs at 80 PSI
- Tread: 2 Steel + 2 Poly + 1 Nylon
- Sidewall: 2 Poly





14. Power & Electrical Schematic





THERMAL INTELLIGENCE

All information and specification in this Operations Manual were accurate at the time of printing.

Thermal Intelligence is committed to continuous product development, and we reserve the right to revise this document at any time, without written notice.

Current versions of all manuals & support documents will be available online:

https://thermalintelligence.com/support-content

