

**UNIMAC**



# **Diesel / Kerosene Industrial Heater – DHT66**

## **User Manual**

[Revision 1.0 February 2018]

---

READ THIS MANUAL CAREFULLY BEFORE USE – FAILURE TO DO SO MAY RESULT IN INJURY, PROPERTY DAMAGE AND MAY VOID WARRANTY. • KEEP THIS MANUAL FOR FUTURE REFERENCE.

- Products covered by this manual may vary in appearance, assembly, inclusions, specifications, description and packaging.
-

# Safety

Safety messages are designed to alert you to possible dangers or hazards that could cause death, injury or equipment or property damage if not understood or followed. Safety messages have the following symbols:

 You WILL be KILLED or SERIOUSLY INJURED if you do not follow instructions.	 You CAN be KILLED or SERIOUSLY INJURED if you do not follow instructions.	 You CAN be INJURED if you do not follow instructions or equipment damage may occur.
<p>It is vital that you read and understand this user manual before using the product, including safety warnings, and any assembly and operating instructions. Keep the manual for future reference.</p> <p>Safety precautions and recommendations detailed here must be fully understood and followed to reduce the risk of injury, fire, explosion, electrical hazard, and/or property damage.</p> <p>Safety information presented here is generic in nature – some advice may not be applicable to every product. The term "equipment" refers to the product, be it electrical mains powered, battery powered or combustion engine powered.</p> <ul style="list-style-type: none"> <li><b>Before Use</b> - If you are not familiar with the safe operation/handling of the equipment, or are in any way unsure of any aspect of suitability or correct use for your application, you should complete training conducted by a person or organization qualified in safe use and operation of this equipment, including fuel/electrical handling and safety.</li> <li>Do NOT operate the equipment in flammable or explosive environments, such as in the presence of flammable liquids, gases or dust. The equipment may create sparks or heat that may ignite flammable substances.</li> <li>Keep clear of moving parts.</li> <li>Equipment may be a potential source of electric shock or injury if misused.</li> <li>Do NOT operate the equipment if it is damaged, malfunctioning or is in an excessively worn state.</li> <li>Do NOT allow others to use the equipment unless they have read this manual and are adequately trained.</li> <li>Keep packaging away from children – risk of suffocation! Operators must use the equipment correctly. When using the equipment, consider conditions and pay due care to persons and property.</li> </ul>	<p><b>General Personal Safety</b></p> <ul style="list-style-type: none"> <li>Wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect from eye and ear injury, poisoning, burns, cutting and crush injuries. Protective equipment such as safety goggles, respirators, non-slip safety footwear, hard hat, hearing protection etc should be used for appropriate equipment / conditions. Other people nearby should also wear appropriate personal protective equipment. Do not wear loose clothing or jewellery, which can be caught in moving parts. Keep hair and clothing away from the equipment.</li> <li>Stay alert and use common sense when operating the equipment. Do not over-reach. Always maintain secure footing and balance.</li> <li>Do not use the equipment if tired or under the influence of drugs, alcohol or medication.</li> <li>This equipment is not intended for use by persons with reduced physical, sensory or mental capabilities.</li> </ul>	<p><b>General Equipment Use and Care</b></p> <ul style="list-style-type: none"> <li>The equipment is designed for domestic use only.</li> <li>Handle the equipment safely and carefully.</li> <li>Before use, inspect the equipment for misalignment or binding of moving parts, loose components, damage or any other condition that may affect its operation. If damaged, have the equipment repaired by an authorised service centre or technician before use.</li> <li>Prevent unintentional starting of the equipment - ensure equipment and power switches are in the OFF position before connecting or moving equipment. Do not carry equipment with hands or fingers touching any controls. Remove any tools or other items that are not a part of the equipment from it before starting or switching on.</li> <li>Do not force the equipment. Use the correct equipment for your application. Equipment will perform better and be safer when used within its design and usage parameters.</li> <li>Use the equipment and accessories etc. in accordance with these instructions, considering working conditions and the work to be performed. Using the equipment for operations different from those intended could result in hazardous situations.</li> <li>Always keep equipment components (engines, hoses, handles, controls, frames, housings, guards etc) and accessories (cutting tools, nozzles, bits etc) properly maintained. Keep the equipment clean and, where applicable, properly lubricated.</li> <li>Store the equipment out of reach of children or untrained persons. To avoid burns or fire hazards, let the equipment cool completely before transporting or storing. Never place or store the equipment near flammable materials, combustible gases or liquids etc.</li> </ul>
<p><b>General Work Area Safety</b></p> <ul style="list-style-type: none"> <li>Work areas should be clean and well lit.</li> <li>Do not operate the equipment if bystanders, animals etc are within operating range of the equipment or the general work area.</li> <li>If devices are provided for connecting dust extraction / collection facilities, ensure these are connected and used properly. Dust collection can reduce dust-related hazards.</li> </ul>	<p><b>General Fuel Safety</b></p> <ul style="list-style-type: none"> <li>Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources.</li> <li>Do not spill fuel. If you spill fuel, wipe it off the equipment immediately – if fuel gets on your clothing, change clothing.</li> <li>Do NOT smoke near fuel or when refuelling.</li> <li>Always shut off the engine before refuelling.</li> <li>Do NOT refuel a hot engine.</li> <li>Open the fuel cap carefully to allow any pressure build-up in the tank to release slowly.</li> <li>Always refuel in well ventilated areas.</li> <li>Always check for fuel leakage. If fuel leakage is found, do not start or run the engine until all leaks are fixed.</li> </ul>	<p><b>General Carbon-Monoxide Safety</b></p> <ul style="list-style-type: none"> <li>Using a combustion engine indoors <b>CAN KILL IN MINUTES</b>. Engine exhaust contains carbon-monoxide – a poison you cannot smell or see.</li> <li>Use combustion engines OUTSIDE only, and far away from windows, doors and vents.</li> </ul>

**General Electrical Safety**

- Inspect electrical equipment, extension cords, power bars, and electrical fittings for damage or wear before each use. Repair or replace damaged equipment immediately.
- Ensure all power sources conform to equipment voltage requirements and are disconnected before connecting or disconnecting equipment.
- When wiring electrically powered equipment, follow all electrical and safety codes.
- Wherever possible, use a residual current device (RCD).
- High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal.

**General Electrical Safety**

- Electrically grounded equipment must have an approved cord and plug and be connected to a grounded electrical outlet.
- Do NOT bypass the ON/OFF switch and operate equipment by connecting and disconnecting the electrical cord.
- Do NOT use equipment that has exposed wiring, damaged switches, covers or guards.
- Do NOT use electrical equipment in wet conditions or in damp locations.
- Do NOT use electrical cords to lift, move or carry equipment.
- Do NOT coil or knot electrical cords, and ensure electrical cords are not trip hazards.

**General Service Information**

- The equipment must be serviced or repaired at authorised service centres by qualified personnel only.
- Replacement parts must be original equipment manufacturer (OEM) to ensure equipment safety is maintained.
- Do NOT attempt any maintenance or repair work not described in this manual.
- After use, the equipment and components may still be hot – allow the equipment to cool and disconnect spark plugs and/or electrical power sources and/or batteries from it before making adjustments, changing accessories or performing repair or maintenance.
- Do NOT make adjustments while the equipment is running.
- Perform service related activities in suitable conditions, such as a workshop.
- Replace worn, damaged or missing warning/safety labels immediately.



**Using an engine or wood/charcoal/gas fuelled appliance indoors CAN KILL YOU IN MINUTES.**

**Engine exhaust and wood/charcoal/gas fumes contain carbon monoxide. This is a poison you cannot see or smell.**



**NEVER** use inside a building, home, garage, boat, caravan or tent EVEN IF doors and windows are open.



**Only use OUTSIDE and far away from windows, doors, and vents.**

**Avoid other hazards - READ MANUAL BEFORE USE.**

**GENERAL:**

- Do not operate in a hazardous location. Such areas include where there is a risk of explosion of petrol fumes, leaking gas or explosive dusts.
- Do not operate in a confined area where exhaust gases or wood/charcoal/gas fumes could reach dangerous concentrations.

**PRODUCTS FEATURING AN ENGINE**

- Follow all warnings in the section titled "GENERAL".
- Explosion hazard - never smoke while refuelling.
- Take care not to spill fuel. When refuelling the engine, ensure that the engine has been allowed to cool. Prevent spilling of fuel as this may also ignite with a hot engine.
- Never refuel while engine is running.

**GENERATORS**

- Follow all warnings in the sections titled "GENERAL" and "PRODUCTS FEATURING AN ENGINE".
- The output of this generator is potentially lethal. The generator should not be connected to a fixed electrical installation except by an appropriately licensed person.
- Not weatherproof – protect your machine. This machine is not weatherproof and should not be exposed to direct sunlight, high ambient temperature, damp conditions, wet conditions or high humidity conditions.

## Safety Symbols

The product may have safety warning labels attached to it, explained below. Understand the symbols on your product and their meanings. If any stickers become unreadable, unattached etc, replace them.

			 WARNING EXHAUST FUMES
			
			
			
			

			
<b>Carbon-Monoxide Hazard</b> Do not use the product in confined areas or without adequate ventilation. Carbon-monoxide poisoning can be fatal.	<b>Pull Hazard</b> Be aware that the product contains or uses mechanical devices that can pull in objects and can cause severe injury to fingers, limbs etc. Take due care when handling and using the product.	<b>Slope / Fall Injury Hazard</b> Be aware that using the product on sloping surfaces or in slippery conditions may present additional dangers from falls and contact with blades, moving parts, hot surfaces etc.	<b>"Slam Dunk" Warning</b> Do NOT attempt "slam dunk" manoeuvres as this may result in severe injury due to falling, product breakage or collapse etc.
			
<b>Electrocution / Electrical Shock Hazard - Outdoor</b> High voltage or high current electricity may be present or required by the product. Do NOT use in rain, damp or wet conditions. Electrical shock can be fatal.	<b>Electrocution / Electrical Shock Hazard - Disconnect</b> High voltage or high current electricity may be present or required by the product. Always disconnect the product from the electrical supply before handling the product, adjusting, maintenance etc.	<b>Power Line Electrocution Hazard</b> High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal.	<b>"Kick-Back" Hazard</b> High level of "kick-back" hazard that can cause the machine to suddenly rotate towards operator. Kick-back injury can be fatal.
			
<b>Winch Operator Position Hazard</b> Do NOT stand between winch and load. Do NOT use winch to move people.	<b>Winch Lift Hazard</b> Do NOT LIFT load vertically. Use machine to PULL only.	<b>Cable Hazard</b> Ensure that load bearing cable is not kinked or knotted.	<b>Winch Cable Hazard</b> Ensure that there is a minimum number of cable coils on winching mechanism.
			
<b>Winch Hook Hazard</b> Carry hook to load – do NOT throw or run.	<b>Flash / Blinding Hazard</b> Wear appropriate eye protection for welding. Direct exposure to weld arcs may cause permanent eye injury.	<b>Laser Hazard</b> Laser may be in use – do NOT look directly at laser, or allow others to.	<b>Corrosive Substance Hazard</b> The product may contain corrosive substances that can harm or otherwise cause damage. Take due care when handling and using the product.
			
<b>Explosion Hazard</b> The product may contain substances that can explode under certain conditions or misuse. Take due care when handling and using the product.			

# Equipment Safety



Fuel burning heaters use highly flammable substances, and emit heat and fumes that can cause serious or fatal injury if not used correctly or without taking proper safety precautions.

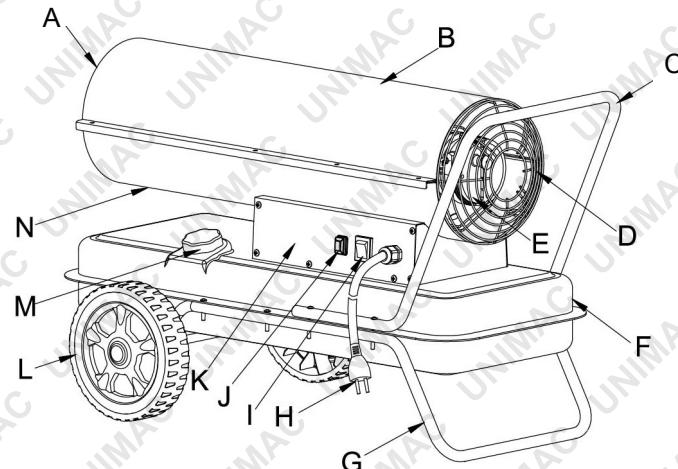
**It is extremely important that you read and fully understand the information in this section and all other safety warnings / recommendations and usage instructions before using the equipment.**

- INCORRECT USE OF THIS APPLIANCE CAN CAUSE SERIOUS OR FATAL INJURY FROM BURNS / FIRE / EXPLOSION / ELECTRICAL SHOCK / CARBON MONOXIDE POISONING.
- USE KEROSENE OR DIESEL FUEL ONLY.
- DO NOT USE NEAR FLAMMABLE SUBSTANCES OR VAPOURS.
- NEVER MOVE, HANDLE, REFUEL OR SERVICE THE APPLIANCE IF HOT, OPERATING OR CONNECTED TO THE ELECTRICAL SUPPLY.
- WHEN IN USE, MAINTAIN A MINIMUM DISTANCE TO ANY OBJECT OF: 4M (12') FROM OUTLET AND 2M (6') FROM SIDES / TOP / REAR.
- USE IN WELL-VENTILATED AREAS ONLY. PROVIDE A MINIMUM 1M<sup>2</sup> OPENING TO FRESH AIR PER 100000 BTU / HR OF RATED HEAT OUTPUT.
- DO NOT USE INSIDE A HOUSE / HOME.
- USE AND STORE ON FLAT AND LEVEL SURFACES ONLY.
- DO NOT MODIFY, ALTER OR ATTACH ANY OBJECT TO THIS APPLIANCE
- KEEP CHILDREN AND ANIMALS AWAY.
- APPLIANCE MUST BE EARTHD.
- DISCONNECT FROM THE ELECTRICAL SUPPLY WHEN NOT IN USE.
- FOLLOW ALL REGULATIONS PERTAINING TO USE OF THIS APPLIANCE.

# Table of Contents

<b>Safety</b> .....	<b>2</b>
Safety Symbols .....	4
<b>Equipment Safety</b> .....	<b>6</b>
<b>Parts Identification</b> .....	<b>8</b>
<b>Assembly</b> .....	<b>9</b>
<b>Operation</b> .....	<b>10</b>
Safety Protection.....	10
Fuel .....	10
Ignition .....	11
Shut Down.....	11
Adjusting Heat Output .....	11
<b>Maintenance and Troubleshooting</b> .....	<b>12</b>
Cleaning the Fuel Intake Tube / Filter .....	12
Cleaning the Air Filter.....	12
Draining the Fuel Tank.....	12
Troubleshooting .....	13
<b>Specifications</b> .....	<b>13</b>

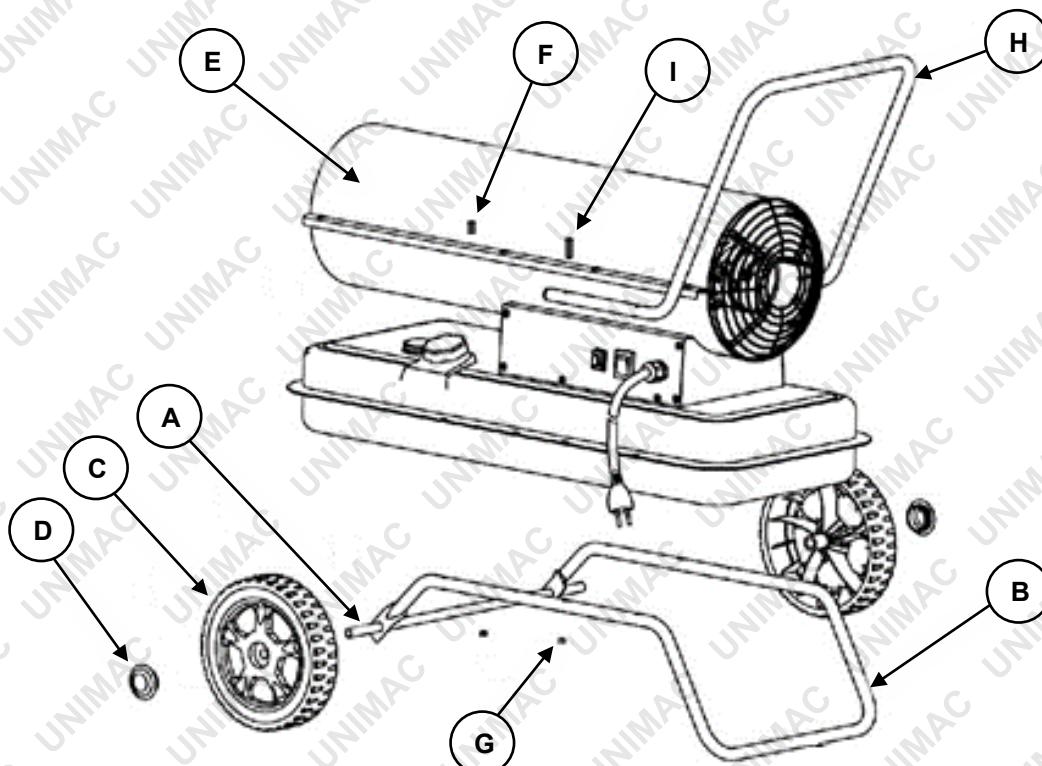
# Parts Identification



No.	Name	No.	Name
<b>A</b>	Hot Air Outlet	<b>H</b>	Electrical Supply Cable
<b>B</b>	Upper Heater Shell	<b>I</b>	ON / OFF Switch
<b>C</b>	Handle	<b>J</b>	Ignition Switch
<b>D</b>	Air Intake	<b>K</b>	Control Panel
<b>E</b>	Fan Motor	<b>L</b>	Wheel (2)
<b>F</b>	Fuel Tank	<b>M</b>	Fuel Filler Cap
<b>G</b>	Foot	<b>N</b>	Lower Heater Shell

# Assembly

1. Insert the wheel axle (A) into the holes at the ends of the lower frame (B).
2. Slide each wheel (C) onto the axle, then press a wheel retainer (D) onto the axle to secure the wheel.
3. Place the heater body (E) onto the assembled lower frame, so the 4 holes towards the front of the heater body align with the holes toward the front (where the wheels are) of the lower frame. Secure the heater body to the lower frame using 4 short screws (F) and nuts (G).
4. Position the upper frame (H) over the heater body, so the 4 holes in the upper frame are aligned with the 4 holes toward the rear of the heater body and lower frame. Secure the upper frame to the heater body and lower frame using 4 long screws (I) and nuts (G).



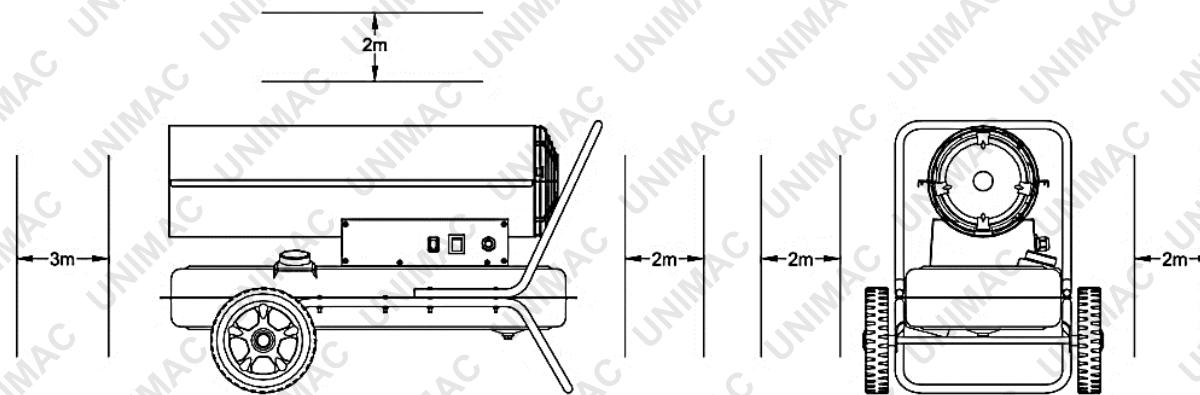
# Operation



Fuel burning heaters use highly flammable substances, and emit heat and fumes that can cause serious or fatal injury if not used correctly or without taking proper safety precautions.

**It is extremely important that you read and fully understand the information in this section and all other safety warnings / recommendations and usage instructions before using the equipment.**

As a minimum, ensure that the following clearances are applied when using the heater:



## Safety Protection

**Flame-Out** – The heater uses a photocell to monitor the flame during normal operation. If the flame is extinguished, the heater automatically shuts down.

**Power Loss** – If the electrical supply to the heater is interrupted during normal operation, the heater will stop operating, however, when power is restored, the heater will remain OFF even though the ON / OFF switch is in the ON position. To restart the heater, switch it OFF then ON again, then ignite it.

**Over-Temperature** – If the heater gets too hot (for example, if there is insufficient air coming into it, it shuts down automatically. The heater cannot be operated again until it has cooled sufficiently. Ensure that there is adequate ventilation etc to and around the heater before using it again.

## Fuel



**Use ONLY DIESEL or KEROSENE.** Do NOT use volatile fuels such as petrol. Do NOT use old or contaminated fuel. Do NOT use diesel and kerosene fuels at the same time. • Fill the fuel tank when the heater runs dry and the flame extinguishes. • Take necessary precautions when handling fuel and ensure adequate ventilation and that the heater has cooled sufficiently before bringing any fuel near it or opening the fuel filler cap. • Do NOT use the heater if any fuel leaks are present – have the unit inspected and repaired at an authorised service centre before using it again.

1. Place the ON / OFF switch in the OFF ("O") position, and disconnect the heater from the mains electrical supply.
2. Clean the fuel filler cap and surrounding area to ensure no dirt etc will enter the fuel tank when the cap is removed.
3. Move the heater to a safe location for filling – do NOT fill it where it is to be used. Ensure that the heater is level and stable when being filled.
4. Remove the fuel filler cap, then using a funnel, carefully fill the tank. Be careful not to over-fill or spill fuel. If any fuel is spilled on the heater, ensure that it is completely removed before using the heater.
5. Re-install the fuel filler cap and ensure that it is on correctly and tightly.

## Ignition



**Always maintain a safe distance from the heater when igniting it. Ensure that you or any other person is in front of the hot air outlet when the heater is ignited or is in use.** • Do NOT use the heater if the ignition system is not operating correctly – have the unit inspected and repaired at an authorised service centre before using it again.

1. Ensure there is adequate fuel in the tank.
2. Connect the heater to a mains electrical supply, then place the ON / OFF switch in the ON position ("I").
3. Press and hold the green ignition button – the fan motor starts running and the fuel ignites – the igniter stops "sparking" after 10 seconds. When the heater ignites, release the button. If heater does not ignite, switch the heater OFF then ON again, then attempt ignition again. If the heater does not ignite after three consecutive attempts, contact your dealer.



## Shut Down

When you shut down the heater, make sure the flame is fully extinguished before leaving the appliance, moving it etc.

To shut down the heater, place the ON / OFF switch in the OFF position ("O"), then disconnect it from the mains electrical supply.

## Adjusting Heat Output

The heater has an adjustment that affects heat output. This is factory set, however, from time to time or due to circumstance may require adjusting.

1. At the rear of the unit, remove the plastic cover (A) (if fitted) over the adjustment screw (B).
2. Using a flat-blade screwdriver, rotate the adjustment screw as required. Rotate right (clockwise) to increase heat output; rotate left (anti-clockwise) to reduce heat output. It is recommended to adjust the screw by a half turn each time, then test the heater output.



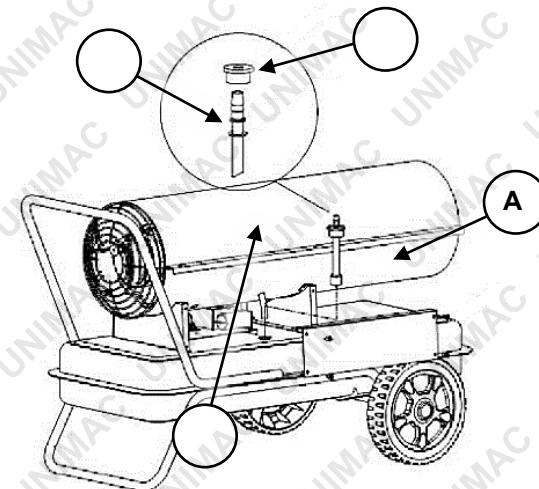
# Maintenance and Troubleshooting



Disconnect the heater from the electrical supply before performing any maintenance. • The heater should be cool enough to touch before performing maintenance activities. • Some maintenance activities described may be beyond the scope of some users. For procedures that you are not comfortable with or have the knowledge, tools or experience for, have the unit serviced by a service centre or qualified technician.

## Cleaning the Fuel Intake Tube / Filter

1. Using a Phillips head screwdriver, remove the 4 screws securing the heater side plate (A), and remove the plate.
2. Disconnect the fuel hose (B) from the fuel intake tube (C), then carefully pull the fuel intake tube and sealing plug (D) from the fuel tank.
3. Thoroughly clean the fuel intake tube and filter and sealing plug in clean solvent.
4. Re-install the fuel intake tube to the sealing plug, then insert the assembled parts into the fuel tank.
5. Reconnect the fuel hose to the fuel intake tube, then re-install the side plate.



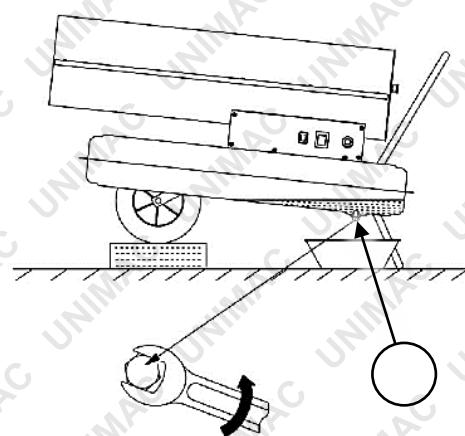
## Cleaning the Air Filter

1. Using a Phillips head screwdriver, remove the 4 screws securing the air intake grille (A) to the heater shell, then remove the grille.
2. Carefully pull the filter (B) element from the heater.
3. Thoroughly clean the filter element in warm water and mild detergent, then rinse and allow to dry.
4. Re-install the filter element and air intake grille.



## Draining the Fuel Tank

1. Clean the drain plug (A) (under the rear of the fuel tank) and surrounding area.
2. Place a suitable container for catching the drained fuel under the drain plug area.
3. Raise the rear of the heater up so the drain plug is the lowest point.
4. Remove the fuel filler cap, then use a suitable spanner to remove the drain plug and sealing washer. Allow the fuel to drain.
5. Clean the drain plug and sealing washer, then re-install them and tighten firmly using a spanner.
6. Re-install the fuel filler cap.



## Troubleshooting

The following information may assist in identifying a problem and rectifying it.



Occasionally, smoke, sparks or flames may be emitted from the heater outlet on ignition and/or warm-up. This is a temporary situation that is considered normal through small amounts of air in the fuel line or slight amounts of contaminants being burnt. • When the heater is warming or cooling, it is normal for the housing to "creak" or "click".

### **Heater will not ignite.**

Possible Fault	Action
No voltage	Ensure the machine is properly connected to the mains electrical supply and that an electrical supply is available.
Insufficient fuel	Ensure adequate fuel is available.
Contaminated fuel	<a href="#">Drain the fuel tank</a> and <a href="#">refill with fresh fuel</a> .

### **Excessive smoke, dust or flame from outlet.**

Possible Fault	Action
Low voltage or incorrect frequency	Ensure that the mains electrical supply voltage is within specifications.
Filter or fuel hose dirty	Clean the fuel filter, and air intake filter.
Contaminated fuel	<a href="#">Drain the fuel tank</a> and <a href="#">refill with fresh fuel</a> .

### **Heater stops burning.**

Possible Fault	Action
Insufficient fuel	Ensure adequate fuel is available.
Filter or fuel hose dirty	Clean the fuel filter, and air intake filter.

## Specifications

<b>Electrical Requirements</b>	240VAC / 50Hz
<b>Fuel</b>	Diesel or Kerosene
<b>Fuel Tank Capacity</b>	24l
<b>Fuel Consumption</b>	Approximately 1.85l / hour
<b>Dimensions</b>	Approximately 840 (L) x 460 (W) x 530mm (H)
<b>Weight</b>	Approximately 20kg (without fuel)



Some experts believe the incorrect or prolonged use of almost any product could cause serious injury or death. For information that may reduce your risk of serious injury or death, consult the points below and additionally, the information available at [www.datastreamserver.com/safety](http://www.datastreamserver.com/safety)

- Consult all documentation, packaging and product labelling before use. Note that some products feature online documentation which should be printed and kept with the product.
- Check product for loose / broken / damaged / missing parts, wear or leaks (if applicable) before each use. Never use a product with loose / broken / damaged / missing parts, wear or leaks (if applicable).
- Products must be inspected and serviced (if applicable) by a qualified specialist every 6 months assuming average residential use by a person of average weight and strength, above average technical aptitude, on a property matching average metropolitan specification. Intended use outside these guidelines could indicate the product is not suitable for intended use or may require more regular inspection or servicing.
- Ensure all possible users of the product have completed an industry recognized training course before being given access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or your description of the application. Be sure to attain third-party approval for your application from a qualified specialist before use regardless of prior assurances by the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (take an automobile, aircraft, computer or ball point pen for example), there is always a small chance of technical issues that needs to be repaired or may require replacement of the product or a part. If the possibility of such failure and the associated time it takes to rectify could in any situation inconvenience the user, business or employee then the product is not suitable for your requirements. This product is not for use where incorrect operation or a failure of any kind, including but not limited to a condition requiring product return, replacement, service by a technician or replacement of parts could cause a financial loss, loss of employee time or an inconvenience requiring compensation.
- If this item has been purchased in error after considering the points above, simply contact the retailer directly for details of their returns policy, if required.

 **edisons**<sup>®</sup>  
.com.au

©2018 Unimac. All rights reserved. No part of this document, including descriptive content, concepts, ideas, diagrams or images may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, scanning or recording, or any information storage and retrieval system, without express permission or consent from the publisher.