

Clarke<sup>TM</sup>

*POWER*



## Generator Set

CP Range

Operating & Maintenance  
Instructions



© 0702

**Read these safety instructions before using the equipment.**

## Introduction

Thank you for purchasing this Clarke portable Generator set. The set is powered by a Honda engine, a manual for which, is provided separately. Please refer to that manual for all matters relating to the engine, ...starting and stopping procedures, maintenance etc.

## Guarantee

This product is guaranteed against faults in manufacture for 12 months from purchase date. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product has been abused or tampered with in any way, or not used for the purpose for which it is intended.

The reason for return must be clearly stated.

This guarantee does not affect your statutory rights.

## Contents

Page

|                                   |    |
|-----------------------------------|----|
| Guarantee .....                   | 2  |
| Important General Notes .....     | 3  |
| For your Own Safety .....         | 3  |
| Preparation for Use .....         | 6  |
| Electric Start Models .....       | 6  |
| Fuelling .....                    | 6  |
| Using Extension Cables .....      | 7  |
| Before Use .....                  | 7  |
| Using your Generator .....        | 8  |
| Shutting Down the Generator ..... | 9  |
| Maintenance .....                 | 9  |
| Troubleshooting .....             | 9  |
| Schematic Wiring Diagram .....    | 11 |
| Parts and Service Contacts .....  | 11 |

**POWER**

- 2 -

**Clarke**

## IMPORTANT General Notes

- **NEVER** allow anyone, not fully familiar with generator sets, to use this equipment.
- This generator set is not suitable for use with electronic equipment such as Televisions, hi-fi's or computers etc.
- **IMPORTANT!** This generator does NOT require to be earthed.
- Connect **ONLY** those appliances that are in good working order.

*Note: Most portable electric tools are Class II (double insulated) appliances. Always check before connecting. Equipment that does not meet this standard (generally tools with metallic casing) require a three conductor cable (with an earth conductor).*

- **DO NOT** alter the engine settings...the voltage and frequency of the generator output is directly linked to the engine speed. These settings are set at the factory. Should they need recalibration - consult your Clarke dealer
- Connect **ONLY** those appliances whose voltage, according to its data plate, corresponds to that produced by the generator set.

## For Your Own Safety

### General Safety Precautions

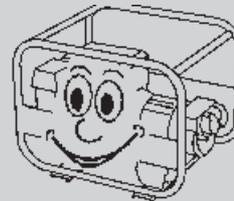
**Always** use in a well ventilated area.

**Always** ensure the applied load does not exceed the generator rating. Overloading the generator is dangerous and could cause serious damage.

**Always** disconnect the generator when carrying out any maintenance.

**Always** ensure the generator reaches operating speed before connecting a load.

**Always** start the engine BEFORE connecting appliances to the output receptacles.

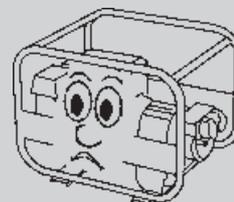


**Never** allow children near the generator

**Never** connect to a commercial or mains power supply, or any other electrical source.

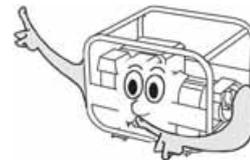
**Never** allow the generator to run out of fuel when a load is connected.

**Never** alter or tamper with the internal wiring of the generator



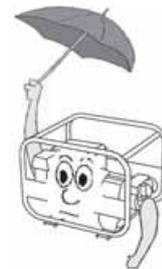
### Fire Prevention

- Always** switch the engine OFF when refuelling.
- Always** refuel away from any source of heat.
- Always** refuel in a well ventilated area.
- Never** overfill the tank, fill to the level specified.
- Never** smoke whilst refuelling and avoid smoking or using a naked flame near the generator.
- Never** start the engine if there is spilled fuel. Any spillage must be wiped clean and the generator allowed to dry before attempting to start the engine.



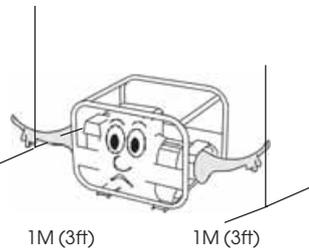
### Prevention of Electric Shock

- Always** store the generator undercover when not in use away from damp or wet conditions.
- Never** use the generator when it is raining or snowing or in wet or damp conditions.
- Never** operate the generator with wet hands.
- Never** use water or any other liquids to clean the unit



### Positioning the Generator for use

- Always** leave a least a 1M gap between the generator and any surrounding building or structures.
- Always** ensure the generator is on a solid, flat surface.
- Always** ensure the surrounding area is free from any material that could burn or be damaged by heat.
- Never** move or tilt generator whilst it is switched on.
- Never** cover the generator or enclose it whilst in use.



### Exhaust Gas Precautions

**WARNING:**  
Exhaust fumes can be fatal

- Always** ensure there is adequate ventilation when using the generator.
- Always** position the generator so that the exhaust is pointed away from people or animals .
- Never** use the generator indoors or in an enclosed area. (i.e. in a warehouse, tunnel, well, hold.)



## Preparation for Use

### a. Electric Start Models

Electric start models are supplied with a 24AH dry charged battery, and a battery acid pack. The battery must be prepared as follows:

Check to ensure the battery is in good condition, with no damage caused during transit. Should there be any apparent damage, please contact your Clarke dealer immediately.

- 1 Disconnect the leads and remove the battery from the frame.
- 2 Remove the vent plugs and fill to 12mm (1/2" above the top of the separators).
- 3 Allow the battery to 'soak' for 30 minutes or so, then check the levels and top up if necessary.
- 4 Replace the vent plugs.

Your battery is now ready for use, however, we recommend that you put it on charge, at a rate of 2.5Amps ONLY, for a period of 4 hours. Should you do this, remember to recheck the battery levels when completed, and top up if necessary with distilled water (to BS4974).

*Note: You may charge at a lower rate than that specified, but a longer charge time will be necessary to achieve the same ampere hour input.*

Before connecting to the generator, ensure the outside of the battery is completely dry

### Connect the battery as follows:

- 1 Ensure the battery is firmly secured in its compartment within the frame
- 2 Connect the battery terminals to the battery posts, ensuring you connect the **POSITIVE** connection **FIRST**. (When disconnecting, always disconnect the positive terminal last).

*NOTE: Smear the connections and the terminals with petroleum jelly.*

### b. Fuelling

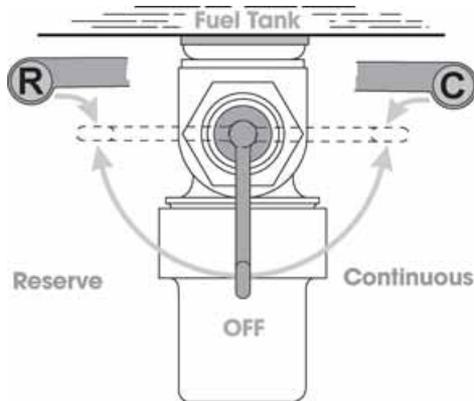
Fill with unleaded petrol, according to the instructions within the engine manual.

Note that the 'LR' (Long Run) models are fitted with a three position fuel tap as illustrated in Fig 1. These positions are ON - OFF - RESERVE.

- Ensure the tap is set to the required position.
- The fuel hose and connectors are intact and there is no leakage.

*Note : Always use a funnel to fill the fuel tank so as to avoid accidental spillage of fuel. If fuel is spilled it must be removed from the unit and surrounding area, before attempting to start the engine.*

**Fig.1**



**WARNING !**

- Observe all safety precautions when handling fuel. Always refuel in a well ventilated area away from any heat sources.
- Ensure there is adequate fuel in the tank when using the generator. Running out of fuel or stopping the engine suddenly with a load connected could cause serious damage.
- Allow the unit to cool down before refuelling.

**Extension Cables**

All extension cables, from generator set to the appliance, must be carefully selected, fitted and maintained. Cables in accordance with IEC 245-4 should be used.

Cables should be inspected regularly, and should be replaced, not repaired in the event of a defect.

The length and cross section of conductors should be selected according to the job to be done. The table below is an indication of sizes which should be used.

| Conductor (mm <sup>2</sup> ) | Max Length (M) | Current (Amps) | Single Phase (kW) |
|------------------------------|----------------|----------------|-------------------|
| 1.5                          | 25             | 10             | 2.3               |
| 2.5                          | 40             | 16             | 3.7               |
| 4                            | 60             | 28             | 6.5               |

**IMPORTANT !** Ensure the Cable is fully unwound when in use to avoid overheating, and the placing of extra load on the generator.

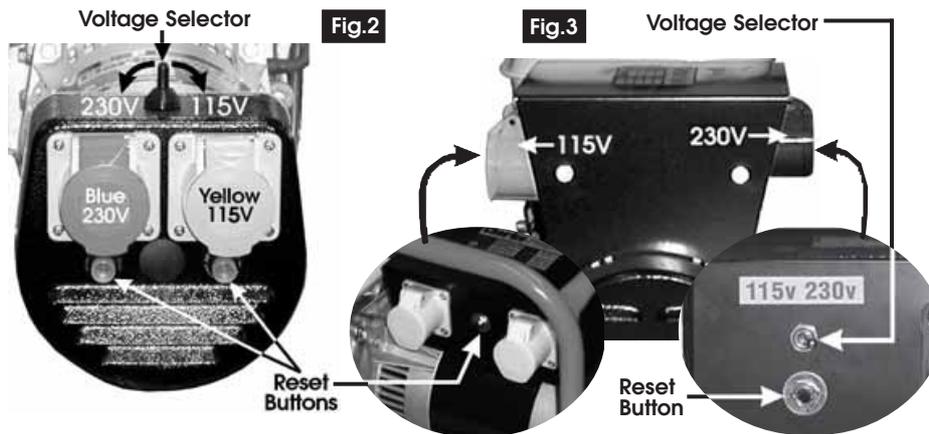
## Using your Generator Set

**IMPORTANT!** Ensure all precautions are taken, referring to this and the Honda engine manual, before proceeding.

- 1 Start the Engine** - (Refer to the Honda engine manual) and allow to run for a few minutes at full speed in order for it to warm up.

**IMPORTANT!** Ensure that no appliances are connected to the generator when starting the engine.

- 2** Check the condition of the appliance, including the supply cable and the extension cable if used, and ensure it is switched OFF. Ensure also that the operating voltage is the same as the output from the generator.
- 3** For those generators with dual output, ensure the voltage selector switch, is set to deliver the appropriate output - 115 or 230V, see Figs 2 and 3.  
Depending upon the model, the switch is mounted as shown, or similar, to that in Figs 2 and 3.



- 4** With the engine running smoothly, connect the appliance to the appropriate receptacle..... BLUE - 230V YELLOW - 115V

**Note :** If the AC circuit is overloaded the circuit protection switch will trip. To reset the circuit, first disconnect the appliance, and rectify the cause of the overload. Wait a short period then press the appropriate reset button shown in Figs 2 & 3.

### BE AWARE

Some appliances draw more current on startup than their nominal running current ....electric motors and compressors are examples. If in doubt as to whether an appliance is compatible or not, please contact your nearest Clarke dealer.

Additionally, please refer to the 'Specifications' sheet attached, to ensure the machine is used under the correct operating conditions.

## Shutting Down the Generator

**IMPORTANT ! Never switch off the engine whilst an electrical appliance is connected.**

- 1** Switch off the electrical appliance.
- 2** Unplug the appliance from the generator.
- 3** Switch the Engine OFF (see engine manual).
- 4** Turn the Fuel OFF (see engine manual - for Long Run models...see page 7).

## Maintenance

Always ensure the generator air vents are completely clear. Brush away any dust that may have accumulated.

The engine requires periodic servicing. Please refer to the engine manual for details.

If the generator is not going to be used for some time, the engine must be adequately prepared. Please refer to the engine manual for details:

## Troubleshooting : Electrical Fault finding

| Problem        | Possible Cause  | Remedy   |
|----------------|---|--|
| No AC Output   | Selector switch in wrong position<br>Tripped Circuit Breaker<br>Poor connection or faulty lead<br>Broken AC connector<br>Faulty Circuit Breaker | 1. Set selector switch<br>2. Reset AC safety trip<br>3. Check connection and (or) replace lead<br>4. Contact Clarke Servicing<br>5. Contact Clarke Servicing |
| Erratic Supply | Incorrect engine RPM<br>Internal Alternator problem   | 1. Set Engine RPM - Consult your Clarke dealer<br>2. Contact Clarke Servicing  |

**Troubleshooting : Engine....consult the engine manual**