

shock

hazard

#### INSTRUCTIONS FOR

## INVERTER GENERATOR 2000W 230V 4-STROKE ENGINE MODEL NO: G2000I.V2

# Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.









Do not use in

non ventilated

area





Switch off the engine Before refuelling

# instructions 1. SAFETY

- WARNING! Ensure any Health & Safety, Government, or local authority regulations are adhered to when using this equipment.
   Familiarise yourself with the application and limitations, as well as the potential hazards, of the generator.
- Maintain the generator in good condition (use an authorised service agent). Replace or repair damaged parts. Use genuine parts only. Unauthorised parts may be dangerous and will invalidate the warranty.
- This generator is designed and manufactured for specific applications. DO NOT attempt to modify the unit or use it for any application for which it is not designed. If you have any questions regarding the application of the unit please contact your local Sealey stockist.
- □ WARNING! DO NOT exceed the Wattage/Amperage capacity of the generator. Add rated wattage of all devices intended for connection at any one time, the total must not exceed rated wattage of generator (see specifications).
- WARNING! Generator exhaust gases contain deadly carbon monoxide which must not be inhaled. Always allow sufficient ventilation.
   WARNING! If you decide to use an Earth Leakage Circuit Breaker (also referred to as an RCD or Ground Fault Circuit Interrupter), it is imperative that the neutral end of the power winding is connected to the frame of the generator set and that the earth lug on the frame is connected with a low impedance connector to the local earth via an earth spike or local protective earth conductor. This connection should only be attempted by a qualified electrician, after first having consulted your local dealer.
- ▲ **DANGER!** This generator is designed for outdoor use only. To use the generator inside any building or enclosure, including the generator compartment of a caravan, may result in fire or an explosion. No user performed modifications, including venting of the exhaust and/or cooling ventilation, will eliminate the danger.
- ▲ DANGER! If this unit is used for back-up power in the event of a commercial power failure, the following steps must be taken. Before connecting the generator to the electrical system, open the main circuit breaker to isolate the generator and system from the commercial electric supply. Failure to do this may result in damage to the generator and may result in serious injury or fatality, due to a back-feed of electrical energy.
- ▲ **DANGER!** The generator produces a very powerful voltage that can cause a severe electrical shock. Avoid contact with bare wires, terminals etc. Never allow any unqualified person to operate or service the generator.
- WARNING! Petrol is highly flammable and petrol vapour is explosive. Do not permit smoking, naked flames, sparks or heat in the vicinity while handling petrol. Avoid spilling petrol onto a hot engine. Comply with all laws regulating storage and handling of fuels.
- □ WARNING! Risk of burns. DO NOT touch the exhaust system or the drive unit.
- **WARNING! NEVER** refuel when the engine is running or when the engine is hot. Allow cool down time.
- Operate the generator only on level surfaces (maximum allowable tilt is 10°) and where it will not be exposed to excessive moisture, dirt or corrosive vapours or be in the proximity of combustible material (flammable liquids, solids or gases).
- **× DO NOT** tip or change the generator's position whilst it is operating.
- Remove ill fitting clothing, ties, watches, rings and other loose jewellery and contain long hair. Wear appropriate protective clothing.
- $\checkmark$  Keep non-essential persons and children away from the working area.
- □ WARNING! Never start or stop the generator while electrical loads are connected. Start the engine, let it stabilise, then connect the electrical load. To stop engine, disconnect the electrical load and let engine stabilise before switching off.
- WARNING! DO NOT use worn, bare, frayed or otherwise damaged electrical cables with the generator. To do so may result in electric shock.
- **x DO NOT** use the generator for any purpose other than that for which it is designed.
- **DO NOT** operate the generator if any parts are missing or damaged, as this may cause failure and/or personal injury.
- **DO NOT** over-fill fuel tank. Always leave room for fuel to expand.
- DO NOT operate in the rain.
- DANGER! DO NOT tamper with the engine governed speed setting. Higher operating speeds are dangerous and increase the risk of personal injury and/or equipment damage. The generator supplies the correct rated frequencies and voltage only when running at the correct governed speed. Incorrect frequency and/or voltage can damage some connected electrical loads. Operating at excessively low speeds may result in shortened engine life. Over-speeding will invalidate the warranty.
- Operating at excessively low speeds may result in shortened engine life. Over-speeding will invalidate the warranty.
   **DO NOT** operate the generator when you are tired, or under the influence of alcohol, drugs or intoxicating medication.
- DO NOT operate the generator when you are thed, or under the initial control, drugs or intoxical
   DO NOT store generator with fuel in tank where petrol vapours might reach an open flame or spark.
- ✓ The generator must be grounded with a good guality insulated conductor.
- ✓ Keep vents free from dirt etc.
- If supplying electronic equipment, or in an area where electronic equipment is being used, keep the generator a sufficient distance away to prevent electrical noise from the engine.

#### 2. INTRODUCTION

Digital inverter technology provides pure sine wave electric power suitable for use with sensitive electrical equipment. Lightweight, easily lifted and fully portable. Eco mode set up allowing the generator to run quieter(60dB@7mtr.), increase fuel efficiency (4ltr. fuel tank will last 6hrs.) and reduce emissions. Features light recoil start, fuel gauge, auto voltage adjuster, low oil alarm and electric circuit protector. Fitted with two 230 V AC sockets and 12V DC 8.3A port.

#### 3. SPECIFICATION

Model No	
Motor Power	3hp
Motor Type	4_Stroke Petrol
Fuel	Unleaded 95 RON
Output	230V-50Hz/12V DC
Current Rating	8.3A
Continuous Power Rating	1600W
Maximum Power Rating	2000W
Fuel Tank Capacity	4ltr
Maximum Running Time	6hr
Noise Rating	95dB
Dry Weight	21.5kg
Dimensions (WxDxH)	480x285x390mm

#### 4. CONTROL PANEL

- 1. Oil Warning Light
- 2. AC Pilot light
- 3. Overload Indicator Light
- 4. Economy Control Switch
- 5. Engine Switch
- 6. Fuel Switch
- 7. Ground Earth Terminal
- 8. Choke
- 9. AC Socket
- 10. DC Socket
- 11. DC Protector



#### 5. CONTROLS

#### 5.1. Engine Switch

"STOP" Ignition circuit is switched off. The engine will not run. "ON" Ignition circuit is switched on. The engine can run.

#### 5.2. Oil Warning Light (Yellow)

If the oil level falls below the lower level, the oil warning light will come on and the engine will stop automatically. The engine will not start again until the oil is filled up.

If the engine stalls or does not start, press the engine switch to "ON" and then pull the recoil starter, it the oil warning light flickers for a few seconds, there is insufficient oil, add oil to restart.

#### 5.3. Overload Indicator Light (Red)

The overload indicator light comes on when an overload of a connected electrical device is detected, the inverter control unit overheats, or the AC output voltage rises. Then, the AC protector will trip, stopping power generation in order to protect the generator and any connected electrical devices. The AC pilot light (Green) will go off and the overload indicator light (Red) will stay on, the engine will continue to run. If the overload indicator light comes on and power generation stops, proceed as follows:

#### 5.3.1. Turn off any connected electrical devices and stop the engine.

- 5.3.2. Reduce the total wattage of connected appliances to the rated output.
- 5.3.3. Check for blockages in the cooling air inlets and around the control unit and remove.

5.3.4. Restart the engine Note:- The overload indicator light may come on for a few seconds at first when using electrical devices that require a large starting current, such as a compressor or a submersible pump. This is not a malfunction.

#### 5.4. AC Pilot Light (Green)

The AC Pilot light comes on when the engine starts and power is produced.

#### 5.5. DC Protector

The DC protector turns to "OFF" automatically when an electrical device connected to the generator is operating above the rated

capacity. To switch the generator back on , press the DC protector button to "ON", Direct current will resume. Reduce the load of the connected device below the specified rating output of the generator if the DC protector turns off again, Stop using the device and contact authorized stockist.

5.6. Economy Control Switch (ECS)

When the ECS switch is "ON" the economy control unit controls the engine speed according to the connected load. The results are better fuel consumption and less noise.

When the ECS switch is "OFF" the engine runs at the rated speed (4500rev/min) regardless of whether a load is connected or not. **Note:**- The ECS must be "OFF" when using electrical devices that require a large starting current, such as a compressor or submersible pump.

#### 5.7. Fuel Tank Cap

Turn the fuel tank cap counter clockwise to remove

The fuel tank cap is provided with an air vent knob to allow fuel flow. The air vent knob must be turned to "ON" This will allow fuel to flow to the carburettor and the engine to run. When the engine is not in use turn the air vent knob to "OFF" to stop fuel flow.

#### 5.8. Ground (Earth) terminal

When the electrical device is earthed, the generator must always be earthed.

### 6. OPERATION

#### 6.1. Engine Oil

WARNING! The generator has been shipped without engine oil. DO NOT start the engine until it has been filled with sufficient engine oil.

Recommended engine oil	SAE SJ 15W-40
÷	grade API Service SE type or higher
Quantity	0.35ltr
-	

- 6.1.1. Place the generator on a level surface.
- 6.1.2. Remove the screws fig.2.1and then remove cover fig.2.2.
- 6.1.3. Remove oil filler cap.
- 6.1.4. Fill with the specified amount of the recommended engine oil replace and tighten the oil filler cap.
- 6.1.5. Replace the cover and tighten the screws.



#### 6.2. Fuel

- **Danger:** The Fuel is highly flammable.
- **× DO NOT** overfill the fuel tank, as it might overflow
- when the fuel warms up and expands.
   Use only unleaded petrol. The use of leaded petrol will cause severe damage to internal engine parts.
- WARNING! The generator should be kept in an upright position when fuel is in the tank.

Recommended Fuel.....Unleaded Petrol Fuel Tank Capacity.....4.0ltr.

6.2.1. To fill tank remove fuel tank cap and pour fuel into the tank up to the red line inside the filler tube fig.3. Maximum fuel level is shown in fig.4.

#### 6.3. Starting the Engine

- 6.3.1. Turn the ECS switch (Bkack) to "OFF" fig.5.
- 6.3.2. Turn the air vent knob to "ON" fig.6.







fig.5

Original Language Version

- 6.3.3. Turn the fuel Knob to "ON" fig.7.
- 6.3.4. Turn the engine switch (Red) to "ON" fig.8.
- 6.3.5. Turn the choke knob fully out fig.9.
   Note:- The choke is not required to start a warm engine. Push the choke knob in to the original position.
- 6.3.6. Grasp the carrying handle firmly to prevent the generator from falling over. Pull slowly on the recoil starter until it is engaged, then pull it briskly fig.10.
- 6.3.7. After the engine starts, let the engine warm up until the engine does not stop when the choke knob is retuned to the original position.

Note:- When starting the engine , with the ECS "ON" and there is no load on the generator: In ambient temperature below 0°C the engine will run at 4500rev/min. for 5 min. to warm up the engine. In ambient temperature below 5°C the engine will run at 4500rev/min. for 3 min. to warm up the engine. The ECS unit operates normally after the above time period, while the ECS is "ON".

#### 6.4. Stopping The Engine

- 6.4.1. Turn off any electric devices.
- 6.4.2. Turn the ECS to "OFF" fig.11.
- 6.4.3. Disconnect any electrical devices fig.12.
- 6.4.4. Turn the engine switch (Red) to "Stop".
- 6.4.5. Turn the fuel knob to "OFF"fig.13.
- 6.4.6. Turn the fuel tank cap air vent knob to "OFF" fig.14 after the engine has completely cooled down.

#### 6.5. Alternating Current (AC) connection

- □ WARNING! Be sure any electric devices are turned off before plugging them in.
- Ensure all electrical devices including the cables and plug connections are in good condition before connecting to the generator.
- Ensure the total load is within the generator rated output.
- Ensure the receptacle load current is within receptacle rated current.
   Ensure the generator is earthed, if the electrical device is earthed.
- 6.5.1. Start the engine.
- 6.5.2. Turn the ECS to "ON".
- 6.5.3. Plug electrical device into the AC connection socket.
- 6.5.4. Make sure the AC pilot light is on.
- 6.5.5. Turn on the electrical device.
- 6.5.6. If the generator is to be used to supply medical equipment, obtain advice from manufacture / medical professional.
- 6.5.7. Some electrical appliances have high starting currents and therefore can not be used, even if they lie within the supply ranges of the generator.

#### 6.6. Battery Charging





Wear eye

protection

Wear protective

gloves



Warning corrosive substance

Warning: explosive material



**9 0** <u>-</u> + Use in well Keep in dry area privated areas protect from rain

Keep away Use in well Keep in dry area from sources of ventilated areas protect from rain ignition

The generator DC rated voltage is 12V.

Before starting to charge the battery, make sure that the DC protector is turned on.

- 6.6.2. Start the engine.
- 6.6.3. Connect the red battery charger lead to the positive (+) battery terminal.
- 6.6.4. Connect the black battery charger lead to the negative (-) battery terminal.
- 6.6.5. Turn the ECS to "OFF" to start battery charging.
- 6.6.6. Charge the battery using the correct procedure laid down by the battery manufacturer's instructions. Follow the instructions to determine the end of battery charging, this may include measurements of specific gravity at regular intervals. **DO NOT** over charge battery.
- WARNING! "Modern vehicles contain extensive electronic systems. You are required to check with the vehicle Manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle. No liability will be accepted for damage / injury, where this product is not used in accordance with all instructions."
- 6.6.7. The DC protector turns off automatically if current is above the generator rating. To restart charging the battery, turn the DC protector on. If the protector turns off again, stop charging the battery immediately.



#### 7. MAINTENANCE

□ WARNING! Stop the engine before servicing. Put the engine on a level surface and remove spark plug cap. In order to keep the engine in good working condition, it must be serviced.

Items	Frequency	Each Time	First month or first 20hrs of operation	Every 3 months or every 50hrs of operation	Every Year or every 100hrs of operation	
Engine Oil	Check-Refill	✓				
	Replace		✓	✓		
Reduction gear Oil (if equipped)	Oil Level Check	✓				
	Replace		✓	$\checkmark$		
Air Filter Element	Check	✓				
	Clean		✓			
	Replace			✓		
Deposit Cup (if equipped)	Clean				~	
Spark Plug	Check-Adjust				√*	
Spark Arrester	Clean			✓		
Idling (if equipped) **	Check-Adjust				✓	
Valve Clearance **	Check-Adjust				✓	
Fuel tank/filter	Clean				✓	
Fuel Line	Check	Every 2 Years (change if necessary)				
Cylinder head piston	Clean Carbon **	< 225cc Every 125hrs, ≥225cc Every 250hrs.				
* These items should	be replaced if required	~				

\* These items should be replaced if required.

\*\*The repair work should be carried out by authorized stockists.

If the engine frequently works under high temperature or heavy load, change the oil every 25hrs.

If the engine works in a dusty atmosphere clean the air filter element every 10hrs. If necessary change the air filter element every 25hrs.

#### 7.1. Spark Plug Inspection

7.1.1. Remove cap in outer case and the spark plug cap. Insert spark plug socket through external case turn counter clockwise to remove spark plug.

- 7.1.2. Check for discolouration and remove the carbon. The porcelain insulator around the centre electrode of the spark plug should be a medium to light tan colour.
- 7.1.3. Check the spark plug gap fig.15. this should be measured with a thickness gauge.

7.1.4. Install the spark plug.

- 7.1.5. Install the spark plug cap and the spark plug cover.
  - Standard Spark Plug..... E6TC/E6RTC

Spark Plug Gap.....0.6-0.7mm.

Spark Plug Torque......20.0 Nm

#### 7.2. Carburettor Adjustment

Adjusting the carburettor should be left to an authorised stockist with the professional knowledge, specialised data and equipment to adjust to the correct settings.

#### 7.3. Engine Oil Replacement

- 7.3.1. Place the generator on a level surface and warm up the engine for several minutes.
- 7.3.2. Switch off engine, switch fuel knob to "OFF" and switch fuel tank cap air vent to "OFF". Remove spark plug cap.
- 7.3.3. Remove the two screws fig.16.1 in the side panel and remove panel fig.16.2.
- 7.3.4. Remove the oil filler cap.
- 7.3.5. Place an oil pan under the engine. Tilt the generator to drain the oil completely.
- 7.3.6. Place the generator back on a level surface. **DO NOT** tilt the generator when adding engine oil. This could result in over filling and damage to the engine.
- 7.3.7. Add engine oil to the upper level. (see section 6.1)
- 7.3.8. Wipe the cover clean and ensure no foreign material enters the crankcase.
- 7.3.9. Install the cover and tighten the screws.

#### 7.4. Air Filter

- 7.4.1. Remove the two screws fig.16.1 and then remove the cover fig.16.2.
- 7.4.2. Remove the screw fig.16.3 and then remove the air filter case cover fig.16.4.
- 7.4.3. Remove the foam element fig.17.5
- 7.4.4. Wash the foam element in detergent and dry it.
- 7.4.5. Oil the foam element and squeeze out the excess oil. The foam element should be wet but not dripping.
   **DO NOT** wring out the foam element when squeezing it, as this could cause it to tear.
- 7.4.6. Insert the foam element into the air filter case. Install the air filter case cover in its original position and tighten the screw. Install the side cover and tighten the screws.





fig.16

fig.17



#### 7.5. **Muffler Screen and Spark Arrester**

- WARNING! The engine and muffler will be very hot after the engine has been running.
- 7.5.1. Remove the screws fig.18.1, then pull off cover fig.18.2.
- 7.5.2. Loosen the bolt fig.19.3 and then remove the muffler cap fig.19.4, the muffler screen fig.19.5, and spark arrester fig.20.6.





fig.18

fig.20

fig.19

- 7.5.3. Clean the carbon deposits on the muffler screen and spark arrester using a wire brush fig.21. When cleaning use the wire brush gently to avoid damaging or scratching of the muffler screen and spark arrester.
- 7.5.4. Check the muffler screen and spark arrester. Replace them if damaged.
- 7.5.5. Install the spark arrester. Align the spark arrester projection fig.22.7 with the hole fig.22.8 in the muffler pipe.
- 7.5.6. Install the muffler screen and the muffler cap.
- 7.5.7. Install the cover and tighten the screws.







#### 7.6.

- WARNING! Never use petrol while smoking or in the vicinity of an open flame. 7.6.1. Remove the fuel tank cap and filter. fig.23
- 7.6.2. Clean the filter with petrol in a wash tank.
- 7.6.3. Wipe the filter and install it.

**Fuel Tank Filter** 

7.6.4. Install the fuel tank cap. Be sure the fuel tank cap is tightened securely.



- 7.7.1. Remove the screws fig.24.1 and then remove cover fig.24.2 and drain the fuel fig.25.3.
- 7.7.2. Hold and move up the clamp fig.25.4 and the take off the hose fig.25.5 from the tank
- 7.7.3. Take out the fuel filter fig.26.6.
- 7.7.4. Clean the filter with petrol.
- Dry the filter and put it back into tank. 7.7.5.
- 7.7.6. Install the hose and clamp, then open the fuel valve to check if it is leaking.
- 7.7.7. Install the cover and tighten the screws.





fig.25

fig.23



#### 8. STORAGE

#### 8.1. Drain the Fuel

- 8.1.1. Turn the engine switch to "STOP"
- 8.1.2. Remove the fuel tank cap and filter. Extract the fuel from the fuel tank into an approved fuel container. Replace fuel tank cap.
- 8.1.3. Start the engine and leave it to run out of fuel. Approx 20min.
- 8.1.4. Remove the screws and cover fig.24.
- 8.1.5. Drain the fuel from the carburettor by loosening the drain screw on the carburettor float chamber.

- 8.1.6. Turn the engine switch to "STOP"
- 8.1.7. Tighten the drain screw.
- 8.1.8. Install the cover and tighten the screws.
- 8.1.9. Turn the fuel tank cap air vent knob to "OFF" after the engine has completely cooled down.
- 8.2. Engine

Perform the following steps to protect the cylinder, piston ring, etc. from corrosion.

- 8.2.1. Remove the spark plug and pour about one table spoon of clean engine oil into the spark plug hole and replace spark plug. Pull start cord to turn over the engine several times to coat the cylinder walls with oil.
- 8.2.2. Pull the recoil starter until you feel compression. Then stop pulling (this stops the cylinder and valves from rusting.
- 8.2.3. Clean exterior of the generator. Store the generator in a dry, well ventilated place , with a cover paced over it.

#### 9. TROUBLESHOOTING

#### 9.1. Engine will not Start

- 9.1.1. No fuel supplied to combustion chamber. No fuel in tank.....Supply fuel. Fuel in tank......Turn fuel air vent and fuel knob to "ON". Clogged fuel filter.....Clean fuel filter. Clogged carburettor.....Clean Carburettor.
  9.1.2. Engine oil system insufficient. Oil level is low......Add engine oil.
  9.1.3. Electrical Systems Poor spark. Spark plug dirty or wet......Remove spark plug and clean/dry Faulty Ignition system......Consult authorised stockist.
- 9.1.4. Generator will not produce power Press the DC protector to "ON" The AC pilot light (Green) goes off......Stop the engine and restart.

Parts support is available for this product. To obtain a parts listing and/or diagram, please log on to www.sealey.co.uk, email sales@sealey.co.uk or telephone 01284 757500.



#### **Environmental Protection**

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain off any fluids (if applicable) into approved containers and dispose of the product and the fluids according to local regulations.



#### WEEE Regulations

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

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**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. **IMPORTANT:** No liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

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Original Language Version

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