

# **CROMTECH OUTBACK™**

## **OWNER'S MANUAL**

### **2.4kVA Portable Petrol Inverter Generator**



Thank you for purchasing your Cromtech Outback™ 2.4kVA portable petrol inverter generator.

This manual provides understanding of the operation and maintenance of this generator. Please read this manual carefully before operating machine.

For any questions regarding operation or maintenance, please consult your local service agent.

### IMPORTANT ICONS

Important information is distinguished by the notifications below. The Safety Alarm Symbol (⚠) alerts you to potential hazards. Please obey all safety information in the symbol to avoid any possible injury or even death.

**⚠ WARNING:** - The WARNING text indicates a hazardous situation, which will lead to severe injury or death if not avoided.

**⚠ NOTICE:** The 'NOTICE' text indicates special precautions to avoid damage to this machine or other property.

**⚠ NOTE:** The 'NOTE' text provides important information to simplify operation.

**⚠ WARNING: PLEASE READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THE GENERATOR.**

**⚠ NOTE: The manufacturer of this generator continually seeks advancements in product design and quality. Therefore, there may be minor discrepancies in actual machine and the printed manual.**

**⚠ NOTE: There may be changes in generator for different countries according to laws and regulations.**

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## **WARRANTY**

CROMTECH™ and CROMTECH OUTBACK™ are a registered trademark of Crommelins Machinery. Crommelins Machinery warrants their goods against defects in materials and workmanship under normal use and service.

The Crommelins Machinery warranty does not cover fair wear commensurate with the age of the product, any damage caused by accident, abuse, misuse, neglect or failure to observe proper operating instructions or proper machinery maintenance as described in the instruction manual.

It is the owner's responsibility to regularly maintain a product in accordance with the owner's manual and only use the equipment for its designed purpose.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## **CONSUMER ADVICE**

Any claim under these warranties must be made in the warranty period from the date of purchase of the product.

There are over 185 national authorised service/repair agents available, visit [www.crommelins.com.au](http://www.crommelins.com.au) for their details and locations.

To make a claim under the warranty, you must return the product (with proof of purchase) to the closest warranty agent or to the place of purchase.

Where a failure does not amount to a major failure, Crommelins Machinery is entitled to choose between providing you with a repair, replacement or refund. To obtain compensation, you would need to provide documentary evidence of the loss or damage suffered, and documentary evidence that such loss or damage was a reasonably foreseeable consequence of a failure by Crommelins Machinery to comply with a consumer guarantee under the Australian Consumer Law.

Crommelins Operations Pty Ltd trading as Crommelins Australia and Crommelins Machinery

### **CROMMELINS MACHINERY:**

Ph: (08) 9350 5588 Fax: (08) 9451 6381

[email@crommelins.com.au](mailto:email@crommelins.com.au)

[www.crommelins.com.au](http://www.crommelins.com.au)

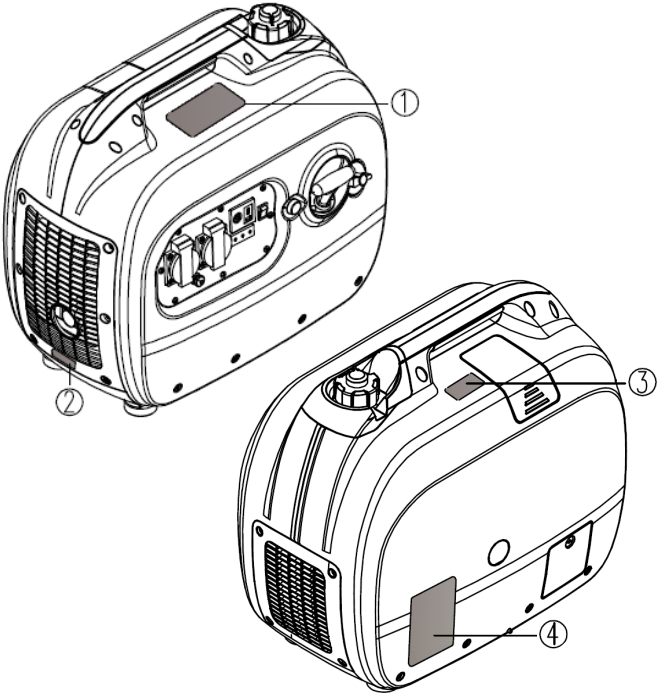
PO Box 352, BENTLEY WA 6982

ABN 11 008 889 656

# LOCATION OF IMPORTANT LABELS

**! NOTE: Maintain/replace safety and instruction labels, if worn or illegible when necessary.**

## CTG2500i Series - Safety and instruction labels



**1** **⚠ DANGER ⚠**

Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.

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

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

**CROMMELINS** MACHINERY To avoid other generator hazards **READ MANUAL BEFORE USE.**

**2** **! NOTICE**

**! A hot exhaust system can cause serious burns.**

- Avoid touch if the engine has been running

**3** **! NOTICE**

- Stop the engine before refueling and clean the overflowing fuel.
- Use the specified spark plug only. **ASRTC (TORCH)**.

ASRTC (TORCH)  
405001

**4** **! NOTICE**

For safety, read carefully the operation manual before operating this equipment:

- Do not operate this equipment in poorly ventilated areas.
- Do not direct exhaust fumes toward people, buildings or equipment.
- When refueling, always stop the engine.
- Always immediately wipe up the fuel that is spilled.
- Keep any flammable items away from this equipment.
- Use gasoline of 93# octane or above and refill oil as required to ensure equipment performance.
- Do not expose the equipment directly to rain or snow.
- Do not touch or contact the wiring sockets with wet hands.
- Do not connect the AC output to any indoor wiring.
- When operating the equipment, do not put any barriers or obstacles around the equipment, or anything on top of the equipment. Do not cover the equipment with a box or the like.

<b>OLIO</b>			<b>OIL</b>
SAE15W-40			


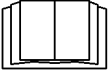




<b>OLIO</b>			<b>OIL</b>
SAE15W-40			

<b>OLIO</b>			<b>OIL</b>
SAE15W-40			

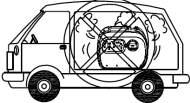
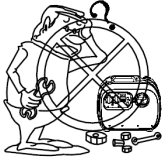

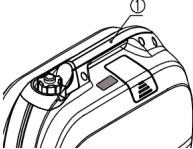
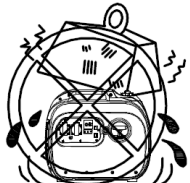

## SYMBOL MEANINGS

(Refer to SAFETY INFORMATION for more details. Page 7)

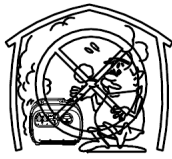
	Attention! Become alert! Your safety is important!
	Read the manual before operation.
	Be careful of poisonous exhaust.
	Never operate the machine in a closed area.
	Avoid touching hot surfaces, such as engine and muffler.
	Ground (earth) terminal. Be sure to ground (earth) the generator.



## SAFETY INFORMATION




<p>Do not use in a closed vehicle This generator is not designed for marine-use.</p>	
<p>Do not modify or use the generator with any component removed.</p>	
<p>Do not allow children to use the generator.</p>	
<p>Make sure to move the generator only by the carry handle.</p> <p>① Handle</p>	
<p>Do not place any obstacle on the generator.</p> <p>Do not place any obstacle in front of exhaust pipe</p>	
<p>Do not operate generator on wet or dusty/sandy surface. Operate on hard, dry surfaces only.</p>	

## POISONOUS EXHAUST

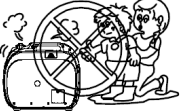
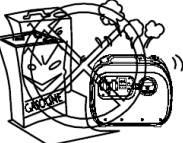
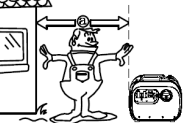
<p>Never operate generator in a closed area, as it may cause unconsciousness or death.</p> <p>Start the engine in a well-ventilated area.</p>	
<p>Generator exhaust is carbon monoxide. This is a poisonous gas that you cannot see or smell.</p>	

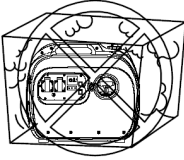
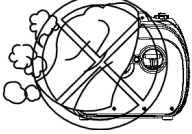


## HIGHLY FLAMMABLE AND POISONOUS FUEL

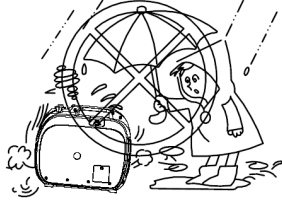
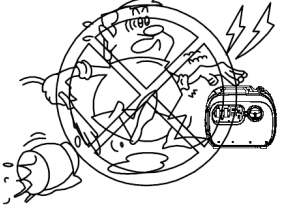
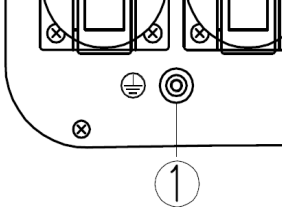
<p>Always stop the engine when refueling.</p> <p>Do not operate, refuel, or store generator near any source of ignition, including fire, heater, grinding sparks etc.</p>	 A cartoon illustration of a person refueling a generator. A large 'X' is drawn over the scene, and a speech bubble with the word 'stop!' is positioned near the top right of the 'X'.
<p>Never refuel when smoking or near an open flame.</p> <p>Be careful not to spill any fuel on the Engine or muffler when refueling.</p>	 A cartoon illustration of a person wearing a hat and smoking a pipe while refueling a generator. A large 'no' symbol (a circle with a diagonal slash) is overlaid on the scene.
<p>Do not swallow, inhale fuel vapor, or allow any fuel into your eye. If this occurs, seek medical attention immediately.</p> <p>If you spill fuel on your skin or clothing, wash it immediately with soap and water.</p>	
<p>When carrying generator, keep machine vertical (upright). Tilting may cause fuel leakage from carburetor or fuel tank.</p> <p>During transportation, ensure fuel tank cap is tightly on, and vent knob set to OFF.</p>	 A cartoon illustration of a person carrying a generator tilted at an angle. Fuel is shown dripping from the bottom. A large 'no' symbol is overlaid on the scene.

## HOT ENGINE AND MUFFLER

<p>Place the generator in a place where Pedestrians or children can not reach.</p>	 A cartoon illustration of a generator with a large 'no' symbol overlaid. Two children are shown running towards the generator.
<p>During operation, avoid placing any flammable material near the exhaust outlet.</p>	 A cartoon illustration of a generator with a large 'no' symbol overlaid. A person is shown placing a box of flammable material near the exhaust outlet.
<p>Keep the generator at least 1 meter distance from buildings or other equipment, if not, the generator may overheat.</p>	 A cartoon illustration of a generator placed next to a building. A person is shown measuring the distance between the generator and the building. A large 'no' symbol is overlaid on the scene.

<p>Do not operate the generator in a confined space or when covered with dust cover (or other materials).</p>	
<p>Ensure the engine and muffler are completely cooled, before covering generator.</p>	

### ELECTRIC SHOCK PREVENTION

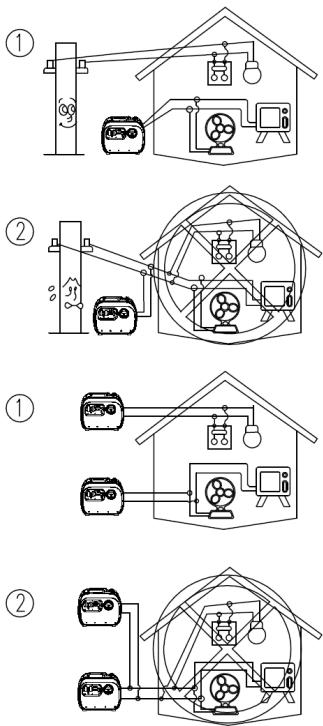
<p>Never operate generator in rain or snow to avoid electric shock.</p>	
<p>Never touch the generator with wet hands, or electric shock may occur.</p>	
<p>Connect the ground line of generator with ground (earth) terminal, and the other end to the ground electrode buried in the ground.</p> <p>① Ground (earth) terminal</p>	

## CONNECTION NOTES

Avoid connecting the generator to commercial power socket.

Avoid connecting the generator in parallel with any other generator.

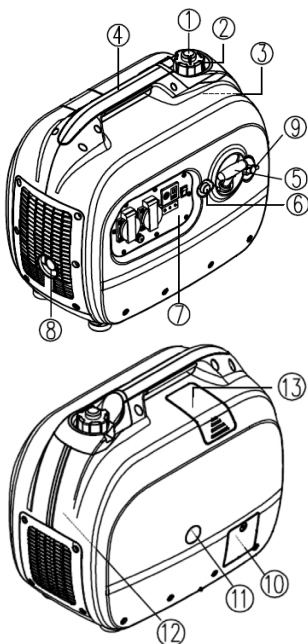
① Correct    ② Incorrect



**⚠ WARNING:** Before connecting generator to a building's electrical system, a licensed electrician must install an isolation (transfer) switch to main fuse box. The switch is the connection point for generator power and allows generator power or main line power to the building. This will prevent from charging the main power line (back feeding) when the main power supply has failed or has been turned off for a line repair. Back feeding can electrocute or injure line maintenance personnel. Also damage can occur when normal operation power returns if unit is used without an isolation switch.

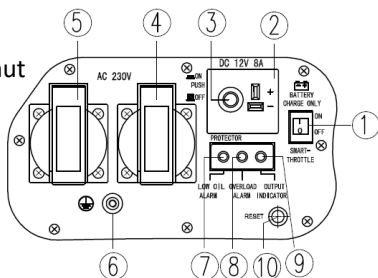
## CTG2500i DIAGRAM

- ① Vent knob
- ② Fuel tank cap
- ③ Fuel tank
- ④ Handle
- ⑤ Recoil starter handlebar
- ⑥ Choke cable
- ⑦ Control panel
- ⑧ Muffler
- ⑨ Main switch
- ⑩ Engine oil cover (Plug)
- ⑪ Drain screw, carburetor
- ⑫ Air filter cover
- ⑬ Spark plug cover



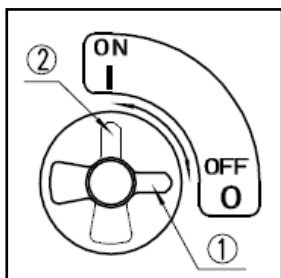
## CONTROL PANEL

- ① Smart-throttle switch (Eco-mode)
- ② N/A
- ③ N/A
- ④ AC socket
- ⑤ AC socket
- ⑥ Ground (earth) bolt/nut
- ⑦ Low oil alarm
- ⑧ Over load alarm
- ⑨ Output indicator
- ⑩ Reset button



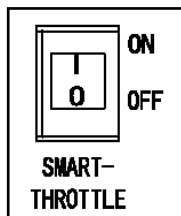
## ON/OFF SWITCH

- ① **OFF** - Ignition circuit and fuel supply are off, and engine stops.
- ② **ON** - Ignition circuit and fuel supply are on, and engine can be started to work.



### SMART-THROTTLE SWITCH (ECO-MODE)

① **ON** - When smart-throttle switch is in ON position, the economic control mode will automatically adjust the engine speed according to the connected load, so as to achieve low fuel consumption and low noise.



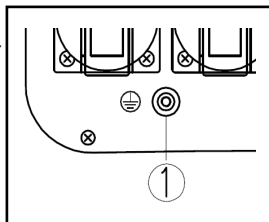
② **OFF** - When smart-throttle switch is in the OFF position, the engine will run at rated speed (5000rpm), regardless of load.

**⚠ NOTE: Smart-throttle switch must be in OFF position, when applying to electric devices that require a large starting current, such as air conditioner, air compressor, submersible pump, or high-power DC equipment.**

### GROUND (EARTH) BOLT/NUT TERMINAL

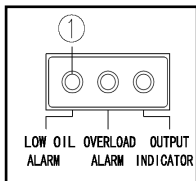
Make sure ground (earth) terminal of generator is connected to avoid electric shock. When electric device is applied, generator should connect with earth ground.

① Ground (earth) terminal



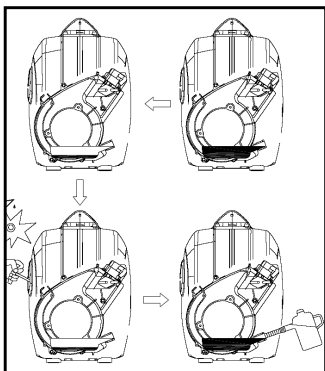
## LOW OIL ALARM (YELLOW)

If engine oil level falls below the lower level, the low oil alarm will turn on, and the engine will stop automatically. Refill engine oil, otherwise engine will not start.



### ① Engine Oil Alarm

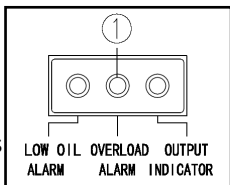
**! NOTE:** If engine won't start, turn the main switch to ON position, then pull the recoil starter. If low oil alarm light flickers for a few seconds, it means engine oil is insufficient. Add engine oil and retry.



## OVERLOAD ALARM (RED)

*Overload Alarm is Blinking* - The overload alarm light (RED) ① will turn ON and blink when the total power of connected electrical devices is close to rated power.

*Overload Alarm is ON* - The overload alarm light will turn ON when it detects an overload of power to all connected devices. The electrical breaker will activate and stop the generator in order to protect it and connected devices. The AC output indicator (Green) will be off, and the overload alarm light (red) will stay on and the generator will not stop running.

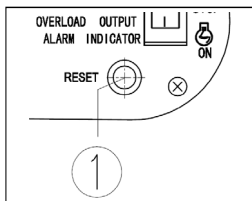


**When overload light is ON proceed as follows:**

1. Disconnect all devices and press the reset button ①.

2. Reduce total wattage of electric devices below the output range

3. Check for blockages around cooling air inlet and control unit. If blocked, clear it.



4. Restart the engine after checking.

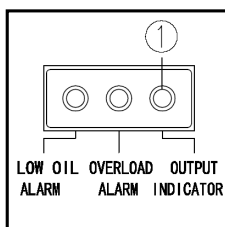
**⚠ NOTE:** The generator output automatically resets when engine is stopped and then restarted.

**⚠ NOTE:** The overload indicator light may be ON for a few seconds at first when using electric devices that require a large starting current, such as air conditioner, air compressor, submersible pump, or high-power DC equipment. This is not a malfunction.

### OUTPUT INDICATOR (GREEN)

When the engine is started the output indicator turn ON (Green).

① Output indicator

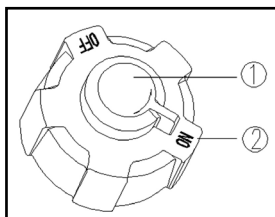


### FUEL TANK CAP VENT KNOB

The fuel tank cap has a vent to balance inner and outer pressure of fuel tank, and stop fuel flow. Turn vent knob clockwise from OFF to ON to allow fuel to flow into carburetor to allow the generator to start.

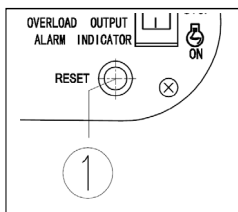
When generator is OFF or moved, ensure to turn vent knob counter clockwise from ON to OFF to avoid possible fuel overflow or vapor.

① Vent knob    ② Fuel tank cap



### RESET BUTTON

If the generator stops output due to an overload, disconnect all devices, reduce total wattage to within the application range, and press the reset button ①. The generator will recover to output.



## PRE-OPERATION CHECK

**!** **NOTE:** Pre-operation checks should be made each time before using generator.

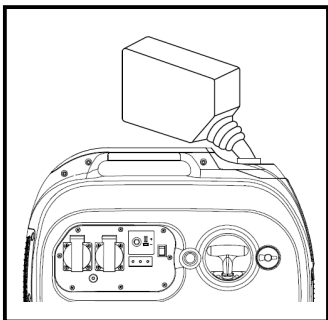
### FUEL

Open fuel tank cap, fill with unleaded fuel to red mark inside fuel filling screen. The recommended fuel is unleaded gasoline #93 octane or above.



**!** **NOTICE:** If there is any spilled fuel, use a clean and dry soft cotton cloth to wipe area to avoid corrosion on surface or plastic parts.

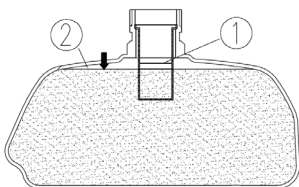
**!** **NOTICE:** Only use recommended unleaded fuel, as other may cause serious damage on engines inner components.



### FUEL TANK CAPACITY

5.0L (1.3 US gal)

- ① Red Mark
- ② Fuel level



**!** **WARNING:** Fuel is highly flammable and poisonous. Check and read SAFETY INFO (page 7) before refueling.

**!** **WARNING:** Do not fill above the red mark in the fuel filter as it may overflow if the fuel heats up and expands. Make sure to tighten the fuel tank cap after refueling.

**!** **WARNING:** Engine and muffler become very hot when running. Avoid touching engine and muffler when running, ensure engine and muffler have cooled before inspecting or repair.

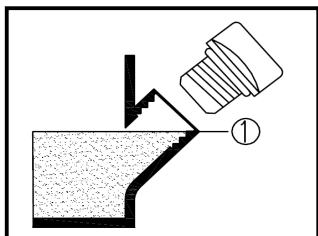
**!** **WARNING:** Do not leave generator in a hot car or directly in the sun for long periods of time. Fuel vapors can cause the fuel tank to expand, which can cause cracks/leaks to occur. Expansion may even cause an explosion.



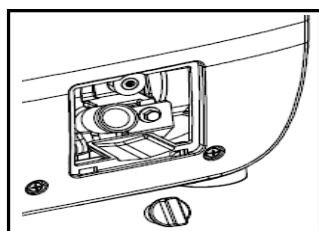
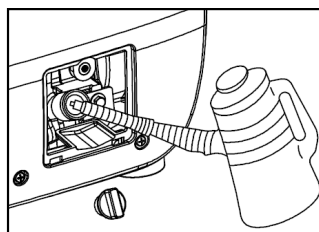
## ENGINE OIL

Check the oil level by placing generator on a level surface and inspecting at the oil filter hole. The oil should be level with the Lower edge. Add oil if necessary.

- ① Lower edge, oil filter hole



**!** NOTICE: The generator leaves the factory without engine oil.



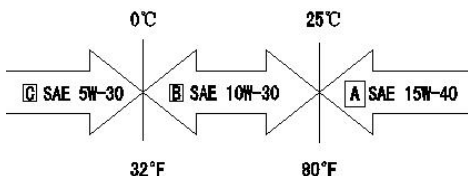
**!** NOTICE: Do not tilt the generator when filling engine oil. This may result in overfilling and potential damage to the generator.

## RECOMMENDED ENGINE OIL

A: SAE15W-40

B: SAE10W-30

C: SAE5W-30



## ENGINE OIL CAPACITY

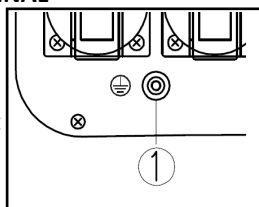
300 to 400ml (0.42US qt, 0.35Imp qt)

**!** NOTICE: Do not over fill, fill to oil indicator line only

## GROUND (EARTH) BOLT/NUT TERMINAL

Make sure ground (earth) terminal of generator is connected to avoid electric shock. When electric device is applied, generator should connect with earth ground.

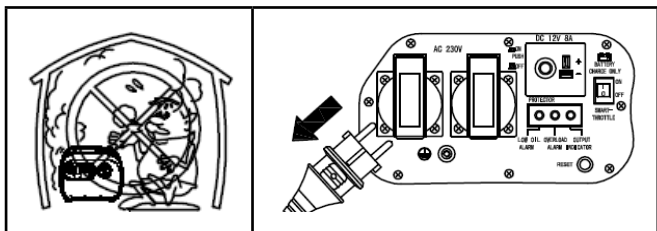
- ① Ground (earth) terminal



## OPERATION INSTRUCTIONS

**⚠ WARNING:** Always operate generator in a well ventilated area. Never operate generator in a closed in area as it may cause unconsciousness or even death within minutes.

**⚠ NOTE:** Clean dust, dirt or water off the socket before use. Before starting the engine, do not connect any electrical devices.



**⚠ NOTICE:** Read PRE-OPERATION CHECK (see page XX) carefully before operation of generator.

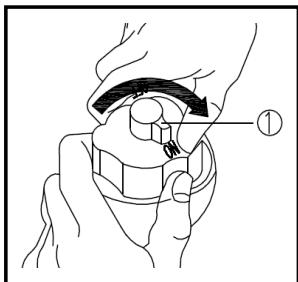
**⚠ NOTE:** Generator can be used at rated output load in standard atmospheric conditions as follows:

- Ambient temperature - 25°C
- Atmospheric pressure - 1000KPa
- Relative humidity - 30%

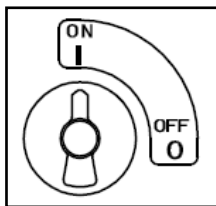
The generator output may differ due to changes in temperature, altitude (the higher altitude, the lower air pressure) and humidity.

### STARTING THE GENERATOR

1. Hold the fuel tank cap to avoid it moving, and turn vent knob clockwise from OFF to ON, so as to open the vent hole. ① Vent knob

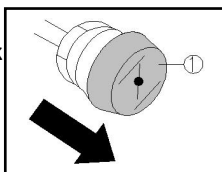


2. Turn the main switch to ON position. This turns on the Ignition circuit and allows the fuel to flow.



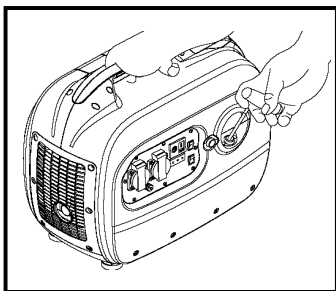
3. Pull out choke cable button out completely. ① Choke cable button

**! NOTE:** Choke is not required when starting a warm engine. Set choke back to original position.



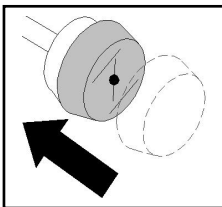
4. Pull slowly on the recoil starter handlebar until it is compressing, then pull hard.

**! NOTE:** Grasp generator by the carry handle firmly to prevent the generator from falling when pulling the recoil starter.



5. After the engine is started, allow engine to warm before pressing the choke button back to original position.

**! NOTICE:** Choke cable button should be moved back to original position when generator is warmed.



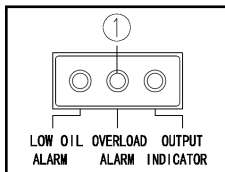
**! NOTE:** When starting generator, place smart-throttle switch in OFF position when there is no load on the generator.





- For ambient temperatures below 3°C (37°F), engine should run at rated speed for 5 minutes to warm up.
- For ambient temperatures above 3°C (37°F), engine should run at rated speed for 3 minutes to warm up.
- Once engine is warmed up, place smart-throttle switch to ON position (and run the generator in economy status).

## APPLICATION RANGE

When using the generator, please make sure total load is under the range of generator rated output, or the generator may be damaged.

**⚠ NOTE:** The overload alarm indicator ① is on (red) When total watts exceed the application range. (See page 17 for more details.)



A AC				D DC
B Power factor	1	0.8–0.95	C 0.4–0.75 (Efficiency 0.85)	
2000	1800VA	1440VA	612VA	E Rated voltage 12V Rated current 8A
2500	2100VA	1680VA	714VA	Rated voltage 12V Rated current 8A
1000	900VA	720VA	306VA	Rated voltage 12V Rated current 8A

CTG2500i		
	Power Factor	Rated Output
AC	1.0	2100VA
	0.8	1680VA
DC	-	96W
		12V/8A

**⚠ NOTICE:** Do not overload. The total load of all electrical appliances must not exceed the supply range of the generator. Overloading will damage the generator.

When supplying precision equipment, PCs, electronic computers, mobile devices or battery chargers, keep the generator a sufficient distance away to prevent electrical interference.

This generator is not designed for medical applications.

Some electrical appliances or general-purpose electric motors have high starting currents, and may not run, even if they lie within the supply range given in the above table.

## AC CONNECTION (POWERING EQUIPMENT)

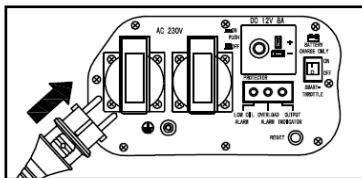
**! WARNING:** Be sure all electric devices are turned off before connection.

### **! NOTICE**

1. Be sure all electric devices including lines and plugs connections are in good condition before connecting to generator.
2. Be sure the total load is within generator rated output.
3. Be sure the socket load current is within socket rated current.

**! NOTICE:** Do not run generator for extended periods with no load or minimal load (eg. when charging batteries or powering low wattage equipment such as TVs and Radios). This may cause premature spark plug failure, excessive carbon build up or high oil consumption. To prevent this, run the generator periodically with an increased load.

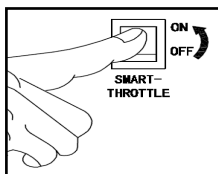
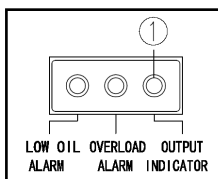
**! NOTE:** Make sure generator is connected to ground earth. When electric device is connected to ground earth, generator should connect ground earth.



## STARTING THE ENGINE

1. Start the generator.
2. Connect the plug with the AC socket.
3. Make sure the AC output indicator is ON (Green).

① AC output indicator



4. Turn the smart-throttle Switch to the ON position, and then turn on all electric devices.

## DC CONNECTION (BATTERY CHARGING)

**! WARNING:** Never connect with VRLA (valve regulated lead-acid) battery, which needs special (constant voltage) battery charging.

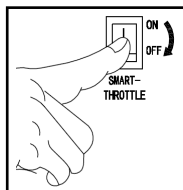
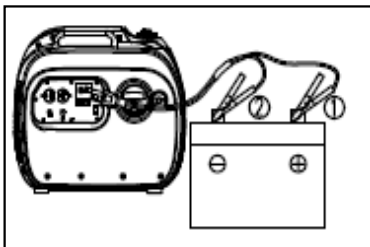
- ! NOTE:** The generator rated DC voltage is 12V - 8 Amp.
- Make connection to battery after starting engine
  - Clamp the red wire to the positive (+) terminal and the black wire to the negative (-) terminal of the battery. ① Red cable ② Black cable
  - Use battery charge cable set with appropriate plug (fused)

### STARTING THE ENGINE

1. Start the generator.

2. Turn the smart-throttle switch to OFF position.

3. Connect charging line to battery terminal, and then plug to generator DC socket.



**! NOTICE:** Make sure the smart-throttle switch is in OFF position while charging battery and ensure battery lines are properly connected.

To avoid short circuit, connect charging line to battery terminal first, then to generator DC socket. After charging, disconnect the generator terminal first.

**! NOTE:** At full charge, electrolyte specific gravity is between 1.26 and 1.28. Check specific gravity hourly to avoid over charging on battery.

**! WARNING:** During charging, do not smoke near or cut battery connection cable, as a spark may occur and cause a fire.

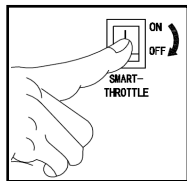
**! WARNING:** - Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with skin, eyes or clothing.

1. **CONTACT WITH SPILL:** Wash with water.
2. **CONTACT WITH EYES:** Flush with water for 15 minutes and get prompt medical attention.
3. **DO NOT CONSUME:** If this occurs, contact medical facility immediately. Drink large quantities of water or milk (milk with magnesia, beaten egg or vegetable oil) to dilute the sulfuric acid.

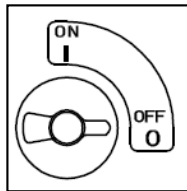
Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc, away. Always ventilate when charging. Cover eyes when working near batteries. Keep battery out of reach of children.

#### STOPPING THE ENGINE

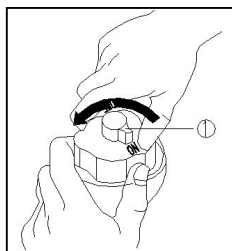
**! NOTE:** Disconnect all electric devices. Place smart-throttle switch in position of OFF.



1. Disconnect all electric devices.
2. Turn the main switch to OFF position.
3. Turn the vent knob to OFF position to close vent hole (when engine is completely cooled down).



- ① Vent knob



## MAINTENANCE

It is an owners requirement to periodically inspect, adjust, lubricate and maintain their generator to keep it in good working condition.

**!** **NOTE: Use only genuine parts for replacement, contact Crommelins spare parts 1300 554 524.**

**!** **WARNING: Consult your local service agent for all major maintenance work.**

**!** **WARNING: Stop the engine before starting maintenance work.**

Item	Description	Pre-operation check	Every 6 months or 100 hour	Every 12 months or 300 hour
Spark Plug	Check condition, clean and replace if necessary		○	
Fuel	Check fuel level and leakage	○		
Fuel hose	Check fuel hose for cracks or damage. Replace if necessary.	○		
Engine oil	Check oil level in engine	○		
	Replace	(1.)	○	
Air filter element	Check condition and clean		○ (2.)	
Flame retardant element	Check condition, clean and replace if necessary		○	
Fuel screen	Clean and replace if necessary			○
Crankcase breather hose	Check breather hose for cracks or damage. Replace if necessary.			○
Cylinder head	Decarbonizes cylinder head more frequently if necessary			●
Valve clearance	Check and adjust when engine is cold.			●
Fittings/ fasteners	Check all fittings and fasteners. Correct if necessary.			●
General inspection	Check machine over for any abnormality.	○		

1. **ENGINE OIL** - Initial replacement of engine oil is after 1 month or 20 hours of operation.
  2. **AIR FILTER ELEMENT** - When using in unusually wet or dusty areas, more frequent cleaning is required.
- **12 MONTH OR 300HR** - Please contact local authorised service agent to conduct this service



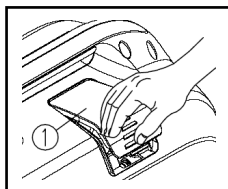
## CARBURETOR ADJUSTMENT

Consult your local service agent for any adjustments on the carburetor as special equipment is required for correct adjustment.

### SPARK PLUG INSPECTION

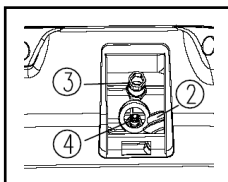
1. Remove spark plug cover and spark plug cap.

- ① Spark plug cover
- ② Spark plug cap



2. Locate spark plug socket on spark plug, turn it clockwise with wrench, and then disassemble spark plug.

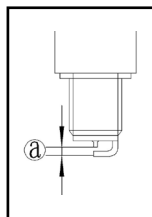
- ③ Spark plug socket
- ④ Spark plug



3. Check for discoloration and remove the carbon (Standard electrode color: Medium-to-light tan color).

4. Check spark plug type and clearance.

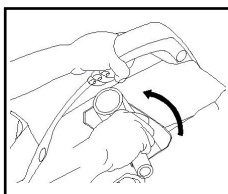
Spark plug: A5RTC (TORCH)  
Plug clearance: (a) 0.6mm



5. Install spark plug.

Plug torque: 12~15N.m

6. Install spark plug cover.



**!** **NOTE:** When installing spark plug, twist it for 2-3 rounds by hand, and lock it up with specified torque value.

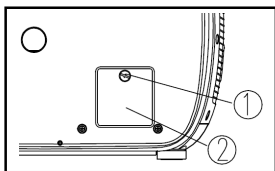
## ENGINE OIL REPLACEMENT

**! WARNING:** Never drain engine oil immediately after turning off engine. Let the engine cool first to avoid scalding.

1. Place generator on a level surface, and start engine for few minutes to reduce the engine oil viscosity. Shut-off the engine, and turn the fuel tank cap vent knob to OFF.

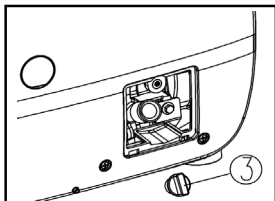
2. Un-screw and remove oil filling cover.

- ① Screw
- ② Oil filling cover



3. Remove oil drain plug, place an oil pan under the engine, and tilt the generator to drain the oil completely.

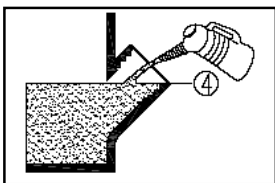
- ③ Oil drain plug



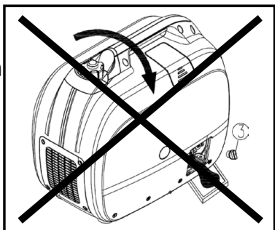
**! NOTE:** It is your responsibility to dispose of waste engine oil correctly.

4. Place generator on a level surface and add engine oil to lower level of filter port.

- ④ Lower level



**! NOTICE:** Do not tilt the generator when filling oil. This can result in overfilling and damage to the generator. Ensure no other material enters the engine crankcase.



**RECOMMENDED ENGINE OIL:** See page 17

5. Wipe any spilled oil around filter port, and tighten oil drain plug.

6. Re-install oil filling cover and screw tight.

## FLAME RETARDANT ELEMENT AND SCREEN

**! WARNING:** Engine and muffler become very hot when running. Avoid touching the engine and muffler and ensure engine and muffler have cooled before inspecting element and screen.

1. Remove screws on both sides, and disassemble exhaust cover.

- ① Screw
- ② Exhaust cover

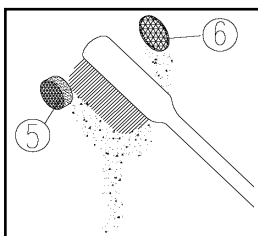
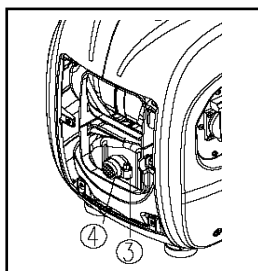
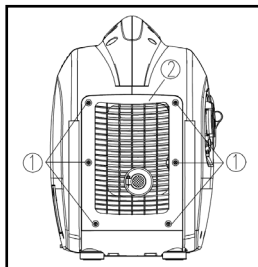
2. Loosen clamp, and remove flame retardant element locking cap.

- ③ Clamp
- ④ Locking cap

3. Use a wire brush to remove carbon deposits from flame retardant element and screen.

- ⑤ Flame retardant element
- ⑥ Screen

**! NOTE:** When cleaning, use a soft wire brush to lightly brush avoiding damaging or scratching flame retardant element.



4. Check the flame retardant element and screen. Replace them if damaged.

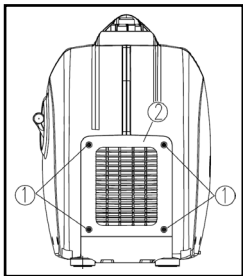
5. Install flame retardant element and screen into locking cap, and then to muffler, with clamp to tighten them.

6. Install exhaust cover, and tighten the screws on both sides.

## AIR FILTER REPLACEMENT

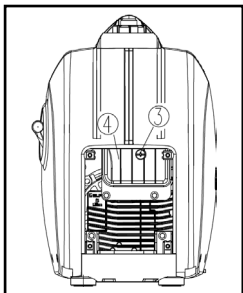
1. Loosen screws and remove air intake cover.

- ① Screw
- ② Air intake cover



2. Loosen screw, remove air filter cover, and take out filter element.

- ③ Screw
- ④ Air filter cover
- ⑤ Filter element



3. Wash the filter element in solvent and dry it.

4. Add a small amount of engine oil to element and squeeze out any excess oil. The element should be wet, but not dripping.

### Recommended filter oil:

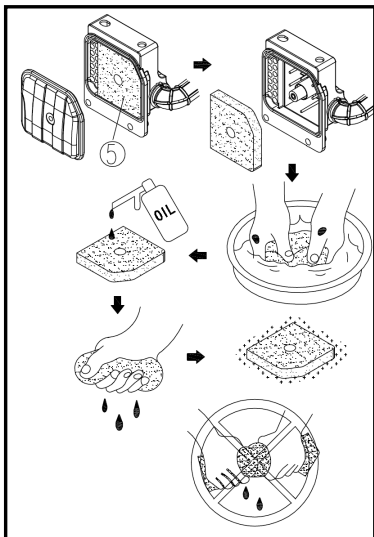
Foam-air-filter oil or  
SAE#20 lubricant oil.

**! NOTICE:** Do not 'wring out' the element sponge or may get damaged.

5. Insert the element into air filter.

**! NOTE:** Be sure the element sealing surface matches the air filter so as to not leak air.

**! NOTICE:** Never run the engine without element or it may cause excessive poisonous gas and cylinder wear.



6. Install air filter cover, and tighten it with screws.

**! NOTE:** When installing air filter cover, check and place the sealing strip on air filter correctly.

7. Assembly air intake cover, and tighten screws.

8. Install the mainenance door with the screw

## FUEL TANK FILTER

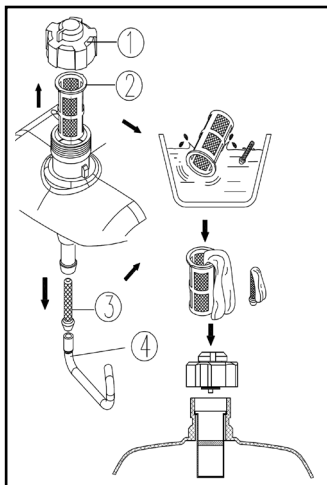
1. Open fuel tank cap, and take out inlet filter screen. Remove fuel outlet line and take out fuel outlet filter screen.

- ① Fuel tank cap
- ② Fuel filling filter screen
- ③ Fuel outlet pipe, fuel tank
- ④ Fuel outlet filter screen

2. Clean the fuel filling filter screen and fuel outlet filter screen with gasoline. Replace it if damaged.

3. Wipe fuel intake filter screen and outlet filter screen, and install them into fuel tank intake port and outlet port.

4. Install fuel tank cap and tighten it. Assemble fuel outlet pipe in correct position and tighten it with clamp.



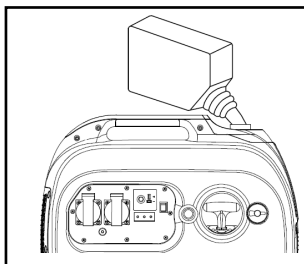
**! WARNING: Make sure to tighten fuel tank cap, and fuel pipe clamp.**

## TROUBLESHOOTING

### ENGINE WILL NOT START

1. No fuel supplied to combustion chamber.

- There is no fuel in tank:  
Add fuel
- There is some fuel in tank:  
Check vent knob on fuel tank cap, and turn it to position ON.
- Clogged fuel line: Clean fuel line.
- Clogged carburetor: Clean carburetor.

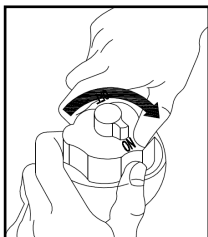


## 2. Low engine oil level:

- Add engine oil to specified position.

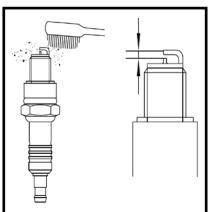
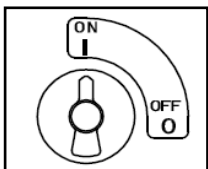
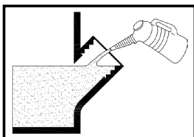
## 3. Electrical system

- Check main switch, and turn it to position ON.



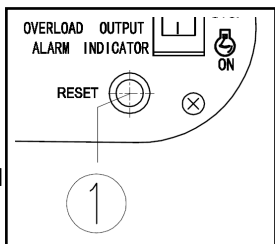
## 4. Poor spark

- Spark plug is dirty with carbon or wet:  
Remove carbon or wipe and dry spark plug.
- Check spark plug clearance is 0.5~0.7mm: Replace if it is over tolerance.
- Faulty ignition system: Consult dealer.



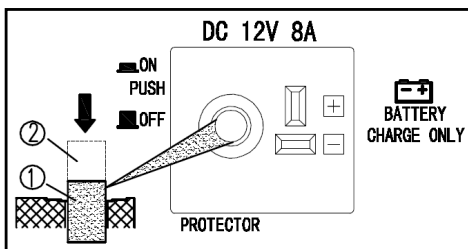
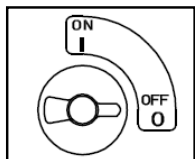
## GENERATOR HAS NO OUTPUT

1. For generator with reset function, disconnect all electric devices, reduce total wattage of connected electric devices within the application range, and press the reset button ①.



- ① Reset button

2. Press DC protector to position ON to reset the DC output.



## STORAGE

For long term storage of your machine, follow these preventive procedures to guard against deterioration.

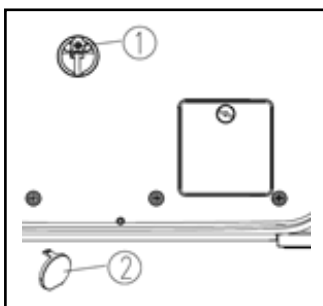
### DRAIN THE FUEL

1. Remove fuel tank cap. Drain the fuel from fuel tank into an approved gasoline container by a commercially available hand siphon. Then install fuel tank cap.

2. Remove carburetor drain cover, loosen the drain screw on the carburetor float chamber, and drain the fuel from carburetor into an approved gasoline container.

- ① Drain screw
- ② Carburetor drain cover

3. Tighten carburetor drain screw, and install carburetor drain cover.



**! WARNING: Fuel used in the machine is highly flammable and poisonous. Check SAFETY INFORMATION (page 9) carefully before adding the fuel. Make sure to wipe up any spilled fuel immediately to avoid damage on rubber or plastic parts.**

4. Start the engine and let run until it automatically stops (As it has used all remaining fuel in carburetor).

### PROTECT THE ENGINE

In order to protect engine, inside the cylinder, piston rings and other parts, please proceed as following steps:

1. Remove the spark plug, and pour about 5ml SAE10W\30 or 20W\40 engine oil into the spark plug hole and then re-install the spark plug. Pull the recoil starter several times to coat the cylinder wall, piston rings and other parts with engine oil.

2. Pull the recoil starter until you feel compression and then stop pulling (This prevents the cylinder and valves from rusting).

## CLEAN THE GENERATOR

1. Clean the exterior part of the generator. Use only damp cloth with mild detergent. Avoid excess moisture.
2. Store the generator in a dry and well-ventilated place, with a clean cloth covered.
3. The generator must remain in a vertical position when stored, carried and operated.

## TRANSPORT

When transporting the generator;

1. Do not overfill the tank (there should be no fuel in the filler neck).
2. Do not operate generator while it is on a vehicle. The generator must be operated in a well ventilated area.
3. Avoid putting the generator on a vehicle exposed directly to sunlight. If the generator is left in an enclosed vehicle for many hours, the high temperatures inside the vehicle could cause fuel to vaporize resulting in possible explosion.
4. Do not drive on a rough road for an extended period with the generator on board. If you must transport the generator on a rough road, drain the fuel from the generator before hand.
5. Ensure Vent knob is turned to the OFF position.

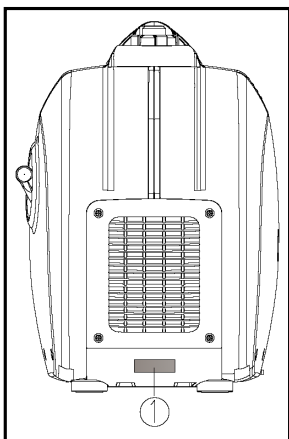
## IDENTIFICATION

The machine identification series number is attached in the location as shown in drawing.

- ① Machine series number

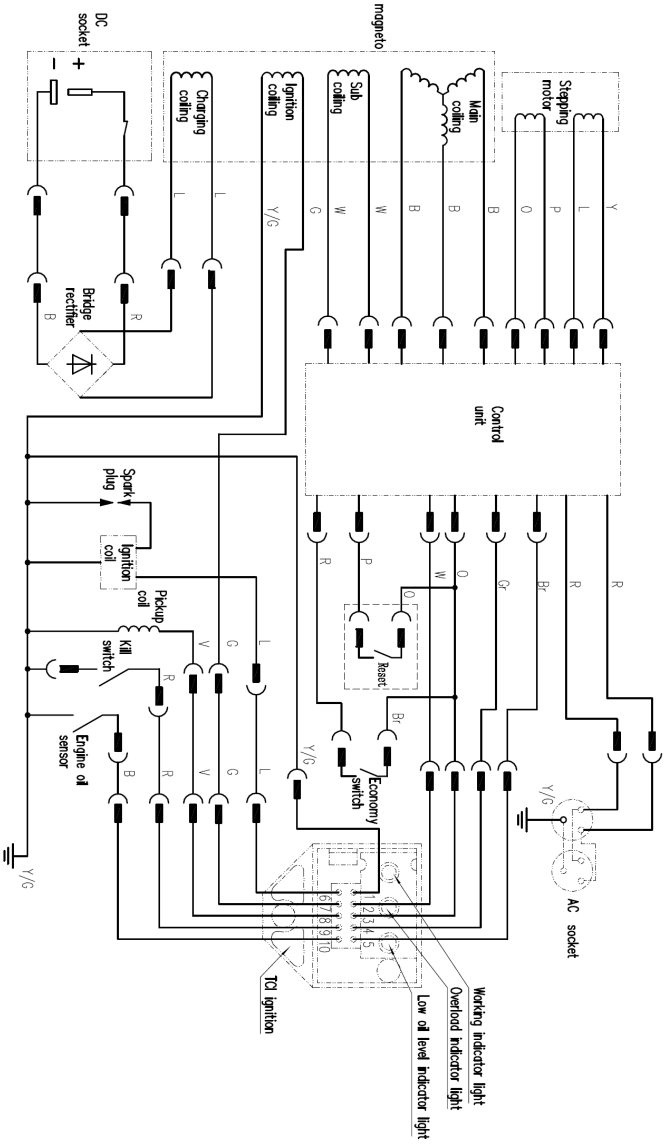
## SERIAL NUMBERS

\_\_\_\_\_  
(Write serial no.)





# WIRING DIAGRAM



## CTG2500i SPECIFICATIONS

2.4kVA CROMTECH™ GENERATOR	
Power Factor (kVA)	2.4kVA
Max. Wattage	2400watts
Cont. Wattage	2100watts
Type	Single Phase
Voltage Regulation	Inverter / Pure Sine Wave 2.5% THD
AC Output	240V - 50hz
Cromtech Engine	LH148F(G)
Engine Type	4 stroke, air-cooled, single cylinder, OHV gasoline engine
Displacement	2.6kw, 79cc
Engine Oil	300-400ml
Fuel Tank	5.0L
Spark Plug	A5RTC (TORCH)
Starting System	Recoil Start
Noise Level	52 - 59db at 7m*
Battery Charging	12V - 8Amp
USB (x2)	5V
Dimensions (LxWxH)	511 x 314 x 447mm
Weight (dry)	19.8kg
Package Dimensions	547x350x505mm
Run Time	5 to 20hours (depending on load)

**\*Noise level is measured when the smart-throttle switch is ON. LWA shows the sound power level under the ISO3744 standard test condition. The decibel rating is measured at 7m from the machine (Noise level may vary in different environments).**

### NOISE LEVEL

The figures quoted are emission levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of work-force include the characteristics of the work room, the other sources of noise, etc. i.e. the number of machines and other adjacent processes, and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary from country.



## STANDARD FEATURES

- Outlets (single phase - 15 Amp) x2
- USB Charging (5V-2 Amp) x2
- Battery charging (12V-8Amp)
- Pure Sine Wave <2.5% THD suits precise instruments
- Super quiet running at 52-59db
- Low oil alarm, overload alarm, output indicator
- Eco-mode adjusts output as load requires and lowers noise
- 5 to 20hrs continuous running (depending on load)
- Bonus protective yellow cover
- 4-Stroke, forced air cooled, OHV engine
- 5.0L fuel tank
- Lightweight & compact design
- Recoil start with direct gravity fuel supply
- Easy maintenance with quick convenient access ports
- Durable, cast iron cylinder liner
- 1 Year Cromtech warranty

## APPLICATIONS

- Camping
- Caravanning & RVs
- Home/small office backup power
- Shop and production use
- Precision Instruments
- Small power tools
- Fetes & Markets

## INDUSTRY

- Recreation
- Light industrial
- Light commercial

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