

TIMCO I3000SPG



→ CERTIFIED



Degree of
protection: IP23





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1. Information regarding security:

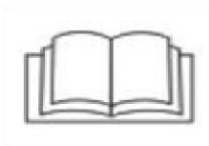
Security is very important. Important security messages have been included throughout the entire manual. Read and observe these messages to ensure usage of this equipment is completely safe.

We have divided the safety messages in 4 different types due to the seriousness of their consequences if not observed:

 DANGER	Imminently dangerous situation which, if not avoided, will cause serious or lethal injuries .
 WARNING	Potentially dangerous situation which, if not avoided, could cause serious or lethal injuries .
 CAUTION	Potentially dangerous situation which, if not avoided, may cause mild or moderate injuries .
 NOTE	Situation which if not avoided may cause material damage .

1.1 Summary of the most important hazards in machine usage.

Read the user's manual thoroughly before using the machine!



Using the equipment without being fully informed of its operation and safety regulations may lead to dangerous situations.
Do not allow anyone to use the equipment without training.

Gasoline is explosive and flammable!



Do not refuel the machine while it is running.
Do not refuel while smoking or near open fire.
Clean all gasoline spillage.
Allow cooling before refueling.
Use labeled gasoline containers.
Do not use the generator in potentially explosive environments, gas plants or similar, check with safety staff.

Engine emissions contain poisonous carbon monoxide!



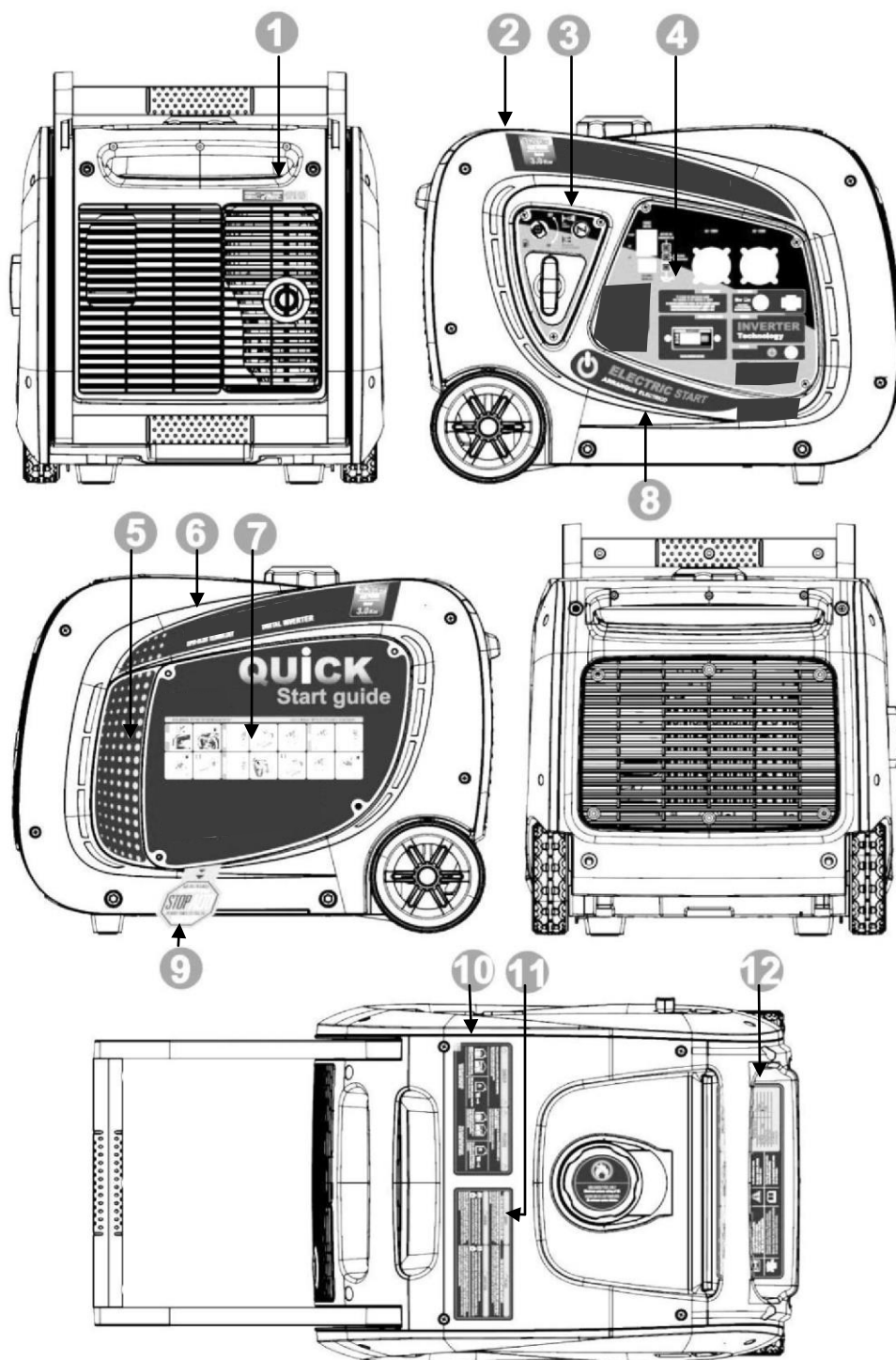
Never use inside the house, garages, tunnels, warehouses or anywhere without ventilation.
Do not use the equipment near windows or doors where gases may enter.
The exhaust expels poisonous carbon monoxide. You will not be able to see or smell this gas, therefore it is very dangerous.

Attention to electrical hazards!



Do not operate while your hands are wet.
Do not expose the generator to rain, humidity or snow.
Verify that the electrical wiring and devices to be plugged are in good conditions.
Connect the grounding of the generator.

2. Location of safety stickers and usage:



----1----	----2----	----3----	----4----
Exhaust warning	Especifications	Chocke and fuel valve instruction	Control panel
----5----	----6----	----7----	----8----
Decorative	Especifications	Quick start guide and service contact	Especifications

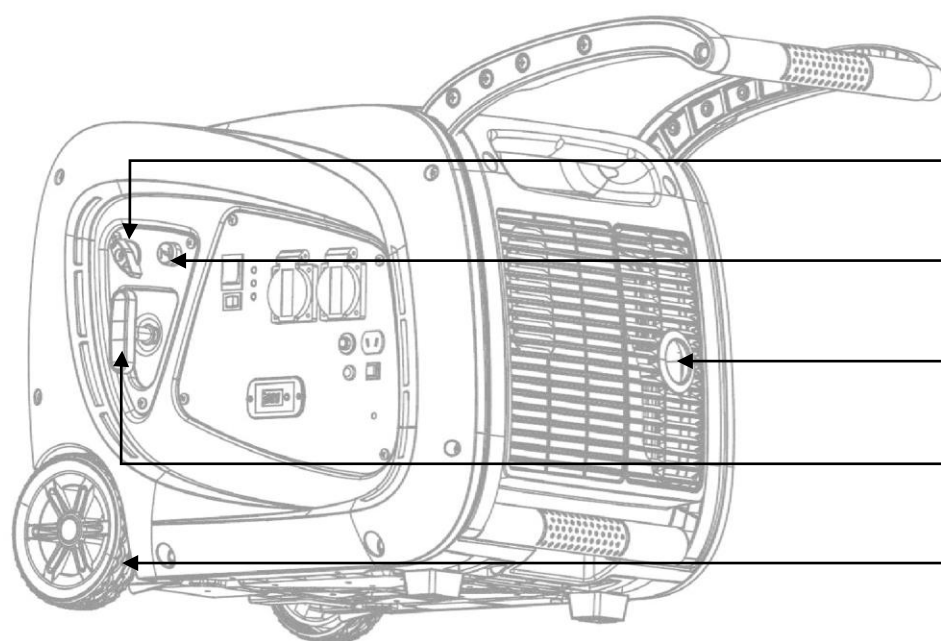
-----9-----
Oil warning

-----10-----
Safety warnings

-----11-----
Safety warnings

-----12-----
Specifications and
regulations

3. Component identification:



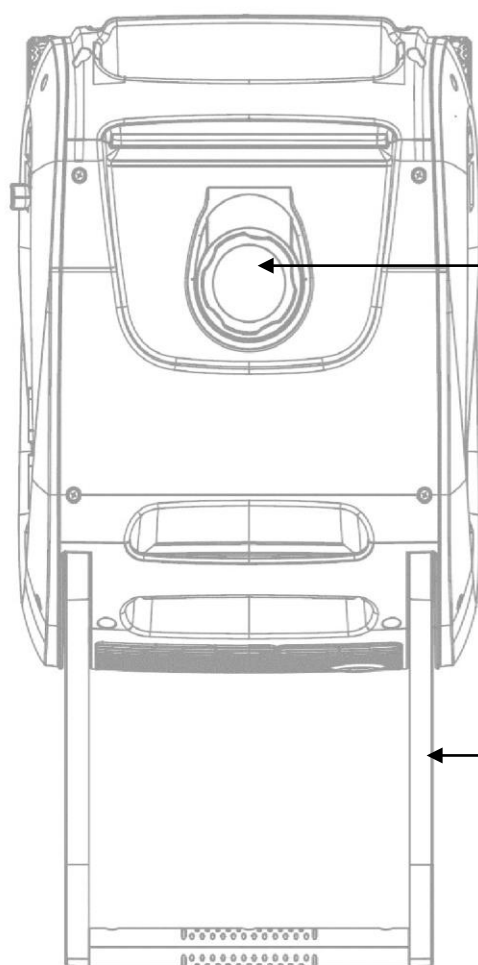
FUEL VALVE

CHOCKE

MUFLER

RECOIL START SYSTEM

TRANSPORT WHEELS

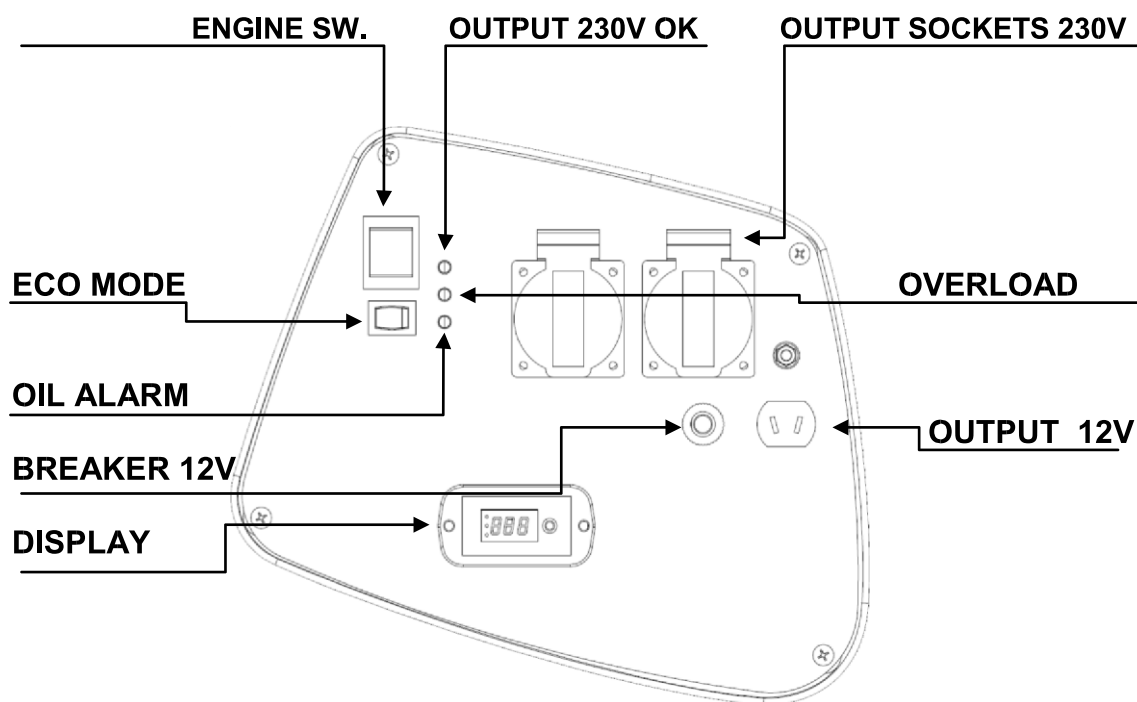


FUEL CAP

MAINTENANCE COVER

TRANSPORT HANDLE

3 1 Control control.



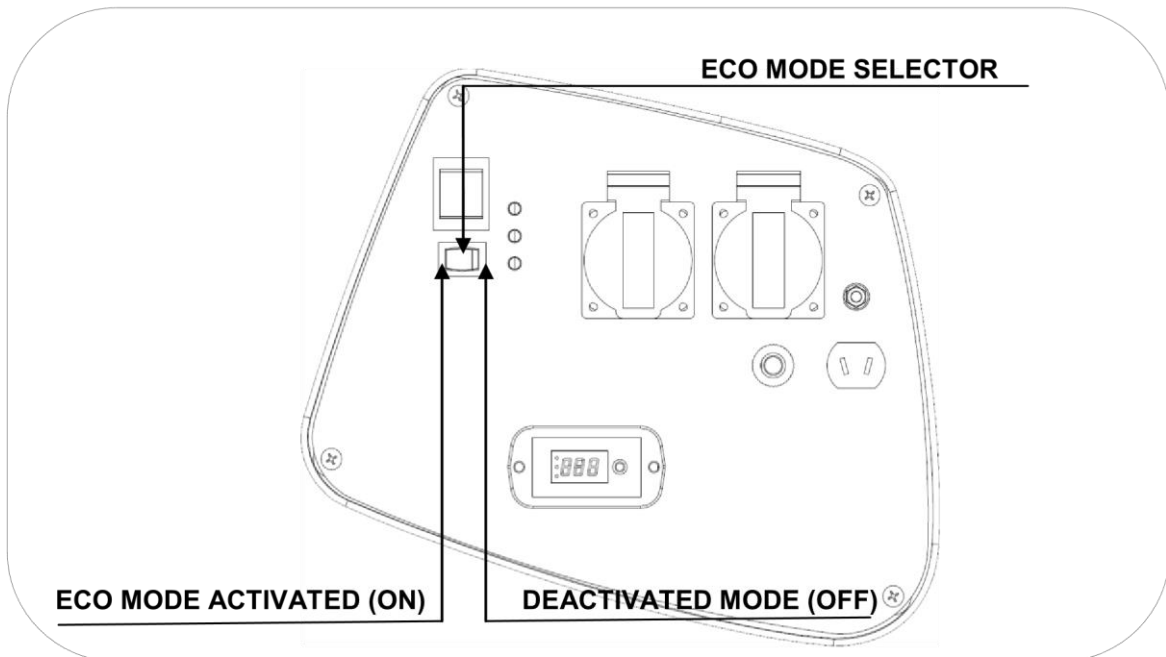
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3.2 ECO mode use.

When the ECO mode switch is deactivated (**OFF position**) the engine always works in a constant revolutions rating. This mode is recommended if high charges (2000W or greater) are being plugged in, as the group will respond better to this high consumption.

When the ECO mode switch is activated (**ON position**) the engine revolutions will be auto adjusted to the charge plugged at any moment. If we connect a low charge, the engine will work at lower rpm. The revolutions will increase with the equipment's charge.

Use of the ECO mode allows great fuel savings, especially with low charges. We will also get a lower noise level and less gas emissions to the atmosphere.



When plugging a high consumption electrical device (greater than 2000W), keep the ECO mode deactivated (**OFF Position**).

For use with 12V direct current outlet, always keep the ECO mode deactivated (**OFF Position**).

You can use the 12V direct current outlet and the 230V current at the Sam time, but keep the ECO mode deactivated (**OFF Position**) at all times.

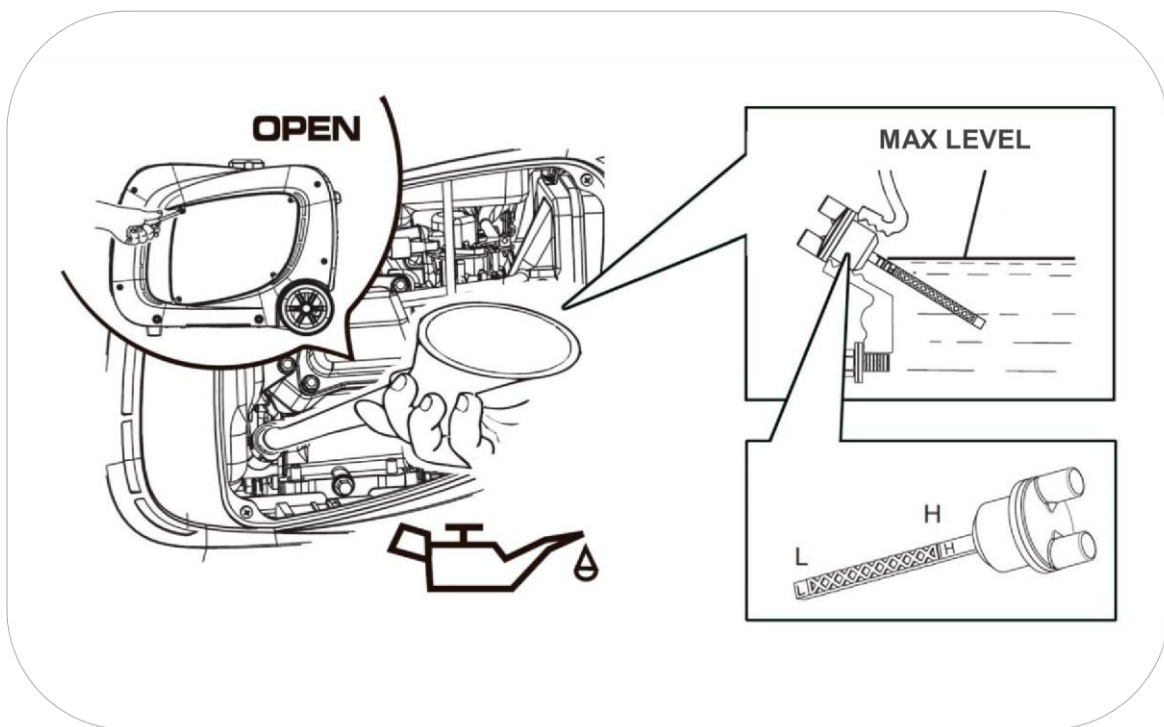
It is normal that upon deactivating the ECO mode (**OFF Position**) the engine increases its noise level as the engine's revolutions increase.

4 2 Oil level loading and check.

NOTE: The machine is delivered without oil, **do not attempt to start up the machine without adding oil first!**

Ensure that the generator is on a perfectly leveled surface to avoid mistakes in the oil filling.

Unscrew the screws and open the maintenance cover. Remove the filling cap and pour oil in the hole until the maximum level shown in the figure below is reached.



L: Minimum H: Maximum


Oil capacity to the right level is about 0.65L.


Use good quality SAE15W30 - SAE10W30 or SAE10W40 4-stroke motor oil. Oil quality API: "SG", "SF" (check container specifications).


NOTE: Consider that the engine consumes some oil during usage. Check the oil level before each use and refill if the level has diminished.


NOTE: Never use old, dirty or bad oils. Do not use oil if you don't know its grade and quality. Do not mix different types of oils.

4.3 Fuel level loading and check.

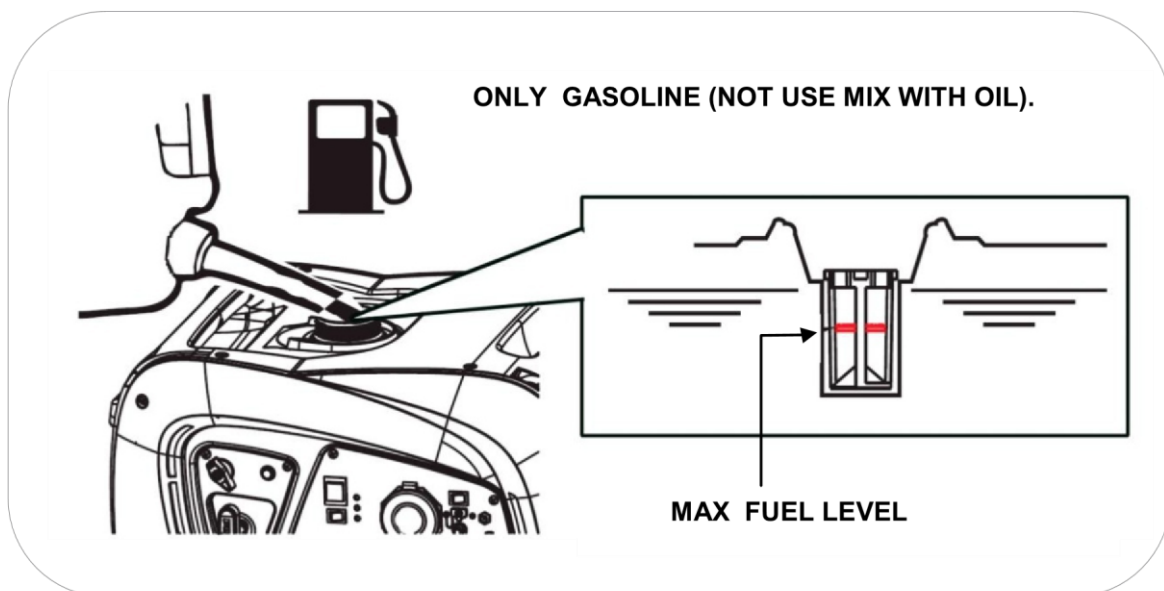
 **NOTE:** Use only unleaded gasoline (86 octane or higher).


 **NOTE:** Never use expired or contaminated gasoline. Never use oil/gasoline blends.


 **NOTE:** Avoid dirt and water entering the fuel tank.


 **NOTE:** Do not use gasoline blends with ethanol or methanol or the engine could be seriously damaged.


Remove the fuel cap turning counter clockwise, refill the gasoline without reaching the maximum level in the figure below. The reservoir's approximate capacity is 6.8 Liters.




 **DANGER:** Gasoline is extremely explosive and flammable. It is completely forbidden to smoke, make fire or generate any type of flame at the time of refueling or in the place where the fuel is stored.

 **WARNING:** Keep the fuel out of the reach of children.

 **WARNING:** Avoid fuel spillage when refueling. (Clean possible spillage before starting up the engine again)

 **WARNING:** Do not overfill the fuel tank (do not surpass the maximum level). After refueling, make sure that the tank plug is closed and secured.

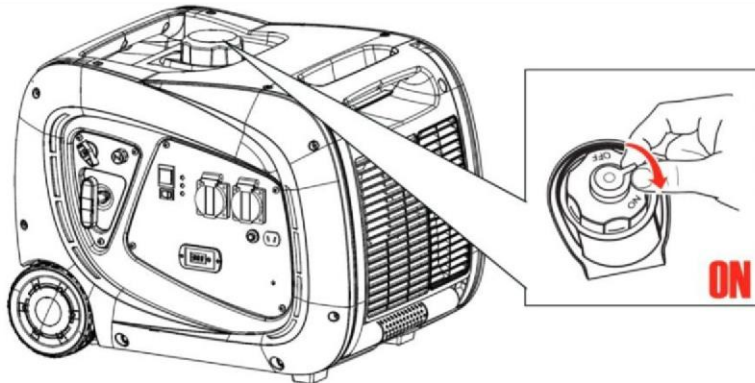
 **CAUTION:** Avoid skin contact and do not inhale in the fuel vapors.

5 Generator startup.

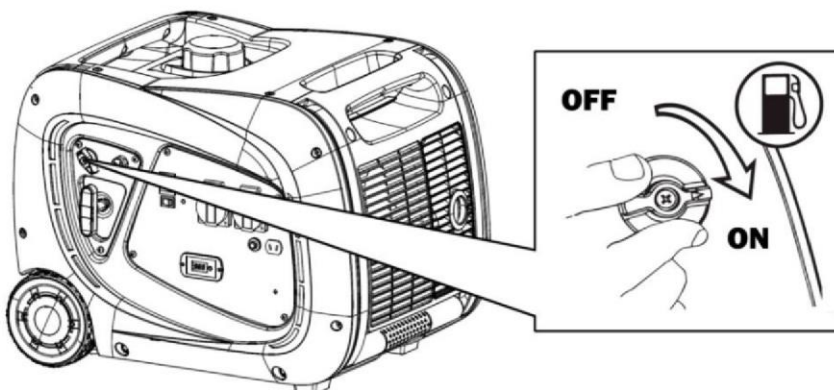
⊙ **CAUTION:** Always before starting up the engine, make sure that there are no devices plugged into the generator.

⊙ **CAUTION:** Check the oil level is correct before every use.

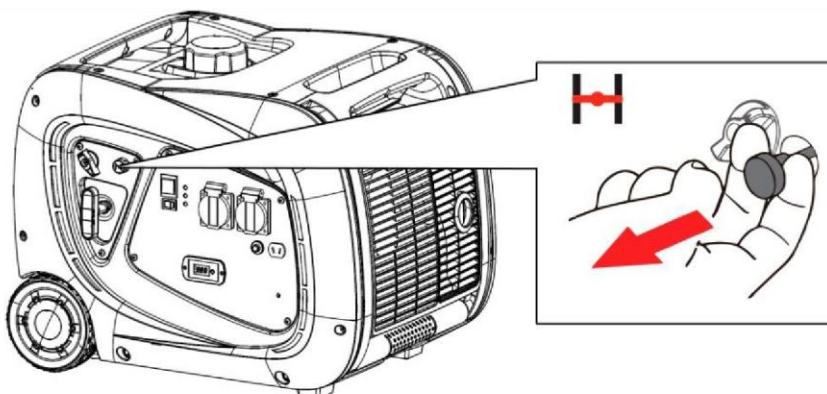
1 Turn the fuel vent of fuel cap to "ON":



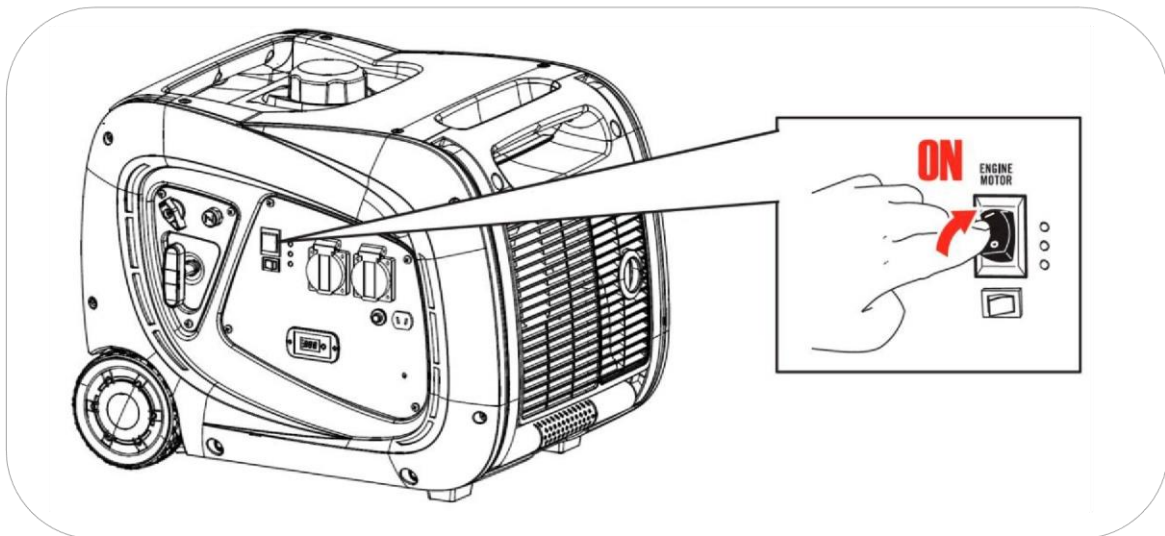
2 Turn the fuel valve to Open, "ON".



3 Pull out the choke to closed air position; this position enriches the gasoline mix and makes startup easier.



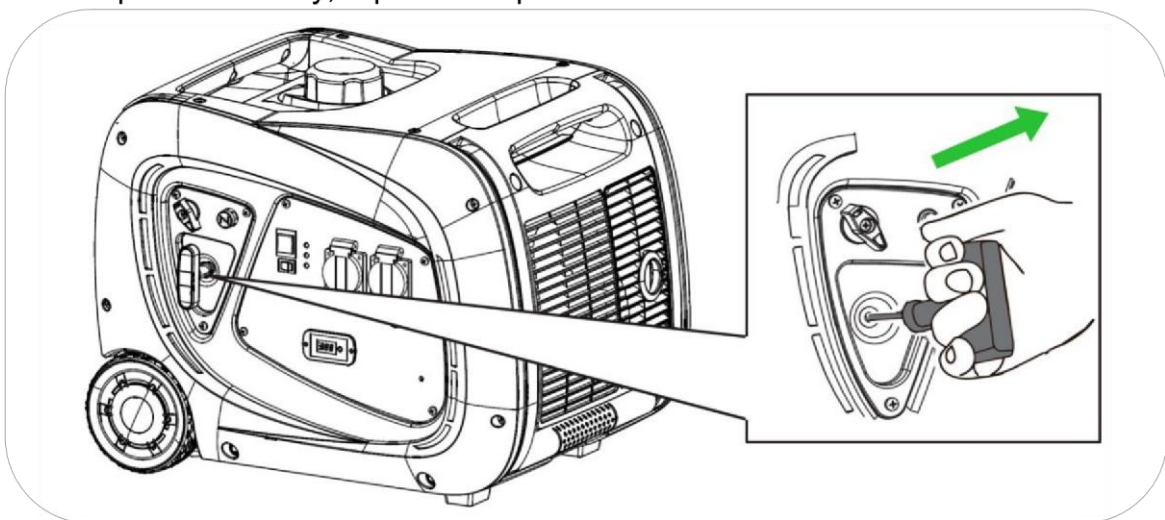
4 Place the engine S.W in "ON" position.



5 Pull the startup handle slowly and until the end to calculate the maximum length of the rope (and do not exceed it later when pulling vigorously), then allow the rope to coil back.

Pull softly again until you notice slight resistance, now allow the rope to coil back and pull vigorously to start up the engine.

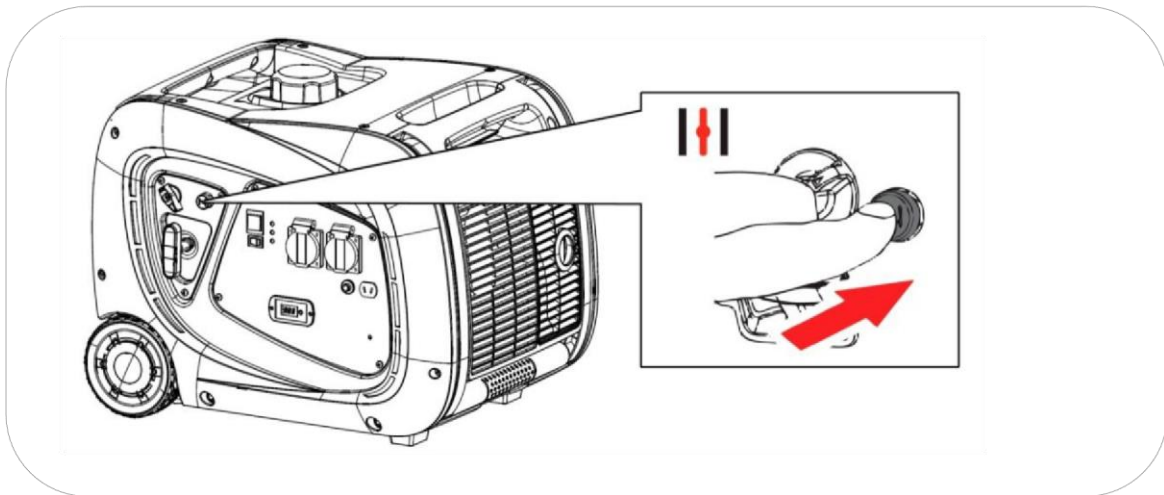
Allow the rope to coil slowly without hitting the equipment. If you were unable to start up in the first try, repeat the operation.



NOTE: If you reach the end of the rope length abruptly you could damage the handle or rope spring and it wouldn't be covered by warranty.

NOTE: Do not let go of the handle after pulling to prevent the handle from hitting the machine. Move your hand along with the handle until it has coiled back completely.

6 Once the engine is started wait for a few seconds and then push the choke to air intake open (as picture). The engine will begin working stably and is ready to have equipment plugged in.



NOTE: If the generator stops and doesn't start again, first verify the oil level.

NOTE: Do not leave the choke in an intermediate position, the blend would be too rich and the engine would not work properly.

6 Carburetor alteration for high altitude operation

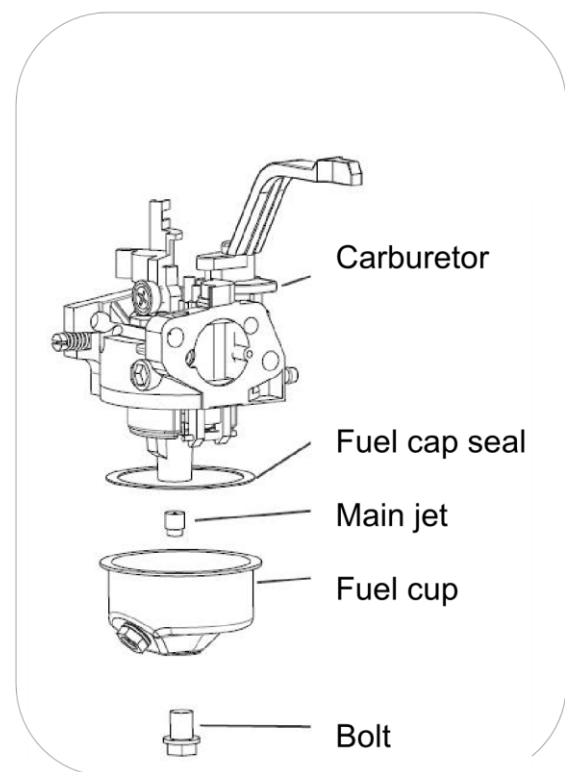
In high altitudes, the normal air-fuel blend in the carburetor would be too rich. Performance would decrease and fuel consumption would increase. A very rich blend would also dirty the spark plug and make startup difficult.

If the generator is always running in an altitude above 900 meters, get in touch with an authorized service to modify the carburetor (this service is not warranty, therefore it would be quoted).

The generator's output power of 230V will vary depending on the altitude and other elements such as humidity and temperature, see chapter on environmental correction of this manual.

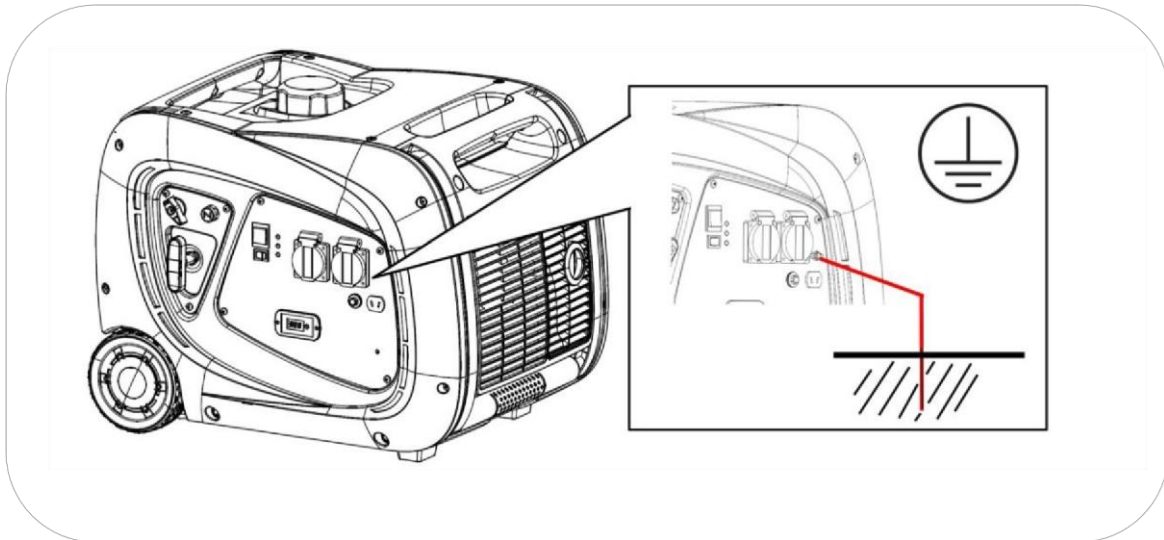
NOTE: If the carburetor has been modified to operate at great altitude, the air-fuel blend would be too poor to work in low altitudes. Operation at low altitudes may cause the engine to overheat and be seriously damaged. It would be necessary to return the carburetor to its original state.

Note: The fuel cup seal maybe damaged during removal, we suggest replace together main jet.



7 Generator usage:

⚠ WARNING: To make sure the generator to ground the generator (grounding rod). If you have questions, check with your electrician.



⚠ WARNING: Never connect the 230 voltage output of the equipment to a building or house (not even during a power outage). The return of the main network would clash with the generator's voltage and cause serious damage to the equipment or even a fire.


⚠ WARNING: Do not connect in parallel with the generators, both will be damaged and will be a fire hazard.

🗨 NOTE: Do not connect an extension to the exhaust.


🗨 NOTE: If a cable extension is needed, make sure you use a good quality rubber extension and with appropriate section. Check with your electrician.


🗨 NOTE: Devices that use motors such as compressors, pumps, saws, grinder, etc. require up to 3 times more power for startup. For example, a 500 W water pump would need a 1500 W generator for startup. Verify that charges upon connection do not exceed the maximum power of the group according to this guideline.

7.1 Use of the 12V DC outlet.

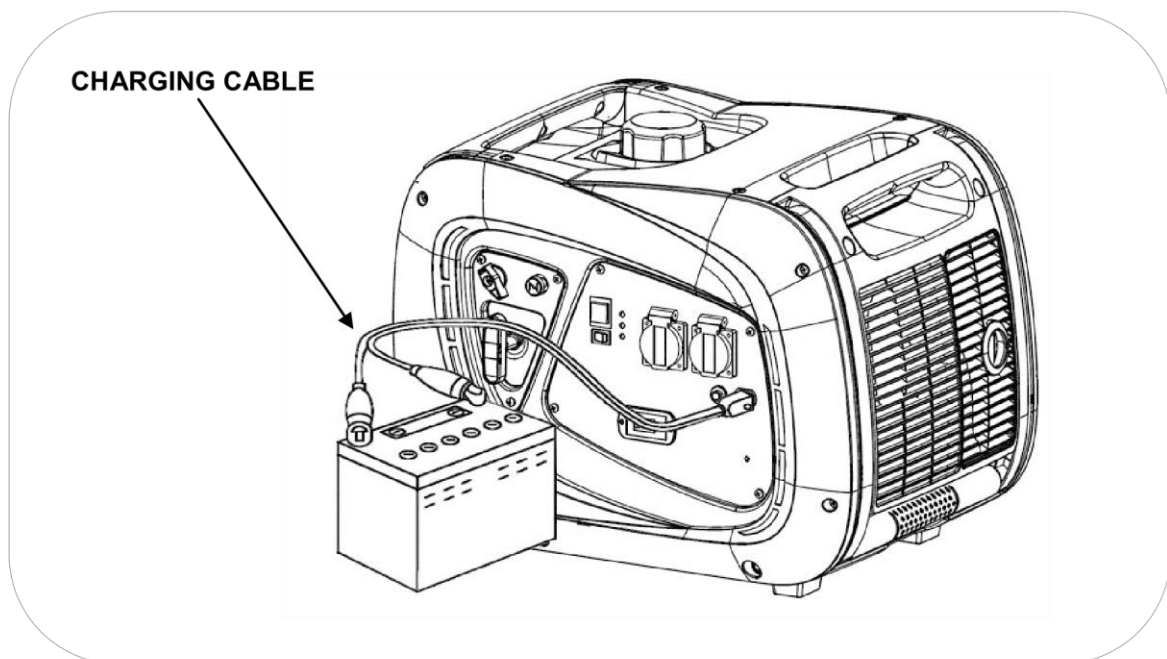
 **NOTE:** The 12V direct current outlet is only valid for 12V battery charging. Do not connect 12V electrical or electronic devices to the generator.


Before battery charging check the safety-use instruction of the battery.


 **NOTE:** For use with 12V direct current outlet, always keep the ECO mode deactivated (OFF Position).


 **NOTE:** You can use the 12V direct current outlet and the 230V current at the same time, but keep the ECO mode deactivated (OFF Position) at all times.

- 1 First connect the clamps in the battery terminals.
- 2 Then connect the charging cable to the generator panel.
- 3 Start the generator.



 **CAUTION:** Connect the red cable (+) to the red terminal (+) of the battery and the black cable (-) to the negative (-) of the battery.

 **CAUTION:** In order to avoid sparks in the battery terminals, first connect the charging cable to the battery terminals and then plug to the generator.

 **NOTE:** Do not charge a battery connected to a vehicle. First disconnect the vehicle's terminals and then connect the charging cable of the generator.

Disconnect the battery charge:

- 1 Stop the generator.
- 2 Disconnect the negative terminal (-) black cable of the battery.
- 3 Disconnect the positive terminal (+) red cable of the battery.

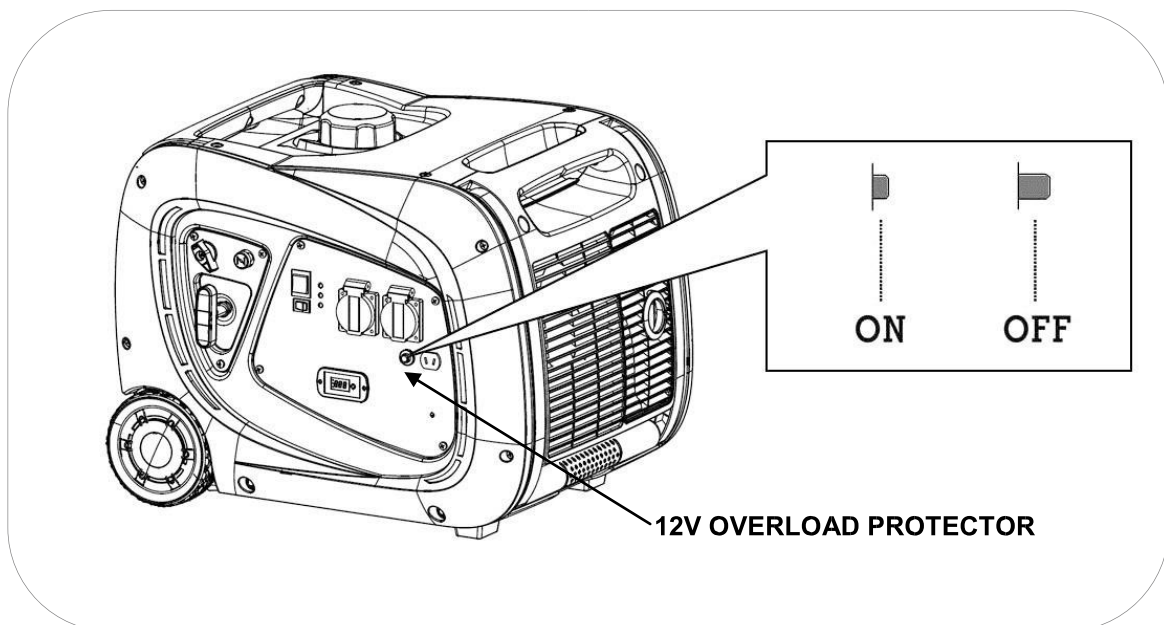
⊘ WARNING: The battery may release explosive gases. Keep the battery away from sparks/fire. Charge the battery in ventilated conditions.

⊙ CAUTION: The battery electrolyte contains sulfuric acid which will cause serious burns to the skin and eyes. Therefore you should wear protective close and a mask.

If the battery electrolyte gets into the eyes, rinse with warm water during 15 minutes at least and call a doctor immediately.

⊙ CAUTION: Keep children away.

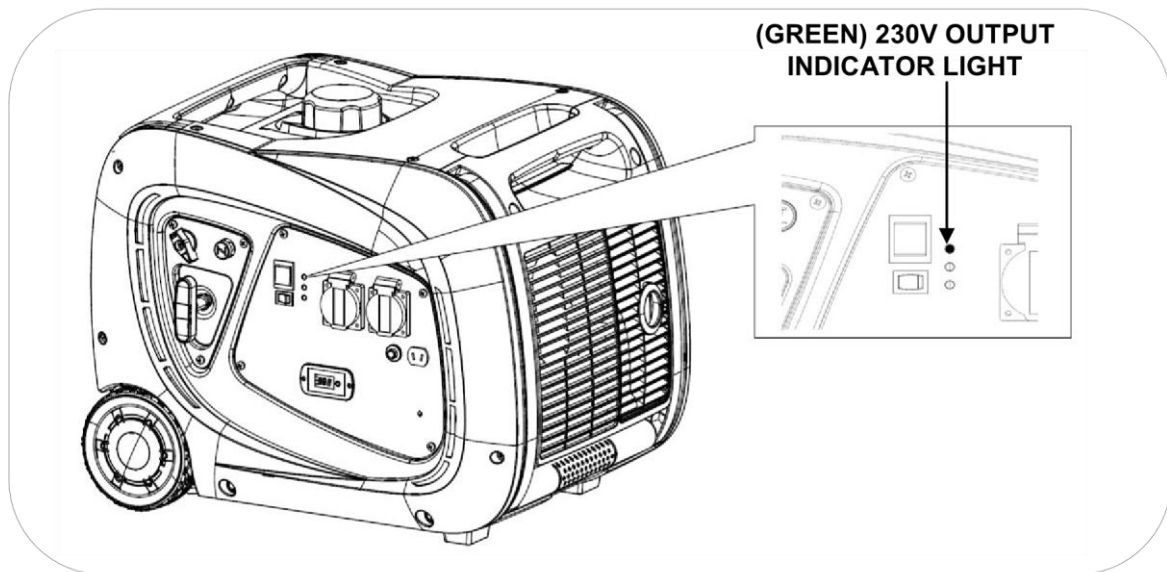
If the 12V DC outlet has a short circuit, the safety protector will trip going to the "OFF" position and the supply will shut down. First remove the charge, wait a few minutes and then press the protector to reassemble the current output, changing the protector to "ON".



7.2 Use of the 230V AC outlet.

NOTE: Check that no devices are plugged into the generator; unplug everything before starting the engine. (Using remote control start is not necessary).

Start up the engine and verify that the 230V current output light indicator is on (green). Now you can plug your devices.



In order to improve the engine operation and extend the life of the machine, we recommend a "break-in period" of 20 hours without forcing the generator, with charges that do not exceed 60% of the equipment's maximum output (1800w).

⚠ WARNING: Confirm that all electrical devices are in good work conditions before plugging them to the generator.

If an electrical device is not working properly, is slow or stops suddenly, turn off the engine immediately and unplug the device.

7.3 Overload indicator.

In normal use the output indicator (green) is ON.


If the power outputs reach the rated power (about 3000W) the overload indicator light flash showing we are near to limit of power.

If the power outputs reach and keep the max power for some seconds, power output will be OFF to avoid damage in generator.

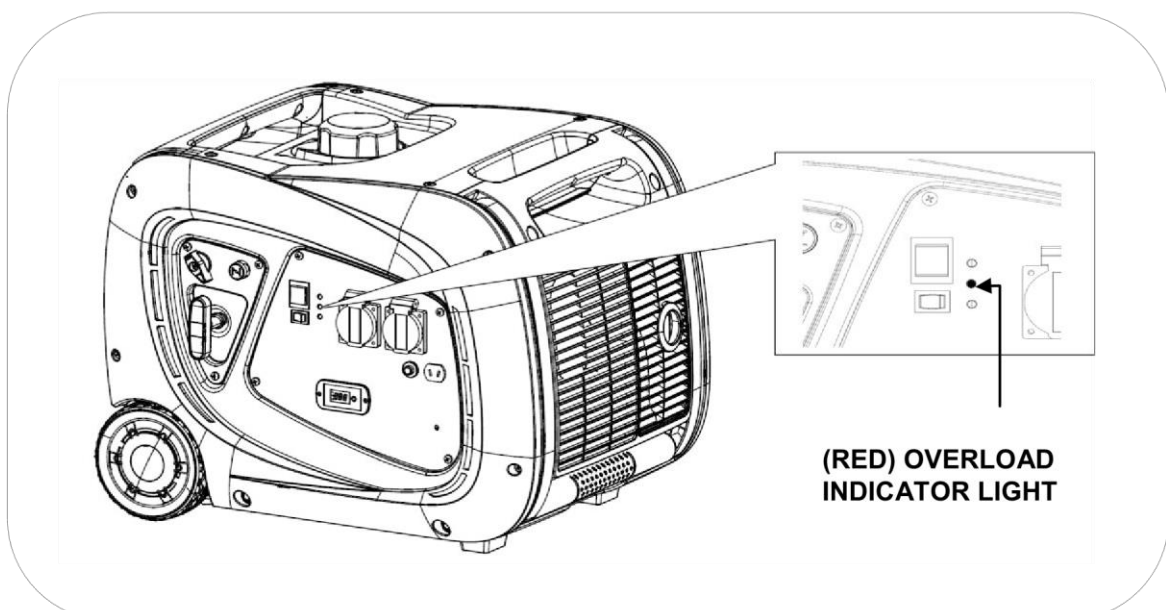
To reset output power follows the next steps:

- 1 First unplug all devices connect in generator.
- 2 Stop generators, after some seconds restart again.
- 3 Wait 2 minutes and then connect again the device in generator.

If the overload protector trips again after connecting the devices, do not plug the device. The plugged device may have a problem or exceeds the generator's power.

 **NOTE:** Once you verify that the generator cannot support or accept the load, please do not insist. **Regular overloads may affect the group despite all of its advanced protections.**

Remember that many types of equipment need extra consumption for startup. Equipment's that use motors such as compressors, water pumps, circular saws, grinders or others similar consume up to 3 times more power for startup. For example, a 500W water pump will need 1500W to start up; therefore we would need a generator no less than 1500W.



Upon starting the engine it is completely normal for the (red) overload indicator light and the (green) output indicator light to turn on at the same time for a few moments. The overload indicator light will shut down after a few moments and only the 230V current output will remain on.

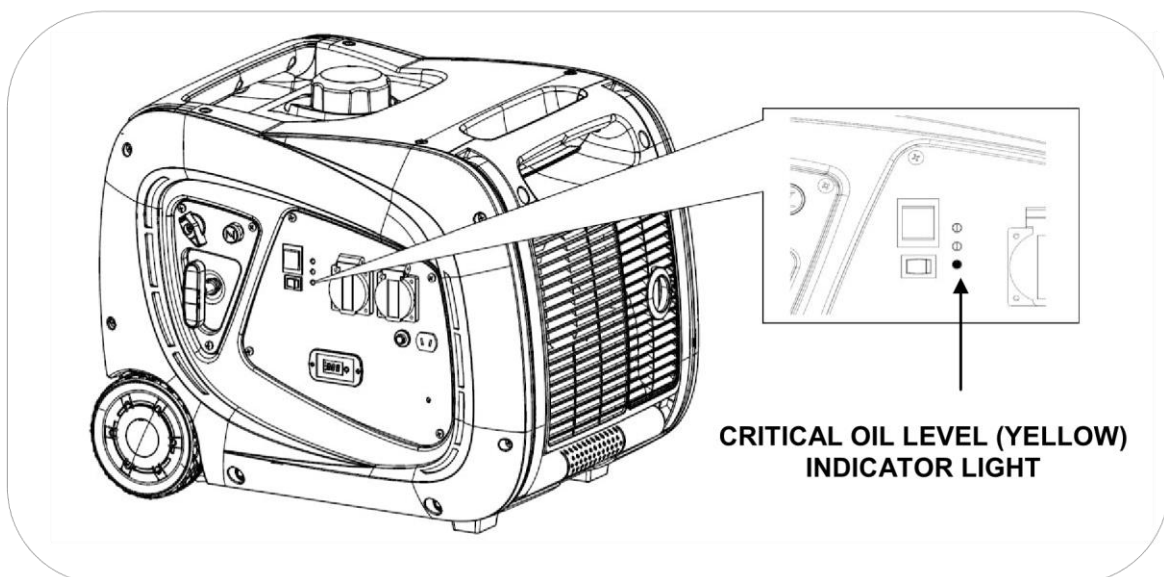
7.4 Oil alarm system.

The oil alarm system is designed to avoid engine damaged caused by an insufficient amount of oil in the sump. Before the oil level in the engine sump is below the safety limit, the oil alert system will shut the engine down automatically.

The oil pilot will turn on during a few moments but it will turn off at the same time as the engine. When attempting to start up the engine again it doesn't work and the yellow pilot indicating low oil flashes at the same time we pull the starter rope. In this cases check the oil level in the engines and refill.

NOTE: Protection due to lack of oil must be considered extreme safety. It is the sole responsibility of the user to check the oil level before each use as indicated in the manual. It is unlikely for this safety to fail, but if it does, damage in the image would be very significant. The user would be solely responsible for lack of maintenance and repair would be excluded from the warranty.

Remember that it is a safety alarm in case of critical level, it is not a low oil level indicator.

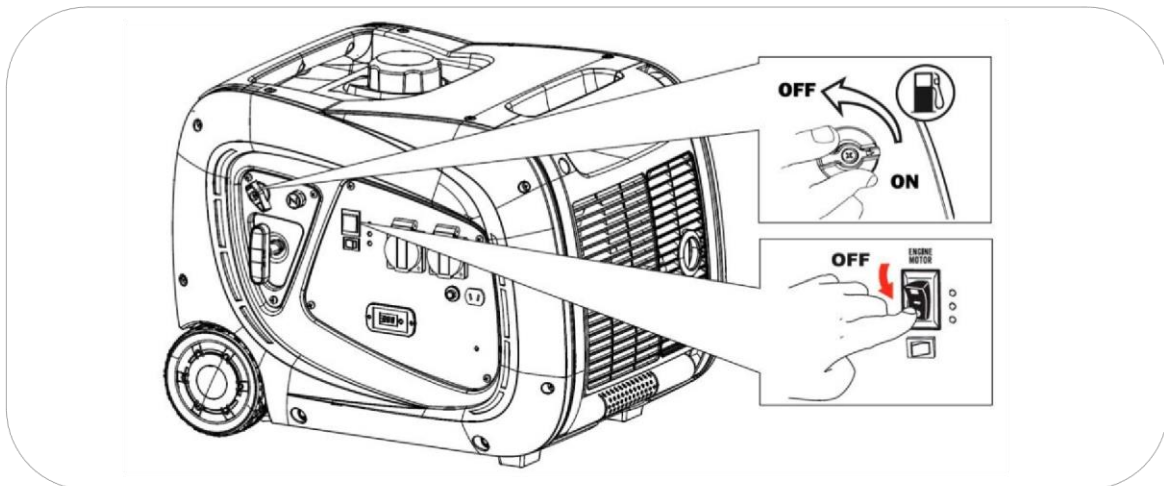


8. Stopping the engine

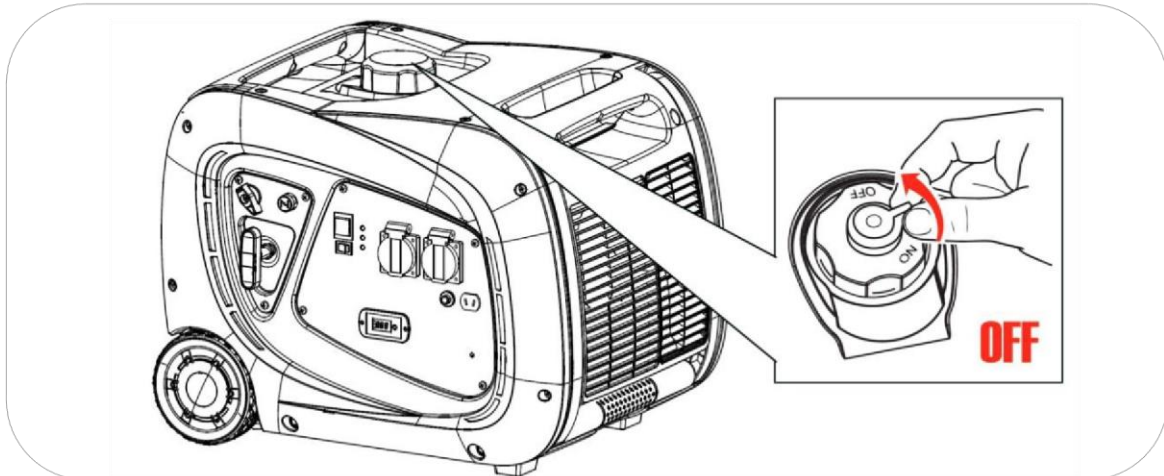
To stop the engine in case of an **emergency**, turn the engine switch off by turning to the "OFF" position.

Normal engine shutdown:

- 1 Unplug the electrical devices plugged to the generator.
- 2 Turn the engine switch to OFF.
- 3 Turn the gasoline valve to the "OFF" position.



- 4 Turn the fuel vent of fuel cap to "OFF":



Shutdown using remote control mode:

Push the stop button in controller, the generator stop.

If generator not be used during this working day, follow the steps 1-2-3-4 from this page to finish work and storage.

9. Maintenance:

The purpose of the maintenance program is to keep the generator in good conditions and to reach the maximum life for the equipment.



DANGER: Stop the engine before performing any maintenance.

If you need to start up the engine for any type of check, make sure that the area is well ventilated. Exhaust gases contain poisonous carbon monoxide.



NOTE: Use original parts or proven quality components for maintenance.

Maintenance scheduling.

SERVICE	MAINTENANCE PERIODS
Engine oil	Check the level before each use. First oil change after 20 hours of break-in. Subsequent oil changes every 100 hours of use.
Air filter	Check and clean every 50 hours. Replace when it begins to wear out.
Spark plug	Clean and adjust the electrode every 50 hours. Replace every 300hours or before if any damage is noticed.
Exhaust spark arrestor mesh	Dismount and clean every 100 hours
Engine valves*	Adjust every 500 hours*
Combustion chamber*	Clean every 500 hours*
Fuel filter and tank*	Clean every 500 hours*
Fuel hose*	Replace every two years or sooner if any wear is noticed*



NOTE: Perform maintenance more frequently when the equipment is used in places with a lot of dust or very high temperatures.



NOTE: Services marked with an asterisk must be performed by a qualified service center, during the warranty period of services approved by SG GROUP.



NOTE: Lack of compliance with maintenance services will shorten the life of the generator and produce malfunctions that will not be covered by the warranty. Warranty will not be respected if the detailed maintenance plan is not observed, except in case of authorization to skip a service by SG GROUP or an authorized service.

9.

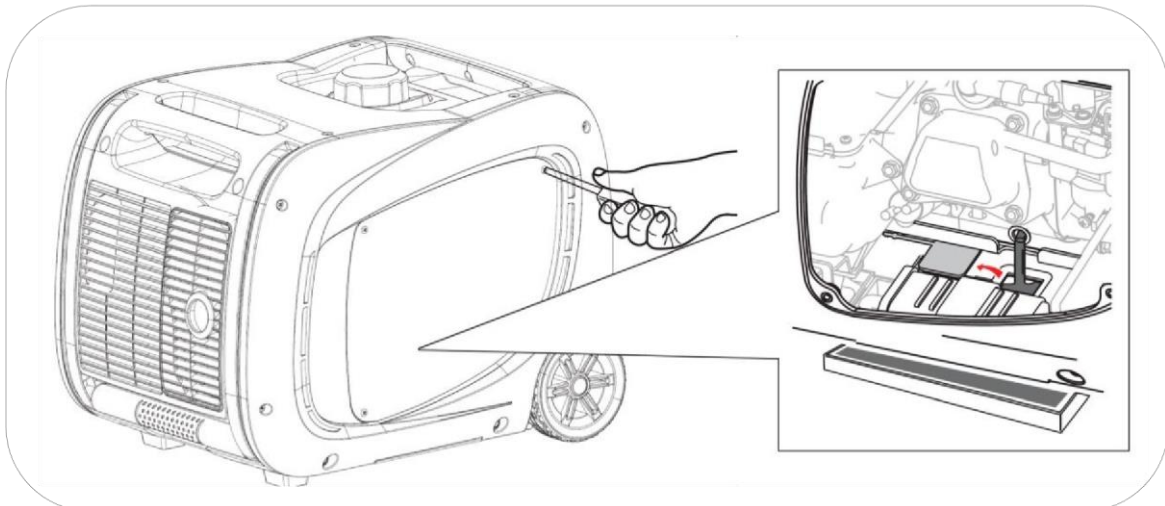
1 Oil change.

1 Keep the engine running during 5 to 10 minutes for the oil to reach some temperature and reduce its viscosity (more liquid). This way it will be easier to extract it completely.

2 Open the maintenance access cover by releasing the closing screw.

3 Open the evacuation covers so the oil may pour through this hole out of the equipment and place a tray under the equipment to collect the oil.

4 Unscrew the oil draining screw by turning counter clockwise and allow all the spent oil to pour out.



5 Once all of the oil has been extracted, place the evacuation cover again, as well as the drain plug. Clean any oil spills.


6 Open the oil plug and refill with the recommended oil (see 4.2 point of this manual).


8 After changing the oil, wash your hands with soap.


9.

IMPORTANT: In order to comply with environmental requirements, the used oil must be placed in a sealed container and taken to the service station for recycling. Do not discard the trash and do not spill on the floor.

9.2 Air filter maintenance.

 **NOTE:** A dirty air filter will restrict the air flow in the carburetor, which will cause incorrect combustion resulting in serious problems for the engine. Clean the filter regularly according to the maintenance plan in this manual and with more frequency in dusty areas.

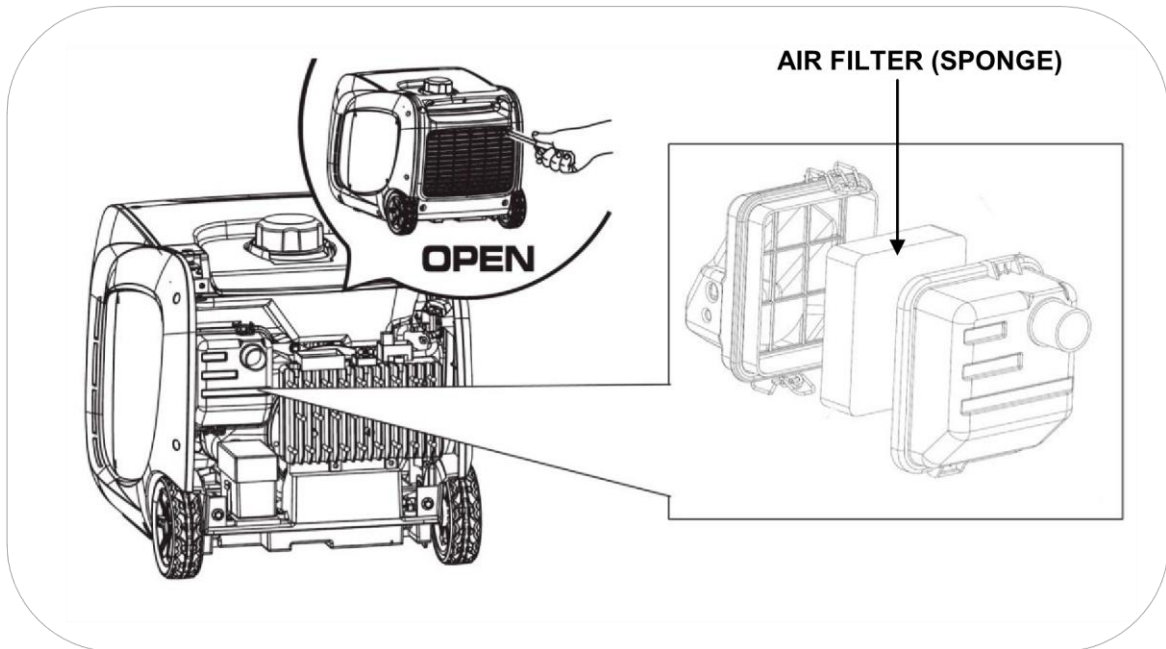
 **NOTE:** Never operate the generator without the air filter, otherwise this will cause a fast engine abrasion.

 **WARNING:** Do not use gasoline or solvents for low ignition point when cleaning the filter. They are flammable and explosive under certain conditions.

9.

1 Loosen the screws in the maintenance cover front and remove the cover

2 Loosen the air filter closing flange and open the cover to extract the air filter (sponge), clean with a water/soap mix and let dry totally.



3 Wet with same oil type as used in engine, then drain completely it.

4 Install the air filter back in the generator, close the filter cap and the generator's maintenance cover.

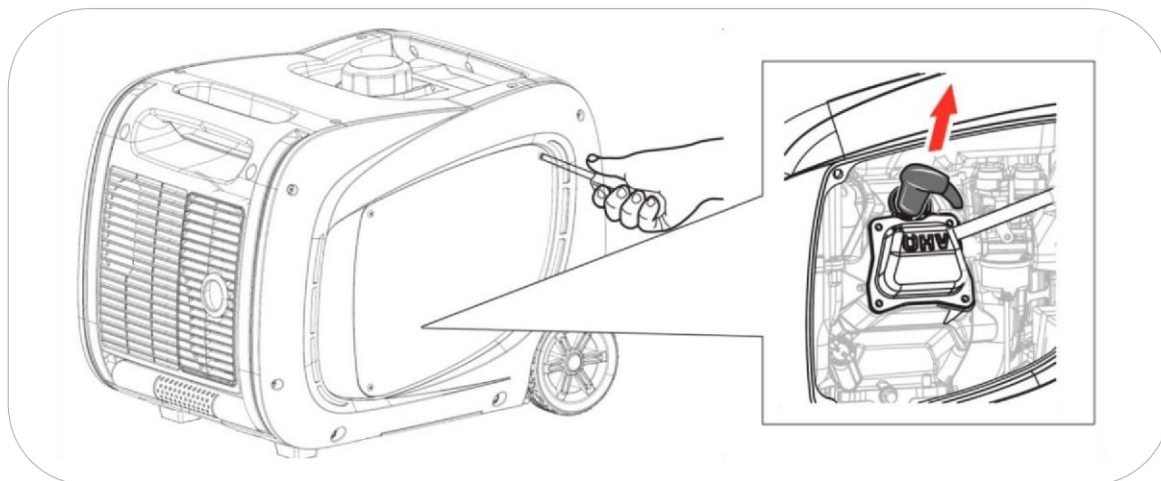
NOTE: If air filter sponge is not totally drain, the oil excessive can produce an abnormal combustion in engine due to lack of air intake.

3 Spark plug maintenance.

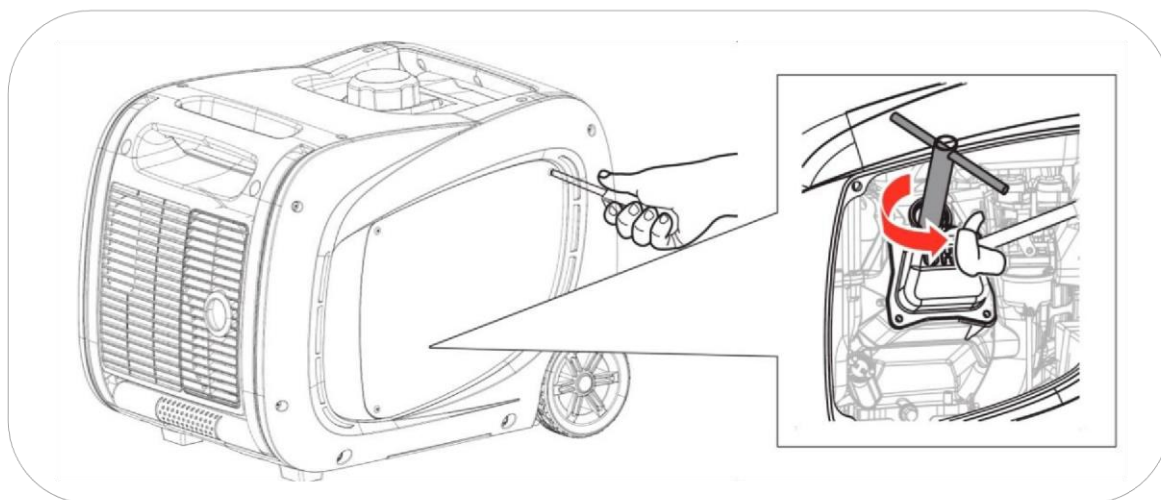
9.

Spark plug recommendation: **TORCH F6RTC**, **NGK BPR6ES**, **CHAMPION RN9YC**, **DENSO W20EPR-U**.

- 1 Remove the screws and open the maintenance cover.
- 2 Unplug the spark plug pipette or cap by pulling outward.

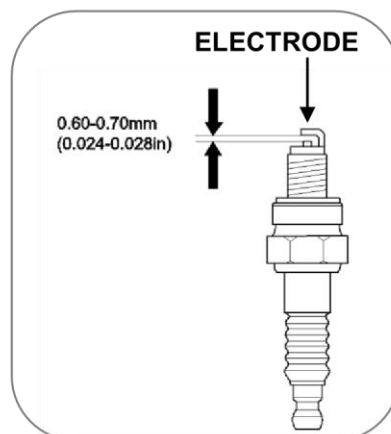


- 2 Using the spark plug spanner, extract the spark plug by unscrewing it from the engine (turn counter clockwise)



4 Inspect the spark plug visually. Replace with a new one if the insulator is cracked or chipped. Clean the electrode with a fine wire brush to clean the filth deposits.


5 Measure the electrode distance with a gauge. Normal value 0.6 - 0.7 mm. Adjust the opening carefully if the value is not correct.



6 Place the spark plug again carefully, start screwing with your hand to avoid the threads. Once the spark plug is threaded to the end of the thread, make the final tightening:

- New spark plugs, 1/2 turn with the spark plug spanner.
- 1/8 to 1/4 turn used spark plugs with spark plug spanner.

7 Install the spark plug pipette or cap and close the spark plug access cover, fixing it with the screw.

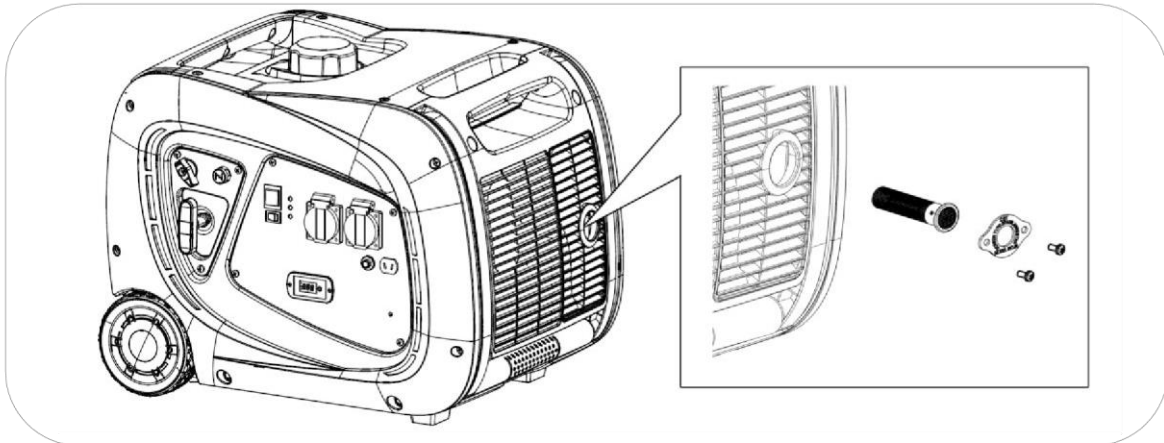
 **NOTE:** The spark plug must be tightened firmly. A loose spark plug may overheat and even damage the engine. Similarly, overtightening may damage the spark plug and, worse, the engine cylinder head thread.

9.4 Spark arrester maintenance.

The spark arrester must be cleaned every 100 hours of use.

⊙ **CAUTION:** Perform this service once the engine and exhaust are completely cold.

1 Remove all 2 screws and remove the spark arrester.



2 Remove the carbon deposits in the spark arrester using a brush. If the spark arrester is too worn out, replace it.



3 Install the spark arrester again.

10. Transportation and storage:

In order to avoid fuel spills during transportation or temporary storage the engine switch and aerator in the fuel cover must be turned to the "OFF" position.

10.1 Generator usage.



DANGER: Never use the generator inside the transportation vehicle. The generator should be used only in good ventilation conditions.



DANGER: Do not leave your vehicle parked in the sun for too long while the generator is inside. An excessive rise in temperatures could evaporate the gasoline and form an explosive environment in the vehicle.



WARNING: Do not overfill the tank if the equipment is going to be transported.



CAUTION: Empty the fuel tank when the generator is transported on a bumpy road or cross country.

10.2 Generator storage.

Gasoline loses its properties if stagnant for too long and it leaves residues that may clog the carburetor, complicating or impeding the startup after a temporary storage. If the generator will be not using temporarily follow this instructions:

Infrequent service during year.

If the unit is used infrequently, difficult starting may result. To eliminate hard starting, follow these instructions:

1. Run the generator at least 30 minutes every month.
2. When you go to finish the use, first disconnect loads, then close the fuel shut-off valve and allow the unit to run until the engine stops.
3. Move the engine switch to the "OFF" position.

Long term storage

Long periods of inactivity (from 2 months onwards) can make difficult or impossible to start up, or also producing an unstable run of engine. To avoid these problems:

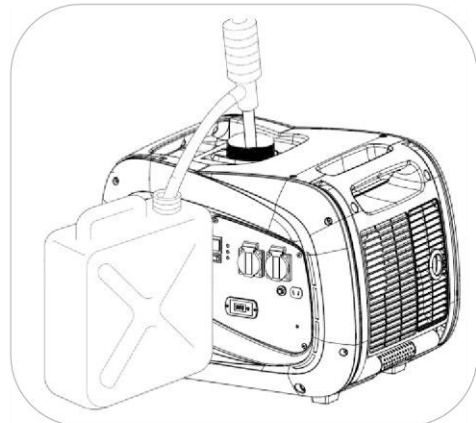
1 Add a properly formulated commercially name fuel stabilizer to the fuel tank according to the manufacturer's instructions to delay the degradation of the gasoline.

2 Start the generator to circulate treated fuel into fuel lines and carburetor before shutdown.

3 With the help of a vacuum siphon extract the gasoline from the fuel tank and store it in an appropriate container.

NOTE: Do not use regular plastic bottles, some plastics partially decompose when in contact with the gasoline and contaminate it. This contaminated gasoline may damage an engine if reused.

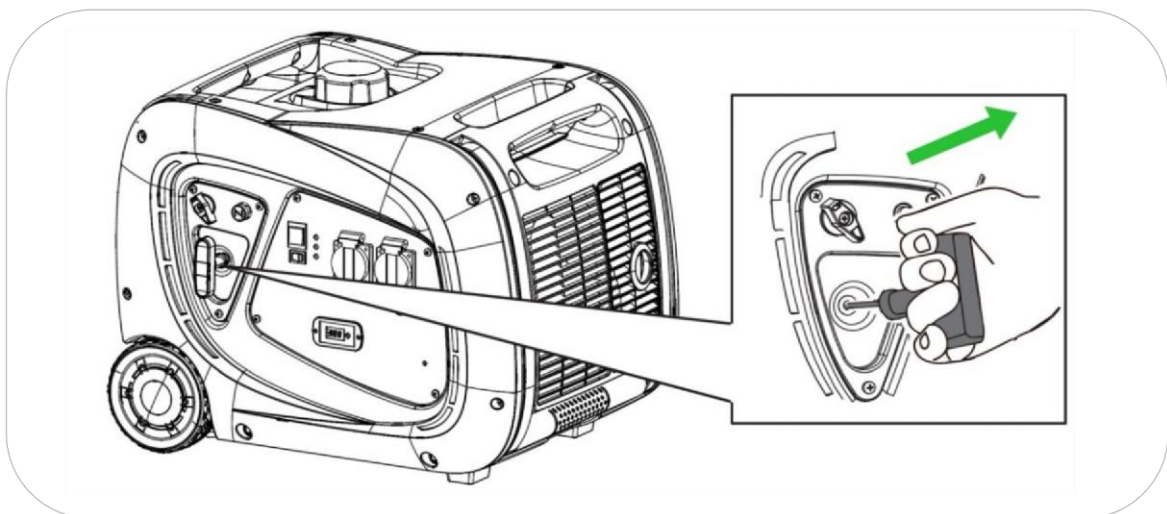
DANGER: Gasoline is explosive and flammable. Never smoke or generate any type of flame or flash while handling gasoline.



4 Start and run the generator until stops from lack of fuel. This will dry out all remaining fuel in tank, fuel lines and carburetor.

5 Change oil of engine.


6 Remove spark plug and pour about one teaspoon of engine oil through the spark plug hole, pull the recoil starter several times to distribute the oil for lubricating the cylinder. Reattach the spark plug.





7 Pull recoil slowly until resistance is felt. This will close the valves so moisture cannot enter engine cylinder. Gently release recoil starter.

8 Cover the unit and store in a clean, dry place out of direct sunlight.

Variable: If it is not practical to empty the fuel tank and the unit is to be stored for some time, use a commercially available fuel stabilizer added to the gasoline to increase the life of the gasoline. Run the unit for 5-10 minutes, turn off the fuel valve and allow to run until engine stops from lack of fuel.

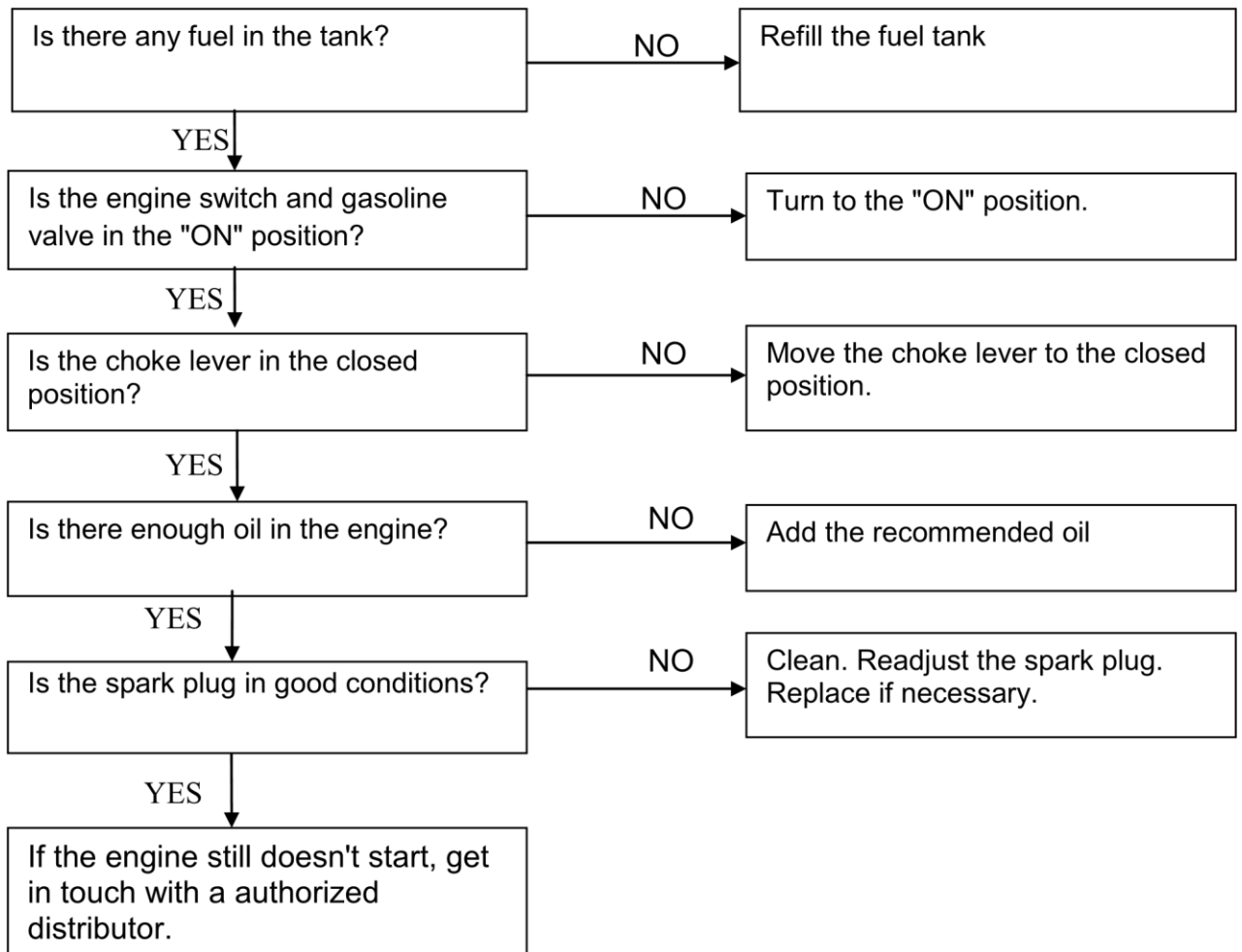
 Note: We suggest the use of famous brands for the stabilizer, the use of an improper additive, incorrect or of doubtful quality can generate failures or breakdowns that will be totally excluded from the warranty.

 Note: The use of poor or past gasoline may cause generator failure. This type of damage due to the bad condition of the fuel, are totally excluded from the warranty system.

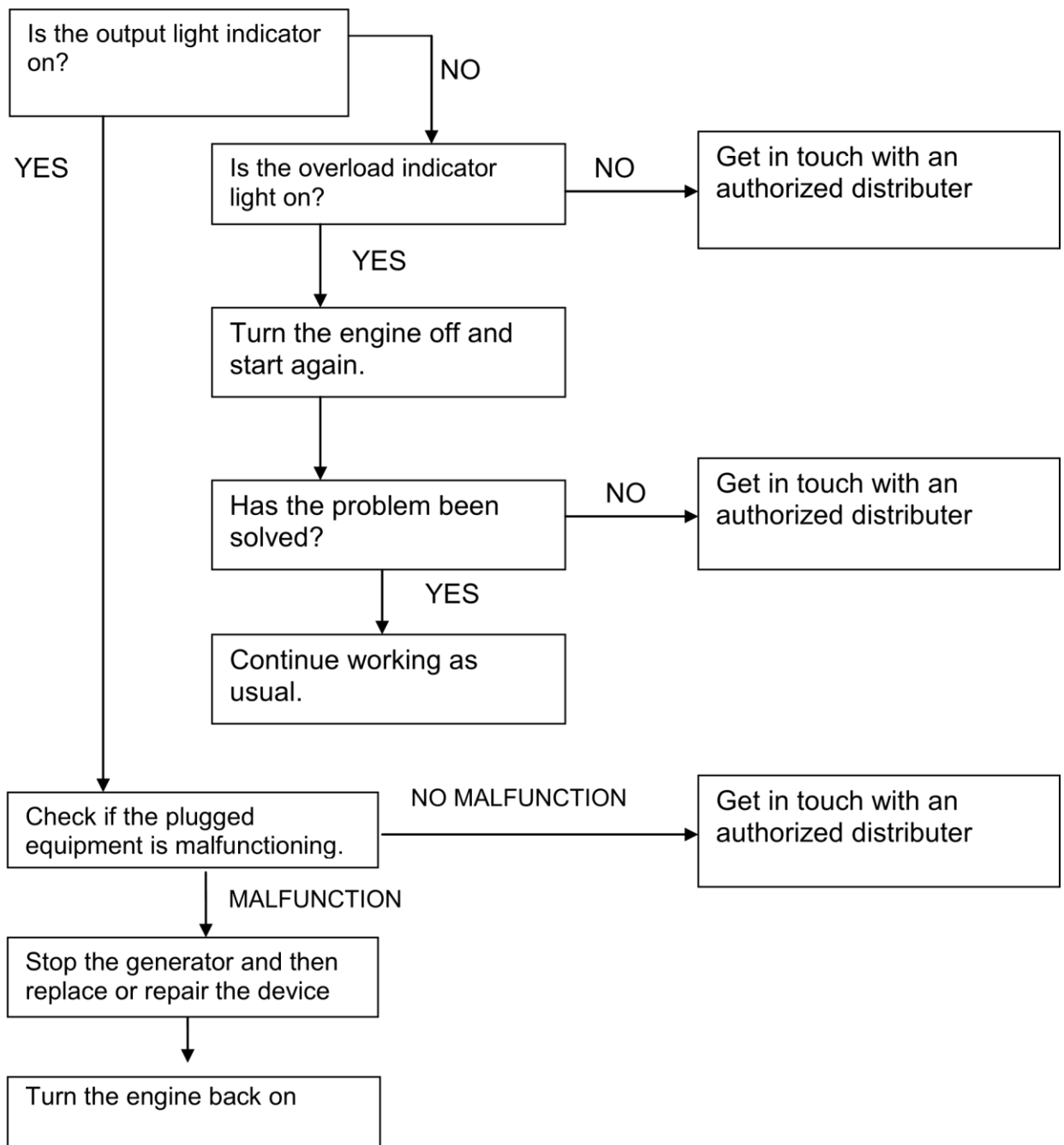
 Note: The stabilizer extends the life of the gasoline temporarily. After the deadline indicated by the manufacturer, the gasoline cannot be used.

11. Troubleshooting:

- If you are unable to start up the engine:



- The connected 230V equipments are not working:



12. Technical information.

Technical characteristics.

Model	3200W E.START
Regulation – Voltage – Frequency	Inverter – 230V – 50Hz
Voltage distortion - harmonics	1% - 3%
Overload protection	Yes
Nominal AC - maximum	3000w – 3200w
Cubic capacity	171cc
Engine type	4-stroke OHV, air forced cooling.
Sound level at 7 m L _{pa} (Idle - 75%)	60dB - 69dB
Max. pressure guaranteed CE-LwA pursuant to 2000/14/EC	92dB
Startup type	Manual-Electric
Fuel tank capacity	6.8L
Hourly consumption - Autonomy at 25% 50% 75% loads	(0.70l/h 9h) (1l/h – 7h) (1.3l/h – 5h)
Oil capacity – Type of oil	0.65L 10W30 – 10W40
Transportation kit	Yes
Dimensions L x W x H (cm)	59 x 45 x 45
Weight (Kg)	42.5

Noise level measurements:

- ✓ L_{WA} shows the guaranteed sound power tested by Directive 2000/14/CE.
- ✓ The noise level at 7 m is the average sound level (l_{pA}) obtained in four directions and 7 meters from the generator.

NOTE: The noise level may vary noticeably in different environments.

Environmental correction

Power specifications indicated are with the following values:

Altitude: 0m Ambient temperature: 25° Relative humidity: 30%

Factor “A” of environmental correction (Temperature and altitude):

Altitude (meters)	Ambient temperature (degrees Celsius)				
	25	30	35	40	45
0	1	0.98	0.96	0.93	0.90
500	0.93	0.91	0.89	0.87	0.84
1000	0.87	0.85	0.82	0.80	0.78
2000	0.75	0.73	0.71	0.69	0.66
3000	0.64	0.62	0.6	0.58	0.56
4000	0.54	0.52	0.5	0.48	0.46

Factor “B” of environmental correction (humidity):

- ✓ Relative humidity 60 % correction factor C - 0.01
- ✓ Relative humidity 80% correction factor C - 0,02
- ✓ Relative humidity 90% correction factor C - 0,03
- ✓ Relative humidity 100% correction factor C - 0,04

Example of power calculation according to atmospheric conditions.

3KW generator, altitude: 1000m, Temperature: 35°C, Humidity: 80%

$$\begin{array}{ccccccc} \text{Power rating} & \times & (\text{Factor A} - \text{factor B}) & = & \text{Actual Power} \\ \downarrow & & \downarrow & & \downarrow \\ 3 & \times & (0.82 - 0.02) & = & 2.4\text{KW} \end{array}$$

13. Warranty information

You machine has the following warranty:

- ✓ 2 years for machines billed to consumers (individuals).
- ✓ 1 year for the rest (companies, partnerships, cooperatives, autonomous parties...).

The warranty covers any defect the machine may have during the warranty period, whenever the machine's maintenance and care have been appropriate. The warranty will cover any parts needed as well as labor.

The warranty does not cover consumables (filters, batteries, spark plugs) or preventive maintenance operations. Normal wear and tear of the components is not covered either.

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