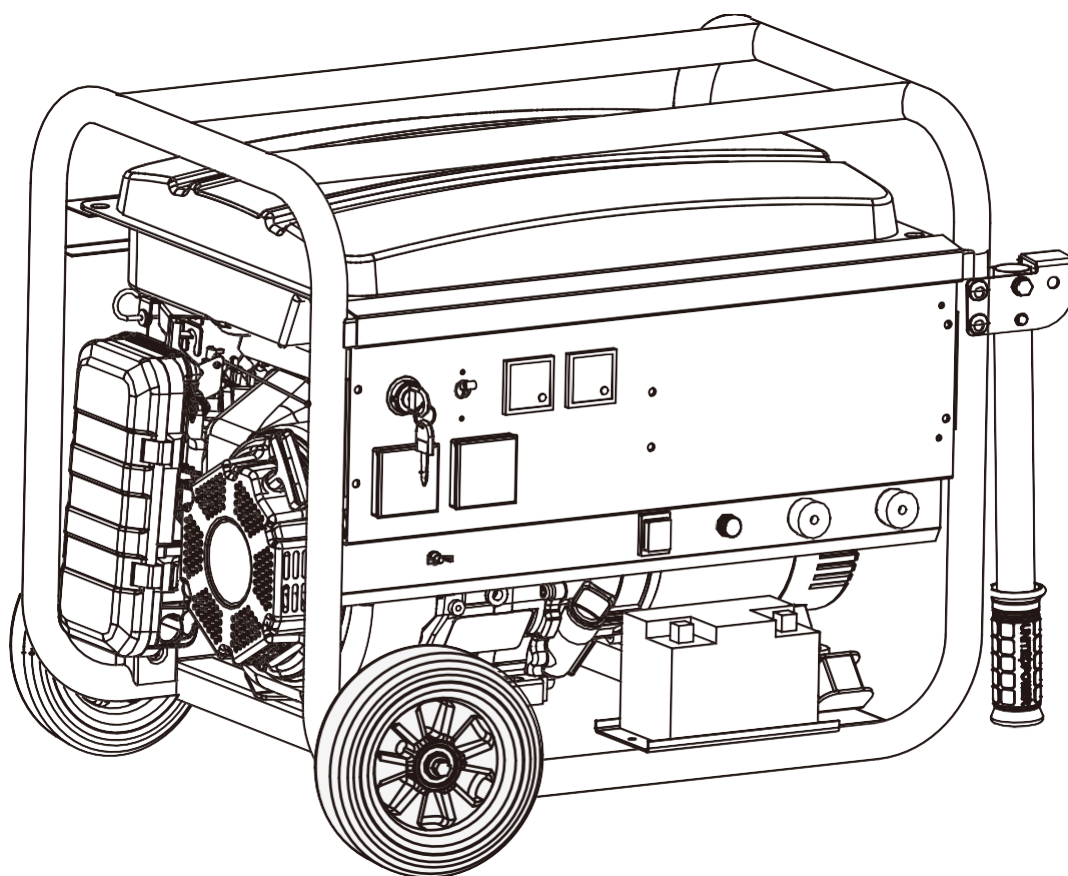


Instructions - User Manual

**GENERATOR - WELDER**

**GCS5800E**



**ALNOVA**<sup>®</sup>

Milesur, SL.  
Rúa Eduardo Pondal, nº 23 - Pol. Ind. Sigüeiro  
15688 - Oroso - A Coruña 981 696465 [www.millasur.com](http://www.millasur.com)



**ANOVA** thanks you for choosing one of our products and guarantees the assistance and cooperation that has always distinguished our brand over time.

This machine is designed to last for many years and to be of great use if used in accordance with the instructions contained in the user manual. We therefore recommend that you read this instruction manual carefully and follow all our recommendations.

For more information or doubts, you can contact us through our web supports such as [www.anovamaquinaria.com](http://www.anovamaquinaria.com).

## **INFORMATION ABOUT THIS MANUAL**

Please pay attention to the information provided in this manual and on the appliance for your safety and that of others.

- This manual contains instructions for use and maintenance.
- Take this manual with you when you go to work with the machine.
- The contents are correct at the time of printing.
- The rights to make changes at any time are reserved without affecting our legal responsibilities.
- This manual is considered an integral part of the product and must remain with it in case of loan or resale.
- Ask your dealer for a new manual in case of loss or damage.

## **READ THIS MANUAL CAREFULLY BEFORE USING THE MACHINE**



To ensure that your machine provides the best results, please read the usage and safety regulations carefully before using it.

### **OTHER WARNINGS:**

Incorrect use could cause damage to the machine or other objects.

The adaptation of the machine to new technical requirements could cause differences between the content of this manual and the purchased product.

Read and follow all instructions in this manual. Failure to follow these instructions could result in personal injury

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**ALNOVA**<sup>®</sup>

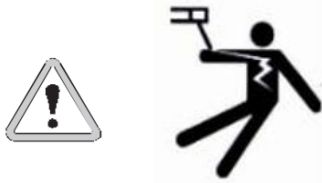
# 1. SAFETY PRECAUTIONS



Protect yourself and others from injury - read, follow and save this manual and safety precautions.

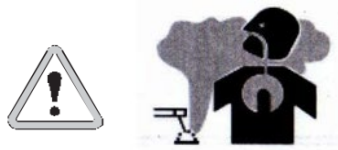


Familiarize yourself with the product and its controls before working on this machine! Wear personal safety equipment that is approved and compliant with applicable regulations! Disconnect input power before installing, servicing, or maintaining equipment!

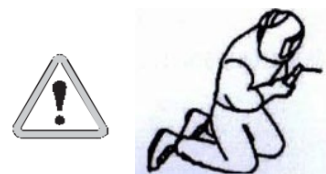


Electric shock can kill! Connect the ground wire according to current regulations and keep the circuit safely isolated. Do not touch live electrical parts with bare hands or while wearing wet gloves and clothing.

Isolate yourself from the workpiece and the ground. Ensure safety at your workplace.



The fumes and gases given off can be dangerous! Keep your head out of the fumes. Do not breathe the fumes generated by the machine in its combustion or in the welding operation. Keep the workplace well ventilated during welding using self-contained ventilation or evacuation equipment.



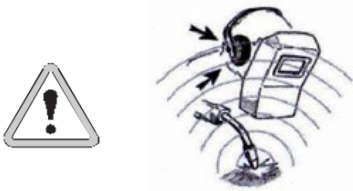
Rays from the welding arc can burn eyes and skin! Wear an approved protective welding helmet/face shield and protective clothing to protect your eyes and body. Wear an approved helmet/face shield or face shields or a barrier to protect other third parties for injuries.

Do not allow third persons to be unprotected by your side while working with the welding machine.



Hot parts can burn and cause serious injury! The work piece and the welding gun become hot and reach

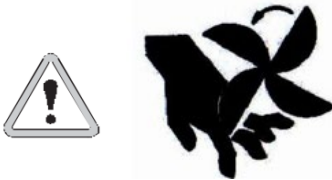
high temperatures during welding. Do not touch these hot parts. Allow a cool down period after welding to allow these parts to cool before operating the machine.



Noise can damage your hearing! Wear approved hearing protection to protect the operator's hearing. The noise warning label must be posted in a conspicuous position to warn bystanders of the potential noise hazard when working with the machine.



Electrical and magnetic fields (EMFs) can affect implanted medical devices such as pacemakers. Pacemakers and other implanted medical device wearers should stay away.



Moving parts can cause serious injury. Keep all covers and covers securely in place before welding. Keep away from moving parts such as fans and alternators.



Incorrect operation may cause fire or explosion! Sparks from the welding machine may cause fire. Make sure there are no flammable materials nearby and watch the direction of any sparks. Have a fire extinguisher nearby. Do not weld indoors or near containers of fuel or flammable products! Do not use the welder to thaw frozen pipes.



Turn to professionals for help when you have difficulty! Please refer to this instruction manual when a fault occurs during installation and operation. If a problem is not solved according to this manual, consult an authorized Anova dealer or professional. Qualified persons must disassemble, repair or maintain this machine to avoid safety hazards!

## 2. PRODUCT PROFILE

With power generation and welding functions.

- compact, multi-purpose design.
- Easy to use.
- Clear distinction of functional area, without interference.

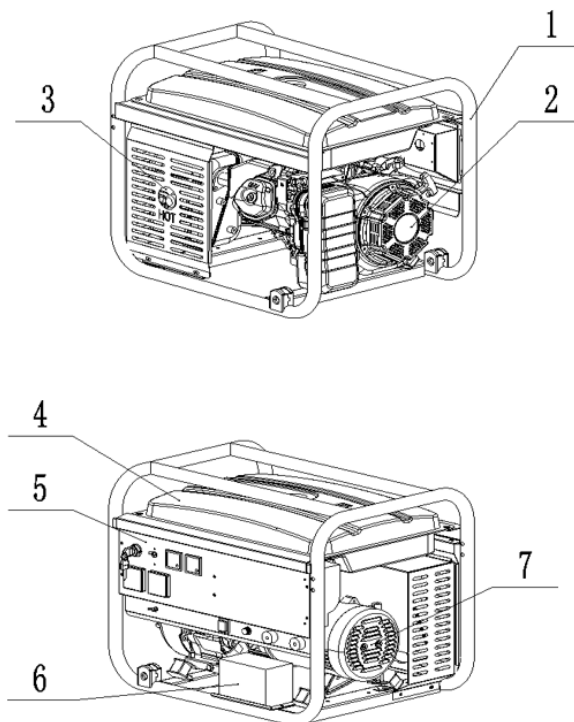
Advanced IGBT inverter technology

- "Wide range of applications, suitable for all kinds of acid and basic electrodes.
- "Advanced control method featuring easy arc generation.
- "Less spatter, stable current, good appearance of the weld bead.
- "With a wide range of applications, suitable for all kinds of acid and basic electrodes.
- "Better performance that meets the demand of all types of welding.

Advantages of MMA

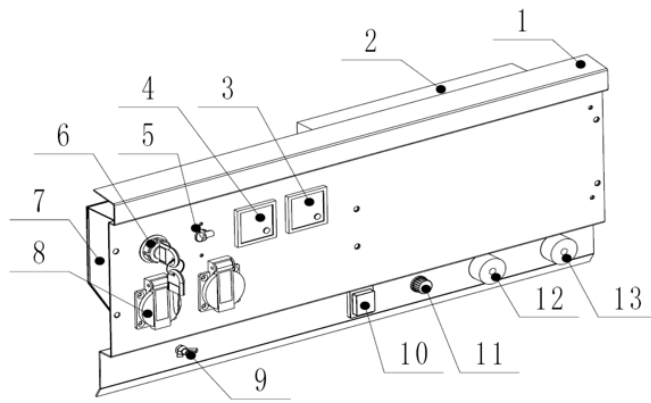
"Efficient, energy saving, easy to use and portable. Stable arc strike, easy welding voltage control and higher no-load voltage.

Valid use for construction work or home, as well as in the field and in high-altitude areas without power supply.



- 1 – chassis
- 2 – engine
- 3 – exhaust
- 4 - fuel tank

- 5 - control panel
- 6 - ignition battery
- 7 - alternator



- 1 - metal panel
- 2 - IGBT circuit board box
- 3 - welding current meter
- 4 - multifunction meter (voltage, frequency and operating hours)
- 5 - electromagnetic circuit breaker
- 6 - key switch
- 7 - rear hood
- 8 - AC socket
- 9 - ground outlet
- 10 - function switch (electricity generation / welding function)
- 11 - welding current adjustment knob
- 12 - negative welding output terminal
- 13 - positive welding output terminal

### 3. TECHNICAL DATA

Model	GCS5800E
Frequency	50
AC voltage	220V/230V
Average power (Kw)	5.8
Max. AC Power (Kw)	6.3
Average continuous voltage (V)	20-28
Continuous current (A)	180
No-load voltage (V)	70-78
Current setting range (A)	20-180
Load percentage (%)	60
power factor	1.0
engine oil	SAE10W-30
fuel type	90# gasoline
Dimensions (LxWxL) mm	700x540x570

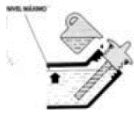
### 4. INSTALLATION AND OPERATION

#### 4.1 General settings

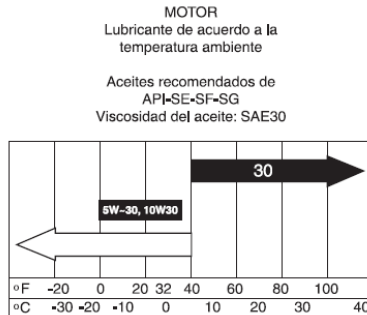
##### 4.1.1 PREPARATION FOR START-UP (PRE-START)

## OIL LEVEL CHECK AND FILLING

- The verification, as well as the oil filling, will be carried out with the unit located on a horizontal surface.
- Remove the oil filler cap and clean the oil dipstick.
- Insert the oil level dipstick into the oil filler neck without threading.
- Remove it and check the level indicated on the dipstick. If the level is too low, fill the reservoir to the top of the oil filler neck with recommended oil (SAE10W-30).



Depending on the temperatures in the work area, you can refer to the table below to find the most appropriate grade of oil. If in doubt, consult your sales center.



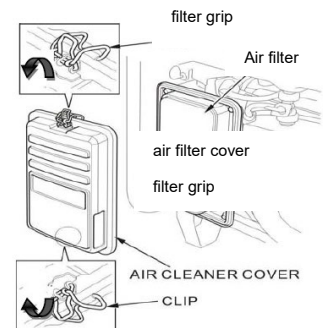
**Change the oil after the first 25 hours of operation and every 100 hours thereafter.**

### FILLING THE FUEL TANK

- Clean the contour of the filler neck of the tank.
  - Check the fuel level on the level indicator and, if necessary, refuel with the recommended fuel.
  - **Check the engine fuel level before each start.**
  - **Use only approved fuel.**
  - **Do not start the engine when it contains an insufficient quantity of fuel.**
- Never use dirty fuel/oil mixture or fuel. The use of non-authorized fuel alternatives to the recommended one is not recommended.**

### AIR FILTER

- Check the cleanliness of the machine's air filter regularly.
- Remove the air filter cover and check that the filter is in good condition and completely clean. If you notice damage, replace it immediately.
- If there is too much dirt, clean it with compressed air and immerse it in a cleaning solvent, let it dry and add a few drops of engine oil. Drain off excess oil and return filter to original location.



### STARTER BATTERY (optional)

- Check the state of charge regularly, at least 1 time every 6 months. For sealed type batteries, recharge with a suitable battery charger or replace if the charge is not adequate.
- In acid-type batteries, remove the sealing devices if necessary, and the caps.
- Fill the electrolyte vessels (upper level: 10 to 15 mm below the plates).
- Let the battery rest for 30 minutes.
- Readjust the level with the electrolyte.

**Advice:** To check electrolyte levels, use a clean toothpick.

- Check the state of charge of the battery with the help of a tester.
- Write down the concentration levels read from the acidometer and compare them with those given in the table. To find out the average electrolyte concentration level, add the values read on the acidometer and divide by the number of punctures.
- The calculated value will indicate the state of charge of your battery. Recharge it if necessary.

Nivel de concentración	Porcentaje de carga
1,26	100%
1,23	75%
1,20	50%
1,17	25%



#### 4.1.2. LOCATION FOR ITS USE

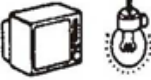



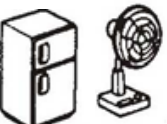

- Place the generating set on a flat, horizontal surface.
- The group's inclination must never exceed 20° in each direction.
- Plan the supply of oil and fuel in a place close to the use of the group, always respecting a minimum safety distance.
- Choose a clean, ventilated place, sheltered from bad weather.
- Provide good ventilation in case of use inside a room (even if this use is exceptional).
- Install the generator set in a place that does not hinder the passage of people or vehicles.

#### 4.1.3. USE OF THE GENERATOR SET



Never exceed the capacity (amps and/or watts) of the nominal power of the generator set during continuous operation. Before connecting and starting up the generator set, calculate the electrical power required by the electrical appliances (in watts or amps). The value of this electrical power (in watts or amps) can generally be found on the nameplate of light bulbs, electrical devices, motors, etc. The sum of the powers of all the devices to be used must not exceed the nominal power of its group.

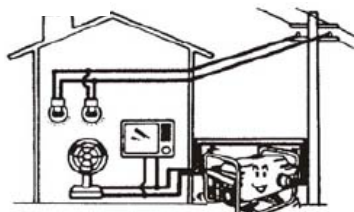
**Note:**an electrical device (jigsaw, felling, etc.) consumes more watts or amps than those indicated on the nameplate when the motor is subjected to overexertion. For example, a saw that must cut extremely hard material requires 3 to 4 times more watts or amps than indicated on the manufacturer's plate.

Item type	Watts			examples		
	Switched on	medium usage		Watts in item	Switched on	medium usage
Incandescent lamps heat resistors	x1	x1		100W lamp 	100W(W)	100VA(W)
fluorescent lamp	x2	X1.5		40W lamp 	80VA(W)	60VA(W)
motorized appliances	x3-5	x2		150W fridge 	450-750VA(W)	300VA(W)

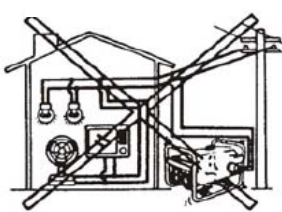


**WARNING:** Damage and/or fire in the generator. When it is necessary to connect the generator to a power source in a building, make sure you have a qualified electrician to do the job. Incorrect connection between the generator and the loads can cause damage to the generator, including fire and serious damage to the installation.

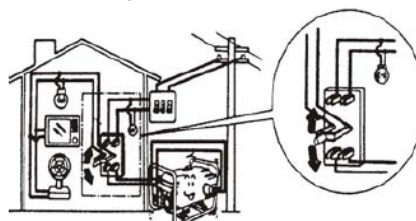
RIGHT



INCORRECT



RIGHT



## **4.2 Welding installation**

4.2.1 Connect the quick coupler of the cable with the electrode holder to the positive output terminal (red) on the control panel and tighten it clockwise. 4.2.2 Connect the quick coupler of the cable with the clamp ground to the negative (black) output terminal on the control panel and tighten it clockwise. 4.2.3 Ground the ground stud on the panel.

There are two connection methods for the DC welder: positive connection and negative connection. In general, a negative connection is recommended for the basic electrode, and there are no special requirements for the acid electrode. The connection method of the above 4.1.1 and 4.1.2 is negative connection (work piece to "-", while electrode to "+"). The operator can choose a positive connection according to the main metal and the welding rod (work piece to "+", while electrode to "-").

## **4.3 Operation with welding**

4.3.1 After the installation is complete, start the engine and turn the function switch on the front panel to the "ON" position. At this time, the fan in the IGBT circuit board case starts to work, and the welding current meter light on the control panel is "ON", which shows the current at this time. 4.3.2 The operator can rotate the current adjustment knob to adjust the welding current to meet actual needs. 4.3.3 After adjusting the welding current according to the diameter of the electrode, fix the electrode to the electrode holder and start welding. If the distance between the welding place and the welder is long, the cross-sectional area of the cable connecting the welder, the electrode holder and ground clamp should be larger to decrease power loss and voltage drop during transmission. Change the connection method when the following situation occurs: unstable arc strike, large splash, low power, etc.

## **4.4 Welding data sheet (for reference)**

electrode diameter (hmm) recommended welding current (A) recommended welding voltage (v)

1.0 20~60 20.8~22.4

1.6 44~84 21.76~23.36

2.0 60~100 22.4~24.0

2.5 80~120 23.2~24.8

3.2 108~148 23.32~24.92

4.0 140~180 24.6~27.2

5.0 180~220 27.2~28.8 The above data is for welding on mild steel. For other materials, see the specification on the corresponding electrode type.

# **5. RECOMMENDATIONS FOR USE**

## **5.1 Environment of use**

5.1.1 Welding must be done in a dry area with the right temperature. In general, the humidity of the

working environment should not be higher than 90% and the ambient temperature should be kept within -10°C and + 40°C. 5.1.2 Avoid welding outdoors and protect yourself from sun, rain, and snow. 5.1.3 Welding should be done in an area with little dust and no corrosive chemical gases. 5.1.4 Gas shielded welding does not should be done in areas with strong airflow.

## **5.2 Security**

The machine has an electrical system for overvoltage and overheating. When the output voltage, output current and internal temperature exceed the set value, the welder will automatically stop working to protect itself. Wait for the temperature values to drop before you can turn on the machine again. Excessive use may cause equipment damage. Please pay attention to the following points:

### *5.2.1 Good ventilation*

The fan is installed inside the welder for cooling, since natural airflow ventilation cannot meet the cooling demand of electrical components. Make sure there are no blockages or plugs in the vent opening during use with the welder. The distance between the welder and objects near the welder should be more than 1m. Good ventilation is of great importance for better working performance and longer life of the soldering iron.

### *5.2.2 No overload*

Operate the welder within its duty cycle to ensure there are no overloads. Overloading will shorten the service life and damage the welder.

### *5.2.3 Voltage*

In general, this welder automatically compensates its voltage, which allows it to keep the current within the optimal limits of use. It is possible to damage the components of the welder when excessive voltage is produced during work.

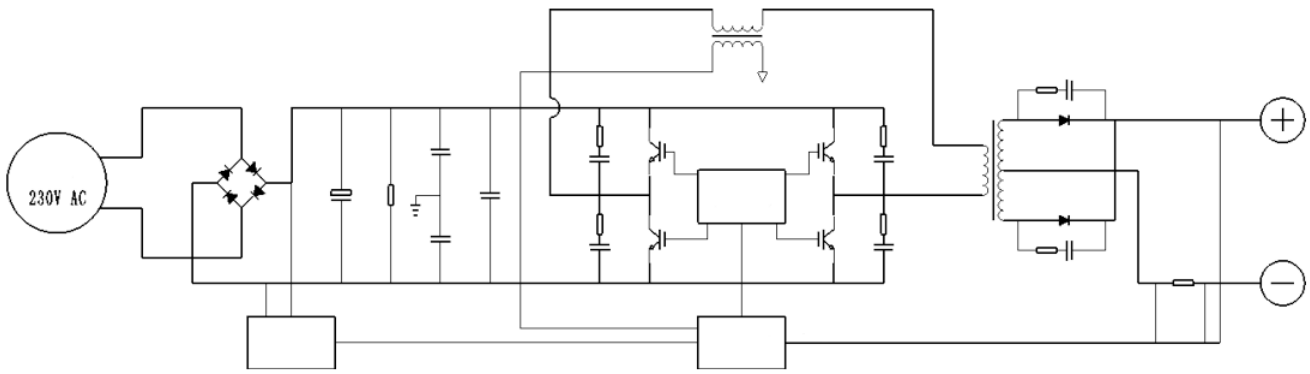
### *5.2.4 Earth fault*

A ground stud with ground connection marking is available on the control panel. Ground the equipment with a ground wire whose cross section is greater than 2.5mm to prevent electric and static leakage and cause damage to the machine or user.

### *5.2.5 Temperature switch*

The welder will stop working automatically when it works during its duty cycle. The temperature switch activates when electrical components overheat. At the same time, the "PROTECTION" light (red) on the welding current meter will be on. You don't need to stop the machine because the fan keeps running. When the temperature falls within the limit, the red light will turn off and you can start welding again.

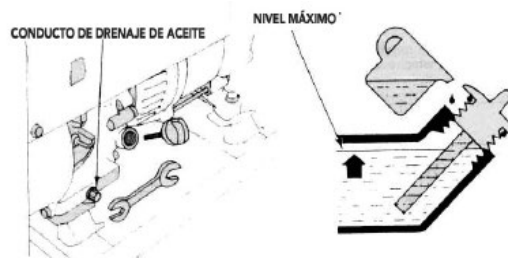
## 6. ELECTRICAL DIAGRAM



## 7. MAINTENANCE

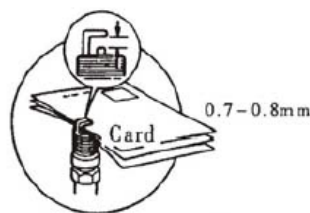
### 7.1 Regular maintenance

- Check the filter element of the engine air filter. Remove dirt and dust to keep it clean.
- Check bolts and nuts to make sure they are tight.
- Check that the lubricating oil level is between "H" and "L".



7.2 The air filter should be cleaned after every 25 hours of operation.

7.3 Check the spark plug after every 50 hours of operation. Remove your carbon deposits and adjust your gap to 0.6~0.7mm. Check the radiating fins and remove any dirt on them.



7.4 Replace the lubricating oil, unscrew the drain plug, tilt the engine slightly and let the lubricating oil drain, then fill in the kerosene to clean it and drain the kerosene oil, tighten the drain plug and fill in the new lubricating oil until the specific oil level.

7.5 Clean the fuel tank and strainer filter after every 100 hours of operation. Open the fuel tank cap, take out the filter and clean it with a brush. Remove the fuel tank, clean the inner surface and remove any dirt and water. Reinstall fuel tank and filler filter; Fill with new fuel until the level reaches the red scale line.

7.6 Check the aging status of the oil tube after every 2 years of use.

Replace the oil tube if there is any age hardening or crack. Tighten the new oil pipe joints and prevent leaks.

7.7 In case the engine is to be stored for a long period of time, do the following:

- First, remove the fuel tank, drain all the fuel and remove the dirt / water stuck on the surface of the tank internally. Open the fuel cock, unscrew the drain plug at the bottom of the carburetor, and completely drain the fuel in the carburetor.

Then tighten the drain plug.

- Second, unscrew the drain plug at the bottom of the crankcase and drain the lubricating oil in the crankcase completely. Then tighten the drain plug.

- Finally, wipe the outer surface of the motor with a clean cloth and remove any dirt or dust. Then put the machine in a dry and protected place.

#### 7.8 Important data on tightening force (Nm) screws

Model	cylinder bolts	crankshaft bolts	rotor screws	flywheel bolts
CGS5800E engine	3.4	24	24	113

#### 7.9 Element setting data

Element	Specification
Spark plug electrode gap	0.6~0.7mm (0.024~0.028")
Valve opening (cold)	IN: 0.15±0.02mm EX: 0.20±0.02mm

## 8. TROUBLESHOOTING

FAILED	POSSIBLE CAUSE	REQUIRED ACTION
The motor does not start	insufficient fuel	add fuel
	Dirty spark plug	Clean the spark plug
	Speed controller is not in "RUN" position.	Place the controller lever in the "RUN" position
	Improper amount of engine lubricating oil	Check engine oil level. It should be between the upper level "H" and the lower level "L".
	The speed and force applied on the starter handle are not enough	Start the engine according to the required manual procedure.
There is no current in the generator	Circuit breaker is off	turn on the switch
	The connection in the plug is not correct	Fit the plug and connect well
	Engine speed for generator is not as required	Adjust the motor according to the requirements
	worn brushes	change the brushes
	AVR (controller) worn	Change the AVR module
	Low current while welding	Check the connections; use a larger diameter cable.

## 9. INFORMATION ON THE TRANSPORT, STORAGE AND DISPOSAL OF THE MACHINE

### 9.1 TRANSPORT

Always transport the machine with the engine off. Consider the weight of the machine if you are going to lift it. See the technical characteristics of the machine for the weight of the machine. To lift the appliance, lift it by the corresponding handle. To transport the appliance, use its wheels. Hold the device by the handlebar and pull it.

If you are going to transport the device in vehicles, secure it firmly to prevent it from sliding or tipping over.

### 9.1 STORAGE

Store the machine in a place that is inaccessible to children and safe so that it does not endanger anyone. The machine out of use must be stored clean, on a flat surface. Store the machine in a place where the temperature range is not lower than 0°C and not higher than 45°C.

### 9.2 INFORMATION ON THE DISPOSAL OF THE MACHINE AND RECYCLING

Please dispose of your machine in an ecological way. We must not dispose of machines together with household waste. Its plastic and metal components can be classified according to their nature and recycling. The materials used to pack this machine are recyclable. Please do not dispose of the packaging in household waste. Please dispose of these packages at an official waste collection point.



## **10. WARRANTY CONDITIONS**

10.1.- GUARANTEE PERIOD- The guarantee period (Law 1999/44 CE) according to the terms described below is 2 years from the date of purchase, in parts and labor, against manufacturing and material defects.

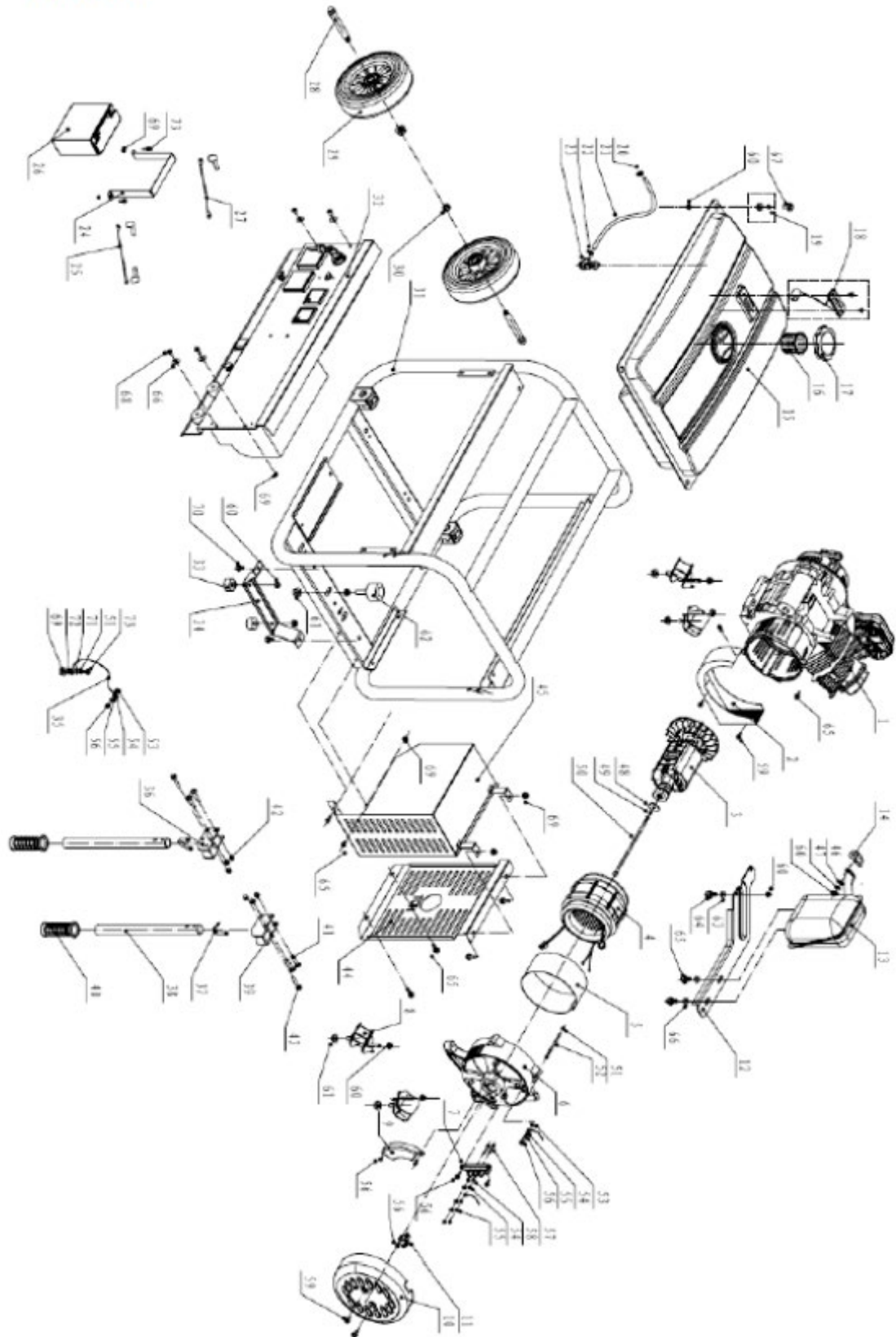
10.2.- EXCLUSIONS The guarantee does not cover in any case:- Natural wear and tear due to use.- Misuse, negligence, careless operation or lack of maintenance.- Defects caused by incorrect use, damage caused due to manipulations carried out by unauthorized personnel by Anova or use of non-original spare parts.

10.3.- APPLICATION-The guarantee ensures service coverage in all applicable cases, although the machine must be accompanied by its respective purchase invoice and be managed through an authorized Anova center.

# 11. EXPLODING

**ANOVA**

GCS5800E





## 12.CE CERTIFICATE

### DECLARATION OF CONFORMITY (CE)

#### DISTRIBUTION COMPANY

MILLASUR, SL  
RUA EDUARDO PONDAL, Nº 23 PISIGÜEIRO  
15688 OROSO - A CORUÑA  
SPAIN



## EC DECLARATION OF CONFORMITY

In compliance with the different CE directives, it is hereby confirmed that, due to its design and construction, and according to the CE mark printed by the manufacturer on it, the machine identified in this document complies with the relevant and fundamental health and safety requirements. of the aforementioned EC directives. This declaration validates the product to display the CE symbol.

In the event that the machine is modified and this modification is not approved by the manufacturer and communicated to the distributor, this declaration will lose its value and validity.

Machine name: GENERATOR - WELDER

Model: **GCS5800E**

Recognized and approved standard to which it conforms:

**Directive 2006/42/EC 97/98/EC [2006/105/EC]**

Company seal

**millasur**  
Rúa Eduardo Pondal, nº 23  
Pol. Ind. Sigüeiro - 15688 Oroso - A Coruña  
Tlf. 981 696465 / Fax. 981 690861

A handwritten signature in black ink, appearing to be 'A. P.', is written over a dashed rectangular box that encloses the company seal information.

01/21/2017