



# SAFETY AND OPERATING MANUAL

## 2000W Inverter Generator

### IG2200i



## ORIGINAL INSTRUCTIONS



IG2200i

# TABLE OF CONTENTS

## Welcome to Autojack!

Dear Customer, Congratulations on your purchase. Before using the product for the first time please be sure to read these instructions for use.

They provide you with all information necessary for using the product safely and to ensure its long service life.

Closely observe all safety information in these instructions!

|                                                  |           |
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# GENERAL POWER TOOL SAFETY WARNINGS

**WARNING Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.** The term "power tool" in the warnings refers to your electric (corded) power tool or battery-operated (cordless) power tool.

## 1. Work area safety

**a) Keep work area clean and well lit.** Cluttered or dark areas invite accidents.

**b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

**c) Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

## 2. Electrical safety

**a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.

**b) Avoid body contact with grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

**c) Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

**d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

**e) When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

**f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

## 3. Personal safety

**a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

**b) Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

**c) Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

**d) Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

# GENERAL POWER TOOL SAFETY WARNINGS

**e) Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

**f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

**g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

## 4. Power tool use and care

**a) Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

**b) Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

**c) Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

**d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

**e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

**f) Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier

**g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

# GENERAL POWER TOOL SAFETY WARNINGS

## 6. Additional Safety Instructions for Generators

- a). Keep the generator at least 1 m (3 ft.) from buildings or other equipment, or the engine may overheat.
- b). Place the generator on a solid, flat surface.
- c). Make sure the surrounding area is free from any material that could burn or be damaged by heat.
- d). Never move or tilt the generator whilst it is switched on.
- e). Always switch the engine OFF when refuelling.
- f). Always refuel in a well-ventilated area.
- g). Never overfill the tank, fill to the level specified.
- h). Never smoke whilst refuelling and avoid smoking or using a naked flame near the generator.
- i). Never start the engine if there is spilled fuel. Any spillage must be wiped clean and the generator allowed drying before attempting to start the engine.
- j). Never use the generator in wet conditions unless it is well protected/covered. Under these conditions, adequate ventilation MUST be provided.
- k). Never operate the generator with wet hands.
- l). Never use water or any other liquids to clean the generator.
- m). Make sure you ground (earth) the generator.

- n). Always make sure the applied load does not exceed the generator rating. Overloading the generator is dangerous and could cause serious damage.
- o). Always disconnect the generator when carrying out any maintenance.
- p). Always allow the generator to reach operating speed before connecting a load.
- q). Never allow the generator to run out of fuel when a load is connected.
- r). Never transport the generator with fuel in the tank.
- s). Never connect the generator to a commercial or residential power supply; e.g. ring main.
- t). Never allow the generator air vents to become blocked.

# SYMBOLS AND POWER RATING CHART



**Danger! – Read the operating instructions to reduce the risk of injury.**



**Caution! Wear safety goggles.**



**Caution! Wear ear defenders. The impact of noise can cause damage to hearing.**

# MACHINE DETAILS AND PRODUCT FEATURES

## Machine Details

### Specifications:

#### Engine

Engine model – XY156F

Type – petrol

Displacement – 60m<sup>3</sup>

Ignition type – C.D.I

Fuel tank capacity – 4.1L

Maximum run time at 3/4 load – 3.5h

Engine oil capacity – 0.52L

Guaranteed sound power – 58dB  
(Taken at 7m)

#### Generator

Rated Frequency – 50Hz

Rated AC voltage – 230V

Max output power – 2200W

Continuous output power – 2000W

Output type – modified sine wave

Rated DC voltage – 12V

Rated DC current – 4A

Rated output current – 4.354A

Rated power factor – 1

Performance Class – G1

Quality Class – A

IP Rating – IP23M

### Package Contents:

Inverter Generator

12Volt Connecting Lead Assembly

Spark Plug Box Spanner

Cross-Head Screwdriver

## Intended Use

Designed to generate electric energy

Using equipment in ways other than its intended use the user and not the manufacture will be liable for any damage or injuries caused.

Also note that this equipment is not designed for commercial or industrial use. Warranty will be voided if used for these purposes.

1. Fuel tank
2. Spark plug
3. Muffler
4. Carrying handle
5. Choke lever
6. Air filter
7. Fuel pump
8. Fuel cock
9. Recoil starter
10. Oil filler cap
11. Fuel tank cap
12. Fuel filter
13. AC pilot light
14. Overload indicator light
15. Oil warning light
16. Economy control switch
17. DC 12V output
18. USB output
19. Parallel outlets
20. Ground (earth) terminal
21. AC receptacle
22. DC protector
23. Output reset

MACHINE DETAILS AND PRODUCT FEATURES





# Assembly

## Before using the generator

**IMPORTANT: Generators should ALWAYS be earthed. Make sure you earth the generator.**

Before using your generator check that:

- The generator is in good condition and free from any damage.
- The generator is clean and free from fuel or oil spillage.
- The generator is correctly located for use
- There is no leakage.

**Note:** To avoid accidental spillage of fuel, always use a funnel to fill the fuel tank. If fuel is spilt it must be removed from the unit before attempting to start the engine.

## Earthing

**WARNING:** It is advisable to properly earth your generator before starting using a wire and a small metal earth spike. The wire and earth are not supplied with the unit.

An earth spike and cable can be purchased at your local camping supplier, or alternatively an earth spike can be made, and it is suggested you get advice from a qualified electrician.

To make a spike use a copper tube or copper rod 12mm diameter, a minimum length of 200mm and with an M6 machine screw one end.

The cable used should be a maximum length of 1 metre and a minimum of 1.0mm<sup>2</sup> to carry a 10 amp load.

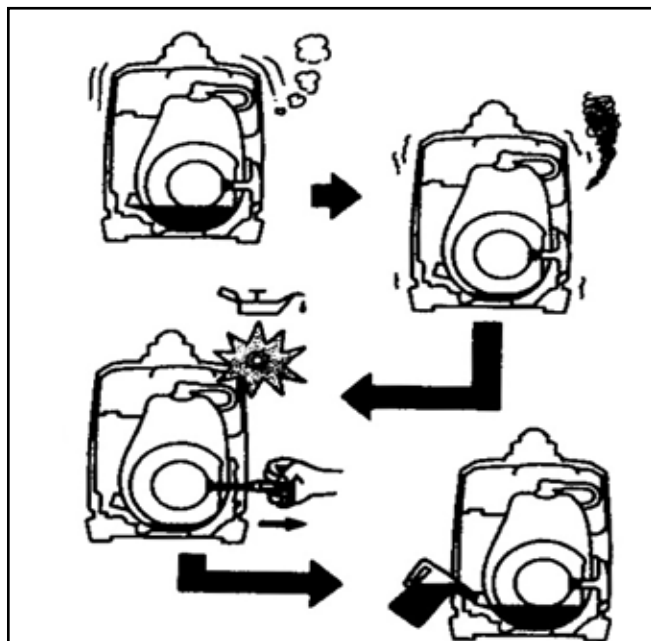
Attach the cable to the generator at the earth point screw on the generator.

When pushing the spike into the ground the generator must not be running and it is suggested that the spike is pushed into the ground by at least 100mm.

Earth of generators is covered in BS7430:2011, If you have any doubts about this subject consult a qualified electrician.

## Oil warning system

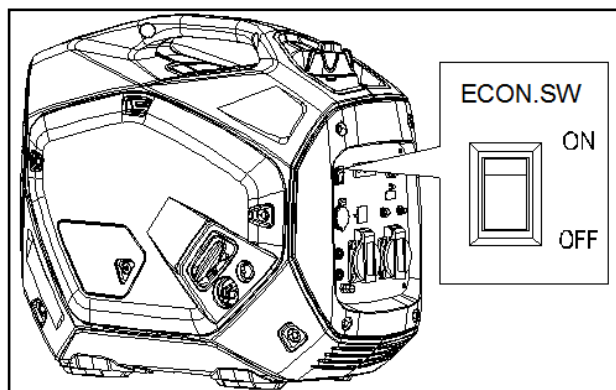
When the oil level falls below the lower level, the engine stops automatically. Unless you refill with oil, the engine will not start again.



# PRE-OPERATION CHECK

## ECONOMY CONTROL SWITCH

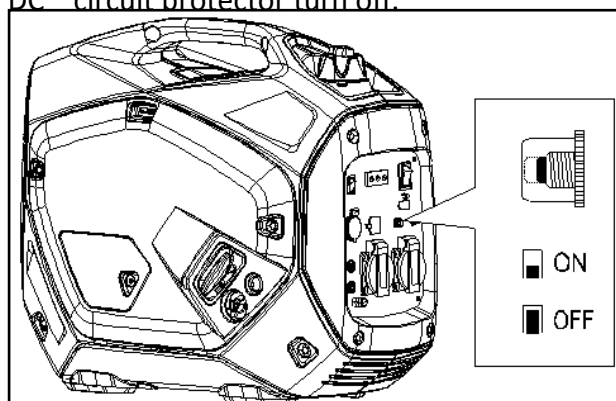
When the economy control switch is turned **ON**, the economy control unit controls the engine speed according to the connected load. The results are better fuel connection and less noise.



## DC CIRCUIT PROTECTOR

The DC circuit protector turns off automatically when the load exceeds the generator rated output?

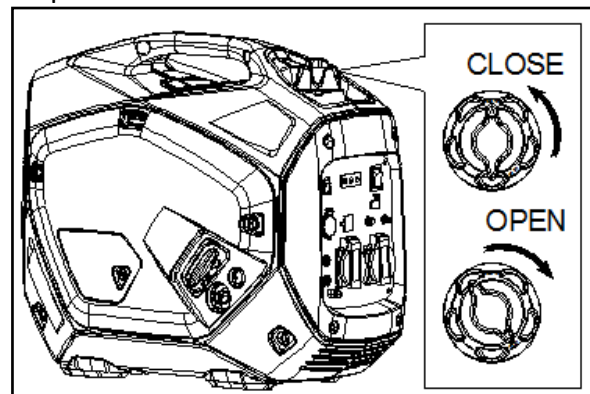
**CAUTION:** Reduce the load to within specified generator rated output if the DC circuit protector turn off.



## FUEL TANK CAP AIR VENT KNOB

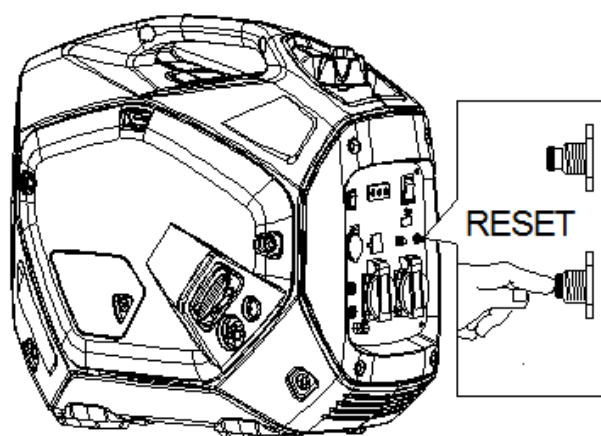
The fuel tank cap is provided with an air vent knob to stop fuel flow. The air vent knob must be turned once clockwise from the closed position. This will allow fuel to flow to the carburetor and the engine to run.

When the engine is not in use, tighten the air vent knob counter clockwise until it is finger-tight to stop fuel flow.



## OUTPUT RESET

Push the reset button for continuous 2 seconds, the generator will recover the AC output when the generator stops AC output under overload protect. **NOTE:** Please reduce the load of the generator to ensure that the total load is within the rated power.



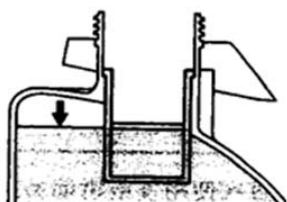
# PRE-OPERATION CHECK

## PRE-OPERATION CHECK

**NOTE:**Pre-operation checks should be made each time the generator is used.

### CHECK ENGINE FUEL

- Make sure there is sufficient fuel in the tank.
- If fuel is low, refill with unleaded automotive fuel.
- Be sure to use the fuel filter screen on the fuel filter neck.
- Recommended fuel: Unleaded fuel
- Fuel tank capacity:

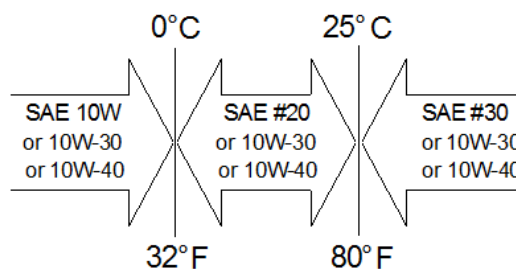
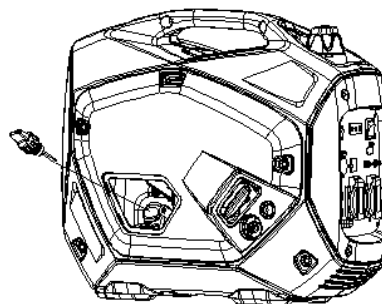
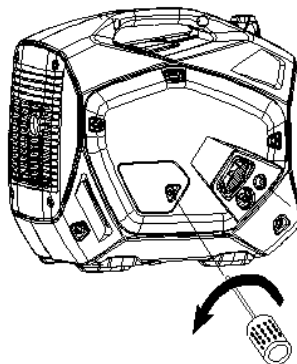


### WARNING:

- Do not refill tank while engine is running or hot.
- Close fuel cock before refueling with fuel.
- Be careful not to let dust, dirt, water or other foreign objects into the fuel.
- Do not fill above the top of the fuel filter or it may overflow when the fuel heats up later and expands.
- Wipe off spilt fuel thoroughly before starting engine.

## CHECK ENGINE OIL

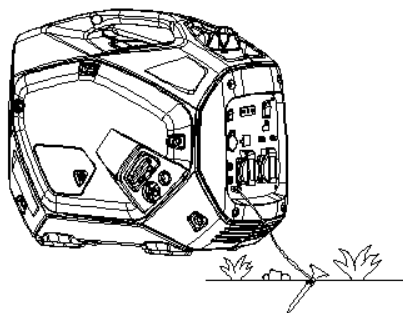
- Remove oil filler cap and check the engine oil level.
- If oil level is below the lower level line, refill with suitable oil to upper level line. Do not screw in the oil filler cap when checking oil level.
- Change oil if contaminated.
- Oil capacity: (see page 20-21)
- Recommended engine oil:  
API Service "SJ"



# PRE-OPERATION CHECK

## GROUND (Earth)

**WARNING:** It is advisable to properly earth your generator before starting using a wire and a small metal earth spike. The wire and earth spike are not supplied with the unit.



## Parallel

Parallel running of two generators through the using parallel terminal operation the special terminal. The parallel operation needs two generators with parallel function and a special cable.

(a) Connect the special cable

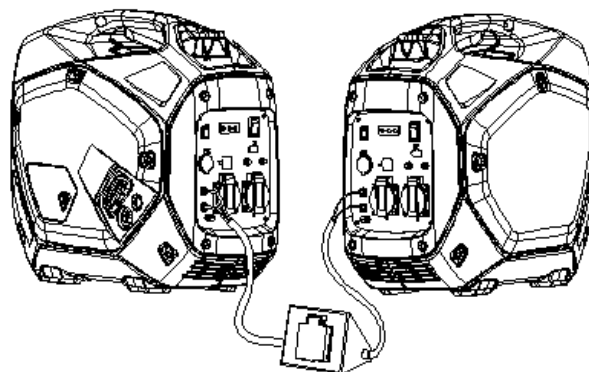
(b) Start two generators separately

(c) The two generators running well, and green light is on, the parallel is ok. Then you can connect the device.

### NOTE:

- Turn the economic switches of two generators on or off at the same time.
- The two generator's parallel rated output is 90% of the total of two generator's rated output.
- To shut down. Disconnect the electric device firstly, and stop the two generators, disconnect the special cable at the end.
- Don't connect or disconnect the special cable when the generators are running.

The parallel running is only applicable to the same model.



# OPERATION

**NOTE:** The generator has been shipped without engine oil. Fill with oil or it will not start.

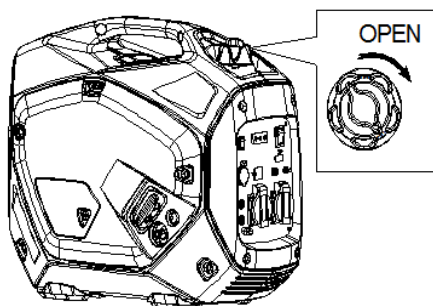
Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine.

## STARTING THE ENGINE

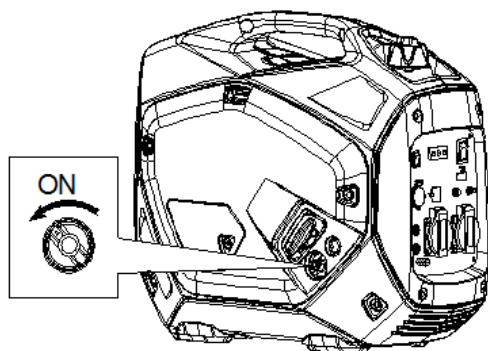
**NOTE:** Before starting the engine, do not connect the electric apparatus.

### Recoil start

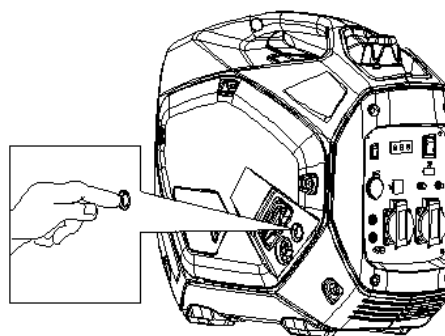
1. Open the fuel tank air vent to the OPEN position.



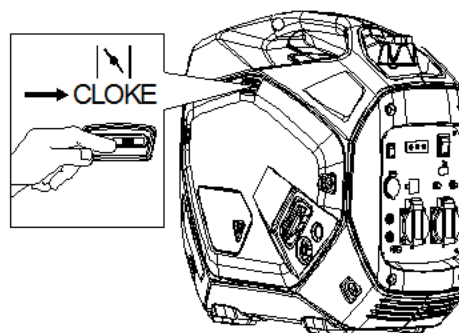
2. Turn the fuel cock lever to the ON position.



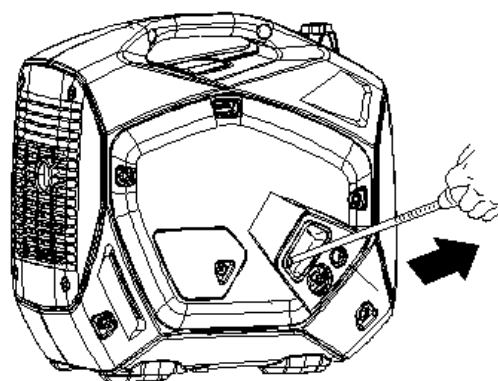
3. When running for the first time use the generator sets, pressing the primer bulb 6 times after refueling.



4. Turn the choke lever to the CHOKE position.



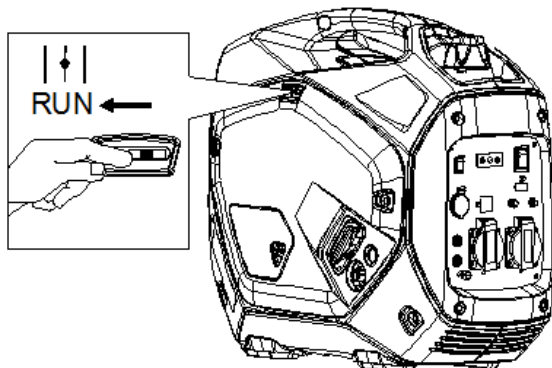
5. Pull the starter handle slowly until resistance is felt. This is the "Compression" point. Return the handle to its original position and pull swiftly. Do not fully pull out the rope. After starting, allow the starter handle to return to its original position while still holding the handle. Grasp the carrying handle firmly to prevent the generator from falling over when pulling the recoil starter.



# OPERATION

6. Warm up the engine.

7. Turn the choke lever back to the | ◆ | RUN position.

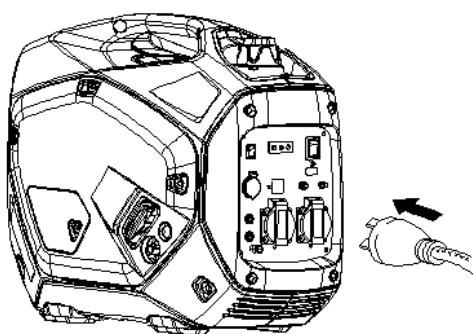


8. Warm up the engine without a load for a few minutes.

## USING ELECTRIC POWER

### 1. AC APPLICATION

- (a) Check the AC pilot lamp for proper voltage.
- (b) Turn off the switch (es) of the electrical appliance(s) before connecting to the generator.
- (c) Insert the plug(s) of the electrical appliance(s) into the receptacle.

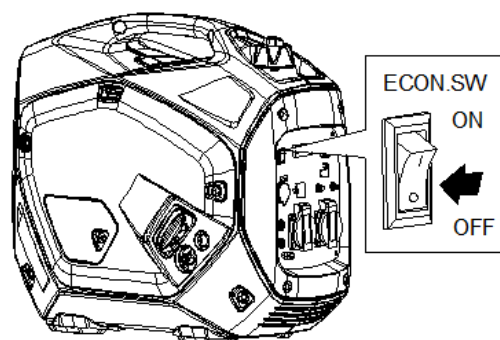


**CAUTION:** Be sure the electric apparatus is turned off before plugging in.

Be sure the total load is within generator rated output.

Be sure the socket load current is within socket rated current.

The economy control switch must be turned to OFF when using electric devices that require a large starting current, such as a compressor or a submersible pump.



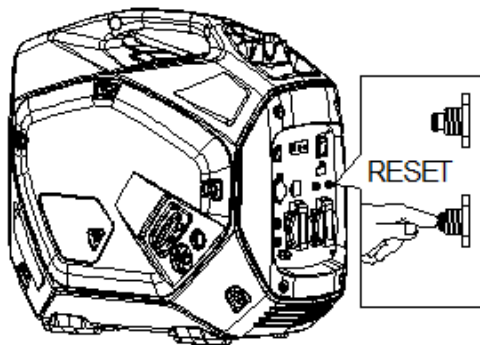
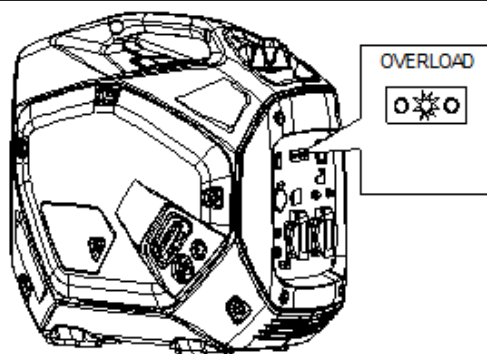
### 2. OVERLOAD INDICATOR LIGHT

The overload indicator light comes on when an overload of a connected electrical device is detected, the inverter unit overheats, or the AC output voltage rises. The electronic breaker will then activate, stopping power to the generator in order to protect the generator and any connected electric devices. The output pilot light (green) will flicker and the overload indicator light (red) will turn on, then the engine will stop running. If so please follow the following steps:

- (a) Turn off any connected electric devices and stop the engine.
- (b) Reduce the total wattage of connected electric devices within the application range.
- (c) Check for blockages in the cooling air inlet and around the control unit. If any blockages are found, remove.
- (d) After checking, restart the engine.



# OPERATION



## CAUTION:

The generator AC output automatically resets when the engine is stopped and then restarted.

The overload indicator light may come on for a few seconds at first when using electric devices that require a large starting current, such as a compressor or a submersible pump. However, this is not a malfunction.

## 3. DC APPLICATION (option)

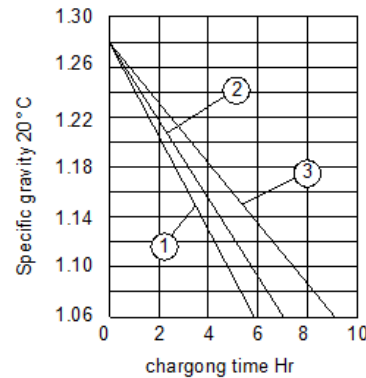
This usage is applicable to 12V battery charging only.

- (a) Charging instruction for battery.
- (b) Disconnect the leads for the battery.
- (c) Loosen the filler cap.
- (d) Fill distilled water to the upper limit, if the battery fluid is low level.

Measure the specific gravity for the battery fluid by using the hydrometer, and calculate the charging time in according with the table shown on right side.

The specific gravity for the fully charged battery shall be within 1.26 to 1.28. It is recommended to confirm every hour.

Aim for specific gravity and charging time

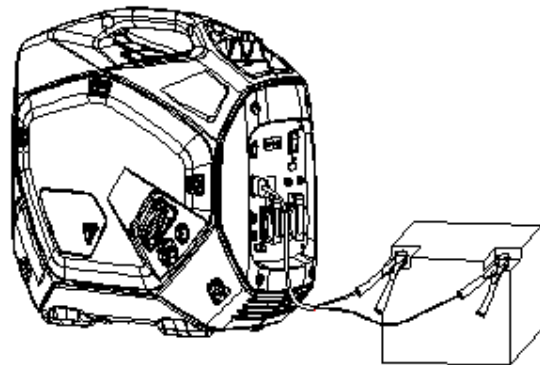


Battery capacity

- 1. 30AH 20HR
- 2. 35AH 20HR
- 3. 47AH 20HR

(b) Connect between the DC output socket and the battery terminals using the charging leads. The leads should be connected making sure of the (+) and (-) polarity.

(c) The DC circuit protector is to be set to ON after confirming the connection, if the protector is in OFF position.



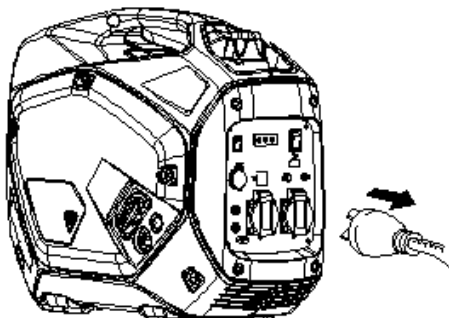
## CAUTION:

Be sure the economy control switch is turned OFF while charging the battery.

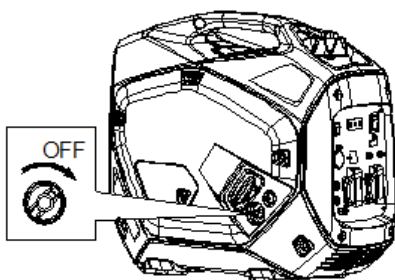
# OPERATION AND MAINTENANCE AND SERVICE

## STOPPING THE ENGINE

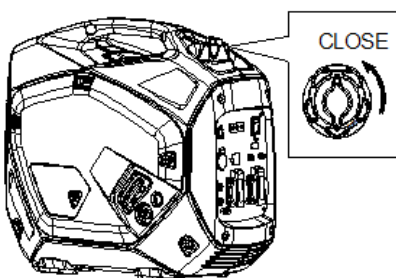
1. Turn off the power switch of the electric apparatus or disconnect any electric devices.



2. Turn the fuel cock lever to **OFF**.



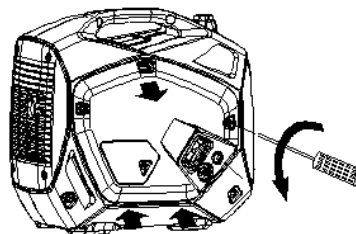
3. Turn the fuel tank cap air vent knob counter clockwise to the **CLOSED** position.



## ENGINE OIL REPLACEMENT

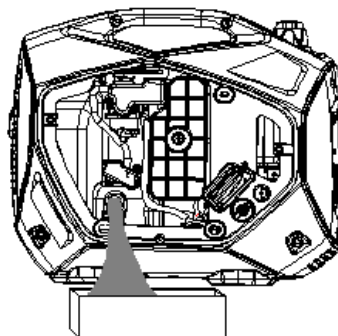
1. Place the machine on a level surface and warm up the engine for several minutes. Then stop the engine and turn the fuel cock knob to OFF. Turn the fuel tank cap air vent knob counter clockwise to the CLOSED position.

2. Loosen the screw and remove the cover.



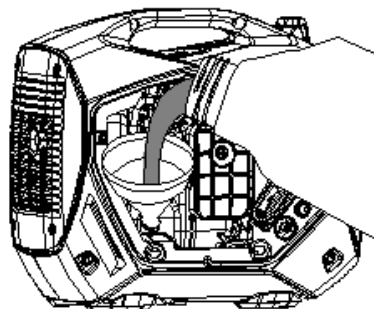
3. Remove the oil filler cap.

4. Place an oil pan under the engine. Tilt the generator to drain the oil completely.



5. Replace the generator on a level surface.

6. Add engine oil to the upper level.



7. Install the oil filler cap.

8. Install the cover and tighten the screw

Recommended engine oil: (SAE 10W30)

API Service "SJ"

### CAUTION:

Be sure no foreign material enters the crankcase. Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine

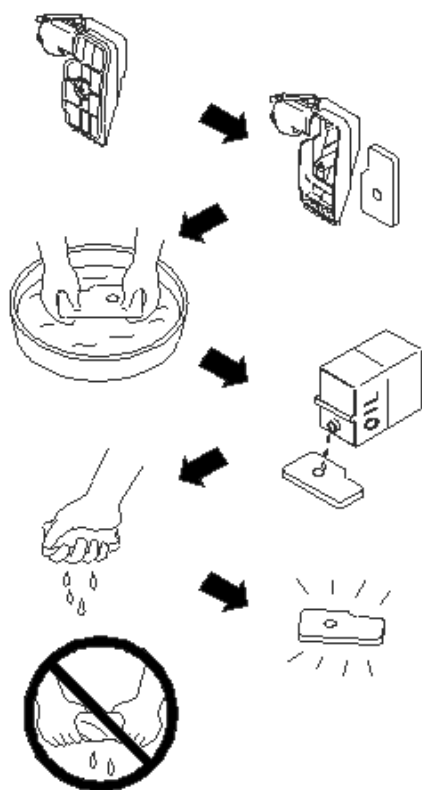


# MAINTENANCE AND SERVICE

## AIR FILTER

Maintaining an air filter is very important. Dirt induced through improperly installed, improperly serviced, or inadequate elements damages and wears out engines. Keep the element always clean.

1. Remove the cover.
2. Remove the air filter cover and element.
3. Wash the element in solvent and dry.
4. Oil the element and squeeze out excess oil. The element should be wet but not dripping.
5. Insert the element into the air filter.
6. Install the cover.



### CAUTION:

The engine should never run without the element; excessive piston and/or cylinder wear may result.

## CLEANING AND ADJUSTING SPARK PLUG

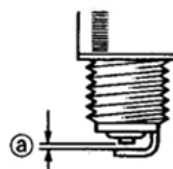
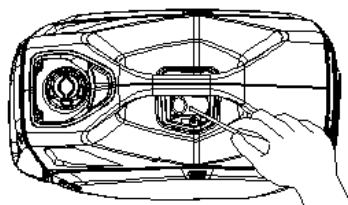
1. Remove the cover.
2. Check for discoloration and remove the carbon.
3. Check the spark plug type and gap.
4. Install the spark plug.
5. Install the cover.

### CAUTION:

Standard electrode colour: Tan Colour.

Standard Spark Plug: CM6RA (TORCH)

Spark Plug Gap: 0.6-0.7 mm (0.024-0.028 in)



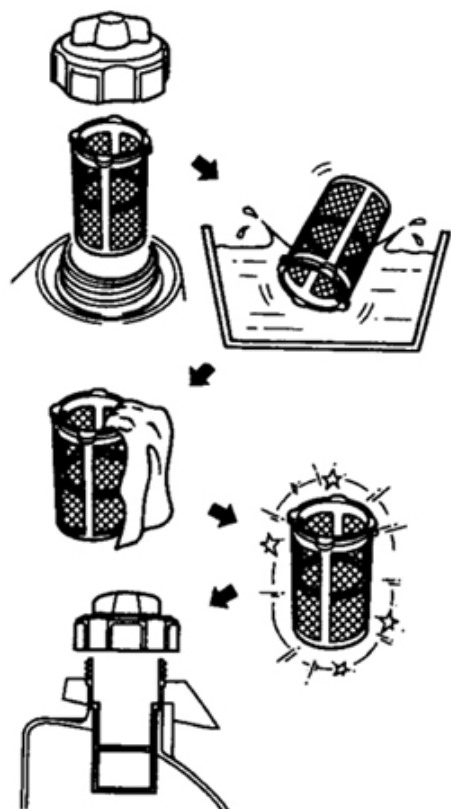
## FUEL TANK FILTER

1. Remove the fuel tank cap and filter.
2. Clean the filter with solvent. If damaged, replace.
3. Wipe the filter and insert it.

### ! WARNING

Be sure the tank cap is tightened securely.

# MAINTENANCE AND SERVICE

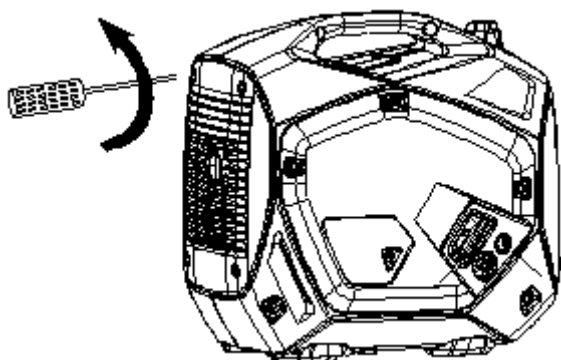


## MUFFLER SCREEN

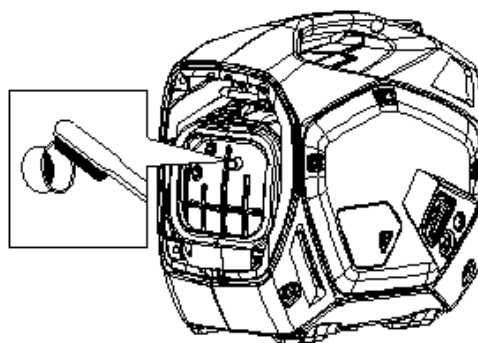
### WARNING

The engine and muffler will be very hot after the engine has been run.

Avoid touching the engine and muffler while they are still hot with any part of your body or clothing during inspection or repair.



- 1.Remove the cover.
- 2.Remove the muffler screen.
- 3.Use the flathead screw driver to pry the spark arrester out from the muffler.
- 4.Remove the carbon deposits on the muffler screen and spark arrester using a wire brush.
- 5.Install the muffler screen.
- 6.Install the cover.



## Troubleshooting

| Problem                                     | Cause                                                    | Solution                                                                                     |
|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------|
| The generator fails to start                | Fuel in tank                                             | Fuel tank cap air vent knob to OPEN, fuel cock knob to ON.                                   |
|                                             | Not enough oil in the generator                          | Add more oil                                                                                 |
|                                             | No fuel                                                  | Add more fuel                                                                                |
|                                             | Spark plug not working correctly                         | Change the spark plug                                                                        |
| The generator fails to generate electricity | The device you are trying to power is faulty             | Make sure the device you want to power is working properly                                   |
|                                             | The overload indicator is on                             | Remove the appliance immediately, do not connect any appliance that requires more than power |
|                                             | (DC supply only) The DC overload protector has activated | Press the reset button                                                                       |
| The generator is difficult to start         | The air filter is dirty                                  | Clean the air filter                                                                         |

If this does not solve your problem, please contact the AUTOJACK service department.

# AUTOJACK GUARANTEE

## 1. Guarantee

1.1 Autojack guarantees that for a period of 12 months from the date of purchase the components of qualifying products (see clauses 1.2.1 to 1.2.8) will be free from defects caused by faulty construction or manufacture

1.2 During this period, Autojack, will repair or replace free of charge any parts which are proved to be faulty in accordance with paragraph 1.1 providing that:

1.2.1 You follow the claims procedure set out in clause 2.

1.2.2 Autojack and its Authorised Dealers are given reasonable opportunity after receiving notice of the claim to examine the product.

1.2.3 If asked to do so by Autojack or its Authorised Dealer, you return the product at your own cost to Autojack's or the supplying Authorised Dealer's Premises, For the examination to take place clearly stating the Returns Material Authorisation Number given by Autojack or an Authorised Dealer.

1.2.4 The fault in question is not caused by industrial use, accidental damage, fair wear and tear, wilful damage, neglect, incorrect electrical connection, misuse, alteration or repair of the product without approval.

1.2.5 The product has been used in a domestic environment only.

1.2.6 The fault does not relate to consumable items such as blades, bearings, drive belts or other wearing parts which can reasonably be expected to wear at different rates depending on usage.

1.2.7 The product has not been used for hire purposes.

1.2.8 The product has been purchased by you, as the guarantee is not transferable from a private sale.

## 2. Claims Procedure

2.1 In the first instance please contact the Authorised Dealer who supplied the product to you. In our experience many initial problems with machines that are thought to be fault due to faulty parts are actually solved by correct setting up or adjustment of the machine. A good Authorised Dealer should be able to resolve the majority of these issues much more quickly than processing a claim under the guarantee. If a return is requested by the Authorised Dealer or Autojack, you will be provided with a Returns Material Authorisation Number which must be clearly stated on the returned package, and any accompanying correspondence. Failure to provide a Returns Material Authorisation Number may result in item being refused delivery.

# AUTOJACK GUARANTEE

2.2 Any issues with the product resulting in a potential claim under the guarantee must be reported to the Authorised Dealer from which it was purchased within 48 hours of receipt.

2.3 If the authorised Dealer who supplied the product to you has been unable to satisfy your query, any claims made under this guarantee should be made directly to Autojack. The claim itself should be made in a letter setting out the date and place of purchase, giving a brief explanation of the problem which has led to the claim. This letter should be then sent with proof of purchase to Autojack. If you include a contact number with this it will speed your claim up.

2.4 Please note that it is essential that the letter of claim reaches Autojack on the last day of this guarantee at the latest. Late claims will not be considered.

## 3. Limitation of Liability.

3.1 We only supply products for domestic and private use. You agree not to use the product for any commercial, business or resale purposes and we have no liability to you for any loss of profit, loss of business, business interruption or loss of business opportunity.

3.2 This guarantee does not confer any rights other than these expressly set out above and does not cover any claims for consequential loss or damage. This guarantee is offered as an extra benefit and does not affect your statutory rights as a consumer.

## 4. Notice

This guarantee applies to all product purchased from an Authorised Dealer of Autojack within the United Kingdom. Terms of guarantee may vary in other countries.

## **CE DECLARATION OF CONFORMITY**

### **TOOLSAVE**

Unit C, Manders Ind. Est.,  
Old Heath Road, Wolverhampton,  
WV1 2RP.  
Tel: 01902 450 470

**Declares that the Inverter Generator (IG2200i)**

**Is in compliance with the regulations included in the Directives:2014/30/EU**

## **EC DECLARATION OF CONFORMITY**

**Certificate for EC-type examination delivered by Interk Testing Services Hangzhou 16**  
**No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China**  
**(Verification No.:180200079HZH-V1 )**

**Person who declares: Bill Evans**

---



**17/05/21**

**The Director**

A handwritten signature in black ink, appearing to be 'Bill Evans', written over a faint, larger signature.

## FIG.A CRANKCASE ASSY

| No. | Description                 | No. | Description                       |
|-----|-----------------------------|-----|-----------------------------------|
| 1   | Screw M6×18                 | 16  | Oil Gauge                         |
| 2   | Ventilation Nozzle          | 17  | O ring 19*3.55                    |
| 3   | Cylinder Head Cover         | 18  | Lower Crankcase                   |
| 4   | Cylinder Head Cover Seal    | 19  | Inner Hexagon ScrewGB/T70.1 M6×25 |
| 5   | Valve Oil Seal              | 20  | Inner Hexagon ScrewGB/T70.1 M8×55 |
| 6   | Screw M6×20                 | 21  | Oil Seal 21×32×5                  |
| 7   | Cam Chamber Cover           | 22  | Oil Pan                           |
| 8   | Dual-Head Bolts M5×100      | 23  | Hexagon Flange Bolt M6×12         |
| 9   | Upper Crankcase             | 24  | Aluminium Gasket 6×13×2           |
| 10  | Dual-Head Bolts M6×32       | 25  | Oil Lever Sensor                  |
| 11  | Dual-Head Bolts M5×76       | 26  | Screw M6×18                       |
| 12  | Countersunk Head Screw M3×5 | 27  | Dual-Head Bolts M6×36             |
| 13  | Limiting Board              | 28  | One-Way Valve Components          |
| 14  | Valve Plate                 | 29  | stud M6*36                        |
| 15  | Dowel Pin 4×8               |     |                                   |

## FIG.B CRANKSHAFT PISTON

| No. | Description     |
|-----|-----------------|
| 1   | Piston Pin Clip |
| 2   | Piston          |
| 3   | Piston Pin      |
| 4   | Connecting Rod  |
| 5   | Woodruff Key    |
| 6   | Piston Ring     |

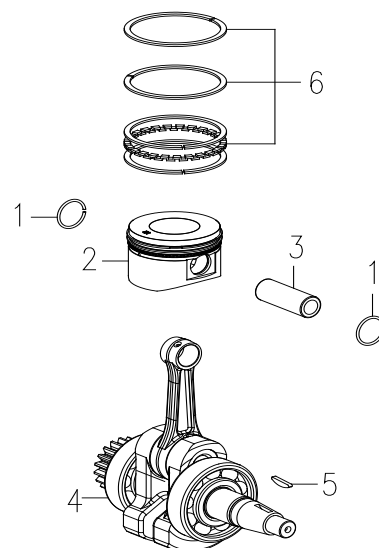
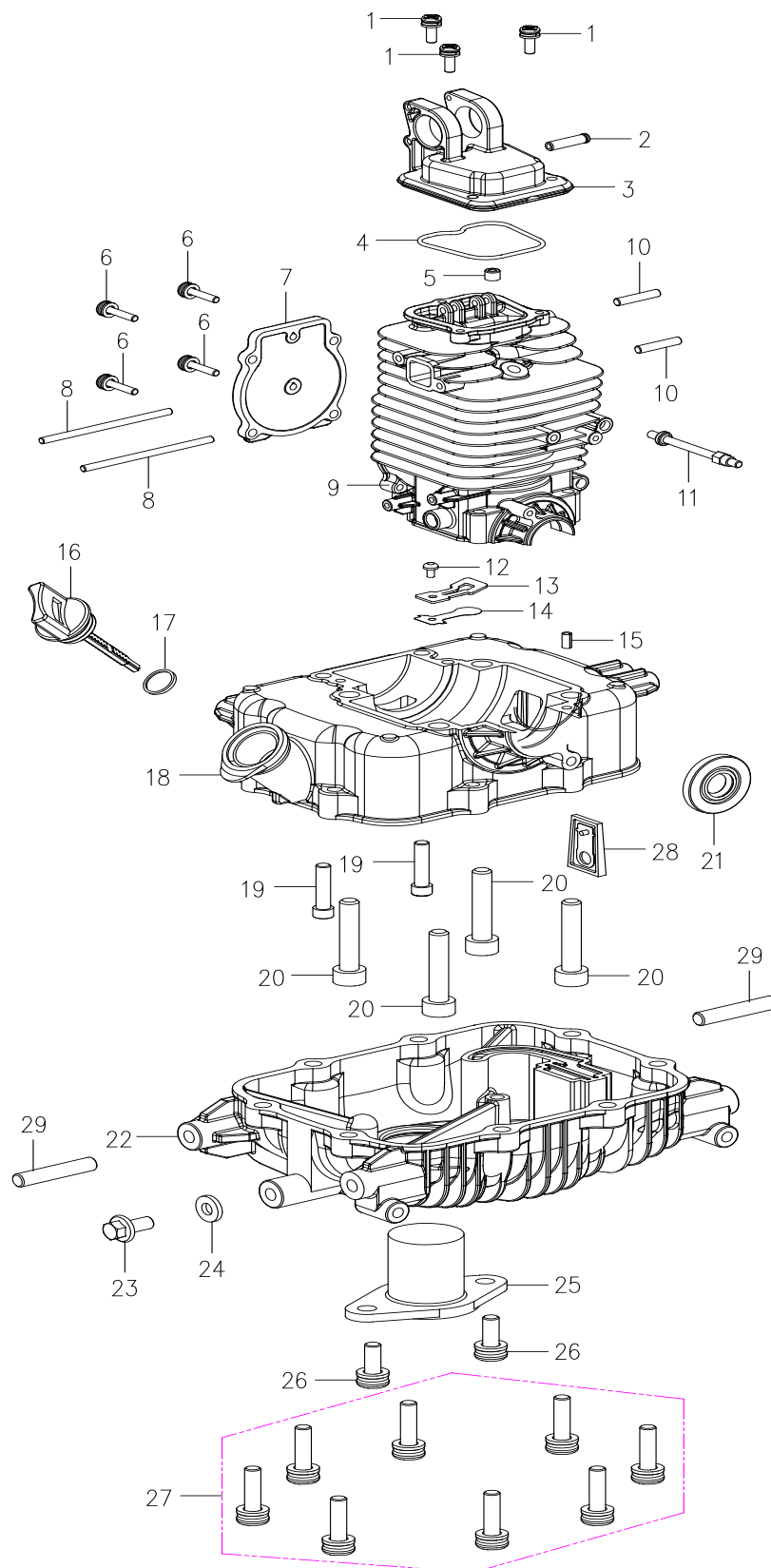


FIG.B CRANKSHAFT PISTON

# Parts Diagram



**FIG.A CRANKCASE ASSY**



FIG.C CAMSHAFT

| No. | Description                                                                         |
|-----|-------------------------------------------------------------------------------------|
| 1   | Tappet                                                                              |
| 2   | Lower Rocker                                                                        |
| 3   | Pin 7 g6×39                                                                         |
| 4   | Rocker Bush                                                                         |
| 5   | cam combination<br>+Decompression of the pin<br>+Torsional spring<br>+Cover for cam |
| 6   | Camshaft                                                                            |
| 7   | Upper Rocker                                                                        |
| 8   | Valve Spring Seat                                                                   |
| 9   | Valve Spring                                                                        |
| 10  | Intake Valve                                                                        |
| 11  | Exhaust Valve                                                                       |

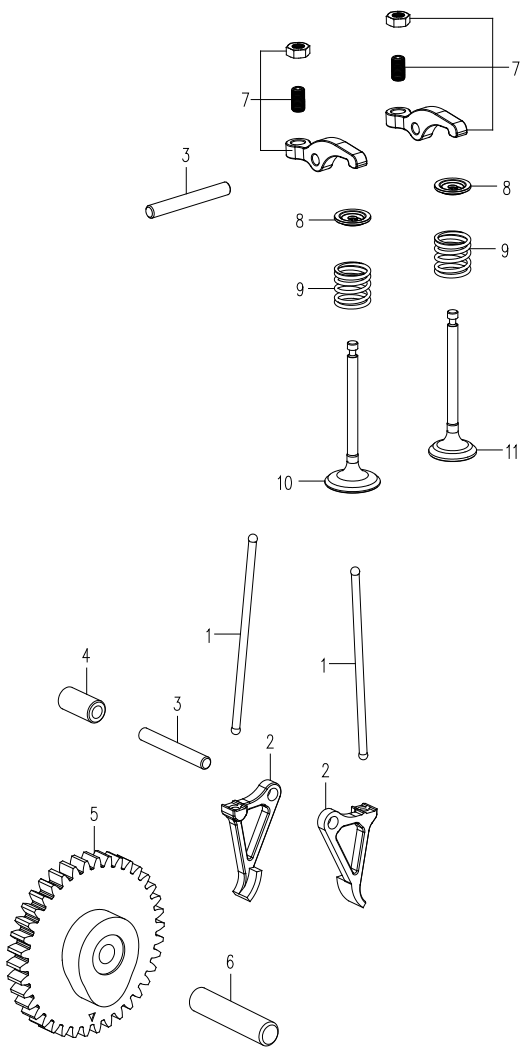


FIG.D LUBRICATION SYSTEM

| No. | Description               |
|-----|---------------------------|
| 1   | Respiratory Tube          |
| 2   | Outlet Tube               |
| 3   | Pipe Hoop 9               |
| 4   | Hexagon Flange Bolt M5×16 |
| 5   | Deaerator                 |
| 6   | O Ring                    |

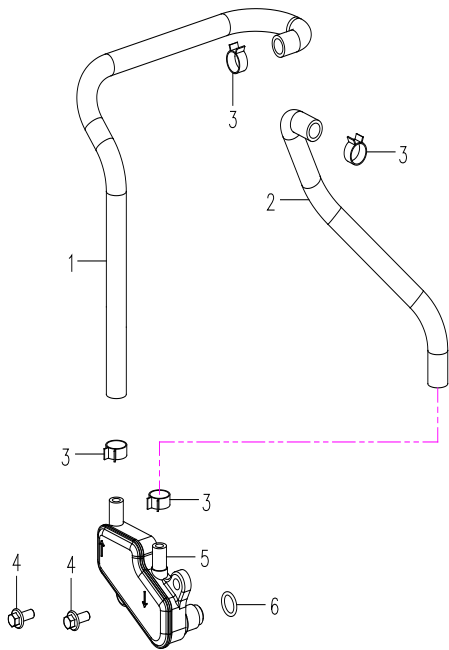


FIG.E CLEANER

| No. | Description                                                                                    |
|-----|------------------------------------------------------------------------------------------------|
| 1   | Hexagon Flange Bolts M5                                                                        |
| 2   | Air Cleaner Bush                                                                               |
| 3   | Air Cleaner Assy.<br>+Cover of Air Cleaner Assy.<br>+Foam/sponge<br>+Inner Hexagon Screw M6×12 |
| 4   | Air Cleaner Gasket                                                                             |
| 5   | Choke Valve                                                                                    |
| 6   | Air Cleaner Gasket                                                                             |
| 7   | Carburetor Gasket                                                                              |
| 8   | Insulation Board Components                                                                    |
| 9   | Insulation Gasket                                                                              |
| 10  | Tap Screw ST4.8×16-F.H                                                                         |

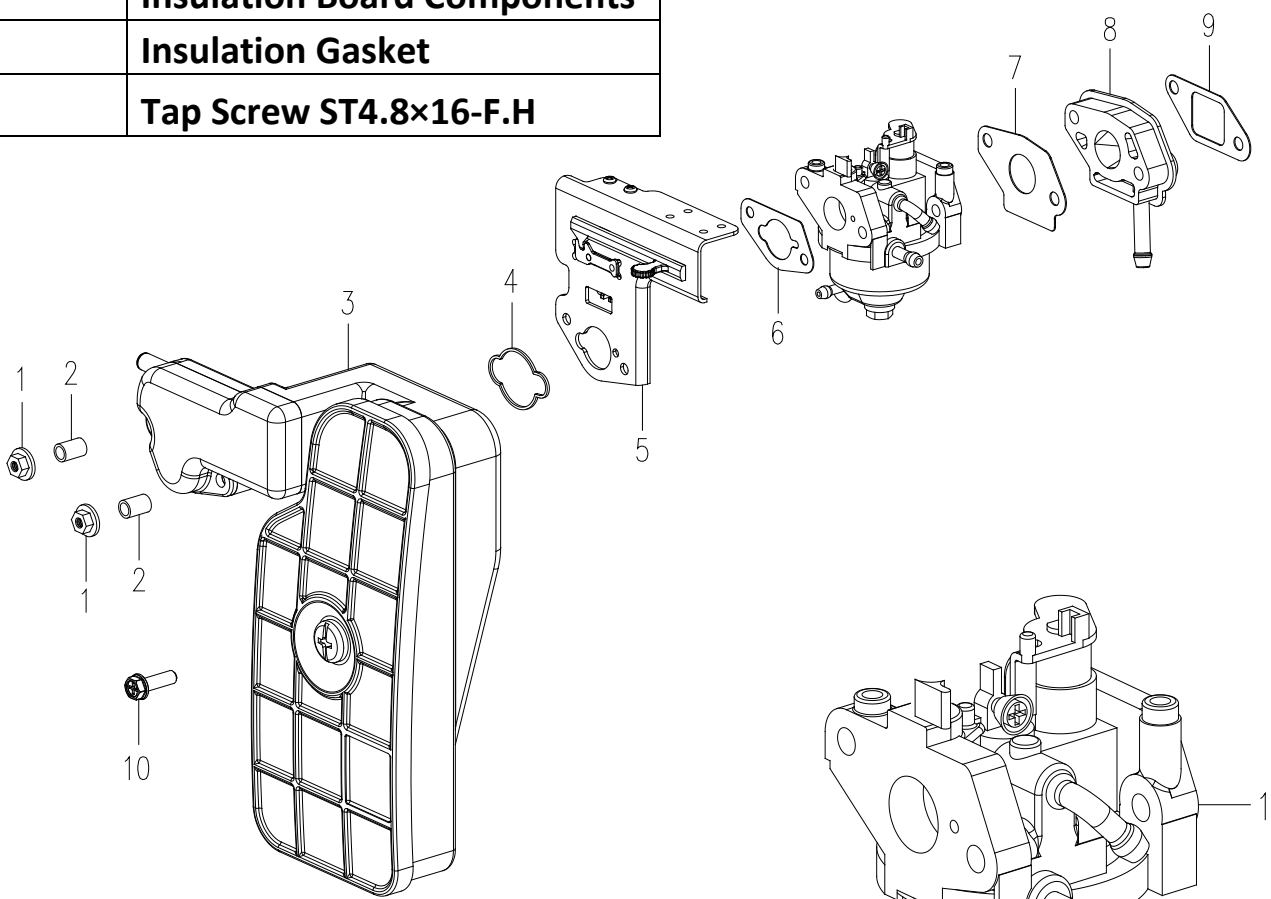
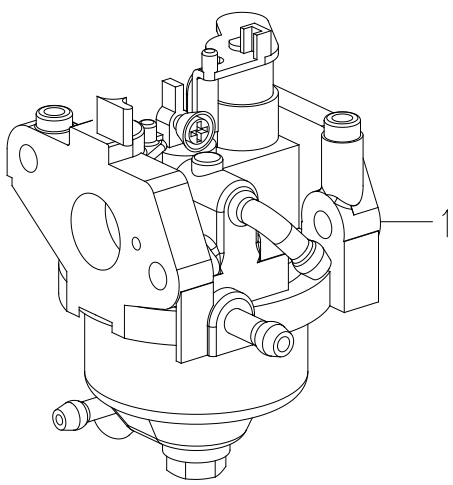


FIG.F ARBURETOR

| No. | Description |
|-----|-------------|
| 1   | Carburator  |



## FIG.G ECOIL STARTER

| No. | Description                  | No. | Description                |
|-----|------------------------------|-----|----------------------------|
| 1   | Oil Filler Hole Airproof Pad | 8   | Inner Hexagon Screw M6×12  |
| 2   | Air Guide Sleeve A           | 9   | Fan Volute                 |
| 3   | Air Guide Sleeve B           | 10  | Hexagon Flange Nut M5      |
| 4   | Tap Screw ST4.8×16-F.H       | 11  | Hexagon Flange Bolts M5×25 |
| 5   | Rubber Cover                 | 12  | Recoil Starter Parts       |
| 6   | Cooling Fan                  | 13  | Hexagon Flange Bolts M6×12 |
| 7   | Starting Hub                 |     |                            |

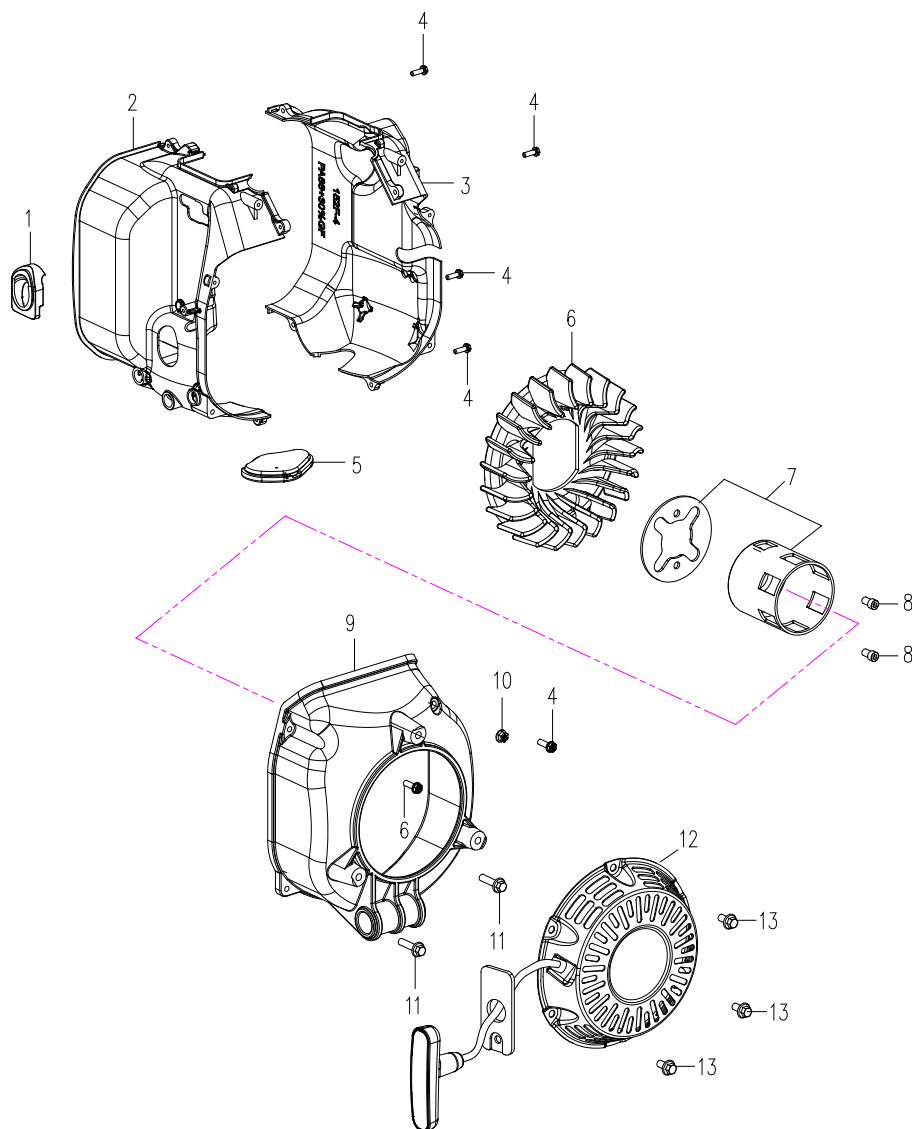
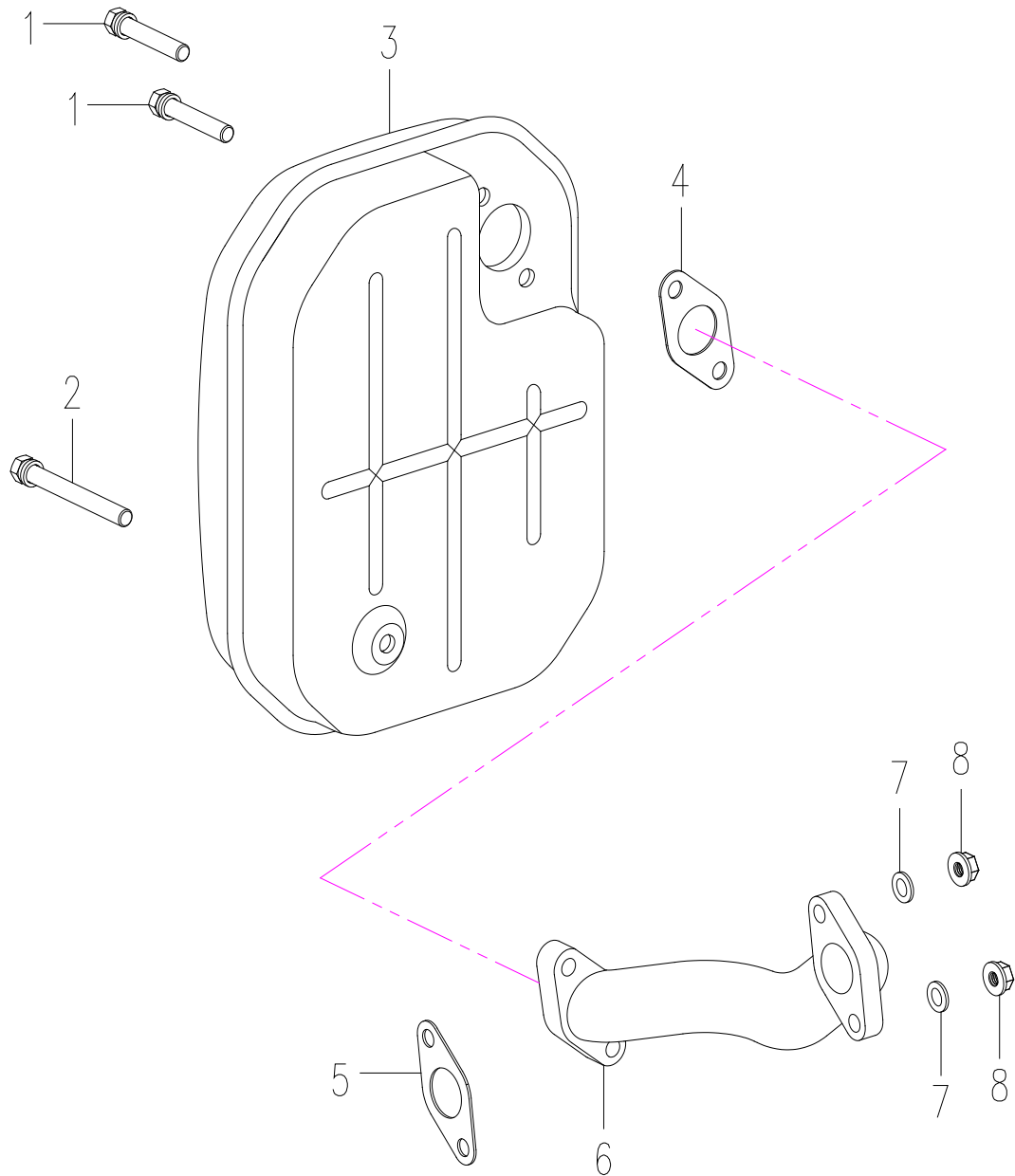


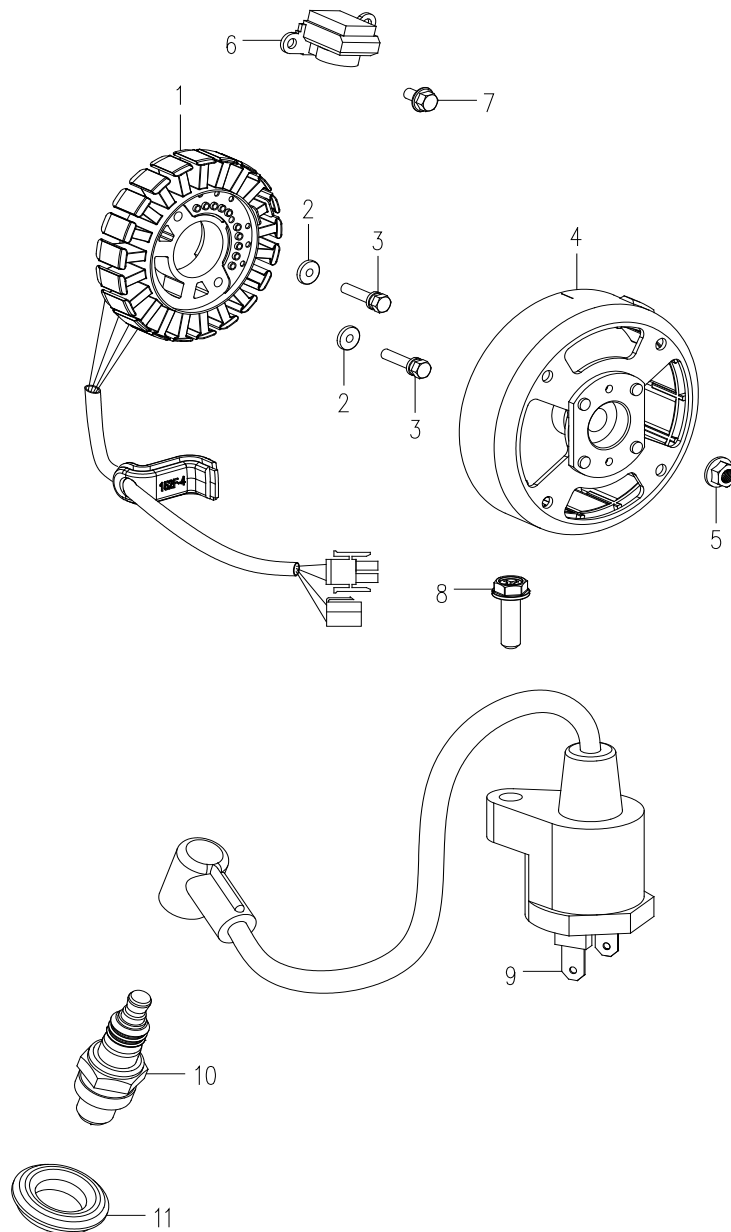
FIG.H MUFFLER

| No. | Description    | No. | Description           |
|-----|----------------|-----|-----------------------|
| 1   | Bolt M6×50     | 5   | Muffler Pipe Gasket   |
| 2   | Bolt M6×80     | 6   | Muffler Pipe          |
| 3   | Muffler Assy.  | 7   | Washer 6              |
| 4   | Muffler Gasket | 8   | Hexagon Flange Nut M6 |



## FIG.I GENERATOR

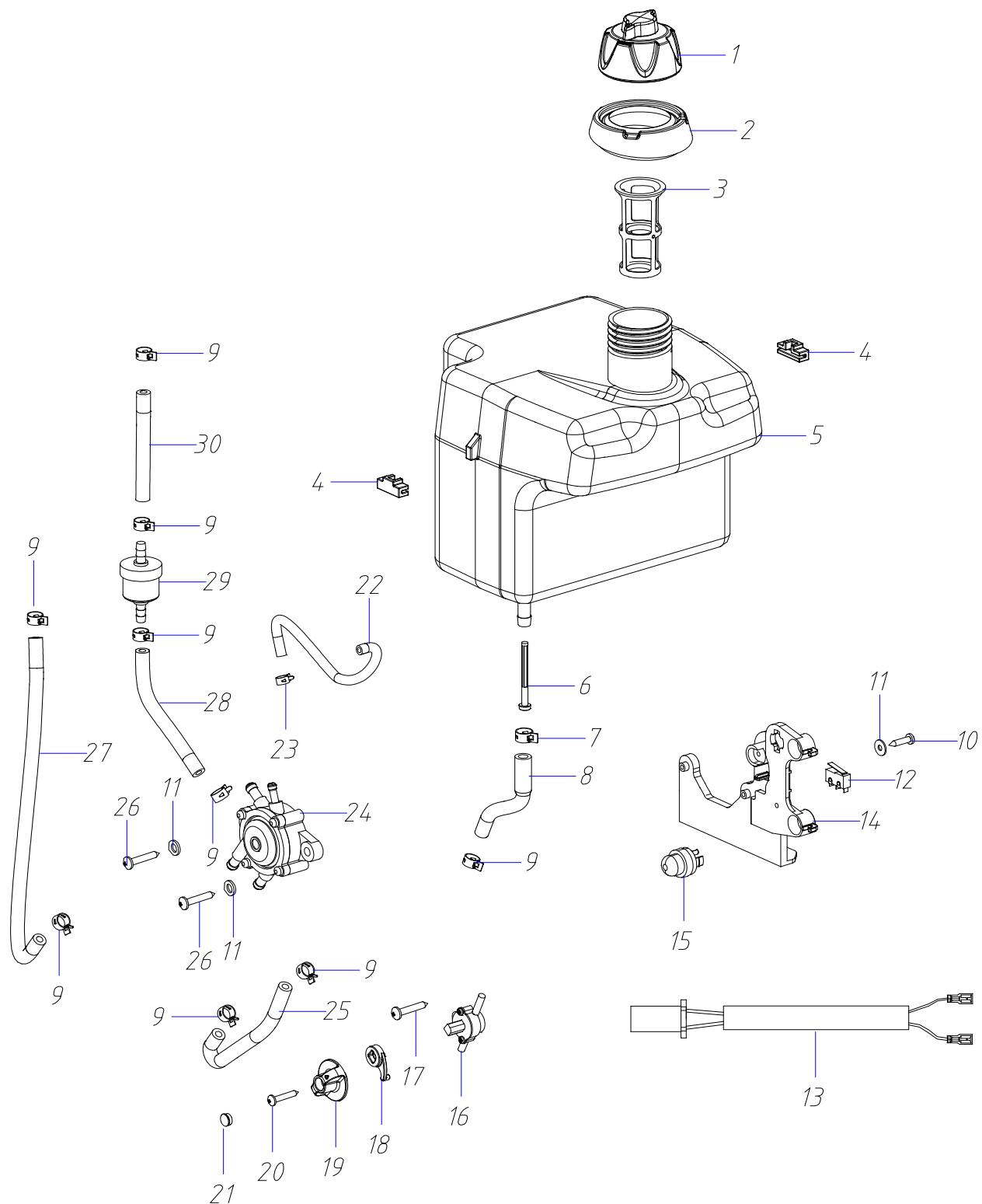
| No. | Description                       | No. | Description                |
|-----|-----------------------------------|-----|----------------------------|
| 1   | Stator 2.0KW 420V 580Hz + bushing | 7   | Hexagon Flange Bolts M5×12 |
| 2   | Washer 5                          | 8   | Tap Screw ST4.8×25-F.H     |
| 3   | Hexagon Flange Bolts M5×30        | 9   | Ignition Coil              |
| 4   | Rotor                             | 10  | Spark Plug A5RTC           |
| 5   | Hexagon Flange Nut M12×1.25       | 11  | Ignition Coil Cap Seal     |
| 6   | Trigger                           |     |                            |



## FIG.J FUEL TANK

| No. | Description                     | No. | Description                  |
|-----|---------------------------------|-----|------------------------------|
| 1   | Fuel Tank Cap Assy.             | 16  | Fuel Cock                    |
| 2   | Fuel Tank Port Rubber           | 17  | Tap Screw GB/T845 ST4.8×16-F |
| 3   | Fuel Tank Filter                | 18  | Micro Switch Plate           |
| 4   | Fuel Tank Pad                   | 19  | Fuel Cock Knob               |
| 5   | Fuel Tank                       | 20  | Screw M4x16                  |
| 6   | Fuel Outlet Filter              | 21  | Fuel Cock Knob cover         |
| 7   | Clamp Ø11                       | 22  | Fuel Hose (4-8) -185         |
| 8   | Single-head Expansion Fuel Hose | 23  | Clamp Ø7.5                   |
| 9   | Clamp Ø9                        | 24  | Fuel Pump                    |
| 10  | Tap Screw GB/T845 ST4.2×13      | 25  | Oil Tube                     |
| 11  | GasketGB/T96 φ4                 | 26  | Tap Screw GB/T845 ST4.2×19   |
| 12  | Micro switch                    | 27  | Fuel Hose (5-10) -285        |
| 13  | Engine Flame Out Line           | 28  | Fuel Hose (5-10) -90         |
| 14  | Fuel Pump Stand                 | 29  | Fuel Filter                  |
| 15  | Fuel Lubricator                 |     |                              |

### FIG.J FUEL TANK



## FIG.K SHELL

| No. | Description                       | No. | Description                              |
|-----|-----------------------------------|-----|------------------------------------------|
| 1   | Hexagon Flange Bolts M6×16        | 21  | Tap Screw GB/T845 ST4.2×13-F             |
| 2   | Muffler Cover                     | 22  | Reed Nut ST4.8                           |
| 3   | Muffler Cover Seal                | 23  | Vibration Absorber                       |
| 4   | Muffler Inner Cover               | 24  | Chassis Back Stand Left                  |
| 5   | Screw M5x16                       | 25  | Chassis Back Stand Right                 |
| 6   | Upper Cover                       | 26  | Hexagon Flange Bolt M6                   |
| 7   | Split Washer                      | 27  | Rectification Voltage-Stabilized Circuit |
| 8   | Spark Plug Mouth Guard Right Side | 28  | Chassis Front Stand Left                 |
| 9   | Spark Plug Mouth Guard Left Side  | 29  | Chassis Front Stand Right                |
| 10  | Rubber Shock Absorber             | 30  | Chassis                                  |
| 11  | Metal Tube                        | 31  | Hexagon Bolt M6                          |
| 12  | Rubber Button                     | 32  | Hexagon Flange Bolt M5X10                |
| 13  | Left Cover of Shell               | 33  | Vibration Absorber                       |
| 14  | Left Side Cover                   | 34  | Panel Box                                |
| 15  | Fuel Port plastic                 | 35  | Snap Joint Nut M6                        |
| 16  | Right Cover of Shell              | 36  | Flange Lock Nut GB/T6187 φ5              |
| 17  | Right Side Cover                  | 37  | Screw M5×8                               |
| 18  | Oil Port Cover Plate              | 38  | Cable Ties                               |
| 19  | Tap Screw GB/T845 ST4.8×9.5-F     | 39  | Wire Harness                             |
| 20  | Edge Protection                   |     |                                          |



FIG.K SHELL

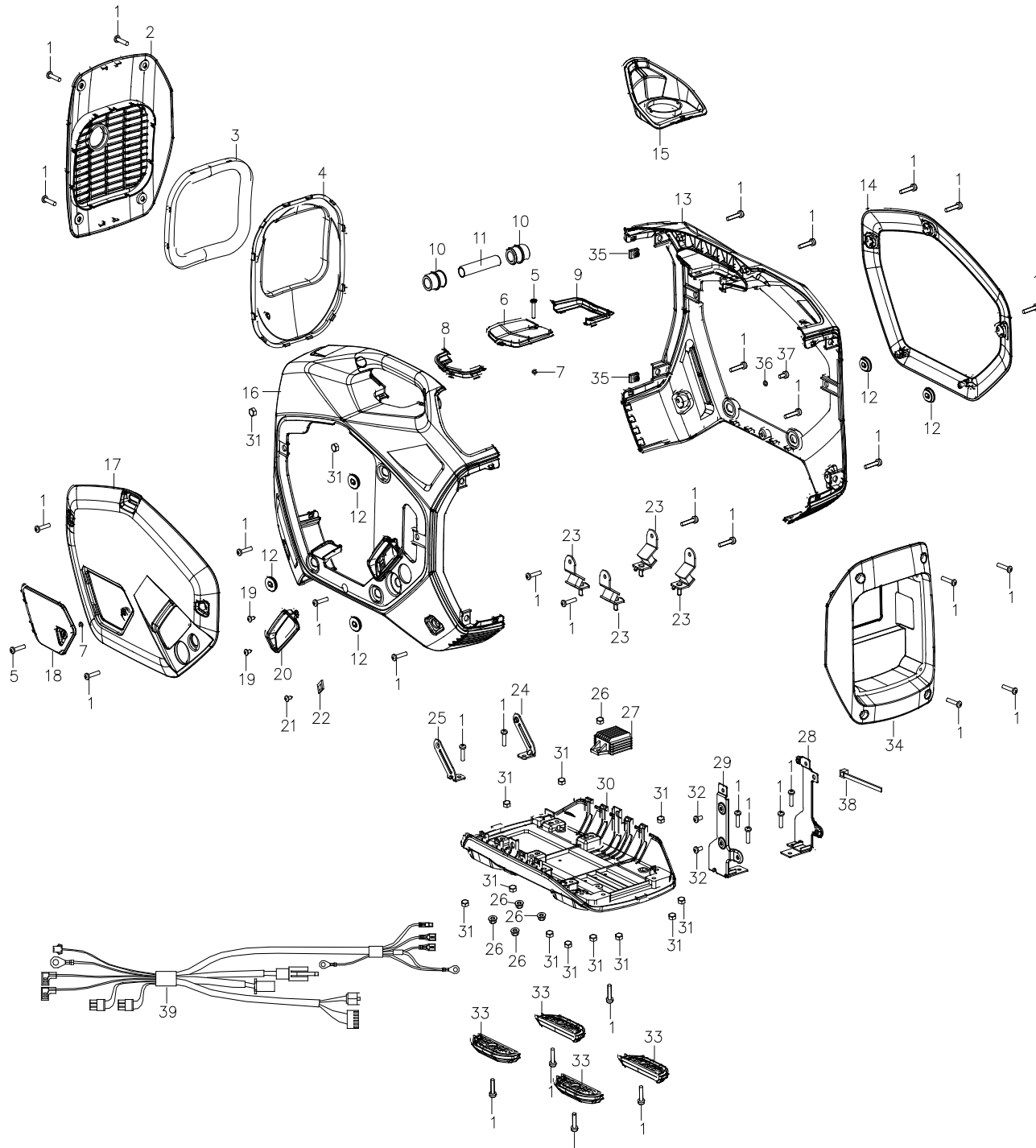


FIG.L GOVERNOR

| No. | Description                  |
|-----|------------------------------|
| 1   | Screw M3×8                   |
| 2   | Stepper Motor Assy.          |
| 3   | Screw M4×12                  |
| 4   | Stepper Motor Holder         |
| 5   | Drive Arm                    |
| 6   | Stepper Motor Extension Cord |

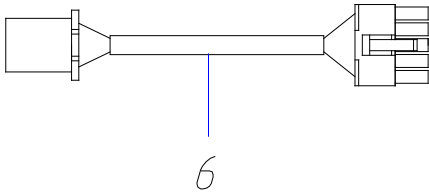
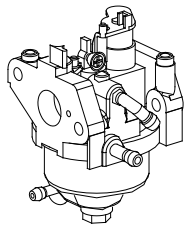
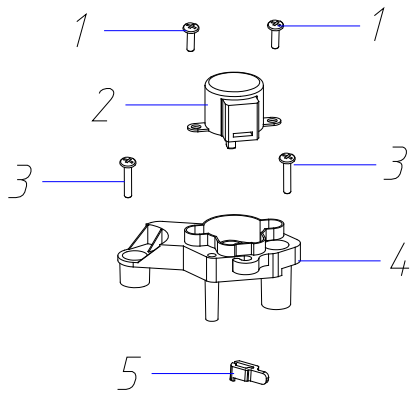


FIG.M INVERTER

| No. | Description               |
|-----|---------------------------|
| 1   | Inverter 2.0kw 230V 50HZ  |
| 2   | Hexagon Flange Bolt M5X10 |
| 3   | Inverter Gasket           |

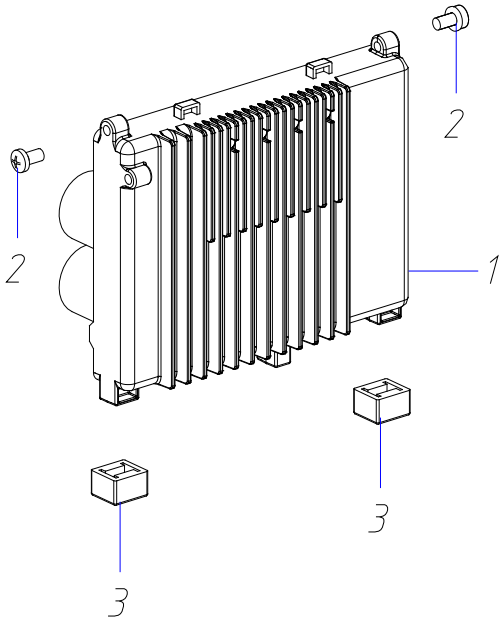


FIG.N CONTROL PANEL

| No. | Description                    | No. | Description                           |
|-----|--------------------------------|-----|---------------------------------------|
| 1   | Cross Pan Head Screw M5×16     | 13  | Reset Switch                          |
| 2   | Ignition Controller            | 14  | Socket                                |
| 3   | Cross Pan Head Screw M5×8      | 15  | Tapped Screw GB/T819 M4×12            |
| 4   | Lock Gasket GB862.2 φ5         | 16  | Water-Proof Cap of Overload Protector |
| 5   | Hexagon Flange Nut M4          | 17  | USB Port                              |
| 6   | Overload Protector 6A          | 18  | Cigar Lighter                         |
| 7   | Flange Bolt GB/16674 M5×16     | 19  | Hexagon Flange Nut M5                 |
| 8   | Earth Sticker                  | 20  | Flat Washer GB/T97 φ5                 |
| 9   | Panel Components               | 21  | Spring Washer GB/T93 φ5               |
| 10  | Panel Sticker                  | 22  | Hexagon Nut GB/T6170 M5               |
| 11  | Boat Switch                    | 23  | AC Socket Wire Harness                |
| 12  | Water-Proof Cap of Boat Switch | 24  | DC Socket Wire Harness                |

