

TUSK

INVERTER GENERATOR

User Manual

TG 5500 I



WARNING: SAVE THIS MANUAL FOR FUTURE REFERENCE



This manual contains important information regarding safety. Operation, maintenance and storage of this product. Before use, read carefully and understand all cautions, warnings, instructions and product labels. Failure to do so could result in serious personal injury and/or property damage.

Thank you for choosing an Inverter Generator distributed by our company

This manual contains information on how to operate Tusk Inverter Generator. Please read this manual carefully before operating the generator. This will help you safely starting the generator and to achieve best result.

All Information in this manual is based on the latest product information available at the time of production.

Our company reserves the right to make changes at any time without prior notice. No section of this manual may be reproduced without our written permission.

This manual should be considered a permanent part of the generator and should remain with the generator if it is resold.

SAFETY MESSAGES

Your safety and the safety of others are very important. We have provided important safety messages in this manual and on the generator. Please read these messages carefully.

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol and one of three words: DANGER, WARNING, or CAUTION. These mean:



You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.



You **CAN** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.



You **CAN** be **HURT** if you don't follow instructions.



Your generator or other property could be damaged if you don't follow instructions.

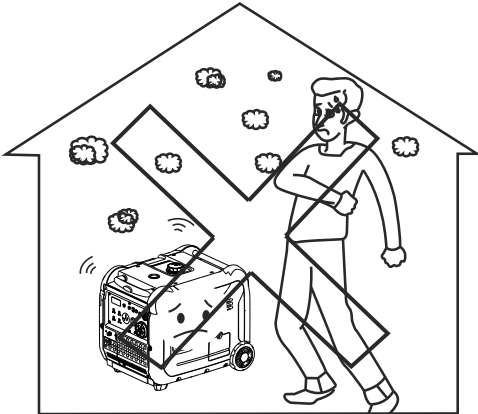
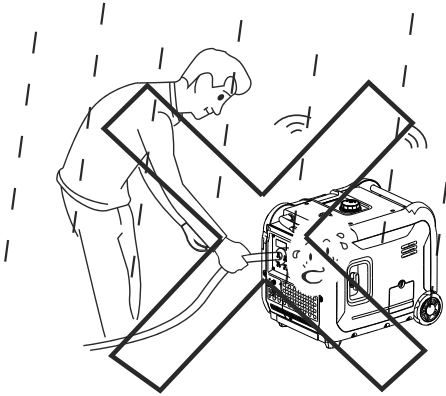
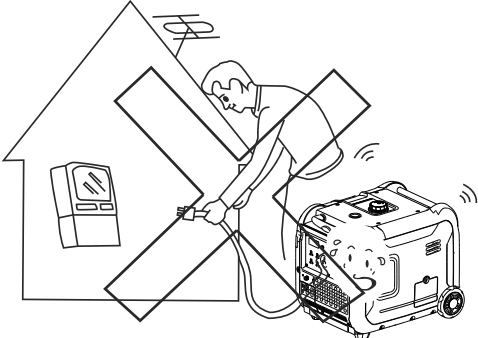
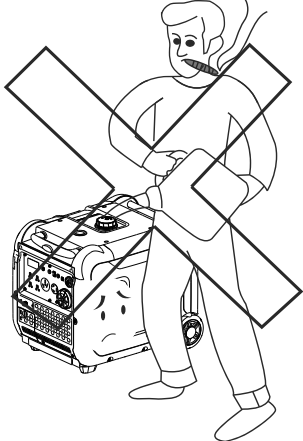
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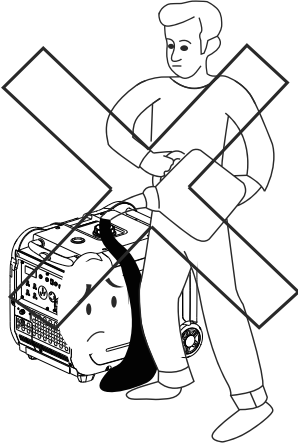
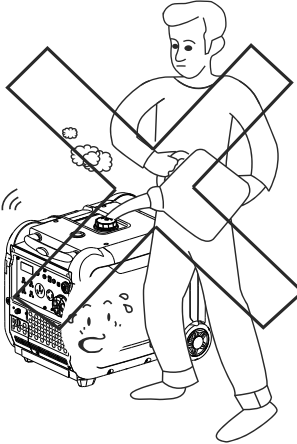
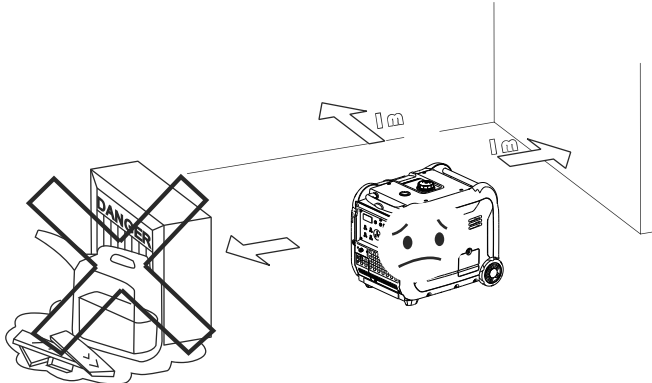
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1. SAFETY NOTICE

1. Safety Standard

Read and understand this owner's manual before operating your generator. You can help prevent accidents by being familiar with your generator's controls, and by observing safe operating procedures.

	
<p>Don't operate indoors.</p>	<p>Don't operate in the wet conditions.</p>
	
<p>Don't directly connect to the household power supply</p>	<p>Don't smoke when refueling</p>

	
<p>Don't overflow the fuel when refueling</p>	<p>Stop the engine before refueling</p>
	
<p>Please keep it 1m at least far away from the inflammable materials</p>	

2. Special Requirements

Electrical equipment including lines and plug connections should be free from damage.

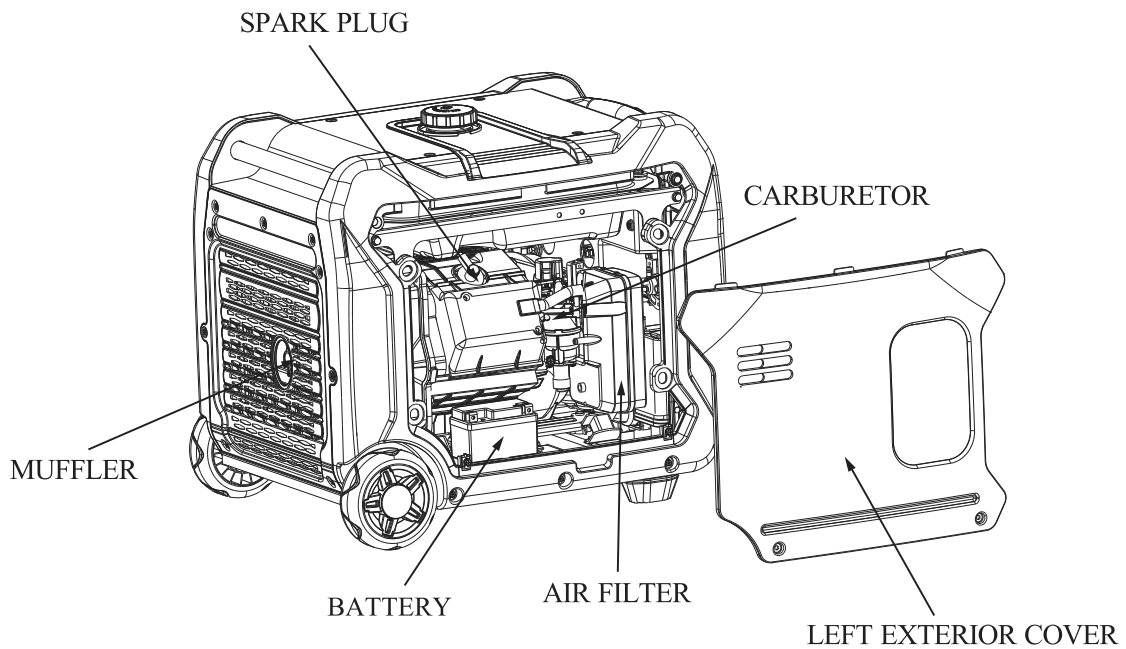
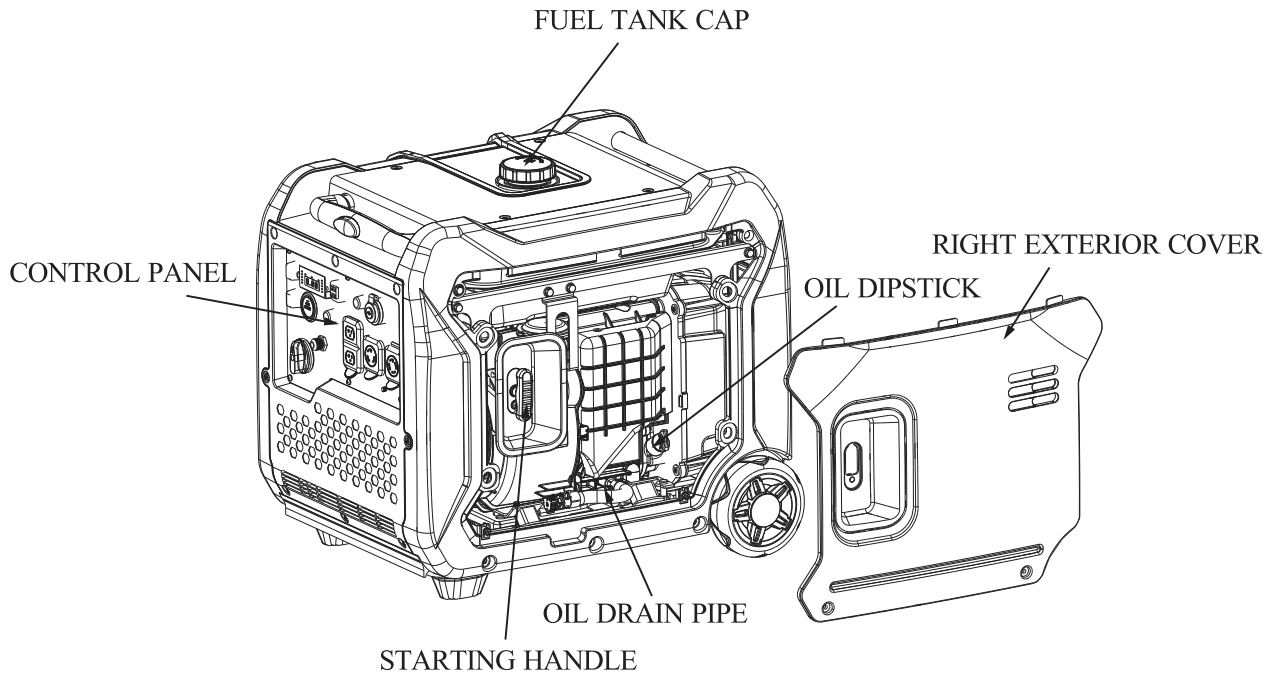
The circuit breaker should be matched with the generator capacity. If the circuit breaker require replacement, then it must be replaced with a circuit breaker having an identical rating and performance characteristics.

Don't operate the generator before grounding

If an extension lead is being used, ensure the following requirements are met:

The length of the extension lead should not exceed 60m for 1.5mm internal cord and 100m for 2.5mm internal cord.

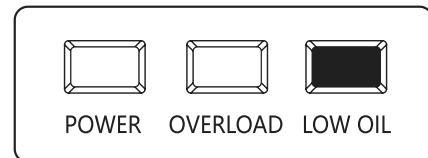
2.COMPONENT IDENTIFICATION



3. CONTROL FUNCTION

1. Oil warning light (Red)

When the oil level falls below the lower level, the oil warning light comes on and then the engine stops automatically. Unless you refill with oil, the engine will not start again



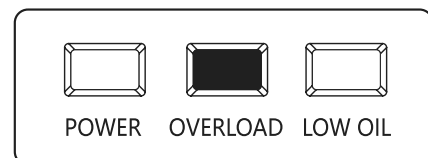
Tip: If the engine stalls or does not start, turn the engine switch to “ON” and then pull the recoil starter.

If the oil warning light flickers for a few seconds, the engine oil is insufficient.

Add oil and restart.

2. Overload indicator light (Red)

The overload indicator light comes on when an overload of a connected electrical device is detected, the inverter control unit overheats, or the AC output voltage rises. Then, the AC protector will trip, stopping power generation in order to protect the generator and any connected electric devices. The AC pilot light (Green) will go off and the overload indicator light (Red) will stay on, but the engine will not stop running.



When the overload indicator light comes on and power generation stops, proceed as follows:

- 1) Turn off any connected electric devices and stop the engine.
- 2) Reduce the total wattage of connected electric devices within the rated output.

3) Check for blockages in the cooling air inlet and around the control unit.

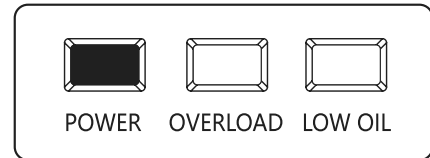
If any blockages are found, remove.

- 4) After checking, restart the engine.

Tip: 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. AC pilot light (Green)

The AC pilot light comes on when the engine starts and produces power.



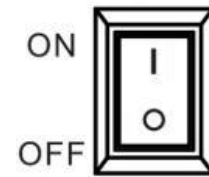
4. Engine smart control (ECO)

① “ON”

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

② “OFF”

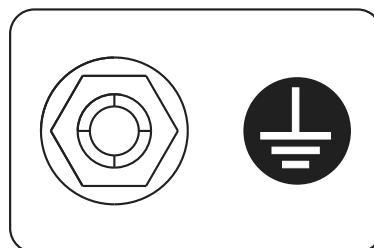
When the ECO switch is turned to “OFF”, the engine runs at the rated/min (3600r/min) regardless of whether or not it is connected a load.



Tip: The ECO must be turned to “OFF” when using electric devices that require a large starting current, such as a compressor or a submersible pump.

5. Ground (Earth) terminal

Ground (Earth) terminal connects the earth line to prevent electric shock. The generator must always be earthed.



4. PREPARATION

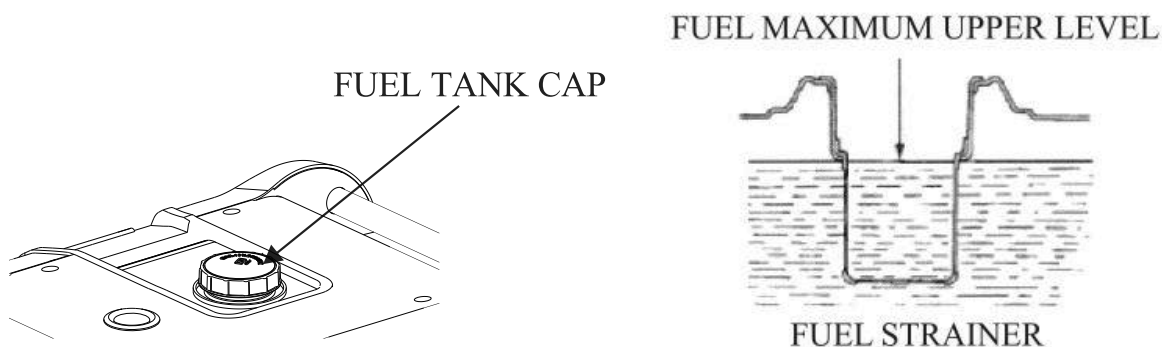
1. Fuel

DANGER!

Fuel is highly flammable and poisonous. Check “SAFETY INFORMATION” before filling the generator.

Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.

After filling the fuel, make sure the fuel tank cap is tightened securely.



NOTICE

Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

Use unleaded gasoline only, as leaded gasoline can severely damage internal parts of the generator.

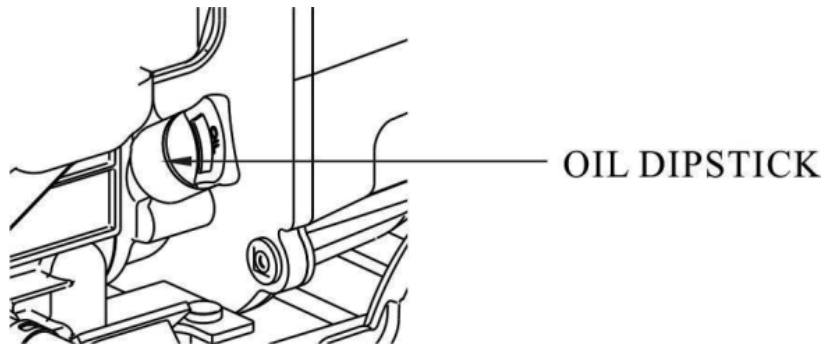
Remove the fuel tank cap and fill the tank to the red level.

Recommended fuel: Unleaded gasoline

Fuel tank capacity: 13.5L

2 Engine oil

The generator has been shipped without engine oil. Do not start the engine till it is filled with sufficient engine oil.

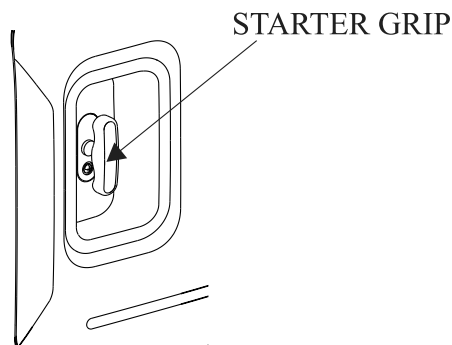


3. Recoil Starter

To start the engine, pull the starter grip lightly until resistance is felt, then pull briskly.

Do not allow the starter to snap back against the engine.

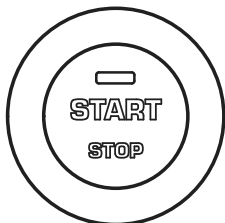
Return it gently to prevent damage to the starter.



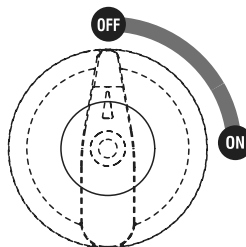
4. Generator Switch

One-button start switch: press to start the generator, press again to shut down the generator.

Fuel switch: The fuel switch controls fuel flow from the tank to the carburetor. Be sure to return the fuel switch to the "off" position after stopping the engine.



One-button start switch



Fuel switch

5. AC Circuit Breaker/Over current Protector

The overload current will automatically switch off circuit breaker to avoid short circuit of the load or overload. If the indicator of AC over current Protector is raised, the over current Protector is now in the “OFF” position. Press the button of AC over current Protector to the “ON” position again a few minute later. If the circuit breaker is switched off automatically, switch the circuit breaker on again.



6. Ground Terminal

This ground terminal is specially used to connect the generator.



5. GENERATOR OPERATION

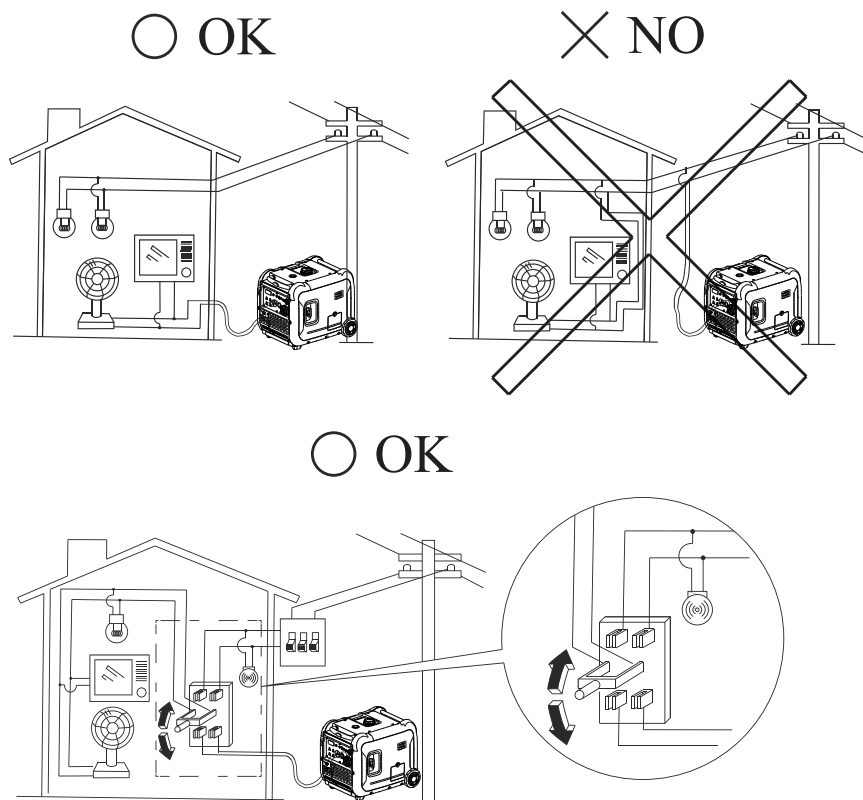
Generator operation environment:

- Temperature: $-5^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Humidity: Below 95%
- Height above sea level: 1000 m lower (If the area is 1000 m over, the power should be lowered in operation).

1. Connection to the Household Power Supply

NOTICE

When connecting the generator to the household power supply, connection must be made by a qualified electrician. After connecting, carefully check electric connection for their safety and reliability, improper electrical connection may cause generator damage and may cause fire.



2. Generator Grounding

To prevent electrical shock or misuse from faulty appliances, the generator should be grounded with insulated lead.

3. AC Current

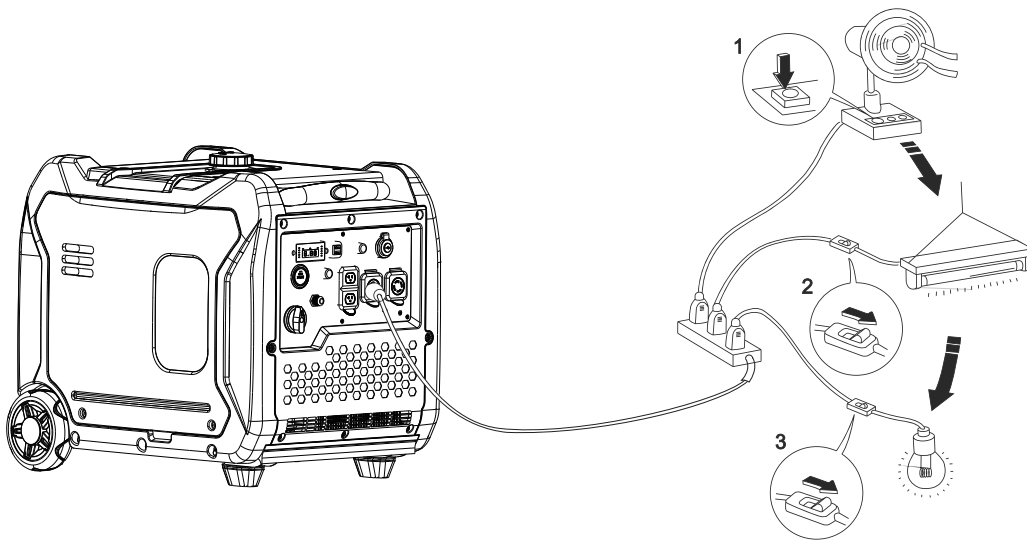
Before starting the generator, make sure that.

Total load appliance power (Total resistance, capacitive and inductive) does not exceed rated power of the generator.









NOTICE

Overload operation will greatly shorten generator service life.

If the generator set is connected to multi- loads or electric appliances, please first connect to current maximum, in turn, current second, and final, current minimum.



In general, capacitive and inductive load, especially, motor-driven devices have a big starting current when starting. The following table is a reference for when connecting to the electric appliances.

Type	Wattage		Typical Device	Examples		
	Start	Rated		Device	Starting	Rated
Incandescent Lamp Heating Device	X1	X1	 Incandescent Lamp  Tv Set	 Incandescent Lamp 100W	100VA (W)	100VA (W)
Fluorescent Lamp	X2	X1.5	 Fluorescent Lamp	 Fluorescent Lamp 40W	80VA (W)	60VA (W)
Motor Drive Device	X3-5	X2	 Refrigerator  Electric Fan	 Refrigerator 150W	450-750VA (W)	300VA (W)

4. DC Current

DC Terminals

The DC terminals are used to provide power supply for DC lower power load and charge for other battery.

The terminals are colored red to identify the positive (+) terminal and black to identify the negative (-) terminal. Load connection method: The load must be connected to DC terminals with the proper polarity (load positive to positive of DC terminal and load negative to negative of DC terminal).

5. High Altitude Operation

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Output power will decrease, and fuel consumption will increase.

Engine performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the engine at altitudes 1000 meters above sea level, you should have our company authorized dealer performed this carburetor modification. If not, you should lower load power in operating generator.

Even equipped with suitable carburetor, engine horsepower will decrease approximately 3.5% for each 300 meter increase in altitude. The effect of altitude on horsepower will be lowered greater than this if no carburetor modification is made.

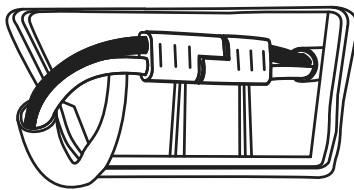
NOTICE

If a carburetor for high altitude is equipped with engine suitable to a lower altitude, the lean air fuel mixture will cause the engine output power lower, over-heat and seriously damage.

6. START THE GENERATOR

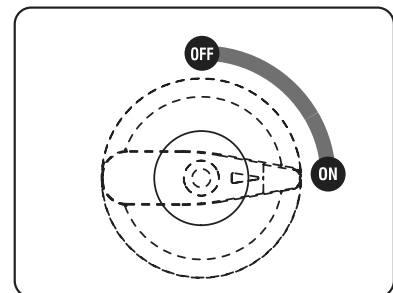
Before electric start and remote start, please open the right generator cover to make sure the battery cable is connected.

1. Loosen the two bolts on the panel cover and remove the left panel cover;
2. Connect the positive and negative electrodes of the battery.

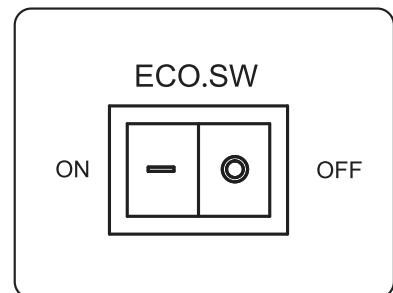


Single fuel start step

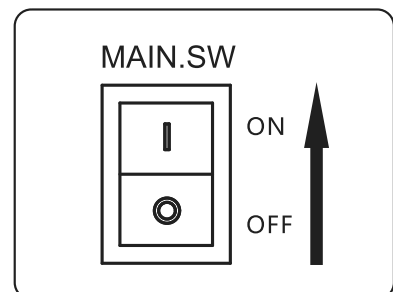
- (1) The load of all output terminals is removed;
- (2) Turn the fuel switch to “ON”;



- (3) Turn the energy saving switch to “OFF”;



- (4) Switch the generator main switch to “ON”;



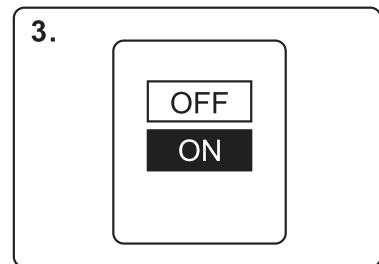
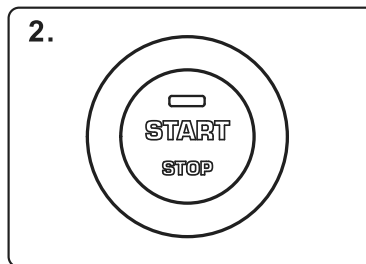
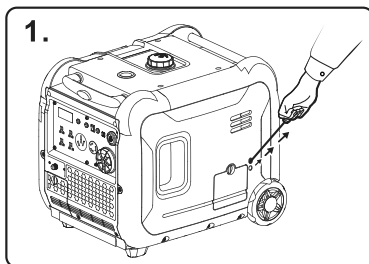
(5) Select the boot mode:

1. Manual start: pull up the start handle to start the generator.

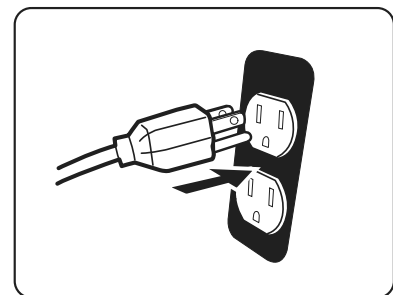
Tip: When pulling the hand starter, hold the generator steady to prevent the generator from tipping over.

2. Electric start: press the one button to start the generator.

3. Remote control startup: press “ON” on the remote control to continue the normal operation of 1-2s generator.



(4) Connect the load.



Remote control pairing

(1) Press the start-stop switch button for 5 seconds, and release when the indicator light of the start-stop switch button lights up;

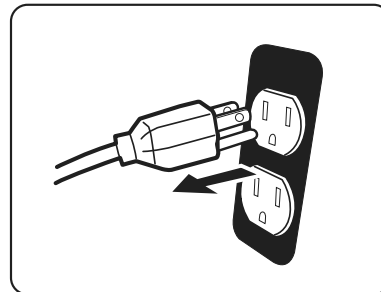
(2) Long press the remote control “ON” / “OFF” until the light goes out;

(3) Long press the remote control “ON” for about 1s to start the generator, and the remote control is paired successfully.

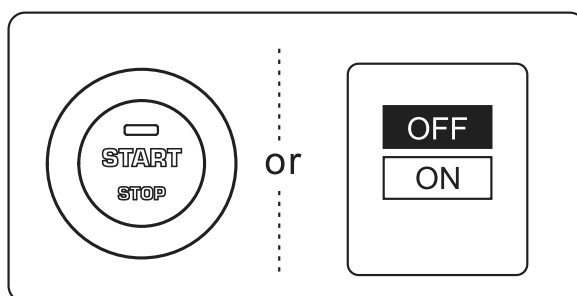
Tip: The remote control provided by the generator factory has been paired successfully.

7. STOPPING THE ENGINE

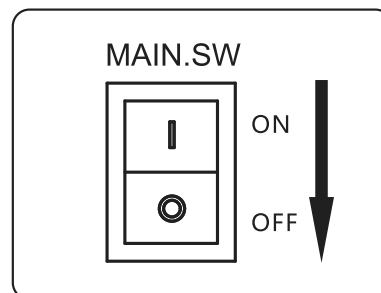
(1) Remove all the loads in the output;



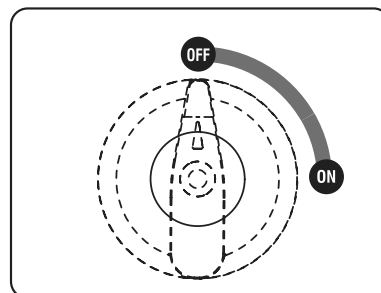
(2) Press the one-button start switch
(or the remote control “OFF”);



(3) Turn the main switch of the generator to
“OFF”.



(4) Turn the fuel switch to “OFF”.



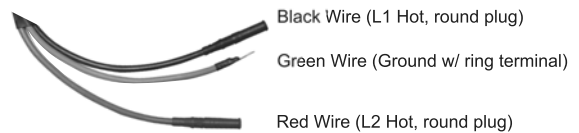
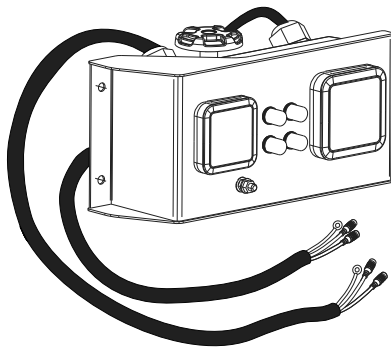
IMPORTANT NOTES

The above instructions for starting and stopping the generator are normal procedures. Users must follow standard procedures to start, use and shut down the generator.

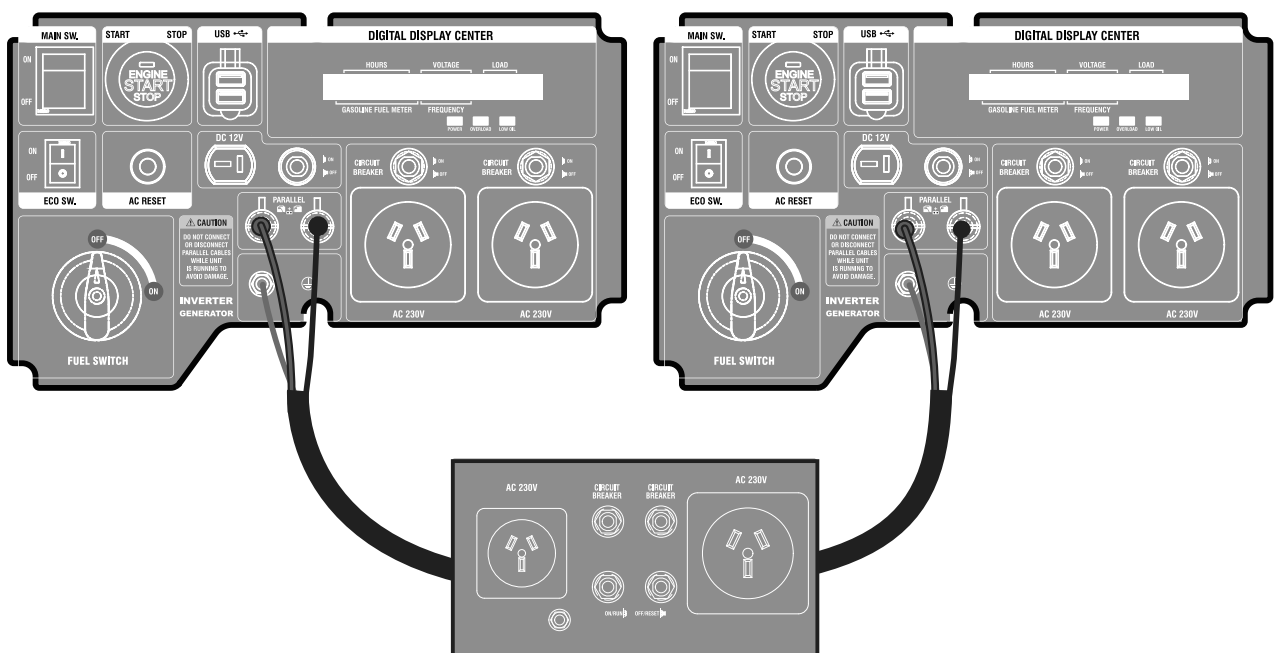
1. If the user directly turns off the generator with the main switch, there may be a sound of muffler blasting, which is a normal phenomenon under abnormal operation.
2. When the battery is not connected or the battery is out of charge, if the user directly turns off the generator with the main switch, it may be difficult or impossible to start the cold machine, which is a normal phenomenon under abnormal operation.

8. INVERTER PARALLEL KIT OPERATION

Parallel Kit



1. Make sure both engine switches are in the off position, and confirm the Low idle switches on both generators are turned off.
2. Attach the ground terminal (green wire) from each end of the parallel cable to the corresponding ground terminal on each generator. Connect and tighten the ground wire.
3. Connect the black and red parallel cable leads to the black parallel ports on each corresponding inverters control panel. **DO NOT connect two red leads or two black leads into the same inverter.**
4. Start each generator and confirm that the green output indicator is illuminated on both.
5. If using Low idle mode, turn both Low idle switches on after the generators are started.
6. To shut down, turn off both generators and then remove the parallel cords.



9. MAINTENANCE

The engine must be properly maintained to ensure it is safely operated and trouble free.

In order to keep your gasoline engine in good working condition, it must be periodically serviced. The following maintenance schedule and routine inspection procedures must be carefully followed:

Items	Frequency	Each time	First 1 month or first 20hrs of operation	Thereafter, every 3 months or every 50hrs of operation	Every year or every 100 hrs of operation
	Engine oil	Check- Refill	√		
	Replace		√	√	
Air filter element	Check	√			
	Clean		√		
	Replace			√	
Deposit Cup(if equipped)	Clean				√
Spark Plug	Check - adjust				√*
Spark arrester	Clean			√	
Idling (if equipped) **	Check - adjust				√
Valve clearance **	Check-adjust				√
Fuel tank & fuel filter **	Clean				√
Fuel line	Check	Every 2 years(change if necessary)			
Cylinder head, piston	Clean up carbon **	$< 225\text{cc}$, Every 125hrs $\geq 225\text{cc}$, Every 250hrs			
* These items should be replaced if replacement needed. ** These items should be maintained and repaired by our authorized dealer, unless the owner has appropriate tools and is proficient with mechanical maintenance.					

NOTICE

- If the gasoline engine is frequently worked under high temperature or at a high load, change the oil every 25 hours.
- If the engine is frequently worked under dusty or other severe circumstances, clean the air filter element every 10 hours; If necessary, change the air filter element every 25 hours.
- The maintenance period and the exact time (hour), the one which comes first should govern.
- If you have missed the scheduled time to maintain your engine, do it as soon as possible.

⚠ WARNING

Stop the engine before servicing. Put the engine on a level surface and remove the spark plug cap to prevent the engine from starting.

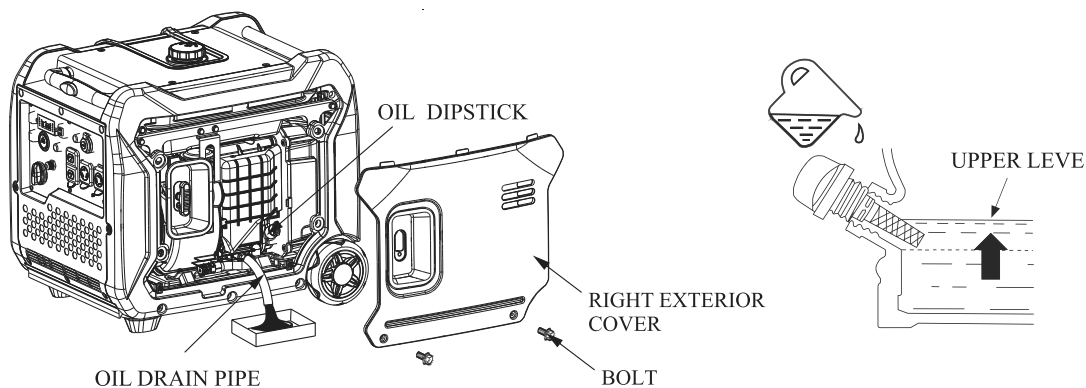
Never run your engine in a poorly ventilated room or other enclosed area, be sure to keep good ventilation in working area. The exhaust from the engine may contain poisonous CO, and inhalation can cause shock, unconsciousness and even death.

1. Engine Oil Change

Drain the oil while the engine is warm to assure complete and rapid draining.

1. Remove the two bolts from the right exterior cover plate and remove the cover plate.
2. Open the oil pipe and discharge the oil.
3. Unscrew the dipstick to refuel the oil and check the oil level. Install the cover after the oil is refueled.

Oil capacity: 0.85L



⚠ CAUTION

Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

Please dispose of used engine oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station or recycling center for reclamation. Do not throw it in the trash or pour it on the ground.

2. Air Cleaner Service

A dirty air cleaner will prevent air from flowing into the carburetor. To prevent carburetor malfunction, maintain the air cleaner regularly. Maintain more frequently when operating the generator in extremely dusty areas.

⚠ CAUTION

Using gasoline or flammable solvent to clean the filter element can cause a fire or explosion. Use only soapy water or nonflammable solvent.

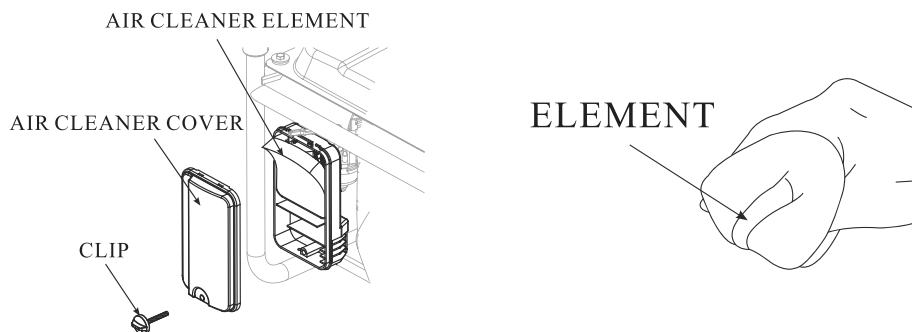
NOTICE

Never run the generator without the air cleaner. If not, rapid engine wear will result.

(1) Open the air cleaner clip and open the air cover. Check the air cleaner element for complete and clean.

(2) If the air cleaner element is dirty, please clean the air cleaner element:

Wash the air cleaner element in a solution of household detergent and warm water, then rinse thoroughly or wash in nonflammable or high flash point solvent: Drop a few points engine oil in, then, squeeze out.



(3) Reinstall the air cleaner element and the cover.

3. Spark Plug Service

Recommended spark plugs: F7RTC or other equivalents

(1) Remove the spark plug cap.

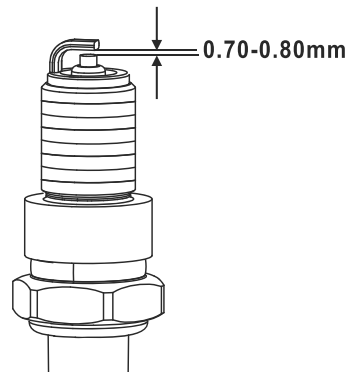
(2) Use the plug wrench to remove the spark plug.

(3) Visually inspect the spark plug if the insulator is cracked, if cracked, replace with new the spark plug.

(4) Measure the plug gap with a feeler gauge. Correct as necessary by carefully bending the side electrode. The gap should be: 0.70-0.80 mm.

(5) Check the spark plug washer if it is still good. If not, replace it.

(6) Reinstall the spark plug, tighten it with plug wrench and impact the washer. Reinstall the spark plug accurately.



NOTICE

Please use the spark plug with suitable heat range.

10. STORAGE

WARNING

Avoid being in contact with a hot engine or exhaust system as it could cause burns. Let the engine cool before storing the generator. If storing the unit for an extended period of time, make sure the storage area is free of excessive humidity and dust.

(1) Drain the fuel out from the fuel tank. Clean strainer, O-ring and sediments, then refit the parts back to their right place. Drain fuel out of the carburettor by loosening the drain bolt, then refit it and screw down the carburettor bolt.

WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Drain fuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area during this procedure.

(2) Screw the oil dipstick off and screw the drain bolt off the crankcase to completely drain the oil out. Then screw down the drain bolt and fill fresh oil to upper mark, finally refit the oil dipstick well.

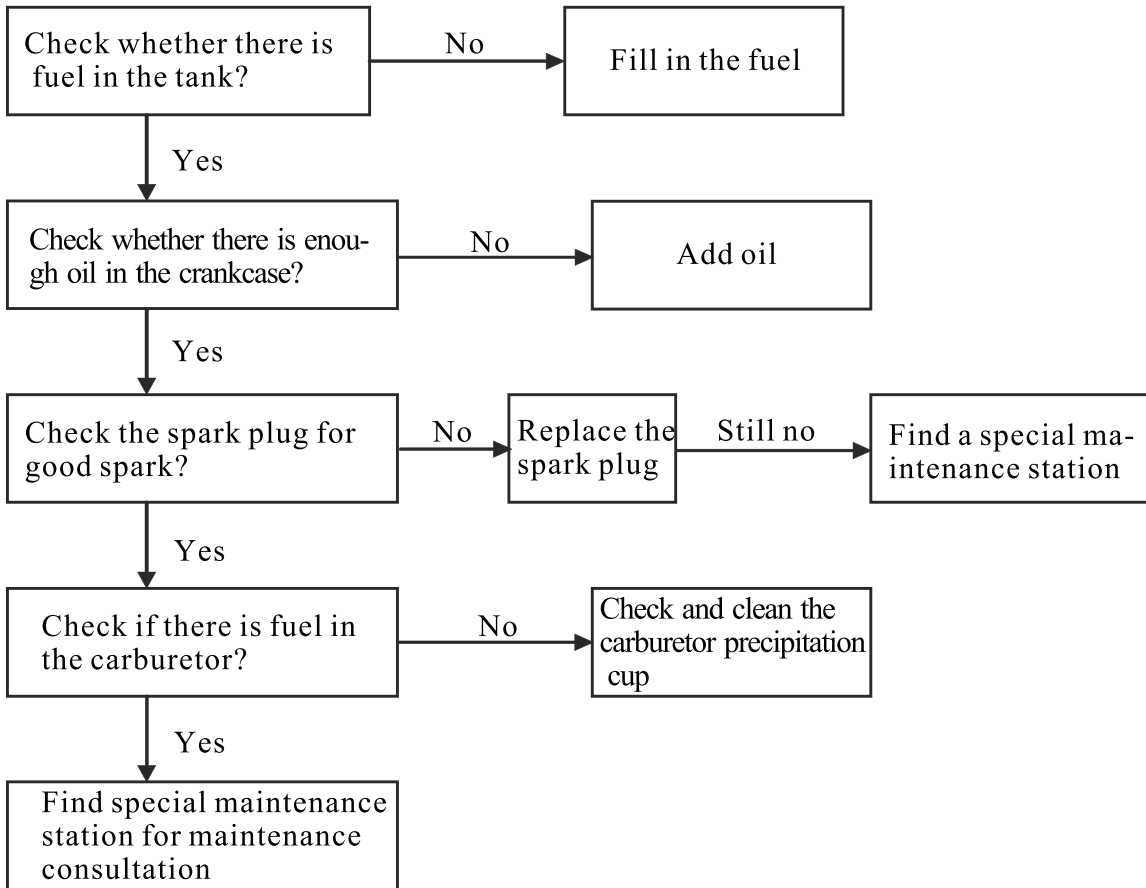
(3) Remove the spark plug, and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.

(4) Slowly pull the starter grip until resistance is felt. Let the intake and exhaust valves in closing position.

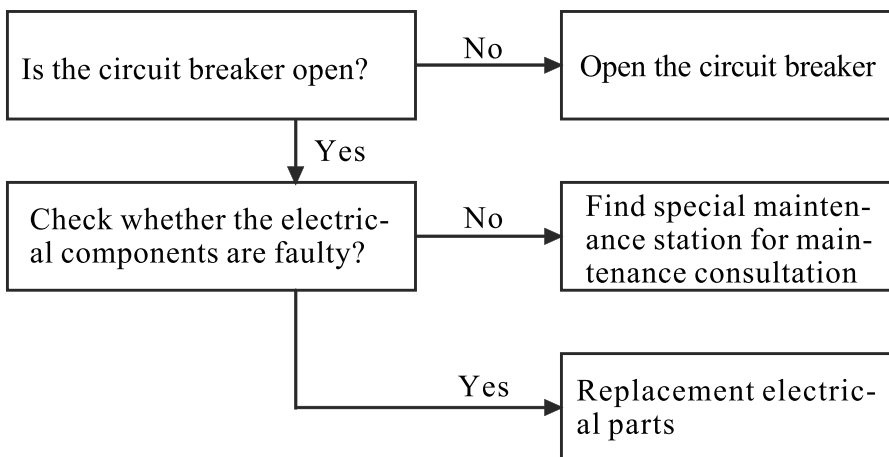
(5) Place the generator in the clean area.

11. TROUBLESHOOTING

Engine not to start:



There is no voltage :



12 . SPECIFICATIONS

Engine	Engine Model	180F/P-2
	Engine Type	Single Cylinder, Four Stroke, Air Cooled, Overhead Valve
	Cylinder Diameter×Stroke(mm)	80x62
	Displacement(cc)	312
	Compression Ratio	8.5:1
	Gas Distribution Mode	OHV
	Cooling Mode	Forced Cold Air
	Output Power(kW/rpm)	≥7.0/3600
	Starting Mode	Manual Recoil Starting / Electric Starting
	Fuel Tank Capacity(L)	13.5
	Type And Grade Of Fuel	Unleaded Gasoline For Vehicles
	Lubricating Oil Capacity(L)	0.85
	Lubricating Oil Model	SAE 10W/30
	Lubrication Way	Splash Lubrication
Generator	Noise dB(7m)	62
	Rated Power(kW)	5.0
	Max Power(kW)	5.5
	Rated Voltage(V)	230
	Rated Frequency(Hz)	50
	Power Factor	1
	Number of Phase	Single phase
	DC Output	12V/8.3A
Configure	Electric Machinery	Permanent Magnet
	Voltage Regulation	Controller Regulation
	Frequency regulation	Controller Regulation
Dimensions(mm)		613*480*556
Net Weight(kg)		52

LIMITED WARRANTY

1. DURATION : 12 months or 250 hours whichever comes first from the date of purchase by the original purchaser (retail customer) on products used solely for customer applications.
2. WHO GIVES THIS WARRANTY (WARRANTOR):
Tusk Tools NZ
3. WHO RECEIVES THIS WARRANTY(PURCHASER):The original purchaser (other than for purposes of resale) of the Tusk inverter.
4. WHAT PRODUCTS ARE COVERED BY THIS WARRANTY: Any portable generator supplied or manufactured by Warrantor.
5. WHAT IS COVERED UNDER THIS WARRANTY: Substantial defects on material and workmanship which occur within the duration of the warranty period.
6. WHAT IS NOT COVERED UNDER THIS WARRANTY:
 - A. Transportation charges for sending the product to Warrantor or its authorised service representative for warranty service, or for shipping repaired or replacement products back to the customer. These charges must be borne by the customer.
 - B. Damages caused by abuse, accident, shipping, misuse, overloading, modification, and the effects of corrosion, erosion and normal wear and tear.
 - C. Warranty is void if the customer fails to install, maintain and operate the product in accordance with the instructions and recommendations set forth in the user manual, or if the product is used as rental equipment, or if the operator is using the product outside of its intended use.
 - D. Pre-delivery service, i.e. assembly, oil or lubricants, and adjustment.
 - E. Items or service that are normally required to maintain the product, i.e. lubricants and filters.
 - F. Warrantor will not pay for repairs or adjustments to the product, or for any costs or labour, performed without Warrantor's prior authorization.

EXCLUSIONS AND LIMITATIONS : Warrantor makes no other warranty of any kind, express or implied. Implied warranties, including warranties of merchantability and of fitness for a particular purpose, are hereby disclaimed. This warranty service described above is the exclusive remedy under this warranty; liability for incidental and consequential damages is excluded to the extent permitted by law.

7. RESPONSIBILITIES OF PURCHASER UNDER THIS WARRANTY:
 - A. The purchaser must provide dated proof of purchase and must notify Warrantor within the warranty period.
 - B. Deliver or ship the serviced generator or component to the nearest Warrantor's authorized service representative. Freight costs, if any, must be borne by the purchaser.

8. HAVE QUESTIONS?

Email: INFO@TUSKTOOLS.CO.NZ Phone: 09 414 5678

WARRANTY CARD

PERSONAL INFORMATION

Name: _____

Street Address: _____

City, State, ZIP: _____

Country: _____

Phone Number: _____

E-Mail: _____

INVERTER INFORMATION

Model Number: _____

Serial Number: _____

Date Purchased: _____

Purchased From: _____



