Now Supplied with Gentech Engine Oil

SAE 10W-40 Engine Oil 1000ml

DIGITAL INVERTER TECHNOLOGY

RECOIL / ELECTRIC STARTING METHOD

DOUBLE POWER
WITH PARALLEL CONNECTIVITY

11 HRS @ 50% LOAD
6 HRS @ 100% LOAD

8000W
MAXIMUM RATED OUTPUT

PURE SINE WAVE DIGITAL INVERTER GENERATOR

1 YEAR WARRANTY

Generator Operators Manual GP8000IS

GENTECH POWER
POWER WHEN YOU NEED IT

POWER WHEN YOU NEED IT

TO KEEP YOUR GENERATOR LASTING LONGER REMEMBER TO SERVICE IT!

Solar Europe Importers

CONTENTS:

IMPORTANT:

Thank you for purchasing a Gentech Gasoline Generating Set (hereinafter referred to as the "generator").
This manual will assist you in operating and maintaining your generator. This manual is the latest version. With the continuous improvement and upgrading of this product, the manufacturer reserves the right to modify this manual without notice. The manufacturer shall assume no liability for incorrect information contained in this manual.
This manual is an integral part of the generator. When the generator is transferred to others, this manual should be handed over to the new owner.
Some important information in this manual will be indicated in the following way, please see below). The users should pay special attention to these instructions.
The range of GENTECH GENERATORS POWERED BY HONDA is safe and reliable, but incorrect use of these products may cause personal injury and or damage to your machine. Please read this manual thoroughly before operation as this product is required to operate strictly in accordance with this manual.

IMPORTANT:

PLEASE PAY SPECIAL ATTENTION TO STATEMENTS PRECEDED BY THE FOLLOWING WORDS:

⚠ DANGER

- **DANGER**

This indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

- **WARNING:**

This indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION

- **CAUTION:**

This indicates a hazardous situation, which, if not avoided, could result in injury.

1. GENERAL SAFETY PRECAUTIONS:

⚠ DANGER	⚠ WARNING	⚠ CAUTION

1.1. A “LAYMAN" and or "CHILDREN" may not recognize the possible dangers of operating a generator. We recommend that only competent persons should operate the generator.

1.2. Fuel is combustible and easily ignited. Do not refuel during operation.

1.3. Do not refuel whilst smoking or near naked flames. Do not overfill or spill fuel. If this happens clean the fuel on and around the generator properly before operating.

1.4. Only use the specified fuel when operating the generator

1.5. Some parts of the internal-combustion engine are hot and might cause burns. Pay attention to the warning signs on the generating set.

1.6. Engine exhaust gases are toxic. Do not operate the generator in an unventilated room. When installed in a ventilated room, additional requirements for fire and explosion protection must be observed.

1.7. Regularly check that the bolts and nuts are properly tightened as they may become lose due to vibration of the generator whilst in use.

1.8. Before using the generator ensure that you have checked the periodic maintenance schedule in the operator's manual.

1.9. Pay attention to the wiring or extension cords from the generator to the connected device. If the wire is under the generator or in contact with a vibrating part, it may break and possibly cause a fire, generator burnout, or electric shock hazard. Replace damaged or worn cords immediately.

1.10. Do not operate in rain wet or damp conditions, or with wet hands. The operator may suffer severe electric shock if the generator is wet.

1.11. If wet, wipe and dry it well before starting. Do not pour water directly over the generator, nor was hit with water.

1.12. Be extremely careful that all necessary electrical grounding procedures are followed during each and every use. Failure to do so can be fatal.

1.13. Do not connect the generator to commercial power line. Connecting to a commercial power line may short circuit the generator. We strongly recommend the use of a Transfer Switch for connecting to a domestic circuit.

1.14. Do not smoke when handling the battery. The battery emits flammable hydrogen gas, which can explode if exposed to cigarettes and or naked flames. Keep the area well-ventilated and keep naked flames/ sparks away when handling the battery.

1.15. Keep children and all bystanders at a safe distance from the generator whilst in use.

1.16. It is essential that you know and understand the safe and proper use of the power tool or appliance that you intend to connect to the generator. All operators must read, understand, and follow the tool/ appliance operator's manual. The tool and appliance applications and limitations must be understood. Keep all instruction manuals and in a safe place for future reference.

1.17. Always switch off the circuit breaker on the generator when not in use.

1.18. Do note store the generator inside a house or office. Do not store the generator where it will be exposed to rain or water.

2. ELECTRICAL SAFETY INFORMATION:

2.1. Electrical equipment including cable, cords and plug connection must not be defective. Please check before using.
2.2. Do not plug the generator directly into a wall socket-outlet.
2.3. The generator should not be connected to other sources such as the power company supply mains. In special cases where stand-by connection to existing electrical systems or integration therewith is intended, note that it is a legal requirement that such connections. or integration may only be performed by a competent person.
2.4. Protection against electrical shock depends on circuit-breakers that are specially matched to the generator. If a circuit breaker requires replacement, it shall be replaced by a circuit breaker that has identical ratings and performance characteristics.
2.5. Due to high mechanical stresses only tough rubber-sheathed flexible cable should be used.
2.6. If the generator is of CLASS II construction, then earthing of the generator is not required.

2.7. Cord Extension Sets:

2.7.1 A 1.0 mm² flexible cable can draw a maximum of 10 A provided that the cable is no longer than 25 m.
2.7.2. A 1.5 mm² flexible cable can draw a maximum of 10 A provided that the cable is no longer than 35 m.
2.7.3. A 1.5 mm² flexible cable can draw a maximum of 16 A provided that the cable is no longer than 20 m.
2.7.4. A 2.5 mm² flexible cable can draw a maximum of 10 A provided the cable is no longer than 65 m.
2.7.5. A 2.5 mm² flexible cable can draw a maximum of 16 A provided that the cable is no longer than 45 m.
2.7.6. A 4 mm² flexible cable can draw a maximum of 10 A provided that the cable is no longer than 100 m.
2.7.7. A4 mm² flexible cable can draw a maximum of 16 A provided that the cable is no longer than 65 m.

2.8. DROP IN ELECTRIC EXTENSION CORDS:

When a long electric extension cord is used to connect an appliance or tool to the generator, a certain amount of voltage drops or loss occurs in the extension cord which reduces the effective voltage available for the appliance or tool.
The chart below has been prepared to illustrate the approximate voltage loss when an extension cord of 300 feet (approx.100 meters) is used to connect an appliance or tool to the generator.

Nominal cross section	A.W.G.	Allowable current	No. of strands/ strands dia.	Resistance	Current Amp.							Voltage drop
mm2	No.	A	No./mm	/100m	1A	3A	5A	8A	10A	12A	15A	
0.75	18	7	30/0.18	2.477	2.5V	8V	12.5V					
1.27	16	12	50/0.16	1.486	1.5V	5V	7.5V	12V	15V	18V		
2	14	17	37/0.26	0.952	1V	3V	5V	8V	10V	12V	15V	
3.5	12 to10	23	45/0.32	0.517		1.5V	2.5V	4V	5V	6.5V	7.5V	
5.5	10 to 8	35	70/0.32	0.332		1V	2V	2.5v	3.5V	4V	5V	

3. SAFETY STICKERS AND EXPLANATIONS:

4. SPECIFICATIONS:

Model:	GP8000iS
Starting Watts:	8000W
Running Watts:	7000W
Ac Voltage:	230V
Frequency:	50Hz
Phase:	Single
Fuel Capacity:	26L
Engine:	SC460(459cc)
Engine Oil:	1.0L

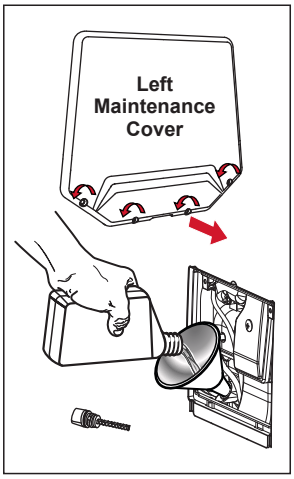
Specifications are subject to change without notice.

5. COMPONENTS:

(1) FRAME
(2) FUEL TANK
(3) CONTROL PANEL
(4) TROLLEY WHEEL
(5) RIGHT MAINTENANCE COVER
(6) HANDLE

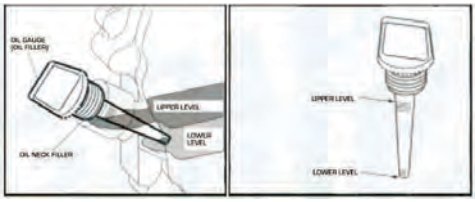
(1) FUEL TANK CAP
(2) HANDLE
(3) MUFFLER
(4) WHEEL LOCK
(5) RECOIL STARTER

6. PRE-OPERATION CHECKS:



6.1. CHECKING THE ENGINE OIL

6.1.1. Ensure that the generator is on a flat and level surface before adding oil.
6.1.2. Remove the oil cap and check the level of the oil.
6.1.3. Add oil to the generator if the oil is below the indicator line.
6.1.4. Always ensure that your engine oil is clean.

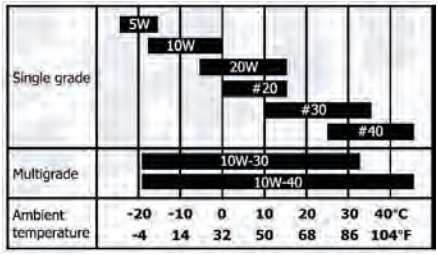


6.2. OIL CAPACITY FOR THE GP8000IS GENERATOR:

6.2.1. GP8000IS - 1.0L

6.3. RECOMMENDED ENGINE OIL:

6.3.1. Only use 4-stroke automotive oil (API or SE) alternatively you can use a higher grade (SG, SH or SJ). **SAE 15W-40** is recommended for general all-temperature use. For extreme temperatures please use **SAE 10W-50**. If single viscosity oil is used, select the appropriate viscosity for the average temperature in your area.



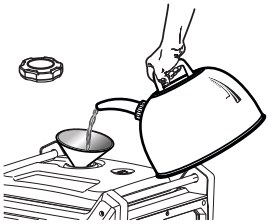
6.4. CHECKING THE ENGINE FUEL:

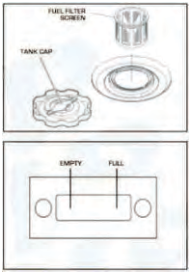
> **⚠ WARNING**
>
> **Do not refuel while smoking or near an open flame or other potential fire hazards.**

6.4.1 Use the fuel gauge to check the fuel level.
6.4.2. If the fuel level is too low, only refuel with unleaded fuel.
6.4.3. Ensure that you use the fuel filter screen on the fuel filter.

6.5. FUEL CAPACITY FOR THE GP8000IS GENERATOR:

6.5.1 GP8000IS - 26L





Make sure you review each warning in order to prevent fire hazards. Do not refill the fuel tank whilst the engine is running or hot. Please ensure that the fuel cock is closed before refueling. Be careful not to contaminate the fuel with any dust, dirt, water, or other foreign liquids/objects. Please lean all spilt fuel thoroughly before starting the generator. Ensure that the generator is clear from any open flames. Do not smoke whist refueling the generator.

6.6. CHECKING COMPONENT PARTS:

Before starting the generator, please check the following:

6.6.2. Check for any fuel leaking from any part of the generator.
6.6.3. Check that all the nuts and bolts are securely tightened on the generator.
6.6.4. Check for any visible damaged components on the generator.
6.6.5. Check that the generator is not resting on or adjacent to any electrical wiring.

6.7. CHECK THE GENERATOR SURROUNDINGS:

⚠ WARNING

Make sure you review each warning in order to prevent fire hazards. Keep the surrounding area clear of flammables or other hazardous materials. Keep the generator at least 3 feet (1 meter) away from all buildings and or other structures. Only operate the generator in a dry, well-ventilated area. Keep the exhaust pipe clear of all foreign objects. Keep the generator away from open flames. Do not smoke near the generator. Keep the generator on a flat and level surface. Do not attempt to block the generator air vents with any paper or other material/objects

6.8. LEAD ACID BATTERY OPERATION FOR THE GP8000IS:

The recommended battery capacity is a 14 Amp Hour.

Health Warning:

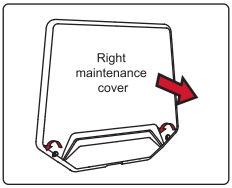
The electrolyte inside the battery is harmful to skin and eyes. If the battery leaks and the electrolyte get into your eyes, do not rub them. Instead, rinse them with clean running water and immediately seek medical attention. If left untreated, electrolyte can cause permanent injury to your eyes.

Installation:

- Check the battery voltage with a voltmeter before fitting. If the voltage is less than 12.8 Volts, do a refresh charge (see charging section).

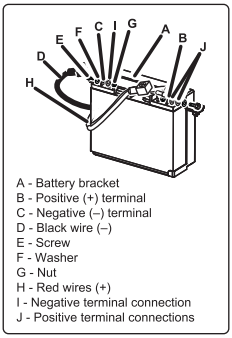
Installation:

- Check the battery voltage with a voltmeter before fitting. If the voltage is less than
- A12.8 Volts, do a refresh charge (see charging section).
- Always follow the manufacturer's instruction guidelines when connecting the battery.
- Connect the positive and negative leads correctly.
- Fit the battery with spacer when needed for best possible fit.



Charging:

- Both the generator and battery charger need to limit the voltage between 14.0 - 15.0 Volts when charging. The battery cannot be fully charged if charging voltage is less than 14.0 Volts, and the battery would be damaged if the charging voltage is over 15.0 Volts.
- The battery must be charged using the standard current specified in charging label if the voltage is less than 8 Volts.
- Always remove the battery from the generator before charging separately.
- Charge the battery with a lower current rather than the MAX Charging Current found on the Charging label.
- After charging, leave the battery for approximately 1 to 2 hours before checking the voltage. If the voltage is less than 12.8 Volts, additional charging is required.
- If the battery becomes too hot to touch, stop charging. Allow battery to cool before resuming.



Storage:

- The battery should be stored with approximately 70% charge state.
- The battery should be stored in clean, dry and ventilated environment (-20-40 Degrees Celsius), not in contact with any corrosive substance and away from heat and fire.
- The battery should be charged completely once every 180 days when in storage.

Transportation:

- The battery should be transported with approximately 70% charge state.
- The battery should be packed with insulation and shockproof material to avoid damage from sudden jolts and collision.
- The battery should be handled with care when loading and unloading during transport. Do not throw the batteries and avoid collision.
- Do not transport the batteries together with flammable, explosive objects, or sharp metal goods.

Maintenance:

- Disconnection of the battery cable is always the best choice if the generator is in storage or used infrequently. Use a standard charger to maintain the battery.
- If the battery stands by for any period, check the voltage in case the voltage is lower than 12.8 Volts, and recharge according to the charging label.
- Keep the connecting poles clean and securely fastened.
- The battery is factory sealed and requires no topping up of any fluid. Never attempt to open the battery.

1. Do not immerse the battery in water.
2. Do not use or store the battery near sources of fire or heat.
3. Do not reverse the positive (+) or negative (-) terminals.
4. Do not connect the battery directly to wall outlets.
5. Do not put the battery into a fire or apply direct heat to it.
6. Do not short-circuit the battery by connecting wires or other metal objects to the positive(+) and negative(-) terminals.
7. Do not pierce the battery casing with a nail or other sharp objects, break it open with a hammer, or step on it.
8. Do not strike, throw, or subject the battery to sever physical shock.
9. Do not directly solder the battery terminals.
10. Do not attempt to disassemble or modify the battery in any way.

11. Do not place the battery in a microwave oven or pressurized container.
12. Do not use the battery in combination with primary batteries (such as dry cell batteries) or batteries of different capacity, type, or brand.
13. Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharge, remove it from the device or charger immediately and discontinue use.
14. Do not use more than one battery in parallel or in series.
15. Do not press on indicator button longer than few seconds.
16. Do not dispose the battery before completely discharge.
17. Do not charge the battery by charging voltage over 15.0V.
18. Do not charge the battery by charging with an automatic "de-sulfation mode" function.
19. The battery will fail if over charged, it may happen to deform or fume.
20. Please fix the battery terminal with original screws and nuts securely.
21. The cranking performance will be affected when environment temperature lower than.
22. Keep out of reach of Children and Pets.

6.9. GROUNDING THE GENERATOR:

6.9.1 When grounding the generator connect the grounding lug of the generator to the grounding spike.

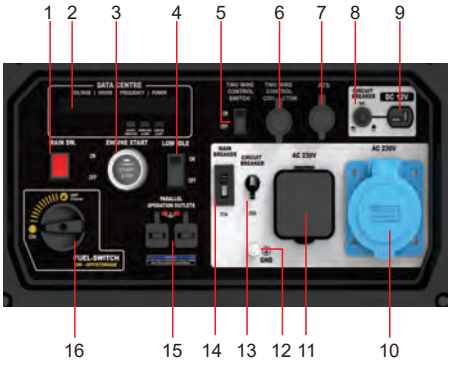
6.9.2 If such grounding conductor or ground electrode is unavailable, connect the grounding lug of the generator to the grounding terminal of the electric tool or appliance.

CONTROL PANEL FOR GP8000IS:

PANEL INTRODUCTION:

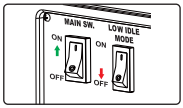
Circuit Breaker

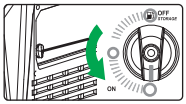
(1) Engine Switch.
(2) Data Display.
(3) Engine Start / Stop.
(4) Low Idle.
(5) Two Wire Control Switch.
(6) Two Wire Control Connection.
(7) ATS.
(8) Circuit Breaker 9A.
(9) DC 12V USB.
(10) AC Receptacles 230V.
(11) AC Receptacles 230V.
(12) Grounding Nut.
(13) Circuit Breaker 25A.
(14) Main Breaker 31A.
(15) Parallel Operation Outlets.
(16) Fuel Switch.



7. OPERATING PROCEDURES:

STARTING THE GENERATOR ENGINE FOR THE GP8000IS:





FOR ELECTRIC START:

7.1.1. Turn the Fuel Saving switch to **"OFF"** position.
7.1.2. Turn the Air Knob on the Fuel Tank to the **"On"** position.
7.1.3 Open the Fuel Choke.
7.1.4. Turn the Combined Switch to **"Start"** position.
7.1.5. Press & hold the **"Start Button"** for **4 seconds** and wait for the generator to start.
7.1.6. To manual start pull the Recoil Starter until resistance is felt.
7.1.7. Do not pull the rope of the recoil starter out completely.
7.1.7. After starting the generator allow the engine to warm up and rotate the Combination Switch to the **"Run"** position.
7.1.7. After starting the engine successfully, press the fuel-saveing switch in the **"On"** position.

***NOTE: When pulling the hand starter, grasp the handle to prevent the generator from falling down.**

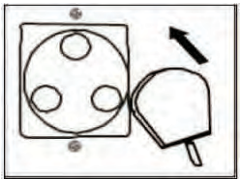
***NOTE: If you are starting the generator for the first time, we recommend that you use the recoil starter.**

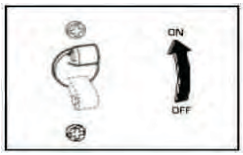
A. When the ambient temperature is lower than 0°C (32°F), the engine speed is 4100rpm and the warm-up time is 3min.
B. When the ambient temperature is below -5°C (41°F), the engine speed is 4100rpm and the warm-up time is 3min.
C. After the above operation time, the fuel saving switch can work normally in "ON" position.

⚠ WARNING

Do not move the generator while it is running.
Be sure to ground the generator if the connected appliance is grounded.
Failure to ground the unit may lead to electrical shock.

8. AC APPLICATION:





8.1.1. Check the digital meter for sufficient voltage.
8.1.2. This generator is properly tested and adjusted and set at the factory.
8.1.3. Should the generator does not produce the specified voltage please contact **GENTECH INDUSTRIES**.
8.1.4. Turn off the switch (es) of the electrical appliance(s) before connecting to the generator.
8.1.5. Insert the plug(s) of the electrical appliance(s) into the receptacle.
8.1.6. Check the amperage of the receptacles used referring to the TABLE on page 4 and be careful not to take a current exceeding the specified amperage.
8.1.7. Check that the total wattage of all appliances that is being connected to the generator does not exceed the rated output of the generator.
8.1.8. Turn on the appliance switch.

***NOTE: If the overload alarm light (red) flashes during operation, the generator is overloaded, or the appliance is defective. Stop the generator immediately and check the appliance and /or generator for overloading. Push engine button or "reset" to re-start the machine.**
If a large starting current is required, such as a compressor or pump, the overload indicator may flash for a short time, but this is not a fault.

8.2. CONNECTING TO DOMESTIC CIRCUITS (HOUSE WIRING):

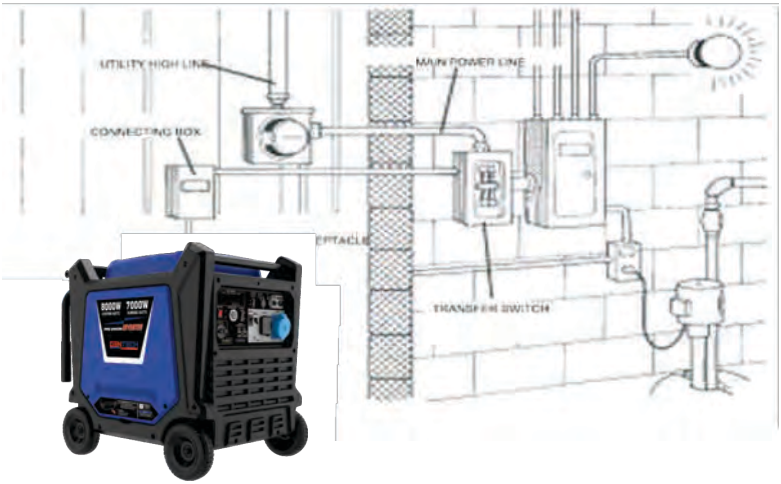
⚠ WARNING

If a generator is to be connected to residential or commercial power lines for stand-by power during power outage, all connections must be made by a competent person/ licensed electrician. Connection failure, or improper connection, may result in death, personal injury, damage to the generator, damage to the appliances, damage to the building's wiring, or even result in a fire.

8.2.1. When connecting the generator to the house wiring the generator output power must be taken from the 230 Volt receptacle.
8.2.2. A transfer switch must be installed to transfer the load from the commercial power source to the generator. This switch is necessary to prevent accidents caused by the recovery from power outages. Use a transfer switch of the correct capacity. Install the transfer switch between the meter and the fuse or AC Breaker Box

⚠ CAUTION

If the neutral wire of the house wiring is earthed, be sure to earth the ground terminal of the generator. An electric shock may result if this procedure is not followed.



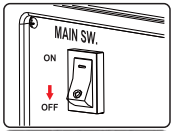
8.3. SAFETY PRECAUTIONS WHILE CHARGING THE BATTERY:

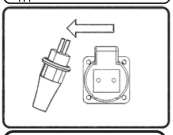
8.3.1 An explosive hydrogen gas is discharged through vent holes in the battery during the charging process.

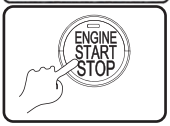
8.3.2 Electrolyte fluid can burn your eyes and clothing. Be extremely careful and avoid contact. If contact occurs wash the affected area immediately with large quantities of water or milk and consult a doctor for treatment.

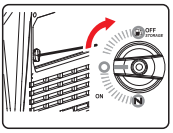
8.3.3 When charging a large capacity battery or totally discharging a battery excessive current may force the DC breaker to turn off. In such cases use a battery charger to charge a large battery with an AC output.

8.4. STOPPING THE GENERATOR:



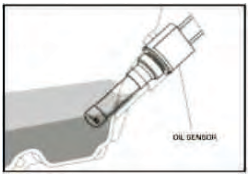






8.4.1. Turn the **"Fuel Saving**" switch to the **"Off"** position.
8.4.2. Turn off the power switch of the electric equipment and unplug the cord from the receptacle of the generator.
Turn the **"Combined**" switch to the **"Stop"** position.
8.4.3. Allow the engine to cool down for about three minutes with no load prior to switching it off.
8.4.4. After the generator has cooled down, turn the **"Air Knob"** on top of the **"Fuel Cap"** to the **"Off"** position.
8.4.5. For recoil starter models turn the switch to the **"OFF"** position
8.4.6. For electric start models, press the button to stop the engine and turn off the battery switch.

8.5. OIL SENSOR:



8.5.1. The oil sensor detects a drop in the oil level in the crank case and automatically stops the engine when oil level drops below a predetermined level.
8.5.2. When engine has stops automatically switch off the generator's circuit breaker and check the oil level. Refill with engine oil to the upper level as instructed on clause 6.1, and then restart the engine.
8.5.3. If the engine does not start, please recheck the oil level.

⚠ CAUTION

Do not remove the OIL SENSOR PROBE when refilling with oil. Remove the oil filler cap on the opposite side of carburetor.

8.6.3. **LCD Display:** Press the "SELECT" button to change the LCD display from voltage, hours run, frequency and oil level.
8.6.4. **Hour Run/ Time Indicated on the Digital Meter:** 0.1h = 6 minutes, 0.2h = 12 minutes. The meter display will only change every 6 running minutes.
8.6.5. **Display Frequency:** 2:30 Hz (EG: 50 Hz will display as F-50)
8.6.6. **Display Voltage:**160 - 250 V Ac (EG: 230 V will display as U230)
8.6.7. **Oil Level Display:** If there is insufficient oil in the machine the oil light will flash red and the machine will automatically switch off. Do not attempt to restart the machine until you have re filled with oil.

8.6.8. **Digital Meter Maintenance Display Tips:**
P-25: Machine requires the oil to be changed.
P-50: Machine requires the air filter element and the oil to be changed.
P-100: The machine requires the fuel filter, air filter element and the oil to be changed.

***NOTE:** **THE MAINTENANCE TIPS AS INDICATED ABOVE, ONCE DISPLAYED, WILL NOT SHOW AGAIN AFTER THE MACHINE HAS BEEN SWITCHED OFF AND THEN RESTARTED.**

⚠ CAUTION

DO NOT TAMPER OR OPEN THE DIGITAL METER AS IT WILL NULLIFY YOUR WARRANTY AND MAY ALSO LEAD TO AN ELECTRIC SHOCK.

9. WATTAGE INFORMATION:

9.1. Some appliances need a "**Surge**" of energy when starting. This is commonly known as a "**LAGGING**" Load.
9.2. This means that the amount of electrical power needed to start the appliance may exceed the amount needed to maintain its use.
9.3. Electrical appliances and tools normally come with a label indicating voltage, cycles/Hz, amperage (amps) and electrical power needed to run the appliance or tool.
9.4. Check with your nearest branch with questions regarding power surges of certain appliances or power tools.
9.5. Electrical loads such as incandescent lamps and hot plates require the same wattage to start as is needed to maintain their use. This is commonly known as a "LEADING" Load.
9.6. Loads such as fluorescent lamps require1.5 to 2 times the indicated wattage during start-up.
9.7. Electrical motors require a large starting current. Power requirements depend on the type of motor and its use Once enough "Power" is attained to start the motor, the appliance will require only +-50% of the wattage in order to continue running.
9.8. Most electrical tools require 1.5 to 3 times their wattage for running under load during use. Loads such as submersible pumps and air compressors require a very large force to start. They need 3 to 5 times the normal running wattage in order to start.

***NOTE:** **PLEASE REFER TO THE CONSUMPTION CHART AND LOAD CALCULATOR IN THE QUICK REFERENCE GUIDE BOOKLET.**

9.2. ELECTRICAL CONNECTING:

9.3. LOAD CAPACITY:

***NOTE: Before use, the generator set and its electrical equipment (including lines and plug connections) should be checked to ensure that they are not defective.**
The generator set must not be connected to other power sources, such as the power company supply mains.

Before connecting the electrical equipment, please follow the following steps to calculate the starting power required for the electrical equipment:

9.3.1. Select the electric equipment running at the same time.
9.3.2. The total operating power is the required power.
9.3.3. **Calculate the maximum starting power required according to the following steps:**

- Calculate these numbers according to the steps required.
- Fluctuation power is the extra surge power required for electric drive equipment.

9.4. Power Management

Voltage and current power are converted by the following formula: **Voltage x Current = Power**

In order to extend the service life of the generator set, please refer to the following steps to increase the power load:

9.4.1. Start the generator set without power load.
9.4.2. Let the generator continue to run for a few minutes until stable.
9.4.4. Turn **"fuel saving**" switch to **"ON"**.
9.4.5. Then plug in and run the first electrical device. It is better to allow the maximum power to be
9.4.6. connected to the generator set first.
9.4.7. Wait till the generator set is stable.
9.4.8. Connect it to another electrical device.
9.4.9. Wait till the generator set is stable.
9.4.10. Repeat step **6 and 7** until complete; and then turn on the connected electrical equipment.

***NOTE: Turn "OFF" the "fuel saving" switch before increasing engine speed.**

9.5. Connecting One Generator to the Electrical Appliances:

9.5.1. Start the generator set and keep running until it stabilizes.
9.5.2. Before connecting the electrical tools and equipment, determine the rated voltage of the generator set **{230V ac, 7A; 12V de, 8A)** and ensure that there is enough current capacity to supply all electrical equipment. If the power consumption exceeds the maximum power of the generator set, connect the electrical equipment to the generator separately.
9.5.3. When the generating set is working, please connect the 230V AC power tool to the AC socket of the generator set and the 12V DC equipment to the 12V DC socket.
9.5.4. Do not connect three-phase electrical equipment.
9.5.5. Do not connect the electrical equipment not recommended in the manual.
9.5.6. Do not connect the load beyond the rated power of the generator set.

Connecting Two Generators in Parallel to Electrical Appliances:

Two generators connected in parallel can increase the output power of the generator.
Please follow the below steps when connecting 2 generators in parallel.

***NOTE: Turn off both generators (engines) and disconnect all cables if any electrical appliances are connected to the socket.**

First insert the connection plug on the parallel cable into the parallel output socket on the control panel of each generator. Be sure to connect red with red (+) and black with black (-).

PARALLEL BOX NOT INCLUDED

The positive pole (red) is connected to the positive pole (red), the negative pole (black) is connected to the negative pole (black), and the ground wire is connected to the ground wire.

***NOTE: Make sure the electrical equipment in use is grounded and that the frames of each generator are placed on a flat, clean and level surface.**

Ensure that you start both generators (engines), the starting procedure is the same as the normal starting procedure, refer in the operator's manual.

***NOTE: Make sure the parallel cable is plugged into the parallel output sockets on both control panels before starting the generators.**

Safely insert the plug of the electrical device into the socket on the generator control panel. Either socket or both sockets may be used.

⚠ WARNING

9.6.1. **GP8000IS parallel cables are only suitable for parallel operation of 2 x GP8000IS generators.**

9.6.2. **Do not attempt to connect more than 2 generators.**

9.6.3. **GP8000IS generators can only use Gentech Power parallel output cables, do not use other cables.**

9.6.4. **When connecting the generator with parallel cables, safely insert the plug into parallel sockets. Ensure that you connect red to red (+) and black to black (-).**

9.6.5. **Be sure to plug the parallel cable into the socket.**

9.6.6. **During parallel operation, do not disconnect the parallel output cable.**

9.6.7. **Connect the parallel output cable before starting the engine. Disconnect the parallel output cable only after shutdown.**

9.6.8. **Do not output current after shutting down a generator while parallel cables are still connected.**

9.6.9. **When operating a single generator, be sure to disconnect the parallel output cables.**

9.6.10. **Do not connect parallel cables when two generators are operating independently.**

9.6.11. **Read GP8000IS instructions carefully before using the generator.**

10. MAINTENANCE SCHEDULE:

FOR ALL YOUR SERVICE, MAINTENANCE AND WARRANTY QUERIES PLEASE CONTACT GENTECH INDUSTRIES. PLEASE REFER TO THE BACK PAGE FOR ALL CONTACT DETAILS.

10.1. DAILY INSPECTION:

Before staring the generator, please check the following service items: These basic inspections can be carried out by a "**Laymen**".

10.1.1. Check that there is sufficient fuel.
10.1.2. Check that there is sufficient clean oil.
10.1.3. Check that there is no excessive vibration and or noise.
10.1.4. Check if there are no loose or broken bolts and nuts.
10.1.5. Check that there are no fuel or oil leaks.
10.1.6. Check that the air filter element is clean.
10.1.7. Ensure that the generator is used in a safe surrounding.
10.1.8. Check the spark plug to ensure that it is not clogged.

10.2. PERIODIC MAINTENANCE:

Periodic maintenance is vital for the safe and efficient operation of the generator. Check the table below for periodic maintenance intervals.

IT IS ALSO NECESSARY TO CONDUCT THE MAINTENANCE AND ADJUSTMENTS ON THE EMISSION RELATED PARTS LISTED BELOW TO KEEP THE EMISSION CONTROL SYSTEM EFFECTIVE. WE RECOMMEND THAT THIS MAINTENANCE IS CARRIED OUT BY A QUALIFIED TECHNICIAN

10.3. The Emission Control System consists of the following parts:

10.3.1. Carburetor and Internal Parts
10.3.2. Cold Start Enrichment System, (if applicable)
10.3.3. Intake Manifold, (if applicable)
10.3.4. Air Cleaner Elements
10.3.5. Spark Plug
10.3.6. Magneto or Electronic Ignition System
10.3.7. Spark Advance/Retard System, (if applicable)
10.3.8. Exhaust Manifold, (if applicable)

10.4. HOSES, BELTS, CONNECTORS, AND ASSEMBLIES

The maintenance schedule indicated in the table is based on normal generator operation. Should the generator be operated in extremely dusty conditions or in heavier loading conditions, the maintenance intervals must be shortened. This will be dependent on the contamination of oil, clogging of filter elements and the wear and tear of parts.

10.5. PERIODIC MAINTENANCE TABLE:

Below is the periodic maintenance table for the Gentech Range of Generators. You are required to service and maintain the generator in accordance with this schedule. Failing to do will nullify your warranty policy. You may be required to provide the service history of the generator should it be requested.

MAINTENANCE PARTS	DAILY	EVERY 20 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 200 HOURS
Clean Generator and check all nuts and bolts	*				
Tighten Wheels and Axle			*		
Check and refill engine oil		*			
Replace Engine Oil		Initial	*		
Clean and Adjust Spark Plug and Electrodes			*		
Replace Spark Plug				*	
Clean Air Filter			*		
Replace Air Filter Element				*	
Clean Fuel Strainer			*		
Replace Fuel Strainer				*	
Remove Carbon from Cylinder Head					*
Clean and Adjust Valve Clearance				*	
Clean and Adjust Carburetor					*
Replace Carbon Brushes				*	
Replace Fuel Lines				*	
Charge Battery	Initial		when generator not in use		

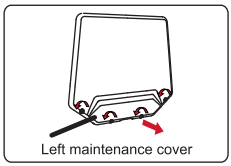
***NOTE: The initial oil change should be performed after the first twenty (20) hours of operation thereafter only change the oil everyone hundred (50) hours.**

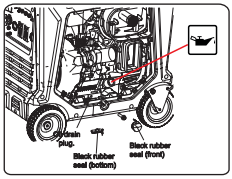
***NOTE: We recommend that all maintenance is carried out by a qualified technician. Proof of such maintenance will be required for warranty purposes.**

10.5.1. Before changing the oil, please try to look for a suitable way to dispose of old oil.
10.5.2. Do not pour it down drains, onto garden soil or into open streams Consult your local zoning or environment instructions on proper disposal.

11. MAINTENANCE:

11.1. ENGINE OIL CHANGE:





11.1.1. We recommend that you change the engine oil every **50 hours**. **(For a new engine please change the engine oil after the first 20 hours.)** Drain the oil by removing the drain plug and the oil filler cap while the engine is still warm.

11.1.2. Once the oil has completely drained out reinstall the drain plug and fill the engine with oil until it reaches the upper level on the oil filler cap. **DO NOT OVER FILL.**

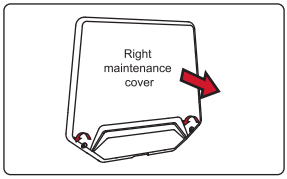
11.1.3. Only use clean high quality lubricating oil. Do not use old or dirty oil as this will affect the performance and longevity of the generator. This generator is fitted with an **OIL ALERT SENSOR** and will **NOT** start if there is insufficient oil in the sump/engine.

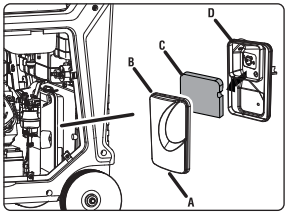
***NOTE:** **This generator is fitted with an Oil Alert Sensor and will Not start if there is insufficient oil in the sump/ engine.**

11.2. CLEANING AIR FILTER

⚠ CAUTION

Do not wash the elements with kerosene, petrol, or oil.





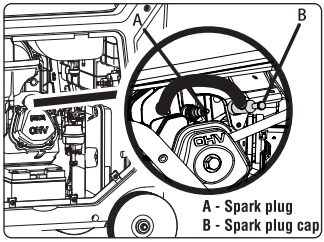
11.2.1. A dirty air filter element will make the starting of the generator difficult. It will also cause the generator to under perform and may cause permanent damage. **Always keep the air filter element clean.**

11.2.2. The urethane foam element must be washed with a cleaning detergent. After cleaning it ensure that it is dried properly before reinstalling. **Please clean every 50 hours.**

11.2.3. Clean the paper element by tapping and blowing it gently to remove dirt and dust. Never use oil to clean the paper element. **Please clean every 50 hours and replace every 100 hours.**

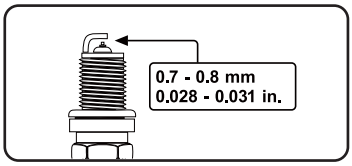
***NOTE:** **Please clean the air filter elements more often when operating in dusty environments.**

11.3. CLEANING AND ADJUSTING SPARK PLUG:

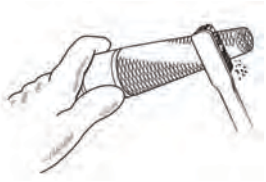


If the spark plug is clogged with carbon, please clean it using a plug cleaner or wire brush.
Always check electrode gap after cleaning.
Adjust gap to 0.03 inches (0.7mm to 0.8mm).

MODEL	SPARK PLUG TYPE
GP8000IS	NGK BP6ES



11.3.1 SPARK ARRESTOR MAINTENANCE

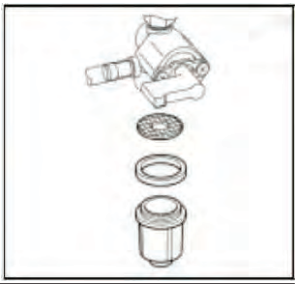


Inspect and clean the spark arrestor every 100 hours of operation.

The spark arrester is located outside the muffler, which gets very hot during operation. Allow the engine to cool completely before servicing the spark arrester.
To inspect and clean the spark arrester:

1. Remove the two screws, and remove the tail pipe and spark arrester.
2. Use a brush to remove carbon deposits from the spark arrester screen. Be careful to avoid damaging the screen. The spark arrester must be free of breaks and tears. Replace the spark arrester if it is damaged.
3. Install the spark arrester in the reverse order of removal.

11.4. CLEANING FUEL STRAINER:



***NOTE: Dirt and water in the fuel are removed by the fuel strainer.**

11.4.1. Remove the strainer cup and clean it properly by removing the water and dirt collected.
11.4.2. Clean the screen and strainer cup with gasoline.
11.4.3. Fasten the cup tightly to the main body and ensure that there are no fuel leaks.

11.5. FUEL HOSE REPLACEMENT:

⚠ WARNING

Please take extreme caution when replacing the fuel hose as gasoline is extremely flammable and dangerous. DO NOT SMOKE OR EXPOSE TO OPEN FLAMES whilst doing this.

11.5.1. Please ensure that the fuel hose is replaced every 100 hours. Do not attempt to do this whilst the fuel cock is open.
11.5.2. Please replace the fuel hose immediately should a leak develop or if the fuel hose is perished

12. TRANSPORTING AND STORAGE

12.1. Before transporting the generator, please ensure that the fuel cock is in the "OFF" position.

> **⚠ CAUTION**
>
> **Contact with a hot engine or exhaust system can cause severe burns and or fires, always allow for the engine to cool down prior to transporting and or storing. Always ensure that the generator is transported and or stored in a flat horizontal position. Tilting of the unit may cause fuel spillage which may result in a fire.**

12.2. Before storing the generator for an extended period please ensure that the area of storage is free from excessive water, dust, and humidity. Please follow the table below:

STORAGE TIME	RECOMMENDED MAINTENANCE
0-1 MONTH	NO PREPARATION REQUIRED
1-2 MONTHS	DRAIN OUT ORIGINAL FUEL IN THE FUEL TANK AND REPLACE WITH CLEAN FUEL
2-12 MONTHS	DRAIN OUT ORIGINAL FUEL IN THE FUEL TANK AND REPLACE WITH CLEAN FUEL EMPTY ALL FUEL FROM THE CARBURETOR EMPTY FUEL FROM THE FUEL SEDIMENT CUP
>12 MONTHS	DRAIN OUT ORIGINAL FUEL IN THE FUEL TANK AND REPLACE WITH CLEAN FUEL EMPTY ALL FUEL FROM THE CARBURETOR EMPTY FUEL FROM THE FUEL SEDIMENT CUP REMOVE THE SPARK PLUG AND POR A TEASPOON OF 4 STROKE ENGINE OIL INTO THE CYLINER TURN THE ENGINE SLOWLY BY PULLING ON THE RECOIL STARTER. REINSTALL THE SPARK PLUG DRAIN THE OLD OIL AND REPLACE WITH CLEAN OIL AFTER REMOVAL FROM STORAGE, DRAIN THE STORED FUEL INTO A SUITABLE CONTINER AND REPLACE WITH FRESH FUEL BEFORE STARTING
DRAIN THE CARBURETOR BY LOOSENING THE DRAIN SCREW. DRAIN THE FUEL INTO A SUITABLE CONTAINER. REINSTALL THE DRAIN PLUG. HAVING SWITCHED THE FUEL COCK OFF, REMOVE THE SEDIMENT CUP, EMPTY THE FUEL, THEN REINSTALL THE CUP AND SECURE IT PROPERLY.	

***NOTE:** **NEVER STORE THE GENERATOR INSIDE A HOUSE OR OFFICE. DO NOT STORE THE GENERATOR WHERE IT IS STANDING IN RAIN OR WATER.**

13. TROUBLESHOOTING:

If the generator engine fails to start after several attempts and if there is no electricity available at the output socket then please check the chart below. If the generator still fails to start or generate electricity the please contact GENTECH INDUSTRIES (see the back page of this manual for the contact details).

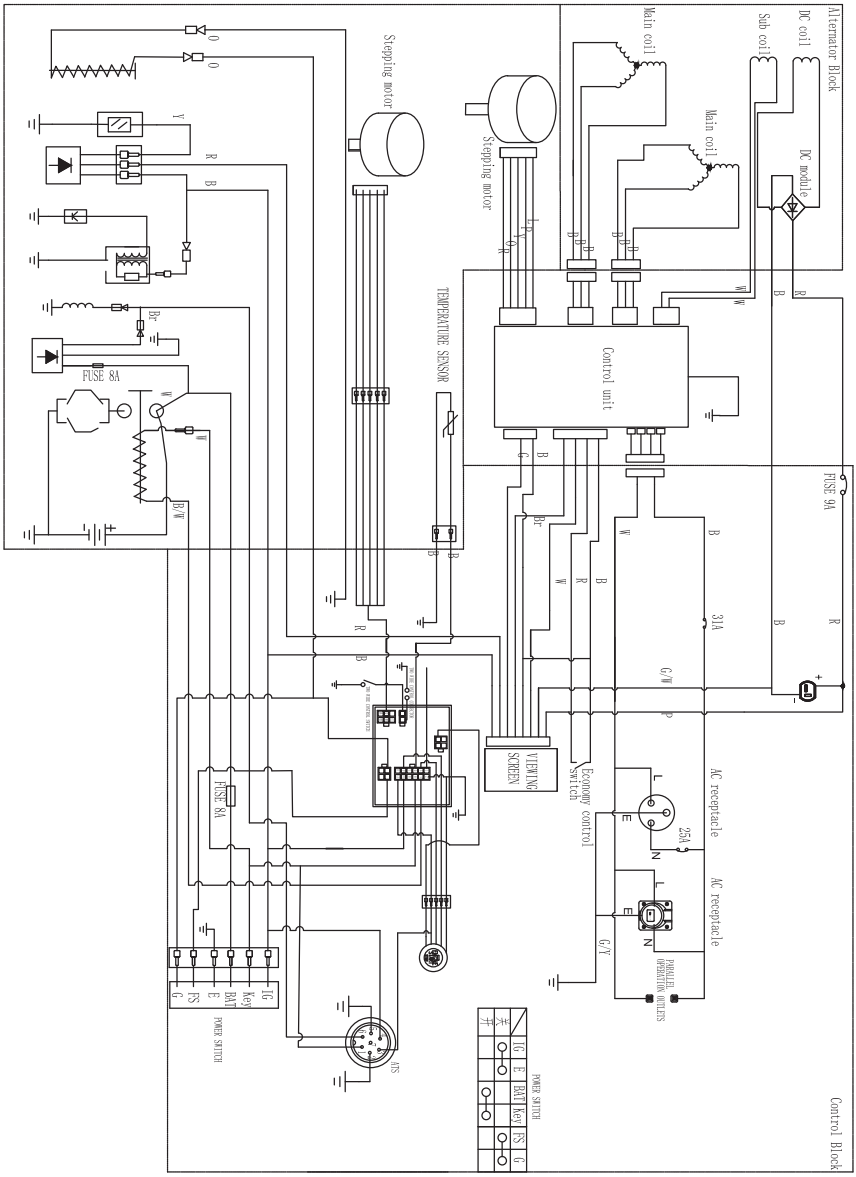
WHEN THE ENGINE FAILS TO START:

Check if chock lever is in its proper position.	Set the choke lever to the "CLOSED" position.
Check if fuel cock is open.	If it is closed then open it.
Check the fuel level.	If empty then refill the fuel. Be careful not to overfill.
Check if engine switch is in the "OFF" position.	Turn engine switch to the "ON" position.
Check to make sure that the generator is not connected to an appliance.	If it is connected to an appliance then turn off the power switch on the appliance and unplug it.
Check the spark plug in case the spark plug cap is loose.	If it is loose then pushing the spark plug cap back tightly onto the spark plug.
Check spark plug for carbon build up.	Remove the spark plug and clean the electrode or replace the park plug with a new one.

WHEN THE ENGINE FAILS TO START:

Check to make sure that the circuit breaker is in the "ON" position.	After making sure that the total wattage of the electrical appliance is within permissible limits and there are no defects in the appliances turn the circuit breaker to the "ON" position. If the circuit breakers continue to trip then please contact GENTECH INDUSTRIES.
Check AC and DC terminal for a possible loose connection.	Secure the connection if necessary.
Check to see if any appliance is connected whilst trying to start the generator.	Turn off the switch on the appliance and disconnect the appliance cable/plugfrom the receptacle. Reconnect only after the generator has started and is running smoothly.
Low and or irregular power from the generator.	Check if the carbon brushes are excessivelyworn and replace if necessary.

14. WIRING DIAGRAM



POWER WHEN YOU NEED IT

Generator Warranty Policy
&
Procedure Manual for GP8000IS

TO KEEP YOUR GENERATOR LASTING LONGER REMEMBER TO SERVICE IT!

Thank you for purchasing a quality Gentech Power product. This product is warrantied for 1 year in domestic applications, subject to adherence to required service intervals and duty cycles as detailed in the operating manual. The warranty only applied to poor workmanship and or faulty materials excluding the AVR, Alternator, Spark Plug, Air and Fuel Filters, Recoil Starter and Battery. Generator modification and non-adherence to prescribed service schedules invalidates the warranty.

1. LIMITED WARRANTY POLICY:

This is a "**walk in**" warranty policy and is limited to the range of generators specified herein. We recommend that you return the generator to the store you purchased it at or contact Gentech Industries to locate the nearest Service Agent situated to you.

2. TO QUALIFY FOR THIS WARRANTY:

The warranty applies to the first purchaser and each subsequent owner during the applicable warranty time period.

3. WHAT THE APPOINTED SERVICE AGENT WILL REPAIR OR REPLACE UNDER WARRANTY:

The appointed Service Agent will repair or replace, at its sole discretion, any part that is proven to be defective in material or workmanship under normal use during the applicable warranty time period. Warranty repairs will be made without any charge for parts and labor. All parts replaced will be considered as part of the original product and the warranty on such parts will expire coincident with the original product warranty.

4. BELOW IS A LIST OF GENERATORS THAT IS COVERED UNDER THIS WARRANTY:

MODELS	WARRANTY PERIOD DOMESTIC/RESIDENTIAL	WARRANTY PERIOD COMMERCIAURENTAL
GP8000IS	12 months or 500 running hours which ever come first.	12 months or 300 running hours which ever come first.

5. EXCLUSIONS TO THIS LIMITED WARRANTY INCLUDE:

5.1. Neglect in the periodic maintenance as specified in the owner's manual.
5.2. Improper repairs or maintenance including any repairs and or maintenance carried out by a non-accredited service agent.
5.3. Operating methods other than those indicated in the owner's manual.
5.4. The use of non-genuine parts and or accessories other than those supplied by an accredited service agent.
5.5. Normal wear and tear including but not limited to the fading of painted or plated surfaces. 6.6. Consumable parts including but not limited to **keys, spark plugs, fuel and oil filters, recoil starter ropes, wheels, lubricants, oil grease and fuel.**
5.6. Cleaning adjustments and normal periodic maintenance work including but not limited to cleaning of the battery, carburetor, engine oil, fuel tank and injectors.
5.7. Over loading resulting in the damage of the AVR, Circuit Breaker and Alternator.
5.8. Charging and proper maintenance of the battery.
5.9. Correct preparation when using the generator for the first time as set out in the owner's manual.
5.10. Fire damage as a result of but not limited to overloading, incorrect installation, incorrect re-fueling and any other causes as set out in the owner's manual.
5.11. Damage to any electronic and or electrical appliances connected to the generator.

- Gentech Industries are both the suppliers and service agents for the Gentech Power Range of Generators.

Please Note the Following Terms & Conditions.

Customer is required to return the generator to the store.

The generator will be repaired at no charge to the customer should the fault be deemed a manufacturer defect only.

The approximate lead time for repairs is **14 - 21 working days** from the time the generator is received at the Gentech Service Center.

A copy of the proof of purchase is required when returning the generator for repairs. The warranty is null and void without a copy of proof of purchase.

IMPORTANT NOTICE — **A 30-day exchange or refund policy applies to all customers retuning the generator to the store. The following terms and conditions apply.**

Terms & Conditions

- **Customer is required to:**
  - Return the generator to the store with all the tools and manuals supplied.
  - Return the generator to the store without any evidence of damage and or scratches.
  - Return the generator only if it has run for less than 20 hours.

- **The Store is required to:**
  - Confirm that the customer has fulfilled the above.
  - Forward 4 clear photographs via email only of the generator showing all 4 sides.
  - Forward a clear photograph via email only of the serial number.
  - Forward a clear copy of the customer proof of purchase via email only.

- **Gentech Industries is required to:**
  - Confirm receipt of the photographs of the generator.
  - Confirm receipt of the photograph of the serial number.
  - Assess the machine using the photographs supplied and revert to the store within 48 hours.

❖ Important Notice:

- **The store may only refund and or exchange the generator once they have received the approval confirmation via email from Gentech Industries.**
- **The store may then raise a claim for credit against Gentech Industries.**
- **Gentech Industries will then arrange to collect the generator from the store.**

NOTE: THE FOLLOWING IS EXCLUDED FROM THE MANUFACTURER WARRANTY POLICY.

Neglect in the periodic maintenance as specified in the owners / operator's manual.

Improper repairs or maintenance carried out.

Operating methods other than those indicated in the owner / operator's manual.

Normal **"wear & tear"** due to day-to-day use & operation.

Overloading resulting in the damage to the AVR / Circuit Breaker / Alternator.

The in-correct installation resulting in the damage to the AVR / Alternator / Control Panel. A certificate of compliance by a competent electrician is required.

CHECK LIST PRIOR TO SENDING THE GENERATOR IN FOR ASSESSMENT / REPAIR.

Ensure that the battery is charged.

Ensure that there is the correct amount of oil and that it does not need to be replaced.

Ensure that there is sufficient fuel.

Ensure that the spark plug does not need to be cleaned or replaced.

Ensure that the generator **has been serviced** if it has run for more than 50 hours. Check the owners / operator's manual for information.

IMPORTANT NOTICE

- **ALL SERVICE-RELATED REPAIRS ARE NOT COVERED BY THIS WARRANTY POLICY.**
- **SHOULD THE GENERATOR BE RETURNED TO GENTECH, ALL COSTS INCLUDING TRANPORTATION AND ADMIN FEE WILL BE FOR THE CUSTOMERS ACCOUNT.**

IMPORTANT NOTICE

FOR ALL NON WARRANTY REPAIRS WHERE THE QUOTE IS DECLINED BY THE CUSTOMER, A STRIP & QUOTE FEE OF R750.00 EXCL VAT AND TRANSPORTATION IS PAYABLE BY THE CUSTOMER TO GENTECH INDUSTRIES. THE GENERATOR WILL NOT BE RELEASED UNTIL THIS HAS BEEN PAID IN FULL.

To log a call and or book the generator in for repairs please email your respective Gentech Customer Care Consultant.

6. LIMITATIONS OF THIS WARRANTY IN TERMS OF THE INSTALLATION OF GENERATORS:

6.1. If the generator is being used for stand by and or back-up power during load shedding it must be installed by a qualified Electrician. A **"Certificate of Compliance"** will be required for warranty purposes. **Should the generator not be correctly installed the warranty policy will be deemed null and void.**

6.2. The generator must be connected to an "essentials" Db Board and not directly to the main Db board. The "essentials" Db board cannot exceed the amperage output of the generator.
PLEASE CONSULT WITH YOUR ELECTRICIAN PRIOR TO THE INSTALLATION.

GENTECH MAY, AT THEIR SOLE DISCRETION, REQUEST AN-ON SIGHT INSPECTION OF THE INSTALLATION. IF THE INSTALLATION IS NOT COMPLIANT AND DOES NOT MEET THE REQUIREMENTS SET OUT IN THIS MANUAL, GENTECH HAS THE RIGHT TO REPUDIATE ANY/ALL CLAIMS. THE COST OF SUCH INSPECTION WILL THEN BE FOR THE OWNER'S ACCOUNT.

7. BELOW IS A TABLE OF PARTS THAT ARE LIMITED BY THIS WARRANTY:

PART	OUT OF BOX FAILURE (LESS THAN 1 RUNNING HOUR)
STATOR	X
ROTOR	X
CIRCUIT BREAKER	X
AVR	X
IGNITION COIL	X
SPARK PLUG	X
BATTERY	X
RECOIL STARTER	X

***NOTE: OUT OF BOX FAILURE REFERS TO A MACHINE THAT HAS RUN FOR< 1 HOUR**

8. PERIODIC MAINTENANCE TABLE:

Below is the periodic maintenance table for the GENTECH & SHINERAY range of generators You are required to service and maintain the generator in accordance with this schedule Failing to do will nullify your warranty policy. You may be required to provide the service history of the generator should it be requested.

MAINTENANCE PARTS	DAILY	EVERY 20 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 200 HOURS
Clean Generator and check all nuts and bolts	*				
Tighten Wheels and Axle			*		
Check and refill engine oil		*			
Replace Engine Oil		initial	*		
Clean and Adjust Spark Plug and Electrodes			*		
Replace Spark Plug				*	
Clean Air Filter			*		
Replace Air Filter Element				*	
Clean Fuel Strainer			*		
Replace Fuel Strainer				*	
Remove Carbon from Cylinder Head					*
Clean and Adjust Valve Clearance				*	
Clean and Adjust Carburetor					*
Replace Carbon Brushes				*	
Replace Fuel Lines				*	
Charge Battery		initial		when generator not in use	

9. DISCLAIMER OF CONSEQUENTIAL DAMAGE AND LIMITATION OF IMPLIED WARRANTIES:

9.1. **GENTECH INDUSTRIES and all distributors and retailers of the GENTECH Power & SHINERAY Brand disclaim any responsibility for the loss of time or use of the product, transportation, commercial loss or any other incidental or consequential loss or consequential loss or damage. Any implied warranties are limited to the duration of this written limited warranty policy and procedures manual.**