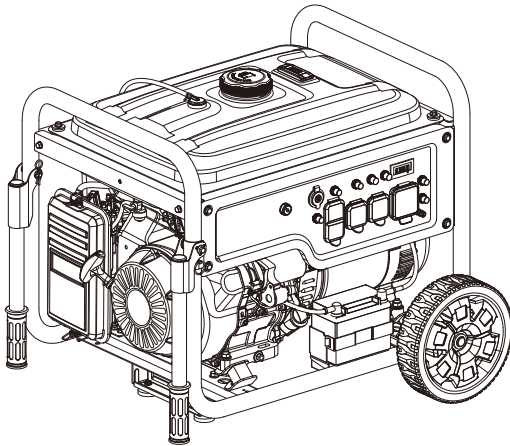


POWERSMART[®]

INSTRUCTION MANUAL

12000W Generator

Model # DB5095



Have product questions or need technical support? Please scan the QR code to enter our official website and contact us!

Website: www.powersmartusa.com

Toll free: 1-800-791-9458 Mon-Fri 9-5 EST

Email: support@amerisuninc.com / support@powersmartusa.com



Website

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TECHNICAL DATA

12000W Generator	Model#DB5095
Engine type:	4 stroke, OHV, single cylinder with forced air-cooling system
Start type:	Recoil/Electric
Phase:	Single
Rated wattage:	9350W
Starting wattage:	12000W
Rated speed:	3600rpm
Rated voltage:	120V/240V
DC output voltage:	12V
Rated Current:	77.91/38.96A
Frequency:	60Hz
Displacement:	459 cc
Spark plug gap:	0.6-0.8mm (0.024-0.031 in.)
Fuel tank capacity:	6 gallons
Oil capacity:	37.2 fl.oz
Runtime at 50% load:	7.5 hours
Noise rating:	78-82 dB at 23 feet
Package dimensions(L x W x H):	31.8x23.5x24.3 inch
Weight:	209.4 lb.

INTRODUCTION

Thank You for Purchasing a PowerSmart® Product. This manual provides information regarding the safe operation and maintenance of this product. Every effort has been made to ensure the accuracy of the information in this manual. PowerSmart® reserves the right to change this product and specifications at any time without prior notice.



Please keep this manual available to all users during the entire life of the generator.

This manual contains special messages to bring attention to potential safety concerns, generator damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

QUESTIONS? PROBLEMS?

Please contact our Customer Service Dept. with any questions and/or comments, either by Email: support@amerisuninc.com/support@powersmartusa.com, or Toll Free at (800)791-9458 .

We are available Mon-Fri 9am-5pm EST to help solve any issues that you might encounter.

NOTICE REGARDING EMISSIONS

Engines that are certified to comply with U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and may include the following emission control systems: (EM) Engine Modifications and (TWC) Three-Way Catalyst (if so equipped).

SAFETY INFORMATION

Before operating this generator, read and observe all warnings, cautions, and instructions on the generator and in this Owner's Manual.

NOTE: The following safety information is not meant to cover all possible conditions and situations that may occur. Read the entire Owner's Manual for safety and operating instructions. Failure to follow instructions and safety information could result in serious injury or death.

This safety alert symbol is used to identify safety information about hazards that can result in personal injury.



A signal word (**DANGER**, **WARNING**, or **CAUTION**) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

DANGER Indicates a hazard, which, if not avoided, will result in death or serious injury.

WARNING Indicates a hazard, which, if not avoided, could result in death or serious injury.

CAUTION Indicates a hazard, which, if not avoided, might result in minor or moderate injury.

CAUTION when used without the alert symbol, indicates a situation that could result in damage to the engine or generator.

GENERAL SAFETY RULES

SAVE THESE INSTRUCTIONS—This manual contains important instructions for the PowerSmart® 12000W generator that should be followed during installation and maintenance of the generator.

Generators vibrate in normal use. During and after the use of the generator, inspect both the generator as well as extension and power supply cords for damage resulting from vibration. Have damaged items repaired or replaced as necessary. Do not use plugs or cords that show signs of damage such as broken or cracked insulation.

For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing of the components, possibly leading to a generator failure.



WARNING: If this generator is used as a supply for a building's wiring system, the generator must be installed by a qualified electrician and connected to a transfer switch as a separately derived system in accordance with the National Electrical Code NFPA 70. The generator shall be connected to a transfer switch that switches all conductors excluding the equipment grounding conductor. The frame of the generator shall be connected to an approved grounding electrode.

DANGER: CARBON MONOXIDE

Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide (CO). This is a poison gas you cannot see or smell. If you can smell the generator exhaust, you are breathing CO. But even if you cannot smell the exhaust, you could be breathing CO.

NEVER use a generator inside homes, garages, crawlspace, or other partly enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air. ONLY use a generator outside and far away from windows, doors, and vents. These openings can pull in generator exhaust.

Even if you use a generator correctly, CO may leak into the home. ALWAYS use a battery-powered on battery-backup CO alarm in the home. If you start to feel sick, dizzy or weak after the generator has been running, move to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning



WARNING: The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death if ignited. A nearby open flame can lead to explosion even if it isn't directly in contact with gasoline.

- Do not operate near open flame.
- Do not smoke near generator.
- Always operate on a firm, level surface.
- Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Do not overfill fuel tank. Gasoline may expand during operation. Allow for expansion.
- Always check for spilled fuel before operating.
- Empty fuel tank before storing or transporting the generator.



WARNING: This generator produces powerful voltage, which can result in electrocution. ALWAYS ground the generator before using it.

Generator should only be plugged into electrical devices, either directly or with an extension cord.

NEVER connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a back-feed, which may result in serious injury or death to utility workers.

- Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.
- Do not use in rainy conditions.
- Do not touch bare wires or receptacles (outlets).
- Do not allow children or non-qualified persons to operate.



WARNING: This generator produces heat when running. Temperatures near exhaust can exceed 150°F (65°C).

- Do not touch hot surfaces. Pay attention to warning labels on the generator identifying hot parts of the machine.
- Allow generator to cool down after use before touching engine or areas of the generator that become hot during use.













CAUTION: Misuse of this generator can damage it or shorten its life.

- Only use generator for its intended purposes.
- Operate only on dry, level surfaces.
- Allow generator to run for several minutes before connecting electrical devices.
- Shut off and disconnect any malfunctioning devices from generator.
- Do not exceed the wattage capacity of the generator by plugging in more electrical devices than the unit can handle.
- Do not turn on electrical devices until after they are connected to the generator.
- Turn off all connected electrical devices before stopping the generator.
- Turn the engine switch to “OFF” position when the engine is not running.

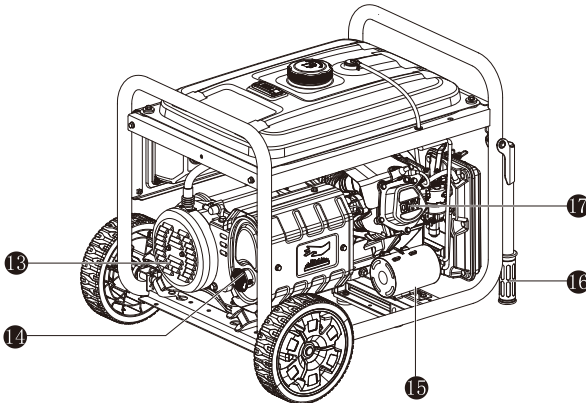
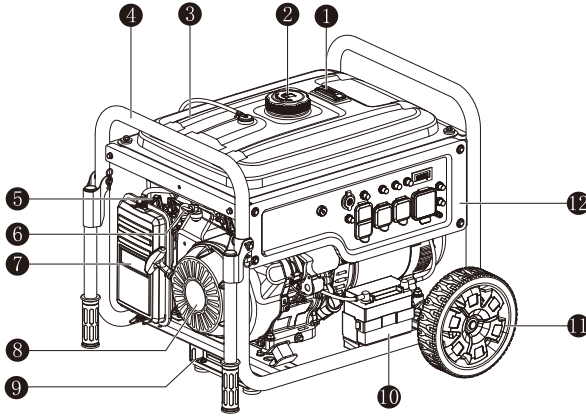
SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watts	Power
MIN	Minutes	Time
	Safety Alert	Precautions that involve your safety.
	Read the user's manual	To reduce the risk of injury, user must read and understand user's manual before using this product.
	Carbon monoxide hazard	Never operate the generator in an enclosed area. Engine exhaust contains carbon monoxide. Only operate the generator outside and away from windows, doors and vents.
	Ground	Consult with local electrician to determine grounding requirements before operation.
	Clearance	Keep all objects at least 5 feet (1.5m) from generator. Heat from the muffler and exhaust gas can ignite combustible objects.
	Electric shock alert	Beware of electric shock hazard.
	Fire/Explosion	Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death. Keep generator at least 5 feet (1.5m) from all objects to prevent combustion.
	Wet conditions alert	Do not expose to rain or use in damp locations.
	Hot Surface	To reduce the risk of injury or damage, avoid contact with any hot surface.
	Open Flame Alert	Fuel and its vapors are extremely flammable and explosive. Keep fuel away from smoking, open flames, sparks, pilot lights, heat, and other ignition sources.

KNOWING YOUR GENERATOR

Use the illustrations below to become familiar with the locations and functions of the various components and controls of this generator.



- | | | |
|-------------------|-----------------|-------------------|
| ① Lever indicator | ② Fuel cap | ③ Fuel tank |
| ④ Rack | ⑤ Choke lever | ⑥ Fuel valve |
| ⑦ Air filter | ⑧ Starter | ⑨ Support bracket |
| ⑩ Battery | ⑪ Wheel | ⑫ Control panel |
| ⑬ End cover | ⑭ Muffler | ⑮ Carbon Canister |
| ⑯ Push handle | ⑰ Cylinder head | |

Unpacking

Unpack the power tool and all its parts, and compare against the list below. Do not discard the carton or any packaging materials. Please call 1-800-791-9458 or E-mail us at support@amerisuninc.com /support@powersmartusa.com if any parts are damaged or missing.

**Including: Generator/Wheel*2/Clamp*3/Washer 1*2/Pin*3/Push handle 1*1/Washer 2*2/
Nut*3/Bolt*3/Push handle 2*1/Support Base Assembly*1/User Manual/
Spark plug socket*1/Remote Key Fob*1/Warranty Card*1/plug assembly*5/
Tool pack,include(solid wrench_10-12_13-15,double end screwdriver)**

GENERATOR PREPARATION

The following section describes steps necessary to prepare the generator for use. If after reading this section, you are unsure about how to perform any of the steps please call (800) 791-9458 Mon-Fri 9-5 EST for customer service. Failure to perform these steps properly can damage the generator or shorten its lifespan.

Unpack the generator and all its parts. Do not discard the carton or any packaging until the generator is completely assembled.

1. Place the shipping carton on a solid, flat surface.
2. Carefully cut each corner of the carton box from top to bottom. Fold each side flat on the ground.
3. Remove everything from the carton except the generator.



WARNING: If any parts are damaged or missing, do not operate this product until the parts are replaced. Use of this product with damaged or missing parts could result in serious personal injury.

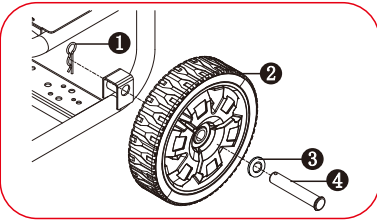


WARNING: Install wheel kit BEFORE filling the generator with fuel or oil. NEVER tip a unit that contains fuel or oil.

Wheel Kit Installation

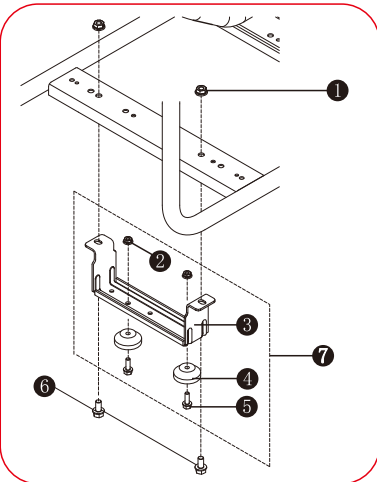
Put wheel stop pin through wheel and mounting lug hole then fix it with the clamp.

NOTE: A flat washer may be used to adjust the assembly clearance as needed.



1. Clamp R8
2. Wheel
3. Washer 1
4. Pin $\phi 16 \times 100$

Support Bracket Installation

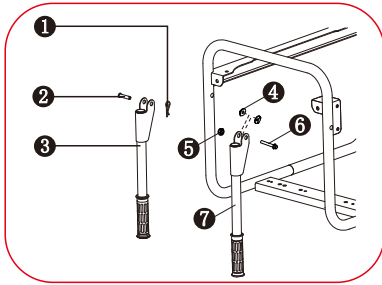


Use supporting bracket bolt to pass through the supporting bracket and the mounting hole on the rack, and then fix with the support bracket nut.

1. Support bracket Nut M8
2. Nut M8
3. Support bracket
4. Damping seat
5. Damping seat bolt M8 \times 16
6. Support bracket bolt M8 \times 16
7. Support Base Assembly

Handle Installation

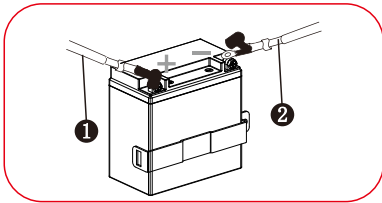
Use the handle pin to across the handle and its mounting lug hole and then fix it with the clamp.



1. Clamp R5
2. Pin $\phi 8 \times 55$
3. Push handle 1
4. Washer 2
5. Nut M8
6. Bolt M8×55
7. Push handle 2

Battery Insert

1. Battery leads consist of a Red(hot) lead that connects to the(+) battery post and is connected to the(+) terminal on the starter solenoid and a Black lead which is connected to the (-)negative battery terminal and the frame mounting bolt.
2. Connect the Red (hot)terminal to the battery(it is connected already).
3. Connect the Black(negative)terminal to the battery. Unscrew the bolt on the battery, and connect the black lead to the negative(-)terminal and tight the bolt.



1. Positive(+) terminal(red)
2. Negative(-) terminal(black)

Operating Location

- Only use OUTSIDE and place the generating set in a well-ventilated area.
- Only operate the generating set on a flat, level surface and in a clean, dry operating environment.
- Allow two feet clearance on all side of the generating set while operating it outdoors.
- Operate in specified area, if any problem on applicable occasion, please consult the authorized local dealers. In some areas, generating set must be registered with the local utility. Generating set used to construction sites may be subject to additional rules and regulations.

High Altitude

This generating set may require a high altitude carburetor kit to ensure correct operation at high altitudes. Consult the authorized local dealer for high altitude kit information if you always operate your engine at altitudes above 5,000 feet (1,500 meters).



CAUTION: Even with carburetor modification, generating set horsepower will decrease about 3.5% for each 1,000 feet (300 meters) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

Operation the engine at altitude below 5,000 feet (1,500 meters) with modified carburetor may cause the generating set to overheat and result in serious engine damage. Please restore factory specifications of the carburetor at the dealer when using the engine in a low altitude area.

Operating Condition

- Check for loose or damaged parts, signs of oil or fuel leaks, and any other condition that may affect proper operation. Repair or replace all damaged or defective parts immediately.
- Clean the dirt or foreign objects on the surface around exhaust and air intake of generator. DO NOT move or tip the generating set during operation. Use generating set only for intended uses. If you have questions about intended use, ask your local dealer.

Add Engine Oil



WARNING: This engine is not filed with oil before send out to the factory. User must add the proper amount of oil before operating the generator for the first time. Any attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil may result in engine damage and void your warranty.

Engine Oil Recommendations

Only use 4-stroke engine oil of SJ,SL or equivalent level which are in accordance with or higher than API standard.

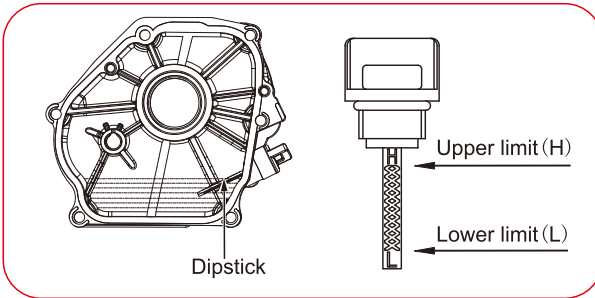
Check the API label on oil bottle or other container, and make sure the “SJ,SL” or equivalent level letter is in the label.

SAE 10W-30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

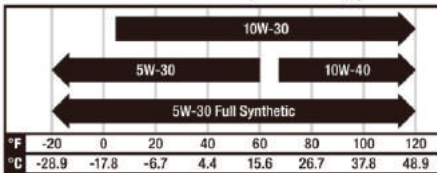
1. Place the generator on level surface.
2. Clean area around Oil Hole Dipstick and unscrew Oil Hole Dipstick.
3. Check oil level. Level should be within the upper limit and lower limit range on dipstick. Fill to the upper limit (marked with “H”) of the dipstick with the recommended oil if the oil level is low.

Refer to Chart for recommended oil type based on Ambient temperature.

- NOTE:** The oil capacity (rated) of the engine crankcase is 37.2 fl. oz.
4. Replace Oil Hole Dipstick/Plug and tighten securely.



Recommended Engine Oil Type



Ambient Temperature

Adding Fuel

1. Clean area around fuel cap, then remove fuel cap (Turn generator off and let it cool for a minimum of three minutes before removing if you need add fuel when using the generator).
2. Turn and remove cap slowly in order to relieve residual tank pressure. Always fill the fuel tank with the unit outdoors.

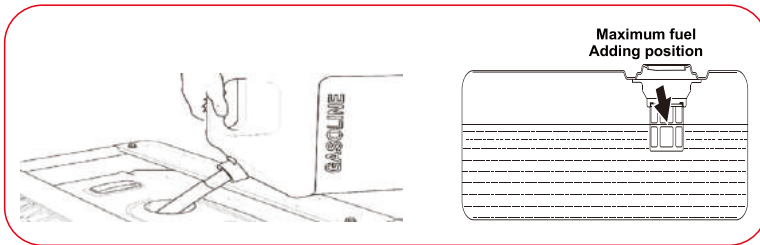
3. Slowly pour fresh, clean regular automotive grade unleaded fuel with a minimum octane rating of 87 into fuel tank.

NOTE: DO NOT mix fuel with oil. Fuel must have ethanol blend of 10% or less. Pay close attention to the storage requirements of these fuels.

The capacity of the fuel tank is 6 gallons. DO NOT overfill fuel tank. Allow room for fuel expansion.

4. Install the fuel cap. Rotate the fuel cap clockwise until it is in its locked position. Wipe away any spilled fuel.

NOTE: Keep fuel away from sparks, open flames, heat, pilot lights and other ignition sources.



Generating Set Grounding



DANGER: Failure to properly ground the generator can result in electrocution.

- The generator must be properly connected to an appropriate ground. It helps prevent electrical shock if a ground fault condition exists in the generating set or in connected electrical devices, especially when the unit is equipped with a wheel kit. Proper grounding also helps dissipate static electricity, which often builds up in underground devices.
- A ground terminal has been provided on the generating set. For remote grounding, connect a length of heavy gauge (4mm²) copper wire between the generating set ground terminal and a copper rod driven into the ground.
- Local electrical codes may also require proper grounding of the unit. We strongly recommend that you consult with a qualified electrician for grounding requirements in your area.

Electrical Devices

- Disconnect all electrical devices from the generator and switch off the AC circuit breaker before start the engine. The generator may be hard to start with electrical devices.
- The connected electrical equipment must not exceed the maximum limit of the generator. Please refer to the specification table for details.

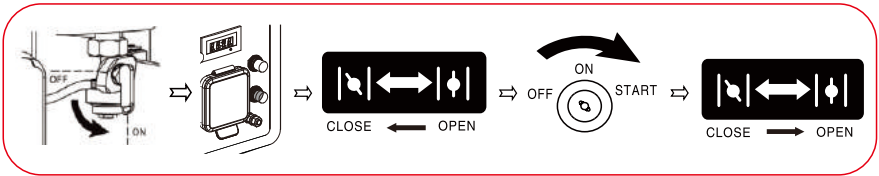
NOTE: After completing the above preparation, the generator is ready to be started.

GENERATOR OPERATION

Start The Generator

Electric Start:

1. Unplug all electrical loads from the generator. Make sure the generator is in a level position.
2. Turn the fuel valve to the “ON” position to ensure fuel flow.
3. Press the AC breaker protector to ON position.
4. Pull the choke lever to the “CLOSE” position.
5. Turn and keep the key to “START” position till the engine is started. After the engine is started, release the key to return to “ON” position.
6. Pull the choke lever to the “OPEN” position. The generator runs.

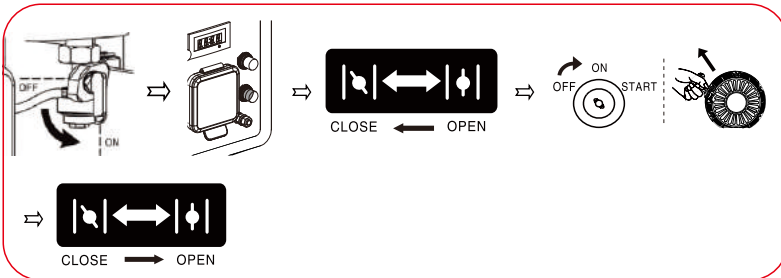


WARNING: During starting, don't keep the starting switch to “START” position for more than 5s and otherwise it is possible to damage the motor. If the unit fails to start within first time, restart after about 10s. After the unit is used for a period, if the starting speed of the motor falls, please replace the battery.

If the electric starter fails to start the engine, immediately turn off the starter. Don't attempt to restart the engine before the failure cause is identified. Don't restart the engine by replacement of other storage battery without authorization.

Recoil Start:

1. Turn the fuel valve to the “ON” position to ensure fuel flow.
2. Press the AC breaker protector to ON position.
3. Pull the choke lever to the “CLOSE” position.
4. Turn the key to “ON” position, grasp starter handle and pull slowly until resistance is felt. Then pull the cord rapidly with a full arm stroke to avoid kickback. Allow the rope to return slowly. Do NOT allow the rope to snap back against housing.
5. After engine is started, pull the choke lever to the “OPEN” position. The generator runs.



WARNING: KICKBACK

Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go. Unintentional startup can result in entanglement traumatic amputation or laceration. Broken bones, fractures, bruises or sprains.

NOTE: If the engine fails to start after attempt for 3 times or flames out after starting, inspect and ensure that the generator is placed in horizontal surface and enough engine oil is injected.

During the operation of the unit the battery supplies power for the solenoid valve of the carburetor. For this, when the unit is turned off, make sure that the starting switch is in "OFF" position and otherwise the storage battery voltage is reduced due to the operating solenoid valve of the carburetor impacting on starting for next time.

The engine is equipped with an engine oil alarm, it is possible to prevent engine start when the engine oil in the crankcase is lower than the minimum level.

During running-in, routinely inspect the engine oil. See maintenance section for recommended maintenance period.



WARNING: Connect the output terminal of the generator with the electric equipment. Don't start or stop the engine when the electric equipment is in "ON" status.

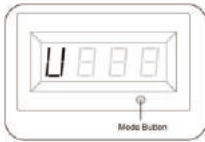
VFT meter

The VFT meter can be used for displaying voltage, frequency(hertz), run time and total run time as applicable. (Display mode depends on the configuration). The LCD displays each mode by pressing the button below the display.

The display meter sets as either automatic switching mode or manual operation mode. In the manual state press MODE BUTTON for mode switching. But in automatic mode MODE BUTTON is used for reset (operate cautiously when necessary).

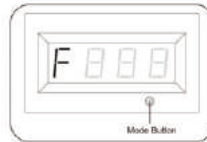
1. Voltage(V)

Output voltage of the generator.



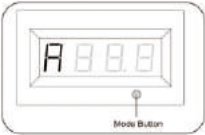
2. Frequency(F)

Output frequency in hertz.



3. Run time(R)

Run time of the generator for the current session.

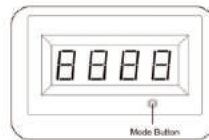
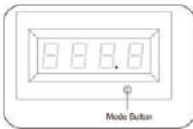


NOTE: If display value is less than 100, the numeric display will accurate to one decimal place. If the operation time is 100 hour or greater, the display will be "101" "102" and so on.

4. Total run time

Total run time of the generator since first operation (display mode depends on the configuration).

(1) The display value is accurate to one decimal place; (2) or the display value shows as a integer.



Connecting Electrical Devices

Inspect power cord for damage before using. There is a hazard of electrical shock from crushing, cutting or heat damage.

1. Ensure engine is started and grounding before plugging in any electrical appliance. Allow the engine to stabilize and warm up for a few minutes after starting.

2. Plug in desired 120 Volt loads to the 120 Volt U-Ground and 240 Volt loads to the 240 Volt receptacles. Always plug appliances into the generator with appliance in its “OFF” position.

- Do NOT connect 240 Volt loads to the 120 Volt receptacles.
- Only connects single-phase 60 Hertz loads.
- DO NOT overload the generator, follow the provided “generator wattage reference worksheet” to determine the running and starting wattage of your equipment refer to the product specifications to ensure your generator will operate the desired equipment.



DANGER: If connected devices overheat, turn them off and disconnect them from generating set.

Electrical Shock

To reduce the risk of electrical shock

- DO NOT use electrical cords that are worn, frayed bare or otherwise damaged.
- DO NOT touch bare wires or receptacles.
- DO NOT handle generating set or electrical cords while standing in water while barefoot, or while hands or feet are wet.

Loading Capacity



WARNING: Do not overload the generating set. Exceeding the generating set’s capacity can damage the generating set and/or electric devices connected to it.

You must make sure your generating set can supply enough rated (running) and (starting) watts for the electrical devices at the same time. Follow these simple steps to calculate the running and starting watts necessary for your purposes.

1. Count the electrical devices you will power at the same time.
2. The amount of power you need to run with the devices is the total rated (running) watts of these items.
3. Starting power is the power needed shortly when electric devices start. Since not all devices start at the same time, starting power can be estimated by the maximum power of all devices plus the total power counted in step 2.

Electric equipment		Rate power(W)	Starting power(W)
Appliances	Tablet TV 27"	80	100
	Energy saving lamb	5-50	5-50
	Electric cooker	1000	1000
	Computer	250	250
	Electric fan	50	100
	Washing machine	250	500
	Refrigerator	50	300
	Air-conditioner	1600	3200
Electric tooling	Electric hammer	1000	1500
	Impact Hammer	3000	6000
	Water pump	2200	5000
	Electric welding machine	5000	7500
	Air compressor	5000	10000

Wattage Reference Chart

Charging Battery

Charge the battery by battery charging socket and keep the full charge of the battery for use at any time. Charge the battery in dry environment.



WARNING: DO NOT allow smoking, open flame, sparks or any other source of heat around a battery. Wear protective goggles, rubber apron and rubber gloves when working around a battery. Battery electrolyte fluid is an extremely caustic sulfuric acid solution that can cause severe burns. If spill occurs, flush area with clear water immediately.

To recharge Volt batteries, proceed as follows:

- Check fluid level in all battery cells. If necessary, add **ONLY** distilled water to cover separators in battery cells. **DO NOT use tap water.**
- If the battery is equipped with vent caps, make sure they are installed and are tight.
- If necessary, clean battery terminals.
- Connect battery charge cable clamp with **red** handle to the **positive(+)** battery terminal.
- Connect battery charge cable clamp with **black** handle to the **negative(-)** battery terminal.
- Start engine. Let the engine run while battery recharges.
- When battery has charged, shut down engine.

Low Oil Alarm System

This model is equipped with a Low Oil Alert System designed to avoid engine damage from insufficient oil in the crankcase. The Low Oil Alarm System will stop the engine automatically before the oil level in the crankcase drops below safe operating levels.

Stopping The Generator

Normal Shut Down

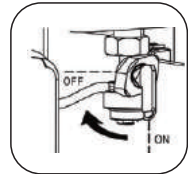
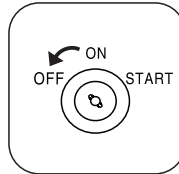
1. Unplug all electrical loads.
2. In order to stabilize internal equipment temperatures, allow the engine to run for 3-5 minutes under no load.

NOTE: If the generator will not be in use for more than 7 days, turn the fuel valve to the "OFF" position and allow the unit to run until the fuel in the carburetor is used and the engine shuts itself off.

3. Turn the key to the "OFF" position

4. Turn the fuel valve to "OFF" position.

- Allow unit to cool to ambient temperature before storage or transportation.
- Always transport the generator with the fuel valve in the "OFF" position. Failure to do so will result in damage to the engine.



Emergency Shut Down

- Turn the Fuel Valve to "OFF" position. The engine shuts itself off until the fuel in the carburetor is used.

MAINTENANCE

It is the operator's responsibility to complete all scheduled maintenance in a timely manner. Correct any issue before operating the generating set. Always follow the inspection and maintenance recommendations and schedules in this manual.



WARNING: Improper maintenance or failure correct a problem before operation can cause a malfunction and result in property damage, serious injury or DEATH. Improper maintenance will void your warranty.



DANGER: Accidental starts can cause severe injury or death. Remove the spark plug cap and ground generating set before performing any service.



WARNING: The filter element may contains PAHs, PAHs are harmful for your health. Please wear gloves for protection during air filter maintenance.

Maintenance Schedule

Stop the generating set before serving, disconnect all electric devices and battery (If equipped),and cool down the generating set completely.

Serve the generating set in a clean, dry and flat area, so that no accident would happen during the serving.

Please make the wheel in brake state to stop accidental movement of generating set.

Follow the service intervals indicated in the chart below. Service your generating set more frequently when operating in adverse conditions.

Contact your local authorized service dealer for your generating set or engine maintenance needs.

		Each time before use	The first month or 10 hours ^{note2}	Every three months or 50 hours ^{note2}	Every six months or 100 hours ^{note2}	Every year or 300 hours ^{note2}
Engine oil	Inspection	√				
	Replacement		√		√	
Air filter	Inspection	√				
	Cleaning			√ ^{note3}		
Spark plug	Inspection and adjustment				√	
	Replacement					√
Spark Extinguisher ^{note1}	Cleaning				√	
Idle speed	Inspection and adjustment					√ ^{note4}
Valve clearance	Inspection and adjustment					√ ^{note4}
Carbon canister ^{note1}	Inspection	Every two years ^{note4}				
Low permeability oil tube ^{note1}	Inspection	Every two years ^{note4}				
Oil tube	Inspection	Every two years ^{note4}				

NOTE:

Note1: Applicable types (if available).

Note2: Before each season and after then (whichever comes first).

Note3: Service more frequently under severe , dusty, dirty conditions.

Note4: To be performed by knowledgeable, experienced owners or the authorized dealer.

Generating Set Maintenance



WARNING: Never clean the generator when it is running! Never use water to clean the generating set. Water can enter the generating set through the cooling slots and damage the generating set windings.



WARNING: Do not modify the generator in any way. Do not tamper with governed speed. Generator supplies correct rated frequency and voltage when running at factory set. Tampering with the factory set governor will void your warranty.

- Make certain that the generator is kept clean and stored properly.
- Use a damp cloth to clean exterior surfaces of the generating set. Use a soft brush to clean the dirt and oil.
- Use an air compressor (25 PSI) to clear dirt and debris from the generating set.
- Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

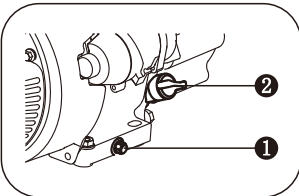
Engine Maintenance

Changing the oil



WARNING: Change the oil when the engine is warm from operation. The oil can reach up to 140°C under that condition. AVOID SPLASHING OF HOT OIL, it can burn you and cause severe injury. Careful operation should be taken to prevent burns.

1. Start your engine and let it warm up to get the oil warm and thinner.
2. Turn the engine On/Off switch to the “OFF” position. Turn Fuel Valve to the “OFF” position.
3. Remove the dipstick by turning counter clockwise. Remove the oil drain plug located below the dipstick utilizing the appropriate tools.



- ①. Oil Drain Plug
- ②. Dipstick

4. Drain the engine oil into an approved receptacle and discard in accordance with all Federal and State Regulations. Never dump the used engine oil on the ground or into drains only discard in an approved manner. Check with your local authorities to determine the regulations in your area.

5. After oil is completely drained, replace oil drain plug and tighten with appropriate tools.

NOTE: Replace oil with the proper oil for your product. Refer to the “Engine Oil Recommendations” section for exact fill requirements.

6. Always use your dipstick to check the oil level and only fill to the full mark on the dipstick. Never overfill the engine as this can cause damage to the unit and void warranty.

7. Reinstall and fully tighten the dipstick on the engine.

NOTE: Proper maintenance of the unit will increase the life of your product the oil must be changed on a regular basis for proper operation, and reliability and to also maintain the warranty on this product.

Fuel System Maintenance:

NOTE: Periodically you can get sediment or trash in your Carburetor Bowl. Use the following procedures to clean:

1. Turn the fuel valve to the “OFF” Position.
2. Remove the carburetor bowl by removing the mounting bolt located at the bottom of the bowl.
3. Dump out the old fuel and sediment into an approved container and clean carburetor bowl thoroughly.

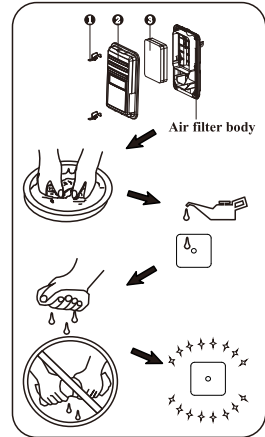
Air Filter Maintenance



WARNING: Do not run the engine without the air filter, or serious danger can result.

Routine maintenance of the air cleaner helps maintain proper airflow to the carburetor. Occasionally check that the air cleaner is free of excessive dirt.

1. Remove the air filter maintenance cover.
2. Loosen the filter fix **clamp**(1) and remove the cover(2) of the air filter. Remove and check the air filter element(3).
3. Wash with liquid detergent and warm water. Squeeze thoroughly dry in a clean cloth.
4. Saturate in clean engine oil.
5. Squeeze in a clean, absorbent cloth to remove all excess oil.
6. Assemble the filter element onto the filter unit. Assemble the filter fix **clamp**. Reinstall the air filter to the generator.



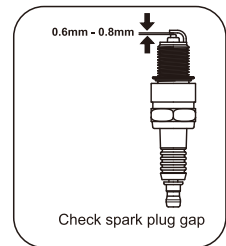
Spark Plug

Spark plug gap : 0.6mm-0.8mm(0.024-0.031 in). Spark plug tighten torque: 15-20N.m

The spark plug is important for proper engine operation. A good spark plug should be intact, free of deposits, and properly gapped. Refer to “Recommended Maintenance Schedule”.

To inspect the spark plug:

1. Clean any dirt from the spark plug cap and spark plug base.
2. Remove the spark plug cap.
3. Using socket wrench to loose and remove the spark plug.
4. Inspect the spark plug and spark plug washer, if it was broken or worn, replace with a new one. Clean the spark plug with wire brush if reuse it.
5. Check spark plug gap. Carefully bend side electrode to adjust the gap if necessary.
6. Carefully thread the plug into the engine by hand.
7. After the spark plug is seated, use spark plug wrench to tighten the plug.
8. Attach the spark cap to the plug and connect the spark plug wire to the plug.



CAUTION: Only use recommended spark plug or equivalent. Do not use spark plugs that have improper heat range.

Spark Arrester

1. Allow the generating set to cool completely before servicing the spark arrester.
2. Remove the muffler blind window first, then remove the spark arrester screen.
3. Carefully remove the carbon deposits from the spark arrester screen with a wire brush.
4. Replace the spark arrester if it is damaged.
5. Reinstall the spark arrester in the muffler and reinstall the muffler blind window.

Speed

The speed has been preset at the factory and should rarely require readjustment. Consult your local authorized dealer for such needs.



WARNING: Unapproved adjustment will damage your engine and/or your electrical devices and void your warranty.

Adjustment

There has no other service and/or adjustment need for your generator.

Unapproved adjustments or tampering can damage your generator and your electrical devices and will void your warranty. Contact your local dealer for such needs.

Storage



WARNING: Gasoline is highly flammable and extremely explosive. Empty the fuel tank and shut off fuel valve before storing or transporting this generating set.

The generating set should be started at least once every 2 weeks and allowed to run for at least 20 minutes. Follow the instructions below for longer term storage if the generating set will be out of service for 2 months or more.

- Allow the generating set to cool completely before storage.
- Clean the generating set according to instruction in maintenance section.
- Drain all fuel completely from the fuel tank, fuel hose and carburetor to prevent gum from forming.
- Turn off the fuel supply at the fuel valve.
- Change the oil.
- Reattach the spark plug.
- Remove the spark plug and pour about 15ml of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
- Store the unit in a clean, dry area out of direct sunlight.

Transport

To prevent fuel spillage when transporting or during temporary storage, the generating set should be secured upright in its normal operating position, with the engine switch OFF. The combination switch should be in the “stop” position and knob of the fuel cap should be turned to the “OFF” position.

When transporting:

- Do not overfill the tank.
- Do not operate the generating set while it is on vehicle. Take the generating set off the vehicle and use it in a well-ventilated place. Avoid a place exposed to direct sunlight when putting the generating

set on a vehicle. If the generating set is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.

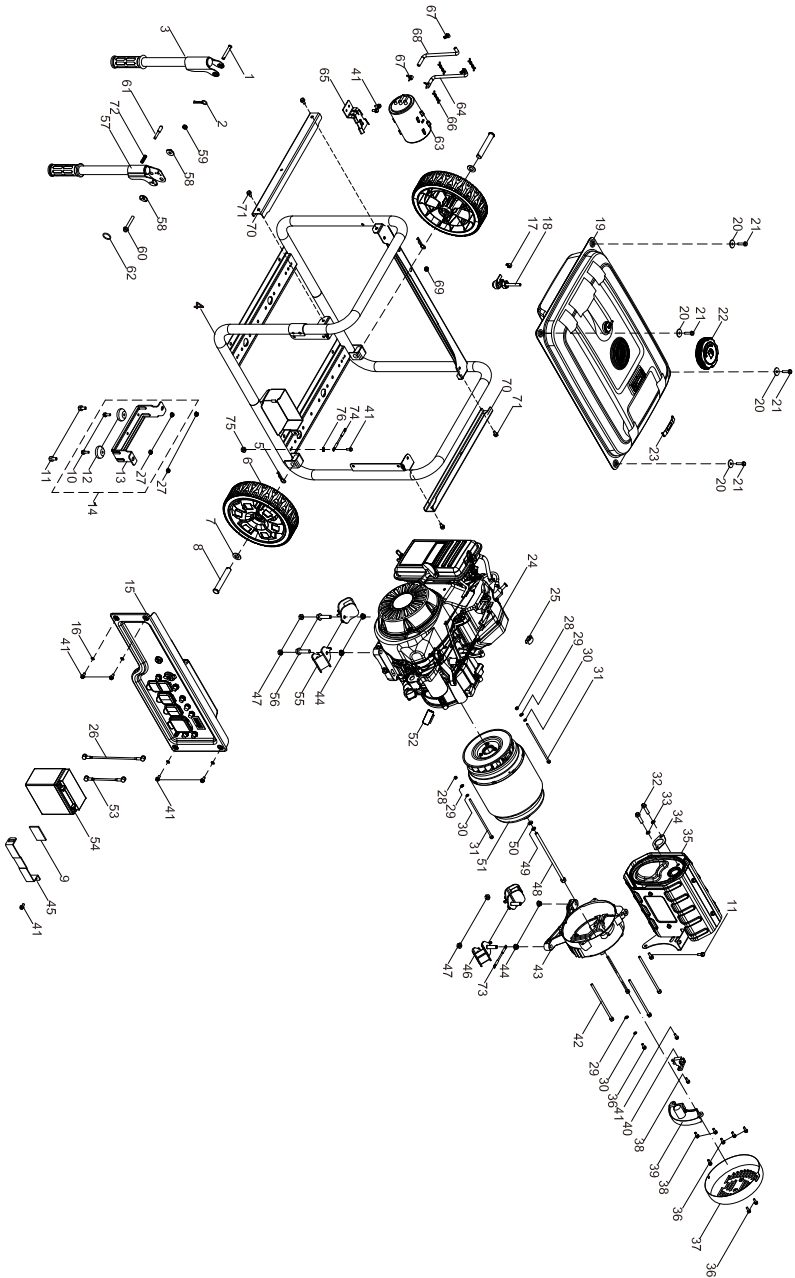
- Do not drive on a rough road for an extended period with the generating set on a rough road, drain the fuel from the generating set beforehand.

TROUBLESHOOTING

Failure		Cause	Removal method
Engine won't start	Fault light does not light.	Engine switch is "OFF".	Turn engine switch to the "ON" position.
	Fault light flashes.	No Fuel.	Fill tank per instructions in this manual.
		Inadequate engine oil.	Check oil level. This engine is equipped with a low oil sensor. The engine cannot be started unless the oil level is above the prescribed lower limit.
		No ignition.	Remove the spark plug cap. Clean any dirt from around the plug base, then remove the spark plug. Install the spark plug in the plug cap. Turn the engine switch "ON". Grounding the electrode to any engine ground, pull the recoil starter to see if sparks jump across the gap. If there is no spark, replace the plug. Reinstall the plug and start engine according to instructions in this manual. Consult Customer Service if necessary.
		Battery voltage is too low.	Check battery voltage, and charge the battery if the voltage is too low.
		Oil pump pressure is too low.	Clean the impurities in the fuel tank and change oil pump. Adding fuel according to instructions in this manual. Consult Customer Service if necessary.
Generator has no output	Circuit breaker tripped.	Reset circuit breakers.	
	Inadequate cord sets or extension cords.	Check cord sets or extension cords capabilities in section Controls; Cable Size in this manual. Consult Customer Service if necessary.	

EXPLODED VIEW & PARTS LIST

Generator exploded view

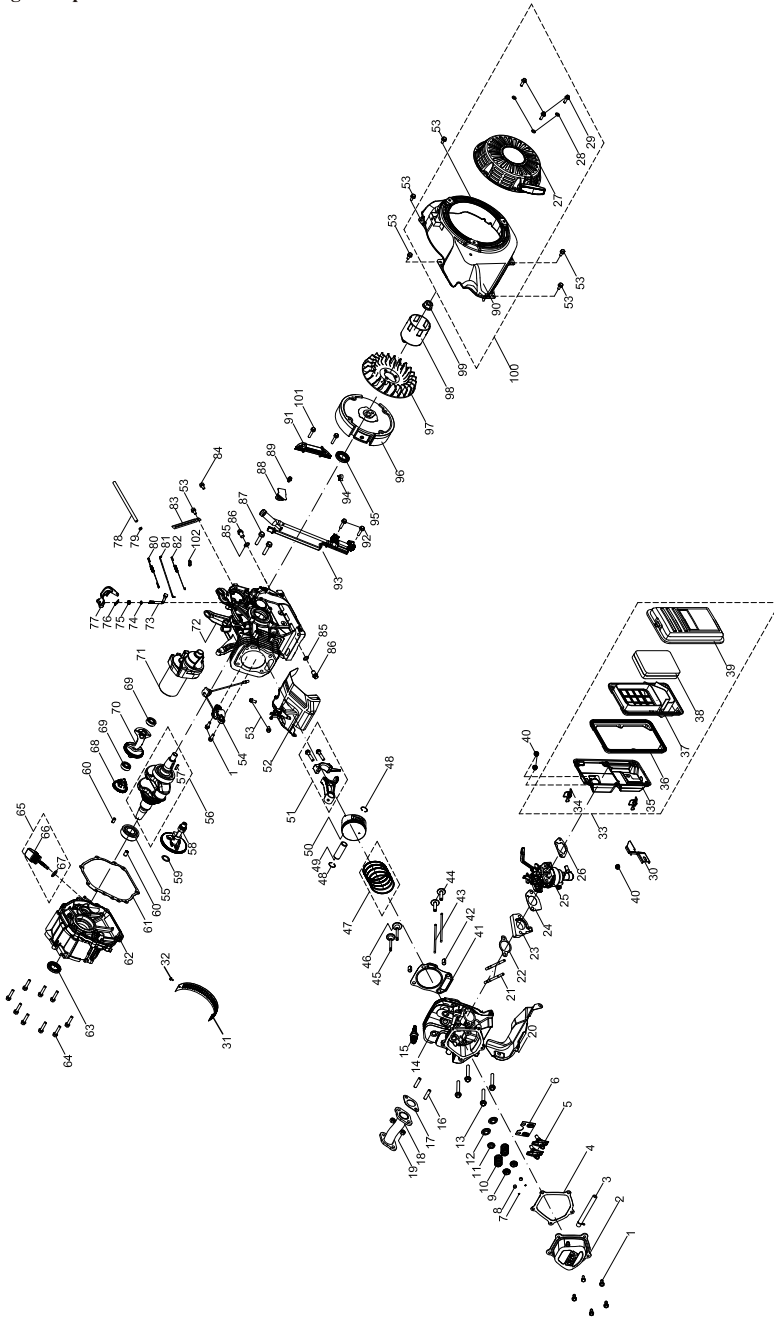


Generator parts list

Part#	Stock#	Description	Qty.
1	100011051-0002	Pin, φ8×55	1
2	100023415-0002	Circlip	1
3	100747317-0006	Handle	1
4	100782108-0001	Frame Assembly	1
5	100023414-0001	Circlip	2
6	100041259-0001	Tire	2
7	100010483	Washer, φ17.5×3×φ30	2
8	100011064-0002	Pin, φ16×100	2
9	100143536	Rubber Mat	1
10	100011265-0003	Bolt, M6×18	2
11	100011311-0005	Bolt, M8×16	4
12	100021015	Damping Pad	2
13	100020665-0001	Support Base	1
14	100020981-0004	Support Base	1
15	100782140-0001	Control Panel	1
16	100006034	Gasket, Drain Bolt	4
17	100005149	Clamp	1
18	100732004	Fuel Switch	1
19	100094304-0005	Fuel Tank	1
20	100010439-0002	Washer, φ6.5×2×φ25	4
21	100011268-0003	Bolt, M6×25	4
22	100091755	Fuel Cap	1
23	100059920-0001	Oily Sense Clip	1
24	1ZZDDF90E	Engine	1
25	100018704	Plug	1
26	100150324	Cathode Wire	1
27	100011453-0003	Nut, M8	4
28	100011419-0001	Nut, M5	2
29	100010919-0002	Washer, φ5	3
30	100010885-0004	Washer, φ5	3
31	100011415-0001	Bolt, M5×235	2
32	100011553-0001	Bolt, M8×32	2
33	100010887-0004	Washer, φ8	2
34	100052281	Gasket, Muffler	1
35	100088674-0001	Muffler	1
36	100011250-0002	Bolt, M5×14	7
37	100018664-0004	End Cover	1
38	100011252-0001	Bolt, M5×18	3
39	100018640	Voltage Regulator	1
40	100018595	Brush	1
41	100011261-0004	Bolt, M6×12	9
42	100011304-0002	Bolt, M6×194	4
43	100018572	Rear Bracket	1
44	100011465-0002	Nut, M10×1.25	4
45	100041264-0003	Binder Plate	1
46	100068991	Damping Pad	2
47	100079483-0001	Nut, M8	4
48	100011401-0001	Bolt, M10×1.25×290	1
49	100010888-0002	Washer, φ10	1
50	100010905-0001	Washer, φ10	1
51	100073621	Alternator	1
52	100000657	Clip	1
53	100009972	Anode Wire	1

Part#	Stock#	Description	Qty.
54	100148229	Battery	1
55	100068992	Damping Pad	2
56	100011381-0002	Bolt, M10×1.25×40	2
57	100782097-0001	Handle	1
58	100068791	Washer	2
59	100070851-0001	Nut, M8	1
60	100011233-0001	Bolt, M8×55	1
61	100086263	Pin	1
62	100087591	Chain	1
63	100008945	Carbon Canister	1
64	100006138	Tube, Carbon Canister	1
65	100008675-0001	Carbon Canister Rack	1
66	100000658	Clamp	3
67	100005148	Clamp	2
68	100147745	Fuel Hose, φ4×φ8×645	1
69	100009075	Damping Pad	1
70	100061877-0001	Across Bar	2
71	100011262-0003	Bolt, M6×14	4
72	100086264	Spring	1
73	100727686	Earth Wire	1
74	100009983	Earth Wire	1
75	100011452-0003	Nut, M6	1
76	100128826-0001	Washer, φ6	1

Engine exploded view



Engine parts list

Part#	Stock#	Description	Qty.
1	100011264-0003	Bolt, M6×16	7
2	100002338	Valve Cover	1
3	100002882	Breather Hose	1
4	100055922	Gasket, Valve Cover	1
5	100149155	Rocker Arm Assembly	2
6	100748373	Rocker Arm Base	1
7	100004576	Valve Locker	4
8	100004589	Valve Adjust Cap, Exhaust	2
9	100004516	Valve Spring Seat	2
10	100067633	Valve Spring	2
11	100004602	Intake Valve Seal	1
12	100004575	Valve Spring Seat	2
13	100002470	Bolt, M10×1.25×87	4
14	100715291	Cylinder Head	1
15	100009379	Spark Plug	1
16	100010395	Stud, M8×47	2
17	100006941	Gasket, Muffler	1
18	100065771	Exhaust Pipe	1
19	100011422-0004	Nut, M6	2
20	100007097	Shroud	1
21	100010364	Stud, M6-8×110	2
22	100076230	Gasket, Carburetor Insulator	1
23	100005618	Insulator	1
24	100076228	Gasket, Carburetor	1
25	100713990-0004	Carburetor	1
26	100076229	Gasket, Air Filter	1
27	100066987-0013	Recoil Starter	1
28	100010920-0002	Washer, φ6	3
29	100011565-0001	Bolt, M6×10	3
30	100021032	Air Filter Bracket	1
31	100141250	Shroud	1
32	100011248-0003	Bolt, M5×10	1
33	100094803-0002	Air Filter Assembly	1
34	100004895	Air Filter Clip	2
35	100094802	Air Filter Base	1
36	100004798	Gasket, Air Filter	1
37	100004878	Air Filter Baffle	1
38	100004781	Air Filter Element	1
39	100094802	Air Filter Cover	1
40	100011452-0003	Nut, M6	3
41	100150209	Gasket, Cylinder Head	1
42	100010562	Pin, φ12×20	2
43	100149152	Push Rod	2
44	100149154	Tappet	2
45	100719490	Exhaust Valve	1
46	100719491	Intake Valve	1
47	100003265	Piston Ring Set	1
48	100753097	Circlip	2
49	100003132	Piston Pin	1
50	100753096	Piston	1
51	100719493	Connecting Rod Assembly	1
52	100725252	Governor Gear Bracket Assembly	1
53	100011261-0004	Bolt, M6×12	9

Part#	Stock#	Description	Qty.
54	100051547	Oil Sensor	1
55	100010789	Bearing, TM6207	1
56	100711963	Crankshaft	1
57	100010577	Woodruff Key	1
58	100711980	Camshaft	1
59	100010521-0001	Washer, φ16.2×0.3×φ24	1
60	100010549	Pin, φ8×12	2
61	100746648	Gasket, Crankcase	1
62	100712041	Crankcase Cover	1
63	100017653	Oil Seal, φ35×φ52×7	1
64	100011323-0001	Bolt, M8×38	9
65	100004129-0007	Dipstick	1
66	100032064-0006	Dipstick	1
67	100030561	O-Ring, Dipstick	1
68	100008305	Governor Gear	1
69	100010742	Bearing, 6202	2
70	100150211	Balance Shaft	1
71	100751380	Electric Starter	1
72	100711174	Crankcase	1
73	100007980	Governor Gear Shaft	1
74	100010518-0001	Washer, φ8×0.8×φ20	1
75	100017631	Oil Seal, φ8×φ14×4	1
76	100007989	Cotter Pin	1
77	100090515	Governor Lever	1
78	100732336	Fuel Hose	1
79	100005149	Clamp	1
80	100007889	Governor Spring	1
81	100090516	Throttle Linkage	1
82	100007927	Idle Spring	1
83	100000655	Clip	1
84	100011260-0005	Bolt, M6×10	1
85	100010467	Washer, φ12×2×φ20	2
86	100010275	Earth Bolt	2
87	100011320-0002	Bolt, M8×35	2
88	100009463	Wire Board	1
89	100011213-0001	Bolt, M6×8	1
90	100055977-0003	Blower Housing	1
91	100009405	Charging Coil	1
92	100011269-0003	Bolt, M6×28	2
93	100052137	Ignition Module	1
94	100000667	Clip	1
95	100017649	Oil Seal, φ35×φ52×7	1
96	100009565	Flywheel	1
97	100007043	Cooling Fan	1
98	100007562	Starter Cup	1
99	100011460-0001	Nut, M16×1.5	1
100	100055208-0010	Recoil Starter	1
101	100033038-0002	Bolt	2
102	100090559	Clamp	1

THREE (3) YEARS LIMITED WARRANTY

PowerSmart is committed to building equipment that will provide years of dependable service. Our warranties are consistent with our commitment and dedication to quality.

THREE (3) YEARS LIMITED WARRANTY OF POWER SMART PRODUCTS FOR HOME USE.

PowerSmart ("Seller") warrants to the original purchaser only, that all PowerSmart consumer power tools will be free from defects in material or workmanship for a period of three (3) years from date of purchase. If the tool(s) is used while providing professional or commercial services, the warranty coverage shall be for a maximum of (90) days.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Three (3) Years Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or improperly repaired, by person(s) other than an Authorized Seller or Service Center.

Please be aware that normal wear parts are not covered this warranty. This includes drive belts, blades and grass bags. Carburetor issues, and/or other damage found to be the result of stale, contaminated or compromised fuel, are not covered under this limited warranty.

To make a claim under this Limited Warranty, you must return the entire power tool product; transportation prepaid, to PowerSmart. The owner must include a legible copy of the original receipt, which shall list the date of purchase, along with the company's name where the product was purchased.

THIS LIMITED WARRANTY DOES NOT APPLY TO ANY ACCESSORY ITEMS INCLUDED WITH THE TOOL SUCH AS CIRCULAR SAW BLADES OTHER RELATED ITEMS OR TO ANY REPLACEMENT PARTS LISTED UNDER MAINTENANCE.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO THREE(3) YEARS FROM DATE OF PURCHASE. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

For questions / comments, technical assistance or repair parts –
Please call toll free at: 1-800-791-9458 (M-F 9am – 5pm EST)
Email: support@amerisuninc.com / support@powersmartusa.com

PLEASE SAVE ALL OF YOUR ORIGINAL RECEIPTS. THIS WARRANTY IS VOID WITHOUT THEM.

