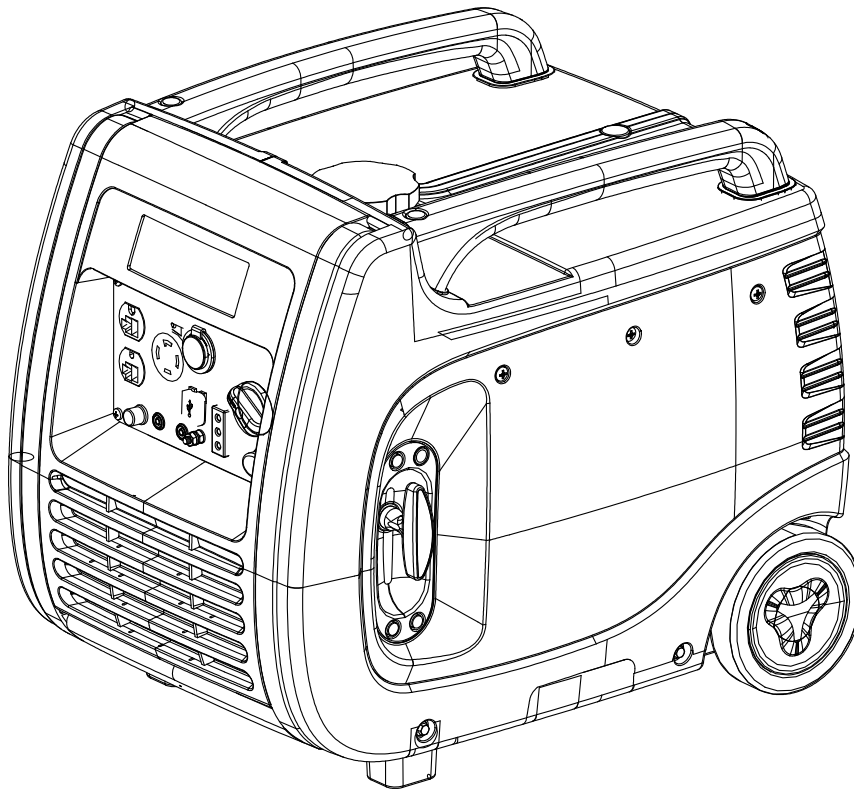




Model: 3000i

Inverter Generator OPERATOR'S MANUAL



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email:customer@quip-all.com



SAVE THIS MANUAL FOR FUTURE REFERENCE

This manual contains important information regarding safety, operation, and maintenance.

PREFACE

Thank you for purchasing a Quipall generator.

This manual covers operation and maintenance of the QPL-3000i generator.

All information in this publication is based on the latest product information available at the time of approval for printing.

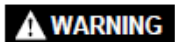
CPO Commerce, LLC reserves the right to make changes at any time without notice and without incurring any obligation.

No part of this publication may be reproduced without written permission.

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

Pay special attention to statements preceded by the following words:

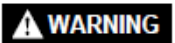
Indicates a strong possibility of severe personal injury or death if instructions are not followed.



CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about the generator, consult an authorized Quipall dealer.



Quipall generator is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the generator. Failure to do so could result in personal injury or equipment damage.

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SAFETY INSTRUCTIONS

Important safety information

Quipall generators are designed for use with electrical equipment that has suitable power requirements. Other uses can result in injury to the operator or damage to the generator and other property.

Most injuries or property damage can be prevented if you follow all instructions in this manual and on the generator. The most common hazards are discussed below, along with the best way to protect yourself and others.

Never attempt to modify the generator. It can cause an accident as well as damage to the generator and appliances.

- Do not connect an extension to the muffler.
- Do not modify the intake system.
- Do not adjust the governor.
- Do not remove the control panel or do not change the wiring of the control panel.

Operator responsibility

Know how to stop the generator quickly in case of emergency. Understand the use of all generator controls, output receptacles, and connections.

Be sure that anyone who operates the generator receives proper instruction. Do not let children operate the generator without parental supervision.

Be sure to observe the instructions in this manual for how to use the generator and maintenance information. Ignoring or improperly following the instructions can cause an accident such as an electric shock, and the condition of the exhaust gas may deteriorate.

Obey all applicable laws and regulations where the generator is used.

Gasoline and Oil is toxic. Follow the instructions provided by each manufacturer before use.

Place the generator on a firm level place before operation.

Do not operate the generator with any cover removed. You may get your hand or foot caught in the generator and it may cause accident.

Consult your authorized Quipall dealer for disassembly and service of the generator that are not covered in this manual.

SAFETY INSTRUCTIONS

Carbon monoxide hazards

Exhaust contains poisonous carbon monoxide, a colorless, odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death. If you run the generator in an area that is confined, or even partially enclosed area, the air you breathe could contain a dangerous amount of exhaust gas.

Never run your generator inside a garage, house, or near open windows or doors.

Electric shock hazards

The generator produces enough electric power to cause a serious shock or electrocution if misused.

Using a generator or electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution.

Keep the generator dry.

If the generator is stored outdoors, unprotected from the weather, check all of the electrical components on the control panel before each use. Moisture or ice can cause a malfunction or short circuit in electrical components that could result in electrocution.

If you get an electric shock, consult a doctor and have medical treatment immediately.

Fire and Burn Hazards

Do not use the generator in areas with a high risk of fire.

The exhaust system gets hot enough to ignite some materials.

-Keep the generator at least 1 meter (3 feet) away from buildings and other equipment during operation.

-Do not enclose the generator in any structure.

-Keep flammable materials away from the generator.

Some parts of the internal combustion engine are hot and may cause burns. Pay attention to the warnings on the generator.

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the generator indoors.

SAFETY INSTRUCTIONS

In case of fire outbreak, use an appropriate fire extinguisher.

If you inhale fumes produced by an accidental fire with the generator, consult a doctor and have medical treatment immediately.

Refuel with care

Gasoline is extremely flammable, and gasoline vapor can explode. Allow the engine to cool if the generator has been in operation. Refuel only outdoors in a well ventilated area with the engine off. Do not refuel during operation.

Do not overfill the fuel tank.

Never smoke near gasoline, and keep other flames and sparks away. Always store gasoline in an approved container.

Make sure that any spilled fuel has been wiped up before starting the engine.

Explosion proof

This generator is not compliant with explosion proof.

Disposal

To protect the environment, do not dispose of the used generator, battery, engine oil, etc. carelessly by leaving them in the waste. Observe the local laws or regulations or consult your authorized Quipall generator dealer to dispose of these parts.

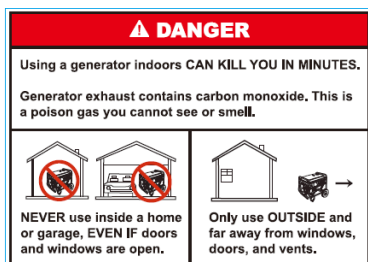
Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

An improperly disposed battery can hurt the environment. Always confirm local regulations for battery disposal.

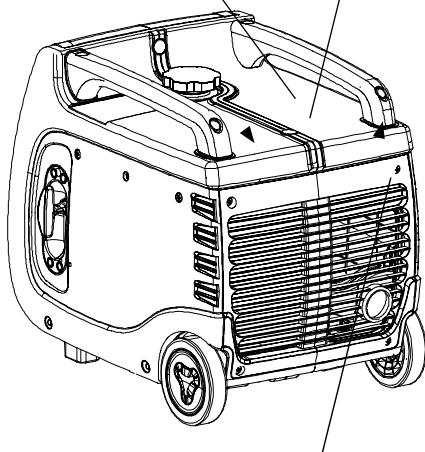
GENERATOR SAFETY

Safety label locations

These labels warn you of potential hazards that can cause serious injury. Read them carefully.



⚠ WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



GENERATOR SAFETY



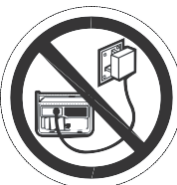
Quipall generator is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the generator. Failure to do so could result in personal injury or equipment damage.



Exhaust contains poisonous carbon monoxide, a colorless, odorless gas. Breathing carbon monoxide can cause loss of consciousness and may lead to death. If you run the generator in an area that is confined,

or even partially enclosed area, the air you breathe could contain a dangerous amount of exhaust gas.

Never run your generator inside a garage, house or near open windows or doors.



Improper connections to a building's electrical system can allow current from the generator to backfeed into the utility lines. Such backfeed may electrocute utility company workers or others who contact the lines during a power outage, and the generator may explode, burn, or cause fires when utility power is restored. Consult the utility company or a qualified electrician prior to making any power connections.



Gasoline is highly flammable and explosive. Turn the engine off and let it cool before refueling.



Connect and remove the receptacle box for parallel operation with the engine stopped. For single operation, the receptacle box for parallel operation must be removed.

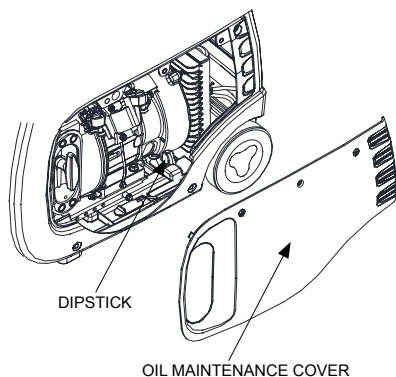
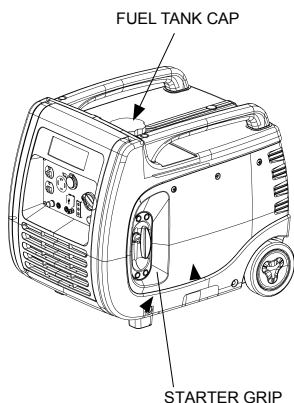
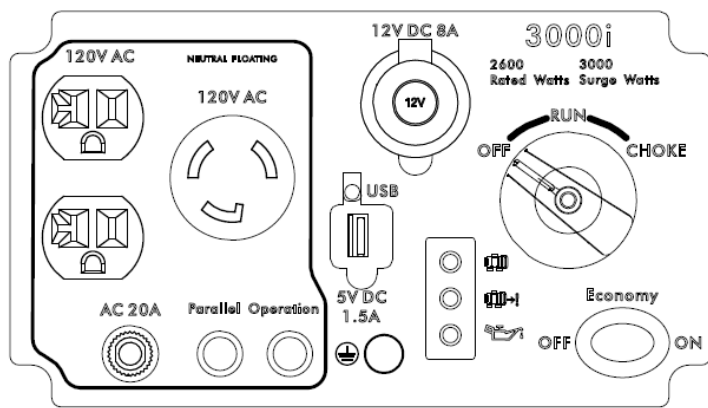


A hot exhaust system can cause serious burns. Avoid contact if the engine has been running.

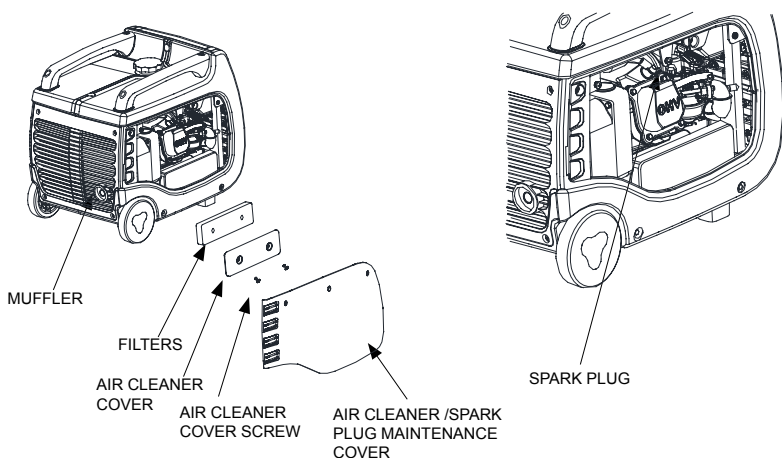
CONTROLS & FEATURES

Component & control locations

Use the illustrations on these pages to locate and identify the most frequently used controls.



CONTROLS & FEATURES



CONTROLS

Engine switch

The engine switch controls the ignition system, fuel valve and choke valve.

OFF-Stops the engine and closes the fuel valve.

ON- Running position; opens the fuel valve and allows the engine to be started.

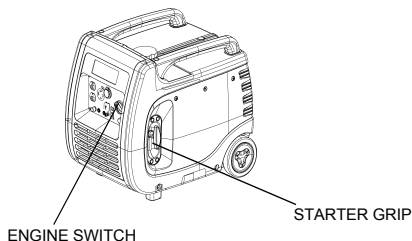
CHOKE-Closes choke valve.

The choke is used to provide proper starting mixture when the engine is cold.

Starter grip

Pulling the starter grip operates the recoil starter to crank the engine.

Do not allow the starter grip to snap back against the generator. Return it gently to prevent damage to the starter.



CONTROLS & FEATURES

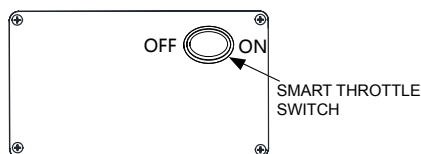
Smart throttle System

The smart throttle system automatically reduces engine speed when loads are turned off or disconnected. When appliances are turned on or reconnected, the engine returns to the proper speed to power the electrical load.

If high electrical loads are connected simultaneously, turn the Smart throttle switch to the OFF position to reduce voltage changes. When using the DC output, turn the Smart throttle switch to the OFF position.

ON: Recommended to minimize fuel consumption and further reduce noise levels when less than a full load is applied to the generator.

OFF: The smart throttle system does not operate.



Parallel operation outlets

These outlets are used for connecting two QPL-3000i generators for parallel operation (see page 18-19). A Quipall approved parallel operation cable kit (optional equipment) is required for parallel operation. This kit can be purchased from an authorized Quipall generator dealer.

PARALLEL OPERATION OUTLETS

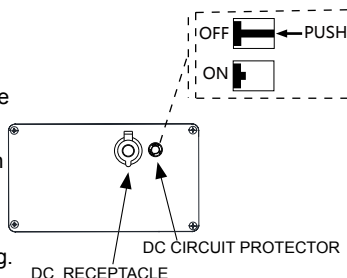


DC receptacle

The DC receptacle should **ONLY** be used for charging 12-volt automotive type batteries. The DC charging output is not regulated.

DC circuit protector

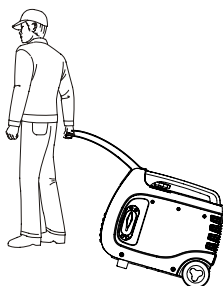
The DC circuit protector automatically shuts off the DC battery charging circuit when the DC charging circuit is overloaded, when there is a problem with the battery, or when the connections between the battery and the generator are improper. However, the circuit protector does not prevent overcharging.



CONTROLS & FEATURES

Folding handle

The foldable handle is intended for ease of transportation and should be folded when the generator is stationary. Do not rest objects on the handle when in the transport position.

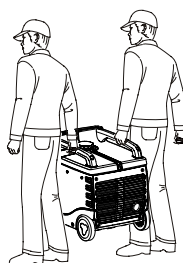


To extend the handle

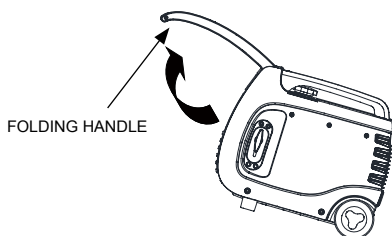
Lift the handle upward with both hands.

To fold the handle

Lower the handle with both hands until it clicks into place.



NOTICE CORRECT

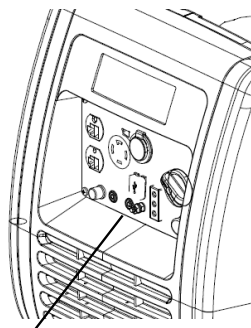


FEATURES

Ground terminal

Be sure to ground the generator when the connected equipment is grounded.

Before using the ground terminal, consult a qualified electrician, electrical inspector, or local agency having jurisdiction for local codes or ordinances that apply to the intended use of the generator.

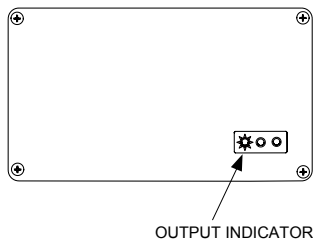


GROUND TERMINAL

CONTROLS & FEATURES

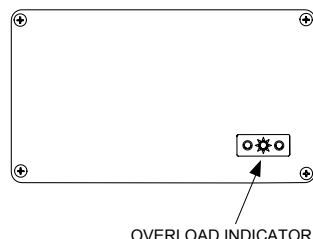
Output Indicator

The output indicator (green) is illuminated when the generator is operating normally. It indicates that the generator is producing electrical power at the receptacles.



Overload Indicator

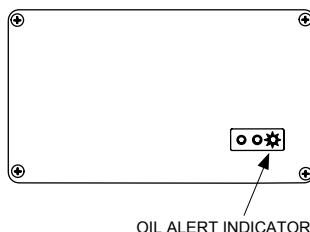
If the generator is overloaded (in excess of 3.0 KVA), or if there is a short circuit in a connected appliance, the overload indicator (red) will come on. If the overload indicator (red) stays on continuously for more than 3 seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go off. However, the engine will continue to run.



Oil alert Indicator

The Oil Alert system is designed to prevent engine damage caused by an insufficient amount of oil in the crankcase. Before the oil level in the crankcase can fall below a safe limit, the Oil Alert indicator (Red) comes on and the Oil Alert system automatically will stop the engine (the engine switch will remain in the ON position).

If the engine stops or the Oil Alert indicator (Red) comes on when you pull the starter grip, check the engine oil level (see page 26) before troubleshooting in other areas.



OPERATION

BEFORE OPERATION

Are you ready to get started?

Your safety is your responsibility. A little time spent in preparation will significantly reduce your risk of injury.

Know ledge

Read and understand this manual. Know what the controls do and how to operate them. Familiarize yourself with the generator and its operation before you begin using it. Know how to quickly shut off the generator in case of an emergency.

If the generator is being used to power appliances, be sure that they do not exceed the generator's load rating (see pages 18).

Statement

CERTIFIED FOR [identify nominal engine speed or range of speeds for testing]
OPERATION ONLY.

Is your generator ready to go?

For your safety, and to maximize the service life of your equipment, it is very important to take a few moments before you operate the generator to check its condition. Be sure to take care of any problem you find.



WARNING

Improperly maintaining this generator, or failing to correct a problem before operation, could cause a malfunction in which you could be seriously injured. Always perform a pre-operation inspection before each operation, and correct any problem.

To prevent a possible fire, keep the generator at least 3 feet (1 meter) away from building walls and other equipment during operation. Do not place flammable objects close to the engine. Before beginning your pre-operation checks, be sure the generator is on a level surface and the engine switch is in the OFF position.

Check the engine

Check the oil level (see page 26). A low oil level will cause the Oil Alert system to shut down the engine. Check the air filter (see page 30). A dirty air filter will restrict air flow to the carburetor, reducing engine and generator performance. Check the fuel level (see page 25). Starting with a full tank will help to eliminate or reduce operating interruptions for refueling.

OPERATION

Safe operating precautions

Before operating the generator for the first time, review chapters GENERATOR SAFETY (see page 7-8) and BEFORE OPERATION (see page 14).

For your safety, do not operate the generator in an enclosed area such as a garage. Your generator's exhaust contains poisonous carbon monoxide gas that can collect rapidly in an enclosed area and cause illness or death.



WARNING

Exhaust contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas. Breathing carbon monoxide can cause unconsciousness or death.

Never run the generator in a closed, or even partly closed area where people may be present.

Before connecting an AC appliance or power cord to the generator:

Use grounded 3-prong extension cords, tools, and appliances, or double-insulated tools and appliances.

Inspect cords and plugs, and replace if damaged.

Make sure that the appliance is in good working order. Faulty appliances or power cords can create a potential for electric shock .

Make sure the electrical rating of the tool or appliance does not exceed that of the generator.

Never exceed the maximum power rating of the generator. Power levels between rated and maximum may be used for no more than 30 minutes.

Operate the generator at least 3 feet (1 meter) away from buildings and other equipment.

Do not operate the generator in an enclosed structure.

Make sure that the appliance is in good working order. Faulty appliances or power cords can create a potential for electric shock. (Make sure the electrical rating.)

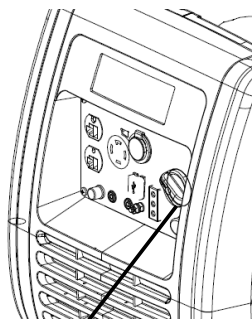
OPERATION

Starting the engine

NOTICE

Operating this generator less than 3 feet (1 meter) from a building or other obstruction can cause overheating and damage the generator. For proper cooling, allow at least 3 feet (1 meter) of empty space above and around the generator.

Refer to SAFE OPERATING PRECAUTIONS on page 14 and perform the IS YOUR GENERATOR READY TO GO checks (see page 14). Refer to AC OPERATION (see page 17) or DC OPERATION (see page 20) for connecting loads to the generator.



ENGINE SWITCH

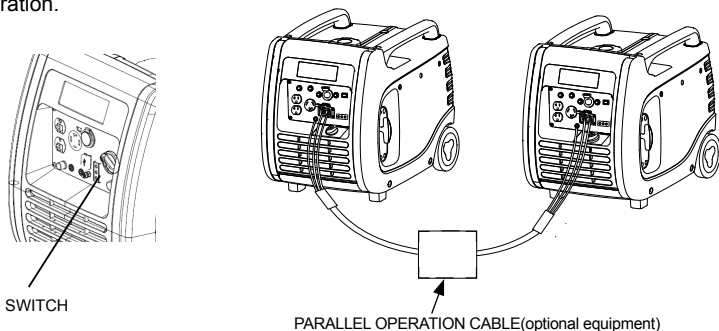
1. Make sure that all appliances connected to the generator are turned off. The generator may be hard to start if a load is connected.
2. Make sure the Smart throttle switch is in the OFF position.
3. Turn the engine switch to the ON position.
To start a cold engine, turn the engine switch to the CHOKE position.
To restart a warm engine, leave the engine switch in the ON position.
4. Pull the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown.
Do not allow the starter grip to snap back against the generator. Return it gently to prevent damage to the starter.
5. If the engine switch was turned to the CHOKE position to start the engine, turn it to the ON position as the engine warms up.
6. If you wish to use the Smart throttle system, turn the Smart throttle switch to the ON position after the engine has warmed up for 2 or 3 minutes.

OPERATION

Stopping the engine

To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure.

1. Turn off or disconnect all appliances connected to the generator.
2. Turn the engine switch to the OFF position.
3. If two generators were connected for parallel operation, disconnect the parallel operation cable after stopping the engines if you do not wish to resume parallel operation.



AC operation

Before connecting an appliance to the generator, make sure that the appliance is in good working order and that its electrical rating does not exceed that of the receptacle.

Most motorized appliances require more than their electrical rating for startup. When an electric motor is started, the overload indicator (red) may come on. This is normal if the overload indicator (red) goes off within 9 seconds. If the overload indicator (red) stays on, consult your generator dealer.

1. Start the engine (see page 16) and make sure the output indicator (green) comes on.
2. Plug an appliance into the appropriate receptacle.
3. Turn on the appliance.

If the generator is overloaded (see page 18), or if there is a short circuit in a connected appliance, the overload indicator (red) will come on. If the overload indicator (red) stays on continuously for more than 4 seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go off. Stop the engine and investigate the problem. Determine if the cause is a short circuit in a connected appliance or an overload. Correct the problem and restart the generator.

OPERATION

AC applications

Before connecting an appliance or power cord to the generator:

Make sure that it is in good working order. A faulty appliance or power cord can create a potential for electrical shock.

If an appliance begins to operate abnormally, becomes sluggish, or stops suddenly, turn it off immediately. Disconnect the appliance, and determine whether the problem is the appliance or the rated load capacity of the generator has been exceeded.

Make sure that the combined electrical rating of the tools or appliances do not exceed that of the generator. Never exceed the maximum power rating of the generator.

NOTICE

Substantial overloading will open the circuit protector. Exceeding the time limit for maximum power operation or slightly overloading the generator may not switch the circuit protector OFF, but will shorten the service life of the generator.

Limit operation requiring maximum power to 60 s. Maximum power is: 3.0 KVA For continuous operation, do not exceed the rated power. Rated power is: 2.6KVA The total power requirements (KVA) of all appliances connected must be considered.

AC parallel operation

Before connecting an appliance to either generator, make sure that the appliance is in good working order and that its electrical rating does not exceed that of the receptacle.

Most motorized appliances require more than their electrical rating for startup.

When an electric motor is started, the overload indicator (red) may come on. This is normal if the overload indicator (red) goes off within 9 seconds. If the overload indicator (red) stays on, consult your generator dealer.

During parallel operation, the Smart throttle switch should be in the same position on both generators.

NOTICE

Quipall parallel function can bring the company various types of generator in parallel.

But how about how to connect and select accessories please consult Quipall and related dealer service providers.

1. Connect the parallel operation cable kit between the two QPL-3000i inverter generators following the instructions supplied with the kit.

OPERATION

2. Start the engines (see page 16) and make sure the output indicator (green) on each generator comes on.
3. Plug in the appliance following the instruction provided with the parallel operation cable kit.
4. Turn on the appliance.

If the generators are overloaded (see page 18), or if there is a short circuit in a connected appliance, the overload indicator (red) will come on. If the overload indicator (red) stays on continuously for more than 3 seconds, current to the connected appliance(s) will shut off, and the output indicator (green) will go off.

Stop both engines and investigate the problem.

Determine if the cause is a short circuit in a connected appliance or an overload.

Correct the problem and restart the generator.

AC Parallel Operation Applications

Follow the instructions included with the parallel operation cable kit. Before connecting an appliance or power cord to the generator:

Make sure that it is in good working order. A faulty appliance or power cord can create a potential for electrical shock.

If an appliance begins to operate abnormally, becomes sluggish, or stops suddenly, turn it off immediately. Disconnect the appliance, and determine whether the problem is the appliance or the rated load capacity of the generator has been exceeded.

Make sure that the combined electrical rating of the tools or appliances do not exceed that of the generator. Never exceed the maximum power rating of the generator. Power levels between rated and maximum may be used for no more than 30 minutes.

Never use a generator connected to other companies generators.

Use only a Quipall approved parallel operation kit (optional equipment) when connecting two QPL-3000i inverter generators for parallel operation.

Never connect or remove the parallel operation cable when the generator is running.

For single generator operation, the parallel operation cable must be removed.

OPERATION

NOTICE

Substantial overloading that continuously lights the overload indicator (red) may damage the generator. Marginal overloading that temporarily lights the overload indicator (red) may shorten the service life of the generator.

Limit operation requiring maximum power to 30 minutes. Maximum power in parallel operation is double the available power for single unit operation.

For continuous operation, do not exceed the rated power.

Rated power in parallel operation is double the available power for single unit operation.

The total power requirements (KVA) of all appliances connected must be considered.

Appliance and power tool manufacturers usually list rating information near the model number or serial number.

DC operation

The DC receptacle should **ONLY** be used for charging 12-volt automotive type batteries.

The DC charging output is not regulated.

The DC receptacle can be used while the AC power is in use.

When using the AC power together with DC power, do not exceed 20.8 ampere AC load.

When using the DC output, turn the Smart throttle switch to the OFF position.

Connecting the battery charging cable (optional equipment):

1. Before connecting the battery charging cable to a battery that is installed in a vehicle, disconnect the vehicle battery ground cable from the negative(-)battery terminal.

WARNING

The battery gives off explosive hydrogen gas during normal operation.

A spark or flame can cause the battery to explode with enough force to kill or seriously hurt you.

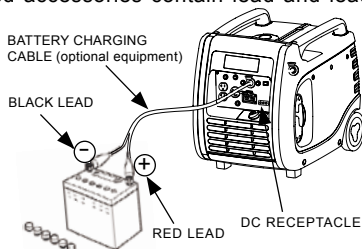
Wear protective clothing and a face shield, or have a skilled mechanic perform the battery maintenance.

Warning: Battery posts, terminals, and related accessories contain lead and lead components. Wash hands after handling.

2. Plug the battery charging cable into the DC receptacle of the generator.

3. Connect the red lead of the battery charging cable to the positive (+)battery terminal and the black lead to the negative(-)battery terminal.

4. Start the generator (see page 16).



OPERATION

NOTICE

Do not start the generator while the battery charging cable is connected and the generator is running. The generator may be damaged.

An overloaded DC circuit, excessive current draw by the battery, or a wiring problem will trip the DC circuit protector (PUSH button extends out). If this happens, wait a few minutes before pushing in the circuit protector to resume operation. If the DC circuit protector continues to go OFF, discontinue charging and contact qualified technician. The circuit protector does not prevent overcharging the battery.

Disconnecting the battery charging cable

1. Stop the engine.
2. Disconnect the black lead of the battery charging cable from the negative (-) battery terminal.
3. Disconnect the red lead of the battery charging cable from the positive (+) battery terminal.
4. Disconnect the battery charging cable from the DC receptacle of the generator.

Smart throttle system

With the switch in the ON position, engine speed is automatically lowered when loads are reduced, turned off, or disconnected. When appliances are turned on or reconnected, the engine returns to the proper speed to power the electrical load. In the OFF position, the smart throttle system does not operate.

Appliances with large start-up power demands may not allow the engine to reach normal operating rpm when they are connected to the generator. Turn the smart throttle switch to the OFF position and connect the appliance to the generator. If the engine still will not reach normal operating speed, check that the appliance does not exceed the rated load capacity of the generator.

If high electrical loads are connected simultaneously, turn the smart throttle switch to the OFF position to reduce voltage changes.

The Smart throttle system is not effective for use with appliances or tools that require only momentary power. If the tool or appliance will be turned ON and OFF quickly, the smart throttle switch should be in the OFF position.

When using the DC output, turn the Smart throttle switch to the OFF position.

Standby power

Connections to a building's electrical system

Connections for standby power to a building's electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power, and must comply with all applicable laws and electrical codes.

OPERATION

WARNING

Improper connections to a building's electrical system can allow current from the generator to backfeed into the utility lines.

Such backfeed may electrocute utility company workers or others who contact the lines during a power outage, and the generator may explode, burn, or cause fires when utility power is restored. Consult the utility company or a qualified electrician prior to making any power connections.

In some areas, generators are required by law to be registered with local utility companies. Check local regulations for proper registration and use procedures.

System ground

Quipall portable generators have a system ground that connects the generator's ground terminals to the ground terminals in the AC output receptacles. The system ground is not connected to the AC neutral wire. If the generator is tested with a receptacle tester, it will not show the same ground circuit condition as for a home receptacle.

Special requirements

NOTICE

Keep all cooling holes open and clear of debris, mud, water, etc. Cooling holes are located on the front panel, rear panel, and the bottom of the generator. If the cooling holes are blocked, the generator may overheat and damage the engine, inverter, or windings.

NOTICE

Do not lay the generator on its side when moving, storing, or operating it. Oil may leak and damage the engine or your property.

In some areas, generators are required to be registered with local utility companies.

If the generator is used at a construction site, there may be additional regulations that must be observed.

SERVICING YOUR GENERATOR

Servicing your generator

The importance of maintenance

Good maintenance is essential for safe, economical, and trouble free operation. It will also help reduce air pollution.

To help you properly care for your generator, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult or require special tools are best handled by professionals and are normally performed by a qualified mechanic.

The maintenance schedule applies to normal operating conditions. If you operate your generator under unusual conditions, such as sustained high-load or high-temperature operation, or use it in dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.



WARNING

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

Remember that your servicing dealer knows your generator best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, Quipall Genuine parts or their equivalents for repair and replacement.

Maintenance safety

Follow all the important safety precautions. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.



WARNING

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in the owner's manual.

SERVICING YOUR GENERATOR

Safety precautions

Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust.

Operate outside away from open windows or doors.

- Burns from hot parts.

Let the engine and exhaust system cool before touching.

- Injury from moving parts.

Do not run the engine unless instructed to do so.

Read the instructions before you begin, and make sure you have the tools and skills required.

To reduce the possibility of fire or explosion, be careful when working around gasoline.

Use only a non-flammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

Maintenance Schedule

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.		Each use	First month or 20 Hrs	Every 3 months or 50 Hrs.	Every 6 months or 100 Hrs.	Every year or 300 Hrs.	Page
Engine oil	Check level	○					26
	Change		○		○		27
Air cleaner	Check	○					29
	Clean			○(1)			30
Spark plug	Check-adjust				○		30
	Replace					○	30
Spark arrester	Clean				○		31
Valve clearance	Check-adjust					○(2)	-
Combustion chamber	Clean		After every 500 Hrs. (2)				-
Fuel tank and filter	Clean						-
Fuel tube	Clean		Every 2 years (Replace if necessary)				-

SERVICING YOUR GENERATOR

- (1) Service more frequently when used in dusty areas.
- (2) These items should be serviced by your qualified technician, unless you have the proper tools and are mechanically proficient. Refer to the Quipall shop manual for service procedures.
- (3) For commercial use, log hours of operation to determine proper maintenance intervals. Failure to follow this maintenance schedule could result in non-warrantable failures.

Refueling

With the engine stopped, remove the fuel tank cap and check the fuel level. Refill the fuel tank if the fuel level is low.

WARNING

Gasoline is highly flammable and explosive.
You can be burned or seriously injured when handling fuel.
Stop the engine and keep heat, sparks, and flame away.
Handle fuel only outdoors.
Wipe up spills immediately.

NOTICE

Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank.

Damage caused by spilled fuel is not covered under warranty.

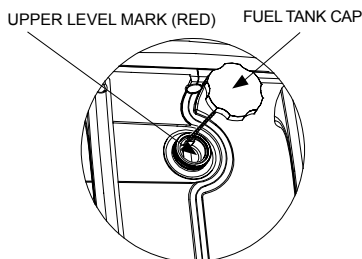
Refuel in a well-ventilated area before starting the engine. If the engine has been running, allow it to cool. Refuel carefully to avoid spilling fuel. Do not fill above the upper level mark.

Never refuel the engine inside a building where gasoline fumes may reach flames or sparks. Keep gasoline away from appliance pilot lights, barbecues, electric appliances, power tools, etc.

Spilled fuel is not only a fire hazard, it causes environmental damage. Wipe up spills immediately.

When fueling an empty fuel tank, fill the tank up to the upper level mark. The generator will not start if there is not enough fuel in the tank.

After refueling, tighten the fuel tank cap until it clicks.



SERVICING YOUR GENERATOR

Fuel recommendations

This engine is certified to operate on regular unleaded gasoline with a pump octane rating of 86 or higher.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

You may use regular unleaded gasoline containing no more than 10% ethanol (E10) or 5% methanol by volume. In addition, methanol must contain cosolvents and corrosion inhibitors.

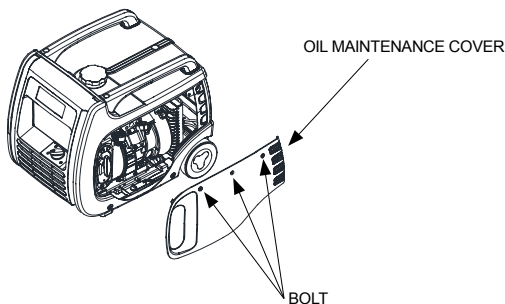
Use of fuels with content of ethanol or methanol greater than shown above may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of the fuel system. Engine damage or performance problems that result from using a fuel with percentages of ethanol or methanol greater than shown above are not covered under warranty.

If your equipment will be used on an infrequent basis, please refer to the fuel section of the STORAGE chapter (see page 32) for additional information regarding fuel deterioration.

Engine oil level check

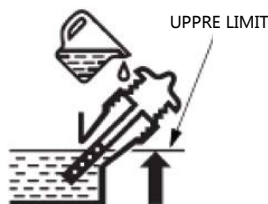
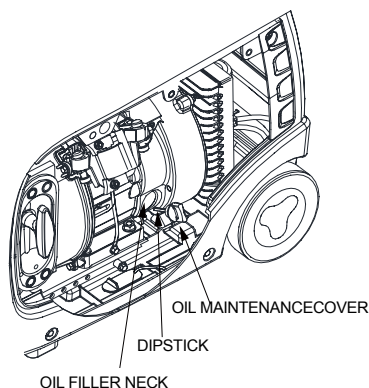
Check the engine oil level with the generator on a level surface and the engine stopped.

1. Pull the knob and remove the oil maintenance cover.



2. Remove the oil filler cap and wipe the dipstick clean.
3. Check the oil level by inserting the dipstick into the oil filler neck without screwing it in.
4. If the level is low, fill with the recommended oil (see page 29) to the upper limit of the oil filler neck.
5. Reinstall the oil filler cap and tighten it securely.
6. Reinstall the oil maintenance cover.

SERVICING YOUR GENERATOR

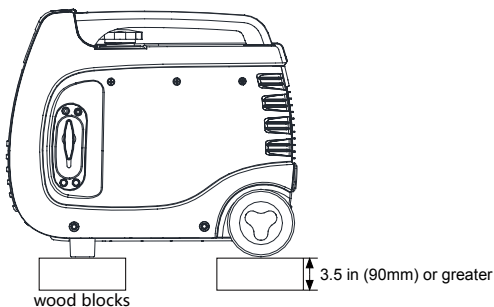


The Oil Alert system will automatically stop the engine before the oil level falls below safe limits. However, to avoid the inconvenience of an unexpected shutdown, check the oil level regularly.

Engine oil change

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

1. Turn the engine switch to the OFF position to reduce the possibility of fuel leakage.
2. Place wood blocks 3.5 in (90 mm) or greater under the generator as shown.



3. Remove the engine oil maintenance cover and oil filler cap/dipstick.
4. Open the oil drain plug cover from the bottom of the generator.
5. Place a suitable container below the engine to catch the used oil.
6. Remove the oil drain plug and sealing washer and drain the oil.
7. Reinstall the oil drain plug and a new sealing washer. Tighten the plug securely.
8. Close the oil drain plug cover.

SERVICING YOUR GENERATOR

NOTICE

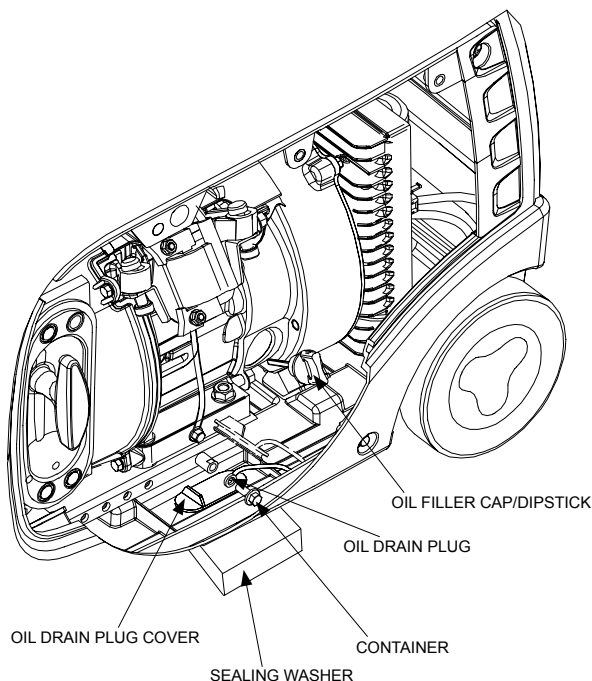
Improper disposal of engine oil can be harmful to the environment. If you change your own oil, please dispose of the used oil properly. Put it in a sealed container, and take it to a recycling center. Do not discard it in a trash bin, dump it on the ground, or pour it down the drain.

9. With the generator in a level position, fill with the recommended oil (see page 29) to the upper limit of the oil filler neck.

10. Reinstall the oil filler cap/dipstick securely.

11. Reinstall the oil maintenance cover.

Wash your hands with soap and water after handling used oil.

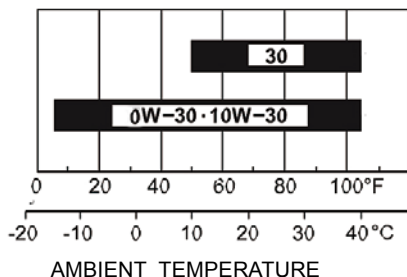


SERVICING YOUR GENERATOR

Engine oil recommendations

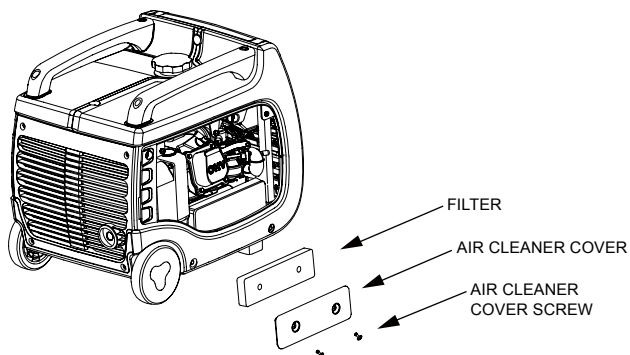
Oil is a major factor affecting performance and service life. Use 4-stroke automotive detergent oil.

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



Air cleaner service

1. Loosen the air cleaner cover screw, and remove the air cleaner cover.
2. Remove the main and outer filters from the air cleaner case.
3. Check the main and outer filters to be sure they are clean and in good condition. If the main and outer filters are dirty, clean them as described on page 30 . Replace the main and outer filters if they are damaged.
4. Reinstall the air filters.
5. Reinstall the air cleaner cover, and tighten the air cleaner cover screw.



NOTICE

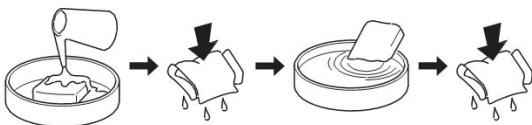
Operating the engine without an air filter or with a damaged air filter will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.

SERVICING YOUR GENERATOR

Air filter cleaning

A dirty main and outer filters will restrict air flow to the carburetor, reducing engine performance. If you operate the generator in very dusty areas, clean the main and outer filters more frequently than specified in the Maintenance Schedule.

1. Wash the main and outer filters in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable or high flash point solvent. Allow the air filters to dry thoroughly.
2. Soak the main and outer filters in clean engine oil and squeeze out the excess oil. The engine will smoke during initial startup if too much oil is left in the air filters.



3. Wipe dirt from the air cleaner case and cover using a moist rag. Be careful to prevent dirt from entering the air duct that leads to the carburetor.

Spark plug service

In order to service the spark plug, you will need a spark plug wrench (commercially available).

Recommended spark plug

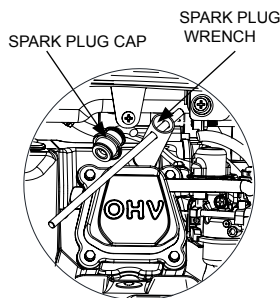
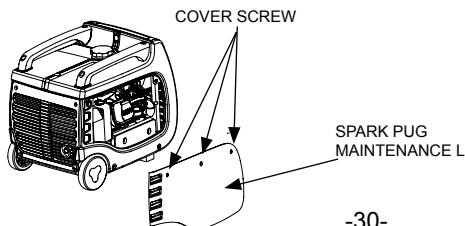
To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

NOTICE

An incorrect spark plug can cause engine damage.

If the engine is hot, allow it to cool before servicing the spark plug.

1. Loosen the cover screw and remove the spark plug maintenance cover.
2. Remove the spark plug cap.
3. Clean any dirt from around the spark plug base.
4. Use a spark plug wrench to remove the spark plug.



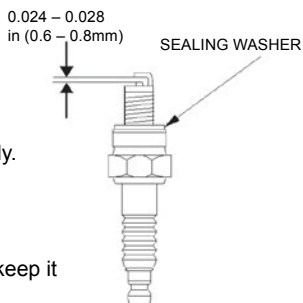
SERVICING YOUR GENERATOR

5. Inspect the spark plug. Replace it if the electrodes are worn or if the insulator is cracked, chipped, or fouled.
6. Measure the spark plug electrode gap with a wire-type feeler gauge. Correct the gap, if necessary, by carefully bending the side electrode. The gap should be: 0.024-0.028 in (0.6-0.8 mm)
7. Make sure that the spark plug sealing washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.
8. After the spark plug is seated, tighten with a spark plug wrench to compress the sealing washer. If reinstalling a used spark plug, tighten 1/8-1/4 turn after the spark plug seats. If installing a new spark plug, tighten 1/2 turn after the spark plug seats.

NOTICE

A loose spark plug can overheat and damage the engine. Over tightening the spark plug can damage the threads in the cylinder head.

9. Reinstall the spark plug cap on the spark plug securely.
10. Reinstall the spark plug maintenance cover.



Spark arrester service

The spark arrester must be serviced every 100 hours to keep it functioning as designed.

If the engine has been running, the muffler will be very hot. Allow the muffler to cool before servicing the spark arrester.

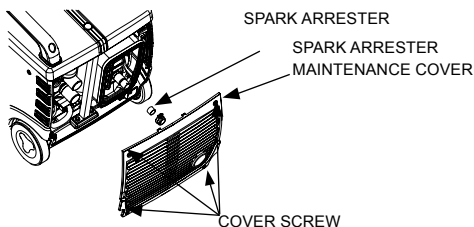
Clean the spark arrester as follows

1. Loosen the cover screw and remove the spark arrester maintenance cover.
2. Remove the 4 mm self-tapping screw and the spark arrester.
3. 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.

4. Reinstall the spark arrester and spark arrester maintenance cover.



STORAGE

Storage preparation

Proper storage preparation is essential for keeping your generator trouble-free and looking good. The following steps will help to keep rust and corrosion from impairing your generator's function and appearance, and will make the engine easier to start when you use the generator again.

Cleaning

Wipe the generator with a moist cloth. After the generator has dried, touch up any damaged paint, and coat other areas that may rust with a light film of oil.

NOTICE

Depending on the region where you operate your equipment, fuel formulations may deteriorate and oxidize rapidly. Fuel deterioration and oxidation can occur in as little as 30 days and may cause damage to the carburetor and/or fuel system. Please check with your servicing dealer for local storage recommendations.

Gasoline will oxidize and deteriorate in storage. Old gasoline will cause hard starting, and it leaves gum deposits that clog the fuel system. If the gasoline in your generator deteriorates during storage, you may need to have the carburetor and other fuel system components serviced or replaced.

The length of time that gasoline can be left in your fuel tank and carburetor without causing functional problems will vary with such factors as gasoline blend, your storage temperatures, and whether the fuel tank is partially or completely filled. The air in a partially filled fuel tank promotes fuel deterioration. Very warm storage temperatures accelerate fuel deterioration. Fuel deterioration problems may occur within a few months, or even less if the gasoline was not fresh when you filled the fuel tank.

The Distributor's Limited Warranty does not cover fuel system damage or engine performance problems resulting from neglected storage preparation.

You can extend fuel storage life by adding a gasoline stabilizer that is formulated for that purpose, or you can avoid fuel deterioration problems by draining the fuel tank and carburetor.

Service according to the table below

STORAGE TIME	RECOMMENDED SERVICE PROCEDURE TO PREVENT HARD STARTING
Less than 1 month	No preparation required
1 to 2 months	Fill with fresh gasoline and add gasoline stabilizer
2 months to 1 year	Fill with fresh gasoline and add gasoline stabilizer Drain the carburetor float bowl
1 year or more	Drain the fuel tank and carburetor (p. 33). Change the engine oil and lubricate the cylinder (p. 34).
Use gasoline stabilizers that are formulated to extend storage life. Follow the manufacturer's instructions for use. Contact your authorized ATIMA generator dealer for stabilizer recommendations.	

STORAGE

Draining the fuel tank and carburetor

WARNING

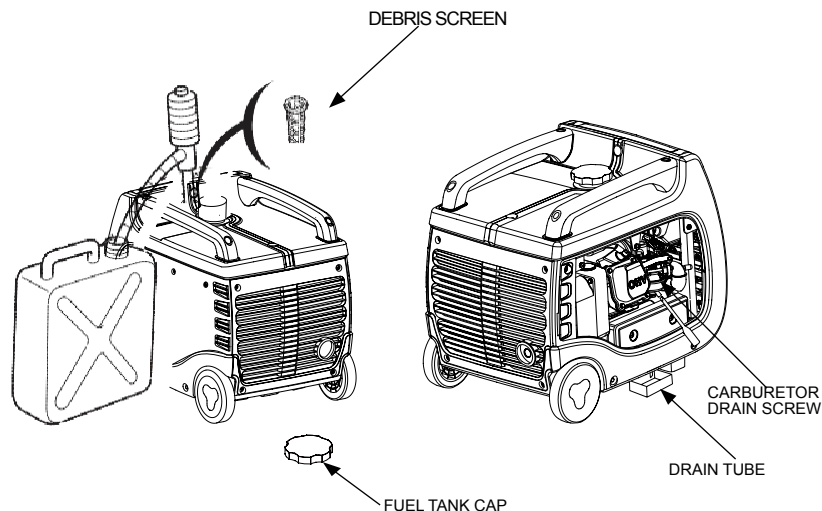
Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

Stop the engine and keep heat, sparks, and flame away. Handle fuel only outdoors.

Wipe up spills immediately.

1. Unscrew the fuel tank cap (see page 25), remove the debris screen, and empty the fuel tank into an approved gasoline container. We recommend using a commercially available gasoline hand pump to empty the tank. Do not use an electric pump. Reinstall the debris screen and the fuel tank cap.
2. Loosen the cover screw and remove the air cleaner cover (see page 29).
3. Place a suitable container under the drain tube.
4. Turn the engine switch to the ON position to finish draining the fuel tank. Leave the engine switch in the OFF position if you are only draining the carburetor (see page 17).
5. Loosen the carburetor drain screw and drain the gasoline from the carburetor.
6. After all the fuel has drained, tighten the drain screw securely.
7. Reinstall the air cleaner cover and turn the engine switch OFF Position .



STORAGE

Engine oil

1. Change the engine oil (see page 27).
2. Remove the spark plug (see page 30), and pour approximately one teaspoon (5-10 cc) of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.
3. Reinstall the spark plug cap on the spark plug securely.
4. Reinstall the spark plug maintenance cover.
5. Pull the starter grip (see page 16) slowly until you feel resistance, then return the starter grip gently. This closes the valves so moisture cannot enter.

Storage Precautions

If your generator will be stored with gasoline in the fuel tank and carburetor, it is important to reduce the hazard of gasoline vapor ignition.

Select a well ventilated storage area away from any appliance that operates with a flame, such as a furnace, water heater, or clothes dryer. Also avoid any area with a spark-producing electric motor, or where power tools are operated.

If possible, avoid storage areas with high humidity, because that promotes rust and corrosion.

Unless all fuel has been drained from the fuel tank, leave the engine switch in the OFF position to reduce the possibility of leakage.

Place the generator on a level surface. Tilting or laying it on its side can cause fuel or oil leakage.

With the engine and exhaust system cool, cover the generator to keep out dust. A hot engine and exhaust system can ignite or melt some materials.

Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the generator, promoting rust and corrosion.

Removal from storage

Check your generator as described in the BEFORE OPERATION chapter of this manual (see page 14).

If the fuel was drained during storage preparation, fill the tank with fresh gasoline. If you keep a container of gasoline for refueling, be sure that it contains only fresh gasoline. Gasoline oxidizes and deteriorates over time, causing hard starting.

If the cylinder was coated with oil during storage preparation, the engine may smoke briefly at startup. This is normal.

TRANSPORTING

Transporting

NOTICE

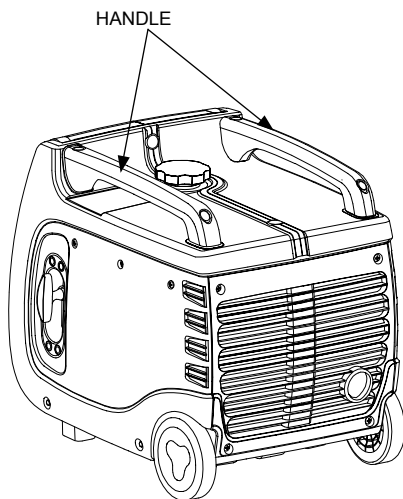
Do not lay the generator on its side when moving, storing, or operating it. Oil may leak and damage the engine or your property.

If the generator has been used, allow it cool for at least 15 minutes before loading the generator on the transport vehicle. A hot engine and exhaust system can burn you and can ignite some material.

To prevent fuel spillage when transporting, the generator should be secured upright in its normal operating position, with the engine switch OFF.

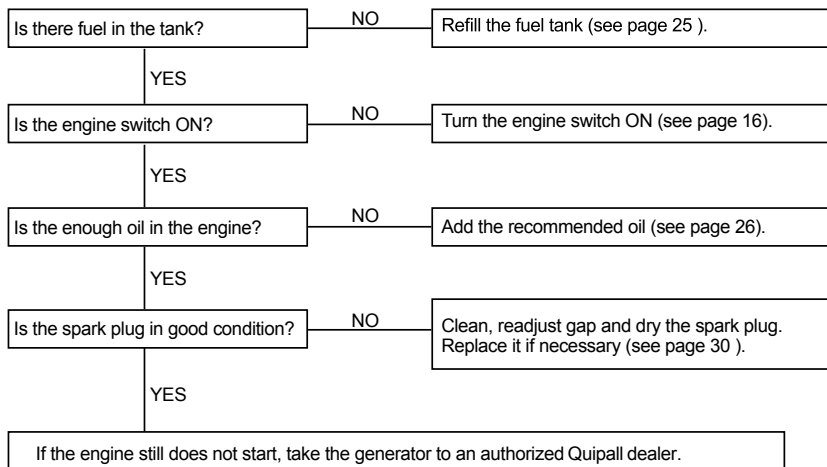
Take care not to drop or strike the generator when transporting. Do not place heavy objects on the generator.

When using ropes or tie-down straps to secure the generator for transportation, be sure to only use the left and right handles as attachment points. Do not fasten ropes or straps to any portions of the generator body or the folding handle.

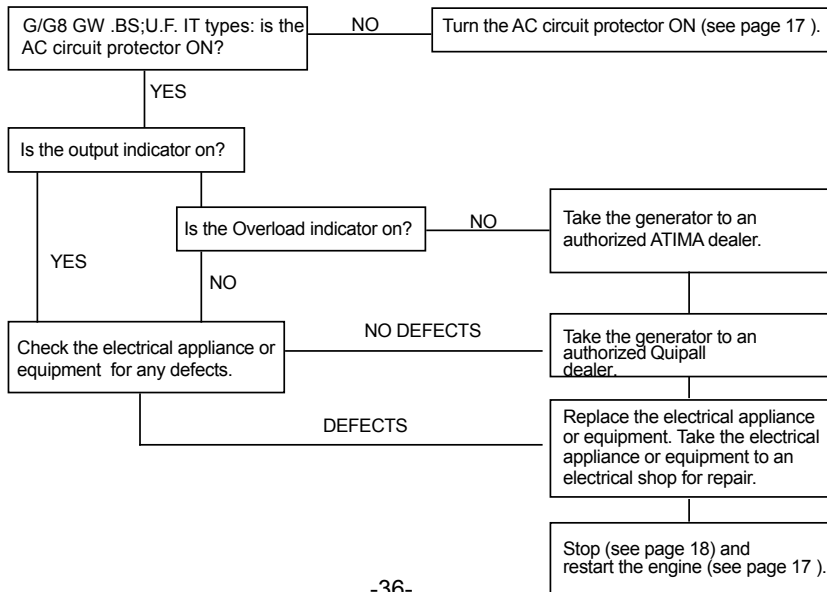


TAKING CARE OF UNEXPECTED PROBLEMS

When the engine will not start:

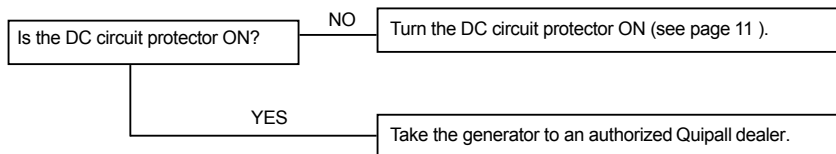


Appliance does not operate:



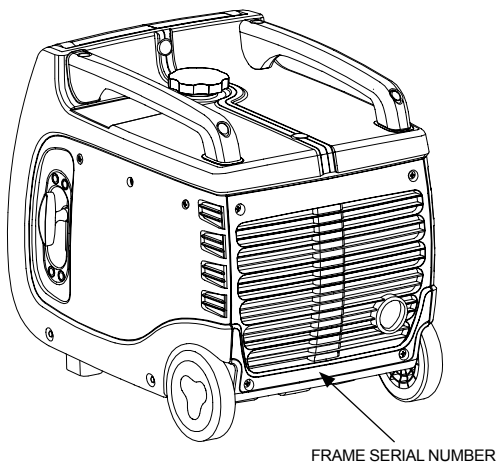
TAKING CARE OF UNEXPECTED PROBLEMS

No electricity at the DC receptacle:



Technical & consumer information

Serial Number Location



Record the frame serial number and date purchased in the spaces below. You will need this information when ordering parts, and when making technical or warranty inquiries.

Frame serial number:

Date purchased:

TECHNICAL & CONSUMER INFORMATION

Carburetor Modification for High Altitude Operation

At high altitude, the standard carburetor air-fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs from that at which this engine was certified, for extended periods of time, may increase emissions.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your generator at altitudes above 5,000 feet (1,500 meters), have your authorized Quipall servicing dealer perform this carburetor modification. This engine, when operated at high altitude with the carburetor modifications for high altitude use, will meet each emission standard throughout its useful life.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 1,000-foot (300-meter) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

NOTICE

When the carburetor has been modified for high altitude operation, the air/fuel mixture will be too lean for low altitude use. Operation at altitudes below 5,000 feet (1,500 meters) with a modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have your servicing dealer return the carburetor to original factory specifications.

TECHNICAL & CONSUMER INFORMATION

Specifications

Dimensions

Model	QPL-3000i
Length	23.2in (590mm)
Width	16.5 in (420 mm)
Height	19.7 in (500 mm)
Dry mass [weight]	86 lbs (39 kg)

Engine

Approved 24-July 2018
Bonnie Hernandez

Approved 24-July 2018
Habib Fuseini

Model	DH212
Engine type	4-stroke, overhead valve, single cylinder
Displacement [Bore × Stroke]	12.7 cu-in (212 cm ³) [2.75 × 2.13 in (70.0 × 54.0 mm)]
Compression ratio	8.5:1
Engine speed	3400rpm
Cooling system	Forced air
Ignition system	Full transistor
Oil capacity	0.53 Imp qt (0.6 L)
Fuel tank capacity	1.32 Imp gal (6 L)
Spark plug	F7RTC

Generator

Model		QPL-3000i
AC output	Rated voltage	120 V
	Rated frequency	60 Hz
	Rated current	21.7A
	Rated output	2.6 kVA
	Maximum output	3.0 kVA
DC output		Only for charging 12V automotive batteries. Maximum changing output = 8A

Tuneup Specifications

ITEM	SPECIFICATION	MAINTENANCE
Spark plug gap	0.024 – 0.028 in (0.6 – 0.8mm)	Refer to page 30-31
Valve clearance (cold)	IN: 0.15±0.02 mm EX: 0.20±0.02 mm	See your authorized Quipall dealer.
Other specifications	No other adjustments needed.	

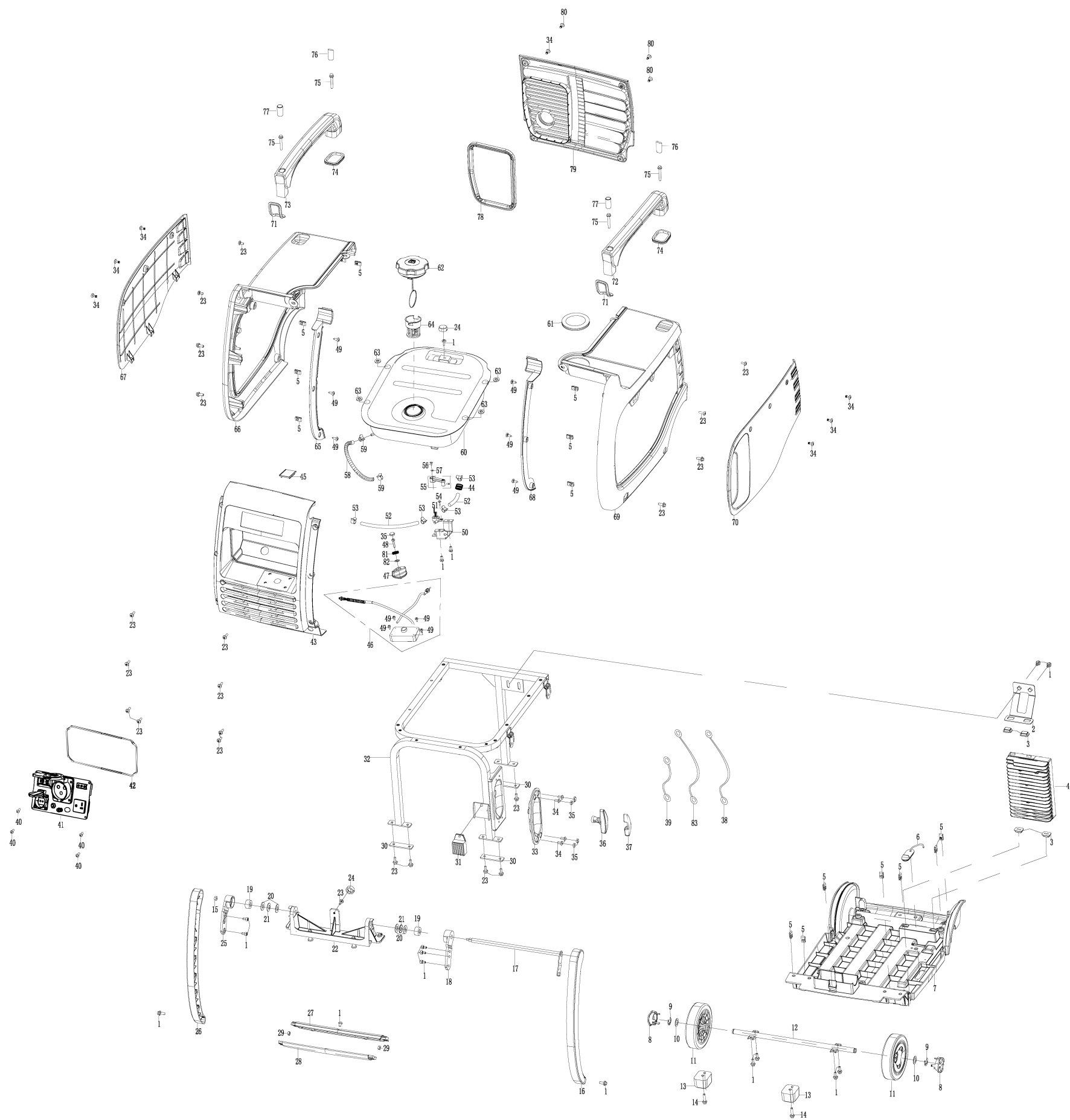
This technical drawing is an exploded view of a mechanical assembly, showing the relationship between various components. The parts are numbered 1 through 94. The main assembly path starts from the bottom right, moving upwards and to the left. Key components include a main housing (1), a shaft (2), a pulley (3), a belt (4), a fan (5), a motor (6), a pump head (7), a pump body (8), a pump housing (9), a pump cover (10), a pump base (11), a pump support (12), a pump bracket (13), a pump flange (14), a pump gasket (15), a pump seal (16), a pump nut (17), a pump washer (18), a pump pin (19), a pump bush (20), a pump sleeve (21), a pump collar (22), a pump nut (23), a pump washer (24), a pump pin (25), a pump bush (26), a pump sleeve (27), a pump collar (28), a pump nut (29), a pump washer (30), a pump pin (31), a pump bush (32), a pump sleeve (33), a pump collar (34), a pump nut (35), a pump washer (36), a pump pin (37), a pump bush (38), a pump sleeve (39), a pump collar (40), a pump nut (41), a pump washer (42), a pump pin (43), a pump bush (44), a pump sleeve (45), a pump collar (46), a pump nut (47), a pump washer (48), a pump pin (49), a pump bush (50), a pump sleeve (51), a pump collar (52), a pump nut (53), a pump washer (54), a pump pin (55), a pump bush (56), a pump sleeve (57), a pump collar (58), a pump nut (59), a pump washer (60), a pump pin (61), a pump bush (62), a pump sleeve (63), a pump collar (64), a pump nut (65), a pump washer (66), a pump pin (67), a pump bush (68), a pump sleeve (69), a pump collar (70), a pump nut (71), a pump washer (72), a pump pin (73), a pump bush (74), a pump sleeve (75), a pump collar (76), a pump nut (77), a pump washer (78), a pump pin (79), a pump bush (80), a pump sleeve (81), a pump collar (82), a pump nut (83), a pump washer (84), a pump pin (85), a pump bush (86), a pump sleeve (87), a pump collar (88), a pump nut (89), a pump washer (90), a pump pin (91), a pump bush (92), a pump sleeve (93), a pump collar (94).

PARTS LIST FOR 3000I'S ENGINE

NO.	ITEM NAME	QTY
1	BOLT M8X30	10
2	OIL SEAL	2
3	DIPSTICK	1
4	COVER ASSEMBLY, CRANKCASE	1
5	PACKING,CASECOVER	1
6	DOWEL PIN,CASECOVER	2
7	BALL BEARING	2
8	CRANKSHAFT ASSEMBLY	1
9	CAMSHAFT ASSEMBLY	1
10	LIFTER,VALVE	2
11	ROD,PUSH	2
12	BOLT M6X16	2
13	SWITCH ASSEMBLY,OIL LEVEL	1
14	CRANKCASE	1
15	WASHER,DRAIN PLUG	2
16	BOLT, DRAIN PLUG	2
17	ROD ASSEMBLY., CONNECTING	1
18	PIN, PISTON	1
19	CLIP, PISTON	2
20	Cable CLAMP	1
21	PISTON	1
22	SCRAPER RING SET ,PISTON	1
23	CYLINDER HEAD	1
24	PACKING,INTAKE	1
25	BOLT, STUD	2
26	PACKING,CARBURETOR	1
27	GASKET,CYLINDER HEAD	1
28	PIN, DOWEL	2
29	BOLT, STUD	2
30	PACKING,EXHAUST	1
31	FUEL HOSE	1
32	CLIP,FUEL LINE	1
33	CLIP,FUEL LINE	1
34	BOLT M8X60	4
35	SPARK PULG	1
36	RETURNER,INTAKE VALVE	1
37	VALVE,IN	1
38	VALVE EXHAUST	1
39	SPRING,VALVE	2
40	SEAT, VALVE SPRING,IN	1
41	SEAT, VALVE SPRING,EX	1
42	ROTATOR	1
43	PLATE,PUSH ROD GUIDE	1
44	ROCKER ARM	2
45	FASTEN BOLT	2
46	PACKING,HEADCOVER	1
47	COVER COMP,CYLINDER HEAD	1
48	BOLT M6X12	33
49	RECOIL STARTER W/FAN HOUSING ASSY	1
50	NUT M14	1
51	CUP, FLYWHEEL	1
52	FAN, FLYWHEEL	1
53	SPACER,CARBURETOR	1
54	CARBURETOR ASSEMBLY	1
55	STEPPER MOTOR	1
56	SEAT,STEPPER MOTOR	1
57	CROSSING SCREW M4X8	6
58	SHROUD,UPPER	1
59	BRACKET, AIR CLEANER	1
60	LIMIT SET	1
61	THROTTLE SWITCH	1
62	ON THE JOINT	1
63	CAP,CENTRIFUGAL COVER	1
64	TUBE, BREATHER	1
65	CLAMP ASSY	2

66	S OVER	1
67	AIR CLEANER ASSEMBLY	1
68	FAN	1
69	MUFFLER COMP ASSY	1
70	NUT M8	4
71	SPRING WASHER	2
72	IGNITION COIL	1
73	IGNITION COIL SUPPORT PLATE	1
74	THE IGNITION TRITION A	1
75	THE TRIGGER	1
76	SPLIT LOCK WASHER $\varnothing 4$	2
77	SHROUD,RIGHT	1
78	SHROUD,ABOVE	1
79	CLAMP, CABLE CLAMP	1
80	SHIELD,OUT MUFFLER	1
81	COVER ,FAN	1
82	PLUG	2
83	BOLT M8X16	4
84	ISOLATOR A	4
85	STATOR	1
86	BOLT M6X45	4
87	ROTOR	1
88	BASEBOARD A	2
89	BASEBOARD B	2
90	NUT M8	6
91	BOLT M6X12	2
92	COVER,STEPPER MOTOR	1
93	ISOLATOR	1
94	GASKET,AIR CLEANER	1

PARTS LIST FOR 3000I



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NO.	ITEM NAME	QTY
1	BOLT M6X12	17
2	INVERTER STAND	1
3	SIDE BEAM	4
4	INVERTER	1
5	LOCK CLAMPS	13
6	COVER,ENGINE OIL BASEBOARD	1
7	ENGINE BOTTOM BOARD	1
8	HUP CAP	2
9	OPEN RING	2
10	FLAT WASHER	2
11	TIRE	2
12	SHIEL COMP, WHEEL	1
13	RUBBER DAMPING BRACKET	2
14	BOLT M6X25	2
15	NUT M8	1
16	HANDLE ASSEMBLY	1
17	PUSH SWIVEL BAR WELDING ASSEMBLY	1
18	RIGHT PUSH BAR	1
19	WASHER	2
20	SPACER,CARBURETOR	4
21	SPRING	2
22	SUPPORT, PUSH	1
23	BOLT M6X16	22
24	COVER	2
25	LEFT PUSH BAR	1
26	HANDLE ASSEMBLY	1
27	UPPER COVER, PUSH BAR	1
28	LOWER COVER, PUSH BAR	1
29	BOLT M6	2
30	CONNECTING BOARD TO FRAME	3
31	DC VOLTAGE REGULATOR	1
32	FRAME	1
33	BEZEL	1
34	CROSS RECESSED PAN HEAD BOLTS M6X16	11
35	PLUG	5
36	GRIP STARTER	1
37	COVER, GRIP STARTER	1
38	GROUNDING WIRE	1
39	GROUNDING WIRE	1
40	BOLT M5X8	4
41	PANEL COMP	1
42	WASHER	1
43	PANEL REAR COVER	1
44	RUBBER SHOOT, FUEL LINE	1
45	COVER INDICATOR	1
46	SWITCH	1
47	SWITCH	1
48	BOLT M6X25	1
49	NUT ST4.2X13	10
50	OIL SWITCH BRACKET	1
51	FUEL COCK	1
52	FUEL LINE	1
53	CLIP,FUEL LINE Φ9	4
54	CROSS RECESSED PAN HEAD BOLTS	1
55	FUEL LEVER CONTROL	1
56	CROSS RECESSED PAN HEAD BOLTS	1
57	SPLIT LOCK WASHER	1
58	CONNECTING PIPE Φ4X10	1
59	CLIP,FUEL LINE Φ9.5	2
60	FUEL TANK ASSEMBLY	1
61	WASHER	1
62	CAP, FUEL TANK	1
63	WASHER	4

64	FILTER	1
65	HANDLE	1
66	HANDLE	1
67	BEZEL	1
68	HANDLE	1
69	HANDLE	1
70	RIGHT BEZEL	1
71	WASHER	2
72	HANDLE	1
73	HANDLE	1
74	WASHER	2
75	BOLT M6X35	4
76	PLUG,HANDLE	2
77	PLUG,HANDLE	2
78	RUBBER	1
79	BEZEL, MUFFLER	1
80	BOLT M6*12	3
81	SPRING WASHER Φ6	1
82	FLAT WASHER Φ6.6X12	1
83	GROUNDING WIRE	1