LONCIN 隆鑫

General Power Products

Gasoline Generator

EN3500

EN5000 • EN6500

Owner's Manual

www.loncinengine.com

Loncin motor co.,ltd.

Thank you for purchasing a Loncin brand generator set (hereinafter referred to as a generator). The copyright of the Manual is reserved to Loncin Industrial Co., Ltd.

● No part of this publication may be reproduced, transmitted, distributed or stored without prior written permission of Loncin Industrial Co., Ltd.

● Loncin and its Chinese translation 隆鑫 are the brand or registered trademark of Loncin Industrial Co., Ltd.

● Loncin adheres to a strategy of sustainable development, so Loncin reserves the right to make changes or improvements without notice to any product described in this publication.

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

● This manual contains the information about how to use the generator correctly, please read it carefully before operating the generator. Safe and correct operation of the generator will give you the best results.

● As Loncin continuously pursues innovation and progress of product design and quality, this manual, though containing the latest information about the product when it is printed, may be slightly different with the actual product.

● Please pay close attention to the following messages about safety:

⚠ WARNING **You CAN SERIOUSLY HURT if you don't follow instructions.**

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

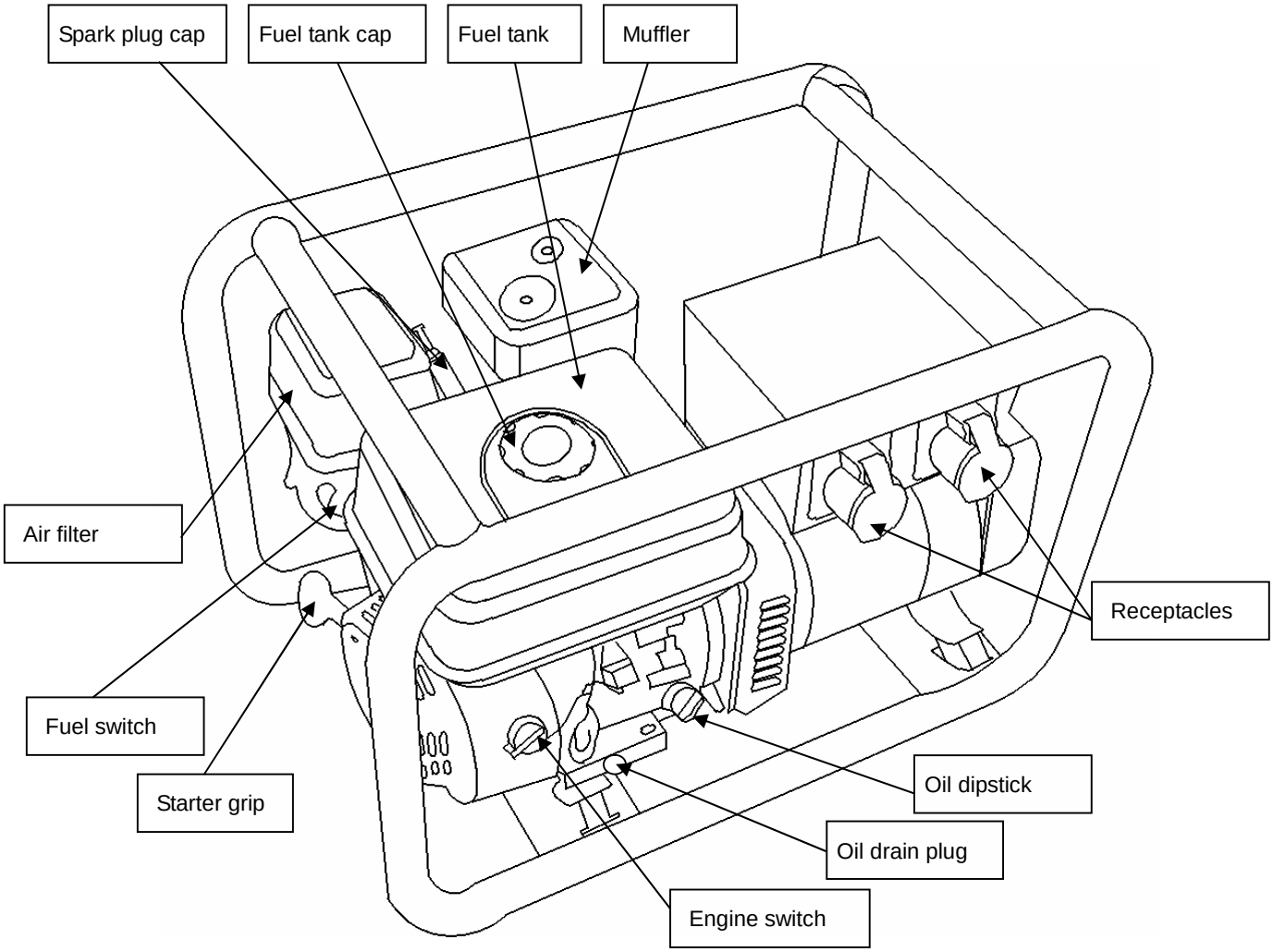
NOTICE **Your generator or other property could be damaged if you don't follow instructions.**

Note: It is useful information to you.

● If any problem occurs, or if you want to ask any question about the generator, please contact an authorized dealer of Loncin.

Contents

Ⅰ Brief introduction of the generator:



II Safety

● Thank you very much for selecting Loncin generator, please carefully read and understand this manual before operating the generator; safe operation procedures can help you avoid accidents.

⚠ WARNING The procedures to ensure safe operation:

1. Each time before starting the generator, preoperation check must be performed (see item 3 of Contents) to avoid accidents to the operators and damage to the equipment.
2. Before starting the generator, good ventilation conditions must be ensured, and the engine must be at least one meter from the building or any other equipment; never put any inflammable object near the generator.
3. In order to avoid scald by the generator or hurt by moving parts, children and pets must be kept away from the operation area.
4. Fueling must be performed in a place with good ventilation; before adding of fuel, the engine must be stopped. Gasoline is highly inflammable and even explosive under certain conditions.
5. When fueling is completed, ensure no residual gasoline exists on the surface of the generator before restarting the generator.
6. In the places to fuel the generator and to store the fuel, no smoking, flame or spark is allowed, or a fire or even explosion may be caused.
7. The exhaust gas of the generator contains carbon monoxide, so take care not to inhale it. Never use the generator in an enclosed room or a place with inadequate ventilation.
8. The generator shall be used on a stable ground surface on which the generator's inclination doesn't exceed 20 degrees from the horizontal surface.
9. During the running of the generator, the muffler will be very hot and will remain hot for a while after the generator is stooped. Never touch the muffler when it is hot, or scald will be caused.
10. In order to avoid electric shock, never use the generator in a humid condition.
11. Never directly connect the generator to a home power supply.

III Preoperation check

1.Oil level of the engine

NOTICE

● If the engine runs without adequate engine oil in it, severe damage will be caused to it.

● When checking the oil level of the engine, it must be stopped and put on a horizontal ground surface.

Operation steps:

(1) Put the generator on a horizontal ground surface.

(2) Take out and wipe off the oil dipstick.

(3) Insert fully the dipstick and then take it out and check the oil level.

(4) If the oil level is close to or is lower than the lower limit mark of the dipstick, then screw off the oil filler cap and add engine oil of qualified grade until the oil level reaches the higher limit mark of the dipstick (see Figure 1).

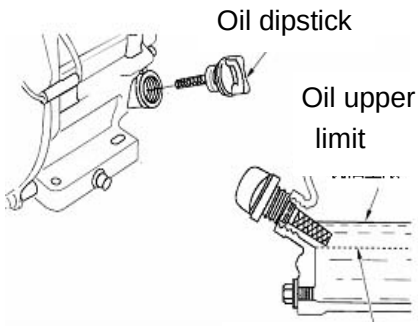


Figure1

(5) Screw back and tighten the oil dipstick and oil filler cap.

Note: engine oil is an important factor that influences engine's output power and service life. Never use Non-detergent engine oil, diesel engine oil or two-stroke engine oil because they will harm the engine. Regular change of engine oil will help prolong engine's service life. The recommended engine oils (see Figure 2) are SE or SF grade four-stroke gasoline engine oils under API classification, or should be SAE10W-3 that is equivalent to SG grade.

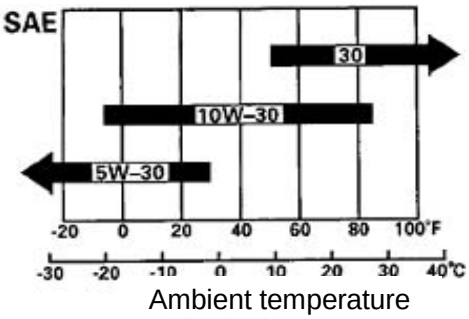


Figure 2

2. Fuel

(1) Screw off the fuel tank cap and check fuel level.

(2) If fuel level is too low, add fuel until its level reaches the shoulder of the fuel strainer in the fuel filler hole (see Figure 3).

(3) When fuelling is completed, screw on and tighten the fuel tank cap.

⚠ WARNING

- **Fuelling must be performed in a place with good ventilation when the engine has stopped. Remember: never smoke or light a fire.**
- **Never spill the fuel out.**
- **Avoid long or frequent contact with fuel or inhalation of fuel vapor.**
- **Never let children contact fuel.**

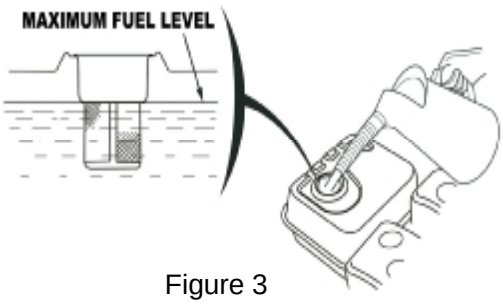


Figure 3

Note: The gasoline grade should be 90# or higher. Unleaded gasoline is recommended because it produces less carbon deposit on the engine and spark plug, and can prolong service life of the exhaust system.

Never use aged gasoline, contaminated gasoline or gasoline mixed with engine oil. Never let dust or water into the fuel tank.

IV. Starting/stopping the generator

Steps to start the generator:

1. Cut off all loads.
2. Turn the fuel switch to the ON position.
3. Put the choke lever on the OFF position.

NOTICE **Do not shut off the choke if the engine is started when it is warm.**

4. Put the engine switch on the ON position.
5. Gently pull up the starter grip and pull it out briskly when a resistance is felt (see Figure 4).

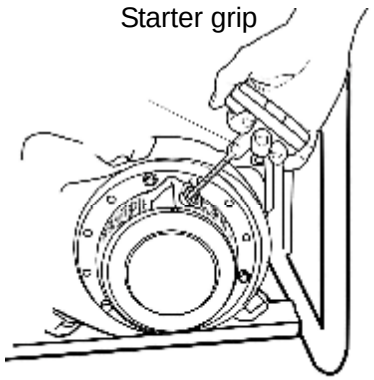


Figure 4

NOTICE **Don't let the starter grip spring back abruptly after starting; the starter grip should be let back gently.**

6. When the engine has been started, put the choke lever on the ON position.

Steps to stop the generator:

1. Cut off all loads.
2. Turn off fuel switch.
3. Turn off engine switch.

NOTICE **If an emergency stop of the engine is needed, the engine switch should be put on the OFF position.**

V. Use of the generator

1. The requirements of environment for use of the generator:

(1) Applicable temperature range: -15℃～40℃

(2) Applicable humidity level: under 95%.

(3) Applicable altitude: lower than 3, 300 feet (1,000 meters). For use at an altitude of more than 3, 300 feet (1,000 meters), power decrease is needed for operation.

2. Connecting to home power supply

If the generator is to be connected to a home power supply as a standby, connection shall be performed by a professional electrician or by another person with proficient electrical skill.

NOTICE **When the loads are connected to the generator, please carefully check whether electrical connections are safe and reliable. Any improper connection may cause damage to the generator, or cause a fire.**

⚠ WARNING **Before connecting the generator to the home power circuit, the circuit's connections to external power supplies (commercial power or other power supplies) must be cut off first.**

3. Earthing of the generator
In order to prevent electric shock due to shoddy electrical appliances or wrong use of electricity, the generator must be earthed with a good-quality insulated conductor.

4. Loads
Before connecting the loads, it must be confirmed that
The total of all loads' power values doesn't exceed the generator's rated power.

NOTICE **Overload use will shorten the generator's service life.**

If the generator is connected to multiple loads or electricity consumers, please remember to first connect the one with the highest starting current, then the one with the second highest starting current... and last connect the one with the lowest starting current.

5. High altitude operation
In a high altitude area, the standard carburetor air-fuel mixture will be excessively rich, output power will decrease and fuel consumption will increase. High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the generator at altitudes higher than 3,300 feet (1,000 meters), please have an authorized generator dealer perform carburetor change.
Even with suitable carburetor jetting, engine horsepower will decrease by approximately 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 change is made.

NOTICE **If an engine suitable for high altitude is used at a lower altitude, the excessively lean air fuel mixture will reduce output power and may over-heat and seriously damage the engine.**

VI. Maintenance of the generator

Good maintenance is the best assurance for safe, economical and zero-malfunction running of the generator, and it is also good for environment protection.

⚠ WARNING **In order to prevent carbon monoxide poisoning and electric shock, shut off the generator before performing any maintenance.**

Periodic maintenance and adjustment are necessary for keeping the generator in a good operating condition. Perform the service and inspection at the intervals shown in the Maintenance schedule below:

MAINTENANCE SCHEDULE		Each use	Firs month or 20 Hrs. (3)	Every 3 months or 50 Hrs. (3)	Every 6 months or 100 Hrs. (3)	Every year or 300 Hrs. (3)
Engine oil	Check oil level	○				
	Change		○		○	
Air filter	Check	○				
	Clean			○(1)		
Fuel sediment cup	Clean				○	
Spark plug	Clean				○	Change
Valve clearance	Check-Adjust					○(2)
Cylinder head	Clean	Every 500 Hrs.(2)				
Fuel tank and strainer	Clean	Every two years(2)				
Fuel line	Change	Every two years (2)				

(1) Maintain more frequently when the generator is used in dusty areas.
(2) These items should be maintained by an authorized dealer of Loncin.
(3) If the generator is to be used frequently, maintenance shall be performed as per the schedule above to ensure long-time normal operation.

⚠ WARNING **Improper maintenance, or failure to correct a problem before operation, can cause a malfunction by which you can be hurt or killed.**

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

1. Engine oil change

Drain the engine oil while the engine has been warmed to ensure complete and rapid draining.

(1) Remove the oil dipstick and screw off the drain plug to drain the engine oil (see Figure 5).

(2) Rinstall the oil drain plug and tighten it.

(3) Refill with the recommended engine oil and check oil level.

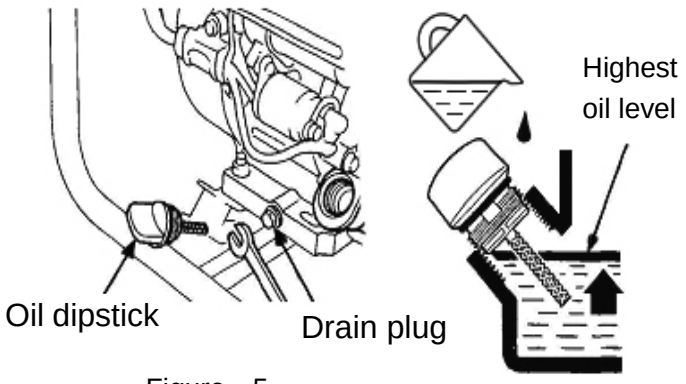


Figure 5

Engine volume:
EN3500 : 0.6 L
EN5000 or EN6500 : 1.1L

⚠ CAUTION **Engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although the skin cancer does not necessarily happen, it is still advisable to thoroughly wash the skin that has contacted engine oil with soap and water after handling engine oil.**

For the sake of environment protection, please treat the used engine oil in an appropriate way. We strongly advise you to store the used engine oil in a sealed container and take it to the local service station or recycling center for reclamation. Never throw it in the trash or pour it on the ground or into the ditch.

2. Air filter maintenance

A dirty air filter will restrict air flow into the carburetor. To prevent carburetor malfunction, maintain the air filter regularly. Maintain it more frequently when operating the generator in extremely dusty areas.

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

NOTICE **Never run the generator without the air filter, or rapid engine wear will result.**

(1) Unsnap the air filter cover clips, remove the air filter cover and check the filter element to confirm it is complete and clean.

(2) If the foam element is dirty, clean it following the method below:

Wash the element in a solution of household detergent and warm water, or in a nonflammable detergent, or a high flash point detergent; squeeze the element to thoroughly remove the fluid in it. Drip some drops of engine oil into it.

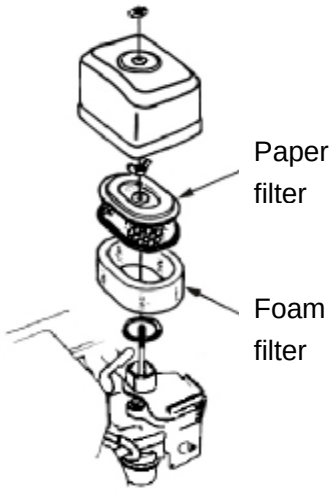


Figure 6

If the paper element is dirty, gently knock it several times; then use compressed air (with a pressure not higher than 207KPa) to blow it from the inside to the outside. Never use a brush to clean the paper element, or the air pores of the element will be clogged. If the paper element is damaged, replace it with a new one (see Figure 6).

(3) Reinstall the air filter element and the cover, then tighten the screw.

3. Clean the fuel sediment cup

(1) Turn the fuel valve to the OFF position, remove the fuel sediment cup, and take out the O ring and strainer.

(2) Clean the sediment cup, o-ring, and strainer in a nonflammable or high flash point solvent.

(3) Reinstall O-ring and strainer, and the fuel sediment cup and tighten the cup.

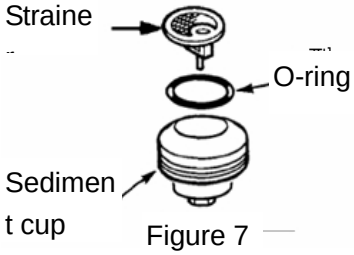


Figure 7

(4) Turn the fuel valve to the ON position and check for leaks (see Figure 7).

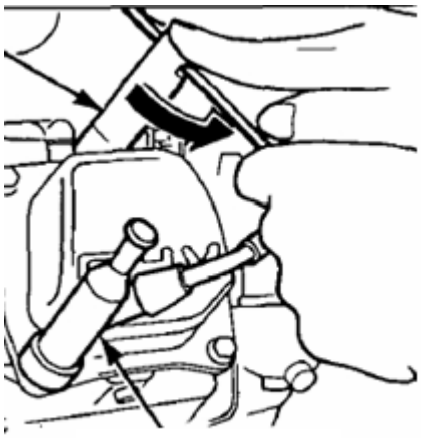
4. Spark plug

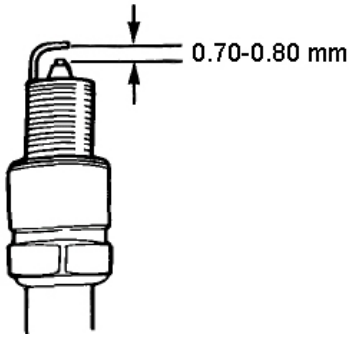
Recommended spark plugs: F7RTC or another one of the equivalent grade.

(1) Remove the spark plug cap.
(2) Clean any dirt from around the spark plug base.
(3) Use the spark plug socket wrench to remove the spark plug.
(4) Visually check whether the spark plug's insulation is damaged, replace it with a new one if its insulation is damaged.
(5) Measure the plug gap with a feeler gauge.
Correct as necessary by carefully bending the side electrode. The gap should be: 0.70-0.80 mm (0.028-0.031 in).
(6) Check whether the spark plug washer is in a good condition
(7) Reinstall the spark plug and use the spark plug socket wrench to tighten it and tightly press the spark plug washer; then reinstall the spark plug cap (see Figure 8).

NOTICE **Use the spark plug of the appropriate heat range.**

Spark plug socket wrench





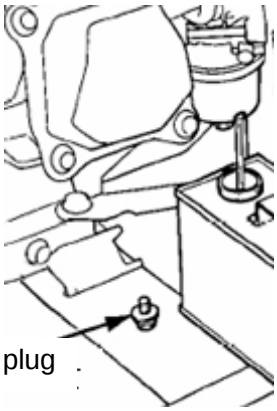
Spark plug cap

Figure 8

VII. Storage/transporting of the generator

When transporting the generator, keep the generator level to prevent fuel spillage.

⚠ WARNING **Contact with a hot engine part can cause a fire. Let the engine cool before transporting or storing the generator.**



Drain plug

If the generator is to be stored for a long period, the storage area must be kept clean and dry.

1. Drain the fuel of the fuel tank completely. Clean the fuel strainer, O-ring and sediment cup; then reinstall them. Loosen off the drain plug of the carburetor and drain off the fuel in it.

⚠ WARNING **Gasoline is extremely inflammable and is explosive under most conditions. Perform this task in a well ventilated area with the engine stopped. Never smoke or allow flames or sparks in the area during this procedure.**

2. Screw off the engine oil dipstick, and screw off the drain plug to complete drain off the engine oil of the crankcase.
   Screw in the drain plug and tighten it, and add new engine oil until oil level reaches the upper limit, then reinstall the engine oil dipstick.

3. Remove the spark plug and add a spoon of clean engine oil into the combustion chamber. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug.

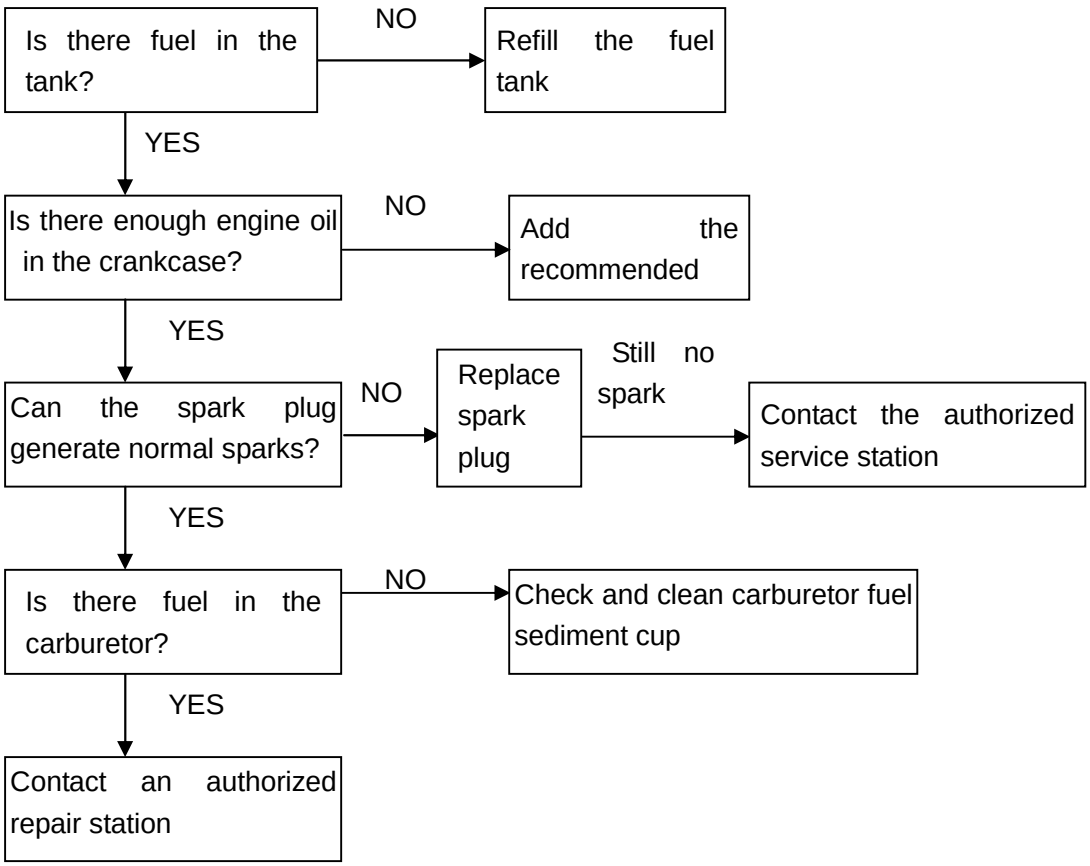
4. Gently pull the starter grip until resistance is felt.

5. Put the generator in a clean and dry area.

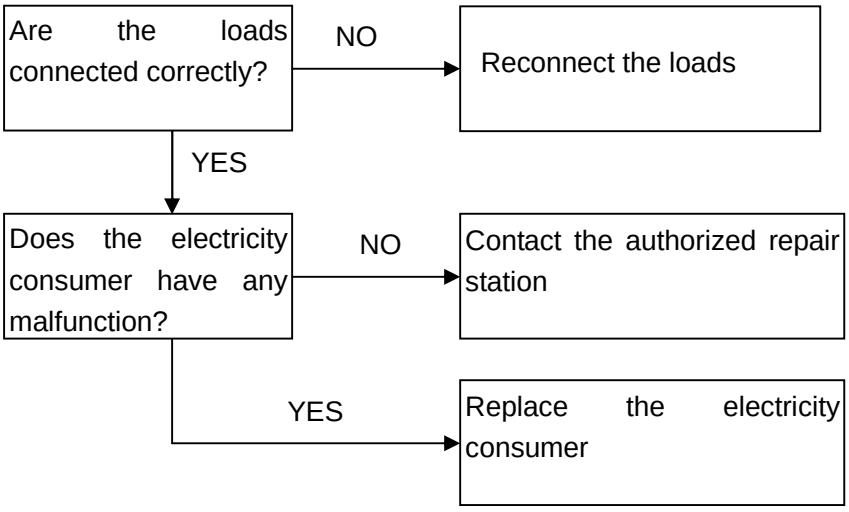
VIII. Troubleshooting

The following recommended troubleshooting methods are applicable to diagnosis of common malfunctions. If these methods cannot solve the problems, please contact an authorized repair station.

1. Engine Unable to start：

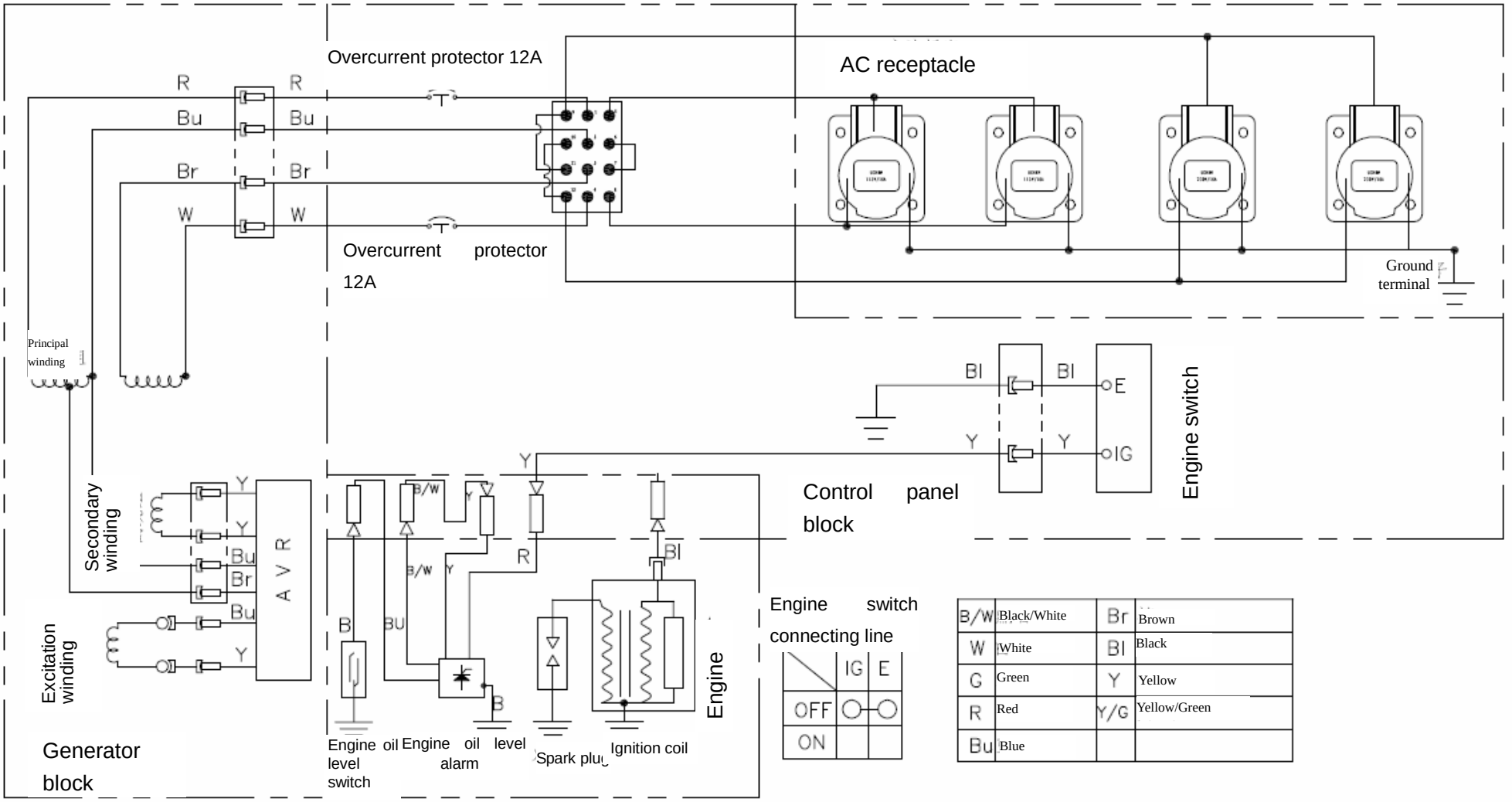


2. No voltage:

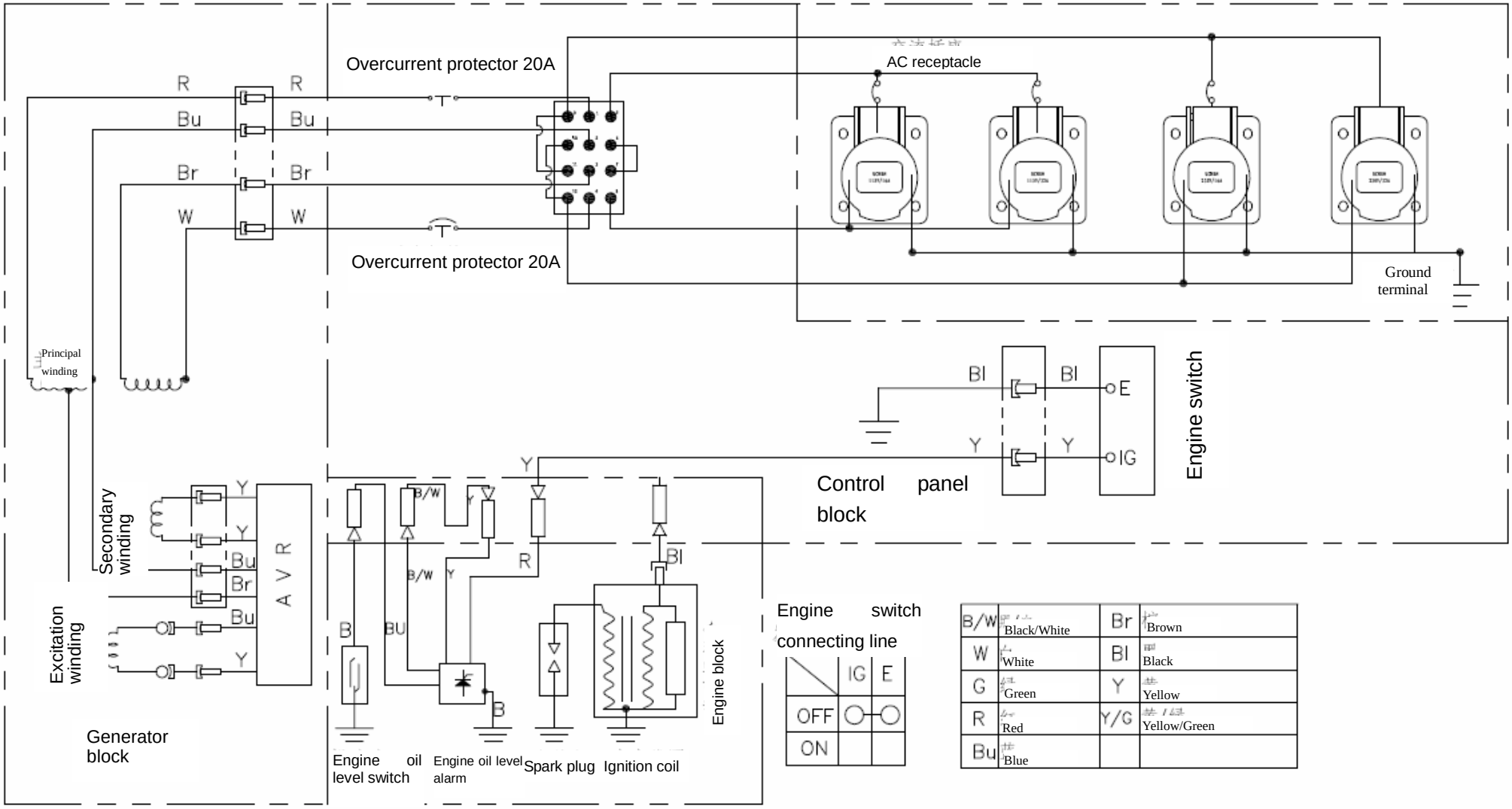


IX.Wiring diagram

1. Wiring diagram of EN3500 Generator



2、EN5000、EN6500 电路图 Wiring diagram of N5000 and EN6500 Generators



X. Basic parameters

Model		EN3500	EN5000	EN6500
Engine	Engine model	LC168F-2	LC182F	LC188F
	Engine type	Single cylinder, 4-Stroke, OHV25°, inclined, forced air cooling		
	Cylinder bore x Stroke (mm)	68x54	82x64	88x64
	Compression ratio	8.5:1	8.0:1	8.0:1
	Starting system	Recoil and hand-operated		
	Igniting mode	T.C.I.		
	Displacement (ml)	196	337	389
	Engine oil volume (L)	0.6	1.1	1.1
Generator	Rated frequency (Hz)	50		
	Rated voltage (V)	115/230		
	Voltage regulating system	AVR		
	Rated power (kVA)	2.3	4.0	5.0
	Maximum power (kVA)	2.5	4.5	5.5
	Power factor	1.0		
	Fuel tank capacity (L)	0.6	1.1	1.1

XI. Accessories

The generator is equipped with a spark plug socket wrench and an operation manual.

Loncin motor co., Ltd.

Add:No.99Hualong Road,Jiulongpo District,Chongqing,China

Tel:86 23 8980 5678/86 23 8980 8505

Fax:86 23 8906 7566

Email:marketing@loncinengine.com

Website:www.loncinengine.com

PRINTED IN CHINA