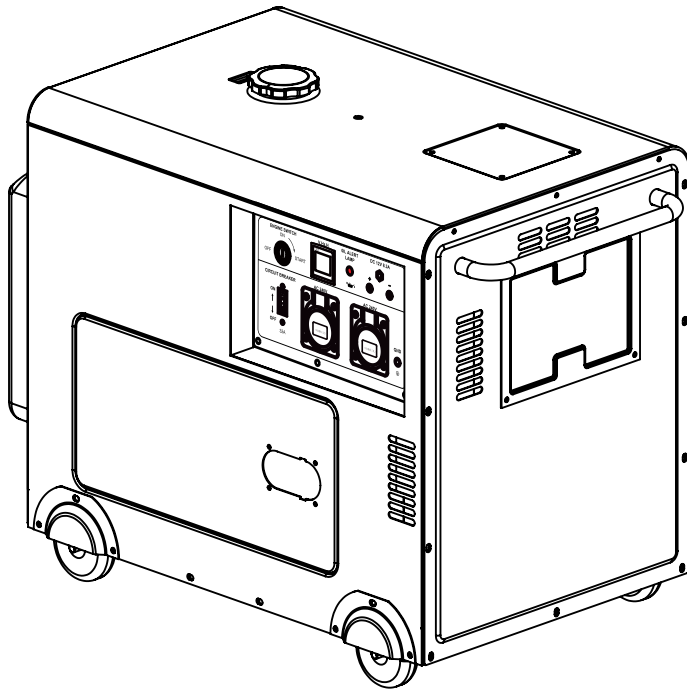




DIESEL GENERATOR OPERATION MANUAL



Preface

Thank you for purchasing our company's diesel generator set.

This manual provides the correct installation, use and maintenance instructions for the generator set. To ensure safe and correct operation, please read this manual before using the generator set. Use in accordance with the operating requirements of the instructions to make your generator set in the best condition and help extend the life of the generator set. If you have any suggestions or questions about this manual, please contact our company or an agent.

This manual describes the general terms and conditions of the generator set of our company. With the continuous improvement and upgrade of the product, the content in this manual may be different from the actual product. If this manual fails to solve the problem of installing, using and maintaining the generator set. For questions, please contact our company or agents in time.

Please heed the following warnings:

⚠ Warning: If you fail to follow the instructions in this manual, you may cause serious personal injury or death.

⚠ Note: Failure to follow the instructions in this manual may cause personal injury or damage the equipment.

Follow this instruction to operate, our company's diesel generator sets will surely meet your needs. Any operation that accidentally violates the precautions in this manual may cause personal injury or property damage. Therefore, the company once again declares: **be sure to read and fully under-**

Warning

1. The generator set cannot be connected to other power sources, such as the power supply mains of the power company. In special cases, connecting the backup power source (generator set) to the existing electrical system must be done by a professional electrician, and must be able to recognize the difference between the public power supply network and the generator line.
2. Non-professionals (especially children) cannot be aware of the possible dangers caused by the generator set, so they need to stay away from the generator set.
3. Please wear suitable clothing and safety helmets and other protective gear.
4. The lock keys and other tools of the unit should be kept properly. During non-working hours of the generator, please lock the inspection door to prevent children from operating the unit, causing personal accidents or property damage.

Safety Precautions

1. To prevent fire

- Do not add fuel or engine oil when the engine is running.
- Wipe off the spilled fuel with a dry cloth.
- Keep the generator set away from flammable and explosive materials.
- Please keep good ventilation. The generator set must be operated at least one meter away from buildings and other equipment.
- Run the generator set on a stable ground.
- After use, please leave the engine to cool down before moving it indoors.
- Fire-fighting equipment and first aid kits should be installed at the work site.

2. Avoid inhalation and exhaust

- Exhaust contains toxic carbon monoxide, please run outdoors in a well-ventilated area. If the generator set must be operated indoors, adequate ventilation and fire-fighting facilities must be provided.
- Please pay attention to the warning decals on the body.

3. Be careful of burns

When the generator set is running or just stopped, the muffler, guard plate, and engine are very hot. Do not touch these parts.

4. Prevent electric shock and short circuit

- To prevent electric shock or short circuit, please use it in a dry area.
- To prevent electric shock, please ground the generator set.



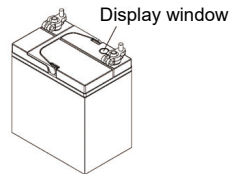
The total current of the electrical equipment cannot exceed the limit current of the socket on the generator.

Never connect the generator set to a household circuit, otherwise it may damage the household appliances and the generator set.

5. How to use the battery

- The battery used by the company adopts advanced maintenance-free technology, and the user does not need to add water or electrolyte during use.
- Observe the battery status display, if the display status is:
 - Blue: The battery is in good condition;
 - White: The battery is insufficient and needs to be charged;

Red: The electrolyte is insufficient and the battery needs to be replaced.



•Attention to battery use:

1) When disassembling the battery, first remove the battery (-) terminal harness, and then disconnect the (+) terminal harness.

2) After installing the battery, connect the battery (+) pole wiring harness first, and then connect the (—) pole wiring harness.

3) If the battery is overheated when it is charged alone, stop charging immediately and wait for a period of cooling before charging.

6. The installation and main maintenance of the unit should be carried out by professional maintenance personnel.

7. Restrict use in areas with high fire risk.

8. Waste engine oil, fuel, filters, batteries and other harmful substances should be disposed of properly in accordance with regulations to prevent environmental pollution.

9. The fuel used by the generator and the exhaust gas exhausted are toxic. Care should be taken to protect it during operation and clean after operation.

10. It is strictly forbidden to add oil to the generator set during operation. The oil

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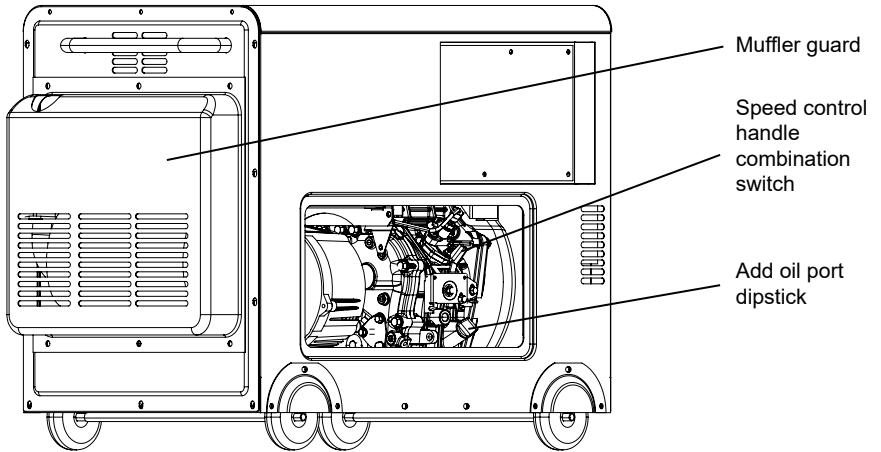
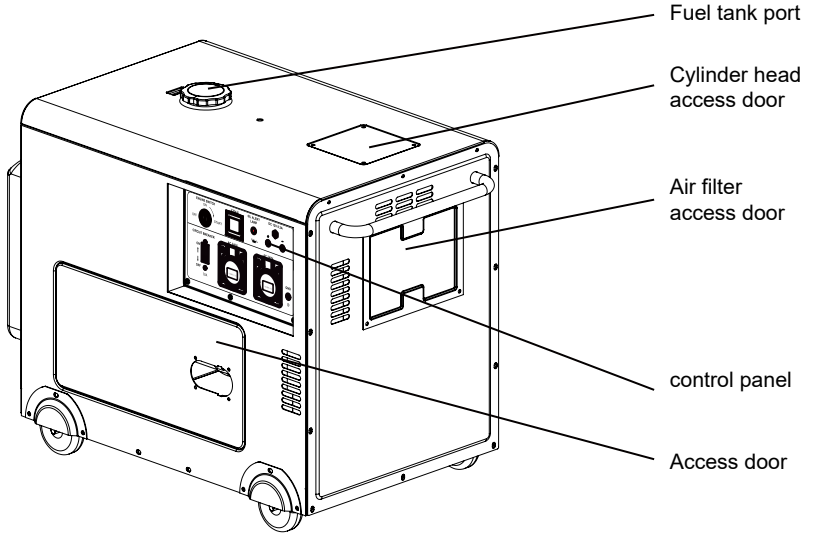
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Chapter 1 Parameter Table

Model	ADG7000ES	ADG12000ES	ADG12000ED-3EP
Phase	Single	Single	Single/Three
Frequency (Hz)	50	50	50
Max. power	5.5kW / 7.0kVA	9.0kW / 11.25kVA	9.0kW / 11.25kVA
Rated power (KW/kVA)	5.0kW / 6.25kVA	8.0kW / 10.0kVA	8.0kW / 10.0kVA
AC voltage (V)	230	230	230/400
Engine model	186	198	198
Rotating speed (rpm)	3000	3000	3000
Bore×stroke (mm)	88×75	92×75	92×75
Displacement (CC)	418	633	633
Lubrication method	Pressure and splash compound type		
Oil volume (L)	1.65	1.65	1.65
Fuel type	Diesel (summer 0#/winter -10#)		
Fuel tank volume (L)	13	15	15
Working temperature (C)	≤40	≤40	≤40
Noise level/dB@7m	70-75	70-75	70-75
Gross weight (kg)	165	195	195
Package Dimension (mm)	970×580×850	1120×630×945	

The specific parameters are subject to update without notice.

Chapter 2 Main Operating Parts and Location



Chapter 3 Installation of Generator Set

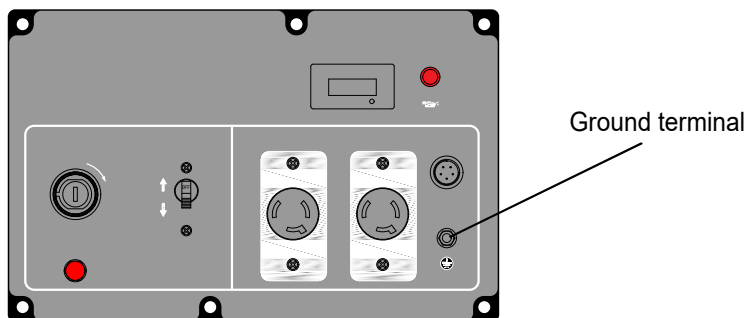
3.1 Outdoor use

Choose to place the generator set on a flat ground that can prevent rain, snow, and direct sunlight. At the same time, pay attention to the exhaust pipe of the generator to avoid directing people and livestock. The location must be able to prevent heavy water, water mist, and dust. All electrical components must be protected from moisture to prevent leakage or short circuit caused by the aging of the insulation system. It is necessary to prevent external foreign matter (such as dust, sand, cotton wool and other abrasive materials) from entering the cooling system to avoid excessive wear and tear of the generator.

⚠ Warning: Never put the generator in a closed or poorly ventilated place to avoid inhalation of exhaust gas that may cause casualties and poor cooling of the generator. If it must be installed and used indoors, good ventilation must be ensured.

3.2 Grounding the generator

Insert a 2cm thick copper rod into the ground near the generator set to the moist soil layer, and then use a wire to connect the grounding terminal of the generator set to the copper rod, and the ground terminal of the generator set is on the front of the output control panel (see the figure below) ; Cannot be connected to the public ground of water pipes or other electronic equipment.



⚠ Warning: The generator set must be grounded to avoid electric shock. Good conductors must be used. Broken or exposed conductors may cause short circuits. The plug connection and terminal connection must be wired by a professional electrician. Incorrect wiring may cause fire or electric shock.

Chapter 4 Start and stop of generator set

4.1 Preparation before starting

4.1.1 Fuel

Use light diesel oil and prohibit the use of unclean diesel oil, otherwise it will cause blockage of the fuel injection pump and nozzle.

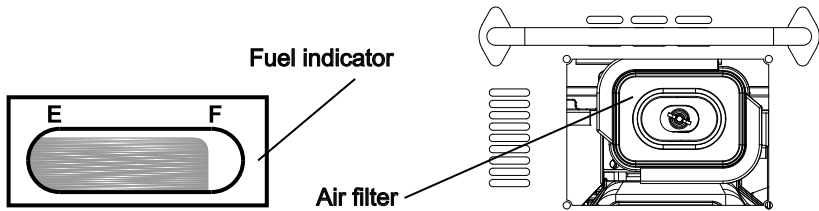
Suggestion: use 0# diesel in summer and -10# diesel in winter.



Note: It is forbidden to add diesel fuel with a mixture of dust and water into the fuel tank, otherwise it may cause blockage of the fuel injection pump and fuel injector. When adding diesel fuel, stop refueling immediately after the fuel gauge on the fuel tank shows full fuel (see the parameter table for the fuel tank volume)

4.1.2 Air filter element

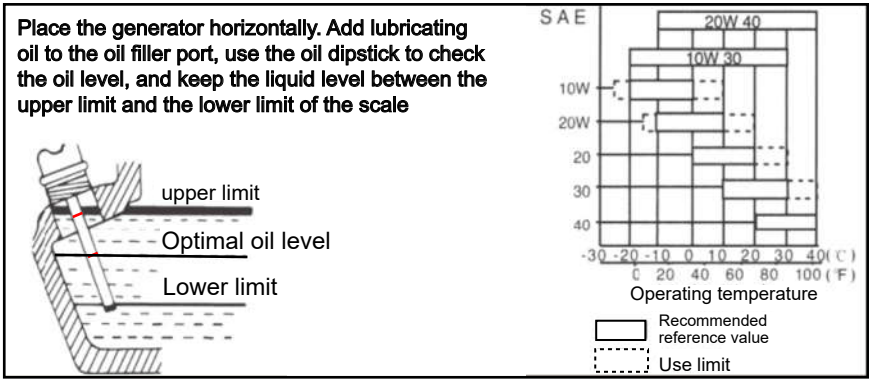
Do not clean the air filter element with water. When the exhaust gas from the diesel engine turns into oil droplets or the color of the exhaust gas is abnormal, the air filter element must be replaced immediately. It is forbidden to use diesel engines without a filter element.



4.1.3 Lubricating oil It is recommended to use diesel oil special lubricating oil: SAE10W-30 (above CD grade).



Note: Do not smoke when adding lubricating oil and ensure that there is no open flame in the lubricating area. Do not let the oil overflow when adding lubricating oil. After adding lubricating oil, make sure that the oil filler bolt is in a tight state



▲ Note: The quality of the lubricating oil you use has a greater impact on diesel engine performance and reliability than other factors. If you use inferior oil or change the oil not in accordance with the regulations, it is easy to cause the piston to jam, and it is also easy to accelerate the wear of the cylinder, bearings and other moving parts, which will shorten the service life of your generator set.

▲ Warning: Before starting the unit, check the oil level. If the oil level is lower than the lower limit, add oil between the upper and lower limit lines. The lubricating oil has been discharged before the machine leaves the factory, and lubricating oil must be added before use.

▲ Warning: It is strictly forbidden to add oil to the generator set during operation. Drain the engine oil when the diesel engine is warming up. After the engine is completely cooled, it is difficult to drain the engine oil cleanly. When draining the oil, take preventive measures against burns caused by the high temperature oil.

▲ Note: The fuel and oil have been exhausted before the generator set leaves the factory. Reasonable oil and fuel must be added before the first start!

4.1.4 Inspection of generator set

a. Low oil pressure protection device (optional according to customer requirements)

The generator is assembled with a low oil pressure protection device. When the oil pressure drops too low, this device can automatically stop the generator (or warning light) to prevent abnormal wear of the diesel engine due to low oil pressure and insufficient lubrication.

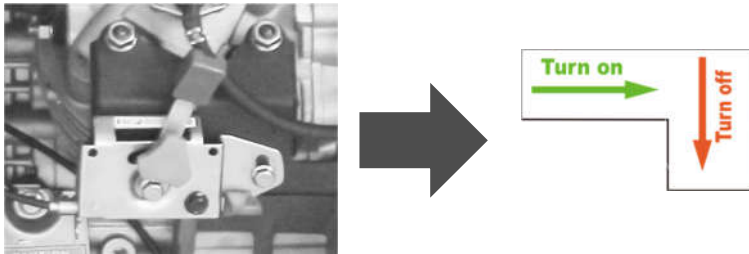
If the diesel engine is operated with insufficient lubricating oil, the oil temperature will increase. But too much oil is also dangerous, because the oil can enter the combustion chamber to burn, causing the diesel engine to suddenly increase its speed and "speeding". Therefore, check the oil before starting and maintain it at the specified height.

b. Start switch

Check whether the start key is in the "off" position. If it is not, it may cause rapid loss of battery power and make the generator start poorly. Therefore, the battery needs to be charged before it can start normally.

c. Speed control handle combination switch

Check whether the speed control handle combination switch is in the "Turn on" position. If it is not, the fuel will not circulate and the generator cannot be started normally.



⚠ Warning: The generator must be started without load.

4.1.5 Exhausting the fuel line of the generator set

When the diesel, engine oil and other conditions are normal, but the unit still cannot start normally, the problem is often that air is mixed in the oil pipe. The specific exhaust method:

- a. Loosen the oil inlet pipe clamp on the fuel injection pump;
- b. Remove the oil inlet pipe and discharge the air in the oil inlet pipe;
- c. Connect the oil inlet pipe and install the clamp;
- d. The start key is placed in the "start" position and kept starting for about 5 seconds. If it fails to start normally, set the key to "off" for about 10 seconds and restart.

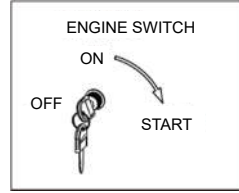
4.1.6 Before starting the generator set, confirm that the following operations have been completed:

- a. Make sure that the generator is located on a stable and firm surface;
- b. The generator set has been grounded;
- c. The oil and diesel oil level has been confirmed;
- d. The spilled fuel has been wiped clean;
- e. Good ventilation around the generator.

4.2 Start and stop of generator set

4.2.1 Startup steps:

- (1) Open the circuit breaker and unload all loads;
- (2) Check the oil quantity;
- (3) Check the fuel quantity;
- (4) Connect the plug or terminal;
- (5) Press the pressure reducing valve;

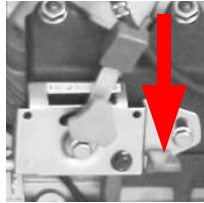


- (6) Turn the start key to "ON" and then to the "Start" position, and keep the "Start" state for about 3~5 seconds;
- (7) Release the key after starting to reset the key to "ON" automatically;
- (8) After the generator runs normally for 10 seconds, turn on the circuit breaker.

⚠ Note: The rotation time of the starter motor should not be too long, otherwise it will ablate the starter motor, cause the battery voltage to drop, and cause the starter motor to block; if operation (4) does not start successfully, turn the starter key to the "off" state and wait After 10 seconds, perform operation (4) again.

4.2.2 Shutdown steps:

- (1) Open the circuit breaker and unload all loads;
- (2) Turn off the speed control handle combination switch;
- (3) Turn the start key to "off";
- (4) Remove the plug.



⚠ Note: After stopping, turn the start key to "OFF". If you do not use it for a long time, please remove the key to avoid a large loss of battery power; if the generator is not used for a long time, disconnect the negative wire on the battery and try again Before using the generator, please charge the battery.

4.3 Battery

The generator can be automatically charged when it is running, and no additional wiring is required. If your unit is not often used as a backup power source, please maintain the battery according to the battery instructions.

⚠ Warning: When the battery is charging, flammable hydrogen is produced. During the charging process, do not spark near the battery.

Chapter 5 Use of Generator Sets

5.1 Total load of the generator

It is important to determine the total power of the electrical equipment load connected to the generator set. The total load power cannot exceed the rated power of the generator set.

Two factors affecting the life of the generator: winding temperature rise and winding corrosion by corrosive substances. If the generator is overloaded, the temperature of the winding will rise, and long-term operation may cause fatal burn-in.

Before using the generator set, make sure that the nameplate data of the generator set is consistent with the power, voltage, current, and frequency of the electrical equipment. Since power is affected by equipment efficiency, power factor, etc., the power of some equipment at startup is 3-10 times larger than the operating power.

Reminder: power calculation formula:

$$\text{Power} = \text{Voltage} \times \text{Current}$$

$$\text{For example: } 1100\text{W} = 220\text{V} \times 5\text{A}$$

When the load is a resistive load (such as incandescent lamps, heaters, ordinary electric tools, etc.), the electrical appliances can be calculated according to the rated output power of the generator. If the load is a mixed load of inductive and resistive (such as fluorescent lamps, mercury lamps, transformers, electric fans, blowers, inductors, etc.), the total power of the load can only be determined by 60% of the generator's rated power.

⚠ Note: The generator must reach the working speed when the load is applied.

Power reference for general household appliances:

Power reference for general household appliances			
Device	Transport power /W	Device	Transport power /W
Air conditioning (12,000 cards)	17000(a)	Light bulb	100
Charger (20Amp)	500	Microwave oven	700
Chain Saw	1200	Milk cooler	1100(a)
Circular saw (ø15mm)	900	Oil burner	300
Coffee pot	1000	Oven	4500
Hair iron	700	Air painting machine (1/3HP)	600(a)

Dishwasher	1200	Air spray paint machine (portable)	150
Trimmer	500	Radio	200
Electric nail gun	1200	Continuous use load	
Electric stove (one resistance wire)	1500	Refrigerator	600(a)
Electric stew pot	1250	Warmer	200
Freezer	800(b)	Submersible pump (1-2HP)	2800(a)
Hair Dryer	1200	Submersible pump (1HP)	2000(a)
Hand drill (ø25mm)	1100	Submersible pump (1/2HP)	1500(a)
Hand drill (ø12mm)	875	Sewage pump (1/2HP)	600(a)
Hand drill (ø10mm)	500	Table saw	2000(a)
Hand drill (ø6mm)	250	TV (10')	500
Home computer	150	Bread maker	1000
Impact wrench	500	Vacuum cleaner	250
Household water pump	800(a)	VCR	70
Lawn mower	1200	Water heater	3000

(a) Hard start motors require 5-7 times the rated current.

(b) Due to the high temperature of the compressor head, this load requires waiting 15 minutes before starting.

5.2 Starting the motor

When starting a motor, a large current is required. Some motors, especially low-power split-phase motors, are very difficult to start and need to start with a current 5-7 times larger than the operating current.

Capacitor-started motors need a current 2-4 times larger than the operating current to start.

Permanent magnet motors need a current 1.5-2.5 times larger than the operating current to start. Permanent magnet, capacitive or split-phase motors of the same power all require the same amount of current to run. The following figure shows the approximate starting current and operating current required for a 220V/50Hz single-phase asynchronous motor:

220V/50Hz electric motor		Starting current
Nameplate power /KW	Operating current /A	Capacitive start-up starting current /A
0.5	2.3	12-16
0.75	3.5	17-24

1.1	5.0	25-35
1.5	7.0	34-49
2.2	10.0	50-70
3.0	15.0	68-95

The data given in the above table are general loads such as blowers or fans. If the motor is connected to a hard-start load such as an air compressor, a large starting current will be required. If it is connected to a light load or no-load start, a smaller starting current will be required. The specific requirements will also vary with the brand and design of the motor.

When the generator is overloaded, it does not run according to the power characteristic curve. When the generator is overloaded, the speed of the diesel engine will not go up and the power cannot satisfy the work of the motor.

The generator can respond to a large initial starting current, but the generator speed drops sharply, or even stalls. If it is allowed to run at a very low speed, the motor windings will burn out in a very short time. Running at this low speed may cause the generator windings to burn out quickly, because the large starting current only takes a moment. When the generator speed rises to the working speed quickly, the generator will not be damaged. If it is difficult to start the motor in a short time, please turn off other electrical loads and reduce the motor load as much as possible.

5.3 Connecting wires

When it is necessary to supply power to a place at a certain distance from the generator, a connecting wire is used. The size of the wire used must meet the cross-section and length requirements, so that the voltage drop between the electrical terminal and the power supply terminal can be kept within a small range.

⚠ Note: The use of wires that do not meet the specifications may cause damage to the equipment and generator.

Refer to the following table for the connection wire reference:

Current / Power		Wire interface (mm ²)			
Current at 240V /A	load /W	Wire length 80 m	Wire length 50 m	Wire length 30 m	Wire length 20 m
10	2400	8	6	4	2.5
15	3600	10	8	6	4
20	4800	10	8	6	6
25	6000	12	10	6	6

30	7200	12	10	10	8
Current at 400V /A	load /W	Wire length 80 m	Wire length 50 m	Wire length 30 m	Wire length 20 m
15	6000	10	8	6	4
20	8000	10	8	6	6
25	10000	12	10	8	6
30	12000	12	10	10	8
37.5	15000	16	12	12	10
50	20000	20	16	16	12

5.4 AC application (AC)

(1) Observe the display on the panel. The load can be applied only when the voltage and frequency are within the specified range.

(2) Each load must be connected to the generator set in order: heavy load first, light load, inductive load first, resistive load. If the motor speed drops sharply or stagnates after the load is connected, the load must be disconnected immediately to find out the cause.

(3) Three-phase generator load balance: the power of each phase on the three-phase generator cannot exceed 1/3 of the total power of the generator, and the difference between the currents of each phase cannot exceed 20% of the rated current.


If the circuit has overload protection (circuit breaker tripping), reduce the load of the circuit and wait a few minutes before resuming operation. If the voltage in the display meter is too low or too high, you must stop the machine to find out the fault and eliminate it before you can start again .

5.5 Direct Current Application (DC)

The DC terminal provides power: DC 12V/8.3A, the red terminal is the positive pole (+) of the power supply, and the black terminal is the negative pole (-) of the power supply. The power supply can be used as a DC load with a rated voltage of 12V or used Charge the 12V battery.

(1) When using the generator's DC power supply to charge the battery with a wire connected to the generator, be sure to disconnect the wire connecting the negative electrode of the battery to the generator.

(2) Connect the positive and negative terminals of the battery with the corresponding positive and negative terminals of the DC output on the generator with a charging wire.

 Tip: The DC load current cannot exceed 8A. When charging a large-capacity battery, the fuse of the DC power supply is easy to blow due to the excessive current.

⚠ Warning: Do not reverse the polarity of the charging wire. If connected reversely, it will seriously damage the generator and battery. Do not touch the positive and negative terminals, as contact will short-circuit the battery.

⚠ Warning: Charging the battery will produce flammable hydrogen gas, do not have sparks nearby while charging. To avoid sparks near the battery, first connect the charging wire to the battery, and then to the generator. When disconnecting, first disconnect the wire at the generator end. To avoid explosion caused by hydrogen accumulation, please charge the battery in a well-ventilated place.

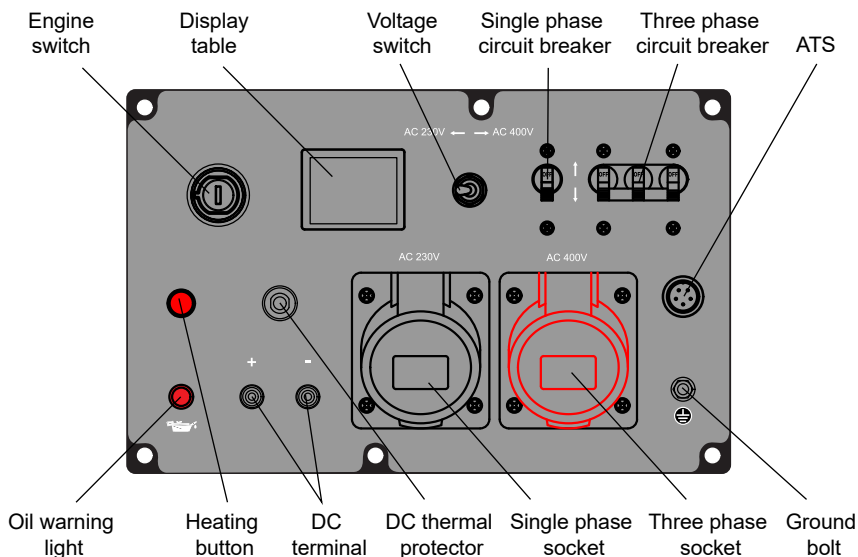
5.6 Single three-phase operation

Before using single-phase or three-phase power supply, you must determine whether the load is single-phase or three-phase.

Select single-phase or three-phase through the switch on the control panel, and judge whether the unit output is the voltage you need through the display meter on the control panel.

⚠ Warning: When using the transfer switch, the load must be disconnected (open the circuit breaker).

⚠ Note: Single-phase and three-phase units with equal power cannot be used at the same time.



Chapter 6 Maintenance of generator set

6.1 Regular maintenance

In order to ensure that the generator set is in good condition, regular inspection and maintenance are very important. For the maintenance of diesel engine power, please refer to the power manual. When performing maintenance on the generator set, the battery must be disconnected from the generator wire, and the negative wire must be removed first, and then the positive wire. When maintaining the unit, if the diesel engine must be running, the surrounding area must be well ventilated. After the generator set is used, wipe off oil and dust on the surface with a cloth to prevent corrosion.

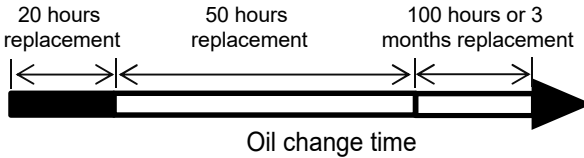
Generator set maintenance items and schedule:

Maintenance time Project	Every day	Every month or 20 hours	Every three months or 100 hours	Every six months or 500 hours	Every year or 1000 hours
Check and add enough fuel	0				
Run out of fuel		0			
Check and add enough oil	0				
Check for oil leakage	0				
Check fasteners	0	● (Tighten the oil pipe bolts)		● (Tighten the cylinder head bolts)	
Change the oil		0 (First time) Replace every 50 hours for the next three times	0 (the fifth time)		
Replace the air filter	(If used in dusty areas, shorten the inspection and maintenance cycle)		0 (replace)		
Clean the oil filter				0 (Replace, if necessary)	
Clean the fuel filter				0	● (Replace)
Check the high pressure oil pump				●	
Check the injector				●	
Check the fuel pipe				● (Replace, if necessary)	
Adjust valve clearance		● (the first time)			
Grinding valve					●
Replace the piston ring					●
Check battery electrolyte	(per month)				

Note: The "●" mark indicates a wrench that requires special tools, please contact the dealer.

6.1.1 Change the oil regularly

Change the oil after the first 20 hours or the first month, then every 50 hours, and after three times, every 100 hours or three months.

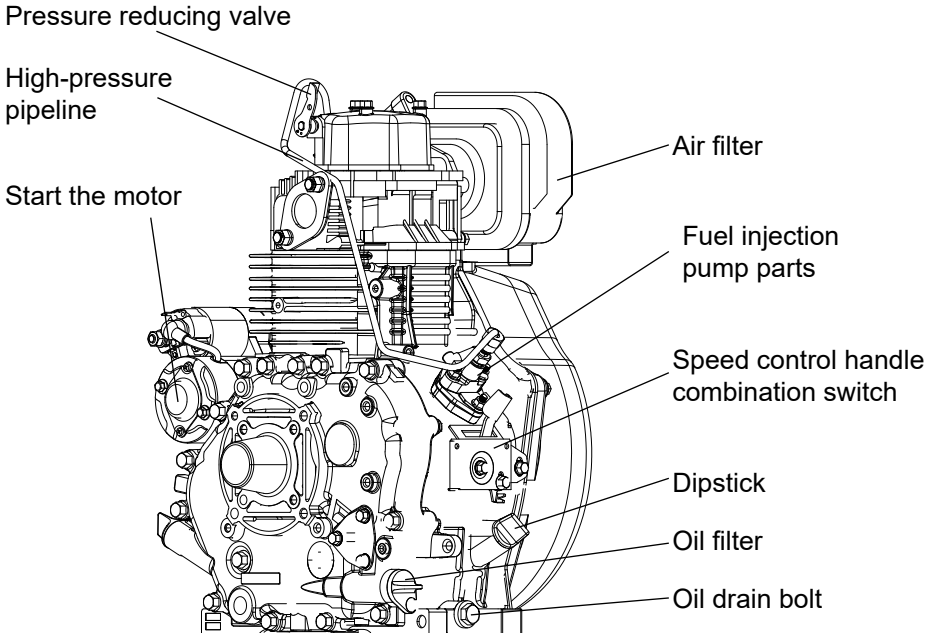


Unscrew the oil dipstick, loosen the oil bolt when the diesel engine is not completely cooled, and drain the old oil. Tighten the oil drain bolt, add new oil, and tighten the oil dipstick.

6.1.2 Cleaning the oil filter

Loosen the locking bolts, take out the oil filter and clean it with gasoline or kerosene.

Oil filter	Clean every 5 months or 250 hours, replace if necessary
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6.1.3 Clean and replace the air filter element

Do not use detergent to clean the element of the air cleaner. Use a soft brush or air gun to remove dust on the outer surface of the filter element.

Replacement time	Every 3 months or 100 hours
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⚠ Note: Do not start the diesel engine when there is no filter element or the filter element is damaged.

6.1.4 Wash and replace the fuel filter

The fuel filter must be cleaned frequently to ensure that the diesel engine has the maximum output power.

(1) Drain fuel from the fuel tank.

(2) Loosen the clamp on the fuel pipe, remove the filter, and clean it thoroughly with diesel.

Cleaning time	Clean every 6 months or 500 hours. If the diesel has more impurities, the cleaning cycle will be shortened
Replacement time	Replace every 1 year or 1000 hours. If the diesel has more impurities, the replacement cycle will be shortened

6.1.5 Tighten the cylinder head bolts (see the diesel engine manual for details)

Tightening the cylinder head bolts requires special tools, do not try casually.

6.1.6 Check the fuel injector, high-pressure fuel pump, etc.

⚠ Note: Do not expose your skin to the fuel spray during operation. Fuel is harmful to the skin; when testing the atomization state of the fuel injector, the exposed skin and eyes must be kept away from the fuel injector.

6.1.7 Adjust the clearance of intake and exhaust valves.

6.1.8 Replace the piston ring.

6.1.9 Battery

Before starting the 12V battery used by the unit, check whether the battery is damaged and check the battery voltage. If it is damaged, replace the battery; if the voltage is insufficient, fully charge the battery to start normally.

Normal battery voltage	12V-14V
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6.2 Maintenance for long-term storage

If your generator needs to be stored for a long time, you must do the following:

6.2.1 Run the generator set for about 15 minutes and then shut down.

6.2.2 After stopping, when the diesel engine is still hot, discharge the old diesel engine oil, and then add new engine oil to the specified height.

6.2.3 Unscrew the cylinder head cover bolts, add 2ml lubricating oil, and then tighten the bolts in the same place.

6.2.4 Maintenance of the starting part

Turn the start key to the "start" position, and let the diesel engine run for 2-3 seconds (no need to start), then turn the key to the "off" position and pull out the key.

6.2.5 Remove the battery from the generator for monthly charging and maintenance. Keep the battery voltage between 12V-14V during storage. Do not store the battery when the battery voltage is lower than 10.8V to avoid damage. Keep the battery storage place away from sunlight, fire and children to avoid property damage and personal injury.

6.2.6 Wipe the generator set clean, store it in a dry and stable place, and lock the wheels.

Chapter 7 Common faults and troubleshooting

7.1 Frequently Asked Questions

	cause of issue	Method of exclusion
Diesel engine fails to start or does not operate normally after star	Not enough fuel	Add fuel
	High-pressure oil pump and fuel injector do not inject oil or have little oil injection	Dismantle and repair high-pressure fuel pump and fuel injector, and debug on the fuel injector test bench
	Check oil level	The standard amount of lubricating oil should be between the upper and lower scale lines
	Fuel injector clogged	Cleaning the fuel injector
	Low battery	Charge the battery, or replace the battery
	There is air in the high-pressure oil pump	Remove air (see 4.1.5 for details)
	The oil pressure alarm is locked, the key does not respond when starting	Check the lubricant, put the key in the "off" position for 2 seconds and start again
The generator does not generate electricity	Poor socket contact	Adjust socket contacts
	The generator has not reached the rated speed	After reaching the rated speed, switch on the load
	Blown fuse	Check if there is a short circuit due to wire damage in the panel, replace the fuse
	Load leakage	Eliminate the leakage of the load, check whether the grounding is good, and re-close
	Regulator wiring is broken or damaged	Rewire or replace with new regulator
Low voltage	The engine has not reached the rated speed	Fine-tune the speed regulating spring to the rated speed
	Damaged display	The test output voltage of the multimeter is compared with the display meter. If the display meter is broken, replace it.
	Regulator wiring is broken or damaged	Rewire or replace with new regulator
Automatic shutdown after a period of operation	Insufficient lubricating oil, resulting in low oil pressure, low oil pressure alarm	Add proper amount of lubricating oil, put the start key in the "off" position for 10 seconds, start again
	Fuel exhausted	Check the fuel quantity and check whether the oil circuit (diesel filter, fuel injector, oil pump, etc.) is blocked
	Speed control spring falls off	Adjust the speed control spring hook surface, reinstall, adjust the speed

After repairing the generator according to the above method, if it still fails to generate electricity, please contact our company's special dealer or directly contact our company.

7.2 Doubts and problems

If you don't understand some operating instructions or encounter any problems during the operation, you can contact our company's authorized dealer or directly contact our company and provide the following:

(1) Diesel generator model and diesel engine number: The diesel generator model is affixed to the box, and the diesel engine model and number are engraved on the body next to the oil drain bolt.

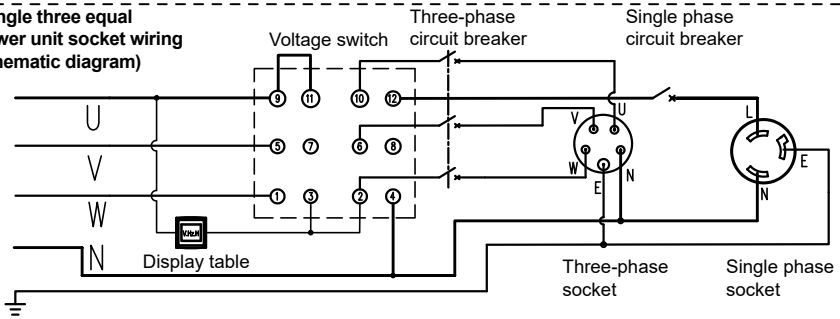
(2) Status: During the operation of the generator, at what speed, what working environment, and what problems occurred.

(3) How much time has the generator set accumulated.

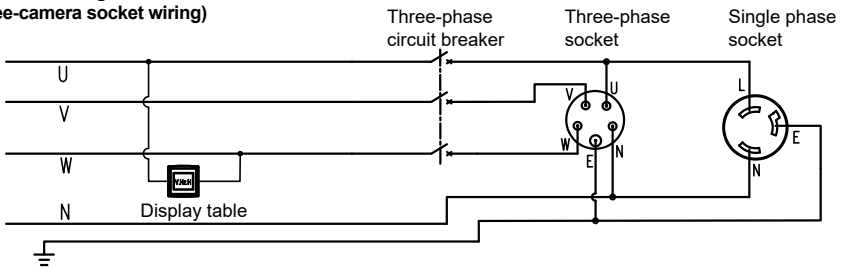
(4) Other details and specific time when the problem occurs.

Attachment: electrical schematic diagram

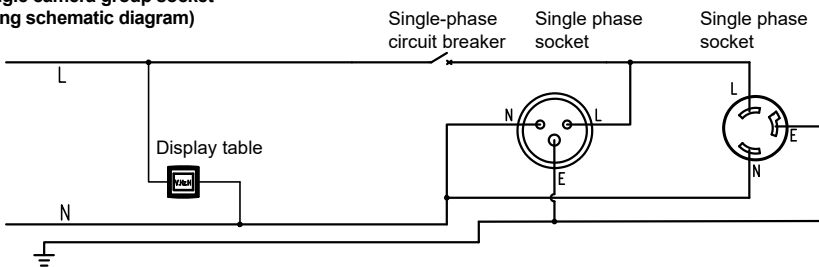
(Single three equal power unit socket wiring schematic diagram)



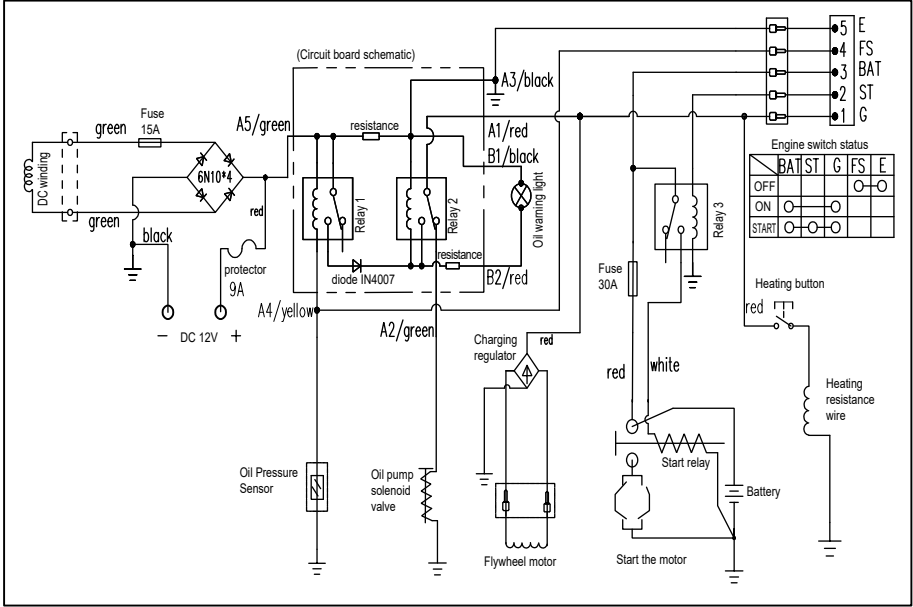
(Schematic diagram of three-camera socket wiring)



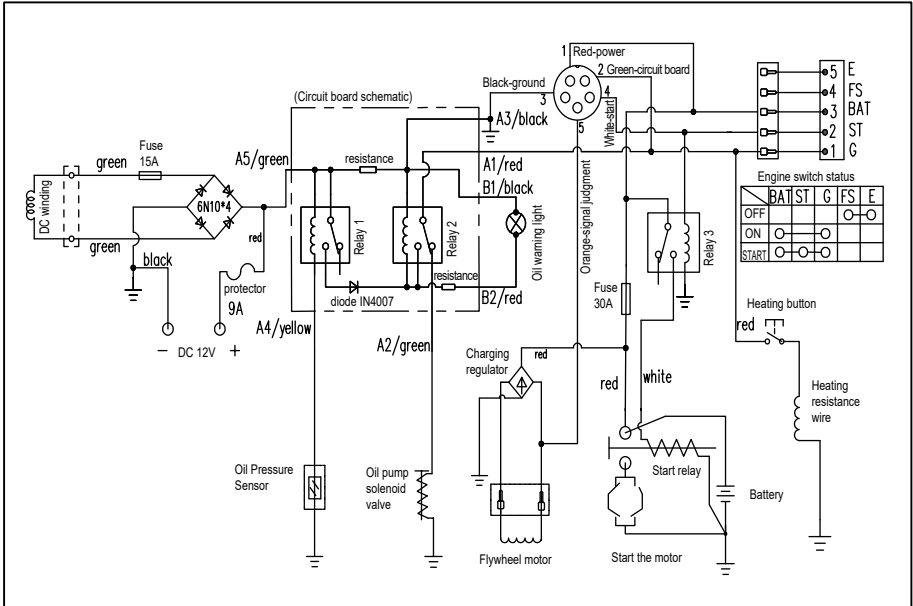
(Single camera group socket wiring schematic diagram)



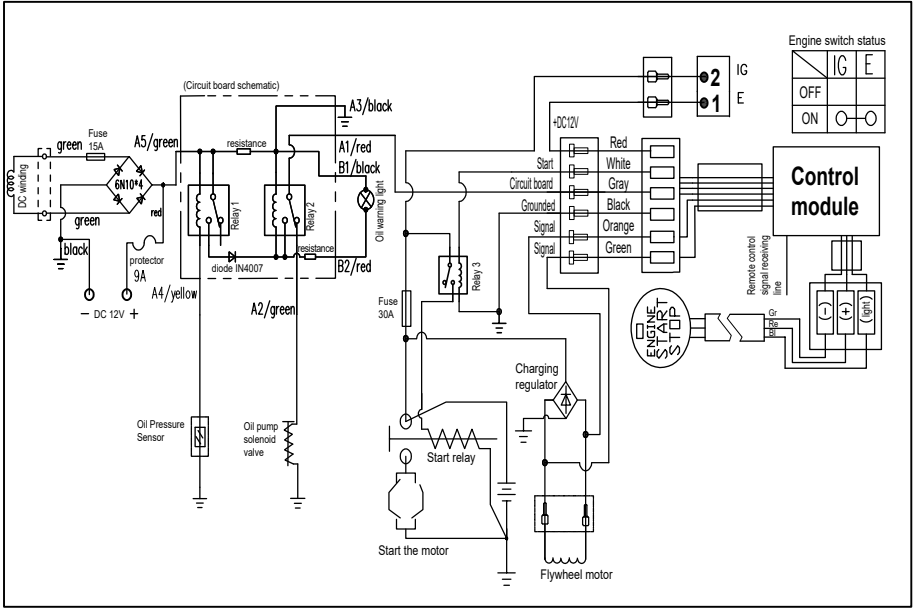
(Conventional electronic lock flameout-control circuit schematic diagram)



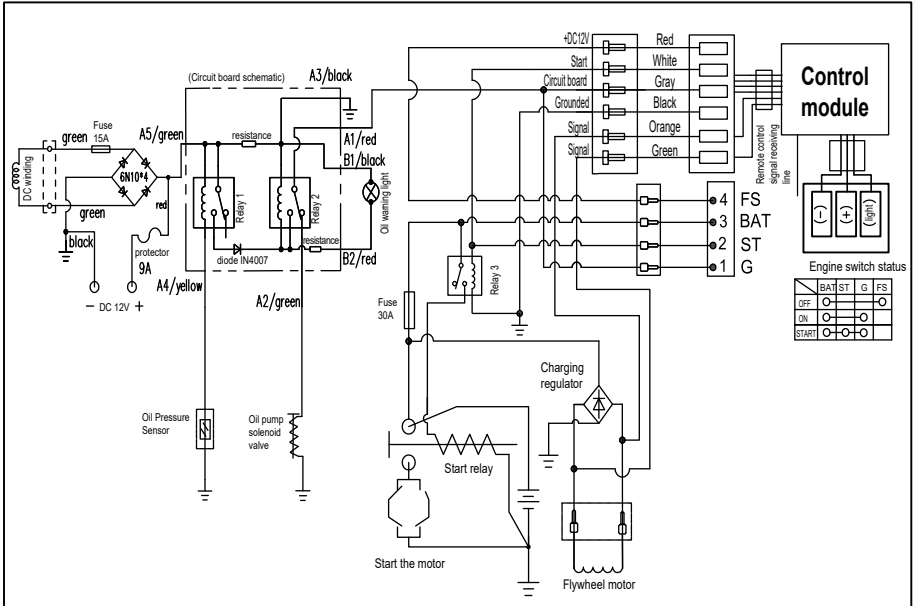
(ATS-control circuit schematic diagram)



(Remote control plus one-key start and stop-schematic diagram of control circuit)



(Lock plus one key start and stop-control circuit schematic diagram)



 **POWER**

