

OWNER'S MANUAL



DY8500 GENERATOR AIR-COOLED DIESEL ENGINE GENERATOR

BOSS
PRODUCTS

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CHAPTER 1: OVERVIEW

TECHNICAL SPECIFICATIONS & DATA (in SI Units)

ITEM/MODEL		DG8500LN	
Generator	Excitation	Self-excitation voltage	
	Voltage System	Condenser Compensation System	
	Frequency (Hz)	60	
	Rated power (kW)	6.3	
	AC Rated Voltage (V)	110, 220, 230, 240, 110/220, 120/240, 220/380, 230/400	
	DC Rated Output (V-A)	12-8.3	
	Speed (rpm)	3000/3600	
Diesel Engine	Engine Model	190F	
	Type	Single-cylinder, vertical, 4-stroke, air-cooled, direct-injection	
	Output	Continuous (kW)	7.6/8.3
		Maximum (kW)	8.3/8.8
	Bore x Stroke (mm)	90 x 75	
	Displacement (cc)	474	
	Lube-Oil Capacity (L)	1.65	
	Fuel Tank Capacity (L)	15	
	Dry Weight (kg)	164	
	Dimensions (L x W x H)(mm)	920 x 530 x 705	

CHAPTER 2: OPERATING THE DIESEL GENERATOR

2-1 General main points of safety during operation of the generator set.

In order to operate the generator set safely, please follow all the instructions provided in this manual carefully. Failing to do so may lead to accidents and or equipment damage.



2-1.1 Fire Preventions

The proper fuel for the diesel generator set is light diesel fuel. Do not use gasoline, kerosene and or other fuels other than light diesel fuel. Keep all flammable fuels away from the generator as the generator may spark and ignite these gases. In order to prevent fires from occurring and to provide enough ventilation for people and the machine, keep the diesel generator at least 1.5 meters or 5 feet away from buildings and or other equipment. Always operate your diesel generator on a level site. If the generator is operated on an incline, the lubrication system within the engine will not perform well and may lead to failure of the engine.



2-1.2 Prevention of Inhaling Exhaust Gases

Never inhale exhaust gases emitted by the engine. The exhaust gases contain toxic carbon monoxide. Never operate your generator in places with poor ventilation. In order to operate this machinery indoors, a suitable ventilation system for the building is required to draw the poisonous exhaust gases out.



2-1.3 Prevention of Accidental Burns

Never touch the muffler and its cover when the diesel engine is running. Never touch the muffler and cover after the diesel engine has been used, as the muffler remains hot for a good period of time.



2-1.4 Electric Shock and Short Circuits

Never touch the generator if the generator is wet. Also never touch the generator if your hand is wet. Never operate your generator if the weather conditions call for any type of precipitation such as rain, snow or fog. To prevent electrical shocks, the generator should be grounded. Use a lead to connect the grounding end of the generator to the grounding surface of choice.

NOTE: When connecting devices to the generator, make sure all other devices are rated lower than the generators output. Any generator socket should not be overloaded over its regulated limit.

2-1.5 Other Safety Points

Before operating this generator, all operators should have a good knowledge of how to break the circuit if any accidents occur. Also, all operators should be familiar with all the switches and functions of the generator before using this machine. While operating the generator, wear safe shoes and suitable clothes during operation. Always keep children and animals away from the generator.

2-1.6 Battery

The electrolytic liquid of the battery contains sulfuric acid. In order to protect your eyes, skin and clothing, wear protective gear when working with the battery. If you come in contact with the electrolytic liquid, wash it immediately with clean water. Also, if they electrolytic liquid comes in contact with your eyes, see a doctor immediately.

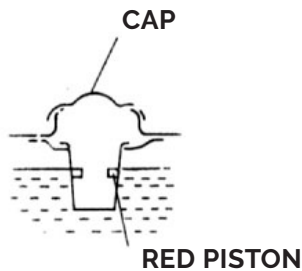
2-2 Preparation Before Operation

2-2.1 Fuel Choices and Fuel Treatment

Fuel Tank

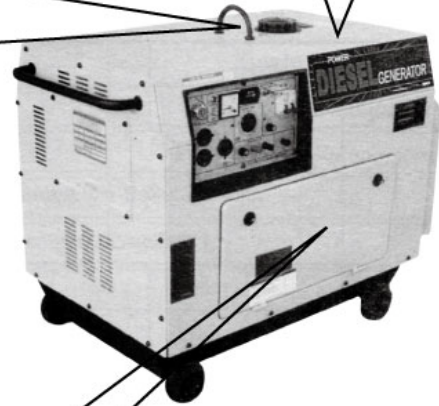
Use only light diesel fuel. The fuel should be clean. Never let dust and water mix with fuel in the fuel tank. Otherwise it will clog the fuel lines and oil nozzles. It may also damage your pressure pump.

Note: It is dangerous to overfill the fuel tank. Never exceed the red piston in the filter.



Air Filter Element

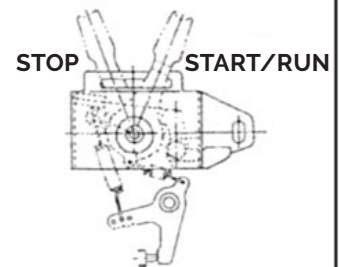
Do not wash the air filter. The element is made of dry material, which does not permit washing. When the output of the diesel engine is bad or the color of the exhaust gas is abnormal, replace the air filter element. Never start the diesel engine without the air filter.



Note:

Never smoke near the opening of the fuel tank. Do not let sparks get near the fuel or fuel tank and do not overfill tank. After filling, tighten the fuel cap.

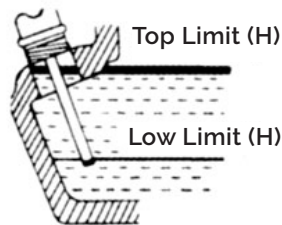
GEAR LEVER



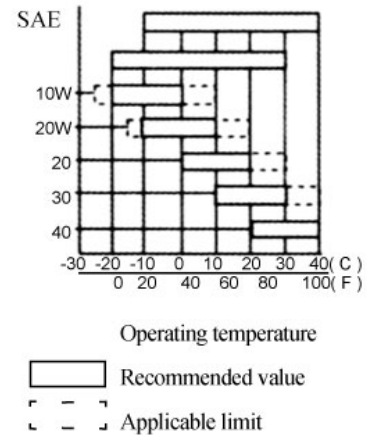
2-2.2 Fill Engine Oil

Fabrication Oil Filling Inlet

Put the generator set in a level state. Fill the oil into the oil-filling inlet. At the time of checking the oil level, it is necessary only to lightly insert the oil ruler. Please pay attention that you should not rotate the oil ruler.

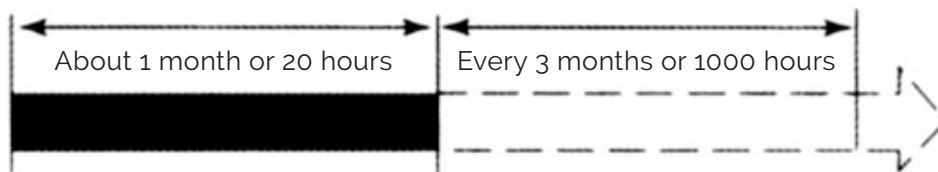


Volume \ Type	186FG
Volume (L) English Gallon	1.65 (0.36)



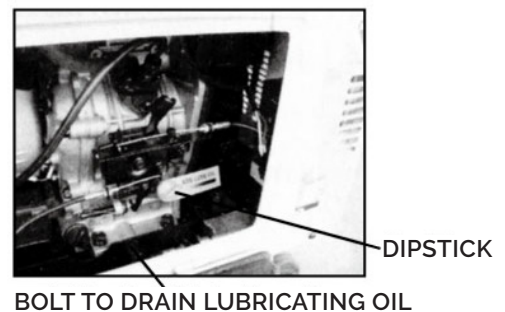
A.P.I. Diesel engine maintenance classification. The lubricating oil should be CC or CD Grade.

Engine oil is the most important factor in determining the life of your generator engine. If you use poor engine oil or if you don't change the oil regularly, the piston and cylinder will wear easily or seize up. Also, the life of the other parts in your engine such as bearings, and other rotating parts will shorten considerably.



Time to change engine oil

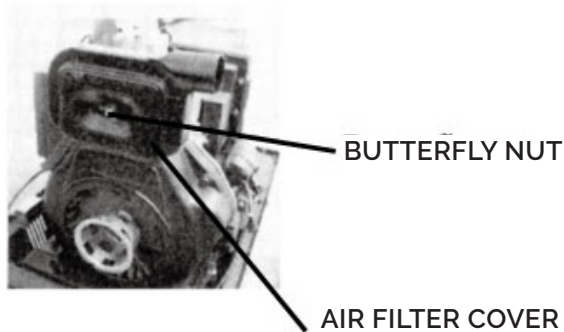
Although there is an alarm system for low oil pressure, it is always a good idea to check the amount of oil inside the engine. If the oil level is low, fill it before starting the engine. A good time to drain the oil from the engine is when the diesel engine is still hot. If the engine is fully cooled, it is more difficult to drain all the oil out and some impurities will remain in the engine.



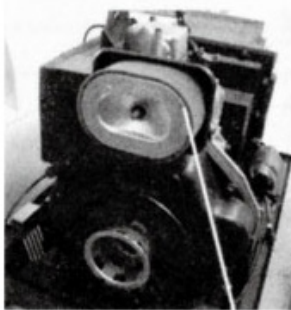
WARNING: Don't fill engine oil when diesel generator is operating

2-2.3 Check Air Filter

(1) Loosen the butterfly nut, take the cover of the air filter off and take the air filter out.



Do not use detergent to wash the air filter. When the performance of the engine decreases or when the color of the exhaust gases is bad, exchange the filter. Never start the engine without air filter as foreign objects may enter the intake and damage the engine.



FILTER CORE

(2) After replacing the air filter, replace the cover and tighten the butterfly nut firmly.



COVER AT THE CHECK MOUTH FOR AIR FILTER

2-2.4 Checking the Generator

Before starting the generator, make sure the air switch is in the "off" position. Starting the generator with the switch in the "on" position is very dangerous. The generator should be grounded in order to prevent electric shock. Use dry compressed air (with pressure about 1.96×10^5 Pa) to blow the dust out in the electric control cabinet and at the surface of the generator. Check to see how clean the surface of the sliding ring is. Check the pressure of the carbon brush. Also, check whether the position of the carbon brush at the slide rig is correct and the fixture is reliable with a good contact. According to the electric wiring diagram, check to see whether the connecting wire is correct and the connection is firm. Use a $500\text{M}\Omega$ meter to measure the insulation resistance of the electrical part. The resistance should be less than $2\text{M}\Omega$. When measuring devices, make sure the capacitor is turned off. Otherwise, it will burn the capacitor. (For silent set, the inspection may not be carried out).

2-2.5 The Fuel and Oil

The fuel and oil in a new engine is drained before sold. Before you start the engine, please fill the fuel tank and oil first. Then, check to see if there are air bubbles in the engine. If there are, follow the procedure: Loosen the connecting nut between the oil injection pump and oil pipe. Bleed the air from the system until there are no more bubbles. Then replace the connecting nut and tighten it.

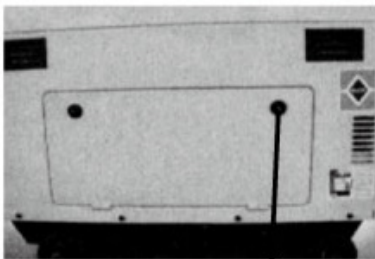
2-3 Checking the Operation of the Diesel Engine

2-3.1 Low-pressure alarm system.

The diesel engines have a low-pressure sensor system where if the oil pressure drops too low, the sensor will shut the engine off. The purpose of having this system is to ensure that the engine does not seize up. If there is not enough oil in the engine, the temperature of the oil will be raised too high. On the contrary, if there is too much oil in the engine, the engine oil can slow the engine down considerably. (NOTE: The 2 GF-L model cannot automatically stop itself.)

2-3.2 How to open the case door/cover

(1) Open the case door: turn the handle counterclockwise and open the door. Do these checks daily.

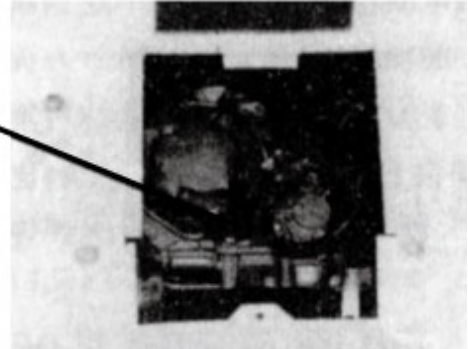


KNOB HANDLE

(2) Loosen the outer cover bolt of the air filter and outer cover of the oil nozzle, and then check the air filter.

(3) Check the outer cover of the oil nozzle. Loosen the butterfly nut and open the outer cover.

**RUBBER
COCK**



2-3.3 Engine Break In

When you purchase a brand new engine, the engine must be properly broken in. The break in period is about 20 hours.

(1) Avoid overloading the engine when brand new.

(2) Change the engine oil according to specifications. An oil change for a brand new engine is about 20 hours or every month, an older engine, the oil change is about 100 hours or three months.

2-4 Starting the Generator

2-4.1 Manual Starting

Start the engine in accordance with procedure below:

(1) Put the fuel switch in the "ON" position.

FUEL SWITCH



(2) Turn the handle of the engine to the "RUN" position.

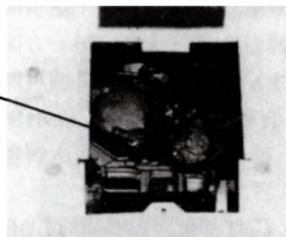
SPEED HANDLE



(3) Pull the recoil starter handle out.
(4) until you feel resistance. It will reset to its original position automatically. The handle should be reset into its recoil device slowing to prolong the life of the engine starter.

In cold climate, it is difficult to start the engine. To remedy this, pull the rubber plug from the rocker of the diesel engine and fill 2ml of engine oil. Before starting, put the rubber plug back in place. If you don't replace it, rain, dust and other dirt can enter into the diesel engine. It will cause parts inside to wear quickly and lead to engine failure.

RUBBER COCK



2-4.2 Electric Starting

The procedure for preparing to start the engine are the same as the manual starting engine.

2-4.3 Battery

1. Insert key into ignition and place in the "off" position.
2. Put the speed handle in the "Run" position.
3. Turn the start switch clockwise to the "START" position; To set the silent type, first turn it clockwise to the "RUN" (ON) position for the 1-2 seconds. The electromagnetic iron will be triggered, now turn it clockwise to the "START" position.
4. After the diesel engine is started, remove your hand from the switch handle; the switch will automatically reset itself to the "ON" position.
5. If the engine is not starting after 10 seconds of cranking, wait about 15 seconds before trying again. If you crank too long, the voltage of the battery will drop. This can lead to improper ignition. When the diesel engine is operating, let the ignition remain in the "ON" position.

SPEED HANDLE



NOTE: If you crank the starter too long, the battery may be drained too much to provide enough energy for proper engine ignition. Also, when the diesel engine is operating, let the key remain in the "ON" position.

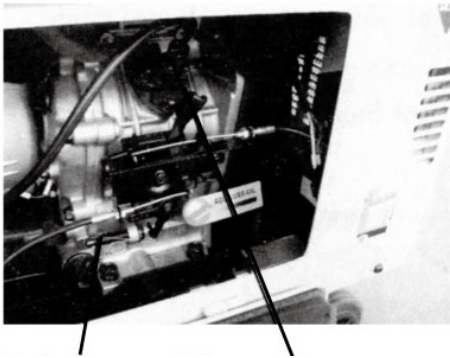
Check the level of the water in the battery once a month. If the level of the liquid drops too low, fill it with distilled water until it reaches the high mark. If there is not enough distilled water, then the diesel engine cannot be started. It is important to keep the liquid level between the high and low limits.

If the level in the batter is too high, the liquid may flow out and end up on the surrounding parts resulting in corrosion of these parts.

NOTE: Avoid too much or too little distilled water. Check and fill it once a month.

2-5 Proper Operation of the Generator Set

- 2-5.1 Operating the Diesel Engine
- Pre-heat the diesel engine for 3 minutes under no load conditions. First check the height of the lubricating oil level, if it is low, refill it. Our diesel engines are equipped with an alarm system that will notify you if the oil pressure is too low. The alarm system will shut down the engine if the oil pressure is too low. Do not adjust the speed limit regulation nut or the fuel adjustment bolt. These bolts have been set by the factory already, changing them will affect the properties of the engine performance.



FUEL
ADJUSTMENT
BOLT

HIGH-PRESSURE
FUEL PIPE NUT

- 2-5.2 Checks during engine operation
1. Check to see if there are abnormal noises.
 2. Check to see if the performance is good or bad.
 3. Check the color of the exhaust gases (whether it is too black or too white). If any of these conditions exist, stop the engine and find the cause of the problem. If no problems are found, please contact your local dealer or our nearest company branch.

2-6 Loading

- 2-6.1 Load Conditions
- Exert loads in accordance with the specified parameters.
- 2-6.2 Output of Electricity
1. Raise the revolutions per minute (turn the speed handle to the max setting) of the generator to get the maximum power out of the generator. If not, the automatic voltage regulator device will excite and doing this for long periods of time will cause the capacitor to burn.
 2. For the rated speed of the generator, please refer to Chapter 1, item 1-1 technical specification and data.
 3. Observe the pointer of the voltmeter, it should point to $220 \pm 5\%$ (50Hz). (For 60 Hz set, it will be $240V \pm 5\%$). This is the reading of the voltage at the ac socket.

CAUTION: Do not start more than two machines at the same time. The machines should be started one by one. Do not use the floodlight at the same time when using other devices.

4. When connecting devices to the generator, make sure to connect these devices in order. Connect the large loads onto the generator first. If everything else is functional, smaller loads can then be added. If the generator shuts off, it may be because the load being drawn by all the

various devices are too high. In this event, decrease the number of small devices until everything is functional. The total drawn power should not exceed the maximum output power of the generator. Please see table 1-1 for technical specifications of what the generator can output. In order to reset the generator after overdrawn power, let it sit for several minutes. If the indication of the voltmeter is too high or too low, adjust the speed accordingly. If there are problems, stop the generator immediately and fix the issue.

5. Make sure you are operating your generator in a well-ventilated area. The generator should never be covered with anything to prevent overheating the generator.

2-6.3 Charging the Battery

1. For the electric starter generator, the 12V battery is automatically charged through the regulator on the generator when it is running.
2. If the generator is not used for long periods of time, the battery should be disconnected to avoid energy loss from the battery.
3. Do not connect the negative and positive terminals of the battery together at any time. Doing so will damage the battery.
4. Do not reverse the polarities when attaching the battery cables to the battery. Doing so will damage both the battery and the electric starter.

5. When charging the battery, the battery produces flammable gases. Do not smoke, flames, and sparks get near the battery while it is charging as this may cause a fire. To avoid sparking while connecting the cables to the battery first, connect the cables to the battery then to the motor. To disconnect battery cables, first disconnect the motor end of the cable.

2-7 Stopping the Generator

1. Take the electrical load off the generator.
2. Turn generator run switch off.
3. Put the speed handle in the "RUN" position and let the engine run for 3 minutes after unloading. Do not stop the diesel engine immediately let it cool off. Stopping the diesel engine suddenly may raise the temperature of the engine abnormally and lock the nozzle and damage the diesel engine.

NOTE:

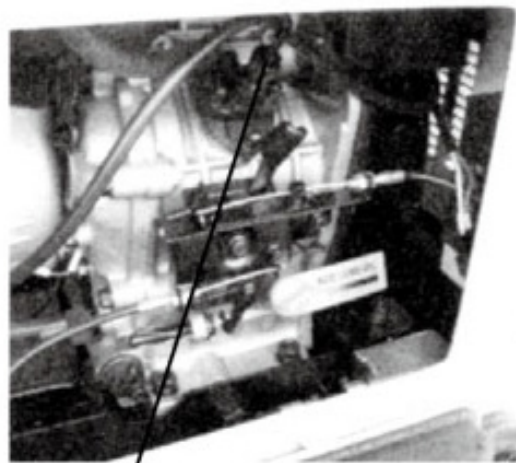
1. If the speed handle is in the "STOP" position and the engine is still running, turn the fuel switch to the "OFF" position or loosen the high pressure oil pipe nut. The engine could be stopped more than one way other than using the speed handle.
2. If you cannot stop the engine with a load on it, then remove the load first then stop the engine.

4. Press down on the brake handle.
5. If equipped with an electric starter, turn the key to the "OFF" position.
6. Put the fuel handle to the "S" position.

7. Finally, pull slowly on the recoil handle until you feel resistance (this is when the piston is on the compression stroke, where the intake and exhaust valves are closed). What this does is prevent the engine from rusting when not in use.



FUEL SWITCH



LOOSE THE HIGH PRESSURE OIL PIPE NUT

CHAPTER 3: MAINTENANCE

3-1 Maintenance Schedules

Keeping your generator well maintained will prolong the life of your generator. Everything needs to be checked including the diesel engine, welder, generator, control cabinet and frame. For overhauling procedures, please refer to the instruction manual of the relative subassembly. If you need these manuals, please call our company and we will send you one.

Before starting the maintenance, make sure the diesel engine is off.

Please refer to the table 3-1 for the proper maintenance schedule.

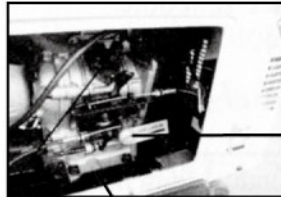
Table 3-1: Maintenance schedule for diesel generator set.

Maintenance Item	Interval of	Everyday	1st Month or after 20 hours	3rd month or 100 hours	6th month or 500 hours	Every year or 1000 hours
Check and fill fuel		O				
Discharge fuel			O			
Check and fill enough engine oil		O				
Check whether it leaks oil		O				
Check and screw each fastened part		O			X Screw the bolt of cylinder head firmly	
Change engine oil			O (1st Time)	O (2nd time late)		
Clean engine oil filter					O (change)	
Change air filter		If operated in dusty area, the period of maintenance should be shortened			O (change)	
Clean fuel filter					O	X (change)
Check high pressure oil pump					X	
Check nozzle					X	
Check fuel pipe					X (If necessary, change it)	
Adjust the gaps of air intake and air exhaust gate			X (1st Time)		X	
Grind air intake and air exhaust gate						X
Change piston ring						X
Check water of accumulator		(each month)				
Check electric brush and slide ring					X	
Check insulation resistance		The time of stop is over 10 days. O				

Note: "X" indicates that it needs a special wrench, please contact dealer.

3-1.1 Changing the Engine Oil
(every 100 hours)

Take the oil cover out. Take off the oil drain plug when the diesel engine is still hot. Be careful of hot oil and hot engine as you may get burned. The bolt is located at the bottom of the cylinder. After draining the oil, put the bolt back and tighten it. Then fill with the proper engine oil to the proper level.



DIPSTICK

HIGH-PRESSURE
FUEL PIPE BOLT OIL DRAIN BOLT

3-1.2 Replacing the oil filter

1. Replacing the oil filter every 6 months or 500 hours of operation.

3-1.3 Air Filter Maintenance Schedule

1. Clean air filter every 6 months or 500 hours of operation.
2. If necessary, replace it.
3. Do not use detergent to clean air filter.



AIR
FILTER

NOTE:

Never start the engine without the air filter. This can cause serious damage to the engine if foreign objects enter the intake system. Always change the air filter on time.

3-1.4 Fuel Filter Maintenance

1. The fuel filter should be cleaned often to keep the engine running at maximum performance.
2. The recommended time period for cleaning the fuel filter is 6 months or 500 hours of operation.
 - a. To do this first drain the fuel from the fuel tank.
 - b. Loosen the small screws on the fuel switch and remove the fuel filter from the port. Use diesel fuel to clean the fuel filter. Also, remove the fuel injector and clean the carbon deposit around it. The recommended time period for this is 3 months or 100 hours.

3-1.5 Cylinder Head Bolt Tensions

The cylinder head bolts should be tightened to specifications. Please refer to the diesel engine manual for specifications and the special tools required to do this.

3-1.6 Battery Check

Make sure the electrolytic solution of the battery is full. The engine uses a 12V battery. Due to numerous starting cycles, the electrolytic solution may be used up. Also, before filling, verify that the battery is not damaged in any way. Add distilled water to the battery when filling. Perform checks on the battery once a month.

3-2 Storing for Long Periods of Time

If your generator needs to be stored for long periods of time, the following preparations should be made:

1. Start the diesel engine for 3 minutes then stop it.
2. When the engine is still hot, change the engine oil with the new engine oil of the proper grade.
3. Pull the rubber plug out of the cylinder head cover and put 2CC of lubricating oil in it, then cover the plughole up again.
4. For manual starting generators, press the decompression handle down and pull the recoil handle 2 or 3 times. This pushes the intake out. (Do not start the engine)
5. For electric start generators, press the decompression handle down and crank the engine for 2-3 seconds. To do this, put the starter switch in the "START" position. (Do not start the diesel engine)
6. Finally, pull the recoil starter until you feel resistance; this is when the piston is on the compression stroke where the intake and exhaust valves are closed. Having the intake and exhaust valves closed will prevent rust, as moisture cannot get inside the combustion chamber.
7. Clean the engine and store it in a dry place.

CHAPTER 4: OVERHAULING AND TROUBLESHOOTING

4-1 Overhauling & Troubleshooting Procedures

Causes of Malfunction		Remedy
Diesel engine won't start	Not enough fuel.	Add fuel.
	The switch of fuel is not at "OPEN" position.	Turn the switch of fuel to "OPEN" position.
	High pressure pump and nozzle do not inject fuel or the injected amount is less.	Disassemble the nozzle and adjust it at test table.
	Speed control lever is not at "RUN" position.	Turn speed control lever to "RUN" position.
	Check level of lubrication oil.	The standard amount of lubricating oil should be between high and graduation "H" and low graduation "L"
	It is not quick and powerful to pull reactive starter.	Start diesel engine in accordance with the requirements of "start operation procedures".
	Nozzle is dirty.	Clean the nozzle.
	Accumulator has no electricity.	Charge the accumulator or change it.
Generator won't generate electricity and has no welding voltage	Master switch (NFB) is not switched on.	Turn master witch handle to "ON" position.
	Carbon brush of generator was worn. The contact is bad.	Change the carbon brush.
	The socket contact is bad.	Adjust the contact feet of socket.
	The rated revolution of engine cannot be reached.	Make it reach the rated revolution in accordance with the requirements.
	AVR automatic governor is damaged.	Change it.
	The potentiometer of current regulations for electric welding is damaged.	Change it.

If cannot generate electricity still, please contact with dealer of our company or with our company directly.

4-2 Questions & Answers

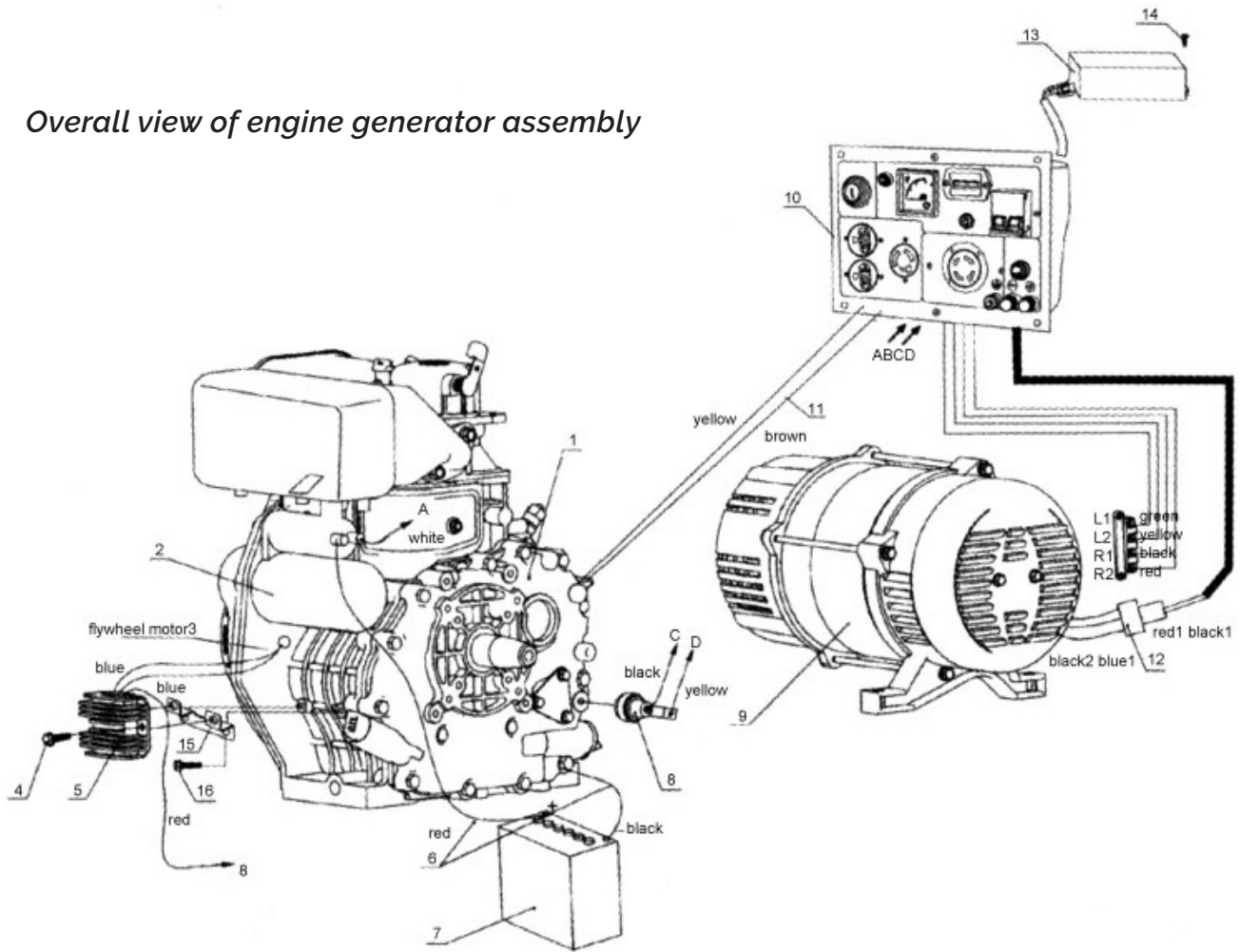
If you do not understand anything or have any questions, please feel free to contact your local dealer or with our company directly. Below is a list of some information you should have ready before contacting your local dealer or us.

1. Model of diesel engine generator and engine model number.
2. State of residency
3. Number of hours of operating equipment along with the problem that occurred.
4. A detailed condition and time when the problem occurred.

In other words, climate and atmosphere.

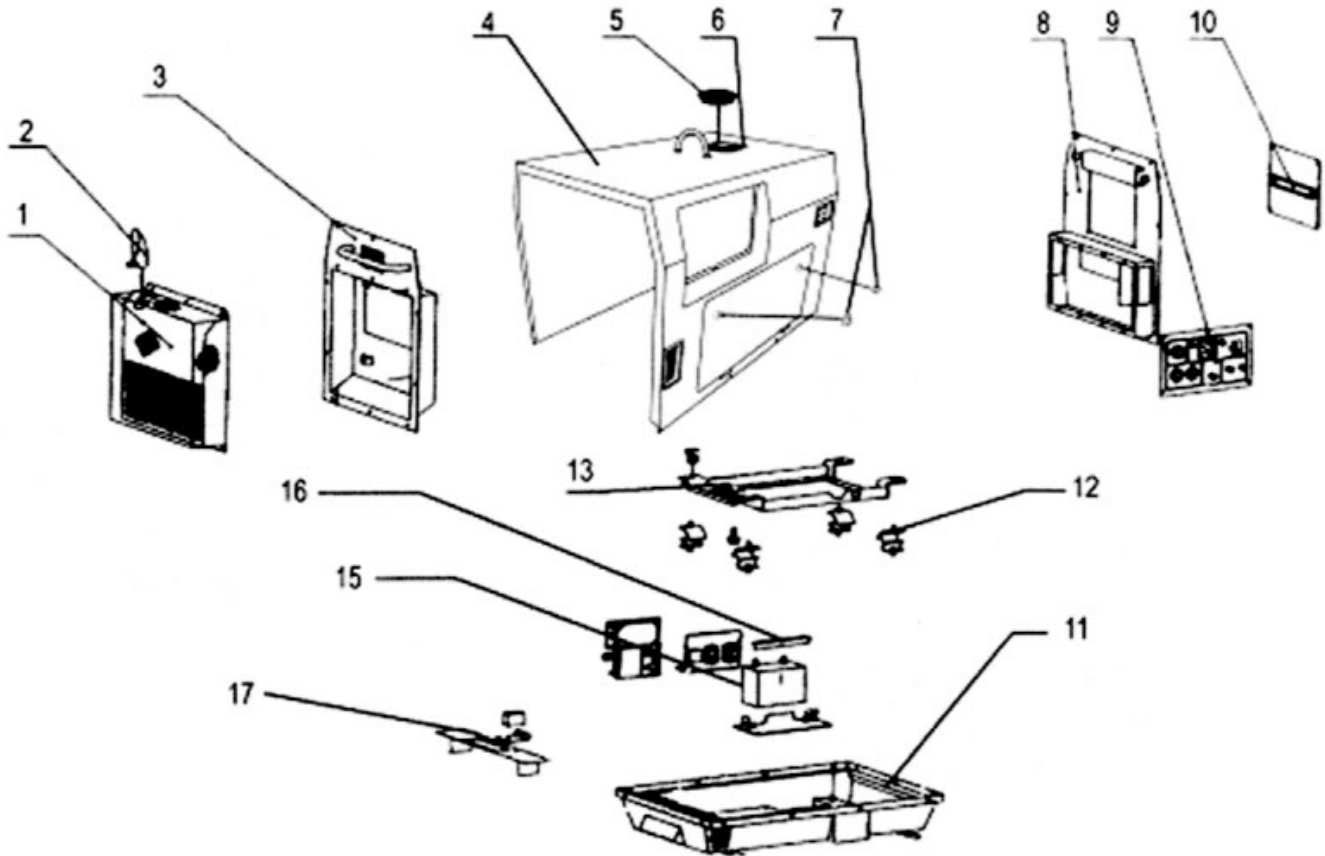
CHAPTER 5: PART LISTINGS

Overall view of engine generator assembly



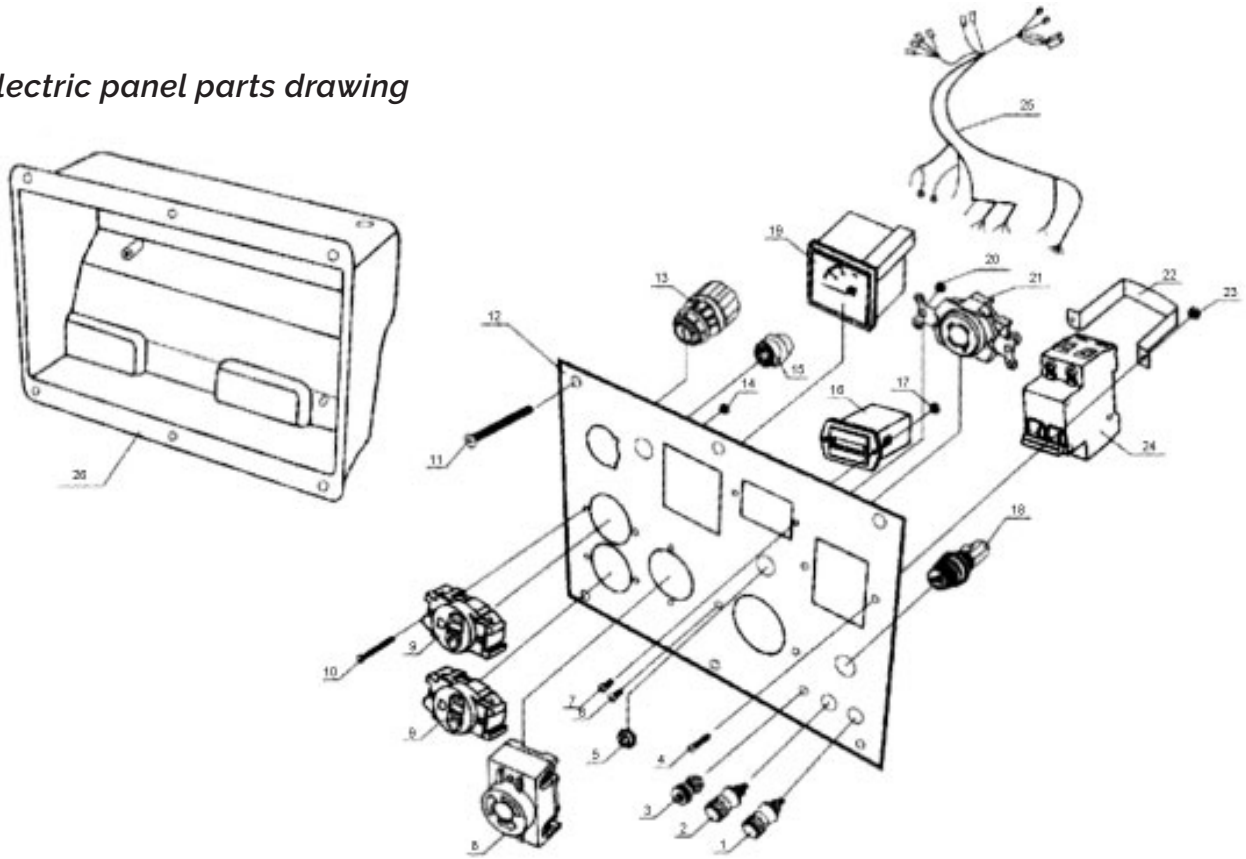
Number	Part Description	Quantity	Part Number
1	Series Diesel Engine	1	4LN1/6LN1
2	Starter Motor	1	4LN2/6LN2
3	Flywheel Generator	1	4LN3/6LN3
4	Bolt	2	4LN4/6LN4
5	Voltage Regulator	1	4LN5/6LN5
6	Battery Cable (red, black)	2	4LN6/6LN6
7	Battery	1	4LN8/6LN7
8	Oil Level Sensor	1	4Ln9/6LN8
9	Generator	1	4LN9/6LN9
10	Output Panel Assembly	1	4LN10/6LN10
11	Throttle Cable	2	4LN11/6LN11
12	Connector Assembly	1	4LN12/6LN12
13	Capacitor	1	4LN13/6LN13
14	Bolt	2	4LN14/6LN14
15	Voltage Regulator Bracket	1	4LN15/6LN15
16	Bolt	2	4LN16/6LN16

Exploded view of frame assembly



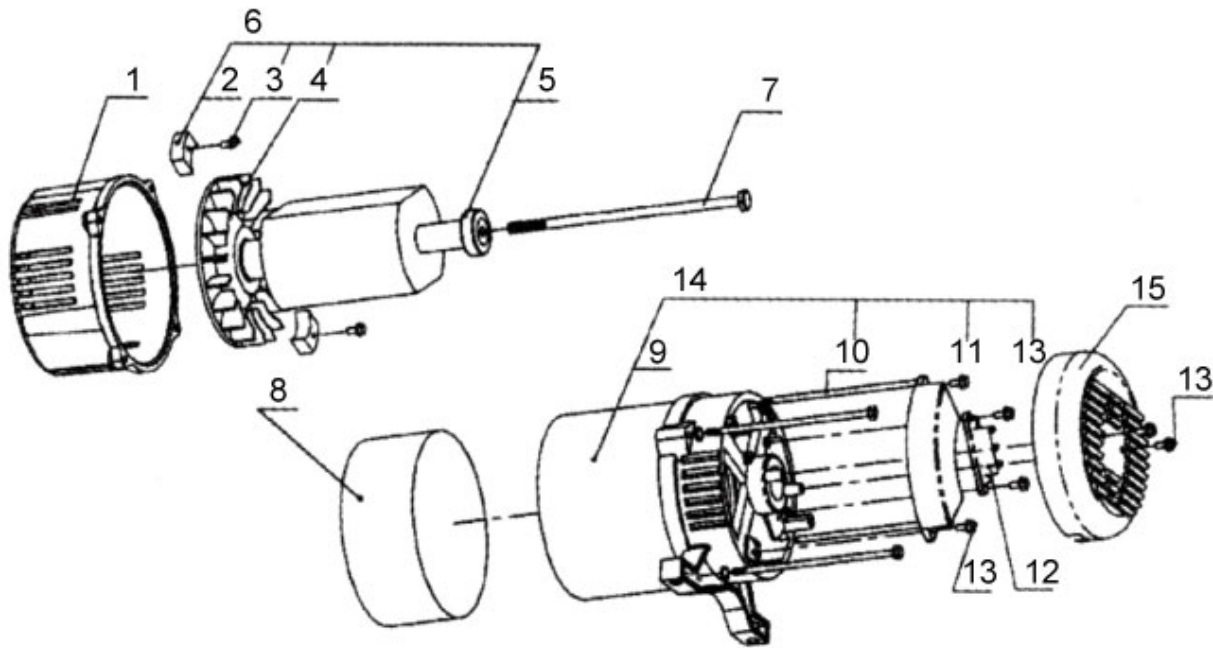
Number	Part Description	Quantity	Part Number
1	Muffler Cover Plate	1	4LN17/6LN17
2	Muffler Elbow	1	4LN18/6LN18
3	Left Outer Cover	1	4LN19/6LN19
4	Fuel Gauge	1	4LN21/6LN21
5	Fuel Tank Sleeve	1	4LN22/6LN22
6	Main Cover	1	4LN23/6LN23
7	Door Knob	1	4LN24/6LN24
8	Right Outer Cover	1	4LN27/6LN27
9	Output Panel Assembly	1	4LN28/6LN28
10	Air Cleaner Cover	1	4LN29/6LN29
11	Lower Chassis	1	4LN30/6LN30
12	Engine Tray Mounts	4	4LN31/6LN31
13	Engine/Generator Tray	1	4LN32/6LN32
14	Wheels	4	4LN33/6LN33
15	Battery	1	4LN34/6LN34
16	Battery Tie Down	1	4LN35/6LN35
17	Long Cover Plate	1	4LN36/6LN36

Electric panel parts drawing



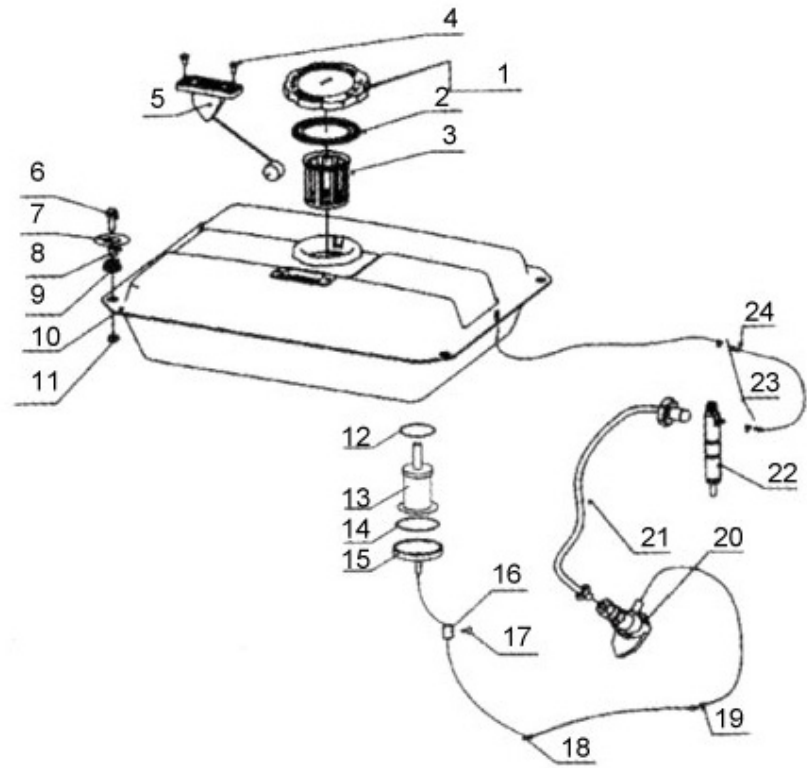
Number	Part Description	Quantity	Part Number
1	Positive DC Port	1	4LN37/6LN37
2	Negative DC Port	1	4LN38/6LN38
3	Grounded Bolt	1	4LN39/6LN39
4	Bolt	2	4LN40/6LN40
5	Large Nut	1	4LN41/6LN41
6	Bolt	2	4LN42/6LN42
7	Bolt	2	4LN43/6LN43
8	Large Nut	1	4LN44/6LN44
9	Current Adjusting Switch	1	4LN45/6LN45
10	3 Prong Socket	6	4LN46/6LN46
11	Bolt	6	4LN47/6LN47
12	Electric Panel Bolt	1	4LN48/6LN48
13	Electric Panel	1	4LN49/6LN49
14	Starter Switch	6	4LN50/6LN50
15	Large Nut	1	4LN51/6LN51
16	Oil Alert Lamp	1	4LN52/6LN52
17	Hour Meter	2	4LN53/6LN53
18	Hour Meter Bolts	1	4LN54/6LN54
19	DC Fuse	1	4LN55/6LN55
20	Voltmeter	1	4LN56/6LN56
21	Nut	2	4LN57/6LN57
22	4 Prong Socket	1	4LN58/6LN58
23	Breaker Bracket	1	4LN59/6LN59
24	Nut	2	4LN60/6LN60
25	Breaker	1	4LN61/6LN61
26	Wiring Harness	1	4LN62/6LN62
27	Electrical Box	1	4LN63/6LN63

Generator Head Assembly



Number	Part Description	Quantity	Part Number
1	Front End Cover	1	4LN64/6LN64
2	Diode	2	4LN65/6LN65
3	M4 x 8 Bolt	2	4LN66/6LN66
4	Fan Blade	1	4LN67/6LN67
5	Bearing	1	4LN68/6LN68
6	Rotor Unit	1	4LN69/6LN69
7	Center Bolt	1	4LN70/6LN70
8	Motor Cover	1	4LN71/6LN71
9	Stator	1	4LN72/6LN72
10	Long Bolt	4	4LN73/6LN73
11	Capacitor	1	4LN74/6LN74
12	Wiring Seat	1	4LN75/6LN75
13	M5 x 15 Bolt	6	4LN76/6LN76
14	Stator Unit	1	4LN77/6LN77
15	Dust Cover	1	4LN78/6LN78

Fuel System Components



Number	Part Description	Quantity	Part Number
1	Fuel Cap	1	4LN79/6LN79
2	Seal	1	4LN80/6LN80
3	Filtering Cup	1	4LN81/6LN81
4	M5 x 10 Screw	2	4LN82/6LN82
5	Fuel Lever Indicator	1	4LN83/6LN83
6	M6 x 25 Bolt	4	4LN84/6LN84
7	Large Flat Washer 6	4	4LN85/6LN85
8	Fuel Tank Lining	4	4LN86/6LN86
9	Shock Absorbing Gasket	4	4LN87/6LN87
10	Fuel Tank	1	4LN88/6LN88
11	M6 Nut	4	4LN89/6LN89
12	O Ring Seal	1	4LN90/6LN90
13	Fuel Tank Filter	1	4LN91/6LN91
14	O Ring Gasket	1	4LN92/6LN92
15	Fuel Filter Cover	1	4LN93/6LN93
16	Cover	1	4LN94/6LN94
17	Wing Nut	1	4LN95/6LN95
18	Fuel Line	2	4LN96/6LN96
19	Fuel Inlet Pipe	1	4LN97/6LN97
20	High Pressure Fuel Pump	1	4LN98/6LN98
21	High Pressure Fuel Pipe	1	4LN99/6LN99
22	Fuel Injector	1	4LN100/6LN100
23	Overfill Tube	2	4LN101/6LN101
24	Fuel Overfill Pipe	1	4LN102/6LN102