affordable generator

Applications for Stand-by and Prime power.
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AFFORDABLE GENERATOR
OPERATING MANUAL
6 KW Diesel Generators

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Thank you for purchasing your generator from Affordable Generator. We are proud of our products and have designed this unit for years of safe and reliable service.

This manual will instruct you in the proper operation and service of your Affordable Generator generator. Please read this manual prior to using the generator to insure safe and proper operation. At all times, follow the instructions to keep your generator in the best working condition and to extend its life. Should you have any comments or problems, please contact us at 877-902-2288 and we will direct you on how to service your generator. We will work with you to answer any questions and solve any problems. This manual addresses the general operation of this unit. As products and their operation can change, this manual is intended only for use with this specific model and does not refer to any other models offered by our company. Please pay particular attention to the warning and caution indicators both within this manual and on the unit itself.

- A warning label indicates that severe personal injury or even death may occur if you do not follow the instructions.
- A caution label indicates that either serious personal injury or equipment damage may result if instructions are not followed.

The Affordable Generator diesel generator will perform safely and to specification if operated according to the following instructions. Failure to do so may result in serious personal injury and/or equipment damage. If you do not understand the contents of this instruction manual, contact Affordable Generator, at 1-877-902-2288 for further clarification.

Warning:

1. Prevent the threat of fire

- **Never** add fuel while the engine is running.
- Wipe off any spilled fuel with a clean cloth before starting.
- Keep all explosive and flammable items safely away from the generator.
- **Maintain adequate ventilation** with **at least** three feet of clear space on all sides of the generator from buildings and other pieces of equipment.
- **NEVER** operate this unit in a closed room or garage.
- Only operate the generator on a level surface
- Do not store the generator indoors while the engine is still hot.

2. Prevent Inhalation of Exhaust Fumes

- Carbon Monoxide is an odorless gas that can **kill you!**
- **Do not** operate this generator in a confined space where the exhaust cannot escape. This means:
    - **Do not** use this unit indoors.
    - **Do not** use this unit in a closed garage.
    - **Do not** attempt to vent the exhaust of this unit outdoors while using the unit indoors.
- Should you experience a headache, ringing in your ears or begin to feel drowsy, **immediately** get some fresh air away from the generator.

3. Prevent being burned

- The muffler and engine body of this generator get very hot when the engine is operating or shortly thereafter. **Do Not Touch** these parts or you may be severely burned.

4. Prevent Electrical Shocks and Short Circuits

- To avoid electrical shocks or short circuits, do not:
    - Touch the unit with wet hands
    - Stand in water
    - Operate in the rain or place the unit in standing water.

- **Note:** This generator is **not** waterproof and therefore should **not** be placed in rain, snow, standing water or any area where there could be water spray. Operating a unit in these environments may cause electrical short circuits that can cause electrical shocks.

- **This generator should also be grounded** to prevent electrical shocks from faulty appliances. To ground this unit, simply connect a length of heavy copper wire between the unit and a ground source.
  Do Not plug in any power cord until **after** the unit is operating. If equipment is attached when starting the generator, it may cause the unit to move resulting in potential injury.

Caution

- Most appliances require more power to start than their rated wattage. Therefore make certain that you do not overload the generator with too many appliances.
- Do not exceed the current limit of any of the sockets on the generator.
- **Do not** connect the generator to a household circuit. The may cause damage to the generator and also to the wiring in your house as well as the electrical appliances.

5. Batteries:

- Batteries contain sulfuric acid which can burn your eyes and skin. Whenever working with a battery, protect your eyes and skin from exposure to the acid. In case of contact with any acid, act **immediately** by thoroughly flushing the affected area with clean cold water and seek **prompt medical attention.**

- Batteries also generate hydrogen gas which can be extremely explosive. **Do not** smoke or allow flames near a battery, especially while in a charging mode. **Always** charge batteries in a fully ventilated area

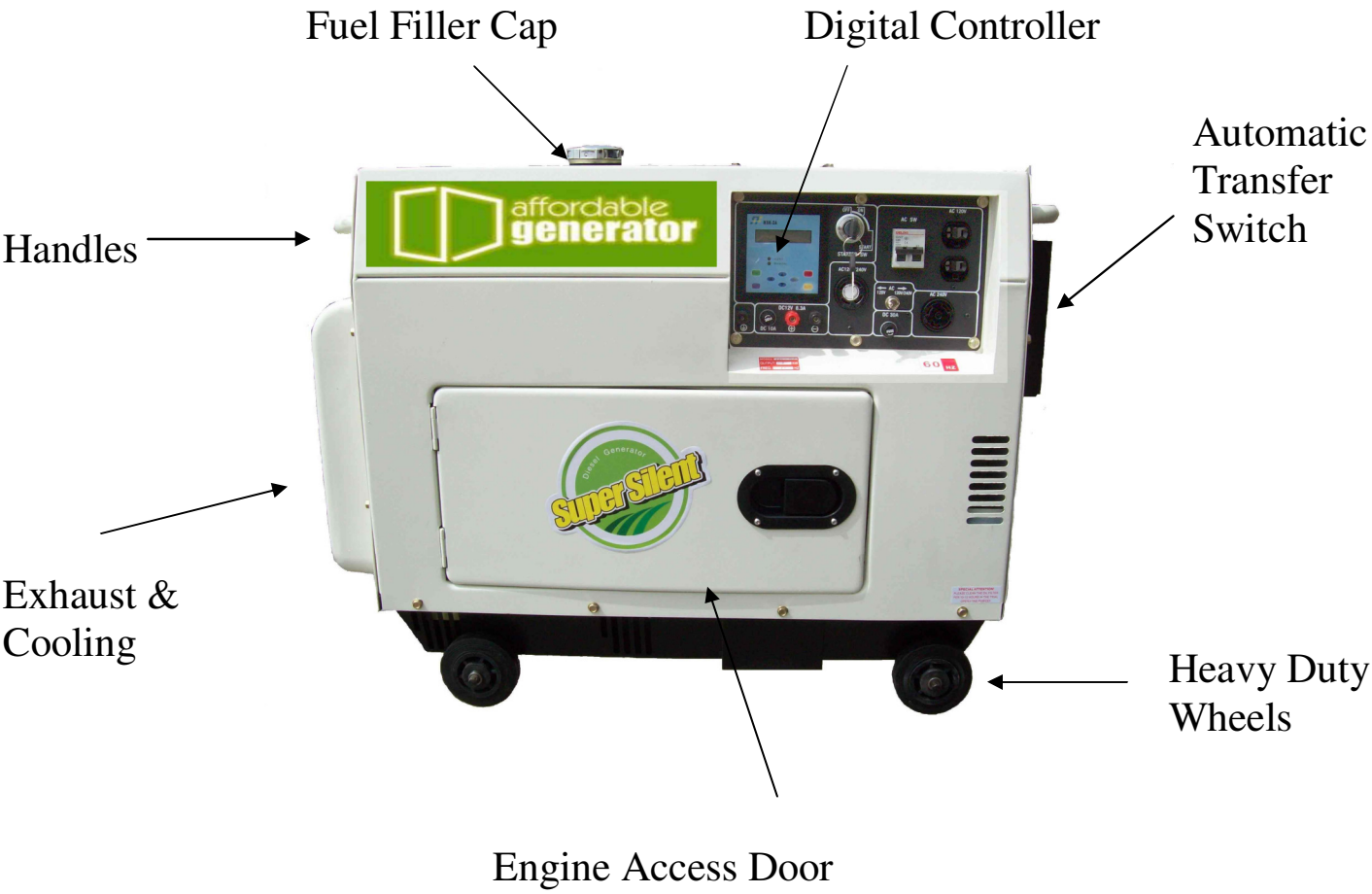
Contents

Technical Specifications and Data

Model	AFF3600
Rated frequency (Hz)	60
Rated voltage (V)	120/240
Rated current (A)	25/50
Rated output power (kW)	6
Max output power (kW)	6.5
Rated rotation speed (rpm)	3600
Power factor	cos 1
Phase number	Single
Pole number	2
Excitation Transistorized	Self-excitation constant voltage (AVR)
ATS type	ATS Manual/ Automatic
Alternator type	KT5
Structure type	Silent type
Fuel tank capacity(g)	4.3
Continuous running time(hr)(at rated power)	8
Noise level [dBA/7m](zero load full load)	70
Starter system	Electric Starter
Fuel type	Diesel
Lube oil brand	SAE15W40
Engine type	Single cylinder,4-stroke,aircooled, vertical, diesel engine
Bore stroke(mm)	86 72
Compression ratio	19:01
Engine Power	10HP
Rotation direction(from the flywheel)	clockwise
The lowest fuel consumption(g/kw.h)	3600r/min:281

2. Configurations

2.1 Part names



2.2 Control panel

Digital Controller

Power and Start

AC 120V Outlets and Breakers

AC 120/240V Outlet

AC 240V Outlet

3. Before Starting Your Generator

3.1 Selection and handling of diesel fuel

- Only use light diesel fuel
- Keep dust and water out of the fuel. Failure to do so will create problems with the injection pump and nozzles.
- **Do not** overfill the tank beyond the red plug inside the fuel oil filter. Doing so can be very dangerous.

Warning:

- Refuel in a well-ventilated area with the engine **off.**
- Do not smoke or allow open flames or sparks near where you are refueling or where the fuel is stored.
- Do not overfill the tank. Make sure that the fuel cap is securely tightened after refueling.
- Do not spill any fuel. If fuel is spilled, make certain that the spilled fuel is removed **before** starting the engine.

3.2 Check and refill engine oil

Warning:

- Before every start, make certain that your generator is on a level surface and then check the oil level.
- The engine may be damaged if it is operated with insufficient oil.
- Too much oil may cause a sudden increase in engine speed also damaging your generator.

Caution: Your Affordable Generator generator is equipped with a “low oil” warning system. This system automatically stops the engine when the oil level becomes dangerously low, preventing major damage to your generator. **Do not** rely totally on this system for maintaining proper oil levels, as it only represents an emergency situation and not a method for checking your generator’s oil level.

Oil Selection

It is very important that you select the proper engine oil to maintain the life and performance of your generator. If inferior or the wrong weight oil is used, or if your engine oil is not replaced periodically, there is a risk of major damage to your engine due to overheating. Affordable Generator recommends CC/CD oil only classified by API. Choose the applicable viscosity according to your local temperature. Affordable Generator recommends Rotella 15W 40 oil.

3.3 Servicing the air filter

1. Remove the ATS switch.

2. Remove the wing nut from the air filter cap and then the cover itself. This will allow you to remove the filter.

Caution:

- Do not wash the filter with detergent.
- Replace the air filter when it impedes the flow of air and cannot be completely cleaned.
- One indicator is when the engine exhaust changes color.
- Never operate the generator without the air filter.

3. Reattach the air filter cover and tighten the wing nut.

4. Replace the Automatic Transfer Switch

3.4 Checking the Generator

1. Make certain that you turn off the main switch and any other electrical load before inspecting the generator.

Warning:

- Turn off the main switch before starting.
- The generator must be grounded to prevent electrical shocks.

2. Operating dual voltage generators.

- Make sure that you use the correct outlet for the rated voltage of the device being powered.

Caution:

- The main switch must be in the “on” position during operation.
- Before starting the engine, either **unplug the devices** to be powered or make certain that all of the devices are turned **“off”.** *If the switches for the devices are left in the “on” position and the generator is started the sudden surge in power can be very dangerous.*

3.5 How to open the cabinet door and remove the protective covers of the generator.

1. Always open the generator cabinet door and inspect the engine prior to starting the generator. To do this, simply pull the handle towards you and swing the door open.

2. Loosen the wing nut of the air cleaner and inspect the cleaner.

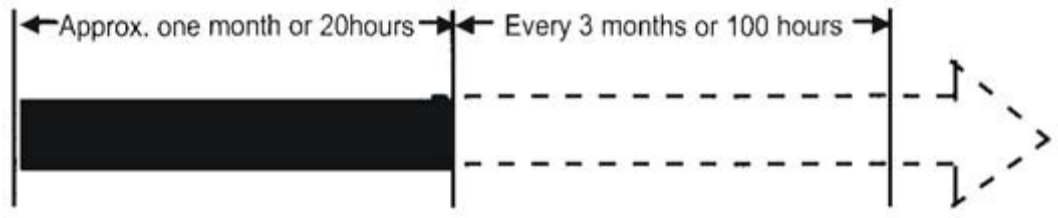
3. Open the wing nut on the cover and inspect the nozzle cover.

3.6 Breaking in your new generator

The first 20 hours of operation are required to properly seat your generator's operating parts. During this period, the following steps **must** be taken:

- During the initial operation, run the generator at low speed and with nothing plugged in for a minimum of **five minutes.**

- Avoid applying any heavy demands to the unit during the break-in period. Affordable Generator recommends that the engine be operated at 3,000 RPM with no more than a 50% load for the first 20 hours of operation.



4. Starting the Generator

Warning: Do not plug in tools or devices prior to starting your generator.

4.1 Electric Starting

1. Starting (The preparations for electric starting are the same as for recoil starting)

- Open the fuel valve

- Set the engine speed lever on “RUN”

- Turn the ignition key to the “ON” Position. This will turn on your digital controller.

- Press the “Start” or “Auto” Button on the digital controller.

OR

- Turn the ignition key clockwise to the “START” position removing your hand from the key as soon as the engine starts. If the engine does not start in 10 seconds, wait 15 seconds and repeat the process.

Note:

- Make sure the fuel flow valve is turned to the “ON” position prior to starting.

- Make sure the flow of fuel is un-obstructed. Crimps in the line may cause your generator not to start.

2. Battery:

- If the battery has an open cell design, check the water level every month. If it is low, refill using distilled water until the cell is full. If the battery is a sealed unit, checks for cracks and leaks.

Caution

- If the distilled water level is too low, the engine may fail to start because there isn't sufficient battery power. If the water level is too high, the fluid will corrode surrounding parts shortening the life of the battery. Always maintain the level of distilled water at the recommended level. **Never** use well or tap water as the minerals in the water will destroy your battery.

5. Operating Your Generator

1. Before plugging anything into the generator, let your generator run for a minimum of three minutes at normal speed.

2. If your generator has a "low oil" light, check to make certain that it is not illuminated.

Caution

- The low oil warning light is activated by either a low pressure level or an inadequate amount of oil in the reservoir. When the low oil light is activated, the engine will automatically stop. If you attempt to start the generator without addressing the problem, the unit will not start. When the "low oil" light illuminates, check the oil level first to make certain that there is adequate oil in the reservoir.

- **Do not** adjust either the engine governor bolt that controls engine speed or the fuel injection bolt that controls fuel mix. Doing so will affect the overall performance of your generator.

5.2 Operational System Checks

- Determine whether there is abnormal sound or vibration
- Determine whether the engine misfires or runs rough.
- Examine the color of the exhaust. If it is too black or too white, shut off your generator and contact your Affordable Generator service representative.

Caution:

- If your generator has been in operation, the muffler will be extremely hot. **Do Not** touch the muffler as you can be severely burned.
- Never refill the fuel tank while the engine is running.

6. Your Generators Capacity

Caution

- Do not attempt to start two or more devices simultaneous. First plug in or start one device and then the next and then the next.
- Do not use floodlights with other devices.

6.1 AC application

- Make certain that you operate the generator at its rated speed in RPM's. If this is not done, the AVR or *Automatic Voltage Regulator* will incorrectly produce too much voltage shortening the life of the AVR.
- After switching on the air switch, check the voltmeter on the control panel. The voltmeter should point to 120V +/- 5% for a single phase generator and 230V +/- 5% (50 Hz) for a multiphase generator.

- When the dual voltage generator exceeds or is below these levels, then the “air” switch should be in the “OFF” position. If not both the generator and the devices powered by it can be damaged.
- Always connect devices to the generator with the highest demand device first and then the lesser demand devices afterward. If the operation becomes overloaded, the generator engine will lag or stop suddenly. If this happens, unplug all devices immediately, turn off the main switch on the generator and check all systems.
- Three phase generators
    - Make certain that you balance all three phases during operation. Stop the engine and check to see if the generating is operating within 20% of specification. If the engine is not, reduce your load or turn off the generator.
    - The sum of the load for each phase must be below the overall rated load. In addition, the overall current drawn must be less than the overall rated current.
    - The phase arrangement A, B, C, D (or U, V, W, N) should be from left-to- right or clockwise.
    - If you are attempting to start three non-synchronous motors, always start with the heaviest duty motor first and then progress to the lighter duty units.

Note: If overloading the circuit trips the circuit breaker, reduce the electrical load on the circuit and then wait a few minutes before resuming operation.

6.2 DC application

1. The DC terminals are only for charging the 12V battery included with your generator.

2. Set the “air” switch in the “OFF” position while charging the battery. On the 12V output terminals, a charge switch can be installed so that the unit can be turned on and off as desired.

3. If your generator has an automatic battery with separate leads, make certain that you disconnect the negative lead while you are charging the battery.

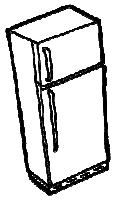
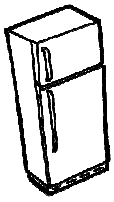
Caution

- Identify and connect positive-to-positive and negative-to-negative poles from, the battery to the engine. Crossing the wires will destroy both the battery and the electrical components of your generator.
- If you attempt to use a larger battery than recommended you will create excessive current that will blow the fuse in the generator.
- **Do not** attempt to operate the generator while it is still connected to the battery.
- **Do not** use a 12V battery and AC current at the same time.

Caution

- All lead batteries emit explosive gas when being charged. Keep sparks, flames and cigarettes away from the battery while charging. To prevent sparks, always connect the booster cables to the battery first and then to the generator. When the battery is charged, disconnect the cables from the generator first.
- Charge the battery in a well ventilated place.
- Unless the battery is sealed, remove the caps from each cell before charging.
  Stop charging if the battery feels extremely hot. If the temperature exceeds 45C or 113F then the battery is too hot.

6.3 All electrical appliances, particularly motor driven equipment, have extremely highly levels of current draw during their start-up period. The table below provides a quick reference regarding connecting different types of devices to the generator.

TYPE	Wattage		Typical Appliance	EXAMPLE		
	Starting	Rated		Appliance	Starting	Rated
• Incand-escent lamp • Heating applian-ce	X1	X1	 	 100W	100W	100W
• Fluores-cent lamp	X2	X1.5		 40W	80W	60W
• Motor-driven equip-ment	X3~5	X2	 	 150W	450-750W	300W

7. Stopping Your Generator

Step I: Disconnect all electrical plugs from the generator outlets **before turning off the generator!**

Step II: To turn just the engine off press the red "STOP" button on the digital controller.

1. Move the fuel lever to the **"Off"** position.

OR

Step III: To turn the engine and controller off turn the key to the "OFF" Position.

2. Move the fuel lever to the **"Off"** position.

Warning:

- Should the engine continue to operate when the key is in the "OFF" position open the cabinet and set the speed lever to "Stop" position.

- If it continues to run turn fuel valve to the "Close" position or loosen the nut of the high pressure fuel pipe on the pump side of the engine. If you do this, remember to tighten it again before attempting to start the engine.

- **Do not** attempt to stop the engine with the decompression lever.

- **Always** make certain that all electrical plugs are removed from the generator outlets before turning off your generator.

8. Periodic Maintenance and Testing

Periodic inspections and service are very important for maintaining your generator's engine in proper working order. The following chart indicates your inspection and service frequency. Please keep this chart handy and refer to it as needed.

Warning:

- Turn off the engine before performing any service. If the engine must be in operation, only do so in a well ventilated area as the exhaust contains carbon monoxide which can be fatal.
- After the generator has been operated, remove all dirt and sediments from the outside cover to prevent corrosion.

Item \ Interval	Every day	First month or 20 Hrs	Third Month or 100 Hrs	Sixth Month or 500 Hrs	Every year or 1000 Hrs
Check and refill fuel oil	■				
Drain out fuel oil		■			
Check and refill engine oil	■				
Check for oil leakage	■				
Check and tighten fastening parts	■			■Tighten the cylinder head bolts	
Replace engine oil		■	■		
Clean engine oil filter				■	
Replace air cleaner element	(Service more frequently when used in dusty areas)			■	
Clean fuel oil filter				■	■
Check fuel injection pump				■	
Check nozzle				■	
Check fuel pipe				■	
Adjust clearance of intake/exhaust valves		■		■	
Grind intake/exhaust valves					
Replace piston ring					■
Check battery electrolyte					■
Check carbon brush and slip ring				■	
Check insulation resistance	■ The generating set has been stored more than 10 days				

■ Indicates special tool requirements. Please locate your attached packet.

8.1 Replacing the Engine Oil

1. Operate the engine for two to three minutes without ***allowing the engine to get hot.***

2. Turn off the engine

3. *While the engine is still swarm*, remove the oil filter cap and the drain plug located on the bottom of the cylinder block, allowing the old oil to drain. Insert the drain plug, refill with recommended oil and place the oil filter cap back on the engine. *Remember to recycle your oil as it is a major cause of soil pollution.*

8.2 Cleaning the engine oil filter

Clean the engine oil filter every six months or 500 hours, whichever comes first. Replace if necessary with authorized Affordable Generator parts.

8.3 Replacing the air cleaner

Do not clean the air cleaner with detergent. Replace the unit every six months or 500 hours, whichever comes first, with authorized Affordable Generator parts.

Caution: Never operate the engine without the air cleaner or with a defective cleaner as it can damage the interior of your engine and shorten its life.

8.4 Cleaning and replacing the fuel oil filter

The fuel oil filter also requires periodic cleaning to insure maximum engine performance.

Cleaning: Every six months or 500 hours

Replacement: Every year or 1000 hours

1. Drain all fuel from the fuel tank.

2. Remove the small screw from the fuel valve, removing the fuel filter from its port.

3. Wash the filter thoroughly with diesel fuel.

4. Loosen the fastening nut, bottom cover and delivery discs for removing any carbon.

5. Replace the filter and all parts to their original position.

8.5 Tightening the Cylinder Head Bolt

Tightening the cylinder head requires a special tool. **Do Not** attempt this yourself! Contact a certified professional.

8.6 Checking the injection nozzle and fuel injection pump requires a certified professional who will:
1. Adjust the clearance for the intake/exhaust valves.
2. Grind the intake and exhaust valves
3. Replace the piston ring

Warning: Do not perform the injection nozzle test near an open flame as the fuel may ignite. Do not expose bare skin to the fuel as it may cause injury. **Always** keep away from the nozzle.

8.7 Checking refilling and charging the battery

Your diesel generator uses a 12V battery for starting. Through use, the battery may naturally lose some of its charge along with the distilled water inside. Before starting your generator, periodically check for physical damage to the battery and also the fluid levels. If the battery is damaged, replace it. If the fluid levels are low, fill each cell with distilled water as needed. Never use well or tap water as they contain minerals that will harm your battery and shorten its life.

Warning:

- Batteries contain sulfuric acid which can burn your eyes and skin. Whenever working with a battery, protect your eyes and skin from exposure to the acid. In case of contact with any acid **immediately** thoroughly flush the affected area with clean cold water and seek **prompt medical attention.**
- Batteries also generate hydrogen gas which can be extremely explosive. **Do not** smoke or allow flames near a battery, especially while in a charging mode. **Always** charge batteries in a fully ventilated area.

8.8 Inspecting the carbon brush and slip ring.

Periodically, check the generators carbon brush and slip ring and readjust if there is a spark.

9. Long-Term Storage

If your plan on storing your generator for periods of time exceeding one month, please follow these guidelines:

1. Operate the engine for two to three minutes. ***Do not allow the engine to get hot.***

2. Turn off the engine.

3. **While the engine is still warm**, drain the crankcase oil by opening the oil drain plug.

4. When all oil has drained, replace the plug and refill the oil reservoir with clean oil.

5. Remove the screw plug on the cylinder head and refill of an ounce of oil (22 CC) and replace the screw plug.

6. It is now necessary to turn the engine over **without starting it.**

> **a) Recoil Start:** Push the decompression level down to the noncompression position and hold it while pulling the recoil starter three times.
>
> **b) Electric Start:** Turn the engine for 2-3 seconds with the decompression lever set in the *non-compression mode* and the key in the “start” position.

7. Now pull the decompression lever up and pull the recoil starter slowly until you begin to feel resistance. In this position both the intake and exhaust valves are closed which prevents rust from forming inside the engine.

8. Wipe off any oil or dirt from the engine and store your generator in a dry place.

10. Troubleshooting & Solutions

	Fault Cause	Remedy
The diesel engine can not start	Fuel oil is not sufficient	Refill the fuel oil
	Fuel cock is not at the START position	Turn it to START position
	Fuel injection pump and nozzle do not deliver the fuel or deliver sufficient level	Remove the nozzle and repair it at test table
	The governor lever is not in START position	Set the lever to START position
	Low oil	The specified oil level should be between the upper level and lower level
	The Speed and force to pull the recoil starter are not enough	Start the engine according to the start procedures included in this book
	The nozzle is dirty	Clean the nozzle
	The battery has no electricity	Charge it or replace it with a new one.
The generating set can not generate	Main switch not turned on	Turn the main switch to ON position
	The carbon brush is worn	Replace the carbon brush
	The contact of the socket is not good	Adjust the socket
	The rated speed can not be attained	Adjust it according to the requirements
	AVR is damaged	Replace the AVR

11. GENERATOR PARTS

2-1 CYLINDER BLOCK ASSEMBL<1>

NO.	CODE	DESCRIPTION
1	7001017	Drain Plug
2	7001100	Oil Plug Seal Assembly
3	9701351	Oil Seal SG35*50*10
4	7011200	Fuel Controller Assembly
5	9702024	O-Ring 24*2.4
6	7801002	Oil Filler Cap
7	9802008	Needle Bearing 7941/8
8	7001012	Stud Plate(Short)
9	7001011	Stud Plate(Long)
10	7012001	Fuel injection Pump Gasket
11	7012003	Seal Gasket
12	7012002	Seal Plate
13	9901061	Nut M6
14	7001009	Retainer
15	9903080	Washer 8
16	9902081	Bolt M8*12
17	9802015	Needle Bearing 37941/15
18	8601003	Cylinder Heed Stud(Short)
19	8601007	Cylinder Heed Washer
20	8601005	Cylinder Heed Washer(Short)
21	8601013	Cylinder Heed Gasket
22	8601006	Cylinder Heed Nut(Long)
23	8601004	Cylinder Heed Stud(Long)
24	8601008	Ring
25	8601015	Crank Case Gasket
26	9801207	Ball Bearing D207
27	8601014	Main Bearing
28	9905081	Pin8*12
29	8601001	Cylinder Block
30	8601016	Crank Case Cover
31	9701351	Oil Seal SG35*50*10
32	9902083	Bolt M8*33.5
33	7001019	Plug
34	7001021	Plunger 8
35	\	Bolt M6*28

36	9902064	Bolt M6*14
37	8601018	Air Governor
38	7801602	Air Governor Collar
39	7801601	Shock Absorber
40	7801603	Shock Absorber Seat

2-2 CYLINDER BLOCK ASSEMBL<1>

NO.	CODE	DESCRIPTION
1	8602014	Air Intake Gasket
2	8602200	Cylinder Heed
3	8602003	Intake Valve
4	8602004	Exhaust Valve
5	8602015	Silencer Gasket
6	9905041	Pin4*8
7	8602007	Valve Spring Washer
8	8602005	Valve Spring
9	8602002	Spring Retainer
10	8602106	Rocker Arm Bolt
11	7002105	Valve Screw
12	9901060	Nut M6
13	8602103	Exhaust Valve Rocker Arm
14	8602102	Rocker Arm Support
15	8602101	Rocker Arm Shaft
16	8602104	Intake Valve Rocker Arm
17	8602016	Valve Adjusting Plate
18	8602001	Cotter
19	9901061	Nut M6
20	7002009	Nozzle Retainer
21	7002018	Spacer Washer
22	7002011	Spacer
23	9909062	Stud AM6*50
24	9909064	Stud AM6*75
25	9902070	Bolt M6*22
26	9909081	Bolt M8*20
27	9902072	Bolt M6*28

2-3 CYLINDER HEAD BONNET ASSEMBLY<1>

NO.	CODE	DESCRIPTION
1	8603001	Cylinder Head Bonnet
2	7003203	Pin

3	9702012	O-Ring 12*1.9
4	8603003	Bonnet Gasket
5	7001021	Plunger8*10
6	9702010	O-Ring 10*1.9
7	9902075	Bolt M6*70
8	9905316	Pin3*16

2-4 PISTON & CONNECTING ROD ASSEMBLY

NO.	CODE	DESCRIPTION
1	8604100	Oil Ring Assembly
2	8604101	First Gas Ring
3	9604102	Second Gas Ring
4	8604103	Piston
5	8604104	Piston Pin
6	9906023	Washer 23
7	8604201	Connecting Rod Body
8	8604203	Rod Nut
9	8604205	Rod Bolt Nut
10	9905301	Pin3*10
11	8604202	Crank Pin Box
12	8604204	Rod Bolt Washer
13	8604205	Crank Pin Bearing

2-5 CRANK SHAFT & FLYWHEEL ASSEMBLY

NO.	CODE	DESCRIPTION
1	9801203	Ball Bearing 203
2	8605007	Balancer Shaft
3	9904051	Key 5*7
4	8605201	Crank Shaft
5	7005202	Plunger 6
6	9904052	Key 5*12
7	9904053	Key 5*14
8	9904061	Key 6*50
9	8605101	Fly Wheel
10	8605102	Fly Wheel Gear
11	8605103	Fly Wheel Nut Washer
12	8605002	Fly Wheel Nut

13	8605001	Starter Pulley
14	9902062	Bolt M6*12
15	9801308	Ball Bearing
		308
16	8605009	Balancer Gear
17	8605006	Balancer Gear
18	8605004	Crank Shaft Timing Gear
19	8606002	Camshaft Timing Gear

2-6 CAMSHAFT ASSEMBLY

NO.	CODE	DESCRIPTION
1	8606100	Valve Rod Assembly
2	8606003	Valve Tappet
3	9904053	Key
		5*14
4	86066001	Camshaft

2-7 AIR CLEANER ASSEMBLY

NO.	CODE	DESCRIPTION
1	8607001	Air Cleaner Gasket
2	8607401	Intake Pipe
3	7007402	Air Cleaner Element Assembly
4	8607100	Air Cleaner Element Assembly
5	9901061	Nut6
6	8607300	Air Cleaner Bottom Case Assembly
7	8607303	Shock Absorber Washer II
8	8607101	Air Cleaner Element Shock Absorber
9	8607203	Shock Absorber Washer I
10	8607201	Ring
11	8607211	Air Cleaner Shock Absorber
12	8607107	Nut M6
		M8
13	9903080	Washer
		8
14	8607200	Air Cleaner Cover Assembly

2-8 SILENCER ASSEMBLY

NO.	CODE	DESCRIPTION
1	8608100	Case Assembly
2	9902061	Bolt M6*8
3	8608200	Silencer Welded Assembly
4	9903080	Washer8
5	9903081	Washer8
6	9901080	Nut M8
7	9902081	Bolt
		M8*12

2-9 LUBE OIL SYSTEM

NO.	CODE	DESCRIPTION
1	9902061	Bolt M6*8
2	7009003	Oil Pump Cover
3	9702345	O-Ring 34.5*1.8
4	7009103	Outer Rotator
5	7009101	Inner Rotator
6	8609102	Oil Pump Shaft
7	9905031	Pin3*16
8	7809004	Oil Pump Gear
LA178/LA186 Oil Filter Assembly		
9	7809200	Oil Filter Assembly
10	9702025	O-Ring 25*2.4
11	9902064	Bolt M6*14
12	7809005	Intake Pipe

2-10 FUEL TANK &FUEL PIPE ASSEMBLY

NO.	CODE	DESCRIPTION
1	9902086	Bolt M8*45
2	7010003	Upper Stay Bolt
3	9903080	Washer 8
4	8610001	Upper Stay
5	7010002	Damper
6	7010013	Clamp
7	1010012	Fuel Oil Return Pipe
8	7010005	Clamp
9	7010006	Fuel Level Pipe

10	9902064	Bolt M6*14
11	7010400	Fuel Tank Cock Assembly
12	9702132	O-Ring 13.2*1.8
13	7010011	Clamp
14	7010009	Fuel Oil Pipe
15	7010007	Fuel Oil Filter Gasket
16	8610300	Filer Element Assembly
17	8610500	Fuel Injection Pipe Assembly
18	8610201	Fuel Tank Welded Assembly
19	7010004	Fuel Oil Filter
20	7010015	Fuel Level Mark
21	7010100	Fuel Tank Cop Assembly
22	7010014	Lower Stay Assembly
23	9901061	Nut M6
24	7010016	Fuel Tank Oil Plug Seal Assembly
25	9902121	Bolt M12*12
26	8610017	Fuel Injection Pipe Damper

2-11 GOVERNOR & CONTROL SYSTEM(F/FP)

NO.	CODE	DESCRIPTION
1	7011303	Control Handle
2	7011302	Pull Lever Head
3	7011304	Handle Bracket
4	7011301	Handle
5	9901060	Nut M6
6	7011305	Pull Bolt
7	7011306	High Speed Limit Screw
8	7011006	Return Spring Ⅱ
9	7011005	Return Spring Ⅰ
10	8611007	Governor Spring
11	9902064	Bolt M6*14
12	9902069	Bolt M6*20

2-12 FUEL INJECTION PUMP ASSEMBLY

NO.	CODE	DESCRIPTION
1	7012006	Delivery Holder
2	7012003	Delivery Spring
3	7012009	Delivery Gasket

4	7012201	Delivery Valve
5	7012202	Delivery Seat
6	7012400	Joint
7	7012005	O-Ring
8	8612101	F.L. Pump Body
9	8612100	Plunger
10	7012013	Shim Set
11	9905206	Pin
12	7012011	Packing
13	7012300	Control Lever Assembly
14	7012004	Snap Ring
15	9905308	Pin3*8
16	7012012	Spring Seat
17	7012016	F.l. Pump Spring
18	7012015	Spring Seat
19	7012014	Tappet

2-13 FUEL NOZZLE ASSEMBLY

NO.	CODE	DESCRIPTION
1	7013200	Nozzle Holder Assembly
2	7013007	Shim Pack
3	7013006	Nozzle Spring
4	7013005	Spring Retainer
5	7013003	Stop Plate
6	7013004	Pin
7	8613100	Nozzle Valve
8	7013002	Nozzle Case Nut

2-14 RECOIL STARTER ASSEMBLY

NO.	CODE	DESCRIPTION
1	9901081	Nut M6
2	7014006	Friction Plate
3	7014003	Friction Washer
4	7014004	Ratchet Plate
5	9903060	Washer 6
6	7014005	Return Spring
7	7014002	Push Spring

8	7014001	Ratchet
9	9905082	Pin8*18
10	8614012	Reel
11	8614009	Spiral Spring
12	8614100	Case Assembly
13	9902061	Bolt M6*8
14	8614008	Starter Rope
15	7814007	Starter Handle

2-15 RECOIL STARTER ASSEMBLY

NO.	CODE	DESCRIPTION
1	8617003	Shock Absorber Seat
2	8617100	Fan Case Welded Assembly
3	7017002	Shock Absorber
4	7017003	Collar
5	9903063	Washer 6
6	9902070	Bolt M6*22

2-16 RECOIL STARTER ASSEMBLY

NO.	CODE	DESCRIPTION
1	7016100	Fly Wheel Generator
2	9902067	Bolt M6*20
3	9902063	Screw M6*12
4	9902062	Bolt M6*12
5	7016003	Clamp
6	7015004	Regulator
7	7016005	Starting motor
8	9902103	Bolt M10*35
9	9903100	Washer 10
10	9903101	Washer 10

- For an extended list of parts for your Affordable Generator 6KW diesel gen set please consult your included manual or call us at 1-877-902-2288.

12. LIMITED WARRANTY

Affordable Generator offers a one (1) year/500 hours (whichever comes earlier) *parts only* manufacturer's limited warranty relative to defective parts from the date of purchase.
Labor is expressly excluded from this limited warranty. The purchaser shall identify and return the defective/faulty product or component/part thereof to our designated facility for inspection. The faulty/defective product/component/part will then be inspected and repaired or replaced (at our option). The repaired/replaced component shall then be returned to the purchaser.
The purchaser shall be responsible for all shipping and handling costs (both ways) of faulty products or parts to us for replacement or repair. Certain items which are subject to normal wear and tear are specifically excluded from this warranty (e.g. filter, belts, spark plugs, etc.)
We shall not be responsible for faulty installation, operation or maintenance of the product and as such we recommend installation, assembly, repair and maintenance only by certified and qualified professionals.
We reserve the right to require proof of same before honoring any parts warranty replacement/repair. Damage resulting from failure to use the product in a manner consistent with our/manufacturer’s recommendations shall render the limited warranty void. This limited warranty specifically excludes any consequential and/or incidental loss or damage.