

GENSD7

7000 Surge Watts / 6300 Running Watts DIESEL GENERATOR INSTRUCTION MANUAL



READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRODUCT.

This manual provides important information on proper operation & maintenance. Every effort has been made to ensure the accuracy of this manual. These instructions are not meant to cover every possible condition and situation that may occur. We reserve the right to change this product at any time without prior notice.

IF THERE IS ANY QUESTION ABOUT A CONDITION BEING SAFE OR UNSAFE,
DO NOT OPERATE THIS PRODUCT!

DO NOT RETURN THIS PRODUCT TO THE RETAILER - CONTACT CUSTOMER SERVICE.

If you experience a problem, have questions or need parts for this product, call Customer Service at **1-866-460-9436, Monday-Friday, 8 AM - 4 PM Central Time**. A copy of the sales receipt is required.

FOR CONSUMER USE ONLY – NOT FOR PROFESSIONAL USE.

KEEP THIS MANUAL, SALES RECEIPT & APPLICABLE WARRANTY FOR FUTURE REFERENCE.

GENSD7 7000 Surge Watts / 6300 Running Watts Diesel Generator



FEATURES

- Generator Type : 7000 Watt
- Self Excited, 2 Pole, Single Phase
- Voltage Regulator: Automatic (AVR)
- Starting System: Electric Start
- Engine Displacement: 418CC
- Engine Horsepower: 9 HP
- Fuel Type: Diesel
- Fuel Tank Capacity: 4 Gallons
- Engine Run Time: 7 Hours @ Full Load
- Engine Noise Level: <70 db
- Automatic Low Oil Shutdown
- Includes Wheels For Mobility
- EPA Approved

TECHNICAL SPECIFICATIONS

Rated Frequency 60 Hz	Rated Output 6.3 kw
Rated Voltage 120/240V	Max Output 7.0 kw
Rated Current 19.2 AMP	Power Factor 1.0
Phase - Single	
Max Height Above Sea Level	3,280 FT (1000 m)
Max Environment Temp	104°F (40°C)
Weight	392 Lbs (178 kg)
Size 37.8 in x 21.8 in x 30.7 in (960 x 555 x 780mm)	

Required Battery - 6-FM-22 (12V22AH.22HR) Not Included

Add Diesel Fuel ONLY (DO NOT ADD GASOLINE)

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THIS ENGINE MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1054.625 .

The emission-related warranty is valid for two (2) years. Keep the purchase receipt and mail in the product registration card for proof of purchase. NB Corp limits emission-related warranty repairs to authorized service centers for owners located within 100 miles of an authorized service center. For owners located more than 100 miles from an authorized service center, NB Corp will, in its sole discretion, either pay for shipping costs to and from an authorized service center, provide for a service technician to come to the owner to make the warranty repair, or pay for the repair to be made at a local non-authorized service center. The provisions of this paragraph apply only for the contiguous states, excluding the states with high-altitude areas identified in 40 CFR part 1068, Appendix III.

To exercise this warranty, DO NOT RETURN TO RETAILER. Instead, call Customer Service toll free at 1-866-460-9436 (email address info@buffalotools.com) and you will be instructed on where to take the engine for warranty service. Take the generator and proof of purchase (your receipt) to the repair facility recommended by the Customer Service Representative. The warranty does not extend to generators damaged or affected by fuel contamination, accidents, neglect, misuse, unauthorized alterations, use in an application for which the product was not designed and any other modifications or abuse.

90 DAY LIMITED WARRANTY

Generators are warranted to be free from defects in materials and workmanship for a period of 90 days from date of original purchase. NB Corp. is not liable for any indirect, incidental or consequential damages from the sale or use of this product. Any implied warranties are limited to 90 days as stated, or as otherwise stated, in this written limited warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages. Some states do not allow limitation on the length of an implied warranty. NB Corp will repair or replace, at its discretion, any part that is proven to be defective in materials or workmanship under normal use during the 90 day warranty period. Warranty repairs or replacements will be made without charge for parts or labor. Parts replaced during warranty repairs will be considered as part of the original product and will have the same warranty period as the original product.

This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

RECOGNIZE SAFETY SYMBOLS, WORDS AND LABELS

What You Need to Know About Safety Instructions

Warning and Important Safety Instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when operating or cleaning tools and equipment.

Always contact your dealer, distributor, service agent or manufacturer about problems or conditions you do not understand.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Add Diesel Fuel ONLY (DO NOT ADD GASOLINE)

Notice Regarding Emissions:

Engines certified to comply with California and U.S. EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline and may include the following emission control systems: Three-Way Catalyst (TWC) (if equipped), and Engine Modifications (EM).

Legal Requirements:

Federal and/or State Occupational Safety and Health Administration (OSHA) regulations, local codes, and/or ordinances may apply to the intended use of this generator. Consult a qualified electrician, electrical inspector, and/or the local agency having jurisdiction. Some areas require generators to be registered with local utility companies. Additional regulations may apply if this generator will be used at a construction site.



USE THIS GENERATOR ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE GENERATOR WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.

STOP!

Before using this generator and if you have any questions regarding the hazard and safety notices listed in this manual and/or on this generator, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time.

DANGER

Carbon Monoxide Gas: When in operation, the exhaust from this generator contains poisonous carbon monoxide gas. Carbon monoxide gas is both odorless and colorless AND may be present even if you do not see or smell gas. Breathing this poison gas can lead to headaches, dizziness, drowsiness, loss of consciousness and eventually death.

- USE THIS GENERATOR ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE GENERATOR WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.
- Keep at least several feet of clearance on all sides to allow proper ventilation for this generator.

WARNING

Chemicals: According to the State of California, the exhaust from this generator contains chemicals known to cause cancer, birth defects, or other reproductive harm.

WARNING

Flammable Fuel: This generator may emit highly flammable and explosive fuel vapors, which can cause severe burns or even death. A nearby open flame can lead to an explosion even if not directly in contact with fuel.

- Do not operate this generator near open flame.
- Do not smoke near this generator.
- Always operate this generator on a firm, level surface.

Diesel Fuel is highly flammable and explosive. Handling fuel can result in serious injury or burns.

- Always shut down this generator before refueling. Refuel in a well-ventilated area. Keep heat, sparks and flame away while refueling and away from the location where diesel fuel is stored. Never refuel indoors where diesel fuel fumes may reach flames and/or sparks.
- Allow this generator to cool for at least 2 minutes before removing the fuel tank cap. Loosen the cap slowly to relieve pressure in the fuel tank. Avoid spilling fuel.
- Do not fill the fuel tank above the upper limit line. Diesel fuel may expand during operation. Do not fill to the top of the tank.
- Always check for spilled diesel fuel and immediately wipe it up before starting this generator.
- Empty the fuel tank before storing or transporting this generator.
- Always handle fuel outdoors.
- Before transporting, turn the fuel valve to the "OFF" position.

DANGER

Powerful Voltage: This generator produces powerful voltage, which can result in electrocution.

- ALWAYS ground this generator before using it. (See "Ground the Generator" section in this manual).
- Only electrical devices should be plugged into this generator, either directly or with an extension cord. NEVER connect a building electrical system to this generator without a qualified electrician. Such connections must isolate generator power from utility power and comply with local electrical laws and codes. Failure to comply can create a back feed into utility lines creating an electrocution hazard, which may result in serious injury or death to utility workers. Such a back feed may cause this generator to explode, burn and create fires when utility power is restored.
- Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.
- Do not use this generator in wet conditions (rain, snow, active sprinkler system, wet hands, etc.). Always keep this generator dry and operate it with dry hands.
- Do not touch bare wires or outlets (receptacles).
- Do not allow children or non-qualified persons to operate this generator.

⚠ DANGER

High Temperatures: This generator produces heat when in operation. Temperatures near the exhaust can exceed 150 Degrees Fahrenheit (65 Degrees Celsius).

- Do not touch hot surfaces. Observe all warning placards on this generator denoting hot surfaces.
- Allow this generator to cool for several minutes after use before touching the engine, muffler or other areas that are hot during operation and before storing indoors.
- Hot exhaust may ignite some materials. Keep flammable materials away from this generator.
- Keep at least several feet of clearance on all sides of this generator during operation. Do not enclose this generator in any structure.

⚠ CAUTION

Usage: Misuse of this generator can damage it or shorten its life.

- Use this generator only for its intended purpose.
- Operate this generator only on a dry, level surface. Do not secure the generator with a chain or rope, which would prevent it from being moved in an emergency.
- Allow this generator to run for several minutes before connecting any electrical devices.
- Promptly turn off any malfunctioning devices and disconnect them.
- Do not operate an excessive number of electrical devices in excess of the wattage capacity of this generator.
- Do not turn on electrical devices until *after* they are connected to this generator.
- Turn off all connected electrical devices before stopping this generator.

⚠ WARNING

USE THIS GENERATOR ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE GENERATOR WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

DANGER

EXHAUST CONTAINS POISONOUS CARBON MONOXIDE GAS THAT CAN BUILD UP TO DANGEROUS LEVELS IN CLOSED AREAS. BREATHING CARBON MONOXIDE CAN CAUSE UNCONSCIOUSNESS OR DEATH. Never run the generator in a closed or even partly closed area where people may be present.

WARNING

GASOLINE IS HIGHLY FLAMMABLE AND EXPLOSIVE. YOU COULD BE BURNED OR SERIOUSLY INJURED IF THE GASOLINE IS IGNITED. Before refueling, stop the engine and keep heat, sparks and flame away. Handle fuel only outdoors. Do not fill the fuel tank above the upper limit line. Wipe up spills immediately.

WARNING

IMPROPER CONNECTIONS TO A BUILDING CAN ALLOW ELECTRICAL CURRENT TO BACKFEED INTO UTILITY LINES, CREATING AN ELECTROCUTION HAZARD. Connections to a building must isolate generator power from utility power and comply with all applicable laws and electrical codes.

In addition to the previously described safety information, familiarize yourself with all safety and hazard placards on this generator.

⚠ DANGER POISONOUS GAS

Generator exhaust contains toxic carbon monoxide gas. Breathing exhaust can cause loss of consciousness and shortness of breath. **NEVER** operate generator in poorly ventilated areas.

⚠ WARNING

Risk of electric shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

⚠ WARNING! RISK OF ELECTRIC SHOCK

This generator produces high voltage.
 Always ground properly before use.
 Do not connect to any building electrical system.
 Never use in rainy or wet conditions.
 Never touch bare wires or receptacles.
 Never allow children or non-qualified person to operate.



⚠ CAUTION! HOT EXHAUST

⚡ DO NOT TOUCH

⚠ ⚡ CAUTION! HIGH TEMPERATURE DO NOT TOUCH

⚠ DANGER

Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.

<p>NEVER use inside a home or garage. EVEN IF doors and windows are open.</p>	<p>Only use OUTSIDE and far away from windows, doors, and vents.</p>
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PACKAGE CONTENTS

The following items are supplied with this Model GENSD7 7000 Surge Watts / 6300 Running Watts Portable Generator. Verify that all items are included.

STOP!

If there are missing items, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time for customer service. **DO NOT RETURN THIS GENERATOR TO THE RETAILER.**

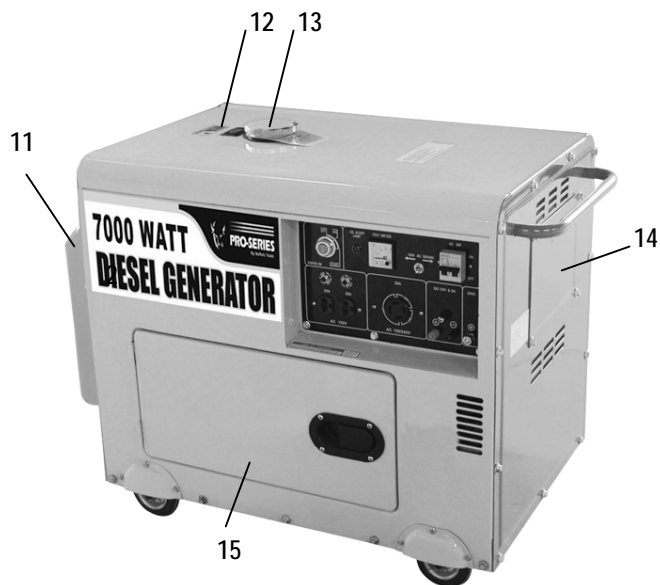
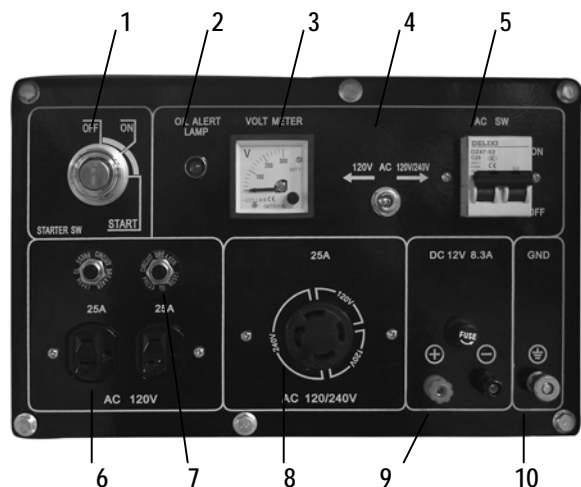
Item List:

1 Each	240 Volt Plug Twist Lock
2 Each	120 Volt Plug Standard
3 Each	Wrenches
1 Each	Screwdriver
1 Pair	Start Keys
4 Each	Wheels

⚠ WARNING

USE THIS GENERATOR ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE GENERATOR WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.

GENERATOR COMPONENTS



- | | |
|--------------------------|-------------------------------|
| 1) Electric Start Switch | 6) 120 Volt AC |
| 2) Low Oil Alert | 7) Reset |
| 3) Volt Meter | 8) 120/240 Volt Twist Lock AC |
| 4) 120/240 Toggle Switch | 9) DC Terminal |
| 5) Breaker | 10) Ground |

- | |
|----------------------------|
| 11) Muffler Panel Cover |
| 12) Fuel Gauge |
| 13) Fuel Cap |
| 14) Air Filter Panel Cover |
| 15) Engine Access Cover |

PREPARING THE GENERATOR FOR USE

STOP!

The following section describes the required steps for preparing this generator for use. Failure to correctly perform these steps can damage this generator and/or shorten its life. If still unsure about how to perform any of these steps after reading this section, call 1-866-460-9436 Monday - Friday, 8 AM - 4 PM Central Time for customer service.

If this generator is being used for the first time, the following few steps are required to prepare it for operation:

Step 1 - Add Oil, Then Add Diesel Fuel

This generator requires engine oil to function. Engine oil is a major factor affecting engine performance and service life. When new from the package, this generator contains no oil in the engine crankcase. The correct quantity of oil is equal to the oil capacity of the engine crankcase and is 58 fluid oz (1.8 quart) for this Model GENSD7 7000 Surge Watts / 6300 Running Watts Portable Generator. Add the correct quantity of oil before operating this generator for the first time.

Model GENSD7 Oil Capacity (fluid oz./ Quart)	58 ounces (1.8 quart)
Model GENSD7 Oil Type Recommended	SAE15W-40 Diesel Grade

To add oil:

1. Confirm that this generator is on a level surface.
2. Open the Oil Access Panel as illustrated in Figure 1 and Figure 2.
3. Using a funnel, add high detergent motor oil to fill the engine crankcase to the correct quantity as stated above. SAE15W-40 Diesel Grade oil is recommended. When the engine crankcase is full, the oil level should reach the lower lip of the oil filling opening.
4. Replace the oil filler/dipstick cap and close the oil access panel.



Figure 1 – Open the Engine Access Panel

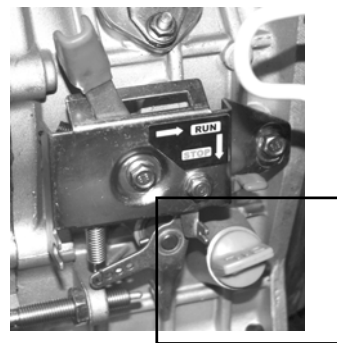


Figure 2 – Close Up View

⚠ WARNING

Diesel Fuel and fumes are highly flammable and explosive. Handling fuel can result in serious injury or burns.

• Do not fill the fuel tank near a heat, sparks or an open flame. Keep fuel away from appliance pilot lights, barbecues, electric appliances, power tools, etc. Do not overfill the fuel tank. Always check for fuel spills and immediately wipe them up. Spilled fuel is a fire hazard.

To add diesel fuel, use only FRESH, DIESEL FUEL:

1. Confirm that this generator is on a level surface.
2. Unscrew fuel tank cap and set aside. (NOTE: The fuel tank cap may be tight and difficult to unscrew.)
3. Slowly add fresh, diesel fuel to the fuel tank. Be careful not to fill the fuel tank above the upper limit line. The fuel tank capacity for this generator is 4 gallon (15 L). NOTE: Because diesel fuel can expand, do not fill the fuel tank to the very top.
4. Securely tighten the fuel tank cap and immediately wipe up any spilled fuel with a dry cloth.

Model GENSD7 Fuel Tank Capacity (gals /L)	4 Gallons / 15 Liters
Model GENSD7 Fuel Type	Diesel Fuel

Step 2 - Ground the Generator

WARNING

Failure to properly ground this generator can result in electrocution.

Ground this generator by tightening the grounding nut against a grounding wire (Figure 3). A No. 12 AWG (American Wire Gauge) stranded copper wire is generally an acceptable grounding wire. The other end of this grounding wire should be connected to a copper or brass grounding rod that is driven into the earth.

Grounding codes can vary by location. Contact a local electrician for information on grounding regulations for your area.

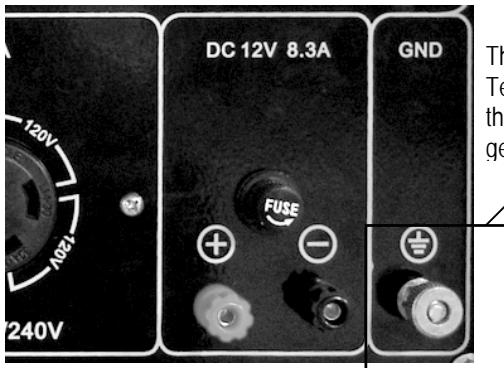


Figure 3
The Grounding Terminal is located on the front of the generator.

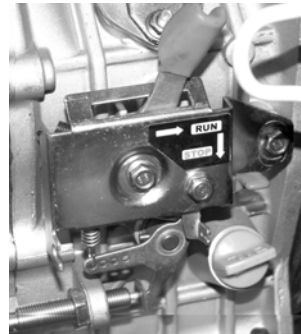


Figure 5

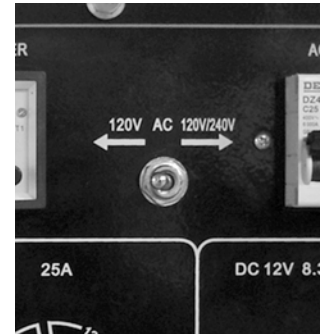


Figure 6

Step 3 - Install Battery (Not included) == Required Battery 6-FM-22 (12V22AH.22HR)

If the generator has been used before, always check the oil level and diesel fuel level. Always check that the battery is secure and the generator has been grounded.

STARTING THE GENERATOR

STOP!

Before starting this generator, confirm that all the steps in the section titled, "Preparing the Generator for Use," of this manual have been correctly completed. If unsure about how to perform any of these steps, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time for customer service.

To start this generator:

1. Confirm that there are no electrical devices connected to this generator. Connected devices may increase the difficulty in starting the engine.
2. Confirm that this generator is properly grounded. (See "Ground the Generator" section of this manual.)
3. Determine if you will use 120V or 120V/240V. Move the Toggle Switch left or right to the correct setting (Figure 6)
4. Turn the fuel valve to the "on" position (lever is UP) (See Figure 4, which shows OFF position – the lever is DOWN)).
5. Set the engine Run switch to the "on" position (Figure 5).
6. Insert Key and turn it to the start position.
7. If the engine fails to start, repeat step 6. NOTE: After repeated attempts, consult the troubleshooting guide before attempting again. If problems persist, call 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time.
8. Allow this generator to run for several minutes before connecting any electrical devices.

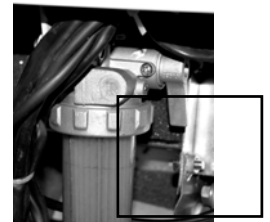


Figure 4

USING THE GENERATOR

WARNING

- USE THIS GENERATOR ONLY OUTDOORS IN NON-CONFINED AREAS. DO NOT SECURE THE GENERATOR WITH A CHAIN OR ROPE, AS THIS WILL MAKE IT DIFFICULT TO MOVE IN AN EMERGENCY.
- Keep at least several feet of clearance on all sides to allow proper ventilation for this generator.

After the engine has been running for several minutes, electrical devices may be connected to this generator.

AC Usage

Electrical devices running on AC current may be connected according to their wattage requirements. The rated (running) and surge wattage for this Model GENSD7 7000 Surge Watts / 6300 Running Watts Portable Generator is 6,300 and 7,000 respectively.

Model GENSD7 Rated (Running) Wattage	6300
Model GENSD7 Surge Wattage	7000

The *rated (running) wattage* corresponds to the maximum wattage a generator can output on a continuous basis.

The *surge wattage* corresponds to the maximum amount of power a generator can output for a short time. Many electrical devices, such as a refrigerator, require short bursts of extra power for starting and stopping fan motors, etc., in addition to their listed rated wattage. Motorized devices typically require more than their rated wattage for startup. The surge wattage ability of a generator allows for this extra power requirement.

The total running wattage requirement of the electrical devices connected to a generator should not exceed the rated wattage of the generator itself. To calculate the total wattage requirement of the electrical devices to be connected, look up the rated (running) wattage of each device and add these numbers together to find the total wattage that all of the devices together will draw from the generator. If the total wattage of the selected devices exceeds the rated wattage of the generator, DO NOT connect all of the devices. Select a combination of the electrical devices that will have a total wattage less than or equal to the rated wattage for the generator.

CAUTION

This generator can run at its surge wattage capacity for only a short time. Connect electrical devices requiring a rated (running) wattage equal to or less than the rated wattage of this generator. Never connect devices requiring a rated wattage equal to the surge wattage of a generator.

A device's rated (running) wattage should be listed somewhere on the device itself and/or in its manual. If the wattage specification for a device is not available, the wattage can be calculated by multiplying the Voltage requirement (120 or 240) by the Amperage drawn.

Or, the wattage required by a device can be estimated by using the following chart. The chart provides only estimates and it is better to know the exact wattage of each electrical device to be powered by this generator.

Electrical Device	Rated (Running) Watts	Additional Surge Watts
air compressor (1 - 1/2 HP)	2500	2500
airless sprayer (1/3 HP)	600	1200
coffee maker	1500	0
computer w/17 inch monitor	800	0
deep freezer	500	500
electric drill (1/2 HP)	1000	1000
furnace fan blower (1/2 HP)	800	1300
hot plate	2500	0
microwave oven (1000 watt)	1000	0
quartz halogen work light	1000	0
refrigerator/freezer (18 Cu. Ft.)	800	1600
saw - circular (7 1/4 inch)	1500	1500
stereo receiver	450	0
electric stove - single element	1500	0
septic pump	800	1200
television (27 inch color)	500	0
well water pump (1/3 HP)	1000	2000
window air conditioner (10000 BTU)	1200	1800
window fan	300	600

Watts = Volts x Amperes

Connect electrical devices to this generator according to the following procedure:

Allow the engine to run for several minutes after it has been started.

Confirm that the electrical device is switched off prior to plugging it into this generator.

⚠ CAUTION

Connect only electrical devices that are in good working order. Faulty devices or power cords present the risk of electrical shock. Immediately turn off and disconnect any device that commences to operate abnormally, sluggish or abruptly stops. Determine if the problem was the device or the rated load capacity of this generator has been exceeded.

NOTE: Plug appliances into the correct outlet. Connect standard 120 Volt, single phase, 60 Hz loads to the 120 Volt outlet. Connect 12 Volt, DC loads to the 12 Volt outlet.

⚠ CAUTION

Even though this generator has an overall rated wattage of 7000, do not attempt to draw more than 6300 Watts from the 120 Volt and/or 240 Volt outlet. Draws higher than 6300 Watts will damage this generator and void the warranty.

NOTE: While this generator is running, power is available from either the standard 120 Volt outlet or the 12 Volt DC outlet. Both 120 Volts and 12 Volts can be simultaneously drawn from this generator.

Turn on the connected electrical devices beginning with the device with the highest rated wattage requirement and then each additional device with the next lower rated wattage requirement.

⚠ CAUTION

Do not connect 50Hz or 3-phase loads to this generator.

DC Usage

⚠ CAUTION

The DC terminal is only for recharging 12 Volt automotive-type batteries. Do not connect any other device to this outlet.

⚠ CAUTION

Use this generator only for recharging 12 Volt batteries. NEVER attempt to jumpstart a car with this generator.

⚠ DANGER

Failing to use the correct procedure can cause a battery to explode, seriously injuring anyone nearby. Keep heat, sparks, flame and smoking materials away from the battery.

To connect 12 Volt batteries to the DC outlet:

1. Connect one charging wire to the positive terminal of the battery and the other charging wire to the negative terminal of the battery.
2. Connect the free end of the positive wire to the positive side of the outlet on this generator.
3. Carefully connect the free end of the negative wire to the negative side of the outlet on this generator.
4. Start this generator.
5. When disconnecting, always disconnect the wires from this generator first to avoid a spark.

⚠ DANGER

Storage batteries emit highly explosive hydrogen gas when charged.

Batteries also contain acid, which can cause severe chemical burns.

- Do not allow open flames or cigarettes nearby for several minutes after charging a battery.
- Always wear protective goggles and rubber gloves when charging a battery.
 - If battery acid gets on the skin, flush with water.
 - If battery acid gets in the eyes, flush with water and immediately call a physician.
 - If battery acid is swallowed, drink large quantities of milk and immediately call a physician.

⚠ DANGER

Do not secure the generator with a chain or rope, which would prevent it from being moved in an emergency.

STOPPING THE GENERATOR

To stop this generator:

- 1. Turn off all connected electrical devices and then unplug them.
- 2. Switch the circuit breaker to the "OFF" position.
- 3. Allow this generator to run for several more minutes with no electrical devices connected to help stabilize the temperature of this generator.
- 4. Set the engine Run switch to the "OFF" position. (Figure 10)
- 5. Turn the fuel valve to the "OFF" position (Down) (Figure 11).

Figure 10

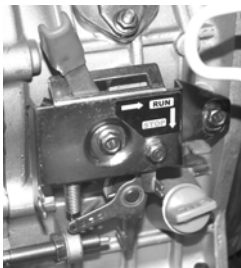
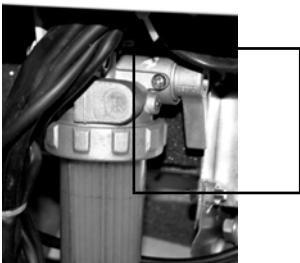


Figure 11



⚠ WARNING

Allow this generator to cool down before touching areas that become hot during operation.

⚠ CAUTION

Allowing diesel fuel to sit in this generator's fuel tank for extended time without use can increase the difficulty in starting this generator in the future. Never store this generator for extended time with fuel in the fuel tank.

MAINTENANCE/CARE

Proper routine maintenance of this generator is essential for safe, economical, and trouble-free operation. It will help prolong the life of this generator as well as help reduce air pollution. Perform maintenance checks and procedures according to the schedule in Figure 7.

⚠ CAUTION

Never perform maintenance procedures while this generator is running. Allow this generator to cool before commencing any maintenance procedures. Keep heat, sparks and flame away.

⚠ WARNING

Improper maintenance and/or failure to correct any problems prior to operating this generator can cause a malfunction which could cause death or serious injury. Always follow the inspection and maintenance recommendations and schedules in this manual.

Recommended Maintenance Schedule

		Each Use	Every Month or Each 20 Hrs	Every 3 Months or Each 50 Hrs	Every 6 Months or Each 100 Hrs	Every Year or Each 300 Hrs
Engine Oil	Check Level	X				
	Replace		X			
Air Filter	Check	X				
	Clean			X		
Fuel Filler Cap	Clean				X	
Fuel Tank	Verify Gas Level	X				
	Clean					X

Figure 7 - Recommended maintenance schedule

Cleaning the Generator

Always try to use this generator in a cool dry place. If this generator becomes dirty, the exterior can be cleaned with a damp cloth, soft brush, vacuum and/or pressurized air.

Never clean this generator with a bucket of water and/or a hose as water can get inside and cause a short circuit or corrosion.

Never use gasoline to clean parts of this generator.

Checking the Oil Level

It is important to check the oil level in the engine crankcase before each use to ensure that there is a sufficient quantity.

To check the oil level:

1. Verify that this generator is shut down and on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine.
3. With a dry cloth, wipe the oil off of the dipstick that is located on the inside of the cap.
4. Insert the dipstick as if replacing the cap and then remove again. There should be oil on the dipstick. If there is no oil on the dipstick, or oil is visible only at the very end of the dipstick, add oil until the engine crankcase is filled.
5. Confirm that the oil filler/dipstick cap is properly in place when finished verifying the oil level.

Changing/Adding Oil

The oil level in this generator should be checked before each use. (See Figure 8.) When the oil level is low, add oil until the level is sufficient to operate this generator.

The oil capacity for this Model GENSD7 7000 Surge Watts / 6300 Running Watts Portable Generator engine is 58 fluid oz. (1.8 quart).

To drain the oil from this generator:

It is necessary to drain the oil from the crankcase only if it has become contaminated with water and/or dirt.

1. Place a tray underneath this generator to catch oil as it drains.
2. Unscrew the oil drain plug located on the crankcase underneath the oil filler/dipstick cap.
3. Allow all the oil to drain from this generator.
4. Replace the oil drain plug and tighten.

NOTE: Never dispose of used motor oil in the trash, down a drain or on the ground. Put oil in a sealed container and contact your local recycling center or auto garage to arrange oil disposal.

To add oil to the engine crankcase:

1. Confirm that this generator is on a level surface.
2. Unscrew the oil filler/dipstick cap from the engine as illustrated in Figure 8 below.
3. Using a funnel, add high detergent motor oil to fill the engine crankcase to the correct quantity. SAE15W-40 Diesel Grade oil is recommended for general use. When the engine crankcase is full, the oil level should reach the lower lip of the oil filling opening.

Oil Capacity (fluid oz./L)	58 fluid ounces / 1.8 quart
Oil Type Recommended	SAE15W-40 Diesel Grade

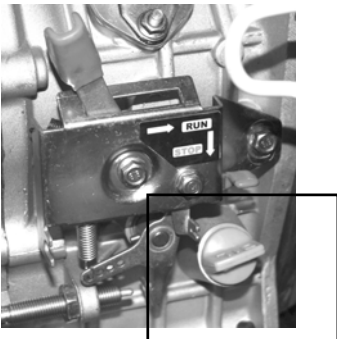


Figure 8

Air Filter Maintenance

Routine maintenance of the air filter helps maintain proper airflow to the carburetor. Occasionally verify that the air filter is free of excessive dirt. The air filter will require more frequent cleaning when operating this generator in extremely dusty areas.

To clean air filter, remove from generator. Remove access panel from side of generator, then remove wing nut to expose the element. (Figure 9)

Wash in kerosene. Pour motor oil on filter, squeeze out excess oil and reinstall in the generator.



Figure 9 – Changing The Air Filter

Emptying the Fuel Tank

To store this generator for extended time, drain the diesel fuel from the fuel tank. To drain fuel from this generator:

1. Turn the fuel valve to the "off" position.
2. Remove the fuel filter cup. (See "Fuel Filter Cup Cleaning" earlier in this section.)
3. Empty the fuel filter cup of any fuel.
4. Place a funnel underneath the fuel valve to catch fuel as it drains into a bucket.
5. Turn the fuel valve to the "on" position and allow all fuel to drain.
6. Turn the fuel valve to the "off" position.
7. Replace the fuel filter cup.
8. Store the drained fuel in a suitable place.

STORAGE/TRANSPORT PROCEDURES

⚠ CAUTION

Never place any type of storage cover on this generator while it is still hot.

When transporting or storing this generator for extended time:

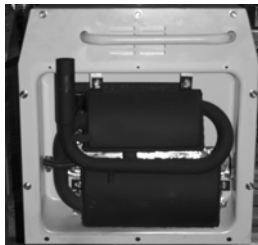
- Allow generator to fully cool before moving it. A hot engine and exhaust system can burn you and ignite some materials.
- Empty the fuel tank. (See "Emptying the Fuel Tank" in the "Maintenance/Care" section.)
- Turn the fuel valve to the "off" position.
- Do not obstruct any ventilation openings.
- Do not drop or strike this generator while moving it.
- Store this generator in a cool dry area, free of excessive dust.

Storage Time	Recommended Storage Procedure (which will help prevent difficult starts)
Less than 1 month	No storage procedure required.
1 to 2 months	Fill with fresh diesel fuel
2 months to 1 year	Empty the fuel tank. (See "Emptying the Fuel Tank" in the "Maintenance/Care" section.)
1 year or more	Empty the fuel tank. (See "Emptying the Fuel Tank" in the "Maintenance/Care" section.)

Replacing The Carbon Brushes



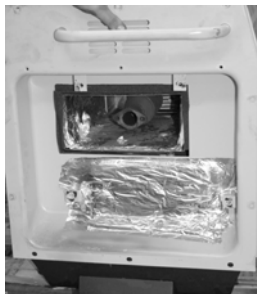
1. Remove Muffler Access Panel



2. Remove Dual Muffler System



3. Remove Both Mufflers



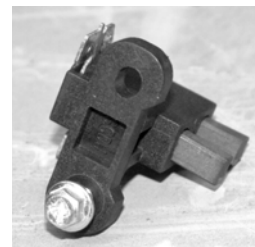
4. Remove End Panel



5. Brush Assembly is Visible



6. Locate Carbon Brushes



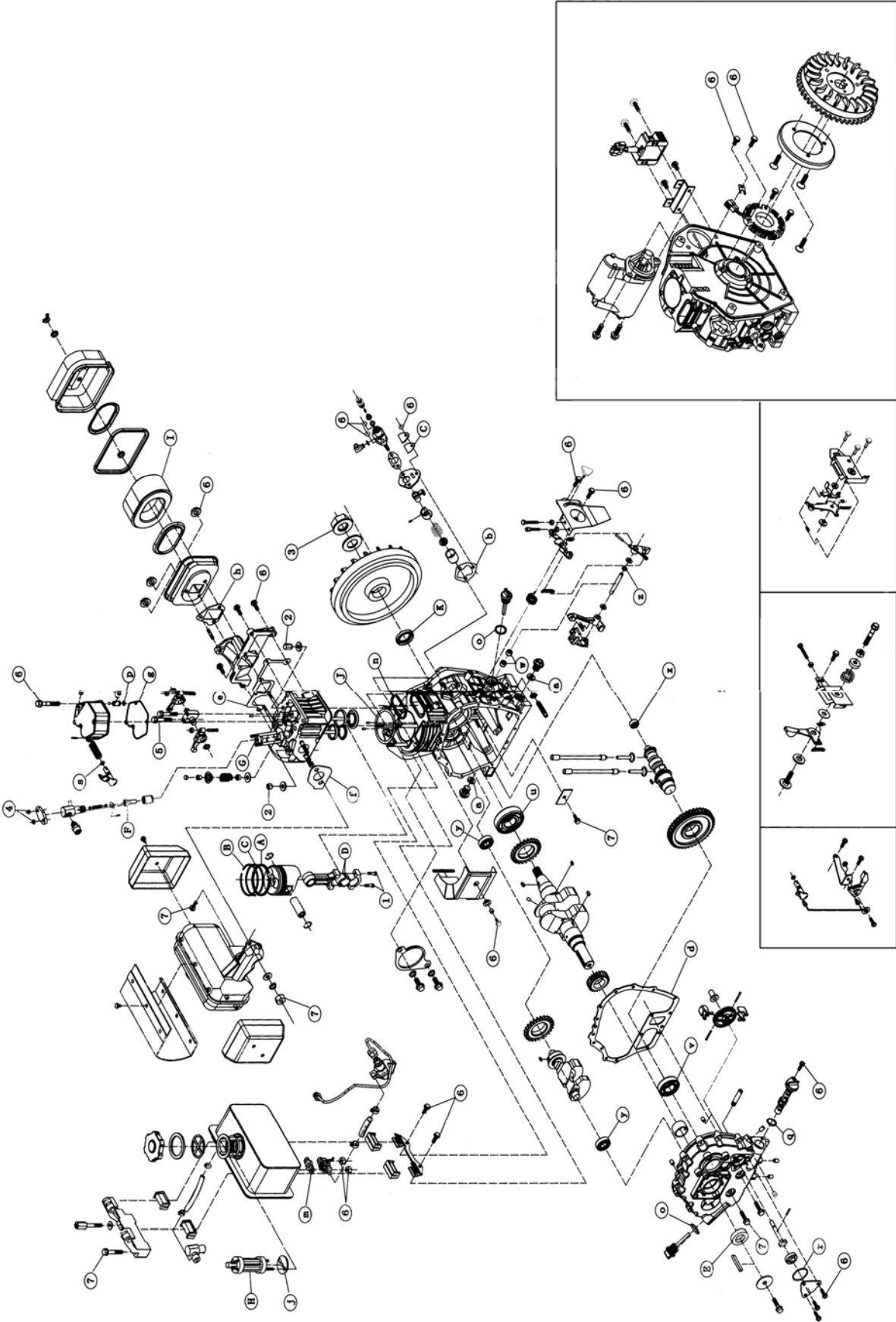
7. Replace Carbon Brushes

TROUBLESHOOTING (Also see page 30 for more details regarding Figure A and Figure B)

IMPORTANT: If trouble persists, call our customer help line at 1-866-460-9436, Monday - Friday, 8 AM - 4 PM Central Time.

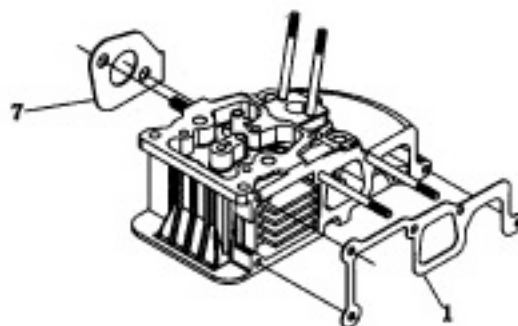
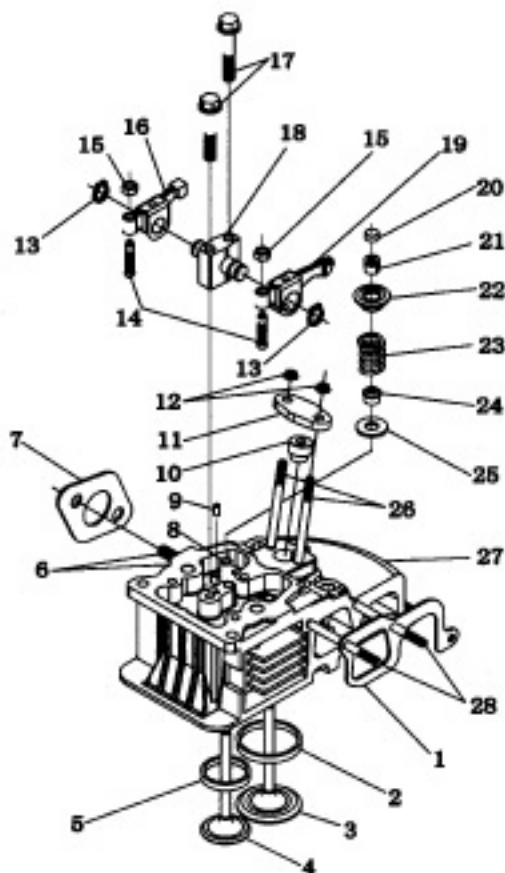
Symptom	Cause	Solution
Engine will not start.	Engine switch is set to "off."	Set engine switch to "on."
	Fuel valve is turned to "closed."	Turn fuel valve to "open."
	Engine is out of diesel fuel.	Add diesel fuel.
	Oil is low.	Add or replace oil.
	Generator is not on level surface.	Move generator to a level surface to prevent triggering the low oil shutdown.
	Spring loaded Decompression Lever has closed the exhaust valve.	Open side panel and remove air filter assembly. (Figure A page 30) Push down on Decompression Lever, reinstall air filter assembly and side panel. Start engine.
	Engine is filled with contaminated and/or old diesel fuel.	Drain fuel from the engine and add new diesel fuel.
Engine runs but there is no electrical output.	Circuit breaker is off.	Flip circuit breaker to "on."
	Reset button is "off."	Push reset button to "on."
	Bad connecting wires/cables.	Try a different extension cord.
	Bad electrical device connected to generator.	Disconnect device, try connecting another device.
	Loose wiring and/or connection behind control panel or at end of generator.	Tighten the nuts that secure the wiring.
	Carbon brushes or AVR are worn or broken.	See Figure B (page 30). Visually inspect to make sure they are in contact with the two copper bands on the rotor. Replace as necessary.
Generator runs but does not support all connected electrical devices.	Generator is overloaded.	Reduce draw on generator to within this generator's rated wattage by reducing number of connected electrical devices.
	Short in one of the connected devices.	Disconnect any faulty or short-circuited electrical loads.
	Air filter is dirty.	Clean or replace air filter.

GENSD7 7000 SURGE WATTS / 6300 RUNNING WATTS DIESEL GENERATOR
PARTS DIAGRAM



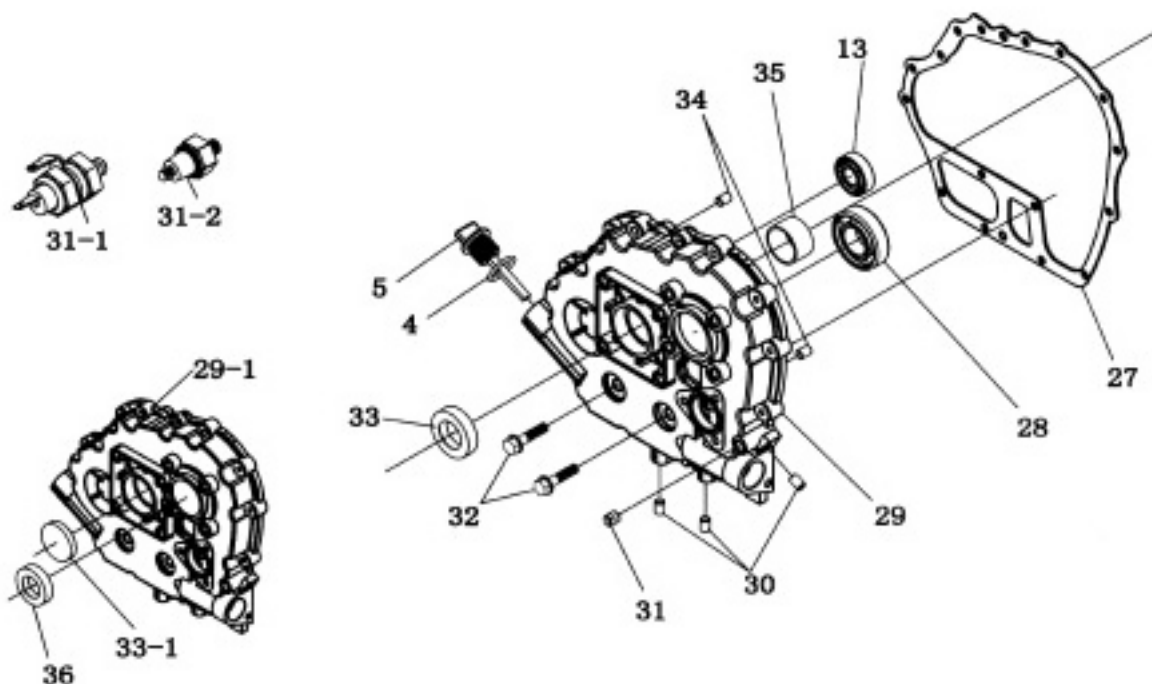
CYLINDER BLOCK ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY
1	GB/T9877.1-1988	Oil seal FB30×45×8 FB35×50×8	1
2	170F-01011	Tighten stud(long)	2
3	170F-01012	Tighten stud(short)	1
4	GB/3452.1-1992	O-Ring 19×2.65	2
5	170F-01002 178F-01002	Oil filler cap	2
6	GB/T290-1989	Needle bearing 7941/8	2
7	170F-01017	Drain plug M16×1.5	2
8	170F-01100	Oil plug seal assembly	2
9	186FA-01001	Cylinder block	1
10	01009	Retainer	1
11	GB/T5789-1986	Bolt M8×14	1
12	GB/T290-1989	Needle bearing HK1512	1
13	GB/T276-1994	Ball bearing 6202/P5 6203/P5	2
14	186F-01003	Cylinder head stud(short)	2
15	GB/T119.1-2000	Pin 4×8	2
16	186F-01005	Flat washer	4
17	186F-01004	Cylinder head nut(short)	2
18	186F-01007	Cylinder head nut(long)	2
19	186FA-01013	Cylinder head gasket	1
20	186F-01006	Cylinder head stud(long)	2
21	186F-01008	Rectangle ring	1
22	186F-01200	Air shroud	1
23	GB/T5789-1986	Bolt M6×12 Bolt M6×16	1
24	178F-01202	Collar	1
25	178F-01201	Shock absorber block	1
26	178F-01203	Shock absorber	1



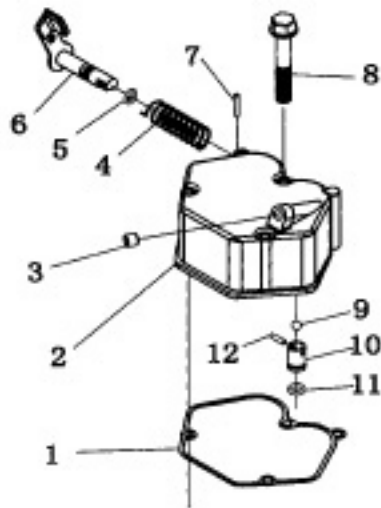
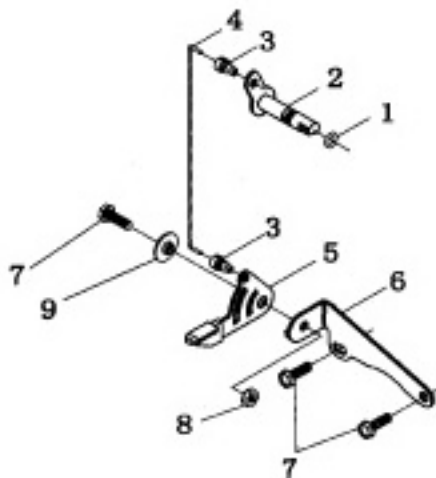
CYLINDER HEAD ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY
1	186F-02011	Air intake gasket	1
2	186F-02203	Intake valve retainer	1
3	186F-02004	Intake valve	1
4	186F-02003	Exhaust valve	1
5	186F-02204	Exhaust valve retainer	1
6	GB/T899-1988	Stud AM8×20	2
7	186F-02012	Silencer gasket	1
8	170F-02201 178F-02201 186F-02201	Valve pipe	2
9	GB/T119.1-2000	Pin 4×8	1
10	170FA-02009	Spacer	1
11	170F-02008	Nozzle retainer	1
12	GB/T6177.1-2000	Nut M6	2
13	GB/T894.1-1986	Check ring 12 Check ring 15	2
14	186F-02105	Valve screw	2
15	186F-02107	Nut M6	2
16	186FA-02103	Exhaust valve rocker arm	1
17	186FA-02106	Rocker arm screw M6×45 M8×45	2
18	186FA-02102	Rocker arm support	1
19	186FA-02104	Intake valve rocker arm	1
20	186F-02013	Valve adjusting plate	2
21	186F-02001	Valve cotter	4
22	186F-02002	Valve spring retainer	2
23	186F-02005	Valve spring	2
24	186F-02006	Valve duct seal	2
25	186F-02007	Valve spring washer	2
26	GB/T900-1988	Stud AM6×65 Stud AM6×55	2
27	186FA-02202	Cylinder head	1
28	GB/T900-1988	Stud AM6×55 Stud AM6×75	2



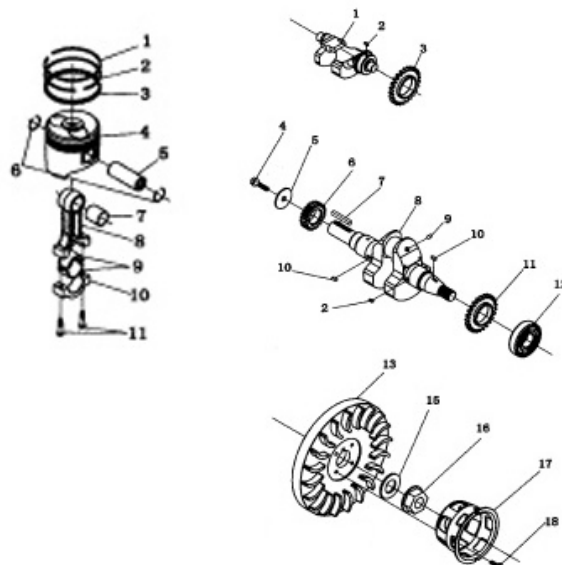
CYLINDER BLOCK ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY		
27	170F-01015 178F-01015 186F-01015	Crank case gasket	1		
28	GB/T276-1994	Ball bearing 6205/P5 6206/P5 6207/P5	1		
29	170F-01016 178F-01016 186F-01016	Crank case cover	1		
30	170F-01021	Aluminium plug $\phi 8 \times 10$	3		
31	170F-01018	Plug G1/8"	1		
31-1	170FG-01300B	Oil pressure sensors	1		
31-2	170FG-01300A	Oil pressure sensors	1		
32	GB/T5789-1986	Bolt M8 \times 33.5	1	15	16
32-1	GB/T5789-1986	Bolt M6 \times 25	14		
33	GB/T9877.1-1988	Oil seal FB25 \times 42 \times 10 FB30 \times 45 \times 10 FB35 \times 50 \times 10	1		
34	GB/T119.1-2000	Pin 8 \times 10	2		
35	170F-01014 178F-01014 186F-01014	Main bearing	1		
178、186FS-01000					
29-1	178FS-01016 186FS-01016	Crank case cover	1		
33-1	178FS-01022 186FS-01022	Aluminium plug $\phi 45$ Aluminium plug $\phi 50$	1		
36	GB/T9877.1-1988	FB30 \times 45 \times 10 FB35 \times 50 \times 10	1		



Valve Cover Assembly

NO	PART NUMBER	DESCRIPTION	Q'TY
1	186FA-03003	Bonnet gasket	1
2	186FA-03001	Cylinder head bonnet	1
3	170F-03006	Aluminium plug $\phi 8 \times 8$	1
4	170F-03004	Decompression spring	1
5	GB3452.1-1992	O-Ring 10 \times 1.9	1
6	170F-03100	Decompression shaft assembly	1
7	GB/T119.1-2000	Pin 3 \times 16	1
8	GB/T5789-1986	Bolt M6 \times 55 Bolt M6 \times 70	3
9	170F-03201	Breather ball	1
10	170F-03202	Breather seat	1
11	GB3452.1-1992	O-Ring 12 \times 1.9	1
12	170F-03203	Breather pin	1
13	170F-03002	Oil screw plug	1
170、178、186FG-03000			
1	GB3452.1-1992	O-Ring 10 \times 1.9	1
2	170FG-03100	Decompression shaft assembly	1
3	170FG-03012	Decompression pulling -string collar	2
4	170FG-03011	Decompression pulling string	1
5	170FG-03009	Decompression handle	1
6	170FG-03008	Decompression handle support	1
7	GB/T5789-1986	Bolt M6 \times 14	3
8	GB/T6170-2000	Nut M6	1
9	170FG-03013	Decompression handle collar	1

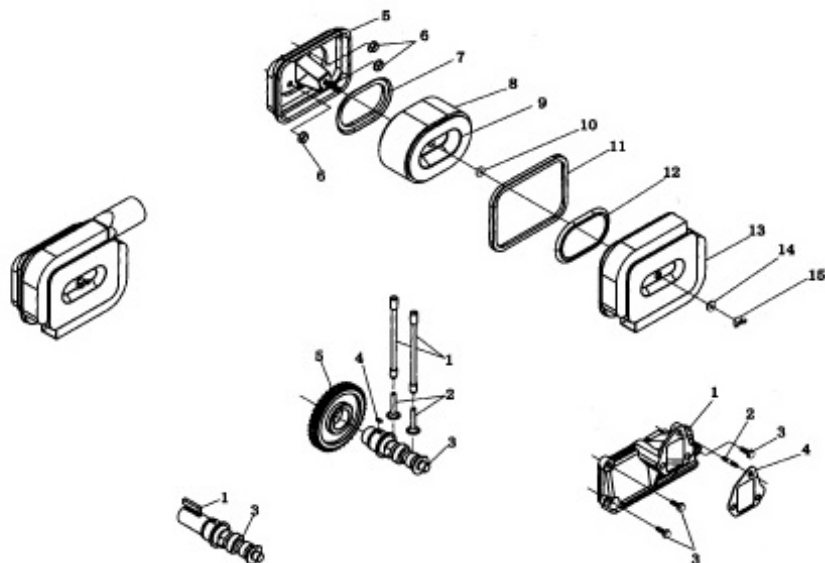


PISTON&CONNECTING ROD ASSEMBLY

NO	PART NUMBER	DESCRIPTION	QTY
1	186F-04001	First gas ring	1
2	186F-04002	Second gas ring	1
3	186F-04100	Oil ring set	1
4	186FA-04003	Piston	1
5	186F-04004	Piston pin	1
6	GB/T893.1-1986	Retainer of piston pin $\phi 19$ $\phi 21$ $\phi 23$	2
7	186F-04204	Connecting rod bushes	1
8	186F-04201	Connecting rod body	1
9	186F-04005	Connecting rod bearing	2
10	186F-04202	Connecting rod cover	1
11	186F-04203	Connecting rod screw	2

CRANK SHAFT&FLYWHEEL ASSEMBLY

NO	PART NUMBER	DESCRIPTION	QTY
1	186F-05301	Balancer shaft	1
2	170F-05303	Key 5×7	2
3	186F-05302	Balancer gear	1
4	170F-05006	Output shaft bolt	1
5	170F-05005	Output shaft washer	1
6	186F-05203	Crankshaft timing gear	1
7	GB/T1096-1979	Key 5×30 Key 6×50	1
8	186FA-05201	Crankshaft	1
	186F-05201	Crankshaft	1
	186FP ₁ -05201	Crankshaft	1
	186FP ₂ -05201	Crankshaft	1
	186FG ₁ -05201	Crankshaft	1
	186FG ₂ -05201	Crankshaft	1
	186FG ₃ -05201	Crankshaft	1
9	170F-05202	Aluminium plug $\phi 6 \times 8$	1
10	GB/T1096-1979	Key 5×12 Key 5×14	2
11	186F-05004	Balancer drive gear	1
12	GB/T276-1994	Ball bearing 6306/P5 6307/P5 6308/P5	1
13	186F-05101	Flywheel	1
13-1	186FE-05101	Flywheel(Electric)	1
14	186F-05102	Flywheel gear(Electric)	1
15	186F-05003	Flywheel nut washer	1
16	186F-05002	Flywheel nut	1
17	186F-05001	Starter pulley	1
18	GB/T5789-1986	Bolt M6×12	3
178、186FS—05000			4
8-1	186FS-05201	Crankshaft	1
13-2	186FS-05101	Flywheel	1
13-2	186FSE-05101	Flywheel(Electric)	1
14-1	186FS-05102	Flywheel gear(Electric)	1

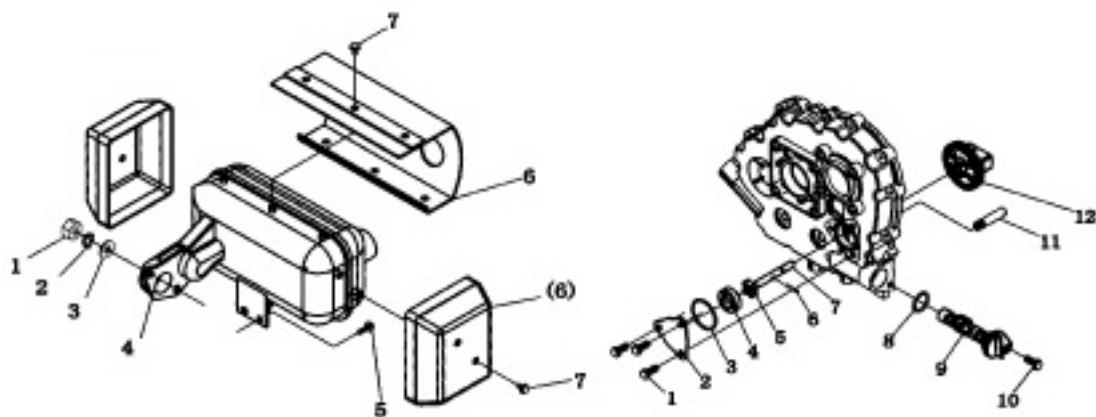


CAMSHAFT ASSEMBLY

NO	PART NUMBER	DESCRIPTION	QTY
1	186F-06100	Valve rod assembly	2
2	186F-06003	Valve tappet	2
3	186FA-06001	Camshaft	1
4	GB/T1096-1979	Key 5×14 Key 4×12 Key 5×14	1
5	186F-06002	Camshaft timing gear	1
	186FS-06000		
1	GB/T1096-1979	Key 8×45	1
3-1	178FS-06001 186FS-06001	Camshaft	1

AIR CLEANER ASSEMBLY

NO	PART NUMBER	DESCRIPTION	QTY
1	186F-07401	Intake pipe	1
2	170F-07402	Air cleaner stud	1
3	GB/T5789-1986	Bolt M6×22 M6×25	1 2 3
4	186F-07001	Air cleaner gasket	1
5	186F-07300	Air cleaner bottom case assembly	1
5-1	178FGD-07300	Air cleaner bottom case assembly	1
6	GB/T6177.1-2000	Nut M6	3
7	186F-07303	Shakeproof seal ring II	1
8	186F-07108	Prefilter	1
9	186F-07100	Air cleaner element assembly	1
10	186F-07101	Vibration proof pad	1
11	186F-07201	Seal ring	1
12	186F-07203	Shakeproof seal ring I	1
13	186F-07200	Air cleaner cover assembly	1
13-1	186FGD-07200	Air cleaner cover assembly	1
14	186F-07210	Shakeproof seal ring assembly	1
15	GB/T62-1988	Fly nut M6 Fly nut M8	1

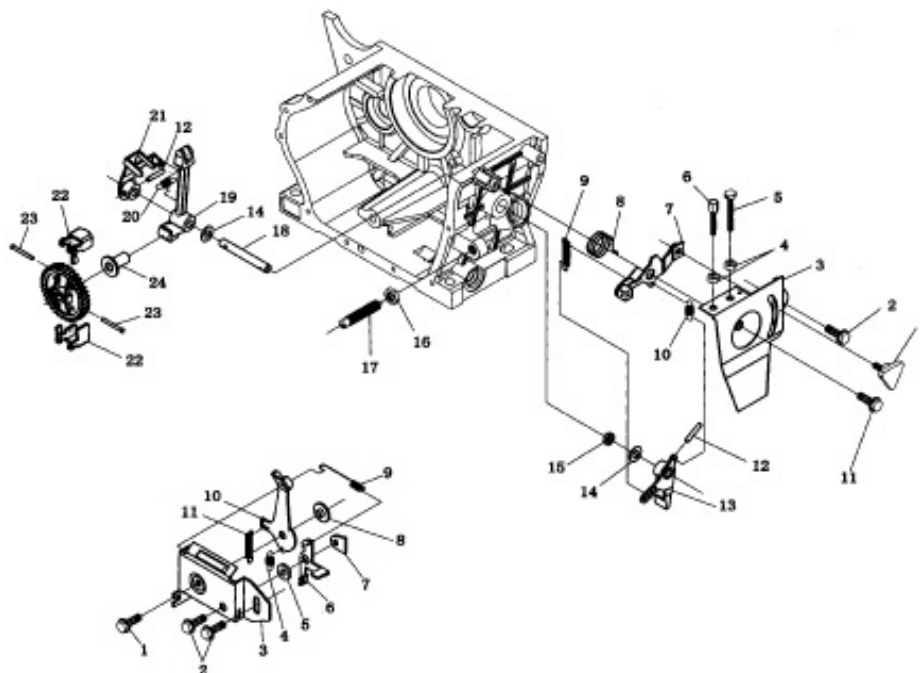


SILENCER ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY
1	GB/T6170-2000	Nut M8	2
2	GB/T93-1987	Washer 8	2
3	GB/T97.1-2002	Flat washer 8	2
4	170F-08200 178F-08200 186F-08200	Silencer welded assembly	1
5	GB/T5789-1986	Bolt M6×16 Bolt M8×16	2
6	170F-08100 178F-08100 186F-08100	Silencer case welded assembly	1
7	GB/T5789-1986	Bolt M6×8	6

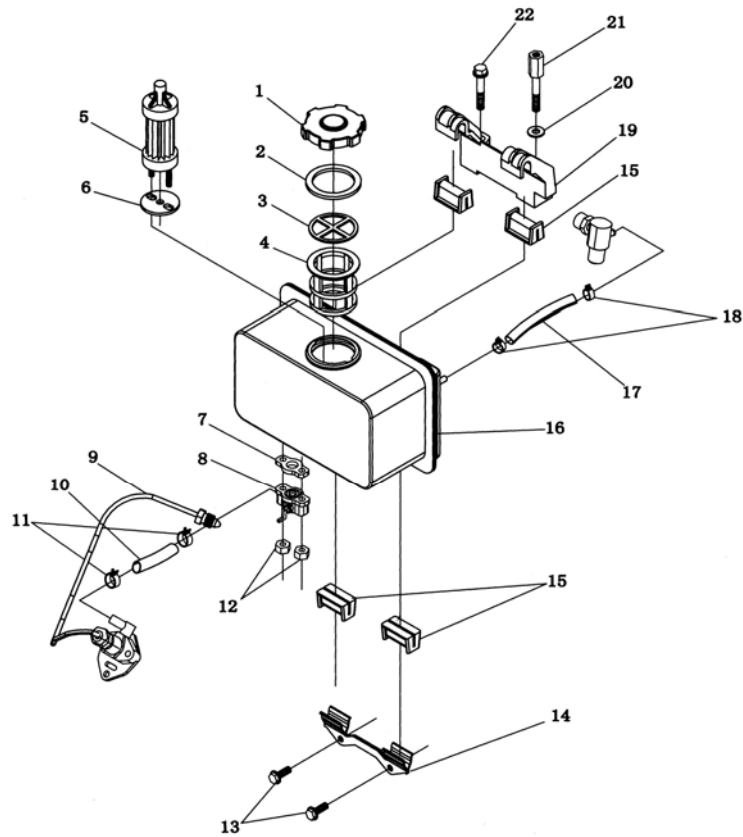
LUBE OIL ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY
1	GB/T5789-1986	Bolt M6×12	3
2	170F-09001	Oil pump cover	1
3	GB/T3452.1-1992	O-Ring $\phi 34.5 \times 1.8$	1
4	186F-09103	Outer rotater	1
5	186F-09101	Inner rotater	1
6	GB/T119.1-2000	Pin 3×16	1
7	186F-09102	Oil pump shaft	1
8	GB/T3452.1-2000	O-Ring $\phi 24 \times 2.4$	1
9	170F-09200	Oil filter Assembly	1
10	GB/T5789-1986	Bolt M6×14	1
11	170F-09003	Oil pipe	1
12	170F-09002 178F-09002	Oil pump gear	1



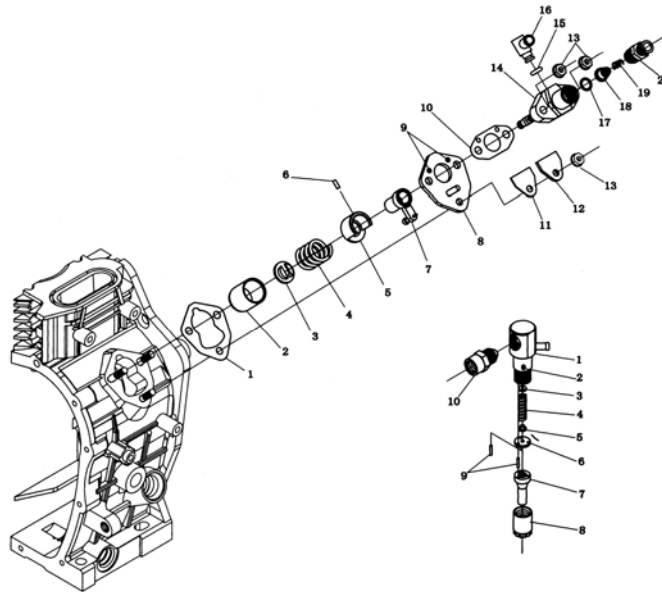
GOVERNOR&CONTROL SYSTEM

NO	PART NUMBER	DESCRIPTION	QTY
1	170F-11301	Handle	1
2	GB/T5789-1986	Bolt M6×14	1
3	170F-11304	Handle bracket	1
4	GB/T6172.1-2000	Nut M6	2
5	170F-11306	High speed limit screw	1
6	170F-11305	Pull bolt	1
7	170F-11303	Control handle	1
8	170F-11005	Return spring I	1
9	170F-11007 186F-11007	Governor spring	1
10	170F-11006	Return spring II	1
11	GB/T5789-1986	Bolt M6×20	1
12	GB/T117-2000	Pin3×22	2
13	170F-11110	Lever fork part	1
14	170F-11003	Lever shaft washer	2
15	170F-11008	Lever shaft oil seal	1
16	GB/T6173-2000	Nut M10×1.25	1
17	170F-11200	Fuel controller assembly	1
18	170F-11102	Lever shaft	1
19	170FA-11101 178FA-11101 186FA-11101	Lever fork	1
20	170FA-11103	spring	1
21	170FA-11120	Balancer	1
22	170F-11001	Fly block	2
23	170F-11002	Fly block pin	2
24	170F-11004 178F-11004	Tappet speed regulator	1
170、178、186FG1-11301			
1	170FG1-11301	Pushing & pulling operation handle shaft	1
2	170FG1-11302	Pushing & pulling handle shaft washer	2
3	170F-11007	Governor spring	1
4	170FG1-11303	Control handle	1
5	170F-11006	Return spring II	1
6	170FG1-11304	Handle bracket	1
7	170FG1-11307	High speed limit screw	1
8	GB/T6172.1-2000	Nut M6	1
9	GB/T5789-1986	Bolt M6×14	1
10	170FG1-11305	Pushing and pulling handle compression spring	1
11	170FG1-11306	Bowl-shape cover	1
12	GB/T6173-2000	Nut M10×1	1
13	GB/T5782-2000	Bolt M6×45	1
170、178、186FG2-11000			
1	GB/T5789-1986	Bolt M6×25	1
2	GB/T5789-1986	Bolt M6×14	2
3	170FG2-11305	Handle bracket	1
4	170F-11006	Return spring II	1
5	170FG2-11012	Stop handle collar	1
6	170FG2-11009	Stop handle	1
7	170FG2-11011	Press board	1
8	170FG2-11303	Handle collar	1
9	170FG2-11005	Return spring I	1
10	170FG2-11302	Control handle	1
11	170F-11007	Governor spring	1



FUEL TANK&FUEL PIPE ASSEMBLY

NO	PART NUMBER	DESCRIPTION	Q'TY
1	170F-10100	Fuel tank gap assembly	1
2	170F-10102	Fuel tank gap ring	1
3	170F-10015	Fuel level mark	1
4	170F-10004	Filter cup	1
5	186F-10300	Filter element assembly	1
6	170F-10007	Fuel oil filter gasket	1
7	170F-10405	Fuel tank cock gasket	1
8	170F-10400	Fuel tank cock assembly	1
9	186FA-10500	Fuel injection pipe assembly	1
	186FAG-10500	Fuel injection pipe assembly	1
	186F-10500	Fuel injection pipe assembly	1
	186FGD-10500	Fuel injection pipe assembly	1
10	170F-10009	Fuel oil pipe	1
11	170F-10011	Clamp	2
12	GB/T6177.1-2000	Nut M6	2
13	GB/T5789-1986	Bolt M6×14	2
14	170F-10014	Lower stay assembly	1
15	170F-10002	Damper	4
16	186F-10200	Fuel tank assembly	1
17	170F-10012	Fuel oil return pipe	1
18	170F-10013	Clamp	2
19	186F-10001	Upper stay	1
20	GB/T97.1-2002	Flat washer 8	1
21	170F-10003	Bolt	1
22	GB/T5789-1986	Bolt M8×45	1

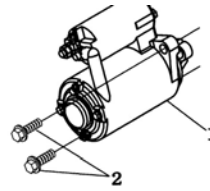
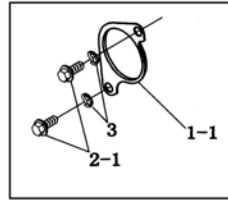


FUEL INJECTION PUMP ASSEMBLY

NO	PART NUMBER			DESCRIPTION			Q'TY	
			186FA			186FA		186FA
1	170F-12001			Shim set			Demand processing	
2	170F-12300			Tappet			1	
3	170F-12009			Spring seat			1	
4	170F-12008			Plug spring			1	
5	170F-12007			Spring supporting mass			1	
6	GB/T879-2000			Pin3×8			1	
7	170F-12006			Fuel control muff assembly			1	
8	170F-12005			Connection board			1	
9	GB/T879-2000			Pin2×6			2	
10	170F-12004			Shim set			Demand processing	
11	170F-12003			Seal gasket			1	
12	170F-12002			Seal plate			1	
13	GB/T6177.1-2000			Nut M6			3	
14		186FA-12200		Fuel oil pump body& plunger assembly			1	
15	GB/T3452.1-1992			O-Ring			1	
16	170F-12400			In-line joint assembly			1	
17	170F-12011			Delivery valve seal gasket			1	
18	170F-12100			Delivery valve assembly			1	
19	170F-12012			Delivery valve spring			1	
20	170F-12013			Delivery valve holder			1	

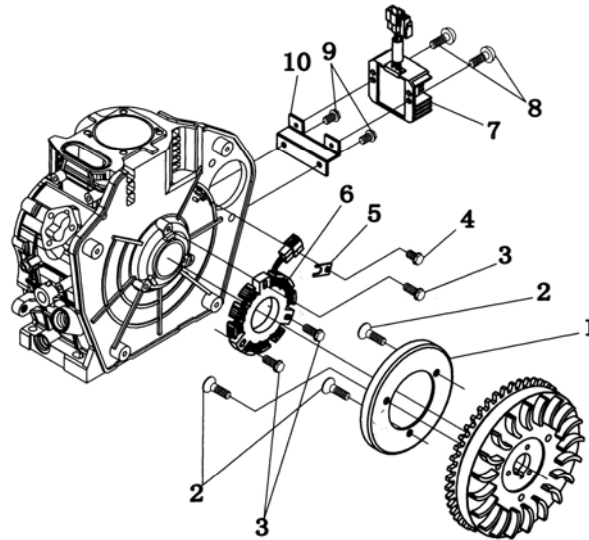
FUEL NOZZIE ASSEMBLY

NO	PART NUMBER			DESCRIPTION			Q'TY	
			186FA			186FA		186FA
1	170FA-13200			Fuel nozzle holder assembly			1	
2	GB/T879-2000			Pin3×5			1	
3	170F-13007			Pressure regulation shim			Demand processing	
4	170F-13006			Nozzle spring			1	
5	170F-13005			Spring retainer			1	
6	170F-13003			Midbody			1	
7		186FA-13100		Nozzle valve			1	
8	170F-13002			Nozzle case nut			1	
9	170F-13004			Pin			2	
10	170F-13300			Filter assembly			1	



STARTER ASSEMBLY

NO	PART NUMBER			DESCRIPTION			Q'TY		
	170FA	178FA	186FA	170FA	178FA	186FA	170FA	178FA	186FA
1	170F-15100A			Starter motor assembly(0.75kw)			1		
	170F-15100B			Starter motor assembly(0.90kw)			1		
1-1	170F-15200			Cover of starting motor hole			1		
2	GB/T5789-1986			Bolt M10×30			2		
2-2	GB/T5781-2000			Bolt M10×20			2		
3	GB/T93-1987			Washer 10			2		



FLYWHEEL GENERATOR ASSEMBLY

NO	PART NUMBER			DESCRIPTION			Q'TY		
	170FA	178FA	186FA	170FA	178FA	186FA	170FA	178FA	186FA
1	170F-16100			Rotor parts of the generator			1		
2	GB/T819.1-2000			Screw M6×14			3		
3	GB/T5789-1986			Bolt M6×20			3		
4	GB/T5789-1986			Bolt M6×12			1		
5	170F-16001			Clamp			1		
6	170F-16200			Stator parts of the generator			1		
7	170F-16400A			Regulated rectifier			1		
	170FG-16400B			Regulated rectifier			1		
8	GB/T818-2000			Screw M6×14			2		
9	GB/T5789-1986			Bolt M6×14			2		
10	170F-16301			Regulated rectifier stay			1		

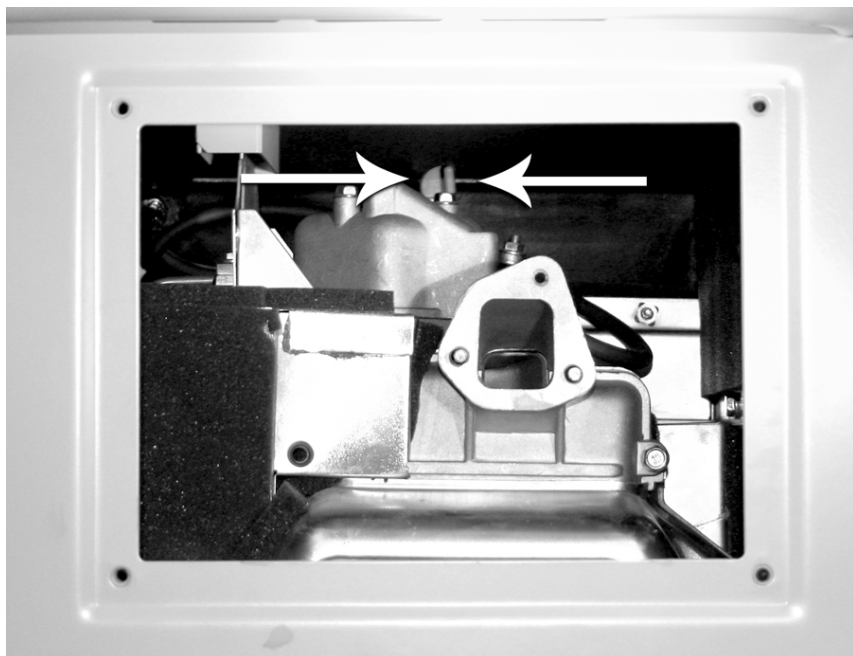


Figure A – Remove side panel, then remove air filter. Locate the “Red” Decompression Lever (Photo above shows it in the UP position). Press the lever down – this will hold the exhaust valve open. Replace the air filter assembly. Start the engine. You will notice that the spring loaded lever will automatically return to the UP position. (Also referred to as the decompression shaft assembly on the parts diagram.)

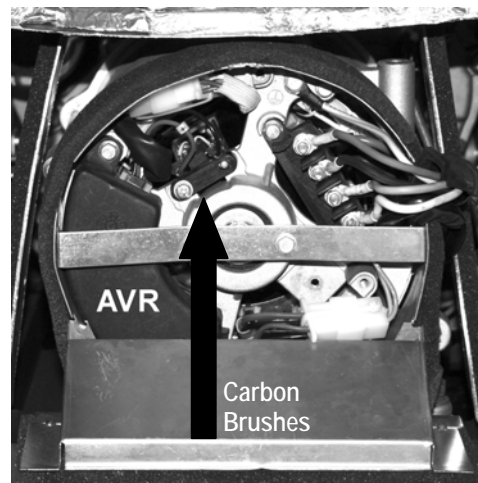


Figure B - Review the location of the AVR (Automatic Voltage Regulator) and the Carbon Brushes. These items may eventually need to be replaced when they wear out.

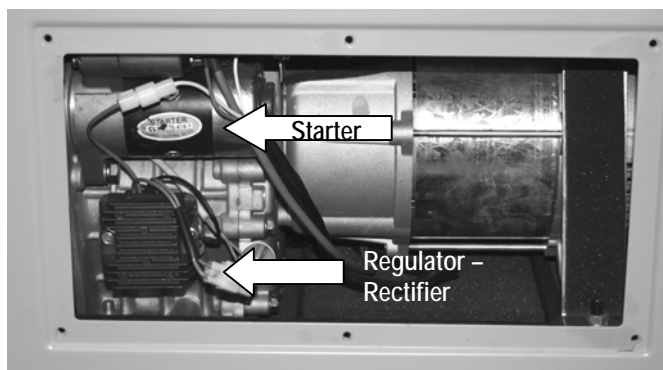


Figure C - Review the location of the rear access panel that has been removed. You can see the location of the starter and the regulator/rectifier for the 12V starting battery. The starter motor is located above the regulator/rectifier.

