



Australia Generators

## Owner's Manual

### Instructions for Installation/Set-up, Operation, Servicing, & Storage Portable, Outdoor Use-Only, Petrol Generator

**MODEL: SF3000E & SF4000E and MODEL: SF9000E**

Can be used to power individual appliances plugged directly into the generator's outlets, or as a back-up connection to a building's power supply via a professionally installed SAA -approved transfer switch and RCD circuit breaker.

#### **WARNING**

**READ and UNDERSTAND this manual completely before using the generator!** Failure to properly set up, operate, and maintain this generator could result in *serious injury or death* from *carbon monoxide poisoning, electric shock, fire/explosion, or burns*. In particular, be aware of the following hazards:

##### **CO POISONING**

Generators give off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it.

- ONLY run generator OUTDOORS and AWAY from building air intakes. NEVER run generator inside any enclosed or semi-enclosed spaces, including homes, basements, garages, sheds, boxes, RVs, boats or pick-up truck beds. These spaces can trap poisonous gases, EVEN if you run a fan or open windows.
- Install carbon monoxide alarms inside nearby structures/buildings (battery-operated, or plug-in with battery backup).

##### **ELECTRIC SHOCK/ELECTROCUTION**

- High voltage electricity from generator can kill. DO NOT operate in wet locations. Be sure generator is properly grounded. Use only Australian-listed, outdoor-rated grounded extension cords of proper size.
- NEVER plug the generator directly into a wall outlet. ANY connection to a building's electrical system must isolate the generator from utility power via an Australian-approved transfer switch installed by a licensed electrician. Otherwise, back feed from the generator into the power grid could kill utility workers.

##### **FIRE/EXPLOSION**

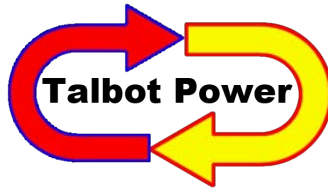
- DO NOT overload generator (per rated capacity), and OPERATE ONLY in an area with adequate cooling ventilation so engine does not overheat. Exhaust can be extremely hot. Keep muffler at least 2 meters from all combustible objects.
- All fuels are flammable. Never fuel a running or hot engine. Never pump fuel directly into generator at gas station – use approved container to transfer fuel. Ensure there are no fuel leaks, and keep sources of sparks and flames away.
- ALWAYS keep a fire extinguisher rated "ABC" nearby.

#### **STOP !**

**CHOOSE THE RIGHT GENERATOR FOR YOUR NEEDS.** See the "Power load Planning & Management" section of this manual to determine your power load requirements and then compare to the generator's rated capacity.

**INSPECT COMPONENTS:** Closely inspect to make sure no components are missing or damaged. See the "Unpacking & Delivery Inspection" section for instructions on whom to contact to report missing or damaged parts.

**ARRANGE FOR PROFESSIONAL INSTALLATION of a transfer switch if you will be connecting the generator to your building's electrical system.** See the "Installation/Initial Set-Up" section for more information about this requirement.



## Talbot Power Pty Ltd – Trading as Strike Force Australia Generators

We are an Australian family owned & run company established in 2004 making and testing “Strike Force” gasoline generators. Therefore we can guarantee that all parts used are of the highest quality which ensures a consistent, stable, industrial quality generators suitable for the harsh Australian conditions.

Our generator are offered through our distributor network and also through many of the regional field days in NSW, VIC, SA and TAS.

So if you choose a “Strike Force” generator you are purchasing the latest technology for Australian conditions together with exceptional quality and reliability. This with professional technical support and a complete range of parts with a back up service which second to none.

PLUS you are supporting another Australia owned family business.

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**Talbot power**





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**Any Questions, Comments, Problems, or Parts Orders**

**Call your place of purchase**



## Hazard Signal Word Definitions

	<p>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 of death.</p>
	<p><b>DANGER</b> (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p><b>WARNING</b> (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p><b>CAUTION</b> (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury</p>
<p><b>CAUTION</b></p>	<p><b>CAUTION</b> (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p> <p>Fig 01453</p>

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## About Your Generator

Thank you for purchasing your Strike Force portable generator!

### About Your Generator

**This SF4000E/ SF3000E model, portable generator is designed to provide up to 3200 watts / 2800 watts of electrical power at 50-60Hz .**

**This SF9000E model, portable generator is designed to provide up to 7200 watts of electrical power at 50-60Hz .**

#### **It can supply power:**

As a portable power source. You can plug appliances directly into the generator's electrical outlets.

**You must select a generator adequately sized for your power needs.** You need to determine the power needs of all the appliances/tools you wish to power at the same time and choose a generator rated to provide at least that power level. See the "Power Load Planning & Management" section of this manual to determine your specific power load requirements and then compare them to this generator's rated capacity. You must not overload the generator. Overloading will cause damage to the generator and attached electrical devices, and may also result in fire.

**Be sure to read about site selection and grounding requirements for running this generator.** More detailed information can be found in the "Installation & Initial Set-up, Steps 5 & 6" of this manual.

## Read this Manual

### **WARNING**

Improper use or maintenance of this generator can result in *serious injury or death* from *carbon monoxide poisoning, electric shock/electrocution, fire/explosion, or burns*. **Read this manual completely** before using the generator and follow all instructions and safety rules.

You must follow all instructions and safety precautions presented throughout this manual. A summary of important safety information can be found at the end of the manual. Keep this manual for reference and review.

## About Your Generator(cont'd)

Proper preparation, operation, and maintenance will result in operator safety, as well as best performance and life of the generator. For detailed engine operation and maintenance information, always refer to the engine Owner's Manual furnished with the generator.

Talbot Power is constantly improving its "STRIKE FORCE" products. The specifications outlined herein are subject to change without prior notice or obligation. The purchaser and/or user shall assume liability for any modification and/or alterations of this equipment from original design and manufacture.

Before using, the user shall determine the suitability of this product for its intended use and assumes liability therein.

**Contact your place of purchase for any questions about the appropriate use of this generator or Talbot Power**

### Warranty Registration

Please fill in the warranty registration information and have it on hand when you call in on a warranty claim or replacement parts.

## Specifications

<b>Item Number</b>	TB 4000E/3000E	TB 9000E
<b>Maximum Output</b> Watts(W)	3.2 / 2.8 Watts(W)	7.3
<b>Continuous Output</b> Watts(W)	2.8 /2.5 Watts(W)	6.8
<b>Voltage</b>	240(V)	240(V)
<b>Phase</b>	Single phase (4-wire)	Single phase (4-wire)
<b>Frequency</b>	50(Hz) ~60(Hz)	50(Hz) ~60(Hz)
<b>Power Factor</b>	0.8 p.f.	0.8 p.f.
<b>Total Harmonic Distortion</b>	less than 5%	less than 5%
<b>Engine</b>	196cc /212cc	420cc
<b>Engine Speed</b>	3180RPM	3180 RPM
<b>Fuel Type</b>	Unleaded petrol	Unleaded petrol
<b>Fuel Capacity</b>	4 gallons (15L)	8.0 gallons (30L)
<b>Oil Capacity</b>	0.16 gallons(0.6L)	0.29 gallons(1.1L)
<b>Starting Method</b>	Recoil/Electrical/remote	Recoil/Electrical/remote
<b>240 V Receptacles</b>	15(A)outlets 1-12/8AH DC output	15(A) outlets 1-12/8AH DC output
<b>Circuit Breakers</b>	1-8 Amp (A) thermal push to reset1- 10(A)	1-8 Amp (A) thermal push to reset1- 10(A)
<b>Battery Specs</b>	12 Volt DC Sealed Lead Acid Power Sport Battery Size 7 Amp hours Terminal Style – K	12 Volt DC Sealed Lead Acid Power Sport Battery Size 9 Amp hours Terminal Style – K
<b>Noise Level (7m)</b>	70db	74db

# REMOTE CONTROL MANUAL

## 1. Active Working Status:

1) Start: Push ON button in the remote panel, the remote control receives the start signal and check the status of generator automatically.

If the generator is working, the remote control will keep idle;

If the generator is off, the remote control will turn off the carburettor magnetic valve (if available)and start the engine of generator;

2) Stop: Push OFF button in the remote panel, the remote control receives the stop signal and checks the status of generator automatically.

### **Caution:**

After you turn off machine allow 10 seconds before restarting machine. This allows remotes to reset

## 2. Operations:

1)The choke is automatic please do not touch

2)Push “ON ”remote button to start.

3)Push “OFF ” remote button to turn off .

## 3. Technical Specifications

Content	Unit	Specification
Size of Remote Control	mm	85*55*25
Rated Working Voltage	V	12
Idle Current	MA	3.5
Max Tolerant Voltage	V	280-320
Remote Control Frequency	MHz	50-60
Max Code Qty	piece	6561
Max Remote Distance	m	<50

### **Caution**



At the disturbance of same frequency, the remote distance will be shorten into 1 meter.

## 4. Repair and Maintenance

If the generator remains in storage for a period of time, the battery will require charging.



# Machine Picture

## SF 3000E/4000E

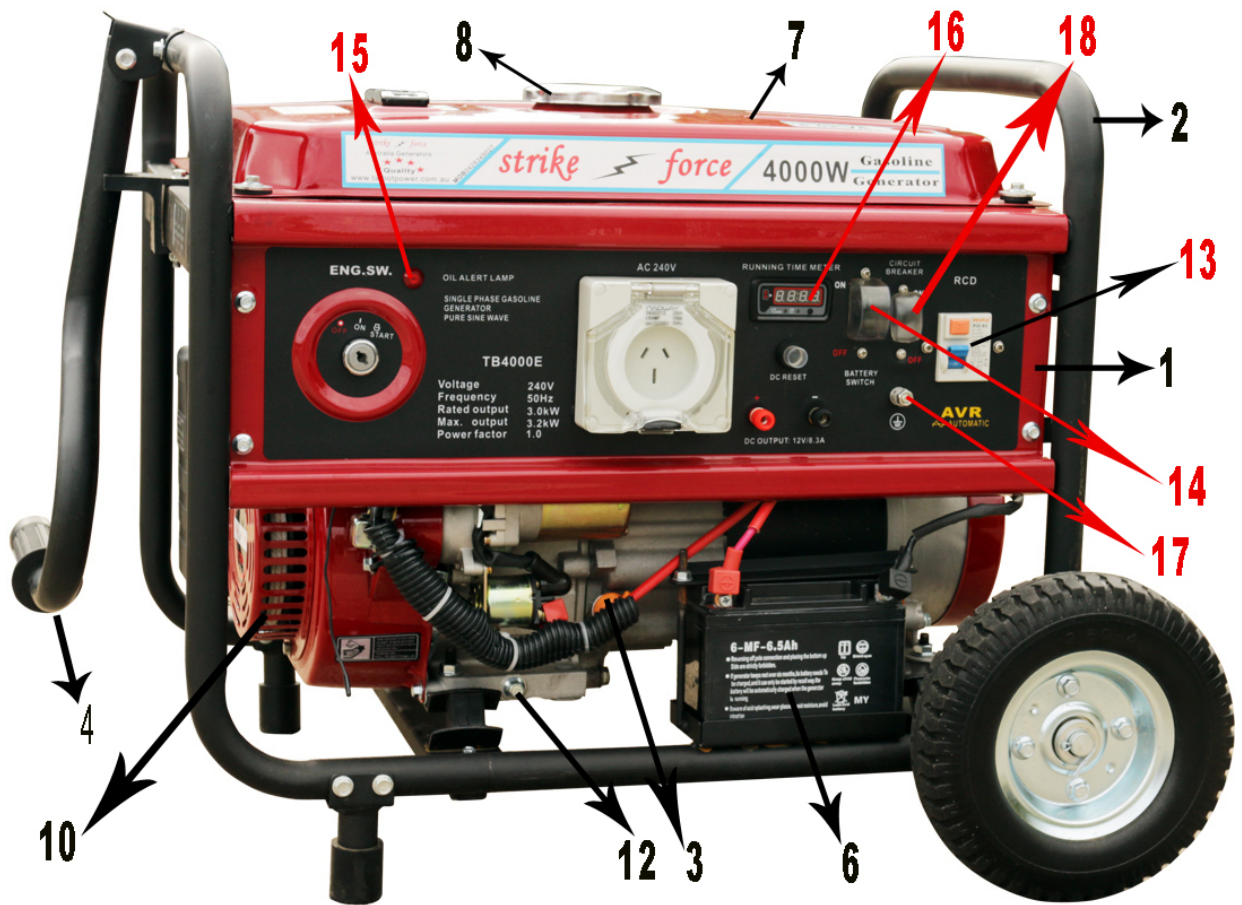


# SF9000E



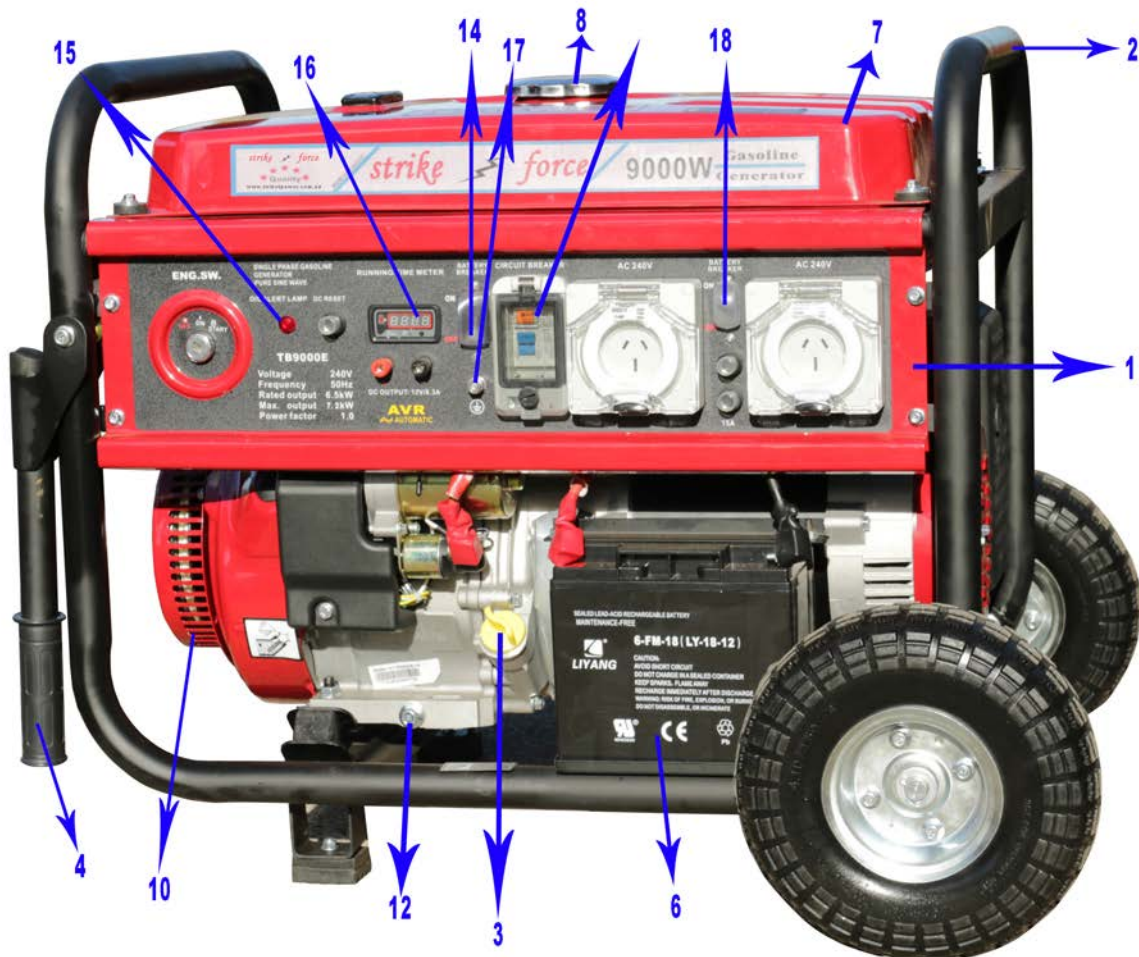
# Machine Component Identification

## SF3000E & 4000E



Ref.	Description	Ref.	Description	Ref.	Description
1	Control Panel	7	Petrol Tank	13	RCD
2	Frame	8	Petrol Cap	14	Battery switch
3	Dipstick / oil fuller	9	Carburettor	15	Oil alert
4	Handle	10	Recoil starter	16	Hour meter
5	Muffler	11	Air Cleaner	17	Earth
6	Battery	12	Oil Drain Plug	18	Circuit braker

### SF 9000E





Ref.	Description	Ref.	Description	Ref.	Description
1	Control Panel	7	Petrol Tank	13	RCD
2	Frame	8	Petrol Cap	14	Battery switch
3	Dipstick / oil fuller	9	Carburettor	15	Oil alert
4	Handle	10	Recoil starter	16	Hour meter
5	Muffler	11	Air Cleaner	17	Earth
6	Battery	12	Oil Drain Plug	18	Circuit breaker

## Power Load Planning & Management

### ⚠ WARNING

NEVER exceed the rated wattage capacity of your generator. OVERLOADING may cause SERIOUS DAMAGE to the generator and attached electrical devices, and may result in fire.

Your generator **MUST BE SIZED PROPERLY** to provide both the running and starting wattage of the devices you will be powering. Before using your generator, determine the running and starting wattage requirements of all the electrical devices you will be powering simultaneously.

The sum of the running and starting wattages of the devices being powered must not exceed the continuous output rating of your generator. (The continuous output rating of your generator is listed in the “Specifications” section of this manual.) Note that:

- Devices without electric motors such as light bulbs, radios, and televisions have the same running and starting wattage.
- Devices with electric motors such as refrigerators, compressors, and hand tools typically require a starting wattage that is 3 to 5 times greater than the running wattage.

The running and starting wattage requirements are often listed on a device’s nameplate. If wattage is not given on the device’s nameplate, the wattage may be calculated by multiplying the nameplate voltage by nameplate amperage,  $\text{Watts} = \text{Volts} \times \text{Amps}$ .

**Example conversion to watts:**

$240\text{Volts} \times 5\text{Amps} = 1200\text{Watts}$

If only the running voltage is given on the nameplate for a device with an electric motor, the starting wattage can be approximated to be three to five times the running wattage.

Estimates for the running wattage requirements for common devices are listed in **Table 1** below.

Guidance for starting wattages is provided in the table's footnotes.

**Table 1** Typical Device Power Requirements( Guide Only)

Device	Running Watts	Device	Running Watts
Air conditioner (12,000 BTU)	1700 (a,b)	Jet pump	800 (a)
Battery charger (20 Amp)	500	Lawn mower	1200
Belt sander (3")	1000	Light bulb (100 Watt)	100
Chain saw	1200	Microwave oven	700
Circular saw (6½")	2000 (a,b)	Milk cooler	1100(a)
Coffee maker	1800 (a,b)	Oil burner on furnace	300
Compressor (1 HP)	1400 (a,b)	Oil-fired space heater (140,000 Btu)	400
Compressor (¾ HP)	1800 (a)	Oil-fired space heater (85,000 Btu)	225
Compressor (½ HP)	1400 (a)	Oil-fired space heater (30,000 Btu)	150
Curling iron	700	Oven	4500
Dishwasher	1200	Paint sprayer, Airless (1/3 HP)	600(a)
Edge trimmer	500	Paint sprayer, Airless (handheld)	150
Electric nail gun	1200	Radio	200
Electric range (1 element)	1500	Refrigerator	600(a)
Electric skillet	1250	Slow cooker	200

**Power Load Planning & Management (cont'd)**

Device	Running Watts	Device	Running Watts
Furnace fan (1/3 HP)	1200 (a)	Submersible pump (1-1/2 HP)	2800 (a)
Freezer	800 (b)	Submersible pump (1 HP)	2000 (a)
Hair dryer	1200	Submersible pump (1/2 HP)	1500 (a)
Hand drill (1")	1100	Sump pump	600 (a)
Hand drill (1/2")	875	Table saw	2000 (a)
Hand drill (3/8")	500	Television	500
Hand drill (1/4")	250	Toaster	1000
Hedge trimmer	450	Vacuum cleaner	250
Home computer	150	VCR	70
Impact wrench	500	Water Heater	3000
Kettle	2400	Weed trimmer	500

- (a) Hard-starting motors require 3-5 times the rated running watts.
- (b) For extremely hard to start loads such as air conditioners and air compressors, consult the equipment dealer to determine maximum wattage.

**To calculate the running and starting wattage requirements for the devices you will be powering, follow these steps:**

1. Make a list of all electrical devices you will be powering at the same time with the generator.
2. List the greater of the running or starting wattage next to each device as obtained from the devices' nameplate or Table 1. If only the running wattage for a device with an electric motor is known, the starting wattage can be estimated to be at least 3 times the running wattage.
3. Add the wattages for all devices on your list. This total must be lower than the continuous output rating of your generator.

**Example:**

<b>Device to be Powered</b>	<b>Greater of Starting/Running Wattage</b>
Light Bulb	75 W
Refrigerator – 18 Cu. Ft.	1600 W
Microwave	700 W
Window AC	1800 W
Sump pump (1/3 hp)	2100 W
<b>Total</b>	<b>6275 W</b>

In this example, the generator must have a continuous output of at least 6275 W in order to power all of the devices simultaneously.

**STAGGERING LOADS**

You can increase the number of devices your generator can power by staggering the load on the generator. For example, you could alternately power your refrigerator and air conditioner for limited periods of time -- powering only one of the devices at a time and never powering both at the same time.

**Operation**

There are a number of important steps required to set up your generator for initial use. These steps are:

**Steps for Installation / Initial Set-Up**

- 1. Unpacking & delivery inspection.**
- 2. Planning the power load to stay within the generator's rated capacity.**
- 3. Setting up generator for the type of power generation you need:**
  - a. portable power source, or**
  - b. connected to a building as a back-up power source.**
- 4. Selecting a site for using the generator.**
- 5. Grounding.**
- 6. Battery installation (electric start models only).**

Each of these steps is discussed in detail below:

### 1. Unpacking & Delivery Inspection

You should inspect the generator immediately after you receive delivery.  
*See the “Machine Component Identification” section of this manual for a diagram of the generator and its components.*

- If you have *missing* components, contact place of purchase.
- If you have *damaged* components, contact the freight company that delivered the unit and file a claim.

### 2. Planning the Power Load

Plan your power load so that you do not exceed the generator’s rated capacity.  
See the “Power Load Planning & Management” section of this manual to review how to plan and manage power loads for the generator.

## Operation

### 3. Set-up either as a BUILDING BACK-UP or PORTABLE Power Source

This generator TB3000E is designed to provide up to 2800 watts of electrical power. And this generator TB9000E is designed to provide up to 7300 watts of electrical power. It can supply electricity in two ways:

1. As a back up, standby power source for a building. For this application, you must arrange for a licensed electrician to connect the generator to your building’s electrical system via the installation of an approved transfer switch .The transfer switch must be installed in accordance with building electrical code and guidelines supplied by your power company.
2. As a portable power source. You can plug appliances or tools directly into the generator’s electrical outlets.

Specific requirements for each are given below.

**Note:** Regardless of whether you use your generator as a back-up power source connected to a building or as a portable power source, you must not overload the generator.

Overloading may cause serious damage to the generator and attached electrical devices.



**Using as a  
Back-up  
Power  
Source for  
a Building**

**Contact a licensed electrician to install an approved transfer switch.** if

you want to use your generator as a back-up power source for a building

What does a transfer switch do? It:

- a) Safely connects the generator to your building's electrical system by isolating your generator from your utility company's power lines, AND
- b) Connects your generator to a critical subset of your building's circuits that are needed for emergency power needs.

If your generator will be connected to your building's electrical system, it **MUST ALWAYS** be isolated from the utility power grid with a *approved transfer switch installed by a licensed electrician* in compliance with all applicable building and electrical codes, and in accordance with guidelines supplied by your power company.

**⚠ DANGER:**

A transfer switch must be installed in order to isolate your generator from the utility power grid. If your generator is **NOT** properly isolated from the utility system, serious hazards will arise:

- When your generator is running, it's output will back feed into the utility power line and transformer that are normally used to provide you with power. The transformer will step up the current to the normal line voltage. An unsuspecting utility line worker working on what he thinks is a deactivated line could be electrocuted.
- If your generator is connected (running or not) when utility power is restored, your generator will be destroyed. It could also explode or cause fire.

In addition to isolating your generator from the utility system, the transfer switch connects your generator to a limited set of circuits in your building that have been chosen as critical to operate during a power outage.

# Operation

The generator cannot power your entire home -- you must work with the installing electrician to determine which devices/appliances you wish to power during an outage. The electrician can help you determine which circuits and devices can be powered simultaneously without overloading the generator.  
(See the previous section of this manual entitled **“Power Load Planning & Management”** for more information on load application and selection.)

Using as a Portable Power Source

**When using the generator as a portable power source, you can plug electric devices and appliances directly into the generator’s electrical outlets.**

**This generator is equipment with 1pc or 3pcs of SAA approved water-proof outlets.**

SF3000E  
SF4000E



SF9000E



(See more technical detail about these receptacles and their associated circuit breakers in the “Machine Component Identification” section of this manual.)

- Make sure you plug each electrical device/appliance into the correct generator outlet based on the device’s plug configuration and voltage/amperage rating. Never exceed the amperage rating of an outlet.

# Operation

- ◆ Extension cords may be used to power devices that are located at a distance from the generator. However, use only Australian approved, outdoor - rated, grounded extension cord of the proper size .Use Table 2 below to choose an adequately size extension cord, according to the amperage of the device being used and the length of the cord.

**Table 2**

Current/Power		Maximum Extension Cord Length			
Amps at 240V	Load (watts)	#10 Ga. Cord	#12 Ga. Cord	#14 Ga. Cord	#16 Ga. Cord
10	2400	250'	150'	100'	75'
20	4800	125'	75'	50'	25'
30	7200	60'	35'	25'	10'
40	9600	30'	15'	100'	*
50	12000	15'	*	*	*



**WARNING:**

Use of under sized extension cords can cause electric shock, fire, or damage to connected devices.

- All extension and appliance cords must be in good condition and not worn, bare, frayed, or otherwise damaged.



**WARNING:**

Use of damaged electric cords can cause electric shock or fire.

**Note:** If an extension cord becomes hot to the touch, it is overloaded or damaged and must be replaced.

*Talbot Power is NOT responsible for damage or injury resulting from customer use of inadequate extension cords.*

# Operation

## 4. Select a Suitable Site

Before using the generator, you must select a suitable **OUTDOOR** location for installation and operation. This location should meet all of the criteria listed below.

**⚠ WARNING:**

You must choose a suitable site for operating your generator to avoid equipment damage and/or injury and possible death from carbon monoxide poisoning, electric shock, or fire. Choose a site that meets all of the criteria specified.

**Dry, level surface**

**The generator should be positioned on a dry, firm, level surface.**  
Ensure that the generator sits level and will not slide or shift during operation. If applicable, block the generator's wheels to prevent sliding and shifting.

**Outdoors only – dangerous carbon monoxide exhaust**

**⚠ WARNING: Carbon monoxide poisoning hazard**

The exhaust from your generator contains carbon monoxide (CO), a poisonous gas that can kill. You cannot smell it, see it, or taste it. *Carbon monoxide exhaust is given off whether you are using petrol natural gas, or propane as the fuel source to power the generator.* Follow the directions below for choosing a location to operate your generator in order to avoid carbon monoxide poisoning.

**The location you choose to operate the generator must be OUTDOORS and away from all air intakes:**

- Never run the generator inside any closed or semi-enclosed spaces (even if outdoors), including homes, garages, basements, sheds, or boxes. *These spaces can trap poisonous gases, even if you run a fan or open windows.*
- Place the generator so that the exhaust fumes will not be directed towards people or building air intakes.
- Ensure that working, battery-operated or battery back-up carbon monoxide alarms are used in any dwelling/structure that is in close proximity to the running generator.
- Note that this generator is NOT designed or approved for use in vehicles or marine applications. Never run the generator inside RVs or other vehicles, on boats, or on pick-up truck beds.

**⚠ WARNING:**

Never attempt to attach ductwork to the muffler system to allow for installation inside an enclosure. This could cause hot air deflection, heat build-up, and increased exhaust back-pressure, resulting in possible exhaust leakage or damage to the generator.

**Adequate cooling ventilation**


**The generator needs adequate, unobstructed flow of air to allow for proper cooling of engine and generator head.**

**⚠ WARNING:**

Heat build-up from inadequate ventilation can result in fire, posing a serious risk to nearby persons and structures.

- Situate so there is adequate clearance around generator to allow for cooling airflow so that heat does not build up.

## Operation

	<ul style="list-style-type: none"> <li>• Never place the generator immediately adjacent to a building or other structure – allow at least 2 meters clearance.</li> <li>• Do not run the generator in close proximity to other heat-generating equipment, such as another generator. The combined heat that is generated may raise air temperature in the immediate area and there will not be adequate cooling ventilation.</li> <li>• Do not allow debris to accumulate and block airflow.</li> <li>• Do not operate with a tarp, blanket, or cover surrounding the generator.</li> </ul>
<p><b>No wet conditions</b></p>	<p><b>Choose a location where the generator will NOT be exposed to rain, snow, or direct sunlight.</b>          Exposure to water can cause electric shock. You <i>may</i> operate the generator under an outdoor, canopy-like structure of heat-resistant material that is open on all sides. Make sure that all parts of canopy are at least 2 meters from exhaust, and allow for adequate clearance above generator so that heat does not build up.</p>
<p><b>Hot exhaust clearance</b></p>	<p><b>The exhaust gas from your generator is extremely hot and can cause combustible materials to catch on fire.</b></p> <ul style="list-style-type: none"> <li>• Make sure your generator's exhaust system is at least 2 meters from all combustible materials and buildings/structures.</li> <li>• Equip the engine with a spark arrestor if the generator will be used near any ignitable forest, brush, or grassy land. (See the “Specifications” section of this manual to determine if your generator is already equipped.) Make sure you comply with applicable local, state, and federal codes.</li> <li>• Keep a fire extinguisher rated "A:B(E)" nearby. Keep it properly charged and be familiar with its use.</li> </ul>
<p><b>Away from dust/dirt</b></p>	<p><b>Do not use the generator in extremely dusty or dirty conditions.</b>          Excessive dust and dirt can cause premature failure of the machine.</p>
<p><b>Hearing protection</b></p>	<p><b>Generators can produce noise levels of up to 95 dB in close proximity, which can be dangerous to human hearing with prolonged exposure.</b>          Hearing protection may be required for persons working with 4.6-6 meter of the running generator for an extended period of time.</p> <p style="text-align: center;"> <b>WARNING:</b></p> <p>Never attempt to attach ductwork to the muffler system to lower noise levels. This could cause hot air deflection, heat build-up, and increased exhaust back-pressure, resulting in possible exhaust leakage or damage to the generator.</p>

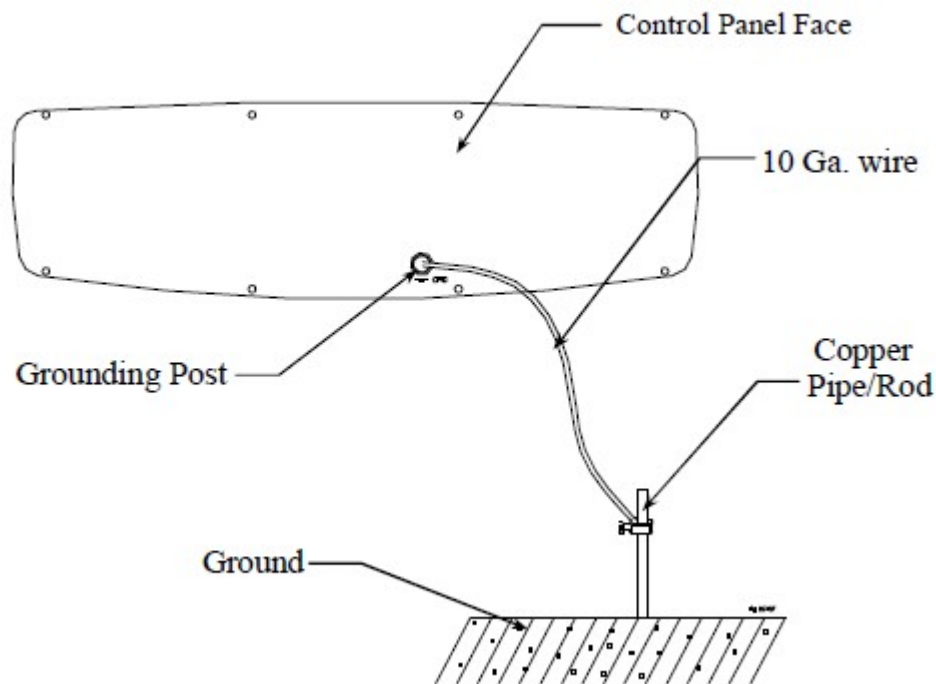
# Operation

## 5. Grounding the generator

**Always ensure the generator is properly grounded to prevent electrical shock.**

You must always ground the generator by the following method when using the generator as a portable electrical source:

- 1) Drive a  $\frac{3}{4}$ " or 1" copper pipe or rod into the ground close to the generator. The pipe/rod must penetrate moist earth – the depth required will be dictated by local soil conditions. Consult with an electrician.
- 2) Connect an approved ground clamp to the pipe.
- 3) Run a 10 gauge wire from the clamp to the generator grounding post located on the rear of the generator head.
- 4) Do not connect the generator grounding post to a water pipe or a ground used by a radio system.



If a licensed electrician installs the generator with a connection to your building's electrical circuit for use as a back-up power system, grounding may alternatively be completed through the building's grounding system. Ask your electrician. If the generator is not grounded through your building's electrical system, follow the procedure above.

**⚠ WARNING:**

Operating the generator when it is not properly grounded can result in electrical shock.

# Operation

## 6. Battery Installation

Your generator's engine is equipped with an electric starter which requires the installation of a 12-volt Battery. See the "Specifications" section of this manual for more specific battery requirements for this generator model, such as minimum amperage or CCA rating.

 **WARNING: Battery hazards**

Batteries are hazardous because they contain caustic acid, can emit explosive gases, and can cause electric shock. Caution must be exercised when making connections to a battery to avoid shock and contact with the acid, and to prevent any sparking that could lead to an explosion. ALWAYS follow the general battery safety rules and instructions listed below.

### General Battery Safety Rules

- ALWAYS use eye protection when handling batteries.
- NEVER smoke or work near sparks or other sources of ignition.
- NEVER touch both battery terminals at the same time with your hand or any non-insulated tools.
- If battery acid contacts skin or clothing, flush immediately with water and neutralize with baking soda.

### Connecting the battery

Always connect the cables in the following sequence to avoid possible shock:

1. Find the battery cables located inside the generator box.
2. Connect the **red** cable to the **positive(+)** terminal of the battery.
3. Then connect the **black** cable to the **negative(-)** terminal of the battery.

### Disconnecting the battery

Always disconnect cables in the following sequence to avoid possible shock.

1. First, disconnect the **black** cable from the **negative(-)** terminal of the battery.
2. Next, disconnect the **red** cable from the **positive(+)** terminal of the battery.

# Operation

Once you have set up your generator for use, it is time to start your generator. The following are the procedures necessary for safe, successful operation of your generator.

## Operation Procedures

1. **General Safety Rules for Operation**
2. **Preparing for Operation**
3. **Starting the Engine**
4. **Checking Generator Output**
5. **Connecting Electrical Loads (Portable Power Generation)**
6. **Stopping**
7. **Storage & Exercise of Generator**

To where the oil is just starting to run back out the hole.

## 1. General safety rules for operation

**Before starting the generator, review the following general safety rules for operation:**

### **WARNING:**

Failure to follow safety rules may result in serious injury or death to the operator or bystanders.

- **Know proper use/how to stop.** Be thoroughly familiar with proper use of the equipment and all generator controls, output receptacles, and connections. Know how to stop the generator quickly if needed (see “Operation, Step 6 - Stopping the Engine”).
- **Instruct operators.** The generator owner must instruct all operators in safe generator set-up and operation. Only trained adults should set up and operate the generator – Do not let children operate.
- **Intended use.** Carefully read about and understand the intended use of this generator. Do not use for other purposes, as unforeseen hazards or equipment damage may result.
- **Under the influence.** Never operate, or let anyone else operate, the generator while under the influence of alcohol, drugs, or medication.
- **Safety equipment / controls.** Do not operate the generator unless all safety covers, guards, and barriers are in place and in good working order, and all controls are properly adjusted for safe operation.
- **Damaged.** Do not operate the generator with damaged, missing, or broken parts.
- **Modifications.** Do not modify the generator in any way. Modifications can create serious safety hazards and will also void the warranty.
- **Engine speed.** Never attempt to modify the engine speed setting. The engine speed is preset at 3600 RPM for safe and optimal performance of the generator. If speed needs adjusting, it must be done by factory authorized personnel.
- **External fuel sources** Never attempt to connect external petrol / diesel sources in order to increase engine run time. Larger tank at pressure or higher elevation will cause petrol to leak from carburettor during operation. Fire or explosion could result.



## Operation

- **Malfunction during operation.**  
Immediately turn off the generator if any of the following condition arise during operation:
  - Excessive change in engine speed, slow or fast
  - Overheating in load connecting devices
  - Sparking or arcs from generator
  - Loss of electrical output
  - Receptacle damage
  - Engine misfire
  - Excessive vibration
  - Flame or smoke
  - Abnormal noise
- **Adjusting / repairing.** Always turn off generator and remove spark plug(s) or spark plug wire(s) before working on the generator to prevent accidental starting. Always discharge the capacitor before working on the generator head to prevent electrical shock. (See Maintenance & Repair section of this manual for instructions on how to do this.)
- **Carbon monoxide poisoning.** The running engine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. Follow all instructions for site selection and positioning the generator, and avoid inhaling the exhaust. If you start to feel sick, dizzy, or weak while using the generator, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.
- **Other exhaust dangers.** This product contains or emits chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Avoid inhalation of exhaust.
- **Wet conditions.** Do not operate the generator or handle any electrical equipment while standing in water, while barefoot, while hands are wet or while in the rain or snow. Electric shock may result.
- **Ground fault circuit interrupter.** Always use a residual current device(RCD) protected extension cord (or outlet, if generator is equipped) in damp or highly electrical conductive areas and on construction jobsites to prevent electrical shock.
- **Avoid contact.** Avoid contact with bare wires, terminals, connections, etc. while the unit is running.
- **Electric shock accident.** If an electric shock accident occurs, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. Avoid direct contact with victim. Use a non conducting implement, such as a dry rope or board, to free the victim from the live conductor. Apply first aid and get immediate medical help.
- **Smoking/sparks.** Never smoke near the running generator, and never operate near sources of sparks Or flames.
- **Hot muffler.** Never touch hot muffler, hot exhaust manifold, or engine cooling fins. Exhaust and engine parts can be very hot and will burn you.
- **Moving parts.** Keep hands, feet, and apparel away from drive belts, fans, and other moving parts. Never remove any drive belt or fan guard while the unit is operating.

# Operation

## **Static electricity and filling the petrol tank:**

### **Static electricity can initiate from ungrounded petrol tanks or containers, from flowing petrol, and from persons carrying a static electric charge**

Static electricity can explosively ignite petrol vapours are present during the fuelling process, resulting in serious burns to nearby persons. To avoid static electricity while fuelling, certain steps must be followed before and during the fuelling process in order to minimize and safely dissipate static charge build-up:

- ***Touch a grounded metal object before starting.*** Always dissipate static charge from your body before beginning the fuelling process by touching a grounded metal object at a safe distance away from fuel sources.
- ***Use a portable container to fill tank.*** Never fill the generator's gas tank directly from the fuel pump – the generator's tank is not grounded and the high velocity flow of petrol from a fuel pump can cause static electric build-up. Use an approved portable container to transfer petrol to the generator's tank.
- ***Fill container on the ground.*** Never fill the portable gas container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed. ALWAYS place container on the ground to be filled.
- ***Keep nozzle in contact with container.*** Keep nozzle in contact with the portable container at all times while filling. Manually control the flow of petrol; do not use the nozzle's lock- open device.
- ***Use a portable container made of metal or conductive plastic.*** It will dissipate charge to ground more readily.

### **About static electricity and fuelling**

Many common objects can accumulate and retain a static electric charge. Objects made of nonconductive materials (e.g. plastics) easily accumulate and retain static electric charge, as can objects made of conductive material (e.g. metal, water) if they are not electrically grounded. The static electric charge on an object, such as a human body or plastic fuel tank/container, can reach as high as several thousand volts!

A static electric spark can be generated if the static electric charge stored on an object “jumps” to another, less charged object. Such a spark can ignite invisible petrol vapours that are present during fuelling situations.

### **Typical sources of static electric hazards during fuelling**

The following objects can accumulate a static electric charge and cause an ignition spark in typical fuelling situations:

- 1) **Ungrounded tanks/containers.** Any ungrounded fuel tank or container can accumulate a static electricity as a result of contact with other objects or friction during transportation. This static electricity can discharge as a spark to the grounded petrol dispenser nozzle, as the nozzle is first brought close to the tank/container at the beginning of the fuelling process.
- 2) **Flowing petrol** Most people are not aware that petrol accumulates in the charge while flowing through a hose or pipe. This charge then transfers to and accumulates in the gas tank or container that is being filled. The total amount of charge accumulation depends on the amount of gas pumped into the container, the speed with which it is pumped, and whether or not the tank/container is grounded. If sufficient static electric charge accumulates in the fuel tank or container during the fuelling process, the tank/container may discharge a spark to the grounded petrol dispenser nozzle.
- 3) **Persons** A person dispensing the petrol can carry a static electric charge on their body, typically resulting from contact with their car seat or electronics. The static electricity can discharge as a spark between that person's hand and either the grounded dispenser nozzle or the fuel tank opening.

## Operation

<b>2. Preparing for Operation</b>	
<b>Position generator</b>	<p><b>Position generator in accordance with the instructions given in “Installation &amp; Initial Set-up, Step 4: Select a Suitable Site” of this manual.</b></p> <p>Operate outside only, on dry, level ground with adequate clearance and ventilation.</p> <p><b>⚠️ WARNING: Carbon monoxide poisoning hazard</b> Generators give off carbon monoxide exhaust, a poisonous gas that can kill. You CANNOT smell it, see it, or taste it. ONLY run generator OUTDOORS and away from air intakes. NEVER run generator inside any enclosed or semi-enclosed spaces, including homes, garages, basements, sheds, boxes, pick-up truck beds, RVs, or boats. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. <i>Carbon monoxide exhaust is given off whether you are using petrol, natural gas, or propane to power the generator.</i></p>
<b>Ground generator</b>	<p><b>Make sure the generator is grounded in accordance with instruction given in “Installation &amp; Initial Set-up, Step 5: Grounding the Generator” of this manual.</b></p> <p><b>⚠️ WARNING: Electric shock hazard</b> Always ensure generator is properly grounded to prevent electrical shock.</p>
<b>Perform scheduled maintenance as needed</b>	<p><b>Make sure that any regular maintenance has been performed as prescribed in this manual in the “Maintenance &amp; Repair” section.</b></p> <ol style="list-style-type: none"> <li>1. Refer to the engine owner’s manual for engine maintenance instructions.</li> <li>2. Make sure battery is charged. Charge as needed according to your battery manufacturer’s instructions.</li> </ol>
<b>Check/add oil</b>	<p><b>Check the oil level using the dipstick and add oil as needed.</b></p> <p>Using a funnel, add oil up to the FULL mark on the dip stick with the recommended oil type for your engine and expected ambient conditions. (See engine Owner’s Manual for oil type and capacity, and more detailed oil check/fill instructions.)</p> <p><b>⚠️ WARNING: Burn hazard</b> Never open oil port while engine is running. Hot oil can spray over face and body.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>○ <i>Low oil shutdown feature prevents the generator from starting without sufficient oil.</i></li> <li>○ <i>Engine is shipped without oil. You must add oil before first use.</i></li> </ul> <p><b>IMPORTANT:</b> Under long, continuous-run operating conditions, be prepared to:</p> <ul style="list-style-type: none"> <li>• Check engine oil level every time you refuel the engine.</li> <li>• Change oil after the first 30 operating hours, and at least every 50 operating hours thereafter, or as directed in engine owner’s manual.</li> </ul>
<b>Check/fill petrol tank</b>	<p><b>Check the petrol level in the generator's tank. If needed, fill tank with fresh unleaded petrol from a portable container, after first reading the warnings and instructions below.</b></p>

## Operation



### **WARNING: petrol fire/explosion hazard**

Petrol highly flammable and explosive. Heat, sparks, and flames can ignite petrol vapours, which can become widespread during fuelling. A flash fire and/or explosion could result and cause serious injury or death. Use extreme care when handling petrol. Carefully follow all the instructions in this section to avoid the following conditions which could result in petrol ignition:

- gas vapour collection inside enclosures
- static electric sparks
- sparks from electric wiring, batteries, or running engines
- sources of heat (such as a hot engine or exhaust)
- open flames, including pilot lights

1) Before starting, review the following general safety precautions for fuelling:

- a) Never pump petrol directly into the generator's gas tank at a gas station- high velocity flow from the pump could result in a static electric build-up in the generator's tank. Always use a portable container to fill the tank. *See warning box about static electric spark hazards below.*
- b) Fill petrol tank OUTDOORS-never indoors.
- c) Stay away from all sources of heat, sparks, and flames. Do not smoke.

2) Turn generator engine off and allow to cool for at least two minutes before removing gas cap.

**Note:** A running or still-hot engine is hot enough to ignite fuel.

Remove generator petrol cap.

Adding petrol through the fill opening:

- Use only an appropriate container to transfer the petrol to the generator's tank. Follow the safety warning and instructions below for avoiding static electric sparking.
- Do NOT overfill the petrol tank. Allow at least 1/2 inch of empty space below the fill neck to allow for fuel expansion.



### **WARNING: Static electric spark hazard**

A static electric spark can explosively ignite petrol vapour, resulting in a flash fire that could cause serious injury or death. To avoid static electric sparking while filling the petrol tank, **the following steps must be followed to minimize and safely dissipate static electric build-up before and during the fuelling process:**

- Always dissipate static charge from your body before beginning the fuelling process by touching a grounded metal object at a safe distance from fuel sources.
- Never fill the generator's gas tank directly from the fuel pump – the generator's tank is not grounded and high velocity flow from the pump can cause static electricity build-up. Use an approved portable container to transfer gas to the generator's tank.
- Never fill the portable gas container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed. ALWAYS place container on the

## Operation

	<p>ground to be filled.</p> <ul style="list-style-type: none"> <li>• Keep nozzle in contact with portable container while filling. Manually control the flow of petrol; do NOT use the nozzle's lock-open device.</li> <li>• A portable container made of metal or conductive plastic is preferred because it dissipates charge to ground more readily.</li> </ul> <p>3) Clean up petrol spills / splashes immediately.</p> <ul style="list-style-type: none"> <li>• If possible, move the generator away from spilled petrol on the ground.</li> <li>• Wipe up spilled petrol , and wait 5 minutes for excess petrol to evaporate before starting engine.</li> <li>• Petrol soaked rags are flammable and should be disposed of properly.</li> <li>• If petrol is spilled on your skin or clothes, change clothes and wash skin immediately.</li> </ul> <p>4) Replace petrol cap securely before starting engine.</p> <p>5) Store extra petrol in a cool, dry place in an Australia approved, tightly sealed container.</p> <p><b>IMPORTANT:</b>  <b>For continuous operation, be prepared to check and refuel the engine on a regular basis. A tank of petrol should last about 4 hours under 100% load, and about 8 hours under 50%load.</b></p>
<p><b>Inspect Fuel System/ Check for Leaks</b></p>	<p><b>Inspect fuel system &amp; check for leaks BEFORE starting generator.</b>            Do not start generator until all needed repairs have been completed.</p>
<p><b>Personal Protection</b></p>	<p>1) Hearing can be damaged from prolonged, close-range exposure to the type of noise produced by this generator. <b>The use of ear plugs or other hearing protection device is recommended</b> for person working within 4.6-6 meter of the running generator for an extended period of time.</p> <p>2) Loose or dangling apparel can become entangled in moving parts. Metal jewellery can conduct electricity. Never wear jewellery or loose-fitting clothing when starting or operating the generator.</p>

# Operation

## 3. Starting the Engine

**After you have completed the pre-start checklist procedures, you are ready to start the engine.**

**To start the engine:**

- 1) Disconnect all loads to the generator.
- 2) Turn petrol line valve to the ON position.
- 3) For cold engine, move choke lever to full choke position. To restart a warm engine, move choke lever to half choke or to RUN position.
- 4) Start the engine:
  - a) Using electric start –
    - i) Turn the engine key switch to the START position and hold it there until the engine starts.  
**NOTE:** *If the engine fails to start after 5 seconds, release key and wait 10 seconds before attempting to start again. Cranking the electric starter for more than 5 seconds continuously can overheat and damage the starter motor.*
    - ii) Release the key when the engine starts.
  - b) Using recoil start –
    - i) Turn the engine key switch to the ON position.
    - ii) Pull the starter grip lightly until you feel resistance, then pull the starter cord out briskly and rapidly.
    - iii) Allow starter cord to return slowly.
- 5) When engine starts, move choke lever to RUN position.
- 6) Under long, continuous-run operating conditions, be prepared to:
  - a) Check and refuel the engine on a regular basis. A tank of gas should last about 8 to 12 hours under 100% load, and about 12 to 18 hours under 50% load. See engine owner's manual for more detail.



**WARNING:**

A running engine is hot enough to ignite fuel. Never add fuel or remove gas cap if engine is running or still hot. Let cool at least 2 minutes.

- b) Check engine oil level each time you refuel.
- c) Change oil after the first 30 operating hours, and at least every 50 operating hours thereafter, as directed in the engine owner's manual.



**WARNING:**

Never open oil port while engine is running. Hot oil can spray over face and body.

# Operation

## 4. Checking Generator Output

Although the speed of the engine was carefully adjusted at the factory so that the generator produces the proper voltage and frequency, **output voltage should be checked periodically to ensure the generator is working properly before connecting loads to the generator**



### WARNING:

The generator must be run at the correct speed in order to produce the proper electrical voltage and frequency. Failure to do so could result in damage to equipment powered by the generator and possible injury to the individual.

Output voltage should be checked with a portable voltage meter:

1. Start engine and allow to warm up for five minutes. Do not connect any loads.
2. Use voltage meter to check output voltage at the generator's outlets/receptacles.
3. Measured voltage should be within the following ranges:

240V +/- 10% at 240V receptacles.

4. If measured voltage is not within the specified range, have generator adjusted by factory authorized personnel. Do not attempt to adjust the engine speed yourself.

### NOTE: Slight variation in voltage/speed with changing electrical loads

All engines have a tendency to slow down when a load is applied. When electrical loads are connected to the generator, the engine is more heavily loaded and as a result the speed drops slightly.

This slight decrease in speed, together with the voltage drop within the generator itself, results in a slightly lower voltage when the generator is loaded to its full capacity than when it is running with no load. Additionally, there may be small brief surges and drops in voltage as motors connected to the generator cycle on or off.

The slight variation has no appreciable effect in the operation of motors, lights, and most appliances.

# Operation

## 5. Connecting Loads

You will want to be careful when connecting loads so as not to overload the generator, especially if you are powering devices with motors that require a higher starting power load.

Instructions are provided below for connecting loads when you are using the generator:

- As a portable power source
- Connected to a building as a back-up power source



### WARNING:

Do not overload generator. Make sure that combined starting and running loads do not exceed rated capacity of generator. Overloading the generator can cause damage to the generator and attached electrical devices, and may result in fire.

### Using as a Portable Power Source

**Connect electrical loads one at a time according to the following instructions:**

1. Allow engine to reach operating speed by allowing it to warm up for approximately 5 minutes before connecting electrical devices.
2. After engine is warmed up, begin by connecting the items that require the highest wattage first. The recommended sequence is as follows:
  - a. Connect items with motors such as refrigerators, freezers, air conditioners, or small hand tools, one at a time. Let each motor stabilize before connecting the next device.
  - b. Connect any lights you are planning on powering.
  - c. Connect voltage sensitive equipment such as electronics via surge protectors. Plug devices such as TV's, computers, and microwaves into a voltage surge protector, then plug the surge protector into the generator.

### Using as a Back-up Power Source for a Building

Each transfer switch installation will be unique.

Proper instructions for how to safely bring the generator online with the building's electrical system should be provided by the installing electrician, who should also provide personal instruction to the owner/operator.

Failure to follow the proper procedure as provided by the electrician could expose persons to the hazards noted above.

## 6. Stopping

**Stop the engine using the following steps:**

1. Disconnect all loads to the generator.
2. Turn engine key switch to OFF position.
3. Turn petrol line shut-off valve to OFF position.
4. Remove key from starter to prevent accidental starting of engine.



# Operation

## 7. Storage & Exercise

**When you are finished using the generator, you must:**

- Disconnect all loads
- Shut off fuel supply
- Store the generator properly
- Plan on exercising the engine regularly unless the generator is prepared for long-term storage.

Detailed instructions are provided below.

**Disconnect loads & turn off fuel supply**

**When you are finished using the generator, disconnect all loads and turn off fuel supply:**

1. Make sure all devices that were connected to the generator's outlets have been disconnected.
2. Check to be sure petrol line shut-off valve is in OFF position.

**Cool engine before storing**

**Let engine cool for at least five minutes before storing.**

A hot engine can be a fire hazard.

**Choose a storage location**

**Store the generator in a location that is:**

- Clean and dry
- Away from sources of heat, open flames, sparks, or pilot lights, even if the generator's fuel tank is empty. Residual fuel in the tank could ignite.
- Away from extreme high or low temperatures.

Note: Do not store with battery charger always connected. Batteries that are over-charged can boil themselves dry and produce excessive amounts of hydrogen, an explosive gas.

**Prevent accidental starting**

**Remove key from starter (for electric start engines) and secure key in a safe location, or remove spark plug(s) in order to ensure the generator cannot be started accidentally in a storage location or by untrained person(s).**

**Exercise generator every 4 weeks**

**The generator should be used regularly.**

At least every four weeks, start the engine and let it run for 10 to 15 minutes with a small load plugged in, such as a lamp or fan.

Monthly exercising of the generator will:

- Dry out any moisture that has accumulated in the windings. If left, this moisture can cause corrosion in the winding.
- Ensure that the unit is operating properly should it be needed in an emergency.

**Perform regular maintenance**

**Perform periodic maintenance** as directed in this manual to keep the generator in safe working condition.

## Operation

### Prepare engine for long term storage if needed

**If you will not be able to exercise the generator regularly, you must prepare the engine for long term storage** to prevent gum deposits from forming and causing malfunction of the engine.

Prepare engine for long term storage by:

- **Removing all petrol** from the tank and carburettor

OR

- **Adding fuel stabilizer** to the petrol ( following manufacturer's instructions)

#### **Fuel stabilizer steps:**

1. Ensure petrol tank is full.
2. Add fuel stabilizer to fuel tank.
3. Run engine at least 10 minutes after adding stabilizer to allow it to enter the fuel system.
4. Shut off engine.
5. Disconnect spark plug wire and remove spark plug.
6. Add one teaspoon oil through spark plug hole.
7. Place rag over spark plug hole and turn starter (or pull the recoil) a few times to lubricate the combustion chamber.
8. Replace spark plug, but do not reconnect the spark plug wire.

## Maintenance & Repair

Inspect and maintain your generator as specified below in order to keep it in safe and optimal working order. Follow all safety rules and recommended maintenance steps.

### ⚠ WARNING

ALWAYS shut off the engine, disconnect the spark plug(s) and discharge the capacitor before cleaning, adjusting, or servicing the generator. Make sure all guards and shields are replaced before using.

**Note:** The generator head is brushless and maintenance free. The bearing is a heavy-duty sealed ball bearing which requires no maintenance or lubrication.

<b>Maintenance &amp; Repair</b>	
<b>Follow safety rules</b>	<p><b>Read and follow these safety rules whenever you will be servicing the generator:</b></p> <ul style="list-style-type: none"> <li>• <b>Turn off generator.</b> Always turn off generator and remove spark plug(s) or spark plug wire(s) before working on the engine or generator to prevent accidental starting.</li> <li>• <b>Replace guards.</b> Make sure all guards and shields are replaced after servicing the generator.</li> <li>• <b>Repair.</b> Major service, including the installation or replacement of parts, should be performed only by a qualified electrical service technician. Obtain factory approved parts from your place of purchase.</li> <li>• <b>Replacement parts.</b> If a part needs replacement, only use factory approved repair parts. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the generator and will void the warranty.</li> </ul>
<b>your place of purchase.</b>	<p><b>Perform engine maintenance as specified in the engine owner's manual.</b></p> <p style="padding-left: 20px;">Engine maintenance items include:</p> <ol style="list-style-type: none"> <li>1. Changing oil and oil filter if fitted.</li> <li>2. Air filter check/replacement.</li> <li>3. Spark plug cleaning and replacement.</li> <li>4. Fuel filter check/replacement.</li> <li>5. Fuel tank cleaning.</li> </ol>
<b>Check receptacles</b>	<p><b>Check receptacles before each use to make sure they are not cracked or broken.</b></p> <p>If a receptacle is cracked or otherwise damaged, do not use until replaced with an authorized factory part. Using cracked or damaged receptacles can be both dangerous to the operator and destructive to the equipment.</p>
<b>Inspect fuel system /check for leaks</b>	<p><b>Inspect the fuel system and check for leaks on a regular basis.</b></p> <ol style="list-style-type: none"> <li>1) Inspect the entire fuel system. Look for: signs of leaks or deterioration ,chafed or spongy fuel hose, loose connections, loose or missing fuel hose clamps, damaged petrol tank, or defective petrol shut-off valve.</li> </ol>
<b>Check RCD (if equipped)</b>	<p><b>Once a month, test the Residual Current Device(RCD) to protect against electrical shock due to failure of the RCD.(Only for Those models equipped with RCD-See the "Specifications" section.)</b></p>

## Maintenance & Repair (cont'd)

	<p><b>To test the RCD:</b></p> <ol style="list-style-type: none"> <li>1. Depress the TEST button. The RESET button should extend from the receptacle. If the RESET button does not extend, contact your place of purchase for replacement parts.</li> <li>2. Restore power to the RCD by firmly pressing the RESET button back into the receptacle until an audible click is heard.</li> </ol>
<p><b>Clean &amp; inspect spark arrestor (if equipped)</b></p>	<p><b>Clean and inspect the spark arrestor muffler.</b>          (Only for those models equipped with a spark arrestor – See the “Specifications” section.) If the engine is equipped with a spark arrestor muffler, clean and inspect it regularly (follow manufacturer’s service instructions). Replace if damaged.</p>
<p><b>Keep generator clean</b></p>	<p><b>Keep generator clean.</b>          If dust or debris accumulates on the generator, clean the generator with a damp cloth or soft bristle brush. Do not allow air intakes to become blocked.  <b>Note:</b> Do not spray generator with a garden hose or pressure washer. Water may enter the generator and cause damage to the rotor, stator, or internal windings.</p>
<p><b>Recharge and maintain battery (if electric start)</b></p>	<p><b>Inspect, recharge, and maintain your battery according to your battery manufacturer’s instructions.</b>          (Only for those models equipped with electric start.)          Do not store with battery charger always connected. Batteries that are overcharged can boil themselves dry and produce excessive amounts of hydrogen, an explosive gas.</p>

**IMPORTANT:**

If a part needs replacement, only use parts that meet the manufacturer’s specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the generator.

**Contact your place of purchase for any questions, problems, or parts orders.**

# TROUBLESHOOTING

<b><i>TROUBLESHOOTING</i></b>		
<b><u>Problem</u></b>	<b><u>Possible Causes</u></b>	<b><u>Possible Remedies</u></b>
Engine will not start.	<ul style="list-style-type: none"> <li>a) Low oil level.</li> <li>b) Fouled spark plug.</li> <li>c) Out of fuel.</li> <li>d) Engine switch in OFF position.</li> </ul>	<ul style="list-style-type: none"> <li>a) Fill crankcase to proper oil level.</li> <li>b) Clean or replace spark plug.</li> <li>c) Fill fuel tank.</li> <li>d) Place engine switch in ON position.</li> </ul>
Voltage too low.	<ul style="list-style-type: none"> <li>a) Engine speed too slow.</li> <li>b) Generator is overloaded.</li> </ul>	<ul style="list-style-type: none"> <li>a) Bring generator to a qualified technician for adjustment.</li> <li>b) Reduce the load. (See Power Load Planning &amp; Mgt. section of this manual.)</li> </ul>
Circuit breaker trips.	<ul style="list-style-type: none"> <li>a) Defective load connected to generator.</li> <li>b) Defective receptacle.</li> <li>c) Generator overloaded.</li> </ul>	<ul style="list-style-type: none"> <li>a) Disconnect load.</li> <li>b) Replace receptacle.</li> <li>c) Reduce the load. (See Power Load Planning &amp; Mgt. section of this manual.)</li> </ul>
Voltage too high.	<ul style="list-style-type: none"> <li>a) Engine speed too high.</li> </ul>	<ul style="list-style-type: none"> <li>a) Bring generator to a qualified technician for adjustment.</li> </ul>
Generator overheating.	<ul style="list-style-type: none"> <li>a) Generator is overloaded.</li> <li>b) Insufficient ventilation.</li> </ul>	<ul style="list-style-type: none"> <li>a) Reduce the load. (See Power Load Planning &amp; Mgt. section of this manual.)</li> <li>b) Make sure there is at least 7 feet of clearance on all sides of generator.</li> </ul>
No output voltage.	<ul style="list-style-type: none"> <li>a) Defective load connected to generator.</li> <li>b) Broken or loose wire.</li> <li>c) Defective receptacle.</li> <li>d) Defective stator.</li> <li>e) Defective rotor.</li> <li>f) Circuit breaker tripped.</li> </ul>	<ul style="list-style-type: none"> <li>a) Disconnect load.</li> <li>b) Bring generator to a qualified technician for repair.</li> <li>c) Replace receptacle.</li> <li>d) Bring generator to a qualified technician for repair.</li> <li>e) Bring generator to a qualified technician for repair.</li> <li>f) Reset circuit breaker and reduce loads connected to the generator.</li> </ul>
Engine lacks power.	<ul style="list-style-type: none"> <li>a) Generator is overloaded.</li> <li>b) Dirty air filter.</li> </ul>	<ul style="list-style-type: none"> <li>a) Reduce the load. (See Power Load Planning &amp; Mgt. section of this manual.)</li> <li>b) Clean or replace air filter.</li> </ul>
Engine shuts down during operation.	<ul style="list-style-type: none"> <li>a) Out of fuel.</li> <li>b) Low oil level.</li> </ul>	<ul style="list-style-type: none"> <li>a) Fill fuel tank.</li> <li>b) Fill crankcase to proper oil level.</li> </ul>

## Summary of Important Safety Information for Operation

This section provides a summary of the various safety procedures and measures that have been presented throughout the manual. Keep this summary handy and refer to it to refresh your memory about how to safely use your generator.

### WARNING

Carefully read and make sure you understand the following safety information before using the generator. Improper use or maintenance of the generator can result in *serious injury or death* from *carbon monoxide poisoning, electric shock, fire/explosion, or burns*.

### General

- **Read manual.** Read this Owner's Manual and the engine Owner's Manual completely before attempting to set-up and use the generator. Serious injury or death can result if safety instructions are not followed.
- **Instruct operators.** The generator owner must instruct all operators in safe generator set-up and operation. Do not allow anyone to operate the generator who has not read the Owner's Manual and been instructed on its safe use.
- **Adults only.** Only trained adults should set up and operate the generator. Do not let children operate.
- **Under the influence.** Never operate, or let anyone else operate, the generator while under the influence of alcohol, drugs, or medication.
- **Intended use.** Carefully read about and understand the intended use of this generator. Do not use for other purposes, as unforeseen hazards or equipment damage may result.

### Prohibition Against Modifications

Never modify or alter the generator in any way. Modifications can create serious safety hazards and will also void the warranty.

- **Engine speed.** Never attempt to modify the engine speed setting. The engine speed is preset at 3600 RPM for safe and optimal performance of the generator. If speed needs adjusting, it must be done by factory authorized personnel.
- **Fuel/exhaust system.** Never modify the exhaust system, fuel tanks, or fuel lines. Carbon monoxide poisoning, fire, or explosion could result.
- **Guards.** Do not operate generator unless all guards and cover shields, which prevent access to moving parts and pinch points, are in place. Failure to guard the power transmission mechanisms *may result in serious injury or death*.

### Safety – Installation & Set-up

#### Installation / Initial Set-up Safety

- **Dry, level surface.** Situate generator on a dry, firm, level surface. Ensure generator sits level and will not slide or shift during operation. Block wheels if applicable.
- **Operate OUTSIDE only – dangerous carbon monoxide exhaust!** Generators give off carbon monoxide exhaust, a poisonous gas that can kill. You CANNOT smell it, see it, or taste it. ONLY run generator OUTDOORS and away from building air intakes. NEVER run generator inside homes, garages, sheds, or other semi-enclosed spaces. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. Carbon monoxide is given off whether you are using petrol, natural gas, or propane to power the generator.
- **No vehicle/marine use.** This generator is NOT designed or approved for use in vehicles or marine applications. Never run the generator inside RVs or other vehicles, on boats, or on pick-up truck beds.
- **Cooling ventilation.** The generator needs adequate, unobstructed flow of air to allow for proper cooling of engine and generator head. Situate so there is adequate clearance around generator to allow for cooling airflow. Do not allow debris to accumulate and block airflow.
- **Grounding.** Always ensure generator is properly grounded to prevent electrical shock. This generator is equipped with a grounding post. Always complete the grounding path from the generator to a copper pipe/rod driven into moist earth to a sufficient depth. Check with an electrician for local grounding requirements. If a

## Summary of Important Safety Information for Operation(cont'd)

licensed electrician installs the generator with a connection to your building's electrical circuit for use as a standby power system, grounding will be complete through the building's grounding system.

- **Isolate connection to building's electrical circuit.** Never plug the generator directly into a wall outlet. ANY connection to a building's electrical system **MUST ISOLATE THE GENERATOR FROM UTILITY POWER** via an approved transfer switch installed by a licensed electrician in compliance with all applicable local building and electrical codes. If the generator is not isolated from the utility power system by such means, generator output will back feed into the utility power grid. This may result in injury or death to utility power workers or others who contact the lines during a power outage. It may also cause the generator to explode or cause fires when utility power is restored.
- **Wet conditions.** Water conducts electricity. Do not operate generator where it is wet. Operate on a dry surface under an open, canopy-like structure.
- **CO alarms.** Ensure that working, battery-operated or battery back-up carbon monoxide alarms are used in any dwelling/structure that is in close proximity to the running generator.
- **Hot exhaust - fires.** Exhaust from engine can be extremely hot and cause fire. Position muffler at least 7 feet from combustible objects during operation.
- **Spark arrestor.** Equip engine with a spark arrestor if generator will be used near any ignitable forest, brush, or grassy land. See the "Specifications" section of this manual to determine if your generator is already equipped. Make sure you comply with applicable local, state and federal codes.
- **Fire extinguisher.** Keep a fire extinguisher rated "ABC" by the National Fire Protection Association nearby. Keep it properly charged and be familiar with its use.

### **Safety – Before Use**

#### Know how to operate

- **Review safety rules.** Before each use of this generator, review the "Rules for Safe Operation." Failure to follow these rules may result in serious injury or death.
- **Know how to operate.** Be thoroughly familiar with all controls and with the proper use of the equipment. Know how to stop the generator quickly if needed.

#### Personal protective equipment

- **Hearing protection.** The use of ear plugs or other hearing protection device is recommended for those in close proximity to the generator while it is operating.
- **Loose / dangling.** Loose or dangling apparel can become entangled in moving parts. Metal jewellery can conduct electricity. Never wear jewellery or loose-fitting clothing when operating the generator.

#### Petrol Safety

Petrol is highly flammable and explosive. You can be burned or seriously injured when handling fuel. Use extreme care when handling:

- **Fuel outdoors.** Fill fuel tank outdoors – never indoors. Petrol vapours can ignite if they collect inside an enclosure. Explosion can result.
- **Use approved container.** Never pump fuel directly into engine at gas station. Static charge can build and ignite fuel. Use an UL approved fuel container to transfer gas to the engine.
- **Running / hot engine.** A running engine is hot enough to ignite fuel. Never add fuel or remove gas cap if engine is running or still hot. Stop the engine and allow to cool at least two minutes before adding fuel.
- **Heat / flames / sparks.** Stay away from sources of heat, flame, or sparks while adding fuel.
- **Don't overfill.** DO NOT overfill the gas tank. Allow at least 1/2 inch of empty space below the fill neck to allow for fuel expansion.
- **Replace cap.** Replace gas cap securely before starting engine.
- **Spills.** Clean up fuel spills immediately. Move generator away from spilled fuel on the ground. Wipe fuel off engine and wait 5 minutes for excess fuel to evaporate before starting engine. Gas soaked rags should be disposed of properly.
- **On skin / clothes.** If petrol is spilled on your skin or clothes, change and wash skin immediately

## Summary of Important Safety Information for Operation (cont'd)

- **Inspect fuel system.** Check fuel system on a regular basis. Look for signs of leaks, deterioration, chafed Or spongy fuel hose, loose or missing fuel hose clamps, damaged fuel tank, or a defective fuel shut-off valve. Do not start generator until needed repairs have been completed.
- **Petrol storage .** Store petrol in a cool, dry place in an approved, . Store petrol in a cool,

### Safety – During Use

- **Safety equipment / controls.** Always operate the generator with all safety covers, guards, and barriers in place and in good working order, and all controls properly adjusted for safe operation.
- **Know how to stop.** Be thoroughly familiar with proper use of the equipment and all generator controls, output receptacles, and connections. Know how to stop the generator quickly if needed.
- **Damaged.** Do not operate the generator with damaged, missing, or broken parts.
- **Carbon monoxide exhaust.** The running engine gives off carbon monoxide, a poisonous gas that can kill you. You CANNOT smell it, see it, or taste it. If you start to feel sick, dizzy, or weak while using the generator, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.
- **Smoking/sparks.** Never smoke near the running generator, and never operate near sources of sparks or flames.
- **Check output voltage.** Check output voltage to ensure the generator is working properly before connecting loads to the generator. Failure to do so could result in damage to equipment powered by the generator and possible injury to the individual. Do not adjust output speed of engine to change voltage. If voltage is not within specified range, have generator repaired by factory-authorized personnel.
- **Stabilize before connecting loads.** Start generator and let engine stabilize before connecting electrical loads.
- **Do not overload.** Do not overload the generator. Make sure that combined starting and running loads do not exceed rated capacity of generator or damage will result.
- **Protect sensitive electronics.** Some electronic equipment, such as computers and audio/video equipment, can be damaged by small fluctuations in the flow of power. Use a surge suppressor for any voltage-sensitive electronic equipment you will be powering with the generator.
- **Wet conditions.** Do not operate the generator or handle any electrical equipment while standing in water, while barefoot, while hands are wet or while in the rain or snow. Electric shock may result.
- **Ground fault circuit interrupter.** cord (or outlet, if generator is equipped) in damp or highly electrical conductive areas and on construction jobsites to prevent electrical shock.
- **Electrical cords.** Only use SAA-approved ,outdoor - rated, three prong extension cords of the proper size. All extension and appliance cords must be in good condition and not worn, bare, frayed, or otherwise damaged. Use of inadequate or damaged electric cords can cause electric shock or fire.
- **Avoid contact.** Avoid contact with bare wires, terminals, connections, etc. while the unit is running.
- **Electric shock accident.** If an electric shock accident occurs, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. Avoid direct contact with victim. Use a non conducting implement, such as a dry rope or board, to free the victim from the live conductor. Apply first aid and get immediate medical help.
- **Hot muffler.** Never touch hot muffler, hot exhaust manifold, or engine cooling fins. Exhaust and engine parts can be very hot and will burn you.
- **Moving parts.** Keep hands, feet, and apparel away from drive belts, fans, and other moving parts. Never remove any drive belt or fan guard while the unit is operating.
- **Refuelling.** DO NOT refuel the engine until it has cooled at least two minutes.
- **Malfunction during operation.** Immediately turn off the generator if any of the following conditions arise during operation:
  - Excessive change in engine speed, slow or fast
  - Overheating in load connecting devices
  - Sparking or arcs from generator
  - Loss of electrical output
  - Receptacle damage
  - Engine misfire
  - Excessive vibration
  - Flame or smoke
  - Abnormal noise



## Summary of Important Safety Information for Operation (cont'd)

- **Adjusting / repairing.** Always turn off generator and remove spark plug(s) or spark plug wire(s) before working on the generator to prevent accidental starting.

### Safety – After use

- **Cool engine before storing.** Let engine cool for at least five minutes before storing. A hot engine can be a fire hazard.
- **Shut off fuel supply.** Make sure petrol shut -off valve is in the OFF position.
- **Prevent accidental starting.** When generator is not in use, remove key from starter (key start engines) and secure in a safe location, or remove spark plug(s) in order to ensure that generator cannot be started in a storage location or by untrained persons.
- **Storage location.** Store the generator in a dry location away from sources of heat, open flames, sparks or pilot lights – such as water heaters, space heaters, furnaces, clothes dryers, or other gas appliances – EVEN IF the generator's gas tank is empty. Residual petrol could ignite.
- **Exercise regularly.** Exercise generator every four weeks to dry out moisture that accumulates in the windings. If generator cannot be exercised on a regular basis, prepare generator for long term storage.
- **Periodic maintenance.** Perform periodic maintenance as directed in this manual to keep the generator in safe working condition.

### Safety - Inspection/Maintenance

Inspect and maintain your generator on a regular basis and repair as needed to keep it in safe working condition:

- **Turn off generator.** Always turn off generator and remove spark plug(s) or spark plug wire(s) before working on the engine or generator to prevent accidental starting.
- **Discharge capacitor.** When the generator is shut down, the capacitor may maintain a charge. Always discharge the capacitor before working on the generator head to prevent electrical shock.
- **Replace guards / shields.** Make sure all guards and shields are replaced after servicing the generator.
- **Replacement parts.** If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the generator and will void the warranty.

# Engine Operation

## ⚠ WARNING

BEFORE operating the engine, be sure to read this section of the manual, otherwise injury to personnel or damage to equipment may occur.

### Start Up Instructions

#### Engine Starting Devices

#### Fuel Valve Lever

When the valve lever is in the ON position, fuel is allowed to flow from the fuel tank to the carburettor. Be sure to return the fuel valve to the OFF position after stopping the engine.

#### Choke Rod

The choke is used to provide an enriched fuel mixture when starting a cold engine. It can be opened and closed by operating the choke lever manually. Pull the rod out toward CLOSED to enrich the mixture for cold starting.

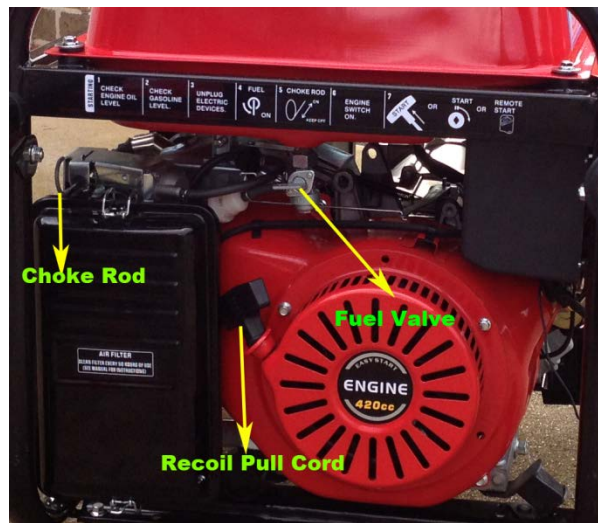
#### Engine Switch

Turn the switch ON to run the engine and to stop the engine turn the switch OFF.

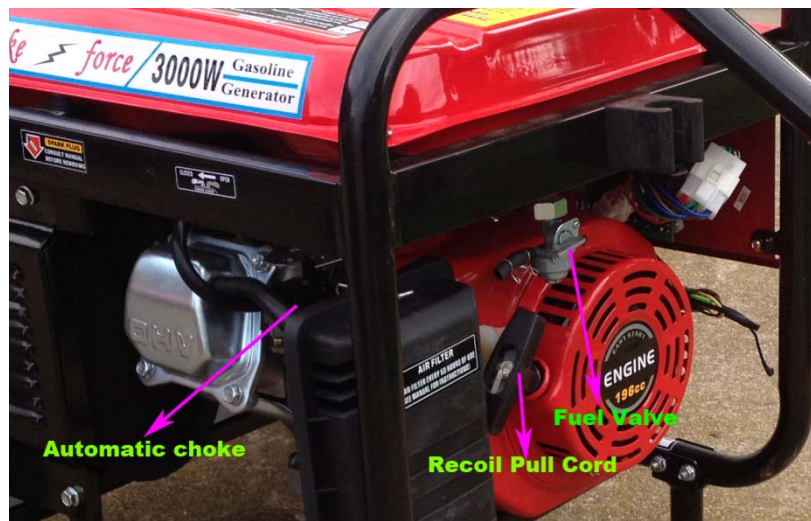
#### Recoil

To start the engine, pull the starter grip lightly until resistance is felt, then pull briskly.

SF9000E



SF3000E/4000E



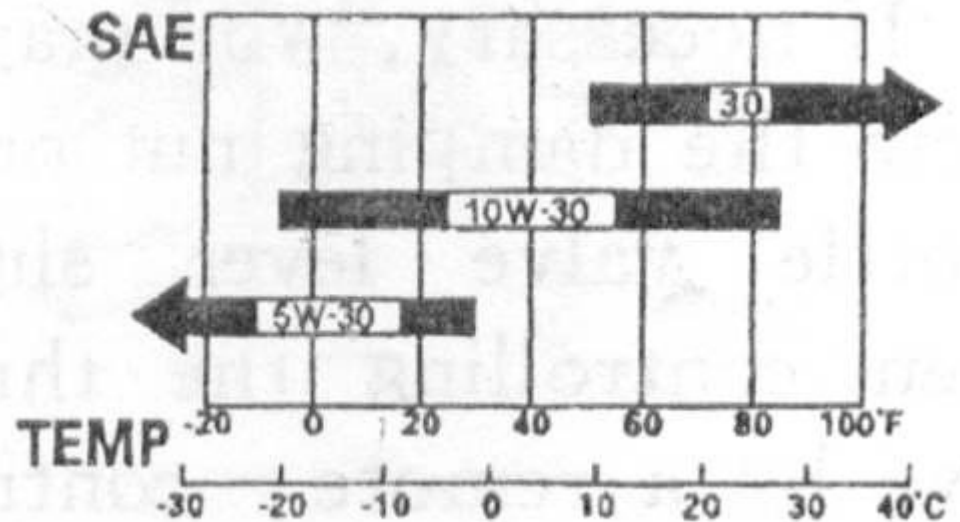
## Engine Operation (cont'd)

### Engine Oil Recommendations

#### Caution

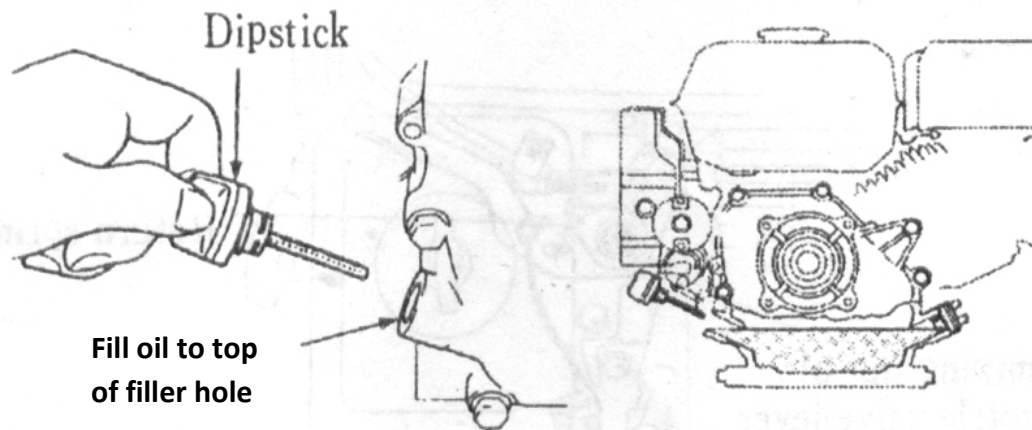
- Engine oil is a key factor in deciding the engine's performance. Do not apply engine oil with additives or 2- stroke petrol oil, as they do not provide enough lubrication, which may shorten the engine's service life.
- Check the engine with it stopped on a level ground.
- Due to viscosity variances with regions and temperatures select the correct oil using the chart below.

Engine oil recommended: SAE10W-30



### Oil Level Check Please Note

1. Ensure that the engine is stopped on a level ground.
2. Remove the dipstick and clean it.
3. Reinsert the dipstick into the oil filler without threading in, and check oil level.
4. If the oil level is too low, add recommended engine oil to the filler neck.
5. Reinstall the dipstick.



## Engine Operation (cont'd)

<b>Maintenance Schedule</b>	REGULAR SERVICE PERIOD	Before each use	Fist month or 20 Hrs.	Every 3 months or 50 Hrs.	Every 3 months or 50 Hrs.	Every year or 300 Hrs.
Engine oil	Check level	<input type="radio"/>				
	Change		<input type="radio"/>		<input type="radio"/>	
Air filter	Check	<input type="radio"/>				
	Clean			<input type="radio"/> (1)		
	Replace					<input type="radio"/>
Spark plug	Check-adjust				<input type="radio"/>	
	Replace					<input type="radio"/>
Spark arrester	Clean				<input type="radio"/>	
Idle speed	Check-adjust					<input type="radio"/> (2)
Valve clearance	Check-adjust					<input type="radio"/> (2)
Combustion chamber	Clean	After every 500Hrs. (2)				
Fuel tank and filter	Clean				<input type="radio"/> (2)	
Fuel tube	Check	Every 2 years (Replace if necessary) (2)				
<ul style="list-style-type: none"> <li>• Emission related items.</li> </ul> <ol style="list-style-type: none"> <li>1) Service more frequently when used in dusty areas.</li> <li>2) These items should be serviced by an authorized generator dealer, unless the owner has the proper tools and is mechanically proficient.</li> </ol>						

## Engine Operation (cont'd)

### Spark Plug Removal, Cleaning and Replacement

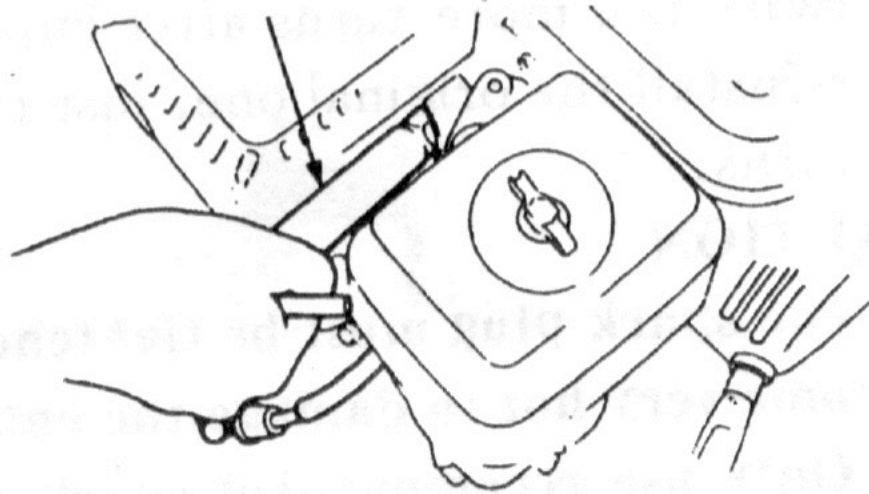
#### Spark Plug

Spark plug type: BP6ES, BPR6ES (NGK) or NHSPLD F6RTC

Proper spark plug clearance ensures the engine's normal running under no deposit around the spark plug.

- a) Remove the spark plug by means of spark plug wrench.

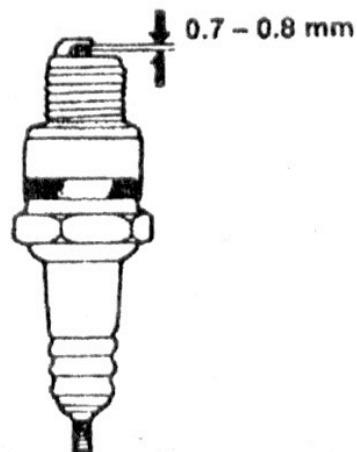
Spark plug wrench



#### **⚠**WARNING

**Be careful not to touch the muffler during or just after the engine has been running.**

- b) Clean the spark plug with a steel brush. If the insulator is damaged, replace the spark plug.
- c) Measure the spark plug clearance with a feeler. The clearance should be 0.7-0.8mm. If adjustment is necessary, bend the side electrode carefully.
- d) Check if the spark plug gasket is in good conditions, or replace with a new one. Screw on the spark plug to the bottom first by hand and then tighten it up by a spark plug wrench. If a new spark plug is used, twist 1/2 more turns after impacting the gasket; if reinstall the original one, just twist 1/8-1/4 more turns

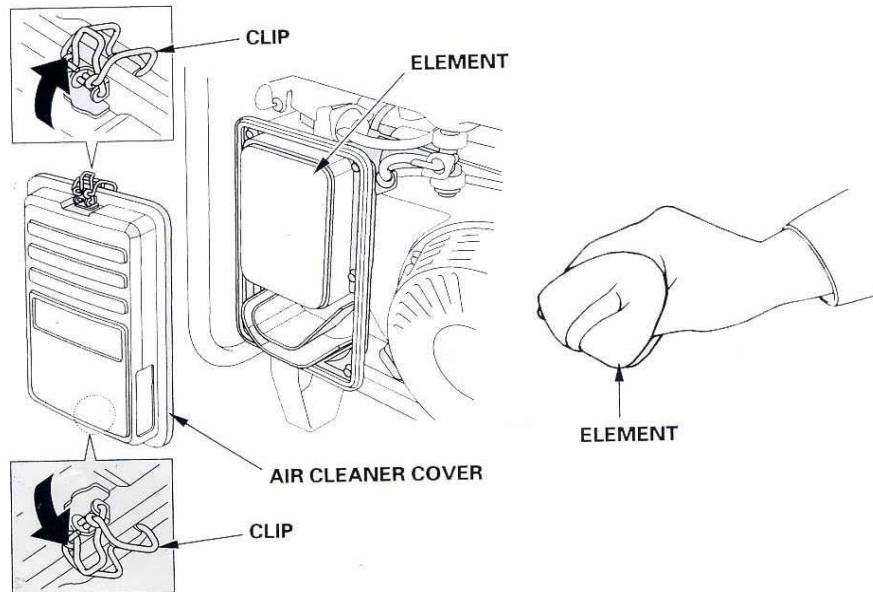


## Engine Operation (cont'd)

### Air Cleaner

**Never run the generator without the air filter. Rapid engine wear will result.**

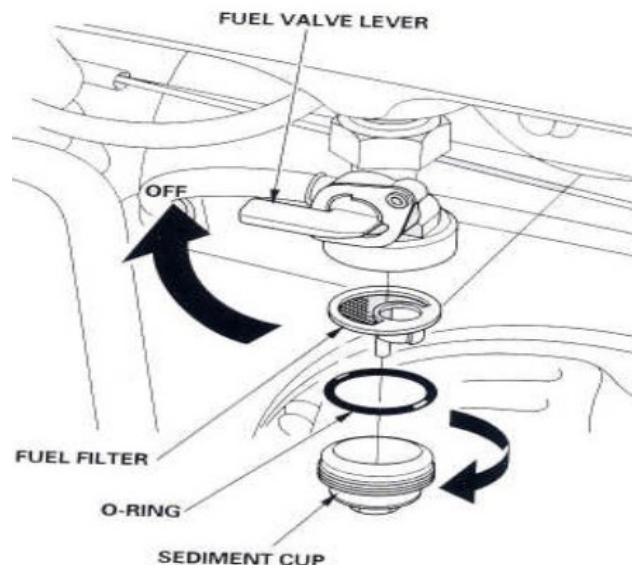
1. Unsnap the air cleaner cover clips, remove the air cleaner cover, and remove the element.
2. Wash the air cleaner element in a solution of household detergent and warm water, then rinse thoroughly, or wash in non flammable or high flashpoint solvent. Allow the air cleaner element to dry thoroughly.
3. Soak the air cleaner element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start up if too much oil is left in the air cleaner element.
4. Reinstall the air cleaner element and the cover.



### Cleaning Sediment

The sediment cup prevents dirt or water which may be in the fuel tank from entering the carburettor. If the engine has not been run for a long time, the sediment cup should be cleaned.

1. Turn the fuel valve lever to the OFF position. Remove the sediment cup, O-ring and filter.
2. Clean the sediment cup, O-ring, and filter in non flammable or high flash point solvent.
3. Reinstall the filter, O-ring, and sediment cup.
4. Turn the fuel valve lever ON and check for leaks.

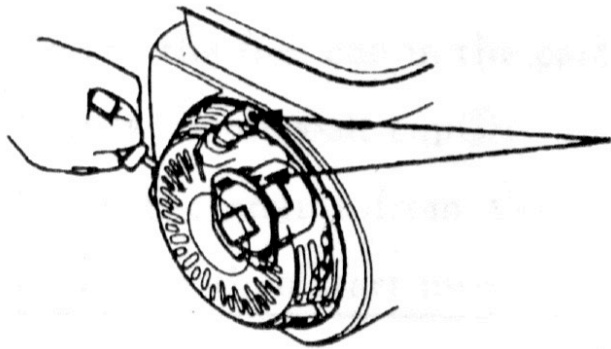


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**Engine Operation (cont'd)**

**Storage**

1. Replace engine oil.
2. Disconnect the spark plug. Fill a spoon of fresh engine oil from the spark plug mount hole into the cylinder. Rotate the engine to distribute engine oil evenly, followed by fitting the spark plug to original position.
3. Pull the starting rope slowly until feel a slight anti-action, and then keep pulling so as to align the arrow of the starting sleeve with the hole of the starter. At this time, both the inlet and outlet valves are closed so to help prevent the engine inside from rusting (Fig.33).



Align the arrow of the starting sleeve with the hole in the starter

**Removal From Storage**

Service item	Service item
Within one month	Use
One-two months	Drain out original fuel of the fuel tank and refuel
Two months-one year	Drain out original fuel of the fuel tank and refuel; Drain out fuel in the carburettor①; Empty the deposit cup.
Two months-one year	Drain out original fuel of the fuel tank and refuel; Empty the fuel cup in the carburettor①; Empty the deposit cup; Move the engine from the storage place, fill it with fuel, then start up it.

Screw off the drain plug and drain out fuel in the carburettor.  
Turn off the engine switch first, disconnect the deposit cup and empty it.  
Note: For the sake of environmental protection, we recommend to fill the discarded fuel into a closed container and bring to local recycling station.  
Never pour freely.

## Engine Troubleshooting

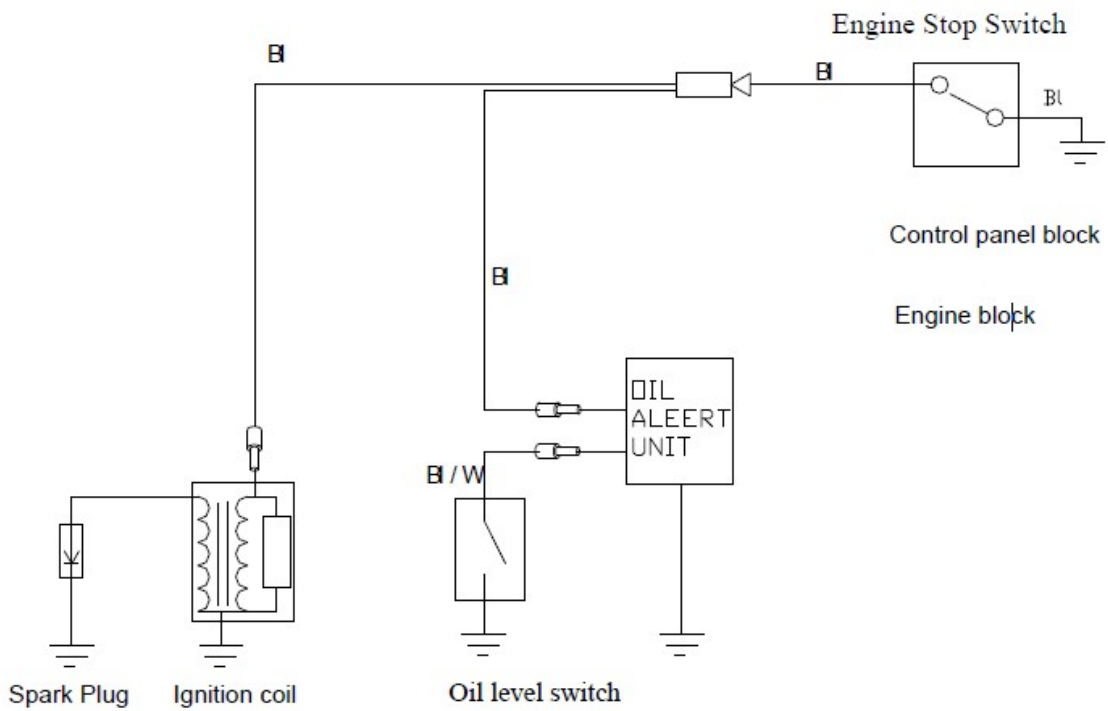
<b>ENGINE WILLNOT START</b>	<b>Possible Cause</b>	<b>Recommended Action</b>
1. Electric starting (applicable types): Check battery.	Battery discharged.	Replace Battery
2. Check control positions.	Fuel valve OFF.	Move lever to ON position.
	Choke open.	Move lever to CLOSED position unless the engine is warm.
	Engine switch OFF.	Turn engine switch to ON position.
3. Check engine oil level.	Engine oil level low (Oil Alert models).	Fill with the recommended oil to the proper level
4. Check fuel.	Out of fuel.	Refuel (p. 8).
	Bad fuel; engine stored without treating or draining petrol, or refuelled with bad petrol.	Drain fuel tank and carburettor. Refuel with fresh petrol.
5. Remove and inspect spark plug.	Spark plug faulty, fouled, or	Gap or replace spark plug.
	Spark plug wet with fuel (flooded engine).	Dry and reinstall spark plug. Start engine with throttle lever in open position.
6. Take engine to an authorized servicing dealer, or refer to shop manual.	Fuel filter restricted, carburettor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair fault components as necessary.
<b>ENGINE LACKS POWER</b>	<b>Possible Cause</b>	<b>Correction</b>
1. Check air filter.	Filter element(s) restricted.	Clean or replace filter element(s).
2. Check fuel.	Bad fuel; engine stored without treating or draining petrol, or refuelled with bad petrol.	Drain fuel tank and carburettor. Refuel with fresh petrol.
3. Take engine to an authorized servicing dealer, or refer to shop manual.	Fuel filter restricted, carburettor malfunction, ignition malfunction, valves stuck, etc.	Replace or repair failing components as necessary.



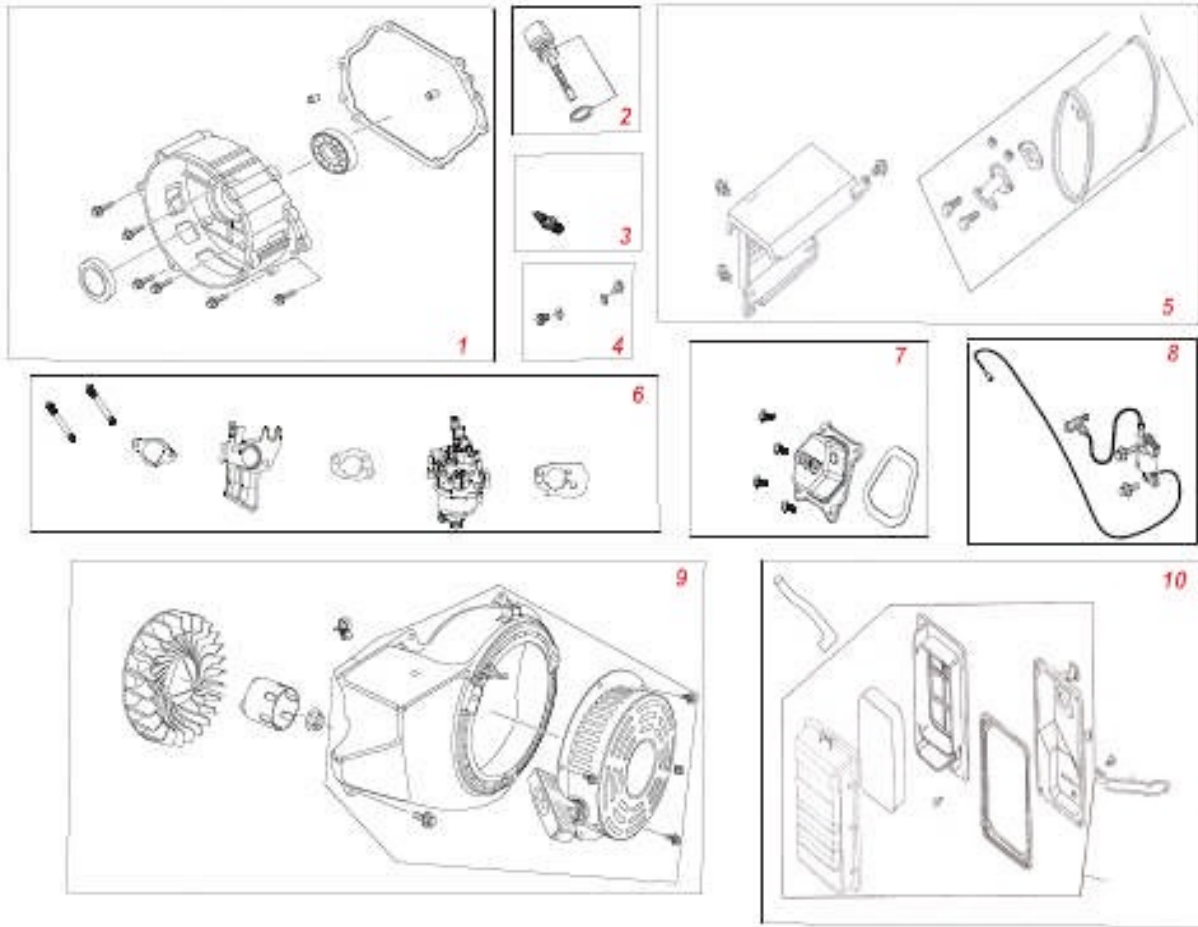
## TB3000E Engine Specifications/Electrical Diagram

Model Items		168F	
Ignition system	Transistorized Magneto		
Spark plug type	NHSP LD F7RTC NGK		
Starting Mode	Recoil /Electric Start		

Spark plug clearance	0.7-0.8 mm
Oil Capacity	0.65 US qt (0.6 litres)
Fuel	Unleaded petrol octane rating 86
Fuel Capacity	4 US gal (15 litres)

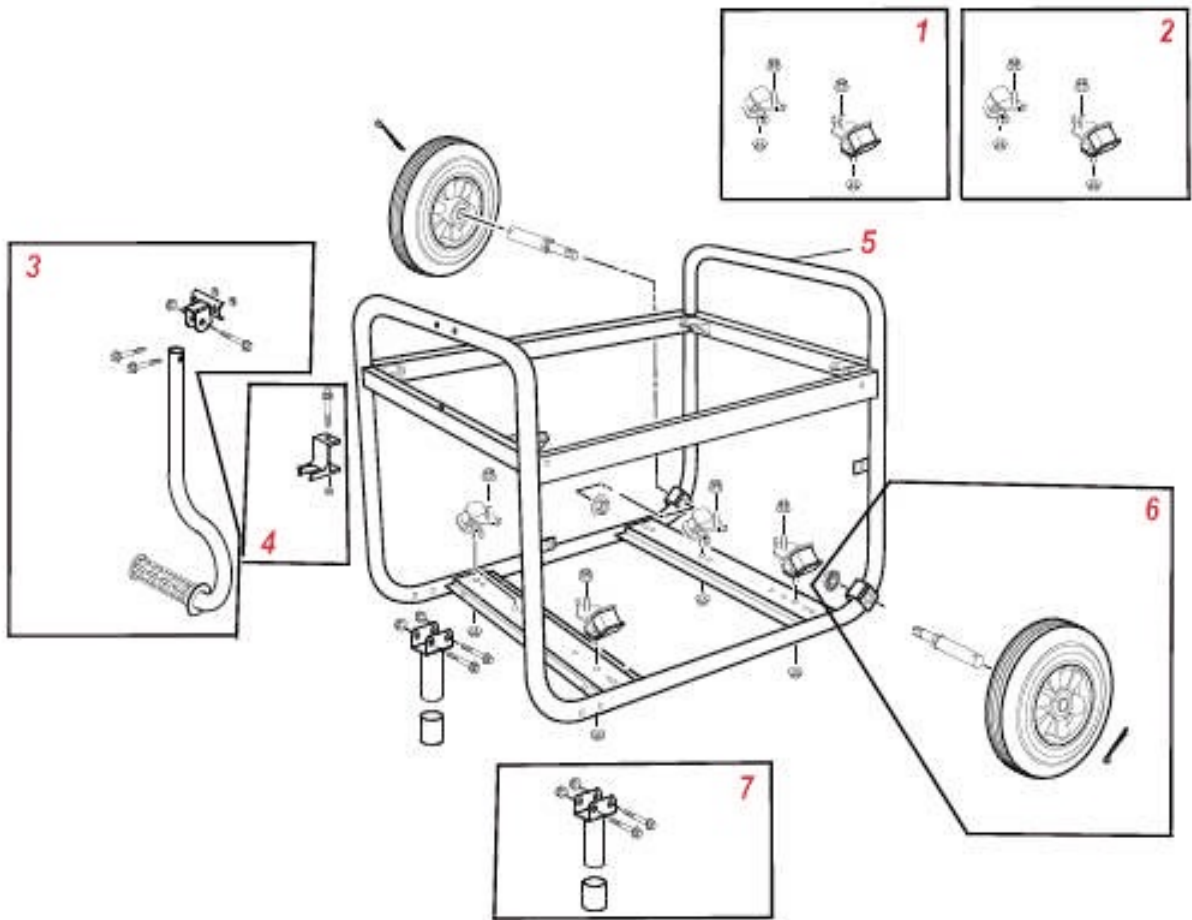


# TB3000E Engine Exploded View Rev- A.1



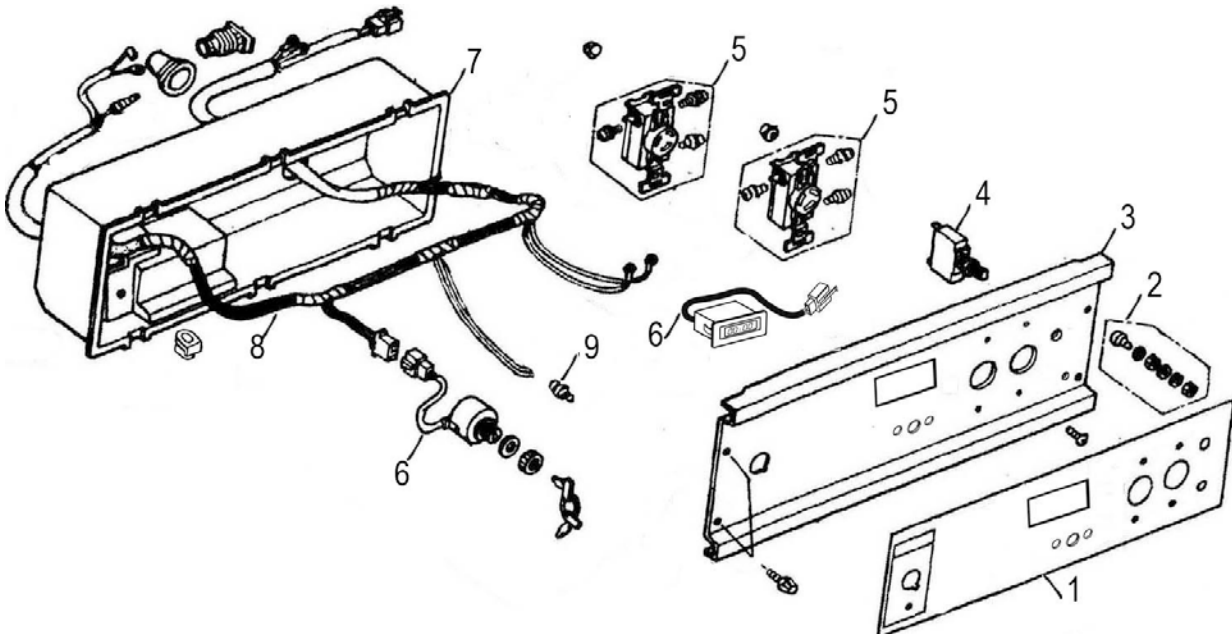
Diag #	Part #	Description	Qty
1		Rear Case Cover Kit	1
2		Dipstick & O-ring Kit	1
3		Spark Plug	1
4		Drain Bolt kit	1
5		Muffler & Shield Kit	1
6		Carburettor Kit	1
7		Valve Cover Kit	1
8		Ignition Coil Kit	1
9		Recoil, Fan & Cover Kit	1
10		Air Cleaner & Bracket Kit	1
		Engine Assembly (not shown)	1

**TB3000E Roll Cage/Wheel Kit Exploded View Rev– A.1**



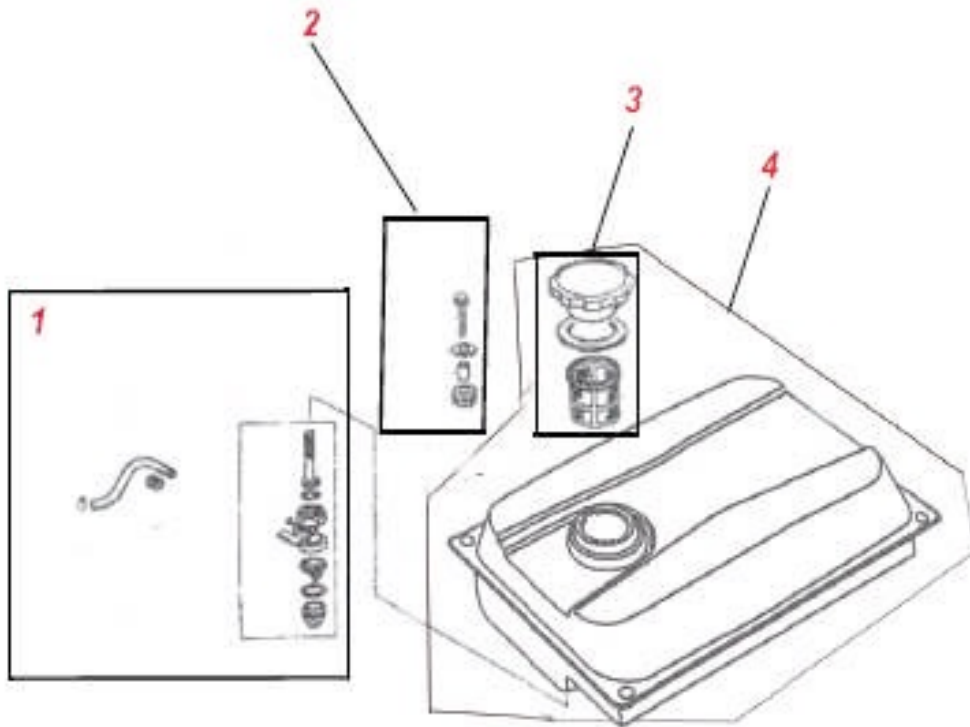
Item #	Description	Qty
1	Front Isolation Mount & Bracket Kit	1
2	Rear Isolation Mount & Bracket Kit	1
3	Handle Kit	1
4	Handle Restrictor Kit	1
5	Frame	1
6	Wheel & Axle Kit	2
7	Wheel & Axle Kit	2

# TB3000E Panel Exploded View Rev-A.1



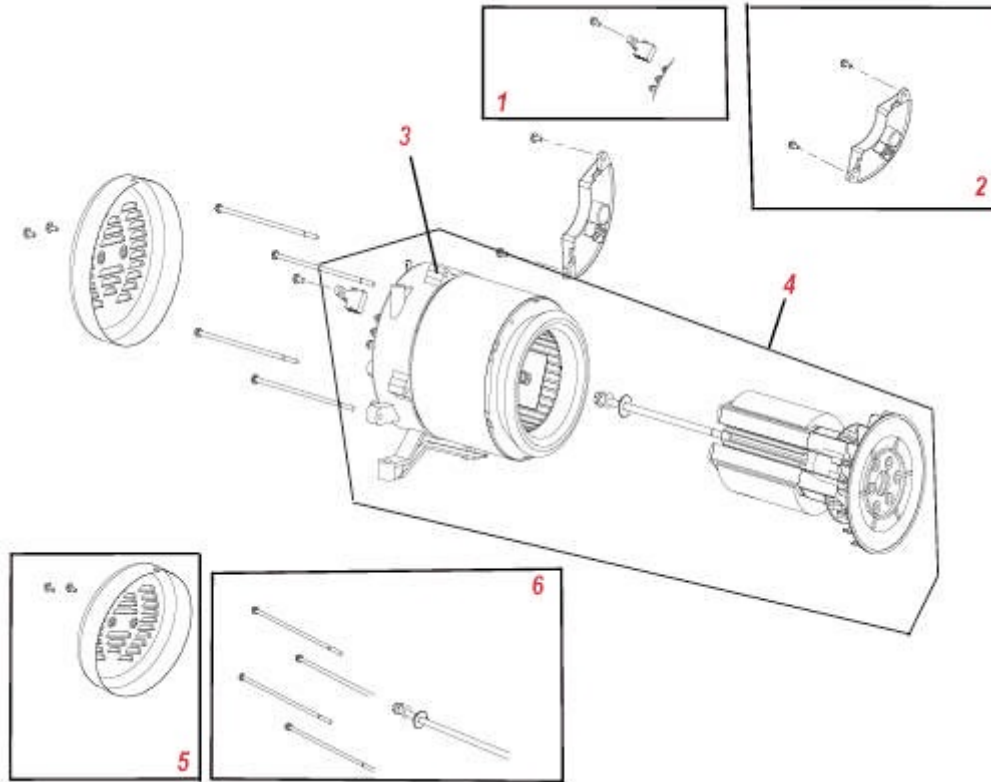
Item #	Description	Qty
1	Panel Label	1
2	terminal	1
3	Front Cover	1
4	Circuit Breaker	1
5	Receptacle	2
6	Digital Meter	2
7	Back Cover	1
8	wrap	1
9	Low Oil Warning Lamp	1
10	Engine Switch	1

# TB3000E Tank Exploded View Rev – A.1



Item #	Description	Qty
1	Fuel Valve & Line Kit	1
2	Tank Bolt & Grommet Kit	1
3	Fuel Cap Kit	1
4	Fuel Tank	1

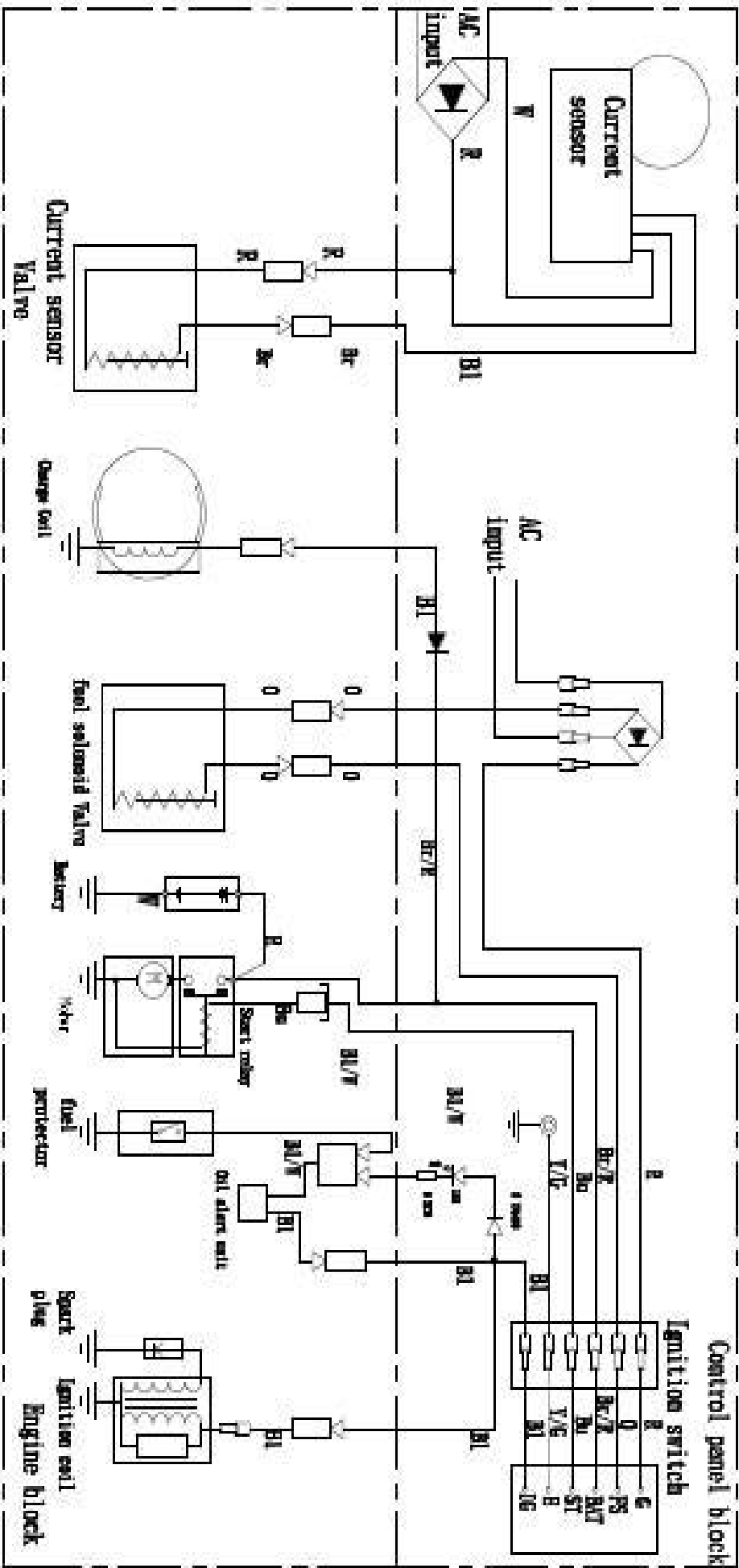
# TB3000E Generator Head Exploded View Rev – A.1



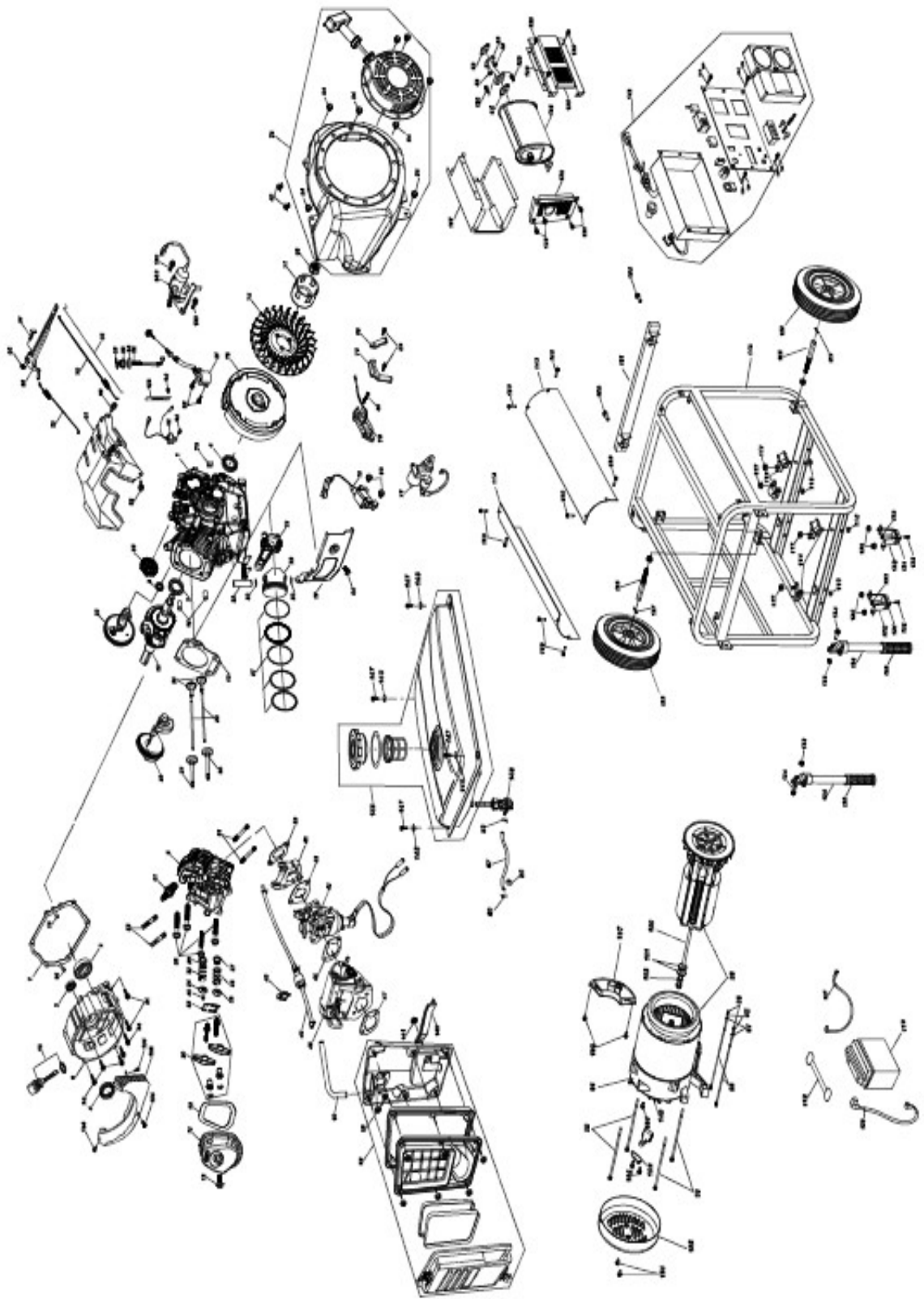
Item #	Description	Qty
1	Brush & Terminal Block Kit	1
2	Voltage Regulator	1
3	Generator Stator	1
4	Generator Rotor	1
5	End Cover Cap	1
6	Stud Bolt Kit	1

## TB9000E Engine Specifications/Electrical Diagram

Engine Model Number	190F
Ignition system	Transistorized Magneto
Spark plug type	NHSP LD F7RTC / NGK
Starting Mode	Electric Start
Spark plug clearance	0.7-0.8 mm
Oil Capacity	1.1 Litres(0.29 gallon)
Fuel	Unleaded petrol octane rating 86
Fuel Capacity	30 litres







## TB9000E BLASTING SPARE PARTS LIST

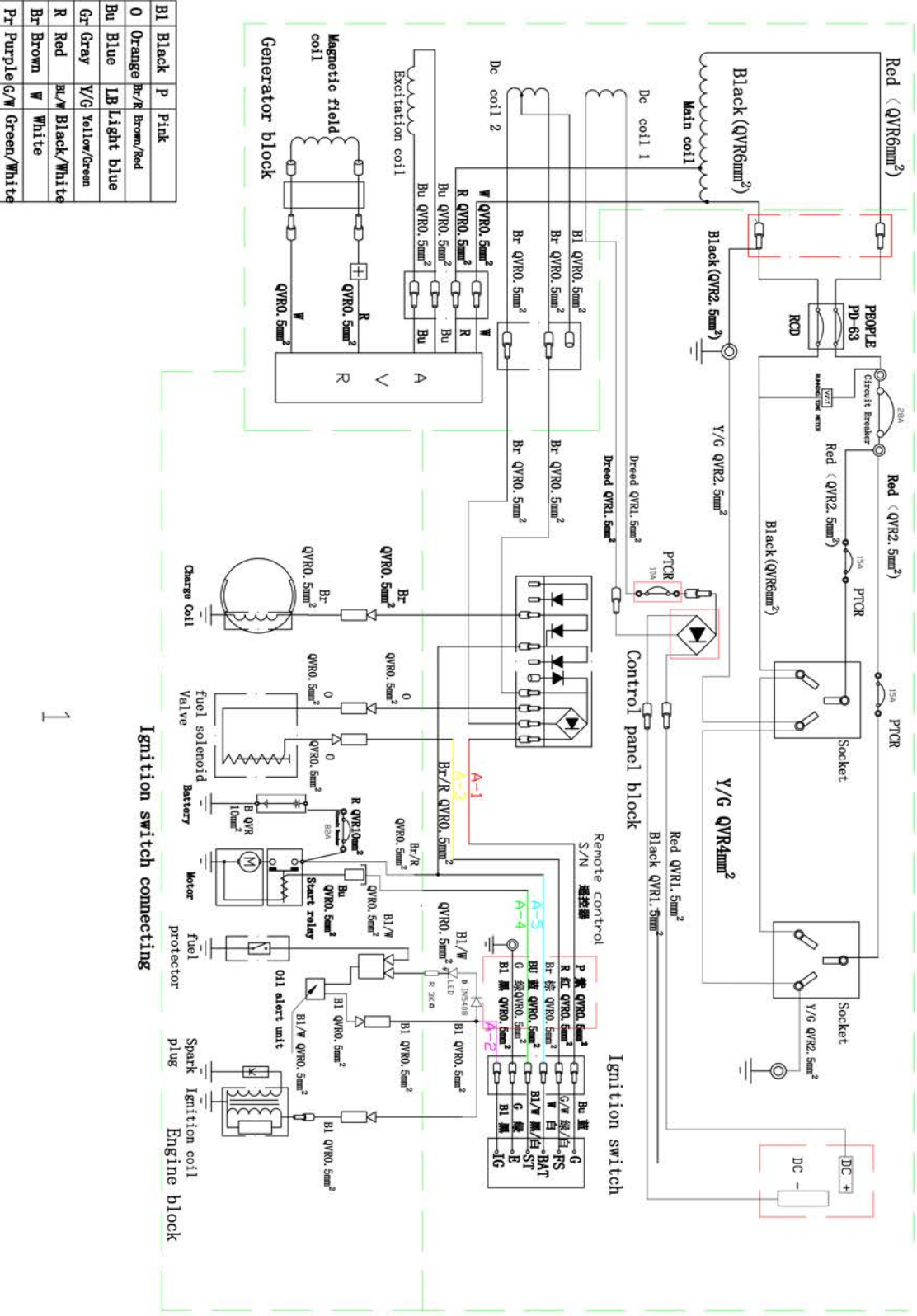
ITEM	PART NO.	DESCRIPTION	QTY
1	DJ190F-11100-B	Crankcase	1
2	GB276-89-6207	Ball bearing	1
3	GB276-89-6202	Ball bearing	2
4	188F-11014-A	Oil Seal 35×52×8	2
5	188F-11200-B	Head Comp, Cylinder	1
6	188FD-11001-A	Cover Assembly, Crankcase	1
7	188F-11003-B	Crankcase Gasket	1
8	188F-11004-A	Bolt, Drain Plug	2
9	188F-11005-A	Washer, Drain Plug	2
10	190F-11010-A	Gasket, Cylinder Head	1
11	188F-11300-B	Cover Comp., Head	1
12	188F-11011-A	Gasket, Cylinder Head	1
13	188F-11015-A	lock bolt	1
14	168F-11002-A	Pin, Dowel 8×14	2
15	188F-11009-A	PIN, Dowel, 12×20	2
16	188FD-11007-A	Gauge Comp., Oil Lever	1
17	188F-11012-A	Air-leading Cover	1
18	188FD-11013-A	Tube, Breather	1
19	190F-12100-B	Camshaft Assembly	1
20	188F-12004-A	Balancing Shaft	1
21	190F-12200-A	Rod Assembly., Connecting	1
22	190F-12001-A	Piston	1
23	188F-12002-A	Pin, Piston	1
24	GBT16674-B8-35	Bolt M8*35	7
25	GBT16674-B10-80	Bolt M10*80	4
26	188F-12003-A	Clip, Piston	2
27	190F-12300-A	Scraper Ring Set ,Piston	1
28	190F-13100-A	Camshaft Assembly	1
29	188F-13200-A	Arm set ,Valve Rocker	2
30	188F-13001-A	Valve Inlet	1
31	188F-13002-A	Valve Exhaust	1
32	188F-13003-A	spring, Valve	2
33	188F-13004-A	Retainer ,Inlet Valve Spring	1
34	188F-13005-A	Retainer, Exhaust Valve Spring	1
35	188F-13300-A	Plate, Push Rod Guide	1
36	188F-13010-A	Seal, Inlet Valve	1
37	188F-13011-A	Oil Seal, Valve	1
38	188F-13008-A	Rod, Push	2
39	188F-13009-A	Lifter, Valve	2

40	188F-13006-A	Cap	1
41	190FD-14100-A	Carburettor Assembly	1
42	188FD-14004-A	Carburettor Insulator	1
43	188F-14005-B	Carburettor Gasket	1
44	188F-14027-A	Space Comp. Carburettor	1
45	188FD-14012-B	Manual Choke Assembly	1
46	188FD-14013-A	Manual Choke Assembly	
47	188F-14016-B	Air Cleaner Gasket	
48	168F-11039-A	Q-Ring	1
49	188F-11039-B	Q-Ring	2
50	188FD-14200-A	Air Cleaner Assembly	1
51	188FD-14001-A	Bolt, Stud	2
52	168F-14002-A	Bolt, Stud	2
53	188FD-14009-A	Exhaust Pipe	1
54	188FD-14010-C	Exhaust Pipe Gasket	1
55	188F-14003-B	Insulator Packing	1
56	188F-14006-C	Muffler Gasket	1
57	DB-8500E-14007-A	Fuel Tank Tube	1
58	168FD-14014-A	Fuel Pipe sleeve	1
59	168F-14008-A	Tube Clip	2
60	188F-15100-A	Governor Assembly	1
61	188FD-15200-A	Control Assembly	1
62	188F-15001-A	Governor Shaft Arm	1
63	188F-15009-A	Oil Seal 8×14×5	1
64	188F-15002-A	Plain Washer	1
65	188F-15003-A	Lock Pin	1
66	188F-15004-A	Arm Comp., Governor	1
67	168F-15005-A	governor Arm Bolt	1
68	188F-15006-A	Governor Rod	1
69	188F-15007-A	Governor Spring	1
70	188F-15008-A	Throttle Return Spring	1
71	188F-16000-A	Starter Pulley	1
72	188F-16100-F-PY	Recoil Starter	1
73	188F-11017-A	Starting Motor Assembly	1
74	188F-16002-A	cooling Fan	1
75	188F-16200-B	Flywheel Assembly	1
76	188F-18100-D	Coil Assembly, Ignition	1
77	188F-18600-A	Starting Motor Assembly	1
78	168F-18004-A	Charge Coil	1
79	168F-18007-A	Clamper Cord A	1
80	188F-18007-A	Clamper Cord B	1
81	188F-18200-A	Switch Assembly ,Oil Level	1
82	168F-18300-A	Amplifier	1

83	168F-18500-B	Spark Plug	1
84	GBT16674-B6-12	Bolt M6*12	9
85	GBT16674-B6-16	Bolt M6*16	2
86	GB6177-N-6	Nut M6	3
87	GB6170-N-8	Nut M8	2
88	188F-16205-A	Nut M16	1
89	GBT16674-B6-8	Bolt M6*8	1
90	GBT16674-B6-25	Bolt M6*25	4
91	GBT16674-B8-30	Bolt M8*30	2
92	GBT16674-B8-40	Bolt M8*40	2
93	DF8000H-33100-AP-20621	Motor Assembly	1
94	DF3800H-33005-A	Motor Stand	1
95	DF8000H-33021-A	Bolt M5 × 224	2
96	GB6170-N-5-H	Nut M5	2
97	GBT97-W-5	Flat Washer	2
98	GBT93-LW-5	Spring Washer	2
99	DF8000H-33015-A	Bolt	4
100	DF6500H-33003-A	Bolt	1
101	GBT97-W-10	Flat Washer	2
102	GBT93-LW-10	Spring Washer	1
103	DF6500H-11032-A	crankcase guard cover	1
104	GBT16674-B5-12	Bolt M5*12	3
105	DF3800H-33006-A-036	End Cover	1
106	GBT16674-B5-16	Bolt M5*16	2
107	DF8000H-33011-A	Automatic Voltage Regulator	1
108	GBT16674-B5-12	Bolt M5*12	2
109	DF2500H-34116-A	Tie Wrap	3
110	GBT16674-B5-12	Bolt M5*12	7
111	GBT93-LW-5	Spring Washer	1
112	DFD8000H-31100-TT-010	Frame	1
113	XP10000E-31009-A-036	R-panel	2
114	DF3800H-31201-A	Isolator A	2
115	DF3800H-31202-A	Isolator B	2
116	GB6177-N-8	Nut M8	4
117	GB6177-N-10	Nut M10	4
118	DFD6500H-31081-A	tie wrap	1
119	31300-002	Battery	1
120	31038-004	positive lead	1
121	31040-004	negative lead	1
122	DF6500H-11033-A	wire clip	1
123	DF6500H-31017-A	Wheel	2
124	XP10000E-31058-A-010	Handle Assembly	2
125	DF3000H-31018-A	Axle	2
126	DF6500H-31016-A	Handle Grip	2
127	DF2500H-31019-B	Cotter Pin	2

128	XP10000E-31020-A-010	Stand	2
129	GBT16674-B8-16	Bolt M8*16	4
130	GB6177-N-8	Nut M8	4
131	DF9000H-31204-A	vibration isolation pad, square	2
132	BT16674-B6-25	Bolt M6*25	2
133	GB6177-N-6	Nut M6	2
134	GBT16674-B6-12	Bolt M6*12	13
135	DF8000H-14400-F	Muffler Assy.	1
136	DF3800H-14018-A	Muffler Hood Outer	1
137	DF3800H-14416-B	Muffler Hood, Inner	1
138	DF3800H-14403-A	Muffler Hood, Side	1
139	GBT16674-B6-12	Bolt M6*12	7
140	DF6500H-14205-A	Air Cleaner Bracket	1
141	GB6177-N-8	Nut M8	1
142	DFY8000H-34100-TT02	Control Panel Assembly	1
143	GBT16674-B6-12	Bolt M6*12	16
144	DF2500H-34106-A	Washer	16
145	DF3800H-14300-C-057	Fuel tank Assembly	1
146	DF2500H-14302-A	Fuel Cock	1
147	92140-B6-25	Bolt M6*25	4
148	DF2500H-14024-A	Washer	4
149	DF6500H-34218-A	Energy-saving valve	1
150	GBT16674-B6-12	Bolt M6*12	4
151	XP10000E-31080-A	Bar	1

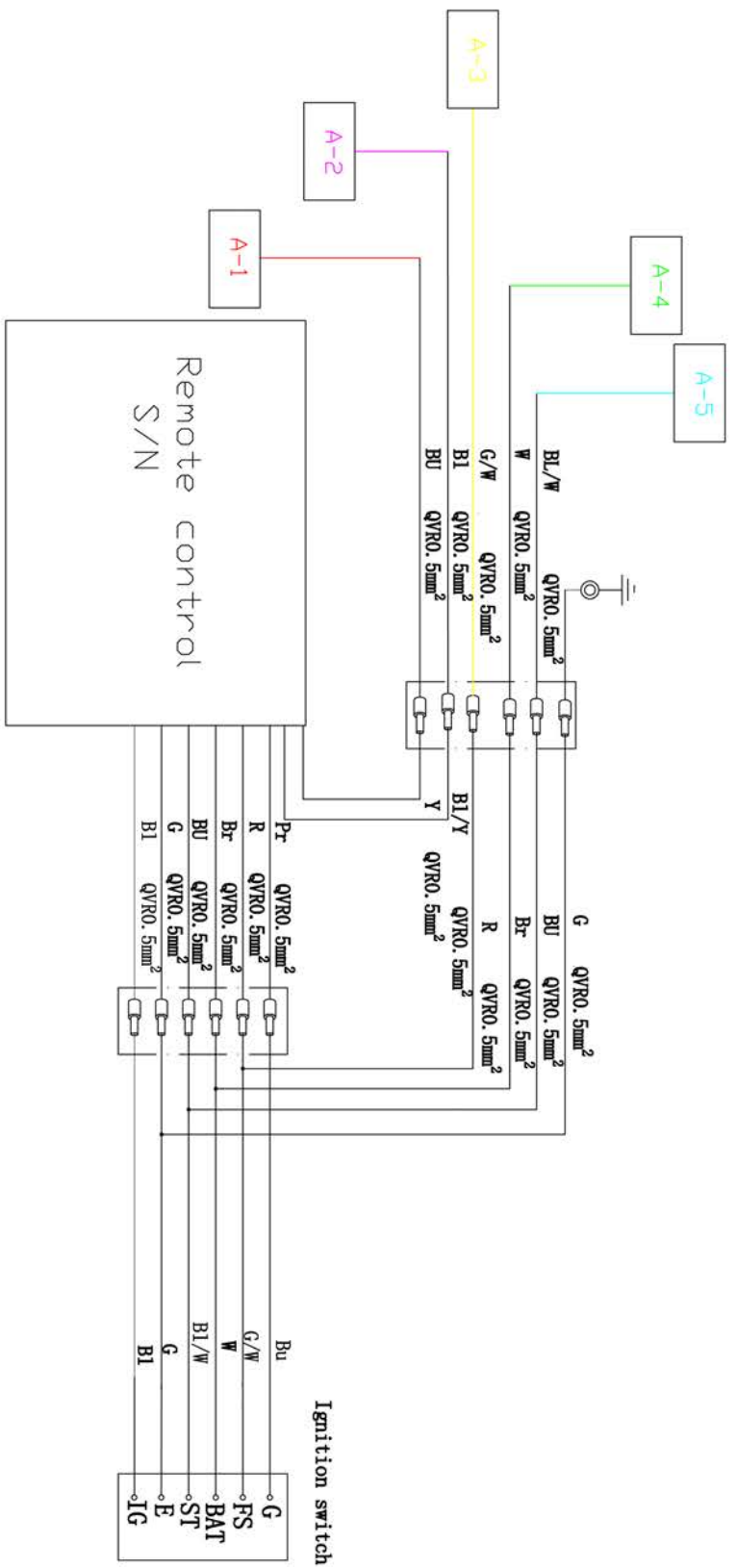
<b>OIL ALERT LIGHT</b>	This light will come on when the oil level is too low and stop the machine to protect it. It will also prevent the machine from starting if no oil is added. The machine will not start until the oil has been topped up. Machine oil should be changed every 30 to 40 hours. Not just topped up all the time. Make sure the generator is level when possible and oil is full to where the oil is just starting to run back out the hole.
<b>VOLTMETER</b>	This should read 240v when the machine is running.
<b>HOUR METER</b>	This meter informs the user of four (4) things 1. The frequency of the voltage – 50 to 55 Hz. 2. The time the machine has been running. 3. The total machine running hours since purchase. 4. On the 3.5KVA model – The voltage output of the machine.
<b>OVERLOAD PROTECTION CUT-OFF SWITCH</b>	This switch will stop the machine if it has been running at total capacity for 15 minutes OR is used at 10% above its rated capacity
<b>EARTH RETURN SWITCH</b>	This switch will stop the machine if there is an unbalance in the voltage. This will help stop electrocutions. (8.5 & 12.0KVA models only)
<b>BATTERY ISOLATION SWITCH</b>	Should be turned off when generator not in use (switch should be in down position).
<b>BATTERY</b>	Suggestion – use a 1A trickle battery charger to keep the battery conditioned when not in use.
<b>REMOTE CONTROL</b>	Must be allowed to have a 10 second interval between when the buttons are pressed. So as to prevent damaging the remote unit
<b>LOAD</b>	When generator is running try and keep a load of approximately 25% of the machine capacity at all time.
<b>SPARK PLUGS</b>	The following brands are recommended 1. Champion – N11Y, N11YC, UN12Y. 2. Bosch – W8DY, W8DCO. 3. NGK – BP6E.
<b>FUEL TAP</b>	Turn off the fuel supply with the tap when transporting the machine.



WIRING DIAGRAM OF 240V GENERATOR SET

Bl	Black	P	Pink
Or	Orange	Br/R	Brown/Red
Bu	Blue	LB	Light blue
Gr	Gray	Y/G	Yellow/Green
R	Red	Bu/W	Black/White
Br	Brown	W	White
Pt	Purple	G/W	Green/White

1



2

IG	E	BAT	ST	FS	G
OFF	○	○		○	○
ON					
Start		○	○		



**Talbot Power WARRANTY REGISTRATION CARD**

**PLEASE NOTE:** Warranty registration card is to be filled out with the dealer/distributor at the date of purchase and returned to TQM Imports within 21 days.

Owner: \_\_\_\_\_  
Address: \_\_\_\_\_  
Town: \_\_\_\_\_  
State / Postcode: \_\_\_\_\_  
Email: \_\_\_\_\_  
Dealer: \_\_\_\_\_  
Purchase date: \_\_\_\_\_

Generator Model:

Pump Model:

Has the dealer instructed you in the correct operation, service and maintenance of your machine ?  Yes  No

Customer's signature  
\_\_\_\_\_

**CUSTOMER SURVEY**

To assist us in our research to improve our products would you please complete the following survey:

a: Products primary use:

Private  Commercial  Hire  Govt

b; Product purpose:

Back-up power  Trade  General

c:Product use approximate hours per week \_\_\_\_\_

d: Age:  Under25  25-34  35-44  45-54  55-64  Over 65

e: Sex:  Male  Female

f:The main reason that influenced your purchase:

- 1.Recommended by  Dealer  Friend
- 2.Replacement of another product \_\_\_\_\_
- 3.Demonstration \_\_\_\_\_
- 4.Appearance \_\_\_\_\_
- 5.Price \_\_\_\_\_
- 6.Quality \_\_\_\_\_
- 7.Service \_\_\_\_\_
- 8.Other \_\_\_\_\_

g: What first brought this product to your attention:

- 1.Yellow pages \_\_\_\_\_
- 2.TV advertisement \_\_\_\_\_
- 3.Press advertisement \_\_\_\_\_
- 4.Friends / Workmates \_\_\_\_\_
- 5.Show field day \_\_\_\_\_
- 6.Dealer display \_\_\_\_\_

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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