POWER USA

# ENERGY STORM







ES5500(E) (CA)



**ES8000E (CA)** 



# Operating Instructions and Owner's Manual

PLEASE READ THIS MANUAL CAREFLLY BEFORE OPERATING YOUR NEW INVERTER GENERATOR
(E) indicates the unit is equipped with electric start and wheelkit
(CA) indicates the unit is CARB Certified for California

# Please Read the Following INSTRUCTIONS!!!!

- 1. Unit Shipped with "NO OIL" installed in Engine or where applicable pumps and/or accessories. Check and fill with proper oil as outlined in the Owners Manual included in this box under "Lubrication Specs".
- 2. For repairs under Warranty or questions concerning Warranty, "DO NOT" return this product to the Store where purchased. Follow the procedures as outlined in the "WARRANTY POLICY" and "WARRANTY REGISTRATION" included in this box. Call 1-866-471-7464 We welcome your call
- 3. Read the "Owners Manual" prior to operating any equipment and familiarize yourself with the proper and safe operation of this equipment. If you have any questions please call Toll Free 866-471-7464.

Distributed by: EquipSource, LLC d/b/a Lifan Power USA, 2205 Industrial Park Road, Van Buren, AR

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### **PREFACE**

Thank you for choosing your new Lifan Power USA Product. Lifan Power USA prides itself with providing quality products at affordable pricing, creating the "Best Equipment Value on Today's Market".

All Lifan Power USA products are manufactured utilizing the latest technology, both here and abroad. Manufactured with quality components your new Power Product will give you years of service. Your unit is designed, engineered, and manufactured utilizing our Industrial Grade Gasoline Engines for peak performance and reliability.

This Owner's Manual gives you information with respect to the safe operation and maintenance of your unit. Be sure to read it carefully prior to your initial operation and keep it with your unit for assistance in following proper maintenance schedules and tips to prolong the life and effective use of your unit. If you require assistance call Lifan Power USA toll free @ 866-471-7464 or refer to our website www.lifanpowerusa.com for technical assistance.

All materials and diagrams in your Owner's Manual will vary depending on which power product you have purchased. Please pay particular attention to which model you have and use the appropriate diagram(s) for reference. The copyright of this manual belongs to Lifan Power USA® and cannot be reprinted or copied without the written consent of Lifan Power USA®. This manual is subject to change without notice.

FOR ALL WARRANTY AND SERVICE RELATED ISSUES AND QUESTIONS "DO NOT RETURN YOUR UNIT" TO THE STORE OR THE DEALER WHERE THE ITEM WAS PURCHASED FROM. FOR SERVICE CALL LIFAN POWER USA'S TECHNICAL DEAPRTMENT @866-471-7464. WE WILL BE HAPPY TO HELP YOU OVER THE PHONE OR TO DIRECT YOU TO THE NEAREST "AUTHORIZED SERVICE CENTER".

THIS OWNERS MANUAL IS FOR THE FOLLOWING MODELS				
ENERGY STORM 3500		DEERCY STORM SSOO	BREET FROM BOOK	
ES3500	ES3500E	ES5500	ES8000E	
ES3500-ca	ES3500E-ca	ES5500E	ES8000E-ca	
		ES5500-ca		
		ES5500E-ca		

**Model Guide:** 

**ES= Energy Storm Product Line** 

E= Electric Start

CA= C.A.R.B. certified (California Air Resources Board qualified unit for sale in the state of California)

# **SPECIFICATIONS**

# **ENERGY STORM PORTABLE GENERATORS**

	2500		9000	
Model Size:	3500	5500	8000	
Voltage :	120/240VAC & 12VDC	120/240VAC & 12VDC	120/240VAC & 12VDC	
Surge Output*:	3750 watts	5500 watts	8000 watts	
Maximum Output**:	3500 watts	5250 watts	7500 watts	
Rated Output***:	3000 watts	5000 watts	7000 watts	
Maximum AC Amperage:	26 AMPS @ 120 VAC	40 AMPS @ 120 VAC	62 AMPS @ 120 VAC	
AC Cycle:	60 Hertz	60 Hertz	60 Hertz	
			AVR (automatic voltage regulater	
	1 ea. With accessory cord			
0 VAC Duplex Receptacle:	1 ea.	2 ea.	2 ea.	
O VAC 30 AMP Receptacle:		NA	NA	
0/240 VAC 30 AMP Receptacle:		1 ea. NEMA L14-30 Twist Locl	1 ea. NEMA L14-30 Twist Lock	
Voltage Selector Switch		_		
(full power switch):		1 ea.	NA	
Circuit Protection;		Master Circuit Breaker	Master Circuit Breaker	
Idle Control Feature:	NA	NA	NA	
Statistics Display:	Pilot Light	Pilot Light	Pilot Light	
	ENG	INE		
Manufacturer:	LIFAN	LIFAN	LIFAN	
Model:	LF168f-2-13111 Recoil Start LF168f-2d-13111 Electric Start	LF182f-13111 Recoil Start LF182fd-13111 Electric Start	LF190f-13111 Recoil Start LF190fd-13111 Electric Start	
Maximum Horse Power:	6.5 MHP	11 MHP	15 MHP	
Starting System:	Recoil/Recoil & Electric (E) models	Recoil/Recoil & Electric (E) models	Recoil/Recoil & Electric (E) models	
Fuel Tank Capacity:	4 Gallons	6.5 Gallons	6.5 Gallons	
Fuel Tank Material:	teel with Rust Prevenative Coatir	teel with Rust Prevenative Coatin	teel with Rust Prevenative Coating	
Fuel Gauge:	Yes	Yes	Yes	
Run Time:	12 hours @ 50% load	10 hours@ 50% load	8 hours @ 50% load	
Sound Level:	65 DB @ 23 feet	75 DB @ 23 feet	75 DB @ 23 ft	
Engine Type:	4-Stroke OHV	4-Stroke OHV	4-Stroke OHV	
Fuel Type:	Automotive Grade Unleaded Gasoline	Automotive Grade Unleaded Gasoline	Automotive Grade Unleaded Gasoline	
Fuel Compliance:	15 % Ethanol Mix Compliant	15 % Ethanol Mix Compliant	15 % Ethanol Mix Compliant	
Oil Type & Amount:	SAE 10w30w 20oz	SAE 10w30w 32 oz.	SAE 10w30w 32 oz.	
Low Oil Shutoff Protection:	Yes	Yes	Yes	
ACCESSORIES				
12 Volt Accessorie cord:	1 ea.	1 ea.	1ea.	
20 Volt Male Twist Lock Plug:	NA	NA	NA	
240 Volt Male Twist Lock Plug:		1 ea.	1 ea.	
Spark Plug Wrench:		1 ea.	1 ea.	
Portability/Wheel Kit:		Standard	Standard	
	12 volt 100 cca min 5.25"lx3"w		12 volt 100 cca min 7"lx3"w	
* C	Temporary Power available for no more than 10 seconds, used for			
* Surge Power:				
** Maximum Power:	Temporary power availbe for perionds of 30 minutes or less, extended run times at this power level WILL damage your generator.			
*** Rated Power:				

# **SAFETY RULES**



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

For your safety read this manual carefully. Become familiar with the proper operation, care, and maintenance of your Lifan generator.

The safety and alert symbol ( ) is used with a signal word (CAUTION, DANGER, WARNING), a pictorial and/or safety message to alert you to hazards. CAUTION indicates a hazard which, if not avoided, might result in minor or moderate injury. DANGER indicates a hazard which, if not avoided, will result in death or serious injury. WARNING indicates a hazard which, if not avoided, could result in death or serious injury.



# **WARNING!**

Running generator emits carbon monoxide an odorless, colorless, poison gas.

Breathing carbon monoxide can cause nausea or death!

ONLY operate generator outdoors.

Exhaust gas must be prevented from entering confined areas. Direct exhaust gas away from windows, doors, ventilation and other openings.

Do not operate generator inside or under any buildings. Operating this generator inside the compartment of a recreational vehicle will likely result in death!



# **WARNING!**

The engine exhaust from this generator contains chemicals known to the state of California to cause birth defects, reproductive harm, and cancer.



Do not use this generator within the generator compartment of a recreational vehicle!

This generator does not meet U.S. Coast Guard Regulation 33CFR-183 and should not be used on marine applications.

Use of this generator on marine applications could result in injury or death.

### **Hazard Symbols and Meanings**









Explosion

Toxic Fumes



Fire

Hot surface or gas



Electrical Shock



# A

# **WARNING!**



Rapid recoil of starter cord (kickback) may pull hand and arm forward toward engine at a rapid rate.
Broken bones, bruises, sprains, and fractures may result.

- When starting engine, pull cord slowly until tension is felt, then pull rapidly to avoid kickback.
- Never start or stop engine with electrical devices plugged in and turned on. Doing so is hazardous and will damage generator.



# **WARNING!**



Generator produces powerful voltage!
Only a licensed electrician can safely
connect generator to existing utility
hookups. Failure to isolate generator from
electrical grid can result in death to utility
workers as well as others.

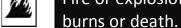
- When using generator as backup power, notify utility company. Use approved transfer equipment to isolate generator from electric utility.
- Do Not operate generator while exposed to rain or other wet conditions.
- Do Not handle generator when in contact with water.
- Do Not contact bare wires or receptacles.
- Inspect all electrical cords for damage and discontinue from use any damaged or excessively worn cords.
- Do Not allow unqualified persons to operate or service generator.



# **WARNING!**



Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe



### WHEN ADDING OR DRAINING FUEL

- Turn generator off and let it cool for at least three minutes before removing fuel cap. Loosen cap slowly in order to relieve pressure in the fuel tank.
- Fill or drain fuel tank outdoors. Do not excessively inhale fuel vapors.
- Keep away from open flames or sparks and other sources of ignition.
- Do not smoke while filling fuel tank.
- Do not overfill tank. Allow space for fuel expansion.

### WHEN TRANSPORTING OR REPAIRING EQUIPMENT

- Transport generator with the fuel valve in the off position.
- Repair generator with the fuel tank empty or the fuel valve in the off position.
- Disconnect spark plug wire before transport or service.

# WHEN STORING FUEL OR EQUIPMENT CONTAINING FUEL

 Store away from furnaces, stoves, water heaters, clothes dryers or other appliances that have pilot light or other ignition source because they can ignite fuel vapors.

### WHEN STARTING EQUIPMENT

- Ensure spark plug, muffler, air cleaner, and fuel cap are in place.
- Do not crank engine with spark plug removed.
- If fuels spills, wait until it evaporates before starting engine.

### WHEN OPERATING EQUIPMENT

- Do not choke carburetor to stop engine.
- Do not tip engine or equipment at an angle which causes fuel to spill.
- This generator is not for use in marine applications.



# **WARNING!**



While engine is running temperature may exceed 150°F (65°).

Server burns may occur.



Exhaust heat/gasses can ignite combustibles, structures or damage fuel tank causing a fire.

- Do not touch hot surfaces and avoid exhaust gasses.
- Allow generator to cool before touching.
- Keep at least 6 ft. (183cm) clearance on all sides of generator including overhead.
- Reflective exhaust heat may damage fuel tank causing fire.
- Code of Federal Regulation(CFR) Title 36 Parks, Forests, and Public Property require equipment powered by an internal combustion engine to have a spark arrester, maintained in working order, complying to USDA Forest service standard 5100-1c or later revision. In the state of California a spark arrester is required under section 4442 of the California Public resources code.



# **WARNING!**



Unintentional sparking can result in fire or electrical shock.

### WHEN TESTING FOR ENGINE SPARK

- Do not check for spark with the spark plug removed.
- Use approved spark plug tester.

### WHEN REPAIRING OR ADJUSTING GENERATOR

 Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.



# **CAUTION!**

Excessively high operating speeds (engine revolutions) increase the risk of injury and damage to the generator. Excessively low speeds impose a heavy load and will damage generator.

- Do not adjust engine speed governor. Generator supplies correct voltage and frequency at designated speed.
- Modifying generator in any way may be dangerous and will void warranty.

# **CAUTION!**

Improper use and care of this generator will cause damage and shorten its lifespan. These actions will void all warranties.

- Use generators only for appropriate and designated purposes.
- The dealer or customer helpline (1-866-471-7464) can instruct you on intended uses.
- Generator must be placed on a level surface.
- Do not expose generator to extreme conditions. Excessive dust, moisture, and corrosive vapors will damage unit.
- Cooling slots must be kept clear of debris.
- Do not connect improperly operating devices to generator.
- Shut off generator and take to a qualified service center if the generator fails to operate properly.

# **CAUTION!**

Exceeding generators wattage/amperage capacity can damage generator and /or electrical devices connected to it.

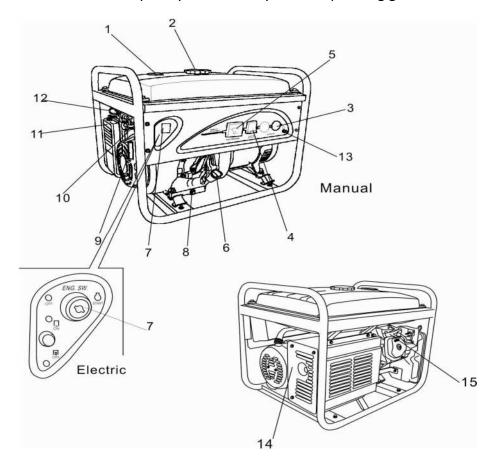
- Start the generator and let the engine rpm's stabilize before connecting electrical loads.
- Connect all electrical loads with the device in the off position.
- Turn off electrical loads before shutting off generator engine.

# **CONTROLS AND FEATURES**



Read the owner's manual completely and carefully before operating generator.

Figure #01



- 1. Fuel Level Sensor: Displays current fuel level.
- 2. Fuel Tank Cap: Vented fuel cap must be properly installed at all times during operation.
- 3. Receptacle Panel:
  - 5500 and 8000 watt models: 1 ea. NEMA L14-30 4 prong female 120/240 Volt AC, 2 ea. 120 Volt 20 amp duplex receptacle, 2 prong 12 volt dc receptacle 3500 watt models: 1 ea. NEMA L14-30 4 prong female 120/240 Volt AC, 1 ea. 120 Volt 20 amp duplex receptacle, 2 prong 12 volt dc receptacle
- 4. Double Pole Circuit Breaker (AC): The double pole circuit breaker protects the receptacles and generator from overload.
- 5. Pilot Light: Amber or Green light will illuminate when the engines is running in order to indicate that the generator is producing power.
- 6. Crankcase Oil Dipstick/Oil Fill Hole Cap: Check and fill engine oil here. See page for further instructions.
- 7. On/Off Switch: Rocker style; set to on to start engine/off to shut engine off. Key switch models; turn to start to crank engine and to off to shut off engine.
- 8. Crankcase Oil Drain Plug: Remove to drain oil from crankcase.
- 9. Recoil Starting Handle: Pull handle to rotate engine for starting.
- 10. Fuel Shutoff Valve: Turn to off to terminate fuel delivery to engine.
- 11. Air Cleaner: Check maintenance schedule for service intervals.
- 12. Choke:
  - 5500 and 8000 watt models: Before starting cold generator pull the choke pin outward from generator to active the choke lever. Push pin inward toward generator after starting and letting the generator run for a few seconds.
  - 3500 watt models: Before cold starting a generator rotate the choke lever to the left until you feel resistance. After starting the generator rotate the choke lever to the right to disengage.
- 13. Earth Grounding Stud: Always connect generator to an earth grounded source. Consult local energy jurisdiction for code requirements in your area.
- 14. Muffler & Muffler Hood: Exhaust muffler emits combustion gas from engine and lowers the noise level of the generator.
- 15. Valve Cover: Cover for overhead valves designed to be removed periodically for valve adjustments.

# **ASSEMBLY**

Your Lifan generator is packaged without fuel and oil. Some assembly is required before operating your Lifan generator.

For further assistance in assembling your generator please contact online at <a href="www.lifanpowerusa.com">www.lifanpowerusa.com</a> or call 1-866-417-7464 between the hours of 9 a.m. and 5 p.m. central time.

### **BOX CONTENTS:**

- Generator
- Accessory kit including:
  - 1.2 piece Spark Plug removal tool
  - 2.12 volt power cord
  - 3. Nemal14-30 male twist lock plug
  - 4. RV adapter plug for 30 amp 120 volt service (Supplied with all models as of 8/01/2011)
- Owner's manual and warranty card
- Wheel kit including(only on specified models)
  - 1. 2 ea."Never Flat" wheel and tire
  - 2 ea. Heavy duty leg supports
     (Shipped stored under the fuel tank)
  - 3. 1 ea. Axle
  - 4. 2 ea. folding handle
  - 5. Hardware bag

# **UNPACKING THE GENERATOR:**

- 1. Set the carton on a flat rigid surface.
- 2. Remove all contents from carton except generator.
- 3. Open box completely by cutting each corner from top to bottom.
- Leave generator on the remainder of the box until wheel kit is installed.
- Locate all items listed above and place them to the side of the unit. Some items may be packaged within the voids of the generator itself.

### WHEEL KIT INSTALLATION:

You will need the following tools in order to install wheel kit.

- Safety Glasses
- 8mm-14mm wrench set
- 8mm-14mm ratchet and socket
- Ratchet with 17mm socket

### Installation order

Note: Install wheel kit before filling the generator with gas or oil. Never tip a unit that contains fuel or oil.

- 1. Tip generator so that the engine end is up.
- 2. Slide axle through both mounting brackets.
- 3. Place a wheel on both sides as shown.
- 4. Hands tighten wheel nuts on both side of generator.
- 5. Securely tighten wheel nuts with the 17mm socket.
- 6. Tip the alternator end of generator up.
- 7. Place the support leg under the frame brace as shown
- Secure with the provided cap screws (size) and hex nuts. Tighten using 12mm ratchet and

# **Battery Installation:**

# Electric Start E code models only:

# With your Energy Storm generator the

battery IS NOT included. These units require an acid cell battery. This battery is normally used in many applications such as lawnmowers, ATV's, Motorcycles, etc. and can be found at many retailers or the dealer where you purchased this Power Product. Use the chart below to find the specifications of the necessary battery or use a cross reference chart to match up with the manufactures model numbers listed under the specification chart with the brand battery that is supplied by your local retailer.

### Specifications

Model Gen.	length	Width	Amp hrs.	volts
ES3500e	5 ¼"	3"	10	12 v –dc
ES3500e-ca	5 ¼"	3"	10	12 v –dc
ES5500e	5 5/16"	3 3/16"	12	12 v –dc
ES5500e-ca	5 5/16"	3 3/16"	12	12 v –dc
ES8000e	5 5/16"	3 3/16"	12	12 v –dc
ES8000e-ca	5 5/16"	3 3/16"	12	12 v –dc

### **Cross Reference Models**

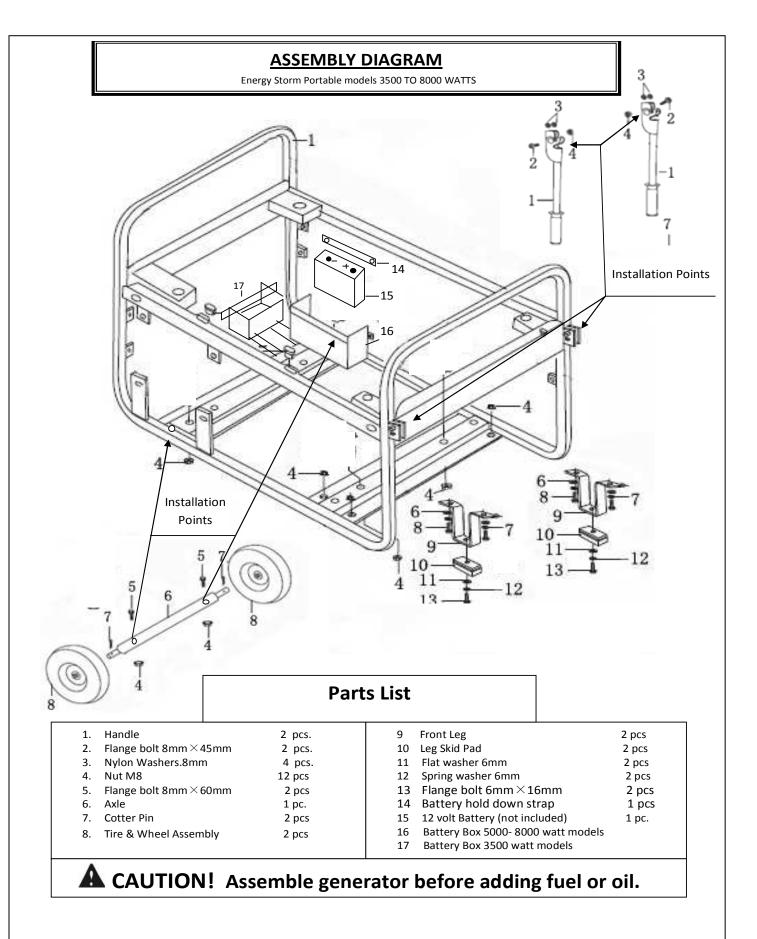
Model Gen.	Manufacturer	Model #	
ES3500e	Super Start®	CB9B	
ES3500e-ca Super Start® CB9B		CB9B	
ES5500e	Excide®	12N12A-4A-1	
ES5500e-ca	Excide®	12N12A-4A-1	
ES8000e	Excide®	12N12A-4A-1	
ES8000e-ca	Excide®	12N12A-4A-1	



# Warning

Follow all the battery manufactures' warnings for proper installing of your battery in order to prevent damage to personnel or equipment.

- Battery leads consist of a red (hot) lead that connects to the +
  battery post and is connected to the +terminal on the starter
  solenoid and a black lead which is connected to the negative
  battery terminal and the frame mounting bolt.
- 2. Connect the Red (hot) terminal to the battery.
- 3. Connect the black( negative) terminal to the battery



# **GENERATOR SET UP**

### ADD ENGINE OIL

CAUTION: Any attempt to start the generator before it has been properly serviced may result in engine failure.

- 1. Place generator on a level surface.
- 2. Clean area around oil hole dipstick/plug and unscrew oil hole dipstick/plug.
- Fill crankcase with appropriate type and amount of oil (see engine specification section for information on oil type and amount).
- 4. Replace oil dipstick/plug and tighten securely.

### ADD FUEL



# **WARNING!**



Fuel and its vapors are extremely flammable and explosive.
Fire or explosion can cause severe burns or death.

### WHEN ADDING FUEL

- Turn generator off and let it cool for a minimum of three minutes before removing fuel cap. Turn and remove cap slowly in order to relieve residual tank pressure.
- Always fill the fuel tank with the unit outdoors.
- DO NOT overfill tank. Allow room for fuel expansion.
- Keep fuel away from sparks, open flames, heat, pilot lights, and other ignition sources.
- 1. Clean are around fuel cap, remove cap.
- Use fresh clean regular unleaded fuel with a minimum octane rating of 85. DO NOT mix fuel with oil. You may use fuel that has an ethanol blend of 15% or less. Please pay close attention to the storage requirements for these fuels. DO NOT overfill the fuel tank. Fill level should not be higher than the bottom of the fuel filler neck.
- Install the fuel cap. Rotate the fuel cap clockwise until it is in its locked position. Wipe away any spilled fuel.

**CAUTION:** Alcohol-blended fuels (gasohol, ethanol, or methanol) will attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be treated with a fuel stabilizer or drained if the generator will not be started for 30 days. If using a fuel stabilizer, follow the manufactures recommend instructions for use. Always use stabilizer with a full tank of gasoline and drain old fuel and use fresh fuel before next use. If you do not use a fuel stabilizer the fuel system must be drained and cleaned. Drain the fuel tank and start the engine and allow it to run until all the fuel lines and carburetor are drained of fuel. Before restarting the carburetor float bowl must be removed and cleaned of any debris.

**NEVER** use chemical solvents or cleaners in the fuel tank for damage may occur.

### VOLTAGE SELECTOR SWITCH

3500 AND 5500 WATT MODELS ARE EQUIPPED WITH A "Full Power" voltage selector switch. This switch allows the operator to choose between 120/240 volt ac dual mode operation where the duplex receptacles are providing 120volt ac electricity and the 4 prong NEMA I14-30 twist lock plug is providing 240 volt ac electricity and 120 volt "Full Power" mode where the duplex and 4 prong twist lock receptacle are providing 120 volt ac power only delivered at the maximum rating for the generator.

When exclusively operating 120 volt ac items with your generator place the voltage selector switch in the 120 volt only position. This will double the effective power available at 120 volts as compared to 120/240 voltage "dual power "mode.

# OPERATION

# **HOW TO USE YOUR GENERATOR**

# **Generator Location**



# **WARNING!**



Running generator gives off carbon monoxide gas. It is odorless, colorless, and highly toxic. Breathing carbon monoxide gas can leads to fainting, nausea or may result in death.

- Only operate generator outdoors.
- Prevent exhaust gas from entering, through windows doors or ventilation intakes, any confined areas.
- DO NOT operate generator inside any enclosed or roofed areas. This includes the generator compartment of any recreational vehicle (RV).

### Starting the Engine



# **CAUTION!**

Never start or shutoff the generator with electrical loads connected and in the operational mode (on switch activated). Starting or shutting off the generator with electrical loads activated may result in damage to the generator.

- 1. Unplug all electrical loads from the generator.
- 2. Make sure the generator is in a level position.
- 3. Open the fuel shutoff valve (item #10 figure #01).
- On cold engine starts only, pull the choke pin to the engaged position per the instruction label on the generator main frame (item#12 figure#01).

# PULL START ONLY MODELS

- Place the on/off switch in the on (I) mode (item#7 figure#01).
- Grasp starter handle (item#9 figure#01) and pull slowly until you feel some resistance, then pull the cord rapidly with a full arm stroke. Allow the rope to return slowly. Do not allow the rope to snap back against housing.
- 7. When the engine starts allow it to run for 3-5 seconds and push the choke pin in to disengage.

# **ELECTRIC/PULL START MODELS**

- 1. Unplug all electrical loads from the generator.
- 2. Make sure the generator is in a level position.
- 3. Open the fuel shutoff valve (item #10 figure#01).

- 4. On cold engine starts only, pull the choke pin to the engaged position per the instruction label on the generator main frame (item#12 figure#01).
- 5. Using provided keys turn the key switch to on position until you feel resistance. Rotate the key one more position in order to engage the starting motor. Hold key switch in start position until engine starts or no more than 10 engine rotations. If the engine does not start re-peat procedures starting with step one.
- 6. When the engine starts allow it to run for 3-5 seconds and push the choke pin in to disengage.

**Note (all models):** If generator does not start within three pulls, check the crankcase oil level. The engines "Low oil protection" circuit may be activated and preventing the engine from starting.

### **CONECTING ELECTRICAL LOADS**

- 1. Plug in desired 120volt loads to the 120 volt U-Ground plugs or the 120 volt 3 prong twist lock receptacle.
- 2. Do not connect 240 volt loads to the 120 volt receptacles.
- 3. Only connect single phase 60 hz loads.
- 4. <u>Do Not Overload the Generator: Follow the provided</u> generator sizing worksheet to determine the running and starting watts of your equipment. Refer to the rating tag on the generator to ensure you generator will operate the desired equipment.

### STOPPING THE GENERATOR

- 1. Unplug all electrical loads or turn the main breaker to the off position.
- 2. In order to stabilize internal equipment temperatures allow the engine to run for 3-5 minutes under no load.
- 3. If the generator will not be in use for more than 7 days turn the fuel valve off (item#10 figure #01) and allow the unit to run until the fuel in the carburetor is used up and the engine shuts itself off.
- 4. Turn the ignition switch to the off position.
- 5. Allow unit to cool to ambient temperatures before storage or transportation.
- 6. Always transport the generator with the fuel valve (item#10 figure #01) in the off position. Failure to do so will result in damage to the engine.

# **STORAGE**

**NOTE:** Before long term storage of your power product, typically 30 days or more, perform the following:

- 1. Set the fuel cock (valve) to the "OFF" position.
- 2. Let the unit continue to run until it stops, burning all of the fuel in the fuel system.
- 3. Turn the ignition switch to the "OFF" position.
- 4. Drain the engine oil in accordance with the previous instruction for oil changes however do not re-fill until ready to use again.
- Remove the Spark Plug in accordance with the previous instructions and spray WD40® or a good spray lubricant into the spark plug hole to lubricate the top of the piston and walls of the cylinder. Replace the spark plug.
- 6. Pull starter rope until you feel resistance, this will place the vales in the closed position.
- 7. Add the recommended amount of fuel stabilizer to the unused gasoline left in your tank in accordance with the amounts recommended by the brand of fuel stabilizer you use (i.e. Stabill®, SeaFoam®, etc.)
- 8. Place your unit in a clean, dry, and secure location.
- Cover with "Lifan Water Proof Generator Cover", Item number LG100-69600 (not included) or canvas/vinyl tarpaulin. (do not operate with cover installed).

### MAINTENANCE OF YOUR UNIT

- 1. Engine Oil Check Each use
- 2. Replace Engine Oil After each 40 hours of use. For initial break-in, after the 1st 10 hours use.
- 3. Air Cleaner Filter Check Each use.
- 4. Air Cleaner Filter Replace When needed or every 100 hours of use.
- 5. Air Cleaner Wash When needed.
- 6. Spark Plug When needed or every 6 months.
- 7. Valve Clearance Check and re-adjust annually or after 300 hours use.
- 8. Fuel Tank Replace every 3 years based on condition of the fuel tank.

# **OIL CHANGE PROCEDURES**

Periodic Maintenance of your engine oil should be performed after each 40 hours of use of your Power Product. Check your engine oil level prior to each use.

- 1. Start your engine and let it warm up to get the oil warm and thinner. Remove the oil cap/dipstick (Item#6 Figure#1) by turning counter clockwise. Remove the oil drain plug(Item#6 figure#1) located below the oil cap/dipstick utilizing the appropriate tools.
  - USE CAUTION THE OIL MAY BE HOT.
- 2. Drain the engine oil into an approved receptacle and discard in accordance with all Federal and State Regulations, never dump your used engine oil on the ground or into drains, only discard in an approved manner. Check with your local authorities to determine the regulations for your area. WARNING!!!!! Avoid splashing of hot oil, it can burn you and cause severe injury.



- 3. After oil is completely drained, replace oil drain plug and tighten with appropriate tools. Replace oil with the proper oil for your product. Depending on your model it will take between 3/4 and 1 quart of oil to fill your unit ( refer to the specification chart for exact fill values). Always use your dipstick to check the oil level and only fill to the full mark on the dipstick, never overfill the engine as this can cause damage to your engine and void your warranty.
- 4. Replace the dipstick/oil cap on your engine, it is now ready to use.
- 5. PROPER MAINTENANCE OF YOUR UNIT WILL INCREASE THE LIFE OF YOUR PRODUCT. THE OIL MUST BE CHANGED ON A REGULAR BASIS FOR PROPER OPERATION AND RELIABILITY AND TO MAINTAIN YOUR WARRANY ON THIS PRODUCT.

# AIR CLEANER MAINTANENCE

- 1. Remove the clip (Fig 3.10) or air cleaner cover wing nut (Fig 3.11) and remove and check the air filter element.
- 2. For Sponge Type Air Filters, wash with soap and water when contaminated, squeeze excess liquid from element, allow the filter to dry, and then re-installing the element into the air filter housing.
- 3. For Paper Type Air Filters, replace with the correct Air Filter for you unit, they are available at your dealer for by calling Lifan Power USA at 866-471-7464.

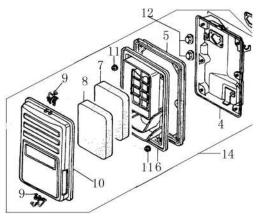
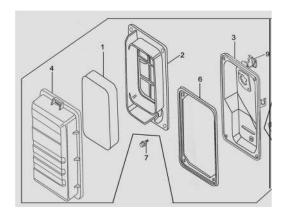


Figure 3.10

Figure 3.11



### SPARK PLUG MAINTENANCE

- 1. Remove Spark Plug Cap. Fig 3.12
- 2. Remove Spark Plug with socket and handle supplied with your unit. Fig.3.13
- 3. Clean any carbon build-up around the spark plug
- 4. Check the spark plug gap and adjust if necessary. .030" gap
- 5. Lubricate the threads of the spark plug with anti-seize compound or engine oil. Re-install the spark plug

Figure 3.12

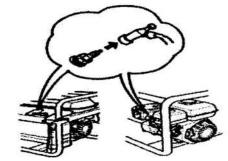
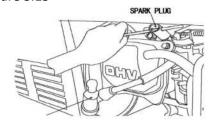


Figure 3.13



### MAINTENANCE OF FUEL SYSTEM

**NOTE:** Periodically you can get sediment or trash in your Carburetor Bowl. Use the following procedures to clean:

- Turn the fuel cock (valve) to the "OFF" position.
- **2.** Remove the carburetor bowl by removing the mounting bolt located at the bottom of the bowl.
- **3.** Dump out the old fuel and sediment into an approved container, clean bowl thoroughly.
- 4. Fit a new rubber washer into place and reattach the fuel bowl to the carburetor.
  NOTE: Sometimes you can remove the drain screw at the bottom of the bowl and drain the fuel to remove smaller debris that has collected in the bowl.
- **5.** After bowl is securely back in place turn the fuel cock (valve) back to the on position for use.
- 6. Units equipped with a pre-filter for fuel will have a filter housed just below the fuel cock. Follow the diagrams below to remove this filter element (Diagram 1) and either clean or replace the fuel filter and reassemble per instructions in Diagram 2.

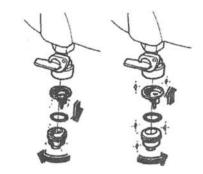


Figure #1

Figure #2

### **TROUBLESHOOTING**

### **IF YOUR ENGINE WILL NOT START**

- Check to make sure switches are in the "ON" position (Both unit and engine)
- 2. Check engine oil level (your unit is supplied with a low oil shutdown feature that will not allow your engine to start if the oil is below safe operating levels, this function is installed to increase the life of your engine and prevent engine damage) If oil level is low, fill to the full mark on dipstick.
- 3. Check the fuel level to insure adequate fuel. If too low, add fuel.
- 4. Remove and inspect the spark plug for cleanliness and proper electrode gap. If fouled, clean or replace plug.
- 5. If your unit still will not start after performing the above checks take your generator to an authorized Service Center, or call our hotline at Lifan Power USA Toll Free 1.866-471-7464

NOTE: Periodically on the initial start-up or after the unit has been stored for a long period of time, the float for your "low oil shutdown" system will stick to the bottom of the oil pan. Locate the 2 wires to the low oil sensor diode (figure 3.14) located on the side of the engine block, unplug these wires and only after assuring that your engine is full of oil, start the engine and let it run until warm (normally 20 minutes as this will heat the oil and release the float on the low oil shutdown system) and then re-plug the wires to the terminals on the low oil shutdown sending unit.

Figure 3.14



Low Oil Sensor Diode

### **UNIT DOES NOT PROVIDE ELECTRICAL CURRENT**

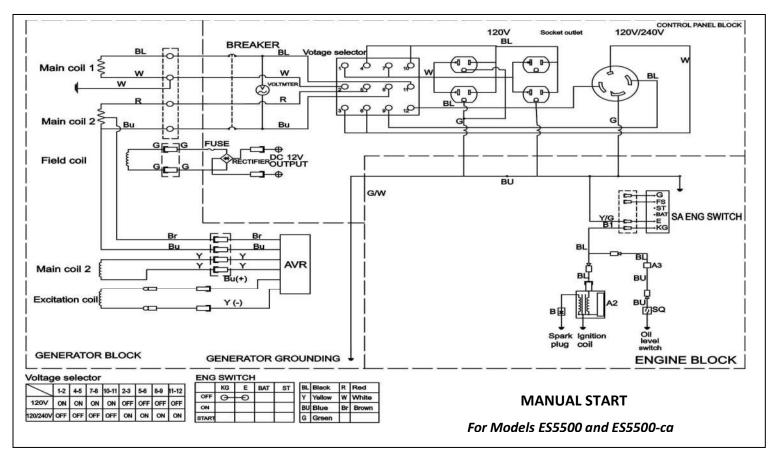
- 1. Plug in a small appliance or tool to test.
- 2. Check to see if the AC circuit breaker is in the "ON" position. If equipped with a GFCI receptacle, re-set GFCI breaker by starting the engine and push in the reset button in the middle of the GFCI's face plate.
- 3. On units equipped with a 120-120/240 volt current selector switch ensure that the switch is in the proper position. For 120 volt only operation place the switch to the side marked with the 120volt designation. For 240 volt operation ensure that the switch is in the 120/240 volt location. If the Voltage Selector Switch is placed in the middle position it will not provide electrical output.
- If your unit still does not produce electricity, call your dealer, and authorized Service Center, or Lifan Power USA at 1-866-471-7464.

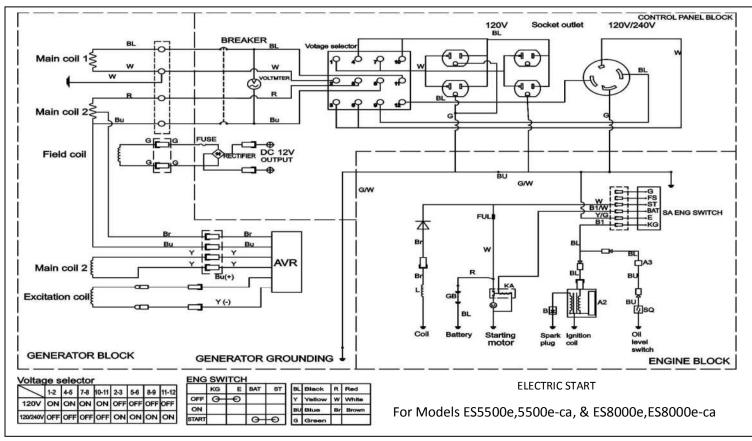
# **SAFETY PRECAUTIONS**

- Never operate gasoline engine powered products in any enclosed spaces as they produce Carbon Monoxide Poisonous Gases which are deadly.
- Never hook a generator directly to your home circuit without the proper installation by a Licensed Electrician and with the proper power transfer devices used.
- Do not operate your power equipment in inclement weather such as rain, snow, and/or sleet.
- 4. Do not operate your power equipment within 5 feet of any flammable materials.
- 5. When refueling your power product never smoke or refuel near or utilize any flame or ignition devices. Never refuel while the unit is running. If during the refueling process some fuel is spilled, always completely clean the fuel and allow sufficient drying time prior to restarting your unit. Gasoline vapors ignite easily and are very dangerous.
- 6. NEVER ALLOW CHILDREN OR ANIMALS TO BE NEAR THIS EQUIPMENT DURING OPERATION. ONLY QUALIFIED PERSONS SHOULD OPERATE THIS EQUIPMENT. PLEASE FOLLOW ALL GUIDELINES CONTAINED IN THIS OWNERS MANUAL FOR THE SAFE OFPERATION OF THIS EQUIPMENT.

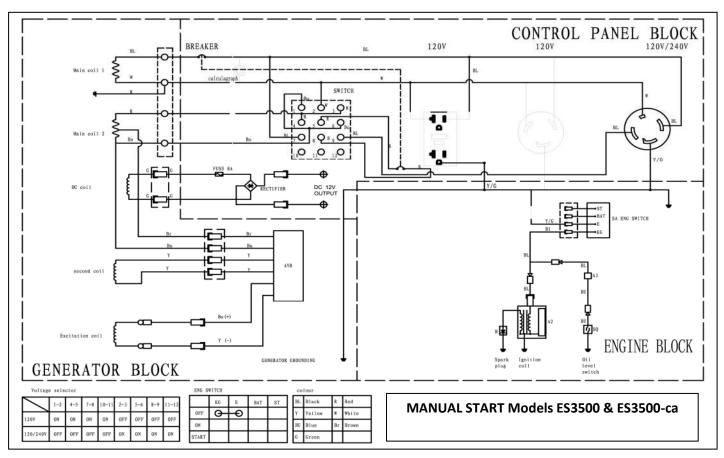
# **TECHNICAL & PARTS INFORMATION**

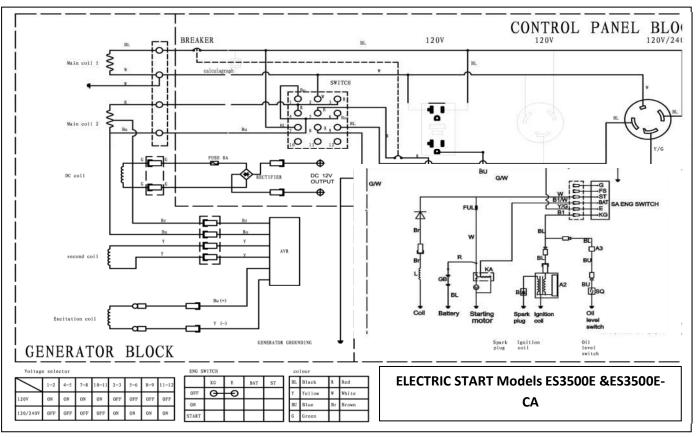
# Wire Diagram





# Wire Diagram





# **GENERATOR SIZING WORKSHEET**

When selecting a generator it is very important to choose one that is capable of producing enough energy to meet all of your requirements. You must match the rated output of the generator to the maximum power needed by the user. Use the chart form this worksheet to determine the running watts and starting watts for all of the equipment that you will operate with your Lifan generator. Add the running watts together for all of the equipment and record that figure. Then identify the single piece of equipment with the largest starting watt requirement and add that figure to the total running watts from all equipment. Select the appropriate Lifan generator by reviewing the specifications chart for Lifan generators and compare your total wattage requirements to the surge ratings for each generator. Remember to follow all safety precautions outlined on the generator or the instruction manual. For additional information please visit our website

GENERATOR WORKSHEET				
	RUNNING WATTAGE REQUIREMENTS	ADDITIONAL STARTING WATTAGE REQUIREMENTS	TOTALS	
HEATING/COOLING:				
Furnace Fan, gas or oil furnace				
1/8 horsepower	300	500		
1/4 horsepower	600	1000		
2/5 horsepower	700	1400		
Central Air Conditioner				
10,000 BTU	1500	2200		
24,000 BTU	3800	4950		
40,000 BTU	6000	6700		
KITCHEN				
Refrigerator, Average	600	2200		
Dish Washer - Hot Dry	1450	1400		
Clothes Dryer - Gas	700	1800		
Clothes Dryer - Electric	5750	1800		
Microwave Oven, 750W	750	800		
Washing Machine	750	2300		

Coffee Maker	850	0	
Toaster 2-slice	1100	0	
Electric Skillet	1500	0	
Electric Range 8-in. element	2100	0	
Freezer	2500	2200	
Bathroom			
Hair Dryer	800 - 1700	0	
Iron	1200	0	
Heating Pad	65	0	
Television - Color	300	0	
Dehumidifier	400	0	
Electric Blanket	400	0	
Garage Door Opener - 1/3HP	725	1400	
Well Pump - 1/2 hp	1000	2100	
Sump Pump - 1/3 hp	800	1300	
Tools			
1/4" Drill	300	300	
Jigsaw	300	300	
Router	1000	1000	
Belt Sander	1000	1000	
Disc Sander	1200	1200	
Chain Saw	1200	1200	
12" Concrete Cutter	1800	3600	
7 1/4" Circular Saw	1500	3000	
Disc Grinder	2000	4000	
Air Compressor, Average	2000	4000	
Total:			

### LIMITED WARRANTY POLICY

This warranty is limited to the following Lifan Power and Storm Series products that are distributed by the EquipSource LLC, dba LIFAN POWER USA, located at 2205 Industrial Park Road, Van Buren, AR 72956. Effective date is 4/20/2010.

LENGTH OF WARRANTY					
	Residential Use**			Commercial/Rental***	
PRODUCTS COVERED	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Warranty not to exceed 300 hrs. Or terms listed below.	
Walk Behind Mowers	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 3 months parts and labor	
Water Pumps	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 12 months parts and labor	
Generators/Inverter Generators	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 12 months parts and labor	
Pressure Washer Engines	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 12 months parts and labor	
Pressure Washer Pumps*	Full unit parts and labor	NA	NA	Full unit: 12 months parts and labor	
Gasoline Engines	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 12 months parts and labor	
Gasoline Powered Welders	Full unit parts and labor	Full unit parts only	Engine: parts only	Full unit: 6 months parts and labor	

<sup>\*</sup>All Lifan Pressure Pro™ and Storm Series Pressure Storm™ pressure washers are equipped with <u>Annovi Reverberi</u> high pressure water pumps . Which are covered by the manufactures 1 year limited warranty. Go to <u>www.lifanpowerusa.com</u> for details.

In order to qualify for the limited warranty the product(s) must be purchased in North America from an authorized EquipSource dealer or a dealer authorized by EquipSource to sell Lifan products. This warranty is non-transferable and applies only to the original purchaser. The supplied "Warranty Registration Card" must be completed and on file with EquipSource, LLC (at the supplied address), at the time that any warranty claim is made. The "Warranty Registration Card" must be submitted with a receipt of purchase which clearly states the date of purchase.

During the warranty period (stated above) Equipsource, LLC will repair or replace, at its' option, any part that is proven to be defective in material or workmanship under normal usage. Repairs and/or replacement will be made without charge for parts or labor. All parts found to be defective must be returned to EquipSource. Upon reception of the parts a judgment as to the validity of the warranty claim will be determined. All parts replaced under warranty will be considered part of the original product and any warranty on those parts will coincide with the original warranty.

To obtain Warranty Service, you must take the product, at your expense, to an authorized Lifan Power Products or Storm Series Power Products service center. If you are unable to locate warranty service or are dissatisfied with the warranty service that you receive, contact EquipSource, LLC at 866-471-7464. At EquipSource's discretion; Equipsource may elect to replace a defective unit. In this case the end user is responsible for all shipping and handling charges associated with the exchange.

This warranty is not valid for products or parts affected or damaged by accident, collision, normal wear, fuel contamination, abuse, neglect, misuse, alteration and/or unsuitable use or unauthorized parts replacement. Mower decks and blades are specifically not warranted for impact or abrasive damage. Warranty becomes void if the customer fails to install, maintain, and/or operate the product in accordance with the instructions and recommended actions of Lifan set forth in the owner's manual. EquipSource, LLC disclaims any responsibility for time loss or loss of usage of the product, transportation, commercial loss, or any other incidental or consequential damage. Prior to any warranty service an approval code must be issued to the service center in order for the warranty claim to be valid. Any implied warranties are limited to the duration of this written limited warranty. This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state.

This warranty specifically excludes the use of any Lifan Power Equipment or Storm Series power equipment for the purpose of powering Life Support devices, Life Support appliances, Medical devices, and/or Medical appliances. EquipSource, LLC will not be held responsible for any damage due to the use of any Lifan or Storm Series power equipment for these purposes.

### Exclusions to Warranty:

- Failure to perform "Periodic Maintenance" as required and specified in the supplied "Owner's Manual."
- · Improper repair of product or replacement of parts with non-oem (original equipment manufacturer) parts.
- Operation in uses and methods other than those outlined in the "Owner's Manual."
- Service and/or repairs performed by anyone other than an" Authorized Lifan or Storm Series Products Service Center."

<sup>\*\*</sup> Residential Use is defined as items that are for personal use.

<sup>\*\*\*</sup> Commercial/Rental use is defined as any usage for income producing or other business related uses.







Please Read This Manual Carefully Before Operating Your New Generator

Thank you for purchasing our EnergyStorm. This Manual includes the operation and maintenance of the ES3500, ES3500E, ES5500, ES5500E Aand ES8000E Models.

All information in this publication is based on the latest product information available at the time of approval for printing. We reserve the right to make changes at any time without notice and without incurring any obligation. The copyright of this manual belongs to our company. No parts of this publication may be reproduced without our written permission. This manual should be considered a permanent part of the generator and should remain with it if it is resold.

For Product Support and Service Please Visit Us at www.lifanpowerusa.com or call Toll Free 1-866-471-7464