OPERATOR'S MANUAL

EG-1800C

Serial Number 00000 & Up

EG-2600C

Serial Number 10000 & Up

GENERATOR

WARNING ⚠ DANGER

READ INSTRUCTIONS CAREFULLY AND FOLLOW RULES FOR SAFE OPERATION. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

For your nearest ECHO Dealer, call 1-800-432-ECHO (3246)

CONTENTS

Specifications, descriptions and illustrations are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories, and may not include all standard equipment.

⚠ This device accompanied by the words WARNING and DANGER calls attentions to an act or a condition which can lead to serious personal injury.

NOTE
This enclosed message provides tips for use, care and maintenance of the unit.

Circle and slash symbol means whatever is shown is prohibited.

IMPORTANT
This enclosed message provides information necessary for the protection of the unit.

⚠ WARNING ⚠

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

IMPORTANT

PLEASE READ BEFORE USING YOUR ECHO GENERATOR

The popularity of generators being used as secondary or emergency power sources in commercial, industrial or residential structures has led many states to enact strict codes. Such as, if a generator is hooked to a main power supply system it is to be connected by an isolation switch (double throw switch).

Potential hazard exists when a portable electric generator is connected to the main electrical supply system without the installation of a double throw switch at the power supply point. It is at this point that the electrical generator could feed back into the distribution system of the utility company causing possible electrocution of workers who are repairing the electricity line.

Laws in many states require that:

- Any owner, renter or lessee who connects an electrical generator to the electrical system of an industrial, commercial or residential structure is to notify the public utility or utility district. Violation of any of the above provisions will be punishable by fine or imprisonment.

WARNING ⚠ DANGER

ELECTROCUTION OR PROPERTY DAMAGE CAN OCCUR: DO NOT CONNECT THIS GENERATOR TO ANY BUILDING'S ELECTRICAL SYSTEM UNLESS AN ISOLATION SWITCH HAS BEEN INSTALLED BY A LICENSED ELECTRICIAN. REFER TO THE OPERATOR'S MANUAL.

Thank you for purchasing an ECHO Generator. This manual covers operation and maintenance.

All information in this publication is based on the latest product information available at the time of approval for print. ECHO, INCORPORATED reserves the right to make changes at any time without notice and without incurring any obligations.

This manual should be considered a permanent part of the generator and should remain with the unit when it is sold. Pay special attention to boxed statements they indicate a possibility of personal injury or equipment damage if instructions are not followed.

IMPORTANT
Before starting engine for the first time, add oil as unit is shipped dry.

FILL OUT AND KEEP FOR YOUR OWN RECORD

MODEL_____ **SERIAL NO.**_____ **PURCHASE DATE**_____

Bill of Sale No._____ **Payment Record (Check No., etc.)**_____

Dealer Name_____

Address_____

City_____ **State**_____ **Zip**_____

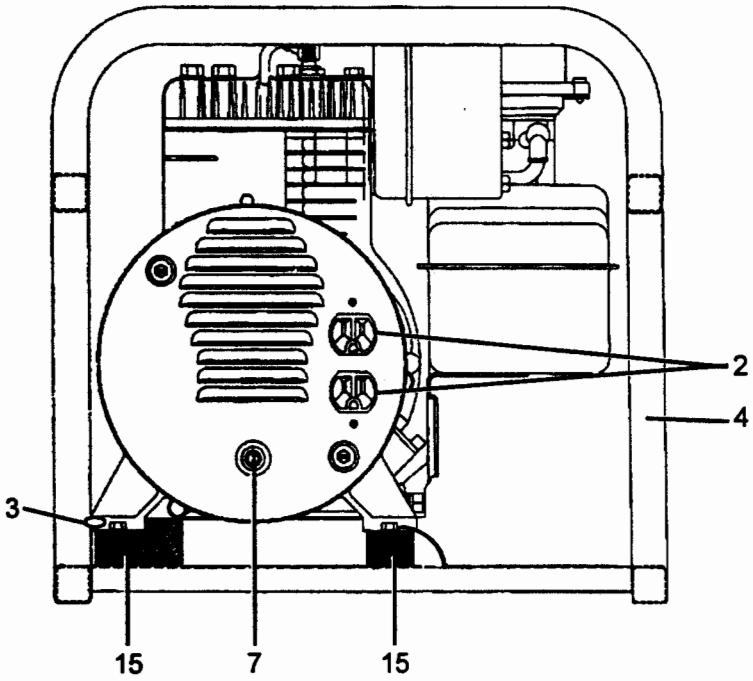
Any part claimed to be defective must be returned by delivering it to an authorized ECHO dealer or distributor. Consult your yellow pages under one or more of the following headings: Lawn equipment, mowers, saws, outdoor power equipment, or phone ECHO, INCORPORATED (800) 432-ECHO for direction to the nearest dealer.

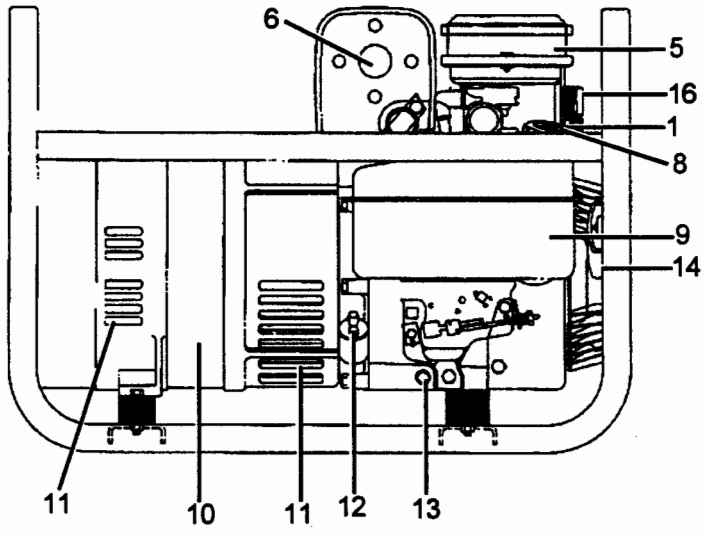
SPECIFICATIONS

DESCRIPTION	EG-1800C	EG-2600C
Engine Model	**B & S 130232**	**B & S 195432 INDUSTRIAL PLUS**
Horse Power	5.0 (4.0 kw)	5.0 (4.0 kw)
Displacement	(12.57 cu.in.) 206cc	(12.57 cu.in.) 206cc
Frequency Hz	60	60
Rated Output Watts AC Cont.	1800	2200
Output Max. Watts AC	2000	2600
Engine Speed	3600	3600
Voltage	120	120
Rated Amperage	15.0 @ 120V	18.3 @ 120V
Starting System	Recoil Starter	Recoil Starter
Fuel Capacity Gal.	.75 Gal. (2.84 lit.)	3.5 Gal. (13.25 lit.)
Run Time Full Load	1.5 Hours	6.5 Hours
Run Time 1/2 Load	2.0 Hours	9.5 Hours
Ignition	Electronic	Electronic
Automatic Voltage Regulator	Yes ±3%	Yes ± 3%
Echo-Mizer℠ Automatic Idle Control	No	Yes
AC Circuit Breaker	YES	YES
AC Receptacles	2/120	2/120
Spark Arrester Muffler	Yes	Yes
Oil Crank Case Capacity	32 oz. (.95 lit.)	32 oz. (.95 lit.)
Low Oil Shutdown	No	Yes
Dimensions L	22" (558.8mm)	22.5" (571.5mm)
Dimensions W	17" (432mm)	15"(381.0mm)
Dimensions H	16" (406.4mm)	20.5" (521mm)
Net Weight	77 lbs. (35.0 kg)	84 lbs. (38 kg)
Shipping Weight	83 lbs. (37.7 kg)	91 lbs. (41.3 kg)

℠: **Echo-Mizer is a Trade Mark of ECHO, INCORPORATED**

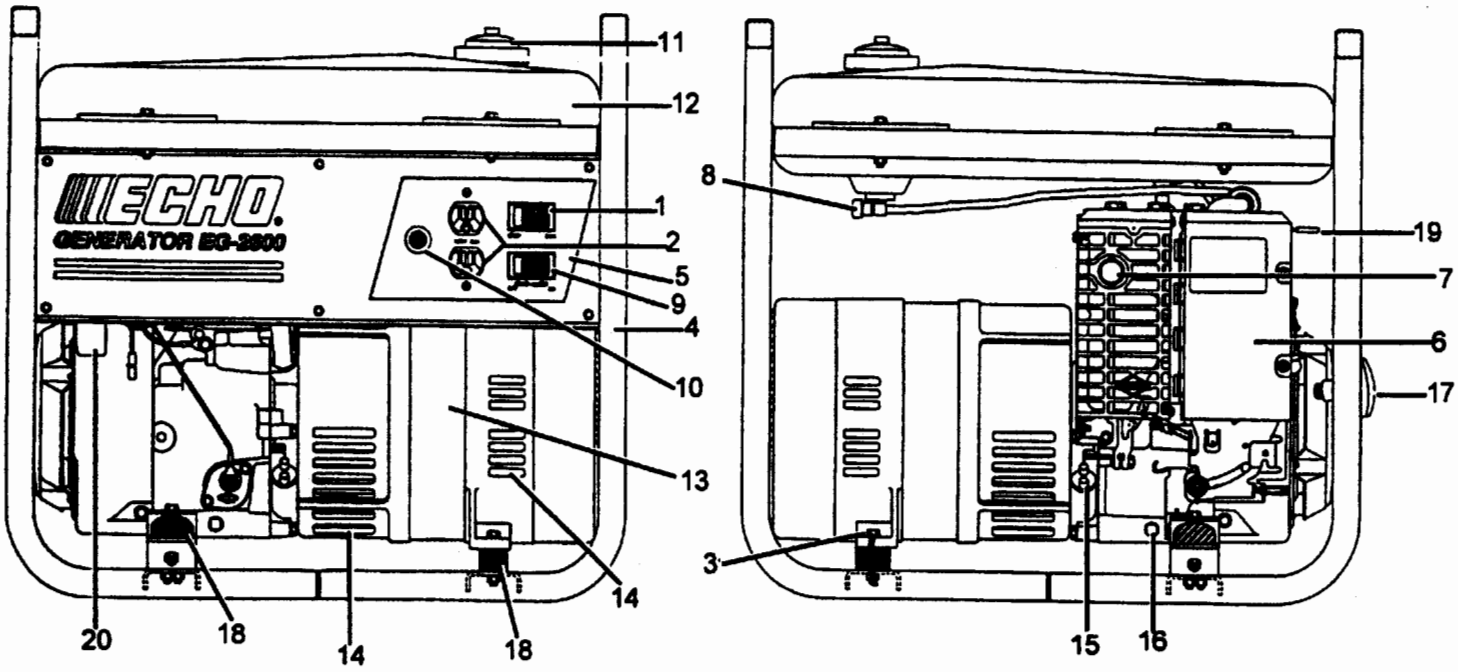
GENERAL IDENTIFICATIONS
MODEL EG-1800C





1. **Engine Ignition Switch** - Switch to left is "OFF" - right is "ON" or "RUN".
2. **AC 120 Volt Receptacles (15 Amp)** - Duplex type. Do not exceed 15 amp load.
3. **Grounding Lug** - Attachment point for adding a ground strap to an external earth ground.
4. **Handle/Tube Frame** - Protective carrying frame for generator.
5. **Air Filter** - Contains automotive style paper element. Refer to the engine Operator's Manual for maintenance.
6. **Muffler/Spark Arrester** - Prevents hot exhaust particles from exiting the engine. Refer to engine Operator's Manual for maintenance.
7. **AC Circuit Breaker (15 amp)** - Protects receptacles and generator winding from overload. Breaker button pushed in allows electricity flow to receptacles. Breaker button is out when tripped preventing electricity flow to receptacles.
8. **Fuel Tank Cap** - Covers and seals fuel tank.
9. **Fuel Tank** -
10. **Generator Housing** - Houses electricity generating components.
11. **Generator Vents** - Provides cooling air flow for electricity generating components. DO NOT BLOCK.
12. **Oil Filler Cap** - Access cap for adding or replacing engine oil. Refer the engine Operator's Manual for maintenance intervals.
13. **Oil Drain Plug** - Access plug to drain engine sump oil.
14. **Starter Handle** - Pull handle slowly until starter engages, then pull quickly and firmly.
15. **Generator Mounts** - Reduces engine vibration to the frame.
16. **Choke/Run Lever** - Set lever to full right "CHOKE" position for cold start. Move lever to full left "RUN" position after engine is running.

GENERAL IDENTIFICATIONS
MODEL EG-2600C



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3. **Grounding Lug** - Attachment point for adding a ground strap to an external earth ground.
4. **Handle/Tube Frame** - Protective carrying frame for generator.
5. **Receptacle Panel** - Contains wiring for receptacles, circuit breaker and control switches.
6. **Air Filter** - Contains automotive style paper element. Refer to the engine Operator's Manual for maintenance.
7. **Muffler/Spark Arrester** - Prevents hot exhaust particles from exiting the engine. Refer to engine Operator's Manual for maintenance.
8. **Fuel Shut Off Valve** - Turn Clockwise to shut off fuel after shutdown.
9. **Echo-Mizer** - When "ON" Echo-Mizer idles unit down to conserve fuel when no electricity is being used.
10. **AC Circuit Breaker (15 amp)** - Protects receptacles and generator winding from overload. Breaker button pushed in allows electricity flow to receptacles. Breaker button out (tripped) prevents electricity flow to receptacles.
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20. **Engine Low Oil Sensor** - Illuminates lamp and shuts engine off when oil is too low. Lamp glows momentarily as engine is pulled over during restart indicating low oil. Sensor will not allow restart.

SAFETY PRECAUTIONS

LEARN GENERATOR SAFETY

Improper use or maintenance can result in injury. Follow these safety suggestions.

Carefully read this manual. Learn how to operate your generator correctly. Also pay attention to point of use safety messages in this manual.

WARNING ⚠ DANGER

UNAUTHORIZED MODIFICATIONS TO THE GENERATOR MAY IMPAIR THE FUNCTION AND/ OR SAFETY AND AFFECT MACHINE LIFE. USE ONLY APPROVED ACCESSORIES ON THE GENERATOR.

DO NOT let any one operate the generator without proper instruction.

PROTECT PEOPLE AND PETS

KEEP PEOPLE AND PETS OUT OF THE AREA where you are using the generator.

DO NOT let children operate the generator, or handle electrical power cords.

OPERATION OF GENERATOR should be restricted to mature, properly instructed individuals.

HANDLE FUEL SAFELY - AVOID FIRES

DO NOT USE ANY OTHER FUEL than that recommended in your engine manufacturer's Operator's Manual. Handle gasoline with care: it is highly flammable. Use an approved gasoline container.

FILL THE FUEL TANK OUTDOORS.

DO NOT OVERFILL FUEL TANK.

DO NOT SMOKE while you fill fuel tank or service fuel system.

DO NOT REMOVE GAS CAP OR ADD GASOLINE to tank if engine is hot or running.

CLEAN UP spilled gasoline.

MOVE AWAY from refueling area before attempting to start generator engine.

KEEP ENGINE CLEAN. Remove grass, leaves, excess oil and dirt before you start engine.

LET ENGINE COOL before you store generator in a building.

DO NOT store generator where fuel fumes could reach an open flame or spark.

Drain gasoline before transporting generator.

REFUEL IN A SAFE PLACE. Move the generator at least 10 feet from its operating location. Open the fuel cap slowly to release any pressure which may have formed in the fuel tank. Return the generator to its original location before re-starting the engine.

OPERATE ENGINE SAFETY

DO NOT RUN ENGINE in an enclosed or poorly ventilated area (inside a room, garage, barn, etc.). Exhaust gas contains carbon monoxide, an odorless and deadly poison.

DO NOT TOUCH HOT ENGINE OR MUFFLER.

OBEY ALL FIRE SAFETY REGULATIONS. Fire prevention regulations of the U.S. Forestry jurisdiction require approved spark arrestor screen to be installed on gasoline powered products used on U.S. Forestry forests, brush and grasslands.

Your unit is equipped with a spark arrestor screen installed on the muffler. Keep this screen properly maintained at all times. An improperly maintained screen can cause engine power loss and improper functioning on the exhaust system.

NOTE
Compliance with local, state and federal laws is the user's responsibility. Replacement spark arrestor screen kits are available for your generator from the engine dealer. If you have any questions concerning spark arrester screens or their use, please contact your ECHO servicing dealer.

OPERATE GENERATOR SAFETY

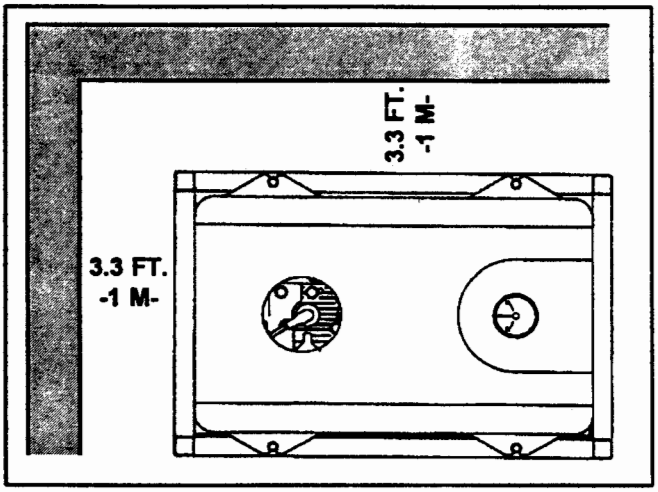
DO NOT ATTEMPT TO CARRY GENERATOR when engine is running.

DO NOT OPERATE GENERATOR ON AN INCLINE. It should be placed on a firm, dry, level surface for proper engine operation and lubrication. Keep the area free of any flammable material such as leaves, brush or fuels.

WARNING ⚠ DANGER

- **AVOID ACCIDENTAL FIRES AND ENGINE OVERHEATING.**
- **DO NOT AIM ENGINE EXHAUST AT MATERIALS THAT COULD CATCH FIRE.**
- **FACE COOLING AIR INTAKE (RECOIL START AREA) AND MUFFLER SIDE OF ENGINE 3.3 FT. 1 M (OR ONE METER) AWAY FROM BUILDINGS, OBSTRUCTIONS AND OTHER BURNABLE OBJECTS.**

SAFETY PRECAUTIONS



WARNING ⚠ DANGER

- **DO NOT OPERATE GENERATOR IN AREA OF FLAMMABLE MATERIALS.**
- **DO NOT ENCLOSE UNIT. IT RELIES ON FREE AIR CIRCULATION TO COOL THE ENGINE AND GENERATOR. ENCLOSING THE UNIT CAN CREATE A FIRE HAZARD RESULTING FROM ENTRAPPED GAS FUMES AND OVER-HEATING WHICH CAN RESULT IN DAMAGE TO THE ENGINE AND OTHER COMPONENTS.**
- **THESE GENERATORS ARE NOT INTENDED FOR INSTALLATION IN RV'S (RECREATIONAL VEHICLES), BOATS OR SIMILAR LOCATIONS.**

RESPECT ELECTRICITY

DO NOT TOUCH ELECTRICAL EQUIPMENT while standing on metal floors, damp concrete, or other well-grounded surfaces.

DO NOT HANDLE ELECTRICAL EQUIPMENT while wearing damp clothing (particularly wet shoes) or while skin surfaces are damp.

BE EXTRA CAUTIOUS WHEN WORKING with generator during wet weather. Generators are not waterproofed. Using a generator in a wet place or during stormy weather could result in short circuits, electric shock or electrocution.

DO NOT pour water directly over the generator, nor wash it with water.

DO NOT operate equipment when mentally or physically stressed.

DO NOT WORK on ungrounded electrical equipment.

DO NOT CONNECT GENERATOR DIRECTLY to house hold electrical circuits.

DO NOT USE ungrounded extension cords.

NEVER ALTER CORD, or plug of any appliance to be used with generator.

WARNING ⚠ DANGER

THESE UNITS PRODUCE 120V WHICH MAY CAUSE FATAL ELECTRICAL SHOCK IF PRECAUTIONS ARE NOT FOLLOWED.

USE ONLY POWER CORDS that are suitable for use outdoors and are so marked. Always examine power cords for signs of fraying, damage or cracks in the insulation before using them.

DO NOT HANDLE POWER CORDS that have damaged insulation or are wet.

DO NOT PLUG IN EXTENSION CORDS OR HOOK UP appliances until generator has been properly started, has reached full engine speed and is generating electricity.

DO NOT, under any circumstances, connect your generator to any circuit or receptacle receiving electrical power (home, office, etc.) from any other sources as this is likely to result in a fire and damage to all electrical systems.

DO NOT, under any circumstances, use the generator for purpose that exceeds its rated capacity.

GROUND THE GENERATOR. The manufacturer has provided a grounding lug for the proper grounding of the generator. Manufacturer does not supply the required grounding conductor or grounding electrode because it would be impossible to cover every exception and meet all local code requirements. See your local code requirements for the proper grounding governing the use of your generator.

IF CONSIDERING CONNECTING GENERATOR to existing wiring systems (house, barn, pumps, for example), **CONTACT A LICENSED ELECTRICIAN** to ensure proper, safe connection and compliance with local electrical, fire safety and building codes.

INSPECT GENERATOR CAREFULLY

INSPECT THE GENERATOR CAREFULLY before you operate it.

GUARDS AND SHIELDS must be in place.

KEEP NUTS, BOLTS, AND SCREWS TIGHT. Loose parts may result in personal injury or damage to the unit.

DO NOT operate the generator without an air filter. Rapid engine wear will result.

DO NOT operate the generator if the oil level is low.

VENTILATING OPENINGS such as the generator cover, air filter and muffler exhaust outlet must be cleaned periodically and kept free of debris to ensure proper operation and adequate cooling of the generator.

SAFETY PRECAUTIONS

SERVICE GENERATOR SAFELY

KEEP generator clean.

BEFORE you service or remove parts, let the engine cool.

DO NOT work on generator while it is being operated.

DO NOT adjust generator when engine is running, unless the procedure is approved. **STOP THE ENGINE.**

WAIT until generator is stopped before you service it.

USE ONLY identical replacement parts when servicing unit.

DO NOT ALTER EXHAUST SYSTEM. Use only Engine Manufacturer approved exhaust mufflers.

DO NOT ALTER ENGINE SETTINGS. The engine speed is controlled by a preset governor to deliver rated electrical frequency (60 Hz). Consult your ECHO servicing dealer if in doubt.

STORE GENERATOR SAFELY

Before you leave the generator unattended:

1. Stop engine by moving the Engine Ignition Switch to the OFF position.
2. Turn fuel valve to OFF position.
3. Disconnect spark plug wire.
4. Do not store generator where fuel fumes could reach an open flame or spark.

WHEN NOT IN USE, STORE GENERATOR in a cool, dry place and **AWAY FROM POSSIBLE SOURCES** of ignition such as gas water heaters, furnaces, clothes dryers, etc.

WHEN TRANSPORTING your generator, make sure it is in an upright position and that gasoline is not leaking. Secure it from sliding.

HAVE A FIRE EXTINGUISHER NEARBY
Have a multipurpose dry chemical fire extinguisher filled and handy. Know how to use it.

COMPLY WITH ALL FIRE PREVENTION REGULATIONS. We recommend you keep a fire extinguisher and long-handle shovel close by whenever using a generator in area where dry grass, leaves or other flammable materials are present.

SPARK ARRESTOR INSTALLATION (EG-2600 ONLY, EG-1800 is factory installed)

Spark arrestor must be installed prior to operation. Spark arrestor parts are in a bag taped to the gas cap. Remove and install according to instructions provided.

FUELS AND LUBRICANTS

ENGINE OIL

IMPORTANT
Before starting engine for first time, add oil, as unit is shipped dry.

IMPORTANT
Operating a generator with a low oil level will cause serious engine damage.

FUEL

WARNING ⚠ DANGER

HANDLE FUEL CAREFULLY. IF THE ENGINE IS HOT OR RUNNING, DO NOT FILL THE FUEL TANK. DO NOT SMOKE WHILE YOU FILL THE FUEL TANK OR SERVICE THE FUEL SYSTEM.

See engine manufacturer's Operator's Manual for all engine operating and maintenance requirements.

WATTAGE CALCULATING INSTRUCTIONS

IMPORTANT
Do not exceed rated capacity of your generator. Serious damage to the generator or appliance can result from overload.

1. When matching generator wattage capacity to tool or appliance operation, starting and running wattage requirements should be calculated to insure the generator is not overloaded.

2. Two types of electrical appliances may be powered by your generator.

   a. "Resistive Load Appliance" (i.e., lights, heaters, television sets, radios) starting wattage and running wattage requirements are the same.
   b. "Inductive Load Appliance" (i.e., electric motors and hand held power tools) starting wattage may be 1.5 to 3.5 times greater than the running or operating wattage requirement.

CALCULATING WATTAGE REQUIREMENTS

Before operating the generator list all the appliances and/or tools you intend to operate at the same time. Then determine starting requirements and running wattage requirements.

CALCULATING STARTING WATTAGE REQUIREMENTS

1. Some tools and appliances will list on the motor label starting and running voltage and amperage requirements. Refer to the starting volts and amps shown on the label. To convert this information to wattage use the following formula:

Volts X Amps = Watts

Ex. (Starting voltage and amperage for 1/4 hp drill)
120V X 10 Amps = 1200 Watts

2. Use actual listed values from the motor label if available. If only one value is shown that value is the running volt/amps. Determine the approximate starting wattage requirement by multiplying the calculated wattage by 3 times for most motor types to assure adequate generator capacity. If no label information is available use the values in the following chart as a guide.

WATTS REQUIRED TO START MOTOR				
Motor Size (HP)	Running Watts	Repulsion Induction	Capacitor	Split Phase
1/6	275	600	850	2050
1/4	400	850	1050	2400
1/3	450	975	1350	2700
1/2	600	1300	1800	3600
3/4	850	1900	2600	–
1	1100	2500	3300	–

3. The starting wattage required by resistive loads is the same as running wattage and is usually listed in watts on the label.

e.g. 60 watt light bulb

CALCULATING RUNNING WATTAGE REQUIREMENTS

1. Running wattage requirements are calculated the same as starting wattage. Refer to the running or operating volts and amps referenced on the motor label and calculate watts by multiplying Volts and Amps.

CALCULATING TOTAL WATTAGE REQUIREMENTS

1. To determine total wattage load, list all appliances that may be operated by the generator at the same time.

2. List running wattage requirements of appliances that will operate in constant application.

GENERATOR APPLICATION WORKSHEET			
Requirem'ts	**Running Wattage**	**Starting Wattage**	**Total Wattage**
Furnace "1/8 HP"	300	500	500
Lights	60	60	60
Radio	80	80	80
TV	255	255	255
TOTAL			895

3. List starting wattage requirements of appliances that may cycle on and off.

4. Compare the running and starting wattage requirements for each appliance, and list the larger wattage requirement in the column TOTAL WATTAGE.

WATTAGE CALCULATING INSTRUCTIONS

5. Add the total wattage requirements for all appliances to determine the maximum generator load.

In the above example running and starting wattages for lights, radio and T.V. are the same values. However, the starting wattage for the furnace, which will cycle on and off, is greater than the running wattage. Therefore, total wattage load of the generator will equal the furnace starting wattage of 500 watts plus the running wattages of the lights, radio and T.V., a total of 895 watts, as shown in the TOTAL WATTAGE column.

6. Using figures calculated, use chart to compare requirements to generator capacity.

If generator capacities are not adequate to cover all requirements, deduct the least needed appliance so generator can be used without overloading.

If requirements are mandatory and cannot be reduced, obtain a larger capacity generator.

GENERATOR CAPACITY CHART		
Model EG	Continuous Running Wattage Capacity	Maximum Wattage Capacity
1800C	1800	2000
2600C	2200	2600

EXTENSION CORD USAGE

When using a tool at a considerable distance from power source, a 3-conductor, grounding type extension cord of adequate size must be used for safety, and to prevent loss of power and overheating. Use the following table to determine the minimum wire size required.

NOTE
Use only three wire extension cords with a three-prong grounding type plug and three-pole receptacles which accept the tool's plug. Replace or repair damaged cords immediately.

IMPORTANT
A cord that is hot to the touch is overloaded.

WIRE GUAGE CHART	
Extension Cable Length	120V/240V *Gauge
25 Ft. (7.62 M)	10
50 Ft. (15.24 M)	10
75 Ft. (22.86 M)	10
100 Ft. (30.48 M)	8
150 Ft. (45.27 M)	8
200 Ft. (60.94 M)	8

*American Wire Guage Size

VOLTAGE DROP IN ELECTRIC EXTENSION CORDS

When a long electric cord is used to connect an appliance or tool to the generator a certain amount of voltage drop occurs in the extension cord which lessens the effective voltage available to the appliance or tool. The chart below has been prepared to illustrate the approximate voltage loss when an extension cord of 300 feet (approx. 100 meters) is used to connect an appliance or tool to the generator.

Nominal Cross Section	A.W.G. Gauge No.	Allowable Current	No. of Strands/Strand Dia.	Resistance	Current Amp.						
mm^2	No.	A	No./mm	Ohms/100m	1A	3A	5A	8A	10A	12A	15A
0.75	18	7	30/0.18	2.477	2.5V	8V	12.5V	-	-	-	-
1.27	16	12	50/0.18	1.486	1.5V	5V	7.5	12V	15V	18V	-
2.0	14	17	37/0.26	0.952	1V	3V	5V	8V	10V	12V	15V
3.5	12~10	23	45/0.32	0.517	-	1.5V	2.5V	4V	5V	6.5V	7.5V
5.5	10~8	35	70/0.32	0.332	-	1V	2V	2.5V	3.5V	4V	5V

MAXIMUM OUTPUT OPERATION

Limit operation of the generator at maximum output to 3 minutes. Additional 3 minute periods of maximum output are possible if the generator is allowed 10 minutes to cool between periods of maximum output. Cool engine by operating in the throttle position with the output load disconnected.

MISCELLANEOUS WATTAGE REQUIREMENT

REQUIREMENTS	TOTAL Inductive Starting Watts
Air Condition, Central	
20,000 BTU	5,800
24,000 BTU	8,750
Blanket, Electric*	400
Charger, Battery*	
4 amp	90
10 amp	200
15 amp	380
30 amp w/200 amp boost	650/3,600
60 amp w/250 amp boost	1,500/5,750
Cleaner, Grain	
1/4 HP	1,650
Coffee Maker *	1,750
Compressor, Air	
1/2 HP	3,000
1 HP	6,000
Conveyor, Portable	
1/2 Hp	3,400
Cooler, Milk	2,900
Cultivator, Electric	2,100
Dehumidifier	1,450
De-Icer, Stock Tank *	1,000
Dish Washer	
Cool dry	2,100
Hot dry	1,000
Drill, Hand	
1/4 inch	350
3/8 inch	400
1/2 inch	800
Dryer, Clothes	
Gas	2,500
Electric	7,550
Dryer, Hair	300 - 1,200
Elevator, Grain	
3/4 HP	4,400
Fence, Electric *	
(25 mile)	250
Freezer	2,900
Fry Pan, Electric	1,300

REQUIREMENTS	TOTAL Inductive Starting Watts
Furnace Fan (Gas or Fuel Oil)	
1/8 HP	800
1/6 HP	1,250
1/4 HP	1,600
1/3 HP	2,100
1/2 HP	3,225
Grinder, Bench	
6 inch	1,720
8 inch	3,900
Heater, Portable Space (Kerosene, Diesel Fuel)	
30,000 BTU	800
50,000 BTU	1,000
85,000 BTU	1,225
90,000 BTU	1,225
140,000 BTU	1,625
150,000 BTU	1,625
350,000 BTU	2,125
Iron *	1,200
Light Bulbs *	Indicated on bulb
Light, Flood	
HID	125
Metal Halide	313
Mercury Vapor (not recommended)	–
Sodium Vapor	1,250
Milker 3-1/2 cu. ft.	
1/2 HP	3,300
Mixer (Vacuum Pump)	
2 HP	10,500
Mixer, 55 gal. drum	
1/4 HP	1,900
Motors, Farm Duty Standard (e.g. conveyor, feed augeb, air compressor)	
1/3 HP	1,720
1/2 HP	2,575
3/4 HP	4,500
High Torque (e.g. Barn leaners silo unloaders, silo hoists, bunk feeders)	
1-1/2 HP	8,100
Motors, Industrial Duty Split Phase	
1/8 HP	800
1/6 HP	1,225
1/4 HP	1,600
1/3 HP	2,100

***These are resistive loads in which starting wattage requirements do not exist.**

MISCELLANEOUS WATTAGE REQUIREMENT(cont.)

REQUIREMENTS	TOTAL Inductive Starting Watts
Capacitor Start, Induction Run	
1/3 HP	2,020
1/2 HP	3,075
3/4 HP	4,500
Capacitor Start, Capacitor Run	
1-1/2 HP	8,100
Fan Duty	
1/8 HP	1,000
1/6 HP	1,400
1/4 HP	1,850
1/3 HP	2,400
1/2 HP	3,500
Opener, Garage Door	
1/4 HP	1,100
1/3 HP	1,400
Oven, Microwave (625 watt)	2,800
Polisher, Floor	
16 inch - 3/4 HP	4,500
20 inch - 1 HP	6,100
Pumps	
Centrifugal, 900 GHP	900
Submersible, 400 GPH	600
Sump	
1/3 HP	2,100
1/2 HP	3,200
Wet	
1/3 HP	2,150
1/2 HP	3,100
Radio *	50 - 200
Refrigerator	2,900
Saws	
Bank, 14 inch	2,500
Circular,	
6-1/2 inch	500
7-1/4 inch	900
8-1/4 inch	1,400

REQUIREMENTS	TOTAL Inductive Starting Watts
Electric Chain	
12 inch, 1-1/2 HP	900
14 inch, 2 HP	1,100
Table	
9 inch	4,500
10 inch	6,300
Television *	
Color	300
Black and White	100
Toaster *	
2 slice	1,050
4 slice	1,625
Trimmer, Hedge 18 inch	400
Trimmer, Nylon Line	
Standard 9 inch	350
Heavy Duty 12 inch	500
Vacuum Cleaner	
Standard	800
Deluxe	1,100
Vacuum, Wet & Dry	
1.7 HP	900
2.5 HP	1,300
Washer, Clothes	3,450
Washer, High-Pressure	
5/8 HP	4,600
1 HP	9,050
1-1/2 HP	10,310
Welder *	
70 amp	2,000
100 amp	3,600
200 amp	9,000

IMPORTANT:
There are examples of appliances in this chart that are more than rated generator capacities. They are shown for reference data only. The running and additional inductive starting wattage shown in this chart are approximations. Actual wattage can usually be found on light bulbs or appliance name plate. If not, determine wattage by multiplying listed amperage by voltage.

***These are resistive loads in which starting wattage requirements do not exist.**

PRESTARTING INFORMATION

WARNING ⚠ DANGER

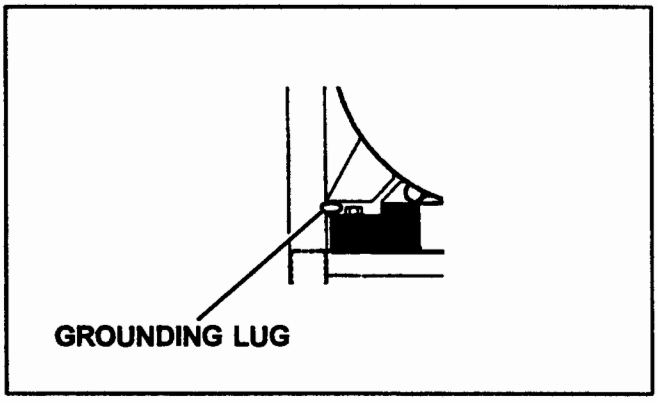
DO NOT RUN ENGINE IN AN ENCLOSED AREA. EXHAUST GAS CONTAINS CARBON MONOXIDE, AN ODORLESS AND DEADLY POISON.

IMPORTANT

Do not start engine with AC loads connected. Damage to the generator or appliance may result.

1. GROUNDING GENERATOR

The National Electrical Code (NEC) requires that all separately derived AC systems be grounded per Article 250-26. Manufacturer has added a grounding lug type terminal per Article 250-26 (a) from the noncurrent-carrying metal parts to the conductor to be grounded. Manufacturer does not supply the required grounding conductor or grounding electrode because it would be impossible to cover every exception and all local code requirements. See your local codes and the NEC manual for the proper grounding for your application.



Location of grounding lug type terminal.

NOTE
- As a general rule, do not use electrical equipment in wet or damp areas. Additional rules from NEC, OSHA and state codes apply to portable generators when used on construction sites.
- It is the responsibility of the consumer to meet the above requirements.

IMPORTANT

The generator must be placed on a firm, level surface for proper lubrication of the engine.

2. AC RECEPTACLES/CIRCUIT BREAKER -ALL MODELS-

IMPORTANT

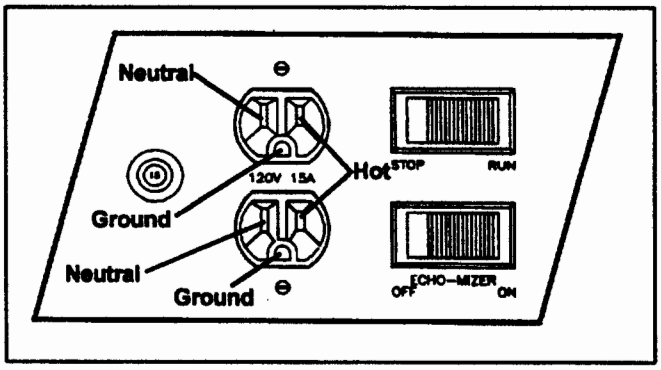
Do not exceed rated capacity of your generator, as serious damage to the generator or appliance could result.
Do not start engine under load, i.e., when appliance is connected.

2.1 CONNECTING 120 V RECEPTACLES -ALL MODELS-

IMPORTANT

Note receptacle wiring polarity to prevent equipment or generator failure.

Plug connections to all equipment should be as follows:



PRESTARTING INFORMATION

3. AC RECEPTACLES/CIRCUIT BREAKER

IMPORTANT
Do not exceed maximum rated capacity of your generator, as serious damage to the generator or appliance could result.

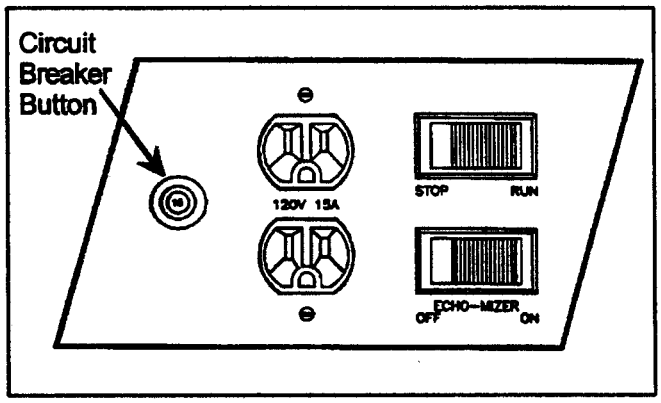
Disconnect appliances from generator before starting engine.

The generator is equipped with two frame grounded 120V 20 amp AC receptacles.

The receptacles are protected by circuit breakers.

NOTE
Circuit breakers trip automatically under circuit overload. When a circuit breaker trips, determine the cause. Typical causes are excessive loading or electrical system shorting.

If a circuit breaker trips, locate and correct the problem, and allow circuit breaker to cool for 1 minute. Then reset circuit breaker by pushing button in.



4. OPERATING GENERATOR/ AC OUTPUT - ALL MODELS -

1. Make sure all power tools, extension cords, appliances are disconnected from the generator.
2. Check that equipment switches are in the "OFF" position.
3. Start engine (**See Starting the Engine**).

IMPORTANT
Do not plug in extension cords to generator receptacles or attempt to operate electrical tools or appliances when engine is operating at idle or intermediate speed positions, as damage to generator or appliance could result.

4. Allow the engine to warm up 2 ~ 3 minutes before connecting tools or appliances.
5. Connect equipment to generator receptacle.

5. MAXIMUM OUTPUT OPERATION

Limit operation of the generator at maximum output to 3 minutes. Additional 3 minute periods of maximum output are possible if the generator is allowed 10 minutes to cool between periods of maximum output. Cool engine by operating with the output load disconnected.

6. FREQUENCY (Hz)

Your generator has been factory preset to 60 cycles [one Hertz (Hz) equals one cycle/per second, the same as 120 volt household current] at 3600 rpm with throttle in **FULL** position, under load.

The 60 cycle output is the standard electrical frequency for the United States.

NOTE
Adjustment or changing of frequency should only be made by an authorized ECHO servicing dealer.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine does not start	1. Unit loaded during start - up 2. Low on fuel or oil 3. Faulty spark plug 4. Loose wire 5. Ignition switch off 6. Fuel valve off 7. Make sure Auto Idle Switch is in the "OFF" position during start-up and warm up.	1. Remove load 2. Add fuel or oil 3. Replace 4. Inspect & repair 5. Turn to "ON" position 6. Turn to "ON" position
No electrical output	1. Faulty circuit breaker 2. Faulty receptacle 3. Faulty power cord	1. a) Reset to "ON" position b) Replace 2. Replace 3. Inspect & replace
Repeated circuit breaker tripping.	1. Overload 2. Faulty equipment or cords	1. Reduce load 2. Check for bare wires or frayed insulation on equipment

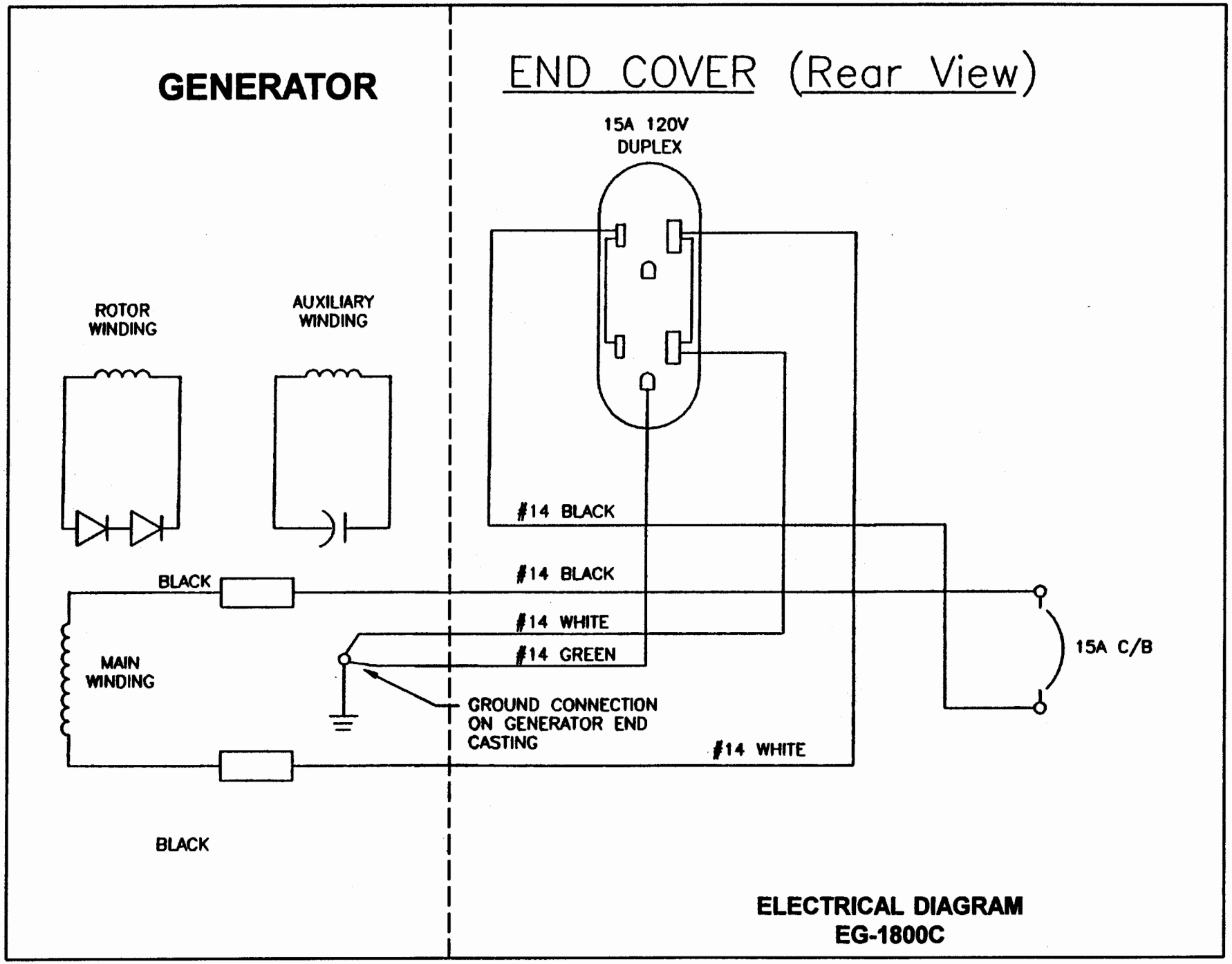
When the engine will not start:

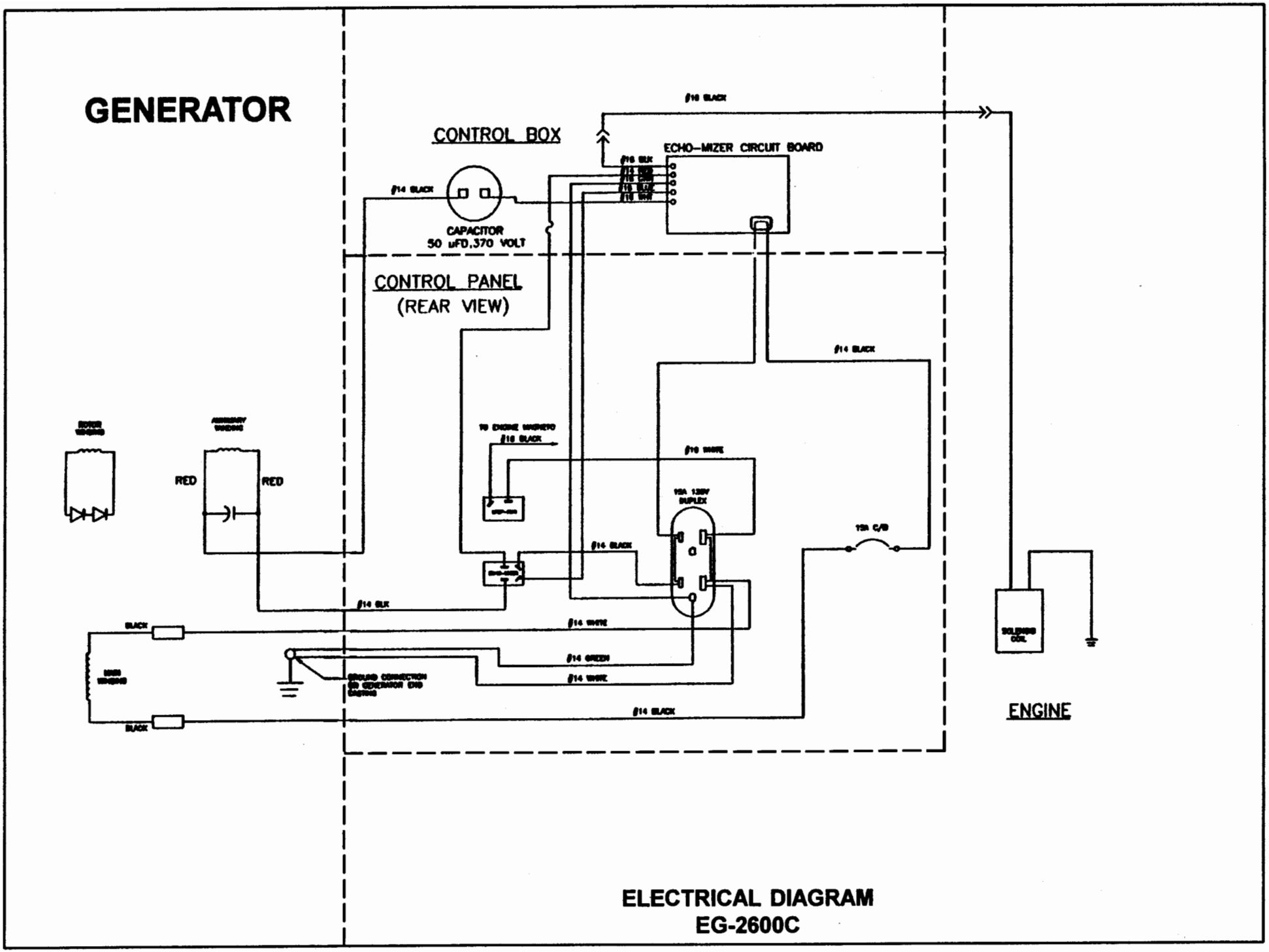
1. Is there enough fuel?
2. Is the fuel valve on?

WARNING ⚠ DANGER

IF ANY FUEL IS SPILLED, MAKE SURE THE AREA IS DRY BEFORE TESTING THE SPARK PLUG OR STARTING THE ENGINE. FUEL VAPOR OR SPILLED FUEL MAY IGNITE.

3. Is the ignition switch "ON"?
4. Is there enough oil in the engine?
   If not, the oil alert lamp will go on when the starter grip is being pulled.
6. Is the choke lever in its proper position?
7. Is there a spark at the spark plug?
   a) Remove the spark plug cap. Clean any dirt from around the spark plug base, then remove the spark plug.
   b) Install the spark plug in the plug cap.
   c) Turn the engine switch on.
   d) Ground the side electrode of the spark plug to any engine ground, pull the recoil starter to see if sparks jump across the gap.
   e) If there are no sparks, replace the spark plug. If OK, try to start the engine according to the instructions.
8. If the engine still does not start, take your generator to the nearest Briggs & Stratton dealer.


GENERATOR
END COVER (Rear View)
15A 120V
DUPLEX
ROTOR
WINDING
AUXILIARY
WINDING
#14 BLACK
#14 BLACK
BLACK
#14 WHITE
#14 GREEN
MAIN
WINDING
15A C/B
GROUND CONNECTION
ON GENERATOR END
CASTING
#14 WHITE
BLACK
ELECTRICAL DIAGRAM
EG-1800C



ELECTRICAL DIAGRAM
EG-2600C

NOTES

PARTS CATALOG

To obtain a parts catalog send a check or money order for $2.00 per parts book made payable to ECHO, INCORPORATED. Include a sheet of paper stating your name, address and specify

EG-1800C	**Part #99922202495**
EG-2600C	**Part #99922202496**

Mail to:

ECHO, INCORPORATED
400 Oakwood Road
Lake Zurich, IL 60047

ECHO, INCORPORATED
400 Oakwood Road
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