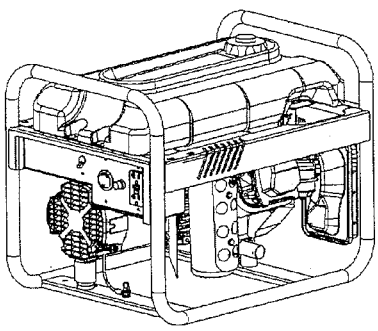
PRAMAC
GROUP

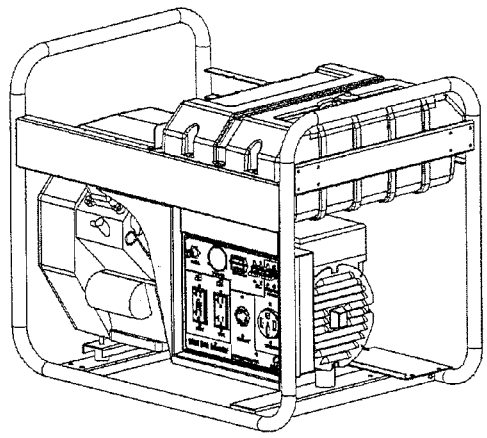
Power Systems

GENERATOR USER MANUAL

GENERATOR MODELS
S3100 – S5000 – S7500 – S10000 –S12000



S3100



S12000

MODEL & SERIAL NUMBER

Enter the Model and Serial numbers of your generator in the spaces provided below. Retain these numbers for future reference. The Model and Serial numbers are located on the generator data plate on the alternator case or generator frame, along with other important information. This manual contains important safety information. This manual must be available to any personnel who operate or maintain this machine. Do not destroy.

Model Number _____

Serial Number _____

CONTACT INFORMATION

For Parts, Service or your nearest distributor call:

U.S. and Canada
(770) 479-2922

Latin America
(305) 888-9911

Table of Contents

All information provided in this manual is believed to be correct at the time of printing. The manufacturer reserves the right to correct any errors and omissions.

ENGLISH INSTRUCTIONS

SAFETY

GENERAL INFORMATION

This manual is provided so that your generator may be properly, safely and effectively applied and operated. Please read and understand all aspects of this manual before operating your generator set. Please also read and understand the documentation supplied with this generator regarding the engine and alternator. Keep this documentation in a safe and accessible place so that reference can be made as needed. All operators, users and subsequent owners of this generator must read and understand all aspects of this documentation before operating this product.

THIS SYMBOL IS USED THROUGHOUT YOUR OWNER'S MANUAL TO BRING ATTENTION TO IMPORTANT SAFETY INSTRUCTIONS. THE WORDS DANGER, WARNING, AND CAUTION ACCOMPANY THIS SYMBOL AND REFLECT THE POTENTIAL SEVERITY OF INJURY OR DAMAGE. FAILURE TO FOLLOW SAFETY INSTRUCTIONS COULD ENDANGER YOU OR OTHERS AND RESULT IN PERSONAL INJURY OR DEATH. READ AND UNDERSTAND ALL SAFETY INSTRUCTIONS BEFORE OPERATION.

SAFETY RULES

SPARK ARRESTING MUFFLER

Certain States and Jurisdictions require that engine driven equipment be fitted with spark arresting mufflers. Depending on the generator model, spark-arresting mufflers may or may not be fitted. If spark-arresting mufflers are required for your location and the generator muffler is not spark arresting, contact your local dealer for instructions for a retrofit.

EXHAUST EMISSION CONTROL SYSTEM

The exhaust emission control system for this generator complies with the standards set forth by the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA). The respective engine manufacturers administer warranties for the exhaust emission system. Refer to the engine documentation for warranty information.

WARNING

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

ELECTROCUTION

DANGER: THIS GENERATOR SET PRODUCES ELECTRICAL CURRENT. THEREFORE, SAFETY GUIDELINES MUST BE FOLLOWED. IMPROPER USE OF THIS GENERATOR CAN RESULT IN ELECTROCUTION, INJURY OR DEATH. DO NOT OPERATE, SERVICE OR REPAIR THIS GENERATOR UNLESS FULLY QUALIFIED TO DO SO.

DANGER: THIS GENERATOR SET IS DESIGNED TO BE OPERATED IN DRY CONDITIONS AND FOR OUTDOOR AREAS ONLY. NEVER OPERATE THIS GENERATOR INDOORS. NEVER OPERATE THIS GENERATOR IN RAIN, SNOW, SLEET OR GENERALLY WET CONDITIONS. DAMAGE TO THE GENERATOR, BODILY INJURY, OR DEATH COULD RESULT FROM ELECTROCUTION.

DANGER: IF THIS GENERATOR IS CONNECTED TO A BUILDING, HOME, BUSINESS, OR ANY OTHER ELECTRICAL CIRCUIT NORMALLY FED BY UTILITY POWER, STEPS MUST BE TAKEN TO INSURE THE GENERATOR OUTPUT AND THE UTILITY POWER ARE POSITIVELY ISOLATED. THIS IS TYPICALLY ACCOMPLISHED THROUGH THE USE OF A PROPERLY INSTALLED TRANSFER SWITCH. FAILURE TO ISOLATE THE UTILITY AND GENERATOR ELECTRICAL SYSTEMS WILL RESULT IN GENERATOR DAMAGE AND COULD RESULT IN INJURY OR DEATH TO UTILITY WORKERS DUE TO THE BACKFEED OF ELECTRICITY.

DANGER: DO NOT MODIFY OR MISAPPLY YOUR GENERATOR SET. OPERATION OF THE GENERATOR OTHER THAN INTENDED COULD RESULT IN GENERATOR SET DAMAGE, BODILY INJURY OR EVEN DEATH FROM ELECTROCUTION.

DANGER: NEVER TOUCH A RECEPTACLE OR BARE WIRE. ELECTROCUTION OR SHOCK COULD RESULT.

FIRE

WARNING: ALWAYS INSURE THAT AT LEAST 6 FEET OF CLEARANCE ON ALL SIDES OF THE GENERATOR ARE MAINTAINED DURING OPERATION. FAILURE TO MAINTAIN PROPER CLEARANCE COULD DAMAGE YOUR GENERATOR AND POTENTIALLY LEAD TO FIRES.

WARNING: GASOLINE IS HIGHLY FLAMMABLE AND ITS VAPORS ARE EXPLOSIVE. FAILURE TO PROPERLY HANDLE GASOLINE CAN RESULT IN EXPLOSION OR FIRE. DO NOT PERMIT SMOKING WITHIN 50FT OF THIS GENERATOR SET.

WARNING: NEVER REFILL A HOT GENERATOR WITH FUEL. NEVER REFILL THE GENERATOR WHILE IT IS RUNNING. SPILLAGE ONTO THE ENGINE OR GENERATOR COULD RESULT IN AN EXPLOSION OR FIRE. ALWAYS ALLOW THE GENERATOR SET TO COOL BEFORE REFILLING.

WARNING: DO NOT STORE THIS GENERATOR SET IN ANY LOCATION WHERE GASOLINE FUMES COULD POTENTIALLY COME INTO CONTACT WITH SPARKS, A PILOT LIGHT OR AN OPEN FLAME. IMPROPER STORAGE OF THIS GENERATOR COULD RESULT IN AN EXPLOSION OR FIRE.

EXHAUST GASES

DANGER: DO NOT OPERATE THIS GENERATOR WITHIN AN ENCLOSED AREA. THE EXHAUST GASES OF THIS GENERATOR EMIT "DEADLY" CARBON MONOXIDE. EXPOSURE TO CARBON MONOXIDE CAN CAUSE CARBON MONOXIDE POISONING, HEADACHES, NAUSEA, SEVERE SICKNESS OR DEATH.

BURNS AND SCALDS

CAUTION: KEEP HANDS, BODY PARTS, HAIR AND CLOTHING AWAY FROM THE "HOT" PARTS OF THE GENERATOR SET DURING AND AFTER OPERATION. THE EXHAUST SYSTEM, AND THE GENERATOR IN GENERAL, CAN REMAIN VERY HOT EVEN AFTER BEING SHUT DOWN.

ENVIRONMENTAL PROTECTION

CAUTION: INSPECT THE EXHAUST SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING PROPERLY. LEAKY EXHAUST SYSTEMS WILL INCREASE NOISE LEVELS.

CAUTION: DIRECT THE "LOUD" SIDES OF THE GENERATOR INTO OPEN SPACES AVOIDING REVERBERATION FROM WALLS OR BUILDINGS THUS AMPLIFYING THE SOUND.

CAUTION: INSPECT THE SPARK ARRESTOR PERIODICALLY. SPARK ARRESTORS ARE REQUIRED IN SOME AREAS AND MINIMIZE THE RISK OF FIRE FROM SPARKS EMMITTED FROM THE EXHAUST.

CAUTION: NEVER DRAIN OR DISPOSE OF ENGINE OIL INTO THE GROUND OR DOMESTIC WASTE WATER SYSTEMS.

GENERAL SAFETY

Always follow National and Local electrical codes pertaining to generators. All local and national codes supersede rules or information provided in this manual.

CAUTION: DO NOT OPERATE THIS GENERATOR IF THE AMBIENT TEMPERATURE EXCEEDS 104°F/40°C.

CAUTION: DO NOT EXCEED THE RATED CAPACITY OF THE GENERATOR. THE TOTAL ELECTRICAL LOADS AT EACH OUTLET MUST BE ADDED TO DETERMINE THE TOTAL ELECTRICAL LOAD. THE TOTAL LOAD MUST NOT EXCEED THE RATED CAPACITY OF THE GENERATOR. IF THE DRIVEN APPARATUS DOES NOT LIST WATTAGE, BUT ONLY AMPERAGE, WATTAGE MAY BE DETERMINED BY MULTIPLYING AMPERAGE TIMES VOLTAGE (WATTS = AMPS X VOLTS).

CAUTION: DO NOT TAMPER WITH THE ENGINE-GOVERNED SPEED. THE GENERATOR OPERATES AT A NOMINAL SPEED OF 3600 RPM. INCREASES IN SPEED OVER THE 3600 RPM NOMINAL WILL INCREASE THE CHANCE OF PERSONAL INJURY DUE TO ROTATIONAL STRESSES ON THE ROTATING MEMBERS. OPERATION OF THE GENERATOR AT SPEEDS BELOW THE NOMINAL 3600 RPM COULD CAUSE DAMAGE TO THE GENERATOR OR DRIVEN APPARATUS DUE TO LOW VOLTAGE OUTPUT.

WARNING: REFER TO LOCAL AND NATIONAL ELECTRICAL CODES TO DETERMINE GROUNDING REQUIREMENTS AS THIS CAN VARY PER APPLICATION. THE GENERATOR IS GROUNDED INTERNALLY NEUTRAL TO FRAME. WHERE APPLICATIONS REQUIRE EXTERNAL GROUNDING, A CONNECTION MUST BE MADE FROM THE GENERATOR TO A SOLID EARTH GROUND. A CONTINUOUS LENGTH OF SPLICE-FREE COPPER CABLE, NO SMALLER THAN 6 AWG, SHALL BE USED FOR THE CONDUCTOR.

- When moving or transporting this generator, take proper precautions to avoid fuel spillage. Further, always use common sense when lifting this generator. An adequate number of people and proper lifting methods must be used.
- Do not cover the generator while it is running or immediately after shutdown. Always allow time to cool down before covering.
- Do not operate this generator unless it is in good mechanical and electrical condition.
- Always keep hands, body parts, hair and clothing well away from the rotating parts of the generator.
- Do not start this generator with connected devices turned "ON". Always make sure that connected devices are disconnected from the generator or turned "OFF" before starting the generator.
- Generators operating on job or construction sites may be required to have GFCI (Ground Fault Circuit Interrupters) receptacles.
- Use only grounded extension cords in good condition and make sure that the wire size within the extension cords is of sufficient size to safely carry the surge output of the generator.
- Never handle extension cords or electrical circuits if standing in water or if standing in a damp area.

BATTERY SAFETY

WARNING: STORAGE BATTERIES PRODUCE AND RELEASE EXPLOSIVE HYDROGEN GAS WHEN CHARGING. THE SLIGHTEST SPARK, FLAME OR BURNING ASH CAN IGNITE THESE GASES CAUSING A SERIOUS EXPLOSION THAT COULD RESULT IN BLINDNESS OR OTHER SERIOUS INJURIES. WEAR EYE PROTECTION, RUBBER APRON AND RUBBER GLOVES WHEN WORKING AROUND A BATTERY OR PERFORMING BATTERY SERVICE. BATTERY FLUID IS AN EXTREMELY CAUSTIC SULFURIC ACID, WHICH CAN CAUSE SEVERE BURNS. ALWAYS DISCONNECT THE NEGATIVE (-) BATTERY CABLE FROM THE BATTERY BEFORE PERFORMING BATTERY SERVICE OR BEFORE PERFORMING ANY ELECTRICAL SERVICE ON THE GENERATOR OR ENGINE.

LIMITED WARRANTY

A. PRAMAC electrical generating sets originally sold by PRAMAC Industries, Inc. or an authorized Distributor/ Dealer thereof, are covered by a limited warranty for a period of 12 months. The Warranty period begins on the date of purchase by the end user, 2 days after shipment to the end user by the PRAMAC Distributor/ Dealer, or 12 months from the date of original invoice by PRAMAC Industries, Inc.- whichever occurs first. PRAMAC Industries, Inc. warrants their PRAMAC products to be free of defects in materials and workmanship for the time period shown above and within the limitations presented in the following. This PRAMAC Limited Warranty does not cover components or assemblies manufactured by other organizations, including, but not limited to – engine, alternator, receptacles, etc. Warranties for items and assemblies not manufactured by PRAMAC Industries, Inc. are covered under the warranties of the respective manufacturers of those products. Documentation concerning the warranty policies of items not manufactured by PRAMAC Industries, Inc., but included as part of the PRAMAC electrical generator is included within the generator documentation.

These warranties are in lieu of and exclude all other warranties of merchantability, fitness, or otherwise, express or implied. There are no warranties extending beyond the description on the face thereof. The sole obligation of PRAMAC Industries, Inc. (Seller) shall be to repair or replace any components thereof which are proved to be other than warranted. PRAMAC Industries, Inc. shall have the sole right to determine whether such goods shall be repaired or replaced. This remedy of repair or replacement is in lieu of all other remedies, and it is agreed that no other claim may be made by the Buyer. Buyer and Seller agree that the sole purpose of this remedy is to provide the Buyer a satisfactory product under the contract. It is further agreed that in no event shall the Seller be liable for incidental or consequential damages arising from any breach of warranty. If goods are claimed to be other than as warranted, Seller or Sellers Authorized Agent, upon notice promptly given, will issue shipping instructions for return to the Seller or Sellers authorized Agent (transportation costs to be born by Buyer) the goods or components, and if goods are proven to be other than as warranted, replacement or repaired components will be shipped (cheapest way) to the Buyer with transportation costs borne by the Seller. PRAMAC Industries, Inc. reserves absolute and final decision power regarding the warrantability of any and all failed components or parts. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

B. All warranties of merchantability, fitness or otherwise, whether express or implied, shall not extend to any goods or parts thereof which have been: subject to misuse or neglect, damaged by accident, rendered defective by reason of improper handling or application, damaged or rendered defective due to tampering of factory set adjustments, damaged due to shipment, damaged due to lack of maintenance, damaged due to collision, impact or shock loads, damaged due to corrosion/ rust or damaged due to overload. Further, any modifications to the intended and original designed use of the PRAMAC electrical generator will negate all warranties. Seller does not accept any liability for normal wear and tear, nor for charges for repairs or replacements made without authority, nor contingent liability of any kind.

C. YOUR WARRANTY RESPONSIBILITIES: You are responsible for the performance of all maintenance including the use of approved fluids. Upon first indication of a problem, you are to cease operation of your PRAMAC electrical generator and report the problem to your Authorized PRAMAC Distributor/ Dealer. Upon request, you will be required to produce proof of purchase and other pertinent information. Your Authorized PRAMAC Distributor/ Dealer will instruct you regarding transportation (prepaid by buyer) of your PRAMAC electrical generator to the Authorized Distributor/ Dealer location or arrange for shipment (prepaid by buyer) of the failed components to the Authorized Distributor/ Dealer for warranty inspection. The name, address and telephone number of your local PRAMAC Distributor/ Dealer or authorized service facility may be obtained by contacting PRAMAC Industries, Inc. at (770) 479-2922.

JANUARY 01, 2002

WARRANTY REGISTRATION

Complete Machine Registration

Fill out the Warranty Registration Form in this section, keep a copy for your records and mail form to:

PRAMAC INDUSTRIES INC.
1100 North Cobb Parkway, Suite C
MARIETTA, GA 30062-2416 - USA
Attn: Warranty Department

Note: Completion of this form within 30 days of purchase validates the warranty.

Registered To					
First Name		Last Name			
Address					
City		State		Zip Code	
Country		Telephone		Email	

User Information

Is this your first purchase of a Pramac product?	☐ Yes	☐ No	
Why did you select this product? (check all appropriate boxes) ☐ Salesman Recommendation	☐ Brand Recognition	☐ Quality	☐ Price
Would you like to receive information about other Pramac products? (check all appropriate boxes) ☐ Stationary Generator	☐ Portable Generator	☐ Material Handling	☐ Pressure Washers

Purchase From	☐ Store	☐ Internet(list website below)	☐ Other
Purchased From			
Address			
City		State	
Zip		Date of purchase	

Product Details			
Model Number			
Serial Number			
Are you satisfied with the product you purchased?		☐ Yes	☐ No
When you need to replace your machine will you consider another Pramac product?		☐ Yes	☐ No

SERVICING DISTRIBUTOR/USER ACKNOWLEDGEMENT

1. The Purchaser has been instructed and/or has read the manual and understands proper preventative maintenance, general operation and safety precautions.
2. The warranty and limitation of liability has been reviewed and understood by the owner/user.
3. Pramac Industries reserves the right to make design changes or modifications of Pramac products at anytime without incurring any obligation to make similar changes or modifications on previously sold units.

Place Stamp Here

PRAMAC INDUSTRIES INC.
1100 North Cobb Parkway, Suite C
MARIETTA, GA 30062-2416 - USA
Attn: Warranty Department

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OPERATION

GENERAL INFORMATION

This manual has been prepared to acquaint you with the operation and maintenance of this product. Study the information provided carefully to avoid problems associated with improper application or maintenance. Upon receipt of your generator, verify that it is complete and in good condition.

The generator is comprised of a 4 stroke, air-cooled engine directly coupled to a 2 pole alternator producing either 125VAC or 125/250VAC depending on model. The no-load speed is approximately 3750rpm with the speed under load going to approximately 3600rpm thus producing a frequency of 60Hz.

INITIAL INSPECTION

Upon receiving your generator set, inspect the product to make sure it is complete and in good condition. Handle with care and place in a suitable site for storage or operation.

GROUND CONNECTION

The generator can be grounded to earth to reduce the chance of electrical shock. To do this you will need a grounding rod and an appropriately sized copper ground wire. Drive the ground rod into the earth, connect one end of the copper wire to the rod and connect the other end to the external ground connection on the generator set. This is a general explanation, consult National and Local electrical codes to ensure compliance.

BEFORE START-UP

ENGINE FUEL

Use Unleaded Gasoline with minimum Octane 86. Check the fuel gauge beside the fuel fill and add as necessary.

ENGINE OIL

The engine manual or other information provided by the engine manufacturer supersedes data provided here. Proper oil grade varies with climate. The grade listed in the table is typically a good grade but consult the engine manual to verify proper grade. The oil fill ports are located on both sides of the engine. The gray filler cap has an integral dipstick. Add the proper amount of oil and check the level using the dipstick. NOTE: The dipstick should be placed into the filler opening but not screwed in to check the level.

ENGINE	HP	Capacity	Grade
Honda GX160	5.5	0.63 qt	API SJ SAE 10W-30
Honda GX270	9	1.16 qt	API SJ SAE 10W-30
Honda GX390	13	1.16 qt	API SJ SAE 10W-30
Honda GX610	18	1.58 qt	API SJ SAE 10W-30
Honda GX620	20	1.58 qt	API SJ SAE 10W-30

STARTING BATTERY (Electric Start Models Only)

It is rated at 12V-18AH (35AH for S10000/12000). The battery is fully charged if a voltage of 13.7VDC is measured across the terminals using a DC Voltmeter.

POSITIONING

- Place the generator set on a flat and solid surface to prevent it from sinking.
- The surface should not be more than 17° from horizontal in any direction for the engine to lubricate properly.
- Keep fuel, oil or other explosives at a safe distance from the generator set.
- Select a site that is well ventilated and protected from the weather.
- Place the generator set safely away from people and animals.

OPERATION

Check the engine oil before each use. Never operate the generator set with insufficient oil.

GENERATOR SET OVERLOAD

Do not exceed the rated load of the generator set when operating continuously. Before connecting items to the generator set, determine the total electrical requirements of the products to be connected. The requirement of each item is generally given on the manufacturer's nameplate. Below is a list of commonly used items and typical requirements. Use this list as a guideline only if no other data is available.

GENERAL WATTAGE GUIDE	
Item	Running Watts
Air Conditioner (12000 Btu) (*)	1750
Air Compressor (1/2 hp) (*)	1400
Air Compressor (3/4 hp) (*)	1800
Air Compressor (1 hp) (*)	2000
Battery Charger (25A)	600
Belt Sander (3" belt)	1000
Circular Saw (7 1/4")	825-1050
Coffee Maker	900-1100
Edger (lawn)	550
Furnace Fan (1/3 hp) (*)	1200
Hot Plate (single)	1500
Impact wrench	600
Light Bulb	Bulb rating
Nail Gun	1200
Microwave	750
Paint Sprayer (1/3 hp) (*)	650
Paint Sprayer, hand-airless	175
Radio	50-200
Refrigerator (*)	600
Table Saw (10") (*)	2000
Television	250-550
Weed Trimmer	500
Note: (*) Items allow at least 3 times the listed wattage for starting.	

NOTE: Many appliances such as saws or drills draw more current than indicated on the manufacturer's nameplate when under severe load.

STARTING THE GENERATOR SET

Before attempting to start the generator set, ensure that all instructions given in previous sections have been followed completely.

- Check oil and fuel levels.
- Turn the fuel valve under the fuel tank on.
- Turn the fuel valve on the front of the engine on.
- Move the choke lever on the front of the engine on. Note: the choke may not be required when the engine is warm or in high ambient temperatures.
- Turn idle-control On/Off switch OFF.

RECOIL START

- Move engine On/Off switch to On position.
- Slowly pull recoil cord until resistance is felt and then pull firmly. Let the recoil rewind slowly to avoid damage.
- Return the choke to the original position.

ELECTRIC START

- Move engine On/Off switch to On position.
- Hold the On/Off switch in the Start position until the engine starts and release. Note: If the engine does not start after 5 seconds, stop and wait 10 seconds and repeat this step.
- Return the choke to the original position.

CAUTION: This generator is equipped with an oil protection system. When oil levels are too low for safe operation the engine will shut down and/or will not start until the oil level is corrected.

OPERATING THE GENERATOR SET

Once started, allow the engine to stabilize for approximately 3 minutes. Check that the circuit breakers and the GFCI receptacles are not tripped. Turn the idle-control switch to the On position if this feature is to be utilized (S5000 & S7500). Set the voltage selector switch to the appropriate mode, either 120V or 120/240V(S5000 & S7500). See the guides below for more information on the idle-control and voltage selector features.

IDLE CONTROL GUIDE (applicable models)

The automatic idle control system is available on some generators. This feature allows the engine to automatically idle down when there is no load drawn against the generator thus saving fuel, decreasing wear and lowering the noise level. There is an on-off switch located on the control panel that activates or deactivates this feature. In the on position the engine will idle down after detection of less than 40Watts. The engine will return to the correct running speed immediately when a load of 350Watts or more is applied. For applications with loads less than 50W or with near constant loads, such as home back up, it is best to turn the idle control feature off. The feature should be turned off before starting or stopping the generator and turned on when there will be extended periods of inactivity for the generator.

VOLTAGE SELECTOR GUIDE (applicable models)

The voltage selector switch allows the generator set to produce 120 volts only or to produce 120/240 volts simultaneously. With the switch in the 120V position only the 120V receptacles may be used. All of the power from the generator is available at 120 volts but the 240V output is not available. In the 120/240V position all receptacles are operable however only half of the generator output is available at any one 120V receptacle. Full power may be pulled from the generator from the 240V receptacle. The switch should always be left in the 120V position when 240 volts are not needed. This balances the load on the generator more effectively.

STOPPING THE GENERATOR SET

Unplug all appliances and let the engine run unloaded for a couple of minutes. Turn the fuel valve on the front of the engine to the Off position where installed. Turn the engine On/Off switch to the Off position. Turn the fuel valve on the fuel tank Off. CAUTION: Never use the choke to stop the engine.

GENERATOR APPLICATION

WHAT IS A GENERATOR

A generator is basically a prime mover, typically a gasoline or diesel engine, coupled to an alternator to produce electricity. It is very useful as a substitute power source during power outages or as the primary source in remote locations where power is not available. Generators are essential for people such as contractors or farmers who are always in need of portable power. They are also very convenient for recreational use.

SELECTING A GENERATOR

Selecting the proper generator is important. A generator that is too small for your application will not run all of the equipment needed. A generator that is too large will cost more and if never used to its potential the money is wasted. The correct size generator is determined by totaling the wattage requirements of the items to be used simultaneously, determine additional starting wattage requirements and total these numbers. Select a generator with a continuous rating that exceeds this by about 20% to allow for expansion. See the table in the section titled "Generator Set Overload" for some wattage guidelines of common equipment.

RATED vs. SURGE WATTS

Rated, or continuous, watts are the watts an item needs as it is running.
Surge, or maximum, watts are the watts an item needs to start. This is typically 2-4 times the rated watts.
This information is typically provided on the manufacturer's nameplate. If watts are not provided, it can be calculated using the formula: Watts=Amps x Volts.

EXTENSION CORDS

An extension cord should always be in good condition with no damage to the wires or sheathing. Never run an extension cord through water. The correct wire size for an extension cord can be determined from the table that follows.

Continuous Load	Minimum Cord Gauge (AWG)		
Amps	0-50 Feet	50-100 Feet	100-150 Feet
20	12	10	8
25	12	10	6
30	10	8	6
35	10	8	4
40	8	6	2
50	6	4	2

LOADING YOUR GENERATOR SET

With reference to the Receptacle details section, please review the power receptacles fitted to your generator. The circuit breaker rating and the generator rating drive the actual load that may be pulled from each receptacle. The ratings shown in the table are the maximum available from each receptacle. DO NOT EXCEED THE INDIVIDUAL RECEPTACLE RATINGS AS SHOWN IN THE TABLE BELOW. DO NOT EXCEED THE TOTAL GENERATOR RATING SHOWN IN TABLE 2 PERFORMANCE SPECIFICATIONS. All generator units are equipped with a thermal-magnetic main circuit breaker as well as a **"PUSH TO RESET"** breaker on branch circuits.

AMPERAGE RATE TABLE

Model	NEMA 5-20R 125V GFCI	NEMA L5-30R 125V Twistlock	NEMA L14-30R 125/250V Twistlock	NEMA 14-50R 125/250V
S3100	20Amps	25Amps	NA	NA
S5000	20Amps	30Amps*	20Amps	NA
S7500	20Amps	30Amps*	30Amps	NA
S10000	20Amps	NA	30Amps	35Amps
S12000	20Amps	NA	30Amps	45Amps

*With voltage selector in 120V mode.

ENGINE LIMITATIONS ON GENERATOR PERFORMANCE

Generator ratings assume 60°F (20C) and Sea Level. Operation of your generator at temperatures above 60°F (20C) or above Sea Level will result in lower electrical output. Electrical output must be derated 1% for each 10°F above 60°F and 3 ½ % for each 1000 feet above mean sea level.

GENERATOR CLEANING

CAUTION: ALWAYS SHUT DOWN THE GENERATOR AND ALLOW IT TO COOL COMPLETELY BEFORE PERFORMING CLEANING OPERATIONS.

WARNING: DO NOT USE HIGH PRESSURE WATER OR A GARDEN HOSE TO CLEAN YOUR GENERATOR. WATER INTRODUCED INTO THE GENERATOR CAN CAUSE ELECTRICAL SHORTS, GENERATOR DAMAGE OR PERSONAL INJURY.

- Compressed air (max. 25 psi) may be used to blow loose dirt and dust from your generator. DO NOT DIRECT COMPRESSED AIR DIRECTLY INTO ANY OPENING IN THE GENERATOR OR ENGINE.
- Use a dampened cloth to wipe clean exterior surfaces.
- Use a soft bristle brush to clean/ loosen heavy dirt, oil or grease deposits.
- NEVER insert rags, tools or any device into the generator or engine openings.

GENERAL STORAGE GUIDELINES

WARNING: GASOLINE FUMES ARE FLAMMABLE. DO NOT STORE YOUR GENSET IN ANY AREA THAT IS INDOOR OR IN POORLY VENTILATED AREAS. GASOLINE FUMES CAN IGNITE IN THE PRESENCE OF ANY OPEN FLAME, PILOT LIGHT, CLOTHES DRYER, WATER HEATER, ETC.

- Your generator should be started and operated for several minutes at least every 30 days.
- If the generator cannot be operated every 30 days, follow the storage recommendations within the engine documentation.
- NOTE: A fuel shut-off valve is positioned at the base of the fuel tank. The valve should be closed during storage periods.

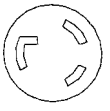
RECEPTACLE DETAILS

The receptacles shown in this section are for reference only. Each receptacle is not available on all generators.

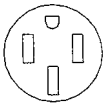
NEMA 5-20R
125V - 20A

NEMA L5-30R
125V - 30A

NEMA L6-30R
250V - 30A



NEMA L6-20R
250V - 20A



NEMA 14-50R
125/250V - 50A

NEMA L14-20R
125/250V - 20A

NEMA L14-30R
125/250V - 30A

GENERAL MAINTENANCE

Proper maintenance and service are required to achieve maximum engine life and maintain warranty. The following tables provide engine specifications as well as maintenance schedules for the generator engines. Note that the generator models are referenced with the engine model. An engine owner's manual is provided with each machine that also provides basic maintenance and troubleshooting information. Defer to the engine manufacturers manual if any discrepancies appear between the data provided in this manual and the engine owner's manual. Full engine service manuals are available from American Honda Motor Co., 4900 Marconi Drive, Alpharetta, GA 30005-8847, (800) 910-1293.

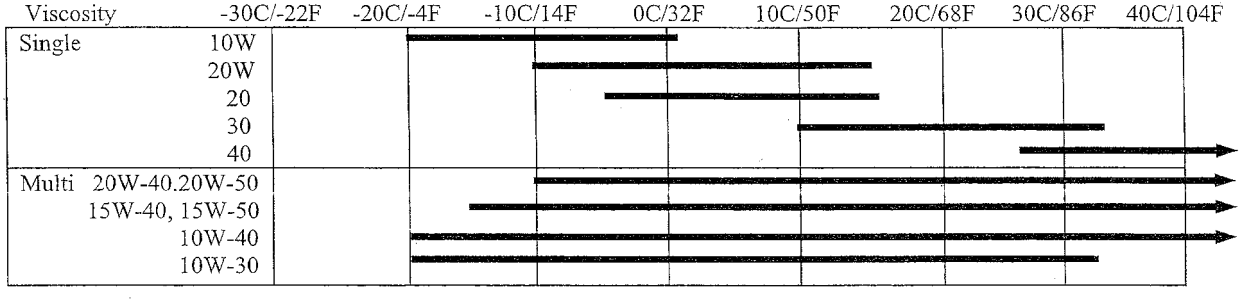
ENGINE SPECIFICATIONS AND CAPACITIES

Model	**GX160 (S3100)**	**GX270 (S5000)**	**GX390 (S7500)**	**GX610 (S10000)**	**GX620 (S12000)**
Type	4-stroke, overhead valve single cylinder, inclined 25°			4-stroke, overhead valve, V-Twin	
Displacement	163cc (9.9 cu in)	270cc (16.5 cu in)	389cc (23.7 cu in)	614cc (37.5 cu in)	614cc (37.5 cu in)
Bore and Stroke	68 x 45 mm (2.7 x 1.8 in)	77 x 58 mm (3.0 x 2.3 in)	88 x 64 mm (3.5 x 2.5 in)	77 x 66 mm (3.0 x 2.6 in)	77 x 66 mm (3.0 x 2.6 in)
Max. HP	5.5 hp	9.0 hp	13.0 hp	18.0 hp	20.0 hp

	@3600rpm	@3600rpm	@3600rpm	@3600rpm	@3600rpm
Max. Torque	8ft-lb @2500rpm	14ft-lb @2500rpm	20ft-lb @2500rpm	31.8 ft-lb @2500rpm	32.5 ft-lb @2500rpm
Compression Ratio	8.5 : 1	8.2 : 1	8.0 : 1	8.3:1	8.3:1
Cooling System	Forced-air				
Ignition System	Transistorized magneto				
Ignition Timing	25° B.T.D.C. (fixed)	20° B.T.D.C. (fixed)	25° B.T.D.C. (fixed)		
Spark Plug	BPR6ES (NGK), W20EPR-U (Nippondenso)				
Carburetor	Horizontal type, butterfly valve				
Air Cleaner	Dual element type				
Lubricating System	Splash			Forced Oil	
Oil Capacity	0.6l (0.63 US qt)	1.1l (1.16 US qt)	1.1l (1.16 US qt)	1.5l (1.58 US qt)	1.5l (1.58 US qt)
Starting System	Recoil	Recoil	Recoil/Electric	Electric	Electric
Stopping System	Ignition primary circuit ground				
Fuel Type	Unleaded gasoline (86 pump octane)				
PTO Shaft Rotation	Counterclockwise (from PTO side)				
Dry Weight	??.?kg (??.? lb)	25.4kg (55.1 lb)	31.0kg (68.3 lb)	40.0kg (88.2 lb)	40.0kg (88.2 lb)

OIL SELECTION

Proper oil selection as well as proper oil level is critical to achieve maximum engine life. Use high detergent, premium quality motor oil certified for service class SJ that should be designated on the container. SAE 10W-30 is recommended for general, all temperature use. Use the table below to select the proper oil for the temperature in your area.



ENGINE MAINTENANCE SCHEDULE

ITEM		Each Use	First Month Or 20 Hrs	3 Months Or 50Hrs	6 Months Or 100Hrs	Every year Or 300Hrs
Oil	Check	X				
	Change		X		X	
Air Cleaner	Check	X				
	Clean			X(1)		

Sediment Cup	Clean				X	
Spark Plug	Check-Clean				X	
Spark Arrestor	Clean				X	
Valve Clearance	Check-Adjust					X(2)
Fuel Tank and Strainer	Clean					X(2)
Fuel Line	Check	Replace as necessary.				

Notes:

(1) Service more frequently in dusty areas.

(2) Should be serviced by authorized dealer unless owner has proper tools and is mechanically proficient. See engine Shop Manual for instructions.

DAILY INSPECTION

1. Recoil Starter Cord
2. Engine Oil Level
3. Check for Engine Oil or Fuel Leaks
4. Inspect Spark Plug Cables
5. Inspect Cooling System for Cleanliness
6. Listen for Abnormal Noise
7. Look for Abnormal Vibration

FAULT FINDING GUIDE

SYMPTOMS	PROBABLE CAUSES	CORRECTION
ENGINE WILL NOT START	1. Oil level too low. 2. No fuel or valve(s) turned off. 3. Start switch turned Off. 4. Blocked or leaking fuel system. 5. Clogged air filter. 6. Genset under load at start-up.	1. Add oil. 2. Add fuel and/or turn valve(s) on. 3. Turn switch On. 4. Repair fuel system. 5. Clean or replace air filter. 6. Disconnect load.
NO POWER OUTPUT	1. Circuit breaker tripped. 2. GFCI receptacle tripped. 3. Faulty circuit breaker. 4. Faulty receptacle. 5. Faulty capacitor in alternator. 6. Faulty diodes in alternator. 7. Failure in alternator windings.	1. Reset circuit breaker. 2. Reset GFCI receptacle. 3. Replace circuit breaker. 4. Replace receptacle. 5. Replace capacitor. 6. Replace diodes. 7. Repair or replace alternator.
NOISY MACHINE	1. Damaged bearing. 2. Damaged exhaust system. 3. Loose or rattling parts.	1. Replace bearing. 2. Repair or replace. 3. Repair loose or rattling parts.
OVERHEATING	1. Ventilation openings blocked. 2. Overload. 3. Ambient temperature too high.	1. Clear ventilation openings. 2. Verify load levels. 3. Provide better ventilation for cooling.
CIRCUIT BREAKER TRIPS	1. Overloaded circuit. 2. Faulty equipment or cable. 3. Faulty circuit breaker.	1. Reduce load. 2. Check, repair or replace. 3. Replace circuit breaker.

PARTS ORDERING

GENERAL

This publication, which contains an illustrated parts breakdown, has been prepared as an aid in locating those parts which may be required in the maintenance of the unit. All of the parts listed in the parts breakdown are manufactured with the same precision as the original equipment. For the greatest protection always insist on genuine Pramac Industries parts for your generator.

NOTE: Pramac Industries can bear no responsibility for injury or damages resulting directly from the use of non-approved repair parts.

Special order parts may not be included in this manual. Contact the local Pramac Parts provider with the unit serial number for assistance with these special parts.

DESCRIPTION

The parts breakdown illustrates and lists the detailed parts which make up this particular machine. This covers the standard models and the more popular options that are available. The part number, the description of the part and the quantity of parts required are shown on each illustration.

The quantities specified are the number of parts used per one assembly and are not necessarily the total number of parts used in the machine. Where no quantity is specified the quantity is assumed to be one.

Each description of a part is based upon the "noun first" method, i.e., the identifying noun or item name is always the first part of the description. The noun name is generally followed by a single descriptive modifier. The descriptive modifier may be followed by words or abbreviations such as upper, lower, inner, outer, front, rear, RH, LH, etc. when they are essential.

MARKINGS AND DECALS

NOTE: Do not paint over safety warnings or instructional decals. If safety warning decals become illegible, immediately order replacements from the factory.

Part numbers for original individual decals and their mounting locations are shown within Parts List Section. These are available as long as a particular model is in production. Afterwards, service sets of exterior decals and current production safety warning decals are available.

HOW TO USE PARTS LIST

- Turn to Parts List Section.
- Locate the area of the machine in which the desired part is used and find illustration.
- Locate the desired part on the illustration by visual identification and make note of part number and description.

HOW TO ORDER

The satisfactory ordering of parts by a purchaser is greatly dependent upon the proper use of all available information. By supplying the nearest sales office, autonomous company or authorized distributor, with complete information, you will enable them to fill your order correctly and to avoid any unnecessary delays. In order that all avoidable errors may be eliminated, the following instructions are offered as a guide to the purchaser when ordering replacement parts:

- Always specify the model number of the machine.
- Always specify the serial number of the unit. THIS IS IMPORTANT.
- Always specify the number of the parts list publication.
- Always specify the quantity of parts required.
- Always specify the part number, as well as the description of the part, or parts, exactly as it is given on the parts list illustration.

In the event parts are being returned to your nearest sales office, autonomous company or authorized distributor, for inspection or repair, it is important to include the serial number of the unit from which the parts were removed.

TERMS AND CONDITIONS ON PARTS ORDERS

Acceptance: Acceptance of an offer is expressly limited to the exact terms contained herein. If purchaser's order form is used for acceptance of an offer, it is expressly understood and agreed that the terms and conditions of such order form shall not apply unless expressly agreed to by Pramac Industries ("Company") in writing. No additional or contrary terms will be binding upon the Company unless expressly agreed to in writing.

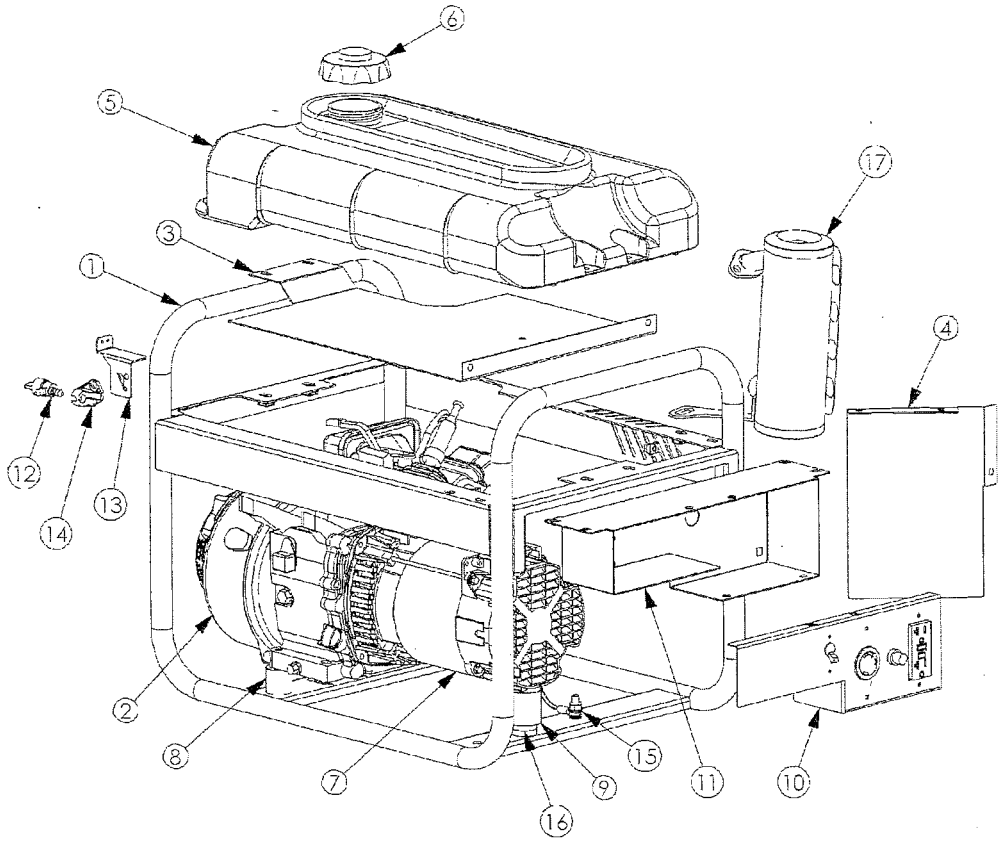
Taxes: Any tax or other governmental charge now or hereafter levied upon the production, sale, use or shipment of material and equipment ordered or sold is not included in the Company's price and will be charged to and paid for by the Purchaser.
Shipping dates shall be extended for delays due to acts of God, acts of Purchaser, acts of Government, fires, floods, strikes, riot, war, embargo, transportation shortages, delay or default on the part of the Company's vendors, or any other cause beyond the Company's reasonable control.
Should Purchaser request special shipping instruction, such as exclusive use of shipping facilities, including air freight when common carrier has been quoted and before change order to purchase order can be received by the Company, the additional charges will be honored by the Purchaser.

Warranty: The Company warrants that parts manufactured by it will be as specified and will be free from defects in materials and workmanship.
The Company's liability under this warranty shall be limited to the repair or replacement of any part which was defective at the time of shipment provided Purchaser notifies the Company of any such defect promptly upon discovery, but in no event later than three (3) months from the date of shipment of such part by the Company.
The only exception to the previous statement is the extended warranty as it applies to the special airend exchange program.
Repairs and replacements shall be made by the Company F.O.B. point of shipment. The Company shall not be responsible for costs of transportation, removal or installation.
Warranties applicable to material and equipment supplied by the Company but wholly manufactured by others shall be limited to the warranties extended to the Company by the manufacturer which are able to be conveyed to the Purchaser.

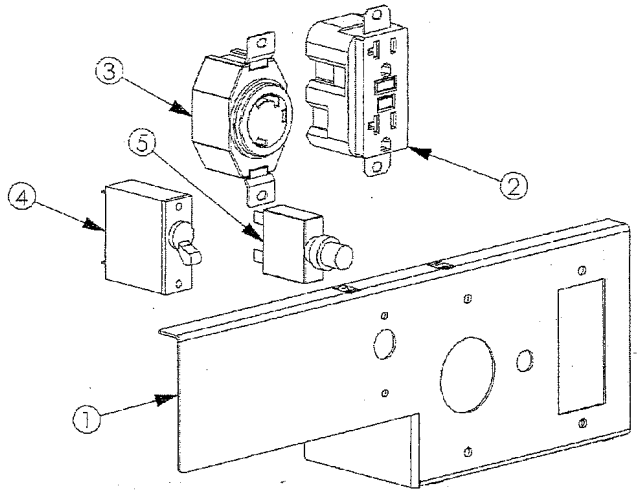
Delivery: Shipping dates are approximate. The Company will use best efforts to ship by the dates specified; however, the Company shall not be liable for any delay or failure in the estimated delivery or shipment of material and equipment or for any damages suffered by reason thereof.
This company makes no other warranty or representation of any kind whatsoever, expressed or implied, except that of title, and all implied warranties, including any warranty of merchantability and fitness for a particular purpose, are hereby disclaimed.

GENERATOR PARTS LISTS

S3100 GENERATOR PART LISTS

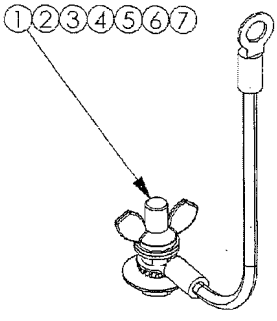


ITEM	QTY.	PART NO.	DESCRIPTION
1	1	VA40011033-	Assembly Frame
2	1	ENGINE	HONDA GX160
3	1	VA9503-	Heat Shield
4	1	VA9504-	Shield Muffler
5	1	G51398	11 Liter Tank
6	1	G080201	Fuel Cap
7	1	Alternator	Model ES80 B
8	2	G052113	Vibro Isolator - 30x30
9	1	G052182	Vibro Isolator - 40x40
10	1	SA40011034	Panel Assembly S3100
11	1	VA9501-	Control Panel Box
12	1	G085102	Fuel Valve
13	1	VA9505-	Fuel Valve Bracket
14	1	G051645	Valve Mount
15	1	Ground Assembly	Ground Wire Assembly
16	2	SA40011907	Spacer
17	1	G92070	Muffler



Panel Assembly

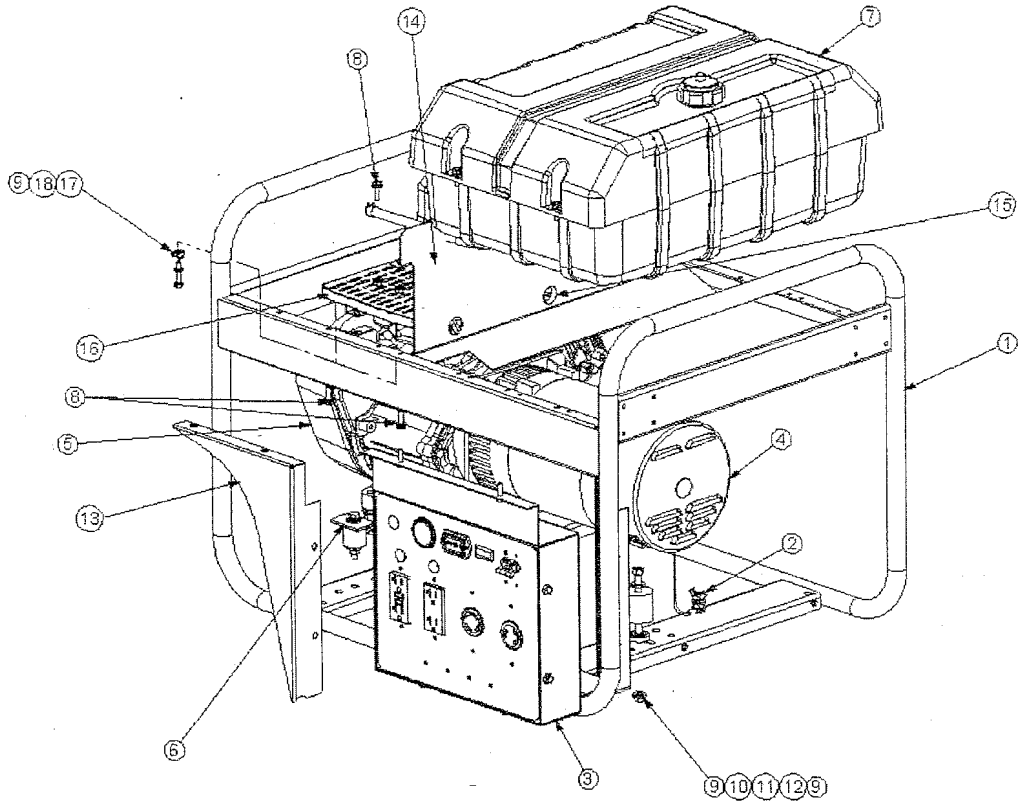
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	GA9502	Panel Face
2	1	G071410	20A GFCI (NEMA 5-20R)
3	1	G071406	30A/125V Twistlock (NEMA L5-30R)
4	1	G075766	25A 1 pole Circuit Breaker
5	1	G075532	20A Thermal Circuit Breaker



Ground Assembly

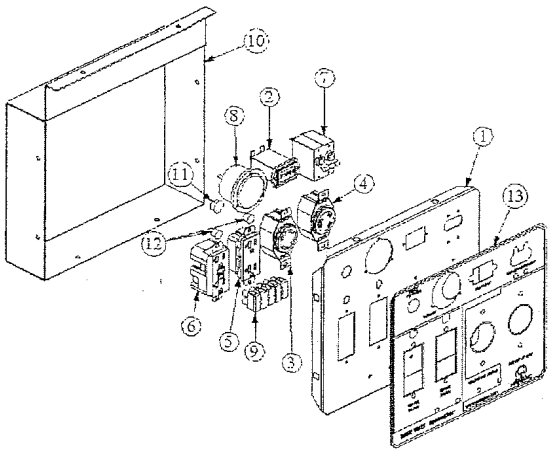
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	G022013	Screw M8x30 ZN
2	1	G034706	M8 Wingnut
3	2	G041901	Washer 8,4x16 ZN
4	1	G032308	Nut M8 ZN
5	1	G041601	Washer 8842 A8
6	1	G041413	Washer 9x24 ZN
7	1	G92729	Wire Ground

S5000 GENERATOR PART LISTS



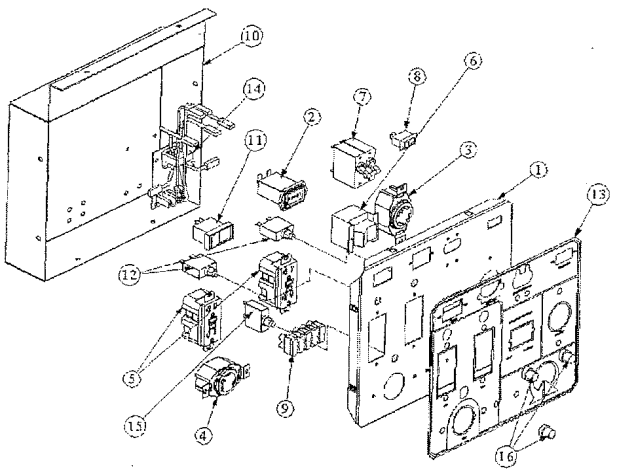
ITEM	Q.TY	PART NO.	DESCRIPTION
1	1	VA40011023-	Frame Assembly
2*	1	//////////	Ground Wire Assembly
3*	1	//////////	Control Panel Assembly
4	1	AMM4900RB0000Y	Alternator
5	1	EHB90BB20Z	Honda GX270 Engine
6*	1	//////////	Engine Sub-Frame Assembly
7*	1	//////////	Fuel System Assembly
8	6	G020802	Flange Bolt, M6x10
9	5	G034308	Nut M8 - Nylon Insert
10	1	G041413	Flat Washer M8
11	2	SA40023901	Spacer 7mm
12	1	G052182	Vibration Isolation
13	1	VA9405-	Shield Control Panel
14	1	VA8429-	Heat Shield
15	1	G70188	Grommet
16	1	VA9403-	Governor System Shield
17	3	G041204	Flat Washer
18	3	G022013	Bolt M8x30

NOTE: For Items with (*) see the sub-assembly details for actual part number



CONTROL PANEL ASSEMBLY - DELUXE PANEL

ID	Q.TY	PART NO.	DESCRIPTION
1	1	GA9326	Panel Face
2	1	G079823	Hourmeter
3	1	G071407	20A 125/250V Twistlock Rec.
4	1	G071440	20A 250V Twistlock Recept.
5	1	G071412	20A Duplex Receptacle
6	1	G071410	20A GFCI Receptacle
7	1	G075756	20A Thermal CB
8	1	G079829	Voltmeter
9	1	G079500	Connector
10	1	VA40011711-	Control Panel Box
11	1	G051120	Cap For Hole Ø16
12	2	G051106	Cap For Hole Ø11
13	1	G004260	Adhesive Label Deluxe Panel

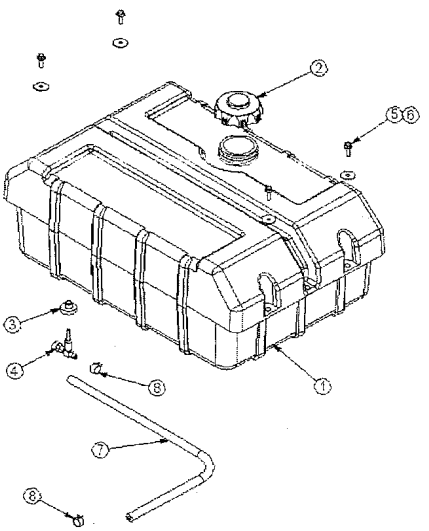


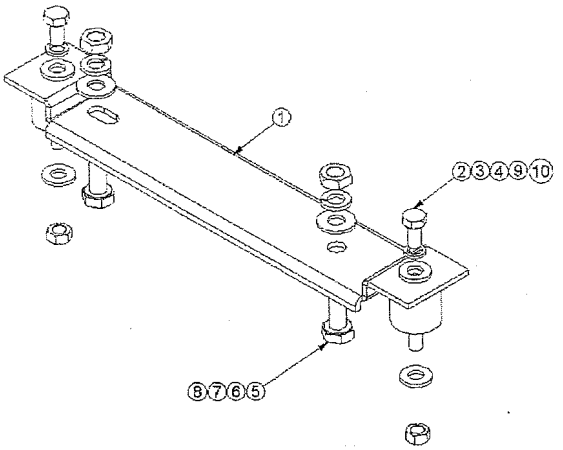
CONTROL PANEL ASSEMBLY - RENTAL PANEL

ID	Q.TY	PART.NO	DESCRIPTION
1	1	SA40011708	Panel Face
2	1	G079823	Hourmeter
3	1	G071411	30A 125/250V Twistlock Rec.
4	1	G071406	30A 125V Twistlock Recept.
5	2	G071410	20A GFCI Receptacle
6	1	G075240	Voltage selector
7	1	G075756	Circuit Breacker Magn.Therm 20A 2 Pole
8	1	G075239	Switch ON-OFF Idle control
9	1	G079500	Terminal Block
10	1	VA40011012-	Control Panel Box
11	1	G075244	Switch ON-OFF
12	2	G075532	Circuit Breacker Therm 20A
13	1	G004231	Adhesive Label Rental Panel
14	1	G076069	Idle Control Board
15	1	G075534	Circuit Breacker Therm 30A
16	3	G070305	Waterproof Cap

FUEL ASSEMBLY

ID	Q.TY	PART NO.	DESCRIPTION
1	1	SA40011020	8 gallons tank
2	1	G080206	Fuel Cap
3	1	G084801	Grommet, Fuel Valve
4	1	G83124	Fuel Valve
5	4	G041411	Flange Bolt, M6x20 Z
6	4	G020803	Fender Washer, M6x16mm
7	1	G083602	Fuel Hose, 20.25" Long
8	2	G049203	Hose Clamp, Spring ¼"



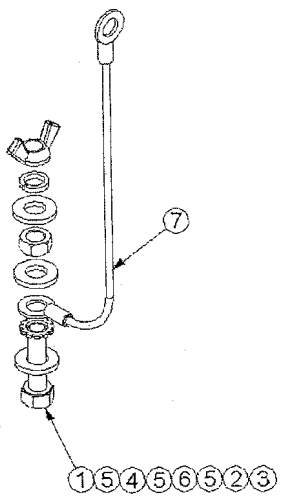


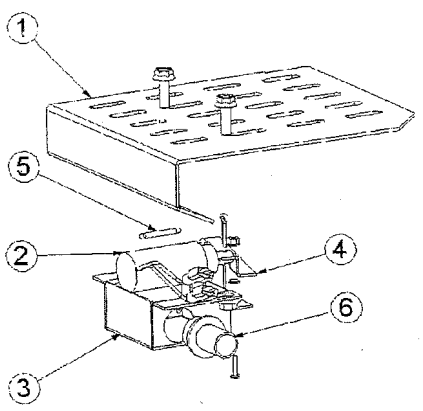
SUB-FRAME ASSEMBLY

ID	Q.TY	PART NO.	DESCRIPTION
1	1	GA9406	Engine Sub-Frame
2	2	G052181	Vibration Isolator
3	2	G041901	M8 Flat Washer
4	2	G034308	M8 Nut – Nylon Insert
5	2	G022051	Bolt M10x40 Z
6	2	G041904	M10 Flat Washer
7	2	G032303	M10 Nut
8	2	G041105	M10 Lock Washer
9	2	G022010	Bolt M8x16 Z
10	2	G041308	M8 Lock Washer

GROUND WIRE ASSEMBLY

ID	Q.TY	PART NO.	DESCRIPTION
1	1	G022013	Bolt M8x30 Z
2	1	G041308	M8 Lock Washer
3	1	G034706	Wing Nut, 5/16"
4	1	G041601	Star Washer, 5/16"
5	3	G041901	Flat Washer, M8
6	1	G032308	Nut, 5/16"-18 Grade 5
7	1	G92729	Wire, Ground

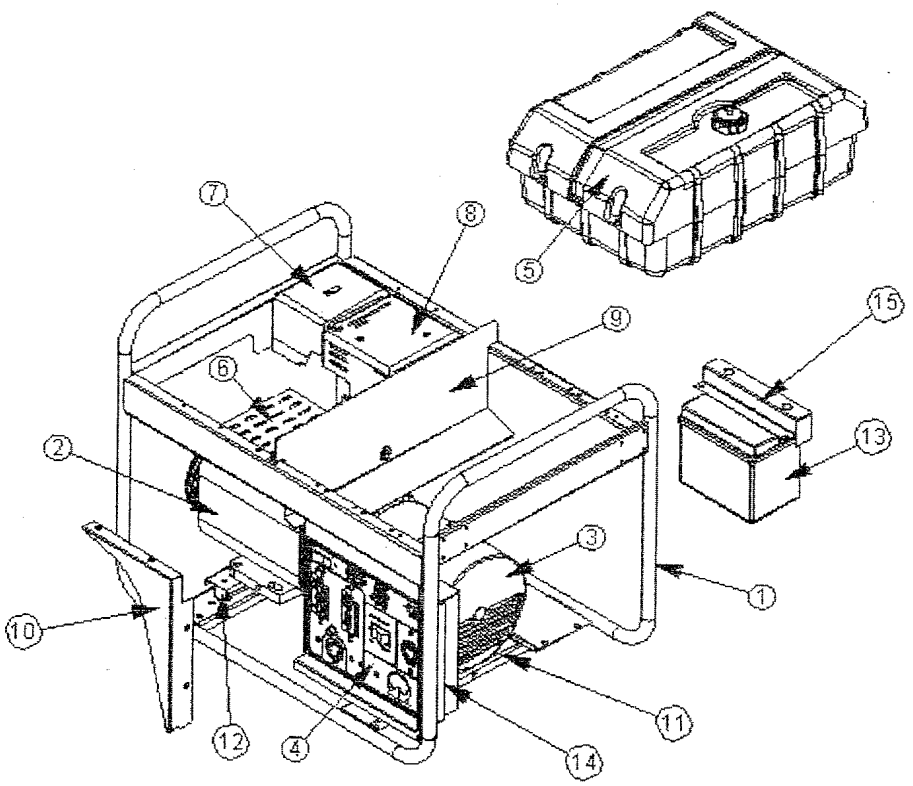




IDLE ASSEMBLY

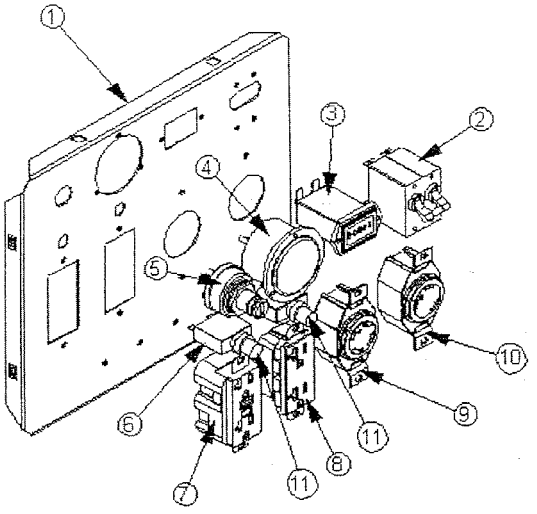
ID	Q.TY	PART NO.	DESCRIPTION
1	1	VA9403-	Governor Cover
2	1	G076204	24V DC, Cont. Duty, Solenoid
3	1	SA40011709	Box, Idle Solenoid
4	1	GA9404	Arm, Idle Control
5	1	SA40011902	Spring
6	1	G071917	Snap-in Connector

S7500 GENERATOR PART LISTS

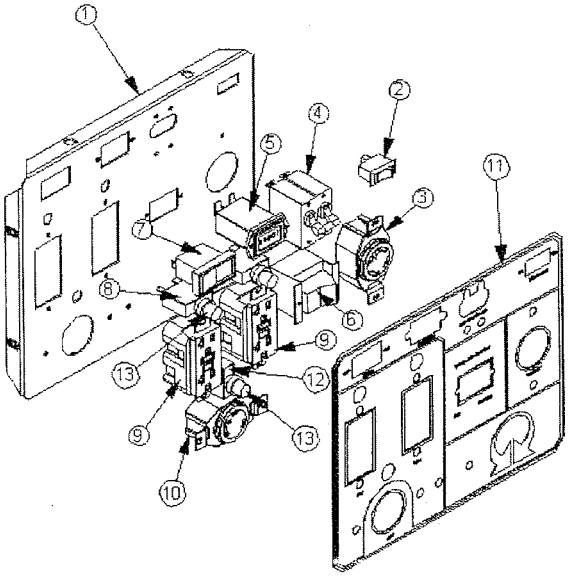


ITEM	Q.TY	PART NO.	DESCRIPTION
1	1	VA40011021-PRAMAC	FRAME ASSEMBLY
2	1	EHB130CB30Z	ENGINE HONDA GX390 K1VCN2
3	1	AMM7200RB0000Y	ALTERNATOR S20W-95/A
4	1	SA40011022	S7500 CONTROL PANEL
5	1	/////	FUEL ASSEMBLY
6	1	/////	IDLE CONTROL ASSEMBLY
7	1	/////	AIR FILTER ASSEMBLY
8	1	/////	MUFFLER ASSEMBLY
9	1	VA8429-9005	HEAT SHIELD
10	1	VA9405-PRAMAC	CONTROL PANEL SHIEL
11	1	/////	GROUND WIRE ASSEMBLY
12	1	/////	ENGINE SUB-FRAME ASSEMBLY
13	1	G089001	BATTERY 12V
14	1	VA40011012-9005	CONTROL PANEL BOX
15	1	VA40011710-9005	BATTERY HOLD DOWN

Refer to the S5000 section of this manual for details of the following items:
Item 5 – Fuel Assembly, Item 12 – Sub-Frame Assembly, Item 11 – Ground Assembly &
Item 6 – Idle Assembly

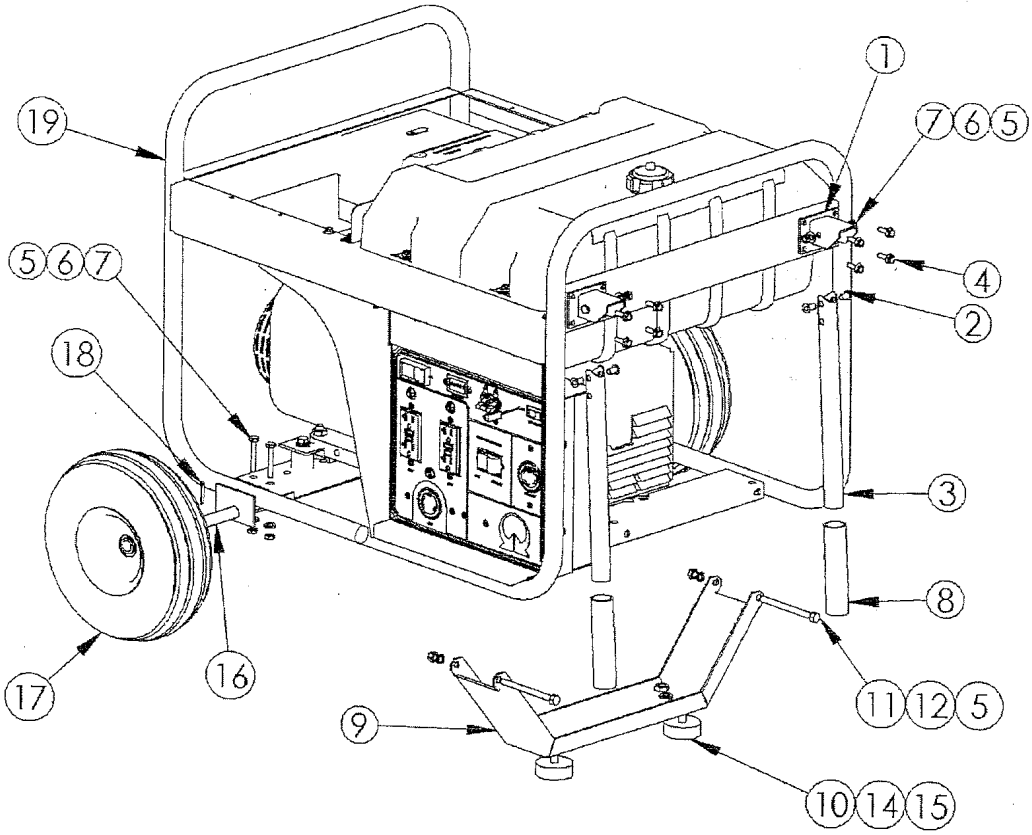


ITEM	Q.TY	PART NO.	DESCRIPTION
1	1	GA9326	DELUXE PANEL
2	1	G075764	30A 2P MAGNETOTHERM. CIRCUIT BREAKER
3	1	G079823	HOURMETER
4	1	G079829	VOLTMETER
5	1	G001418	KEY SWITCH
6	2	G075532	20A 250V THERMAL CIRCUIT BREAKER
7	1	G071410	5-20R 20A 125V GFCI RECEPTACLE
8	1	G071412	5-20R 20A 125V DPLX RECEPTACLE
9	1	G071411	L14-30R 30A 125/250V TL RECEPTACLE
10	1	G071401	L6-30R 30A 250V TL RECEPTACLE
11	2	G070305	M12 WATERPROOF CAP



ITEM	Q.TY	PART NO.	DESCRIPTION
1	1	SA40011708	G5/G7 PANEL
2	1	G075239	ROCKER SWITCH (ON-OFF)
3	1	G071411	L14-30R 30A 125/250V TL RECEPTACLE
4	1	G075764	30A 2P MAGNETOTHERM. CIRCUIT BREAKER
5	1	G079823	HOURMETER
6	1	G075240	120V FULL POWER ROCKER SWITCH
7	1	G075242	12V 20A ROCKER SWITCH (OFF-ON-START)
8	2	G075532	20A 250V THERMAL CIRCUIT BREAKER
9	2	G071410	5-20R 20A 125V GFCI RECEPTACLE
10	1	G071406	L5-30R 30A 125V TL RECEPTACLE
11	1	G004231	OVERLAY
12	1	G075534	30A 250V THERMAL CIRCUIT BREAKER
13	3	G070305	M12 WATERPROOF CAP

WHEEL KIT – S5000 AND S7500



ITEM	Q.TY	PART NO.	DESCRIPTION
1	2	VA40011027-9005	HANDLE BRACKET ASSEMBLY
2	4	G051641	LONG BARREL WASHER
3	2	VA6513-9005	HANDLE, WHEEL KIT
4	8	G020810	FLANGE BOLT M6x20 Z DIN 6921
5	8	G034308	NYLOK NUT M8 Z
6	6	G041901	FLAT WASHER 8.4x16 Z
7	6	G022055	BOLT M8x40 Z
8	2	G052007	GRIP - CUSHION
9	1	VA9414-9005	WHEEL KIT STAND
10	2	G052911	SILENT BLOCK M-50x16-M10x15 SH45
11	2	G022256	BOLT M8x100 Z
12	2	G041308	LOCK WASHER M8 Z
14	2	G041105	LOCK WASHER M10 Z
15	2	G034309	SELF-LOCKING NUT M10 Z
16	1	VA40011028-9005	AXLE ASSEMBLY
17	2	G053631	WHEEL
18	2	G044106	COTTER PIN Ø2,5x25
19	1	S5000	S5000 GENSET

NOTE: Item 19, S5000, shown for clarity

BATTERY INSTALLATION

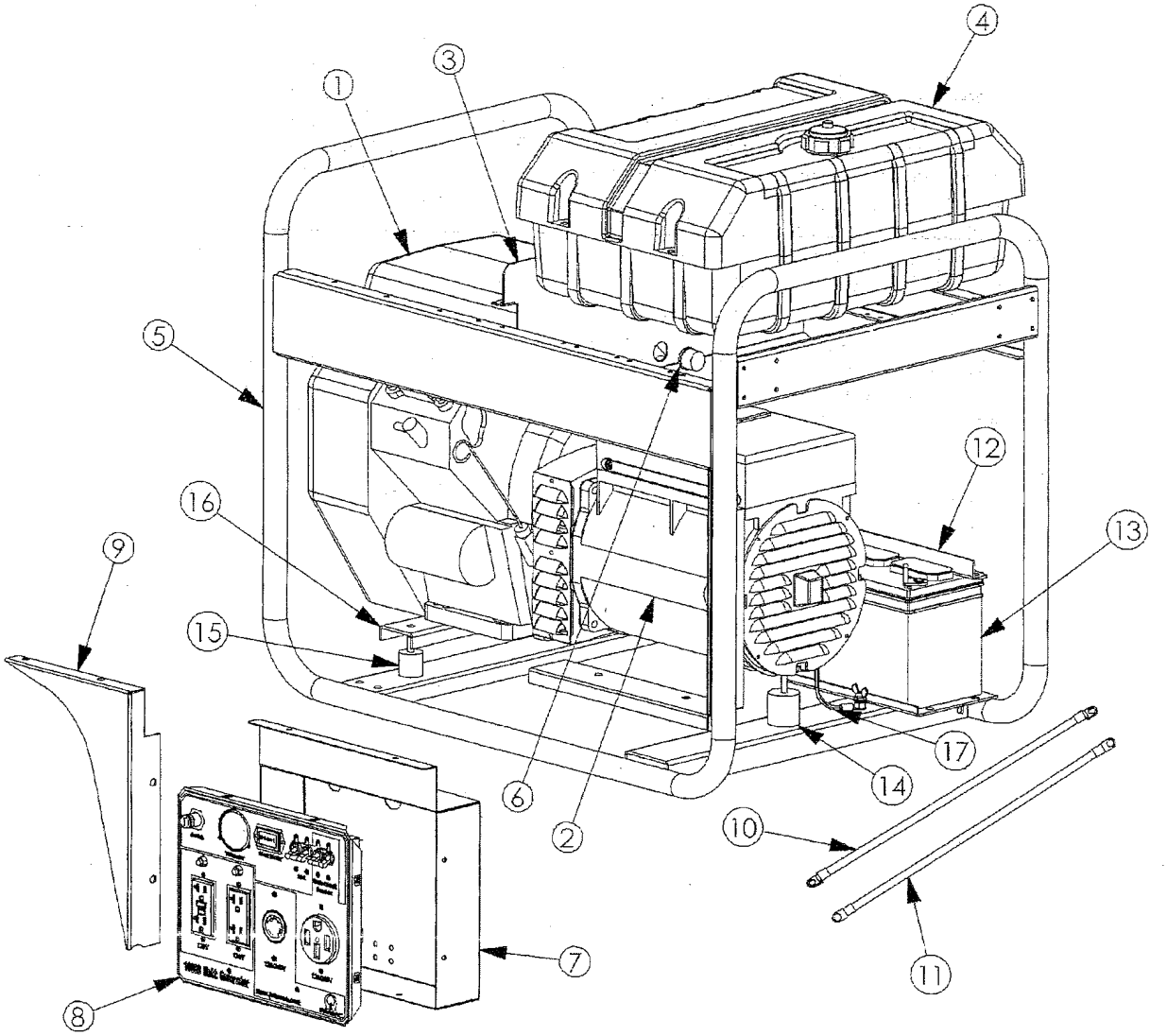
These instructions refer to the S7500 model for reference. The S10000 and S12000 battery installation is basically the same but some reference numbers are different than those listed in this instruction.

Battery installation will require the following tools: M10 Socket/Wrench and 7/16" Socket/Wrench. See the exploded views of the S7500 on page 25 and 26 of this manual. Referenced part numbers are from page 26.

1. Remove battery(1) from the box and place in the battery tray located under the fuel tank on the generator. Orient the battery so that the positive(red/+) terminal is closest to the engine.
2. Orient the Battery Hold Down Bar(14) as indicated in the view on page 26. Install the Grommets(15) in the larger holes in item 14. Route the positive(red) battery cable through the hole nearest the engine(This may require removal of the red battery boot. Replace boot). Route the negative(black) battery cable through the other hole.
3. Connect the red wire(7) to the positive terminal of the battery using one M6 Thread Forming Screw(5) and one M6 Nylock Nut(6). Cover connection with Battery Boot(13).
4. Connect the black wire(8) to the negative terminal of the battery using one M6 Thread Forming Screw(5) and one M6 Nylock Nut(6).
5. Place the Battery Hold Down Bar(14) on top of the battery as indicated in the view on page 26. Place one ¼"X7.5" Bolt through the Sleeve(16) and then the holes on each end of the hold down bar and through the battery tray. Place one ¼" Washer(3) and one ¼" Nylock Nut(4) on each bolt. Tighten until snug but do not deform the battery or the hold down bar.

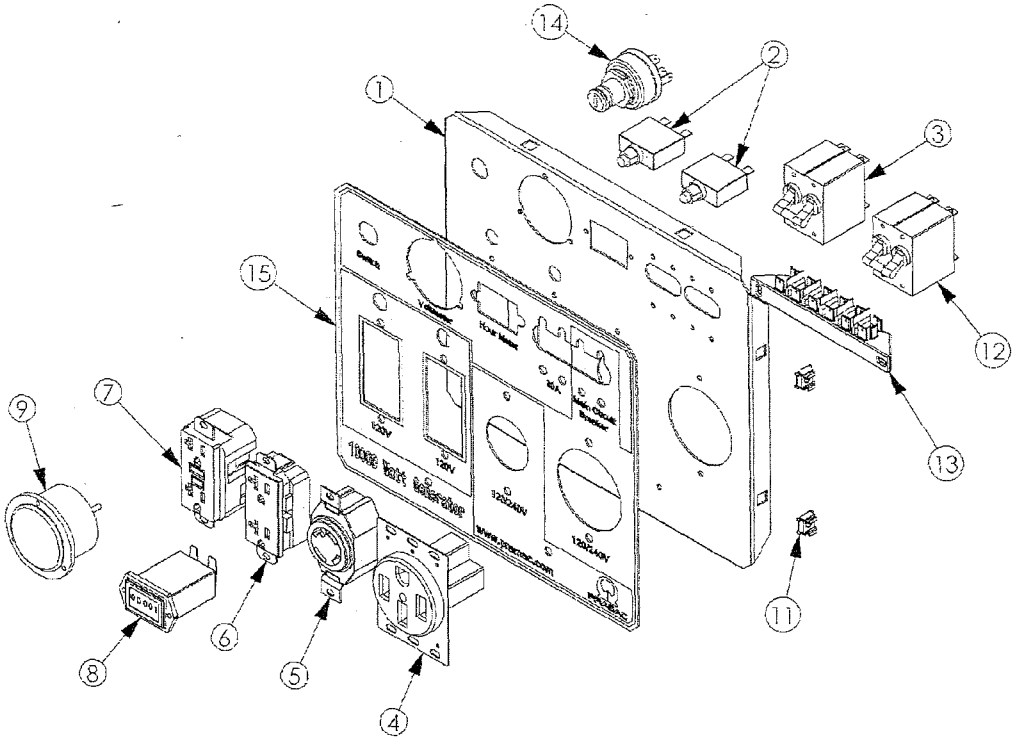
The battery should be fully charged. If it has discharged to the point that it will not start the generator, use the recoil starter for the initial operation. The generator should recharge the battery fully during operation.

S10000 GENERATOR PART LISTS



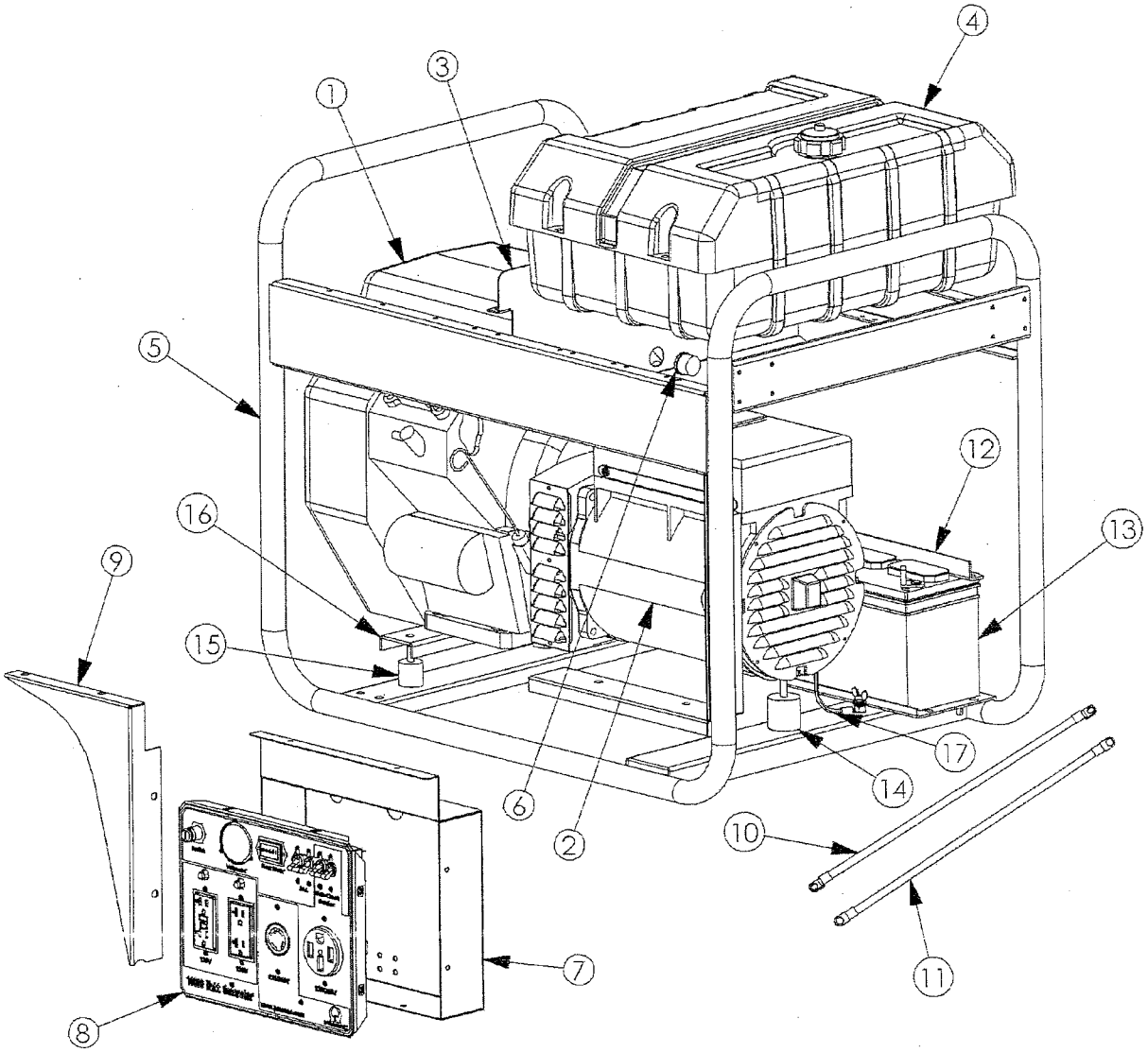
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	EHB180CBE9Z	Honda GX610
2	1	AMM10500RB0000Z	Alternator S20FS-130/A
3	1	VA8429-9005	Heat Shield
4*	1	Fuel Assembly	Fuel System Assembly
5	1	VA40011038-PRAMAC	Frame Assembled
6	1	G051121	Plug, 1"
7	1	VA40011012-9005	Control Panel Box
8	1	SA40011901	Deluxe Panel, 10kW, 18HP
9	1	VA9405-PRAMAC	Shield Control Panel
10	1	G92695	Battery Cable, Negative
11	1	G92694	Battery Cable, Positive
12	1	VA40011704-9005	Hold Down Bar, Battery
13*	1	G089101	12V 17Ah Battery
14	1	G052182	Vibration Isolator
15	1	G052181	Vibration Isolator
16	1	VA40002703-9005	Sub-Frame, Engine
17	1	G92729	Wire, Ground

NOTES: See page 22 for Item 4. Item 13*, Battery, not included –shown for clarity.



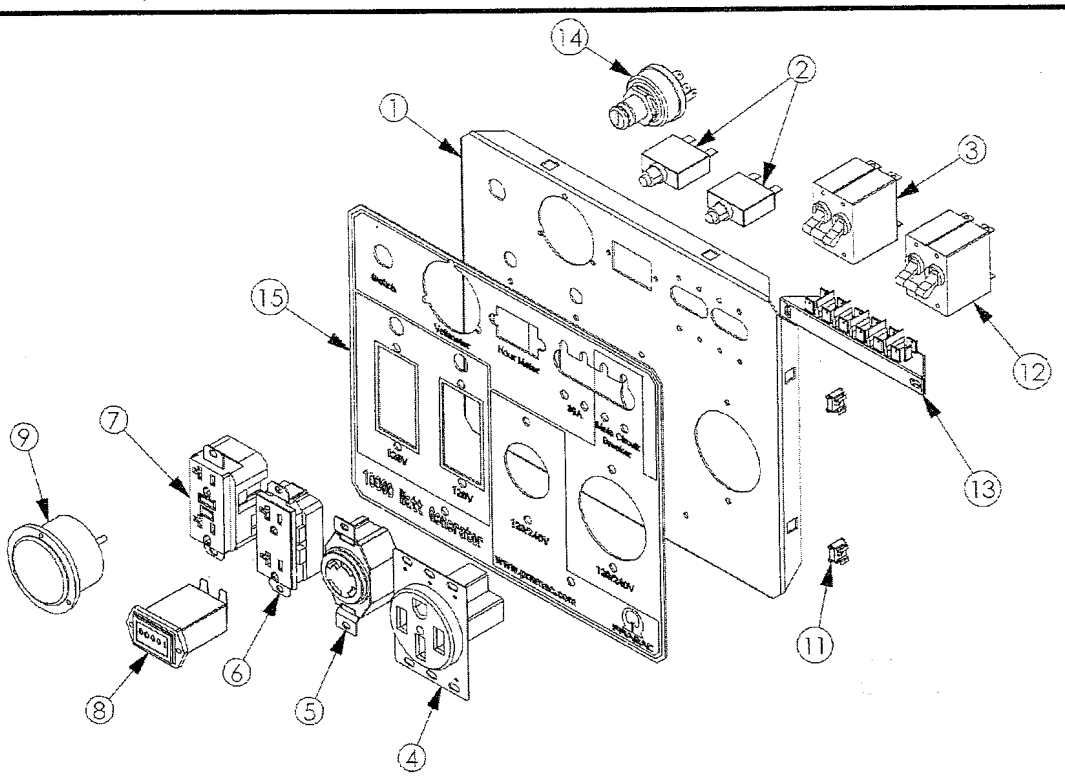
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	SA40002003	Panel Face, Deluxe 10/12 kW
2	2	G075532	20A Thermal Circuit Breaker
3	1	G075764	30A Magn.-Therm Circuit Breaker
4	1	G071413	50A, 125/250V Rec. (14-50R)
5	1	G071411	30A 125/250V, Twist. (L14-30R)
6	1	G071412	20A Duplex, Receptacle
7	1	G071410	20A GFCI (NEMA 5-20R)
8	1	G079823	Hourmeter
9	1	G079822	Voltmeter, 0-300V 240VAC
11	6	G034909	M6 Cage Nut
12	1	G075834	35A, Magn.-Therm Circuit Breaker
13	1	G079641	6 Position Connector
14	1	G001418	Key Switch
15	1	G004525	Decal Brand, S10000-12000

S12000 GENERATOR PART LISTS



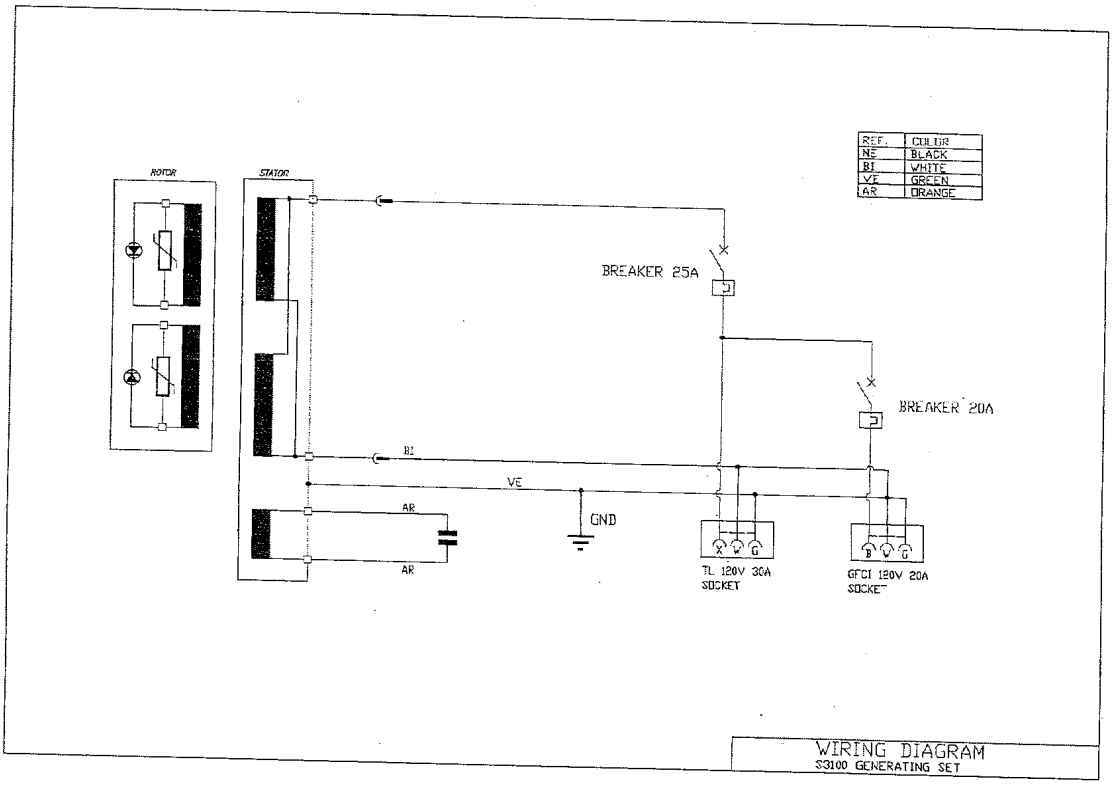
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	EHB200CC37Z	Honda GX620
2	1	AMM12000RB0000Y	Alternator S20FS-160/A
3	1	VA8429-9005	Heat Shield
4*	1	Fuel Assembly	Fuel System Assembly
5	1	VA40011038-PRAMAC	Frame Assembled
6	1	G051121	Plug, 1"
7	1	VA40011012-9005	Control Panel Box
8	1	SA40002004	Deluxe Panel, 12kW, 20HP
9	1	VA9405-PRAMAC	Shield Control Panel
10	1	G92695	Battery Cable, Negative
11	1	G92694	Battery Cable, Positive
12	1	VA40011704-9005	Hold Down Bar, Battery
13*	1	G089101	12V 17Ah Battery
14	1	G052182	Vibration Isolator
15	1	G052181	Vibration Isolator
16	1	VA40002703-9005	Sub-Frame, Engine
17	1	G92729	Wire, Ground

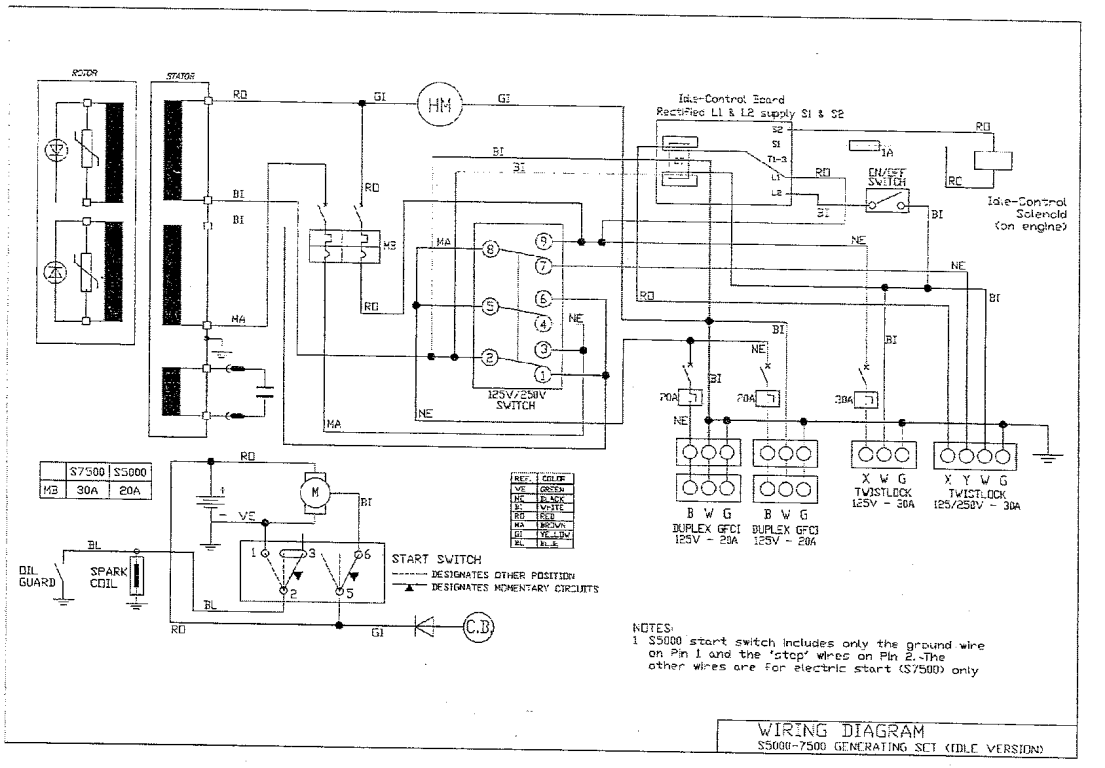
NOTES: See page 22 for Item 4. Item 13*, Battery, not included –shown for clarity.



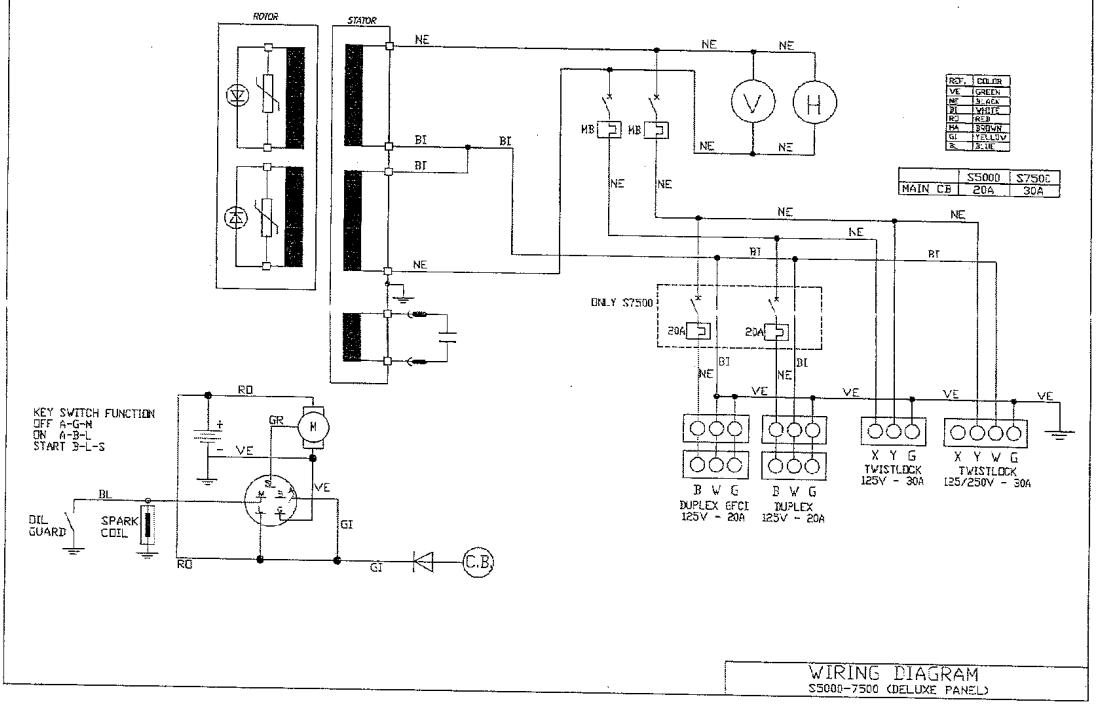
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	SA40002003	Panel Face, Deluxe 10/12 kW
2	2	G075532	20A Thermal Circuit Breaker
3	1	G075764	30A Magn.-Therm Circuit Breaker
4	1	G071413	50A, 125/250V Rec. (14-50R)
5	1	G071411	30A 125/250V, Twist. (L14-30R)
6	1	G071412	20A Duplex, Receptacle
7	1	G071410	20A GFCI (NEMA 5-20R)
8	1	G079823	Hourmeter
9	1	G079822	Voltmeter, 0-300V 240VAC
11	6	G034909	M6 Cage Nut
12	1	G075755	45A, Magn.-Therm Circuit Breaker
13	1	G079641	6 Position Connector
14	1	G001418	Key Switch
15	1	G004525	Decal Brand, S10000-12000

WIRING SCHEMATICS
(FOR INFORMATION ONLY)

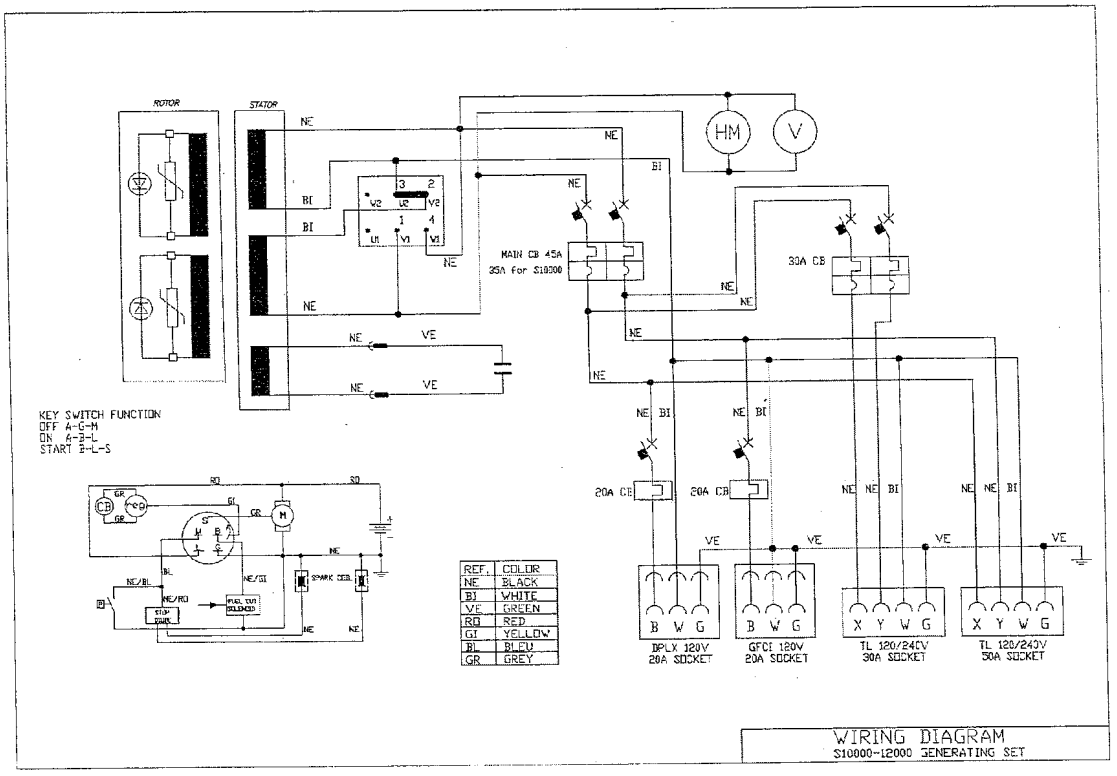




WIRING DIAGRAM
S5000-7500 GENERATING SET (IDLE VERSION)



WIRING DIAGRAM
S5000-7500 (DELUXE PANEL)


ROTOR
STATOR
HM
V
MAIN CB 45A
25A for S10000
30A CB
20A CB
20A CB
KEY SWITCH FUNCTION
OFF A-G-M
ON A-B-L
START B-L-S
REF. COLOR
NE BLACK
BI WHITE
VE GREEN
RD RED
GI YELLOW
BL BLEU
GR GREY
DPLX 120V
20A SOCKET
GFCI 120V
20A SOCKET
TL 120/240V
30A SOCKET
TL 120/240V
50A SOCKET
B W G
X Y W G
WIRING DIAGRAM
S10000-12000 GENERATING SET