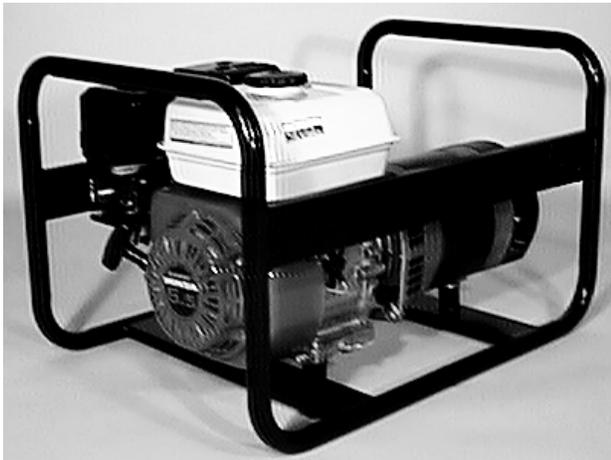


CHICAGO

Electric Generators

GENERATOR USER MANUAL



38863 Model Shown

Model Numbers

38862

38863

39408

39321

MODEL & SERIAL NUMBERS

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.

Model Number _____

Serial Number _____

CHICAGO

Electric Generators

LIMITED 1 YEAR WARRANTY STATEMENT

Harbor Freight Tools makes every effort to assure that it's Chicago Electric products meet high quality and durability standards, and warrants that this product is free from defects in materials and workmanship for the following periods (from the date of purchase): For 1 year: All generator components.

Note: If this product is used by a professional contractor, we warrant that this product is free from defects in materials and workmanship for a period of 90 days (from the date of purchase). This limited warranty does not cover components or assemblies manufactured by other companies, including, but not limited to: engine, alternator, receptacles, etc. Warranties for all items not manufactured by Harbor Freight Tools are covered under the warranties of the respective manufacturers of those products.

This limited warranty extends only to the original purchaser of the product and is not assignable or transferable to any subsequent purchaser/end user.

This warranty does not apply to damage to the product, or to injuries or death to persons or property due directly or indirectly to abnormal use, abnormal conditions, improper storage, misuse, neglect, abuse, accident, repairs or alterations outside our facilities, lack of maintenance, or other acts which are not the fault of Harbor Freight Tools.

Any implied warranty of merchantability, or fitness for a particular purpose of use, shall be limited to the duration of the foregoing written warranty, otherwise, the foregoing warranty is the purchaser's sole and exclusive remedy and in lieu of all other warranties, express or implied. Harbor Freight Tools shall not be liable for incidental or consequential damages or a loss of anticipated benefits or profits resulting from the purchase or use of the product or arising from the breach of the warranty even if Harbor Freight Tools knew of the likelihood of such damages.

Some states do not allow limitation of how long an implied warranty lasts, so the above limitation may not apply to you (the original purchaser). Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusions may not apply to you (the original purchaser).

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election, or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of storing, and returning the product.

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

Harbor Freight Tools

3491 Mission Oaks Blvd., P.O. Box 6009, Camarillo, CA 93011
Telephone Number: (800) 444-3353



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SECTION 1

GENERAL INFORMATION

This manual is provided for you 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. 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 operation.

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 specific local 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 to the standards set forth by the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA). Warranties for the exhaust emission system are administered by the respective engine manufacturers. 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.



THIS SYMBOL IS USED THROUGHOUT YOUR OWNER'S MANUAL TO BRING ATTENTION TO IMPORTANT SAFETY INSTRUCTIONS. 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.



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.



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

SAFETY RULES



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. 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.



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.



CAUTION: 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.

GENERAL SAFETY OPERATIONAL GUIDELINES

- Read and understand all the general safety operational guidelines and rules before operating this generator.
- Always follow National and Local electrical codes.
- 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 procedures must be used.
- Do not wire your generator to a home or structure fed by utility power without proper isolation circuitry. Consult a local licensed electrician for proper wiring of your generator to a home, business or any facility or structure fed by utility power. Failure to properly isolate utility and generator electrical power could result in generator damage or electrocution to you or a utility worker. The main breaker, which disconnects from the utility power, must be open before the generator can safely be connected.
- Do not operate this generator unless the generator is in good mechanical and electrical condition.
- Do not overload this generator. Overloading this generator can cause generator damage, powered apparatus damage and excessive heat build up.
- Always keep hands, body parts, hair and clothing well away from the rotating or "HOT" parts of the generator set. Exhaust systems can cause severe burns.
- 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.
- Do not operate this generator within an enclosed area. The operation area of the generator must be completely open. 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.
- Do not install this generator in an enclosed area such as a RV or motorhome. All warranty will be null and void if installed within an enclosed area.
- 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.
- Never touch a receptacle or bare wire. Electrocution or shock could result.
- **Gasoline is highly FLAMMABLE and its vapors are EXPLOSIVE.** Handle gasoline with extreme care. Failure to properly handle gasoline can result in explosion or fire. Do not permit smoking within 50ft of this generator set.
- **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.
- 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.

- **GROUNDING:** The NATIONAL ELECTRICAL CODE requires that the generator frame be properly grounded to earth. A ground lug is provided on the generator frame. As a general guideline, a 10 AWG wire connected to the grounding lug of the generator on one end (located on the generator frame as indicated by the International "GROUND" symbol) and connected to a copper or brass ground rod (driven into the ground) on the other end of the wire. Some locations require generator set or other grounding. Check with a local electrician to determine the grounding requirements for your area.
- Electrical generators produce electricity; Therefore, never allow or perform service operations to your generator set without proper training/certification. Service operations, without proper precautions can cause severe shock and even death by electrocution.
- Generators operating on job or construction sites must be equipped with GFCI (Ground Fault Circuit Interrupters) on all circuits. Certain generator models are not equipped with GFCI circuits. Therefore, customer supplied GFCI's must be installed in the power cords connected to the generator. Consult a local licensed electrician for proper wiring.
- Use only 3-Prong 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.
- Operate, service or fill with fluids on a level surface only.
- Do not operate this generator in a corrosive or flammable environment.
- Never clean this generator with high-pressure water or a garden hose. Water can accumulate within the generator and cause fuel system, ignition system and/or electrical problems or shorts. Cleaning should be done with a damp rag on a cool generator set.

GENERAL MAINTENANCE

ENGINE FUEL: Use Unleaded Fuel - ONLY!

ENGINE OIL: Refer to the Engine related documentation.

ENGINE MAINTENANCE:
Refer to the documentation supplied regarding the engine for all engine maintenance issues.

GENERATOR CLEANING



CAUTION!: ALWAYS SHUT OFF THE GENERATOR AND ALLOW THE GENERATOR TO COMPLETELY COOL 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 INDOORS 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.

ELECTRICAL LOADS AND GUIDELINES

Your generator set is designed to power electrical apparatuses within the electrical power output limitations of the generator. Please note that any generator overload can cause serious problems/damage to your generator. Additionally, apparatuses with electrical motors can require higher wattage requirements at start-up than when running. Some electric motors require as much as 2.5 times the rated wattage at start-up. Although the start-up wattage requirements for electric motors lasts only a few seconds, great care must be taken in connecting loads to your generator so as not to overload the generator. Refer to the label on each electrical apparatus to determine the wattage requirements of that apparatus. **THE TOTAL WATTAGE REQUIREMENTS OF ALL POWERED APPARATUSES (INCLUDING START-UP LOADS) MUST NEVER EXCEED THE CONTINUOUS RATING OF YOUR GENERATOR, CORRECTED TO THE ACTUAL ENVIRONMENTAL CONDITIONS AT THE OPERATING SITE.**

As a reference only, Table 1 below shows some general wattage requirements for several common electrical devices. This chart is intended as a guide only. The actual total wattage should be determined by referring to the actual labels on each of the powered electrical devices.

Table 1 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
Circle Saw (6 1/2")	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 rated
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 2.5 times the listed wattage for starting.	

GENERATOR DESIGNED PERFORMANCE GUIDELINES

This electrical generator is designed to produce electrical energy for the purpose of powering lights, power tools, appliances and motor loads within the intended design constraints of the generator. The generator is designed to produce single-phase electrical power at 120 or 120/ 240 VAC. This generator is not intended for installation in RV or motorhome applications. The Performance Specifications for your generator are listed in Table 2 Performance Specifications.

Table 2 PERFORMANCE SPECIFICATIONS			
38862	120 VAC (Single Phase)	2600 Watts 22 Amps @ 120 VAC	3100 Watts 25.8 Amps @ 120 VAC
38863	120/240 VAC (Single Phase)	3100 Watts 25.8 Amps @ 120 VAC 12.9 Amps @ 240 VAC	3600 Watts 30 Amps @ 120 VAC 15 Amps @ 240 VAC
39408	120/240 VAC (Single Phase)	3750 Watts 31.2 Amps @ 120 VAC 15.6 Amps @ 240 VAC	4500 Watts 37.5 Amps @ 120 VAC 18.8 Amps @ 240 VAC
39321	120/240 VAC (Single Phase)	4400 Watts 36 Amps @ 120 VAC 18 Amps @ 240 VAC	5000 Watts 41.6 Amps @ 120 VAC 20.8 Amps @ 240 VAC

Table 3 Engine Type		
SKU Number	Engine	HP
38862	Honda GX 160	5.5hp
38863	Honda GX 200	6.5hp
39408	Honda GX 240	8.0hp
39321	Honda GX 270	9.0hp

RECEPTACLE DETAILS

The receptacles configurations 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

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 2% for each 9°F above 60°F and 3 ½ % for each 1000 feet above mean sea level.

LOADING YOUR GENERATOR SET

WITH REFERENCE TO THE RECEPTACLE DETAILS SECTION, PLEASE REVIEW THE POWER RECEPTACLES FITTED TO YOUR GENERATOR. THE ACTUAL LOAD THAT MAY BE PULLED FROM EACH RECEPTACLE IS DRIVEN BY THE CIRCUIT BREAKER RATING AND THE GENERATOR RATING. ALL GENERATOR UNITS ARE EQUIPPED WITH A “PUSH TO RESET” CIRCUIT BREAKER. **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.**

AMPERAGE RATE TABLE

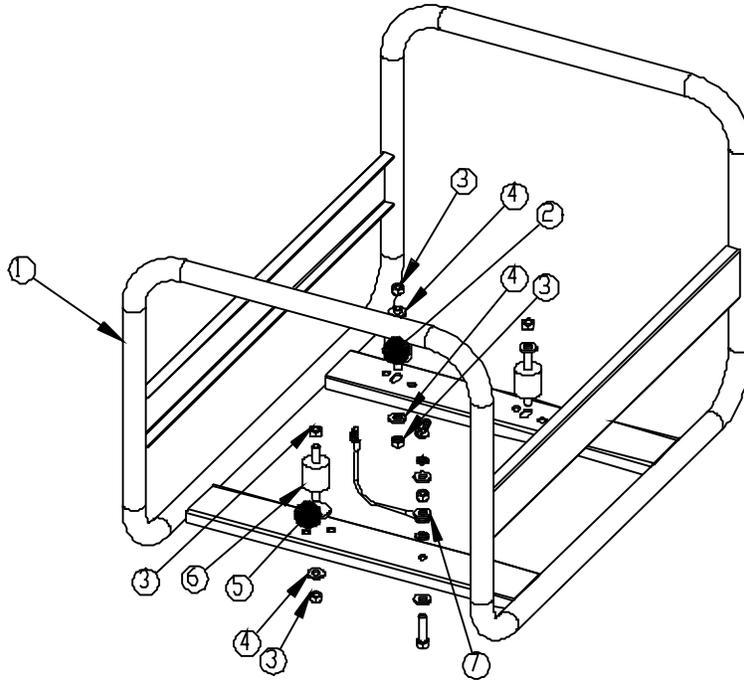
Model SKU	Figure 1 120V Duplex	Figure 2 120V Duplex	Figure 3 120V GFCI	Figure 4 125/250V Twistlock	Figure 5 125V/250V Twistlock
38862	20Amps	20Amps	20Amps	N/A	N/A
38863	20Amps	20Amps	20Amps	N/A	15Amps
39408	20Amps	20Amps	20Amps	N/A	20Amps
39321	20Amps	20Amps	20Amps	N/A	20Amps

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS AND WIRING DIAGRAM(S) IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT; IN FACT THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO. PARTS MAY CHANGE OR VARY FROM THOSE SHOWN.

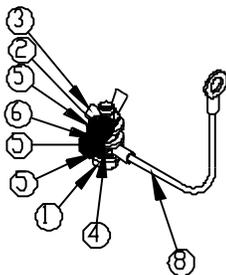
SECTION 2

38862 AND 38863 GENERATOR PARTS AND PART LISTS

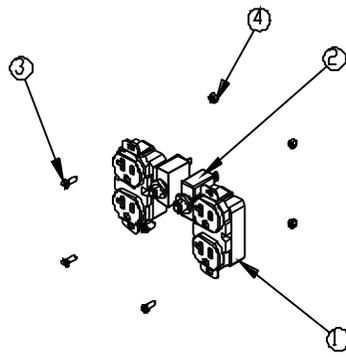


ITEM	QTY	PART NO.	DESCRIPTION
1	1	FRA0005-1	HG Class Roll Cage
2	2	VIB0014	Vibro Isolator - 30 X 30
3	6	NUTM080001	Nut, M8 - Nylon Insert
4	5	WASM080001	Flatwasher, M8
5	1	SPA0001	Spacer, .375x1.25x.125 Zinc
6	1	VIB0009	Vibro Isolator - 30X30
7	1	Ground Assembly	Ground Wire Assembly, E3100-E5000

Ground Assembly

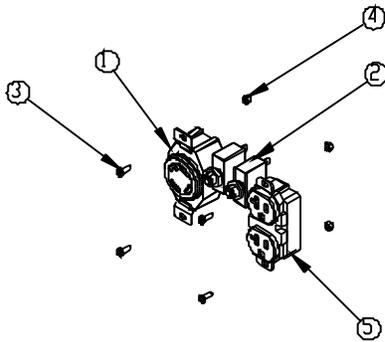


ITEM	QTY	PART NO.	DESCRIPTION
1	1	SCR0310001	Bolt, 5/16"x18x1, Grade 5
2	1	WASM080002	M8 Lockwasher
3	1	NUT0310001	Wingnut, 5/16"
4	1	WAS0310001	Starwasher, 5/16"
5	3	WASM080001	Flatwasher, M8
6	1	NUT0310002	Nut, 5/16-18 Grade 5
8	1	WIR0004	Wire, Ground - E3100-5000



E3100

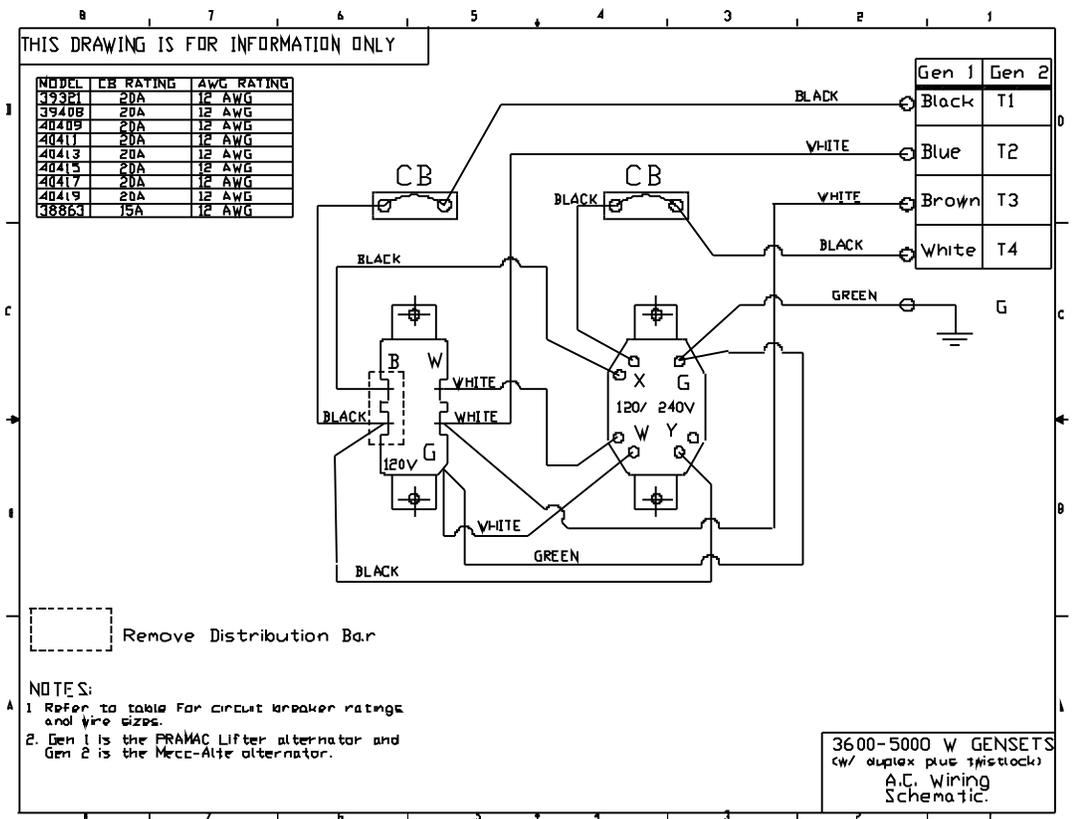
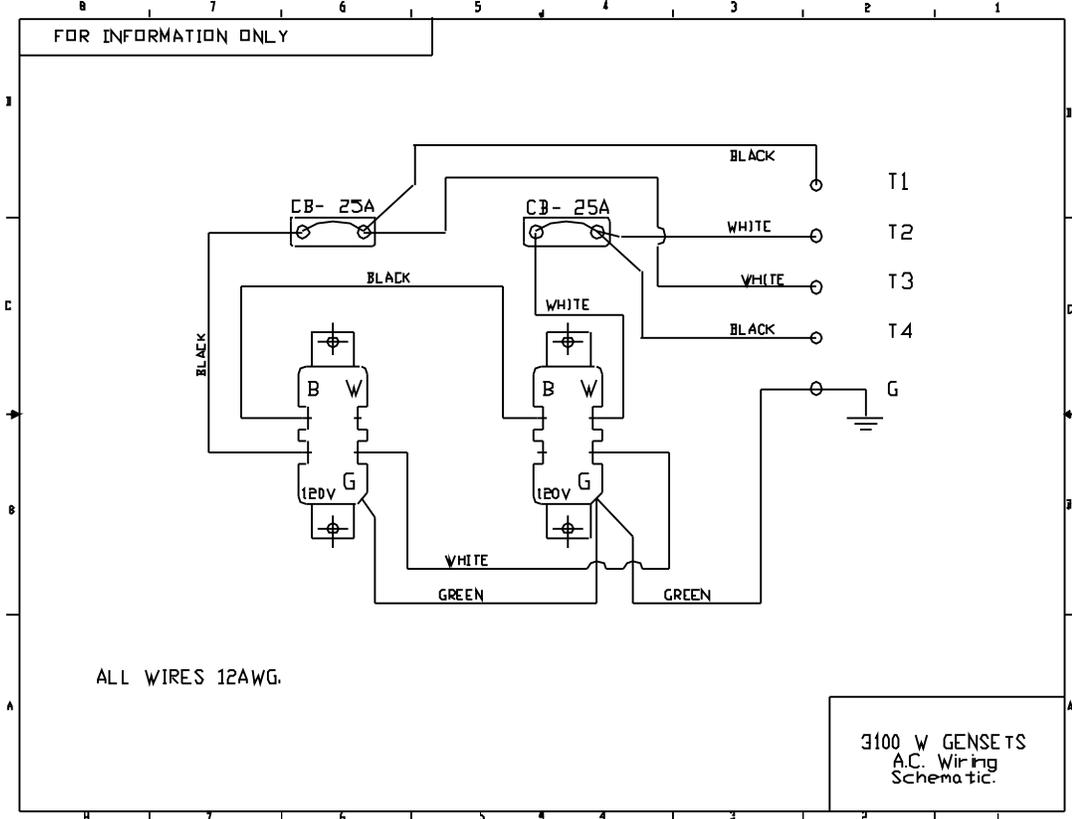
ITEM	QTY	PART NO.	DESCRIPTION
1	2	REC0001	20A Duplex Receptacle
2	2	CIR0008	25A Thermal Circuit Breaker
3	4	SCR0250001	Bolt, #8-32x3/8 Phil Pan HD Z
4	4	NUT0250001	Nut, #8 Nylon Insert



E3600

ITEM	QTY	PART NO.	DESCRIPTION
1	1	REC0003	30A 125/250V, Twistlock Receptacle
2	2	CIR0003	15A Thermal Circuit Breaker
3	4	SCR0250001	Bolt, #8-32x3/8 Phil Pan HD Z
4	4	NUT0250001	Nut, #8 Nylon Insert
5	1	REC0001	20A Duplex Receptacle

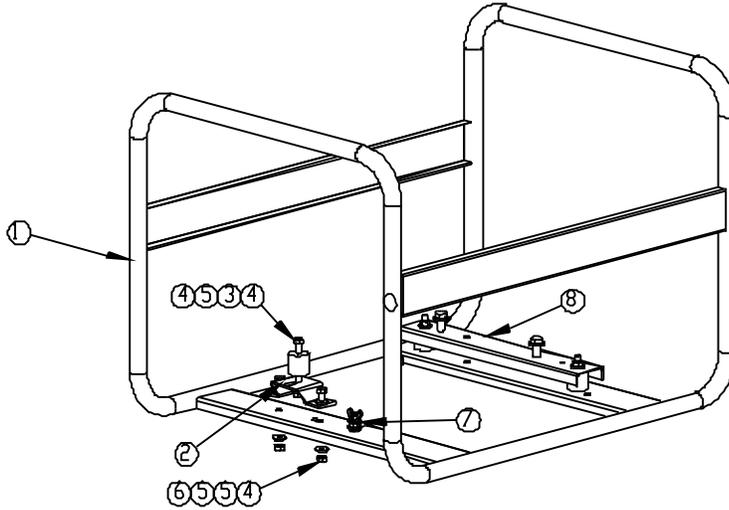
A.C. WIRING SCHEMATIC



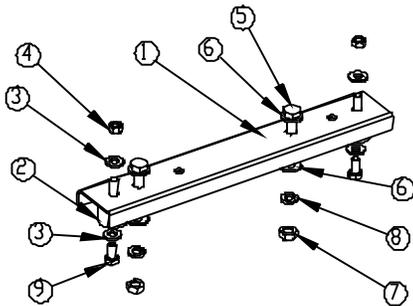
SECTION 3

39408/39321 GENERATOR PARTS AND PART LISTS

Frame and Parts list for
SKU # 39408/39321



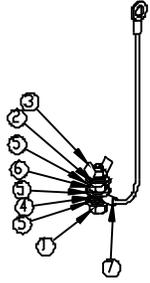
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	FRA0001-1	Frame Assembly, E4500/5000
2	1	BRA0044-1	Alternator Bracket
3	1	VIB0009	Vibration Isolator, 30 X 30
4	4	NUTM080001	Nut, M8 - Nylon Insert
5	5	WASM080001	Flatwasher, M8
6	2	SCRM080002	Bolt, M8 X 16
7	1	Ground Assembly	Ground Wire Assembly
8	1	Sub-Frame Assembly	Engine Sub-Frame Assembly



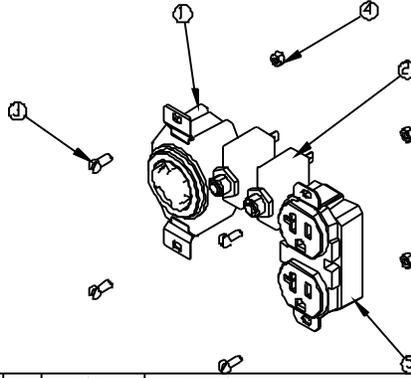
Engine Sub-Frame Assembly

ITEM	QTY	PART NO.	DESCRIPTION
1	1	SUB0001-1	Engine Sub-Frame
2	2	VIB0010	Vibration Isolator
3	4	WASM080001	Flatwasher, M8
4	2	NUTM080001	Nut, M8 - Nylon Insert
5	2	SCRM100001	Bolt, M10 x 40 Z
6	4	WASM100002	Flatwasher, M10 Z
7	2	NUTM100001	Nut, M10
8	2	WASM100001	Lockwasher, M10
9	2	SCRM080002	Bolt, M8 X 16

Ground Wire Assembly

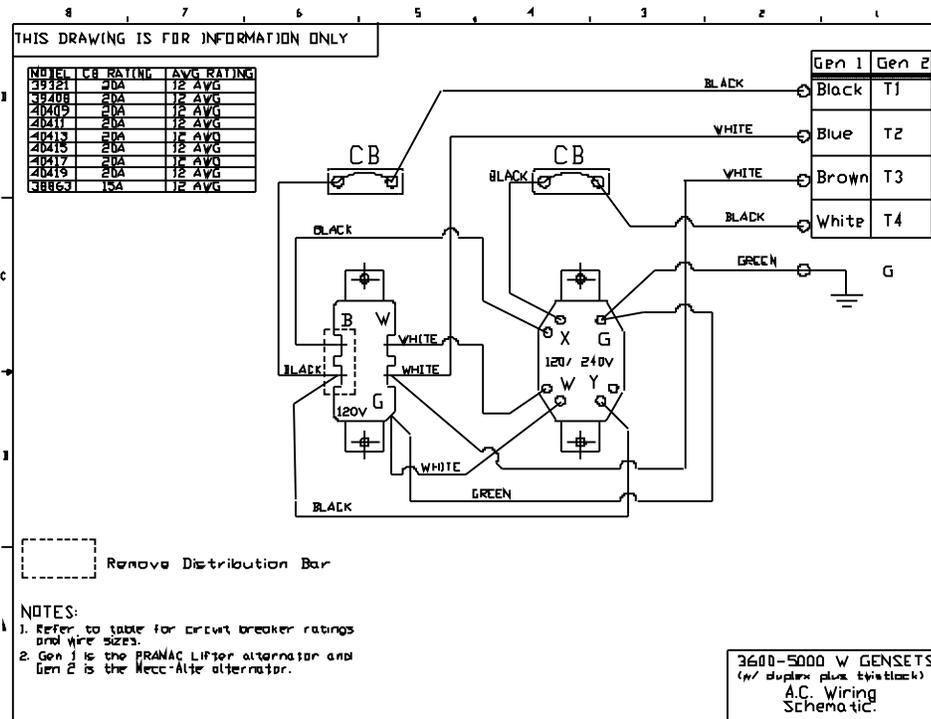


ITEM	QTY	PART NO.	DESCRIPTION
1	1	SCR0310001	Bolt, 5/16"x18xl, Grade 5
2	1	WASM080002	N8 Lockwasher
3	1	NUT0310001	Wingnut, 5/16"
4	1	WAS0310001	Starwasher, 5/16"
5	3	WASM080001	Flatwasher, N8
6	1	NUT0310002	Nut, 5/16-18 Grade 5
7	1	WIR0004	Wire, Ground - E3100-5000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	REC0003	30A 125/250V, Twistlock Receptacle
2	2	CIR0004	20A Thermal Circuit Breaker
3	4	SCR0250001	Bolt, #8-32x3/8 Phil Pan HD W/S Z
4	4	NUT0250001	Nut, #8 Nylon Insert
5	1	REC0001	20A Duplex Receptacle

A.C. WIRING SCHEMATIC



Notes