

# CHICAGO

## Electric Generators

# GENERATOR USER MANUAL



## Model Numbers

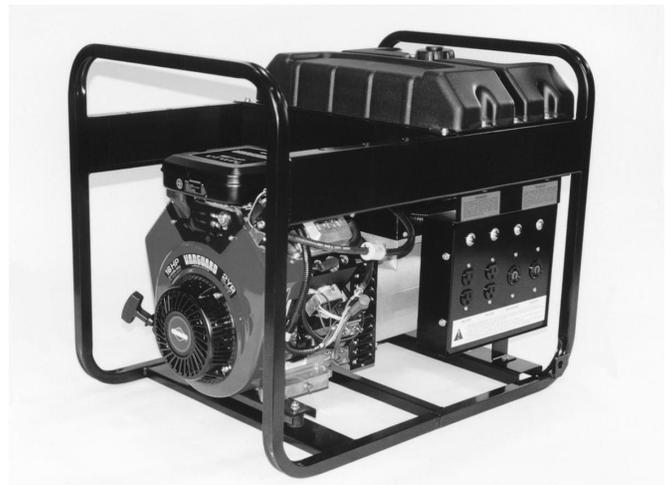
39461	42723
39982	42724
39984	42725
40423	42726
40814	42727
40827	42728

### 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.

Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_





## LIMITED 1 YEAR WARRANTY STATEMENT

Harbor Freight Tools makes every effort to assure that its 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

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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.

## 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.**



**WARNING: 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. DO NOT PERMIT THE BATTERY FLUID TO COME IN CONTACT WITH YOUR CLOTHES OR SKIN.**



**WARNING: ALWAYS DISCONNECT THE NEGATIVE (-) BATTERY CABLE FROM THE BATTERY BEFORE PERFORMING BATTERY SERVICE OR BEFORE PERFORMING ANY ELECTRICAL SERVICE ON THE GENERATOR OR ENGINE.**

## 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.

## GENERAL BATTERY INSTALLATION

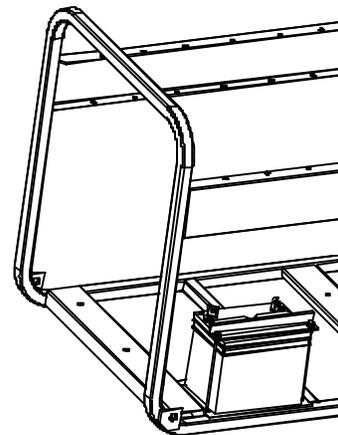


**WARNING: DO NOT ATTEMPT TO OPERATE THE GENERATOR WITHOUT THE BATTERY INSTALLED UNLESS BOTH THE RED(+) AND BLACK(-) CABLE ENDS ARE COMPLETELY INSULATED OR THE CABLES ARE REMOVED ENTIRELY.**

**BATTERY SPECIFICATION: 145 CCA; INTERSTATE BATTERY™ Model SP-18 or Equivalent**

With reference to the diagram below and to the safety guidelines that must be respected for handling batteries, install the battery as follows:

1. Place the battery into the battery tray.
2. Place the battery hold down bar (oriented as shown) on top of the battery.
3. Install qty (2) battery hold down bolts and washers as shown.  
NOTE: Some versions require lock washers and nuts on lower side of battery tray.
4. Gently and evenly tighten the battery hold down bolts. Do not crush and or deform the battery case in the tightening process.
5. Insure that the engine key switch is in the "off" position.
6. Connect the red (+) cable to the battery (+) terminal using the supplied bolt, washers and nut. Tighten the bolt.
7. Connect the black (-) cable to the battery (-) terminal using the supplied bolt, washers and nut. Tighten the bolt.



Battery Installation Diagram

## 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 APPARATUSSES (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			
SKU Number	Voltage	Cont. Watts	Surge Watts
40814	120/240 VAC (Single Phase)	4400 Watts	5000 Watts
42723		37.5 Amps @ 120 VAC	42 Amps @ 120 VAC
42724		18.5 Amps @ 240 VAC	21 Amps @ 240 VAC
39461	120/240 VAC (Single Phase)	6100 Watts	8000 Watts
40423		51 Amps @ 120 VAC	67 Amps @ 120 VAC
42725		26 Amps @ 240 VAC	33 Amps @ 240 VAC
42726			
39982	120/240 VAC (Single Phase)	9350 Watts	10000 Watts
42727		78 Amps @ 120 VAC	83 Amps @ 120 VAC
		39 Amps @ 240 VAC	41.5 Amps @ 240 VAC
39984	120/240 VAC (Single Phase)	10500 Watts	12000 Watts
40827		88 Amps @ 120 VAC	100 Amps @ 120 VAC
42728		44 Amps @ 240 VAC	50 Amps @ 240 VAC

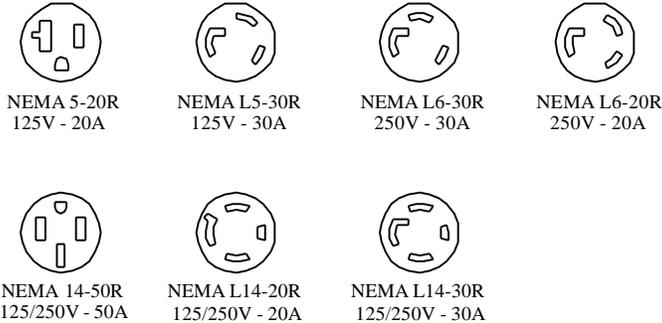
Table 3 Engine Type		
SKU Number	Engine	HP
40814	Honda GX 270	9.0hp
42723	Honda GX 270	9.0hp
42724	Honda GX 270	9.0hp
39461	Honda GX 390	13.0hp
40423	Honda GX 390	13.0hp
42725	Honda GX 390	13.0hp
42726	Honda GX 390	13.0hp
39982	Vanguard	16.0hp
42727	Vanguard	16.0hp
39984	Vanguard	18.0hp
40827	Honda GX 620	20.0hp
42728	Honda GX 620	20.0hp

## 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 1/2 % for each 1000 feet above mean sea level.

## RECEPTACLE DETAILS

The following receptacle details are to aid in identifying mating plugs. Use this chart and compare to your genset to determine which receptacle(s) you have. Note the NEMA configuration and use this to purchase the correct mating plug.



## 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. **DO NOT EXCEED THE INDIVIDUAL RECEPTACLE RATINGS AS SHOWN IN THE AMPERAGE RATE TABLE. DO NOT EXCEED THE TOTAL GENERATOR RATING SHOWN IN TABLE 2 PERFORMANCE SPECIFICATIONS.** All generator units are equipped with a “PUSH TO RESET” Circuit Breaker.

**AMPERAGE RATE TABLE**

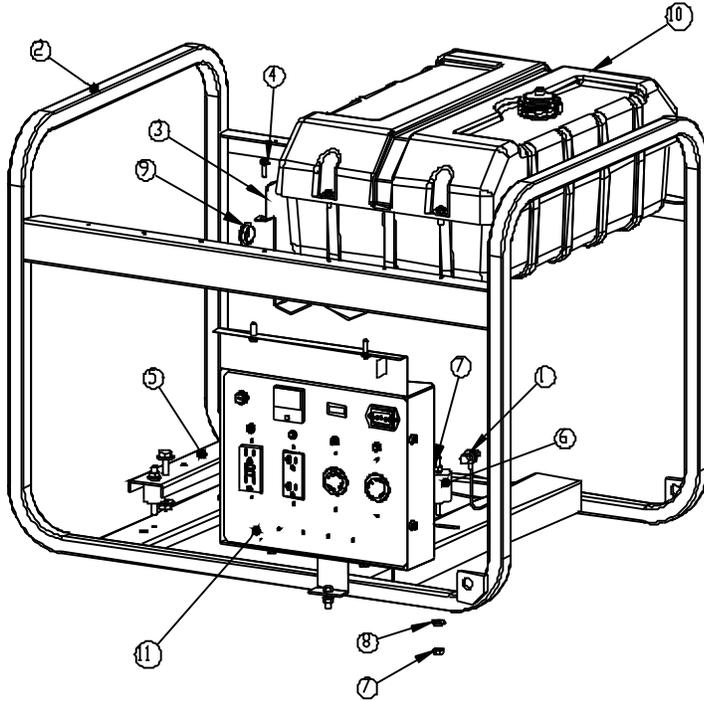
Model/ SKU	NEMA 5-20R 120V – Duplex	NEMA L5-30R 120V Twistlock	NEMA L14-30R 125V/250V Twistlock	NEMA L6-30R 250V Twistlock	NEMA 14-50R 125V/250V Straight Blade	NEMA L6-20R 250V Twistlock	NEMA L14-20R 125V/250V Twistlock
39461	20Amps	30Amps	30Amps	30Amps	N/A	N/A	N/A
39982	15Amps	30Amps	30Amps	25Amps	35Amps	N/A	N/A
39984	20Amps	30Amps	30Amps	30Amps	40Amps	N/A	N/A
40423	20Amps	30Amps	30Amps	30Amps	N/A	N/A	N/A
40814	20Amps	20Amps	N/A	20Amps	N/A	20Amps	20Amps
40827	20Amps	30Amps	30Amps	30Amps	45Amps	N/A	N/A
42723	20Amps	N/A	20Amps	N/A	N/A	N/A	20Amps
42724	20Amps	20Amps	N/A	20Amps	N/A	20Amps	20Amps
42725	20Amps	N/A	20Amps	N/A	N/A	N/A	20Amps
42726	20Amps	30Amps	30Amps	30Amps	N/A	N/A	N/A
42727	15Amps	30Amps	30Amps	25Amps	35Amps	N/A	N/A
42728	20Amps	30Amps	30Amps	30Amps	40Amps	N/A	N/A

## 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. NIETHER 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 MY CHANGE OR VARY FROM THOSE SHOWN.

## SECTION 2

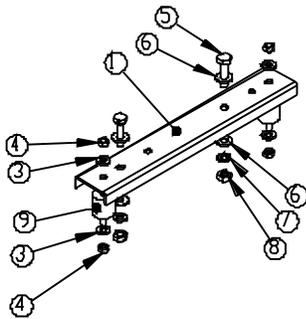
### 40814/42723/42724 GENERATOR PARTS AND PART LISTS



**Frame and Parts list for  
SKU # 40814/42723/42724**

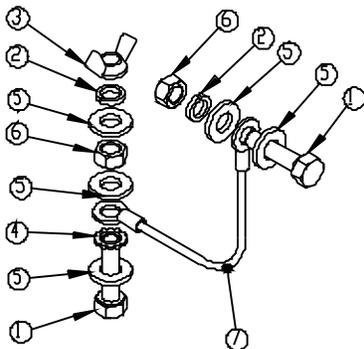
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	Ground Assembly	Ground Wire Assembly
2	1	FRA0007-1	Frame Assembly
3	1	SHD0001-1	Heat Shield
4	2	SCRM060003	Flange Bolt, M6x20 Z, Thr Form
5	1	Sub-Frame Assy	Engine Sub-Frame Assembly
6	1	VIB0011	Vibro Isolator - 40X40
7	2	NUTM080001	Nut, M8 - Nylon Insert
8	1	WASM080001	Flatwasher, M8
9	1	GRM0003	Grammet
10	1	Fuel Assembly	Fuel System Assembly
11	1	Panel Assembly	Control Panel Assembly

Engine Sub-Frame Assembly

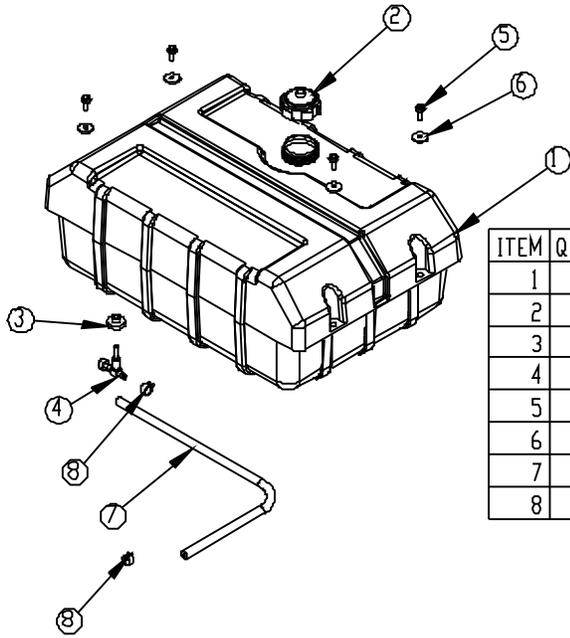


ITEM	QTY	PART NO.	DESCRIPTION
1	1	SUB0001-1	Engine Sub-Frame
3	4	WASM080001	Flatwasher, M8
4	4	NUTM080001	Nut, M8 - Nylon Insert
5	2	SCRM100001	Bolt, M10 x 40 Z
6	4	WASM100002	Flatwasher, M10 Z
7	2	WASM100001	Lockwasher, M10
8	2	NUTM100001	Nut, M10
9	2	VIB0010	Vibro Isolator - 30X30

Ground Wire Assembly

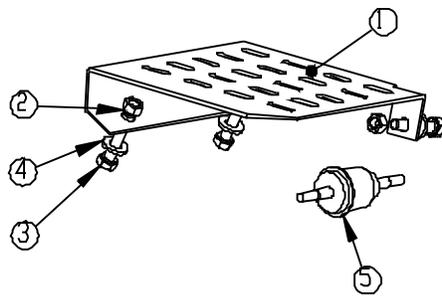


ITEM	QTY	PART NO.	DESCRIPTION
1	2	SCR0310001	Bolt, 5/16"x18x1, Grade 5
2	2	WASM080002	M8 Lockwasher
3	1	NUT0310001	Wingnut, 5/16"
4	1	WAS0310001	Starwasher, 5/16"
5	5	WASM080001	Flatwasher, M8
6	2	NUT0310002	Nut, 5/16-18 Grade 5
7	1	WIR0004	Wire, Ground - E3100-5000



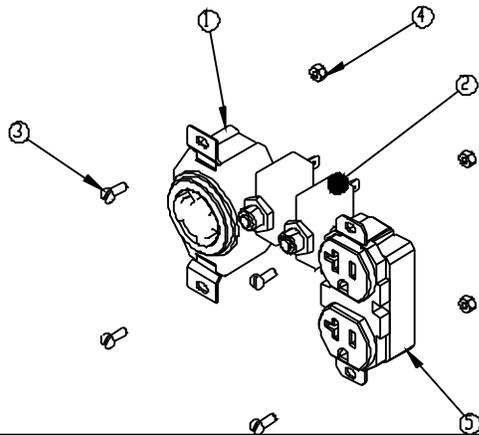
### Fuel System

ITEM	QTY	PART NO.	DESCRIPTION
1	1	TAN0005	Fuel Tank, 8 Gallon
2	1	CAP0004	Fuel Cap, Vented
3	1	GRM0002	Grommet, Fuel Valve
4	1	VAL0001	Fuel Valve
5	4	SCRM060003	Flange Bolt, M6x20 Z, Thread Forming
6	4	WASM060001	Fender Washer, M6 x 24mmOD
7	1	HOS0001	Fuel Hose, 20.25' Long
8	2	CLA0002	Hose Clamp, Spring 1/4", DW-8ST ZD

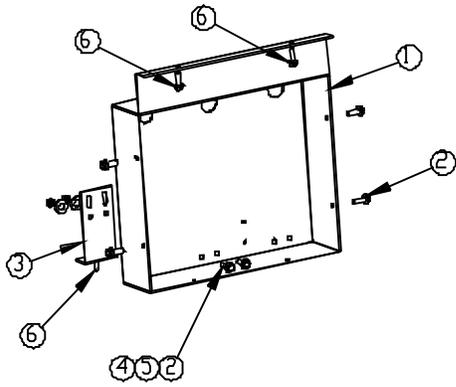


### Governor Cover

ITEM	QTY	PART NO.	DESCRIPTION
1	1	SHD0003-1	Governor Cover
2	3	NUTM080001	Nut, M8 - Nylon Insert
3	3	SCRM080001	Bolt, M8x1.25x30 (8.8)Z
4	3	WASM080001	Flatwasher, M8
5	1	FIL0001	Fuel Filter

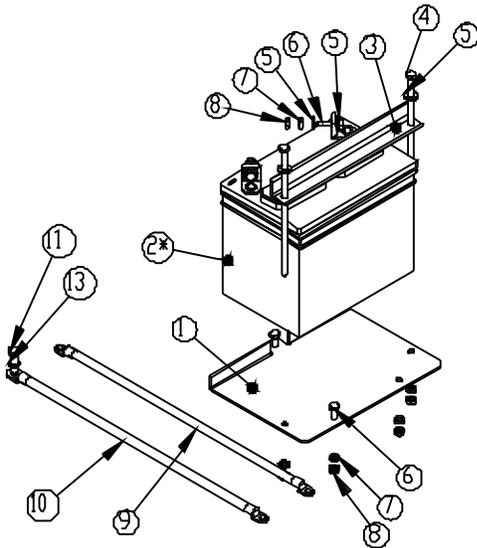


ITEM	QTY	PART NO.	DESCRIPTION
1	1	REC0003	30A 125/250V, Twistlock Receptacle
2	2	CIR0004	20A Thermal Circuit Breaker
3	4	SCR0250001	Bolt, #8-32x3/8 Phil Pan HD N/S Z
4	4	NUT0250001	Nut, #8 Nylon Insert
5	1	REC0001	20A Duplex Receptacle



### Control Panel Box

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	PAB0001-1	Control Panel Box
2	4	SCRM060001	Flange Bolt, M6x20 Z
3	1	BRA0003-1	Panel Box Brace
4	2	NUTM060002	Nut, M6
5	2	WASM080001	Flatwasher, M8
6	3	SCRM060003	Flange Bolt, M6x20 Z, Thread Forming

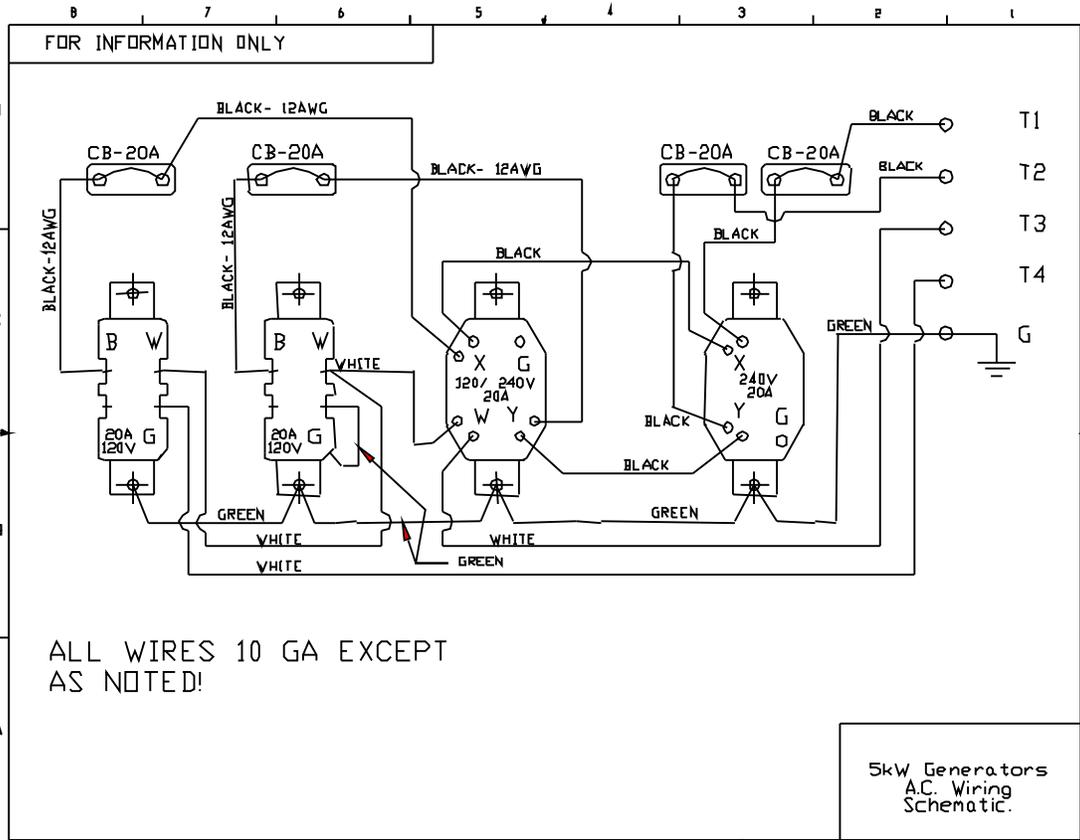
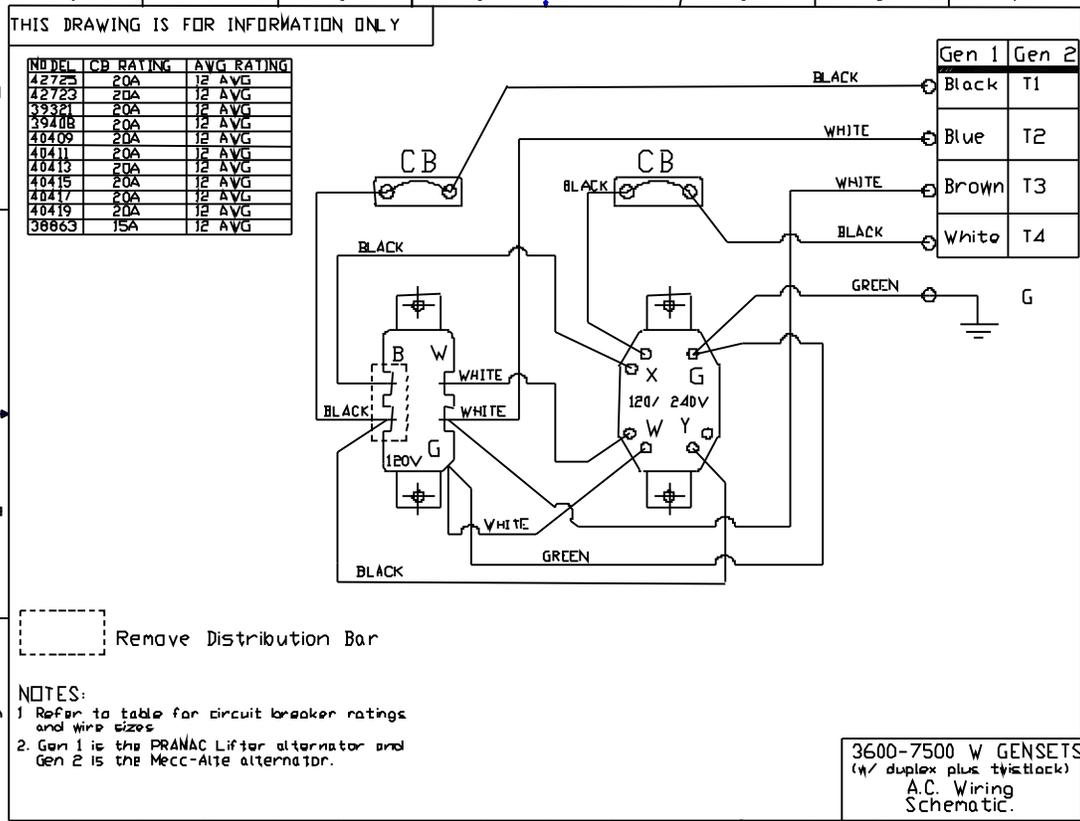


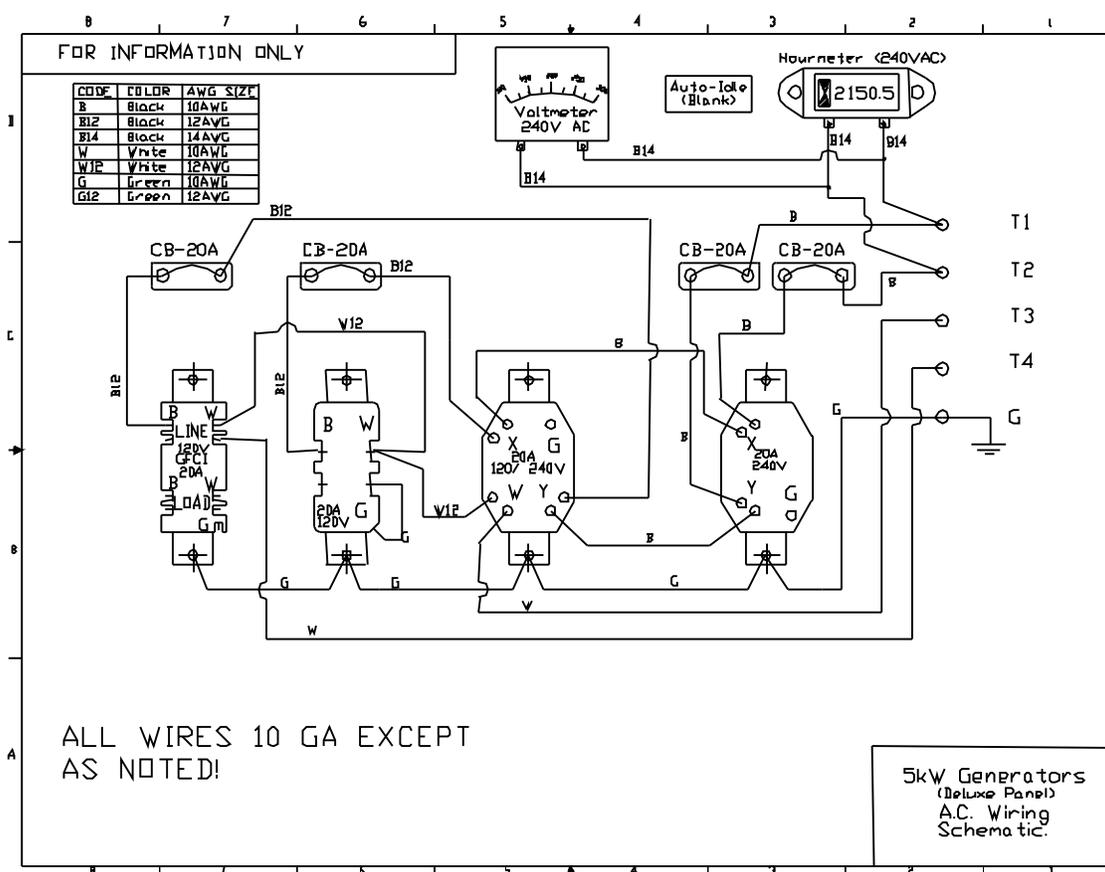
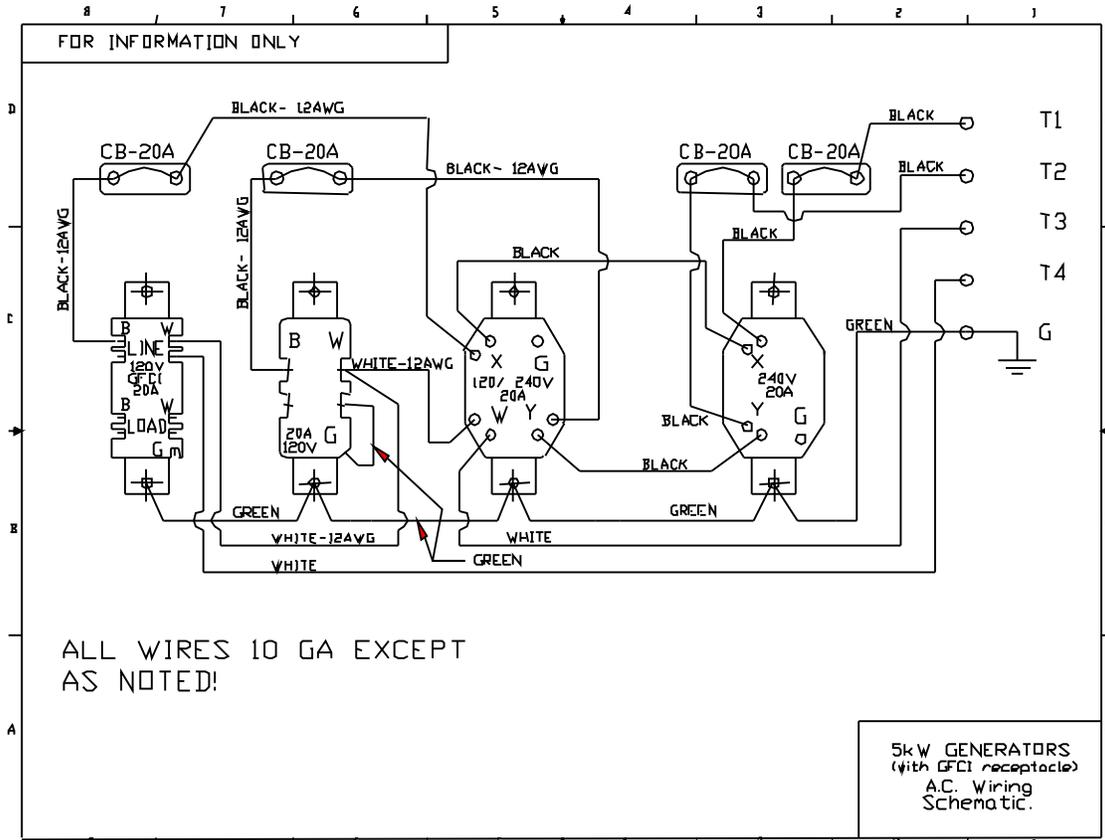
### Battery Assembly (Elec. Start Only)

ITEM	QTY	PART NO.	DESCRIPTION
1	1	PLA0003-1	Battery Tray
2	1	BAT12V0001	Battery (12V 145CCA)
3	1	BRA0006-1	Hold Down Bar, Battery
4	2	SCR0250003	Bolt, 1/4" X 7"
5	6	WAS0250002	1/4" Flatwasher
6	4	SCR0250002	Bolt, 1/4"-20 X 1.00 (Z)
7	7	WAS0250001	1/4" Lockwasher
8	7	NUT0250003	Nut, 1/4"-20
9	1	WIR0007	Battery Cable, Positive
10	1	WIR0003	Battery Cable, Negative
11	1	SCRM080001	Bolt, M8x1.25x30 (8.8)Z
12	1	WASM080001	Flatwasher, M8
13	1	WASM080002	M8 Lockwasher

\*NOTE: Item 2 (battery) is NOT included. Shown for information only.

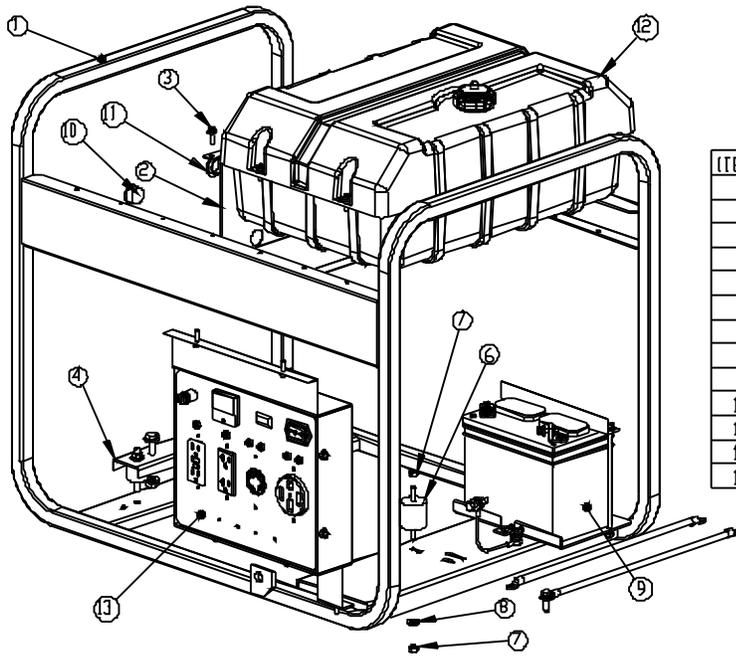
# A.C. WIRING SCHEMATICS





## SECTION 3

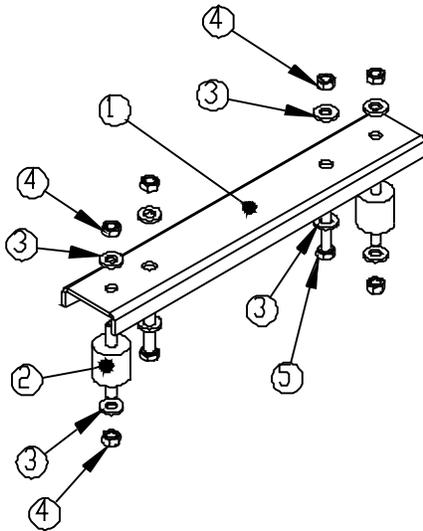
### 39461/39982/40423/42725/42726/42727/39984/40827/42728 GENERATOR PARTS AND PART LIST



**Frame and Parts list for  
SKU # 39461/39982/40423/  
42725/42726/42727/39984/40827/  
42728**

ITEM	QTY	PART NO.	DESCRIPTION
1	1	FRA0006-1	Frame Assembly
2	1	SHI0002-1	Heat Shield
3	2	SCRN060003	Flange Bolt, M6x20 Z, Thread Forming
4	1	Sub-Frame Assy	Engine Sub-Frame Assembly
5	1	Ground Assembly	Ground Wire Assembly
6	1	VIB0012	Vibro Isolator - 40X40
7	2	NUTM080001	Nut, M8 - Nylon Insert
8	1	WASM080001	Flatwasher, M8
9	1	Battery Assembly	Battery Assembly, Electric Start
10	1	CAP0001	Plug
11	1	GRN0003	Grommet
12	1	Fuel Assembly	Fuel System Assembly
13	1	Panel Assembly	Control Panel Assembly

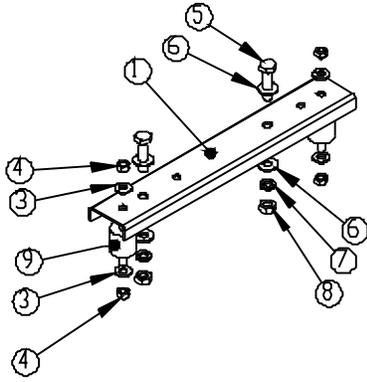
For Items 9, 12, and 13 please refer to Section 2 of this manual.



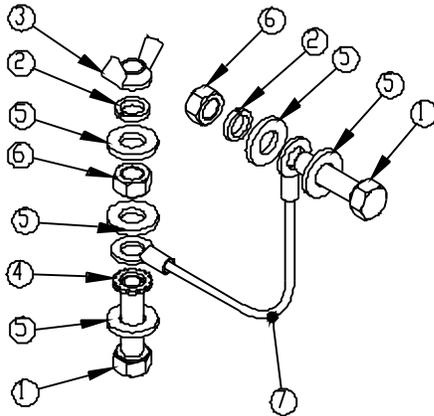
Sub-Frame Assembly (V-Twin Engines)

ITEM	QTY	PART NO.	DESCRIPTION
1	1	SUB0002-1	Sub-Frame, Engine
2	2	VIB0010	Vibro Isolator - 30X30
3	8	WASM080001	Flatwasher, M8
4	6	NUTM080001	Nut, M8 - Nylon Insert
5	2	SCRM080003	Bolt, M8x1.25x40 (8.8)Z

### Engine Sub-Frame Assembly

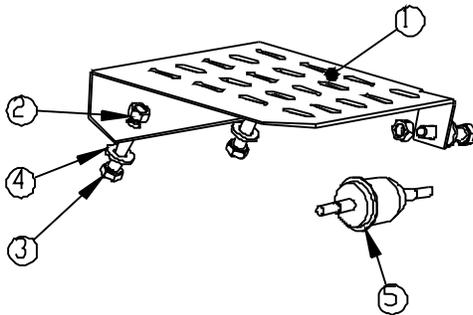


ITEM	QTY	PART NO.	DESCRIPTION
1	1	SUB0001-1	Engine Sub-Frame
3	4	WASM080001	Flatwasher, M8
4	4	NUTM080001	Nut, M8 - Nylon Insert
5	2	SCRM100001	Bolt, M10 x 40 Z
6	4	WASM100002	Flatwasher, M10 Z
7	2	WASM100001	Lockwasher, M10
8	2	NUTM100001	Nut, M10
9	2	VIB0010	Vibro Isolator - 30X30



### Ground Wire Assembly

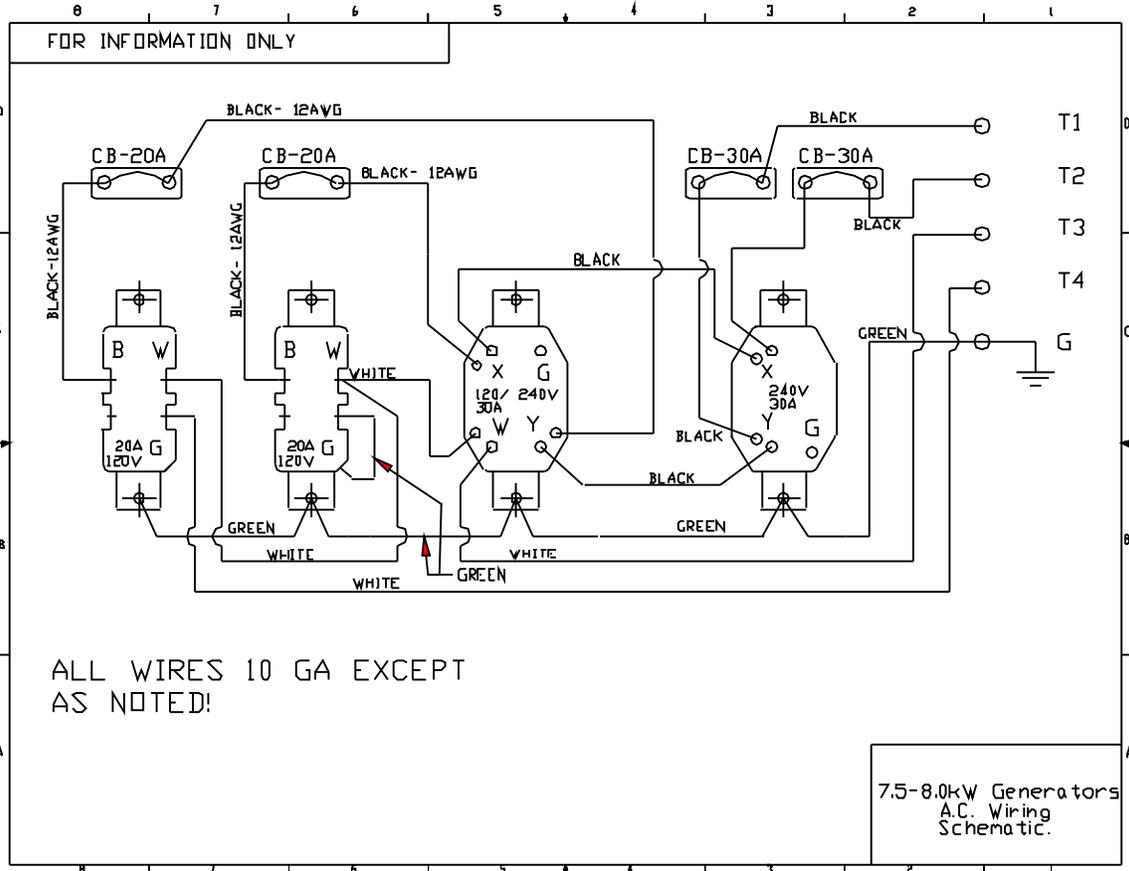
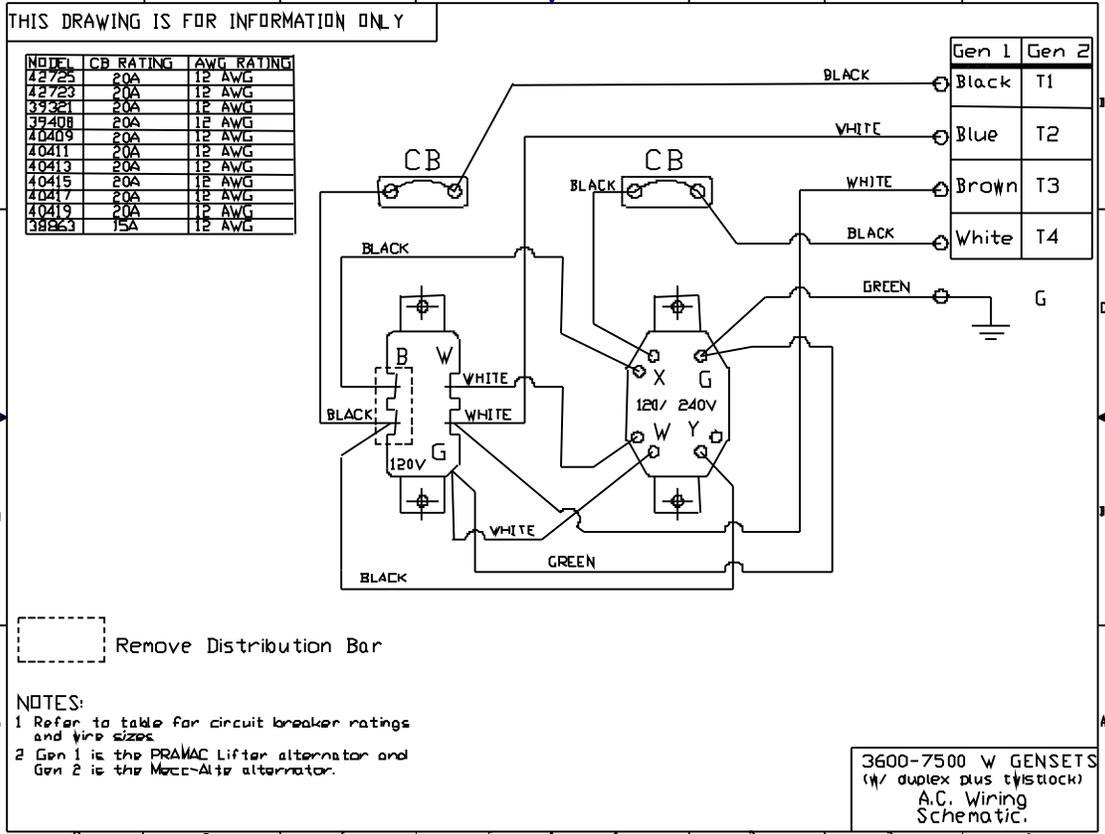
ITEM	QTY	PART NO.	DESCRIPTION
1	2	SCR0310001	Bolt, 5/16"x18x1, Grade 5
2	2	WASM080002	M8 Lockwasher
3	1	NUT0310001	Wingnut, 5/16"
4	1	WAS0310001	Starwasher, 5/16"
5	5	WASM080001	Flatwasher, M8
6	2	NUT0310002	Nut, 5/16-18 Grade 5
7	1	WIR0004	Wire, Ground - E3100-5000

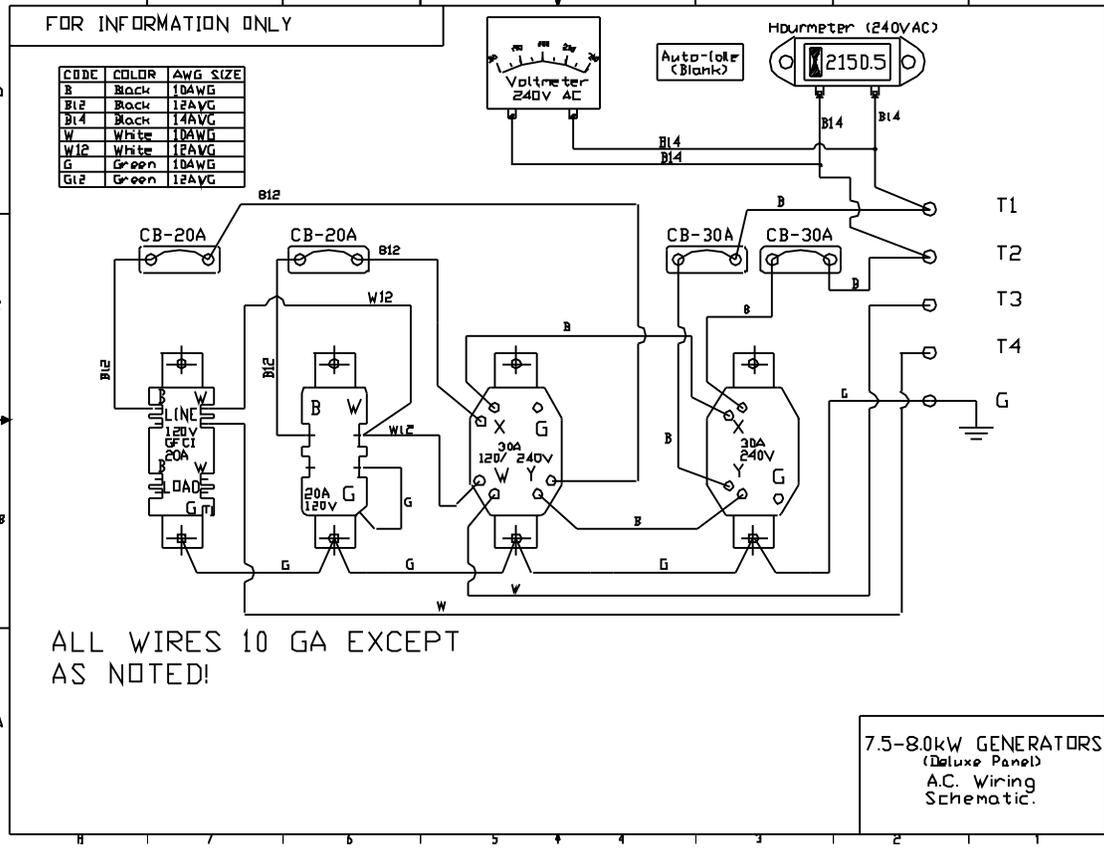
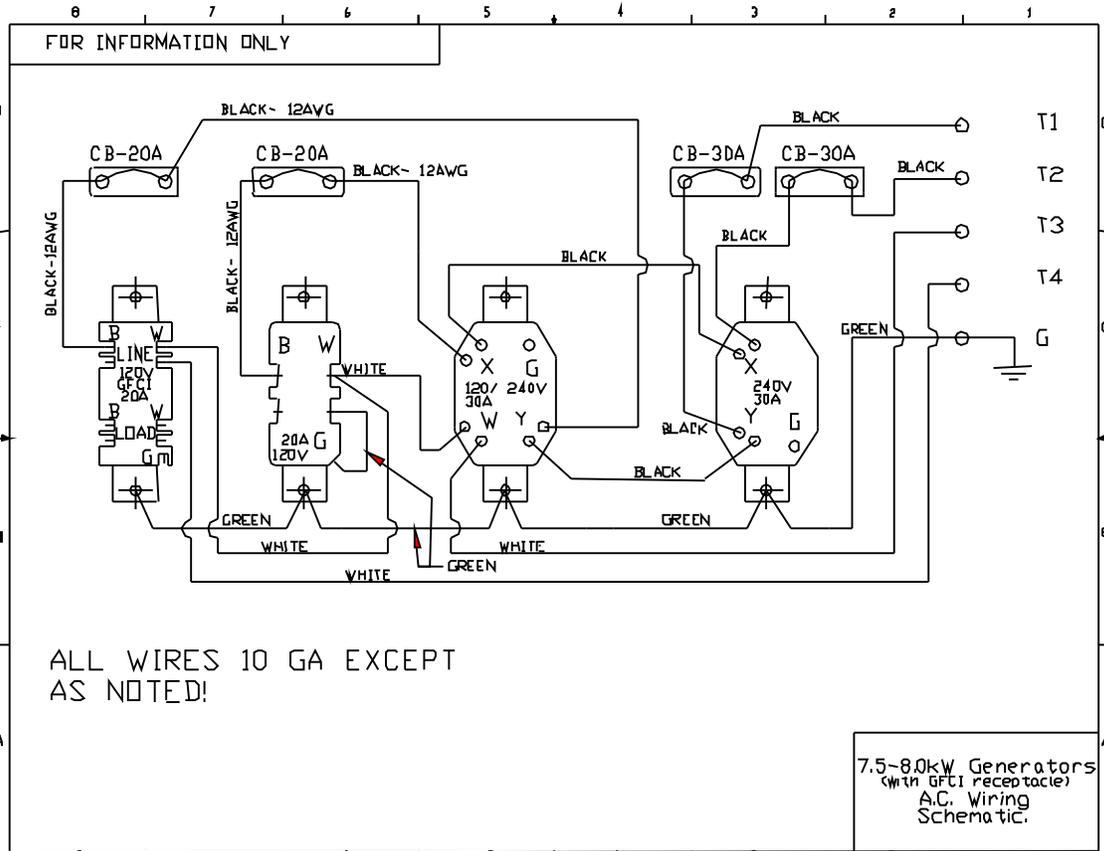


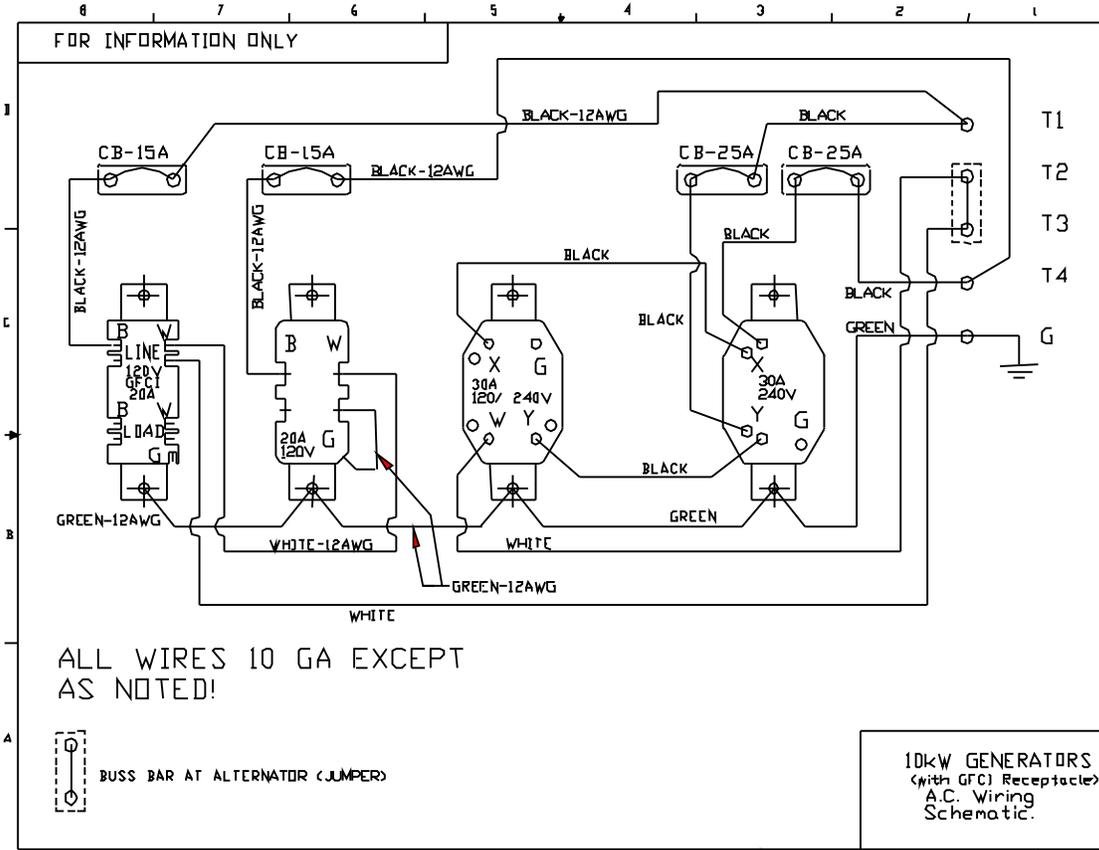
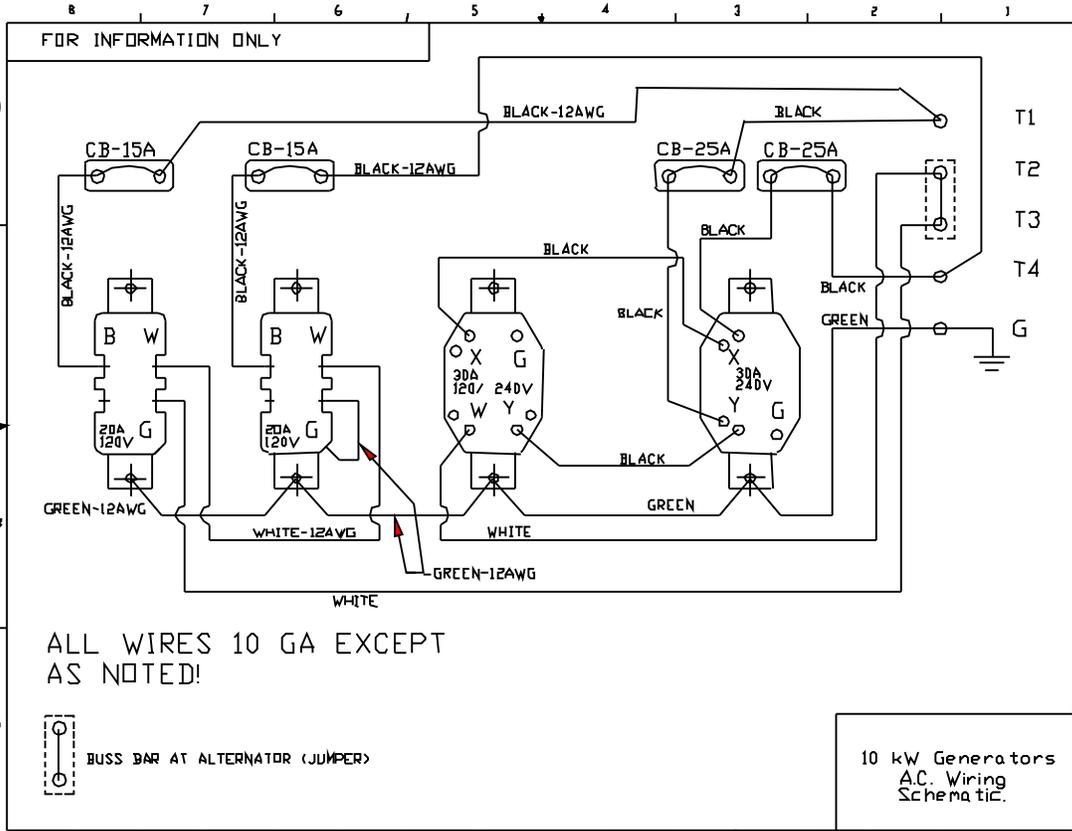
### Governor Cover

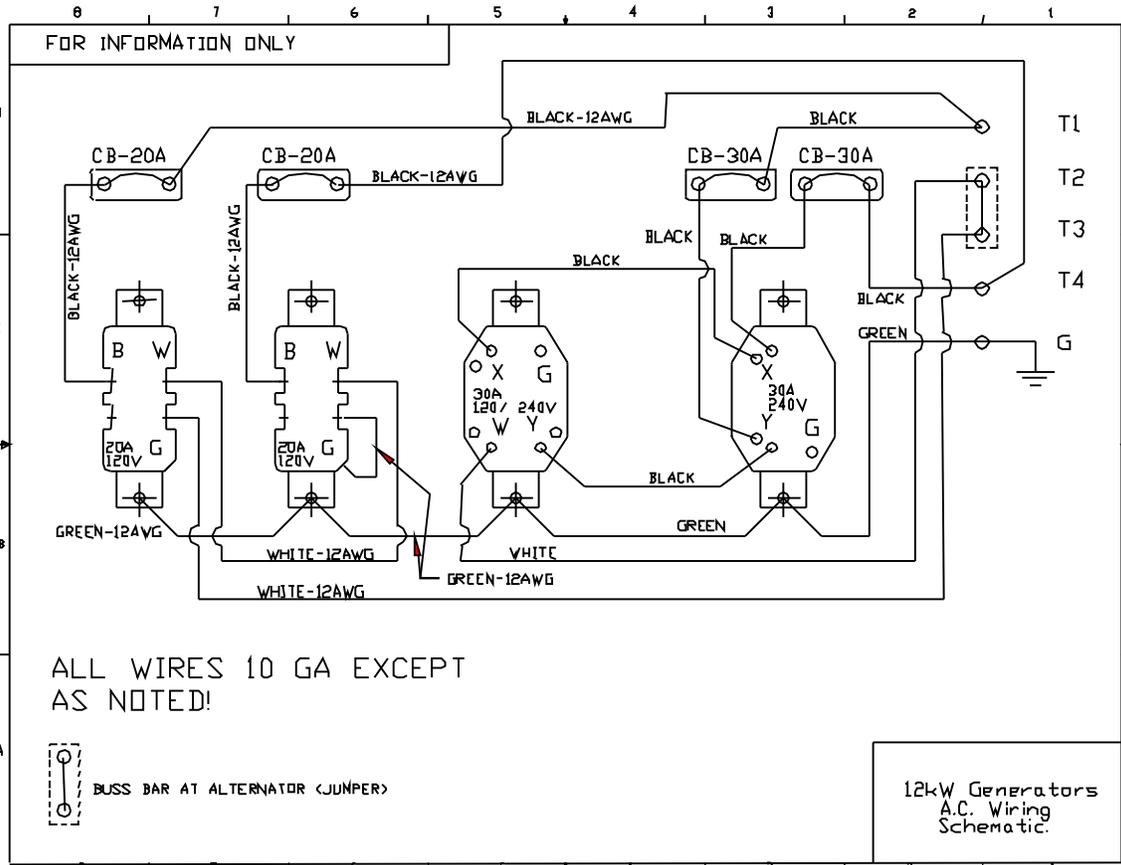
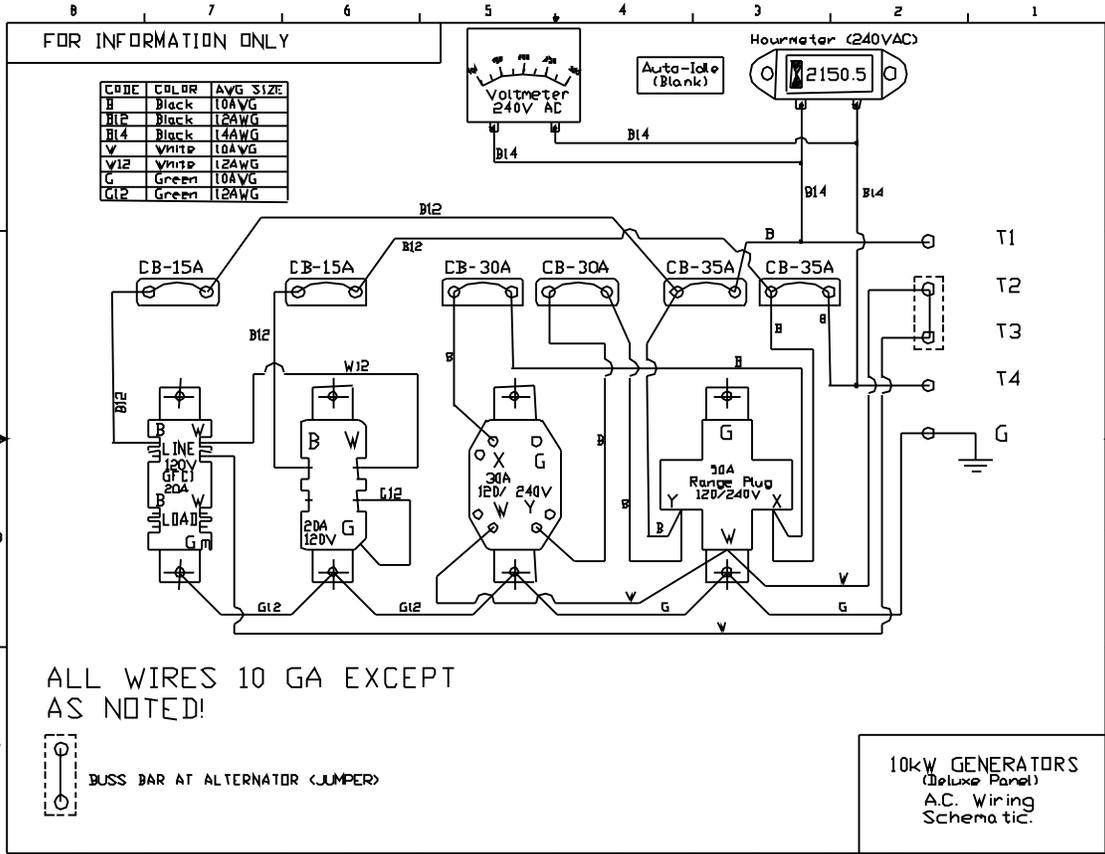
ITEM	QTY	PART NO.	DESCRIPTION
1	1	SHD0003-1	Governor Cover
2	3	NUTM080001	Nut, M8 - Nylon Insert
3	3	SCRM080001	Bolt, M8x1.25x30 (8.8)Z
4	3	WASM080001	Flatwasher, M8
5	1	FIL0001	Fuel Filter

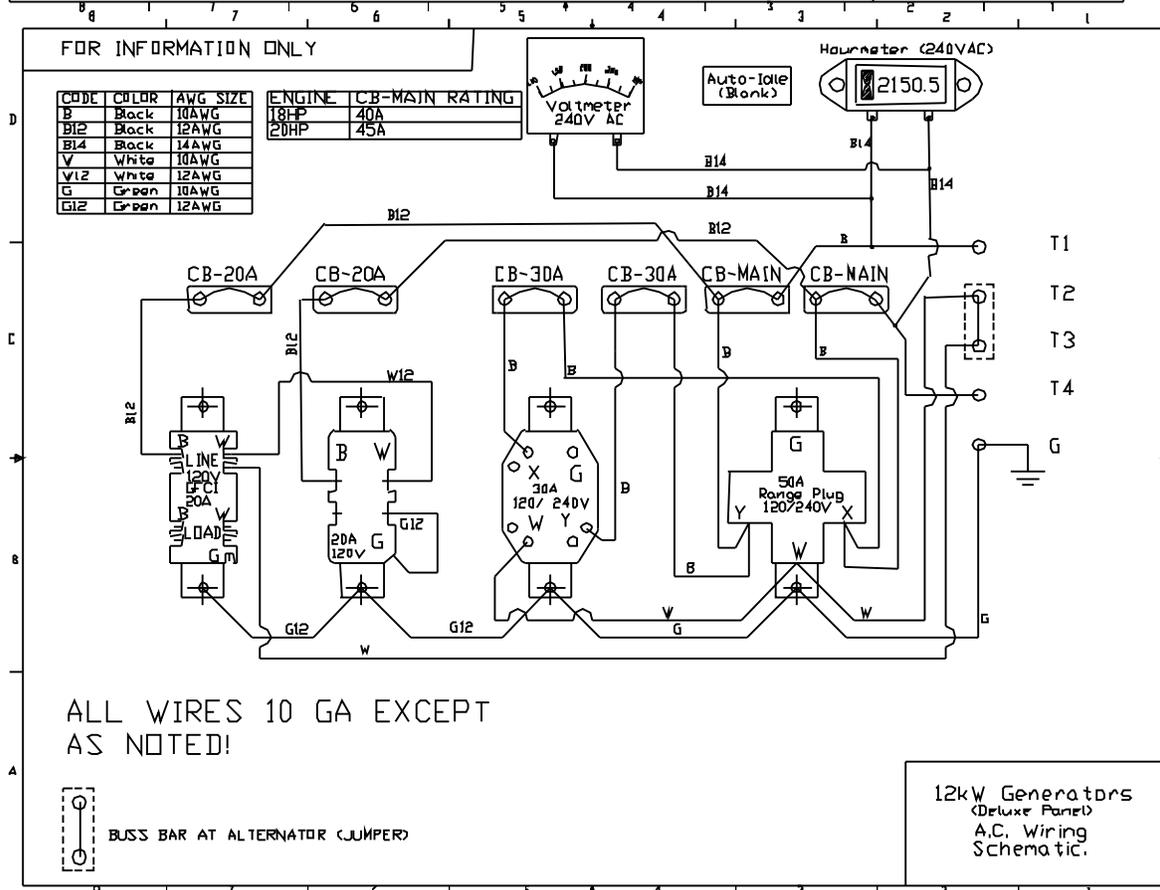
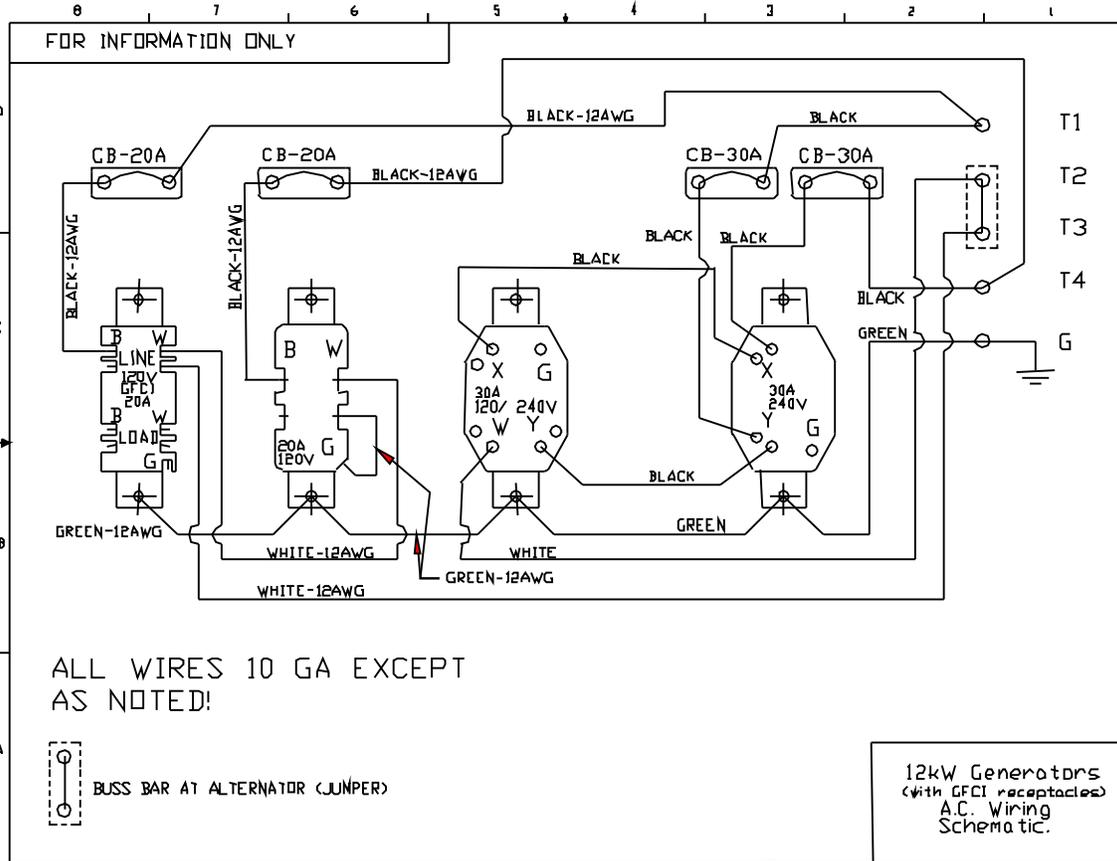
# A.C. WIRING SCHEMATICS





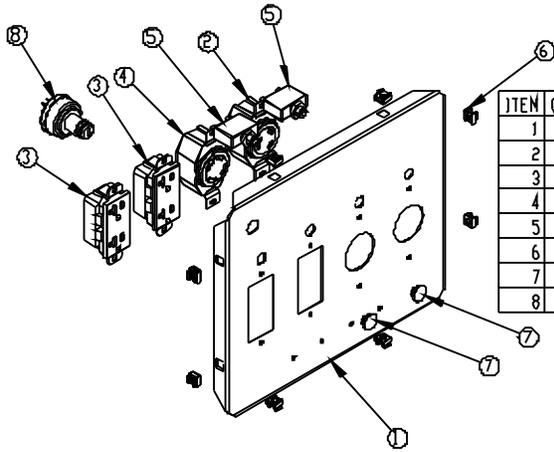






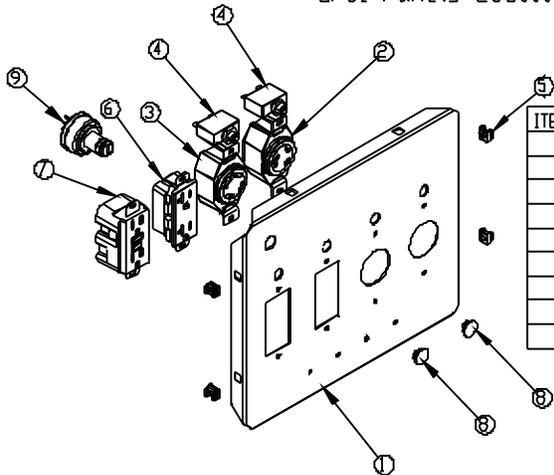
## SECTION 4 CONTROL PANELS

Standard Panel ES5000



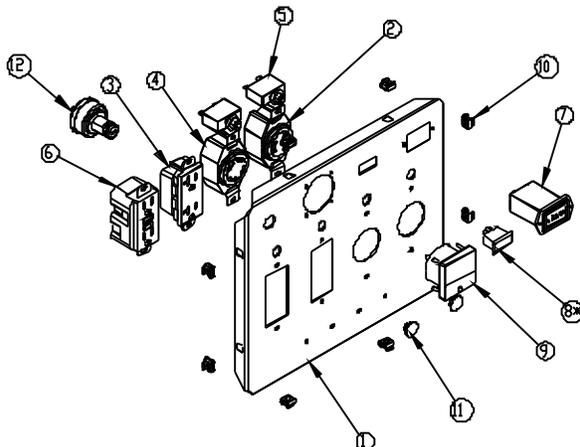
ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0002-1	Panel Face, Standard
2	1	RECO008	20A/250V Twist.(NEMA L6-20R)
3	2	RECO006	20A Duplex, Receptacle
4	1	RECO009	20A, 125/250V Twistlock Rec.
5	2	CIR0004	20A Thermal Circuit Breaker
6	8	NUTM060001	M6 Cage Nut
7	2	PLU0007	Plug
8	1	SW10002	Key Switch

GFCI Panels ES5000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0002-1	Panel Face, Standard
2	1	RECO008	20A/250V Twist.(NEMA L6-20R)
3	1	RECO009	20A, 125/250V Twistlock Rec.
4	2	CIR0004	20A Thermal Circuit Breaker
5	4	NUTM060001	M6 Cage Nut
6	1	RECO006	20A Duplex, Receptacle
7	1	RECO002	20A GFCI Receptacle
8	2	PLU0007	Plug
9	1	SW10002	Key Switch

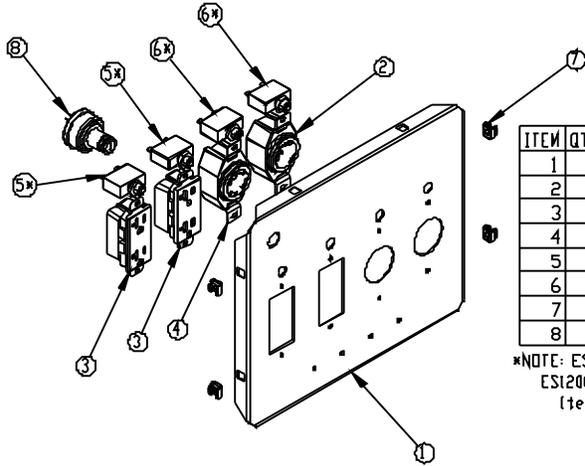
Deluxe Panel ES5000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0001-1	Panel Face, Deluxe 5/7.5 kW
2	1	RECO008	20A/250V Twist.(NEMA L6-20R)
3	1	RECO006	20A Duplex, Receptacle
4	1	RECO009	20A, 125/250V Twistlock Rec.
5	2	CIR0004	20A Thermal Circuit Breaker
6	1	RECO002	20A GFCI Receptacle
7	1	HNT0001	Hourmeter
8	1	PLU0003	Plug
9	1	VMT0001	Voltmeter, 240 VAC
10	8	NUTM060001	M6 Cage Nut
11	2	PLU0007	Plug
12	1	SW10002	Key Switch

\*NOTE: For generators equipped with Idle Control, PLU0003 is replaced with SW10001.

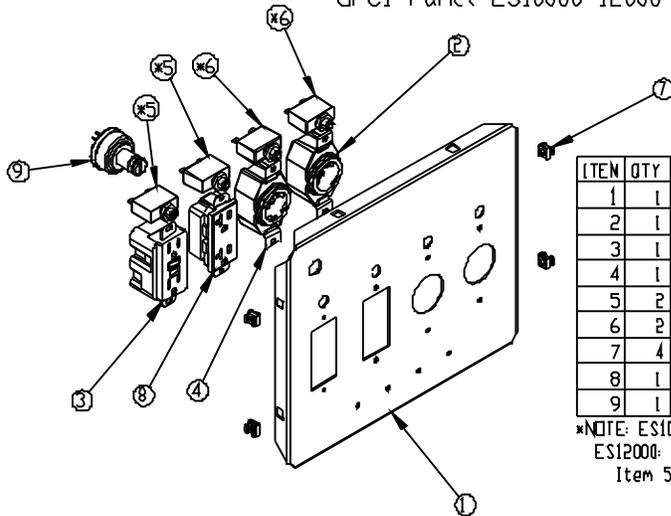
### Standard Panel ES10000-12000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0002-1	Panel Face, Standard
2	1	REC0004	30A, 250V Twistlock Rec.
3	2	REC0006	20A Duplex, Receptacle
4	1	REC0003	30A 125/250V, Twistlock Rec.
5	2	CIR0003	15A Thermal Circuit Breaker
6	2	CIR0008	25A Thermal Circuit Breaker
7	4	NUTM060001	M6 Cage Nut
8	1	SW10002	Key Switch

\*NOTE: ES10000 As Shown,  
ES12000:  
Item 5 - CIR0004(20A), Item 6 - CIR0005(30A)

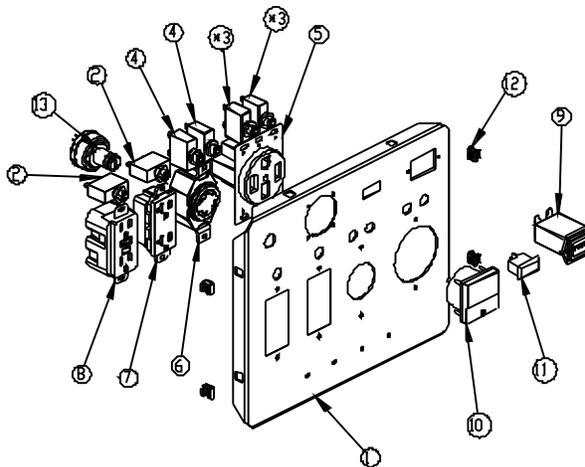
### GFCI Panel ES10000-12000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0002-1	Panel Face, Standard
2	1	REC0004	30A, 250V Twistlock Rec.
3	1	REC0002	20A GFCI Receptacle
4	1	REC0003	30A 125/250V, Twistlock Rec.
5	2	CIR0003	15A Thermal Circuit Breaker
6	2	CIR0008	25A Thermal Circuit Breaker
7	4	NUTM060001	M6 Cage Nut
8	1	REC0006	20A Duplex, Receptacle
9	1	SW10002	Key Switch

\*NOTE: ES10000 As Shown.  
ES12000:  
Item 5 - CIR0004(20A), Item 6 - CIR0005(30A)

### Deluxe Panel ES10000-12000



ITEM	QTY	PART NO.	DESCRIPTION
1	1	PAF0003-1	Panel Face, Deluxe 10/12 kV
2	2	CIR0004	20A Thermal Circuit Breaker
3	2	CIR0010	35A Thermal Circuit Breaker
4	2	CIR0005	30A Thermal Circuit Breaker
5	1	REC0005	50A, 125/250V Receptacle
6	1	REC0003	30A 125/250V, Twistlock Rec.
7	1	REC0006	20A Duplex, Receptacle
8	1	REC0002	20A GFCI Receptacle
9	1	HNT0001	Hourmeter
10	1	VMT0001	Voltmeter, 240 VAC
11	1	PLU0003	Plug
12	4	NUTM060001	M6 Cage Nut
13	1	SW10002	Key Switch

\*NOTE: ITEM 3, ES10000 as shown,  
ES12000 Vanguard: use CIR0006 (40A)  
ES12000 Honda: use CIR0011 (45A)

# NOTES