HONDA
Power
Equipment

SAFETY GUIDELINES GENERATORS

A Few Words About Safety

- Your safety, and the safety of others, is very important.
- This information alerts you to potential hazards that could hurt you or others.
- Of course, it is not practical or possible to warn you about all the hazards associated with operating or maintaining your Honda generator. You must use your own good judgment.
- Your safety is your responsibility. A little time spent in preparation will significantly reduce your risk of injury.
- Read and understand your owner's manual.
- Know what the controls do and how to operate them.
- Familiarize yourself with your Honda generator and its operation before you begin using it.
- Know how to quickly shut off your Honda generator in case of an emergency.

Keep Your Generator In Safe Operating Condition

- Read and understand the owner's manual before operating the generator. Failure to do so could result in personal injury or equipment damage.
- Always make a pre-operation inspection before you start the engine. You may prevent accident or equipment damage.
- All Honda generators are CSA certified. Never modify your generator. CSA certification requires the generator to be operated in its original condition only.
- Operate the generator on a level surface
- Do not connect an extension to the exhaust pipe.
- Connections for standby power to a building's electrical system must be made by a qualified electrician and must comply with all applicable laws and electrical codes.
- Improper connections can allow electrical current from the generator to back feed into the utility lines. Such back feed may electrocute utility company workers or others who contact the lines during a power outage, and when utility power is restored, the generator may explode, burn, or cause fires in the building's electrical system.
- Use an approved isolation/transfer switch to ensure that either grid or generator electricity (but never both) feed the panel at one time.
- When an extension cable is required, be sure to use a tough rubber sheathed flexible cable (IEC 245 or equivalent).
- Limit length of extension cables; 60 m for cables of 1.5, mm^2 and 100 m for cables of 2.5 mm^2. Long extension cables will lower usable power due to resistance in the extension cable.
- Never overload your Honda generator. Learn beforehand how much electrical power is necessary for your household essentials for start-up and continuous running. A handy equation to remember is: Watts = Volts x Amps. For example, you know that your furnace motor runs on 120 volts AC and it draws 20 amps during start up. So, 120 volts x 20 amps is 2400 watts. Consequently, you would require a 2500 watt generator just to run your furnace motor. If you are unsure of your electrical power requirements, consult a certified electrician.
  [SEE WATTAGE CALCULATOR]

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Keep Yourself Safe

- Know how to stop the generator quickly and understand operation of all the controls. Never permit anyone operate the generator without proper instructions.
- An external ground strap should be connected from the external ground terminal on the generator to a steel peg driven well into the ground.
- Never operate a generator inside your house, garage, basement or an enclosure of any kind because its carbon monoxide exhaust fumes are deadly.
- Honda generators should not be operated in the rain or snow.
- Position your generator outside but close to the house or household panel while maintaining a minimum clearance of one meter (3 feet) on all sides of the generator.
- The generator is a potential source of electrical shocks when misused. Before refueling, shut the generator off and check the engine oil level. Use a proper funnel to eliminate fuel spillage. Never run the generator with the fuel cap removed or restart the generator if fuel has been spilled while refueling. Ensure the generator is free (dry) of any spilled fuel before restarting it.
- Keep away from cigarette, smoke and sparks when refueling the generator. Always refuel in a well-ventilated location.
- Fuel should be safely stored in an approved container at least ten meters (32.8 feet) away from the generator and/or 10 meters (32.8 feet) away from any open flame.
- Do not operate the generator while it is on a vehicle.
- Avoid a place exposed to direct sunlight when putting the generator on a vehicle. If the generator is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.

Keep Safety Of Others In Mind

- Keep children and pets away from the generator when it is in operation.

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Using The DC Receptacle To Charge 12 V Automobile-Type Only

- The DC receptacle may be used for charging 12-volt automotive-type batteries only.
- In DC operation, turn the eco throttle switch to the OFF position.
- To prevent the possibility of creating a spark near the battery:
  Connect charging cables first to the generator, then to the battery.
  Disconnect cables first at the battery, then at the generator
- Before connecting charging cables to a battery that is installed in a vehicle, disconnect the vehicles grounded battery cable. Reconnect the vehicle's grounded battery cable after the charging cables are removed. This procedure will prevent the possibility of a short circuit and sparks if you make accidental contact between a battery terminal and the vehicle's frame or body.
- Do not attempt to start an automobile engine with the generator still connected to the battery. The generator may be damaged.
- Connect the positive battery terminal to the positive charging cord. Do not reverse the charging cables, or serious damage to the generator and/or battery may occur.

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Generator Wattage Calculator

- Depending on how you will use your generator, there are different categories to meet your needs. This can include recreation, home standby and construction.
- Honda also offers Inverter Generators. Inverter generators are smaller and lighter as power is created electronically and not through a conventional alternator. Inverter power offers the cleanest power output, ideal for sensitive electronic devices.
- If you want a generator for home standby, for example, if you want to run your refrigerator, you'll need at least 2500 watts or more. And if you want to use a transfer switch so that power can go directly into your home, you'll want a generator with at least 3000 watts.
- You'll also need to consider the maximum and rated power of the generator. This is important depending on what items you want to run off of your generator. Items such as toaster, lamps, and coffee makers are resistive, or constant loads and their total load can be calculated at amps x 1. Items such as saws and drills are reactive loads and while the running load may be small, the starting load should be calculated at running amps x 3. Remember, after the initial start less power is required for actual operation.
- Always remember that simple power management will allow a smaller generator to do a big job. Very seldom are all tools or appliances operating simultaneously.
- When calculating power requirements, consider the starting requirements are only for the initial start and then additional tools may be operated in addition.
- If you are unsure about your electrical power requirements, consult a certified electrician.
- Remember Ohm's Law from High School Physics?

Watts = Volts x Amps

Amps = Watts/Volts

Volts = Watts/Amps

HERE IS A GENERAL GUIDE

AVERAGE WATTAGE REQUIREMENT GUIDE (AMPS X VOLTS = WATTS)		
Household	**Running Wattage Requirements**	**Starting Wattage Required**
Coffee Maker	1750	1750
Dishwasher	1450	1800
Electric Fry Pan	1300	1300
Electric Range - 6-inch element - 8-inch element	 1500 2100	 1500 2100
Microwave Oven - 625 watts	625	800
Refrigerator or Freezer	700	2200
Toaster - 2-slice - 4-slice	 1050 1650	 1050 1650
Automatic Clothes Washer	1150	2300
Clothes Dryer - Electric - Gas	 5750 700	 1800 1800
Dehumidifier	650	800
Electric Blanket (queen size)	800	800
Furnace Fan, gas or fuel oil		
1/8 Horsepower	500	1000
1/6 Horsepower	750	1500
1/4 Horsepower	900	1800
1/3 Horsepower	1000	1800
1/2 Horsepower	1200	2500
Hair dryers	300-1500	300-1500
Clothes iron	1200	1200
Lights	As indicated	As indicated
Radio	50-200	50-200
Sump Pump		
1/3 Horsepower	750	1500
1/2 Horsepower	1000	2100
1 Horsepower	2300	4500
Colour television	300	300
VCR	50	50
Computer	150	150
Modem	25	25
Printer	100	100
Vacuum cleaner - upright - canister	 800 1100	 1100 1500
Garage door opener - 1/4 hp - 1/3 hp	 550 725	 1100 1400
Central Air Conditioner - 10,000 BTU - 20,000 BTU - 24,000 BTU - 40,000 BTU	 1500 2500 3800 6000	 2200 3300 4950 7800

AVERAGE WATTAGE REQUIREMENT GUIDE (AMPS X VOLTS = WATTS)		
Contractor	**Running Wattage Requirements**	**Starting Wattage Required**
Air Compressor		
- 1/2 hp	1000	2000
- 1 hp	1500	4500
- 1 1/2 hp	2200	6000
- 2 hp	2800	7700
Bench Grinder		
- 6-inch	720	1000
- 8-inch	1400	2500
- 10-inch	1600	3600
Electric Cultivator – 1/3 hp	700	1400
Electric hedge trimmer – 18-inch	400	550
Electric grass trimmer	500	650
Drum mixer, 1/4 hp	700	1400
Flood lights, mercury halogen	1000	1000
Floor polisher		
- 16-inch, 3/4 hp	1400	3100
- 20-inch, 1 hp	1600	4500
Hand drill		
- 1/4 inch	350	350
- 3/8 inch	400	400
- 1/2 inch	600	600
Submersible		
- Water pump 400 gp	200	400
- Centrifugal type	500	650
Wet and dry vacuum		
- 1.7 hp	900	900
- 2.5 hp	1300	1300
Saws		
- Worm drive (chop saw)	1800	2600
- Band saw	1100	1400
Circular saw		
- 6 1/2 inch	800	1200
- 7 1/4 inch	1400	2300
- 8 1/4 inch	1800	3000
Electric chain saw		
- 12 inch, 1 1/2 hp	900	1100
- 14 inch, 2 hp	1100	1400
Table saw		
- 1.7 hp	1500	3000
- 2.5 hp	1800	4500
Electric welders		
- 70 amp	2800	2800
- 100 amp	3600	3600
- 200 amp	9000	9000
Kango hammer	900	1200
Farm Equipment	**Running Wattage Requirements**	**Starting Wattage Required**
Electric Fence, 25 miles	250	250
Stock tank de-icer	1000	1000
Grain cleaner	650	1000
Portable conveyer, 1/2 hp	1000	2400
Grain elevator, 3/4 hp	1400	3000
Milk Cooler	1100	2300
Mixer, 3 1/2 cubic feet, 3/4 hp	2800	7700
Milking machine, 2 hp	1000	2300