



# KING CANADA

## POWER FORCE

### 12,000W DUAL FUEL GASOLINE/PROPANE GENERATOR WITH ELECTRIC START



Read this manual. Do not attempt to operate this generator until you have read and understood the safety, operation, and maintenance instructions

MODEL: KCG-12001GE-DF

## INSTRUCTION MANUAL

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## WARRANTY & SERVICE INFORMATION

**1-YEAR  
LIMITED WARRANTY  
FOR THIS 12,000W DUAL FUEL GENERATOR**

**KING CANADA TOOLS  
OFFERS A 1-YEAR LIMITED WARRANTY  
FOR NON-COMMERCIAL USE.**



IF YOU ARE EXPERIENCING  
PROBLEMS, DO NOT RETURN  
TO THE RETAILER,  
CALL THIS TOLL-FREE NUMBER  
FOR SERVICE INFORMATION

**1-877-636-4214**

**BEFORE CALLING THE ABOVE TOLL-FREE NUMBER, PLEASE READ THIS MANUAL, SPECIFICALLY THE SAFETY PRECAUTIONS, THE INSPECTION BEFORE OPERATION AND THE TROUBLESHOOTING GUIDE.**

**• DO NOT RETURN THE DEFECTIVE PRODUCT TO THE RETAILER.**

### **WARRANTY INFORMATION**

#### **PROOF OF PURCHASE**

Please keep your dated proof of purchase for warranty and servicing purposes.

#### **REPLACEMENT PARTS**

Replacement parts for this generator are available at our authorized KING CANADA generator service centers across Canada. For servicing, call the above toll free number to get servicing instructions and be sure to have your proof of purchase if you are claiming warranty work. Please use the 10 digit part numbers listed in this manual for all part orders where applicable.

#### **LIMITED TOOL WARRANTY**

KING CANADA makes every effort to ensure that this product meets high quality and durability standards. KING CANADA warrants to the original retail consumer a 1-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials.

#### **THIS WARRANTY IS NOT TRANSFERABLE AND DOES NOT COVER**

- Damage or liability caused by shipping, improper handling, improper installation, improper maintenance, improper modification, or the use of accessories and/or attachments not specifically recommended.
- Repairs necessary because of operator abuse or negligence, or the failure to install, operate, maintain, and store the product according to the instructions in the owner's manual.
- Damage caused by cold, heat, rain, excessive humidity, corrosive environments and materials, or other contaminants.
- Expendable items that become worn during normal use such as fuel filters, air cleaners, spark plugs, and engine oil.
- Cosmetic defects that do not interfere with product functionality.
- Freight costs from customer to an authorized warranty service location.
- Repair and transportation costs of products or parts determined not to be defective.
- ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT.

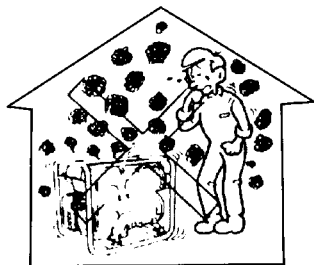
**• RETAIN THE ORIGINAL CASH REGISTER SALES RECEIPT AS PROOF OF PURCHASE FOR WARRANTY WORK.**

KING CANADA shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products. Shipping and handling charges may apply. If a defect is found, KING CANADA will either repair or replace the product.

# BASIC & SPECIFIC SAFETY PRECAUTIONS



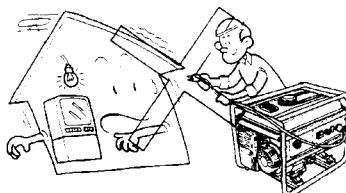
## BE CAREFUL!



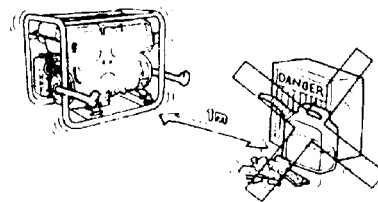
**DO NOT USE  
IN YOUR HOUSE**



**DO NOT USE IN  
WET CONDITIONS**

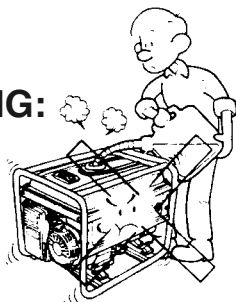


**DO NOT CONNECT TO  
HOUSEHOLD CIRCUIT**

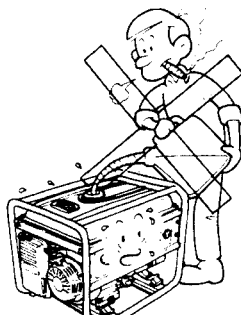


**KEEP FLAMMABLE  
MATERIALS AWAY**

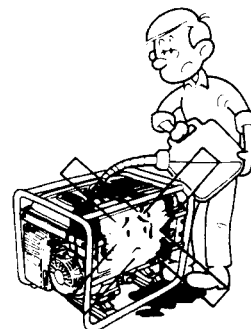
## WHEN REFUELING:



**STOP ENGINE!**



**NO SMOKING!**



**DO NOT SPILL GASOLINE!**

## BASIC SAFETY INFORMATION

### EXHAUST FUMES ARE DANGEROUS

•Never operate the engine in a closed area or it may cause unconsciousness and death within a short time. Operate in a well ventilated area.

### FUEL IS HIGHLY FLAMMABLE AND POISONOUS

- Always turn off the engine when refueling.
- Never refuel while smoking or in the vicinity of an open flame.
- When operating or transporting this generator, be sure to keep it upright. If it tilts, fuel may leak from the carburetor or fuel tank.

### ENGINE AND MUFFLER MAY BE HOT

- Place the generator in an appropriate location, away from children and pedestrians.
- Avoid placing any flammable materials near the exhaust outlet during operation.
- Keep a 4ft. clearance from buildings or other equipment around the generator to prevent overheating.

### ELECTRIC SHOCK PREVENTION

- Never operate in rain or snow.
- Never touch the generator with wet hands or electric shock will occur.
- Be sure to ground (earth) the generator.

### ELECTRICAL CONNECTION NOTES

- Avoid connecting the generator to commercial power outlet.
- Avoid connecting the generator in parallel with any other generator.

**WARNING!** The engine muffler will be very hot after use, avoid

touching the engine or muffler while they are still hot.

### FUEL

Make sure there is sufficient fuel in the tank.

### GROUNDING

Make sure to ground the generator.

## SPECIFIC SAFETY INFORMATION

**Attempting to connect generator directly to the electrical system of any building structure.**

Back feeding electricity through a building's electrical system to the outside utility feed lines could endanger repair persons attempting to restore service.

Failure to use a double throw transfer switch when connecting to a structure's electrical system can damage appliances and **WILL VOID** the manufacturer's warranty.

Never backfeed electricity through a structure's electrical system. To connect to a structure's electrical system in a safe manner, always have a Double-Throw Transfer Switch installed by a qualified electrician and in compliance with local ordinances. (When installing a Double-Throw Transfer Switch, a minimum of 10 gauge wiring must be used).



# SPECIFIC SAFETY PRECAUTIONS

## OPERATION OF GENERATOR IN RAIN, WET, ICY, OR FLOODED CONDITIONS.

Water is an excellent conductor of electricity! Water which comes in contact with electrically charged components can transmit electricity to the frame and other surfaces, resulting in electrical shock to anyone contacting them.

Operate generator in a clean, dry, well ventilated area. Make sure hands are dry before touching unit.

## TAMPERING WITH FACTORY SET ENGINE SPEED SETTINGS.

Engine speed has been factory set to provide safe operation. Tampering with the engine speed adjustment could result in overheating of attachments and could cause a fire.

Never attempt to "speed-up" the engine to obtain more performance. Both the output voltage and frequency will be thrown out of standard by this practice, endangering attachments and the user.

## IMPROPER CONNECTION OF ITEMS TO GENERATOR.

Exceeding the load capacity of the generator by attaching too many items, or items with very high load ratings to it could result in overheating of some items or their attachment wiring resulting in fire or electrical shock. Make sure that the sum total of electrical loads for all attachments does not exceed the load rating of the generator.

## ATTEMPTING TO FILL THE FUEL TANK WHILE THE ENGINE IS RUNNING.

Gasoline and gasoline vapors can become ignited by coming in contact with hot components such as the muffler, engine exhaust gases, or from an electrical spark.

Turn engine off and allow it to cool before adding fuel to the tank. Equip area of operation with a fire extinguisher certified to handle gasoline or fuel fires.

## PROPANE WARNINGS (Liquefied Petroleum Gas -LPG):

- 1) LPG IS HIGHLY FLAMMABLE AND EXPLOSIVE.
- 2) Flammable gas under pressure can cause fire or explosion if ignited.
- 3) LPG is heavier than air and can settle in low places while dissipating.
- 4) LPG has a distinctive odor added to help detect potential leaks.
- 5) In any petroleum gas fire, flames should not be extinguished unless by doing so the fuel supply valve can be turned OFF. This is because if a fire is extinguished and a supply of fuel is not turned OFF, then an explosion hazard could be created.
- 6) When exchanging LPG tank, be sure the tank valve is of the same type.
- 7) Always keep the LPG tank in an upright position.
- 8) LPG will burn skin if it comes in contact with it. Keep any and all LPG away from skin at all times.

## SPARKS, FIRE, HOT OBJECTS

Cigarettes, sparks, fires, or other hot objects can cause gasoline or gasoline vapors to ignite. Add fuel to tank in well ventilated area. Make sure there are no sources of ignition near the generator.

## INADEQUATE VENTILATION FOR GENERATOR

Materials placed against or near the generator or operating the generator in areas where the temperature exceeds 40° C ambient (such as storage rooms or garages) can interfere with its proper ventilation features causing overheating and possible ignition of the materials or buildings.

Operate generator in a clean, dry, well ventilated area a minimum of four feet from any building, object or wall. DO NOT OPERATE UNIT INDOORS OR IN ANY CONFINED AREA.

## RISK OF BREATHING - INHALATION HAZARD

Operate generator in clean, dry, well ventilated area. Never operate unit in enclosed areas such as garages, basements, storage, sheds, or in any location occupied by humans or animals.

Keep children, pets and others away from area of operating unit. Breathing exhaust fumes will cause serious injury or death. **Gasoline engines produce toxic carbon monoxide exhaust fumes.**

## OPERATION OF VOLTAGE SENSITIVE APPLIANCES WITHOUT A VOLTAGE SURGE PROTECTOR.

Any gasoline operated household generator will incur voltage variations causing damage to voltage sensitive appliances or could result in fire.

Always use a U.L./CSA listed voltage sensitive surge protector to connect voltage sensitive appliances (TV, computer, stereo, etc.). Failure to use a U.L./CSA listed voltage surge protector will void the warranty on your generator.

**Notice: A multiple outlet strip is not a surge protector. Make sure you use a U.L./CSA listed voltage surge protector.**

## USE OF WORN, DAMAGED, UNDERSIZED OR UNGROUNDED EXTENSION CORDS.

Contact with worn or damaged extension cords could result in electrocution. Use of undersize extension cords could result in overheating of the wires or attached items, resulting in fire.

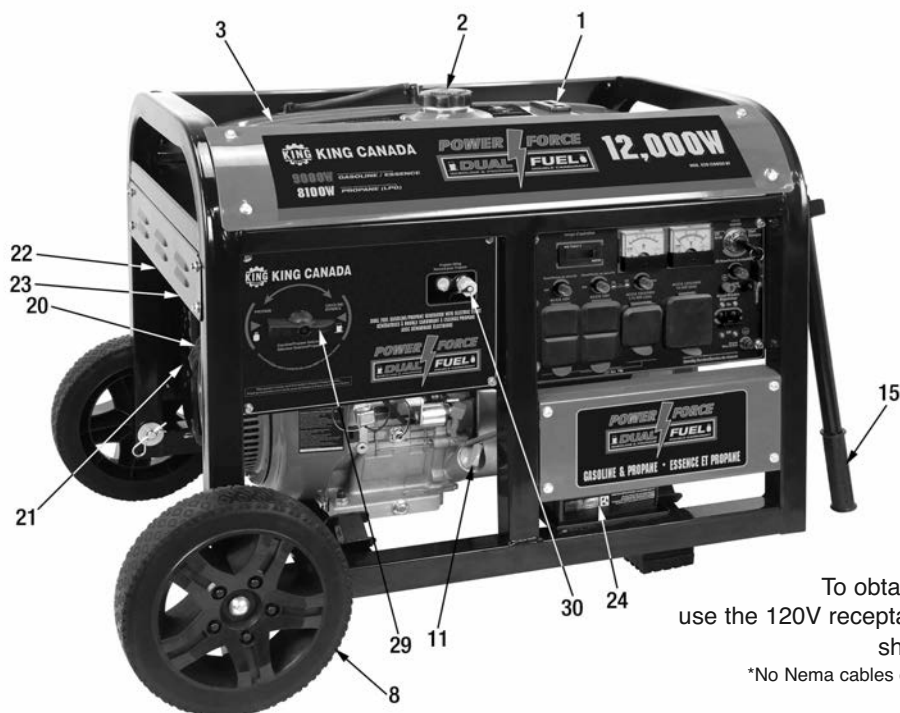
Use of ungrounded extension cords could prevent operation of circuit breakers and result in electrical shock.

Inspect extension cords before use and replace with new cord if required. Use proper size (wire gauge) extension cords for application as shown below. Always use extension cords having a grounding wire with an appropriate grounding plug. DO NOT use an ungrounded plug.

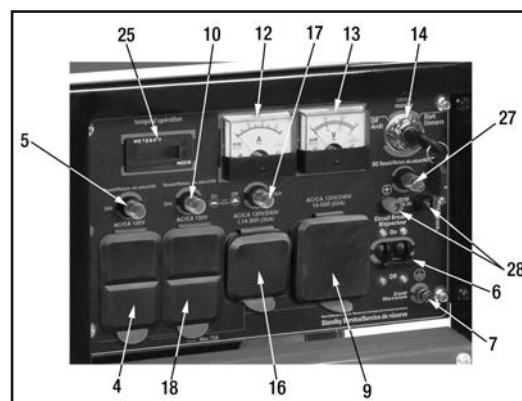
An extension cord that is hot to the touch is overloaded. Repair or replace damaged extension cords immediately.

<u>Cord Length</u>	<u>Wire Gauge Size</u>	<u>Amps</u>
0-100 FEET	NO.12	Up to 20 Amps.
0-100 FEET	NO.10	Up to 30 Amps.

# GETTING TO KNOW YOUR GENERATOR



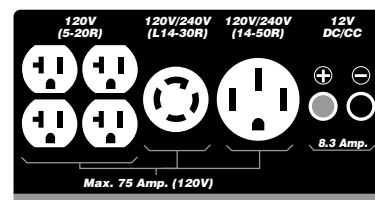
Control Panel



## IMPORTANT

To obtain max amperes, use the 120V receptacles together as shown. (Max 75A).

\*No Nema cables or plugs are included.



1. **Fuel level indicator window with float gauge.**
2. **Fuel cap.** Make sure the fuel cap is always screwed on tightly.
3. **Fuel tank.** Unleaded gasoline only! 31 Liter capacity.
4. **1 of 2 Duplex AC 120V outlets.** Plug up to 2-120V appliances or a power bar, make sure the amps requirement does not exceed max amps or else the AC breaker will automatically shut-off the power output.
5. **20 Amp. Reset.** Resets the corresponding dual 120V AC outlet.
6. **AC Breaker.** The AC breaker turns off automatically when the load exceeds the generator rated output. Reduce the load to within specified generator rated output if AC breaker turns off.
7. **Grounding terminal.** This generator must be grounded, see grounding instructions.
8. **10" Wheels.**
9. **AC 120V/240V 50 Amp. outlet.** This NEMA 14-50R outlet allows 120V or 240V operation, see instructions further in this manual.
10. **20 Amp. Reset.** Resets the corresponding dual 120V AC outlet.
11. **Oil gauge dipstick.** Check the oil level using this oil gauge dipstick.
12. **Ammeter.** Indicates the amperage load.
13. **Voltmeter.** Indicates the voltage rating.
14. **Electric Start Power ON Key Switch.** To turn engine on, first turn key to ON, turn key further and hold until engine starts and release. Move switch to Off position to stop generator.
15. **Transport Pivot Handle.**
16. **AC 120V/240V Twist lock outlet.** This NEMA L14-30 twist lock outlet allows 120V or 240V operation, see instructions further in this manual.
17. **30 Amp. Reset.** Resets the corresponding 120V/240V AC NEMA L14-30 twist lock outlet.
18. **1 of 2 Duplex AC 120V outlets. See #4.**
20. **Recoil starter.** Starts the engine manually.
21. **Air cleaner element/cover.** Periodically the air cleaner filter must be checked and maintained, see maintenance section.
22. **Carburetor throttle lever (choke).** Once the engine is started, it is necessary to gradually push in the carburetor throttle lever to the "OPEN" position, see instructions further in this manual.
23. **Fuel Shut-off Valve.** Regulates the flow of fuel to the engine. The fuel shut-off valve must be fully opened before starting the engine.
24. **12V Battery.** Powers the electric start.
25. **Running Time Digital Meter.** Indicates running time in minutes, total running time in hours and frequency (Hz).
27. **Reset button for 12V DC.** Resets the 12V DC output.
28. **12V DC Terminals.** Operate 12V DC appliances or tools.
29. **Gasoline/Propane Selector.** Choose gasoline or propane as the source of fuel.
30. **Propane cable fitting.** Connect the supplied propane cable to the fitting.

MODEL	KCG-12001GE-DF
Peak Wattage (starting)	12,000W
Running Wattage	9000W (Gasoline)/8100W (Propane)
AC current (120V/240V-Gasoline) / AC current (120V/240V-Propane)	75 Amp., 37.5 Amp. / 67.5 Amp., 33.75 Amp.
Engine (OHV)	18 HP
No load speed	3750 RPM
Displacement (cc)	457
Fuel	Unleaded Gasoline
Fuel tank (L)	31
Oil capacity (L)	1.1
Run time	8-9 hrs
Noise level	74 dB(A)





# ASSEMBLY

**WARNING!** To prevent permanent damage to generator or any appliances, you **MUST** check oil level, fuel level, air cleaner filter and unplug any load from the generator before starting.

## ASSEMBLY

Remove all the contents from the carton and proceed to the following assembly steps:

### Pivot handles and Support Brackets

The pivot handles (A) Fig.1 get installed to the right side of the frame. First mount both pivot handle brackets (B) to the frame using 2 flange head hex. bolts on each bracket. Once these brackets are secured to the frame, install the pivot handles to the brackets using a special hex. bolt and flange head hex. nut on each handle.

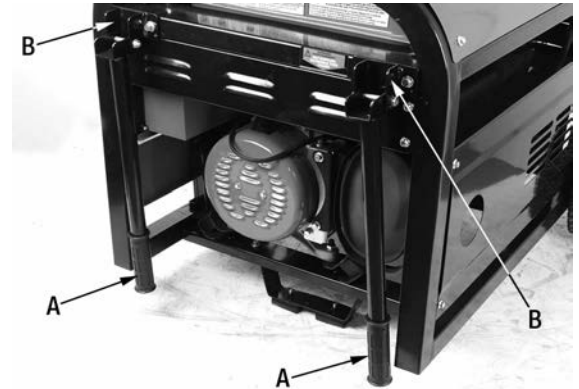


Figure 1

### Wheels and Frame Support

To install a wheel (C) Fig.2 to the right end of the frame, first insert the bushing (A) into the mounting hole in the frame. Insert bolt (B) through the wheel, then slide washer (D) on opposite side of the wheel. Insert bolt through the bushing and mounting hole in the frame. Secure the wheel by inserting a retaining clip (E) into the hole in the end of the bolt. Repeat for the second wheel.

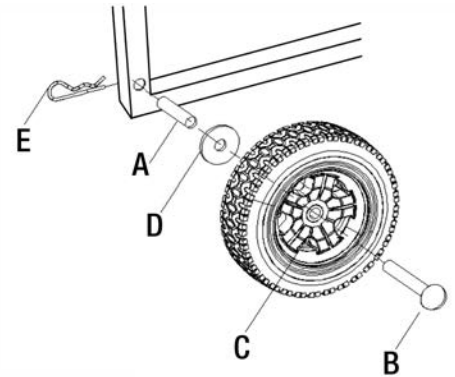


Figure 2

Now that the wheels are installed, install the frame support (A) Fig.3 underneath the frame. First install the two rubber feet (B) to the frame support (A) using flange head hex. bolts. Once installed, install the frame support to the frame using flange head hex. bolts.

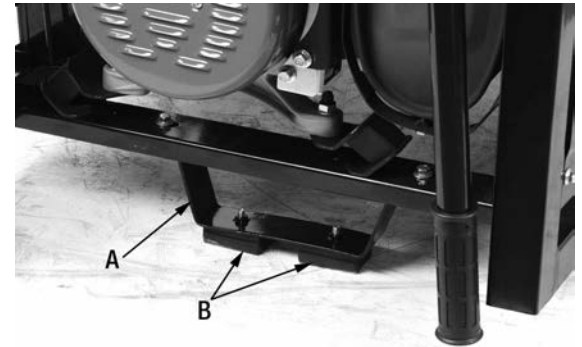


Figure 3

### Battery

To install the battery, first the battery panel (A) Fig.4 must be removed by undoing the 4 flange head hex. bolts which hold it in place. Place the battery (B) into the battery tray and secure it in place using the upper retaining plate (C), fixing shafts and hex. nuts as shown. Once the battery is secure, connect the red positive (+) battery cable (D) to the positive post. Then connect the black negative (-) battery cable (E) to the negative post of the battery.

**Note:** Actual battery may appear different than the one shown in Fig.4, but the installation instructions remain the same, always connect the red positive (+) battery cable to the positive post, connect the black negative (-) battery cable to the negative post of the battery.

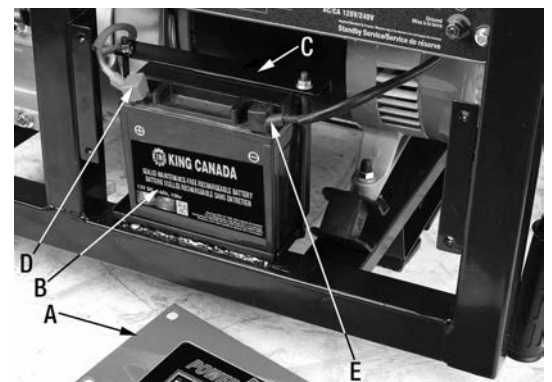


Figure 4

# PRE-START CHECK



## PRE-START CHECK

**WARNING!** To prevent permanent damage to generator or any appliances, you **MUST** check oil level, fuel level, air cleaner filter and unplug any load from the generator before starting.

### OIL LEVEL

**WARNING!** This generator has been shipped from the factory without oil or very little oil in the crankcase. Operating the unit without the correct amount of oil can damage the engine. Oil crankcase capacity: 1.1 litres.

**Always check the oil level before starting the generator, make sure the generator is on a level surface. To check oil level:**

- 1) Turn the oil gauge dipstick (A) Fig.5 counterclockwise, remove it and clean it with a clean cloth.
- 2) Fully reinsert the oil gauge dipstick and pull it out to check the oil level.
- 3) If the oil level is halfway up the dipstick or below, refill with SAE 10W30 oil through the dipstick hole until the oil level reaches 3/4 up the dipstick or until it reaches the bottom lip of the dipstick hole as shown in illustration below.

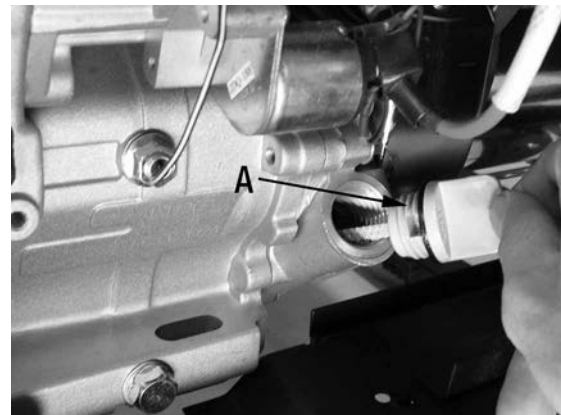
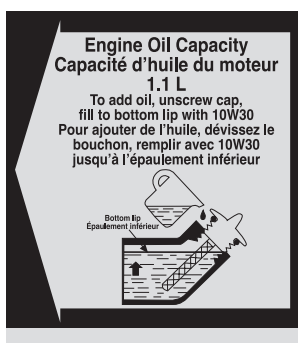


Figure 5

- 4) Reposition the oil gauge dipstick and tighten it by turning clockwise.

### FUEL LEVEL

**WARNING!** Make sure there is enough fuel in the fuel tank before operating.

- 1) Check the fuel level indicator window (A) Fig.6, if the orange float gauge is all the way up, it is not necessary to add fuel. If you do not see or hardly see the orange float gauge, it is necessary to add fuel.
- 2) If it is necessary to add fuel, first make sure the engine is OFF, then open the fuel cap (B) Fig.6 by turning it counterclockwise.
- 3) Make sure the fuel filter cup (C) is positioned inside the tank opening before refueling.
- 4) When refueling, keep in mind all safety precautions and make sure to add enough fuel based on usage. A full tank will give you 5 hours of operation. Use clean unleaded gasoline with a minimum of 87 octane. Do not mix oil with gasoline. Fuel tank capacity: 31 Litres.

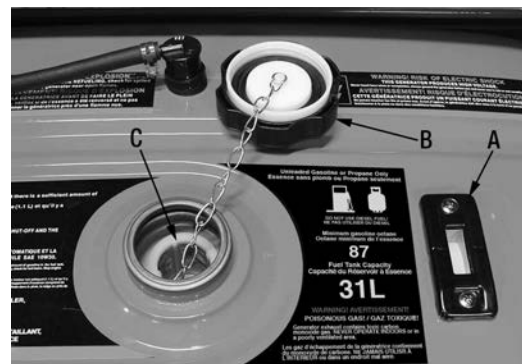


Figure 6

### CONNECTING & USING PROPANE

**WARNING!** Make sure there is enough propane in the propane tank before operating.

- 1) This generator comes with a propane connection cable (A) Fig.7. Connect the small end of the cable to the propane fitting (B). Using a wrench, tighten well to avoid any leaks.
- 2) Connect the larger nut (C) at the other end of the cable to the nut on your propane tank. Tighten well to avoid any leaks.
- 3) Before operating, or during operation, if you desire propane as your source of fuel, turn the Gasoline/Propane Selector lever (D) towards the left so the lever points at the propane tank symbol as shown.

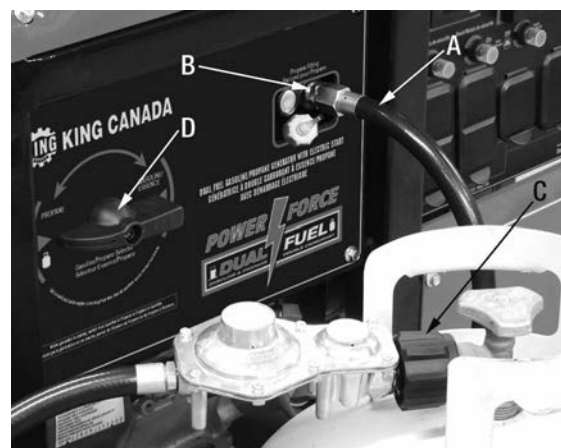


Figure 7



# PRE-START CHECK & STARTING/STOPPING PROCEDURES

## AIR CLEANER FILTER

The air cleaner filter should be checked before every start-up and after prolonged storage, the following steps should be done when checking air cleaner filter:

- 1) Snap the top and bottom clips (A) Fig.8 backwards and remove the air cleaner cover (B).
- 2) Remove the air cleaner filter (C), wash filter in kerosene, squeeze kerosene out, soak filter in engine oil and squeeze engine oil out.
- 3) Replace filter and replace the air cleaner filter cover.

## STARTING PROCEDURES

### GROUNDING

**WARNING! BEFORE STARTING, YOUR GENERATOR MUST BE GROUNDED!**

Before operating make sure to ground the generator. A ground terminal identified by the ground symbol (Fig.9) can be found on the front control panel of the generator, attach a metal spike to a wire, attach the wire to the ground terminal and ground the metal spike into the earth. Your local electrical company or certified electrician should be able to help you with this information. See Fig.9.

### STARTING YOUR GENERATOR

**WARNING! Do not adjust or attempt maintenance of engine without consulting an authorized service center. Never run engine indoors or in enclosed, poor ventilated areas, engine exhaust contains carbon monoxide, an odorless and deadly gas! Make sure all electrical appliances are unplugged before attempting to start generator!**

To safely start your generator, follow the steps 1 through 11 in Fig.10 below.

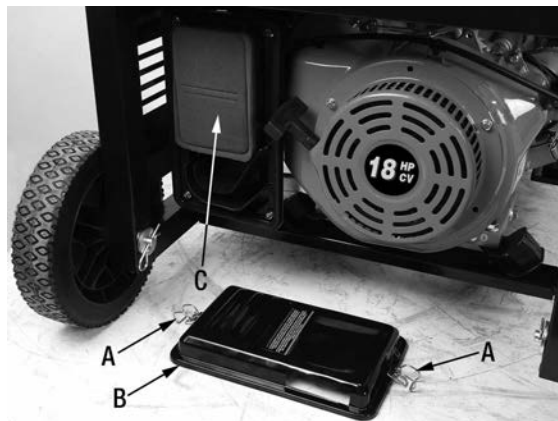


Figure 8

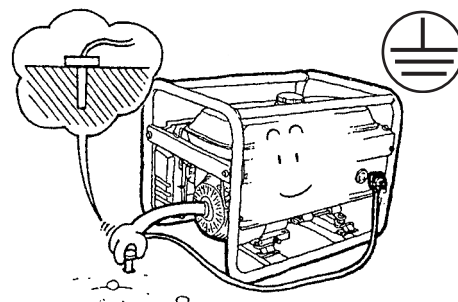


Figure 9

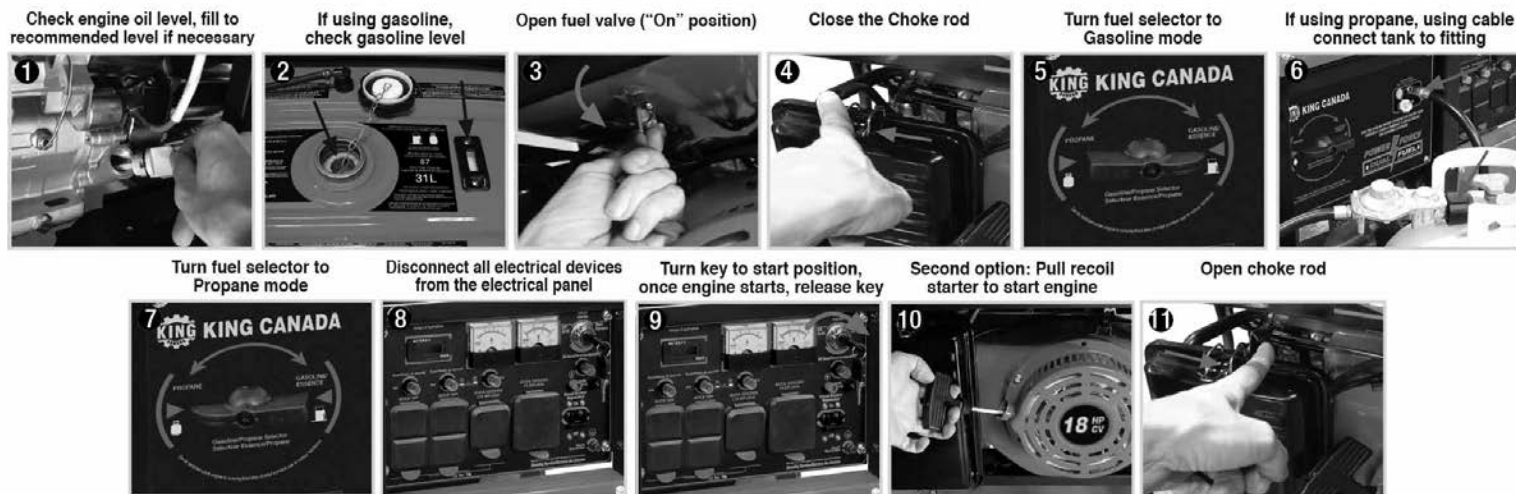


Figure 10

Note: No choke is required on warm engines. Pull the recoil starter handle until resistance is felt, then pull it out with a rapid full arm stroke. Let the starter rope rewind slowly, repeat if necessary. Allow generator to run at no load for 5 minutes upon each initial start-up to allow engine and generator to stabilize. **IF ENGINE OIL LEVEL IS TOO LOW, ENGINE WILL NOT START. CHECK OIL LEVEL AND ADD IF NECESSARY.**

## STOPPING PROCEDURES

### STOPPING YOUR GENERATOR

**Make sure all electrical appliances are unplugged before stopping the generator!**

- 1) Turn breaker (B) Fig.11 "OFF" by lowering it.
- 2) Turn the key in the engine power switch (A) to the "OFF" position by turning the key counterclockwise.
- 3) Close the fuel shut-off valve (C) by bringing it downwards.

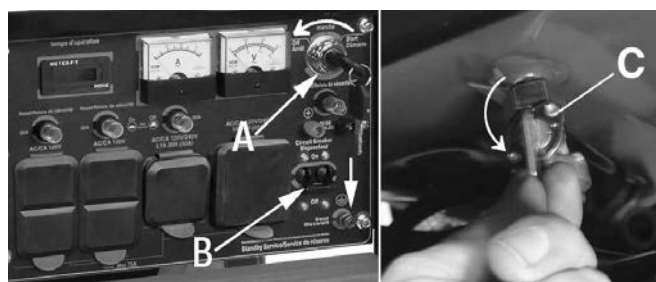


Figure 11



# ELECTRICAL CONNECTIONS & CONTROL PANELS



## ELECTRICAL CONNECTIONS

### CONNECTING ELECTRICAL LOADS

**Attempting to connect generator directly to the electrical system of any building structure.**

Back feeding electricity through a building's electrical system to the outside utility feed lines could endanger repair persons attempting to restore service. Failure to use a double throw transfer switch when connecting to a structure's electrical system can damage appliances and WILL VOID the manufacturer's warranty. Never backfeed electricity through a structure's electrical system. To connect to a structure's electrical system in a safe manner, always have a Double-Throw Transfer Switch installed by a qualified electrician and in compliance with local ordinances. (When installing a Double-Throw Transfer Switch, a minimum of 10 gauge wiring must be used).

### IMPROPER CONNECTION OF ITEMS TO GENERATOR

Exceeding the load capacity of the generator by attaching too many items, or items with very high load ratings to it could result in overheating of some items or their attachment wiring resulting in fire or electrical shock. Make sure that the sum total of electrical loads for all attachments does not exceed the load rating of the generator.

**WARNING! Failure to connect and operate equipment in the sequence below can cause damage to equipment and will void the warranty.**

- 1) Let engine run and warm up for five minutes after starting with no electrical load. Connect loads in the following manner:
- 2) Connect "inductive" load equipment first, inductive loads consist of refrigerators, freezers, water pumps, air conditioners, or small hand tools. Connect the items that require the most wattage first.
- 3) Connect the lights next.
- 4) Voltage sensitive equipment should be the last equipment connected to the generator. Plug voltage sensitive appliances such as TV's, VCR's, microwaves, ovens, computers, and cordless telephones into a UL/CSA listed voltage surge protector, then connect the UL/CSA listed voltage surge protector to the generator.

**Overloading the generator will cause power fluctuations and can damage equipment and appliances. King Canada will not be responsible for equipment damaged as a result of voltage surges, improper operation or improper installation of the generator.**

## CONTROL PANELS

### 120V AC DUPLEX RECEPTACLES & RESETS

For normal 120V operation, plug your appliance or power bar into one of the two duplex 120V receptacles (A & B) Fig.12. Each receptacle has its own reset button (C & D) placed directly above.

### 120V/240V AC TWIST LOCK RECEPTACLE (NEMA L14-30)

This twist lock receptacle (E) Fig.12 is a NEMA L14-30 twist lock receptacle and requires a NEMA L14-30 plug to make the connection. If you are unsure about the use of this twist lock receptacle, contact a qualified electrician for more information. This receptacle has its own reset button (F) placed directly above.

### 120V/240V AC RECEPTACLE (NEMA 14-50R)

This 120/240V receptacle (G) Fig.12 is a NEMA 14-50R receptacle and requires a NEMA 14-50P (50A) plug to make the connection. May be used to supply electrical power for the operation of 120V and/or 240V AC, single phase 60 Hz electrical loads, such as welders and dryers. If you are unsure about the use of this receptacle or what can be connected, contact a qualified electrician for more information.

### RESETS AND CIRCUIT BREAKER

The control panel contains 4 reset buttons (20 amp resets (C & D) for the duplex 120V receptacles, 30 amp reset (F) for the twist lock receptacle and a 8 amp reset (J) for the 12V DC terminals) and a main circuit breaker (H). If an overload occurs (reached maximum capacity), the corresponding reset button and the circuit breaker will "trip" to their "Off" position, causing the generator to automatically shut off. Disconnect all electrical items from the control panel. Press the tripped reset button, then position the circuit breaker to the On position and restart the generator. If the reset and circuit breaker continues to "trip", the electrical item or items are exceeding the amperage capacity of this generator, reduce electrical charge or use a more powerful generator.

### 12V DC OUTLET (I) & DC RESET (J)- Main use, charging automotive batteries.

To charge battery:

- 1) Using battery cables, connect the red positive (+) battery cable to the battery's positive (+) terminal.
- 2) Attach the other end of the red positive (+) battery cable to the 12V DC red positive (+) terminal (I).
- 3) Connect the black negative (-) battery cable to the battery's negative (-) terminal.
- 4) Attach the other end of the black negative (-) battery cable to the 12V DC black negative (-) terminal. (I).
- 5) Charge the battery according to battery or equipment manufacturer recommendations.

### To operate 12V DC equipment:

1. Refer to the 12V DC equipment owner's manual for operation of equipment and any special cable or adapter requirements.

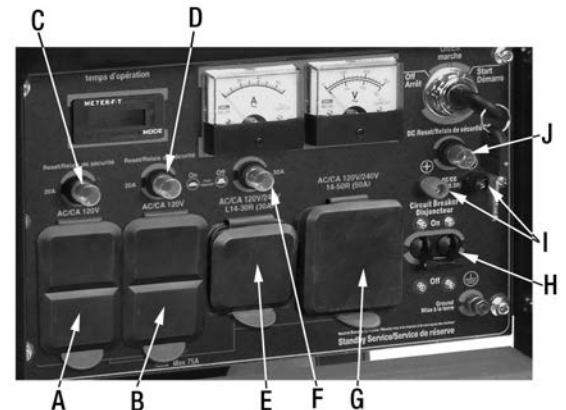


Figure 12



# CONTROL PANELS & WATTAGE CALCULATIONS

## CONTROL PANELS

### RUNNING TIME DIGITAL METER

The control panel contains a running time digital meter (A) Fig.13, this meter has 3 display modes. To toggle through the 3 modes, press the small mode button (B).

**Mode 1** indicates the running time in minutes (00:00), resets once the generator is turned off.

**Mode 2** indicates the total running time in hours (0000), will not reset if the generator is turned off, even if the battery is disconnected.

**Mode 3** indicates the frequency (Hz) rating of the generator.

### AMMETER & VOLTMETER

The control panel contains an ammeter (C) Fig.13 and a voltmeter (D). The ammeter indicates the amperage load of the generator and the voltmeter indicates the voltage rating of the generator.

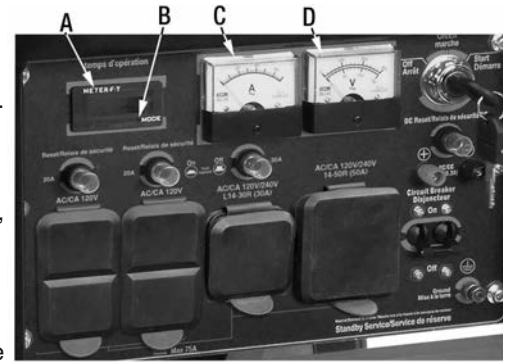


Figure 13

### GASOLINE/PROPANE SELECTOR & PROPANE FITTING

The left hand side panel contains a Gasoline/Propane selector lever (A) Fig.14. This lever is used to select the fuel source to be used, either Gasoline or Propane.

Before starting the generator, or while the generator is running, the fuel source can be changed without stopping the engine, simply turn the lever to the right for GASOLINE fuel source or turn the lever to the left for PROPANE fuel source. The generator will continue running without interruption.

**WARNING!** It is important to not attempt to use propane as the source of fuel without having a propane tank connected to the generator.

The left hand side panel also contains the propane fitting (B) Fig.14. Using the supplied propane cable, thread the propane cable onto the propane fitting. Tighten using a wrench to avoid any leaks.



Figure 14

## WATTAGE CALCULATIONS

**IMPORTANT!** Never exceed the rated capacity of your generator. Serious damage to the generator or appliance could result from an overload.

- 1) "Starting" and "Running" wattage requirements should always be calculated when matching a generators wattage capacity to the appliance or tool.
- 2) There are two types of electrical appliances that can be powered by your generator:
  - a) Items such as radios, light bulbs, television sets, and microwaves have a "resistive load". Starting wattage and running wattage are the same.
  - b) Items such as refrigerators, air compressors, washer, dryer and hand tools that use an electrical motor have an "inductive load". **Inductive load appliances and tools require approx. 2 to 3 times the listed wattage for "starting" the equipment.** This initial load only lasts for a few seconds on start-up but is important when figuring your total wattage to be used.

Always start your largest electric motor first, and then plug in other items, one at a time. **NOTE:** On 120-volt loads the maximum starting wattage should NOT exceed one half of the rated generator wattage. Example: a 12,000 rated wattage generator = 9000 maximum starting wattage.

### DETERMINING WATTAGE REQUIREMENTS

**Note:** Volts X Amps = Watts

**Example:** 120V X 10 Amps = 1200 Watts

Before operating this generator, list all of the appliances and/or tools that are going to operate at the same time. (Then determine the

starting wattage requirements and the running wattage requirements by following the example below:

- 1) Add the total amount of the running wattage of all appliances and/or tools that will be operated at the same time.

Example 1A:

Lights = 100 Watts (Running)  
Television = 300 Watts (Running)  
Electric blanket = 800 Watts (Running)  
Coffee maker = 1750 Watts (Running)  
**TOTAL = 2950 Watts (Running)**

- 2) Next add the total amount of the starting wattage of any appliances and/or tools that will start and stop during operation.

Example 1B:

Small Refrigerator = 700 Watts (Running) 2200 Watts (Starting)  
Fan = 200 Watts (Running) 600 Watts (Starting)  
Water Pump = 500 Watts (Running) 1500 Watts (Starting)  
**TOTAL = 1400 Watts (Running) 4300 Watts (Starting)**

- 3) The running wattage of examples 1A & 1B totals 4350 watts. The starting wattage totals 4300 watts which is 2900 watts more than the running watts. Take this difference of 2900 starting watts and add to the total running watts of 4350. Therefore:

**2900 Starting Watts + 4350 Running Watts = 7250 Total Watts**  
**The generator required to operate the items in example 1A & 1B must have a minimum capacity of at least 7250 starting watts.**

**NOTE: In propane mode, the maximum starting wattage is 8100W.**

# MAINTENANCE & STORAGE



## MAINTAINING YOUR GENERATOR

### Engine Oil Replacement

Engine oil should be replaced after the first 20 hours of operation or after the first month of use, it should be replaced every 100 hours or 6 months after. To replace engine oil:

- 1) Loosen the oil gauge dipstick (A) Fig.15.
- 2) Place an oil pan underneath drain hex. bolt (B), remove hex. bolt (B) and drain oil.
- 3) Once all the oil has completely drained, retighten the hex. bolt (B).

### Recommended Engine Oil

It is recommended to use SAE 10W30 4-stroke gasoline engine oil. For cold weather (below -15°C) use SAE 5W30.

- 4) Fill with clean engine oil through the oil gauge dipstick hole, fill then check oil level until the oil level reaches 3/4 up the dipstick or until it reaches the bottom lip of the dipstick hole.

### Inspecting, Replacing or Cleaning Spark Plug (F7TC or equivalent)

The spark plug should be checked every 100 hours of operation or every 6 months. To replace or clean spark plug:

- 1) Dismantle the spark plug cap (A) Fig.16 by pulling it off the spark plug (B). Using the supplied spark plug wrench, undo the spark plug by turning it counterclockwise.
- 2) Check to see if there is carbon sediment build-up, if so just remove it. If the carbon sediment is excessive, replace the spark plug.
- 3) Measure the electrodes clearance. See Fig.17. The spark plug electrode clearance should be between 0.7-0.8mm. If the clearance exceeds 0.8mm, replace the spark plug with an LD F7TC or equivalent (NGK BP6ES, Champion N9Y).
- 4) Reinstall spark plug in the reverse order.

### Fuel Filter Maintenance

In order to clean the fuel filter inside the fuel shut-off valve, it is necessary to drain all gasoline from the tank and the carburetor, see section "Generator Storage" below for complete instructions.

- 1) Once the tank and carburetor are drained of all gasoline, disconnect the fuel hose (A) Fig.18 from the fuel shut-off valve and then dismantle the fuel shut-off valve nut (B) from the tank.
- 2) Remove the fuel shut-off valve from the tank to expose the fuel filter (C). Clean the fuel filter.
- 3) Reinstall all parts in the reverse order.

## GENERATOR STORAGE

If you plan on storing your generator for an extended period of time, the following steps should be followed:

- 1) Add fuel stabilizer to fuel tank to minimize the formation of fuel gum deposits during storage.
- 2) Run engine at least 5 minutes after adding stabilizer to allow it to enter the fuel system.  
**NOTE:** If a fuel stabilizer is not used, all gasoline must be drained from the tank and carburetor to prevent gum deposits from forming on these parts and causing possible malfunction of the engine. To drain gasoline:
- 3) Turn fuel shut-off valve (A) Fig.19 to the "OFF" position.
- 4) Disconnect the fuel hose (B) from the fuel shut-off valve.
- 5) Turn fuel shut-off valve to the "ON" position and drain fuel from tank. Pivot the fuel shut-off valve outwards to simplify the task as shown in Fig.19.
- 6) Remove drain hex. bolt (D) from the carburetor (C) and drain the rest of the fuel found inside the carburetor and hose.
- 7) Reposition the carburetor drain hex. bolt and fuel shut-off valve hose once the fuel is completely drained.
- 8) Drain engine oil from engine as described in "Engine Oil Replacement".
- 9) Pull the recoil starter handle gently until resistance is felt.

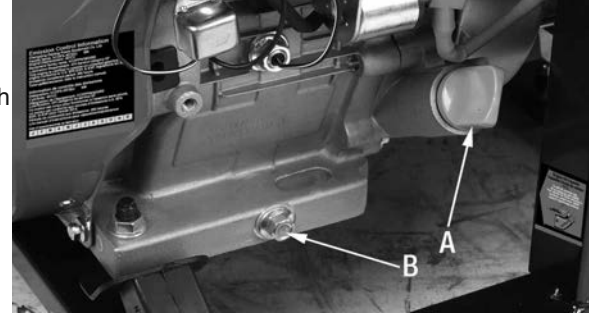


Figure 15

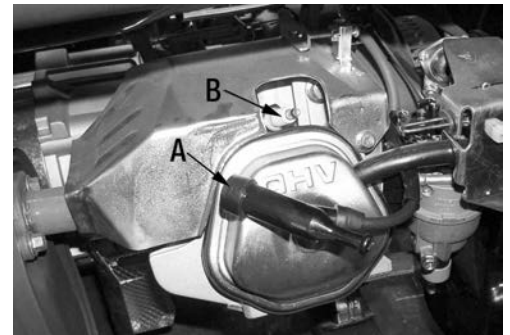


Figure 16

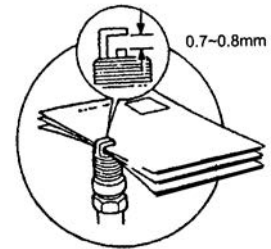


Figure 17

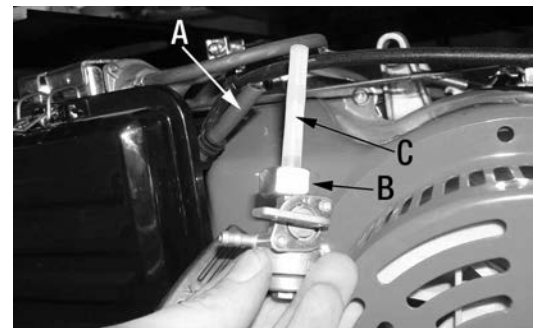


Figure 18

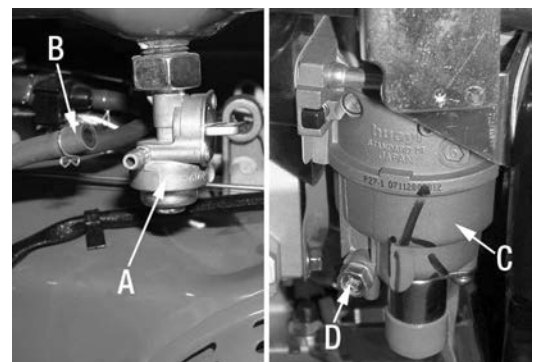


Figure 19



## TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Engine will not start	<ol style="list-style-type: none"><li>1. Low on fuel or oil.</li><li>2. Ignition switch in "Off" position.</li><li>3. Faulty spark plug.</li><li>4. Choke in wrong position.</li><li>5. Fuel shut-off valve is closed.</li><li>6. Unit loaded during start-up.</li><li>7. Spark plug wire loose.</li></ol>	<ol style="list-style-type: none"><li>1. Add fuel or oil.</li><li>2. Turn to "ON" position.</li><li>3. Replace spark plug.</li><li>4. Adjust choke accordingly.</li><li>5. Open fuel shut-off valve.</li><li>6. Remove load from unit.</li><li>7. Attach wire to spark plug.</li></ol>
Engine is running but no AC output	<ol style="list-style-type: none"><li>1. Faulty receptacle.</li><li>2. Circuit breaker tripped.</li><li>3. Defective capacitor.</li><li>4. Faulty power cord.</li></ol>	<ol style="list-style-type: none"><li>1. Have Service Center replace.</li><li>2. Reset breaker.</li><li>3. Have Service Center replace capacitor.</li><li>4. Repair or replace cord.</li></ol>
Repeated circuit breaker tripping	<ol style="list-style-type: none"><li>1. Overload.</li><li>2. Faulty cords or equipment.</li></ol>	<ol style="list-style-type: none"><li>1. Reduce load.</li><li>2. Check for damaged, bare, or frayed wires on equipment. Replace.</li></ol>
Generator overheating	<ol style="list-style-type: none"><li>1. Generator overloaded.</li><li>2. Insufficient ventilation.</li></ol>	<ol style="list-style-type: none"><li>1. Reduce load.</li><li>2. Move to adequate supply of fresh air.</li></ol>
Engine runs well but gets bogged down when loads are connected	<ol style="list-style-type: none"><li>1. Electrical short in connected item.</li><li>2. Overloaded.</li></ol>	<ol style="list-style-type: none"><li>1. Disconnect shorted load.</li><li>2. Reduce load.</li></ol>



IF YOU ARE EXPERIENCING  
PROBLEMS, DO NOT RETURN  
TO THE RETAILER,  
CALL THIS TOLL-FREE NUMBER  
FOR SERVICE INFORMATION

**1-877-636-4214**

### **PARTS DIAGRAM & PARTS LISTS**

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.