



GENERATOR

MGE2601/MGE3301/MGE3701 MGE6601/MGE6901 OWNER'S MANUAL



Before starting this generator, read and understand this Owner's Manual.

Thank you for purchasing a EarthPower generator.

This manual covers operation and maintenance of the EarthPower generators. All information in this publication is based on the latest production information available at the time of approval for printing.

Pay special attention to statements preceded by the following words:

 **WARNING**

Indicates a strong possibility of severe personal injury, loss of life and equipment damage if instructions are not followed.

[CAUTION]

Indicates a possibility of personal injury, or equipment damage if instructions are not followed.

NOTE:

Gives helpful information.

If a problem should arise, or if you have any questions about the generator, consult an dealer selling EarthPower generator.

 **WARNING**

- **The generator is designed to give safe and dependable service if operated according to instructions.**
- **Do not operate the generator before you have read and understood the instructions. Failure to do so could result in personal injury or equipment damage.**

CAUTIONARY NOTICE

The customer must know that the generator has potential danger.

Willbe is not liable for any damage or injury arising from an individual's failure to follow instructions contained in this manual, or his failure to exercise due care and caution in the installation, operation, inspection, and service of the generator.

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This generator conforms to
IEC60034-1.

1. SAFETY PRECAUTIONS

⚠ WARNING



- EarthPower generator is designed to give safe and dependable service if operated according to instructions.
- Do not operate the generator before you have read and understood the instructions. Failure to do so could result in personal injury or equipment damage.
- Do not contact the generator to a commercial power line. Connection to a commercial power line may short circuit the generator and run it. Use the transfer switch for connecting to domestic circuits.

- Do not operate the generator near gasoline or gaseous fuel because of the potential danger of explosion or fire. Do not fill the fuel tank with fuel while the engine is running. Do not smoke or use open flame near the fuel tank. Be careful not to spill fuel during refueling. If fuel is spilt, wipe it off and let dry before starting the engine.
- Do not mix alcohol etc. into the gasoline.

⚠ WARNING



- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot.

- The engine exhaust system will be heated during operation and remain hot immediately after stopping the engine.
- Do not operate the generator inside a room, cave, tunnel, or other insufficiently ventilated area. Always operate it in a well-ventilated area, other wise the engine may become overheated, and the poisonous carbon monoxide gas contained in the exhaust gases will endanger human lives. Keep the generator at least 1 meter (3 feet) away from any structure or building during use.

If the generator must be used indoors, the area must be well-ventilated and extreme caution must be taken regarding the discharge of exhaust gases.



Do not place inflammables near the generator.

Be careful not to place fuel, matches, gunpowder, oily cloths, straw, trash, or any other inflammables near the generator.



Do not enclose the generator nor cover it with a box.

The generator has a built-in forced air cooling system, and may become overheated if it is enclosed.



Operate the generator on a level surface.

It is not necessary to prepare a special foundation for the generator. However, the generator will vibrate on an irregular surface, so choose a level place without surface irregularities. If the generator is tilted or moved during operation, fuel may spill and/or the generator may tip over, causing a hazardous situation.

Proper lubrication cannot be expected if the generator is operated on a steep incline or slope. In such a case, piston seizure may occur even if the oil is above the upper level.



Pay attention to the wiring from the generator to the connected device.

If the wire is under the generator or in contact with a vibrating part, it may break and possibly cause a fire or generator burnout.



Do not operate in rain or with wet hands.

The operator may suffer severe electric shock if the generator is wet due to rain or snow.

If wet, wipe and dry it well before starting.

Do not pour water directly over the generator, not wash it with water.



No smoking while handling the battery.

The battery emits flammable hydrogen gas, which can explode if exposed to electric arcing or open flame.

Keep the area well-ventilated and keep open flames/sparks away when handling the battery.



Do not operate the generator under the following condition: rainwater, seawater and salty breezes.

If the generator is used under the above condition, it may break and the operator may suffer severe electric shock.

2. SPECIFICATIONS

MODEL		MGE2601	MGE3301	MGE3701	
ALTERNATOR	Type	Brush, Revolving Field, Self-exciting, 2-poles, Single phase			
	AC Voltage	50Hz	230V		
		60Hz	110V, 120V, 220V, 110V/220V, 120V/240V		
	Max. Output	50Hz	2,200W	2,800W	3,200W
		60Hz	2,600W	3,300W	3,700W
	Rated Output	50Hz	2,000W	2,300W	2,600W
		60Hz	2,200W	2,700W	3,100W
	Duty type	Continuous running			
	Insulation Class	F			
	Voltage Regulator	AVR Type			
Power Factor	1.0				
ENGINE	Type	Air-cooled, 4 stroke, OHV, Gasoline Engine			
	Displacement	212 cm ³	212 cm ³	224 cm ³	
	Fuel	Unleaded Automobile Gasoline			
	Fuel Tank Capacity	13.5 L			
	Rated Continuous Operation	50Hz	9.5 h	8.5 h	8.0 h
		60Hz	8.0 h	7.0 h	6.5 h
	Lubricating Oil	Engine Oil SE Class or Higher			
	Lubricating Oil Capacity	0.6 L			
Starting System	Recoil Starter or Electric Starter (option)				
DIMENSION	Length x Width x Height	590 x 445 x 490 mm			
	Dry Weight	50Hz	42 kg	46 kg	48 kg
		60Hz	42 kg	46 kg	48 kg

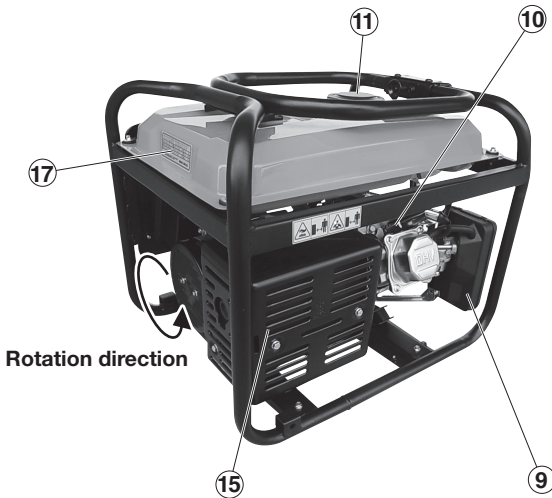
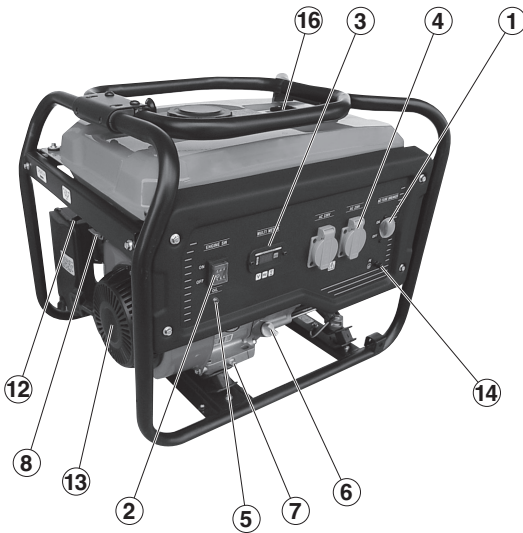
Specifications are subject to change without notice.

MODEL		MGE6601	MGE6901	
ALTERNATOR	Type	Brush, Revolving Field, Self-exciting, 2-poles, Single phase		
	AC Voltage	50Hz	230V	
		60Hz	110V, 120V, 220V, 110V/220V, 120V/240V	
	Max. Output	50Hz	5,600W	6,400W
		60Hz	6,600W	6,900W
	Rated Output	50Hz	4,500W	5,400W
		60Hz	5,500W	6,000W
	Duty type	Continuous running		
	Insulation Class	F		
	Voltage Regulator	AVR Type		
Power Factor	1.0			
ENGINE	Type	Air-cooled, 4 stroke, OHV, Gasoline Engine		
	Displacement	420 cm ³	420 cm ³	
	Fuel	Unleaded Automobile Gasoline		
	Fuel Tank Capacity	23.5 L		
	Rated Continuous Operation	50Hz	7.5 h	7.0 h
		60Hz	6.0 h	5.5 h
	Lubricating Oil	Engine Oil SE Class or Higher		
	Lubricating Oil Capacity	1.1 L		
Starting System	Recoil Starter or Electric Starter (option)			
DIMENSION	Length x Width x Height	702 x 532 x 600 mm		
	Dry Weight	50Hz	75 kg	80 kg
		60Hz	77 kg	81 kg

Specifications are subject to change without notice.

3. COMPONENTS

- ① AC CIRCUIT BREAKER
- ② ENGINE SWITCH
- ③ MULTI METER
- ④ AC RECEPTACLE
- ⑤ OIL WARNING LAMP
- ⑥ OIL FILLER CAP
- ⑦ OIL DRAIN PLUG
- ⑧ FUEL COCK
- ⑨ AIR CLEANER
- ⑩ SPARK PLUG
- ⑪ FUEL TANK CAP
- ⑫ CHOKE LEVER
- ⑬ RECOIL STARTER
- ⑭ GROUND TERMINAL
- ⑮ MUFFLER
- ⑯ FUEL GAUGE
- ⑰ FUEL TANK

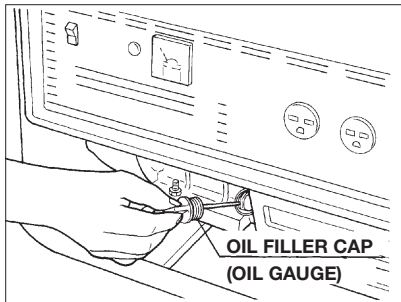


4. PRE-OPERATION CHECKS

1. CHECK ENGINE OIL

Before checking for refilling oil, be sure the generator is put on a stable and level surface with engine stopped.

- Remove oil filler cap and check the engine oil level.

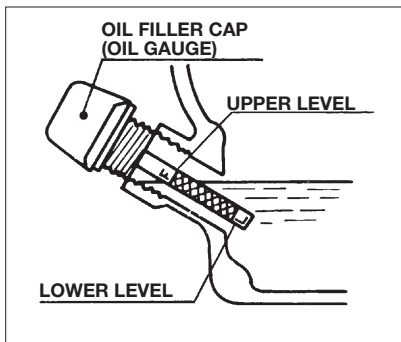


- If oil level is below the lower level line, refill with suitable oil (see table below) to upper level line. Do not screw in the oil filler cap when checking oil level.

- Change oil if contaminated. (See "How-To" Maintenance.)

- Oil capacity

Model	Upper level	Model	Upper level
MGE2601	} 0.6 liter	MGE6601	} ... 1.1 liter
MGE3301		MGE6901	
MGE3701			



- Recommended engine oil:

Use class SE (API classification) oil or a higher grade oil according to the table below. SAE 10W-30 or 10W-40 is recommended for general, all temperature use. If you prefer to use single grade oil, select the appropriate viscosity grade for the average temperature in your area.

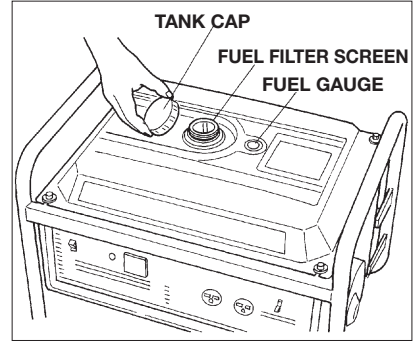
Single grade	5W						
	10W						
	20W						
	# 20						
	#30						
						# 40	
Multigrade	10W-30						
	10W-40						
Ambient temperature	-20	-10	0	10	20	30	40°C
	-4	14	32	50	68	86	104°F

2. CHECK ENGINE FUEL.

WARNING

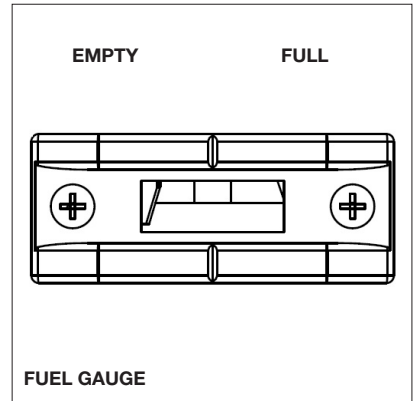
Do not refuel while smoking or near open flame or other such potential fire hazards. Otherwise fire accident may occur.

- Check fuel level at fuel gauge.
- If fuel level is low, refill with unleaded automotive gasoline.
- Be sure to use the fuel filter screen on the fuel filter neck.



- Fuel tank capacity:

Model	Full	Model	Full
MGE2601	} ... 13.5 liter	MGE6601	} 23.5 liter
MGE3301			
MGE3701			



WARNING

Make sure you review each warning in order to prevent fire hazard.

- Do not refill tank while engine is running or hot.
- Close fuel cock before refueling with fuel.
- Be careful not to admit dust, dirt, water or other foreign objects into fuel.
- Wipe off spilt fuel thoroughly before starting engine.
- Keep open flames away.

3. CHECKING COMPONENTS

Check following items before starting engine:

- Fuel leakage from fuel hose, etc.
- Bolts and nuts for looseness.
- Components for damage or breakage.

4. CHECKING GENERATOR SURROUNDINGS.

⚠ WARNING

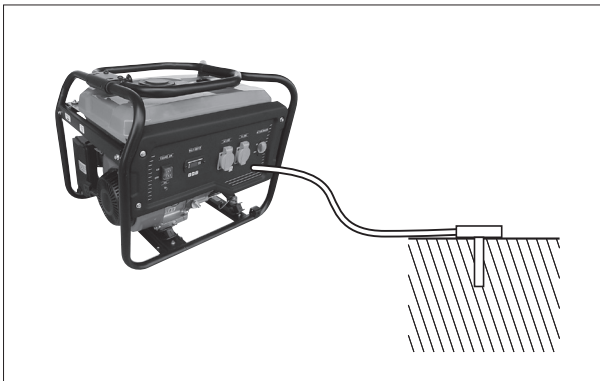
Make sure you review each warning in order to prevent fire hazard.

- Keep area clear of inflammables or other hazardous materials.
- Keep generator at least 3 feet (1 meter) away from buildings or other structures.
- Only operate generator in a dry, well ventilated area.
- Keep exhaust pipe clear of foreign objects.
- Keep generator away from open flame.
- Keep generator on a stable and level surface.
- Do not block generator air vents with paper or other material.

5. CONNECT THE GROUND TERMINAL.

[CAUTION]

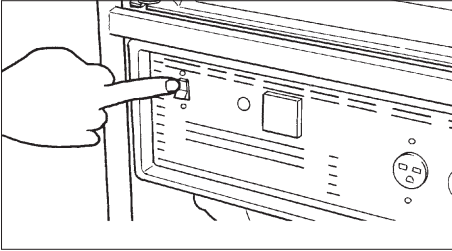
- To prevent electric shock and damage of the generator, connect the ground terminal of the generator to the ground.



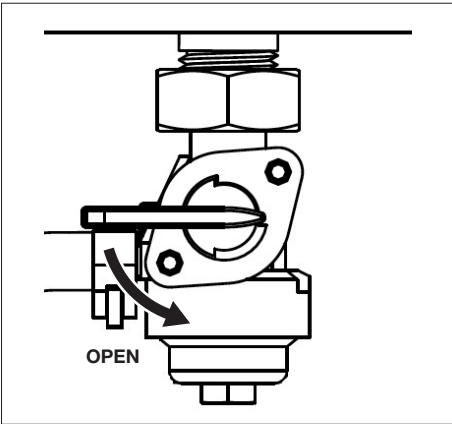
5. OPERATING PROCEDURES

1. STARTING THE ENGINE

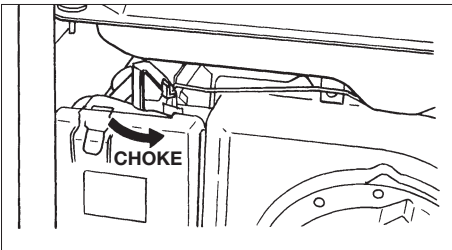
- (a) Set the engine switch to "ON" position.
Turn the AC circuit breaker off.



- (b) Open the fuel cock.



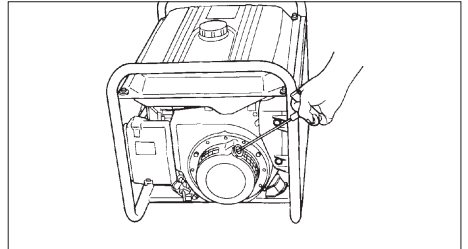
- (c) Set the choke lever to "CHOKE" (arrow mark). Not necessary if the engine is warm.



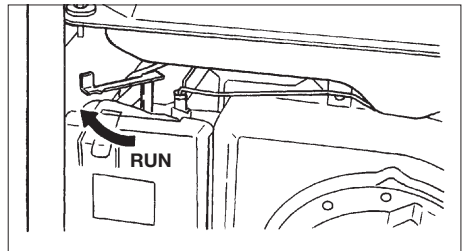
- (d) Pull the starter handle slowly until resistance is felt.

This is the "Compression" point. Return the handle to its original position and pull swiftly.

- Do not fully pull out the rope.
- After starting, allow the starter handle to return to its original position while still holding the handle.
- If the engine fails to start after several attempts, repeat above procedures with choke lever returned "RUN" position.



- (e) After the engine started, return the choke lever gradually to "RUN" position.



- (f) Warm up the engine without a load for a few minutes.

2. USING ELECTRIC POWER

(1) AC APPLICATION

(a) Check the Multi meter for proper voltage.

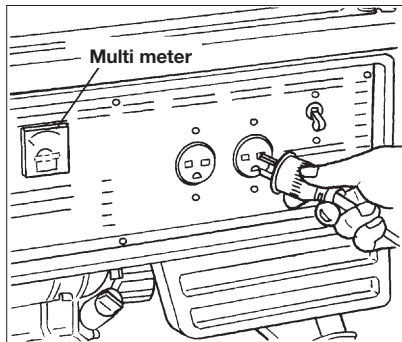
■ This generator is thoroughly tested and adjusted in the factory. If the generator does not produce the specified voltage, consult your nearest EarthPower Generator dealer.

(b) Turn off the switch(es) of the electrical appliance(s) before connecting to the generator.

(c) Insert the plug(s) of the electrical appliance(s) into the receptacle.

■ Check the amperage of the receptacles used referring to TABLE 1 or TABLE 2 (page. 24), and be sure not to take a current exceeding the specified amperage.

■ Be sure that the total wattage of all appliances does not exceed the rated output of the generator.



[CAUTION]

■ **TABLE 1 or TABLE 2 (page. 24) does not apply to generators equipped with special receptacles.**

⚠ WARNING

- To take out power from TWIST LOCK receptacle, insert the plug into receptacle and turn clockwise to lock it.
- Be sure to ground the generator.

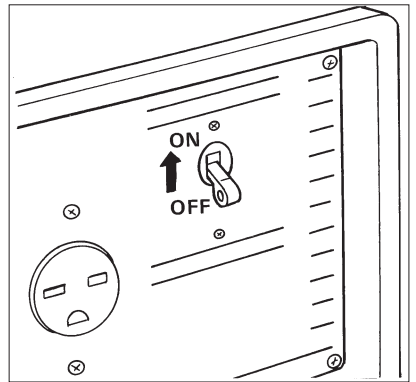
(d) Turn the AC circuit breaker on.

NOTE:

When the AC circuit breaker turns off during operation, the generator is overloaded or the appliance is defective.

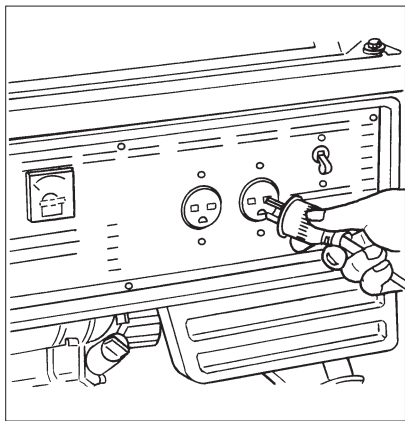
Stop the generator immediately, check the appliance and/or generator for overloading or defect and repair as necessary.

(e) Check the AC circuit breaker is "ON".

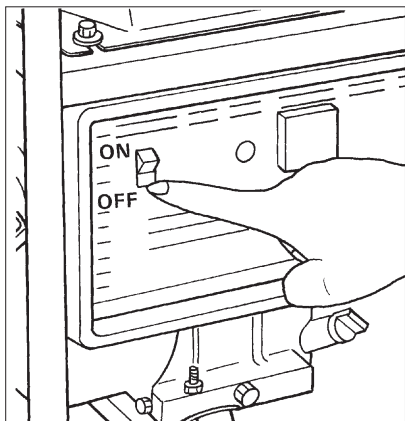


3. STOPPING THE GENERATOR

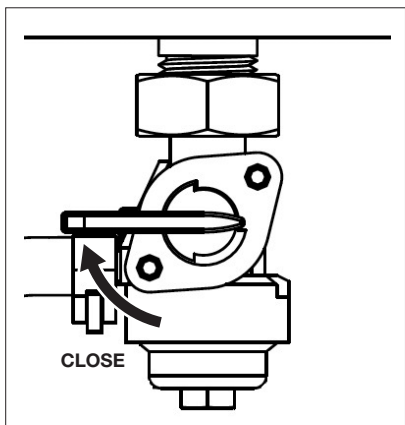
- (a) Turn off the power switch of the electric equipment or unplug the cord from receptacle of the generator.
- (b) Allow the engine to cool down for about 3 minutes at no-load before stopping.



- (c) Set the engine switch to "OFF" position.


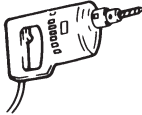


- (d) Be sure to close the fuel cock, after the engine has stopped.



6. SCOPE OF APPLICABILITY

It is recommended to use AC power sources within the following scope.

Applicable instruments		Model	Scope of applicability		Remarks
			50Hz	60Hz	
Alternating current (AC)	Light-Electric Heater	MGE2601	Up to 2000W	Up to 2200W	<ul style="list-style-type: none"> ● The instruments which require much starting current and some kinds of motors may be unable to be used even if they are within the applicable scope. ● The circuit breaker turns OFF when the current exceeding the applicable scope is used or when the applied instrument is defective.
		MGE3301	Up to 2300W	Up to 2700W	
		MGE3701	Up to 2600W	Up to 3100W	
		MGE6601	Up to 4500W	Up to 5500W	
		MGE6901	Up to 5400W	Up to 6000W	
		Motors with single phase	MGE2601	Up to 600W	
		MGE3301	Up to 800W	Up to 900W	
		MGE3701	Up to 900W	Up to 1000W	
		MGE6601	Up to 1500W	Up to 1800W	
		MGE6901	Up to 1800W	Up to 2000W	

7. MAINTENANCE SCHEDULE

Daily	<ul style="list-style-type: none"> ● Check the air cleaner ● Check oil level and refill to the upper level before starting the engine. ● Check all the points indicated in "PRE-OPERATION CHECKS". ● Clean and wash air-cleaner element. More often if used in dirty or dusty environments.
50 hours	<ul style="list-style-type: none"> ● Change engine oil. (The initial oil change must be conducted after the first 25 hours operation.) ● Check spark plug, and clean and adjust if necessary. ● Check and clean the fuel cock.
100 hours	<ul style="list-style-type: none"> ● Replace spark plug. ● Replace air-cleaner element. ○ Decarbonize cylinder head, valves and piston. ○ Check and replace carbon brushes.
3 years	<ul style="list-style-type: none"> ○ Inspect control panel components. ○ Check rotor and stator. ○ Replace engine mount rubber. ○ Overhaul engine. ● Change fuel lines.

NOTE:

Initial oil change should performed after first 25 hours of use. Thereafter change oil every 50 hours. Before changing oil, check for a suitable way to dispose of the old oil. Do not pour it down into sewage drains, onto garden soil or into open streams. Your local zoning environmental regulations will give you more detailed instructions on proper disposal.

Items marked with a  required advanced skill and tools, so they should be done by the distributor.

8. “HOW-TO” MAINTENANCE

1. ENGINE OIL CHANGE

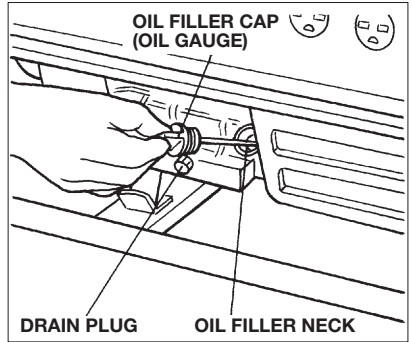
Change engine oil every 50 hours.

(for a new engine, change oil after 25 hours.)

- (a) Drain oil by removing the drain plug and the oil filler cap while the engine is warm.
- (b) Reinstall the drain plug and fill the engine with oil until it reaches the upper level on the oil filler cap.

■ Use fresh and high quality lubricating oil to the specified quantity.

If contaminated or deteriorated oil is used or the quantity of the engine oil is not sufficient, the engine damage will result and its life will be greatly shortened.

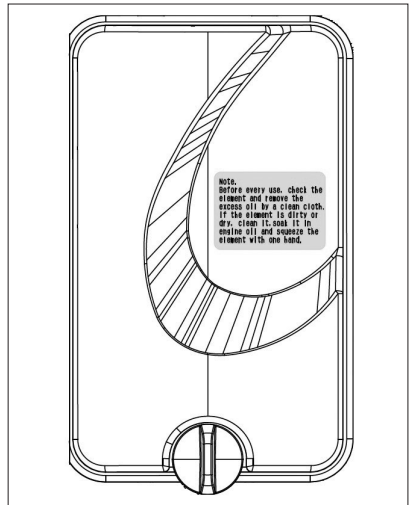
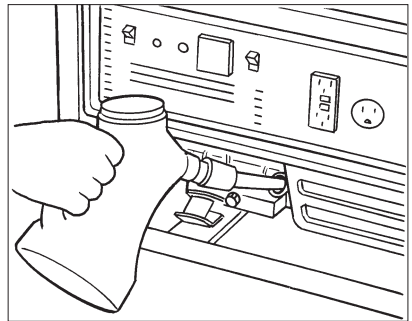


2. SERVICING THE AIR CLEANER

Maintaining an air cleaner in proper condition is very important. Dirt induced through improperly installed, improperly serviced, or inadequate elements damages and wears out engines.

Keep the element always clean.

- (a) Take out the air cleaner, clean it well in kerosene and dry it.
- (b) After wetting the element by clean engine oil, squeeze it tight by hand.
- (c) Lastly, put the element in the case and install it securely.



3. CLEANING AND ADJUSTING SPARK PLUG

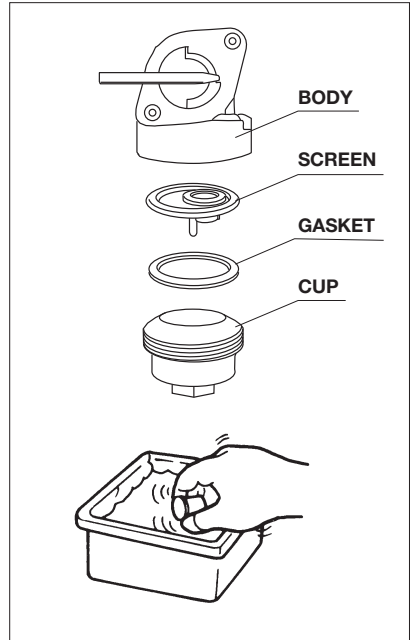
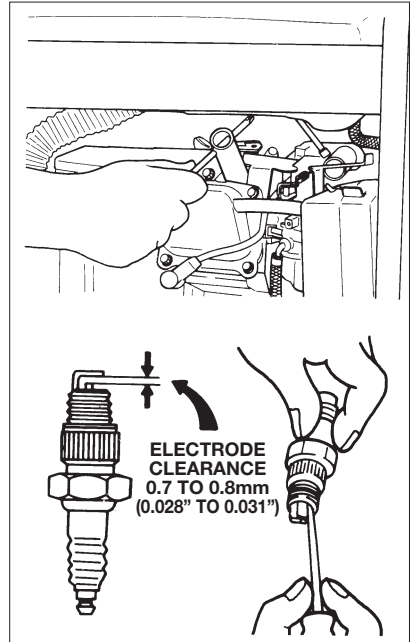
- (a) If the plug is contaminated with carbon, remove it using a plug cleaner and wire brush.
- (b) Adjust the electrode gap to 0.7 to 0.8 mm (0.028" to 0.031").

Spark plug models: Torch F7RTC

4. CLEANING FUEL STRAINER (MGE6601, MGE6901)

Dirt in the fuel are removed by the fuel strainer.

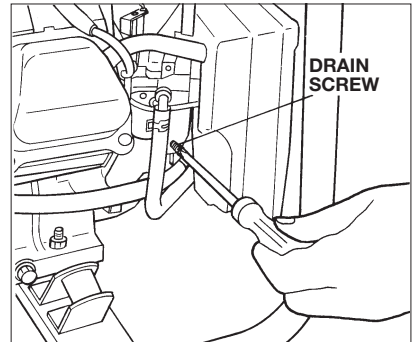
- (a) Remove the strainer cup and throw away dirt.
- (b) Clean the screen and strainer cup with gasoline.
- (c) Tightly fasten the cup to main body, making sure to avoid fuel leak.



9. PREPARATION FOR STORAGE

The following procedures should be followed prior to storage of your generator for periods of 3 months or longer.

- (a) Drain fuel from fuel tank carefully. Gasoline left in the fuel tank may deteriorate making engine-starting difficult.
- (b) Loosen the drain screw on the bottom of the carburetor float chamber, and drain the fuel completely.
- (c) Change engine oil.
- (d) Remove the spark plug from the cylinder head. Pour a small amount (5 to 10 cm³) of engine oil into the plug hole and crack the engine several times to lubricate piston and cylinder. Install the spark plug to the cylinder head.
- (e) Check for loose bolts and screws, tighten them if necessary.
- (f) Clean generator thoroughly with oiled cloth. Spray with preservative if available.
 - ☒ NEVER USE WATER TO CLEAN GENERATOR!
- (g) Pull starter handle until resistance is felt, leaving handle in that position.
- (h) Store generator in a well ventilated, low dust and low humidity area.



10. TROUBLE SHOOTING

When generator engine fails to start after several attempts, or if no electricity is available at the output socket, check the following chart.

If your generator still fails to start or generate electricity, contact your nearest EarthPower Generator dealer for further information or corrective procedures.

When Engine Fails to Start:

Check if choke lever is in its proper position.		Set the choke lever to "CLOSE" position.
Check if fuel cock is open.	↔	If closed, open fuel cock.
Check fuel level.		If empty, refill fuel tank making sure not to overfill.
Check to make sure generator is not connected to an appliance.		If connected, turn off the power switch on the connected appliance and unplug.
Check spark plug for loose spark plug cap.	↔	If loose, push spark plug cap back into place.
Check spark plug for contamination.		Remove spark plug and clean electrodes.

When No Electricity Is Generated at Receptacle:

Check to make sure no-fuse breaker is in the ON Position.	↔	After making sure that the total wattage of the electrical appliance is within permissible limits and there are no defects in the appliance, turn the circuit breaker to the "ON" position. If breaker, continue to actuate, consult your nearest servicing dealer.
Check AC and DC terminals for loose connections.		Secure connections if necessary.
Check to see if engine starting was attempted with appliances already connected to generator.	↔	Turn off switch on the appliance and disconnect cable from receptacle. Reconnect after generator has been started properly.

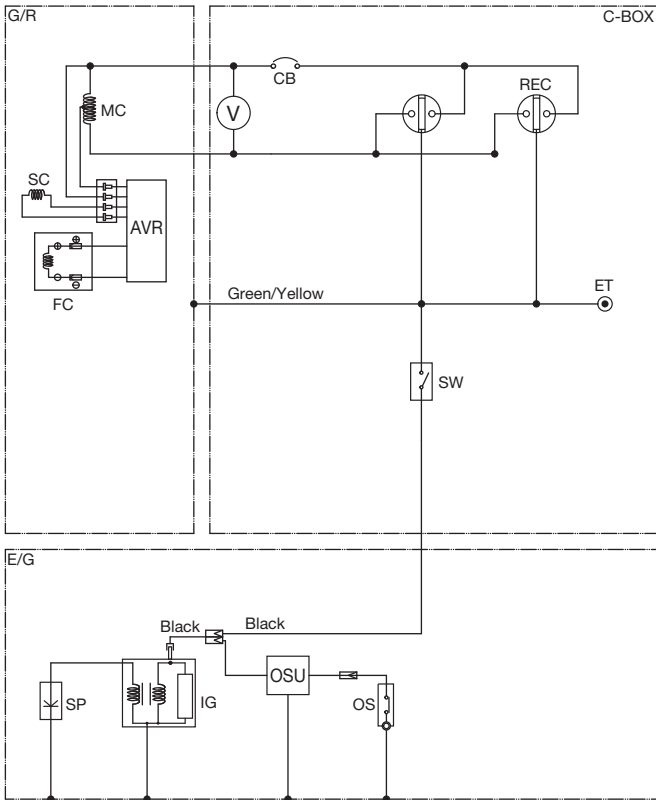
11. WIRING DIAGRAM

(1) AC230V 50Hz

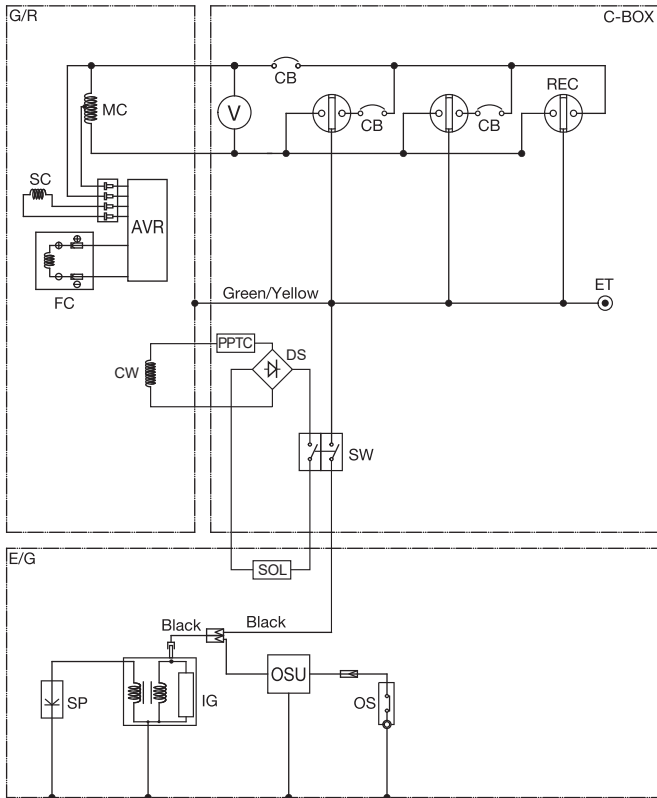
MGE2601

MGE3301

MGE3701



MGE6601
MGE6901

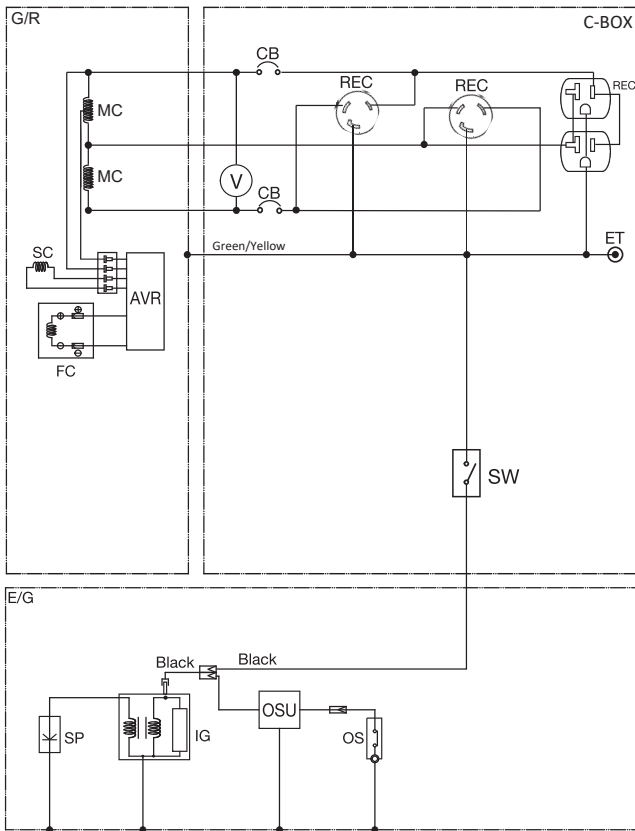


(2) AC220V/110V 60Hz

MGE2601

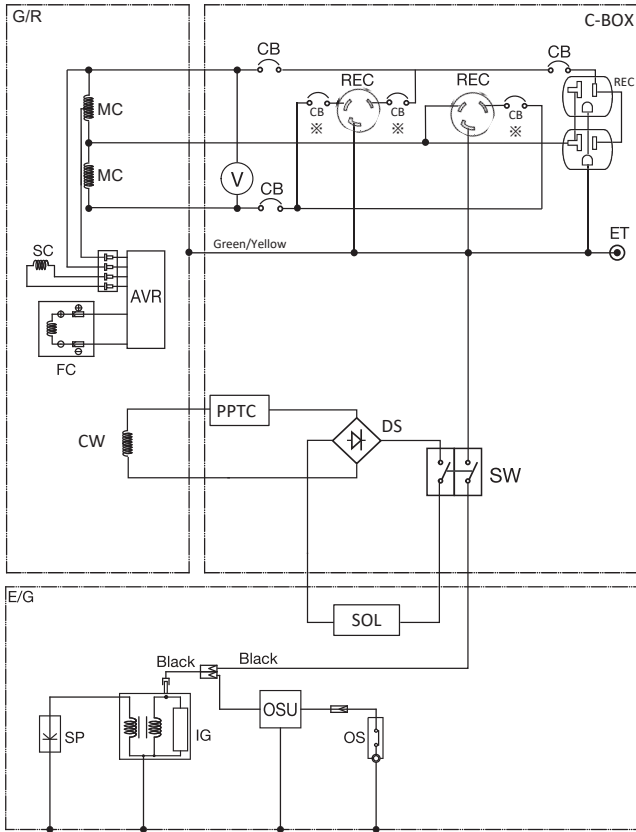
MGE3301

MGE3701



MGE6601

MGE6901 (※ For MGE6901 Only)



Symbol	Parts Name	Symbol	Parts Name	Symbol	Parts Name
AVR	AVR unit	EW,SC	Exciter winding	OSU	Oil sensor unit
AW	Auxiliary winding	E/G	Engine	PL	Pilot lamp
C	Capacitor	FW,FC	Field winding	PPTC	Polymer PTC
CB	Circuit breaker	G/R	Generator	R	Rotor
CW	Charge winding	I/D	IDLE controler	REC	AC receptacle
C-BOX	Control box	I/D SW	IDLE switch	SA	Surge absorber
D	Diode	LED	Oil sensor lamp	SOL	Solenoid vlave
DC	DC coil	MG,IG	Fly wheel magneto	SP	Spark plug
DS	Diode stack	MW,MC	Main winding	SW	Stop switch
ET	Ground terminal	OS	Oil level switch	V	Multi meter

12. APPENDIX



MODEL	Receptacle Type		 	Total Current
	Receptacles No.			
MGE2601	#1	~ 8.7A	-	~ 8.7A
	#2	~ 8.7A		
MGE3301	#1	~ 10.0A	-	~ 10.0A
	#2	~ 10.0A		
MGE3701	#1	~ 11.3A	-	~ 11.3A
	#2	~ 11.3A		
MGE6601	#1	~ 16.0A	-	~ 19.7A
	#2	~ 16.0A		
	#3	-		
MGE6901	#1	~ 16.0A	-	~ 23.5A
	#2	~ 16.0A		
	#3	-		

TABLE1 [AC230V/50Hz]

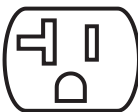


Rated Voltage		AC110V			AC220V	Total Current
MODEL	Receptacle Type					
					Receptacles No.	5-20R
MGE2601	AC110V	#1	~ 12.0A _{Total}	-	-	~ 20.0A
		#2				
		#3				
MGE3301	AC110V	#1	~ 15.0A _{Total}	-	-	~ 24.5A
		#2				
		#3				
MGE3701	AC110V	#1	~ 17.0A _{Total}	-	-	~ 28.2A
		#2				
		#3				
MGE6601	AC110V	#1	~ 20.0A _{Total}	-	-	~ 47.0A
		#2				
		#3				
MGE6901	AC110V	#1	~ 20.0A _{Total}	-	-	~ 50.0A
		#2				
		#3				
MGE2601	AC220V	#1	-	-	~ 10.0A	~ 10.0A
		#2	-	-	~ 12.3A	~ 12.3A
		#3	-	-	~ 14.1A	~ 14.1A
MGE3301	AC220V	#1	-	-	~ 12.3A	~ 12.3A
		#2	-	-	~ 14.1A	~ 14.1A
		#3	-	-	~ 14.1A	~ 14.1A
MGE3701	AC220V	#1	-	-	~ 14.1A	~ 14.1A
		#2	-	-	~ 14.1A	~ 14.1A
		#3	-	-	~ 14.1A	~ 14.1A
MGE6601	AC220V	#1	-	-	~ 25.0A	~ 25.0A
		#2	-	-	~ 25.0A	~ 25.0A
		#3	-	-	~ 25.0A	~ 25.0A
MGE6901	AC220V	#1	-	-	~ 27.3A	~ 27.3A
		#2	-	-	~ 27.3A	~ 27.3A
		#3	-	-	~ 27.3A	~ 27.3A

TABLE2 [AC220V/110V 60Hz]

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