



# OWNER'S MANUAL

Air-cooled gasoline engine generator set  
TG-2500 / TG-3000 / TG-5000



## PREFACE

Thank you for purchasing products from EASTERN TOOLS & EQUIPMENT, INC. We appreciate your business. The following manual is only a guide to assist you and is not a complete or comprehensive manual of all aspects of maintaining and repairing your generator. The equipment you have purchased is a complex piece of machinery. We recommend that that you consult with a dealer if you have doubts or concerns as to your experience or ability to properly maintain or repair your equipment. You will save time and the inconvenience of having to go back to the store if you choose to write or call us concerning missing parts, service questions, operating advice, and/or assembly questions. Our gasoline generators have some of the following features:

- Lightweight construction
- Air cooled
- Four-stroke gasoline internal combustion engine
- Recoil starter
- Large fuel tank
- Automatic voltage stabilizer
- NFB circuit protector
- AC and DC outputs
- Low oil level sensor

The ETQ air-cooled gasoline generators are widely used when electrical power is scarce. Our generators provide a portable mobile solution in supplying power for field operations during project construction.

This manual will explain how to operate and service your generator set.

If you have any questions or suggestions about this manual, please contact your local dealer or us directly. ***Consumers should notice that this manual might differ slightly from the actual product as more improvements are made to our products. Some of the pictures in this manual may differ slightly from the actual product as well. Eastern Tools and Equipment, Inc. reserves the right to make changes at any time without notice and without incurring any obligation.***

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**TECHNICAL SPECIFICATIONS AND DATA**

Technical specifications in SI units

Item	Model	TG-2500	TG-3000	TG-5000
Generator	Type	Brushless, revolving magnetic field, self –exciting, 2-pole, single-phase		
	Voltage regulator	Capacitor		
	Frequency (Hz)	60		
	Rated voltage (V)	120 / 240		
	Maximum output (kW)	3.0	3.2	6.5
	Rated Output (kW)	2.7	3.0	5.5
	Power factor (cos φ)	1.0		
Gasoline Engine	Model	ETQ168	ETQ200	ETQ188
	Engine type	Forced air-cooled, 4-stroke		
	Displacement (cc)	163	196	389
	Max. output (kW/rpm)	4.0 / 3600	4.9 / 3600	2.8 / 3600
	Fuel tank capacity (L)	12	12	25
	Continuous operating hours	7.0	6.8	7.1
	Lube-oil capacity (L)	.6	.6	1.1
Unit Set	Ignition system	Transistorized ignition (TCI)		
	Starting system	Recoil manual start / Electric start (optional)		
	Dimensions (LxWxH) (mm)	432x445x597	545x425x440	674x510x530
	Dry weight (kg)	47	49	83

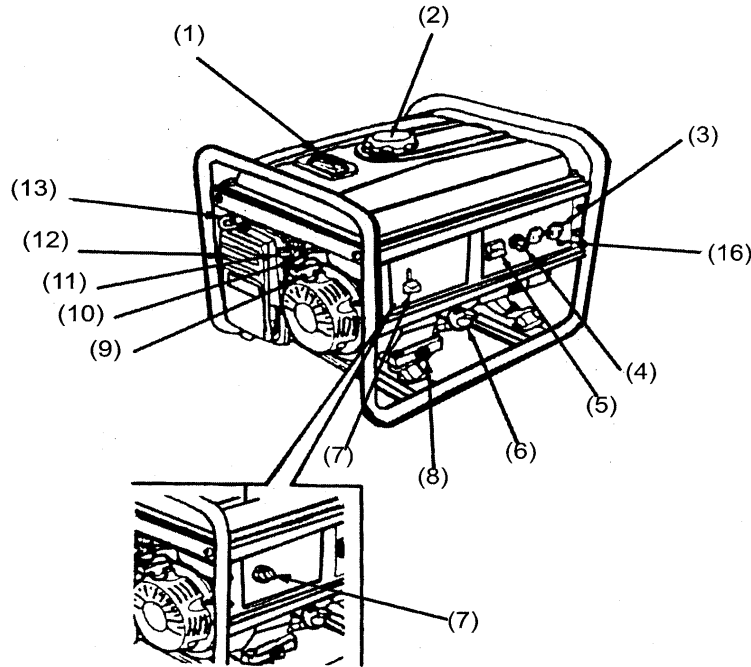
Technical specifications in English units

Item	Model	TG-2500	TG-3000	TG-5000
Generator	Type	Brushless, revolving magnetic field, self –exciting, 2-pole, single-phase		
	Voltage regulator	Capacitor		
	Frequency (Hz)	60		
	Rated voltage (V)	120 / 240		
	Maximum output (HP)	4.02	4.29	8.71
	Rated Output (HP)	3.75	4.02	7.37
	Power factor (cos φ)	1.0		
Gasoline Engine	Model	ETQ168	ETQ200	ETQ188
	Engine type	Forced air-cooled, 4-stroke		
	Displacement (cu. in)	9.95	11.96	23.74
	Max. output (HP/rpm)	5.5 / 3600	6.5 / 3600	13 / 3600
	Fuel tank capacity (US gal)	3.0	3.17	6.61
	Continuous operating hours	7.0	6.8	7.1
	Lube-oil capacity (oz.)	20.3	22.3	37.17
Unit Set	Ignition system	Transistorized ignition (TCI)		
	Starting system	Recoil manual start / Electric start (optional)		
	Dimensions (LxWxH) (in)	21.46x6.73x17.32	17x17.5x23.5	26.54x20.08x20.87
	Dry weight (lb)	95	103.6	183

**EQUIPMENT DESCRIPTION & KNOWING YOUR GENERATOR**

Please read this manual and follow the procedures covered in this manual. Become familiar with the generators functions, applications, and limitations.

Below is a diagram of the locations of the various controls and functions of the generator



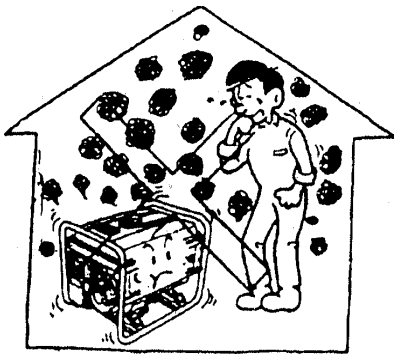
- |                        |                           |
|------------------------|---------------------------|
| (1) FUEL GAUGE         | (10) FUEL FILTERING CUP   |
| (2) FUEL TANK CAP      | (11) FUEL VALVE           |
| (3) AC RECEPTACLES     | (12) AIR CLEANER          |
| (4) AC CIRCUIT BREAKER | (13) CHOKE ROD            |
| (5) VOLTMETER          | (14) MUFFLER              |
| (6) OIL FILLER CAP     | (15) SPARK PLUG           |
| (7) ENGINE SWITCH      | (16) GROUND TERMINAL      |
| (8) OIL DRAIN PLUG     | (17) DC TERMINALS         |
| (9) RECOIL STARTER     | (18) DC CIRCUIT PROTECTOR |

**WARNING:** DO NOT exceed the generator’s wattage / amperage capacity. Our products are continuously being changed and improved. Every effort has been made to ensure that information in the manual is accurate and up to date. However, we reserve the right to change, alter or otherwise improve the product and this manual at any time without prior notice.

**SAFETY PRECAUTIONS**

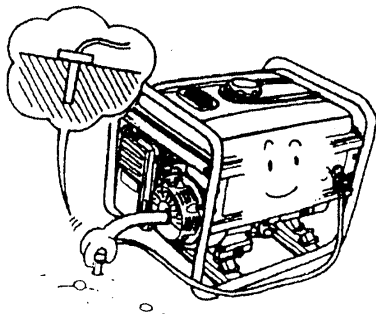
In order to ensure safety for the consumer, please carefully follow instructions on being careful with the generators.

Operate the generator **ONLY** outdoors. Never run the generator indoors as the engine gives off poisonous carbon monoxide, an odorless, and colorless gas. Inhaling carbon monoxide will cause nausea, fainting or death. Also, keep the generator at least 3 feet away from flammable matter for adequate ventilation.



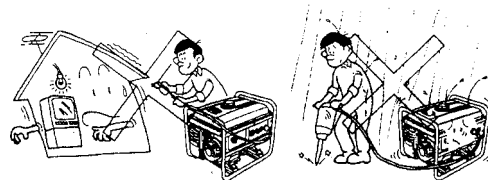
**DANGER**

Always properly ground the generator. Failing to do so can result in electrocution, particularly if the generator is equipped with a wheel kit.



**ELECTRIC SHOCK AND SHORT CIRCUIT**

Be sure to notify the utility company when using the generator for backup power. Use approved transfer equipment to isolate the generator from electric utility. In highly conductive area such as metal decking or steel work, use a ground circuit fault interrupter. Never touch the generator if the generator is wet. Also, never touch the generator if your hand is wet. Never operate your generator if the weather conditions call for any type of precipitation such as rain, snow, or fog.



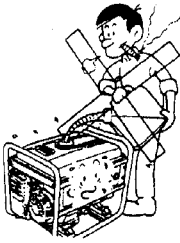
**PREVENTION FROM ACCIDENTAL BURNS**

Never touch the muffler and its cover when the engine is running. Never touch the muffler and cover after the engine has been used, as the muffler remains hot for a good period of time.

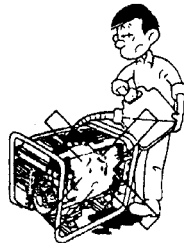
**REFUELING PRECAUTIONS**

Gasoline and its vapors are extremely flammable. Do not smoke near gasoline and keep gasoline away from generator while the generator is running. When adding fuel, turn the generator off and let it cool at least 2 minutes before removing the gas cap. Loosen gas cap slowly to relieve the pressure in the tank.

Fill fuel tank outdoors and never overfill the tank.



NO SMOKING.



DO NOT SPILL.

When storing gasoline or equipment with fuel in tank.

Store away from appliances or equipment that have a pilot light or other ignition sources because they can ignite gasoline vapors.

**BATTERY (optional: for electric start units only)**

Batteries contain electrolyte fluid or battery acid. Batteries emit hydrogen gases as battery is being charged. The slightest spark will ignite hydrogen and cause an explosion.

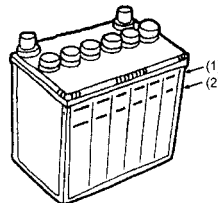
Note: Our units come shipped with a dry battery for safety shipping purposes. Dry batteries need to be filled with electrolytic solution (battery acid) and fully charged (trickle charged) before use. During use, the battery level should be checked once a month to make sure they are between the high and low marks.



**4. BATTERY (only for Model)**

Check to make sure that the electrolyte level in each cell to be sure they are all between upper and lower limits.

- (1) Upper limit
- (2) Lower limit



**ENGINE SAFETY PRECAUTIONS**

Do not touch hot surfaces. Allow equipment to fully cool down before touching.

After the generator has been run, the engine produces heat. The temperatures of the muffler and nearby areas can reach or exceed 160<sup>0</sup> F. Severe burns will occur on contact with skin.

Do not modify the generator in any way. The generator supplies the rated voltage and rated frequency at its governed speed.

**GENERATOR SAFETY**

Never overload your generator as this can damage your generator or the electrical devices connected to it.

Do not start generator with electrical devices connected to it. Start the generator first and after the speed of the generator stabilizes, electrical loads can be applied to it.

When connecting electrical loads, make sure the devices are “OFF” first before connecting them. Keep the same concept when disconnecting electrical devices, make sure all devices are in the “OFF” position before disconnecting.

Operate the generator on level surfaces only. Inclined surfaces reduce the effective lubrication of the engine.

Do not expose the generator to excessive moisture, dust, dirt, or corrosive vapors.

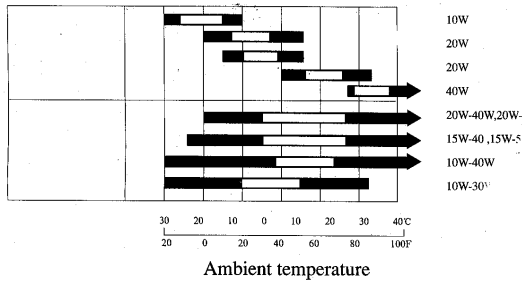


**PREPARATION BEFORE OPERATION**

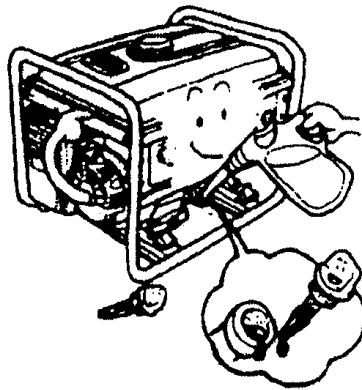
Before starting the generator, verify the following conditions.

**ENGINE OIL**

- Fill the engine with SAE 10W-30 engine oil for general use or follow the table below.

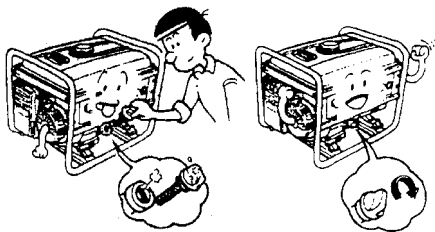


1, SINGLE VISCOSITY      2, MULTI VISCOSITY



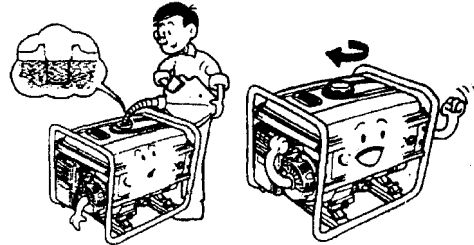
- Make sure the generator is on a level surface and make sure the oil dipstick is on tight.

**GASOLINE**



- Add unleaded gasoline and never fill the fuel tank indoors. Also,

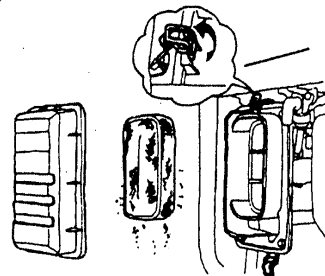
be sure to install the fuel tank cap on tight after filling.



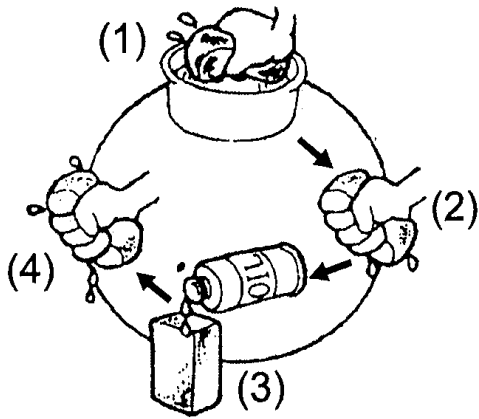
- DO NOT overfill the fuel tank. Always allow room for fuel expansion.
- Never fill the fuel tank when the engine is running or hot. Allow the unit to cool for two minutes before refueling. DO NOT use light a cigarette or smoke when filling the fuel tank.

**AIR CLEANER**

- Unsnap the air cleaner cover springs, and remove the air cleaner cover.
- Check the air cleaner element to be sure they are clean and in good condition.



- If the air filter is dirty, remove and clean the element.
  - Wash in solvent
  - Squeeze
  - Soak oil
  - Squeeze dry

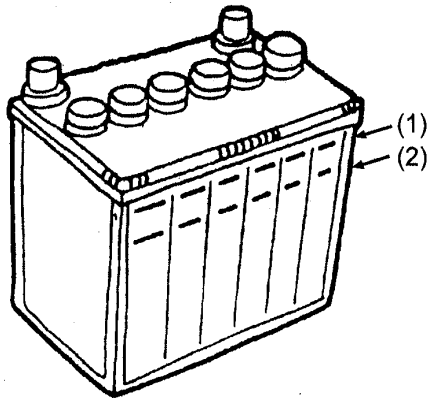


- Reinstall the air cleaner element and secure the cover by setting the cover spring.

**BATTERY (only for electric start models)**

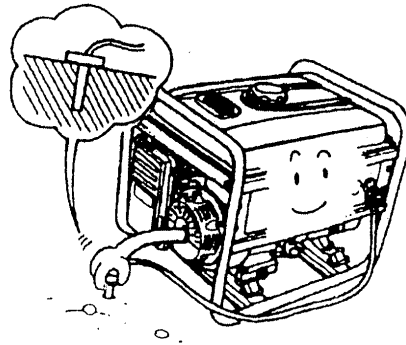
Check to make sure that the battery acid level in each cell is between the upper and lower limits.

- (1) Upper limit
- (2) Lower limit



**GROUNDING THE GENERATOR**

The National Electric Code requires that the frame of the generator and the external electrically conductive parts of the generator be connected to an approved earth ground. Local codes may differ and require other grounding specifications. For this purpose, please use the ground wire that attaches from the frame to the generator unit.



Using a No. 12 AWG (American Wire Gauge) stranded copper wire to the frame and to an earth-driven copper or brass grounding rod provides sufficient safety against shock. However, local codes may differ. Contact a local electrician to find out specifications for grounding your generator.

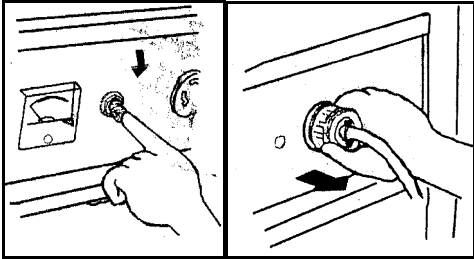
Note: Grounding your generator is highly recommended. It helps prevent electrical shock if a ground fault condition exists in the generator or in faulty connected electrical devices. Also, because the generator is rotating at high speeds, static electricity tends to buildup within the unit. Grounding helps dissipate the static electricity buildup often buildup in ungrounded devices.

## OPERATING THE GENERATOR

### STARTING THE ENGINE

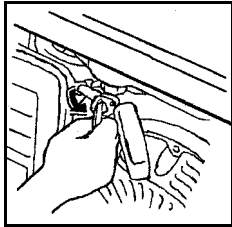
Before starting the engine, verify that the engine oil is full, gasoline is full, and air filter is in place. Also, disconnect any load from the AC receptacle, and turn the AC circuit breaker OFF (Figure 1).

*Figure 1. Disconnecting electrical devices*



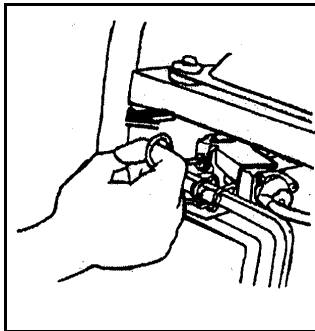
- Turn the fuel valve to the “On” position (Figure 2).

*Figure 2. Fuel Valve*



- Place the choke lever in the “CHOKE” position (Figure 3.).

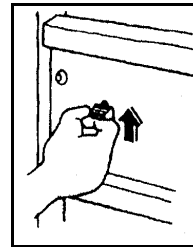
*Figure 3. Choke Positions*



- Turn the engine switch to the “ON” position (Figure 4).

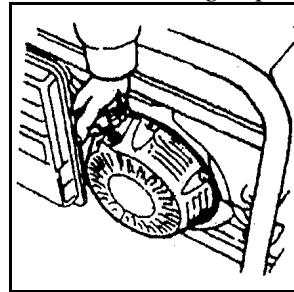
**CAUTION!** NEVER start or stop the unit with electrical loads connected AND with the connected devices turned ON.

*Figure 4. Engine switch on position*



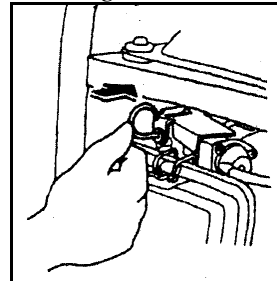
- Pull the recoil starter grip lightly until resistance is felt, then pull hard. Warning: Do not allow the starter grip to snap back against the engine. Return it gently (Figure 5.).

*Figure 5. Recoil starting rope*



Push the choke rod to the “OPEN” position a short distance at a time over several seconds as the engine warms up (Figure 6).

*Figure 6. Putting choke rod to “OPEN”*



**CONNECTING ELECTRICAL LOADS AND ELECTRICAL CAPACITY**

After starting the generator, let the engine warm up after connecting electrical loads to it. Do not have any electrical loads connected before starting the generator.

Do not connect 240 Volt loads to the 120 Volt sockets.

Do not connect 120 Volt loads to the 240 Volt sockets.

Make sure all electrical devices are 60 Hz devices. Do not connect 50 Hz devices to the generator.

Do not connect 3-phase loads to the generator.

Do not overload the generator. Before beginning your work, you must verify that the rated (running) and surge (starting) watts for the items you will power at the same time are within the generators operating capacity. Please refer to the following Table 1. for wattage / amperage ratings. Also, to prolong the life of your generator, sequentially add loads and permit the generator to stabilize before adding another load. Never exceed the capacity of the generator.

Estimate how many surge (starting) watts you will need. Surge wattage is the short burst of power needed to start electric motor-driven tools or appliances such as a circular saw or refrigerator. Below is an example of how the rated and surge wattage can be estimated.

**Example:**

Tool or Appliance	Rated (Running) Watts	Additional Surge (Starting) Watts
Air Conditioner	1200	1800
Refrigerator	800	1600
Freezer	500	500
Television	500	-
Light (75 Watt)	75	-
Total	3075 Total Running Watts	1800 Highest Surge Watts

Total Rated (Running) Watts = 3075  
 Highest Additional Surge Watts = 1800  
 Total Generator Output Required = 4875

**Table 1. Wattage reference chart**

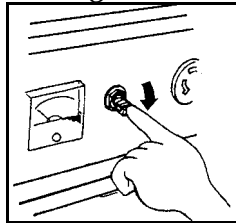
Tool or Appliance	Rated (Running) Watts	Additional Surge (Starting) Watts
<b>Essentials</b>		
Light Bulb – 75 watt	75	-
Freezer	500	500
Sump Pump	800	1200
Refrigerator / Freezer – 18 Cu. Ft.	800	1600
1/3 HP Water Well Pump	1000	2000
<b>Heating/Cooling</b>		
Air condition – 10000 BTU	1200	1800
Window Fan	300	600
½ HP Furnace Fan Blower	800	1300
<b>Kitchen</b>		
1000 Watt Microwave Oven	1000	-
Coffee Maker	1500	-
Single element electric stove	1500	-
Hot plate	2500	-
<b>Family Room</b>		
DVD / CD Player	100	-
VCR	100	-
Stereo Receiver	450	-
27 " Color Television	500	-
Personal Computer w/17" monitor	800	-
<b>Other</b>		
Security system	180	-
AM / FM clock radio	300	-
½ HP Garage door opener	480	520
40 Gallon electric water heater	4000	-
<b>DIY / Job Site</b>		
Halogen work light	1000	-
1/3 HP Airless sprayer	600	1200
Reciprocating Saw	960	960
½ HP Electric Drill	1000	1000
7 ¼ " Circular saw	1500	1500
10" Miter saw	1800	1800
6" Table Planer	1800	1800
10" Table saw / Radial arm saw	2000	2000
1 ½ HP air compressor	2500	2500

**Note: wattages listed are only approximates. Check your electrical device for actual wattage.**

**STOPPING THE ENGINE**

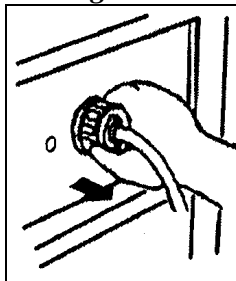
- Turn the AC circuit breaker to the “OFF” position (Figure 1).

*Figure 1.*



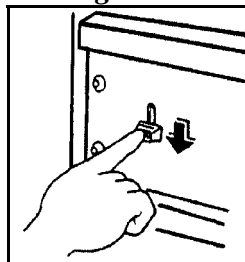
- Unplug all the electrical loads from the generator panel (Figure 2).

*Figure 2.*



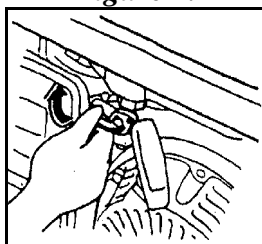
- Let the engine run at no-load for several minutes to stabilize the internal temperatures of engine and generator.
- Turn the engine switch to the “OFF” position (Figure 3).

*Figure 3.*



- Turn the fuel valve to the “OFF” position (Figure 4).

*Figure 4.*

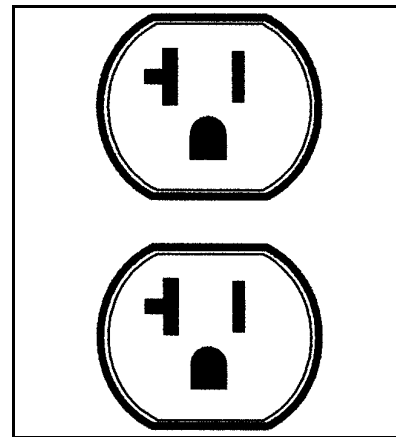


**RECEPTACLES**

This generator is equipped with the following receptacles:

120 Volt AC, 20 Amp Duplex Receptacle

*Figure 5. 120 Volt, 20 Amp Duplex Receptacle*



*Figure 6. 240 Volt, NEMA L14-20*



Note: Please be sure to use electrical cords that support the amount of wattage being used. The electrical cords should be able to handle 20 Amps of current at 125 Volts.

**MAINTENANCE**

Below is a routine maintenance schedule.



			First month or	Every 3 months or	Every 6 months or	Every year or	SEE page
Engine oil							P.6
							P.17
Air cleaner							P.8
							P.8
Fuel strainer							P.19
Battery fluids level							P.19
Spark plug							P.18
Valve Clearance						<sup>(1)</sup>	-
Combustion Chamber						<sup>(1)</sup>	-
Fuel line				<sup>(1), (2)</sup>			-

(1):These items should be serviced by a dealer.

(2):Every 3 years



**CLEANING THE GENERATOR**

Generator maintenance consists of keeping the unit clean and dry. Be sure to store the unit in a clean and dry environment, where it will not be exposed to excessive dust, dirt, moisture or any corrosive vapors. Cooling slots should always be clean and free from clogs.

Note: Do not use a garden hose to clean the generator. Water can enter the fuel and intake system and cause problems. In addition, if water and dirt buildup on the generators internal windings, the resistance of these windings will decrease.

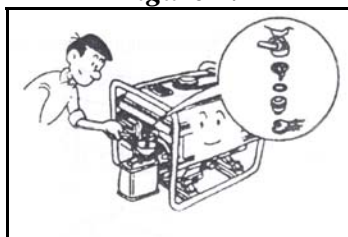
- To clean the generator, use a damp cloth to wipe the exterior surfaces.
- Use a soft bristle brush to loosen caked on dirt or oil.
- Use a vacuum cleaner to pick up loose dirt and debris.
- Compressed air (not to exceed 25 psi) may be used to blow away dirt.

**STORAGE**

The generator should be started at least once every week. If this cannot be done and you must store the unit more than 30 days, please follow the following guidelines.

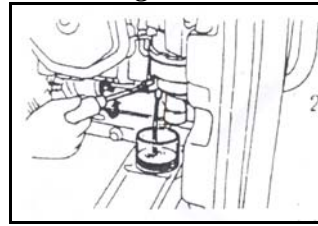
- Close the fuel valve; drain the fuel from the fuel tank (Figure 1).

*Figure 1.*



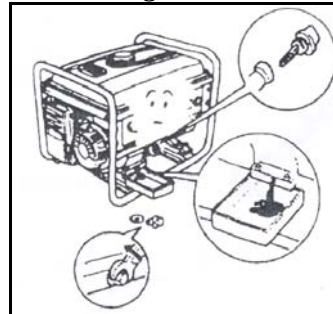
- Drain the fuel from the carburetor (Figure 2.).

*Figure 2.*



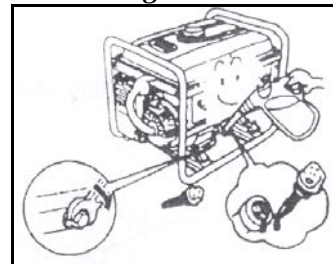
- Remove the oil filter cap and drain plug to drain the oil (Figure 3.).

*Figure 3.*



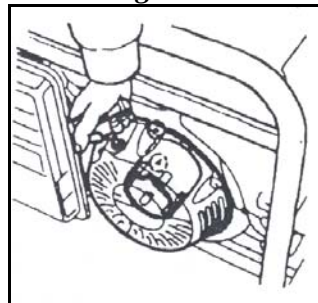
- Tighten the oil drain plug and fill the engine with new oil to the filter neck (Figure 4.).

*Figure 4.*



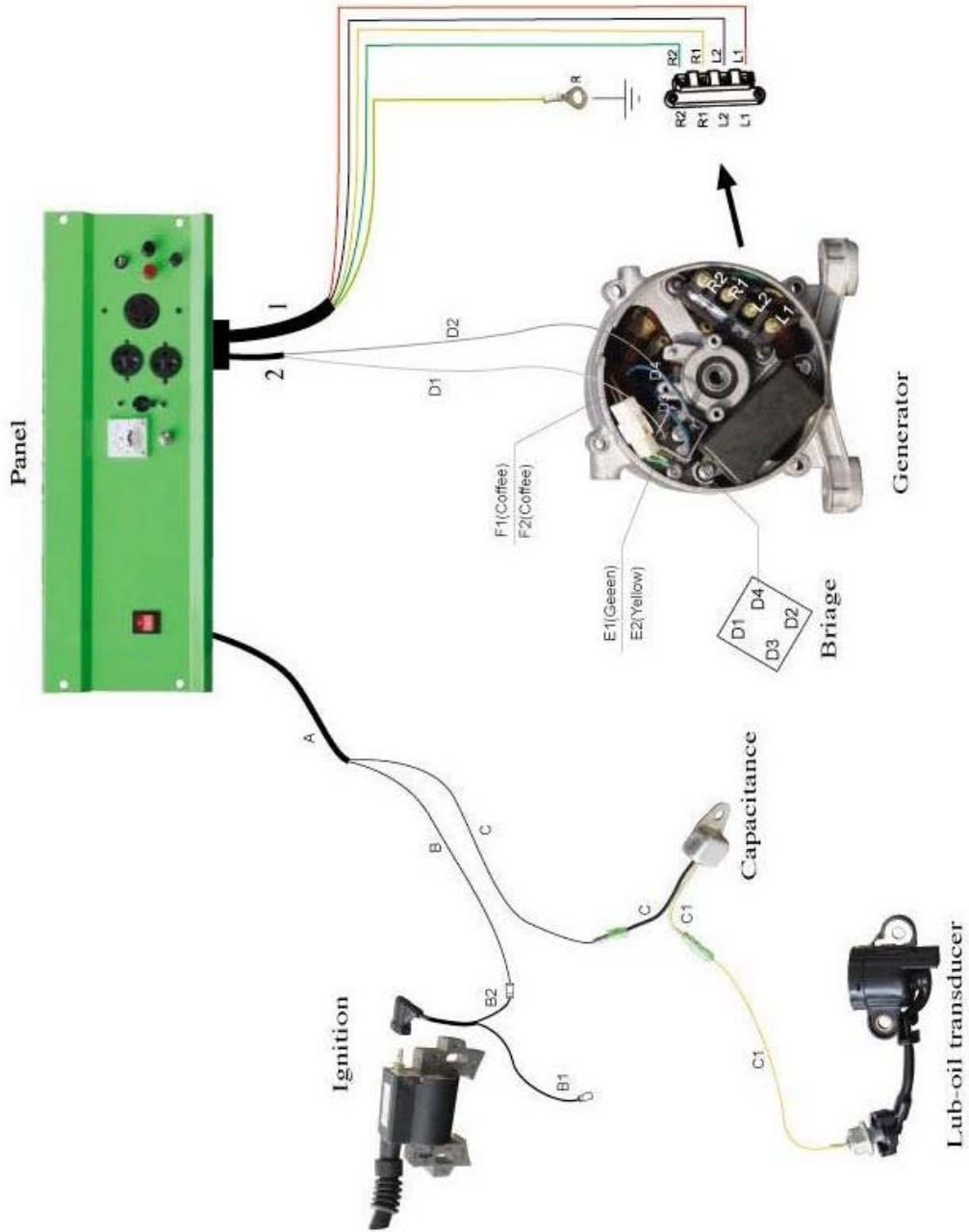
- Pull the starter grip carefully until resistance is felt (Figure 5.).

*Figure 5.*

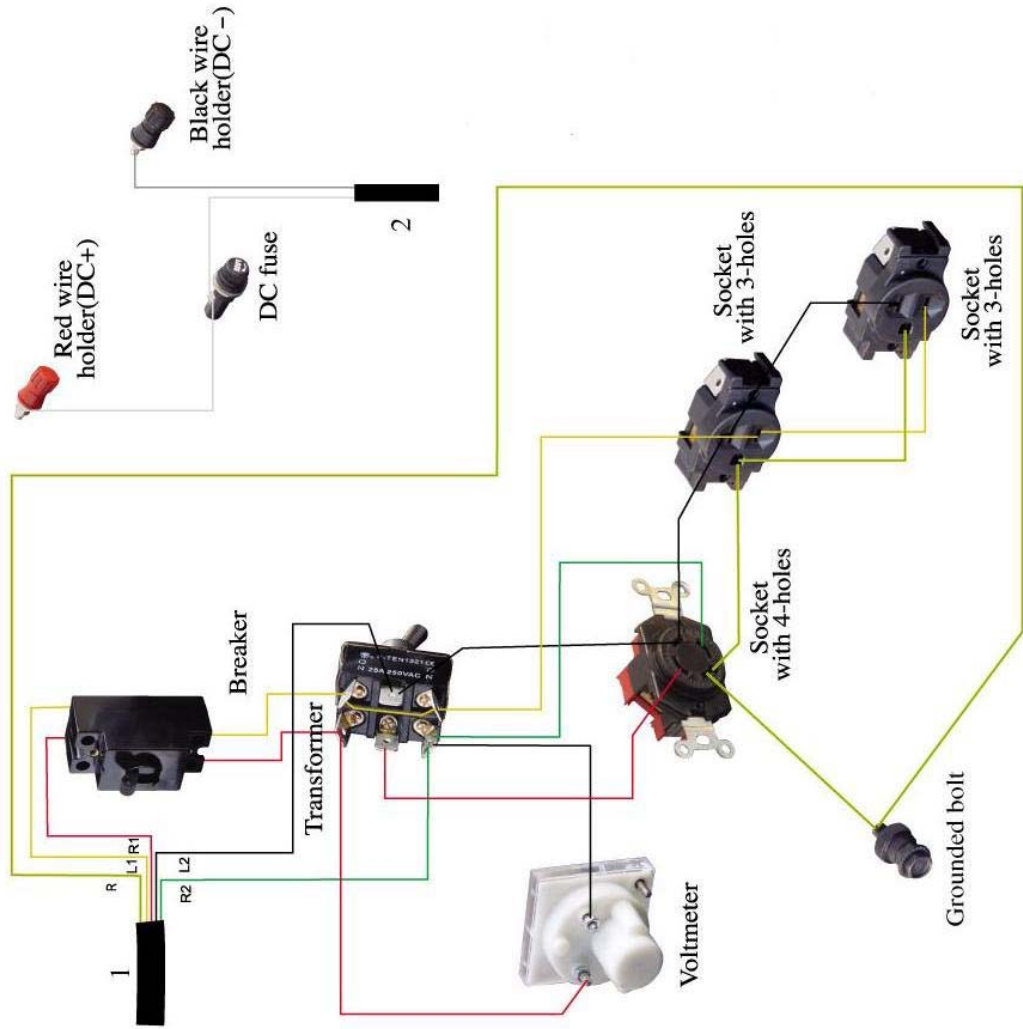


- Store the generator in a clean area.

WIRING DIAGRAMS







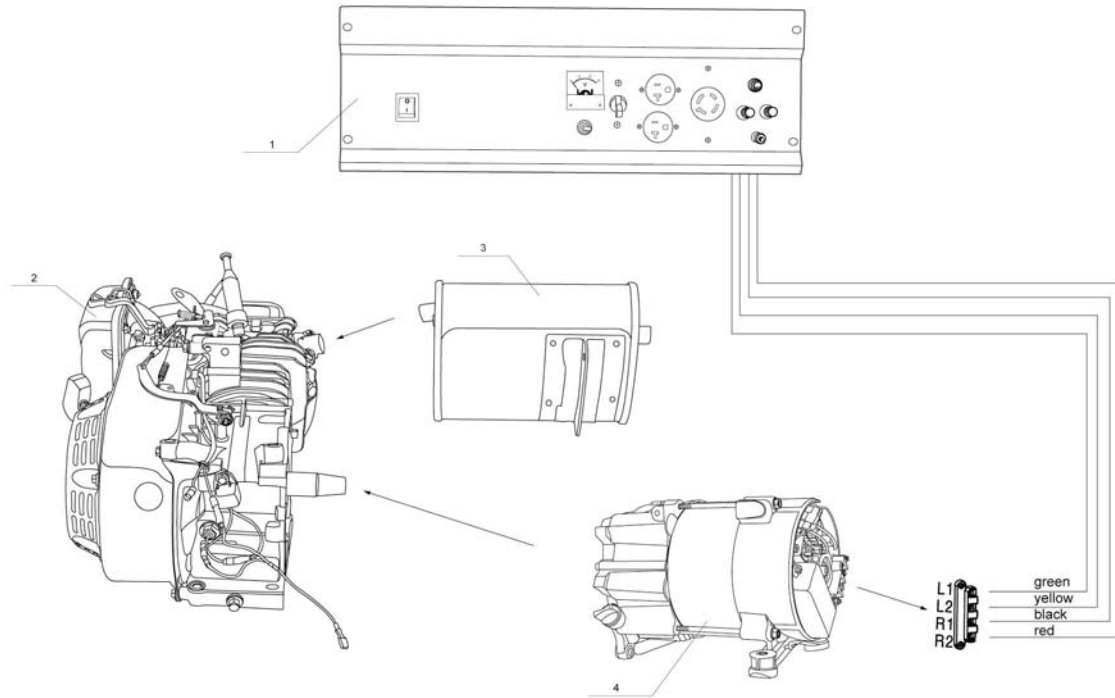
**PART LISTINGS**



*Figure 1. Exploded view of engine assembly*

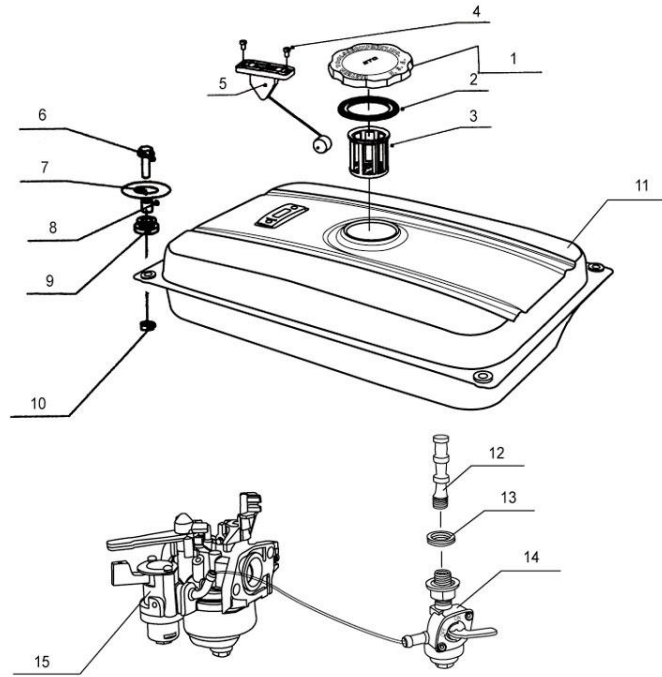
*Note: Please refer to the engine owner's manual for a complete listing of parts*

**Figure 2. Main components of generator**



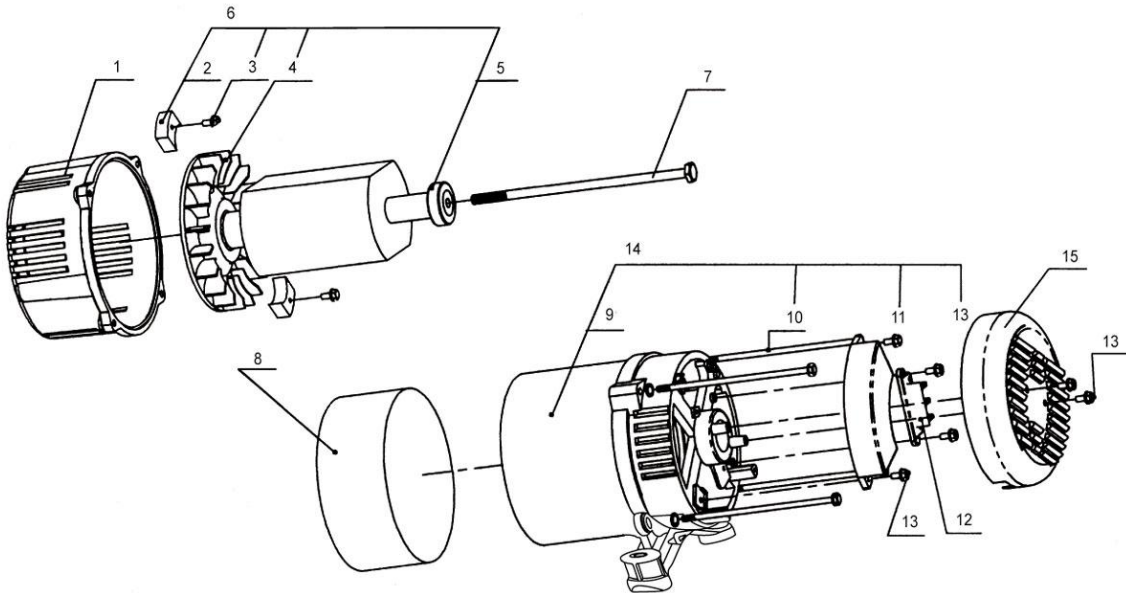
Number	Description	Part Number
1	Electrical control panel	ETQ2500TG1
2	ETQ 168 Engine	ETQ2500TG2
3	Muffler	ETQ2500TG3
4	Generator head	ETQ2500TG4

*Figure 3. Gas tank assembly*



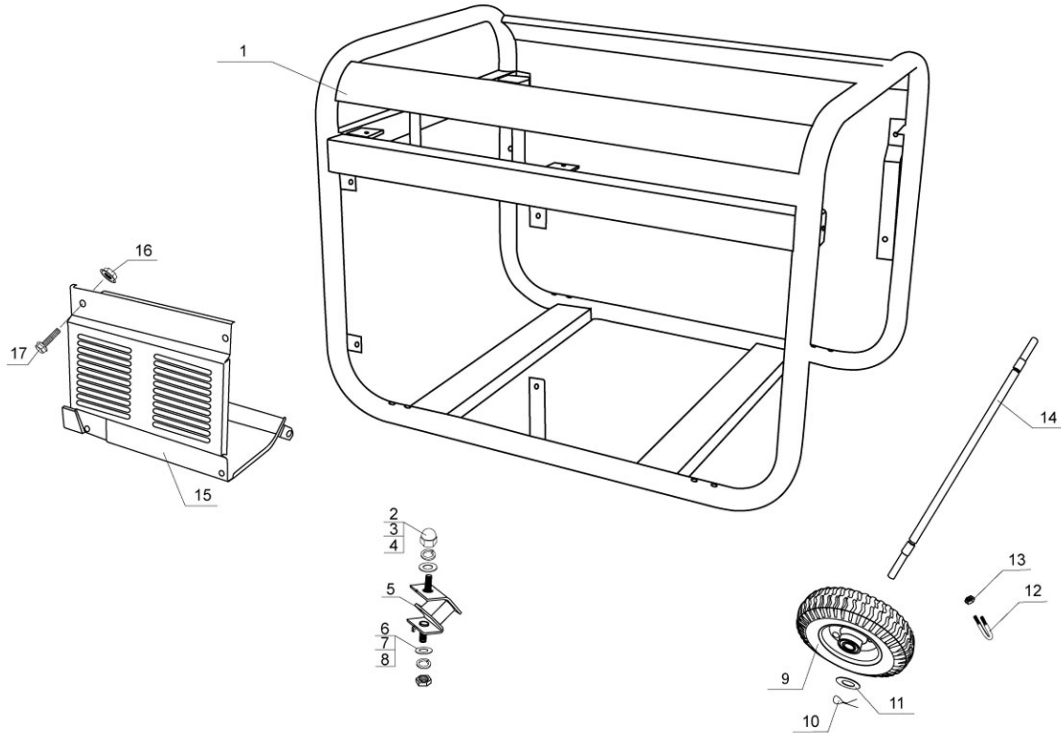
Number	Description	Part Number
1	Fuel cap	ETQ2500TG5
2	Rubber sealing ring	ETQ2500TG6
3	Filtering cup	ETQ2500TG7
4	Screw	ETQ2500TG8
5	Fuel level gauge	ETQ2500TG9
6	Bolt	ETQ2500TG10
7	Washer	ETQ2500TG11
8	Fuel tank lining	ETQ2500TG12
9	Shock absorber gasket	ETQ2500TG13
10	M6 nut	ETQ2500TG14
11	Fuel tank	ETQ2500TG15
12	Fuel filter	ETQ2500TG16
13	Nut	ETQ2500TG17
14	Fuel valve	ETQ2500TG18
15	Carburetor	ETQ2500TG19

**Figure 4. Generator head assembly**



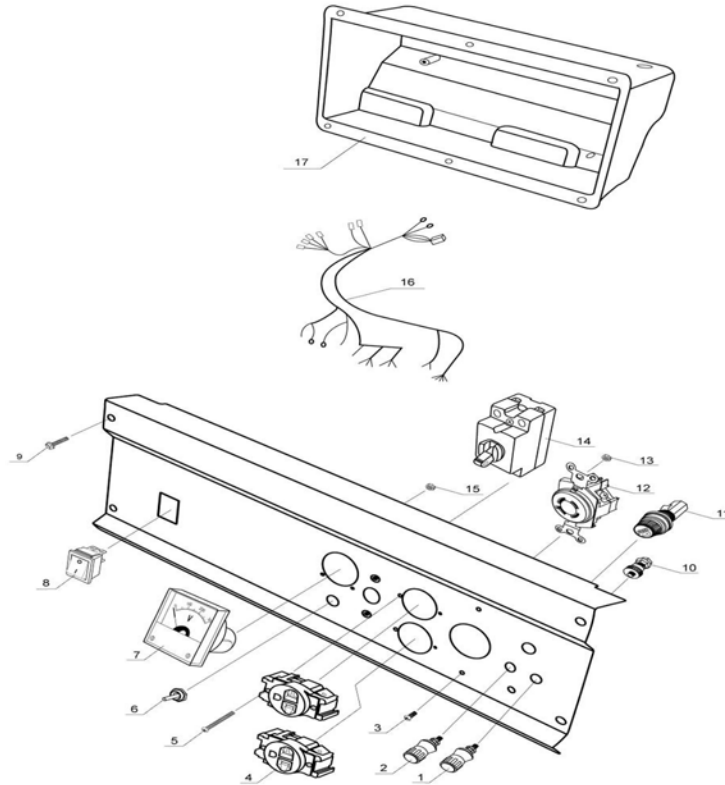
Number	Description	Part Number
1	Front end cover	ETQ2500TG20
2	Diode	ETQ2500TG21
3	M4 x 8 Bolt	ETQ2500TG22
4	Fan blade	ETQ2500TG23
5	Bearing	ETQ2500TG24
6	Rotor unit	ETQ2500TG25
7	Center bolt	ETQ2500TG26
8	Generator guard sheet	ETQ2500TG27
9	Stator	ETQ2500TG28
10	Assembly bolt	ETQ2500TG29
11	Capacitor	ETQ2500TG30
12	Wiring circuit	ETQ2500TG31
13	M5 x 15 bolt	ETQ2500TG32
14	Stator unit	ETQ2500TG33
15	Dust Cover	ETQ2500TG34

**Figure 5. Generator frame assembly**



Number	Description	Part Number
1	Complete frame	ETQ2500TG35
2	Capped nut	ETQ2500TG36
3	Spring washer	ETQ2500TG37
4	Flat washer	ETQ2500TG38
5	Motor mount	ETQ2500TG39
6	Flat washer	ETQ2500TG40
7	Spring washer	ETQ2500TG41
8	M10 nut	ETQ2500TG42
9	Wheel	ETQ2500TG43
10	Cotter pin	ETQ2500TG44
11	Wheel spacer	ETQ2500TG45
12	U bolt	ETQ2500TG46
13	M6 lock nut	ETQ2500T47
14	Axle	ETQ2500TG48
15	Muffer cover	ETQ2500TG49
16	Lock nut	ETQ2500TG50
17	Lock nut	ETQ2500TG51

**Figure 6. Electrical panel assembly**



Number	Description	Part Number
1	DC terminal (DC-)	ETQ2500TG52
2	DC terminal (DC+)	ETQ2500TG53
3	Machine screw	ETQ2500TG54
4	Receptacle	ETQ2500TG55
5	Machine screw	ETQ2500TG56
6	Transformer	ETQ2500TG57
7	Voltmeter	ETQ2500TG58
8	On / Off switch	ETQ2500TG59
9	Machine screw	ETQ2500TG60
10	Ground terminal	ETQ2500TG61
11	DC fuse	ETQ2500TG62
12	Receptacle	ETQ2500TG63
13	Nut	ETQ2500TG64
14	Circuit breaker	ETQ2500TG65
15	Nut	ETQ2500TG66
16	Wiring harness	ETQ2500TG67
17	Electric box	ETQ2500TG68



**TROUBLESHOOTING**

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
<b>Engine will not start or runs rough when started</b>	<ol style="list-style-type: none"> <li>1. Engine switch set to “OFF”.</li> <li>2. Fuel valve is in the “Off” position.</li> <li>3. Dirty air cleaner.</li> <li>4. Out of gasoline.</li> <li>5. Bad gasoline.</li> <li>6. Loose or disconnected spark plug wire.</li> <li>7. Bad spark plug.</li> <li>8. Water in gasoline.</li> <li>9. Overchoking.</li> <li>10. Low oil level.</li> <li>11. Excessive rich fuel mixture.</li> <li>12. Intake valve stuck open or closed.</li> <li>13. No compression</li> </ol>	<ol style="list-style-type: none"> <li>1. Set switch to “On”.</li> <li>2. Turn fuel valve to the “On’ position.</li> <li>3. Clean or replace air cleaner.</li> <li>4. Fill fuel tank.</li> <li>5. Drain gas tank and fill with fresh fuel</li> <li>6. Connect wire to spark plug.</li> <li>7. Replace spark plug.</li> <li>8. Drain gas tank: fill with fresh fuel.</li> <li>9. Set choke to Run position.</li> <li>10. Fill crankcase to proper level.</li> <li>11. Contact your local service dealer</li> <li>12. Contact your local service dealer.</li> <li>13. Contact your local service dealer.</li> </ol>
<b>Engine running but no AC output.</b>	<ol style="list-style-type: none"> <li>1. Circuit breaker open.</li> <li>2. Defective cord or poor connection.</li> <li>3. Connected device is faulty.</li> <li>4. Fault in generator.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset circuit breaker.</li> <li>2. Check and repair.</li> <li>3. Connect a good condition device.</li> <li>4. Contact your local service dealer.</li> </ol>
<b>Engine runs good but gets bogged down when loads are connected.</b>	<ol style="list-style-type: none"> <li>1. Electrical short in connected load.</li> <li>2. Generator is overloaded.</li> <li>3. Engine speed too low.</li> <li>4. Generator circuit shorted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect shorted electrical load.</li> <li>2. Refer to “connecting electrical loads and electrical capacity”.</li> <li>3. Contact your local service department</li> <li>4. Contact your local service department</li> </ol>
<b>Engine lacks power.</b>	<ol style="list-style-type: none"> <li>1. Load is too high.</li> <li>2. Dirty air filter.</li> <li>3. Engine needs to be serviced.</li> </ol>	<ol style="list-style-type: none"> <li>1. See “connecting electrical loads and electrical capacity”.</li> <li>2. Replace air filter.</li> <li>3. Contact your local service dealer.</li> </ol>
<b>Engine shuts down during operation.</b>	<ol style="list-style-type: none"> <li>1. Out of gasoline</li> <li>2. Problem with engine</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank</li> <li>2. Contact your local service dealer.</li> </ol>
<b>Engine “hunts” or falters.</b>	<ol style="list-style-type: none"> <li>1. Choke is opened too soon.</li> <li>2. Carburetor is running too rich or too lean.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move choke to halfway position till engine runs smoothly.</li> <li>2. Contact your local service dealer.</li> </ol>



**LIMITED WARRANTY**

Eastern Tools & Equipment, Inc. will repair or replace, free of charge, any part or parts of the generator that are defective in material or workmanship or both. Transportation charges on parts submitted for repair or replacement under this Warranty must be borne by purchaser. This warranty is effective for the time period and subject to the conditions provided for in this policy. For warranty service, find the nearest Authorized Service Dealer by contacting the place of purchase or Eastern Tools & Equipment, Inc. **THERE IS NO OTHER EXPRESSED WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE, OR TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.** Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

**Eastern Tools & Equipment, Inc.**

**WARRANTY PERIOD\*\*\***

ENGINES	WITHIN U.S.A AND CANADA		OUTSIDE U.S.A. AND CANADA	
	CONSUMER USE	COMMERCIAL USA	CONSUMER USE	COMMERCIAL USE
GASOLINE GENERATOR	1 year or 1000 hours	1 year or 1000 hours	1 year or 1000 hours	1 year or 1000 hours

\* The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated in the table above. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once the engine has experienced commercial use, it shall thereafter be considered as a commercial use engine for purposes of this warranty. **Engines used in competitive racing or on commercial or rental tracks are not warranted.**

\*\*\* A two-year or 1,500 hour warranty applies to the emission control system on engines certified by EPA and CARB

**IMPORTANT**  
**"WARRANTY REGISTRATION IS NECESSARY TO OBTAIN LIMITED WARRANTY ON EASTERN TOOLS & EQUIPMENT, INC., ENGINES. THE WARRANTY REGISTRATION CARD MUST BE RETURNED WITHIN 15 DAYS OF ORIGINAL PURCHASE FOR LIMITED WARRANTY TO BE VALID."**

**About Your Product Warranty**

Eastern Tools & Equipment, Inc. welcomes warranty repair and apologizes to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes warranty service may be inappropriate. For example, warranty would not apply if an engine is damaged because of misuse, lack of routine maintenance, shipping, handling, warehousing and improper installation. Similarly, warranty is void if the serial number on the engine has been removed or if the engine has been altered or modified. If a customer differs with the decision of the Service Dealer, an investigation will be made to determine whether the warranty applies. Ask the Service Dealer to submit all supporting facts to his Distributor or the factory for review. If the distributor or the factory decides that the claim is justified, the customer will be fully reimbursed for those items that are defective. To avoid misunderstanding, which might occur between the customer and the dealer, listed below are some of the causes of engine failure that the warranty does not cover.

**Normal wear:**

Engines and generators, like all mechanical devices, need periodic parts service and replacement to perform well. Warranty will not cover repair when normal use has exhausted the life of a part of an engine.

**Improper maintenance:**

The life of an engine or your equipment depends upon the conditions under which it operates, and the care it receives. Some applications, such as tillers, pumps, and rotary movers, are very often used in dusty or dirty conditions, which can cause what appears to be premature wear. Such wear, when caused by dirt, dust, spark plug cleaning grit, or other abrasive material that has entered the engine because of improper maintenance is not covered by warranty.

**This warranty covers engine related defective material and/or workmanship only, and not replacement or refund of the equipment to which the engine may be mounted. Nor does the warranty extend to repairs required because of:**

1. PROBLEMS CAUSED BY PARTS THAT ARE NOT ORIGINAL EASTERN TOOLS & EQUIPMENT, INC., PARTS.
2. Equipment controls or installations that prevent starting, cause unsatisfactory engine performance, or shorten engine life. (Contact equipment manufacturer.)
3. Leaking carburetors, clogged fuel pipes, sticking valves, or other damage, caused by using contaminated or stale fuel. (Use clean, fresh, lead-free gasoline.)
4. Parts which are scored or broken because an engine was operated with insufficient or contaminated lubricating oil, or an incorrect grade of lubricating oil (check oil level daily or after every 8 hours of operation. Refill when necessary and change at recommended intervals.) Engine damage may occur if oil level is not properly maintained. Read Operating & Maintenance Instructions.
5. Repair or adjustment of associated parts or assemblies such as clutches, transmissions, remote controls, etc., which are not manufactured by Eastern Tools & Equipment, Inc.
6. Damage or wear to parts caused by dirt, which entered the engine because of improper air cleaner maintenance, re-assembly, or use of a non-original air cleaner element or cartridge. Read Operating & Maintenance Instructions.
7. Parts damaged by over-speeding, or overheating caused by grass, debris, or dirt, which plugs or clogs the cooling fins, or flywheel area, or damage caused by operating the engine in a confined area without sufficient ventilation.
8. Engine or equipment parts broken by excessive vibration caused by a loose cutter blades unbalanced blades or loose or unbalanced impellers, improper attachment of equipment to engine crankshaft, over-speeding or other abuse in operation.
9. A bent or broken crankshaft, caused by striking a solid object with the cutter blade of a rotary lawn mower, or excessive v-belt tightness.
10. Routine tune-up or adjustment of the engine.
11. Engine or engine component failure, i.e., combustion chamber, valves, valve seats, valve guides, or burned starter motor winding, caused by the use of alternate fuels such as, liquefied petroleum, natural gas, altered gasoline's, etc.

**Warranty is available only through service dealers, which have been authorized by Eastern Tools & Equipment, Inc. Contact place of purchase or Eastern Tools & Equipment, Inc. for Service Dealer near you.**

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#### **CALIFORNIA & USEPA EMISSION CONTROL WARRANTY STATEMENT**

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB) and Eastern Tools & Equipment, Inc. are pleased to explain the Federal and California Emission Control System Warranty on your 2003 small off-road engine. In California, new small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Eastern Tools & Equipment, Inc. must warrant the emission control system on your small off-road engine for the periods of time listed above provided there has been no abuse, neglect or improper maintenance of your small off-road engine.

Your emission control system may include parts such as the carburetor, or fuel-injection system, the ignition system and catalytic converter. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, Eastern Tools & Equipment, Inc. will repair your small off-road engine at no cost to you including diagnosis, parts and labor.

**OWNER'S WARRANTY RESPONSIBILITIES**

As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Eastern Tools & Equipment, Inc. recommends that you retain all receipts covering maintenance on your small off-road engine, but Eastern Tools & Equipment, Inc. cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small off-road engine owner, you should, however, be aware that Eastern Tools & Equipment, Inc. may deny you warranty coverage if your small off-road engine or a part thereof has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road engine to Eastern Tools & Equipment, Inc. distribution center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities or to request warranty service you should contact either the place of purchase or Eastern Tools & Equipment, Inc., c/o Service Manager, Engine and Equipment Service Division, 12220 Rivera Road, Suite-B; Whittier, California 90606. Telephone 1-562-698-7500, or contact Eastern Tools & Equipment, Inc. through the Internet at <http://www.easterntools.com>

**IMPORTANT NOTE:**

This warranty statement explains your rights and obligations under the Emission Control System Warranty (ECS Warranty), which is provided to you by Eastern Tools & Equipment, Inc. pursuant to California law. Eastern Tools & Equipment, Inc. also provides to original purchasers of new Eastern Tools & Equipment, Inc engines. Eastern Tools & Equipment, Inc. Limited Warranties for New engines & other Equipment associated with the engine (Eastern Tools & Equipment, Inc. Products Warranty), which is enclosed with all New Eastern Tools & Equipment, Inc. engines and products on a separate sheet. The ECS Warranty applies only to the emission control system of your new engine. To the extent that there is any conflict in terms between the ECS Warranty and the Eastern Tools & Equipment, Inc., Warranty, the ECS Warranty shall apply except in any circumstances in which the Eastern Tools & Equipment, Inc. Product Warranty may provide a longer warranty period. Both the ECS Warranty and the Eastern Tools & Equipment, Inc. product Warranty describe important rights and obligations with respect to your new engine.

Eastern Tools & Equipment, Inc. at its location in Whittier, California can perform warranty service or any authorized service dealer near you. At the time of requesting warranty service, evidence must be presented of the date of sale to the original purchaser. The purchaser shall pay any charges for transporting the products to and from the place where the inspection and/or warranty work is performed. The purchaser shall be responsible for any damage or loss incurred in connection with the transportation of any engine or any part(s) thereof submitted for inspection and/or warranty work.

If you have any questions regarding your warranty rights and responsibilities, you should contact eastern Tools & Equipment, Inc. at 1-562-320-0231.

<b>PRODUCT REGISTRATION CARD</b>			
<i>For more efficient customer service, please fill out the information below and mail to Eastern Tools &amp; Equipment, Inc. Product Warranty and Registration Division, 12220 Rivera Rd, suite B; Whittier, CA 90606</i>			
Model No. _____	Engine Serial No. _____	Purchase Date ____/____/____	
<b>Purchased from:</b> <input type="checkbox"/> Retail location <input type="checkbox"/> Private Consumer <input type="checkbox"/> Other _____			
Name _____			
Location Address _____			
Telephone w/ area code _____		Purchase Price _____	
<b>Purchased:</b> <input type="checkbox"/> NEW or <input type="checkbox"/> USED			
<b>Consumer Information:</b>			
Name _____		Telephone w/ area code _____	
Street Address _____			
City _____	State _____	Zip Code _____	Suite or Apt No. _____
Province or Country _____			
Are you a: <input type="checkbox"/> Business or <input type="checkbox"/> Residence			
<b>Product Usage Information:</b>			
How often will you use this product? <input type="checkbox"/> Everyday <input type="checkbox"/> Periodically <input type="checkbox"/> Emergency use only			
<input type="checkbox"/> Other _____			
<b>What type of application will you use this product in?</b>			
<input type="checkbox"/> Heavy Commercial	<input type="checkbox"/> Moderate Commercial	<input type="checkbox"/> Light Commercial	<input type="checkbox"/> Tradeshow
<input type="checkbox"/> Heavy Residential	<input type="checkbox"/> Moderate Residential	<input type="checkbox"/> Light Residential	<input type="checkbox"/> Camping, backpacking
<input type="checkbox"/> Other _____			
<b>IMPORTANT INFORMATION:</b>			
It is critical to your warranty that the original point of sales receipt be retained by current consumer, and in order to comply with Eastern Tools & Equipment Product Warranty Statement you must return this registration card within 15 days of original purchase. Product warranty is valid from original date of purchase.			

**List for comments from users**

		Date of Manufacture	
Name of user		Model Number	
Address of user		Occupation	
Place of purchase			
Packaging conditions			
Operating conditions			
Parts Conditions			
Malfunction problem			
Opinions or suggestions			

Note: Please mail the above card to: *Eastern Tools & Equipment, Inc.*  
 12220 Rivera Rd, Suite B  
 Whittier, CA 90606

**Appendix:**

1. Attached list of tools, fittings, and subassemblies

Order No.	Name	Qty	Remarks
1	Air-cooled generator set	1	
2	Plug	1	

2. Attached technical documents

Order No.	Name	Qty	Remarks
1	Air cooled generator manual	1	
2	Engine instruction manual	1	
3	Certificate of Quality	1	

**EASTERN TOOLS & EQUIPMENT, INC.**

**TEL: 1-626-960-6299**

**FAX: 1-626-960-6244**

**WEB SITE.<http://easterntools.com>**