

Generator

Read this manual carefully before operating this machine.

EF5200DE EF5200D

A WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

YAMAHA LIT-CALIF-65-01

Read this manual carefully before operating this machine. This manual should stay with this machine if it is sold.

INTRODUCTION

Congratulations on your purchase of your new Yamaha.

This manual will provide you with a good basic understanding of the operation and maintenance of this machine.

If you have any questions regarding the operation or maintenance of your machine, please consult a Yamaha dealer.

EF5200DE/EF5200D
OWNER'S MANUAL
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IMPORTANT MANUAL INFORMATION

Particularly important information is distinguished in this manual by the following notations.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

A NOTICE indicates special precautions that must be taken to avoid damage to the machine or other property.

TIP

A TIP provides key information to make procedures easier or clearer.



M WARNING

PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE OPERATING THE MACHINE.

TIP _

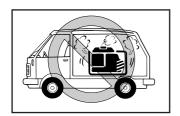
- Yamaha continually seeks advancements in product design and quality.
 Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your engine and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.
- This manual should be considered a permanent part of this engine and should remain with this engine when resold.

^{*} Product and specifications are subject to change without notice.

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SAFETY INFORMATION

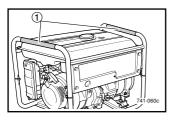
This generator is not designed for on-board use.
 Do not use it while installed on the vehicle.



 Do not modify the generator or use it with its parts removed.



• Do not allow children to operate the generator.



- Be sure to carry the generator only by its carrying handle(s).
- ① Carrying handle(s) (shaded)



• Do not place any obstacles on the generator.



Exhaust fumes are poisonous

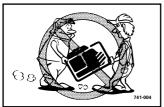
- Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.
- NEVER use inside a home or garage, EVEN IF doors and windows are open.
- Only use OUTSIDE and far away from windows, doors, and vents.



Fuel is highly flammable and poisonous

- Always turn off the engine when refuelling.
- Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any fuel on the engine or muffler when refuelling.
- Do not leave the generator inside the vehicle or in the trunk.
- If you swallow any fuel, inhale fuel vapor, or allow any to get in your eye(s), see your doctor immediately. If any fuel spills on your skin or clothing, immediately wash with soap and water and change your clothes.
- When operating or transporting the generator, be sure it is kept upright. If it tilts, fuel may leak from the carburetor or fuel tank.



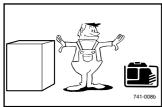


Engine and muffler may be hot

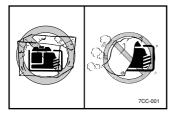
 Place the generator in a place where pedestrians or children are not likely to touch the generator.



 Avoid placing any flammable materials near the exhaust outlet during operation.



 In order to prevent overheating, ensure adequate airflow by keeping the machine at least 1 m (3 ft) from objects or other equipment.



 Do not operate the engine with a dust cover or other objects covering it.

 When covering the generator, be sure to do so only after the engine and muffler have completely cooled down.

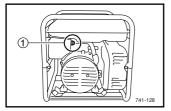


Electric shock prevention

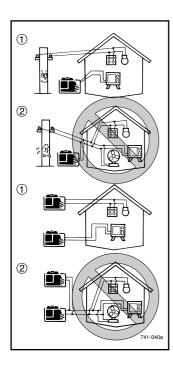
· Never operate the engine in rain or snow.



 Never touch the generator with wet hands or electrical shock will occur.



- Connect the Ground (earth) terminal to a ground source. In order to prevent electrical shock, the generator must be grounded when using an electrical device with a ground plug.
- 1) Ground (earth) terminal



Connection notes

- Avoid connecting the generator to commercial power outlet.
- Avoid connecting the generator in parallel with any other generator.
- (1) Correct
- (2) Incorrect

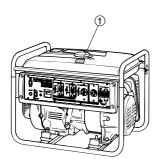
Connection

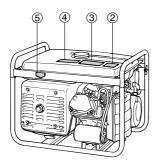


Before the generator can be connected to a building's electrical system, a licensed electrician must install an isolation (transfer) switch in the building's main fuse box. The switch is the connection point for generator power and allows selection of generator or main line power to the building. This will prevent the generator from charging the main power line (backfeeding) when the main power supply has failed or has been turned off for line repair. Backfeeding can electrocute or injure line maintenance personnel. Also, generator and building electrical system damage can occur when normal operating power returns if unit is used without an isolation switch.

Extension cord notes

Extension cords should be protected by a tough flexible rubber sheath (IEC 245) or the equivalent to withstand mechanical stresses.





LOCATION OF IMPORTANT LABELS

Please read the following labels carefully before operating this generator.

Maintain or replace safety and instruction labels, as necessary.

1



(2)

WARNING

Electrocution or property damage can occur: Do not connect this generator to any building's electrical system unless an isolation switch has been installed by a licensed electrician. Refer to the owner's manual.

7C2-F415A-00

(3)

WARNING

A AVERTISSEMENT

- Read the owner's manual and all labels before operating

- Read the cowner's manual and all bises before operating.
 Only operatin a well-werflailed raise,
 Exhaust gas containes poisonous carbon monoxide.
 Ochock for spoll foul of full biase.
 Stop argine before refusaling.
 Ostop rangine before refusaling.
 Os not Operate oner flammable materials.
 Electroculori can occur if generator is used in rain, snow, or near walker, keep this unit of yat all times,
 Office noperating the generator. Do not cover the generator with a box. Do not place any objects on the generator.
- Lisaz la mode d'emploi et toutes les etiquettes avant de inier fonctionnel a machine.

 Particolome la machine.

 Verifica de carbunat a des reverses ou al filla.

 Particolome la companion de la machine.

 Publicos pas a proximate de reverses ou al filla.

 Publicos pas a proximate de reverses ou al filla.

 Publicos pas a proximate de materiaux inflammables ons la pluie, dans la magine cupre soli even que facilitat particolome la pluie dans la negle, ou pres de l'esu, quitade la machine ausce en botas circonstances.

 Ouand la gindratrico est en marchie:

 No jamas encourre la gindratrico de ciclosmo ou d'écrans.

 No jamas recourre la gindratrico de ciclosmo ou d'écrans.

 No jamas recourre la gindratrico d'une bolle.

 702-64-65.

4

EMISSION CONTROL INFORMATION YAMAHA MOTOR CO., LTD

VAMAHA EVAP F CARB : ******* EMISSION CONTROL SYSTEM : *

EVAP F EPA : ** This engine is certified to operate on unleaded gasoline ENGINE OIL: SAE ****** TYPE: ** No other adjustr

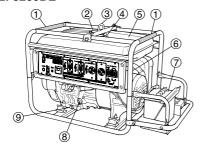
The air index of this engine is 3 (California only) MOST CLEAN LEAST CLEAN Note: The lower the air index, the less the polution. Note: The lower the air index, the less the polution. This engine is certified to be emissions compliant for the following use :

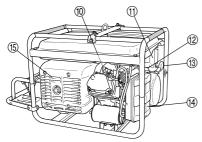
| MODERATE | NITERIMEDIATE | EXTENDED | (""HOURS) | (""HOURS) | (""HOURS) |

(5)



EF5200DE

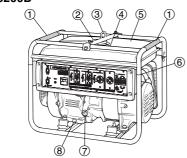


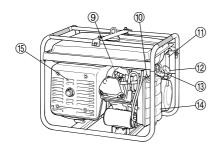


DESCRIPTION

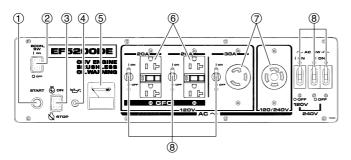
- ① Carrying handles (shaded)
- (2) Fuel tank cap
- 3 Engine hanger
- 4) Fuel level gauge
- (5) Fuel tank
- 6 Ground (earth) terminal
- (7) Battery
- (8) Oil filler cap
- (9) Oil drain bolt
- Spark plug
- 1) Voltage adjuster
- 12) Fuel cock lever
- (13) Recoil starter handle
- (14) Air filter case cover
- (15) Muffler

EF5200D



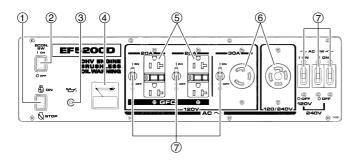


- ① Carrying handles (shaded)
- ② Fuel tank cap
- (3) Engine hanger
- 4 Fuel level gauge
- ⑤ Fuel tank
- 6 Ground (earth) terminal
- (7) Oil filler cap
- (8) Oil drain bolt
- Spark plug
- ① Choke lever
- (1) Voltage adjuster
- (12) Recoil starter handle
- (13) Fuel cock lever
- (14) Air filter case cover
- (15) Muffler



Control panel (EF5200DE)

- 1) Starter switch
- ② Economy control switch
- 3 Engine switch
- 4 Oil warning light (red)
- (5) Voltage meter
- 6 G.F.C.I. receptacle
- (7) AC receptacle
- (8) AC switch (N.F.B.)



Control panel (EF5200D)

- 1 Engine switch
- ② Economy control switch
- 3 Oil warning light (red)
- 4 Voltage meter
- ⑤ G.F.C.I. receptacle
- AC receptacle
- 7 AC switch (N.F.B)

CONTROL FUNCTION

Engine switch

The engine switch controls the ignition system.



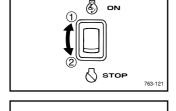
Ignition circuit is switched on.

The engine can be started.



Ignition circuit is switched off.

The engine will not run.



Starter switch (EF5200DE)

The starter switch controls the following item.

Push:

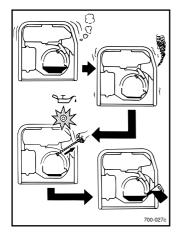
Starting circuit is switched on.

Release:

Starting circuit is switched off.

NOTICE

Take your hand off the switch immediately after the engine starts.

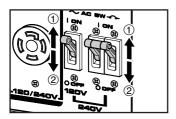


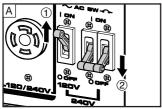
Oil warning light (red)

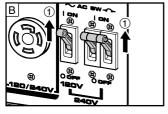
When the oil level falls below the lower level, the oil warning light comes on and then the engine stops automatically. Unless you refill with oil, the engine will not start again.

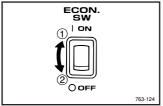
TIP ____

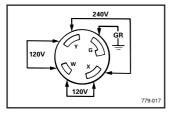
If the engine stalls or does not start, turn the engine switch to "②" (ON) and then pull the recoil starter. If the oil warning light flickers for a few seconds, the engine oil is insufficient. Add oil and restart.











AC switch (N.F.B.)

The AC switch (Non-Fuse Breaker) turns off automatically when the load exceeds the generator rated output.

- ① "I" (ON)
- ② "〇" (OFF)
- A Supplies AC 120 V

B Supplies AC 120 V and 240 V

NOTICE

Reduce the load to the specified generator rated output if the AC switch (N.F.B.) turns off. If it turns off again, consult a Yamaha dealer.

Economy control switch

① "I" (ON)

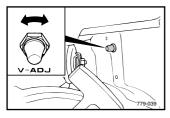
When the economy control switch is turned "I" (ON), the economy control unit controls the engine speed according to the connected load. The results are better fuel consumption and less noise.

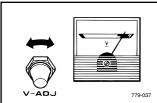
② "〇" (OFF)

When the economy control switch is turned "O" (OFF), the engine runs at the rated r/min (3,600 r/min) regardless of whether is a load connected or not.

TIP

- The economy control switch must be turned to "O" (OFF) when using electric devices that require a large starting current, such as a compressor of a submersible pump.
- The economy control switch must be turned to "O" (OFF) to increase engine speed to rated r/min when:
- using a load of 0.8 A or less.
- supplying AC 120 V only from W with Y.





Voltage adjuster

The voltage adjuster is equipped for adjusting output voltage to rated voltage.

TIP __

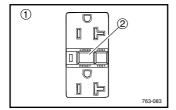
Turn the voltage adjuster clockwise or counterclockwise to increase or decrease output voltage.

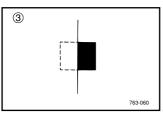
G.F.C.I. receptacle



TO REDUCE THE CHANCE OF ELECTRICAL SHOCK:

- Do not attempt to operate electric devices if the ground fault circuit interrupter reset button pops out repeatedly during use.
- Test the ground fault circuit interrupter during the pre-operation checks according to the maintenance instructions on page 36.
- Remember that only receptacles labeled "GFCI" have ground fault circuit interrupter protection.

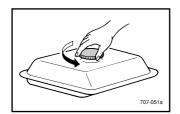




The G.F.C.I. (Ground Fault Circuit Interrupter) shuts off power to the protected receptacles if a ground fault (electrical leak) is detected.

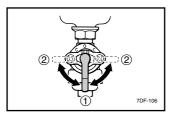
If the reset button pops out, the electric devices connected into the receptacle may be faulty. If this happens, check the electric devices carefully. If the electric devices appears to be in good condition, press the reset button firmly until a click is heard. This will restore power. If the reset button pops out again, disconnect all electric devices immediately. Have the electric devices inspected and repaired by a qualified repair person before attempting to use them again.

- (1) G.F.C.I. (Ground Fault Circuit Interrupter)
- ② Reset button
- ③ Pops out



Fuel tank cap

Remove the fuel tank cap by turning it counterclockwise.



Fuel cock lever

The fuel cock supplies fuel from the fuel tank to the carburetor.

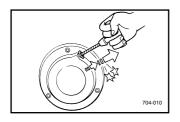
The fuel cock has two positions.

(1) ON

With the lever in this position, fuel flows to the carburetor. Normal using is done with the lever in this position.

② OFF

With the lever in this position, fuel will not flow. Always turn the lever to this position when the engine is not running.



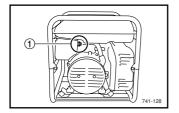
Recoil starter

The recoil starter is used for starting the engine.

Pull the recoil starter slowly until it is engaged, then pull it briskly.

(EF5200DE)

When the engine does not start by electric starter, using the recoil starter.



Ground (earth) terminal

Ground (earth) terminal connects the earth line for prevention of electric shock.

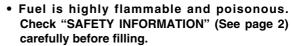
When the electric device is earthed, always the generator must be earthed.

① Ground (earth) terminal

PREPARATION

Fuel

WARNING



- Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.
- After fill the fuel, make sure the fuel tank cap is tightened securely.



- Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.
- Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts.

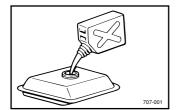
Make sure there is sufficient fuel in the tank.

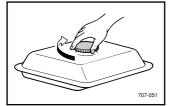
When refueling, be sure to fill the tank to the bottom edge of the fuel tank filter.

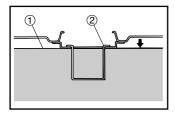
- 1 Fuel level
- ② Fuel tank filter

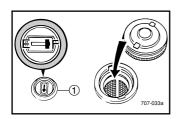
Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number ((R + M)/2) of 86 or higher, or research octane number of 91 or higher.

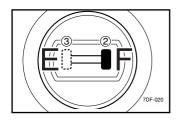
- 1. Stop the engine.
- 2. Place the generator on a level surface.
- 3. Remove the fuel tank cap.
- 4. Check the fuel level.
- 5. If low, fill the tank with fuel.
- 1) Fuel level gauge











② "F"	Full
③ "E"	Empty

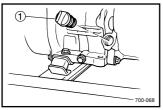
Recommended fuel:

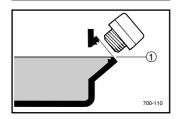
Unleaded gasoline

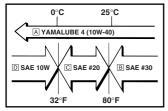
Fuel tank capacity:

Total:

23.0 L (6.08 US gal, 5.06 Imp gal)







Engine oil

NOTICE

The generator has been shipped without engine oil. Do not start the engine until you have filled it with the sufficient engine oil.

- 1. Place the generator on a level surface.
- 2. Remove the oil filler cap.
- 1 Oil filler cap
- 3. Fill the specified amount of the recommended engine oil, and then tighten the oil filler cap.
- (1) Correct level

Recommended engine oil:

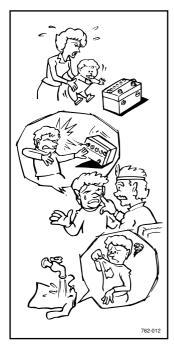
- A YAMALUBE 4 (10W-40), SAE 10W-30 or 10W-40
- B SAE #30
- C SAE #20
- D SAE 10W

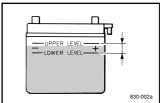
Recommended engine oil grade:

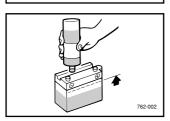
API Service SE type or higher

Engine oil quantity:

1.1 L (1.16 US qt, 0.97 Imp qt)



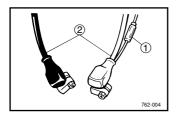


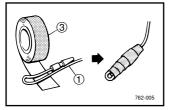


Battery installation (EF5200DE) (See page 35 and 40 for more details)

WARNING

- Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.
 - EXTERNAL: Flush with plenty of water.
 - INTERNAL: Drink large quantities of water or milk and immediately call a physician.
 - EYES: Flush with water for 15 minutes and seek prompt medical attention.
- Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.
- KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN.
- Fill the battery with the electrolyte.
 Refer to the instruction sheet included with the electrolyte for filling instructions.
- 2. Turn the engine switch to "\subsetee" (STOP) to prevent accidental short circuiting.
- Install the battery on the battery mount tray securely.
- 4. Connect the red wire to the positive (+) terminal first, then the black wire to the negative (–) terminal of the battery. Do not reverse these positions.
- 5. Install the battery box and tighten the stay.





WARNING

- Be sure to service battery leads to prevent arcing when the battery is not installed.
- Disconnect the battery charging output lead.
 Then insulate the generator side connector by folding it back on itself and carefully wrapping it with electrical tape to prevent electrical contact with ground (earth) or any other leads.
- · Remove the battery leads from the generator.
- (1) Connector
- ② Battery leads
- ③ Electrical tape

Recommended battery (EF5200DE)

Recommended battery:

Capacity: 12 V/26 Ah

PRE-OPERATION CHECK



If any item in the Pre-operation check is not working properly, have it inspected and repaired before operating the generator.

The condition of a generator is the owner's responsibility. Vital components can start to deteriorate quickly and unexpectedly, even if the generator unused.

TIP _

Pre-operation checks should be made each time the generator is used.

Pre-operation check

Fuel (See page 12)

- Check fuel level in fuel tank.
- Refuel if necessary.

Fuel line

- Check fuel hose for cracks or damage.
- Replace if necessary.

Engine oil (See page 13)

- Check oil level in engine.
- If necessary, add recommended oil to correct level.
- · Check generator for oil leakage.

(EF5200DE)

Battery (See page 35)

- Check the fluid level.
- Add only distilled water if necessary.

The point where abnormality was recognized by use.

- Check operation.
- If necessary, consult a Yamaha dealer.

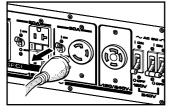
OPERATION

⚠ WARNING

- Never operate the engine in a closed area or it may cause unconsciousness and death within a short time. Operate the engine in a well ventilated area.
- Before starting the engine, do not connect any electric devices.
- Clean dusts, dirt or water off the receptacle before use.

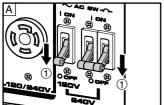
NOTICE

The generator has been shipped without engine oil. Do not start the engine until you have filled it with the sufficient engine oil.



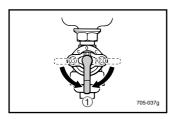
Starting the engine Electric starting (EF5200DE)

1. Disconnect any electric devices.



- Turn the AC switch (N.F.B.) and economy control switch to "O" (OFF).
- ① "〇" (OFF)
- A AC switch (N.F.B.)
- B Economy control switch





- 3. Turn the fuel cock lever to ON.
- (1) ON



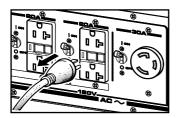
- 4. Turn the engine switch to "(\$\overline{Z}\)" (ON).
- ① "②" (ON)



- 5. Push the starter switch to start the engine.
- 1) Starter switch

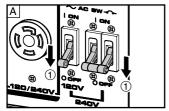
NOTICE

- Take your hand off the switch immediately after the engine starts.
- If the engine fails to start, release the switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 5 seconds on any one attempt.



Manual starting

1. Disconnect any electric devices.



2. Turn the AC switch (N.F.B.) and economy control switch to "O" (OFF).

① "〇" (OFF)

A AC switch (N.F.B.)



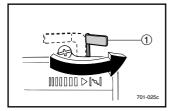
B Economy control switch



- 3. Turn the fuel cock lever to ON.
- (1) ON



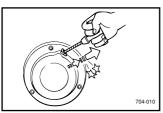
- 4. Turn the engine switch to "怎" (ON).
- ① "②" (ON)

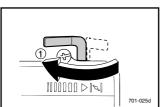


- 5. Turn the choke lever to "|x|". (EF5200D)
- (1) Choke lever

TIP

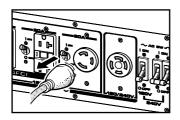
The choke is not required to start a warm engine. Turn the choke lever to the original position.





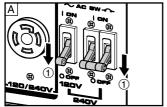
6. Pull the recoil starter slowly until it is engaged, then pull it briskly.

- 7. After the engine starts, warm up the engine until the engine does not stop when the choke lever is returned to the original position. (EF5200D)
- 8. Turn the choke lever back to the original position. (EF5200D)
- 1 Original position



Stopping the engine

1. Turn off any electric devices and then disconnect the plugs.



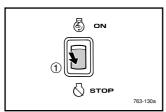
2. Turn the AC switch (N.F.B.) and economy control switch to "O" (OFF).

① "〇" (OFF)

A AC switch (N.F.B.)

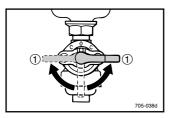


B Economy control switch



3. Turn the engine switch to "♥" (STOP).

① "॑ऽ" (STOP)



4. Turn the fuel cock lever to OFF.

① OFF

Connection Alternating Current (AC)

WARNING

Be sure any electric devices are turned off before plugging it in.

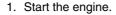
NOTICE

- Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.
- Be sure the total load is within generator rated output.
- Be sure the receptacle load current is within receptacle rated current.

TIP

Make sure to ground (earth) the generator.

When the electric device is earthed, always the generator must be earthed.



- 2. Plug into the AC receptacle.
- 3. Make sure the voltage meter indicates the rated voltage.

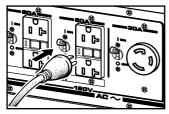
If the voltage meter does not indicate the rated voltage (i.e., when using an extension cord, etc.), use the voltage adjuster to adjust the output voltage to the rated voltage.

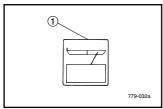
1 Voltage meter

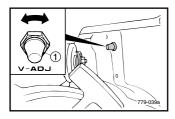


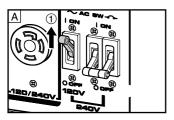
Turn the voltage adjuster clockwise or counterclockwise to increase or decrease output voltage.

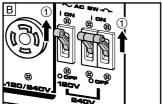
Voltage adjuster



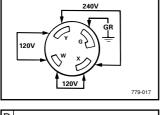




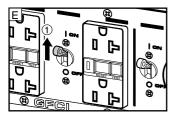












- 4. Turn the AC switch (N.F.B.) and economy control switch to "I" (ON) and turn on any electric devices.
- ① "I" (ON)
- A AC 120 V can be used.
- B AC 120 V and 240 V can be used.

C Economy control switch

NOTICE

Reduce the load to the specified generator rated output if the AC switch turns off. If it turns off again, consult a Yamaha dealer.

TIP

- The 4-blade plug receptacle can supply both 120 V and 240 V power sources.
- The economy control switch must be turned to "O" (OFF) to increase engine speed to rated r/min when:
- using a load of 0.8 A or less.
- supplying AC 120 V only from W with Y.
- D Economy control switch
- ① "O" (OFF)
- 5. Turn the individual AC switch (N.F.B.) to "I" (ON).
- (1) "I" (ON)
- E Individual AC switch for G.F.C.I. receptacle

Application range

When using the generator, make sure the total load is within rated output of a generator. Otherwise, generator damage may occur.

AC	*	an • =	* (
Power factor	1	0.8-0.95	0.4–0.75 (Efficiency 0.85)
EF5200DE EF5200D	-4,500W	-3,600W	-1,530W

TIP

- "-" means below.
- Application wattage indicates when each device is used by itself.

NOTICE

- Do not overload. The total load of all electrical appliances must not exceed the supply range of the generator. Overloading will damage the generator.
- Some types of precision equipment such as electronic controllers, PCs, electronic computers, microcomputer-based equipment and battery chargers are sensitive to voltage fluctuations and may require more stable voltage supply than the voltage supplied from the portable generator.
 - When using such equipment, consult with a Yamaha dealer.
- When supplying precision equipment, electronic controllers, PCs, electronic computers, microcomputer-based equipment or battery chargers, keep the generator a sufficient distance away to prevent electrical interference from the engine. Also ensure that electrical noise from the engine does not interfere with any other electrical devices located near the generator.
- If the generator is to supply medical equipment, advice should first be obtained from the manufacturer, a medical professional or hospital.
- Some electrical appliances or general-purpose electric motors have high starting currents, and cannot therefore be used, even if they lie within the supply ranges given in the above table. Consult the equipment manufacturer for further advice.

High altitude operation

This engine may require a high altitude carburetor kit to ensure correct engine operation at altitudes above 4000 ft. (1219 meters). If you operate your engine at altitudes above 4000 ft. (1219 meters) consistently, have your local Yamaha dealer perform the necessary carburetor modification. This engine should be operated in its original configuration below 4000 ft. (1219 meters) as damage may occur if high altitude carburetor kit is installed and operated below 4000 ft. (1219 meters).

PERIODIC MAINTENANCE

Safety is an obligation of the owner. Periodic inspection, adjustment and lubrication will keep your generator in the safest and most efficient condition possible. The most important points of generator inspection, adjustment, and lubrication are explained on the following pages.

lowing pages	S.	·	, ,	·	•
WARN	IING				

If you are not familiar with maintenance work, have a Yamaha dealer do it for you.

Maintenance chart

WARNING

Stop the engine before starting maintenance work.

NOTICE

Use only Yamaha specified genuine parts for replacement. Ask an authorized Yamaha dealer for further attention.

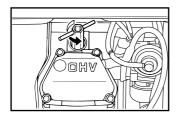
Item		Pre-	Every	
	Routine	operation check	6 months or 100 Hr	12 months or 300 Hr
Charle plug	Check condition.		0. 100 1	01 000 111
Spark plug	Clean and replace if necessary.			
Fuel	Check fuel level and leakage.	0		
Fuel hose	Check fuel hose for cracks or damage.			
	Replace if necessary.			
Engine oil	Check oil level in engine.	0		
	Replace.		○(*1)	
Air filter element	Check condition.		○(*2)	
All liller element	• Clean.		O(2)	
Muffler screen	Check condition.			
	Clean and replace if necessary.			
Spark arrester	Check condition.			
	Clean and replace if necessary.			
Fuel tank filter	Clean and replace if necessary.			0

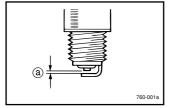
Item		Pre-	Every		
	Routine	operation check	6 months or 100 Hr	12 months or 300 Hr	
Fuel strainer	Clean and replace if necessary.			0	
Battery (EF5200DE)	Check the fluid level.				
	Add only distilled water if necessary.				
Crankcase breather hose	Check breather hose for cracks or				
	damage.			0	
	Replace if necessary.				
Cylinder head	Decarbonize cylinder head.	After every 500 Hrs.			
Cylinder nead	More frequently if necessary.				
Valve clearance	Check and adjust valve clearance.			*	
Idle speed	Check and adjust idle speed.			*	
Recoil starter	Check recoil starter for damage.			*	
Fittings / fasteners	Check all fittings and fasteners.				
	Correct if necessary.			*	
The point where abnormality was recognized by use.		0			

^{*1.....} Initial replacement of the engine oil is after one month or 20 hours of operation.

^{*2.....}The air filter element needs to be cleaned more frequently when using in unusually wet or dusty areas.

^{★·····} Since these items require special tools, data and technical skills, have a Yamaha dealer perform the service.





Spark plug inspection

The spark plug is important engine components, which should be checked periodically.

- 1. Remove the spark plug cap and the spark plug.
- Check for discoloration and remove the carbon. The porcelain insulator around the center electrode of spark plug should be a medium-to-light tan color.
- 3. Check the spark plug type and gap.
- (a) Spark plug gap

Standard spark plug: BPR4ES (NGK) Spark plug gap: 0.7–0.8 mm (0.028–0.031 in)

TIP

The spark plug gap should be measured with a wire thickness gauge and, if necessary, adjusted to specification.

4. Install the spark plug.

Spark plug tightening torque: 20 Nm (2.0 m·kgf, 14 ft·lbf)

TIP

If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4–1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

5. Install the spark plug cap.

Carburetor adjustment

The carburetor is a vital part of the engine. Adjusting should be left to a Yamaha dealer with the professional knowledge, specialized data, and equipment to do so properly.

Engine oil replacement

WARNING

Avoid draining the engine oil immediately after stopping the engine. The oil is hot and should be handled with care to avoid burns.

- Place the generator on a level surface and warm up the engine for several minutes. Then stop the engine.
- 2. Remove the oil filler cap.
- Place an oil pan under the engine. Remove the oil drain bolt so that the oil can be completely drained
- 4. Check the oil drain bolt, oil filler cap and O-ring. Replace them if damaged.





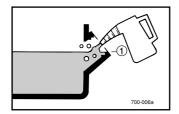
(3) Oil drain bolt

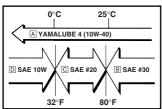
(4) Gasket

5. Install a new gasket and the oil drain bolt, and then tighten the bolt.

Oil drain bolt tightening torque: 27 Nm (2.7 m·kgf, 20 ft·lbf)

- 6. Add engine oil to the correct level.
- (1) Correct level





Recommended engine oil:

A YAMALUBE 4 (10W-40), SAE 10W-30 or 10W-40

B SAE #30

C SAE #20

D SAE 10W

Recommended engine oil grade:

API Service SE type or higher

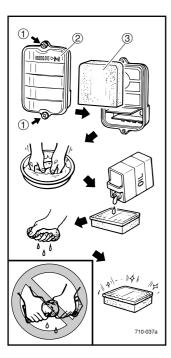
Engine oil quantity:

1.1 L (1.16 US qt, 0.97 Imp qt)

NOTICE

Be sure no foreign material enters the crankcase.

7. Install the O-ring and the oil filler cap.



Air filter

- Remove the screws, and then remove the air filter case cover.
- 2. Remove the foam element.
- 1 Screw
- (2) Air filter case cover
- 3 Foam element
- 3. Wash the foam element in solvent and dry it.

WARNING

Never use solvent while smoking or in the vicinity of an open flame.

4. Oil the foam element and squeeze out excess oil. The foam element should be wet but not dripping.

Recommended oil:

Foam-air-filter oil or engine oil (See page 29)

NOTICE

Do not wring out the foam element when squeezing it.

This could cause it to tear.

5. Insert the foam element into the air filter case.

NOTICE

The engine should never run without the foam element; excessive piston and cylinder wear may result.

TIP ____

Be sure the foam element sealing surface matches the air filter case so there is no air leak.

Install the air filter case cover and tighten the screws.

Muffler screen and spark arrester

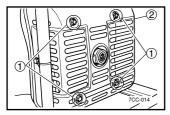
WARNING

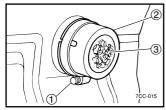
The engine and muffler will be very hot after the engine has been run.

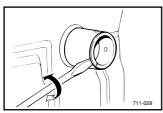
Avoid touching the engine and muffler while they are still hot with any part of your body or clothing during inspection or repair.

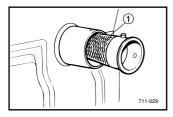
- Remove the muffler cover bolts and then remove the muffler cover.
- (1) Muffler cover bolt
- (2) Muffler cover
- 2. Loosen the muffler cap bolt and then remove the muffler cap and muffler screen.
- 1 Muffler cap bolt
- 2 Muffler cap
- (3) Muffler screen
 - 3. Use a flathead screw driver to pry the spark arrester out from the muffler.
- 4. Remove the spark arrester.
- Spark arrester

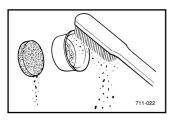




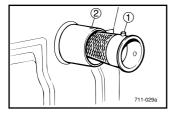


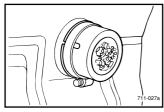












5. Remove the carbon deposits on the muffler screen and spark arrester using a wire brush.

NOTICE

When cleaning, use the wire brush lightly to avoid damaging or scratching of the muffler screen and spark arrester.

Check the muffler screen and spark arrester. Replace them if damaged.

7. Install the spark arrester.

TIP

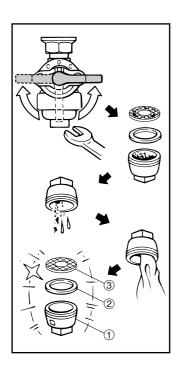
Align the spark arrester lump to the hole in the muffler pipe.

- 1) Spark arrester lump
- 2 Hole
- 8. Install the muffler screen and muffler cap, and then tighten the muffler cap bolt.

Muffler cap bolt tightening torque: 2.0 Nm (0.20 m·kgf, 1.4 ft·lbf)

Install the muffler cover and then tighten the muffler cover bolts.

Muffler cover bolt tightening torque: 12 Nm (1.2 m·kgf, 8.7 ft·lbf)



Fuel cock



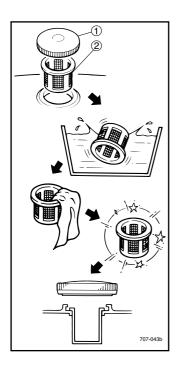
Never use the gasoline while smoking or in the vicinity of an open flame.

- 1. Stop the engine.
- 2. Turn the fuel cock lever to OFF.
- 3. Remove the fuel cock cup, gasket and fuel strainer.
- 4. Clean the cup and fuel strainer with gasoline and wipe it off.
- 5. Check the gasket. Replace it if damaged.
- 6. Install the fuel strainer, gasket and fuel cock cup.

WARNING

Be sure the fuel cock cup is tightened securely.

- 1) Fuel cock cup
- ② Gasket
- ③ Fuel strainer



Fuel tank filter



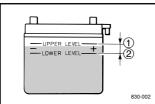
Never use the gasoline while smoking or in the vicinity of an open flame.

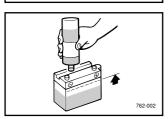
- 1. Remove the fuel tank cap and fuel tank filter.
- 1) Fuel tank cap
- ② Fuel tank filter
- 2. Clean the fuel tank filter with gasoline. Replace it if damaged.
- 3. Wipe the fuel tank filter and insert it.
- 4. Install the fuel tank cap.



Be sure the fuel tank cap is tightened securely.







Battery (EF5200DE)

WARNING

- Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.
 - EXTERNAL: Flush with plenty of water.
 - INTERNAL: Drink large quantities of water or milk and immediately call a physician.
 - EYES: Flush with water for 15 minutes and seek prompt medical attention.
- Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.
- KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN

Replenishing the battery fluid

- 1. Check the fluid level. The level should be between the upper and lower level marks.
- 1 Upper level
- ② Lower level
- 2. Add only distilled water if necessary.

NOTICE

- Normal tap water contains minerals which are harmful to a battery; therefore, refill only with distilled water.
- Do not disconnect the battery during engine operation.
- Avoid operating the generator with the battery removed.

Fuse replacement (EF5200DE)

WARNING

Be sure to use specified fuse. A wrong fuse will cause electrical system damage and A FIRE HAZ-ARD.

NOTICE

Be sure the engine switch is turned to " \bigcirc " (STOP) to prevent accidental short circuiting.

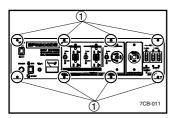
- Remove the control panel screws and then remove the control panel.
- 1 Control panel screw
- Replace the blown fuse with one of proper amperage.

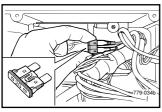


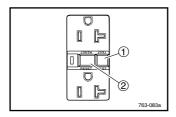


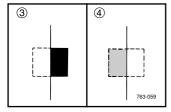
If the fuse immediately blows again, consult a Yamaha dealer.

3. Install the control panel and tighten the control panel screws.









G.F.C.I. receptacle test

- 1. Start the engine.
- 2. Turn the AC switch (N.F.B.) to "I" (ON).
- 3. Press the test button, then check the position of the reset button.
- 1 Test button
- ② Reset button

G.F.C.I. Reset Button Position after Test	G.F.C.I. Receptacle Operation
③ Pop Out	Correct
④ Stay In	Incorrect

4. If G.F.C.I. operation is correct, push in the reset button.

If the G.F.C.I. operates incorrectly, consult a Yamaha dealer.



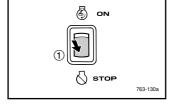
Do not operate the generator with a faulty G.F.C.I. circuit. Electric shock could occur. Have the generator repaired by a qualified mechanic.

STORAGE

Long term storage of your generator will require some preventive procedures to guard against deterioration.

Drain the fuel

- 1. Turn the engine switch to "♥" (STOP).
- ① "⑤" (STOP)
- Remove the fuel tank cap and the fuel tank filter. Extract the fuel from the fuel tank into an approved gasoline container using a commercially available hand siphon. Then, install the fuel tank filter and the fuel tank cap.





Fuel is highly flammable and poisonous. Check "SAFETY INFORMATION" (See page 2) carefully.

NOTICE

Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.

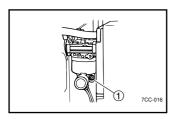
- 3. Turn the engine switch to "" (ON).
- ① "②" (ON)
- 4. Turn the fuel cock lever to ON.
- ON
- Start the engine and leave it run until it stops.
 The engine stops in approximately 20 minutes time by running out of fuel.



- Do not connect with any electrical devices. (unloaded operation)
- Duration of the running engine depends on the amount of the fuel left in the tank.









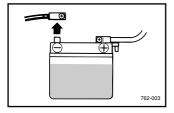
- Drain the fuel remaining in the carburetor into an approved container by loosening the drain screw on the carburetor float chamber.
- 1 Drain screw
- 7. Tighten the drain screw.
- 8. Turn the engine switch to "♥" (STOP).
- 9. Turn the fuel cock lever to OFF.
- 10. Tighten further if any screws, bolts and nuts are loose.
- 11. Store the generator in a dry, well-ventilated place, with the cover placed over it.



Engine

Perform the following steps to protect the cylinder, piston ring, etc. from corrosion.

- Remove the spark plug, pour about one tablespoon of SAE 10W-30 or 20W-40 motor oil into the spark plug hole and install the spark plug only. Recoil start the engine by turning over several times (with ignition off) to coat the cylinder walls with oil.
- Pull the recoil starter until you feel compression. Then stop pulling. (This prevents the cylinder and valves from rusting).
- Clean exterior of the generator and apply a rust inhibitor.
- 4. Store the generator in a dry, well-ventilated place, with the cover placed over it.
- 5. The generator must remain in a vertical position when stored, carried or operated.



Battery (EF5200DE)

- 1. Remove the battery.
- Check the fluid level. Add only distilled water if necessary. (See page 35; "Battery-Replenishing the battery fluid")
- 3. After checking the fluid level, charge the battery.
- 4. Store the battery in a cool, dark and dry place and charge it once a month.

Do not store the battery in an excessively warm or cold place [i.e., less than 0° C (30° F) or more than 30° C (90° F)].

WARNING

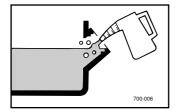
- Disconnect the negative lead first, then the positive lead from the battery.
- Connect the positive lead first, then the negative lead to the battery when installing the battery.
- Never smoke or make and break connections at the battery while charging. Sparks may ignite the battery gas.
- Be sure the battery terminals are tight and that the battery vent tube is properly routed and is securely attached to the battery.

NOTICE

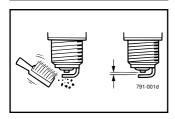
- Do not disconnect the battery during engine operation.
- Avoid operating the generator with the battery removed.











TROUBLESHOOTING

Engine won't start

- Fuel systems
 No fuel supplied to combustion chamber.
- O No fuel in tank Supply fuel.
- Fuel in tank Fuel cock lever to ON.

(1) ON

- O Clogged fuel line Clean fuel line.
- Foreign matter in fuel cock Clean fuel cock.
- O Clogged carburetor Clean carburetor.
- Engine oil system
 Insufficient
- Oil level is low Add engine oil.
- 3. Electrical systems
- O Engine switch to "怎" (ON).
- ① "②" (ON)

Poor spark

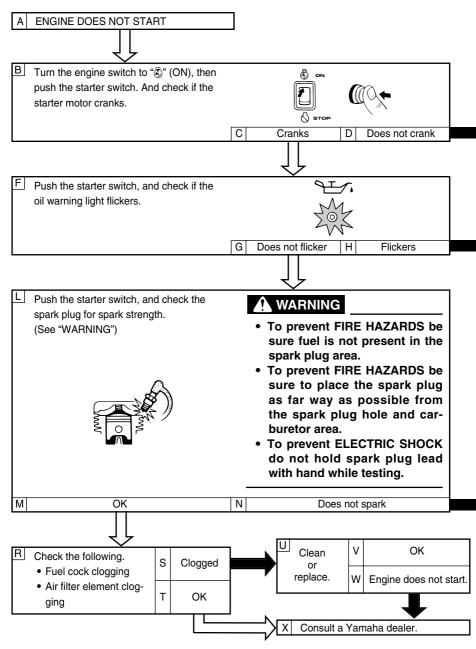
- Spark plug dirty with carbon or wet Remove carbon or wipe spark plug dry.
- Faulty ignition system Consult a Yamaha dealer.

Generator won't produce power

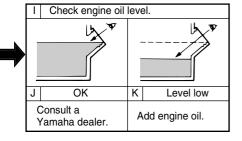
 Safety device (AC switch) to "O" (OFF)....Turn the AC switch (N.F.B.) to "I" (ON).

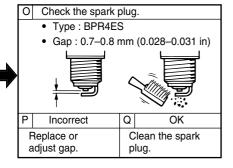
- MEMO -

EF5200DE

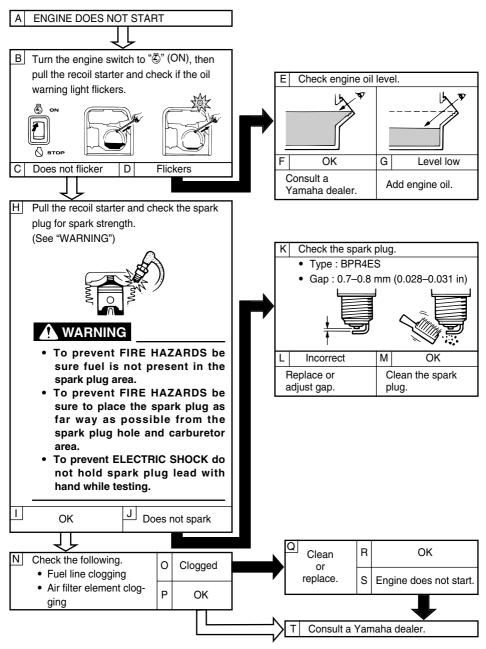


E Faulty battery and/or starter motor.
Consult a Yamaha dealer.





EF5200D



SPECIFICATIONS

Dimensions

	Unit	EF5200DE	EF5200D
Overall length	mm (in)	894 (35.2)	670 (26.4)
Overall width	mm (in)	520 (20.5)	510 (20.1)
Overall height	mm (in)	577 (22.7)	577 (22.7)
Dry weight	kg (lb)	93 (205)	86 (190)

Engine

	Unit	EF5200DE/EF5200D
Туре		Air cooled 4-stroke gasoline OHV
Cylinder arrangement		Inclined, 1 cylinder
Displacement	cm³	357
Bore × stroke	mm (in)	$85.0 \times 63.0 \ (3.35 \times 2.48)$
Operation hours	Hr	7.4
Fuel		Unleaded gasoline
Fuel tank capacity	L (US gal, Imp gal)	23.0 (6.08, 5.06)
Engine oil quantity	L (US qt, Imp qt)	1.1 (1.16, 0.97)
Ignition system		TCI
Spark plug: Type		BPR4ES (NGK)
Gap	mm (in)	0.7-0.8 (0.028-0.031)
Noise level*	dB (A)/7m	73

 $[\]ensuremath{^{\star}}$: Measured at rated operation from 7 m (23 ft) distance.

Generator

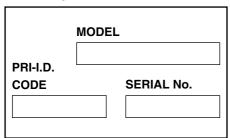
	Unit	EF5200DE/EF5200D
AC output		
Rated voltage	V	120/240
Rated frequency	Hz	60
Rated current	Α	37.5/18.8
Rated output	kVA	4.5
Safety device: Type		N.F.B.

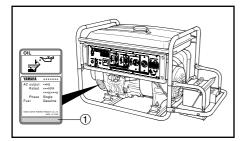
Battery (EF5200DE)

	Unit	EF5200DE
Voltage	V	12
Capacity	Ah	26

CONSUMER INFORMATION

PRI-I.D. NUMBER:





Identification number records

Record your Primary I.D., and serial numbers in the spaces provided, to assist you in ordering spare parts from a Yamaha dealer.

Also record and keep these I.D. numbers in a separate place in case your machine is stolen.

Machine identification

The machine serial number is stamped in the location as shown.

1 Machine serial number

TIP

The first three digits of these numbers are for model identification; the remaining digits are the unit production number. Keep a record of these numbers for reference when ordering parts from a Yamaha dealer.

EXHAUST EMISSION CONTROL SYSTEM AND COMPONENTS

Item	Acronym
• CARB. ASSY., LH. & JT.,	CARB (Carburetor)
CARBURETOR2	
• T.C.I. MAGNETO ASSY. &	El (Electronic Ignition)
PLUG, SPARK	
• CRANKCASE1 & HEAD,	PCV (Positive Crankcase
CYLINDER1	Ventilation)
AIR FILTER ASSY	ACL (Air Cleaner)
 MUFF., 2, CAP, NET, WIRE2 & 	·
ARRESTER, SPARK	

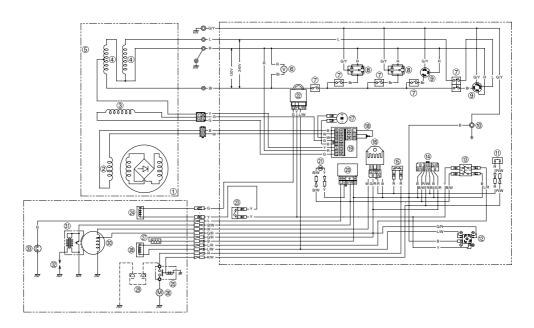
The above items and the corresponding acronyms are provided in accordance with U.S. EPA REGULATIONS FOR NEW NONROAD SPARK-IGNITION NONHANDHELD ENGINES and the CALIFORNIA REGULATIONS FOR 1995 AND LATER SMALL OFF-ROAD ENGINES.

The acronyms conform to the latest version of the SAE's recommended practice document J1930, "Diagnostic Acronyms, Terms, and Definitions For Electrical/Electronic System".

It is recommended that these items be serviced by a Yamaha dealer.

WIRING DIAGRAM

EF5200DE



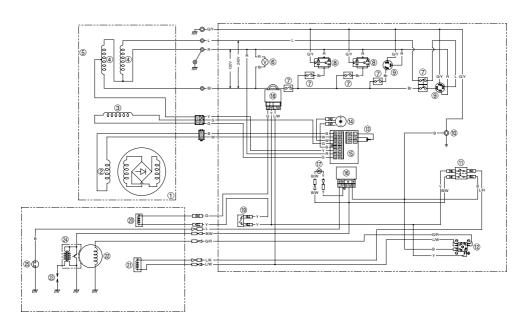
- 1) Rotor assembly
- (2) Exciter field coil
- 3 Sub coil
- (4) Main coil
- (5) Stator assembly
- (6) Voltage meter
- 7 AC switch (N.F.B.)
- (8) G.F.C.I. receptacle
- (9) AC receptacle
- (10) Ground (earth) terminal
- (11) Starter switch
- (2) Rectifier
- (13) Engine switch
- (14) Remote control terminal
- (15) Fuse
- (6) Rectifier/regulator
- (17) Condenser

- (8) Voltage adjuster
- (19) AVR
- @ Oil warning unit
- (2) Oil warning light
- ② Economy control unit
- (23) Economy control switch
- (24) Solenoid valve
- ② Starter relay
- ②6 Starter motor
- ② Carburetor heater
- (28) Carburetor solenoid valve
- ② Battery
- 30 Charging coil
- 31) TCI unit
- 32 Spark plug
- 3 Oil level switch

Color code

- B Black Br Brown
- G Green
- G Gree
- R Red
- W White Y Yellow
- B/W Black/White
- G/R Green/Red
- G/Y Green/Yellow
- L/R Blue/Red
- L/W Blue/White
- L/VV Blac/VVIIIC
- R/B Red/Black
- R/W Red/White

EF5200D



- 1) Rotor assembly
- (2) Exciter field coil
- 3 Sub coil
- (4) Main coil
- (5) Stator assembly
- (6) Voltage meter
- 7 AC switch (N.F.B.)
- (8) G.F.C.I. receptacle
- AC receptacle
- (10) Ground (earth) terminal
- (1) Engine switch
- (2) Rectifier
- (3) Voltage adjuster
- (14) Condenser
- ① AVR
- (6) Oil warning unit

- (7) Oil warning light
- (8) Economy control unit
- Economy control switch
- ② Solenoid valve
- (2) Carburetor solenoid valve
- (2) Charging coil
- ② Spark plug
- ② TCI unit
- ② Oil level switch

Color code

В	Black
Br	Brown

G Green

L Blue R Red

W White Y Yellow

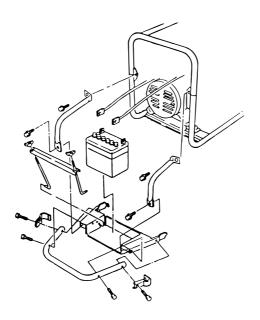
B/W Black/White

G/R Green/Red G/Y Green/Yellow

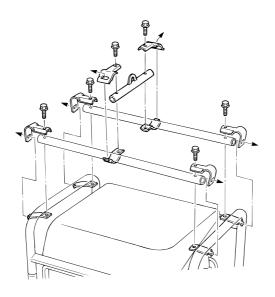
L/R Blue/Red

L/W Blue/White

BATTERY TRAY INSTALLATION (EF5200DE)

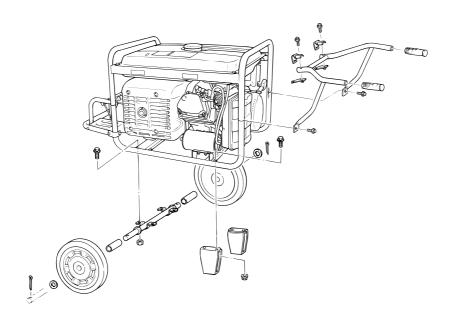


ENGINE HANGER INSTALLATION



OPTIONAL PARTS INSTALLATION

Two wheel kit



YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha Generator protected even after your warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. You get uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You can choose the plan that's right for you: 12 months, 24 months or 36 months
 coverage.
- Y.E.S. is administered by the same Yamaha people that handle your warranty and it shows in the
 comprehensive coverage benefits. There are no hour limitations and Y.E.S. covers manufacturing
 defects just like your warranty. See a sample contract at your Yamaha dealer and see how comforting uninterrupted factory backed protection can be.
- There are no "out-of-pocket" expenses for covered repairs. Yamaha will never ask you to pay a
 deductible.
- Nationwide coverage. Y.E.S. coverage is honored at any authorized Yamaha <u>Outdoor Power</u> Equipment Service dealer.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make you Yamaha much more valuable.

This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. He can show you how easy it is to protect your investment with Yamaha Extended Service.

Special note:

If visiting your dealer isn't convenient, contact Yamaha with your Primary ID number (your frame number). We'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing P.O. Box 6555 Cypress, CA 90630 1-866-YES-EXTD (1-866-937-3983)



www.yamahawarrantyregistration.com Register Your Generator at

Or complete the card below and Mail

Generator Warranty Registration

To begin your 3 year warranty coverage, please register online within 30 days of purchase:

www.yamahawarrantyregistration.com

If you prefer, you can complete and mail this card. Be sure to attach proper postage.

Owner's Name		
Address		
CityState		Zip
Phone Number ()P		
E-mail address		
Yamaha Generator Model Name:	 - -	(Example) EF2000IS
Yamaha Generator Primary I.D. Serial Number:		(Example) 7DK - 0000000
Date Purchased / / Selling Dealer Name		

- Please register online or complete and mail this form. It will help ensure that Yamaha has accurately registered your purchase for
 - Manufacturers are required to maintain a complete up-to-date list of all first purchasers of products in the event of a safety-related defect or recall

STAMI	PLAC	

HERE

CYPRESS, CA 90630 P.O. BOX 6555 YAMAHA MOTOR CORPORATION U.S.A.

ATTN: WARRANTY DEPARTMENT