



Generator

OWNER'S MANUAL



Read this manual carefully before operating this machine.

EF2000iSv2

LIT-19626-02-33
7PB-F8199-12

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.

**EF2000iSv2
OWNER'S MANUAL
© 2015 by Yamaha Motor Corporation, U.S.A.
1st Edition, September 2015
All rights reserved.
Any reprinting or unauthorized use
without the written permission of
Yamaha Motor Corporation, U.S.A.
is expressly prohibited.
Printed in China
P/N LIT-19626-02-33**

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

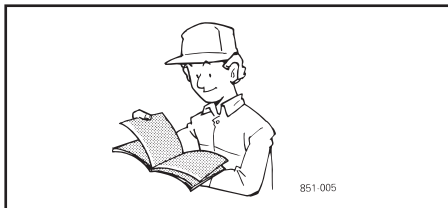
A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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.



AE00032

WARNING

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

TIP

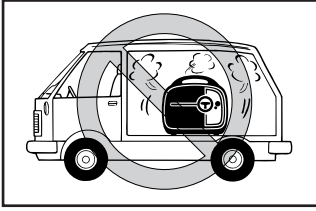
- Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your machine and this manual. If there is any question concerning this manual,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

* Product and specifications are subject to change without notice.

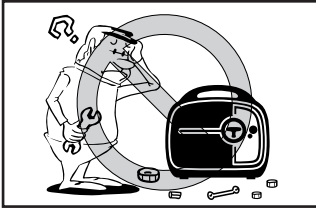
CONTENTS

SAFETY INFORMATION	1	PERIODIC MAINTENANCE	27
Exhaust fumes are poisonous	2	Maintenance chart	27
Fuel is highly flammable and poisonous	2	Spark plug inspection	29
Engine and muffler may be hot	2	Carburetor adjustment	30
Electric shock prevention	3	Engine oil replacement	30
Connection notes	4	Air filter	32
Connection	4	Muffler screen and spark arrester	33
Extension cord notes	4	Fuel tank filter	35
LOCATION OF IMPORTANT LABELS	5	STORAGE	36
DESCRIPTION	7	Drain the fuel	36
Control panel	7	Engine	38
CONTROL FUNCTION	8	TROUBLESHOOTING	39
Engine switch	8	SPECIFICATIONS	42
Recoil starter	8	Dimensions	42
Oil warning light (Red)	8	Engine	42
DC protector	9	Generator	42
Economy control switch	9	CONSUMER INFORMATION	43
AC pilot light (Green)	10	Identification number records	43
Overload indicator light (Red)	10	Machine identification	43
Fuel tank cap	10	EXHAUST EMISSION CONTROL SYSTEM AND COMPONENTS	44
Fuel tank cap air vent lever	11	WIRING DIAGRAM	45
Fuel petcock	11	YAMAHA EXTENDED SERVICE (Y.E.S.)	46
Ground (earth) terminal	11		
Twin Tech (Parallel generator operation)	12		
PREPARATION	13		
Fuel	13		
Engine oil	14		
PRE-OPERATION CHECK	16		
Pre-operation check	16		
OPERATION	17		
Starting the engine	17		
Stopping the engine	19		
Connection	20		
Battery charging	21		
Operating range of DC power supply	24		
Application range	25		
High Altitude Operation	26		

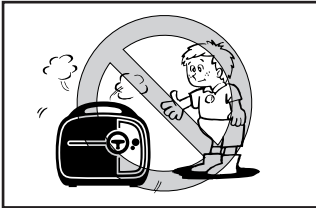
SAFETY INFORMATION



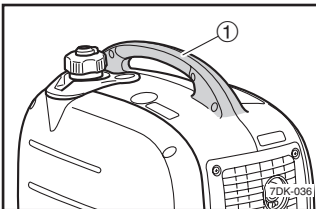
- This generator is not designed for on-board use. Do not use it while installed on the vehicle.



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

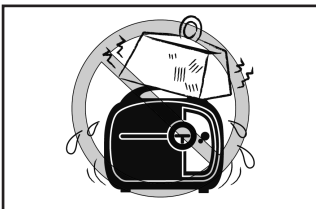


- Do not allow children to operate the generator.



- Be sure to carry the generator only by its carrying handle.

① Carrying handle



- Do not place any obstacles on the generator.



AE00072

Exhaust fumes are poisonous

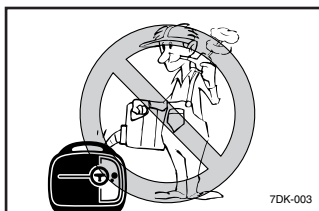
- Using a generator indoors **CAN KILL YOU IN MINUTES**. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.
- **NEVER** use inside a home or garage, **EVEN IF** doors and windows are open.
- Only use **OUTSIDE** and far away from windows, doors, and vents.



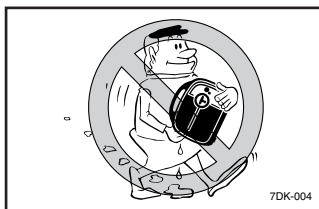
AE00075

Fuel is highly flammable and poisonous

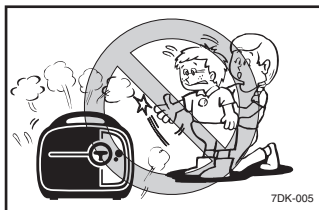
- Always turn off the engine when refuelling.
- Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any fuel on the engine or muffler when refueling.
- Do not leave the generator inside the vehicle or in the trunk.
- If you swallow any fuel, inhale fuel vapor, or 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.



7DK-003



7DK-004



7DK-005

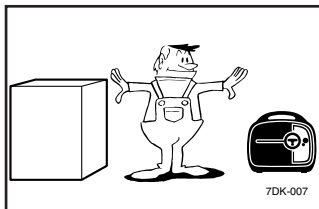
AE00843

Engine and muffler may be hot

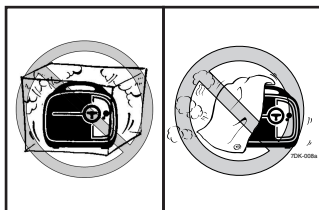
- Place the generator in a place where pedestrians or children are not likely to touch the machine.



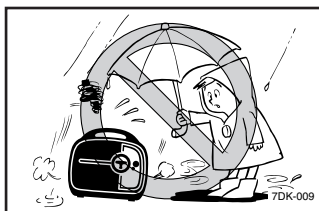
- Avoid placing any flammable materials near the exhaust outlet during operation.



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



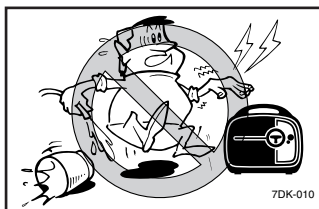
- Do not operate the engine with a dust cover or other objects covering it.
- When covering the generator, be sure to do so only after the engine and muffler have completely cooled down.



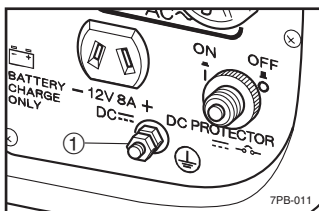
AE00083

Electric shock prevention

- Never operate the engine in rain or snow.

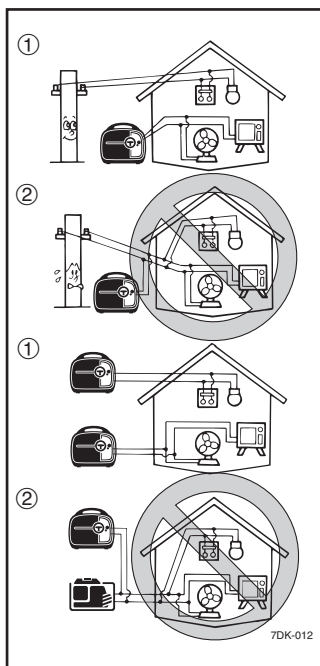


- Never touch the generator with wet hands or electrical shock will occur.



- 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



AE00088

Connection notes

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

- ① Correct
② Incorrect

AE00091

Connection

! WARNING

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.

AE00086

Extension cord notes

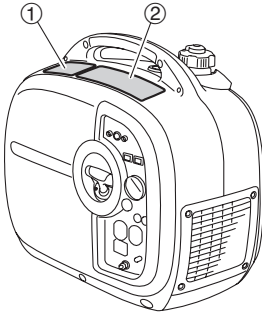
Extension cords should be protected by a tough flexible rubber sheath (IEC 245) or the equivalent to withstand mechanical stresses.

LOCATION OF IMPORTANT LABELS

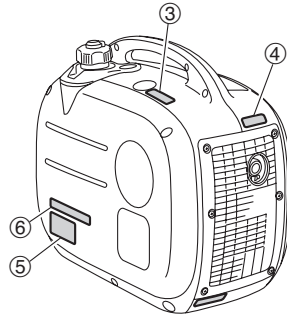
Please read the following labels carefully before operating this machine.

TIP

Maintain or replace safety and instruction labels, as necessary.



7DK-013



7PB-014

①

⚠ DANGER	
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. 7C2-F4877-00

②

⚠ WARNING

- Read the owner's manual and all labels before operating.
- Only operate in well-ventilated areas. Exhaust gas contains poisonous carbon monoxide.
- Check for spilled fuel or fuel leaks.
- Stop engine before refueling.
- Do not operate near flammable materials.
- Electrocutation can occur if generator is used in rain, snow, or near water. Keep this unit dry at all times.
- Electrocutation 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.
- When operating the generator:
 - Never place a partition or other barrier around the generator.
 - Do not cover the generator with a box.
 - Do not place any objects on the generator.

7PB-F4162-10

③

NOTICE

Use the specified spark plug only.

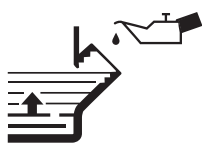
Specified plug: BPR6HS(NGK)

④

HOT EXHAUST

7PB-F8176-10

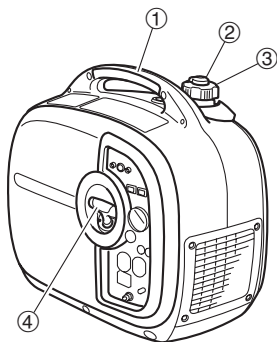
⑤

OIL 	YAMAHA EF2000iS AC output 60Hz Rated 1.6kVA 120V Phase Single DC output 12V 8A Fuel Gasoline YAMAHA MOTOR POWERED PRODUCTS CO.,LTD. MADE IN CHINA
--	--

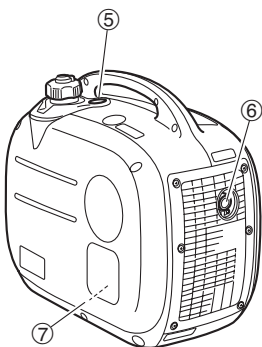
7PB-F4164-10

⑥

EMISSION CONTROL INFORMATION YAMAHA MOTOR CO.,LTD. THIS ENGINE MEETS U.S. EPA EXH / EVP REGS AND CALIFORNIA EXH / EVP SI SORE REGS FOR****. EMISSION COMPLIANCE PERIOD : *** HOURS EF : ***** EVAP F CARB : *****	 YAMAHA DISPLACEMENT : ** cc EVAP F EPA : *****	The air index of this engine is 3 <table border="1"> <tr> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> </tr> <tr> <td colspan="3">MOST CLEAN</td> <td colspan="3">LEAST CLEAN</td> </tr> </table> FOR EXTENDED Check owner's manual for further details. No other adjustments needed.	0	2	4	6	8	10	MOST CLEAN			LEAST CLEAN		
0	2	4	6	8	10									
MOST CLEAN			LEAST CLEAN											



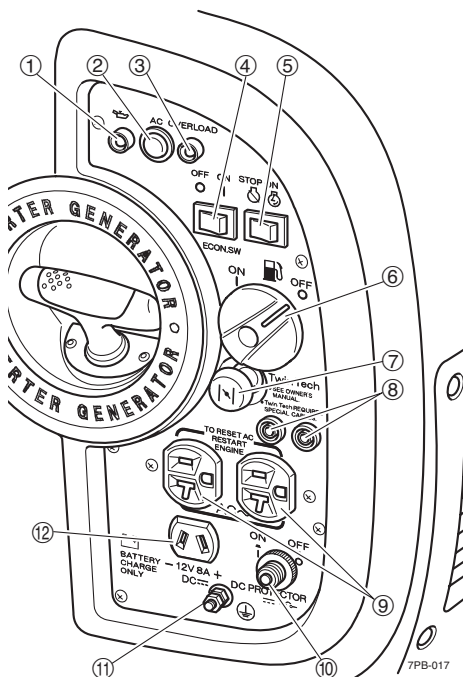
7DK-015



7PB-016

DESCRIPTION

- ① Carrying handle
- ② Fuel tank cap air vent lever
- ③ Fuel tank cap
- ④ Recoil starter
- ⑤ Fuel gauge
- ⑥ Muffler
- ⑦ Oil filler cap



7PB-017

AE00103

Control panel

- ① Oil warning light
- ② AC pilot light
- ③ Overload indicator light
- ④ Economy control switch (Black)
- ⑤ Engine switch (Red)
- ⑥ Fuel petcock
- ⑦ Choke knob
- ⑧ Twin Tech (parallel running terminal)
- ⑨ AC receptacle
- ⑩ DC protector (breaker)
- ⑪ Ground (earth) terminal
- ⑫ DC receptacle

AE00101

CONTROL FUNCTION

AE00121

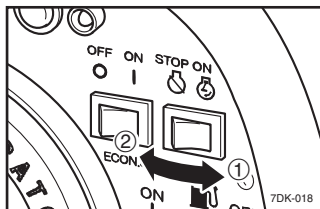
Engine switch

The engine switch controls the ignition system.

① “” (ON)

Ignition circuit is switched on.

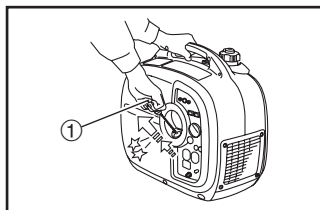
The engine can be started.



② “” (STOP)

Ignition circuit is switched off.

The engine will not run.



Recoil starter

The recoil starter is used to start the engine.

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

① Recoil starter handle

NOTICE

- Pull the recoil starter handle straight.
- Return the recoil starter handle slowly.
- Do not touch the recoil starter handle while the generator is operating.

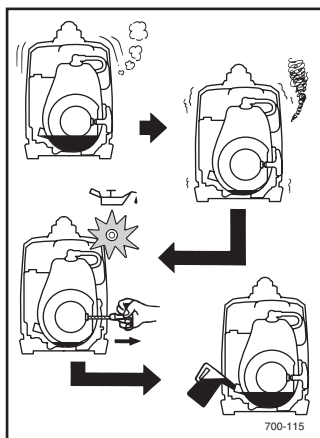
AE00111

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.

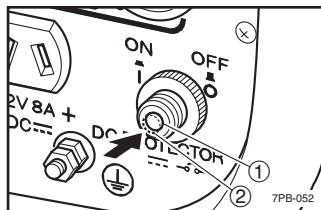
TIP

If the engine stalls or does not start, turn the engine switch to “” (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.



DC protector

The DC protector turns to **OFF** automatically when electric device being connected to the generator is operating and current above the rated flows. To use this equipment again, turn on the DC protector by pressing its button to **ON**.



① **“I” (ON)**

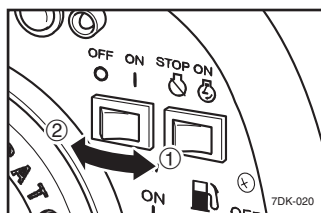
Direct current is output. (This is the default position.)

② **“O” (OFF)**

Direct current is not output.

NOTICE

Reduce the load of the connected electric device below the specified rated output of the generator if the DC protector turns off. If the DC protector turns off again, stop using the device immediately and consult a Yamaha dealer.



AE00142

Economy control switch

① **“I” (ON)**

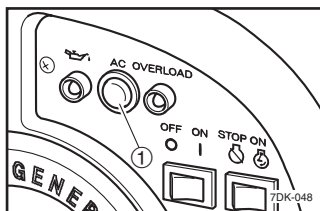
When the economy control switch is turned to **ON**, the economy control unit controls the engine speed according to the connected load. The results are better fuel consumption and less noise.

② **“O” (OFF)**

When the economy control switch is turned to **OFF**, the engine runs at the rated r/min (4,500 r/min) regardless of whether is a load connected or not.

TIP

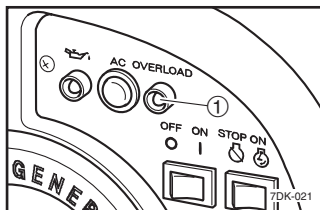
The economy control switch must be turned to **OFF** when using electric devices that require a large starting current, such as a compressor or a submersible pump.



AC pilot light (Green)

The AC pilot light comes on when the engine starts and produces power.

- ① AC pilot light



AE01087

Overload indicator light (Red)

The overload indicator light comes on when an overload of a connected electrical device is detected, the inverter control unit overheats, or the AC output voltage rises. Then, the AC protector will trip, stopping power generation in order to protect the generator and any connected electric devices. The AC pilot light (Green) will go off and the overload indicator light (Red) will stay on, but the engine will not stop running.

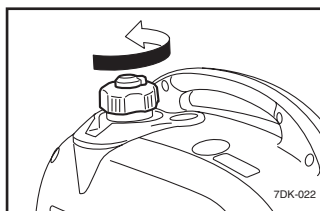
- ① Overload indicator light

When the overload indicator light comes on and power generation stops, proceed as follows:

1. Turn off any connected electric devices and stop the engine.
2. Reduce the total wattage of connected electric devices within the rated output.
3. Check for blockages in the cooling air inlet and around the control unit. If any blockages are found, remove.
4. After checking, restart the engine.

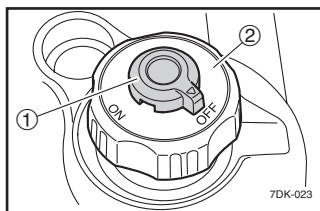
TIP

The overload indicator light may come on for a few seconds at first when using electric devices that require a large starting current, such as a compressor or a submersible pump. However, this is not a malfunction.



Fuel tank cap

Remove the fuel tank cap by turning it counterclockwise.

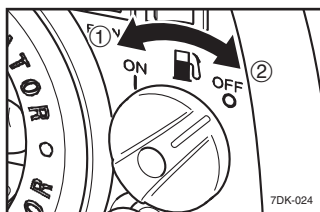


Fuel tank cap air vent lever

The fuel tank cap is provided with an air vent lever to stop fuel flow.

The air vent lever must be turned to ON. This will allow fuel to flow to the carburetor and the engine to run. When the engine is not in use, turn the air vent lever to OFF to stop fuel flow.

- ① Air vent lever
- ② Fuel tank cap



Fuel petcock

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

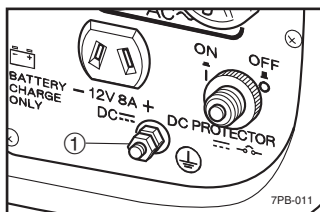
The fuel cock has two positions.

① ON

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

② OFF

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

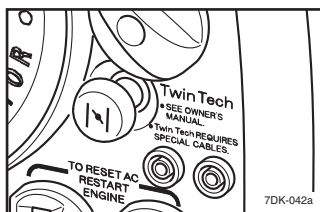


Ground (earth) terminal

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

When the electric device is grounded, be sure to ground the generator also.

- ① Ground (earth) terminal



Twin Tech (Parallel generator operation)

Two EF2000iSv2 generators can be operated in parallel to increase the rated output to 3.0 kVA and the rated current to 25.0 A. For parallel operation, use only a special parallel cable set (optional equipment) approved by Yamaha; contact your Yamaha dealer for the proper parallel cable set.

The handling, operation procedure and the notes on usage are described in the parallel cable set owner's manual included in the parallel cable set. Consult a Yamaha dealer for this parallel cable set.

TIP

The EF2000iSv2 may be connected in parallel with an earlier model Yamaha EF2000iS. However, a second Yamaha EF2000iSv2 is recommended to use the full capabilities of this model.

NOTICE

To avoid severe damage to the generators or other equipment:

- **Never attempt to parallel Yamaha generators of different outputs or a Yamaha generator with any other brand.**
- **Connect the parallel cable set to the generators before starting the generators and turn off the generators before disconnecting them. Never connect the parallel cable set to running generators or disconnect them from the generators during parallel operation.**
- **Do not use parallel cable set with only one generator or with just one generator running.**
- **During parallel operation, do not use the AC receptacles on the generator control panel.**
- **Never allow the parallel cable set to hang close to the exhaust side of the generator. Heat from the exhaust could damage the parallel cables.**
- **Do not attempt to modify the parallel cable set in any way, such as to try to use three generators.**

PREPARATION

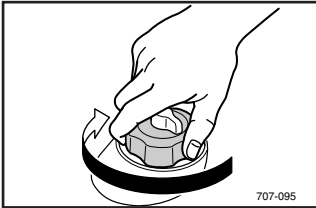
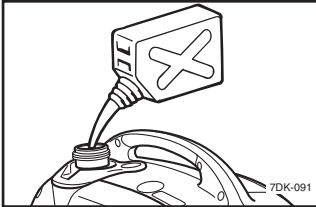
AE00856

Fuel



WARNING

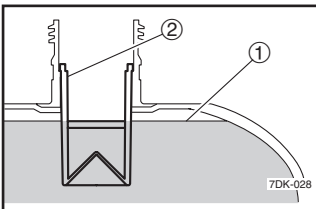
- Fuel is highly flammable and poisonous. Check “SAFETY INFORMATION” (See page 2) carefully before filling.
- Do not overfill the fuel tank, otherwise it may overflow when the fuel warms up and expands.
- After fill the fuel, make sure the fuel tank cap is tightened securely.



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.

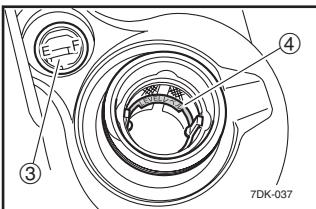
NOTICE

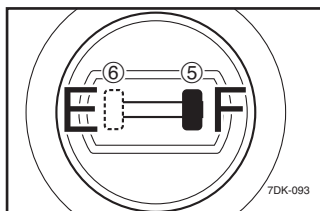
- Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.
- Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts.



Make sure there is sufficient fuel in the tank. When refueling, be sure to fill the tank up to the “LEVEL” (red) mark of the fuel tank filter.

- ① Fuel level
- ② Fuel tank filter
- ③ Fuel level gauge
- ④ “LEVEL” (red) mark





Recommended fuel:
Unleaded gasoline
Fuel tank capacity:
Total:
4.2 L (1.11 US gal, 0.92 Imp gal)

⑤ "F"	Full
⑥ "E"	Empty

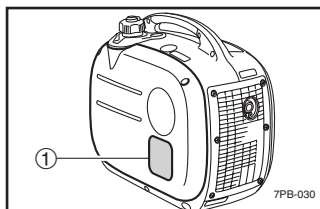
Your Yamaha engine has been designed to use regular unleaded gasoline with a pump octane number $((R + M)/2)$ of 86 or higher, or research octane number of 91 or higher.

AE00222

Engine oil

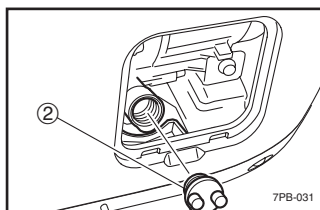
NOTICE

The generator was shipped from the factory without engine oil. Do not start the engine for the first time until the oil level has been checked and oil added if necessary.



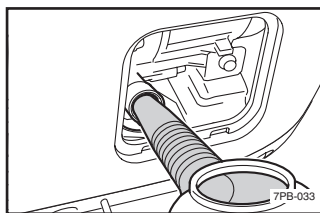
1. Place the generator on a level surface.
2. Remove the panel.

① Panel



3. Remove the oil filler cap.

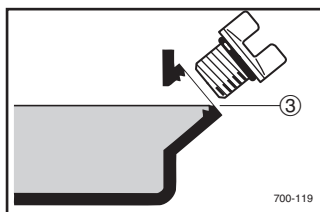
② Oil filler cap



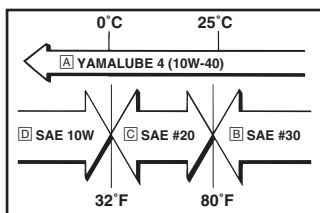
4. Fill the specified amount of the recommended engine oil, and then install and tighten the oil filler cap.

NOTICE

- Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine.
- Be sure no foreign material enters the crankcase.



- ③ 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:

0.4 L (0.42 US qt, 0.35 Imp qt)

5. Install the panel.

PRE-OPERATION CHECK



WARNING

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 is unused.

TIP

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

Pre-operation check

Fuel (See page 13)

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

Fuel line

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

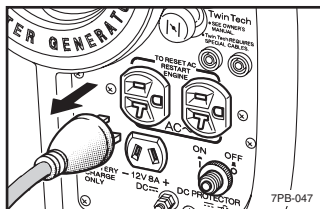
Engine oil (See page 14)

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

The point where abnormality was recognized by use

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

OPERATION

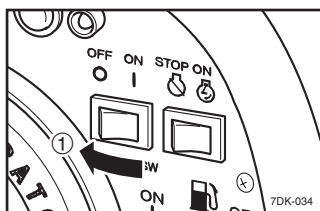


! WARNING

- 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

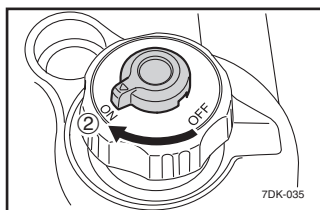
The generator was shipped from the factory without engine oil. Do not start the engine for the first time until the oil level has been checked and oil added if necessary.



Starting the engine

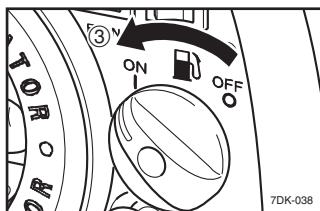
1. Turn the economy control switch (Black) to "○" (OFF).

① "○" (OFF)



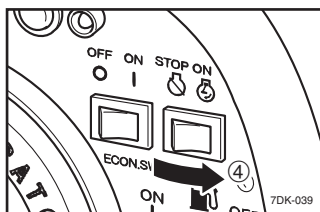
2. While holding the fuel tank cap so that it will not move, turn the air vent lever to ON.

② ON



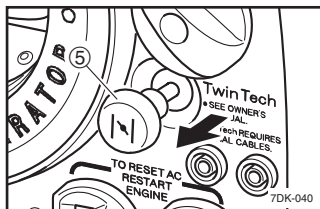
3. Turn the fuel petcock to ON.

③ ON



4. Turn the engine switch (Red) to “4” (ON).

④ “4” (ON)

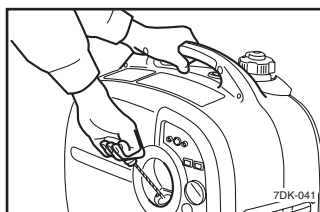


5. Pull the choke knob fully out.

⑤ Choke knob

TIP

The choke is not required to start a warm engine. Push the choke knob in to the original position.



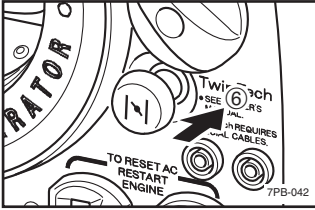
6. Pull the recoil starter slowly until it is engaged, then pull it briskly.

! WARNING

Be careful when using recoil starter. In rare cases, the recoil starter handle can be drawn back quickly by the engine kickback.

TIP

Grasp the carrying handle firmly to prevent the generator from falling over when pulling the recoil starter.



7. After the engine starts, warm up the engine until the engine does not stop when the choke knob is returned to the original position.

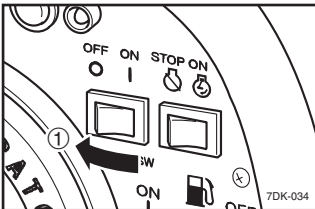
⑥ Original position

TIP

When starting the engine, with the economy control switch ON, and there is no load on the generator:

- in ambient temperature below 0 °C (32 °F), the engine will run at the rated r/min (4,500 r/min) for 5 minutes to warm up the engine.
- in ambient temperature below 5 °C (41 °F), the engine will run at the 4,500 r/min for 3 minutes to warm up the engine.

The economy control unit operates normally after the above time period, while the economy control switch is ON.



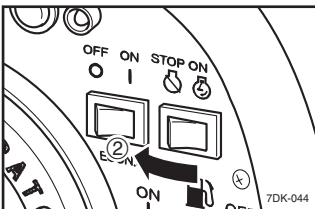
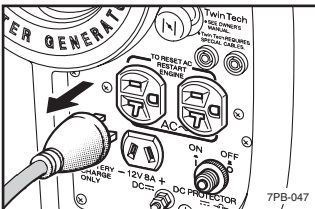
AE01025

Stopping the engine

1. Turn off any electric devices.
2. Turn the economy control switch (Black) to "○" (OFF).

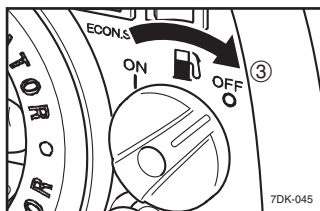
① "○" (OFF)

3. Disconnect any electric devices.



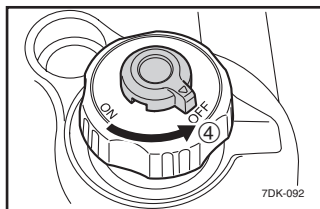
4. Turn the engine switch (Red) to "⊗" (STOP).

② "⊗" (STOP)



5. Turn the fuel petcock to OFF.

③ OFF



6. Turn the fuel tank cap air vent lever to OFF after the engine has completely cooled down.

④ OFF

AE00839

Connection Alternating Current (AC)

⚠ WARNING

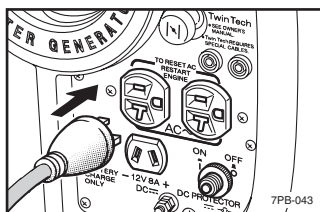
Be sure any electric devices are turned off before plugging them in.

NOTICE

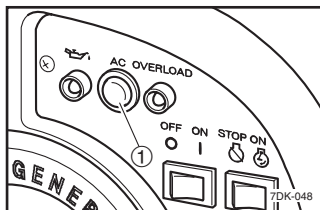
- Be sure all electric devices including the lines and plug connections are in good condition before connection to the generator.
- Be sure the total load is within generator rated output.
- Be sure the receptacle load current is within receptacle rated current.

TIP

Make sure to ground (earth) the generator. When the electric device is grounded, be sure to ground the generator also.

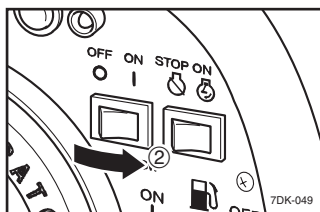


1. Start the engine.
2. Plug in to AC receptacle.



3. Make sure the AC pilot light is on.

① AC pilot light



4. Turn the economy control switch to "I" (ON).

② "I" (ON)

5. Turn on any electric devices.

TIP

The economy control switch must be turned to "O" (OFF) to increase engine speed to rated r/min.

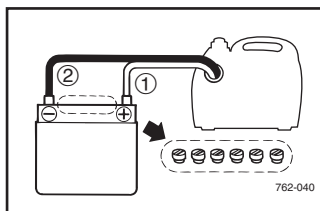
Battery charging

NOTICE

Do not connect a VRLA (Valve Regulated Lead Acid) battery. To charge a VRLA battery, a special (constant-voltage) battery charger is required.

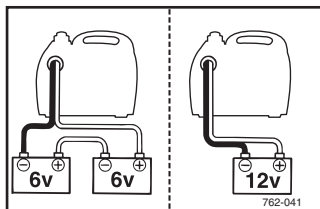
TIP

- The generator DC rated voltage is 12 V.
- Start the engine first, and then connect the generator to the battery for charging.
- Before starting to charge the battery, make sure that the DC protector is turned on.



1. Start the engine.
2. Connect the red battery charger lead to the positive (+) battery terminal.

- ① Red battery charger lead
② Black battery charger lead

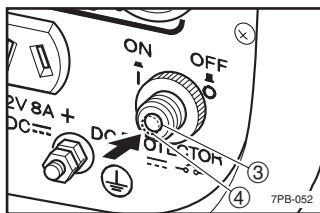


3. Connect the black battery charger lead to the negative (-) battery terminal.
4. Turn the economy control switch "○" (OFF) to start battery charging.

NOTICE

- Be sure the economy control switch is turned off while charging the battery.
- Be sure to connect the red battery charger lead to the positive (+) battery terminal, and connect the black lead to the negative (-) battery terminal. Do not reverse these positions.
- Connect the battery charger leads to the battery terminals securely so that they are not disconnected due to engine vibration or other disturbances.
- Charge the battery in the correct procedure by following instructions in the owner's manual for the battery.
- The DC protector turns  "○" (OFF) automatically if current above the rated flows during battery charging.

To restart charging the battery, turn the DC protector on by pressing its button to  "I" (ON). If the DC protector turns off again, stop charging the battery immediately and consult a Yamaha dealer.



- ③ — "I" (ON)
 ④ — "O" (OFF)

TIP

- Follow instructions in the owner's manual for the battery to determine the end of battery charging.
- Measure the specific gravity of electrolyte to determine if the battery is fully charged. At full charge, the electrolyte specific gravity is between 1.26 and 1.28.
- It is advisable to check the specific gravity of the electrolyte at least once every hour to prevent overcharging the battery.



! WARNING

Never smoke or make and break connections at the battery while charging. Sparks may ignite the battery gas.

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. contains sulfuric (sulphuric) acid. Avoid contact with skin, eyes or clothing.

Antidote:

EXTERNAL—Flush with water.

INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately.

EYES: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away. Ventilate when charging or using in closed space. Always cover eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.

Operating range of DC power supply (exclusively for charging 12 V battery)

This power source is designed to charge batteries up to 40 Ah that are half-discharged. Do not charge batteries of a higher capacity than 40 Ah.

12 V battery

The time required for recharging a battery varies depending on the discharge level of the battery. When the specific gravity of the battery reaches 1.26 to 1.28, charging is complete. When charging, check the battery's specific gravity once an hour.

The average time for charging a half-discharged 40 Ah battery is approximately 5 hours. Be sure to check the battery fluid level before charging.

NOTICE

- **Do not connect any load to the battery or use the engine starter motor while charging. This causes high current to flow through the generator which will burn out the coil.**
 - **Do not connect a VRLA (Valve Regulated Lead Acid) battery. To charge a VRLA battery, a special (constant-voltage) battery charger is required.**
-

Application range

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

AC				DC 
Power factor	1	0.8–0.95	0.4–0.75 (Efficiency 0.85)	
EF2000iSv2	–1,600 W	–1,280 W	–544 W	Rated voltage 12 V Rated current 8 A

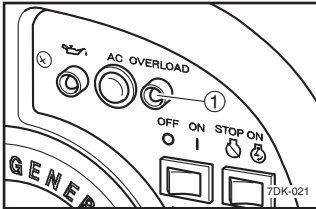
TIP

- “—” means below.
- Application wattage indicates when each device is used by itself.
- The simultaneous usage of AC and DC power is possible but total wattage should not exceed the rated output.

EX:

Generator rated output		1,600 VA
Frequency	Power factor	
AC	1.0	–1,500 W
	0.8	–1,180 W
DC	—	96 W (12 V/8 A)

- The overload indicator light comes on when total wattage exceeds the application range. (See page 10 for more details.)



① Overload indicator light

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.
- 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.



WARNING

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 information.

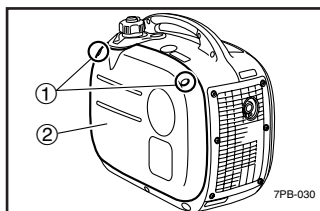
Item	Routine	Pre-operation check	Every	
			6 months or 100 Hrs	12 months or 300 Hrs
Spark plug	• Check condition. • Clean and replace if necessary.		○	
Fuel	• Check fuel level and leakage.	○		
Fuel hose	• Check fuel hose for cracks or damage. • Replace if necessary.	○		
Engine oil	• Check oil level in engine.	○		
	• Replace.		○(*1)	
Air filter element	• Check condition. • Clean.		○(*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.			○

Item	Routine	Pre-operation check	Every	
			6 months or 100 Hrs	12 months or 300 Hrs
Crankcase breather hose	• Check breather hose for cracks or damage. • Replace if necessary.			○
Cylinder head	• Decarbonize cylinder head. • More frequently if necessary.	After every 500 Hrs.		
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.		○		

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

*2The 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.



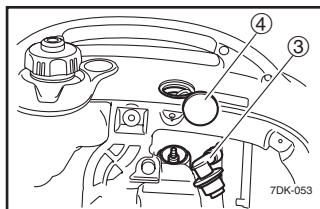
Spark plug inspection

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

1. Remove the screws, and then remove the cover.

① Screw

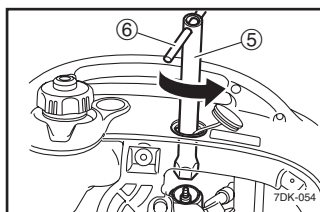
② Cover



2. Remove the spark plug cap and cap, and insert the tool through the hole from the outside of the cover.

③ Spark plug cap

④ Cap

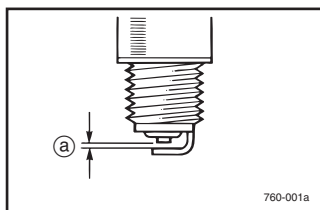


3. Insert the handlebar into the tool and turn it counterclockwise to remove the spark plug.

⑤ Tool

⑥ Handlebar

4. 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.



5. Check the spark plug type and gap.

① Spark plug gap

Standard spark plug:

BPR6HS (NGK)

Spark plug gap:

0.6–0.7 mm (0.024–0.028 in)

TIP

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

6. 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.

7. Install the spark plug cap and cap.
8. Install the cover and tighten the screws.

AE00431

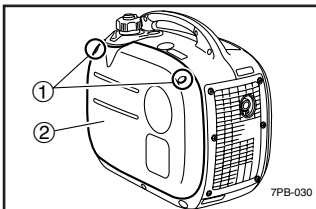
Carburetor adjustment

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.

AE00412

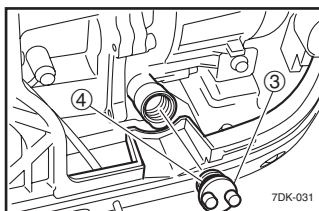
Engine oil replacement

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



1. Place the generator on a level surface and warm up the engine for several minutes.
Then stop the engine and turn the fuel petcock, fuel tank cap air vent lever to OFF.
2. Remove the screws and then remove the cover.

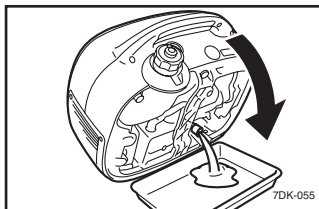
- ① Screw
② Cover



3. Remove the oil filler cap.

③ Oil filler cap

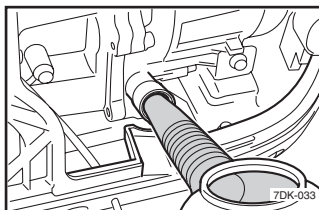
④ O-ring



4. Place an oil pan under the engine. Tilt the generator to drain the oil completely.

5. Check the oil filler cap and O-ring. Replace them if damaged.

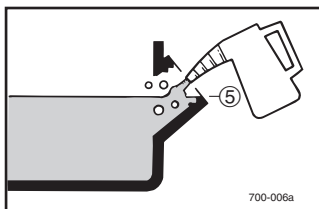
6. Place the generator on a level surface.



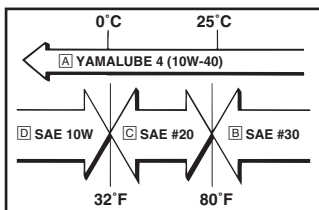
7. Add engine oil to the correct level.

NOTICE

- Do not tilt the generator when adding engine oil. This could result in overfilling and damage to the engine.
- Be sure no foreign material enters the crankcase.



⑤ 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

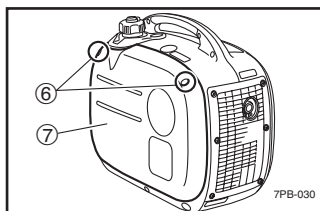
Recommended engine oil grade:

API Service SE type or higher

Engine oil quantity:

0.4 L (0.42 US qt, 0.35 Imp qt)

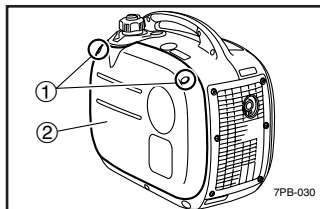
8. Wipe the cover clean, and wipe up any spilled oil.



9. Install the O-ring and the oil filler cap.
10. Install the cover and tighten the screws.

⑥ Screw

⑦ Cover



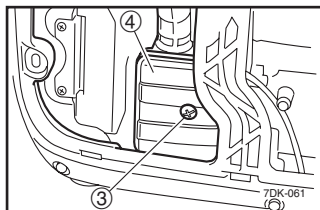
AE01084

Air filter

1. Remove the screws, and then remove the cover.

① Screw

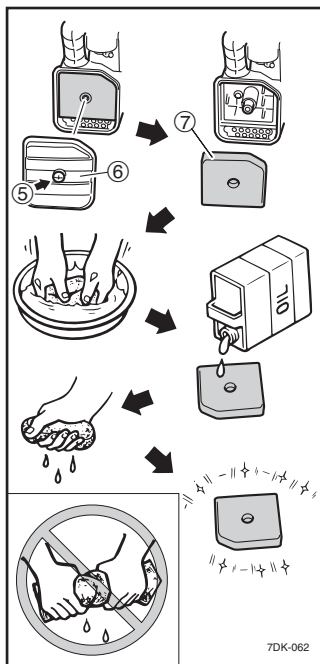
② Cover



2. Remove the screw and then remove the air filter case cover.

③ Screw

④ Air filter case cover



3. Remove the foam element.

⑤ Screw

⑥ Air filter case cover

⑦ Foam element

4. Wash the foam element in solvent and dry it.

WARNING

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

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

NOTICE

Do not wring out the foam element when squeezing it.

This could cause it to tear.

Recommended oil:
Foam-air-filter oil
or
engine oil (See page 15)

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

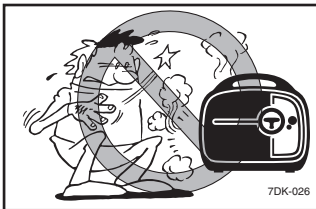
NOTICE

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 so there is no air leak.

7. Install the air filter case cover in its original position and tighten the screw.
8. Install the cover and tighten the screws.



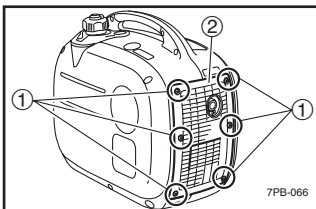
AE01075

Muffler screen and spark arrester

WARNING

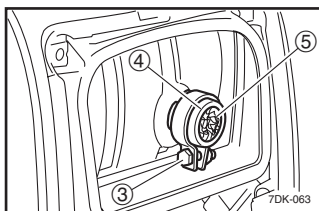
The engine and muffler will be very hot after the engine has been run.

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



1. Remove the muffler cover screws, and then remove the muffler cover.

- ① Muffler cover screw
- ② Muffler cover

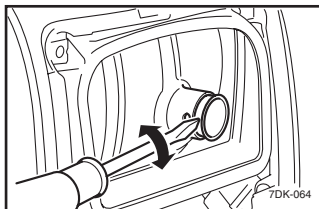


2. Loosen the muffler cap bolt and then remove the muffler cap and muffler screen.

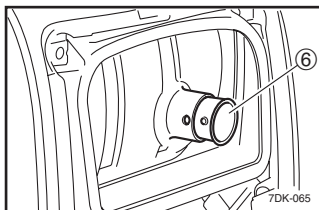
③ Muffler cap bolt

④ Muffler cap

⑤ Muffler screen

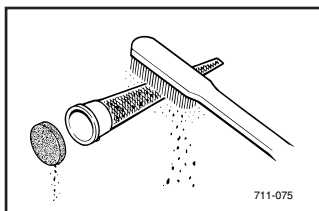


3. Use a flathead screw driver to pry the spark arrester out from the muffler.



4. Remove the spark arrester.

⑥ Spark arrester



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

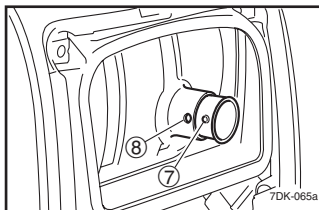
NOTICE

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

6. Check the muffler screen and spark arrester.

Replace them if damaged.

7. Install the spark arrester.

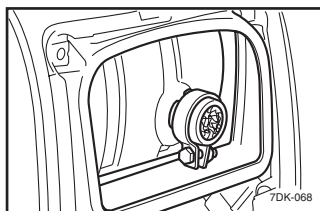


TIP

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

⑦ Spark arrester projection

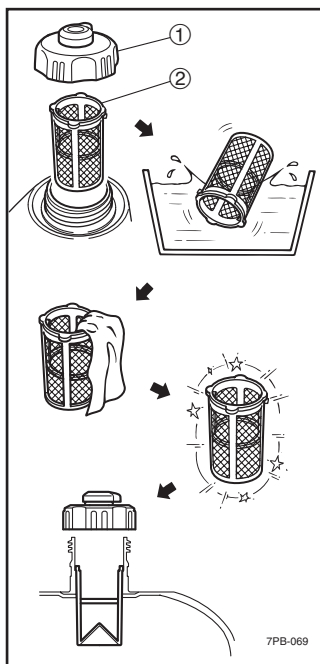
⑧ Hole



8. Install the muffler screen and muffler cap, and then tighten the muffler cap bolt.

Muffler cap bolt tightening torque:
3.5 Nm (0.35 m·kgf, 2.5 ft·lbf)

9. Install the muffler cover and tighten the muffler cover screws.



AE00471

Fuel tank filter



WARNING

Never use 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.



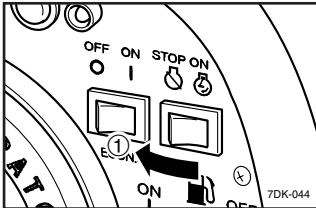
WARNING

Be sure the fuel tank cap is tightened securely.

AE00601

STORAGE

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



AE01056

Drain the fuel

1. Turn the engine switch to "⊘" (STOP).

① "⊘" (STOP)

2. Remove the fuel tank cap and 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 fuel tank cap.

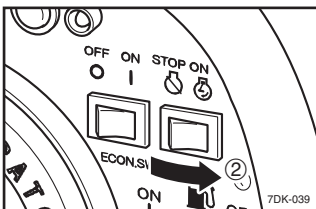


WARNING

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

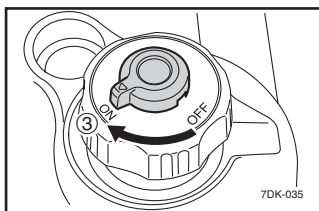
NOTICE

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).

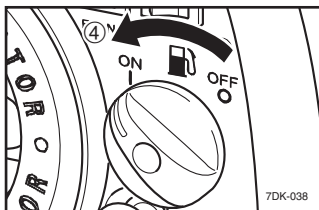
② "⊙" (ON)



4. Turn the fuel tank cap air vent lever and fuel petcock to ON.

③ ON

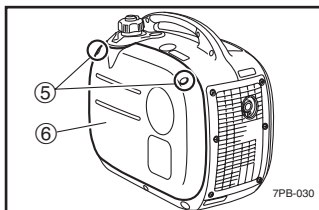
④ ON



5. Start the engine and leave it run until it stops.
The engine stops in approximately 20 minutes time by running out of fuel.

TIP

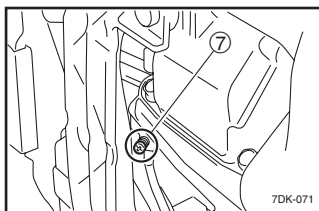
- Do not connect with any electrical devices. (unloaded operation)
- Duration of the running engine depends on the amount of the fuel left in the tank.



6. Remove the screws, and then remove the cover.

⑤ Screw

⑥ Cover

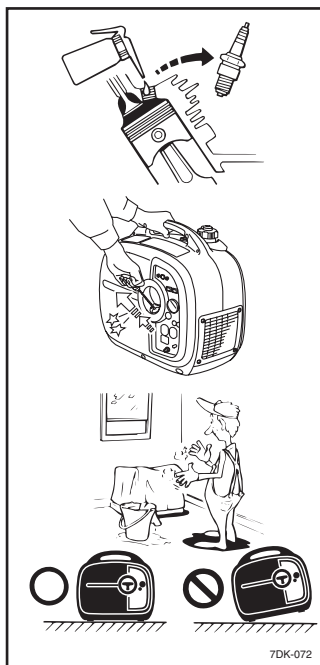


7. Drain the fuel remaining in the carburetor into an approved container by loosening the drain screw on the carburetor float chamber.

⑦ Drain screw



8. Tighten the drain screw.
9. Turn the engine switch to "⏻" (STOP).
10. Turn the fuel petcock to OFF.
11. Install the cover and tighten the screws.
12. Turn the fuel tank cap air vent lever to OFF after the engine has completely cooled down.
13. Tighten further if any screws, bolts and nuts are loose.
14. 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.

1. Remove the spark plug, pour about one tablespoon of engine oil (See page 15) into the spark plug hole and install the spark plug. Recoil start the engine by turning over several times (with ignition off) to coat the cylinder walls with oil.
2. Pull the recoil starter until you feel compression. Then stop pulling. (This prevents the cylinder and valves from rusting).
3. 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.

TROUBLESHOOTING

Engine won't start

1. Fuel systems

No fuel supplied to combustion chamber.

- No fuel in tank Supply fuel.
- Fuel in tank Fuel tank cap air vent lever and fuel petcock to ON.

① ON

② ON

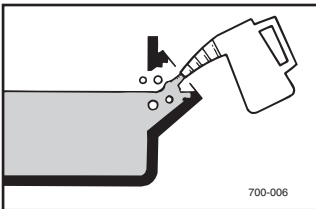
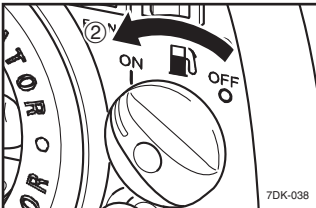
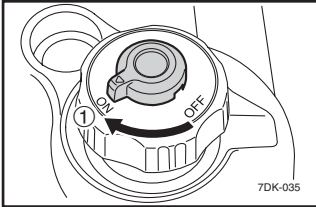
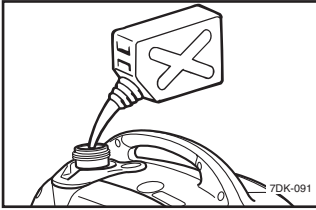
○ Clogged fuel line Clean fuel line.

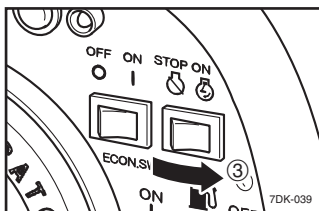
○ Clogged carburetor Clean carburetor.

2. Engine oil system

Insufficient

- Oil level is low Add engine oil.

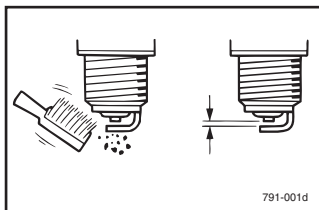
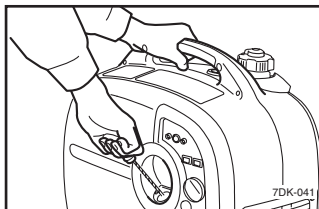




3. Electrical systems

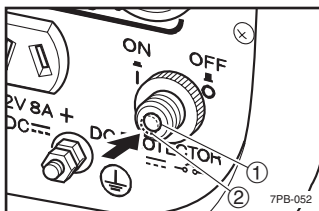
- Engine switch to "3" (ON) and pull the recoil starter.

③ "3" (ON)



Poor spark

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



AE00515

Generator won't produce power

- Safety device (DC protector) to OFF Press the DC protector to ON.

① "I" (ON)

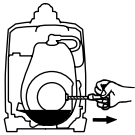
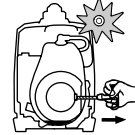
② "O" (OFF)

- Safety device (AC) to OFF Stop the engine, then restart.

A	ENGINE DOES NOT START
---	-----------------------



B	Turn the engine switch to "ⓘ" (ON), then pull the recoil starter and check if the oil warning light flickers.
---	---

C	Does not flicker	D	Flickers
---	------------------	---	----------



H	Pull the recoil starter and check the spark plug for spark strength. (See "WARNING")
---	--



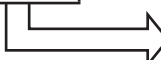
⚠ WARNING

- To prevent **FIRE HAZARDS** be sure fuel is not present in the spark plug area.
- To prevent **FIRE HAZARDS** be sure to place the spark plug as far away as possible from the spark plug hole and carburetor area.
- To prevent **ELECTRIC SHOCK** do not hold spark plug lead with hand while testing.

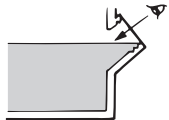
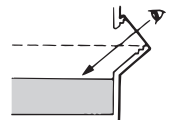
I	OK	J	Does not spark
---	----	---	----------------



N	Check the following.	O	Clogged
	• Fuel line clogging • Air filter element clogging.	P	OK



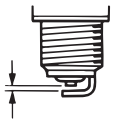
E	Check engine oil level.	
---	-------------------------	--

F	OK	G	Level low
Consult a Yamaha dealer.		Add engine oil.	

K	Check the spark plug.	
---	-----------------------	--

- Type: BPR6HS
- Gap: 0.6–0.7 mm (0.024–0.028 in)

L	Incorrect	M	OK
Replace or adjust gap.		Clean the spark plug.	

Q	Clean or replace.	R	OK
		S	Engine does not start.



T	Consult a Yamaha dealer.
---	--------------------------

SPECIFICATIONS

Dimensions

	Unit	EF2000iSv2
Overall length	mm (in)	490 (19.3)
Overall width	mm (in)	280 (11.0)
Overall height	mm (in)	445 (17.5)
Dry weight	kg (lb)	20 (44)

Engine

	Unit	EF2000iSv2
Type		Air cooled 4-stroke gasoline OHV
Cylinder arrangement		Inclined, 1 cylinder
Displacement	cm ³	79
Bore × Stroke	mm (in)	48.6 × 43.0 (1.91 × 1.69)
Operation hours	Hr	4.2–10.5 (rated load–1/4 load)
Fuel		Unleaded gasoline
Fuel tank capacity	L (US gal, Imp gal)	4.2 (1.11, 0.92)
Engine oil quantity	L (US qt, Imp qt)	0.4 (0.42, 0.35)
Ignition system		CDI
Spark plug: Type		BPR6HS (NGK)
Gap	mm (in)	0.6–0.7 (0.024–0.028)
Noise level*	dB / L _{WA}	89
	dB (A) / 7 m	51.5–61

* : Noise level is measured when the economy control switch is turned to ON.

L_{WA} shows the sound power level under the ISO3744 satisfied test conditions.

The noise level in “dB (A) / 7 m” is the arithmetic mean value in four directions measured 7 meters away from each side of the generator.

The noise level may vary in different environments.

Generator

	Unit	EF2000iSv2
AC Output		
Rated voltage	V	120
Rated frequency	Hz	60
Rated current	A	13.3
Rated output	kVA	1.6
Safety device: Type		Electronic
DC Output		
Rated voltage	V	12
Rated current	A	8
Safety device: Type		DC protector

CONSUMER INFORMATION

PRI-I.D. NUMBER:

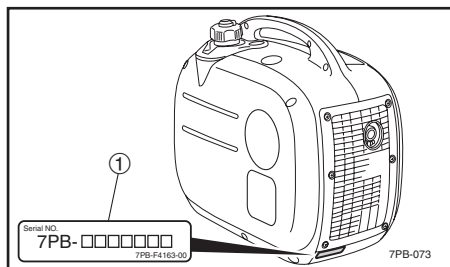
	MODEL
PRI-I.D. CODE 	SERIAL No.

AE00012

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.



AE00011

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

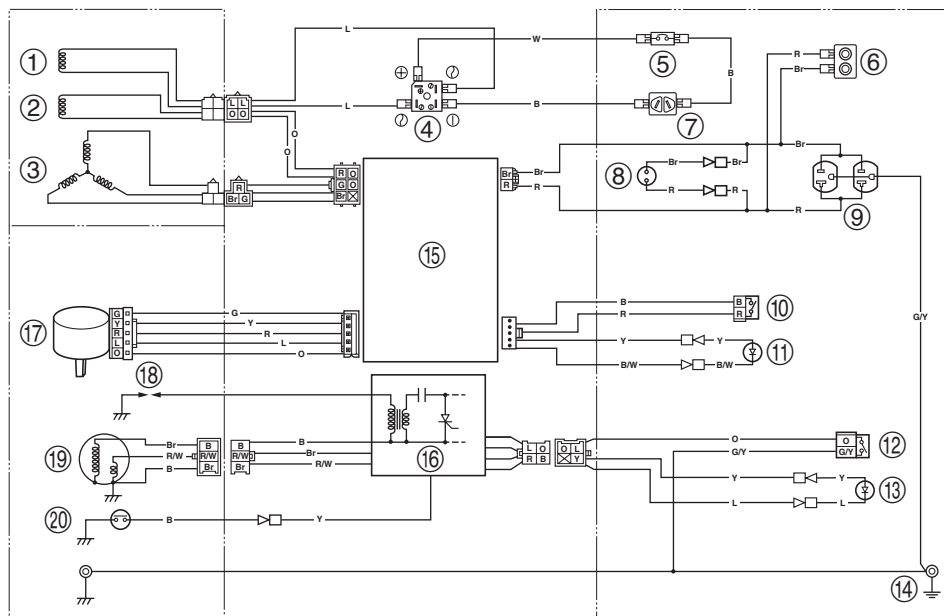
Item	Acronym
• CARB. ASSY., LH. & JT., CARBURETOR2	CARB (Carburetor)
• T.C.I. MAGNETO ASSY. & PLUG, SPARK	EI (Electronic Ignition)
• CRANKCASE1 & HEAD, CYLINDER1	PCV (Positive Crankcase Ventilation)
• AIR FILTER ASSY.	ACL (Air Cleaner)
• MUFF., 2, CAP, NET, WIRE2 & ARRESTER, SPARK	

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



7DK-10

- ① Sub coil
- ② DC coil
- ③ Main coil
- ④ DC rectifier
- ⑤ DC protector (breaker)
- ⑥ Twin Tech (parallel running terminal)
- ⑦ DC receptacle
- ⑧ AC pilot light
- ⑨ AC receptacle
- ⑩ Economy control switch
- ⑪ Overload indicator light
- ⑫ Engine switch
- ⑬ Oil warning light
- ⑭ Ground (earth) terminal
- ⑮ Control unit
- ⑯ CDI unit/Ignition coil
- ⑰ Stepping motor
- ⑱ Spark plug
- ⑲ CDI magneto

- ⑳ Oil level gauge

Color code

B	Black
Br	Brown
G	Green
L	Blue
O	Orange
R	Red
W	White
Y	Yellow
B/W	Black/White
G/Y	Green/Yellow
R/W	Red/White

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 Outdoor Power 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)



PRINTED IN CHINA
2015.10 
(E)

Register Your Generator at

www.yamahawarrantyregistration.com

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 _____

City _____ State _____ Zip _____

Phone Number (_____) _____ - _____

E-mail address _____

Yamaha Generator Model Name: _____ (Example) EF2000iS

Yamaha Generator Primary I.D. Serial Number: _____ (Example) 7DK - 0000000
(See "Machine Identification" in your Owner's Manual for location of this number)
(The engine stamp is not the valid Primary ID Serial Number)

Date Purchased _____ / _____ / _____
Month Day Year

Selling Dealer Name _____

- Please register online or complete and mail this form. It will help ensure that Yamaha has accurately registered your purchase for warranty.
- 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.

REGISTER ONLINE OR MAIL THIS CARD TO YAMAHA MOTOR CORPORATION, U.S.A.

PLACE
STAMP
HERE

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

ATTN: WARRANTY DEPARTMENT