



YAMAHA

OWNER'S MANUAL



Read this manual carefully before operating this machine.

EF2200iS



WARNING: This product can expose you to chemicals including engine exhaust, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



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.



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.

EF2200iS

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.

Contents

Safety information	1-1	Starting the engine	4-1
General safety information	1-1	Stopping the engine	4-3
Exhaust fumes are poisonous	1-2	Connecting devices via Alternating Current (AC) receptacles	4-4
Fuel is highly flammable and poisonous	1-2	Connecting devices via the accessory socket	4-5
Engine and muffler may be hot	1-3	Application range	4-7
Electric shock prevention	1-3	High altitude operation	4-8
Connection notes	1-4		
Connection	1-4	Periodic maintenance	5-1
Extension cord notes	1-5	The importance of maintenance	5-1
Location of important labels	1-6	Check before use	5-1
Controls and features	2-1	Maintenance chart	5-1
Description	2-1	Engine oil replacement	5-3
Control function	2-4	Spark plug inspection	5-4
Engine switch	2-4	Air filter cleaning	5-6
Oil level warning light (Red)	2-4	Muffler screen and spark arrester cleaning	5-8
AC switch (N.F.B.)	2-4	Fuel tank strainer cleaning	5-10
Fuel tank cap	2-5	Carburetor adjustment	5-10
Ground (earth) terminal	2-5		
Economy control switch	2-5	Storage	6-1
Power supply display	2-6	Drain the fuel	6-1
Overload indicator light (Red)	2-6	Engine	6-3
Fuel tank cap air vent lever	2-6		
Fuel level gauge	2-7	Trouble recovery	7-1
Hour meter	2-7	Troubleshooting	7-1
Boost mode switch	2-7		
Twin Tech (parallel running terminal)	2-8	Specifications	8-1
Accessory socket	2-9	EF2200iS	8-1
AC receptacle	2-9		
Carburetor fuel drain cock	2-9	Consumer information	9-1
Recoil starter	2-9	Machine identification	9-1
		Identification number records	9-1
Before operation	3-1		
Preparation	3-1		
Fuel	3-1		
Engine oil	3-2		
Pre-operation check	3-4		
Operation	4-1		
Precautions for use	4-1		

Contents

**Exhaust emission control
system and components 10-1**

Wiring diagram 11-1

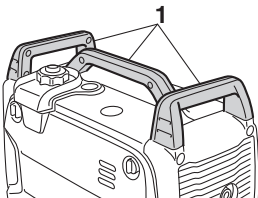
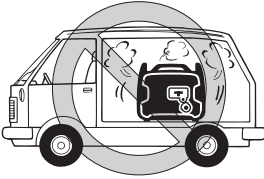
**Yamaha Extended Service
(Y.E.S.)..... 12-1**

Index..... 13-1

⚠ Safety information

General 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.



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



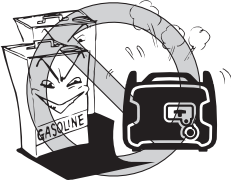
- Always turn off the engine when refuelling.
- Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any fuel on the engine or muffler when refueling.
- Do not leave the generator inside the vehicle or in the trunk.
- If you swallow any fuel, inhale fuel vapor, or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

Engine and muffler may be hot

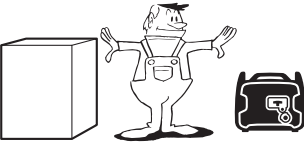
- Place the generator in a place where pedestrians or children are not likely to touch the machine.



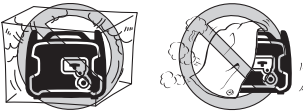
- Avoid placing any flammable materials near the exhaust outlet during operation.



- In order to prevent overheating, ensure adequate air-flow 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.

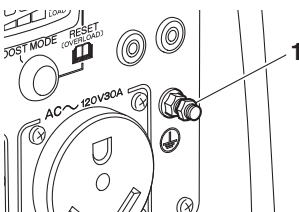


Electric shock prevention

- Never operate the engine in rain or snow.



Safety information



- 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

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.

Extension cord notes

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

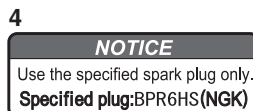
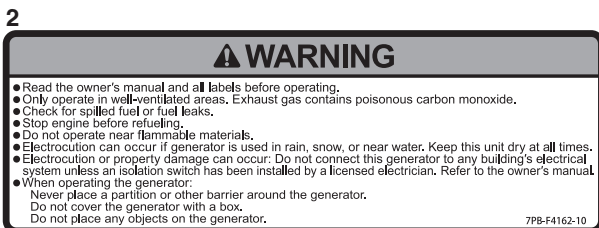
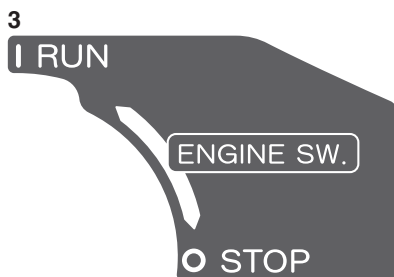
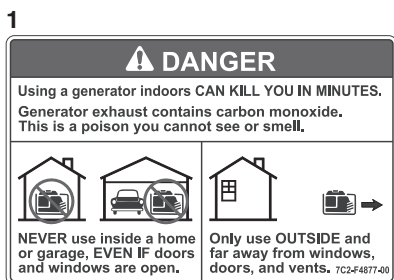
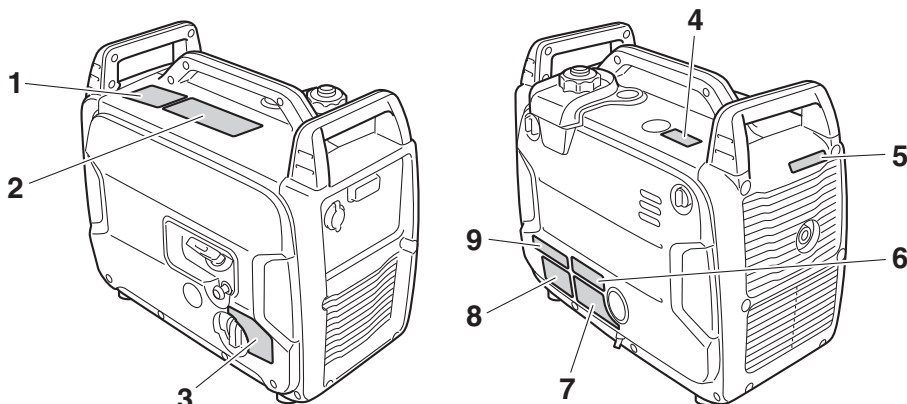
Safety information

Location of important labels


Please read the following labels carefully before operating this machine.

TIP

Maintain or replace safety and instruction labels, as necessary.



6

 **WARNING**

- Before using the carburetor drain cock, turn the engine switch (recoil starter side) to the “STOP” position.
- After draining the fuel, be sure to turn the drain cock lever to the “CLOSED” position.

7PC-F415H-10

9

EMISSION CONTROL INFORMATION
YAMAHA MOTOR CO.,LTD.
THIS ENGINE MEETS U.S. EPA EXH / EVP REGS AND
CALIFORNIA EXH / EVP & SORC REGS FOR *****
EMISSION COMPLIANCE PERIOD : 300 HOURS
EP : ***** DISPLACEMENT : 80cc
EVAP F CARB : ***** EVAP F EPA : *****

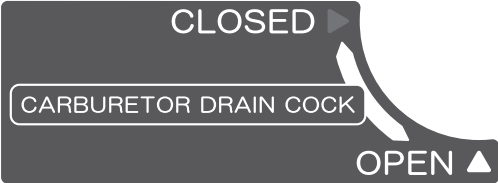

YAMAHA
EM

The air index of this engine is 3


0 2 4 6 8 10
MOST CLEAN LEAST CLEAN

FOR EXTENDED
Check owner's manual for further details.
No other adjustments needed.

7



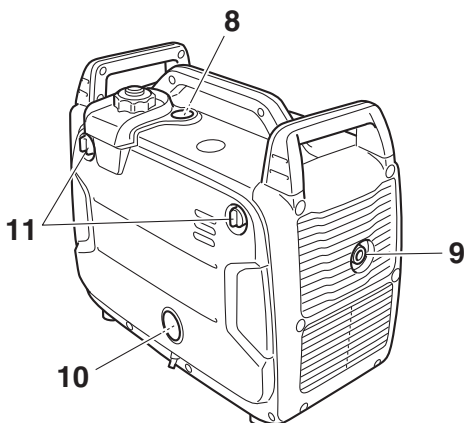
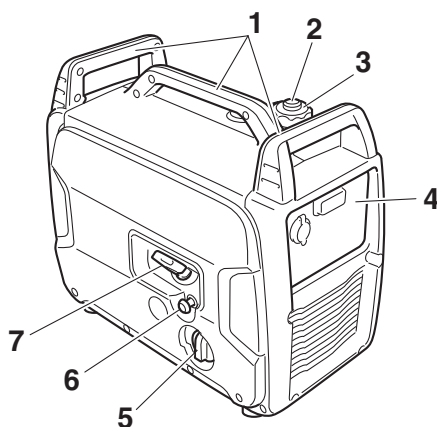
8

OIL	YAMAHA EF2200iS
	AC output 60Hz Rated 1.8kVA 120V Phase Single DC output 12V 3A Fuel Gasoline
7PC-F4164-10	YAMAHA MOTOR POWERED PRODUCTS CO.,LTD. MADE IN CHINA

Controls and features

Description

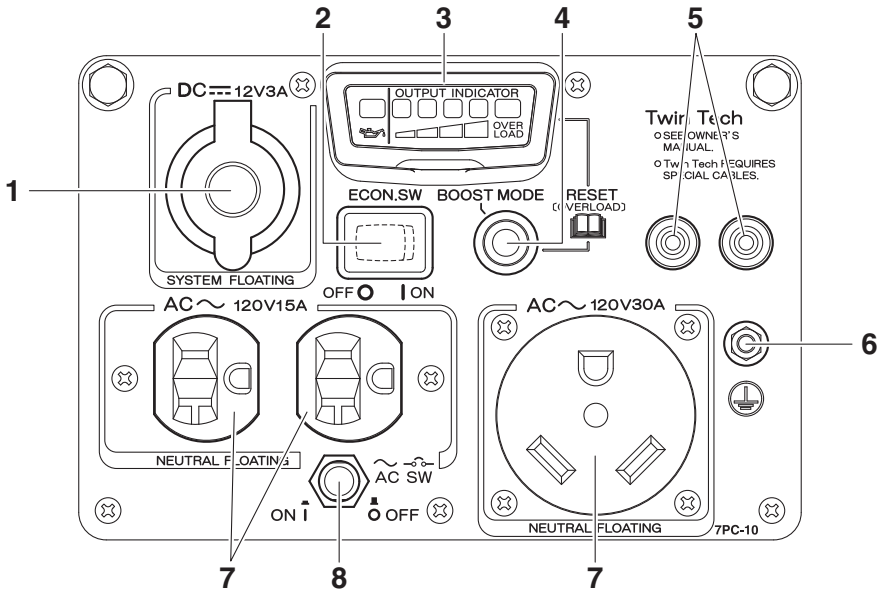
2



- 1 Carrying handle (p. 1-1)
- 2 Fuel tank cap air vent lever (p. 2-6)
- 3 Fuel tank cap (p. 2-5)
- 4 Control panel (p. 2-1)
- 5 Engine switch (p. 2-4)
- 6 Choke knob (p. 4-1)

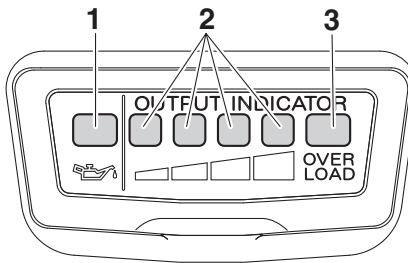
- 7 Recoil starter (p. 2-9)
- 8 Fuel level gauge (p. 2-7)
- 9 Muffler (p. 5-8)
- 10 Carburetor fuel drain cock (p. 2-9)
- 11 Panel opener (p. 3-2)

Control panel



- | | | | |
|---|------------------------------------------------|---|------------------------------------------------|
| 1 | Accessory socket (p. 2-9) | 5 | Twin Tech (parallel running terminal) (p. 2-8) |
| 2 | Economy control switch (p. 2-5) | 6 | Ground (earth) terminal (p. 2-5) |
| 3 | Multi-function LED meter (p. 2-1) | 7 | AC receptacle (p. 2-9) |
| 4 | Boost mode switch/Reset button (p. 2-7/p. 2-6) | 8 | AC switch (N.F.B.) (p. 2-4) |

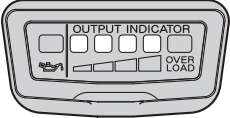
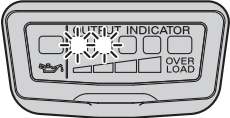
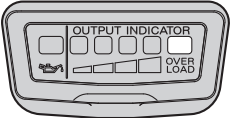
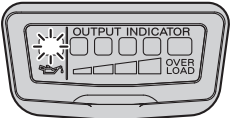
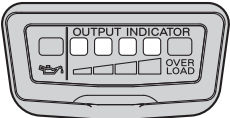
Multi-function LED meter



- | | | | |
|---|----------------------------------------|---|-----------------------------------------|
| 1 | Oil level warning light (Red) (p. 2-4) | 3 | Overload indicator light (Red) (p. 2-6) |
| 2 | Output indicator (Green) (p. 2-6) | | |

Controls and features

This generator has an integrated multi-function LED meter. Its functions are described as below.

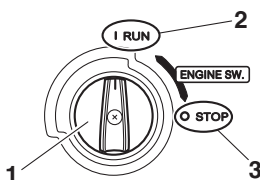
Function	Display	Description	Page
Power supply meter		Output indicator(s) come on according to the current power supply.	2-6
Operating time meter		Output indicator(s) flash according to the accumulated operation time.	2-7
Overload warning		Overload indicator light comes on after output indicators come on, when an overload or some malfunctions of connected devices are detected.	2-6
Oil warning		Oil level warning light flashes when the engine oil level is too low.	2-4
Boost mode		Output indicators come on consecutively when the generator is in boost mode.	2-7

Control function

Engine switch

The engine switch controls the ignition system and the fuel cock.

1. Engine switch
2. "I" (RUN)
3. "O" (STOP)



TIP

The engine switch of this generator opens and closes the fuel cock simultaneously. You don't need to operate the fuel cock separately.

"I" (RUN)

Ignition circuit is switched on, and the fuel cock opens. The engine can be started.

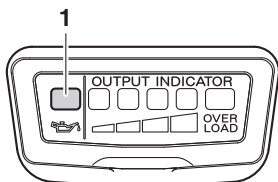
"O" (STOP)

Ignition circuit is switched off, and the fuel cock closes. The engine will not run.

Oil level warning light (Red)

When the oil level falls below the lower level, the oil level warning light flashes and then the engine stops automatically. If the light flashes, stop the engine immediately, and add engine oil up to the specified level. Unless you refill with oil, the engine will not start again.

1. Oil level warning light (Red)



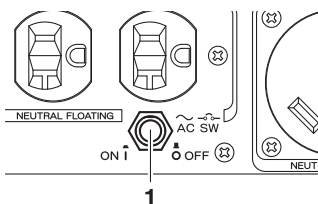
TIP

If the oil level warning light flashes even though the engine oil level is sufficient, make sure to place the generator horizontally.

AC switch (N.F.B.)

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

1. AC switch (N.F.B.)



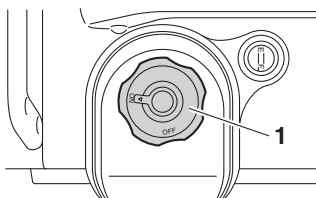
NOTICE

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.

Fuel tank cap

Remove the fuel tank cap by turning it counterclockwise.

1. Fuel tank cap



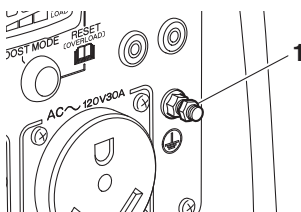
Ground (earth) terminal

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

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

For the grounding, consult a Yamaha dealer.

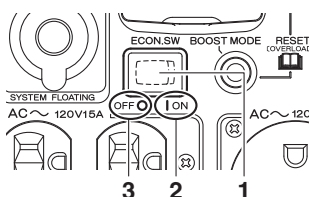
1. Ground (earth) terminal



Economy control switch

In order to reduce fuel consumption and operating noise, use the economy control switch.

1. Economy control switch
2. "I" (ON)
3. "O" (OFF)



"I" (ON)

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

"O" (OFF)

When the economy control switch is turned to "O" (OFF), the engine runs at the rated speed (4900 r/min) regardless of whether a load is connected or not.

TIP

- The economy control switch must be turned to "O" (OFF) when using electric devices that require a

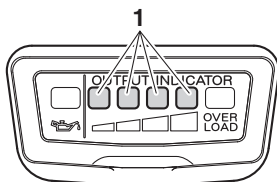
large starting current, such as a compressor of a submersible pump.

- Economy control does not function when the generator is in warming-up period (See page 4-1).

Power supply display

The current power supply level is displayed by the output indicators. According to the power supply level, the output indicator(s) will come on.

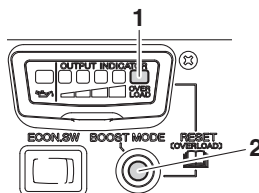
1. Output indicator (Green)



Overload indicator light (Red)

The overload indicator light comes on when electricity over the rated output is required by the connected electrical devices, or when 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.

1. Overload indicator light (Red)
2. Reset button



TIP

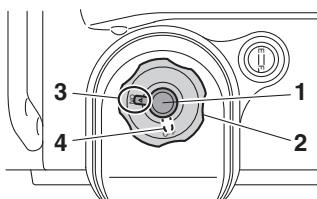
The overload indicator light may come on for a few seconds at the first when using electric devices that require a large starting current, such as a compressor of a submersible pump. However, this is not a malfunction.

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" to run the engine.

1. Air vent lever
2. Fuel tank cap
3. "ON"
4. "OFF"



“ON”

This will allow fuel to flow to the carburetor and the engine to run.

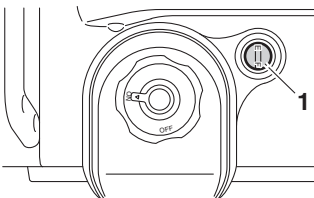
“OFF”

When the engine is not in use, turn the air vent lever to “OFF” to stop fuel flow.

Fuel level gauge

The fuel level gauge shows the amount of the fuel in the fuel tank. Make sure that sufficient fuel is in the fuel tank before the operation.

- 1. Fuel level gauge

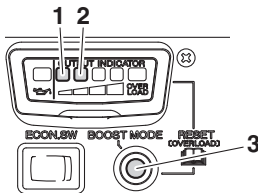


Hour meter

The accumulated operation time is displayed by output indicator lights “A” and “B”.

To see the time, push the reset button 3 times within 1 second in no-load running.

- 1. Output indicator light “A”
- 2. Output indicator light “B”
- 3. Reset button



After one-second absence, the light “A” flashes every 1000 hours, and the light “B” flashes every 100 hours.

For example, if the light “A” flashes 2 times and the light “B” flashes 3 times, it shows that the total operation time is about 2300 hours.

TIP

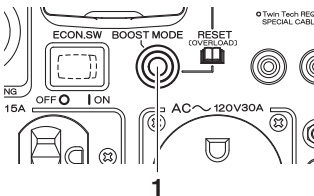
Hour meter does not function when the generators are in parallel operation (Twin Tech).

Boost mode switch

The boost mode switch raises up the number of rotation of the engine temporarily (for approximately 60 seconds). When using devices that require a large starting current, such as a compressor of a submersible pump or refrigerator, use this switch.

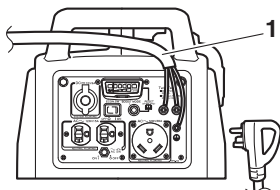
To enter the boost mode, push the boost mode switch for 3 seconds. To exit the boost mode, push the boost mode switch for 3 seconds again.

- 1. Boost mode switch



TIP

After approximately 60 seconds of the boost mode, the generator will return to the normal mode automatically.

**Twin Tech (parallel running terminal)**

Two EF2200iS generators can be operated in parallel to increase the rated output to 3.6 kVA and the rated current to 30.0 A. For parallel operation, use only a special Twin Tech cable (optional equipment) approved by Yamaha; contact your Yamaha dealer for the proper Twin Tech cable.

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

1. Twin Tech cable

NOTICE

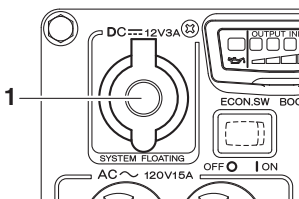
To avoid severe damage to the generators or other equipment:

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

Accessory socket

This generator has an accessory socket with a cover. It is suitable for the use with portable electric devices.

- 1. Accessory socket

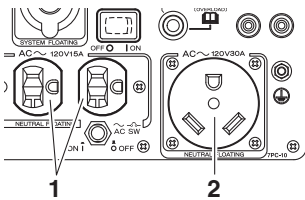


AC receptacle

This generator has two 5-20R receptacles and one NEMA TT-30 receptacle.

Before connection, confirm the shapes of the consents and the specifications of both the generator and the devices to be connected.

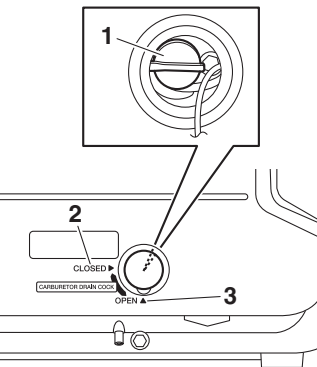
- 1. AC receptacle (5-20R)
- 2. AC receptacle (NEMA TT-30)



Carburetor fuel drain cock

Carburetor fuel drain cock is used to discharge the remained fuel in the carburetor for long term storage. Before operation, make sure that the carburetor fuel drain cock is in “CLOSED”.

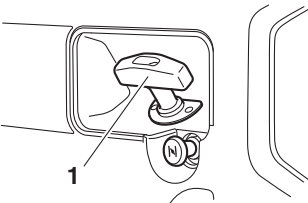
- 1. Carburetor fuel drain cock
- 2. “CLOSED”
- 3. “OPEN”



Recoil starter

The recoil starter is used to start the engine. Pull the recoil starter handle slowly until it is engaged, then pull it briskly.

- 1. Recoil starter handle



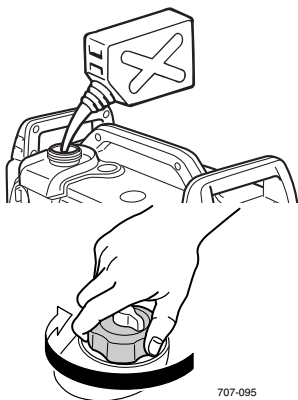
NOTICE

- Pull the recoil starter handle straight unless it breaks by getting caught in a part around it.
 - Return the recoil starter handle slowly, not to break the parts of the generator due to the impact when the recoil starter handle retracts vigorously by letting go of the hand while pulling the recoil starter handle.
 - Do not touch the recoil starter handle while the generator is operating.
-

Before operation

Preparation

Fuel



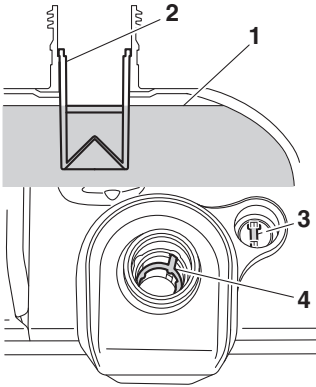
⚠ WARNING

- Fuel is highly flammable and poisonous. Check “Safety information” (See page 1-1) carefully before filling.
- Do not overfill the fuel tank over the red level of the fuel tank strainer, otherwise it may overflow when the fuel warms up and expands.
- Never refuel while smoking or in the vicinity of an open flame.
- Refuel after discharging static electricity from the body, in order not to get burnt by letting a spark catch on fire.
- After fill the fuel, make sure the fuel tank cap is tightened securely.

1. Stop the engine. (See page 4-3)
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.
- If foreign materials enter the fuel tank, they may clog the fuel line. Thus, fill the fuel with the fuel tank strainer certainly installed.



Make sure there is sufficient fuel in the tank.
When refueling, be sure to fill the tank up to the "LEVEL" mark of the fuel tank strainer.

1. Fuel level
2. Fuel tank strainer
3. Fuel level gauge
4. "LEVEL" (Red)
5. "F" (Full)
6. "E" (Empty)

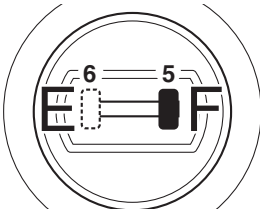
Recommended fuel:

Unleaded gasoline

Fuel tank capacity:

Total:

4.7 L (1.24 US gal, 1.03 Imp gal)



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.

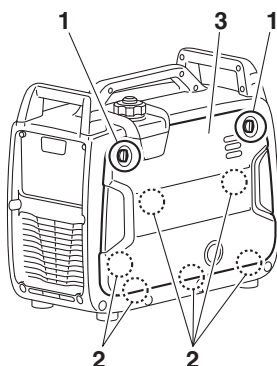
Engine oil

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.

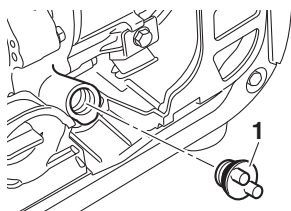
1. Place the generator on a level surface.

Before operation



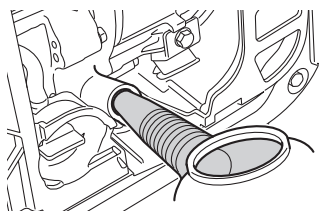
2. Turn the panel openers to disengage the lock, then remove the panel by detaching the hooks.

1. Panel opener
2. Hook
3. Panel



3. Remove the oil filler cap.

1. Oil filler cap

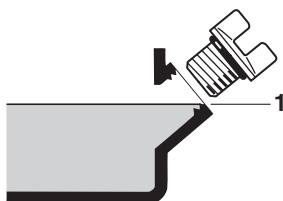


4. Fill the specified amount of the recommended engine oil, and then install and tighten the oil filler cap.

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.

1. Correct level



Recommended engine oil:

Recommended oil brand:

YAMALUBE

Available oil grade:

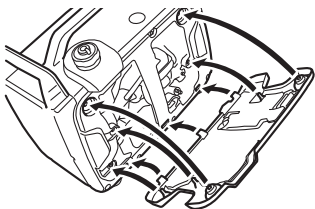
API SE type or higher JASO MA or MB

Available viscosity index:

10W-30 or 10W-40

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.

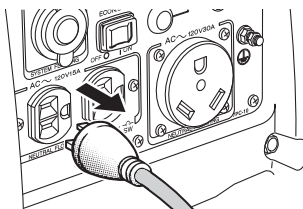
TIP

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

- **Carburetor fuel drain cock**
 - Make sure that the cock is closed.
- **Fuel (See page 3-1)**
 - Check fuel level in fuel tank.
 - Refuel if necessary.
- **Fuel line**
 - Make sure that the fuel should not leak from the generator when turning on the engine switch.
 - Consult a Yamaha dealer, if necessary.
- **Engine oil (See page 3-2)**
 - 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

Precautions for use



⚠ 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

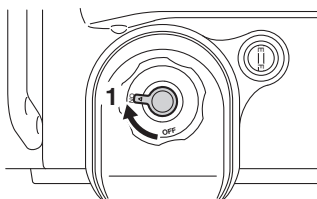
The generator was shipped from the factory without engine oil. Do not start the engine for the first time until the oil level has been checked and oil added if necessary.

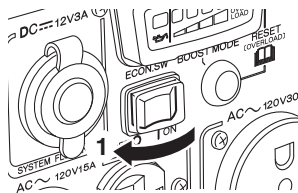
TIP

Soon after the purchase or after draining the fuel from the carburetor with the carburetor fuel drain cock, the fuel will not be supplied to the entire starting system automatically. Thus, the recoil starter handle may have to be pulled a few times until the engine starts.

Starting the engine

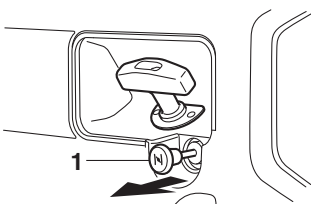
1. While holding the fuel tank cap so that it will not move, turn the air vent lever to "ON".
 1. "ON"





2. Turn the economy control switch to “○” (OFF), if necessary.

1. “○” (OFF)

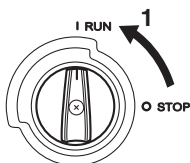


3. Pull the choke knob fully out.

1. Choke knob

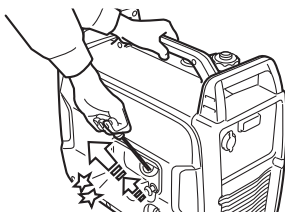
TIP

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



4. Turn the engine switch to “I” (RUN).

1. “I” (RUN)



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

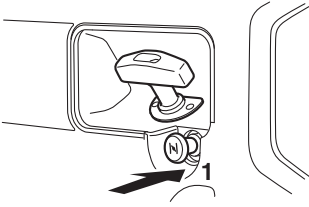
⚠ WARNING

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

NOTICE

- Pull the recoil starter handle straight unless it breaks by getting caught in a part around it.
- Return the recoil starter handle slowly, not to break the parts of the generator due to the impact when the recoil starter handle retracts vigorously by letting go of the hand while pulling the recoil starter handle.
- Grasp the carrying handle firmly to prevent the generator from falling over when pulling the recoil starter.

Operation



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

1. Original position

TIP

When starting the engine, with the economy control switch “I” (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 (4900 r/min) for 5 minutes to warm up the engine.
- in ambient temperature below 5 °C (41 °F), the engine will run at the 4900 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 “I” (ON).

Stopping the engine

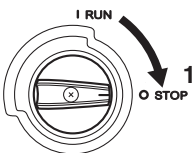
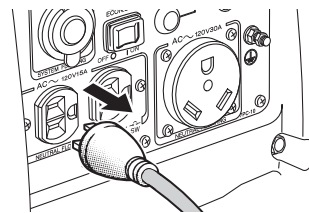
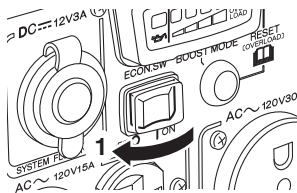
1. Turn off any electric devices.
2. Turn the economy control switch to “○” (OFF), if necessary.

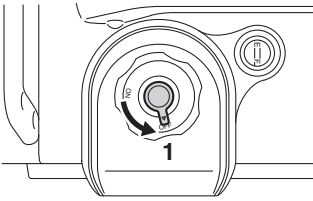
1. “○” (OFF)

3. Disconnect any electric devices.

4. Turn the engine switch to “○” (STOP).

1. “○” (STOP)





5. Turn the fuel tank cap air vent lever to “OFF” after the engine has completely cooled down.
 1. “OFF”

Connecting devices via Alternating Current (AC) receptacles

WARNING

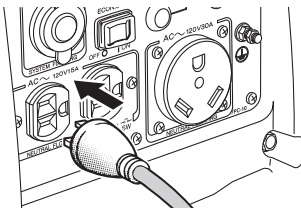
Be sure any electric devices are turned off before plugging them in.

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.

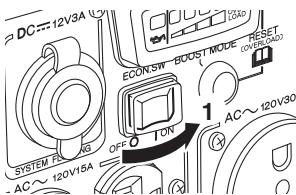
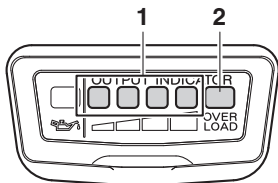
TIP

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



1. Start the engine (See page 4-1).
2. Plug in to AC receptacle.

Operation



3. Make sure that all the output indicators and the overload indicator light come on.

- 1. Output indicator (Green)
- 2. Overload indicator light (Red)

4. Make sure that the output indicators and the overload indicator light once turn off, and then the only one of the output indicators still remains on.

5. Turn the economy control switch to “I” (ON), if necessary.

- 1. “I” (ON)

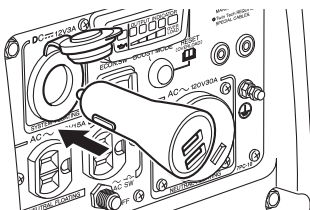
6. Turn on any electric devices.

TIP _____
The economy control switch must be turned to “○” (OFF) to increase engine speed to rated r/min.

Connecting devices via the accessory socket





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.



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 (Accessory socket)
				
Power factor	1	0.8–0.95	0.4–0.75 (Efficiency 0.85)	Rated voltage 12 V Rated current 3 A
EF2200iS	–1800 W	–1440 W	–612 W	

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		1800 VA
Frequency	Power factor	
AC	1.0	–1764 W
	0.8	–1404 W
DC	—	36 W (12 V/3 A)

- The overload indicator light comes on when electricity over the rated output is required by the connected electrical devices, or when the inverter control unit overheats.

NOTICE

- **Do not overload.** The total load of all electrical appliances must not exceed the total supply range of both AC and DC 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 even though you use the boost mode switch. 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

The importance of 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.

Check before use

The customer needs to perform the pre-operation check (See page 3-4). If any problems are discovered during the inspection, contact a Yamaha dealer and request an inspection or maintenance.

5

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-op- eration check	Every		
			6 months or 100 Hrs	12 months	300 Hrs
Engine oil	• Check oil level in engine.	√			
	• Replace.		√ (*1)		
Fuel	• Check fuel level and leakage.	√			
Spark plug	• Clean and replace if necessary.				√
Air filter	• Check for cracks or damage. Clean.		√ (*2)		
Muffler screen	• Check condition.		√		
Fuel tank strainer	• Check for dirt and clogging. Clean if necessary.	√			
	• Check for cracks.			√	

Periodic maintenance

Item	Routine	Pre-operation check	Every		
			6 months or 100 Hrs	12 months	300 Hrs
Fuel cock strainer	<ul style="list-style-type: none"> Remove the cock, check for clogging, and clean if necessary. 			★	
Cylinder head	<ul style="list-style-type: none"> Decarbonize cylinder head. 				★
Intake/Exhaust valves	<ul style="list-style-type: none"> Check and adjust valve clearance. 				★
Recoil starter	<ul style="list-style-type: none"> Check for fine splits and damage. 		√		
Outer covers	<ul style="list-style-type: none"> Check outer covers for installation and damage. 	√			
Fittings/fasteners	<ul style="list-style-type: none"> Check that bolts are securely fastened. Fasten them if necessary. 		√		
Output voltage	<ul style="list-style-type: none"> Check that output indicators are on. 	√			
The point where abnormality was recognized by use.		√			

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

*2..... 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.

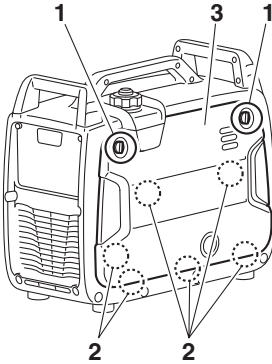
Engine oil replacement

WARNING

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

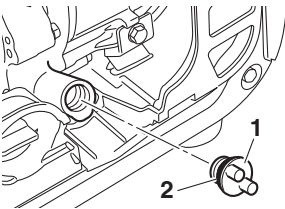
1. Place the generator on a level surface and warm up the engine for several minutes. Then stop the engine, then turn the engine switch to “○” (STOP) and fuel tank cap air vent lever to “OFF”.
2. Turn the panel openers to disengage the lock, then remove the panel by detaching the hooks.

1. Panel opener
2. Hook
3. Panel

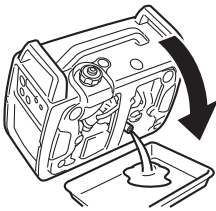


3. Remove the oil filler cap.

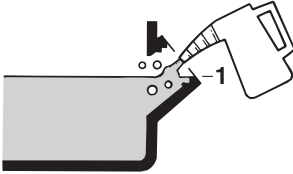
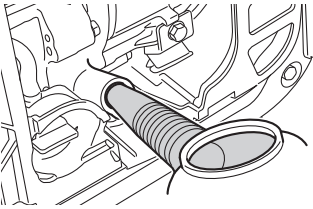
1. Oil filler cap
2. O-ring



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.**

1. Correct level

Recommended engine oil:

Recommended oil brand:

YAMALUBE

Available oil grade:

API SE type or higher JASO MA or MB

Available viscosity index:

10W-30 or 10W-40

Engine oil quantity:

0.4 L (0.42 US qt, 0.35 Imp qt)

8. Wipe the panel clean, and wipe up any spilled oil.
9. Install the O-ring and the oil filler cap.
10. Install the panel.

Spark plug inspection

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

WARNING

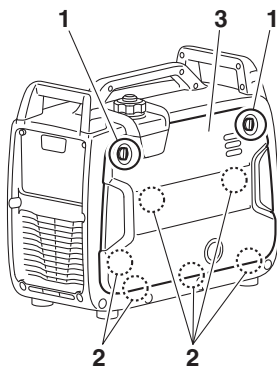
Soon after stopping the engine, do not touch the spark plug and the engine. As they are hot, it may result in a burn.

TIP

The tool is not included with the generator. Please prepare the appropriate spark plug wrench of 20.8 mm (13/16 in) by yourself.

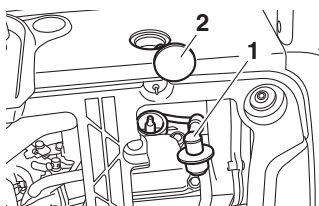
Periodic maintenance

1. Turn the panel openers to disengage the lock, then remove the panel by detaching the hooks.



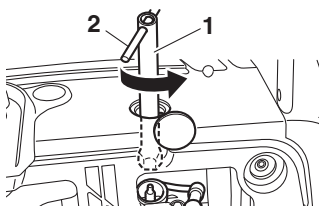
- 1. Panel opener
- 2. Hook
- 3. Panel

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



- 1. Spark plug cap
- 2. Access cap

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

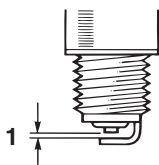


- 1. Tool
- 2. Handlebar

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 speci-

cation.

6. Install the spark plug.

Spark plug tightening torque:

20 N·m (2.0 kgf·m, 15 lb·ft)

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.

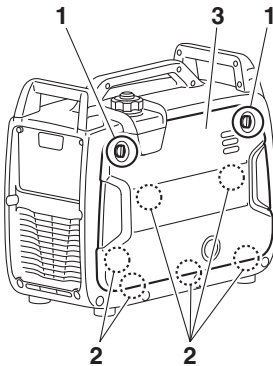
7. Install the spark plug cap and access cap.

8. Install the panel.

Air filter cleaning

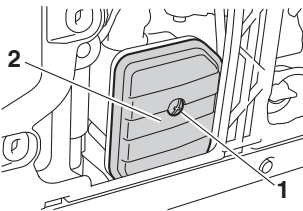
1. Turn the panel openers to disengage the lock, then remove the panel by detaching the hooks.

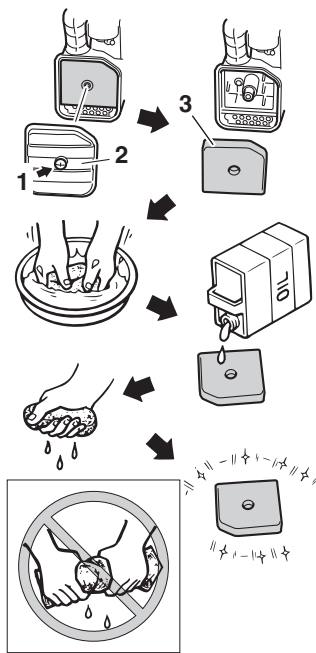
1. Panel opener
2. Hook
3. Panel



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

1. Screw
2. Air filter case cover





3. Remove the foam element.

1. Screw
2. Air filter case cover
3. Foam element

4. Wash the foam element with a foam air filter cleaner and dry it.
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 equivalent oil

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 panel.

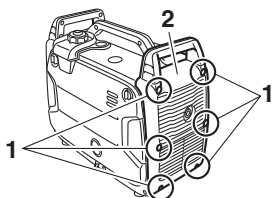
Muffler screen and spark arrester cleaning



! WARNING

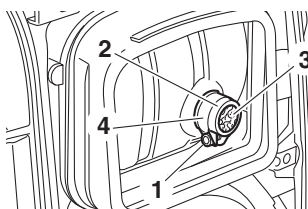
The engine and muffler will be very hot after the engine has been run.

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



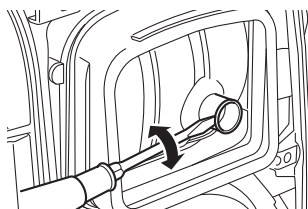
1. Remove the muffler cover bolts, and then remove the muffler cover.

1. Muffler cover bolt
2. Muffler cover



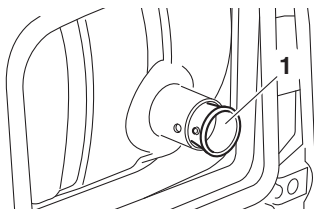
2. Loosen the muffler cap bolt and then remove the muffler cap, muffler cap band and muffler screen.

1. Muffler cap bolt
2. Muffler cap
3. Muffler screen
4. Muffler cap band



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

Periodic maintenance



4. Remove the spark arrester.

1. Spark arrester

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

NOTICE

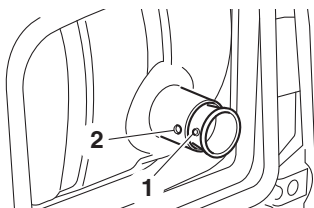
When cleaning, use the wire brush lightly to avoid damaging or scratching of the muffler cap, muffler screen and spark arrester.

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.

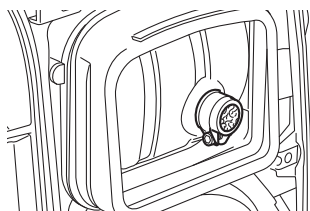


1. Spark arrester projection
2. Hole

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

Muffler cap bolt tightening torque:

3.5 N·m (0.35 kgf·m, 2.6 lb·ft)



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

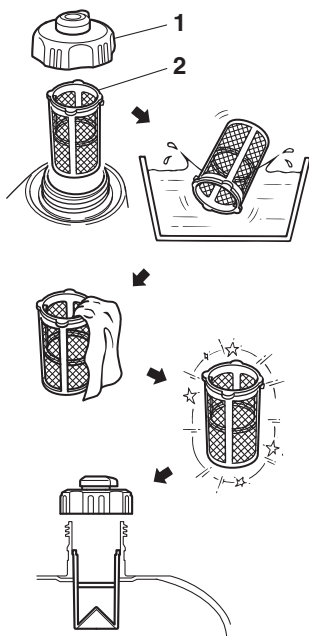
Muffler cover bolt tightening torque:

7 N·m (0.7 kgf·m, 5.2 lb·ft)

Fuel tank strainer cleaning

WARNING

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



1. Remove the fuel tank cap and fuel tank strainer.

1. Fuel tank cap
2. Fuel tank strainer

2. Clean the fuel tank strainer with gasoline. Replace it if damaged.

3. Wipe the fuel tank strainer and insert it.

4. Install the fuel tank cap.

WARNING

Be sure the fuel tank cap is tightened securely.

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.

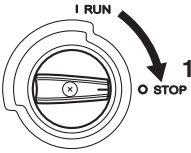
Storage

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

Drain the fuel

1. Turn the engine switch to “○” (STOP).

1. “○” (STOP)



2. Remove the fuel tank cap and fuel tank strainer. Extract the fuel from the fuel tank into an approved gasoline container using a commercially available hand siphon. Then, install the fuel tank strainer and fuel tank cap.

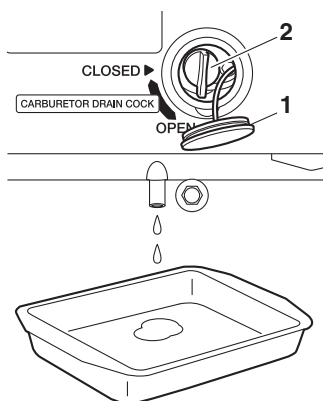


WARNING

- Fuel is highly flammable and poisonous. Check “Safety information” (See page 1-1) carefully.
- Install the fuel tank cap securely.
- Immediately wipe off spilled fuel with a rag. Fire hazard may occur.

NOTICE

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



3. Drain the fuel from the carburetor by turning the carburetor fuel drain cock to “OPEN”.

1. Cap
2. Carburetor drain cock

WARNING

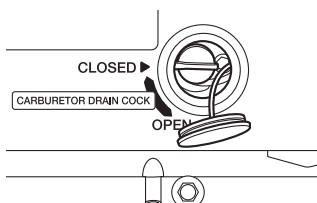
Immediately wipe off spilled fuel with a rag. Fire hazard may occur.

NOTICE

Do not turn the carburetor drain cock with any tools not to break the cock.

TIP

When draining the fuel from the carburetor, place the generator on a level surface.



4. After draining the fuel, turn the carburetor fuel drain cock to “CLOSED”.

5. Pull the recoil starter a few times. Stop pulling when you feel compression.
6. Turn the fuel tank cap air vent lever to “OFF” after the engine has completely cooled down.
7. Tighten further if any screws, bolts and nuts are loose.
8. 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 5-3) into the spark plug hole and install and tighten the spark plug to the specified torque. 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.



Trouble recovery

Troubleshooting

This section describes the likely causes and remedies for problems.
If your Generator requires repair, bring it to a Yamaha dealer.

Engine won't start

Item	Check	Action	Page
Fuel	Is there fuel in the fuel tank?	Supply fuel.	3-1
	Is the engine switch in "I" (RUN)?	Turn the engine switch to the "I" (RUN).	2-4
	Is the fuel tank cap air vent lever closed?	Turn the fuel tank cap air vent lever to the "ON".	2-6
	Have you drained the fuel according to the procedure of storage after the previous use?	The fuel line and the carburetor may be clogged. Consult a Yamaha dealer.	—
Engine oil	Is the engine oil level low?	Add engine oil.	3-2
Spark plug	Is the spark plug dirty with carbon or wet?	Remove carbon or wipe spark plug dry.	5-4

The machine suddenly stopped

Item	Check	Action	Page
Receptacle(s)	Are the device(s) correctly plugged in to the receptacle(s)?	Plug in the device(s) correctly.	4-4, 4-5
Output indicator(s)	Are the output indicator(s) turned off?	Make sure that the engine is running correctly.	4-1
Overload indicator light	Does the overload indicator light come on?	Make sure that the total wattage of connected device(s) is within the rated range.	2-6
	Is the overload indicator light flashing?	Some malfunctions have been detected. Consult a Yamaha dealer.	—

Trouble recovery

Output indicator(s) do not come on

Item	Check	Action	Page
Overload indicator light	Does the overload indicator light come on?	Make sure that the total wattage of connected device(s) is within the rated range.	2-6
	Is the overload indicator light flashing?	Some malfunctions have been detected. Consult a Yamaha dealer.	—
	The reset button does not function even while the overload indicator light is coming on.	Consult a Yamaha dealer.	—

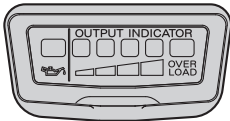
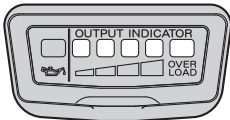
Overload indicator light does not turn off

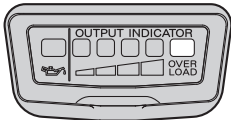
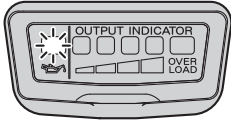
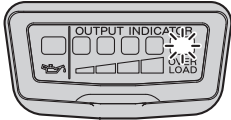
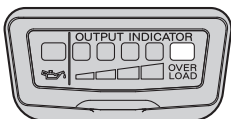
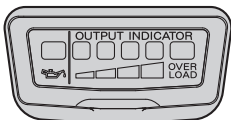
Item	Check	Action	Page
Receptacle(s)	Are the device(s) plugged out from the receptacle(s)?	Plug out any connected devices from the receptacle(s).	—

The device(s) that had been working correctly before do not work

Item	Check	Action	Page
Device(s)	Are you using an extension cord?	Connect the device(s) directly without using extension cords.	—
	Do the device(s) stop due to a voltage drop?	It is not recommended to use devices that are sensitive to voltage fluctuation. Also make sure that the total wattage of connected device(s) is within the rated range.	4-7

Multi-function LED meter flash or come on abnormally

Display	Check	Action	Page
	Are some of the output indicator(s) and overload indicator light off even when the engine is started?	Consult a Yamaha dealer.	—
	Do the output indicator(s) and the overload indicator light come on for a few seconds immediately after starting the engine?	It is not a malfunction. The multi-function LED meter is in self-diagnostic mode.	—

Display	Check	Action	Page
	After all the output indicator(s) come on, the overload indicator light comes on, then only output indicators turn off after a few seconds or a few minutes.	The engine is overload. Disconnect any devices from the generator, reduce the total wattage within the rated range, and push the reset button for 3 seconds while the overload indicator light is coming on.	2-7
	Is the oil level warning light flashing?	Add sufficient engine oil. Place the generator on a level surface.	3-2
	Does the output indicators turn off, and is the overload indicator light flashing?	Consult a Yamaha dealer.	—
	The output indicators turn off, and the overload indicator light comes on. Pushing the reset button does not restore the generator.	Consult a Yamaha dealer.	—
	Do all the indicator turn off when the output is shut off?	Consult a Yamaha dealer.	—

Specifications

EF2200iS

DIMENSIONS:	
Overall length	555 mm (21.9 in)
Overall width	300 mm (11.8 in)
Overall height	470 mm (18.5 in)
Dry weight	25 kg (55 lb)
ENGINE:	
Engine type	Air cooled 4-stroke gasoline OHV
Cylinder arrangement	Inclined, 1 cylinder
Displacement	79 cm ³
Bore × Stroke	48.6 × 43.0 mm (1.91 × 1.69 in)
Operation hours	4.2–10.5 Hr (rated load–1/4 load)
Fuel type	Unleaded gasoline
Fuel tank capacity	4.7 L (1.24 US gal, 1.03 Imp gal)
Engine oil quantity	0.4 L (0.42 US qt, 0.35 Imp qt)
Ignition system	CDI
Spark plug	BPR6HS (NGK)
Spark plug gap	0.6–0.7 mm (0.024–0.028 in)
Noise level*	92 dB/Lwa, 57–65 dB (A)/7 m
GENERATOR:	
AC output	
Rated voltage	120 V
Rated frequency	60 Hz
Rated current	15.0 A
Rated output	1.8 kVA
Rated current (in parallel)	30.0 A
Rated output (in parallel)	3.6 kVA
Safety device	Electronic + AC protector
DC output	
Rated voltage	12 V
Rated current	3 A
Safety device	Electronic

* Noise level is measured when the economy control switch is turned to “1” (ON).

LWA 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.

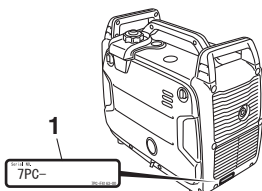
The noise level may vary in different environments.

Consumer information

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 (PRI-I.D. CODE); the remaining digits are the unit production number (SERIAL No). Keep a record of these numbers for reference when ordering parts from a Yamaha dealer.

Identification number records

Record your model type, 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.

MODEL:

PRI-I.D. CODE:

SERIAL No:

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	

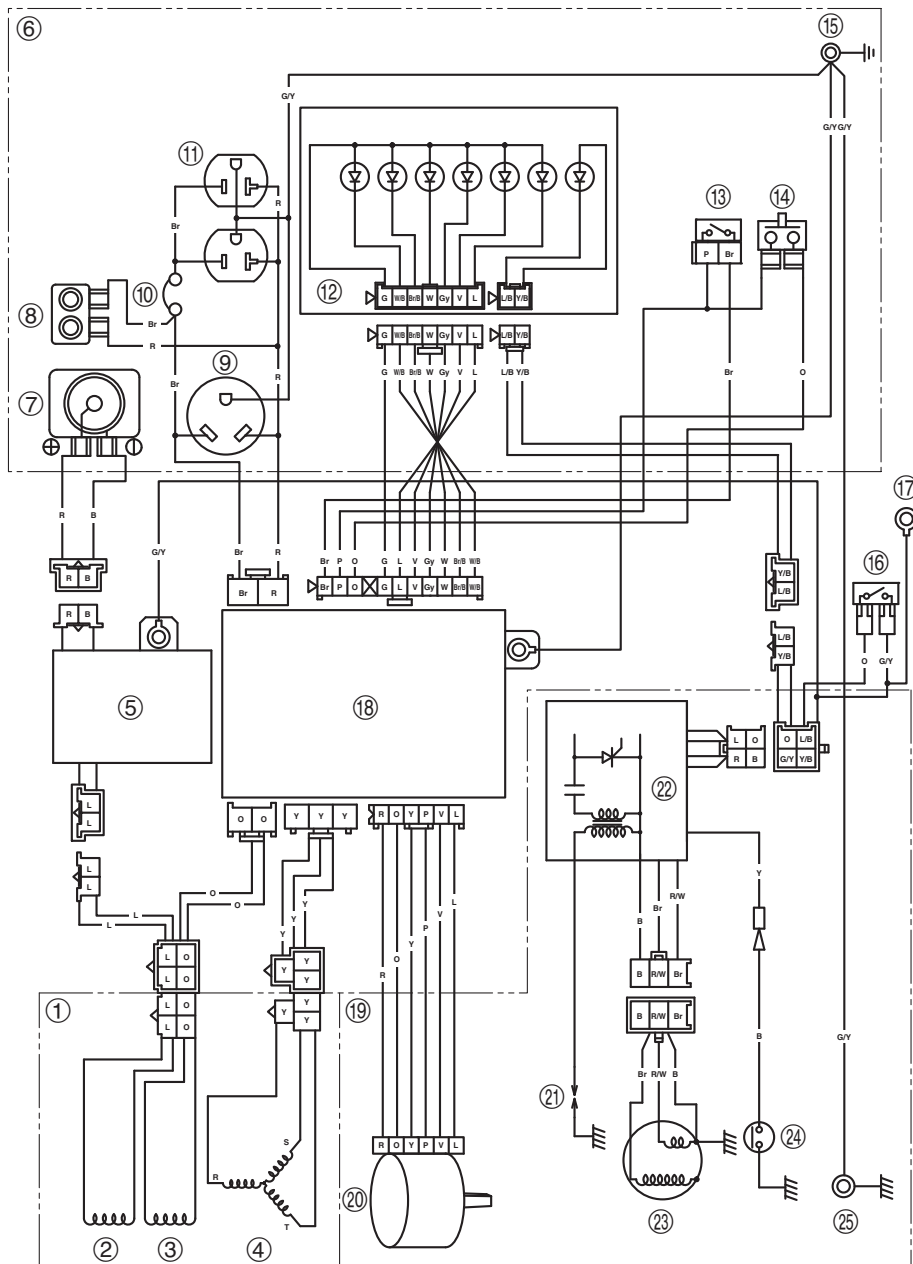
The above items and the corresponding acronyms are provided in accordance with U.S. EPA REGULATIONS FOR NEW NONROAD SPARK-IGNITION NONHANDHELD ENGINES and the CALIFORNIA REGULATIONS FOR 1995 AND LATER SMALL OFF-ROAD ENGINES.

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



	Color code
1. Generator	B Black
2. DC coil	Br Brown
3. AC sub coil	G Green
4. AC coil	Gy Gray
5. AC/DC convertor	L Blue
6. Control box	O Orange
7. Accessory socket	P Pink
8. Twin Tech (parallel running terminal)	R Red
9. AC receptacle (NEMA TT-30)	V Violet
10.AC switch (N.F.B.)	W White
11.AC receptacle (5-20R)	Y Yellow
12.Multi-function LED meter	Br/B Brown/Black
13.Economy control switch	G/Y Green/Yellow
14.Boost mode switch/Reset button	L/B Blue/Black
15.Ground (earth) terminal	R/W Red/White
16.Engine switch	W/B White/Black
17.Fuel cock ground (earth)	Y/B Yellow/Black
18.Control unit	
19.Engine	
20.Throttle control motor	
21.Spark plug	
22.CDI unit/Ignition coil	
23.CDI magneto	
24.Oil level switch	
25.Ground (earth) terminal	

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)

Index

A		L	
Accessory socket	2-9	Location of important labels	1-6
AC receptacle	2-9	M	
AC switch (N.F.B.)	2-4	Machine identification	9-1
Air filter cleaning	5-6	Maintenance chart	5-1
Application range	4-7	Muffler screen and spark arrester cleaning	5-8
B		O	
Boost mode switch	2-7	Oil level warning light (Red)	2-4
C		Overload indicator light (Red)	2-6
Carburetor adjustment	5-10	P	
Carburetor fuel drain cock	2-9	Power supply display	2-6
Check before use	5-1	Precautions for use	4-1
Connecting devices via Alternating		Pre-operation check	3-4
Current (AC) receptacles	4-4	Preparation	3-1
Connecting devices via the accessory		R	
socket	4-5	Recoil starter	2-9
Connection	1-4	S	
Connection notes	1-4	Spark plug inspection	5-4
Control function	2-4	Specifications, EF2200iS	8-1
D		Starting the engine	4-1
Description	2-1	Stopping the engine	4-3
Drain the fuel	6-1	T	
E		The importance of maintenance	5-1
Economy control switch	2-5	Troubleshooting	7-1
Electric shock prevention	1-3	Twin Tech (parallel running terminal)	2-8
Engine	6-3		
Engine and muffler may be hot	1-3		
Engine oil	3-2		
Engine oil replacement	5-3		
Engine switch	2-4		
Exhaust fumes are poisonous	1-2		
Extension cord notes	1-5		
F			
Fuel	3-1		
Fuel is highly flammable and poisonous ...	1-2		
Fuel level gauge	2-7		
Fuel tank cap	2-5		
Fuel tank cap air vent lever	2-6		
Fuel tank strainer cleaning	5-10		
G			
General safety information	1-1		
Ground (earth) terminal	2-5		
H			
High altitude operation	4-8		
Hour meter	2-7		
I			
Identification number records	9-1		





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