



A Read this manual carefully before operating this machine.

**MZ175 MZ200 MZ250 MZ300 MZ360** 



## **A WARNING**

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

YAMAHA LIT-CALIF-65-01

#### 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.

MZ175, MZ200, MZ250, MZ300, MZ360
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.



## **MARNING**

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.

<sup>\*</sup> Product and specifications are subject to change without notice.

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#### SAFETY INFORMATION

 Do not allow children to operate the multi-purpose engine.



Do not place any obstacles on the multi-purpose engine.



#### Exhaust fumes are poisonous

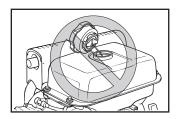
- Using a multi-purpose engine indoors CAN KILL YOU IN MINUTES. Multi-purpose engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.
- NEVER use inside a home or garage, EVEN IF doors and windows are open.
- Only use OUTSIDE and far away from windows, doors, and vents.



#### 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 multi-purpose engine 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 refueling, do not place the fuel tank cap near the muffler.
- Take care not to spill fuel.



 When operating or transporting the machine, 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 machine in a place where pedestrians or children are not likely to touch the machine.

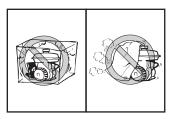




 Avoid placing any flammable materials near the exhaust outlet during operation.



In order to prevent overheating, be sure the equipment in which the multi-purpose engine is mounted allows adequate ventilation, and keep the equipment at least 1m (3 ft) from objects or other equipment.



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



#### **Electric shock prevention**

• Never operate the engine in rain or snow.



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

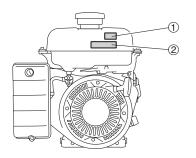
#### LOCATION OF IMPORTANT LABELS

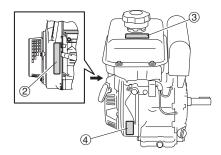
Please read the following labels carefully before operating this machine.

TIP \_\_\_\_

Maintain or replace safety and instruction labels, as necessary.

#### (MZ175)





1

This spark ignition system meets all requirements of the Canadian Interference Causing Equipment Regulations.

Ce système d'allumage respecte toutes les exigences sur le matériel brouilleur du Canada. 7CC-H2377-50

#### (2) (with fuel tank model)

EMISSION CONTROL INFORMATION YAMAHA MOTOR CO.,LTD.

THIS ENGINE MEETS U.S. EPA EXH / EVP REGS AND CALIFORNIA EXH / EVP SI SORE REGS FOR 20\*\*. EMISSION COMPLIANCE PERIOD: \*\*\* HOURS

EF: \*\*\*\*\* CARB: \*\*\*\*\*\*\*

DISPLACEMENT: \*\*\* cc EVAP F EPA: \*\*\*\*\*\*\*\*\*

YAMAHA

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,

(without fuel tank model)

EMISSION CONTROL INFORMATION YAMAHA MOTOR CO.,LTD.

THIS ENGINE MEETS U.S. EPA EXH REGS AND CALIFORNIA EXH SI SORE REGS FOR 20\*\*. EMISSION COMPLIANCE PERIOD: \*\*\* HOURS

DISPLACEMENT : \*\*\* cc

YAMAHA

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.

EM

Check owner's manual for further details.

No other adjustments needed.

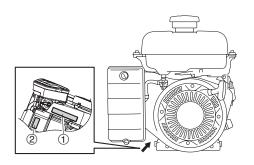
## **AWARNING**

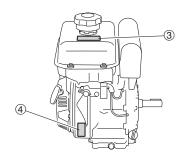
- READ THE OWNER'S MANUAL AND ALL LABELS BEFORE OPERATING.
   ONLY OPERATE IN WELL-VENTILATED AREAS. EXHAUST GAS CONTAINS POISONOUS CARBON MONOXIDE.
   CHECK FOR SPILLED FUEL OR FUEL LEAKS.
   STOP ENGINE BEFORE REFUELING.
   DO NOT OPERATE NEAR FLAMMABLE MATERIALS.
   KEEP THIS UNIT DRY AT ALL TIMES. 7CN-F4162-50

4



#### (MZ200)





#### (1) (with fuel tank model)

**EMISSION CONTROL INFORMATION** YAMAHA MOTOR CO.,LTD.

**YAMAHA** 

EM

The air index of this engine is 3 8 10 LEAST CLEAN 0 2 MOST CLEAN FOR EXTENDED Check owner's manual for further details. No other adjustments needed.

#### (without fuel tank model)

**EMISSION CONTROL INFORMATION** YAMAHA MOTOR CO.,LTD.

DISPLACEMENT : \*\*\* cc

EM

**YAMAHA** 

The air index of this engine is 3 8 10 LEAST CLEAN 0 2 MOST CLEAN FOR EXTENDED Check owner's manual for further details. No other adjustments needed.

2

This spark ignition system meets all requirements of the Canadian Interference Causing Equipment Regulations.

Ce système d'allumage respecte toutes les exigences sur le matériel brouilleur du Canada. 7CC-H2377-50

3

## **▲ 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.

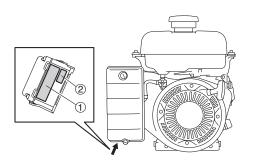
DO NOT OPERATE NEAR FLAMMABLE MATERIALS.

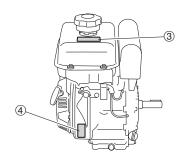
KEEP THIS UNIT DRY AT ALL TIMES. 7CN-F4162-50

**(**4**)** 

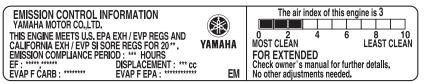


#### (MZ250, MZ300 (7VB))

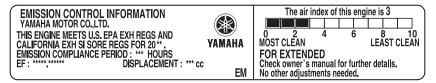




#### (1) (with fuel tank model)



#### (without fuel tank model)



2

This spark ignition system meets all requirements of the Canadian Interference Causing Equipment Regulations.

Ce système d'allumage respecte toutes les exigences sur le matériel brouilleur du Canada. 7CC-H2377-50

3

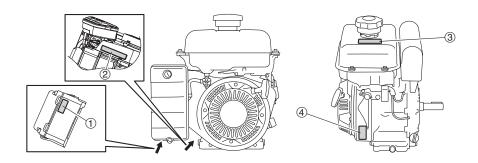
## **▲ WARNING**

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.
 KEEP THIS UNIT DRY AT ALL TIMES. 7CN-F4162-50

**(**4**)** 



#### (MZ300 (7CS), MZ360)

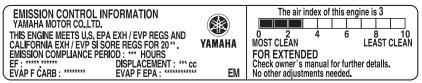


(1)

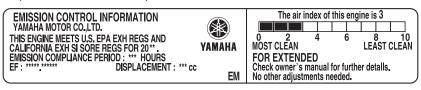
This spark ignition system meets all requirements of the Canadian Interference Causing Equipment Regulations.

Ce système d'allumage respecte toutes les exigences sur le matériel brouilleur du Canada. 7CC-H2377-50

#### (2) (with fuel tank model)



(without fuel tank model)



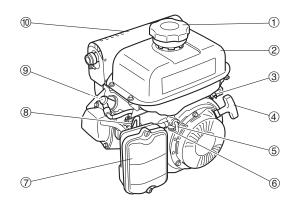
## **AWARNING**

- READ THE CWINER'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.
   KEEP THIS UNIT DRY AT ALL TIMES. 7CN-F4162-50

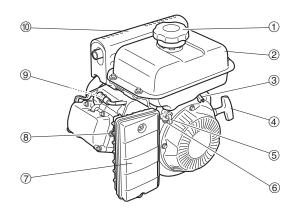


## **DESCRIPTION**

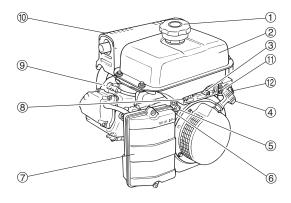
(MZ175, MZ200, MZ360)

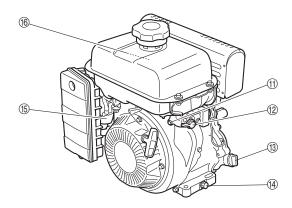


## (MZ250, MZ300 (7VB))

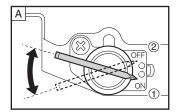


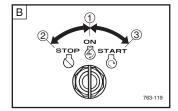
#### (MZ300 (7CS))





- Fuel tank cap (On models equipped with a Yamaha fuel tank)
- ② Fuel tank (On models equipped with a Yamaha fuel tank)
- ③ Throttle lever
- (4) Recoil starter handle
- (5) Fuel cock lever
- 6 Fuel cock cup
- 7 Air filter case cover
- (8) Choke lever
- 9 Spark plug
- ① Muffler
- (1) Oil warning light (Red)
- (2) Engine switch
- (13) Oil filler cap
- (1) Oil drain bolt
- (5) Carburetor
- (6) Fuel tank filter (On models equipped with a Yamaha fuel tank)





#### CONTROL FUNCTION

#### **Engine switch**

The engine switch controls the ignition system.

① "ON"/"②" (ON)

Ignition circuit is switched on.

The engine can be started.

② "OFF"/"∑" (STOP)

Ignition circuit is switched off.

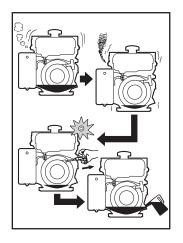
The engine will not run.

③ "⑤" (START)

Starting circuit is switched on.

The starter motor starts and the engine can be started. After starting the engine, take your hand off the switch immediately.

- A Manual starting model
- B Electric starting model



#### 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.

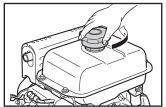
#### TIP \_\_\_\_

(Manual starting model)

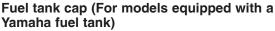
If the engine stalls or does not start, turn the engine switch to "ON" and then pull the recoil starter. If the oil warning light flickers for a few seconds, the engine oil is insufficient. Add oil and restart.

(Electric starting model)

If the engine stalls or does not start, turn the engine switch to "6" (START). If the oil warning light comes on, the engine oil is insufficient. Add oil and restart.







Remove the fuel tank cap by turning it counterclockwise. (On models equipped with a Yamaha fuel tank)

#### Fuel cock lever

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

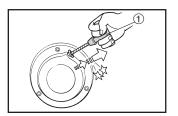
The fuel cock has two positions.

(1) ON

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

#### ② OFF

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



#### Recoil starter handle

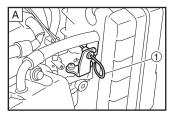
Used to start the engine.

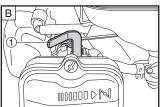
1 Recoil starter handle

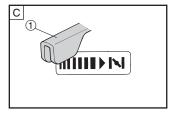
#### **NOTICE**

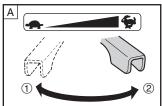
- Pull the recoil starter handle straight.
- Return the recoil starter handle slowly.
- Do not touch the recoil starter handle while the multi-purpose engine is operating.

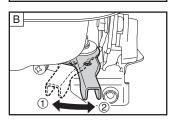
Pull the recoil starter handle after turning the engine switch to "ON".











#### **Choke lever**

Starting a cold engine requires a richer air-fuel mixture, which is supplied by the choke lever.

(1) Choke lever

ABC

Functions and specification differs depending on the models.

#### Throttle lever

Throttle lever controls the engine speed.



Lever position to idle the engine.

Decrease engine speed.



Increase engine speed.

A B

Functions and specification differs depending on the models.

#### PREPARATION

Fuel (For models equipped with a Yamaha fuel tank)

## **MARNING**

- Fuel is highly flammable and poisonous.
   Check "SAFETY INFORMATION" (See page 1) carefully before filling.
- Do not fill the fuel above the red line, otherwise it may overflow when the fuel warms up and expands.
- Wipe up any spilled fuel immediately.
- After refueling, make sure the fuel tank cap is tightened securely.

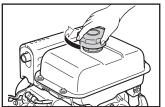


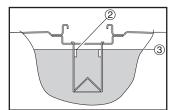
#### NOTICE

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

- 1 Red line
  - 1. Stop the engine.
  - 2. Place the engine on a level surface.
  - 3. Remove the fuel tank cap.
  - 4. Check the fuel level.
- 5. If low, fill the tank with fuel. Do not fill past the red line as fuel may mix with the activated charcoal in the fuel tank cap and overflow.







TIP

If filled beyond the red line, fuel may mix with the active charcoal located within the fuel tank cap and soil the surrounding areas.

- ② Red line
- (3) Correct fuel level

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.

#### **NOTICE**

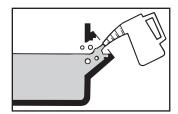
Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts.

## **Engine oil**

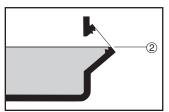
#### NOTICE

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

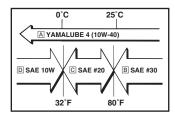
- 1. Place the multi-purpose engine on a level surface.
- 2. Remove the oil filler cap.
- (1) Oil filler cap



3. Fill the specified amount of the recommended engine oil.



- 4. Check the oil level of the oil filler hole.
- (2) Correct level
  - 5. Install the oil filler cap.



Recommended engine oil:

AYAMALUBE 4 (10W-40), SAE 10W-30 or 10W-40

**BSAE #30** 

**CSAE** #20

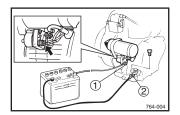
DSAE 10W

Recommended engine oil grade:

API Service SE type or higher

Engine oil quantity:

MZ175 0.6 L (0.63 US qt, 0.53 Imp qt)
MZ200 0.6 L (0.63 US qt, 0.53 Imp qt)
MZ250 1.0 L (1.06 US qt, 0.88 Imp qt)
MZ300 (7VB) 1.0 L (1.06 US qt, 0.88 Imp qt)
MZ300 (7CS) 1.1 L (1.16 US qt, 0.97 Imp qt)
MZ360 1.1 L (1.16 US qt, 0.97 Imp qt)



# Connecting the battery (For models equipped with electric starter)

Recommended battery capacity is 12 V/26 Ah or more.

Use battery lead wires with cross section of at least 8 mm (0.31 in) square.

- 1 Connect the battery positive terminal to the starter switch.
- ② Ground the battery negative terminal to the engine mounting bolt.

#### PRE-OPERATION CHECK



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

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

Pre-operation checks should be made each time the multi-purpose engine is used.

#### **Pre-operation check**

Fuel (See page 18 for Yamaha fuel tank instructions)

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

#### Fuel line

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

#### Engine oil (See page 20)

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

## The point where abnormality was recognized by use

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

#### **OPERATION**



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.

#### NOTICE

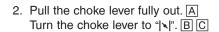
The multi-purpose engine has been shipped without engine oil. Do not start the engine until you have filled it with the sufficient engine oil.





① ON

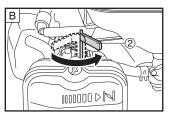




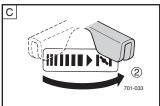
(2) Choke lever

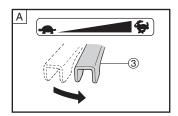
ABC

Functions and specification differs depending on the models.



The choke is not required to start a warm engine. When starting the warm engine, put the choke lever to the original position.



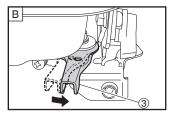




③ Throttle lever

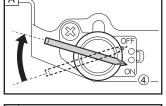
A B

Functions and specification differs depending on the models.

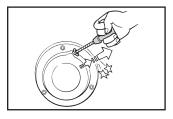


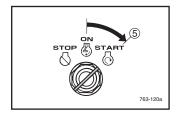
- 4. Turn the engine switch to "ON"/"

  (ON).
- ④ "ON"/"②" (ON)
- A Manual starting model
- B Electric starting model



- B 4 A START TO THE TRANSPORT TO THE TRAN
- 5. (Manual starting model) Pull the recoil starter slowly until it is engaged, then pull it briskly.





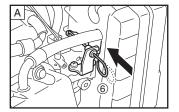
6. (Electric starting model) Turn the engine switch to "ὧ" (START).

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

⑤ "⑤" (START)

#### **NOTICE**

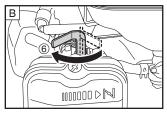
If the engine fails to start, release the switch, wait a few seconds, then try again. Each attempt should be as short as possible to preserve the battery. Do not crank the engine more than 5 seconds on any one attempt.

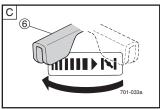


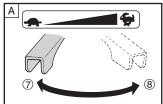
- 7. After the engine starts, warm up the engine enough so that the engine does not stop when the choke lever is returned to the original position.
- 6 Original position



Functions and specification differs depending on the models.







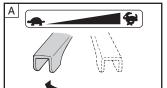


- 8. Set the throttle lever in desired position.
- 7 " Tierease engine speed
- ⑧ "♠": Increase engine speed

AB

Functions and specification differs depending on the models.



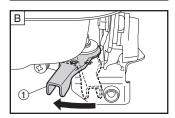


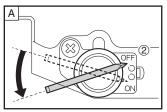
#### Stopping the engine

- 1. Move the throttle lever fully to the left.
- 1 Throttle lever

AB

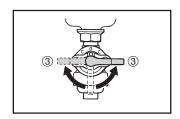
Functions and specification differs depending on the models.





STOP START
763-120b

- 2. Turn the engine switch to "OFF"/" $\bigcirc$ " (STOP).
- ② "OFF"/"∑" (STOP)
- A Manual starting model
- B Electric starting model



- 3. Turn the fuel cock lever to OFF.
- ③ OFF

#### 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 multi-purpose engine in the safest and most efficient condition possible. The most important points of multi-purpose engine inspection, adjustment, and lubrication are explained on the following pages.

are explained on the	e following pages.
<b>MARNING</b>	
If you are not fami	iliar with maintenance work, have a Yamaha dealer do it for you.

## Maintenance chart

**WARNING** 

Stop the engine before starting maintenance work.

#### NOTICE

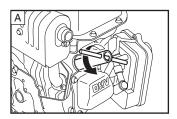
Use only Yamaha specified genuine parts for replacement. Ask an authorized Yamaha dealer for further information.

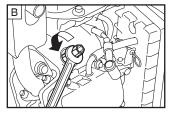
		Pre-	Initial		Every		
Item	Routine	operation	1 month	3 months	6 months	12 months	
		check	or 20 Hrs	or 50 Hrs	or 100 Hrs	or 300 Hrs	
	<ul> <li>Check condition.</li> </ul>						
Spark plug	<ul> <li>Clean and replace if</li> </ul>			0			
	necessary.						
Fuel	<ul> <li>Check fuel level and</li> </ul>						
	leakage.						
Fuel hose	Check fuel hose for	_					
	cracks or damage.	0					
	<ul> <li>Replace if necessary.</li> </ul>						
	Check oil level in						
Engine oil	engine.						
	Replace.		0		0		
Air filter	<ul> <li>Check condition.</li> </ul>			O (*1)			
element	Clean.			O ( 1)			
	Check condition.						
Spark arrester	<ul> <li>Clean and replace if</li> </ul>				0		
	necessary.						
Fuel tank filter	<ul> <li>Clean and replace if necessary.</li> </ul>				0		
Fuel strainer	Clean and replace if necessary.				0		

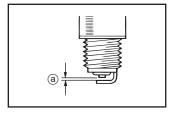
		Pre- Initial Every					
Item	Routine	operation	1 month	3 months	6 months	12 months	
		check	or 20 Hrs	or 50 Hrs	or 100 Hrs	or 300 Hrs	
Crankcase	Check breather hose						
breather hose	for cracks or damage.						
breather nese	<ul> <li>Replace if necessary.</li> </ul>						
Cylinder head	<ul> <li>Decarbonize cylinder</li> </ul>						
	head.	After every 500 Hrs. (★)					
	<ul> <li>More frequently if</li> </ul>	Aiter every 300 mis. (x)					
	necessary.						
Valve	Check and adjust					*	
clearance	when engine is cold.						
Idle speed	Check and adjust idle					*	
	speed.						
Recoil starter	Check recoil starter for					*	
	damage.						
Fittings /	Check all fittings and						
fasteners	fasteners.					*	
	<ul> <li>Correct if necessary.</li> </ul>						
The point where abnormality was							
recognized by a	JSE.						

<sup>\*1.....</sup>The air filter element needs to be cleaned more frequently when using in unusually wet or dusty areas.

<sup>★·····</sup>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 spark plug cap and the spark plug.
- Check for discoloration and remove the carbon. The porcelain insulator around the center electrode of spark plug should be a medium-to-light tan color.
- A MZ175, MZ200
- B Except for MZ175, MZ200
  - 3. Check the spark plug type and gap.
- (a) Spark plug gap

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

#### TIP \_\_\_\_

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

4. Install the spark plug and then tighten it.

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

#### TIP \_\_\_\_\_

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

5. Install the spark plug cap.

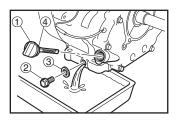
## Carburetor adjustment

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

### **Engine oil replacement**

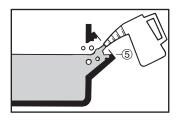


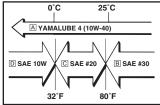
Avoid draining the engine oil immediately after stopping the engine. The oil is hot and should be handled with care to avoid burns.



- Place the multi-purpose engine on a level surface and warm up the engine for several minutes. Then stop the engine and turn the fuel cock lever to OFF.
- 2. Remove the oil filler cap.
- 1 Oil filler cap
- Place an oil pan under the engine. Remove the oil drain bolt and gasket so that the oil can be completely drained.
- 2 Oil drain bolt
- (3) Gasket
  - Check the oil drain bolt, oil filler cap and O-ring. Replace them if damaged.
- 4 O-ring
  - 5. Install a new gasket and the oil drain bolt and then tighten the bolt.

Oil drain bolt tightening torque: (For MZ175, MZ200) 17 Nm (1.7 m·kgf, 12 ft·lbf) (Except for MZ175, MZ200) 27 Nm (2.7 m·kgf, 20 ft·lbf)





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

## **NOTICE**

Be sure no foreign material enters the crankcase.

Recommended engine oil:

AYAMALUBE 4 (10W-40),

SAE 10W-30 or 10W-40

BSAE #30

CSAE #20

DSAE 10W

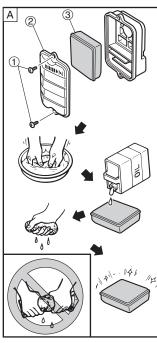
Recommended engine oil grade:

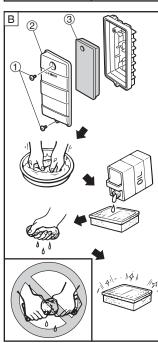
API Service SE type or higher

Engine oil quantity:

MZ175 0.6 L (0.63 US qt, 0.53 Imp qt)
MZ200 0.6 L (0.63 US qt, 0.53 Imp qt)
MZ250 1.0 L (1.06 US qt, 0.88 Imp qt)
MZ300 (7VB) 1.0 L (1.06 US qt, 0.88 Imp qt)
MZ300 (7CS) 1.1 L (1.16 US qt, 0.97 Imp qt)
MZ360 1.1 L (1.16 US qt, 0.97 Imp qt)

7. Install the oil filler cap.





#### Air filter

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

## **WARNING**

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

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

Recommended oil:

Foam-air-filter oil or engine oil (See page 34)

### NOTICE

Do not wring out the foam element when squeezing it. This could cause it to tear.

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

#### TIP \_\_\_\_\_

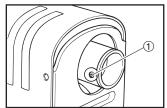
Be sure the foam element sealing surface matches the air filter case so there is no air leak.

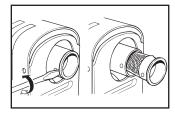
### NOTICE

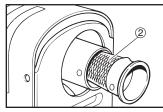
The engine should never run without the foam element; excessive piston and cylinder wear may result.

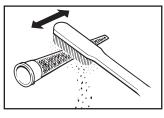
- Install the air filter case cover and tighten the screws.
- A MZ175, MZ200, MZ300 (7CS), MZ360
- B MZ250, MZ300 (7VB)











## 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.

(For MZ250, MZ300 (7VB))

- 1. Remove the screw.
- (1) Screw
- 2. Use a flathead screw driver to pry the spark arrester out from the muffler.

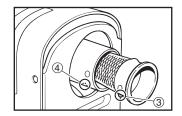
- 3. Remove the spark arrester.
- ② Spark arrester

4. Remove the carbon deposits on the spark arrester using a wire brush.

## NOTICE

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

5. Check the spark arrester. Replace it if damaged.

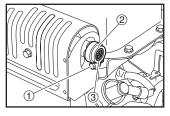


6. Install the spark arrester.

TIF

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

- ③ Spark arrester lump
- 4 Hole
  - 7. Install the screw, and then tighten the screw.

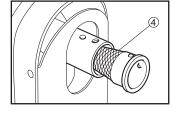


(For MZ175, MZ200, MZ360)

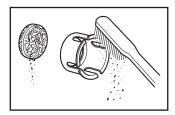
- 1. Loosen the muffler cap bolt and then remove the muffler cap and muffler screen.
- 1 Muffler cap bolt
- ② Muffler cap
- ③ Muffler screen
- 2. Use a flathead screw driver to pry the spark arrester out from the muffler.

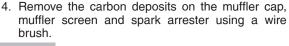


3. Remove the spark arrester.



④ Spark arrester



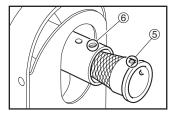


#### NOTICE

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



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

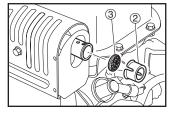


6. Install the spark arrester.

TIP

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

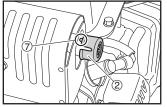
- (5) Spark arrester lump
- 6 Hole
- 7. Install the muffler screen to the muffler cap, then install the muffler cap to the muffler.
- ② Muffler cap
- (3) Muffler screen



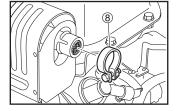


Install the muffler cap until it contacts with the projection on the muffler.

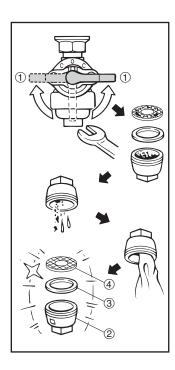




- 8. Install the muffler band, then tighten the muffler cap bolt.
- (8) Muffler band



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



#### Fuel cock

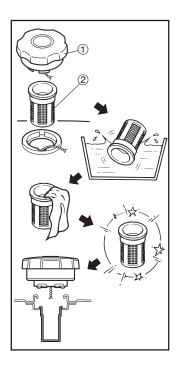


Never use the gasoline while smoking or in the vicinity of an open flame.

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



Be sure the fuel cock cup is tightened securely.



# Fuel tank filter (For models equipped with a Yamaha fuel tank)

## **WARNING**

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

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



Be sure the fuel tank cap is tightened securely.

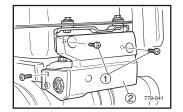
# Fuse replacement (For electric starting model)

# **MARNING**

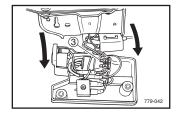
Be sure to use specified fuse. A wrong fuse will cause electrical system damage and A FIRE HAZARD.

## NOTICE

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



- 1. Remove the screws and then remove the cover.
- (1) Screw
- ② Cover



2. Replace the blown fuse with one of proper amperage.

Specified fuse: 10 A		

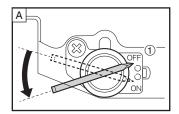
TIP

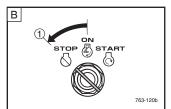
If the fuse immediately blows again, consult a Yamaha dealer.

- ③ Fuse
  - 3. Install the cover and then tighten the screws.

#### **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 "OFF"/"⟨\" (STOP).
- ① "OFF"/"\\" (STOP)
- A Manual starting model
- B Electric starting model
- 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.



Fuel is highly flammable and poisonous. Check "SAFETY INFORMATION" (See page 1) carefully.

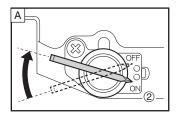
## **NOTICE**

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





- A Manual starting model
- B Electric starting model



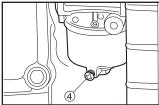




- 4. Turn the fuel cock lever to ON.
- 3 ON
  - Start the engine and leave it run until it stops.
     The engine stops in approximately 20 minutes time by running out of fuel.

#### TIP \_\_\_\_

Duration of the running engine depends on the amount of the fuel left in the tank.



container by loosening the drain screw on the carburetor float chamber. Pour the drained fuel into the same approved gasoline container as the fuel from the fuel tank.

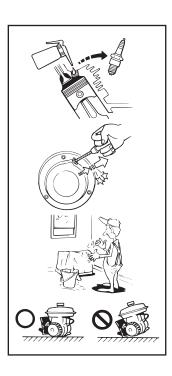
6. Drain the fuel from the carburetor into a clean





- 8. Turn the fuel cock lever to OFF.
- 9. Tighten the drain screw.
- Tighten further if any screws, bolts and nuts are loose.
- 11. Store the multi-purpose engine in a dry, well-ventilated place, with the cover placed over it.

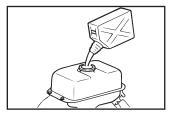




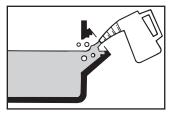
## **Engine**

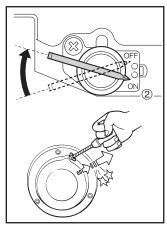
Perform the following steps to protect the cylinder, piston ring, etc. from corrosion.

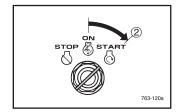
- Remove the spark plug, pour about one tablespoon of engine oil (See page 34) into the spark plug hole and reinstall the spark plug. Recoil start the engine by turning over several times (with ignition off) to coat the cylinder walls with oil.
- 2. Pull the recoil starter until you feel compression. Then stop pulling. (This prevents the cylinder and valves from rusting).
- Clean exterior of the multi-purpose engine and apply a rust inhibitor.
- 4. Store the multi-purpose engine in a dry, well-ventilated place, with the cover placed over it.
- 5. The multi-purpose engine must remain in a vertical position when stored, carried or operated.









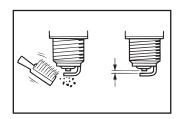


## **TROUBLESHOOTING**

## Engine won't start

- 1. Fuel systems
  - No fuel supplied to combustion chamber.
- O No fuel in tank .... Supply fuel.
- Fuel in tank .... Fuel cock lever to ON.
- (1) ON
  - O Clogged fuel line .... Clean fuel line.
  - O Foreign matter in fuel cock .... Clean fuel cock.
  - Clogged carburetor .... Clean carburetor.
- 2. Engine oil system Insufficient
- Oil level is low .... Add engine oil.
- 3. Electrical systems
- (Manual starting model) Engine switch to "ON" and pull the recoil starter.
- ② "ON"

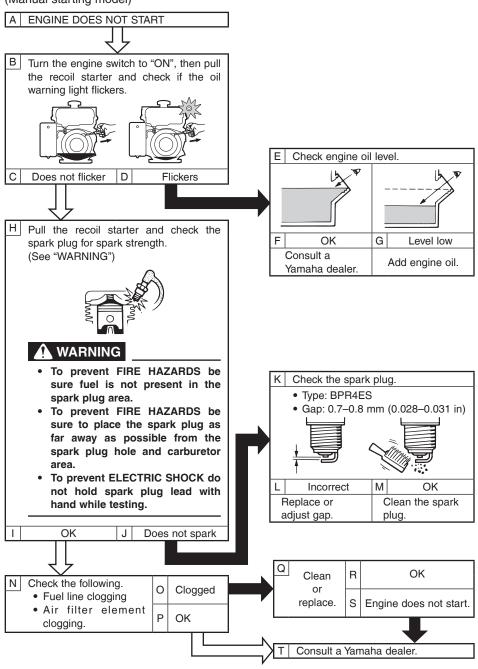
- (Electric starting model) Engine switch to "©" (START).
- ② "⑤" (START)

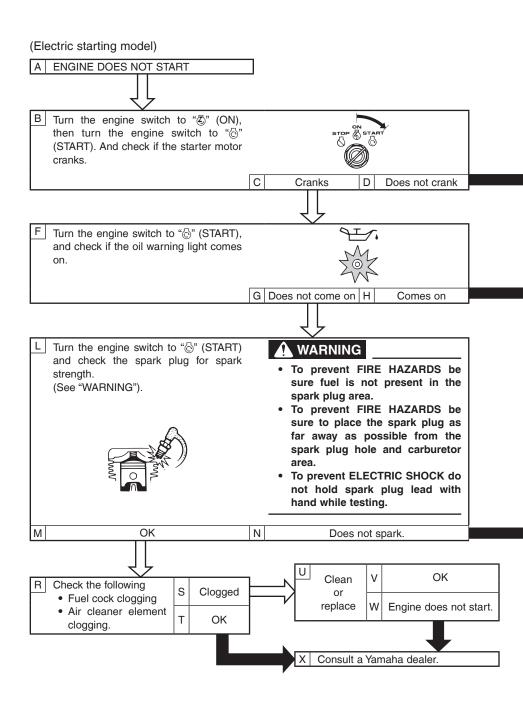


## Poor spark

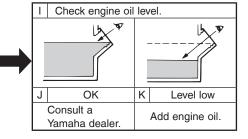
- O Spark plug dirty with carbon or wet .... Remove carbon or wipe spark plug dry.
- Faulty ignition system .... Consult a Yamaha dealer.

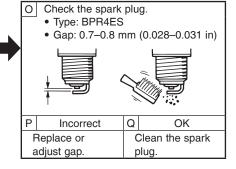
#### (Manual starting model)





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





## **SPECIFICATIONS**

## **Dimensions**

			i .	
		MZ175	MZ175	MZ175
	Unit	7CN	7CN	7CP
		With fuel tank model	Without fuel tank model	With fuel tank model
Overall length	mm (in)	326 (12.83)	337 (13.27)	317 (12.48)
Overall width	mm (in)	352 (13.86)	352 (13.86)	361 (14.21)
Overall height	mm (in)	407 (16.02)	238 (9.37)	407 (16.02)
Dry weight	kg (lb)	13-20 (29-44)	13-20 (29-44)	13-20 (29-44)

		MZ200	MZ200	MZ250
	Unit	7DH	7DH	7KB
		With fuel tank model	Without fuel tank model	With fuel tank model
Overall length	mm (in)	326 (12.83)	337 (13.27)	387 (15.24)
Overall width	mm (in)	352 (13.86)	352 (13.86)	426 (16.77)
Overall height	mm (in)	407 (16.02)	238 (9.37)	464 (18.27)
Dry weight	kg (lb)	13-20 (29-44)	13-20 (29-44)	20-27 (44-60)

		MZ250	MZ300	MZ300
	Unit	7KB	7VB	7VB
		Without fuel tank model	With fuel tank model	Without fuel tank model
Overall length	mm (in)	404 (15.91)	387 (15.24)	404 (15.91)
Overall width	mm (in)	416 (16.38)	426 (16.77)	416 (16.38)
Overall height	mm (in)	294.5 (11.59)	464 (18.27)	294.5 (11.59)
Dry weight	kg (lb)	20-27 (44-60)	20-27 (44-60)	20–27 (44–60)

		MZ300	MZ360	MZ360
	Unit	7CS	7CT	7CT
		Without fuel tank model	With fuel tank model	Without fuel tank model
Overall length	mm (in)	443 (17.44)	425 (16.73)	443 (17.44)
Overall width	mm (in)	470 (18.50)	451 (17.76)	452 (17.80)
Overall height	mm (in)	327 (12.87)	485 (19.09)	306 (12.05)
Dry weight	kg (lb)	31–40 (68–88)	31-40 (68-88)	31–40 (68–88)

		MZ360	MZ360
	Unit	7BY	7CN
		Without fuel tank model	Without fuel tank model
Overall length	mm (in)	381 (15.00)	443 (17.44)
Overall width	mm (in)	436 (17.17)	470 (18.50)
Overall height	mm (in)	319 (12.56)	327 (12.87)
Dry weight	kg (lb)	31-40 (68-88)	31-40 (68-88)

# **Engine**

	MZ175		MZ175	MZ175
	Unit	7CN	7CN	7CP
		With fuel tank model	Without fuel tank model	With fuel tank model
Туре		Air cooled 4-stroke	Air cooled 4-stroke	Air cooled 4-stroke
		gasoline	gasoline	gasoline
		OHV	OHV	OHV
Cylinder arrangement		Inclined, 1 cylinder	Inclined, 1 cylinder	Inclined, 1 cylinder
Displacement	cm <sup>3</sup>	171	171	171
Bore × stroke	mm (in)	$66.0 \times 50.0$	$66.0 \times 50.0$	66.0 × 50.0
		$(2.60 \times 1.97)$	$(2.60 \times 1.97)$	(2.60 × 1.97)
Fuel		Unleaded gasoline	Unleaded gasoline	Unleaded gasoline
Fuel tank capacity	L (US gal,	4.0	_	4.0
	Imp gal)	(1.06, 0.88)		(1.06, 0.88)
Engine oil quantity	L (US qt,	0.6	0.6	0.6
	Imp qt)	(0.63, 0.53)	(0.63, 0.53)	(0.63, 0.53)
Ignition system		TCI	TCI	TCI
Spark plug: Type		BPR4ES (NGK)	BPR4ES (NGK)	BPR4ES (NGK)
Gap	mm (in)	0.7-0.8	0.7–0.8	0.7–0.8
		(0.028-0.031)	(0.028-0.031)	(0.028-0.031)

		MZ200	MZ200	MZ250
	Unit	7DH	7DH	7KB
		With fuel tank model	Without fuel tank model	With fuel tank model
Туре		Air cooled 4-stroke	Air cooled 4-stroke	Air cooled 4-stroke
		gasoline	gasoline	gasoline
		OHV	OHV	OHV
Cylinder arrangement		Inclined, 1 cylinder	Inclined, 1 cylinder	Inclined, 1 cylinder
Displacement	cm <sup>3</sup>	192	192	253
Bore × stroke	mm (in)	$70.0 \times 50.0$	$70.0 \times 50.0$	74.0 × 59.0
		$(2.76 \times 1.97)$	$(2.76 \times 1.97)$	$(2.91 \times 2.32)$
Fuel		Unleaded gasoline	Unleaded gasoline	Unleaded gasoline
Fuel tank capacity	el tank capacity L (US gal,		_	5.5
	Imp gal)	(1.06, 0.88)		(1.45, 1.21)
Engine oil quantity	ngine oil quantity L (US qt,		0.6	1.0
	Imp qt)	(0.63, 0.53)	(0.63, 0.53)	(1.06, 0.88)
gnition system		TCI	TCI	TCI
Spark plug: Type		BPR4ES (NGK)	BPR4ES (NGK)	BPR4ES (NGK)
Gap	mm (in)	0.7-0.8	0.7–0.8	0.7–0.8
		(0.028-0.031)	(0.028-0.031)	(0.028-0.031)

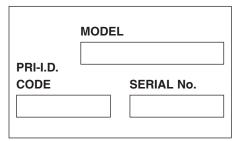
		MZ250	MZ300	MZ300
	Unit	7KB	7VB	7VB
		Without fuel tank model	With fuel tank model	Without fuel tank model
Туре		Air cooled 4-stroke	Air cooled 4-stroke	Air cooled 4-stroke
		gasoline	gasoline	gasoline
		OHV	OHV	OHV
Cylinder arrangement		Inclined, 1 cylinder	Inclined, 1 cylinder	Inclined, 1 cylinder
Displacement	cm <sup>3</sup>	253	296	296
Bore × stroke	mm (in)	$74.0 \times 59.0$	$80.0 \times 59.0$	80.0 × 59.0
		$(2.91 \times 2.32)$	$(3.15 \times 2.32)$	(3.15 × 2.32)
Fuel		Unleaded gasoline	Unleaded gasoline	Unleaded gasoline
Fuel tank capacity	L (US gal,	_	5.5	_
	Imp gal)		(1.45, 1.21)	
Engine oil quantity	L (US qt,	1.0	1.0	1.0
	Imp qt)	(1.06, 0.88)	(1.06, 0.88)	(1.06, 0.88)
Ignition system	gnition system		TCI	TCI
Spark plug: Type		BPR4ES (NGK)	BPR4ES (NGK)	BPR4ES (NGK)
Gap	mm (in)	0.7–0.8	0.7–0.8	0.7–0.8
		(0.028-0.031)	(0.028-0.031)	(0.028-0.031)

		MZ300	MZ360	MZ360
	Unit	7CS	7CT	7CT
		Without fuel tank model	With fuel tank model	Without fuel tank model
Туре		Air cooled 4-stroke	Air cooled 4-stroke	Air cooled 4-stroke
		gasoline	gasoline	gasoline
		OHV	OHV	OHV
Cylinder arrangement		Inclined, 1 cylinder	Inclined, 1 cylinder	Inclined, 1 cylinder
Displacement	cm <sup>3</sup>	301	357	357
Bore × stroke	mm (in)	$78.0 \times 63.0$	85.0 × 63.0	85.0 × 63.0
		$(3.07 \times 2.48)$	$(3.35 \times 2.48)$	$(3.35 \times 2.48)$
Fuel		Unleaded gasoline	Unleaded gasoline	Unleaded gasoline
Fuel tank capacity	L (US gal,	_	6.1	_
	Imp gal)		(1.61, 1.34)	
Engine oil quantity	L (US qt,	1.1	1.1	1.1
	Imp qt)	(1.16, 0.97)	(1.16, 0.97)	(1.16, 0.97)
Ignition system		TCI	TCI	TCI
Spark plug: Type		BPR4ES (NGK)	BPR4ES (NGK)	BPR4ES (NGK)
Gap	mm (in)	0.7–0.8	0.7–0.8	0.7–0.8
		(0.028-0.031)	(0.028-0.031)	(0.028–0.031)

	I		
		MZ360	MZ360
	Unit	7BY	7CN
		Without fuel tank model	Without fuel tank model
Туре		Air cooled 4-stroke	Air cooled 4-stroke
		gasoline	gasoline
		OHV	OHV
Cylinder arrangement		Inclined, 1 cylinder	Inclined, 1 cylinder
Displacement	cm <sup>3</sup>	357	357
Bore × stroke	mm (in)	85.0 × 63.0	85.0 × 63.0
		$(3.35 \times 2.48)$	$(3.35 \times 2.48)$
Fuel		Unleaded gasoline	Unleaded gasoline
Fuel tank capacity	L (US gal,	_	
	Imp gal)		
Engine oil quantity	L (US qt,	1.1	1.1
	Imp qt)	(1.16, 0.97)	(1.16, 0.97)
Ignition system		TCI	TCI
Spark plug: Type		BPR4ES (NGK)	BPR4ES (NGK)
Gap	mm (in)	0.7-0.8	0.7–0.8
		(0.028-0.031)	(0.028-0.031)

### CONSUMER INFORMATION

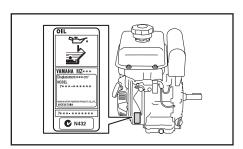
#### PRI-I.D. NUMBER:



#### Identification number records

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

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



#### Machine identification

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

TIP \_

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

# EXHAUST EMISSION CONTROL SYSTEM AND COMPONENTS

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