



2008 WaveRunner GP1300R

OWNER'S/OPERATOR'S MANUAL

**READ THIS MANUAL
CAREFULLY BEFORE OPERATION!**

U.S.A. Edition

YAMAHA MOTOR CORPORATION, USA

LIT-18626-07-48

F1G-F8199-15

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

Important manual information

EJU30160

To the owner/operator

Thank you for choosing a Yamaha watercraft. This owner's/operator's manual contains information you will need for proper operation, maintenance, and care. A thorough understanding of these simple instructions will help you to obtain maximum enjoyment from your new Yamaha. If you have any questions about the operation or maintenance of your watercraft, please consult a Yamaha dealer. Because Yamaha has a policy of continuing product improvement, this product may not be exactly as described in this owner's/operator's manual. Specifications are subject to change without notice.

This manual should be considered a permanent part of this watercraft and should remain with it even if the watercraft is subsequently sold.

In this manual, information of particular importance is distinguished in the following ways:



The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

EWJ00060



WARNING

Failure to follow WARNING instructions could result in severe injury or death to the machine operator, the passenger, a bystander, or a person inspecting or repairing the watercraft.

ECJ00090

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid damage to the watercraft.

NOTE:

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

EJU30220

**WaveRunner GP1300R
OWNER'S/OPERATOR'S MANUAL
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General and important labels

EJU30260

Identification numbers

Record the Primary Identification (PRI-ID) number, Hull Identification Number (HIN), and engine serial number in the spaces provided for assistance when ordering spare parts from a Yamaha dealer. Also record and keep these ID numbers in a separate place in case your watercraft is stolen.

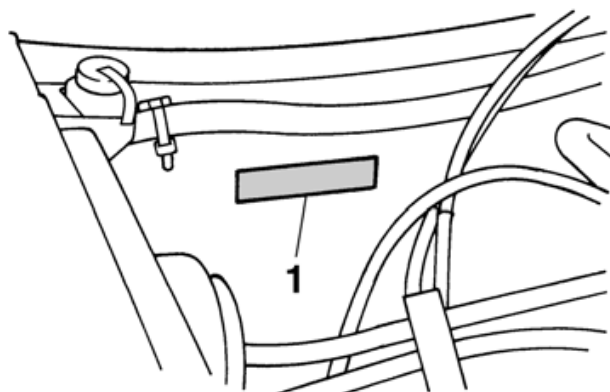
EJU30281

Primary Identification (PRI-ID) number

The PRI-ID number is stamped on a plate attached inside the engine compartment.

MODEL:

GP1300-G (GP1300R)



1 Primary Identification (PRI-ID) number location

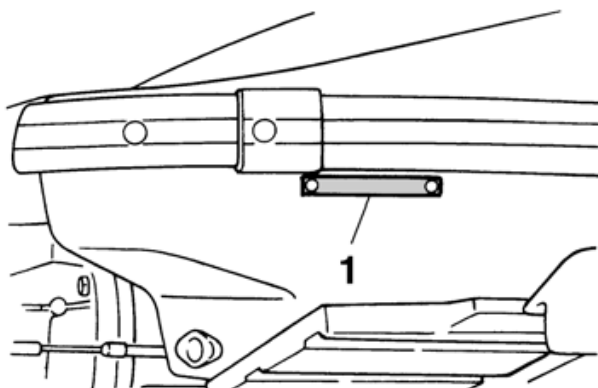
MODEL		PRI-ID.	
		F1G	
YAMAHA MOTOR CO., LTD. ASSEMBLED IN U.S.A. FROM AMERICAN AND JAPANESE COMPONENTS. ASSEMBLÉ AUX ÉTATS-UNIS DE PIÈCES AMÉRICAINES ET JAPONAISES.			

F1G -

EJU30290

Hull Identification Number (HIN)

The HIN is stamped on a plate attached to the hull on the aft, starboard (right) side.



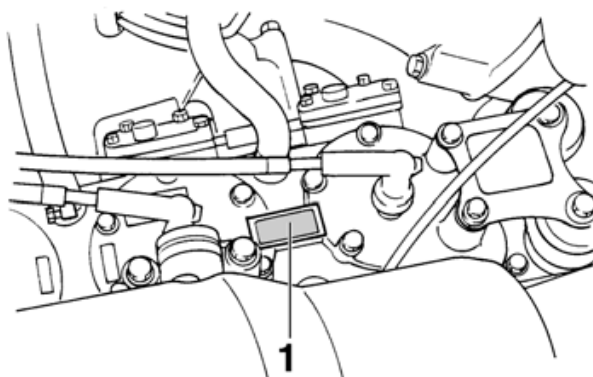
1 Hull Identification Number (HIN) location

US-YAM

EJU30310

Engine serial number

The engine serial number is stamped on a plate attached to the engine unit.



1 Engine serial number location

YAMAHA	
YAMAHA MOTOR CO., LTD.	
MADE IN JAPAN	
PAYS D'ORIGINE JAPON	

General and important labels

EJU30340

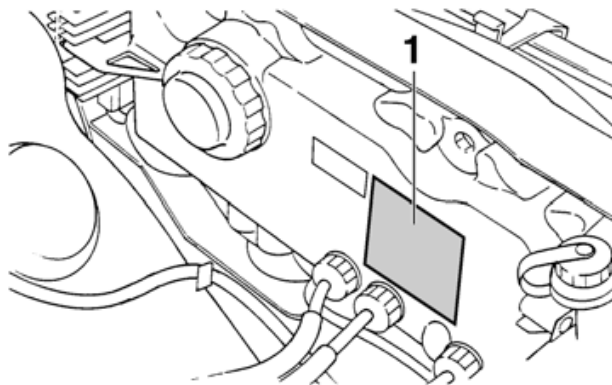
Emission control information

This engine conforms to 2008 U.S. Environmental Protection Agency (EPA) regulations for marine SI engines.

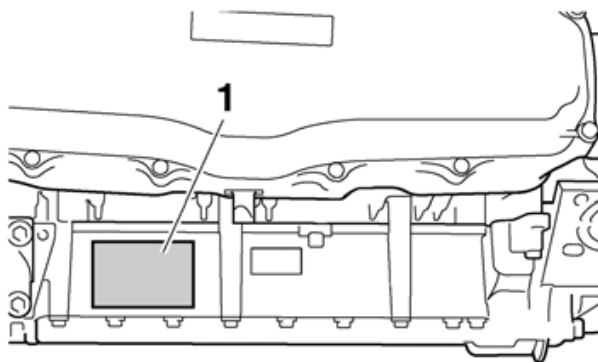
EJU30380

Approval label of emission control certificate

This label is attached to the electrical box and the intake side of the crankcase.



1 Emission control information label location



1 Emission control information label location

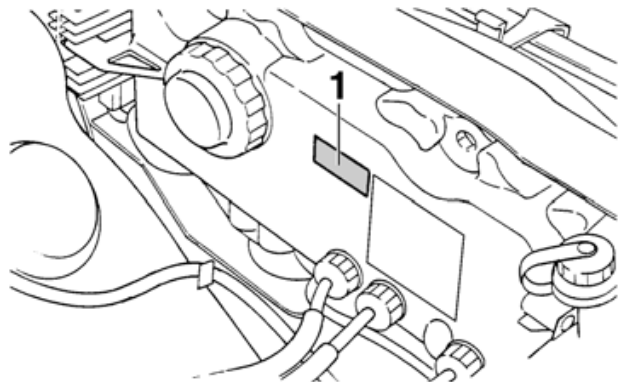
EMISSION CONTROL INFORMATION				MF1/OC	
ENGINE FAMILY :					
THIS ENGINE CONFORMS TO :, U.S. EPA EMISSION REGULATIONS FOR SI MARINE ENGINES. REFER TO THE OWNER'S MANUAL FOR MAINTENANCE SPECIFICATIONS AND ADJUSTMENTS.					
FEL :	g/kw-hr	ADVERTISED POWER :	kw	FUEL : UNLEADED REGULAR GASOLINE	
SPARK PLUG :		TROLLING SPEED :	rpm	ENGINE LUBRICANT : YAMALUBE2W	
DISPLACEMENT :	cm³	SPARK PLUG GAP (mm) :			
INFORMATION ANTIPOLLUTION					
CATÉGORIE DU MOTEUR :					
CE MOTEUR EST CONFORME AUX NORMES D'ÉMISSIONS :, EPA DES É.-U. POUR MOTEURS NAUTIQUES SI. POUR CONNAÎTRE LES SPÉCIFICATIONS ET LES RÉGLAGES À EFFECTUER, CONSULTEZ LE MANUEL DU PROPRIÉTAIRE.					
FEL :	g/kw-hr	PUISSANCE AFFICHÉE :	kw	CABURANT : ESSENCE NORMALE SANS PLOMB	
BOUGIE :		RALENTI :	tr/mm	LUBRIFIANT MOTEUR : YAMALUBE2W	
CYLINDRÉE :	cm³	BOUGIE-ÉCARTEMENT (mm) :			
YAMAHA MOTOR CO.,LTD.					

New Technology; Catalytic converter

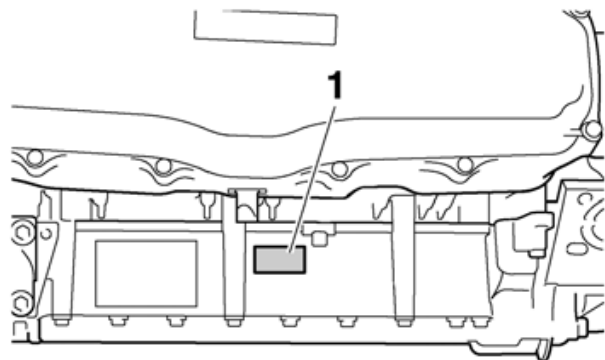
EJU30420

Manufactured date label

This label is attached to the electrical box and the intake side of the crankcase.



1 Manufactured date label location



1 Manufactured date label location

YAMAHA

Manufactured:

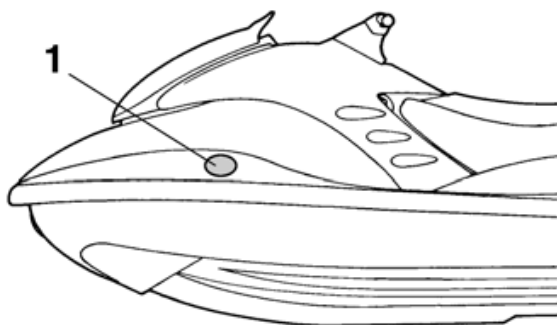
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General and important labels

EJU30440

Star labels

This watercraft is labeled with a California Air Resources Board (CARB) star label. See below for a description of your particular label.



1 Star label location

One Star - Low Emission

The one-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2001 exhaust emission standards. Engines meeting these standards have 75% lower emissions than conventional carbureted two-stroke engines. These engines are equivalent to the U.S. EPA's 2006 standards for marine engines.



Two Stars - Very Low Emission

The two-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2004 exhaust emission standards. Engines meeting

these standards have 20% lower emissions than One Star-Low Emission engines.



Three Stars - Ultra Low Emission

The three-star label identifies engines that meet the Air Resources Board's Personal Watercraft and Outboard marine engine 2008 exhaust emission standards or the Sterndrive and Inboard marine engine 2003-2008 exhaust emission standards. Engines meeting these standards have 65% lower emissions than One Star-Low Emission engines.



Four Stars - Super Ultra Low Emission

The four-star label identifies engines that meet the Air Resources Board's Sterndrive and Inboard marine engine 2009 exhaust emission standards. Personal Watercraft and Outboard marine engines may also comply with these standards. Engines meeting these

General and important labels

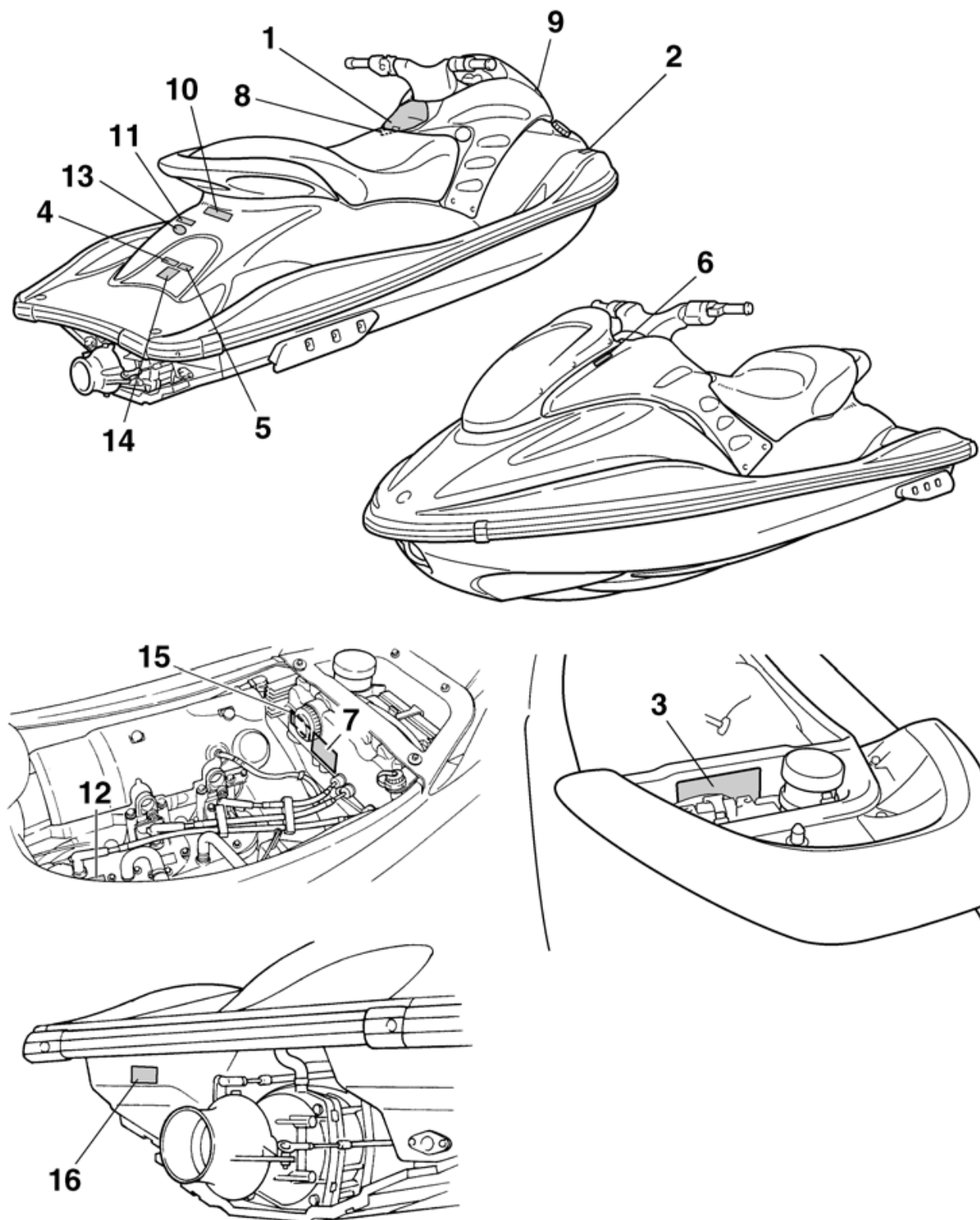
standards have 90% lower emissions than
One Star-Low Emission engines.



General and important labels

EJU30450

Important labels

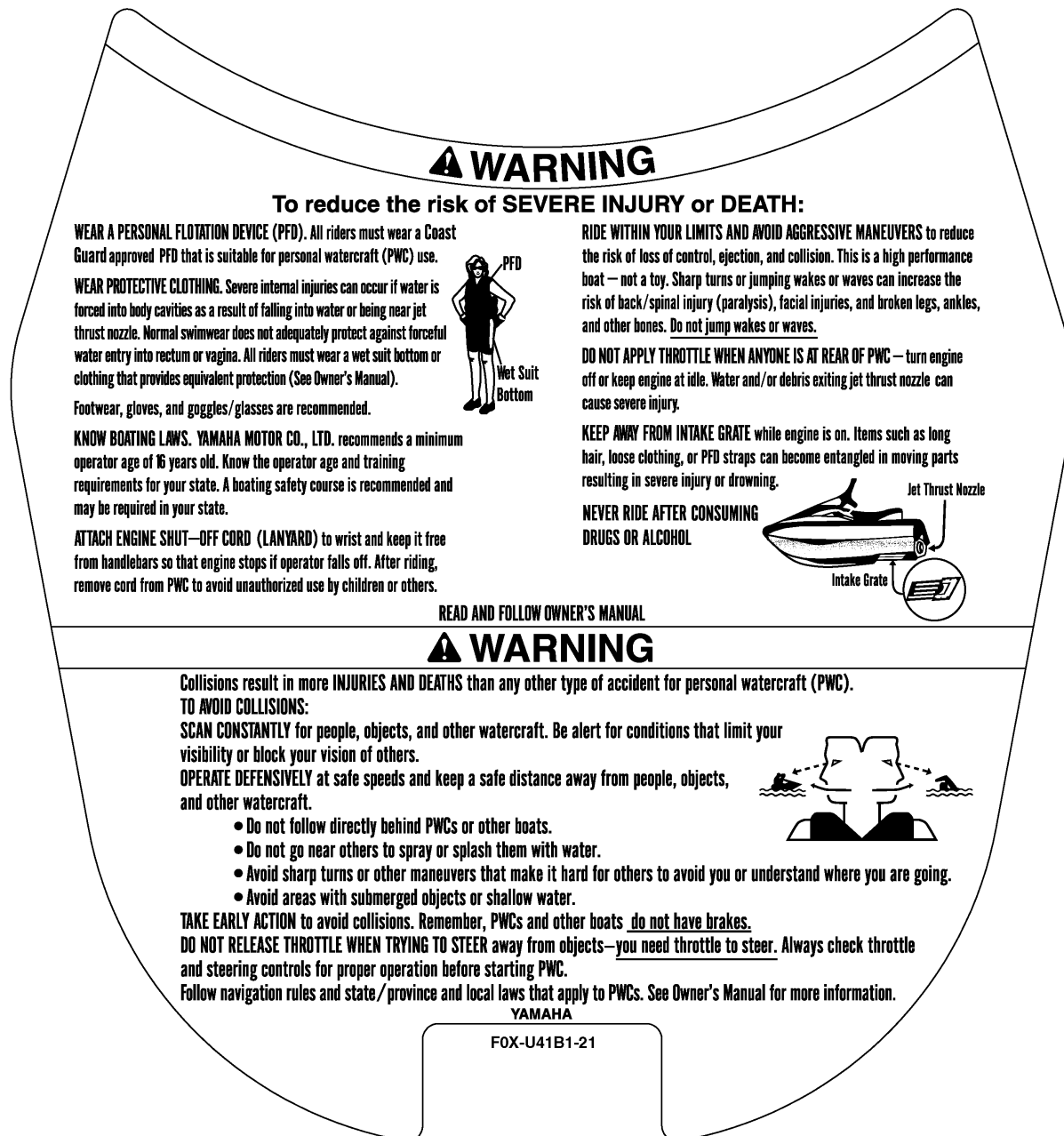


General and important labels

EJU35910

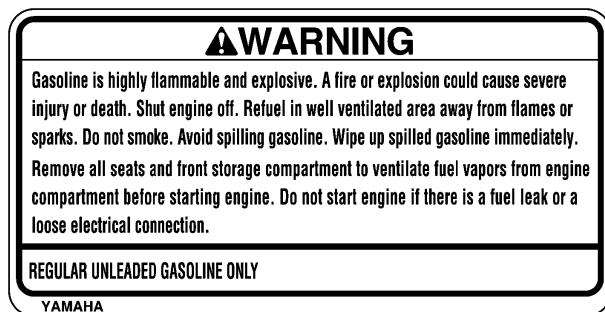
Warning labels

1



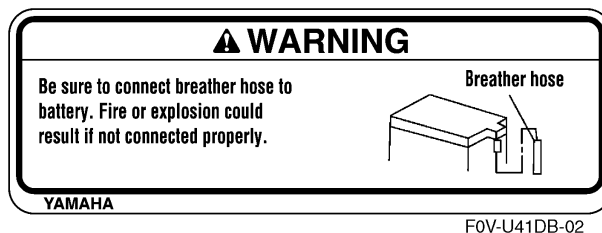
General and important labels

2



F1G-U415B-00

3

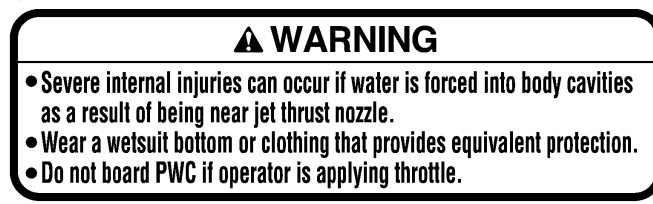


4



(F1G-U41E2-01)

5



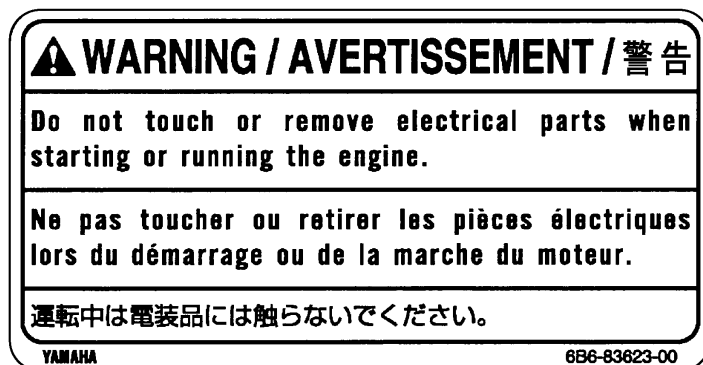
(F1G-U41E2-01)

6



F0V-U418W-01

7

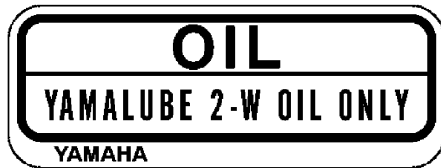


General and important labels

EJU35923

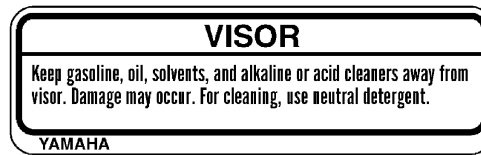
Other labels

8



F0V-U41FB-01

9



F0X-U41FD-01

10

FIRE EXTINGUISHER CONTAINER

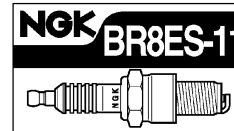
F0V-U41F5-01

11



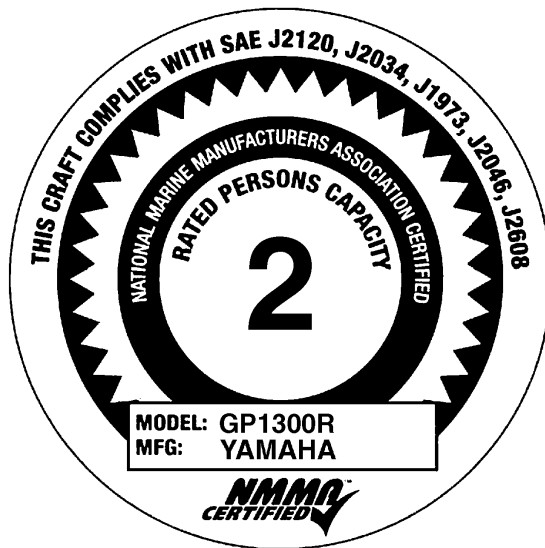
F1G-U41G1-00

12

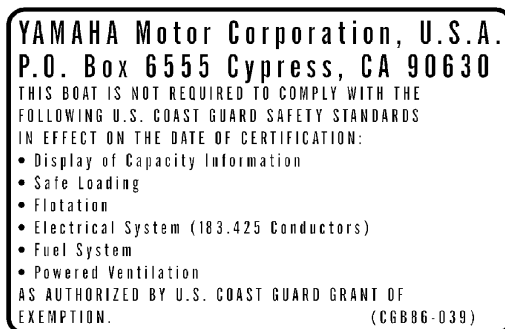


(66V-42791-00)

13



14



(F1G-U41E2-01)

15

All applicable electrical system components installed as original equipment meet appropriate U.S.C.G. requirements for ignition protection.(Ref.33 CFR 183.410 and 183.440)

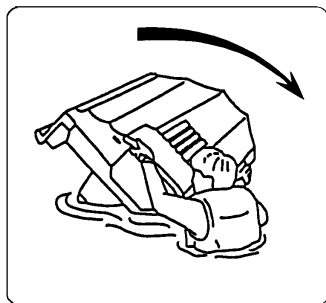
YAMAHA

60E-83627-00

General and important labels

The following label indicates the correct direction to upright a capsized watercraft.

16



F1G-U418F-00

EJU30670

The safe use and operation of this watercraft is dependent upon the use of proper riding techniques, as well as upon the common sense, good judgment, and expertise of the operator. Every operator should know the following requirements before riding the watercraft.

- Before operating the watercraft, read this owner's/operator's manual, the Riding Practice Guide, the Riding Instruction card, and all warning and caution labels on the watercraft. Also, watch the Basic Orientation Video provided with your watercraft. These materials should give you an understanding of the watercraft and its operation.
- Never allow anyone to operate this watercraft until they too have read this owner's/operator's manual, the Riding Practice Guide, the Riding Instruction card, and all warning and caution labels, and, if possible, watched the Basic Orientation Video. Showing them the video may help reinforce the information contained in these materials.

EJU30710

Limitations on who may operate the watercraft

- Yamaha recommends a minimum operator age of 16 years old.
Adults must supervise use by minors. Know the operator age and training requirements for your state. A boating safety course is recommended and may be required in your state. You can find local rules by contacting the United States Coast Guard (USCG), the National Association of State Boating Law Administrators, or your local Power Squadron.
- This watercraft is designed to carry the operator and 1 passenger. Never exceed the maximum load limit or allow more than 2 persons to ride the watercraft at any time.



Maximum load:
160 kg (353 lb)
Load is the total weight of cargo, operator, and passenger.

- Do not operate the watercraft with a passenger on board until you have considerable practice and experience riding alone. Operating the watercraft with a passenger requires more skill. Take the time to become accustomed to the handling characteristics of the watercraft before trying any difficult maneuvers.

Safety information

EJU30760

Cruising limitations

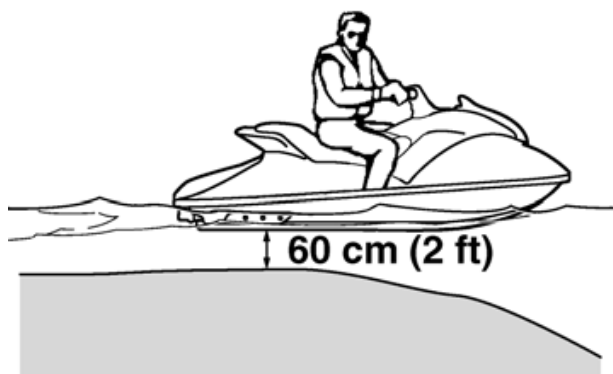
- Scan constantly for people, objects, and other watercraft. Be alert for conditions that limit your visibility or block your vision of others.



- Operate defensively at safe speeds and keep a safe distance away from people, objects, and other watercraft.
- Do not follow directly behind watercraft or other boats.
- Do not go near others to spray or splash them with water.
- Avoid sharp turns or other maneuvers that make it hard for others to avoid you or understand where you are going.
- Avoid areas with submerged objects or shallow water.
- Take early action to avoid collisions. Remember, watercraft and other boats do not have brakes.
- Do not release the throttle lever when trying to steer away from objects—you need throttle to steer. Always check throttle and steering controls before starting the watercraft.
- Ride within your limits and avoid aggressive maneuvers to reduce the risk of loss of control, ejection, and collision.
- This is a high performance boat—not a toy. Sharp turns or jumping wakes or waves can increase the risk of back/spinal injury (paralysis), facial injuries, and broken legs, an-

kles, and other bones. Do not jump wakes or waves.

- Do not operate the watercraft in rough water, bad weather, or when visibility is poor; this may lead to an accident causing injury or death. Be alert to the possibility of adverse weather. Take note of weather forecasts and the prevailing weather conditions before setting out on your watercraft.
- As with any water sport, you should not operate your watercraft without someone else nearby. If you operate further than swimming distance from shore, you should be accompanied by another boat or watercraft, but make sure you stay a safe distance away. It's good, common sense!
- Never operate in water that is less than 60 cm (2 ft) deep, otherwise you increase your chance of hitting a submerged object, which could result in injury.



- This watercraft is not equipped with lighting required for night operation. Do not operate the watercraft after sunset or before dawn, otherwise you increase the risk of colliding

with another boat, which could result in severe injury or death.

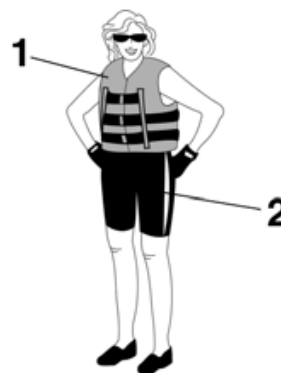


- Follow navigation rules, and state/provincial and local laws that apply to watercraft.

EJU30790

Operation requirements

- All riders must wear a U.S. Coast Guard (USCG) approved personal flotation device (PFD) that is suitable for personal watercraft use.
- Wear protective clothing. Severe internal injuries can occur if water is forced into body cavities as a result of falling into the water or being near the jet thrust nozzle. Normal swimwear does not adequately protect against forceful water entry into the rectum or vagina. All riders must wear a wetsuit bottom or clothing that provides equivalent protection. Such clothing includes thick, tightly woven, sturdy and snug-fitting apparel such as denim, but does not include spandex or similar fabrics, like those used in bicycle shorts.



1 USCG approved PFD

2 Wetsuit bottom

- Eye protection is recommended to keep wind, water, and glare from the sun out of your eyes while you operate your watercraft. Restraining straps for eyewear are made which are designed to float should your eyewear fall in the water. Footwear and gloves are recommended.
- Helmets meeting Snell or DOT standards are required for IJSBA-sanctioned races. You must decide whether to wear a helmet while you ride for recreation. You should

Safety information

know that a helmet could help protect you in certain kinds of accidents and that it could injure you in others.

A helmet is designed to provide some head protection. Although helmets cannot protect against all foreseeable impacts, a helmet might reduce your injuries in a collision with a boat or other obstacle.

A helmet may have potential safety hazards, as well. Falling into the water could risk the chance of the helmet catching water, commonly known as “bucketing”, and the resulting strain on your neck could cause choking, severe and permanent neck injuries, or death. A helmet could also increase the risk of an accident if it reduces your vision or hearing, or if it distracts you or increases your fatigue.

How should you decide if a helmet’s potential safety benefits outweigh its potential risks for you? Consider your particular riding conditions. Consider factors such as your riding environment and your riding style and ability. Also consider the likelihood of traffic congestion, and the water surface conditions. If you decide to wear a helmet based upon your riding circumstances, choose one carefully. Look for a helmet designed for personal watercraft use, if possible. Consider a helmet meeting Snell or DOT standards. If you will be engaging in closed-course competition, follow the helmet requirements of the sanctioning organization.

- NEVER operate the watercraft after consuming alcohol or taking other drugs.



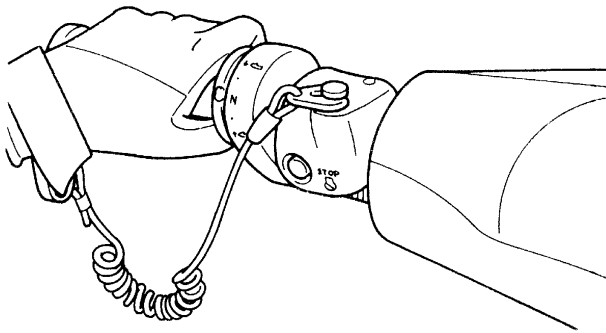
- For reasons of safety and proper care of the watercraft, always perform the pre-operation checks listed on page 44 before operating the watercraft.
- The operator and passenger should always keep their feet on the floor of the footwell when the watercraft is in motion. Lifting your feet increases the chances of losing your balance, or hitting objects outside the watercraft with your feet. Do not give a ride to a child whose feet cannot reach the floor of the footwell.
- The passenger should firmly hold on to the operator.



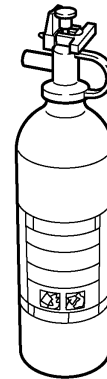
- Never allow a passenger to ride in front of the operator.
- Always consult your doctor on whether it is safe for you to ride this watercraft if you are pregnant or in poor health.

Safety information

- Do not attempt to modify this watercraft! Modifications to your watercraft may reduce safety and reliability, and render the watercraft unsafe or illegal for use.
- Attach the engine shut-off cord to your left wrist and keep it free from the handlebars so that the engine stops if you, the operator, fall off. After riding, remove the engine shut-off cord from the watercraft to avoid accidental starting or unauthorized use by children or others.



when navigating in waters under USCG jurisdiction. In addition, most state and local boating laws also require that the fire extinguisher be approved by the USCG.



- Scan carefully for swimmers and stay away from swimming areas. Swimmers are hard to see and you could accidentally hit someone in the water.
- Avoid being hit by another boat! You should always take the responsibility to watch for traffic; other boaters may not be watching for you. If they do not see you, or if you maneuver more quickly than other boaters expect, you risk a collision.
- Maintain a safe distance from other boats and watercraft, and also watch for ski ropes or fishing lines. Obey the "Rules of the Road" and be sure to check behind you before making a turn. (See "Rules of the Road" on page 17.)
- According to the USCG, boats under 6.1 m (20 ft) in length like your watercraft **MUST** carry a fire extinguisher of a B-1 classification, with a capacity of two pounds or more

Safety information

EJU30830

Recommended equipment

The following items should be carried on board your watercraft:

- **Sound-signaling device**

You should carry a whistle or other sound-signaling device that can be used to signal other boats. See “Rules of the Road” for more information.

- **Visual distress signals**

It is recommended that a U.S. Coast Guard approved pyrotechnic device be stored in a waterproof container on your watercraft. A mirror can also be used as an emergency signal. Contact a Yamaha dealer or the U.S. Coast Guard for more information.

- **Watch**

A watch is helpful so you will know how long you have been operating the watercraft.

- **Towline**

A towline can be used to tow a disabled watercraft in an emergency.

EJU30860

Hazard information

- Never start the engine or let it run for any length of time in an enclosed area. Exhaust fumes contain carbon monoxide, a colorless, odorless gas that may cause loss of consciousness and death within a short time. Always operate the watercraft in an open area.
- Do not start the engine on land if anyone is behind the watercraft. Hot water and steam spurting from the exhaust outlet can cause serious burns.
- Do not touch the hot muffler or catalytic converter during or immediately after engine operation; they can cause serious burns. In addition, the catalytic converter becomes hotter after the engine stops before cooling down.

EJU30890

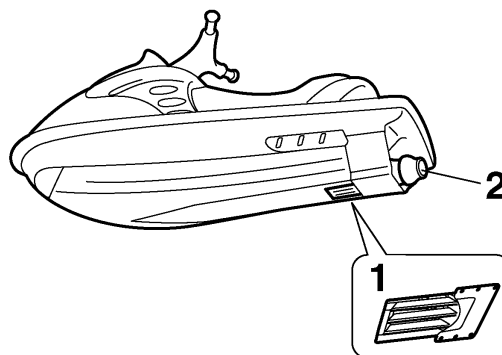
Watercraft characteristics

- Jet thrust turns the watercraft. Releasing the throttle lever completely produces only minimum thrust. If you are traveling at speeds above trolling, you will have rapidly decreasing ability to steer without throttle. This model is equipped with the Yamaha Engine Management System (YEMS) that includes an off-throttle steering (OTS) system. It will activate at planing speeds should you attempt to steer the watercraft after releasing the throttle lever. The OTS system assists in turning by continuing to supply some thrust while the watercraft is decelerating, but you can turn more sharply if you apply throttle while turning the handlebars. The OTS system does not function below planing speeds or when the engine is off. Once the engine slows down, the watercraft will no longer turn in response to handlebar input until you apply throttle again or you reach trolling speed.

Practice turning in an open area without obstacles until you have a good feel for this maneuver.

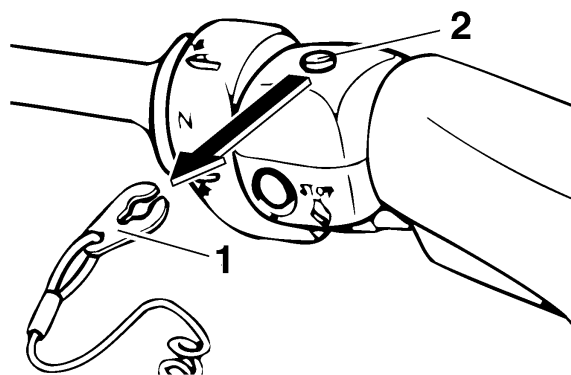
- This watercraft is water-jet propelled. The jet pump is directly connected to the engine. This means that jet thrust will produce some movement whenever the engine is running. There is no “neutral” position.
- Keep away from the intake grate while the engine is on. Items such as long hair, loose clothing, or PFD straps can become entangled in moving parts, resulting in severe injury or drowning.
- Never insert any object into the jet thrust nozzle while the engine is running. Severe injury or death could result from coming in

contact with the rotating parts of the jet pump.



- 1 Intake grate
- 2 Jet thrust nozzle

- Stop the engine and remove the clip from the engine shut-off switch before removing any debris or weeds, which may have collected around the jet intake.



- 1 Clip
- 2 Engine shut-off switch

Safety information

EJU30960

Rules of the Road

Your Yamaha watercraft is legally considered a powerboat. Operation of the watercraft must be in accordance with the rules and regulations governing the waterway on which it is used.

Just as there are rules that apply when you are driving on streets and highways, there are waterway rules that apply when you are operating your watercraft. These rules are used internationally, and are also enforced by the United States Coast Guard and local agencies. You should be aware of these rules, and follow them whenever you encounter another vessel on the water.

Several sets of rules prevail according to geographic location, but are all basically the same as the International Rules of the Road. The rules presented here in this owner's/operator's manual are condensed, and have been provided for your convenience only. Consult your local U.S. Coast Guard Auxiliary or Department of Motor Vehicles for a complete set of rules governing the waters in which you will be operating your watercraft.

Steering and sailing rules

Whenever two vessels on the water meet one another, one vessel has the right-of-way; it is called the "stand-on" vessel. The vessel that does not have the right-of-way is called the "give-way" or "burdened" vessel. These rules determine which vessel has the right-of-way, and what each vessel should do.

Stand-on vessel

The vessel with the right-of-way has the duty to continue its course and speed, except to avoid an immediate collision. When you maintain your direction and speed, the other vessel will be able to determine how best to avoid you.

Give-way vessel

The vessel which does not have the right-of-way has the duty to take positive and timely action to stay out of the way of the stand-on vessel. Normally, you should not cross in front of the vessel with the right-of-way. You should slow down or change directions briefly and pass behind the other vessel. You should always move in such a way that the operator of the other vessel can see what you are doing. The General Prudential Rule regarding the right-of-way is that if a collision appears unavoidable, neither boat has the right-of-way. Both boats must avoid the collision.

In other words, follow the standard rules except when a collision will occur unless both vessels try to avoid each other. If that is the case, both vessels become give-way vessels.

Rules when encountering vessels

There are three main situations that you may encounter with other vessels which could lead to a collision unless the Steering Rules are followed:

Meeting: you are approaching another vessel head-on

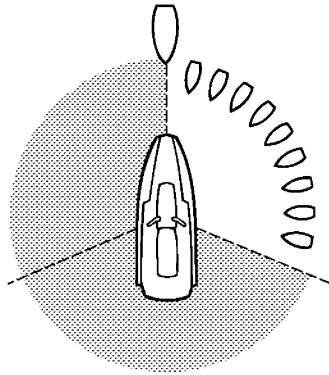
Crossing: you are traveling across another vessel's path

Overtaking: you are passing or being passed by another vessel

In the following illustration, your watercraft is in the center. You should give the right-of-way to any vessels shown in the white area (you are the give-way vessel). Any vessels in the shaded area must yield to you (they are the

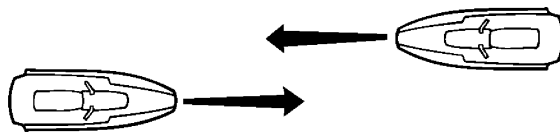
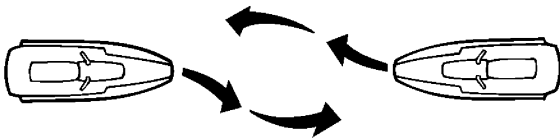
Safety information

give-way vessels). Both you and the meeting vessel must alter course to avoid each other.



Meeting

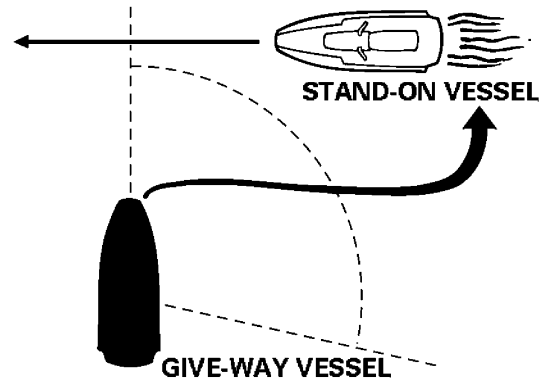
If you are meeting another power-driven vessel head on, and are close enough to run the risk of collision, neither of you has the right-of-way! Both of you should alter course to avoid an accident. You should keep the other vessel on your port (left) side. This rule does not apply if both of you will clear one another if you continue on your set course and speed.



Crossing

When two power-driven vessels are crossing each other's path close enough to run the risk of collision, the vessel which has the other on the starboard (right) side must keep out of the way of the other. If the other vessel is on your starboard (right) side, you must keep out of its way; you are the give-way vessel. If the other vessel is on your port (left) side, remember that you should maintain course and direction,

provided the other vessel gives you the right-of-way as it should.



Overtaking

If you are passing another vessel, you are the give-way vessel. This means that the other vessel is expected to maintain its course and speed. You must stay out of its way until you are clear of it. Likewise, if another vessel is passing you, you should maintain your speed and direction so that the other vessel can steer itself around you.

Other special situations

There are three other rules you should be aware of when riding your watercraft around other vessels.

Narrow channels and bends

When navigating in narrow channels, you should keep to the right when it is safe and practical to do so. If the operator of a power-driven vessel is preparing to go around a bend that may obstruct the view of other water vessels, the operator should sound a prolonged blast of four to six seconds on the whistle. If another vessel is around the bend, it too should sound the whistle. Even if no reply is heard, however, the vessel should still proceed around the bend with caution. If you navigate such waters with your watercraft, you will need to carry a portable air horn, available from local marine supply stores.

Safety information

Fishing vessel right-of-way

All vessels fishing with nets, lines, or trawls are considered to be “fishing vessels” under the International Rules. Vessels with trolling lines are not considered fishing vessels. Fishing vessels have the right-of-way regardless of position. Fishing vessels cannot, however, impede the passage of other vessels in narrow channels.

Sailing vessel right-of-way

Sailing vessels should normally be given the right-of-way. The exceptions to this are:

- (1) When the sailing vessel is overtaking the power-driven vessel, the power-driven vessel has the right-of-way.
- (2) Sailing vessels should keep clear of any fishing vessel.
- (3) In a narrow channel, a sailing vessel should not hamper the safe passage of a power-driven vessel that can navigate only in such a channel.

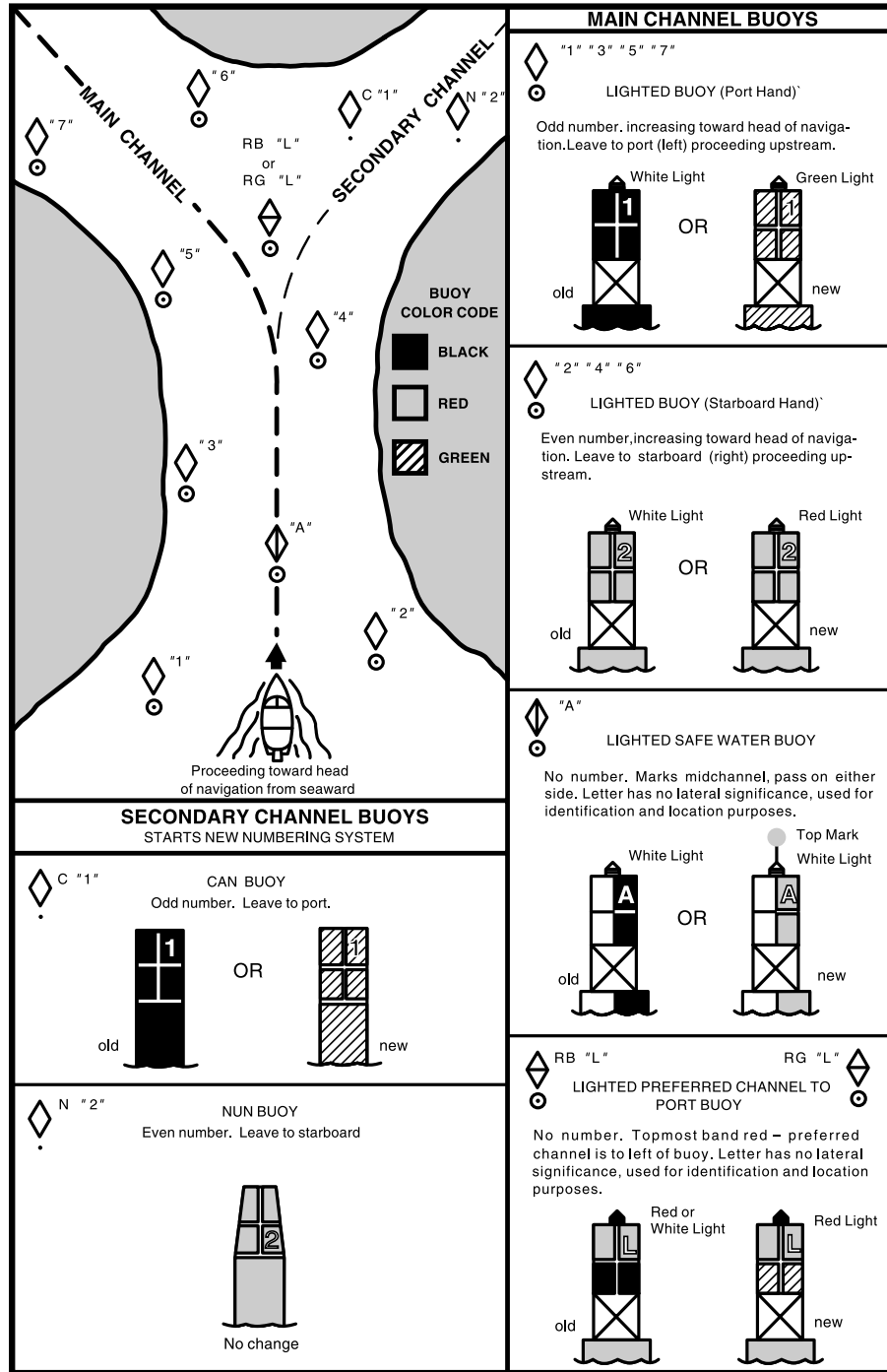
Reading buoys and other markers

The waters of the United States are marked for safe navigation by the lateral system of buoyage. Simply put, buoys and markers have an arrangement of shapes, colors, numbers, and lights to show which side of the buoy a boater should pass on when navigating in a particular direction. The markings on these buoys are oriented from the perspective of being entered from seaward (the boater is going towards the harbor). Red buoys are passed on your starboard (right) side when proceeding from open water into the harbor, and black buoys are to your port (left) side. An easy way to remember the meaning of the colors is the phrase “red right returning”. When navigating out of the harbor, your position with respect to the buoys should be reversed; red buoys should be to port and black buoys to starboard.

Many bodies of water used by boaters are entirely within the boundaries of a particular state. The Uniform State Waterway Marking System has been devised for these waters. This system uses buoys and signs with distinctive shapes and colors to show regulatory or advisory information. These markers are white with black letters and orange borders.

⚠ Safety information

They signify speed zones, restricted areas, danger areas, and general information.



Remember, markings may vary by geographic location. Always consult local boating authorities before riding your watercraft in unfamiliar waters.

Safety information

EJU30980

To get more boating safety information

Be informed about boating safety. Additional publications and information can be obtained from many organizations, including the following.

United States Coast Guard

Consumer Affairs Staff (G-BC)

Office of Boating, Public, and Consumer Affairs

U.S. Coast Guard Headquarters

Washington, D.C. 20593-0001

Boating Safety Hotline: 1-800-368-5647

Other sources

You can find local rules by contacting the National Association of State Boating Law Administrators, or your local Power Squadron.

Watercraft Education and Training

The Online Boating Safety Course, available through the watercraft section of the yamaha-motor.com website, is a free, 50 question learning course available to the public. Upon successful completion of 80 percent or better, the user can request a certificate of completion by mail or can download one immediately. The Online Boating Safety Course, provided by the Boat/US Foundation, is approved by the National Association of State Boating Law Administrators (NASBLA) and recognized by the United States Coast Guard. This course meets the education requirement for those states that recognize non-proctored, NASBLA-approved courses.

Yamaha is the watercraft industry's leading manufacturer to build awareness and support for boating education. In 1997, Yamaha launched its GET W.E.T. (Watercraft Education and Training) initiative and has since reached out to over one million Americans promoting the benefits of boating education.

The Online Boating Safety Course:
<http://www.boatus.com/onlinecourse/>

EJU30990

Enjoy your watercraft responsibly

You share the areas you enjoy when riding your watercraft with others and with nature. So your enjoyment includes a responsibility to treat these other people, and the lands, waters, and wildlife with respect and courtesy. Whenever and wherever you ride, think of yourself as the guest of those around you. Remember, for example, that the sound of your watercraft may be music to you, but it could be just noise to others. And the exciting splash of your wake can make waves others won't enjoy.

Avoid riding close to shoreline homes and waterfowl nesting areas or other wildlife areas, and keep a respectful distance from fishermen, other boats, swimmers, and populated beaches. When travel in areas like these is unavoidable, ride slowly and obey all laws.

Proper maintenance is necessary to ensure that the exhaust emission and sound levels of your watercraft will continue to be within regulated limits. You have the responsibility to make sure that the recommended maintenance in this owner's/operator's manual is carried out.

Remember, pollution can be harmful to the environment. Do not refuel or add oil where a spill could cause damage to nature. Remove your watercraft from the water and move it away from the shoreline before refueling. And keep your surroundings pleasant for the people and wildlife that share the waterways: don't litter!

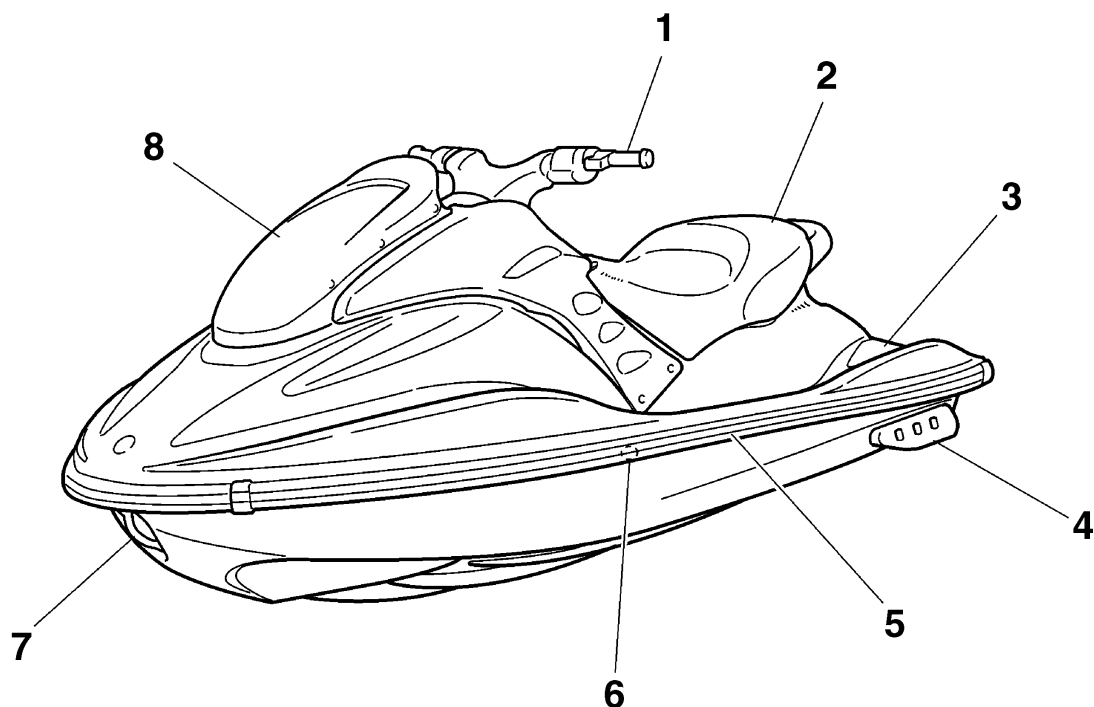
When you ride responsibly, with respect and courtesy for others, you help ensure that our waterways stay open for the enjoyment of a variety of recreational opportunities.

Features and functions

EJU31010

Location of main components

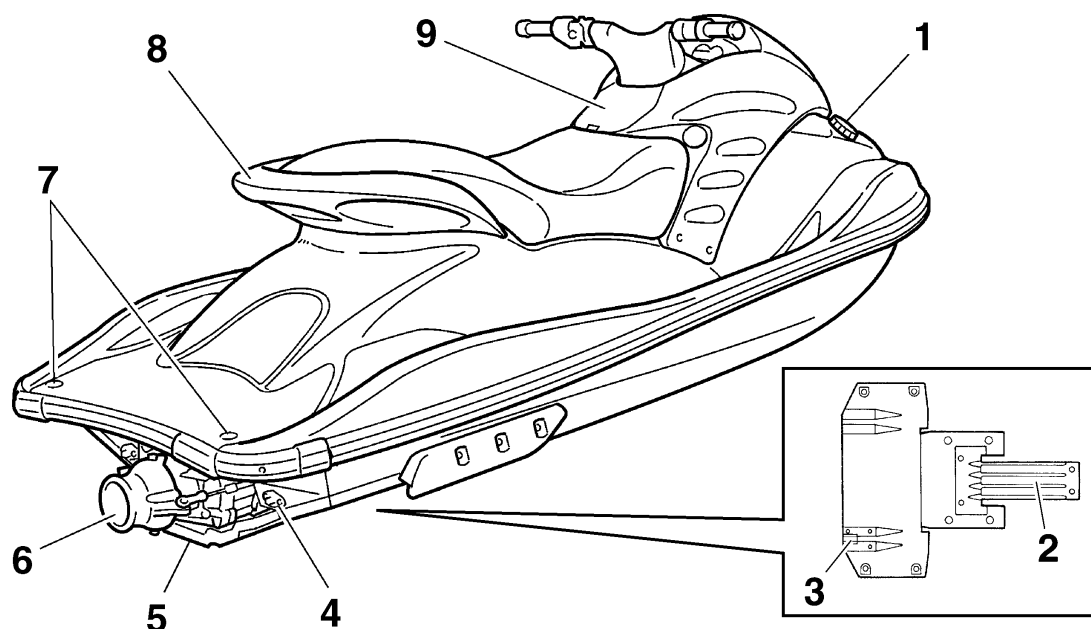
Front view



- 1 Handlebars
- 2 Seat
- 3 Footwell
- 4 Yamaha Adjustable Sponson (YAS)
- 5 Gunwale
- 6 Cooling water pilot outlet
- 7 Bow eye
- 8 Hood

Features and functions

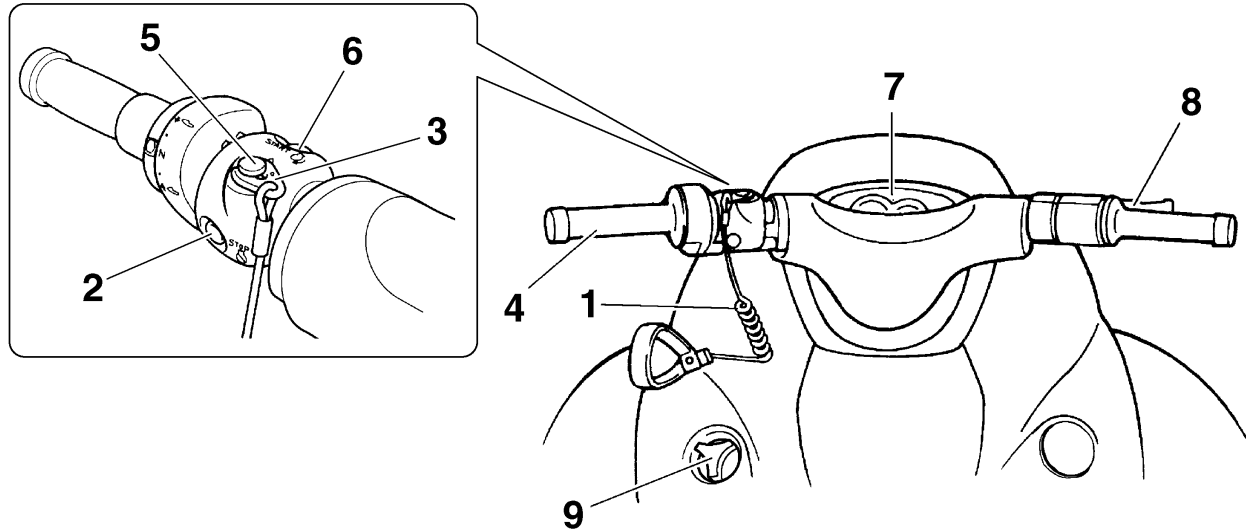
Rear view



- 1 Fuel tank filler cap
- 2 Intake grate
- 3 Speed sensor
- 4 Stern drain plugs
- 5 Ride plate
- 6 Jet thrust nozzle
- 7 Stern rope hole
- 8 Handgrip
- 9 Glove compartment

Features and functions

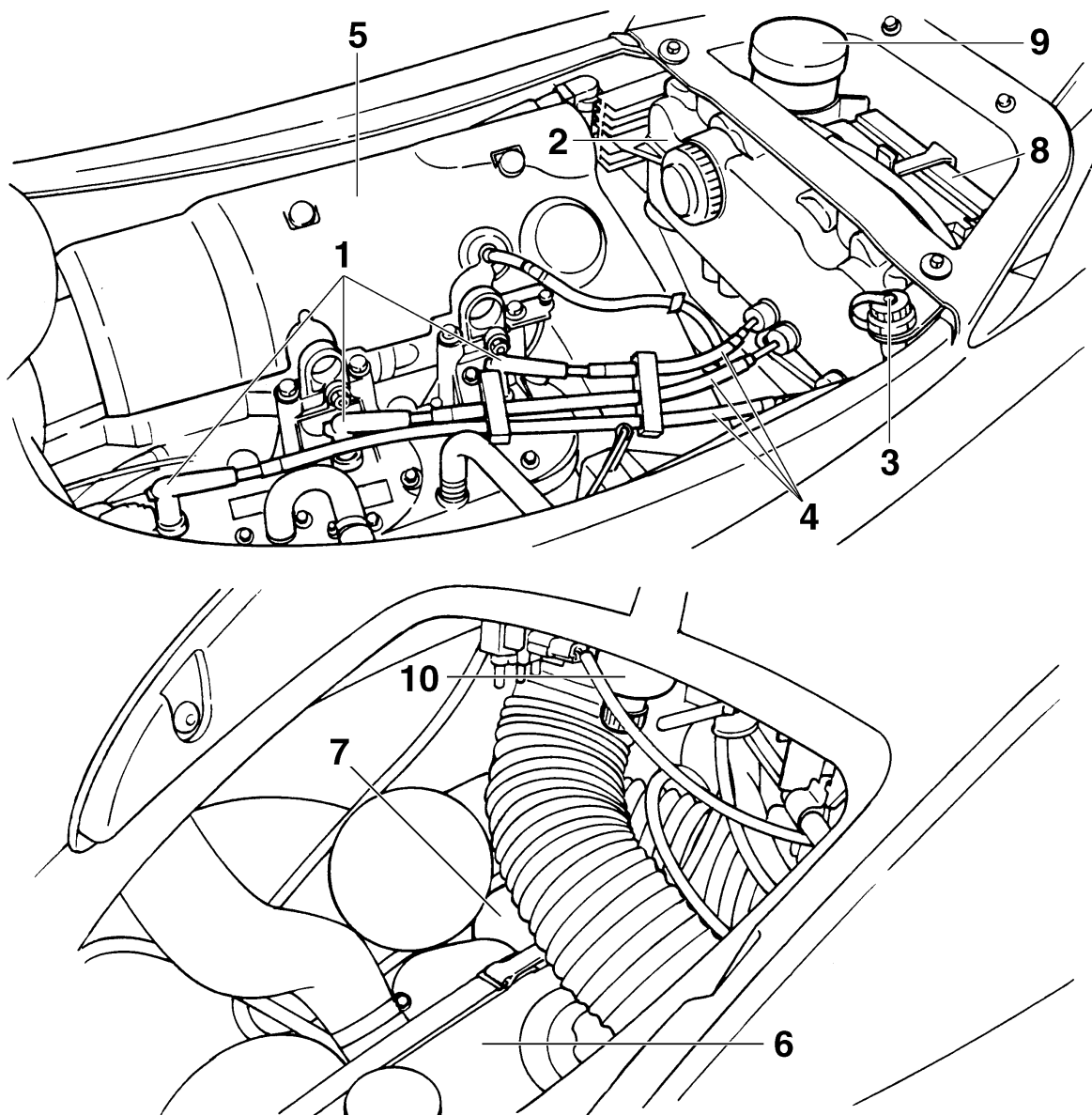
Control system



- 1 Engine shut-off cord (lanyard)
- 2 Engine stop switch
- 3 Clip
- 4 Quick Shift Trim System (QSTS) selector
- 5 Engine shut-off switch
- 6 Start switch
- 7 Multifunction information center
- 8 Throttle lever
- 9 Oil tank filler cap

Features and functions

Engine compartment



- 1 Spark plugs/Spark plug caps
- 2 Electrical box
- 3 Flushing hose connector
- 4 Spark plug lead
- 5 Muffler
- 6 Fuel tank
- 7 Oil tank
- 8 Battery
- 9 Fire extinguisher container
- 10 Water separator

Features and functions

EJU31020

Operation of controls and other functions

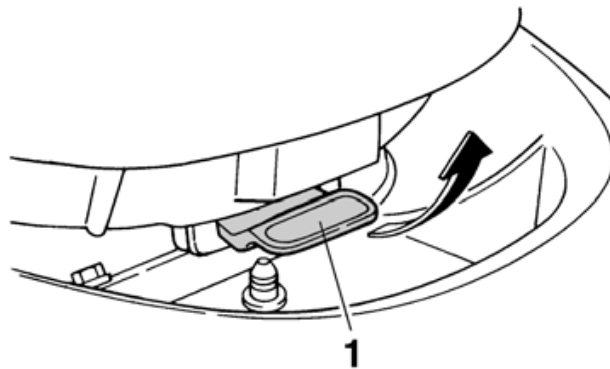
EJU31031

Seat

There is a seat latch at the rear of the seat to remove the seat.

To remove the seat:

Pull the seat latch up, and then pull the seat off.



1 Seat latch

To install the seat:

Insert the projection on the front of the seat into the stay on the deck, and then push the

rear of the seat down to lock it in place securely.



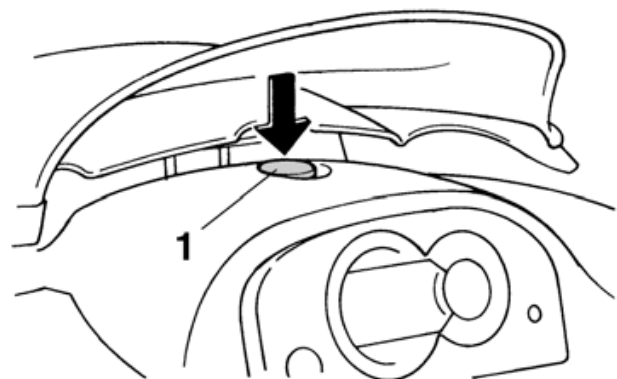
NOTE:

Make sure that the seat is securely installed before operating the watercraft.

EJU31061

Hood

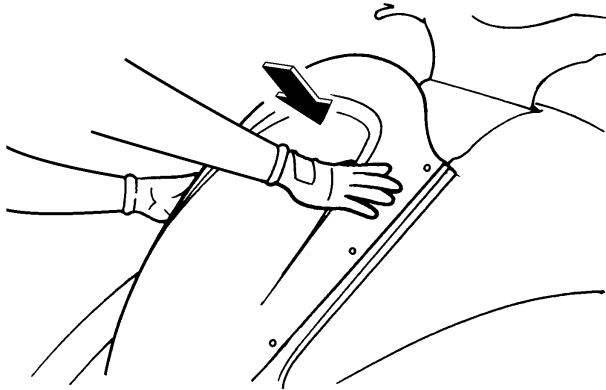
To open the hood, push the hood latch down, and then lift up the hood.



1 Hood latch

Features and functions

To close the hood, push the hood down to lock it in place.



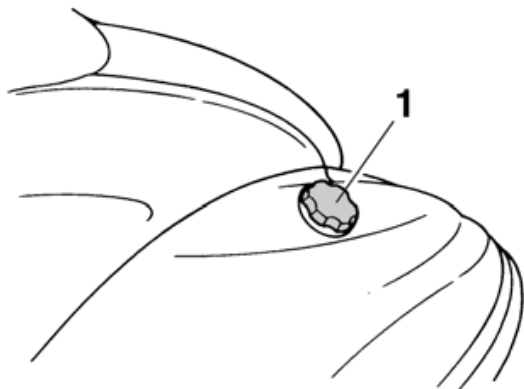
NOTE:

Make sure that the hood is securely closed before operating the watercraft.

EJU31090

Fuel tank filler cap

To remove the fuel tank filler cap, turn it counterclockwise.



1 Fuel tank filler cap

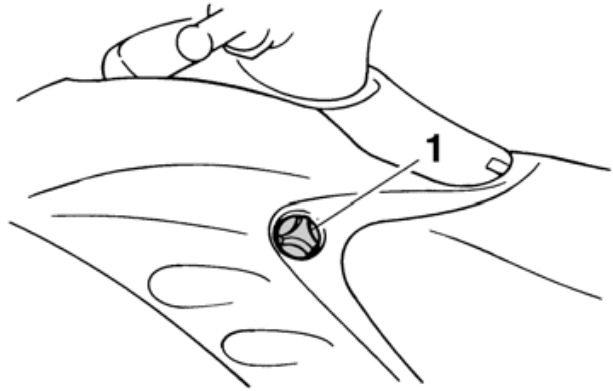
NOTE:

Make sure that the fuel tank filler cap is securely closed before operating the watercraft.

EJU31100

Oil tank filler cap

To remove the oil tank filler cap, turn it counterclockwise.



1 Oil tank filler cap

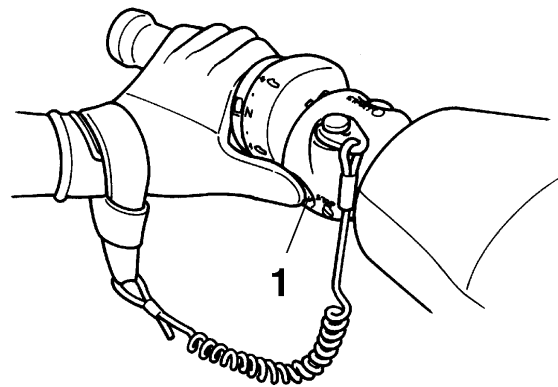
NOTE:

Make sure that the oil tank filler cap is securely closed before operating the watercraft.

EJU31150

Engine stop switch

Push the engine stop switch (red button) to stop the engine normally.



1 Engine stop switch

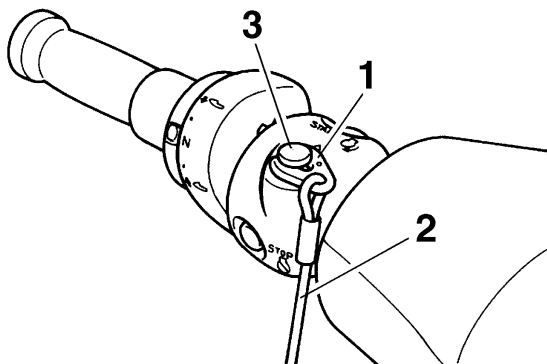
EJU31160

Engine shut-off switch

Insert the clip, on the end of the engine shut-off cord, under the engine shut-off switch (black button). The engine will stop automatically when the clip is removed from the

Features and functions

switch, such as if the operator falls off the watercraft.

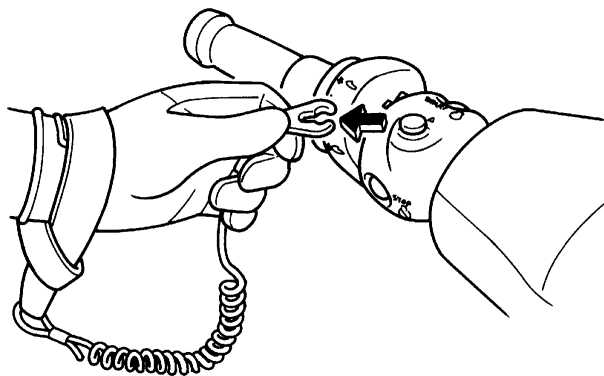


- 1 Clip
- 2 Engine shut-off cord
- 3 Engine shut-off switch

EWJ00010

WARNING

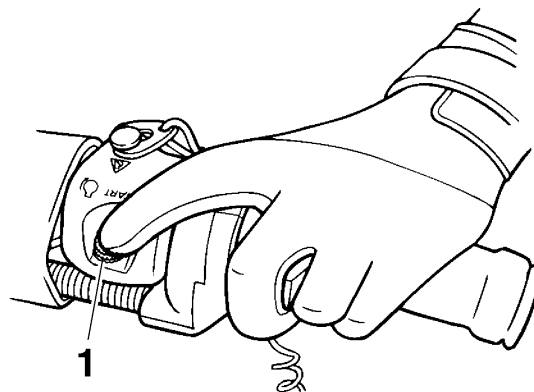
- Always attach the engine shut-off cord to your left wrist and the clip to the engine shut-off switch **BEFORE** starting the engine.
- To prevent accidental starting of the engine or unauthorized use by children or others, always remove the clip from the engine shut-off switch when the engine is not running.



EJU31180

Start switch

Push the start switch (green button) to start the engine.



- 1 Start switch

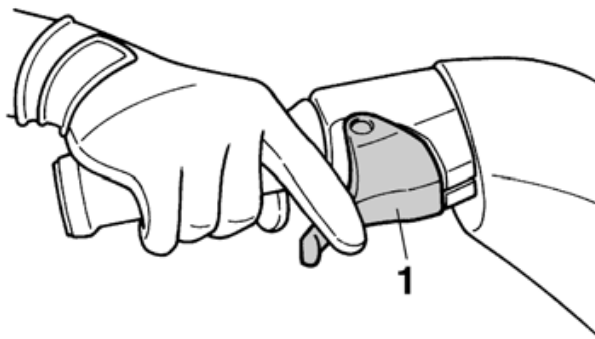
NOTE:

The engine will not start when the clip is removed from the engine shut-off switch or if the throttle lever is squeezed.

EJU31210

Throttle lever

Squeeze the throttle lever to increase engine speed.



- 1 Throttle lever

Release the throttle lever to decrease engine speed or to return it to the idle position.

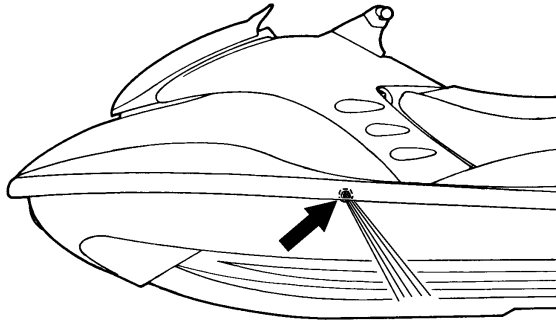
EJU31231

Cooling water pilot outlets

This watercraft is equipped with cooling water pilot outlets.

Features and functions

When the engine is running, cooling water is circulated in the engine, and then it is discharged from the pilot outlets.



To check for proper operation of the cooling system, check that water is being discharged from the pilot outlets. If water is not being discharged from the outlets, cooling water may not be circulating in the engine. When this occurs, stop the engine and check for the cause. (See pages 35 and 83 for more information.)

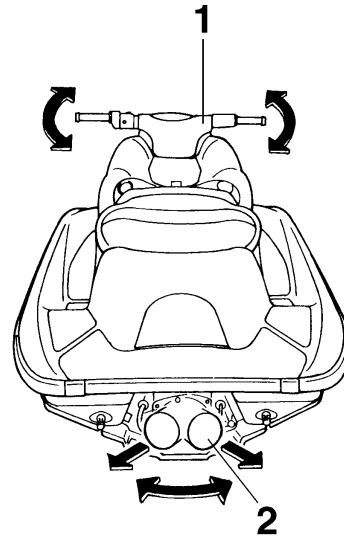
NOTE:

If the cooling water passages are dry, it will take about 20 seconds for the water to reach the outlets after the engine is started.

EJU31260

Steering system

Your watercraft can be steered by turning the handlebars in the direction you wish to travel.



- 1 Handlebar
- 2 Jet thrust nozzle

When the handlebars are turned, the angle of the jet thrust nozzle is changed, and the direction of the watercraft is changed accordingly. Since the strength of the jet thrust determines the speed and degree of a turn, throttle must always be applied when attempting a turn, except at trolling speed.

This model is equipped with the Yamaha Engine Management System (YEMS) that includes an off-throttle steering (OTS) system. It will activate at planing speeds should you attempt to steer the watercraft after releasing the throttle lever. The OTS system assists in turning by continuing to supply some thrust while the watercraft is decelerating, but you can turn more sharply if you apply throttle while turning the handlebars.

The OTS system does not function below planing speeds or when the engine is off. Once the engine slows down, the watercraft will no longer turn in response to handlebar in-

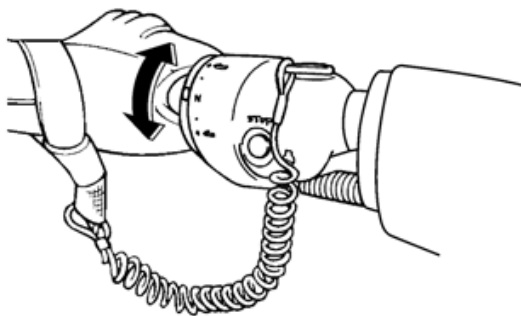
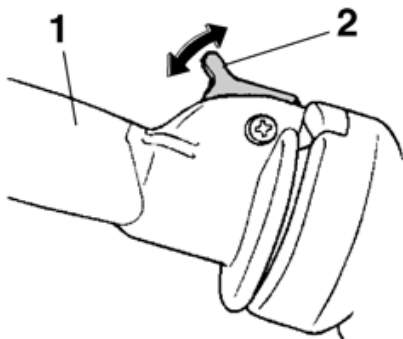
Features and functions

put until you apply throttle again or you reach trolling speed.

EJU31311

Quick Shift Trim System (QSTS) selector

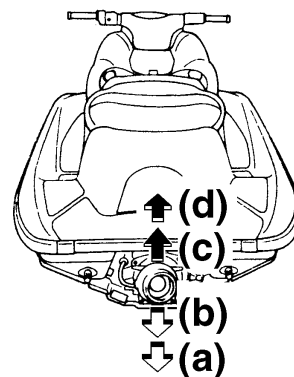
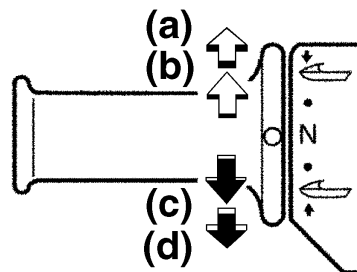
The QSTS selector is located at the left handlebar grip and is used to adjust the trim angle of the watercraft.



- 1 Quick Shift Trim System (QSTS) selector
- 2 QSTS selector lock lever

Operating the QSTS selector changes the angle of the jet thrust nozzle vertically. This changes the trim angle of the watercraft.

There are 5 positions: 2 bow-down positions (a) and (b), neutral "N", and 2 bow-up positions (c) and (d).



To change the trim angle:

- (1) Reduce engine speed to less than 3000 r/min.
- (2) Squeeze the QSTS selector lock lever, and then turn the QSTS selector to the desired position.
- (3) Release the lock lever to lock the QSTS selector.

ECJ00011

CAUTION:

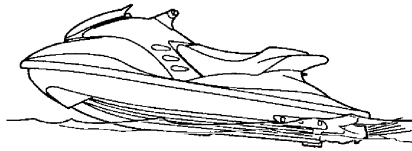
Do not turn the QSTS selector while operating the watercraft at an engine speed of 3000 r/min or more, otherwise damage could occur to the QSTS.

The neutral "N" position will provide good performance for most operating conditions.

Features and functions

To enhance particular types of performance, select bow down or bow up.

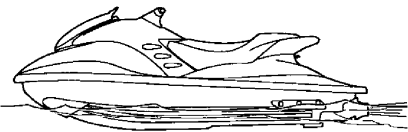
(d) ↑



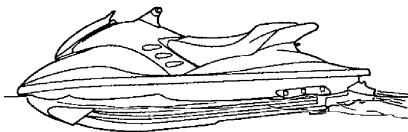
(c) ↑

N

(b) ↓



(a) ↓



EJU31330

Bow down

Turn the QSTS selector to (a) or (b) and the bow will go down while the watercraft is on plane.

Bow down puts more of the bow in the water. This gives the watercraft more “hook”, which enhances turning performance. This position will also help the watercraft get up on plane more quickly.

At higher speeds, however, the watercraft will have a greater tendency to “bow steer” and follow waves and wakes in the water. Fuel economy and maximum speed are also reduced.

EJU31340

Bow up

Turn the QSTS selector to (c) or (d) and the bow will go up while the watercraft is on plane.

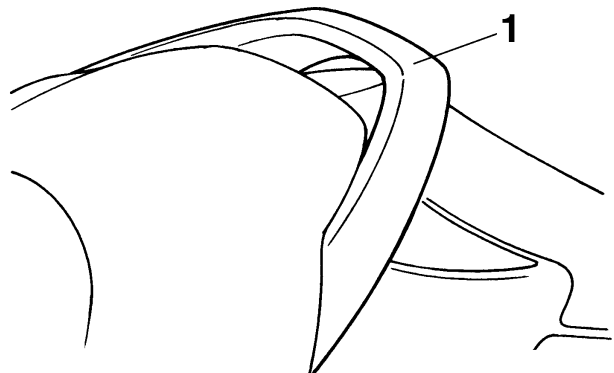
Bow up puts less of the bow in the water. There is less water resistance, so straight-ahead acceleration when on plane and top speed are enhanced.

In some conditions, however, the watercraft may tend to “porpoise” (hop in the water). If the watercraft is porpoising, select neutral or bow down.

EJU31350

Handgrip

The handgrip provides a handhold for boarding the watercraft.



1 Handgrip

EWJ00020

WARNING

Do not use the handgrip to lift the watercraft. The watercraft could fall, which could result in severe injury.

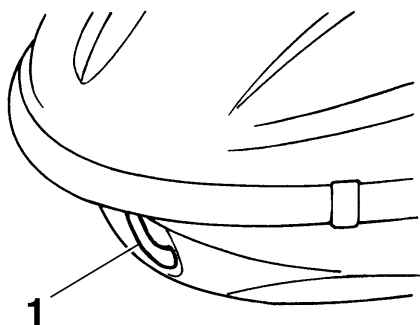
EJU34870

Bow eye

The bow eye is located at the bow of the watercraft.

Features and functions

The bow eye is used to attach a rope to the watercraft when transporting, mooring, or towing it in an emergency.



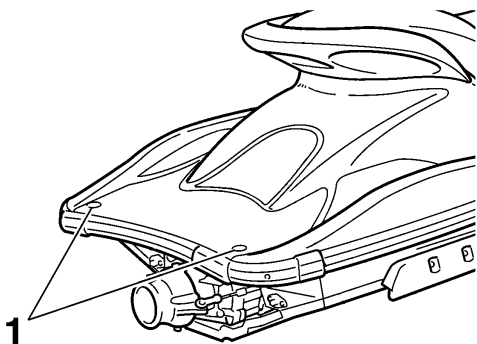
1 Bow eye

EJU36020

Stern rope holes

The stern rope holes are located at the stern of the watercraft.

The stern rope holes are used to attach a rope to the watercraft when transporting or mooring it.



1 Stern rope hole

EJU31370

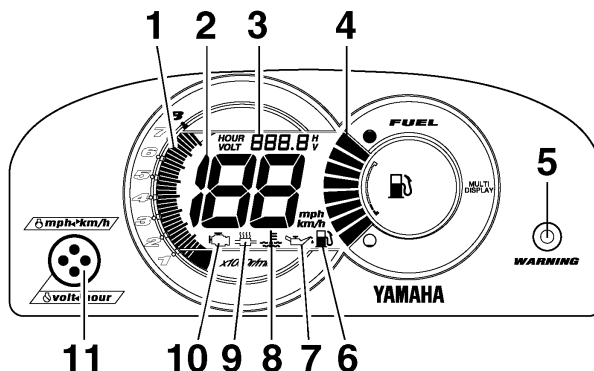
Yamaha Engine Management System (YEMS)

This model is equipped with an integrated, computerized management system that controls and adjusts ignition timing, fuel injection, engine diagnostics, and the off-throttle steering (OTS) system.

EJU31422

Multifunction information center

This meter contains the following functions for help and convenience in operating the watercraft.



- 1 Tachometer
- 2 Speedometer
- 3 Hour meter/voltmeter
- 4 Fuel level meter
- 5 "WARNING" light
- 6 Fuel level warning indicator
- 7 Oil level warning indicator
- 8 Engine overheat warning indicator
- 9 Exhaust temperature warning indicator
- 10 Check engine warning indicator
- 11 Select button

ECJ00062

CAUTION:

- Do not run the engine for more than 15 seconds without supplying water or over 4000 r/min when checking the operation of the meter on land, otherwise the engine could overheat and the catalytic converter could be seriously damaged.
- Use the specified resistor-type spark plugs and caps, otherwise the meter may function erratically.

NOTE:

- When the engine is started, all displays light up for a few seconds, the buzzer sounds twice, and then the meter starts to operate normally.

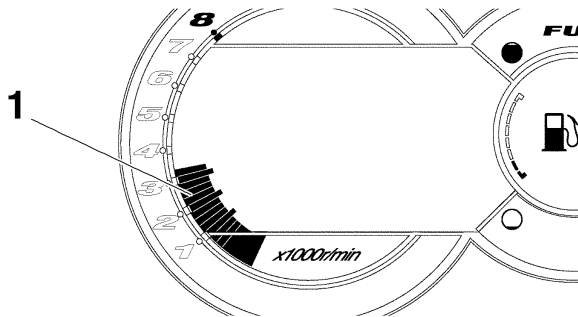
Features and functions

- The current display will continue to operate for 25 seconds after the engine stops.

EJU31461

Tachometer

The engine speed (r/min) is displayed by segments. Each segment indicates a 250 r/min increment.

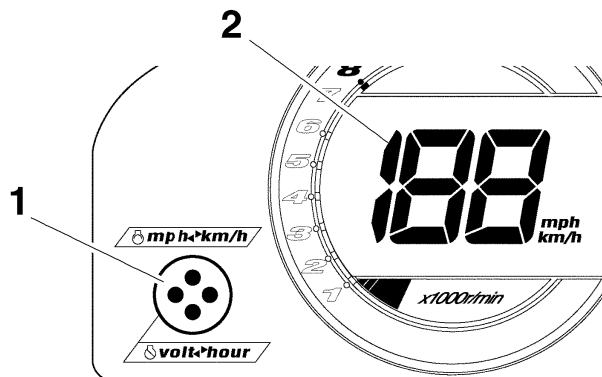


1 Tachometer

EJU31500

Speedometer

The meter shows the watercraft speed against water.



1 Select button
2 Speedometer

NOTE:

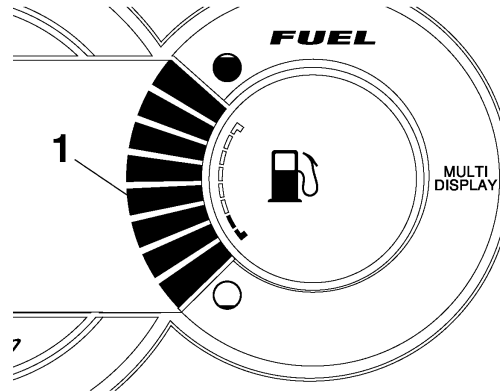
To switch the speedometer display between kilometers and miles, push the select button for at least 1 second, within 10 seconds after the meter is displayed.

EJU31511

Fuel level meter

The fuel level meter is provided for convenient fuel level checking while riding.

The fuel level meter has eight segments which show the amount of fuel remaining in the fuel tank.



1 Fuel level meter

NOTE:

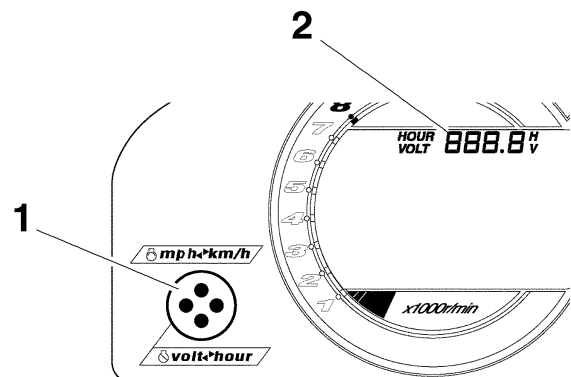
The fuel level is most accurate when the watercraft is sitting level on a trailer or in the water.

EJU31531

Hour meter/voltmeter

NOTE:

To switch the display between the hour meter and the voltmeter, push the select button for at least 1 second after the meter is displayed for more than 10 seconds.



1 Select button
2 Hour meter/voltmeter

Features and functions

Hour meter

The hour meter is provided to make it easy to follow the maintenance schedule.

The meter shows the hours of engine operation that have elapsed since the watercraft was new.

Voltmeter

The voltmeter is provided to display the voltage of the battery.

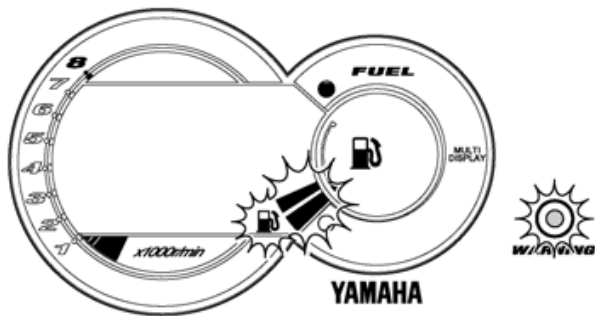
The voltmeter displays 12 volts or more when the battery voltage is within specification.

If the voltage displayed is low, return to shore and, if necessary, have a Yamaha dealer check the charging system and the battery.

EJU31560

Fuel level warning indicator

If the fuel remaining in the fuel tank drops to about 13 L (3.4 US gal, 2.9 Imp gal), the lowest two fuel level segments, the fuel level warning indicator, and the "WARNING" light begin to blink. The buzzer also starts sounding intermittently.



If this occurs, refill the fuel tank as soon as possible.

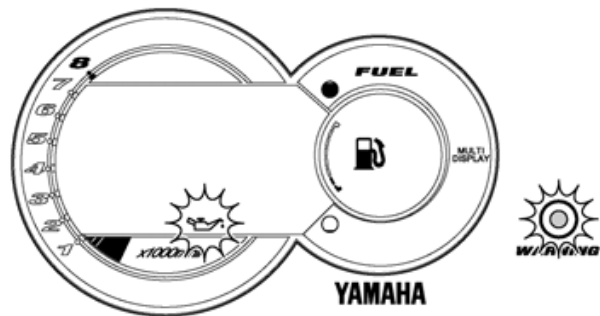
The warning signals will be cleared when the engine is restarted after the fuel tank is refilled.

EJU31570

Oil level warning indicator

If the oil remaining in the oil tank drops to about 1.7 L (0.45 US gal, 0.37 Imp gal) or the oil filter is clogged, the oil level warning indicator and the "WARNING" light begin to blink.

The buzzer also starts sounding intermittently.



If this occurs, refill the oil tank as soon as possible.

The warning signals will be cleared when the engine is restarted after the oil tank is refilled.

NOTE:

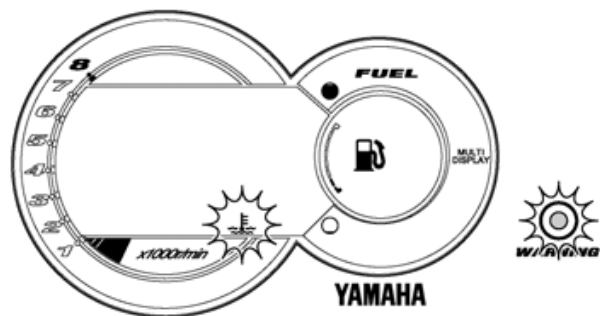
If the oil level warning indicator and the "WARNING" light blink when there is adequate oil in the oil tank, have a Yamaha dealer check the oil filter for dirt and clogs.

EJU31581

Engine overheat warning indicator

This model is equipped with an engine overheat warning system.

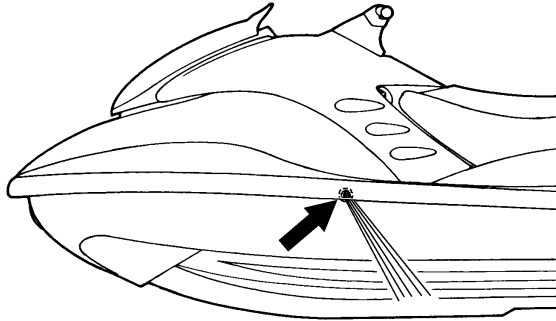
If the engine starts to overheat, the "WARNING" light and the engine overheat warning indicator begin to blink, and the buzzer sounds intermittently.



If this occurs, reduce the engine speed, return to shore, and then check for water discharge

Features and functions

at the cooling water pilot outlet while the engine is running. If there is no discharge of water, shut the engine off, and then check the intake grate and impeller for clogging.

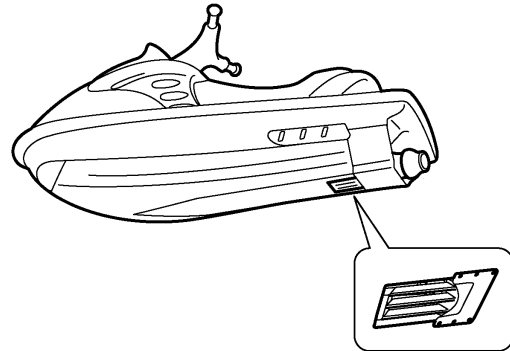
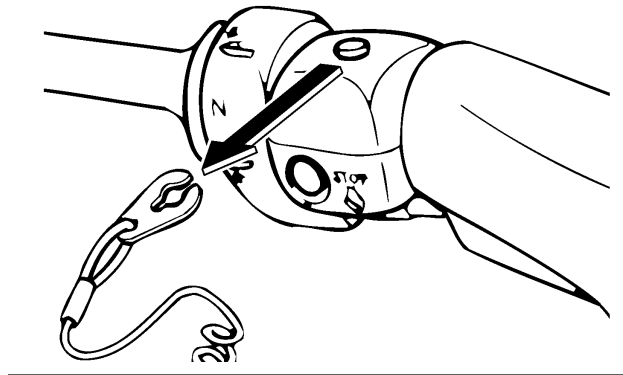


EWJ00050

WARNING

Before attempting to remove weeds or debris from the intake grate or impeller, shut the engine off and remove the clip from the engine shut-off switch. Severe injury or

death could result from coming in contact with the rotating parts of the jet pump.



ECJ00800

CAUTION:

This watercraft is equipped with a catalytic converter.

- If the “WARNING” light, engine overheat warning indicator, and buzzer come on, reduce the engine speed and return to shore. If you ignore these signals, the engine will stop running and cannot be restarted until the exhaust system cools down.
- If you cannot locate and correct the cause of the overheating, consult a Yamaha dealer. Continuing to operate at higher speeds could result in severe engine damage.

If the overheat warning is ignored, engine and exhaust system heat may increase, particularly if the watercraft is operated at higher

Features and functions

speeds. If this occurs, the “WARNING” light and the engine overheat warning indicator come on and the buzzer sounds continuously. In addition, the warning system will cut the ignition to the engine to reduce the risk of severe overheating. The engine cannot be started until it cools down, so it may be necessary to have the watercraft towed back to the shore. (See “Towing the watercraft” on page 85 for towing procedures.)

The warning signals will be cleared when the engine is restarted after it has cooled down.

NOTE:

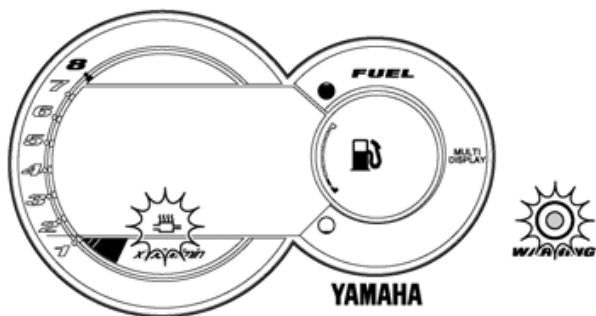
- Press the select button on the multifunction information center to stop the buzzer.
- If multiple warnings occur at the same time, their priority is as follows:
 - (1) Final engine overheat warning
 - (2) Fuel level warning
 - (3) Oil level warning
 - (4) Initial engine overheat warning
 - (5) Exhaust temperature warning
 - (6) Check engine warning

EJU31612

Exhaust temperature warning indicator

This model is equipped with an exhaust temperature warning system.

If the exhaust temperature becomes too hot, the “WARNING” light and the exhaust temperature warning indicator begin to blink, and the buzzer sounds intermittently.



If this occurs, reduce the engine speed and return to shore to allow the exhaust system to cool down.

EWJ00830

WARNING

Do not touch the hot muffler or catalytic converter during or immediately after engine operation; they can cause serious burns. In addition, the catalytic converter becomes hotter after the engine stops before cooling down.

ECJ00810

CAUTION:

This model is equipped with a catalytic converter.

- If the “WARNING” light, exhaust temperature warning indicator, and buzzer come on, reduce the engine speed (below 4000 r/min) and return to shore.
- If you cannot locate and correct the cause of the overheating, consult a Yamaha dealer. Continuing to operate at higher speeds could result in severe engine damage.

The warning signals will be cleared when the engine is restarted after it has cooled down.

NOTE:

Press the select button on the multifunction information center to stop the buzzer.

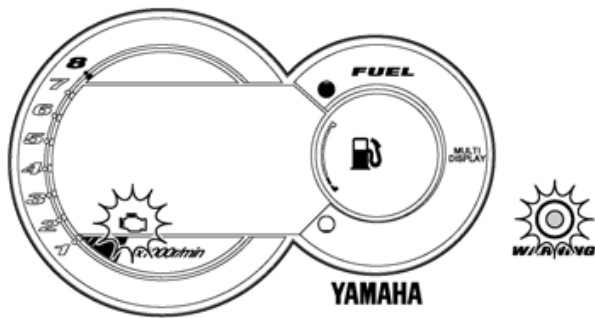
EJU31630

Check engine warning indicator

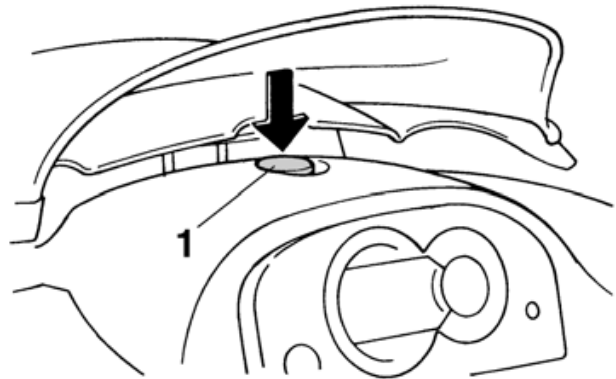
If a sensor malfunction or a short circuit is detected, the “WARNING” light and the check

Features and functions

engine warning indicator begin to blink, and the buzzer sounds intermittently.



To open the front storage compartment, push the hood latch down, and then lift the hood.



1 Hood latch

If this occurs, reduce the engine speed, return to shore, and have a Yamaha dealer check the engine.

EJU31680

Storage compartments

A front storage compartment and a glove compartment are provided.

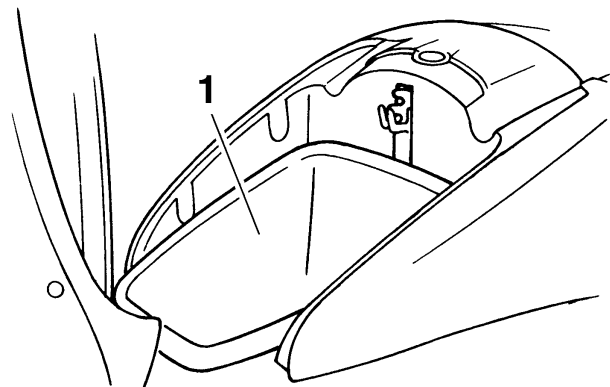
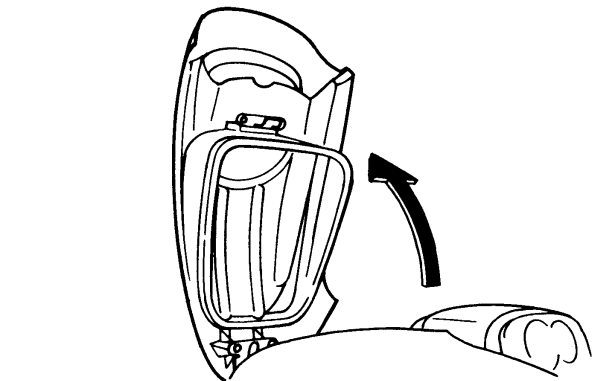
NOTE:

- Make sure that the storage compartments are securely closed before operating the watercraft.
- The storage compartments are not designed to be waterproof. If you carry objects that must be kept dry, such as the manuals, put them in a waterproof bag.

EJU31701

Front storage compartment

The front storage compartment is located at the bow.



1 Front storage compartment

Front storage compartment:

Capacity:

16.0 L (4.2 US gal) (3.5 Imp.gal)

Load limit:

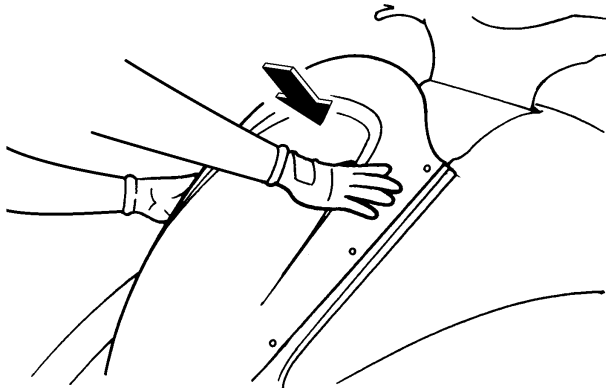
5.0 kg (11 lb)

Features and functions

NOTE:

The front storage compartment can be removed to access the engine compartment.

To close the front storage compartment, push down on the rear of the hood until it latches securely.



NOTE:

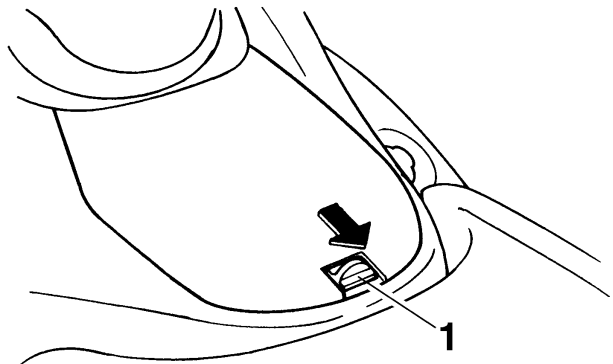
Make sure that the front storage compartment is securely closed before operating the watercraft.

EJU31731

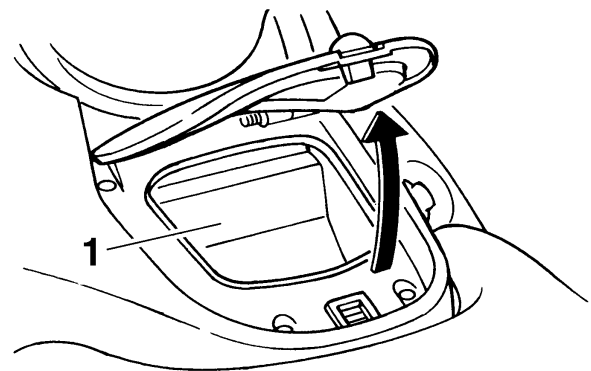
Glove compartment

The glove compartment is located in front of the seat.

To open the glove compartment, slide the glove compartment latch toward you, and then lift up the lid.



1 Glove compartment latch



1 Glove compartment

Glove compartment:

Capacity:

2.0 L (0.5 US gal) (0.4 Imp.gal)

Load limit:

1.0 kg (2 lb)

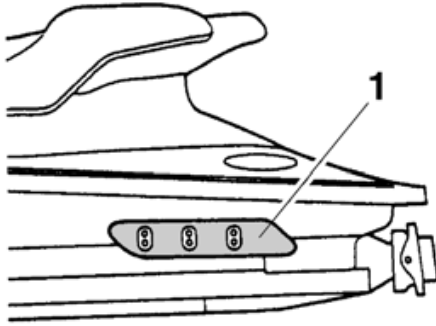
To close the glove compartment, push the lid down until it latches securely.

EJU31771

Yamaha Adjustable Sponsons (YAS)

The positions of the Yamaha Adjustable Sponsons are adjustable to allow the operator to enhance either straight-line performance or turning performance according to preference

and the operating conditions. (See page 77 for adjustment procedures.)



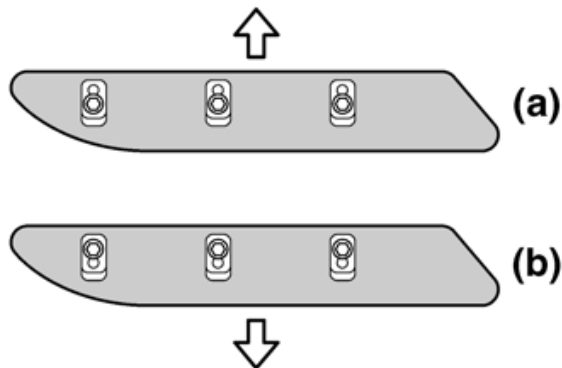
1 Yamaha Adjustable Sponson (YAS)

Up position (a):

There is less water resistance in this position, so straight-ahead acceleration when on plane and top speed are enhanced.

Down position (b):

This position gives the watercraft more “hook”, which enhances turning performance.



Operation

EJU31800

Fuel and oil

This engine uses Yamaha's oil injection system, which provides superior lubrication by ensuring the proper fuel-to-oil ratio for all operating conditions. No fuel premixing is necessary, except during the engine break-in period. Simply pour gasoline into the fuel tank and oil into the oil tank.

The engine utilizes an electronic fuel injection system to deliver the optimal air-fuel ratio required by the engine. By ensuring the optimal combustion conditions, this system is able to increase startability and improve fuel economy.

EJU31851

Gasoline

EWJ00290



WARNING

GASOLINE AND ITS VAPORS ARE HIGHLY FLAMMABLE AND EXPLOSIVE!

- Do not smoke when refueling, and keep away from sparks, flames, and other sources of ignition.
- Stop the engine before refueling.
- Refuel in a well-ventilated area with the watercraft in a horizontal position.
- Do not stand or sit on the watercraft while refueling in case of fire.
- Take care not to spill gasoline. If gasoline spills, wipe it up immediately with dry rags. Always properly dispose of gasoline-soaked rags.
- Avoid overfilling the fuel tank. Stop filling when the fuel level just reaches the bottom of the filler tube. Do not fill up the filler tube because fuel expands as it warms up and could overflow. If temporarily leaving the watercraft with a full fuel tank, do not leave it in direct sunlight. Leave it in a well-ventilated area

with the watercraft in a horizontal position.

- Tighten the fuel tank filler cap securely after refueling.
- If you should swallow some gasoline, inhale a lot of gasoline vapor, or get gasoline in your eyes, get immediate medical attention.
- If any gasoline spills on your skin or clothing, immediately wash the affected area with soap and water and change your clothes.

ECJ00320

CAUTION:

- Do not use leaded gasoline. Leaded gasoline can seriously damage the catalytic converter.
- Use only fresh gasoline that has been stored in clean containers.

Recommended gasoline:

Regular unleaded gasoline with a minimum octane rating of

$86 \text{ (Pump octane number)} = (R + M)/2$

90 (Research octane number)

EJU31860

Gasohol

There are two types of gasohol: gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if ethanol content does not exceed 10% and the fuel meets the minimum octane ratings.

Gasohol containing methanol is not recommended by Yamaha because it can cause fuel system damage and engine performance problems.

EJU31880

2-stroke engine oil

ECJ00270

CAUTION:

Use only YAMALUBE 2-W engine oil, otherwise the catalytic converter and other engine components could be seriously damaged.

Recommended engine oil:
YAMALUBE 2-W

NOTE:

YAMALUBE 2-W engine oil is developed for this watercraft and available from a Yamaha dealer.

EJU31920

Filling the fuel tank

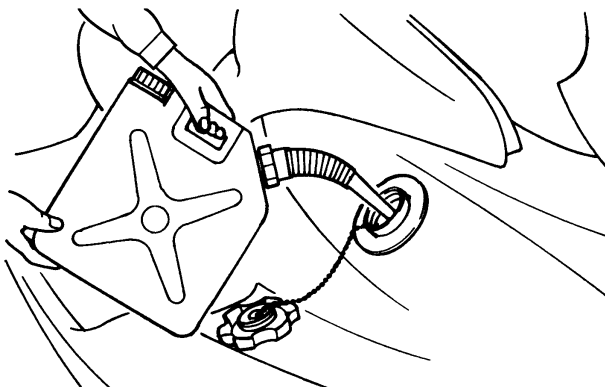
ECJ00290

CAUTION:

Be careful when refueling. Avoid getting water and other contaminants in the fuel tank. Contaminated fuel can cause poor running and engine damage.

- (1) Open the hood, remove the front storage compartment, and then check the fuel level. (See "Front storage compartment" on page 38 for more information.)
- (2) Remove the fuel tank filler cap, and then slowly add fuel to the fuel tank. Stop filling

when the fuel level just reaches the bottom of the filler tube.



- (3) Install the fuel tank filler cap and front storage compartment, and then close the hood.

NOTE:

Do not fill up the filler tube because fuel expands as it warms up and could overflow.

Fuel tank capacity:
60 L (15.9 US gal) (13.2 Imp.gal)

EJU31961

Filling the oil tank

EWJ00420



WARNING

- Do not add gasoline to the oil tank. Fire or explosion could result.
- Oil in the bilge is a serious fire hazard. Wipe up any spilled oil immediately.

ECJ00300

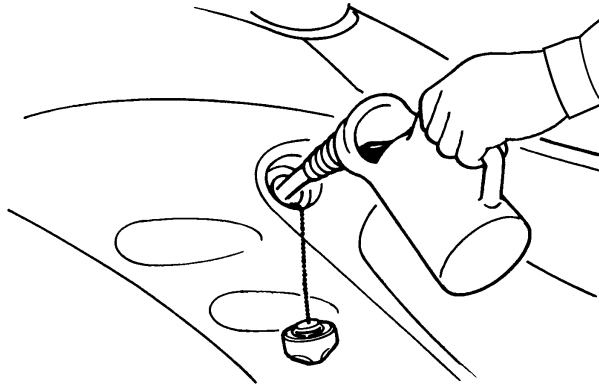
CAUTION:

Do not allow the oil tank to become completely empty. If the oil tank becomes empty, the oil pump must be bled to ensure proper oil flow, otherwise engine damage could result. If necessary, have a Yamaha dealer bleed the oil pump.

- (1) Remove the seat to view the oil level. (See page 27 for seat removal and installation procedures.)

Operation

- (2) Remove the oil tank filler cap, and then very slowly add engine oil to the oil tank. Stop filling when the oil level just reaches the top of the oil tank.



- (3) Install the oil tank filler cap.

Oil tank capacity: 5.5 L (1.45 US gal) (1.21 Imp.gal)
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EJU31980

Pre-operation checks

EJU31990

Pre-operation check list

Before operating this watercraft, perform the checks in the following check list. See the accompanying text in this chapter for details on how to perform the checks.

EWJ00410



WARNING

If any item in the pre-operation check list is not working properly, have it inspected and repaired before operating the watercraft, otherwise an accident could occur.

ITEM	ROUTINE	PAGE
BEFORE LAUNCH OR OPERATION		
Engine compartment	Remove the seat and front storage compartment to ventilate the engine compartment. Check for fuel vapors and loose electrical connections.	45
Bilge	Check for water and fuel and drain if necessary.	45
Stern drain plugs	Check for proper installation.	46
Throttle lever	Check that the throttle lever springs back smoothly.	48
Steering system	Check for proper operation.	48
QSTS	Check for proper operation.	48
Fuel and oil	Check the fuel and oil levels and replenish if necessary. Check the hoses and tanks for leakage.	45
Water separator	Check for water and drain if necessary.	45
Battery	Check the electrolyte level and battery condition.	46
Hood	Check that the hood is securely closed.	27
Seat	Check that the seat is securely installed.	27
Hull and deck	Check the hull and deck for cracks and other damage.	45
Jet intake	Check for debris and remove if necessary.	49
Fire extinguisher	Check the condition and replace if necessary.	47
Engine shut-off cord	Check the condition and replace if frayed or broken.	50
Switches	Check the start switch, engine stop switch, and engine shut-off switch for proper operation.	50
AFTER LAUNCH		
Cooling water pilot outlet	Check that water is discharged while the engine is running and the watercraft is in the water.	50
Multifunction information center	Check for warning indications and proper operation.	50

NOTE:

Pre-operation checks should be made each time the watercraft is used. These checks can be completed in a short time. It is worth the time spent to ensure safety and reliability.

Operation

EJU32280

Pre-operation check points

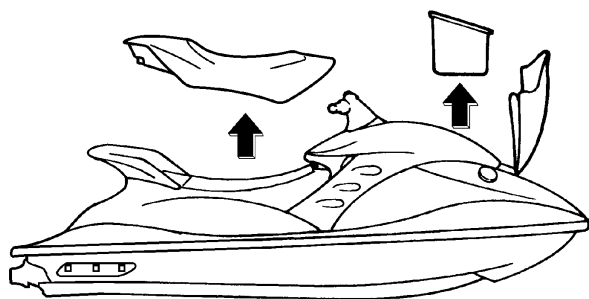
EJU32300

Engine compartment

Ventilate the engine compartment before each use.

To ventilate the engine compartment, remove the seat and front storage compartment. (See “Seat” on page 27 and “Front storage compartment” on page 38 for more information.) Leave the engine compartment open for a few minutes to allow any fuel vapors to escape.

While the engine compartment is open, check for loose electrical connections.



EWJ00460



WARNING

Failure to ventilate the engine compartment could result in a fire or explosion. Do not start the engine if there is a fuel leak or a loose electrical connection.

EJU32350

Hull and deck

Check the hull and deck for cracks and other damage. If any damage is found, have a Yamaha dealer repair the watercraft.

EJU32371

Fuel and oil systems

Check the fuel system for leakage, cracks, and malfunctions before each use. (See page 72 for check points and correct procedures.)

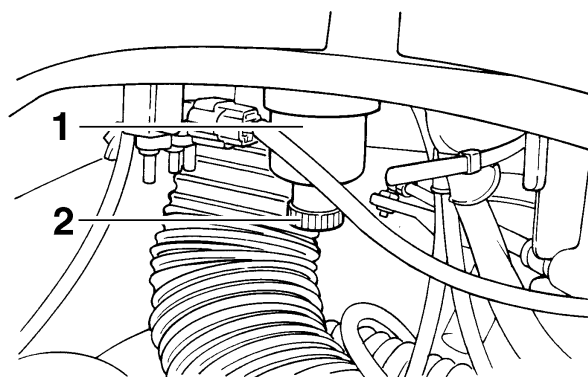
- (1) Remove the fuel tank filler cap to release any pressure that might have built up in the fuel tank.

- (2) Remove the seat and front storage compartment. (See “Seat” on page 27 and “Front storage compartment” on page 38 for more information.)
- (3) Check the fuel and oil levels in the tanks and replenish if necessary. (See page 42 for refueling procedures and page 42 for oil tank filling procedures.)
- (4) Install the fuel tank filler cap, seat, and front storage compartment.

EJU32420

Water separator

Check the water separator for water. The water separator retains any water that may have entered through the fuel tank breather hose if the watercraft was capsized. Normally, the water separator is empty.



- 1 Water separator
- 2 Drain screw

If water remains in the water separator, drain it by removing the drain screw. Place a drain pan under the water separator to catch the draining water or use a dry cloth to soak up any water that could spill into the watercraft. If any water spills into the watercraft, be sure to wipe it up with a dry cloth. Also, be sure to install the drain screw after draining the water separator.

EJU32440

Bilge

Check the bilge for moisture and fuel residue. This watercraft is equipped with a conventional jet vacuum bilge draining system and an

electric bilge draining system. The electric bilge draining system is operated when the engine is running. When excess water reaches the water inlet of the electric bilge pump, the water is discharged via the exhaust passage from the jet thrust nozzle.

A small quantity of water will remain in the bilge and should be drained manually. To drain any residual water, beach the watercraft and perform the following procedure.

To drain water from the bilge:

- (1) Remove the stern drain plugs.
- (2) Raise the bow of the watercraft until the water drains.
- (3) After the water has drained, wipe the bilge with dry rags to make sure that it is thoroughly dry.
- (4) Install the stern drain plugs.

ECJ00360

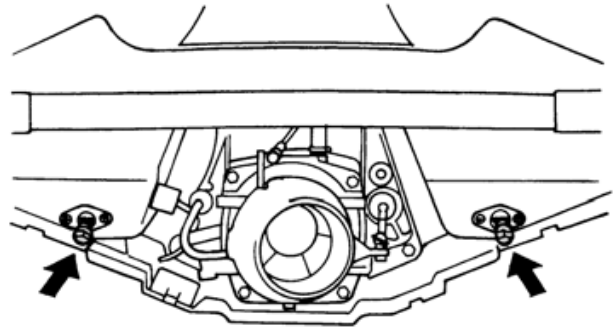
CAUTION:

- Before installing the stern drain plugs, clean the drain plug threads to remove any foreign materials, such as dirt or sand. Otherwise, the stern drain plugs could be damaged, allowing water to enter the engine compartment.
- Make sure that the stern drain plugs are tightened securely before launching the watercraft. Otherwise, water may flood the engine compartment and cause the watercraft to submerge.

EJU32470

Stern drain plugs

Check the stern drain plugs for proper installation.



ECJ00360

CAUTION:

- Before installing the stern drain plugs, clean the drain plug threads to remove any foreign materials, such as dirt or sand. Otherwise, the stern drain plugs could be damaged, allowing water to enter the engine compartment.
- Make sure that the stern drain plugs are tightened securely before launching the watercraft. Otherwise, water may flood the engine compartment and cause the watercraft to submerge.

EJU32481

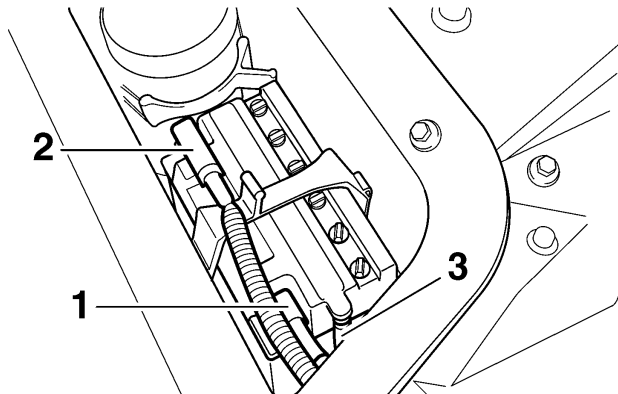
Battery

Check the battery electrolyte level and check that the battery has sufficient power to start the engine easily. Recharge the battery or replace it if it is not in good condition. (See page 75 for battery recharging procedures.)

Also, check that the battery leads are tightened securely and that there is no corrosion on the battery terminals. Check that the

Operation

breather hose is securely connected to the battery and that it is not pinched.



- 1 Positive (+) battery terminal: Red lead
- 2 Negative (-) battery terminal: Black lead
- 3 Breather hose

EWJ00450

WARNING

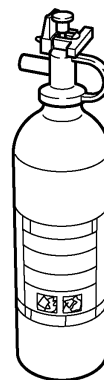
- **The battery must always be fully charged and in good condition. Loss of battery power may leave you stranded. Never operate the watercraft if the battery does not have sufficient power to start the engine or if it shows any other signs of decreased power.**
- **Be sure to connect the breather hose to the battery. Fire or explosion could result if the breather hose is damaged, obstructed, or not connected properly.**

Make sure that the battery is securely held in place.

EJU32510

Fire extinguisher

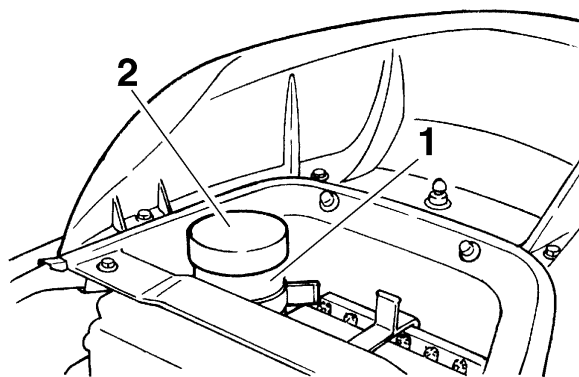
Check that there is a full fire extinguisher on board.



The fire extinguisher container is located in the battery compartment under the seat.

To open the fire extinguisher container, turn the cap counterclockwise.

To close the fire extinguisher container, insert the fire extinguisher into the container, and then install the cap and tighten it securely.



- 1 Fire extinguisher container
- 2 Fire extinguisher container cap

NOTE:

- To check the fire extinguisher, see the instructions supplied by the fire extinguisher manufacturer. Always keep the fire extinguisher in the fire extinguisher container.
- Always carry a fire extinguisher on board. A fire extinguisher is not standard equipment with this watercraft. If you do not have one,

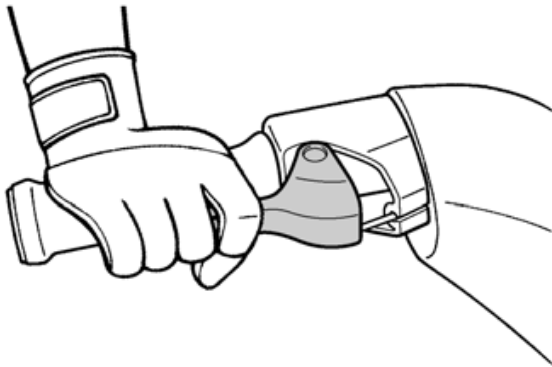
contact a Yamaha dealer or a fire extinguisher dealer to obtain one meeting the proper specifications.

Fire extinguisher:
Classification:
B-1
Capacity:
2 lb or more

EJU32590

Throttle lever

Check the throttle lever for proper operation. Squeeze and release the throttle lever several times to make sure that there is no hesitation in its travel. It should be smooth over the complete range and spring back to the idle position when released.



EWJ00490

WARNING

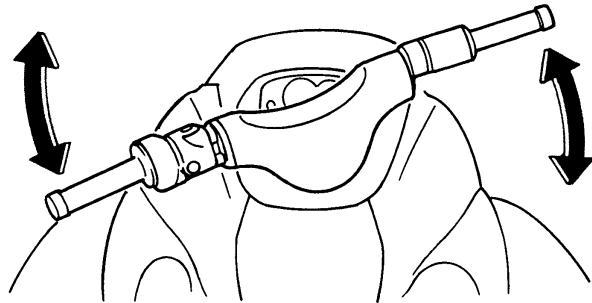
Before starting the engine, always check the operation of the throttle lever.

EJU32600

Steering system

Check the handlebars for looseness. Turn the handlebars as far as possible to the right and left to make sure that operation is smooth and unrestricted throughout the whole range. Also, make sure that the jet thrust nozzle moves as the handlebars are

turned, and that there is no free play between the handlebars and the jet thrust nozzle.

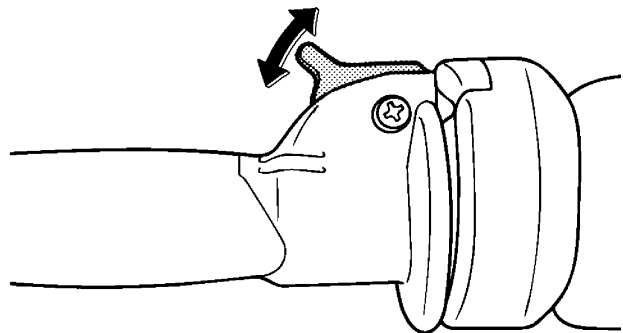


EJU32641

Quick Shift Trim System (QSTS)

Operate the QSTS selector lock lever and the QSTS selector several times to check that they operate properly.

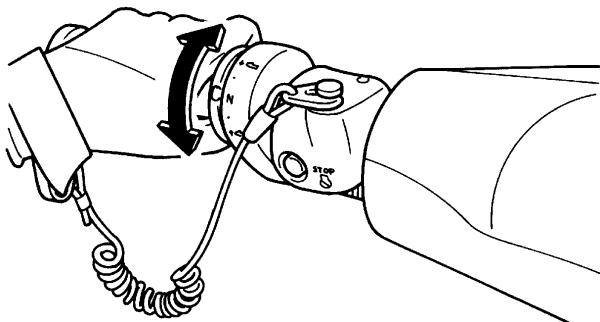
- (1) Squeeze the QSTS selector lock lever and check that it returns smoothly to its original position when released.



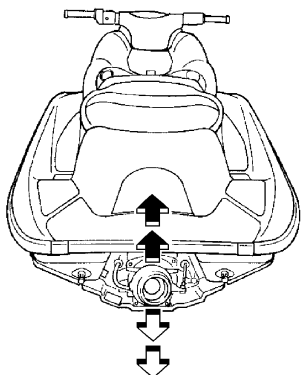
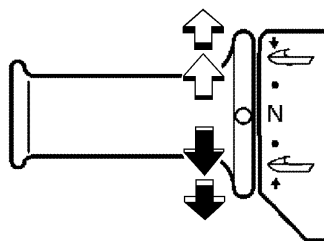
- (2) Check that the QSTS selector turns smoothly when the lever is squeezed and

Operation

check that the selector locks in place at each position when the lever is released.



- (3) Check that the angle of the jet thrust nozzle changes when the QSTS selector is shifted from neutral to bow up or bow down.



If the mechanism does not work properly, have a Yamaha dealer service it.

EJU32650

Jet intake

Carefully check the jet intake for weeds, debris, or anything else that might restrict the intake of water. If the jet intake is clogged,

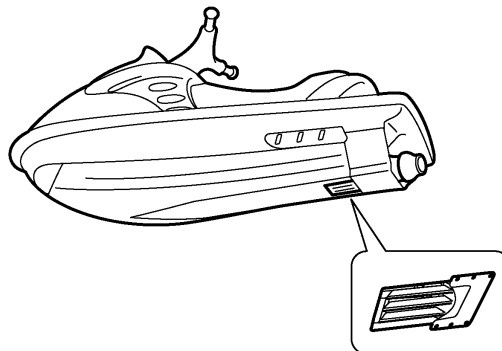
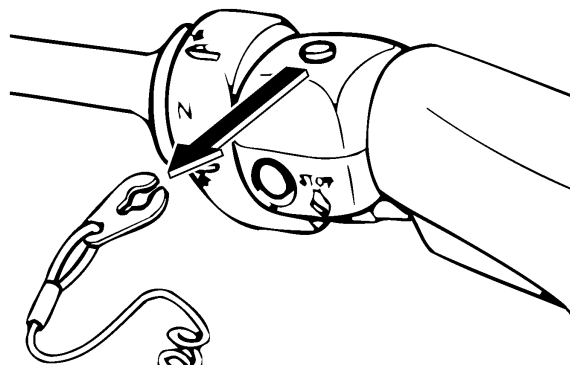
cavitation could occur, reducing jet thrust, and possibly damaging the jet pump.

In some cases, the engine may overheat because of lack of cooling water, and damage to the engine could result. Cooling water is fed to the engine by the jet pump. (See page 83 for jet intake cleaning procedures.)

EWJ00470

! WARNING

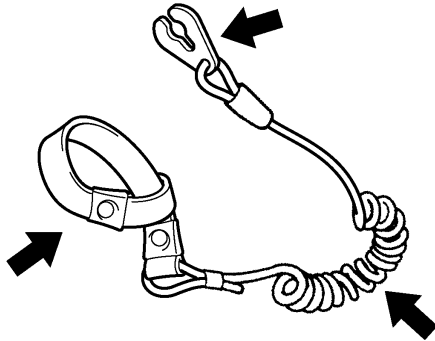
- Keep away from the intake grate while the engine is on. Items such as long hair, loose clothing, or PFD straps can become entangled in moving parts, resulting in severe injury or drowning.
- Stop the engine and remove the clip from the engine shut-off switch before removing any debris or weeds, which may have collected around the jet intake.



EJU32660

Engine shut-off cord

Check that the engine shut-off cord is not frayed or broken. If the cord is damaged, replace it; never try to repair it or tie it together.



EJU32670

Switches

ECJ00410

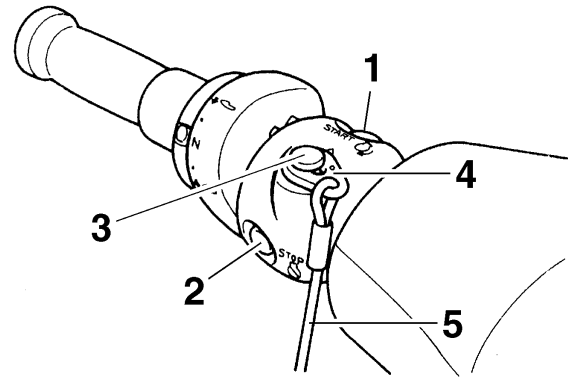
CAUTION:

Do not run the engine for more than 15 seconds when checking the switches on land without supplying water, otherwise the engine could overheat.

Check the start switch, the engine stop switch, and the engine shut-off switch for proper operation.

Push the start switch to start the engine. As soon as the engine starts running, push the engine stop switch to verify that the engine stops immediately. Restart the engine, and then pull the engine shut-off cord to remove the clip from the engine shut-off switch to verify that the engine stops immediately. (See pages 28 to 29 for information on proper op-

eration of the start switch, the engine stop switch, and the engine shut-off switch.)

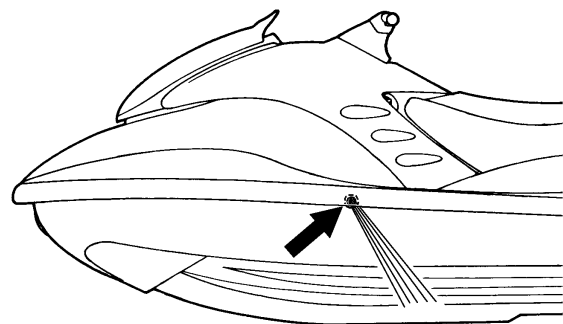


- 1 Start switch
- 2 Engine stop switch
- 3 Engine shut-off switch
- 4 Clip
- 5 Engine shut-off cord

EJU32690

Cooling water pilot outlets

Check that water comes out from the cooling water pilot outlets while the engine is running and the watercraft is in the water.



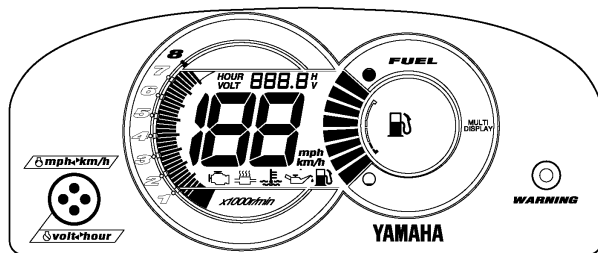
EJU32710

Multifunction information center

Check the multifunction information center for proper operation. (See page 33 for informa-

Operation

tion on proper operation of the multifunction information center.)



EJU32740

Operation

EWJ00510

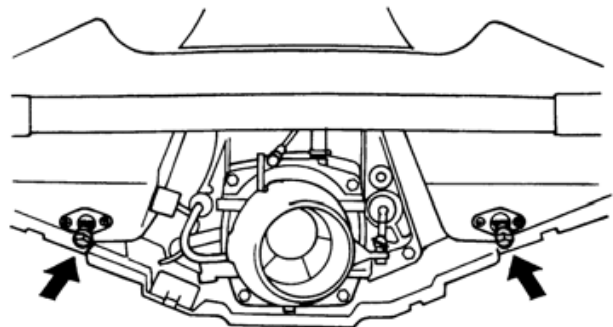
! WARNING

Before operating your watercraft, become familiar with all of the controls. Consult a Yamaha dealer about any control or function that you do not fully understand. Failure to understand how the controls work could cause an accident or prevent you from avoiding an accident.

ECJ00460

CAUTION:

Make sure that the stern drain plugs are tightened securely before launching the watercraft.



EJU32760

Engine break-in

The engine break-in period is essential to allow the various components of the engine to wear and polish themselves to the correct operating clearances. This ensures proper performance and promotes longer component life.

ECJ00450

CAUTION:

- For the first tankful of fuel, premix the fuel in a fuel-to-oil ratio of 50:1 (in addition to the oil in the oil tank).
- After break-in, use straight gasoline for normal operation.

- (1) Launch the watercraft and start the engine. (See page 52 for engine starting procedures.)
- (2) Run the engine at trolling speed for 5 minutes.
- (3) Gradually apply throttle and run the engine at 5000 r/min or less.
- (4) Operate the watercraft at 5000 r/min or less for the first tankful of fuel.
- (5) Fill the fuel tank with straight gasoline, and then proceed with normal operation.

ECJ00430

CAUTION:

Failure to follow the engine break-in procedure could result in reduced engine life or even severe engine damage.

EJU32820

Launching the watercraft

When launching the watercraft, make sure that there are no obstacles around you.

After the watercraft is in the water, turn it around so that the bow faces the direction you wish to go. Start the engine, and then slowly move away from the launching area. If there are waves, someone should make sure that the watercraft is not pushed into the trailer after launching the watercraft.

EJU32840

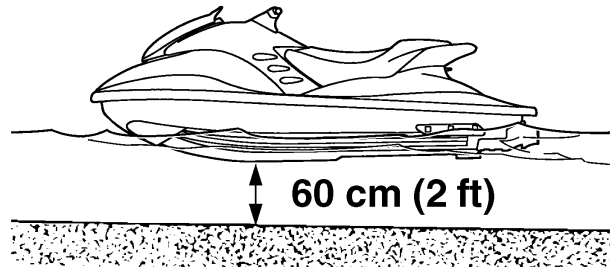
Starting the engine

EWJ00560

! WARNING

Never start the engine or let it run for any length of time in an enclosed area. Exhaust fumes contain carbon monoxide, a colorless, odorless gas that may cause loss of consciousness and death within a short time. Always operate the watercraft in an open area.

- (1) Launch the watercraft in water free from weeds and debris and at least 60 cm (2 ft) deep.



EWJ00570

! WARNING

Never operate in water that is less than 60 cm (2 ft) deep, otherwise you increase your chance of hitting a submerged object, which could result in injury.

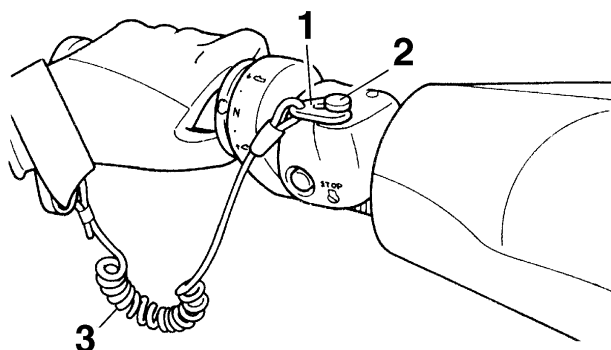
ECJ00470

CAUTION:

Never operate in water that is less than 60 cm (2 ft) deep, otherwise pebbles or sand could be sucked into the jet intake, causing impeller damage and engine overheating.

Operation

- (2) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.



- 1 Clip
2 Engine shut-off switch
3 Engine shut-off cord

EWJ00580

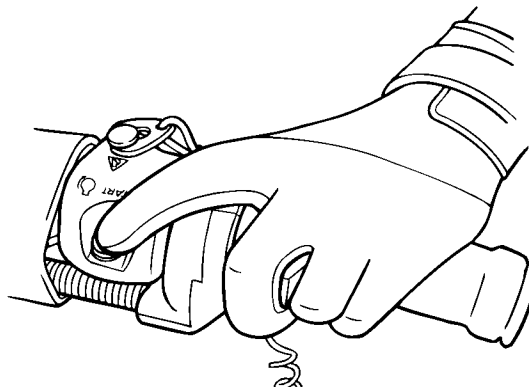
WARNING

Check that the engine shut-off cord is not frayed or broken, and keep it free from the handlebars so that the engine stops if the operator falls off. The engine shut-off cord may not pull free if wrapped around the handlebars when the operator falls off, allowing the watercraft to continue to run and cause an accident.

NOTE:

It is not possible to start the engine with the clip removed from the engine shut-off switch.

- (3) Push the start switch (green button), and then release it as soon as the engine starts to run.



NOTE:

The engine will not start if the throttle lever is squeezed.

ECJ00480

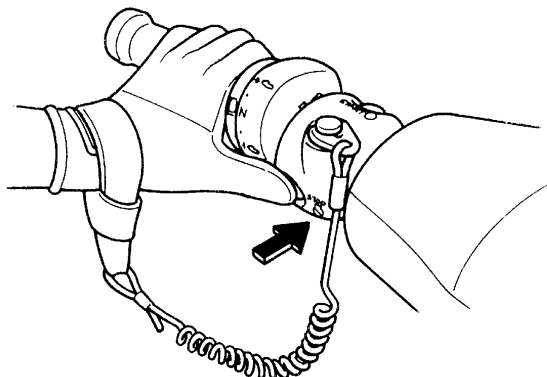
CAUTION:

- Never push the start switch while the engine is running.
- Do not operate the start switch for more than 5 seconds, otherwise the battery will be discharged and the engine will not start. Also, the starter motor could be damaged. If the engine does not start in 5 seconds, release the start switch, wait 15 seconds, and then try again.

EJU32860

Stopping the engine

To stop the engine, release the throttle lever, and then push the engine stop switch (red button).



EWJ00600

WARNING

You need throttle to steer. Shutting the engine off can cause you to hit an obstacle you are attempting to avoid. A collision could result in severe injury or death.

EJU32870

Leaving the watercraft

If leaving the watercraft, remove the engine shut-off cord to reduce the chance of accidental starting or unauthorized use by children or others.

EJU32900

Operating your watercraft

EJU32930

Getting to know your watercraft

Operating your watercraft requires skills acquired through practice over a period of time. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

Operating your new watercraft can be a very enjoyable activity, providing you with hours of pleasure. However, it is essential to familiarize yourself with the operation of the watercraft to achieve the skill level necessary to enjoy riding safely. Before operating this watercraft, read this owner's/operator's manual, the Riding Practice Guide, the Riding Instruction card, and all warning and caution labels on the watercraft. Pay particular attention to the safety information on page 10. Also, watch the Basic Orientation Video provided with your watercraft. These materials should give you an understanding of the watercraft and its operation.

Remember: This watercraft is designed to carry the operator and 1 passenger. Never exceed the maximum load limit or allow more than 2 persons to ride the watercraft at any time.

Maximum load: 160 kg (353 lb) Load is the total weight of cargo, operator, and passenger.
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EJU36240

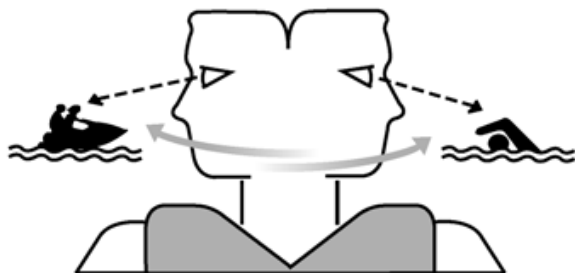
Learning to operate your watercraft

Before operating the watercraft, always perform the pre-operation checks listed on page 44. The short time spent checking the watercraft will reward you with added safety and reliability.

Check state and local laws before operating your watercraft.

Operation

Operate defensively at safe speeds and keep a safe distance away from people, objects, and other watercraft. Select a wide area to learn in, where there is good visibility and light boat traffic.



Use the buddy system—operate with someone nearby. Scan constantly for people, objects, and other watercraft. Be alert for conditions that limit your visibility or block your vision of others.

Attach the engine shut-off cord to your left wrist and keep it free from the handlebars so that the engine stops if you, the operator, fall off.

Wear a personal flotation device (PFD). All riders must wear a U.S. Coast Guard approved PFD that is suitable for personal watercraft use.

Wear protective clothing. Severe internal injuries can occur if water is forced into body cavities as a result of falling into the water or being near the jet thrust nozzle. Normal swimwear does not adequately protect against forceful water entry into the rectum and vagina. All riders must wear a wetsuit bottom or clothing that provides equivalent protection.

Such clothing includes thick, tightly woven, sturdy and snug-fitting apparel such as denim, but does not include spandex or similar fabrics, like those used in bicycle shorts. A full wetsuit can also protect against hypothermia

(subnormal body temperature) and abrasions.

Footwear and gloves are recommended.

Eye protection is recommended to keep wind, water, and glare from the sun out of your eyes while you operate your watercraft. Restraining straps for eyewear are made which are designed to float should your eyewear fall in the water.

You should grip the handlebars firmly and keep both feet on the floor of the footwell. Do not attempt to ride with a passenger until your operating skills are fully developed.

EJU33010

Riding with a passenger

When a passenger is on board with the operator, the watercraft handles differently, and is not as easy to maneuver, so operating it requires a higher degree of skill. Before attempting to operate the watercraft with a passenger on board, the operator must practice operating the watercraft alone enough to be able to acquire the necessary skills.

The passenger must always wear a U.S. Coast Guard approved PFD and a wetsuit bottom or equivalent.

EWJ00520

WARNING

Do not apply throttle when anyone is at the rear of the watercraft. Turn the engine off or keep it at idle. Water and/or debris exiting the jet thrust nozzle can cause severe injury. The passenger should not attempt to board the watercraft if the operator is applying throttle.

Do not give a ride to a child whose feet cannot reach the floor of the footwell. The passenger should hold on firmly to the operator and keep both feet on the floor of the footwell. Never allow a passenger to ride in front of the operator.

EWJ00530

WARNING

When a passenger is on board, make sure that the passenger is holding on firmly and has both feet on the floor of the footwell before you start to accelerate.

EJU33080

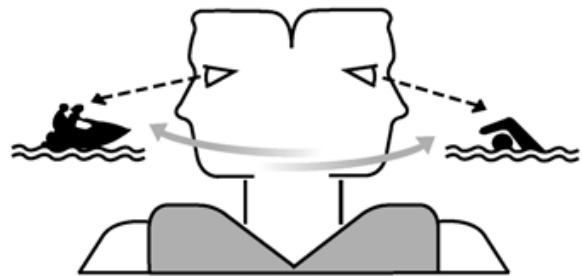
Starting the watercraft

EWJ00710

WARNING

- Scan constantly for people, objects, and other watercraft. Be alert for conditions that limit your visibility or block your vision of others.
- Operate defensively at safe speeds and keep a safe distance away from people, objects, and other watercraft.
- Do not follow directly behind watercraft or other boats. Do not go near others to spray or splash them with water. Avoid sharp turns or other maneuvers that make it hard for others to avoid you or understand where you are going. Avoid areas with submerged objects or shallow water.
- Take early action to avoid collisions. Remember, watercraft and other boats do not have brakes. Do not release the throttle lever when trying to steer away from objects—you need throttle to steer.

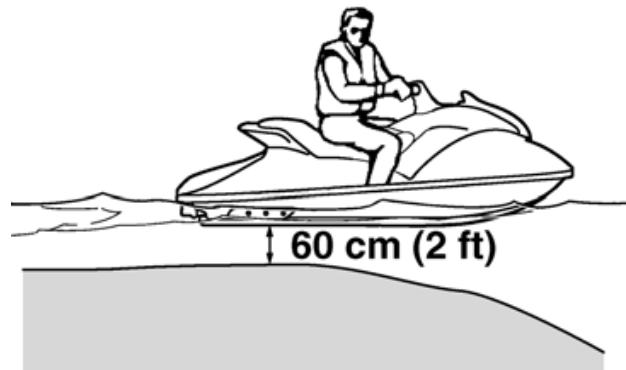
- Practice reboarding in shallow water before riding in deep water.



EJU33091

Boarding and starting in shallow water

- (1) Launch the watercraft in water free from weeds and debris and at least 60 cm (2 ft) deep.



EWJ00570

WARNING

Never operate in water that is less than 60 cm (2 ft) deep, otherwise you increase your chance of hitting a submerged object, which could result in injury.

ECJ00470

CAUTION:

Never operate in water that is less than 60 cm (2 ft) deep, otherwise pebbles or sand could be sucked into the jet intake, causing impeller damage and engine overheating.

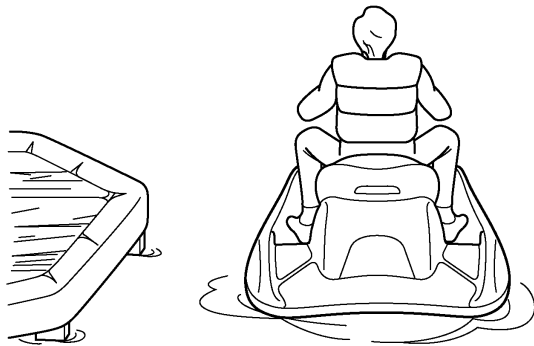
Operation

- (2) Board the watercraft from the side or the rear.
- (3) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.
- (4) Grip the handlebars with both hands, place both feet on the floor of the footwell, start the engine, and then look in all directions before starting off.

EJU33110

Boarding and starting from a dock

- (1) Board the watercraft from the side.
- (2) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.
- (3) Push the watercraft away from the dock, grip the handlebars with both hands, place both feet on the floor of the footwell, start the engine, and then look in all directions before starting off.



EJU33130

Boarding and starting in deep water

EWJ00620

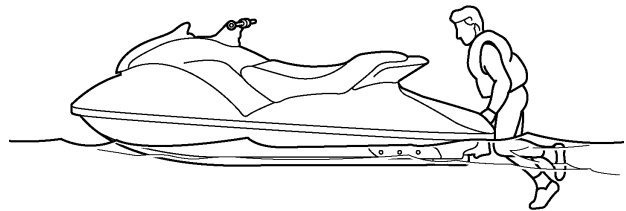
WARNING

- The operator and passenger should practice boarding in shallow water before riding in deep water. Boarding in deep water requires more skill.
- The fatigue and exposure that could result after unsuccessful attempts to get back on the watercraft may increase the risk of injuries and drowning.

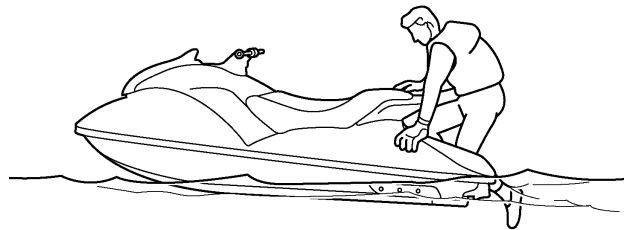
EJU33140

Boarding alone

- (1) Swim to the rear of the watercraft and place both hands on the boarding platform, pull yourself up, and then grasp the handgrip with one hand.

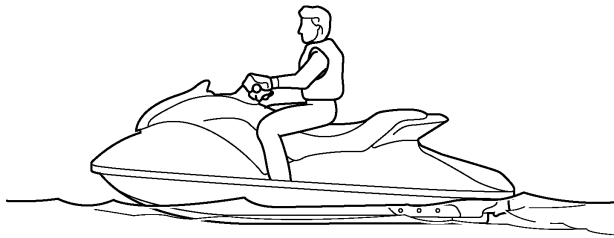


- (2) Pull yourself up to a kneeling position on the platform, and then move to the seat and sit astride.



- (3) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.
- (4) Grip the handlebars with both hands, place both feet on the floor of the footwell,

start the engine, and then look in all directions before starting off.



EWJ00610

WARNING

Before starting off, make sure that there are no boats, swimmers, or obstacles around you.

EJU33150

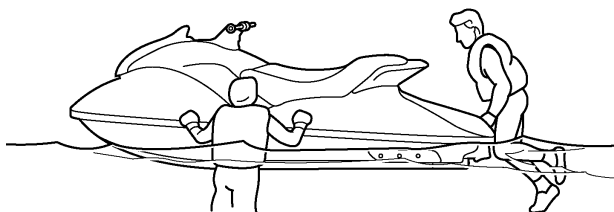
Boarding with a passenger

EWJ00650

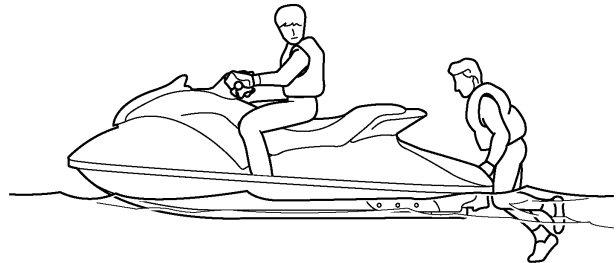
WARNING

Severe internal injuries can occur if water is forced into body cavities as a result of being near the jet thrust nozzle. Do not apply throttle until the passenger is seated with both feet on the floor of the footwell and is securely holding on to the operator.

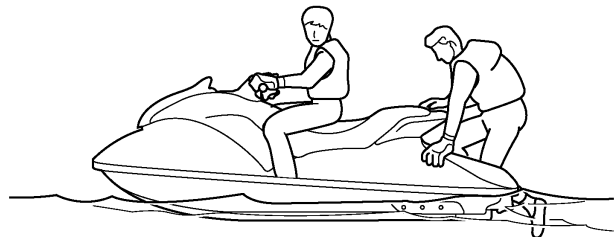
- (1) Climb on board as noted in the previous section, and sit astride the seat.



- (2) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.
- (3) Have the passenger move to the rear of the watercraft.



- (4) Have the passenger board and sit astride the seat.



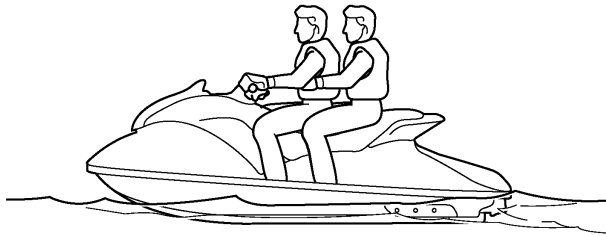
NOTE:

When the passenger is boarding, both the passenger and the operator should try to balance the watercraft.

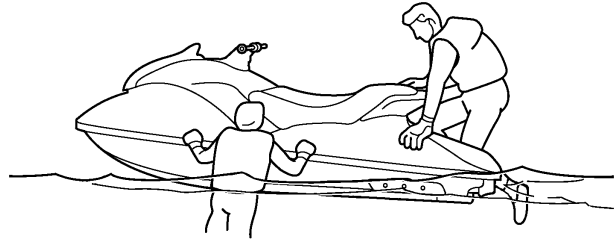
- (5) Check that the passenger has both feet on the floor of the footwell and is securely

Operation

holding on to the operator. Never allow a passenger to ride in front of the operator.



then move to the seat and sit astride to balance the watercraft.



- (6) Start the engine, look in all directions, and then accelerate to planing speed.

EWJ00610

WARNING

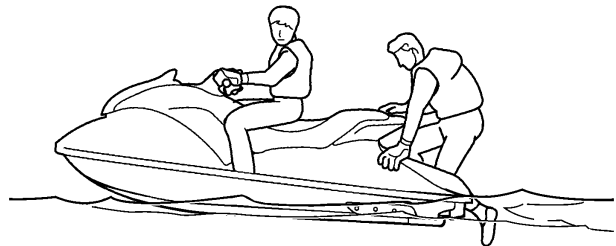
Before starting off, make sure that there are no boats, swimmers, or obstacles around you.

NOTE:

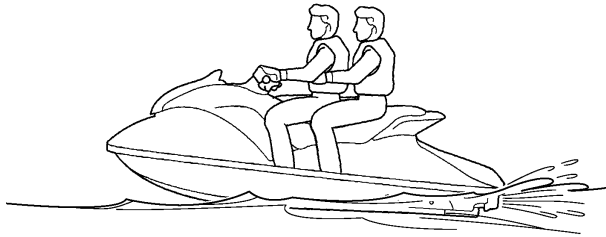
The heavier the total weight of the operator and passenger, the more difficult it will be to balance the watercraft. Do not operate the watercraft when the total weight exceeds 160 kg (353 lb) including any cargo. If it is difficult to balance the watercraft at a standstill, proceed as follows:

- (1) While the passenger is steadying the watercraft, pull yourself up onto the boarding platform into a kneeling position, and

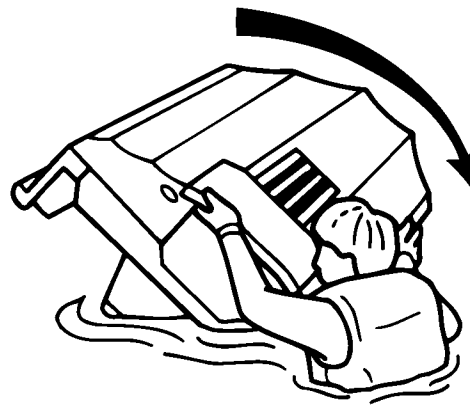
- (2) Attach the engine shut-off cord to your left wrist, and then attach the clip to the engine shut-off switch.
(3) Start the engine and keep it at idle.
(4) Have the passenger pull him or herself up onto the boarding platform into a kneeling position, then crawl onto the seat as the watercraft accelerates.



- (5) Gradually increase the speed to balance the watercraft.



ride plate while pushing down on the gunwale with your right hand or foot.



EJU33210

Capsized watercraft

If the watercraft capsizes, turn it over immediately.

Be sure to carefully follow the procedures below to prevent injury, or damage to the watercraft.

EWJ00670



WARNING

IMPROPER UPRIGHTING CAN CAUSE INJURY:

- Be sure to shut the engine off by pulling on the engine shut-off cord to remove the clip from the engine shut-off switch.
- Do not put your hands in the intake grate.

- (1) Remove the clip from the engine shut-off switch.
- (2) Swim to the rear of the watercraft. Pull the watercraft over with your left hand on the

NOTE:

If the port (left) side of the capsized watercraft is tilting up, push down on the gunwale so that the port (left) side is down before turning the watercraft clockwise.

ECJ00540

CAUTION:

Do not turn the watercraft over counter-clockwise, otherwise water can enter the engine, which can result in severe damage.

- (3) Start the engine and operate the watercraft to discharge any water remaining in the engine compartment. (If the engine does not start, see "Towing the watercraft" on page 85 or "Submerged watercraft" on page 86.)

Operation

ECJ00550

CAUTION:

Do not operate the engine at full throttle for at least 1 minute after the engine has been restarted. Excessive water in the bilge can splash into the engine, which can result in severe damage.

NOTE:

To efficiently discharge water from the engine compartment, operate the watercraft as straight as possible and above planing speed for at least 2 minutes.

EJU36050

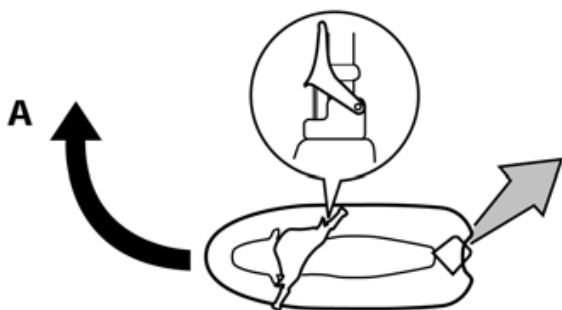
Turning the watercraft

Steering control depends on the combination of handlebar position and the amount of throttle.

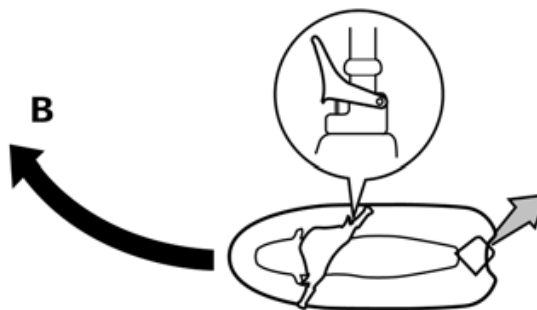
Water sucked in through the intake grate is pressurized by the impeller in the jet pump. As the pressurized water is expelled from the pump through the jet thrust nozzle, it creates thrust to move and steer the watercraft. The higher the engine speed, the more thrust produced.

The amount of jet thrust, in addition to the position of the handlebars, determines how sharply you turn.

- A. More throttle produces higher thrust, so the watercraft will turn more sharply.

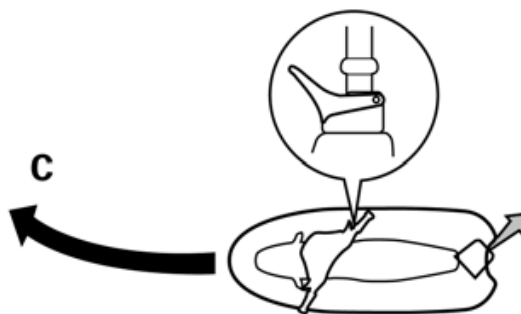


- B. Less throttle produces lower thrust, so the watercraft will turn more gradually.

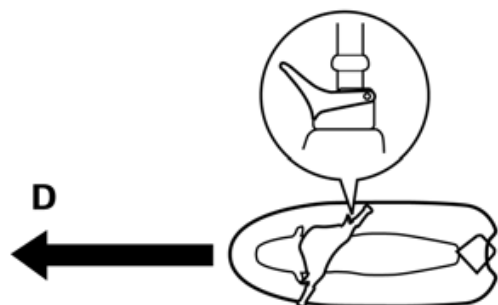


- C. Releasing the throttle lever completely produces only minimum thrust. If you are traveling at speeds above trolling, you will have rapidly decreasing ability to steer without throttle. You may still have some turning ability immediately after releasing the throttle lever, but once the engine slows down, the watercraft will no longer respond to handlebar input until you apply throttle again or you reach trolling speed.

At trolling speed, the watercraft can be turned gradually by handlebar position alone using just the amount of thrust available at idle.



- D. If the engine is stopped while riding, there is no thrust. The watercraft will go straight even though the handlebars are turned.



You need throttle to steer.

EWJ01100

WARNING

- **Do not release the throttle lever when trying to steer away from objects—you need throttle to steer. A collision could result in severe injury or death.**
- **When operating at higher speeds, make gradual turns or slow down before turning. Sharp high-speed turns may cause the watercraft to slide sideways or spin, throwing the operator and passenger overboard, which could cause an injury.**

This model is equipped with the Yamaha Engine Management System (YEMS) that includes an off-throttle steering (OTS) system. It will activate at planing speeds should you attempt to steer the watercraft after releasing the throttle lever (see condition C above).

The OTS system assists in turning by continuing to supply some thrust while the watercraft is decelerating, but you can turn more sharply if you apply throttle while turning the handlebars. The OTS system does not function below planing speeds or when the engine is off. Once the engine slows down, the watercraft will no longer turn in response to handlebar in-

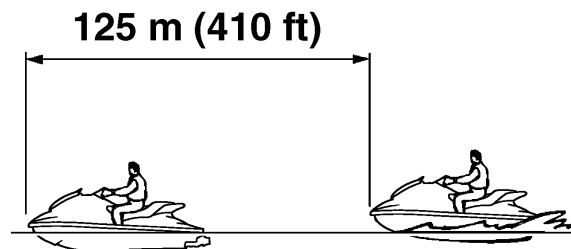
put until you apply throttle again or you reach trolling speed.

EJU35980

Stopping the watercraft

The watercraft is not equipped with a separate braking system. It is stopped by water resistance when the throttle lever is released. From full speed, the watercraft comes to a complete stop in approximately 125 m (410 ft) after the throttle lever is released or the engine is stopped, although this distance will vary depending on many factors, including gross weight, water surface conditions, and wind direction.

The watercraft slows down as soon as the throttle lever is released, but will coast for a distance before fully stopping. If you are not sure you can stop in time before hitting an obstacle, apply throttle and turn in another direction.



EWJ00720

WARNING

- **Allow adequate stopping distance.**
- **Take early action to avoid collisions. Remember, watercraft and other boats do not have brakes.**
- **Operate defensively at safe speeds and keep a safe distance away from people, objects, and other watercraft to give you time to stop.**
- **Do not shut the engine off when slowing down in case you need engine power to**

Operation

steer away from a boat or other obstacle that comes into your path.

EJU35940

Beaching the watercraft

- (1) Make sure that there are no boats, swimmers, or obstacles near the beach. Release the throttle lever about 125 m (410 ft) before you reach the intended beaching area.
- (2) Approach the beach slowly and stop the engine before reaching land.
Remember, you need throttle to steer.
- (3) Get off the watercraft and pull it up on the beach.

ECJ00490

CAUTION:

Small pebbles, sand, seaweed, and other debris can be sucked into the jet intake and impair or damage the impeller. Always stop the engine and get off the watercraft before beaching it.

EJU33310

Docking the watercraft

- (1) Make sure that there are no boats, swimmers, or obstacles near the watercraft. Reduce speed about 125 m (410 ft) away from the dock.
- (2) Slowly approach the dock and stop the engine just before coming alongside it.

EJU33340

Rough water operation

The force of landing after jumping can cause a strong impact on both the watercraft and the operator and passenger. It is possible for the operator to hit his or her chest or jaw on the watercraft or handlebars and be injured. The passenger could also impact the watercraft and be injured.

Do not operate the watercraft with your chin right above the handlebars. In addition, the operator and passenger should keep their feet on the floor of the footwell.

Operating in rough water or jumping waves can also crack the watercraft hull and deck, and damage internal parts. Avoid operating in rough water or bad weather conditions.

EJU33372

Post-operation care

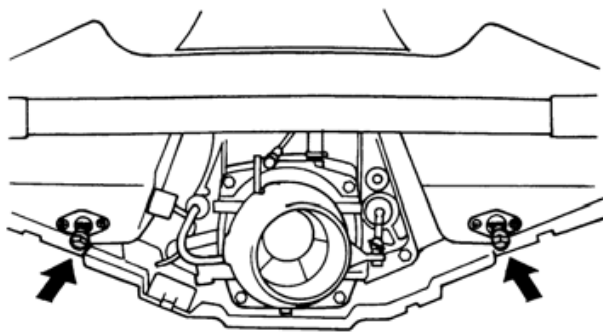
EWJ00270

WARNING

Do not start the engine on land if anyone is behind the watercraft. Hot water and steam spurting from the exhaust outlet into the air can cause serious burns.

To keep your watercraft in top shape, always take it out of the water after using it and perform the following procedures. Leaving the watercraft in the water for extended periods will accelerate the rate of normal deterioration of the jet unit components and hull finish. Marine organisms and corrosion are some of the conditions that can adversely affect the life of many watercraft components.

- (1) Remove the watercraft from the water.
- (2) Wash down the hull, handlebars, and jet unit with fresh water.
- (3) Remove the seat and check the engine compartment for water. To drain excess water, remove the stern drain plugs, and then raise the bow of the watercraft enough to allow the water in the bilge to drain out.



NOTE:

This watercraft is equipped with a jet vacuum bilge draining system and an electric bilge draining system that remove water from the engine compartment while you are underway.

However, some residual water will remain. (See page 45 for bilge draining procedures.)

- (4) Place the watercraft in a horizontal position.
- (5) Flush the cooling system to prevent it from clogging with salt, sand, or dirt. (See page 66 for flushing procedures.)
- (6) Drain residual water from the exhaust system by running the engine at less than 4000 r/min for 10 to 15 seconds.

ECJ00600

CAUTION:

Do not run the engine over 4000 r/min on land, otherwise the catalytic converter could be seriously damaged.

- (7) If the watercraft will be stored for a week or more, lubricate internal engine components to help prevent corrosion. (See page 67 for lubrication procedures.)
- (8) Rinse the engine and engine compartment with a small amount of water.

ECJ00570

CAUTION:

Do not use high-pressure water when rinsing the engine or engine compartment as severe engine damage could result.

- (9) Wipe the engine and engine compartment dry with a clean cloth (repeat step 3, if necessary).
- (10) Wipe the hull, handlebars, and jet unit dry with a clean cloth.
- (11) Spray a rust inhibitor on metallic parts to minimize corrosion.

EWJ00260

WARNING

Do not spray flammable rust inhibitor products on engine surfaces while the engine is hot. The sprayed substance or propellants could catch fire.

Operation

(12) Allow the engine compartment to air dry completely before installing the seat.

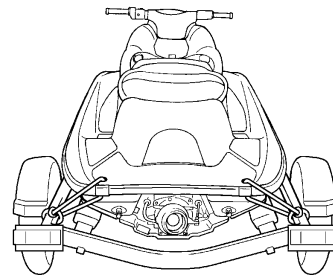
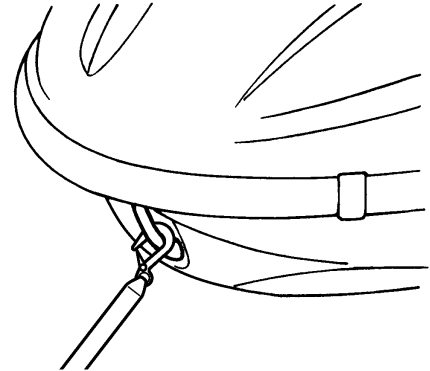
NOTE: _____

Cover the watercraft after the engine and catalytic converter have cooled down.

EJU33430

Transporting

When transporting the watercraft on a trailer, secure the tie downs to the trailer through the bow eye and stern rope holes.



ECJ00610

CAUTION: _____

Do not route ropes or tie downs over the seat, as they may leave permanent marks on the seat's surface. Also, wrap the ropes or tie downs with towels or rags where they touch the body of the watercraft to avoid scratching or damage.

EJU33490

Storage

EWJ00330

WARNING

Always place the watercraft upright in a horizontal position when storing it, otherwise fuel could leak out into the engine or engine compartment, which could create a fire hazard.

Storage for long periods of time, such as winter storage, requires preventive maintenance to ensure against deterioration. It is advisable to have the watercraft serviced by a Yamaha dealer prior to storage. However, the following procedures can be performed by the owner.

EJU33522

Flushing the cooling system

Flushing the cooling system is essential to prevent it from clogging with salt, sand, or dirt.

EWJ00270

WARNING

Do not start the engine on land if anyone is behind the watercraft. Hot water and steam spurting from the exhaust outlet into the air can cause serious burns.

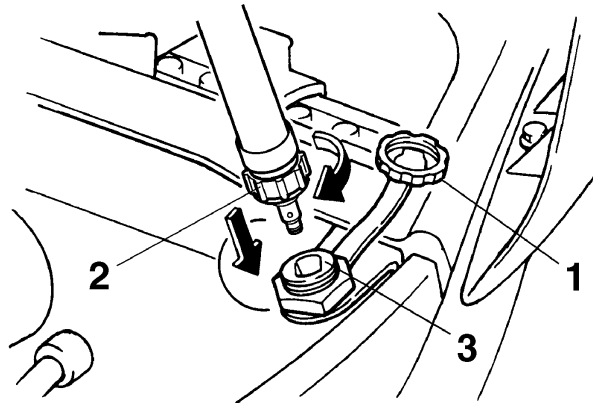
ECJ00130

CAUTION:

- Do not supply water to the cooling water passages when the engine is not running. The water could flow back through the muffler into the crankcase, causing severe engine damage.
- Do not run the engine for more than 15 seconds on land without supplying water, otherwise the engine could overheat.
- Do not run the engine over 4000 r/min on land, otherwise the catalytic converter could be seriously damaged.

- (1) Place the watercraft in a horizontal position.

- (2) Remove the flushing hose connector cap, and then insert the garden hose adapter into the flushing hose connector and turn it until it is securely connected.



- 1 Flushing hose connector cap
- 2 Garden hose adapter
- 3 Flushing hose connector

- (3) Connect the garden hose adapter to a water tap using a garden hose.

NOTE:

A garden hose is not included and must be purchased separately.

- (4) Start the engine, and then immediately turn the water supply on until water flows out continually from the cooling water pilot outlet.
- (5) Run the engine at idling speed for about 3 minutes watching the engine condition. If the engine stops while flushing, turn the water supply off immediately and repeat the above steps.
- (6) Turn the water supply off, and then force the remaining water out of the cooling water passages by running the engine at less than 4000 r/min for 10 to 15 seconds.
- (7) Stop the engine.
- (8) Remove the garden hose adapter and install the flushing hose connector cap.

Maintenance and care

EJU33570

Lubrication

EWJ00260



WARNING

Do not spray flammable rust inhibitor products on engine surfaces while the engine is hot. The sprayed substance or propellants could catch fire.

- (1) Remove the spark plugs and pour approximately one tablespoon of engine oil into each cylinder.
- (2) Grease the spark plug threads and reinstall the spark plugs.
- (3) With the spark plug caps removed from the spark plugs, crank the engine for 3 seconds or less using the start switch.
- (4) Lubricate all cables such as the throttle and steering cables.

NOTE:

Use a Yamaha Power Cable Luber and Yamaha Lube-Zall to pressure-lubricate the cables and purge out any moisture between the inner and outer cables.

- (5) Lubricate the areas of the watercraft specified in "Lubrication points" on page 74.

EJU33651

Fuel system

EWJ00290



WARNING

GASOLINE AND ITS VAPORS ARE HIGHLY FLAMMABLE AND EXPLOSIVE!

- Do not smoke when refueling, and keep away from sparks, flames, and other sources of ignition.
- Stop the engine before refueling.
- Refuel in a well-ventilated area with the watercraft in a horizontal position.
- Do not stand or sit on the watercraft while refueling in case of fire.

- Take care not to spill gasoline. If gasoline spills, wipe it up immediately with dry rags. Always properly dispose of gasoline-soaked rags.
- Avoid overfilling the fuel tank. Stop filling when the fuel level just reaches the bottom of the filler tube. Do not fill up the filler tube because fuel expands as it warms up and could overflow. If temporarily leaving the watercraft with a full fuel tank, do not leave it in direct sunlight. Leave it in a well-ventilated area with the watercraft in a horizontal position.
- Tighten the fuel tank filler cap securely after refueling.
- If you should swallow some gasoline, inhale a lot of gasoline vapor, or get gasoline in your eyes, get immediate medical attention.
- If any gasoline spills on your skin or clothing, immediately wash the affected area with soap and water and change your clothes.

Top off the fuel tank with fresh gasoline and add 470 ml (15.9 US oz, 16.5 Imp oz) of Yamaha Fuel Stabilizer and Conditioner.

ECJ00140

CAUTION:

Use only Yamaha Fuel Stabilizer and Conditioner, otherwise the catalytic converter could be seriously damaged.

EJU33680

Battery

If the watercraft will not be used for more than a month, remove the battery from the watercraft and store it in a cool, dry place.

- (1) Disconnect the negative (–) battery lead first, then the positive (+) battery lead and breather hose, and then remove the battery from the watercraft.

Maintenance and care

- (2) Clean the battery casing using fresh water.
- (3) If the battery terminals are dirty or corroded, clean them with a wire brush.
- (4) Fully charge the battery.
- (5) Apply Yamaha Marine Grease or Yamaha Grease A to the battery terminals, and then store the battery in a cool, dry place.
- (6) Check the battery at least once every 2 months and fully charge it if necessary.

ECJ00100

CAUTION:

Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

To check the condition of the battery, check the specific gravity of the electrolyte or measure the voltage at both battery terminals. Charge the battery if the voltage is less than 12 volts.

Specific gravity (for reference):
1.28 at 20 °C (68 °F)

It is recommended to have a Yamaha dealer check the specific gravity and charge the battery. If you maintain the battery yourself, be sure to read and follow the instructions provided with the battery tester and charger you use.

EJU33710

Cleaning the watercraft

Clean the watercraft before storing it for a long period.

EWJ00260



WARNING

Do not spray flammable rust inhibitor products on engine surfaces while the engine is hot. The sprayed substance or propellants could catch fire.

- (1) Wash down the hull, handlebars, and jet unit with fresh water.
- (2) Rinse the engine and bilge area with fresh water. Drain all of the water and wipe up any remaining moisture with clean, dry rags.

ECJ00110

CAUTION:

Do not use high-pressure water when rinsing the engine and bilge area as severe engine damage could result.

- (3) Spray the engine's exterior with a rust inhibitor and lubricant such as Yamaha Silicone Protectant and Lubricant.
- (4) Wax the hull with a non-abrasive wax such as Yamaha Silicone Wax.
- (5) Wipe all vinyl and rubber components, such as the seat and engine compartment seals, with a vinyl protectant such as Yamaha Protectant.

Maintenance and care

EJU33751

Maintenance and adjustments

Periodic inspection, adjustment, and lubrication will keep your watercraft in the safest and most efficient condition possible. Safety is an obligation of the watercraft owner. Proper maintenance must be carried out to keep the exhaust emission and sound levels within the regulated limits. The most important points of watercraft inspection, adjustment, and lubrication are explained on the following pages.

See a Yamaha dealer for genuine Yamaha replacement parts and optional accessories designed for your watercraft.

Remember, failures that are the result of the installation of parts or accessories which are not qualitatively equivalent to genuine Yamaha parts are not covered by the limited warranty.

Maintenance, replacement, or repair of the emission control devices and system may be performed by any marine SI engine repair establishment or individual. Warranty repair, however, must be performed at an authorized Yamaha marine dealership.

EWJ00310

WARNING

- **Be sure to shut the engine off when you perform maintenance unless otherwise specified, otherwise an accident or injury could result from unexpected operation, moving parts, or electric shock. If the owner is not familiar with watercraft servicing, this work should be done by a Yamaha dealer. Improperly serviced components could fail or stop operating correctly, which could result in an accident.**
- **Modifications to this watercraft not approved by Yamaha may cause loss of performance or excessive noise and exhaust emissions, or render it unsafe for**

use. Consult a Yamaha dealer before attempting any modifications.

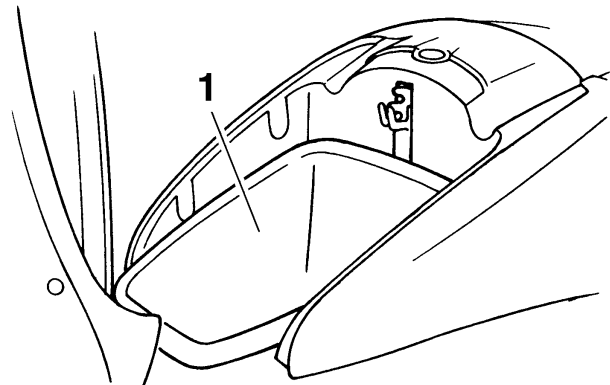
NOTE:

A service manual is available for purchase through a Yamaha dealer for owners who have the mechanical skills, tools, and other equipment necessary to perform maintenance not covered by this owner's/operator's manual.

EJU33800

Owner's/operator's manual and tool kit

It is advisable to always carry the owner's/operator's manual and tool kit with you whenever you use the watercraft. For your convenience, a storage compartment is provided on the watercraft for the manual and tool kit.



1 Storage compartment

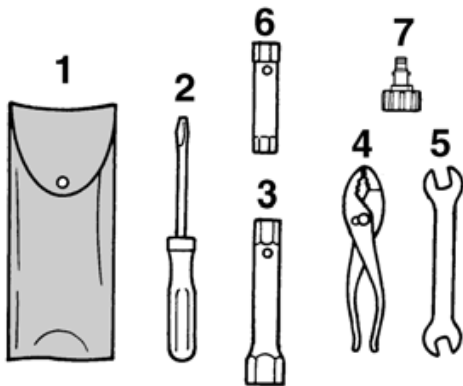
NOTE:

To protect these materials from water damage, it would be a good idea to put them in a waterproof bag. If your owner's/operator's manual is damaged, order a replacement from a Yamaha dealer.

The service information included in this manual is intended to provide you, the owner, with the necessary information for completing your own preventive maintenance and minor re-

Maintenance and care

pairs. The tools provided in the tool kit are sufficient for this purpose, except that a torque wrench may also be necessary to tighten nuts and bolts.



- 1 Tool bag
- 2 Screwdriver
- 3 14/21 mm box wrench
- 4 Pliers
- 5 Open-end wrench
- 6 10/12 mm box wrench
- 7 Garden hose adapter

Maintenance and care

EJU33820

Periodic maintenance chart

The following chart gives general guidelines for periodic maintenance. However, maintenance may need to be performed more frequently depending on your operating conditions.

This “●” mark indicates maintenance that you may do yourself.

This “○” mark indicates work to be done by a Yamaha dealer.

Item	Operation	Initial			Thereafter every		Page
		10 hours	50 hours	100 hours	100 hours	200 hours	
			6 months	12 months	12 months	24 months	
Spark plugs	Check, clean, adjust	●	●	●	●		73
Lubrication points	Lubricate			●/○	●/○		74
Intermediate housing	Lubricate	○		●	●		74
Fuel system	Check			○	○		72
Fuel tank	Check, clean			●/○	●/○		72
Oil injection system	Check, clean	○				○	72
Throttle shaft	Check			○	○		—
Cooling water passages	Flush	●*					66
Water inlet strainer	Check, clean			○	○		—
Bilge strainer	Clean			○	○		—
Electric bilge pump strainer	Check, clean			○	○		—
Impeller	Check			○	○		—
Jet thrust nozzle angle	Check, adjust			●/○	●/○		72
QSTS mechanism	Check, adjust	○		○	○		—
Throttle cable	Check, adjust	○		●	●		73
Stern drain plugs	Check, replace			○	○		46
Battery	Check, charge			●/○	●/○		75
Rubber coupling	Check					○	—
Engine mount	Check					○	—
Nuts and bolts	Check	○		○	○		—

* This operation should be performed after every use.

EJU34210

Checking the fuel system

EWJ00380



WARNING

Gasoline is highly flammable and explosive. Failure to check for and repair any fuel leakage could result in a fire or explosion. A fire or explosion can cause severe injury or death. Shut the engine off. Do not smoke. Avoid spilling gasoline.

Fuel in the fuel lines is pressurized.

Fuel can spray out and cause injury or a fire hazard if a fuel line is disconnected.

Do not run the engine with a fuel line disconnected.

Check the fuel system for leaks, cracks, and malfunctions. If any problem is found, consult a Yamaha dealer.

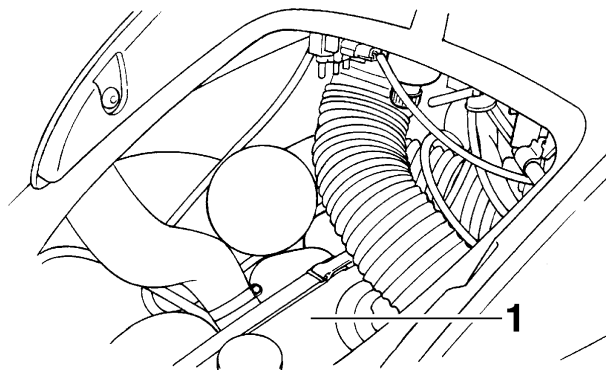
Check:

- Fuel tank filler cap and seal for damage.
- Fuel in fuel tank for water and dirt.
- Fuel tank for damage, cracks, and leakage.
- Fuel hoses and joints for damage, cracks, and leakage.
- Air bleeding passages for leakage.

EJU34230

Fuel tank

Check the fuel tank for leakage and for water in the tank. If water is found in the fuel system, or if the fuel tank needs to be cleaned, have a Yamaha dealer service the watercraft.



1 Fuel tank

EJU34240

Checking the oil injection system

Check the oil injection system for leakage, cracks, and malfunctions. Have a Yamaha dealer repair the oil injection system if necessary.

Check:

- Oil tank for damage, cracks, and leakage.
- Oil in the oil tank for water and dirt.
- Oil hoses and joints for damage, cracks, and leakage.
- Oil filter for dirt.
- Oil pump for leakage.

EJU34250

Oil tank

Check the oil tank for leakage and for water in the tank. If water is found in the oil injection system, or if the oil tank needs to be cleaned, have a Yamaha dealer service the watercraft.

EJU34260

Oil filter

Have a Yamaha dealer check the oil filter for dirt and clogs.

EJU34321

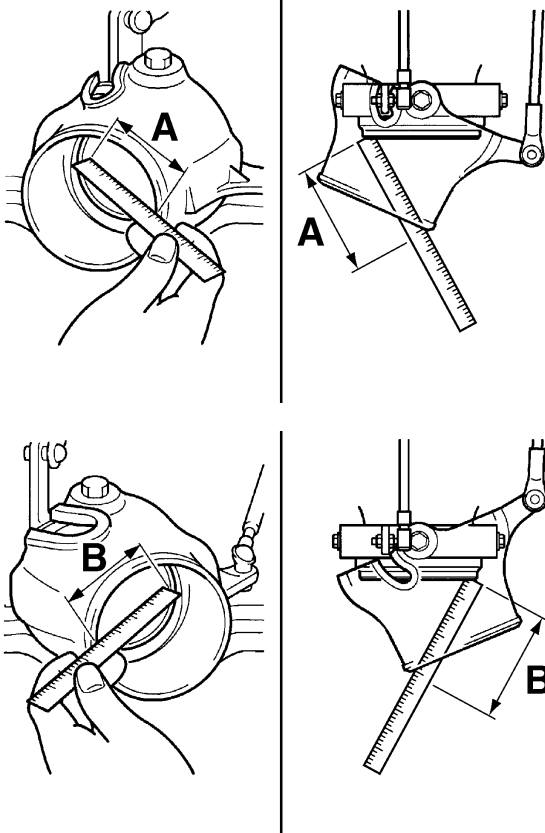
Checking the jet thrust nozzle angle

Check the handlebars and jet thrust nozzle for smooth operation.

Turn the handlebars as far as possible to the right and left and check that the difference of distances A and B between the jet thrust nozzle and the nozzle is within specification.

Maintenance and care

Difference of A and B:
Maximum 5 mm (0.20 in)



If the steering is stiff or misadjusted, have a Yamaha dealer service it.

EJU36520

Checking and adjusting the throttle cable

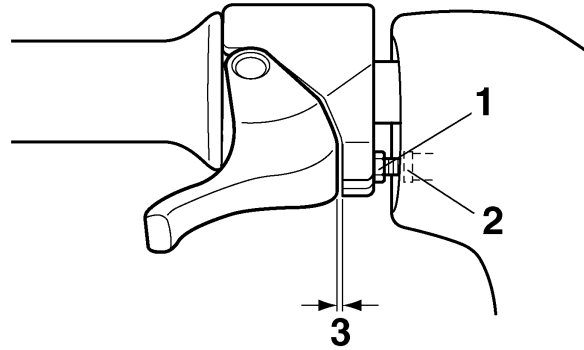
Check that the throttle cable moves back to the set position smoothly and that the throttle lever free play is within specification.

Squeeze and release the throttle lever. If the throttle lever does not return smoothly, have a Yamaha dealer service it.

If the specified throttle lever free play cannot be obtained as described below, have a Yamaha dealer make the adjustment.

(1) Loosen the locknut.

(2) Adjust the free play by turning the adjuster.



- 1 Locknut
- 2 Adjuster
- 3 Throttle lever free play

Throttle lever free play:
4.0–7.0 mm (0.16–0.28 in)

(3) Hold the adjuster with one wrench while tightening the locknut with another wrench.

EJU34371

Cleaning and adjusting the spark plugs

EWJ00350

! WARNING

Be careful not to damage the insulator when removing or installing a spark plug. A damaged insulator could allow sparks to escape, which could result in a fire or explosion.

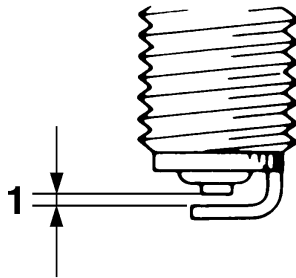
The spark plug is an important engine component and is easy to inspect. The condition of the spark plug can indicate something about the condition of the engine. For example, if the center electrode porcelain is very white, this could indicate an intake air leak or carburetion problem in that cylinder. Do not attempt to diagnose any problems yourself. Have a Yamaha dealer service the watercraft.

Maintenance and care

Remove and inspect the spark plugs periodically; heat and deposits will cause the spark plugs to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, replace the spark plug with the specified plug.

Specified spark plug:
BR8ES-11

Measure the spark plug gap with a wire thickness gauge. Replace the spark plugs or adjust the gap to specification if necessary.



1 Spark plug gap

Spark plug gap:
1.0–1.1 mm (0.039–0.043 in)

To install a spark plug:

- (1) Clean the gasket surface.
- (2) Wipe any dirt from the threads of the spark plug.
- (3) Install the spark plug, and then tighten it to the specified torque.

Spark plug tightening torque:
25.0 Nm (18.4 ft-lb) (2.55 kgf-m)

- (4) Install the spark plug cap.

NOTE: _____

- Wipe off any water on the spark plug or inside the spark plug cap before installing the

cap. Push the spark plug cap down until it is securely installed.

- If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 turn to 1/2 turn past finger tight using the spark plug wrench included in the tool kit. Have the spark plug adjusted to the correct torque with a torque wrench as soon as possible.

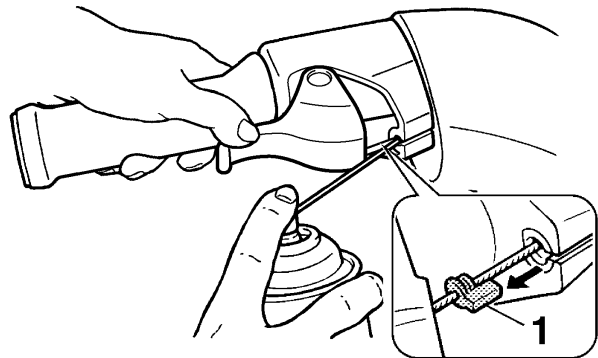
EJU34411

Lubrication points

To keep moving parts sliding or rotating smoothly, coat them with water-resistant grease.

Recommended water-resistant grease:
Yamaha Marine Grease/Yamaha Grease A

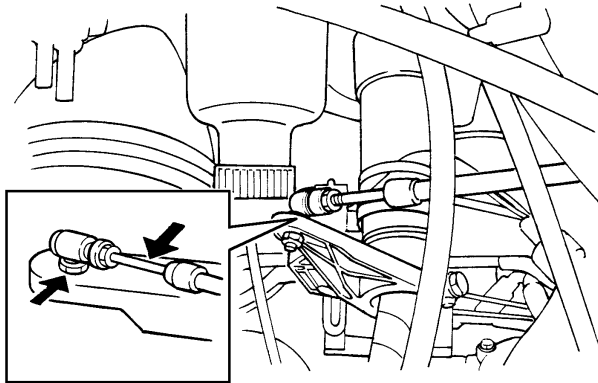
- Throttle cable (handlebar end)
Squeeze the throttle lever and remove the seal. Spray a rust inhibitor into the outer cable. Refit the seal securely.



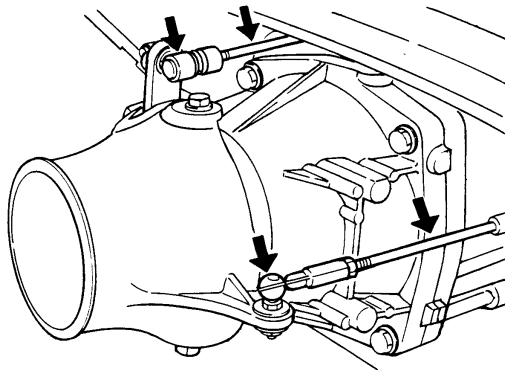
1 Seal

Maintenance and care

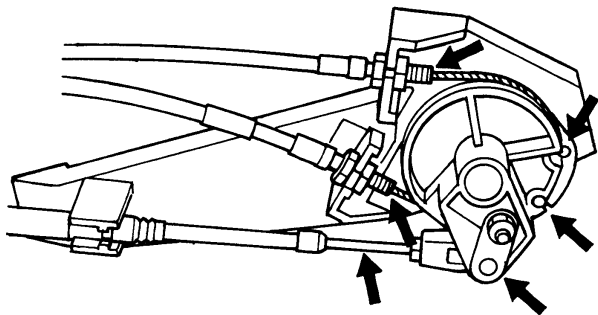
- Steering cable (handlebar end)



- Steering cable (jet thrust nozzle end)
- QSTS cable (jet thrust nozzle end)

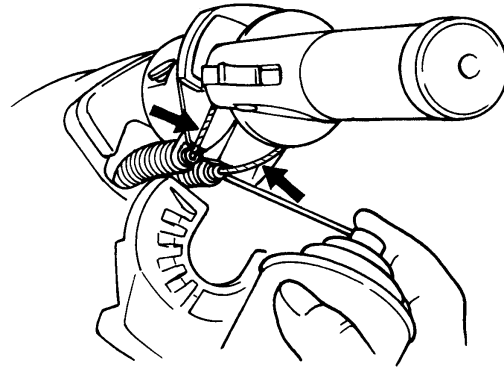


- QSTS cables (pulley end)



- QSTS cables (handlebar end)

Remove the QSTS cable housing. Spray a rust inhibitor into the outer cables. Reinstall the QSTS cable housing.



- Intermediate housing

Fill the intermediate housing with water-resistant grease through the grease nipple using a grease gun.

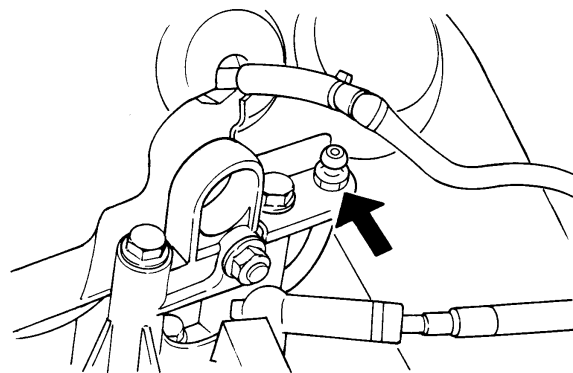
Grease quantity:

Initial 10 hours or 1 month:

33.0–35.0 cm³ (1.12–1.18 US oz)
(1.16–1.23 Imp.oz)

Every 100 hours or 12 months:

6.0–8.0 cm³ (0.20–0.27 US oz)
(0.21–0.28 Imp.oz)



EJU34451

Checking the battery

Check the level of the battery electrolyte and make sure that the negative (–) and positive (+) battery leads are tightened securely.

Maintenance and care

EWJ00790

WARNING

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

Antidotes

External: Flush with water.

Internal: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call a physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flames, cigarettes, etc., well away. If using or charging the battery in an enclosed space, make sure that it is well ventilated. Always shield your eyes when working near batteries.

KEEP OUT OF THE REACH OF CHILDREN.

ECJ00230

CAUTION:

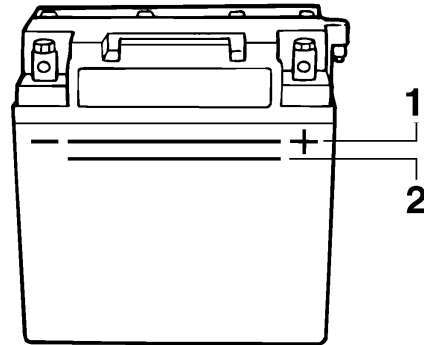
- Be careful not to place the battery on its side.
- Be sure to remove the battery from the battery compartment when adding electrolyte or charging the battery.

To remove the battery:

Disconnect the negative (–) battery lead first, then the positive (+) battery lead and breather hose, and then remove the battery from the watercraft.

To replenish the battery:

- (1) Make sure that the electrolyte level is between the maximum and minimum level marks.



- 1 Maximum level mark
- 2 Minimum level mark

- (2) If the electrolyte level is low, add distilled water to raise it to the specified level.

ECJ00240

CAUTION:

Normal tap water contains minerals that are harmful to a battery. Use only distilled water for replenishing the battery.

To recharge the battery:

ECJ00250

CAUTION:

Do not attempt to charge a battery hastily. Battery life could be shortened.

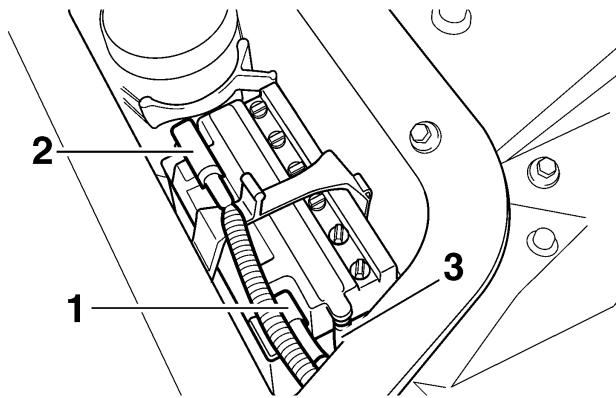
It is recommended to have a Yamaha dealer charge the battery. If you charge the battery yourself, be sure to read and follow the instructions provided with the battery tester and charger you use.

To install the battery:

- (1) Place the battery in the battery compartment and connect the battery leads to the battery terminals.
- (2) Connect the breather hose to the battery.

Maintenance and care

- (3) Secure the battery in place.



- 1 Positive (+) battery terminal: Red lead
2 Negative (-) battery terminal: Black lead
3 Breather hose

EWJ00400

WARNING

Be sure to connect the breather hose to the battery. Fire or explosion could result if the breather hose is damaged, obstructed, or not connected properly.

ECJ00260

CAUTION:

After installation, make sure that the battery leads are properly connected to the battery terminals.

EJU34490

Fuel injection system

The fuel injection system was set at the Yamaha factory. If the fuel injection system needs to be adjusted, have a Yamaha dealer service the watercraft.

ECJ00220

CAUTION:

Do not attempt to adjust the fuel injection system. If the settings are disturbed by someone who does not have the necessary technical knowledge, poor engine performance and damage may result.

EJU34500

Checking the trolling speed

- (1) Place the watercraft in the water.

- (2) Start the engine and warm it up. Use the tachometer in the multifunction information center to check the trolling speed.

Trolling speed:
 1350 ± 100 r/min

If the trolling speed is out of specification, have a Yamaha dealer service the watercraft.

EJU34520

Bleeding the oil pump

If the oil tank becomes completely empty, or any hose connected to the oil pump has been disconnected, the oil pump must be bled to ensure proper oil flow.

If necessary, have a Yamaha dealer bleed the oil pump.

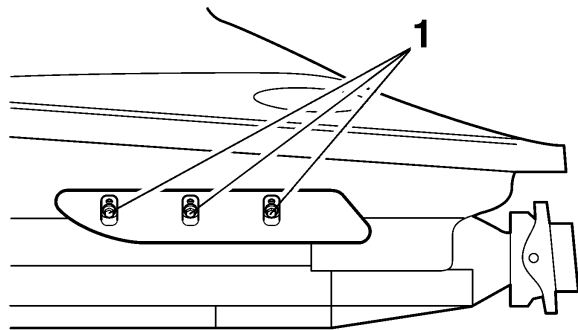
EJU36190

Adjusting the Yamaha Adjustable Sponsons (YAS)

The Yamaha Adjustable Sponsons can be adjusted to two positions to enhance watercraft performance according to operator preference and operating conditions. (See page 39 for an explanation of the positions.)

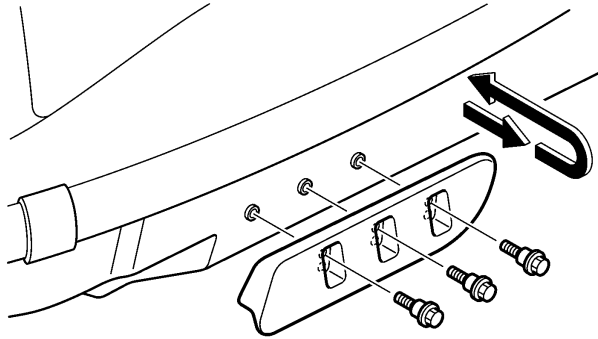
To adjust the YAS:

- (1) Remove the bolts on both sponsons.



1 Bolt

- (2) Remove the sponsons, and then install them in the desired position.



NOTE:

Be sure to install both sponsons in the same position.

- (3) Tighten the sponson bolts to the specified torque.

Sponson bolt tightening torque:
18.0 Nm (13.3 ft-lb) (1.84 kgf-m)

Specifications

EJU34542

Specifications

Watercraft capacity:

Maximum people on board:

2 person

Maximum load capacity:

160 kg (353 lb)

Dimensions:

Length:

2930 mm (115.4 in)

Width:

1150 mm (45.3 in)

Height:

1020 mm (40.2 in)

Dry weight:

297 kg (655 lb)

Performance:

Maximum fuel consumption:

57.0 L/h (15.1 US gal/h) (12.5 Imp.gal/h)

Cruising range at full throttle:

1.05 hour

Trolling speed:

1350 $\pm$ 100 r/min

Engine:

Engine type:

2-stroke

Number of cylinders:

3

Engine displacement:

1297 cm³

Bore & stroke:

84.0 $\times$ 78.0 mm (3.31 $\times$ 3.07 in)

Compression ratio:

5.9 : 1

Lubrication system:

Oil injection

Cooling system:

Water

Starting system:

Electric

Ignition system:

Digital C.D.I.

Spark plug:

BR8ES-11

Spark plug gap:

1.0–1.1 mm (0.039–0.043 in)

Battery capacity:

12 V, 19.0 Ah

Charging system:

Flywheel magneto

Drive unit:

Propulsion system:

Jet pump

Jet pump type:

Axial flow, single stage

Impeller rotation:

Counterclockwise

Jet thrust nozzle angle:

23.0+23.0 °

Jet thrust nozzle trim angle:

-10, -5, 0, 5, 10 °

Fuel and oil:

Recommended fuel:

Regular unleaded gasoline

Minimum octane rating (PON):

86

Minimum octane rating (RON):

90

Recommended engine oil:

YAMALUBE 2-W

Fuel tank total capacity:

60 L (15.9 US gal) (13.2 Imp.gal)

Engine oil tank capacity:

5.5 L (1.45 US gal) (1.21 Imp.gal)

EJU34560

Troubleshooting

If you have any trouble with your watercraft, use this section to check for the possible cause. If you cannot find the cause, or if the procedure for replacement or repair is not described in this owner's/operator's manual, have a Yamaha dealer perform the necessary service.

EJU34581

Troubleshooting chart

TROUBLE	POSSIBLE CAUSE		REMEDY	PAGE
Engine does not start (Starter motor does not turn over)	Engine shut-off switch	Clip not in place	Install clip	28
	Fuse	Burned out	Replace the fuse and check wiring	85
	Battery	Run down	Recharge	75
		Poor terminal connections	Tighten as required	75
		Terminal corroded	Clean	67
	Starter motor	Faulty	Have serviced by Yamaha dealer	—
	Warning system	Overheat mode	Have serviced by Yamaha dealer	35
Engine does not start (Starter motor turns over)	Throttle lever	Squeezed	Release	29
	Fuel	Empty	Refill as soon as possible	42
		Stale or contaminated	Have serviced by Yamaha dealer	72
	Fuel tank	Water or dirt present	Have serviced by Yamaha dealer	72
	Spark plug	Fouled or defective	Clean or replace	73
	Spark plug cap	Not connected or loose	Connect properly	73
	Crankcase	Filled with water	Have serviced by Yamaha dealer	86
	Fuel injection system	Fuel pump faulty	Have serviced by Yamaha dealer	—
	Water temperature sensor	Failed	Have serviced by Yamaha dealer	35

Trouble recovery

TROUBLE	POSSIBLE CAUSE		REMEDY	PAGE
Engine runs irregularly or stalls	Fuel	Empty	Refill as soon as possible	42
		Stale or contaminated	Have serviced by Yamaha dealer	72
	Fuel tank	Water or dirt present	Have serviced by Yamaha dealer	72
	Spark plug	Fouled or defective	Replace	73
		Incorrect heat range	Replace	73
		Gap incorrect	Adjust	73
	Spark plug cap	Loose	Connect properly	73
		Cracked, torn, or damaged	Have serviced by Yamaha dealer	—
	Electrical wiring	Loose connection	Have serviced by Yamaha dealer	—
Warning light or indicator blinks	Fuel injection system	Faulty or clogged injectors	Have serviced by Yamaha dealer	—
	Fuel level	Empty	Refill as soon as possible	42
	Engine oil level	Empty	Refill immediately	42
		Oil filter clogged	Have serviced by Yamaha dealer	—
	Engine overheated	Jet intake clogged	Clean	83
		Water temperature sensor is failed	Have serviced by Yamaha dealer	35
	Low battery voltage	Battery voltage low	Charge	75
		Battery terminal connected wrong	Connect properly	75
	Exhaust gas temperature	Gas temperature is too high	Cool down engine	37
	Check engine warning	Faulty sensors	Have serviced by Yamaha dealer	37

Trouble recovery

TROUBLE	POSSIBLE CAUSE		REMEDY	PAGE
Watercraft slow or loses power	Cavitation	Jet intake clogged	Clean	83
		Impeller damaged or worn	Have serviced by Yamaha dealer	—
	Engine over-heated	Jet intake clogged	Clean	83
	Spark plug	Fouled or defective	Replace	73
		Incorrect heat range	Replace	73
		Gap incorrect	Adjust	73
	Spark plug caps	Loose	Connect properly	73
	Electrical wiring	Loose connection	Have serviced by Yamaha dealer	—
	Fuel	Stale or contaminated	Have serviced by Yamaha dealer	72
	Bilge	Water in bilge	Drain	45

Trouble recovery

EJU34620

Emergency procedures

EJU34630

Cleaning the jet intake and impeller

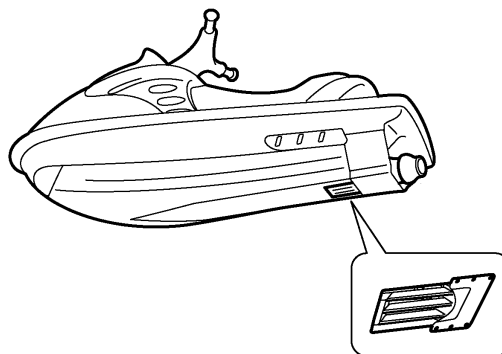
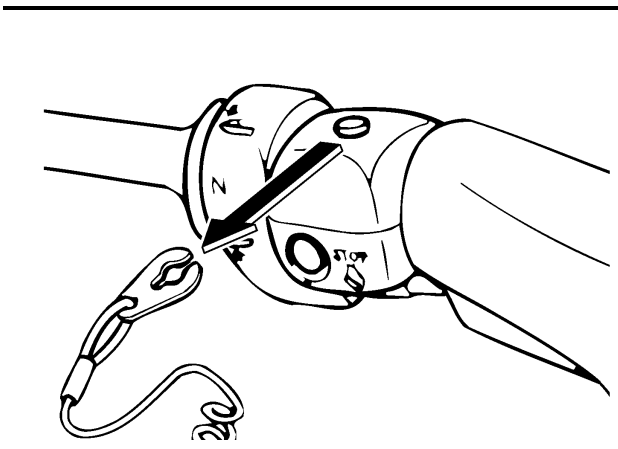
If weeds or debris get caught in the jet intake or impeller, cavitation can occur, causing jet thrust to decrease even though engine speed rises. If this condition is allowed to continue, the engine will overheat and may seize. If there is any sign that the jet intake or impeller is clogged with weeds or debris, return to shore and check the intake and impeller. Always stop the engine before beaching the watercraft.

EWJ00780

WARNING

Before attempting to remove weeds or debris from the jet intake or impeller area, shut the engine off and remove the clip from the engine shut-off switch. Severe injury or death could result from coming in

contact with the rotating parts of the jet pump.

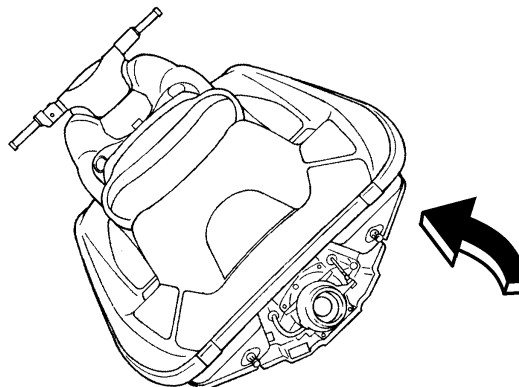


ECJ00650

CAUTION:

If weeds or debris get caught in the jet intake, do not operate the watercraft above trolling speed until they have been removed.

- (1) Turn the watercraft on its side as shown.



ECJ00660

CAUTION:

- Place a suitable clean cloth or carpeting underneath the watercraft to protect it from abrasions and scratches.
- Always turn the watercraft over onto its port (left) side.
- When turning the watercraft on its side, support the bow so that the handlebars are not bent or damaged.

(2) Remove any weeds or debris from around the drive shaft, impeller, jet pump housing, and jet thrust nozzle.

If debris is difficult to remove, consult a Yamaha dealer.

ECJ00670

CAUTION:

Always avoid operating your watercraft in areas where weed growth is thick. If traveling in weeded areas is unavoidable, operate the engine alternately at partial throttle and full throttle. Weeds tend to accumulate more at a steady speed and at trolling speed. If weeds clog the jet intake or impeller area and cause cavitation, follow the cleaning procedure above.

EJU34640

Jumping the battery

If the watercraft battery has run down, the engine can be started using a 12-volt booster battery and jumper cables.

EWJ00790

WARNING

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

Antidotes

External: Flush with water.

Internal: Drink large quantities of water or milk. Follow with milk of magnesia, beaten

egg, or vegetable oil. Call a physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention.

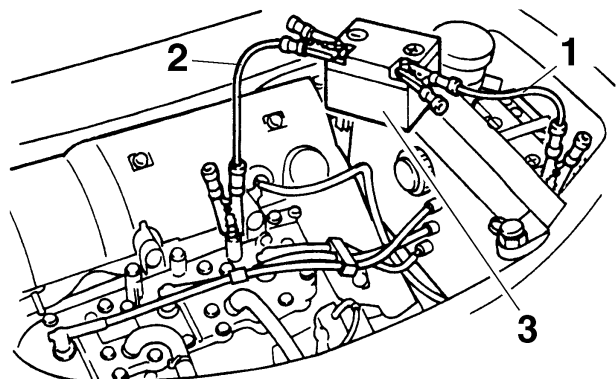
Batteries produce explosive gases. Keep sparks, flames, cigarettes, etc., well away. If using or charging the battery in an enclosed space, make sure that it is well ventilated. Always shield your eyes when working near batteries.

KEEP OUT OF THE REACH OF CHILDREN.

EJU34651

Connecting the jumper cables

- (1) Connect the positive (+) jumper cable to the positive (+) battery terminals of both batteries.
- (2) Connect one end of the negative (–) jumper cable to the negative (–) battery terminal of the booster battery.
- (3) Connect the other end of the negative (–) jumper cable to an unpainted bolt on the cylinder head.



- 1 Positive (+) jumper cable
- 2 Negative (–) jumper cable
- 3 Booster battery

ECJ00680

CAUTION:

Do not connect the end of the negative (–) jumper cable to the negative (–) battery terminal of the watercraft battery! Make sure that all connections are secure and correct before attempting to start the en-

Trouble recovery

gine. Any wrong connection could damage the electrical system.

- (4) Start the engine, and then disconnect the jumper cables by reversing the steps above.

ECJ00480

CAUTION:

- Never push the start switch while the engine is running.
- Do not operate the start switch for more than 5 seconds, otherwise the battery will be discharged and the engine will not start. Also, the starter motor could be damaged. If the engine does not start in 5 seconds, release the start switch, wait 15 seconds, and then try again.

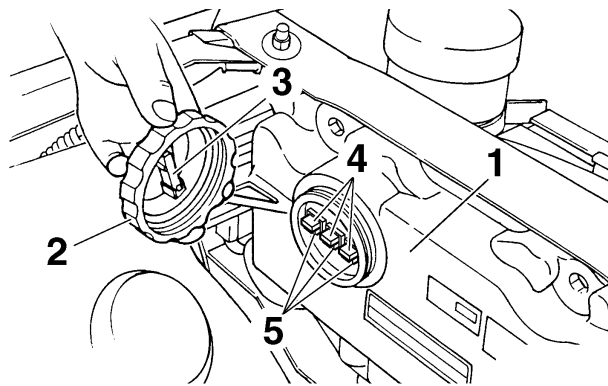
EJU34680

Replacing the fuses

The fuses are located in the electrical box.

To replace a fuse:

- (1) Remove the cap on the electrical box.
- (2) Replace the blown fuse with the spare fuse of the correct amperage by using the fuse puller on the reverse side of the cap.



- 1 Electrical box
- 2 Cap
- 3 Fuse puller
- 4 Fuse
- 5 Spare fuse

Fuse amperage:

Main fuse:

20 A

Meter fuse:

3 A

Bilge pump fuse:

3 A

EWJ00800

WARNING

Do not use fuses of higher amperage than recommended. Substitution with a fuse that has an improper rating can cause extensive electrical system damage and possible fire.

EJU34710

Towing the watercraft

If the watercraft becomes inoperative in the water, it can be towed to shore.

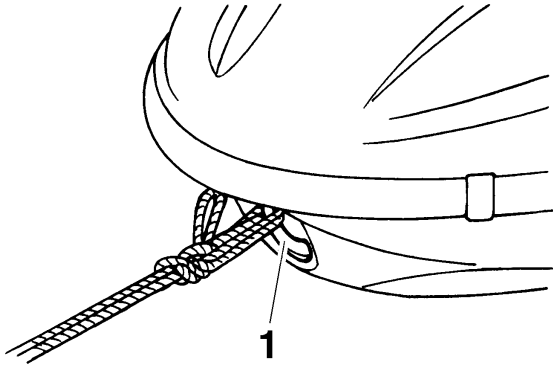
If the watercraft must be towed in an emergency using a towline, the operator should ride the watercraft, holding onto the handlebars.

ECJ00720

CAUTION:

- Tow the watercraft at 5 mph (8 km/h) or less, otherwise water could enter the engine through the exhaust passages or through the air intake and flood the engine compartment if it is towed too fast.
- Tow the watercraft using the bow eye only.

- The bow must be kept up out of the water during towing to prevent water from entering the engine compartment.



1 Bow eye

EWJ00810

WARNING

- The watercraft should only be towed in an emergency.
- The towline should be long enough so that the watercraft will not collide with the towing boat when slowing down. A good rule of thumb is a towline that is three times the combined length of the towing boat and the watercraft.
- The operator of the towing boat must keep speed to a minimum and avoid traffic or obstacles which could be a hazard to the rider on the watercraft.

EJU34740

Submerged watercraft

If the watercraft is submerged or flooded with water, follow the procedure below and consult a Yamaha dealer as soon as possible. Failure to do so could result in serious engine damage!

In an emergency:

- (1) Beach the watercraft and remove the stern drain plugs to drain the water from

the engine compartment. (See page 45 for more information.)

Remove the storage compartment drain plugs to drain the water from each storage compartment.

- (2) Install the stern drain plugs.
- (3) Have the watercraft inspected by a Yamaha dealer as soon as possible.

Consumer information

EJU34791

Limited warranty

YAMAHA MOTOR CORPORATION, U.S.A. WATERCRAFT LIMITED WARRANTY

Yamaha Motor Corporation is proud of its heritage and reputation for producing products with high standards of quality and workmanship. Product excellence provides the cornerstone for our commitment to customer satisfaction. The Yamaha Watercraft Limited Warranty is your assurance of this commitment.

This warranty provides you with protection against the expense of repairs for your watercraft that are required as a result of defects in materials or workmanship. When maintained and utilized in the prescribed manner, you can count on your Yamaha watercraft to provide reliable service.

This warranty provides you with specific coverage and notes your responsibilities in maintaining and operating your watercraft. Please take the time to read and become familiar with this warranty.

PERIOD OF WARRANTY. Any new Yamaha watercraft purchased for pleasure use from an authorized Yamaha dealer in the United States, will be warranted against defects in material or workmanship for a period of one (1) year from date of purchase, subject to exclusions noted herein. Any Yamaha Watercraft purchased and utilized for commercial applications will be warranted for a period of ninety [90] days from the date of purchase, subject to exclusions noted herein. Replacement parts used in warranty repairs will be warranted for the balance of the applicable warranty period.

The warranty described here applies to watercrafts purchased and registered for use in the United States only. For warranty provisions outside the United States, contact the particular country's local Yamaha distributor.

OBTAINING REPAIRS UNDER WARRANTY. During the period of warranty, any authorized Yamaha dealer will, free of charge, repair or replace, at Yamaha's option, any parts adjudged defective by Yamaha due to faulty workmanship or material from the factory. All parts replaced under warranty will become the property of Yamaha Motor Corporation, U.S.A.

CUSTOMER'S RESPONSIBILITY. Under the terms of this warranty, the customer will be responsible for ensuring that the watercraft is properly operated, maintained, and stored as specified in the applicable Owner's/Operator's Manual.

The owner of the watercraft shall give notice to an authorized Yamaha dealer of any and all apparent defects within ten [10] days of discovery and make the watercraft available at that time for inspection and repairs at the dealer's place of business.

GENERAL EXCLUSIONS FROM WARRANTY. This warranty will not cover the repair of damage if the damage is a result of abuse or neglect of the product. Examples of abuse and neglect include, but are not limited to:

1. Racing or competition use, modification of original parts abnormal strain.
2. Lack of proper maintenance and off season storage as described in the Owner's/Operator's Manual, installation of parts or accessories that are not equivalent in design and quality to genuine Yamaha parts.
3. Use of lubricants, oils, and fuel/oil mixtures that are not suitable for watercraft motor use.
4. Damage as a result of accidents, collisions, contact with foreign materials, or submersion.
5. Growth of marine organisms on motor or hull surfaces.
6. Normal deterioration.
7. Gel coat stress cracks.

SPECIFIC PARTS EXCLUDED FROM WARRANTY.

Parts replaced due to normal wear or routine maintenance such as oil, spark plugs, fuel filters, impeller and liner, and anodes are not covered by warranty. Charges for transporting the watercraft to and from an authorized Yamaha dealer are excluded from warranty coverage.

TRANSFER OF WARRANTY. Transfer of the warranty from the original purchaser to any subsequent purchaser is possible by having the watercraft inspected by an authorized Yamaha dealer and requesting the dealer to submit a change of registration to Yamaha Motor Corporation, U.S.A. within ten [10] days of the transfer.

EMISSION CONTROL SYSTEM WARRANTY. Yamaha warrants to the ultimate purchaser and each subsequent, that this engine is designed, built, and equipped so as to conform at the time of sale with applicable regulations under section 213 of the Clean Air Act and this engine is free from defects in materials and workmanship which cause said engine to fail to conform with applicable regulations for one (1) year from date of purchase.

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

Consumer information

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
Post Office Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

- Q. What costs are my responsibility during the warranty period?
- A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages.
- Q. What are some examples of "abnormal" strain, neglect, or abuse?
- A. These terms are general and overlap each other in areas. Specific examples include:
Running the watercraft out of oil, operating the machine with a broken or damaged part which causes another part to fail, and so on. If you have any specific questions on operation or maintenance, please contact your Yamaha dealer for advice.
- Q. Does the warranty cover incidental costs such as transportation due to a failure?
- A. No. The warranty is limited to repair of the watercraft itself.
- Q. May I perform any or all of the recommended maintenance shown in the Owner's/Operator's Manual instead of having the dealer do them?
- A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's/Operator's and Service Manual. We do recommend, however, that items requiring special or equipment be done by a Yamaha dealer.
- Q. Will the warranty be void or cancelled if I do not operate or maintain my new watercraft exactly as specified in the Owner's/Operator's Manual?
- A. No. The warranty on a new watercraft cannot be "voided" or "cancelled". **However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's/Operator's Manual, that failure may not be covered under warranty.**
- Q. What responsibility does my dealer have under this warranty?
- A. Each Yamaha dealer is expected to:
1. Completely set up each new watercraft before sale.
 2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date. In addition, each Yamaha dealer is held responsible for his setup, service and warranty repair work.
- Q. Is the warranty transferable to second owners?
- A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha dealer for the policy to remain effective.

CUSTOMER SERVICE

If your watercraft requires warranty service, you must take it to any authorized Yamaha dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. If you are still not satisfied and require additional assistance, please write:

YAMAHA MOTOR CORPORATION U.S.A.
CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

CHANGE OF ADDRESS

The federal government requires each manufacturer to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new watercraft, please advise us of your new address by sending a postcard listing your Yamaha model name, engine number, dealer number [or dealer's name] as it is shown on your warranty card, your name and new mailing address.

Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

Consumer information

EJU34800

YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha 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 choose the plan that is right for you: 12 months, 24 months, 36 months, or (on four-stroke models) 48 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty—and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage is not limited to “moving parts” or the “drive train” like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factory-backed protection can be.
- You do not have to pay anything for covered repairs. There is no deductible to pay, and repairs are not “pro-rated.” You do not have any “out-of-pocket” expenses for covered repairs.
- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to \$150 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your 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.

We urge you to act now. You will get the excellent benefits of TRIP coverage right away, and you will rest easy knowing you will have strong factory-backed protection even after your Yamaha Limited Warranty expires.

A special note:

If visiting your dealer is not convenient, contact Yamaha with your Primary ID number (your Owner's Manual shows you where to find this number). We will 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)



YAMAHA EXTENDED SERVICE

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