

YAMAHA

E



**Water
Vehicle**



OWNER'S/OPERATOR'S MANUAL

FX1-28199-81

IDENTIFICATION NUMBER RECORDS

- 1 HULL IDENTIFICATION NUMBER
(H.I.N.):

2. PRI-I.D. NUMBER:

MODEL	
PRI-I.D. CODE	
SERIAL No.	

3. ENGINE NUMBER:

YAMAHA	MODEL	
CODE	SERIAL No.	

Record your H.I.N. , Primary I.D. , and engine numbers in the spaces provided, to assist you in ordering spare parts from your Yamaha Water Vehicle dealer. (See pages 3-1 and 3-2.) Also record and keep these I.D. numbers in a separate place in case your water vehicle is stolen.

EA100E*

SUPER JET/FX1

OWNER'S/OPERATOR'S MANUAL

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Printed in Japan

TO THE OWNER

Thank you for choosing a Yamaha Water Vehicle. This Owner'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 water vehicle, please consult a Yamaha dealer.

YAMAHA MOTOR CO., LTD.

Because Yamaha has a policy of continuing product improvement, this product may not be exactly as described in this Owner's Manual. Specifications are subject to change without notice.

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

IMPORTANT MANUAL INFORMATION

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!

▲WARNING

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

CAUTION:

A **CAUTION** indicates special precautions that must be taken to avoid damage to the water vehicle.

NOTE:

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

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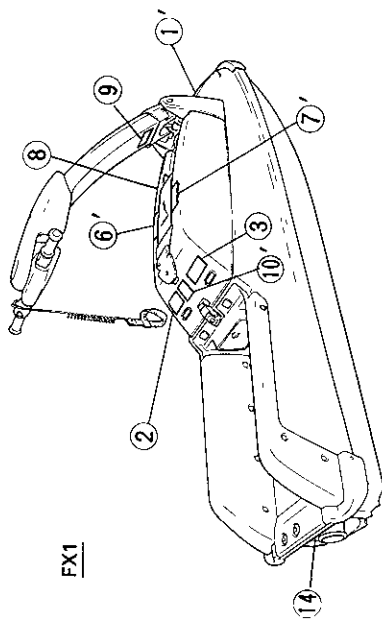
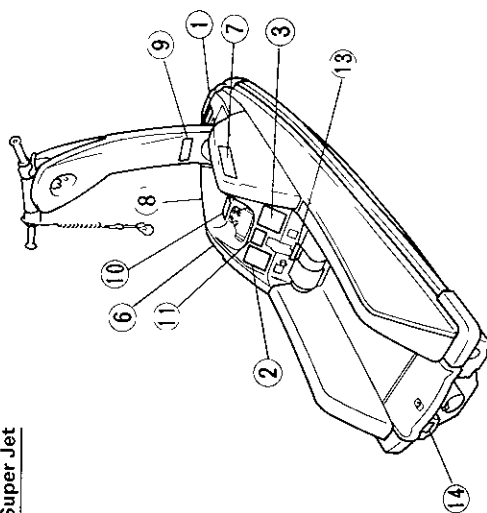
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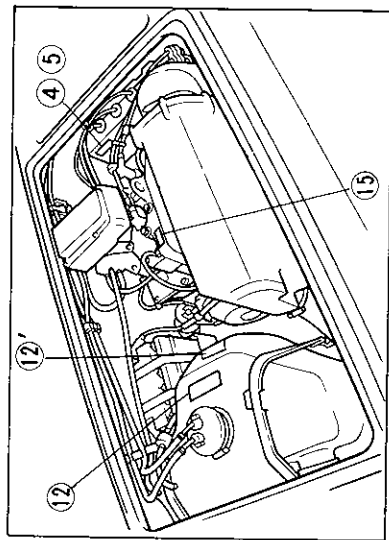
IMPORTANT LABELS

LOCATION

Super Jet



FX1



LABELS

Warning labels

① Super Jet

⚠ WARNING GASOLINE IS HIGHLY FLAMMABLE AND EXPLOSIVE • Stop engine before refueling. Refuel in well ventilated area • Never refuel while smoking or around sparks or flames • Avoid spilling gasoline. Wipe up spilled gasoline immediately GAS AND OIL MIXING RATIO 50 : 1	⚠ AVERTISSEMENT L'ESSENCE EST TRÈS INFLAMMABLE ET EST EXPLOSIVE • Arrêtez le moteur avant de ravaler le plein. Ravaler le plein dans une endroit bien ventilé • Ne pas ravaler le plein en fumant ou à proximité de étincelles et de flammes • Évitez de renverser de l'essence. P essuyer immédiatement tout liquide renversé RAPPORT DE MÉLANGE D'ESSENCE ET D'HUILE 50 : 1
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①' FX1

⚠ WARNING GASOLINE IS HIGHLY FLAMMABLE AND EXPLOSIVE • Stop engine before refueling • Refuel in well ventilated area • Never refuel while smoking or around sparks or flames • Avoid spilling gasoline. Wipe up spilled gasoline immediately GAS AND OIL MIXING RATIO 50 : 1	⚠ AVERTISSEMENT L'ESSENCE EST TRÈS INFLAMMABLE ET EST EXPLOSIVE • Arrêtez le moteur avant de ravaler le plein. Ravaler le plein dans un endroit bien ventilé • Ne pas ravaler le plein en fumant ou à proximité de étincelles ou de flammes • Évitez de renverser de l'essence. Essuyer immédiatement tout liquide renversé RAPPORT DE MÉLANGE D'ESSENCE ET D'HUILE 50 : 1
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② ⚠ WARNING

SEVERE INJURY OR DEATH MAY RESULT IF YOU IGNORE ANY OF THE FOLLOWING:

- 1 Read the Owner's Manual before operating
- 2 This vehicle is recommended only for 16 and older with valid motor vehicle license and adequate experience for minimum age requirements
- 3 Vehicle capacity - Operator only
- 4 No passenger approved personal flotation device
- 5 Wear wet suits to protect against abrasions and hypothermia and injuries to necks, chests and vaginas from impact with the water
- 6 Attach the engine stop lanyard to your left wrist before operating
- 7 You must know and follow all applicable and local boating laws

continued on inside the right

③ ⚠ WARNING

CONTINUED

- 8 Never operate after drinking alcohol or taking drugs
- 9 You must apply throttle to turn
- 10 Do not operate in rough water or improper operation before starting the engine
- 11 Open the hood to ventilate fuel vapors from the engine compartment before starting the engine
- 12 Do not operate in less than 2 ft (60 cm) a fuel leak or loose electrical connection
- 13 Never in distance from swimmers, other watercraft, and obstructions
- 14 Never attempt jumps with this water vehicle
- 15 Do not travel far away without another watercraft or boat with young people
- 16 Keep hands, feet, hair, and all other parts of your body and clothing away from the propeller and the engine

continued on inside the right

④

⚠ AVERTISSEMENT

Ne pas toucher ou retirer les pièces électriques lors du démarrage ou de la marche du moteur

GR7 83623 50

⑤

⚠ WARNING

Do not touch or remove electrical parts when starting or running the engine

GR7 83623 40

⑥

▲ AVERTISSEMENT

LE NON RESPECT DES PRECAUTIONS SUIVANTES PEUT ÊTRE LA CAUSE DE BLESSURES SÉRIEUSES VOIRE MORTELLES.

- 1 Luez le manuel d'utilisation, les renseignements sur la conduite et toutes les étiquettes avant de faire fonctionner le véhicule.
- 2 Ce véhicule n'est recommandé que pour les pilotes de 16 ans et plus, ayant un permis de conduire valide. Les adultes doivent surveiller l'utilisation par des mineurs. Lisez les lois locales pour les prescriptions d'âge minimum.
- 3 Capacité du véhicule. Pilote « minimum » Pas de passager.
- 4 Toujours porter un gilet de sauvetage homologué.
- 5 Porter une combinaison de sport nautique afin de vous protéger contre l'hypothermie et toutes blessures corporelles.
- 6 Attacher la lanterne de l'interrupteur d'arrêt du moteur au poignet et ne pas le laisser en utilisation.
- 7 Vous devez connaître et suivre tous les règlements en vigueur, y compris les règlements locaux sur la navigation de plaisance.
- 8 Vous devez utiliser les gaz pour tourner.

Suite sur l'étiquette de droite

⑦

▲ AVERTISSEMENT

LE NON RESPECT DES PRECAUTIONS SUIVANTES PEUT ÊTRE LA CAUSE DE BLESSURES SÉRIEUSES VOIRE MORTELLES.

- 9 Ne jamais utiliser après avoir bu de l'alcool ou pris des médicaments.
- 10 Vérifier que le fonctionnement de la commande des gaz et la direction est correct avant de démarrer le moteur.
- 11 Quand le capot moteur pour évacuer les vapeurs d'essence avant de démarrer.
Ne jamais débrancher le moteur si il y a une fuite d'essence. Ne connexion électrique mal fixée.
- 12 Ne pas utiliser dans moins de 60cm d'eau.
- 13 Garder une distance suffisante des nageurs, des bateaux, des autres embarcations à moteur et des obstacles.
- 14 Ne jamais tenter de faire des sauts avec ce véhicule nautique.
- 15 Ne pas engager l'on sans une autre embarcation à moteur au bateau avec soi.
- 16 Avertissement: Ne jamais utiliser le moteur pour retirer d'urgence les corps étrangers dans la turbine. Veuillez garder les mains et les pieds à toute autre partie du corps et des vêtements à distance de la turbine lorsque le moteur tourne.

⑥

A AVERTISSEMENT

LE NON RESPECT DES PRECAUTIONS SUIVANTES PEUT ETRE LA CAUSE DE BLESSURES SÉRIEUSES, VOIRE MORTELLES.

- 1 Lisez le manuel d'utilisation les renseignements sur le moteur et les précautions d'emploi.
- 2 Ce véhicule n'est recommandé que pour les pilotes de 16 ans et plus ayant un permis de conduire valide. Les adultes doivent surveiller l'utilisation par des mineurs. Vérifier les lois locales pour les prescriptions d'âge minimum.
- 3 Capacité du véhicule. Pilote seulement.
- 4 Pas de Passager.
- 5 Toujours porté un gilet de sauvetage homologué protégeant contre l'hypothermie et toutes blessures corporelles.
- 6 Attacher la ceinture de l'intercepteur d'arrêt du moteur au point de fixation avant l'utilisation.
- 7 Vous devez connaître les règlements en vigueur dans la zone de navigation.
- 8 Vous devez utiliser les gaz pour tourner.

Sûreté sur l'urgence de droit

⑦

A AVERTISSEMENT

LE NON RESPECT DES PRECAUTIONS SUIVANTES PEUT FAIRE LA CAUSE DE BLESSURES SÉRIEUSES, VOIRE MORTELLES.

- 9 Ne jamais utiliser après avoir bu de l'alcool ou pris des médicaments.
- 10 Vérifier que le fonctionnement de la commande du gaz et la direction est correct avant de démarrer le moteur.
- 11 Quitter le capot moteur pour évaluer les risques d'essence avant de démarrer.
- 12 Ne jamais utiliser le moteur si il y a une fuite d'essence. Une inspection électrique peut fixer le problème.
- 13 Garder une distance suffisante des autres embarcations, des obstacles et des obstacles.
- 14 Ne jamais tenter de faire des sauts avec ce véhicule.
- 15 Ne pas naviguer loin sans une autre embarcation à moteur ou bateau avec vous.
- 16 Arrêter immédiatement le moteur pour réparer d'éventuels corps étrangers dans la turbine. Veuillez garder les mains, cheveux ou tout autre partie du corps et des vêtements à distance de la turbine lorsque le moteur tourne.

⑧

A AVERTISSEMENT

APPLICABLE POUR LA FRANCE SEULEMENT

- En France permis de conduire et immatriculation obligatoire.
- Navigation en mer autorisée entre 300 mètres et 1 mille nautique.
- Entre 0 et 300 mètres, se référer aux instructions maritimes affichées.
- Sinon, règle générale d'usage maritime.
- Utiliser les chemins obligatoires de sortie lorsqu'ils existent.
- Respecter les règles de priorité.
- Gilet de sauvetage obligatoire.
- Ne jamais conduire sous l'influence de l'alcool ou de drogues.
- Consulter la météo avant de sortir en mer.
- Une conduite responsable et un contrôle quotidien de votre machine suivant le manuel d'entretien JAMAHA seront garants de votre sécurité.

EMC 2115 J

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CAUTION

BATTERY REMOVAL

- Disconnect both battery leads and the breather pipe before removing battery

BATTERY INSTALLATION

- Connect red lead to positive (+) terminal
- Reversing leads will damage electrical system
- Make sure the breather pipe is connected after installation



ATTENTION

RE RETIRER LA BATTERIE

- Déconnecter les deux câbles de la batterie et le tuyau de ventilation avant de retirer la batterie

RE POSER LA BATTERIE

- Connecter le fil rouge à la borne positive (+)
- Connecter le fil noir à la borne négative (-)
- L'inversion des fils endommagera le système électrique
- Vérifier que le tuyau de ventilation est connecté après la pose



10

AFTER OPERATION

After removing vehicle from the water

- Flush drive system and hull with fresh water
- Start the engine and rapidly pull and release the throttle lever for 10–15 seconds to drain any left over water in the exhaust system
- Refer to the Owner's Manual for complete maintenance and storage information

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APRES USAGE

Après avoir retiré le véhicule de l'eau

- Rincer le système d'entraînement et la coque avec de l'eau douce
- Mettre le moteur en marche et tirer et relâcher rapidement le levier des gaz pendant 10–15 secondes pour vidanger toute eau résiduelle dans le système d'échappement
- Se reporter au mode d'emploi pour les informations complètes sur l'entretien et le remisage

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11' FX1

AFTER OPERATION

After removing vehicle from the water

- Flush drive system and hull with fresh water
- Start the engine and rapidly pull and release the throttle lever for 10–15 seconds to drain any left over water in the exhaust system
- Refer to the Owner's Manual for complete maintenance and storage information

APRES USAGE

Après avoir enlevé le véhicule de l'eau

- Rincer le système d'entraînement et la coque avec de l'eau douce
- Mettre le moteur en marche et tirer et relâcher rapidement le levier des gaz pendant 10–15 secondes pour vidanger toute eau résiduelle dans le système d'échappement
- Se reporter au mode d'emploi pour les informations complètes sur l'entretien et le remisage

YAMAHA

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YAMAHA MOTOR MANUFACTURING CORPORATION OF AMERICA

NEWMAN GEORGIA 30263-1320

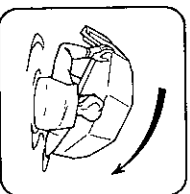
Date Mfg	Molded on FOT	Material	HDPE
Date de Fab	Moulé sur RES	Matériel	PEHD
Capacity	4.8 us gal	Model No	EW2
Contenance	4.0 Imp gal	N° modèle	EW2
	18 l		

Maximum Recommended Test Pressure 3psi
Pression d'essai max. recommandée 0.2 kg-f/cm²
This tank has been tested under 33 CFR 183.510
Ce réservoir a été testé sous le n° 33 CFR 183.510
Recommandé pour l'essence

13

FIRE EXTINGUISHER COMPARTMENT
L'EXTINCTEUR

14



15



12

FX1

YAMAHA MOTOR MANUFACTURING CORPORATION OF AMERICA

NEWMAN GEORGIA 30263-1320

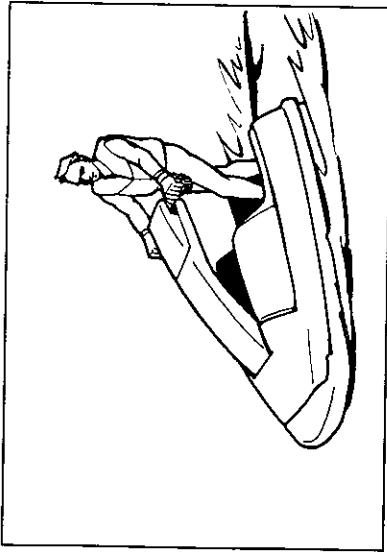
Date Mfg	Molded on FOT	Material	HDPE
Date de Fab	Moulé sur RES	Matériel	PEHD
Capacity	3.7 us gal	Model No	FX1
Contenance	3.1 Imp gal	N° modèle	FX1
	14 l		

Maximum Recommended Test Pressure 3psi
Pression d'essai max. recommandée 0.2 kg-f/cm²
This tank has been tested under 33 CFR 183.510
Ce réservoir a été testé sous le n° 33 CFR 183.510
Recommandé pour l'essence

GENERAL OPERATING AND SAFETY INFORMATION



SAFETY INFORMATION



When you operate your Yamaha Water Vehicle, you must know and practice the following for your safety

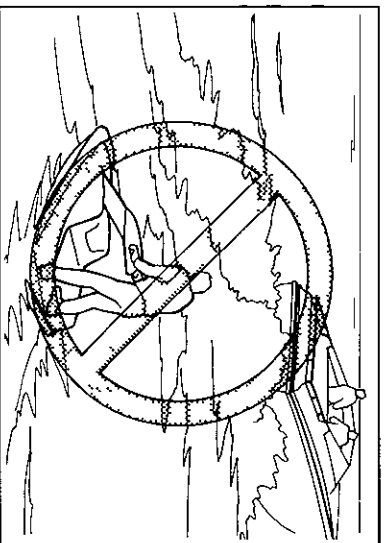
NOTE

In French waters, confirm all local regulations, such as for operating areas, applied to the operation of the water vehicle prior to the operation

Never allow anyone to operate this water vehicle until they too have read this Owner's Manual, the Riding Practice Hand Book and all warning labels

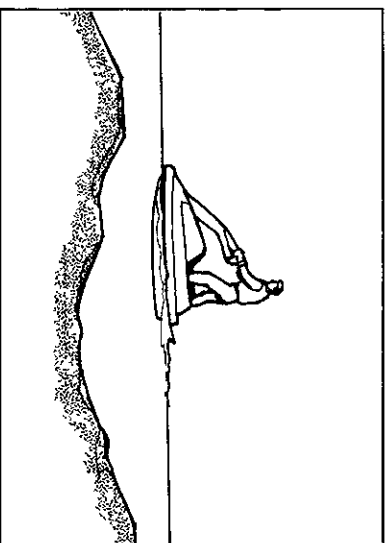
Limitations on who may operate the vehicle

- This vehicle is recommended only for operators 16 and older with a valid motor vehicle license
Even though a motor vehicle operator's license is not required for water vehicle operation in most countries, it is one indicator that the operator has previously demonstrated a reasonable degree of maturity, responsibility, and good judgement
A responsible adult must supervise operation of this vehicle by minors
Many countries have minimum age and education requirements Always check all applicable local boating laws that apply to you before you operate the water vehicle
- Your water vehicle is designed to carry the operator only Never have more than one person on the vehicle at any time



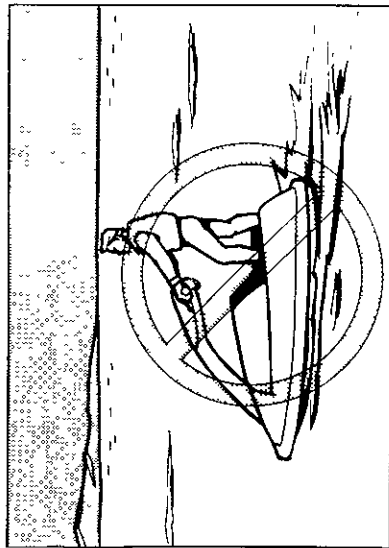
Cruising limitations

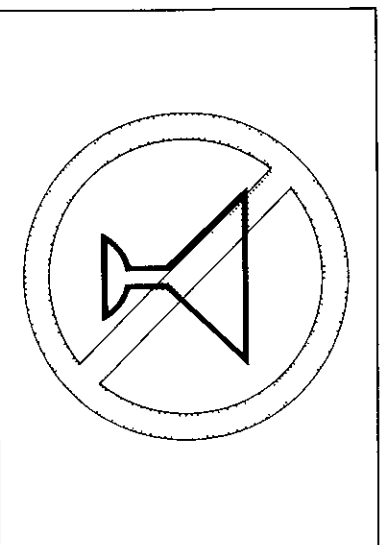
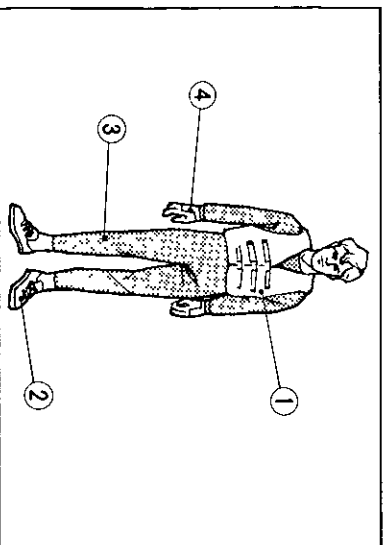
- Do not try to jump other boat's wakes or follow another boat or watercraft too closely. You increase your chance of colliding with the boat. Do not go over a water-ski jump, or attempt any other kind of jumping maneuver with the vehicle you risk injuring yourself or damaging your water vehicle when landing from a jump.
- As with any water sport, you should not ride your water vehicle without someone else near by. If you ride further than swimming distance from shore, you should be accompanied by another boat or watercraft. It's good, common sense!



- Watch for dangerous underwater obstacles when riding in shallow water. Never ride in water that is less than 60 cm (2 feet) deep.

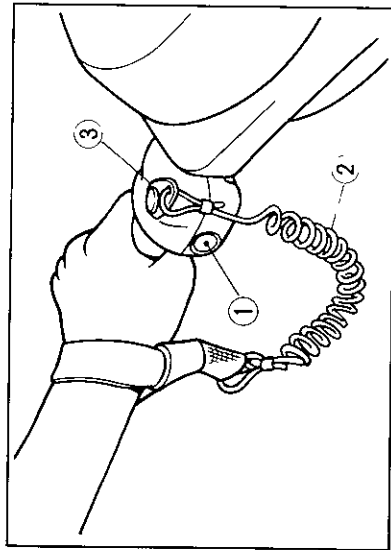
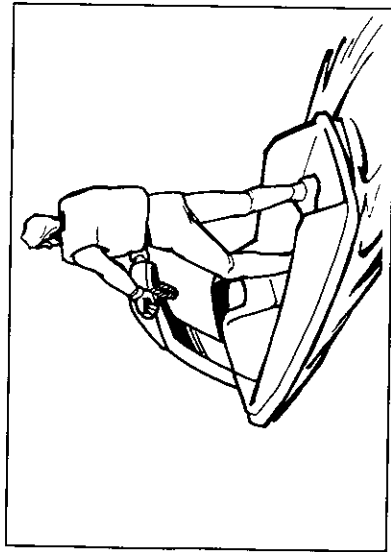
- Do not operate your water vehicle after sunset or before dawn. It is not equipped for night operation.
- Do not operate the vehicle in rough water, bad weather or when visibility is poor, this may lead to an accident causing injury or death. Be alert to the possibility of adverse weather. Take note of weather forecasts and the prevailing weather conditions before setting out on your water vehicle.





Operational requirements

- Operating your water vehicle requires skills acquired only through practice over a period of time. Take the time to learn the basic operating techniques well, before attempting more difficult maneuvers
- The operator should always wear an authority approved personal flotation device (vest-type) because of the drowning hazards associated with water sports
- The operator should wear wet suits. You should consider wearing water shoes, gloves and other protective apparel. Water sports increase your risk of injury from contact with your watercraft, other vessels, docks, rocks, coral, or the water surface, particularly as speeds increase. Normal swimming attire may not adequately protect you. In addition to helping protect against abrasions, a wet suit can help protect against hypothermia (low body temperature), and injuries to certain body orifices (rectum and vagina) due to impact with the water surface
- ① Authority approved personal flotation device or buoyancy vest
- ② Water shoes
- ③ Wet suit
- ④ Gloves
- NEVER operate the vehicle after consuming alcohol or taking drugs
- For reasons of safety and proper care, always perform the pre-operation checks on page 5-1 before riding

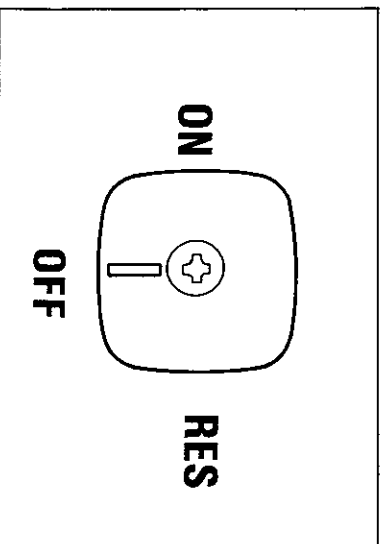


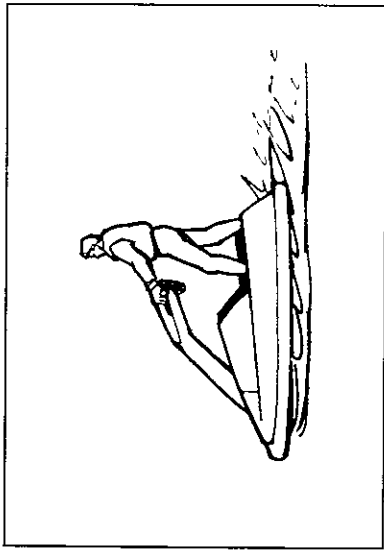
- The operator should always keep both feet or knees on the riding tray when the vehicle is in motion. If you lift your feet, you increase your chances of losing your balance, and your feet could hit objects outside the water vehicle.
 - If you are pregnant or in poor health, ask your doctor's advice on whether it is safe for you to ride this water vehicle.
 - Do not attempt to modify this water vehicle! Modifications to your machine may reduce safety and reliability, and may make the vehicle unsafe or illegal for use.
 - The operator should always attach the engine stop switch lanyard (cable) to his left wrist so that the engine will stop if the operator falls off. Be sure the lanyard is not wrapped around the handlebar or tangled in the controls which would prevent the lanyard from pulling away.
 - To prevent accidental starting of the engine, always remove the lock-plate from the stop switch when the engine is not running.
- ① Engine stop switch
 - ② Engine stop switch lanyard
 - ③ Lock-plate attached to the lanyard

- Always watch carefully for swimmers. 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 don't see you, or you maneuver more quickly than other boaters expect, you risk a collision.
- Maintain a safe distance from other boats or watercraft, and also watch for boat's ski ropes or fishing lines. Obey the "SAFE BOATING RULES" (see page 2-8), and be sure to check behind you before making a turn.

Hazard information

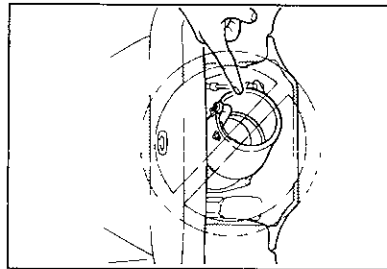
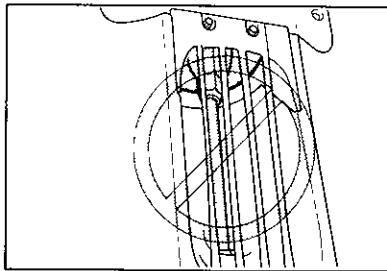
- When transporting or storing your water vehicle, always place the fuel cock in the "OFF" position. Otherwise, it is possible for gasoline to overflow from the carburetor.





Water vehicle characteristics

- Jet thrust turns the water vehicle. If you are going faster than trolling speeds, you must use throttle to turn. If you release the throttle completely, you cannot turn-even if you turn the handlebars. Practice turning in an open area without obstructions until you have a good feel for this maneuver.
- Yamaha Water Vehicles are water-jet propelled. The jet pump is directly connected to the engine. This means that jet thrust will produce some vehicle movement whenever the engine is running. There is no "neutral" position.
- Boats, including your water vehicle, do not have brakes. Release the throttle or stop the engine to slow down. Remember, however, that you have no steering control without throttle.
- Keep hands, feet, hair, and all other parts of your body and clothing away from jet intake on the bottom of the hull while engine is running.
Stop the engine and remove the stop switch lock plate before removing any debris or weeds which may have collected around the jet intake.
Never insert any object in the jet pump outlet.



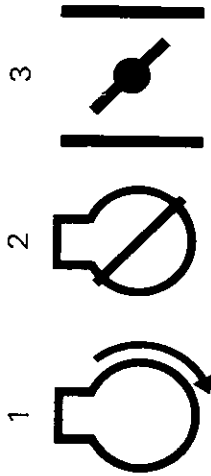
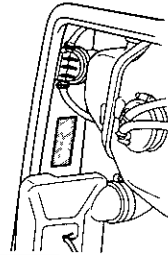
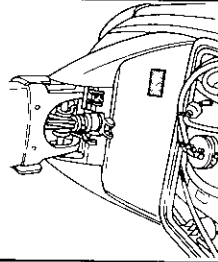
SAFE BOATING RULES

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

GENERAL INFORMATION

SYMBOLS

- 1 Starter switch
- 2 Engine stop switch
- 3 Choke knob

Super JetFX1

IDENTIFICATION NUMBERS

Primary ID numberSuper Jet

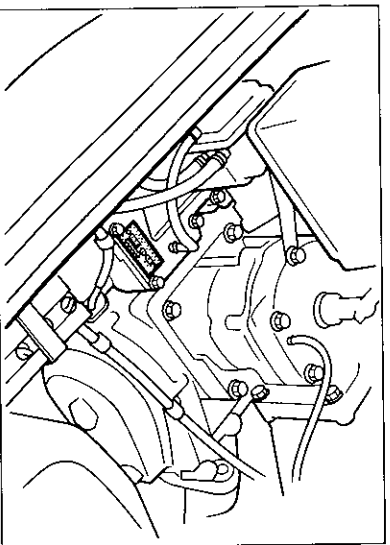
The Primary ID number is stamped on a plate attached to the inside of the engine compartment

FX1

The primary ID number is stamped on a plate attached to the hull at front side of the engine hood

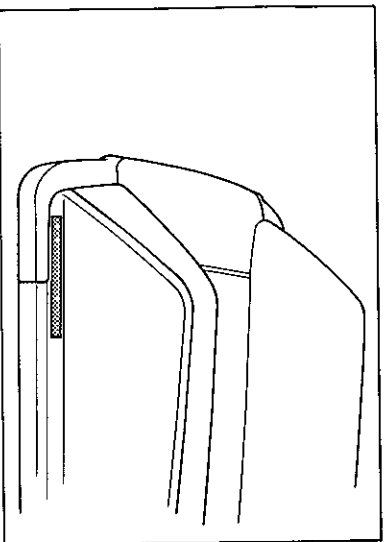
Engine serial number

The Engine serial number is stamped on a plate attached to the intake manifold

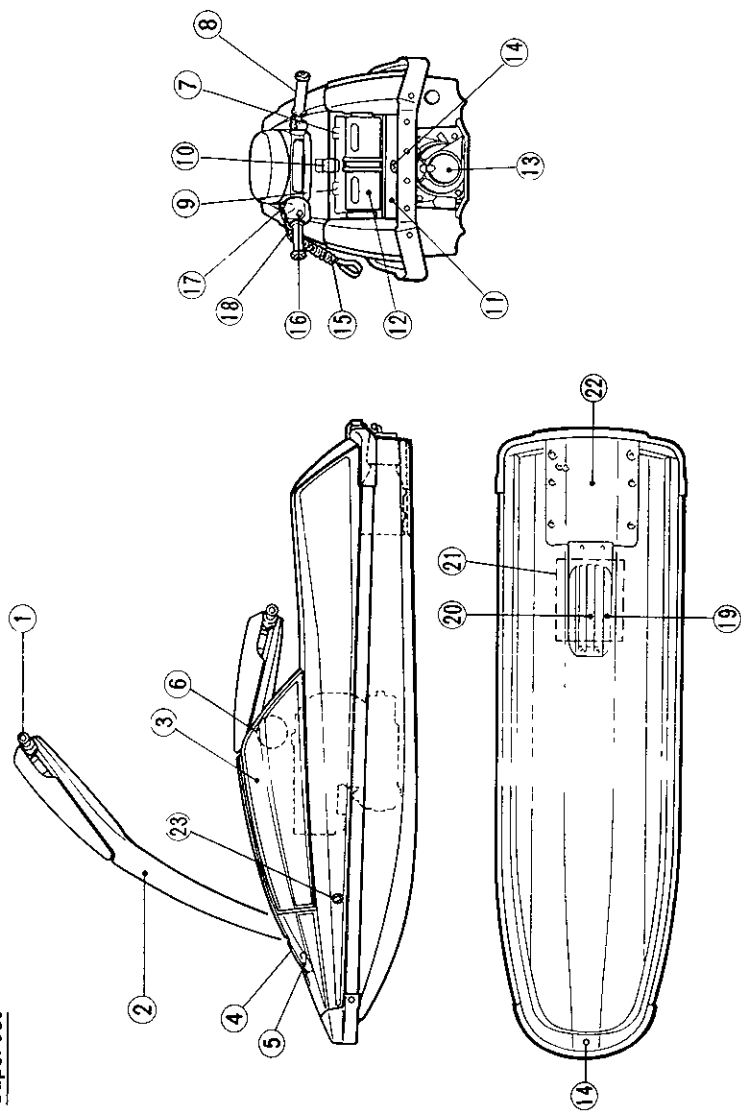


Hull identification number (H I N)

The H I N is stamped on the rear end of the side gunnel

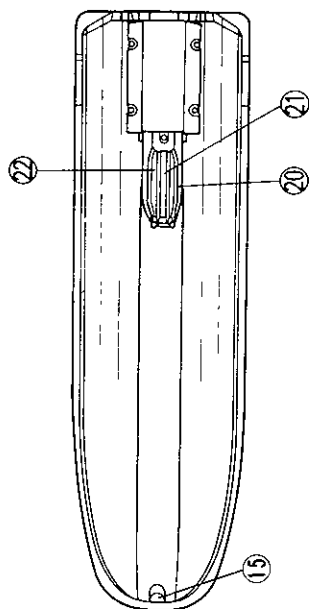
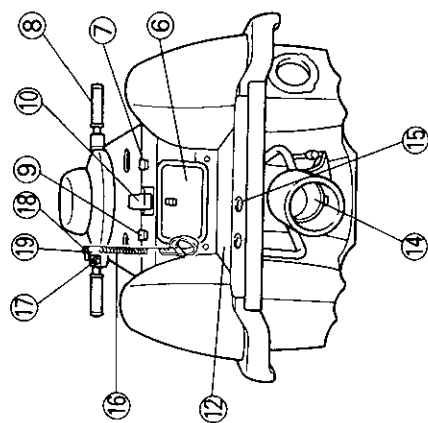
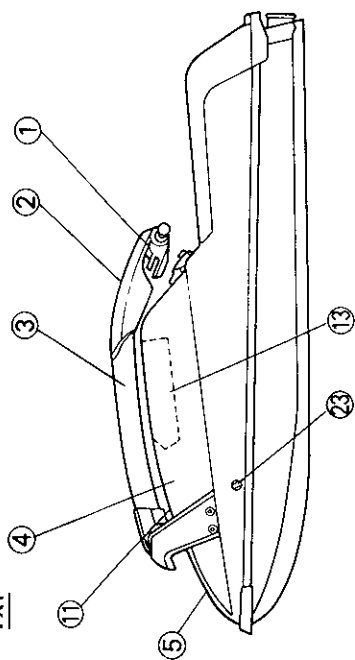


LOCATION OF MAIN COMPONENTS

Super Jet

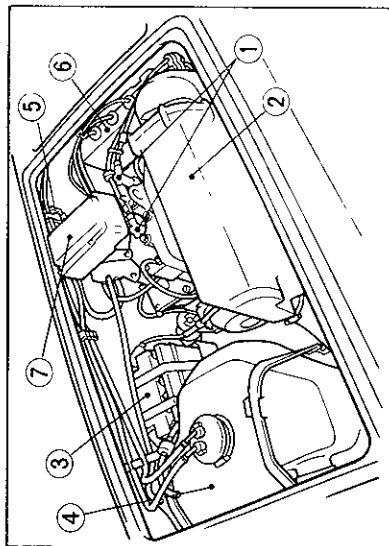
- | | | |
|------------------------|--|------------------------------|
| ① Handlebars | ⑨ Choke knob | ⑰ Lock-plate |
| ② Steering pole | ⑩ Hood latch | ⑱ Starter switch |
| ③ Engine hood | ⑪ Riding tray | ⑲ Intake grille |
| ④ Fuel tank filler lid | ⑫ Fire extinguisher container | ⑳ Drive shaft |
| ⑤ Fuel tank filler cap | ⑬ Jet output nozzle (Adjustable) | ㉑ Jet intake (Water intake) |
| ⑥ Storage container | ⑭ Rope holes (For mooring and tying down to trailer) | ㉒ Adjustable ride plate |
| ⑦ Fuel cock | ⑮ Engine stop switch lanyard (Cable) | <u>SJ700</u> |
| ⑧ Throttle lever | ⑯ Engine stop switch | ㉓ Cooling-water pylon outlet |

FX1



- | | | |
|------------------------|--|------------------------------|
| ① Handlebars | ⑨ Choke knob | ⑰ Engine stop switch |
| ② Steering pad | ⑩ Hood latch | ⑱ Lock-plate |
| ③ Steering pole | ⑪ Front hood latch | ⑲ Starter switch |
| ④ Engine hood | ⑫ Riding tray | ⑳ Intake grille |
| ⑤ Fuel tank filler cap | ⑬ Fire extinguisher container | ㉑ Drive shaft |
| ⑥ Storage compartment | ⑭ Jet output nozzle | ㉒ Jet intake (Water intake) |
| ⑦ Fuel cock | ⑮ Rope holes (For mooring and tying down to trailer) | ㉓ Cooling-water pilot outlet |
| ⑧ Throttle lever | ⑯ Engine stop switch lanyard (Cable) | |

- ① Spark plug caps
- ② Muffler box
- ③ Battery
- ④ Fuel tank
- ⑤ Fuel filter
- ⑥ Electrical box
- ⑦ Silencer cover



FUEL REQUIREMENTS**Gasoline (petrol)**

Use unleaded regular gasoline (petrol)

WARNING**GASOLINE (PETROL) AND ITS VAPORS ARE HIGHLY FLAMMABLE AND EXPLOSIVE!**

- Do not smoke when refueling, and keep away from sparks, flames, or other sources of ignition
- Stop engine before refueling
- Refuel in a well-ventilated area. Do not stand or sit on the water vehicle while refueling in case of fire.
- Take care not to spill gasoline (petrol). If gasoline (petrol) 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.
- Tighten the filler cap securely after refueling
- If you should swallow some gasoline (petrol), inhale a lot of gasoline (petrol) vapor, or get gasoline (petrol) in your eyes, get immediate medical attention
- If any gasoline (petrol) spills onto your skin, immediately wash with soap and water. Change clothing if gasoline (petrol) spills on it

CAUTION:

Use only fresh gasoline (petrol) that has been stored in clean containers

Engine oil

Recommended oil: Yamaha outboard motor oil/Yamalube for Outboards

If Yamaha outboard motor oil/Yamalube for outboards is not available, another two-stroke engine oil with a BIA-certified TC-WII or TC-W3 rating may be used

FUEL FILLING**Fuel mixing ratio**

	Oil	Gasoline (petrol)
Running-in Period (First two tanks of fuel)	1	25
After Running-in	1	50

1) In a clean container, pour the oil in first, then petrol (gasoline). Mix them thoroughly, by shaking the container

- ① Oil
② Gasoline (petrol)

2) Lift the steering pole up and support it with the lock pin. Remove the engine hood so you can watch the fuel level to the fuel tank. Be careful not to spill fuel or overfill the tank. Stop filling when the fuel level just reaches the bottom of the filler tube. Do not fill up the filler tube, because Gasoline (petrol) could leak out.

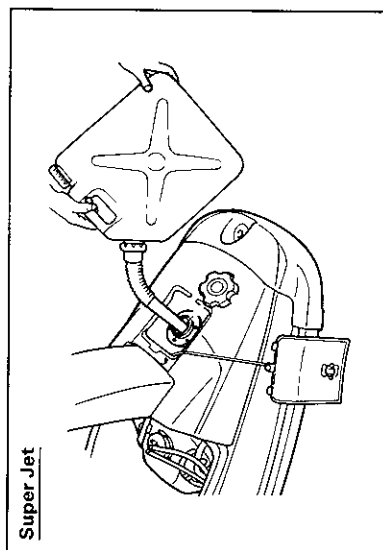
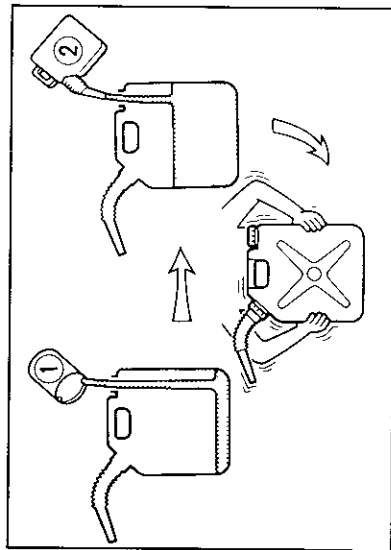
CAUTION:

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

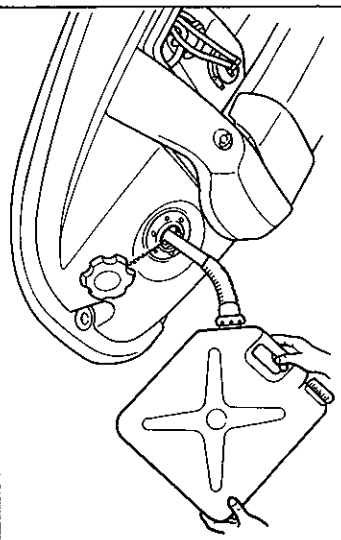
Fuel tank capacity

Super Jet 18 lit (4.8 US gal, 3.96 Imp gal)

FX1 14 lit (3.7 US gal, 3.08 Imp gal)



FX1



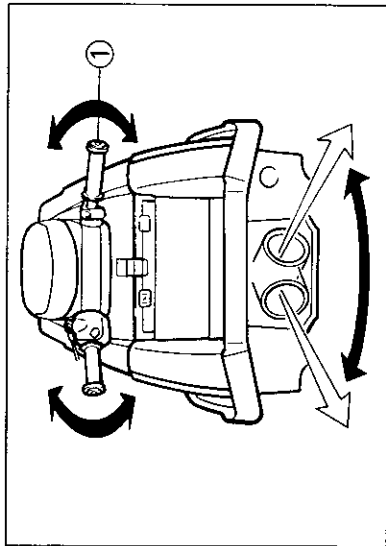
CAUTION.

- Avoid using any other than the designated oil and fuel-oil mixtures
- Use a thoroughly mixed fuel-oil blend.
- If the mixture is not thoroughly mixed or if it is the wrong ratio of oil to gasoline (petrol), the following problems will occur.
 - Low oil ratio. Because of lack of oil, major engine trouble, such as seizure, will result
 - High oil ratio. Fouled spark plugs, smoky exhaust, or heavy carbon deposits will result

OPERATION OF CONTROLS AND OTHER FUNCTIONS**Steering**

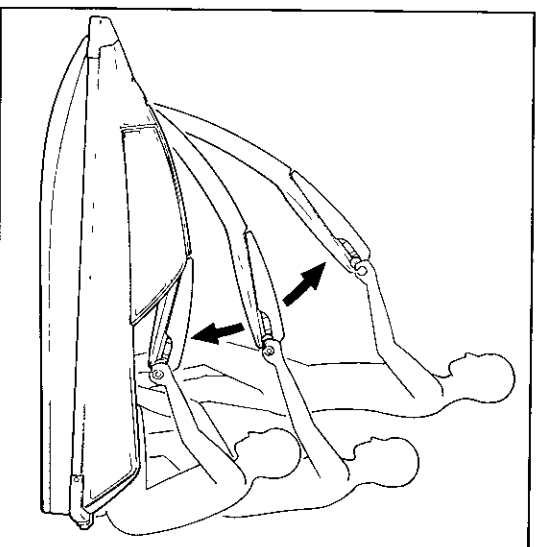
Your water vehicle can be steered by turning the handlebars the same direction you wish to travel, to the right or left. When the handlebars are turned, the angle of the output nozzle at the rear of the craft is changed, and the change in direction of the nozzle changes the direction of the vehicle accordingly. Therefore, because only the strength of the jet-flow output can determine the speed and direction of a turn, the throttle must always be opened above idle when attempting a turn, except at trolling speed.

① Handlebars



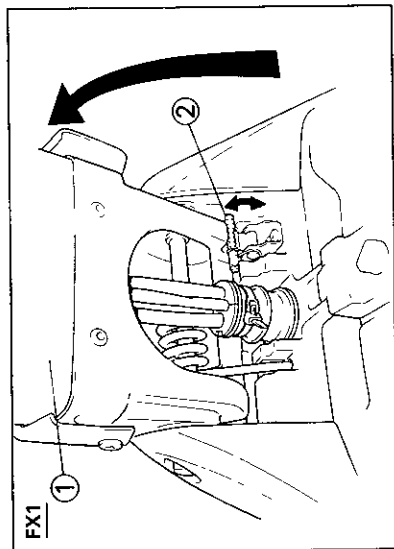
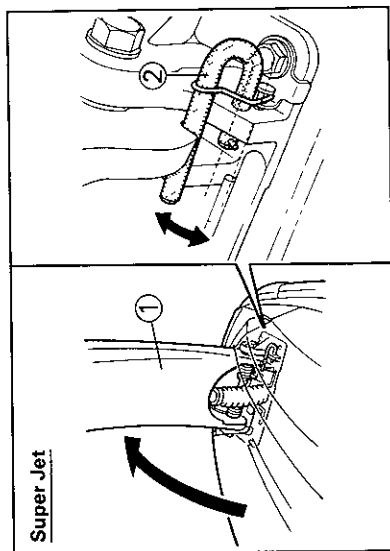
Steering pole

The steering pole varies in height with the rider's posture, enabling the rider to assume various riding positions



When removing the engine hood for pre-operation checks, maintenance, etc. lift the steering pole up and support it with the lock pin. Move the lock pin into the "locked" detent. Be sure to make the lock pin back to the "stowed" detent when you are finished.

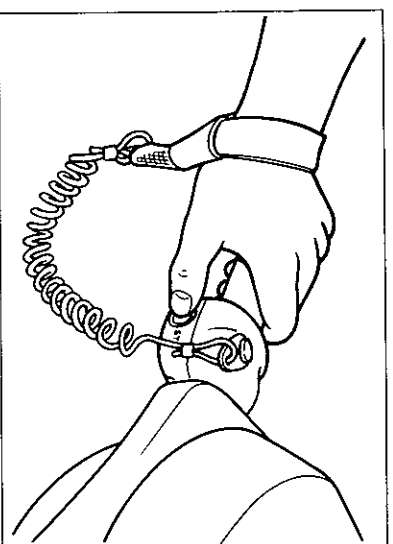
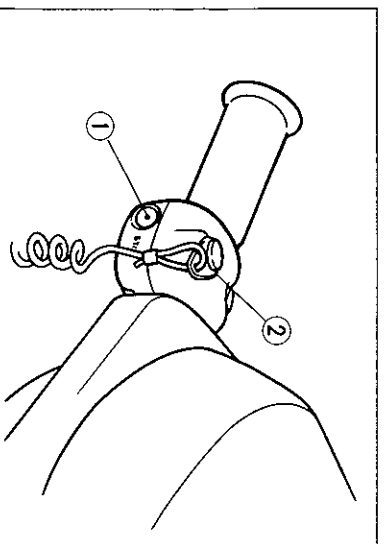
- ① Steering pole
- ② Lock pin



Engine stop switches

These switches have the following functions one is to stop the engine normally by pressing button ① on the switch box, the other is to stop the engine if you fall off, or in case of an emergency, when lock-plate ② attached to the lanyard is pulled from the switch

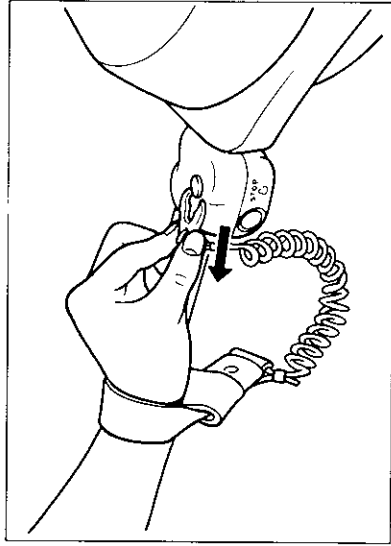
- ① Engine stop switch
- ② Lock-plate



When the button on the switch is pushed, without removing the lock-plate, the ignition circuit opens and stops the engine immediately

WARNING

Once the engine has stopped, you have **NO STEERING CONTROL** over the vehicle



Should the lock-plate be removed for any reason, the engine stops by itself

▲WARNING

- Always attach the engine stop switch lanyard (cable) to your left wrist **BEFORE** starting the engine
- To prevent accidental starting of the engine, always remove the lock-plate from the stop switch when the engine is not running

ED401S

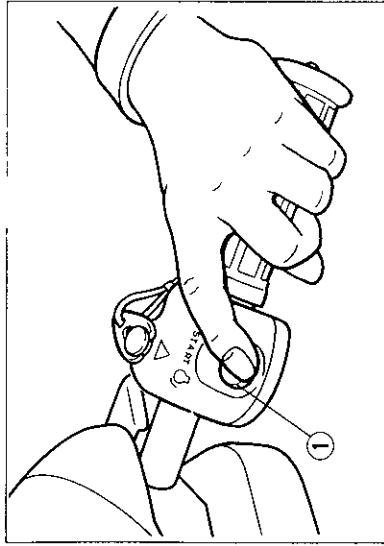
Starter switch

To start the engine, push the green button on the starter switch

NOTE

The engine will not start when the lock plate is removed from the engine stop switch. The starter motor will not turn

- ① Starter switch

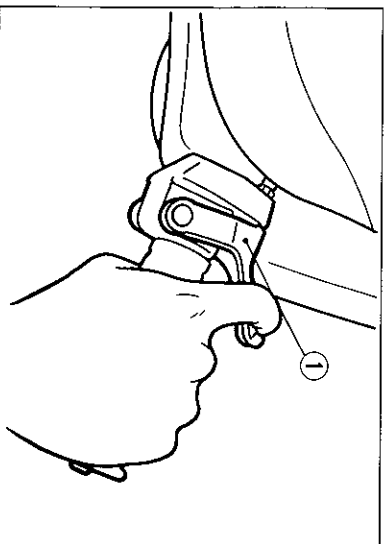


Throttle lever

Moving the throttle lever toward the handlebar increases engine speed. When the throttle lever is released, it returns to its closed (idle) position through the action of a return spring.

WARNING

Before starting the engine, always check the operation of the throttle lever. It should move smoothly through its full range of operation, and should spring back to the idle position when released.



① Throttle lever

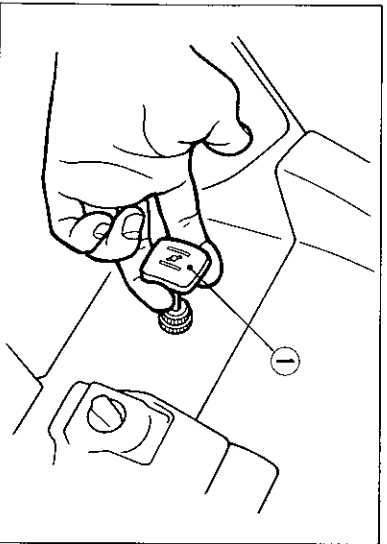
ED500S

Choke knob

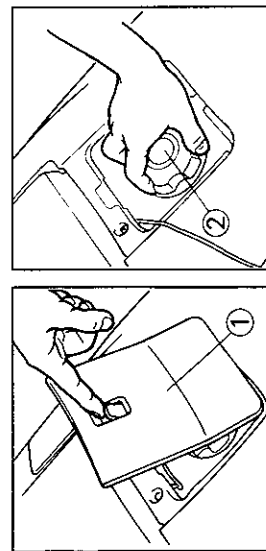
Pulling this knob supplies a rich fuel-air mixture required to start the engine.

NOTE

Refer to **Starting the engine** on pages 6-1 to 6-4 for proper operation.



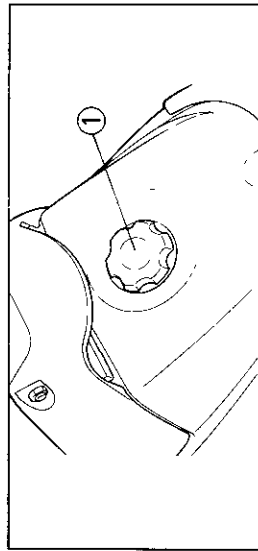
① Choke knob

**Fuel tank filler cap (for Super Jet)**

Open the fuel filler lid, then remove the fuel tank filler cap by turning it counterclockwise

- ① Fuel tank filler lid
- ② Fuel tank filler cap

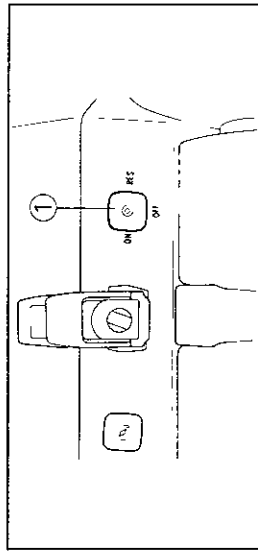
Be sure to tighten the cap securely before riding

**Fuel tank filler cap (for FX1)**

To remove the fuel tank filler cap, turn it counterclockwise

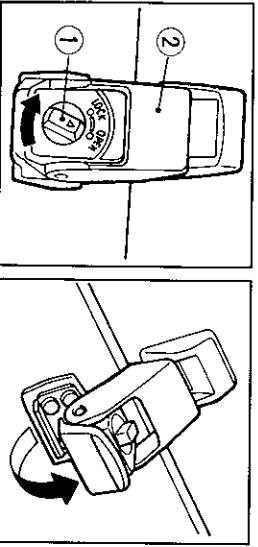
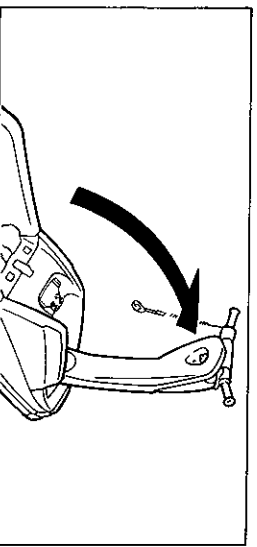
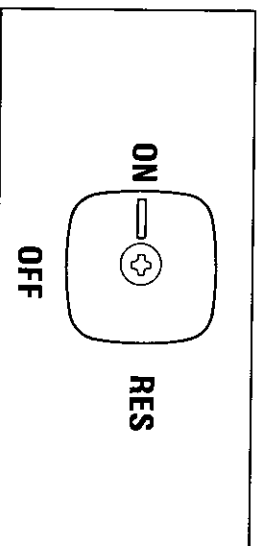
- ① Fuel tank filler cap

Be sure to tighten the cap securely before riding

**Fuel cock**

The fuel cock supplies fuel from the tank to the carburetor
The fuel cock has three positions,

- ① Fuel cock



- 1 **OFF** With the knob in this position, fuel does not flow. Always turn the knob to this position when the engine is not running.
- 2 **ON** With the knob in this position, fuel flows to the carburetor. Normal running is done with the knob in this position.
- 3 **RES** This position selects "RESERVE". If you run out of fuel in the "ON" position, turn the knob to this position to be able to continue for a short time. Remember to **FILL THE TANK AT THE FIRST OPPORTUNITY**. After refueling, return the fuel cock knob to the "ON" position for further riding.

XZ050S

Engine hood (for Super Jet)

The engine hood is secured at the rear by one latch. Before removing the hood, lift the steering pole up and support it with the lock pin.

- To remove the hood, turn the latch knob to the open position.

Then lift upward the hood latch and unlatch the hood. Remove the hood by grasping it at the rear and at the handgrip in the middle. Lift the hood up and to the rear.

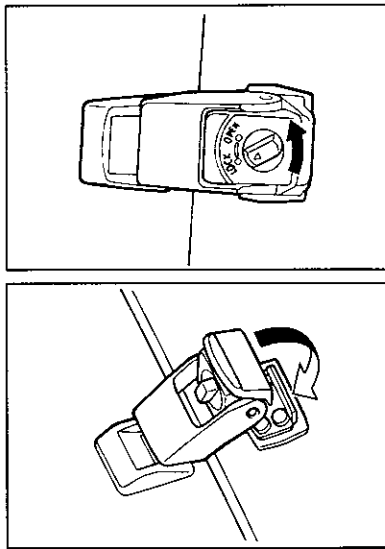
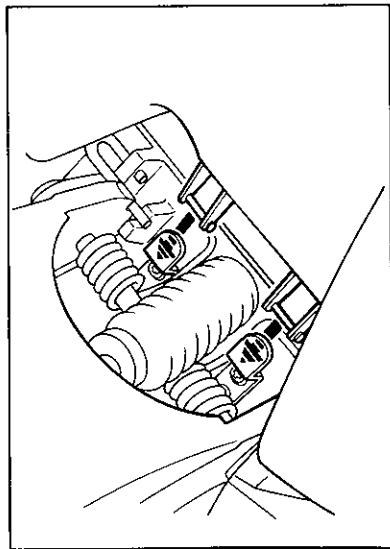
- ① Knob
- ② Hood latch

- To install the engine hood, position the hood on the deck so the two projections at the front of the hood fit under the two tabs on the deck

Push down the hood latch and turn the knob to the lock position

NOTE

Make sure the hood is firmly secured with the latch and is locked before attempting to ride

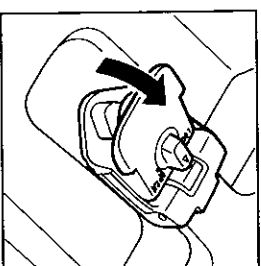
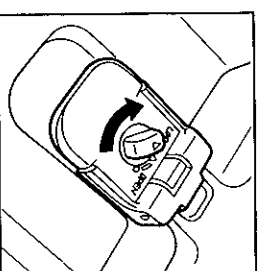
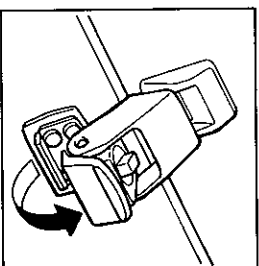
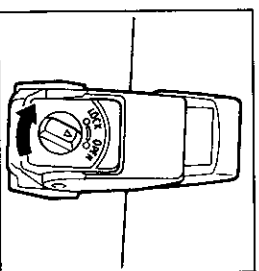
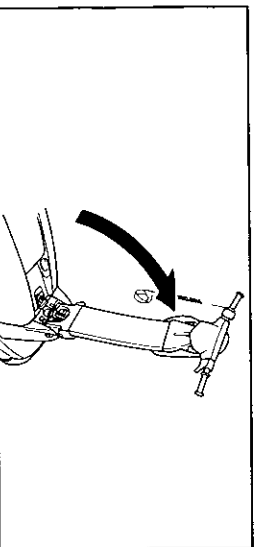


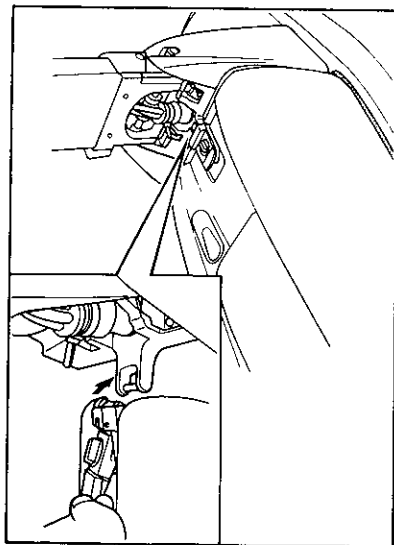
Engine hood (for FX1)

The engine hood is secured by two latches, at the front and rear. Before removing the hood, lift the steering pole up and support it with the lock pin.

To remove the hood

- 1) Turn the rear latch knob to the open position. Then lift the rear latch upward and unlatch the hood.
- 2) Turn the front latch knob to the open position. Then lift the front latch upward and unlatch the hood.
- 3) Grasp the hood using the handgrips which are provided at the front and rear and at both sides of the hood. Lift the hood up and to the rear to remove it.





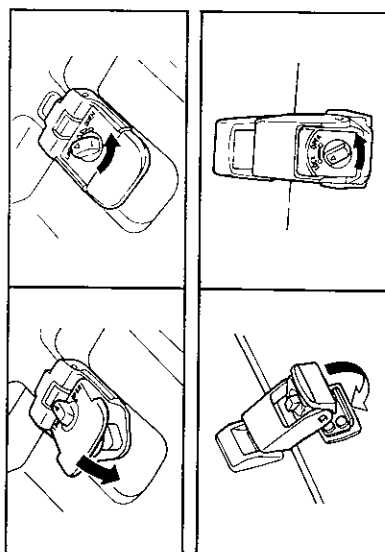
To install the engine hood

- 1) Position the engine hood on the deck so the opened front latch fits onto the front latch hook. Push down the front latch until it clicks, then turn the knob to the lock position

- 2) Position the engine hood so it fits correctly on the rubber seal on the deck. Push down the rear latch, then turn the knob to lock the hood in place

NOTE

Make sure the hood is firmly secured with the latches and is locked before attempting to ride



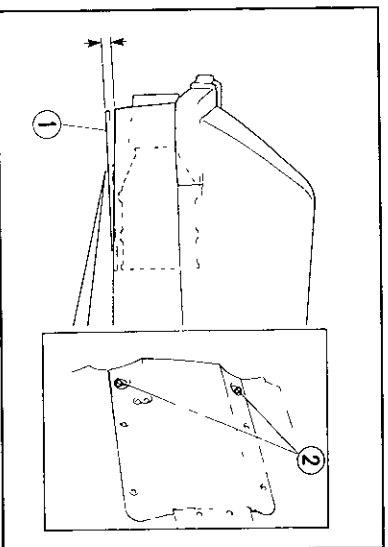
X2D700S*

Adjustable ride plate (for Supur Jet)

The height of the water vehicle's rear ride plate can be adjusted to suit the rider's preference. When the ride plate is placed downward, the vehicle tends to turn faster and is more resistant to "porpoising." This position is also best for heavier riders. When the ride plate is placed in an upper position, the vehicle doesn't turn as sharply and is easier to spin. This position is also good for lighter riders.

Refer to page 10-17 for "Ride plate angle adjustment"

- ① Adjustable ride plate
- ② Adjusting jack bolt



2D750S*

Adjustable steering nozzle angle

The steering nozzle angle is adjustable to one of four positions, depending upon operator preference. The larger the nozzle angle, the more sensitive the steering. A smaller nozzle angle makes large radius turn easier. A larger nozzle angle makes sharp, smaller radius turns easier.

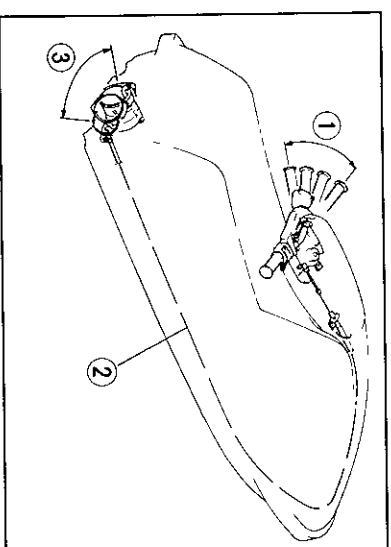
Standard setting, include standard steering angle

Nozzle angle **Super Jet** 20.5°

FX1 18.5°

Refer to page 10-19 to 10-20 for "Steering nozzle angle adjustment"

- ① Steering angle
- ② Steering cable
- ③ Nozzle angle



X2D900S

Storage container (for Super Jet)

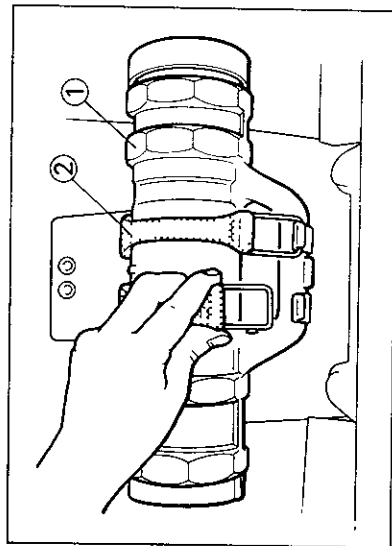
A storage container is provided underside of the engine hood. Turn the container lid counterclockwise to open it.

- ① Storage container
- ② Band

Install the storage container on the engine hood and secure it with the bands.

NOTE

The container cap should be on securely before mounting the engine hood.



X2D901S

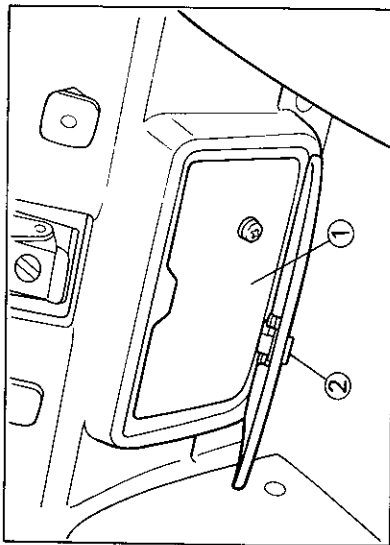
Storage compartment (for FX1)

A storage compartment is provided below the rear hood latch. Push the lock knob downward to open it.

- ① Storage compartment
- ② Lock knob

NOTE

Water seal is not provided on the compartment. If you store something in it, put things in a water sealed bag before storing.



Overheat warning system

The engine has an overheat warning device. If the engine starts to overheat, engine rpm will be limited to about 3,000 rpm. If this happens, stop the engine and check for a clog at the jet intake or water cooling passages.

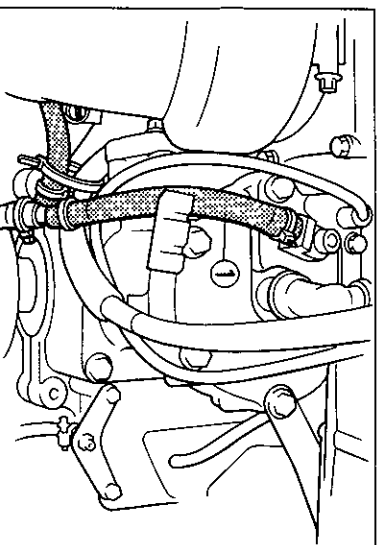
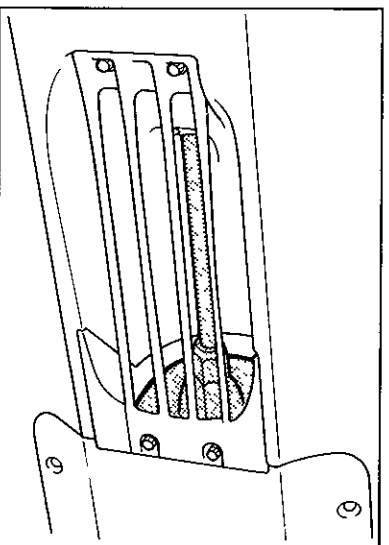
- ① Water cooling passage

WARNING

Be sure the engine is shut off before attempting to remove debris from the jet intake. The impeller can cause injury.

CAUTION.

If you cannot locate the cause of the overheating, return to the nearest port at low speed. Consult a Yamaha dealer. Continuing to operate at higher speeds could result in severe engine damage.

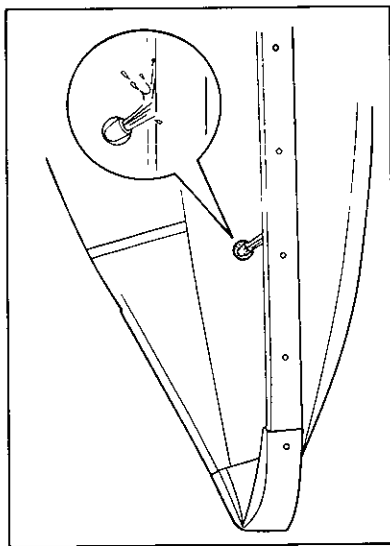


Cooling-water pilot outlet (for SJ700, FX1)

This engine is equipped with a cooling-water pilot outlet at left side of the hull. Check that water comes out of the outlet while the engine is running, particularly while applying throttle. If water cooling passages on the engine are dry it will take about 20 second to reach water at the outlet after starting. If you do not see any water at the outlet, cooling water may not be circulating in the engine. In that case, stop the engine and check for the cause (Refer to overheat warning system).

NOTE

If water cooling passages on the engine are dry it will take about 20 second to reach water at the outlet after starting.



ENJOY YOUR WATER VEHICLE RESPONSIBLY

- You share the areas you enjoy when riding your Water Vehicle 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 Water Vehicle 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 boaters, swimmers, and populated beaches. When travel in areas like these is unavoidable, ride slowly and obey all laws.
- Remember that pollution can be harmful to the environment. Do not refuel or add oil where a spill could cause damage to nature. Remove your Water Vehicle 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.

PRE-OPERATION CHECKS

CHECK LIST

Before operating this water vehicle, perform the following checks

▲WARNING

If any item in the Pre-Operation check is not working properly, have it inspected and repaired before operating the water vehicle. Otherwise or accident could occur

ITEM	ROUTINE	PAGE
ENGINE COMPARTMENT	Open engine hood and ventilate the engine compartment	5-3
BILGE	Check, and remove all water and fuel residue before launching	5-3
THROTTLE	Check for proper throttle operation	5-4
STEERING	Check for proper steering operation	5-4, 5-5
FUEL	Check fuel level, add as necessary, Check for leaks	5-6
WATER SEPARATOR	Check retaining water, drain it if retaining	5-5
BATTERY	Check fluid level and charge condition	5-7
ENGINE HOOD	Check that hood latches are secure	3-18-3-21
HULL	Check the hull for damage or cracks	—
JET (WATER) INTAKE	Check that no debris is in the intake	5-7
FIRE EXTINGUISHER	Check readiness of the extinguisher	5-8
SWITCHES	Check operation of the starter and stop switches when the vehicle is in the water	5-9

NOTE:

Pre-operation checks should be made each time the vehicle is used. This procedure can be accomplished thoroughly in a short time. The added safety and reliability the checks assure is worth the time involved.

2E201S

ENGINE COMPARTMENT

Lift up the steering pole and support it by stopper pin, then open the hood to ventilate the engine compartment. Allow the hood to remain open for a few minutes to allow any fuel vapors to escape.

⚠WARNING

Failure to ventilate the engine compartment to release fuel vapors could result in fire or explosion. Do not start the engine if you can smell fuel vapors in the engine compartment.

EE2500

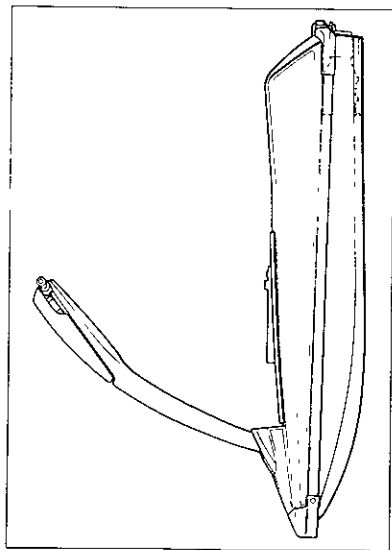
FUEL SYSTEM

Refer to page 10-10 "FUEL SYSTEM INSPECTION" for correct procedure.

2E300S

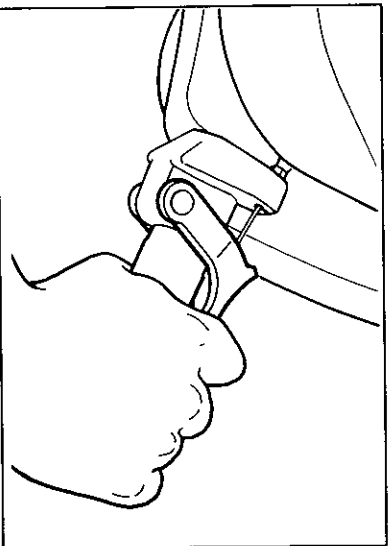
BILGE

Remove any moisture from the bilge in the engine compartment. Wipe up the moisture with clean, dry rags. If the bilge level is allowed to rise to just below the coupling, bilge water could be thrown toward the carburetor and enter the engine. This could cause engine damage.

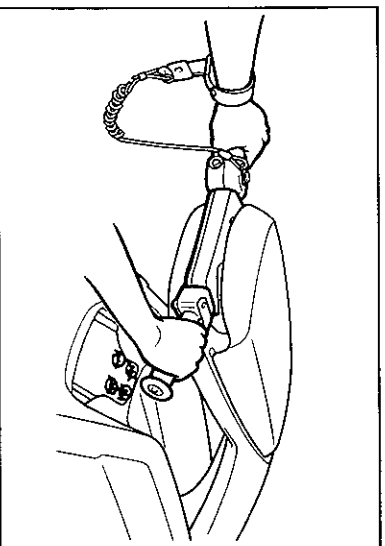


THROTTLE

Operate the throttle lever several times to make sure there is no hesitation in its travel. It should be smooth over the complete range, and spring back to the idle position on its own when released.

**STEERING****1) Handlebars**

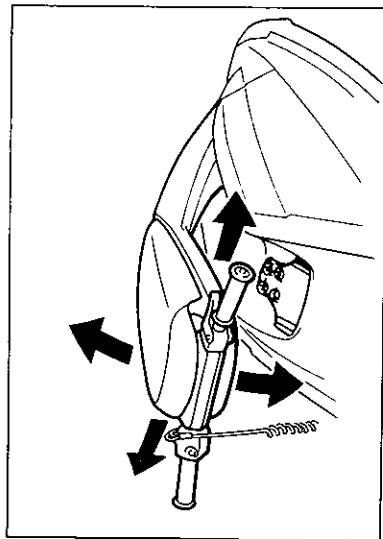
Make sure the handlebars are not loose. Turn them full-right and full-left to make sure operation is smooth and unrestricted throughout the whole range. Make sure the jet nozzle also changes directions as the handlebars are turned, and that there is no free play between the handlebars and the jet nozzle. Also shaking the handlebars to make sure that the handlebars is not loose.



2) Steering Pole

Make sure the steering pole is not loose. Lift it up and down to make sure operation is smooth and unrestricted throughout the whole range.

Also make sure the steering pole does not have any side play.



X2E550S

WATER SEPARATOR

- 1) Check the water separator to see if there is any water in this separator.

This water separator retains any water entering through the fuel tank breather pipe if the water vehicle is cap-sized.

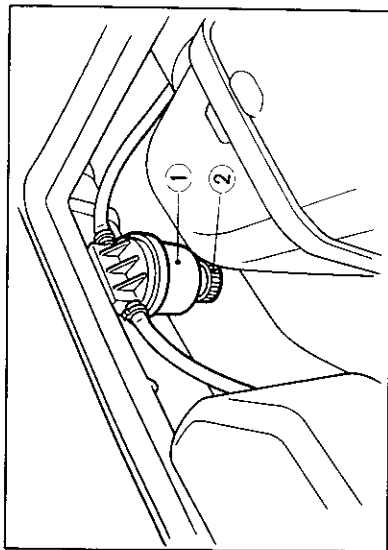
Normally this water separator is empty (No water).

- 2) If water remains in this water separator, drain it by removing the drain screw.

Don't forget to reinstall the drain screw.

① Water separator

② Drain screw

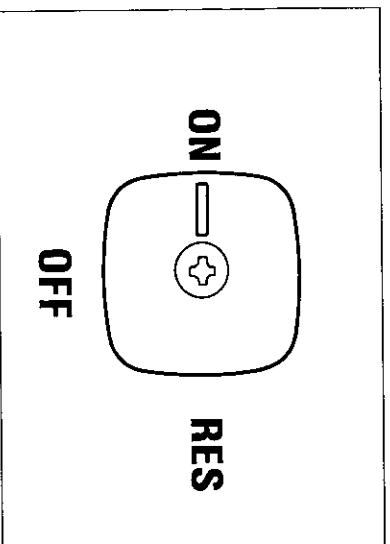


FUEL

- 1) Open the fuel filler lid (Super Jet), and remove the fuel tank filler cap to release any pressure which might have built up in the tank because of fuel expansion. Check the fuel level in the tank and add as necessary (Refer to fuel filling on page 3-9)

- 2) Reinstall the fuel tank filler cap and fuel filler lid (Super Jet) securely

- 3) Turn the fuel cock knob to the "ON" position



BATTERY

Check the battery condition and the battery electrolyte level

▲WARNING

The battery must always be fully charged and in good condition. Loss of battery power may leave you stranded. Never operate the water vehicle if the battery does not have sufficient power to start the engine or if it shows any other signs of decreased power.

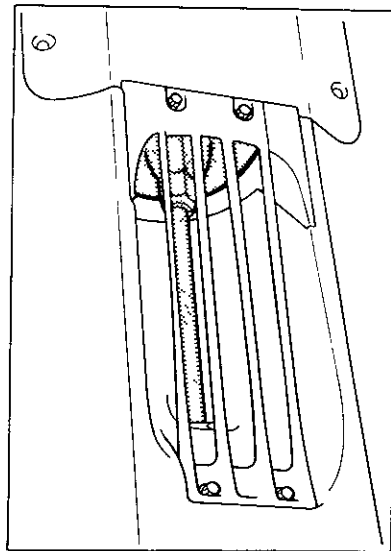
2E700S

JET INTAKE

Carefully check the water intake for weeds, debris, or anything else that might restrict the intake of water. If the intake is clogged, cavitation could occur, reducing jet thrust, and possibly damaging jet pump parts. In some cases, the engine may overheat because of lack of cooling water, and damage could result. Engine cooling water is fed to the engine by the jet pump (see pages 3-24).

▲WARNING

Before attempting to remove weeds or debris from the jet intake or impeller areas, shut off the engine and remove the engine stop switch lock-plate from the stop switch.

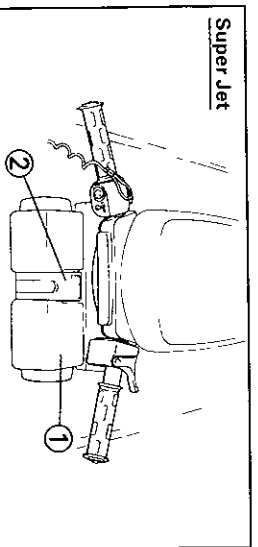
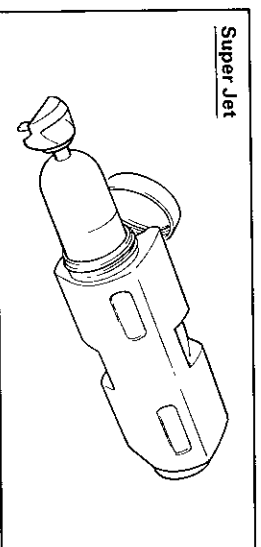


FIRE EXTINGUISHER

Make sure the fire extinguisher is aboard and fully charged. See the instructions supplied by the fire extinguisher manufacturer to determine proper indication of condition. Always keep the extinguisher in the fire extinguisher container

for Super Jet

The fire extinguisher container is stored at the front of the riding tray. To remove the fire extinguisher container, pull the band up and forward. Then remove the cap to reach the fire extinguisher.

**Super Jet**

- ① Fire extinguisher container
- ② Band

for FX1

The fire extinguisher container is stored on the engine hood. To open the fire extinguisher container, grasp the tab, pull the band to the rear, then pull up. Lift the container about 30 degrees from the stored position until it touches the stopper. Remove the cap to reach the fire extinguisher.

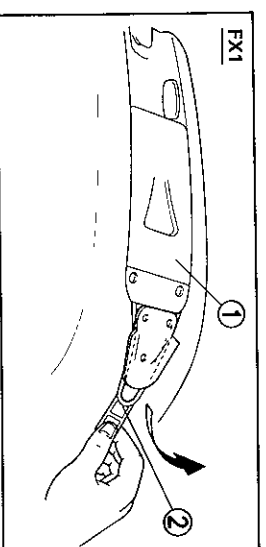
- ① Fire extinguisher container
- ② Band with tab

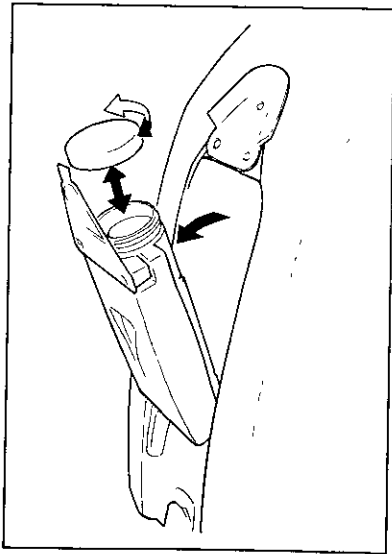
CAUTION:

Do not force the fire extinguisher container up after the stopper touches. The container or hood can be damaged.

WARNING

Always carry a fire extinguisher on board.





A fire extinguisher is not standard equipment with this vehicle. If you do not have one, contact your local Yamaha Water Vehicle dealer or a fire extinguisher dealer to obtain one meeting the proper specifications.

Open the container cap and insert the fire extinguisher into the cylindrical container.

Be sure to reinstall the cap and tighten it securely.

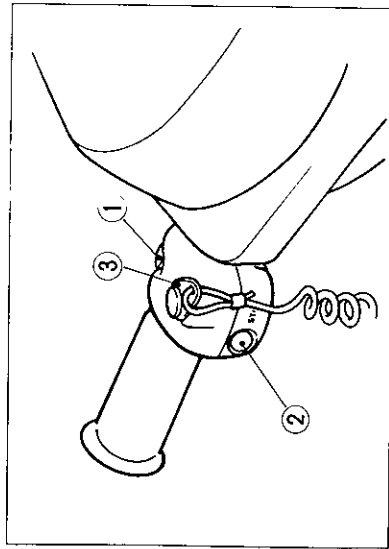
Reinstall the container on the riding tray (Super Jet)/on the engine hood (FX1) and secure it with the band.

EE900S

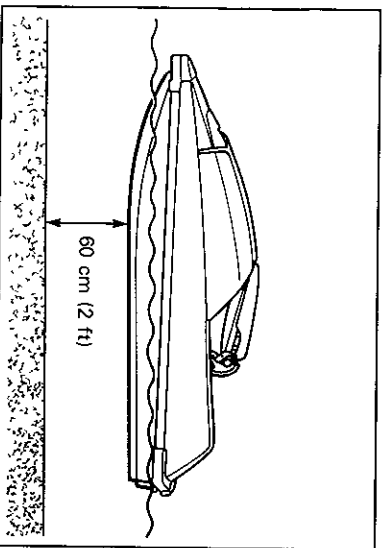
SWITCHES

First, place the vehicle in the water to provide adequate engine cooling. Start the engine, and then remove the engine stop switch lock-plate, and verify that the engine stops. Refer to pages 6-1 to 6-4 "STARTING THE ENGINE", for information on proper operation of the starter switch.

- ① Starter switch
- ② Engine stop switch
- ③ Lock-plate



OPERATION



WARNING

Before operating your water vehicle, become familiar with all controls. Consult your Yamaha dealer about any control or function you do not fully understand.

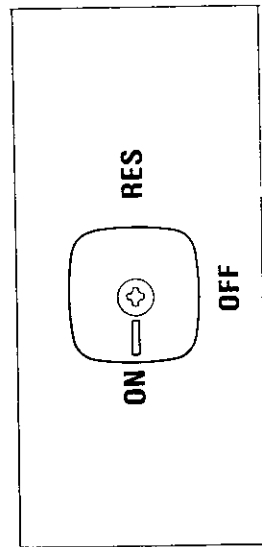
FG203S

STARTING THE ENGINE

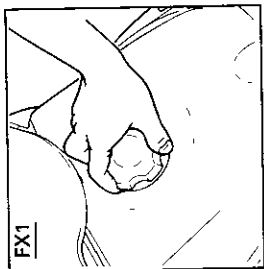
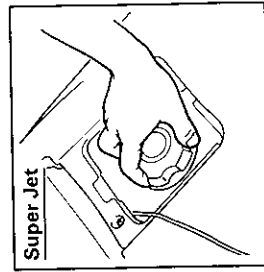
- 1) Always make sure the vehicle is launched and used in waters that are free from weeds and debris, and in depths of at least 60 cm (2 feet).

WARNING

Never ride in water that is less than 60 cm (2 feet) deep. You increase your chance of hitting an underwater obstacle. You could be injured. Pebbles or sand can also be sucked into the jet (water) intake, damaging the impeller.



- 2) Turn the fuel cock knob to the "ON" position



NOTE.

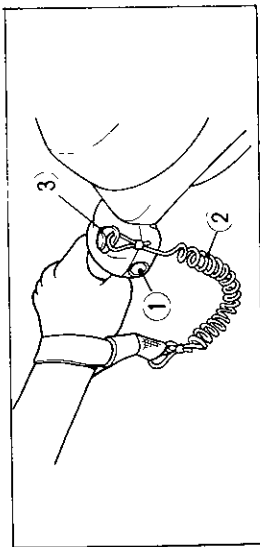
Before the first start-up, remove the fuel tank filler cap to release any built-up pressure in the tank because of fuel expansion

- 3) Install the lock-plate on the top of the engine start/stop switch box and pushing the small tab over the barrel beneath the knob, attach the lanyard to your left wrist. Be sure the lanyard is not wrapped around the handlebar or tangled in the controls

- ① Engine stop switch
- ② Engine stop switch lanyard
- ③ Lock-plate attached to the lanyard

NOTE

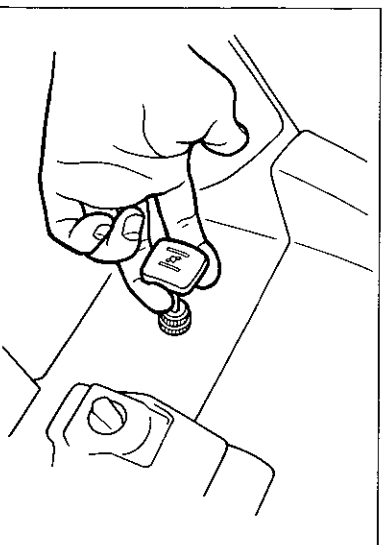
It is not possible to start the engine with the lock-plate removed from the engine stop switch



- 4) Pull the choke knob all the way out

NOTE:

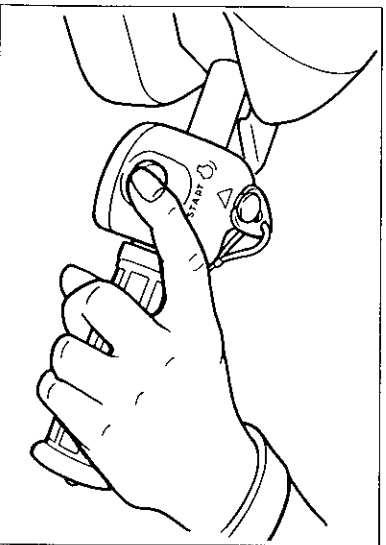
- Hold the choke knob completely pulled for a secure start of cold engine
- After the engine has warmed up, push the choke knob in. The choke should not be used when the engine is warm



- 5) While lightly squeezing the throttle lever, push the starter switch button

⚠WARNING

On this vehicle, the engine is connected directly to the drive unit. Starting the engine immediately generates some thrust. Only enough throttle should be applied to keep the engine at a fast enough idle to stay running.



- 6) As soon as the engine starts to run, release the starter button at once. The starter button returns to its home position automatically.

CAUTION

Never push the starter switch while the engine is running. Do not keep the starter motor running for more than five seconds. If the engine does not start after five seconds of cranking, release the starter button. Wait at least 15 seconds before trying to start the engine again. If the starter motor is engaged continuously for more than five seconds, the battery will be quickly discharged, and it will be impossible to start the engine. The starter motor may also be damaged if it is engaged continuously for more than five seconds.

- 7) After the engine is warm, push the choke knob in fully, to its original position.

NOTE

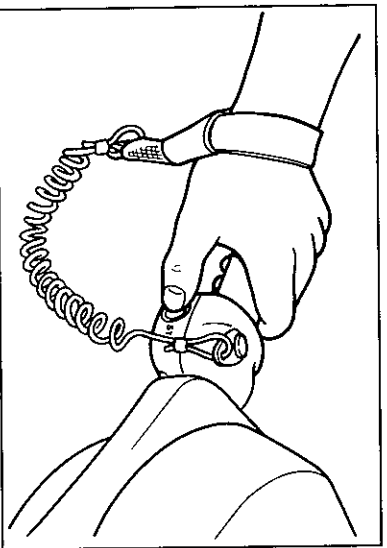
If the choke knob is left pulled out, the engine will stall.

STOPPING THE ENGINE

To stop the engine, release the throttle lever, then push and hold the stop switch with your left hand. When the button is pushed the ignition stops, which stops the engine.

WARNING

Once the engine has stopped, you have **NO STEERING CONTROL** over the vehicle.



2G401E

RUNNING-IN PROCEDURE

The engine and other components require a break-in period to allow surfaces of moving parts to wear in evenly. This ensures proper performance and promotes longer component life.

CAUTION:

During first 5 hours or 2 tanks of operation, use 25 1 premix fuel

- 1) Launch the vehicle and start the engine. Board the vehicle.

WARNING

Never ride in water that is less than 60 cm (2 feet) deep. You increase your chance of hitting an underwater obstacle. You could be injured. Pebbles or sand can also be sucked into the jet (water) intake, damaging the impeller.

- 2) Run the engine at the lowest possible speed for the first five minutes.
- 3) Gradually open the throttle to one-half.
- 4) Continue operation at half-throttle (or less) until the first tankful of fuel has been used up.
- 5) Use a gasoline (petrol) oil ratio of 25 : 1, and proceed with normal operation.

CAUTION:

Failure to follow the break-in procedure properly can result in severe damage to the engine.

POST-OPERATION CHECKS

- 1) After removing the vehicle from the water, raise the rear of the vehicle 30 cm (12 in.) for a period of 5 to 10 seconds to drain water from the muffler box
- 2) Flush the cooling system to prevent the cooling system from clogging up with salt, sand, or dirt "Refer to pages 9-3 for the cooling system flushing procedure"
- 3) Drain residual water from the exhaust system by alternately pulling and releasing the throttle lever for a period of 10 to 15 seconds while the engine is running

CAUTION

Never attempt to run the engine at full throttle or for more than 15 seconds while the vehicle is out of the water. The engine may overheat and/or seize

- 4) After operating the vehicle from the water, wash down the hull, steering pole, handlebars and drive unit with fresh water
- 5) Remove any moisture from the engine compartment

NOTE

Although this vehicle is equipped with an automatic bilge draining device that removes water from the engine compartment while you are under way, a small amount of residual water will always remain

- 6) Wipe up any remaining liquid in the engine compartment with clean dry rags. Always properly dispose of petrol (gasoline) soaked rags. They can ignite spontaneously

WARNING

Always properly dispose of gasoline (petrol) soaked rags. They can spontaneously ignite

- 7) Spray a rust inhibitor on metallic parts to minimize corrosion

RIDING YOUR WATER VEHICLE

GETTING TO KNOW YOUR WATER VEHICLE

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

Riding your new water vehicle can be a very enjoyable activity, providing you with hours of pleasure. But it is essential to familiarize yourself with the operation of the water vehicle to achieve the skill necessary to enjoy riding safely. Before you begin to ride be sure you have read this Owner's Manual completely and understand the operation of the controls. Pay particular attention to the safety information on pages 2-1 to 2-8. Read all caution and warning labels on your water vehicle. Also read the Riding Practice Handbook booklet supplied with your vehicle.

Remember Your water vehicle is designed for the operator only. Never have more than one person on the vehicle at any time.

LEARNING TO RIDE YOUR WATER VEHICLE

Before riding, always perform the Pre-Operation Checks listed on page 5-1. The short time spent checking the machine's condition will reward you with added safety and a more reliable water vehicle.

Check all applicable laws before operating your water vehicle.

Select a wide area to learn in, where visibility is good and other boat traffic is light. Have someone in a boat accompany you if operating far from shore. Keep the proper distance from other boats and vehicles. Do not ride where people are swimming.

Always attach the engine stop switch lanyard to your left wrist before operating. You should always wear a authority approved personal flotation device and foot protection. It is also advisable that you wear a wet suit, gloves to help protect against possible injury from objects in or under the water.

STARTING

The water vehicle is less stable when at a standstill or at slow speed. It takes skill to keep the water vehicle upright when starting.

Even though it is easier to start in shallow water, you must learn deep water mounting first. You will inevitably fall off, so be sure you know how to get back on the water vehicle once you are away from shore.

WARNING

1. Before starting off, make sure there are no boats, obstructions, or swimmers around you.
 2. The water vehicle is difficult to balance when at a standstill or at slow speeds. Stay clear of objects in or under the water (such as docks, jetties, rocks, bouys, or other water craft. You could be injured if you lose your balance and fall against an object.
 3. Practice the "deep water" starting method near shore before riding in deep water.
-

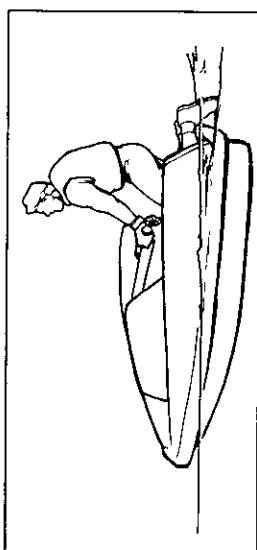
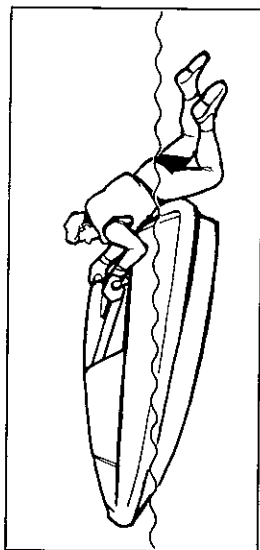
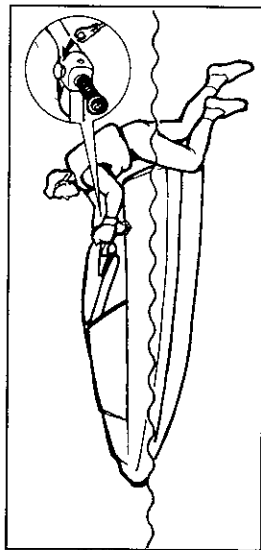
STARTING AND MOUNTING IN DEEP WATER

- 1) Swim to the rear of the vehicle. Attach the lanyard to your left wrist. Attach the lock-plate to the engine stop switch.
- 2) Grip the handlebars with both hands. Maintain your balance while you pull your body up onto the riding tray, using your elbows on the gunnels for leverage.
- 3) Start the engine and begin to accelerate. As the vehicle speed increases, continue to pull your body up onto the vehicle. The vehicle will become easier to balance because jet thrust provides stability as well as steering control. As soon as you can do so, bring your knees up onto the riding tray and move into a kneeling position.

WARNING

- Do not give the engine a lot of throttle while you are behind the vehicle. You could be injured by strong jet thrusts.
- Do not ride for a long time with your body trailing behind the vehicle. Your visibility is limited in this position. You may not see other boats, swimmers, or obstructions in your path.

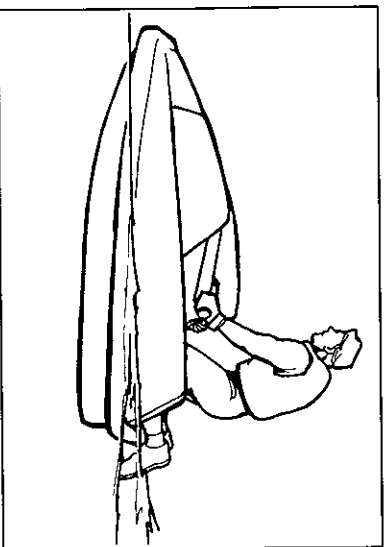
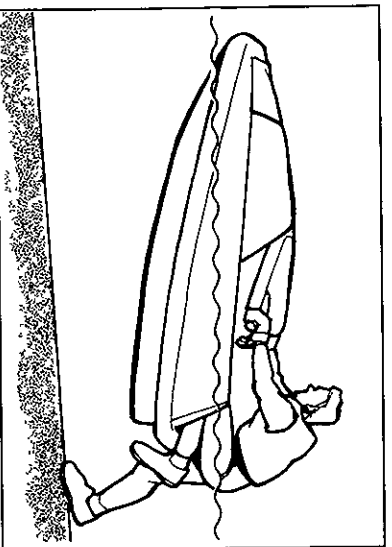
- 4) Move forward as much as possible without interfering with handlebar movement. Keep your body perpendicular to the water, with your weight forward and low.
- 5) As the vehicle's speed increases, the bow will drop and the vehicle will level out in the water. This is called "planing." It will take longer for a heavier rider than it will for a light rider. Once the vehicle has reached planing speed, you can back off the throttle and select your desired speed.



STARTING AND MOUNTING IN SHALLOW WATER

Be sure to learn the deep water starting method before riding into water where it is too deep for you to stand.

- 1) Move the vehicle into water which is at least 60 cm (2 ft) deep. Do not try to start the vehicle in water that is too shallow.
- 2) Attach the engine stop switch lanyard to your left wrist.
- 3) Attach the lock-plate to the engine stop switch.
- 4) Grip the handlebars with both hands. Maintain your balance while you place one knee on the riding tray.
- 5) Start the engine and begin to accelerate. As the vehicle speed increases, pull your other knee up onto the riding tray. The vehicle will become easier to balance because jet thrust provides stability as well as steering control.
- 6) Move forward as much as possible without interfering with handlebar movement. Keep your body perpendicular to the water, with your weight forward and low.



CHOOSING RIDING POSITIONS

After you are underway, you can choose to kneel or stand, depending upon vehicle speed, your skill level, and your preference. Here are some guidelines:

Kneeling

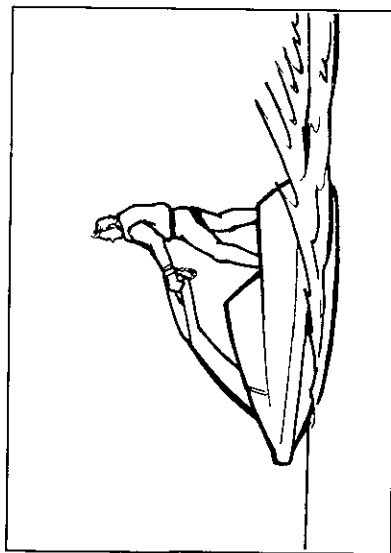
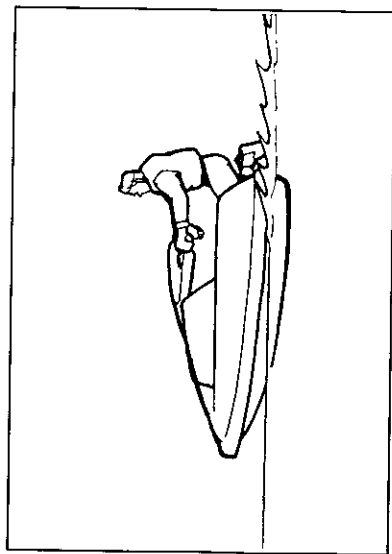
It is easier to maintain your balance when kneeling than when standing. This position is suggested when travelling at sub-planing speeds (there is a wake, but the vehicle is moving through the water rather than skimming on top of it).

NOTE

For very slow speeds, it may be necessary to support your upper body weight with your elbows resting on the gunnels, with your legs trailing in the water.

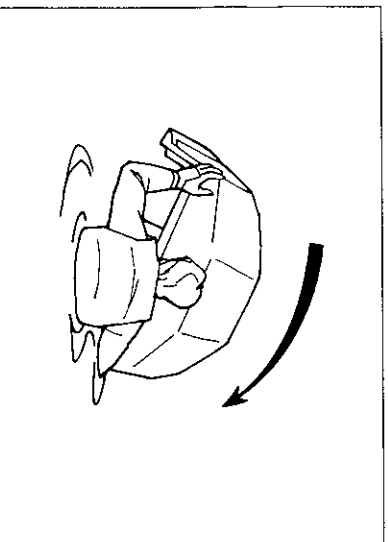
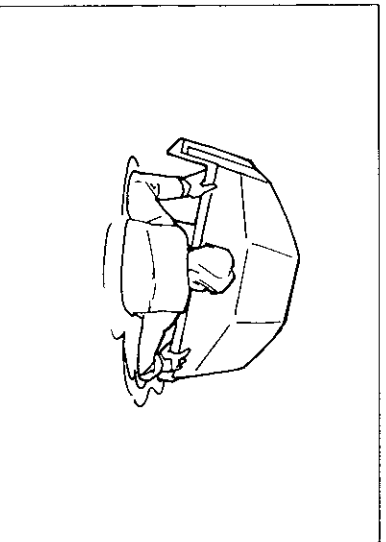
Standing

After you are comfortable handling the water vehicle from a kneeling position, try standing as the vehicle gains speed. Stability increases when you are travelling at planing speed. When you are riding slowly, or preparing to stop, you will probably need to return to the kneeling position to maintain balance.



CAPSIZED WATER VEHICLE

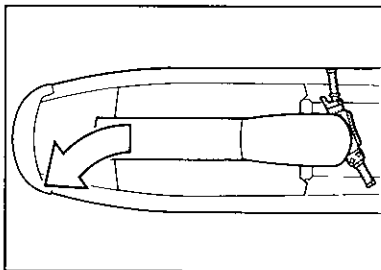
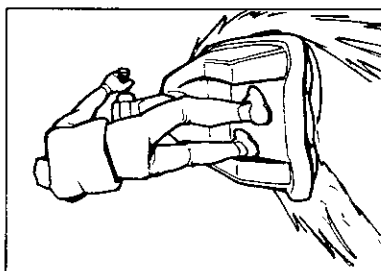
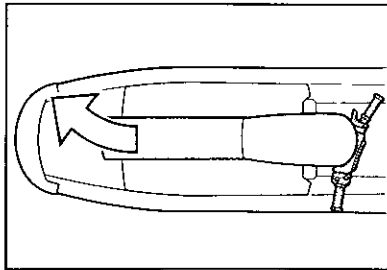
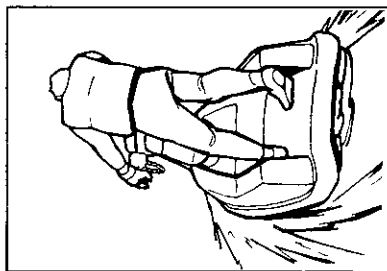
- 1) Turn off the engine by removing the engine stop switch lock-plate. The engine will overheat when capsized because it has no water to pump as coolant.
- 2) Swim to the rear of the vehicle and upright it by turning it clockwise only. Do not turn the vehicle counterclockwise, or water may leak into the carburetor and engine.
- 3) Start the engine using normal procedure, then head for shore to inspect engine for water damage.



TURNING

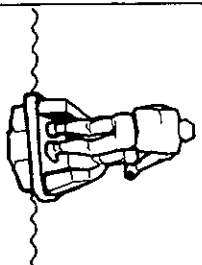
Throttle produces thrust from the jet pump. Directional control is provided by opening the throttle and turning the handlebars.

To make a turn at higher than trolling speed. Reduce your speed, then turn the handlebars, shift your weight in the desired direction, and apply enough throttle to make your turn. High thrust turns the vehicle sharply, low thrust turns less sharply. Releasing the throttle completely causes the vehicle to go straight. **URNS CANNOT BE MADE WITHOUT APPLYING THROTTLE!**

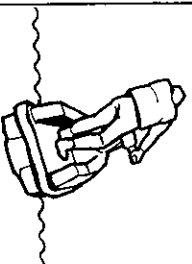


Lean into the turn to maintain your balance. How much you lean depends on the tightness of the turn and your traveling speed. In general, the higher the speed or the sharper the turn, the more you lean.

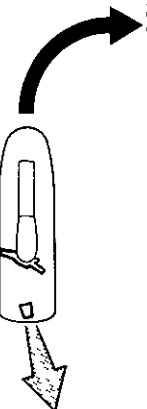
SLOW TURNS



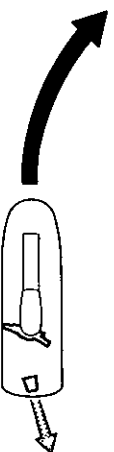
HIGH SPEED TURNS



HIGH THRUST TURN



LOW THRUST TURN



NO THRUST = NO TURN



Remember that the amount of jet thrust, in addition to handlebar position, determines how sharply you turn

High thrust (more throttle) will make the water vehicle turn more sharply

Low thrust (less throttle) will make the water vehicle turn more gradually

If you release the throttle completely, the vehicle will go straight, even if the handlebars are turned. This is because there is no thrust from the jet pump

WARNING

- 1 A beginner tends to release the throttle lever when trying to steer clear of an obstruction. Do not forget to use the throttle when turning
- 2 Making quick turns at higher speeds may throw the rider off the vehicle. Make gradual turns at higher speeds

E1401S*

STOPPING

The water vehicle is not equipped with a separate braking system

It is stopped by water resistance when the throttle lever is released. From full speed, the water vehicle stops in approximately 90 m (300 ft) after the throttle is released and the engine stopped. The stopping distance varies depending on gross weight, water surface conditions, and wind direction. The stated stopping distance should be used for a reference.

WARNING

You will lose steering control if you completely release the throttle

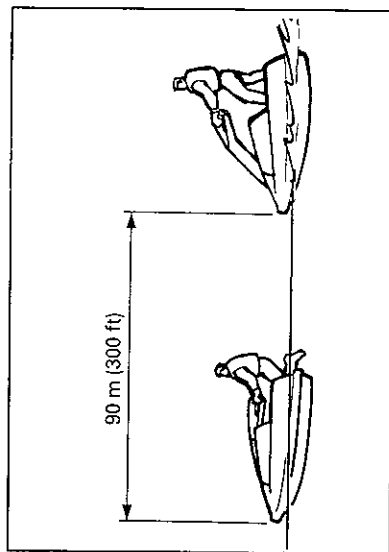
E1500S*

BEACHING

- 1) Make sure no obstructions, boats or swimmers are near the beach. Release the throttle lever about 90 m (300 ft) before the intended landing area
- 2) Approach the beach slowly and stop the engine before reaching landing point. Remember turning is impossible with the engine stopped
- 3) Get off the vehicle and pull it up on the beach

CAUTION

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

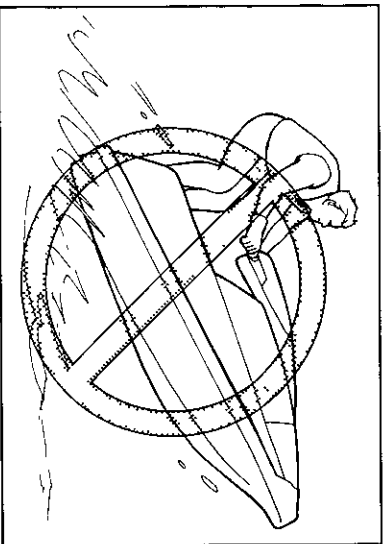


ROUGH WATER OPERATION

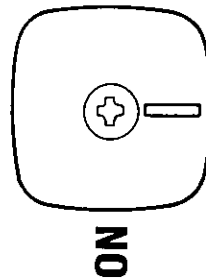
Operation in rough water or jumping waves can crack the vehicle body or damage internal parts. The force of landing after jumping can cause a strong impact on both the water vehicle and the operator. It is possible for the operator to hit his chest or jaw on the vehicle body or handlebars and be injured. Do not ride with your chin or other parts of your body right above the handlebars. Avoid riding in rough water or bad weather conditions.

▲WARNING

Operation in rough water or jumping waters can lead to injury. It may also damage the vehicle.



TRANSPORTATION AND STORAGE



OFF

WARNING

Always place the fuel cock in the "OFF" position when transporting or storing the water vehicle to prevent possible leaking of fuel out of the carburetor into the engine, or out into the engine compartment, causing a fire hazard

2J200S

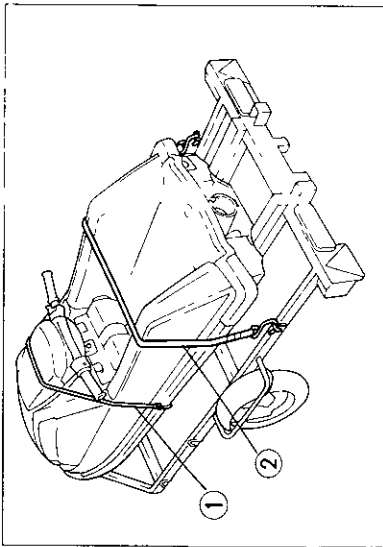
TRANSPORTATION

When transporting the water vehicle on a trailer, lock the bow with a pin to the trailer and secure the stern with ropes or tie downs over the gunnels over the gunnels. Use a rubber shock cord to hold the steering pole

CAUTION:

- Do not route ropes or tie downs over the steering pole, as they may damage the steering pole. Also wrap the ropes or tie downs with towels or rags where they touch the body of the water vehicle to avoid scratching or damage.
- Don't transport with steering pole lifted up, or steering pole may damage during transportation

- ① Rubber shock cord
- ② Rope or tie down



STORAGE

Water vehicle storage for prolonged periods of time, such as winter storage, requires preventative maintenance to ensure against deterioration. It is advisable to have the water vehicle serviced by an authorized Yamaha Water Vehicle dealer prior to storage. However, the following procedures can be performed by the owner with a minimum of tools.

EJ310E

Fuel system

- 1 Place the fuel cock in the OFF position
- 2 Drain the fuel tank by using a siphon
- 3 Idle the engine for about 10 to 15 seconds

Cooling system flushing

Cooling system flushing is essential in order to prevent the cooling system from being clogged with salt, sand, or dirt

NOTE

Use the water check plug for the water vehicle cooling system flushing

- 1) Remove the screw located the exhaust guide on the engine, install the water check plug, and connect it to a fresh-water tap
- 2) Start the engine, then immediately turn on the water supply

CAUTION:

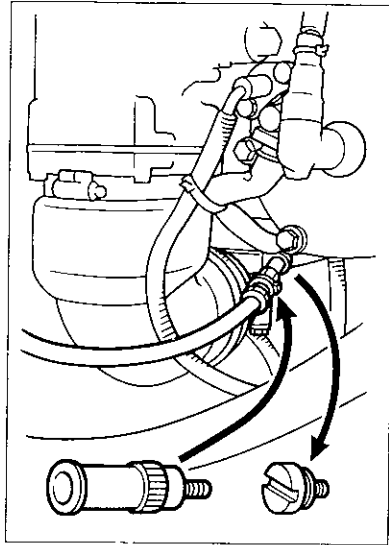
Never turn on the water before starting the engine. The water could back flow through the muffler into the crankcase causing severe engine damage. Be sure to turn on the water immediately after starting the engine to prevent engine overheating

- 3) Run the engine at a fast idle for 10 ~ 15 minutes
- 4) Turn off the water supply and force the remaining water out of the cooling system by quickly opening and closing the throttle several times for 10 to 15 seconds

CAUTION:

Never have the water on when the engine is not running. The water could back flow through the muffler into the crankcase causing severe engine damage. Do not run the engine for more than 15 seconds after the water supply has been turned off to avoid engine overheating

- 5) After stopping the engine, remove the water check plug and install the screw



LUBRICATION

- 1) Open the cap ① on the carburetor silencer cover
- 2) With the water vehicle in a well-ventilated area, start the engine

With the engine running at a fast idle, quickly spray as much a rust inhibitor, or an equivalent, as possible into the carburetor through the hole in the silencer cover. Keep spraying until the engine stalls (or a maximum of 15 seconds). Reinstall the cap securely.

WARNING

To reduce the risk of fire or explosion

Never pour or spray gasoline, or any other substance except engine fogging oil through the hole in the carburetor silencer cover

CAUTION:

Be sure to replace the cap securely after fogging the engine. Otherwise water could enter the engine and cause damage

CAUTION:

Do not run the engine at full throttle or for more than 15 seconds, or overheating may occur

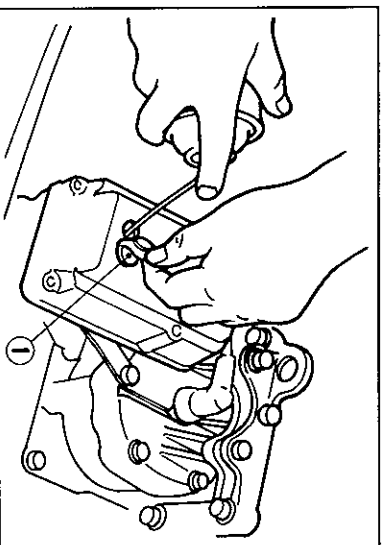
- 3) Remove the spark plugs and pour approximately one tablespoon of oil into each cylinder

- 4) Grease the spark plug threads and reinstall the spark plugs
- 5) Lubricate all cables such as the throttle, choke, and steering cables

NOTE:

Use a suitable marine grease applicator to pressure lubricate the cables and purge out any moisture between the inner and outer cables

- 6) Grease the areas of the water vehicle specified in "Grease Points" in the ADJUSTMENT AND MAINTENANCE section



Battery

- 1) When the machine is not to be used for a month or more, remove the battery and store it in a cool, dark place. Clean the battery's casing and terminals using a mixture of baking soda and water (one tbsp of baking soda to one cup of water). Apply dielectric grease or petroleum jelly to the battery terminals and to all exposed connectors.
- 2) If the battery is to be stored for a longer period, check the specific gravity of the fluid at least once a month and recharge the battery if it gets too low.

Specific gravity 1.28 at 20°C (68°F)

2J350E**Cleaning**

- 1) Wash down the hull, handlebars, and drive unit with fresh water.
- 2) Rinse the engine and bilge area with fresh water. Drain off all water and wipe up remaining moisture with clean, dry rags.
- 3) Spray the engine's exterior with a rust inhibitor and lubricant.
- 4) Wax the hull with a non-abrasive wax.
- 5) Wipe all vinyl and rubber components, such as the engine compartment seals, with a vinyl protectant.
- 6) Do not use protectant on the riding tray, because it will make it slippery.

ADJUSTMENT AND MAINTENANCE

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

WARNING

Be sure to turn off the engine when you perform maintenance unless otherwise specified. If the owner is not familiar with machine service, this work should be done by a Yamaha dealer or other qualified mechanic.

TOOL KIT

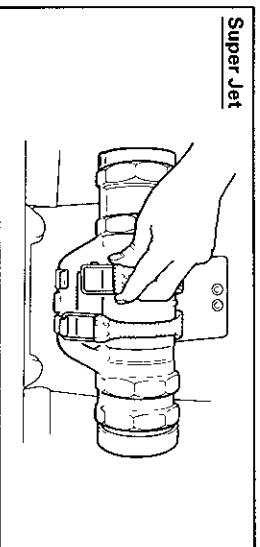
It is advisable to always carry the Owner's Manual and Tool Kit with you, whenever you use the water vehicle. For convenience of the user, a storage space is provided in storage container on the underside of the hood (Super Jet)/below the rear engine hood latch (FX1). To protect these materials from water, it would be a good practice to put them in a vinyl bag.

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 repairs. The tools provided in the owner's tool kit are sufficient for this purpose, except that a torque wrench is also necessary to properly tighten nuts and bolts.

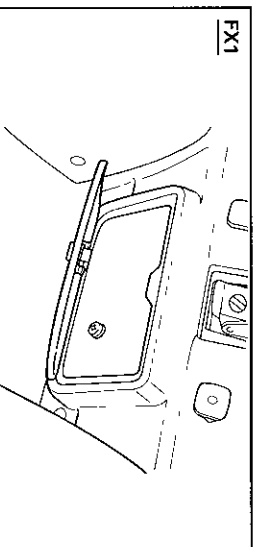
WARNING

Modifications to this machine not approved by Yamaha may cause loss of performance, excessive noise, or render it unsafe for use. Consult a Yamaha Water Vehicle dealer or other qualified mechanic before attempting any changes.

Super Jet



FX1



PERIODIC INSPECTION CHART

Frequency of maintenance operations may be adjusted according to the operating conditions, but the following table gives general guidelines

The mark (●) indicates the checkups which you may do yourself
The mark (○) indicates work to be done by your Yamaha dealer

Maintenance interval		Initial			Thereafter every			Page
		10 hours	50 hours 3 months	100 hours 6 months	100 hours 6 months	200 hours 12 months		
Item								
Spark plug	Cleaning/Adjustment	●	●	●	●	●	10-4	
Greasing points	Greasing			●	●	●	10-5	
Bearing housing	Greasing	○ *1		● *2	● *2	● *2	10-9	
Fuel system	Inspection			○	○	○	10-10	
Fuel filter	Checking/Replacement	○				○	10-11	
Fuel tank	Cleaning					○	10-11	
Carburetor setting	Inspection/Adjustment	○		○	○	○	10-12	
Trolling speed	Adjustment				●	●	10-12	
Carburetor throttle shaft	Inspection				○	○	—	
Cooling-water passages	Cleaning		● (after every ride)				3-24	
Bilge strainer	Cleaning		●	●	●	●	—	
Impeller	Inspection		●	●	●	●	—	
Steering cable	Inspection/Adjustment			●	●	●	10-13	
Steering pivot	Inspection	○			○	○	10-7	

Item	Maintenance interval		Initial			Thereafter every			Page
			10 hours	50 hours 3 months	100 hours 6 months	100 hours 6 months	200 hours 12 months		
Steering friction	Inspection		●		●	●			10-15
Throttle cable and choke cable	Inspection/Adjustment				●	●			10-14
Battery	Inspection	● (Inspect fluid level before every ride)							10-22
Rubber coupling	Inspection						○		—
Bolts and nuts	Retightening	○			○	○			—

*1 Grease capacity 20.0 ~ 22.0 cm³ (1.22 ~ 1.34 cu in)

*2 Grease capacity 3.0 ~ 5.0 cm³ (0.18 ~ 0.31 cu in)

SPARK PLUG CLEANING AND ADJUSTMENT

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 centre electrode porcelain is very white, this could indicate an intake air leak or carburettor problem in that cylinder. Do not attempt to diagnose any problems yourself. Instead, take the water vehicle to a Yamaha dealer. You should periodically remove and inspect the spark plug because heat and deposits will cause the spark plug to slowly break down and erode. If electrode erosion becomes excessive, or if carbon and other deposits are excessive, you should replace the spark plug with another of the correct type.

Standard spark plug NGK B-8HS

Noise suppressor type spark plug NGK BR-8HS

Before installing the spark plug, measure the electrode gap with a wire thickness gauge, adjust the gap to specification if necessary

Spark plug gap 0.6~0.7 mm (0.024 ~ 0.028 in)

When fitting the plug, always clean the gasket surface and use a new gasket. Wipe off any dirt from the threads and screw in the spark plug to the correct torque

Spark plug torque

20 Nm (2.0 m • kg, 14 ft • lb)

NOTE

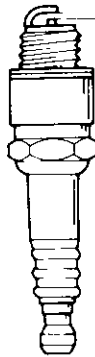
Before installing the spark plug cap, be sure to wipe off any water on the spark plug or inside the cap. Push the spark plug cap down until it clicks.

NOTE

If a torque-wrench is not available when you are fitting a spark plug, a good estimate of the correct torque (with a new gasket) is 1/4 to 1/2 a turn past finger-tight. Have the spark plug adjusted to the correct torque as soon as possible with a torque wrench.

WARNING

When removing or installing a spark plug, be careful not to damage the insulator. A damaged insulator could allow external sparks, which could lead to explosion or fire.



NGK
BR-8HS
B-8HS

0.6~0.7 mm
(0.024 ~ 0.028 in)

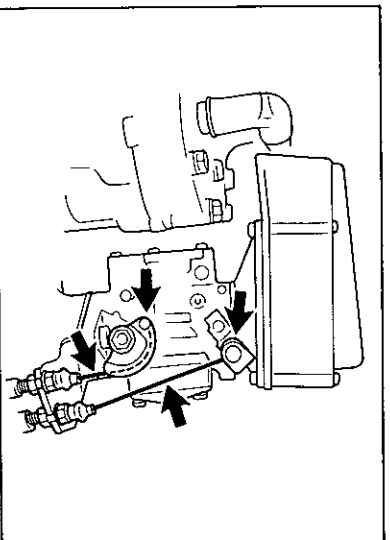
2K401S*

GREASING POINTS

To keep moving parts sliding or rotating smoothly, coat them with Water resistant grease (Yamaha Marine Grease, Yamaha grease A) or equivalent

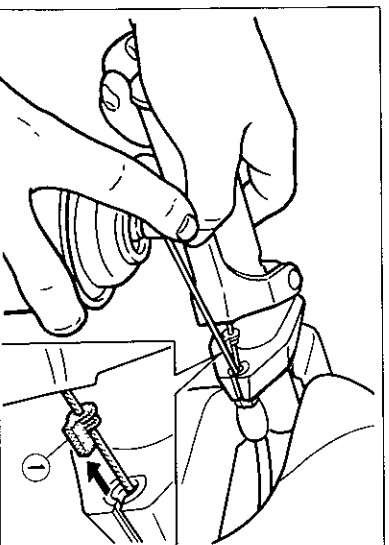
Throttle cable and choke cable

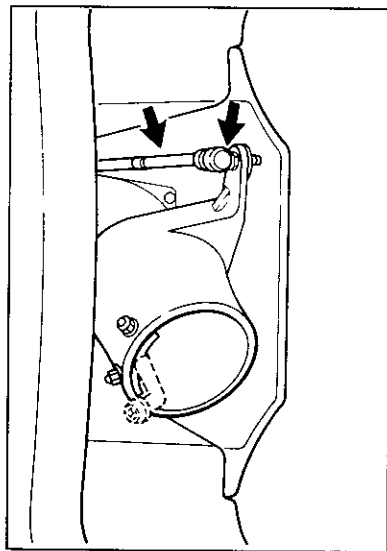
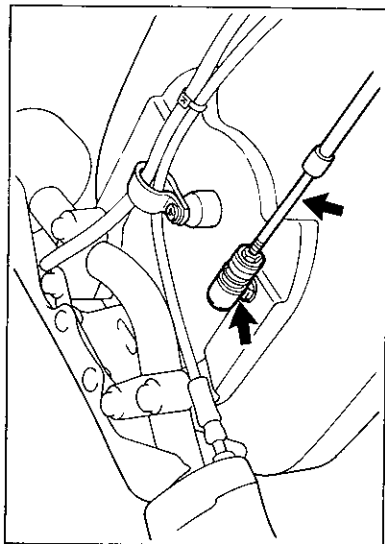
- 1) Grease the carburetor throttle cable and choke cable inner wires



- 2) Pull the throttle lever and remove the seal. Spray a rust-inhibitor into the outer cable. Refit the seal securely.

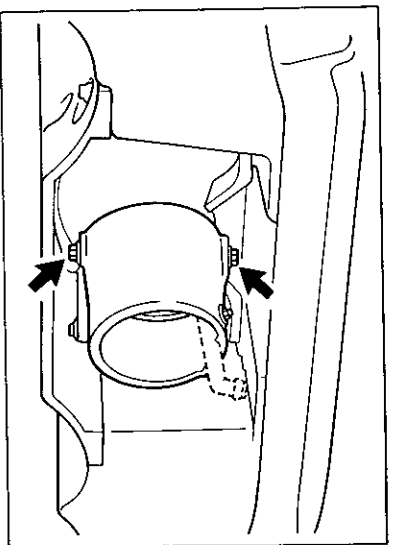
- ① Seal





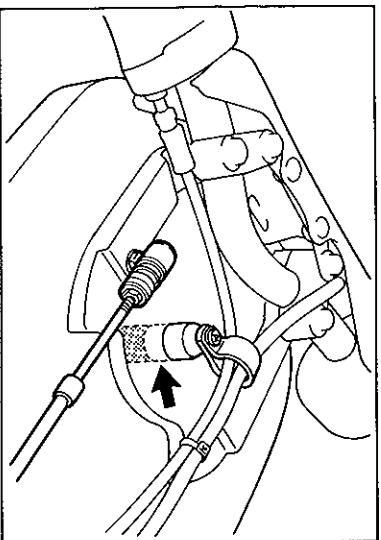
Steering cable ball joints and inner wire

Remove the handle cover by removing the two bolts
 Grease the steering cable ball joints both on the handlebar end at the cable and on the steering nozzle end
 Extend the steering cable inner wire, and apply a thin coat of grease to it both on the handlebar end and on the steering nozzle end



Steering nozzle pivot bolts

Remove one bolt at a time, grease the bolt collar, then reinstall the bolt.
Repeat with the other bolt. Tighten both bolts securely.

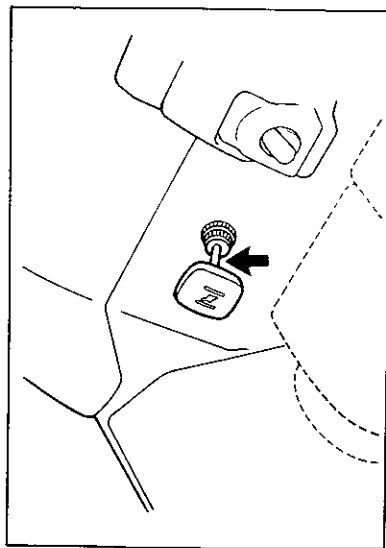


Steering handle pivot shaft

The steering handle pivot shaft should be lubricated by your Yamaha dealer. It requires disassembly of steering of steering components.

Choke knob

Pull out the choke knob and apply a thin film of grease to the choke knob shaft



Bearing housing

① Greasing nipple

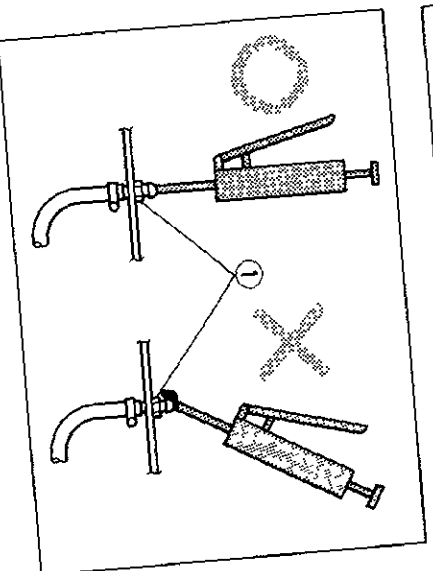
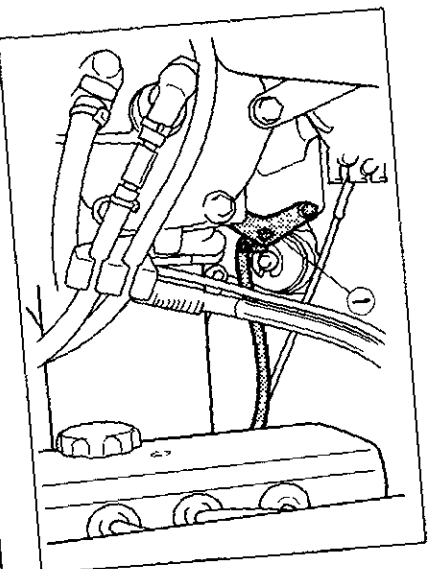
Grease up the bearing housing from grease nipple
Initial time After 10 hours or 1 month (by YAMAHA dealer)

- Fill in the bearing housing from nipple with water resistant grease
- Grease capacity 20.0 ~ 22.0 cc (1/22 ~ 1/34 cu in)

Thereafter every After 100 hours or 6 month (you may do yourself)
Grease capacity 3.0 ~ 5.0 cc (0.18 ~ 0.31 cu in)

NOTE

- Fill in the grease slowly and carefully, because they can damage the hose and the joints
- Recommend water resistant grease
YAMAHA Grease A or YAMAHA Marine Grease.



FUEL SYSTEM INSPECTION**⚠WARNING**

Gasoline and its vapors are highly flammable and explosive

Check the fuel system for leaks, cracks, or malfunctions. If any problem is found, do the necessary repair or replacement as required. If repair is necessary, consult your nearest Yamaha dealer.

Checking points

- 1 Carburetor leakage
- 2 Fuel pump malfunction or leakage
- 3 Fuel tank leakage
- 4 Fuel hose joint leakage
- 5 Fuel hose cracks or other damage
- 6 Fuel filter leakage
- 7 Fuel cock leakage
- 8 Air vent check valve leakage

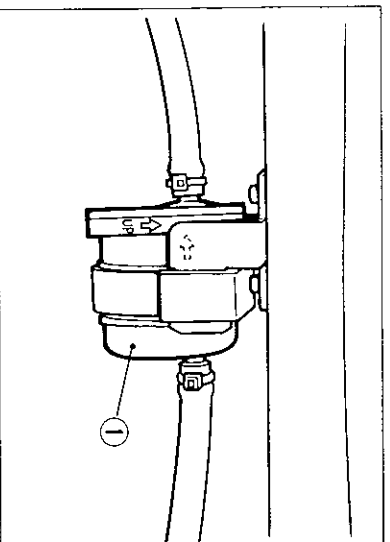
⚠WARNING

Failure to check for and repair fuel leakage may result in fire or explosion

FUEL FILTER

The fuel filter is a one-piece, disposable type. The filter must be replaced whenever water can be seen in the filter (a separate layer under the fuel). The filter should be replaced once a year or after every 200 hours of operation as part of normal operation. Take the water vehicle to your Yamaha dealer if fuel filter replacement is required.

- ① Fuel filter

**⚠ WARNING**

The fuel filter must be attached correctly so that there is no fuel leakage. Gasoline is highly flammable and explosive. Do not attempt to change the fuel filter yourself. Take the water vehicle to your Yamaha dealer for filter replacement.

2K520S

FUEL TANK

If the fuel tank needs to be cleaned or when any water is found in the fuel system, take the water vehicle to your Yamaha dealer for service.

CARBURETOR ADJUSTMENT

The carburetor is a vital part of the engine and requires very sophisticated adjustment. Most adjusting should be left to a Yamaha dealer who has the professional knowledge and experience to do so. However, the following point may be serviced by the owner as part of his usual maintenance routine.

CAUTION:

The carburetor was set at the Yamaha factory after many tests. If the settings are disturbed without having technical knowledge, poor engine performance and damage may result.

Trolling speed

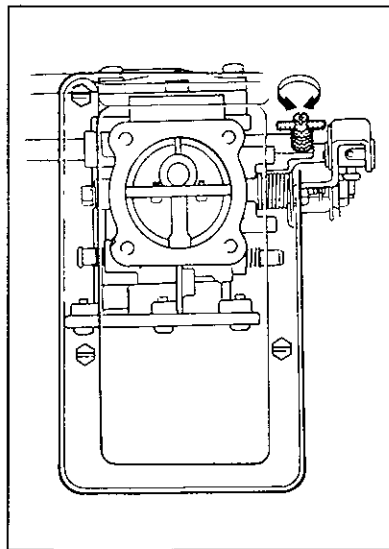
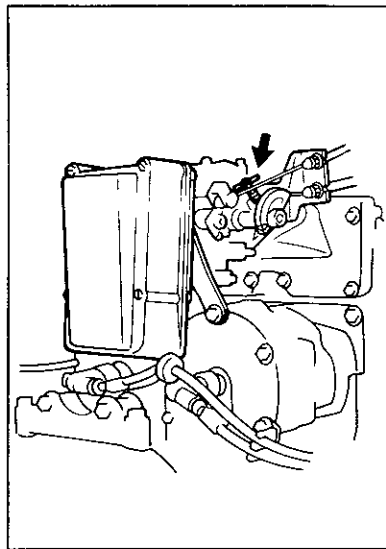
NOTE

A diagnostic tachometer must be used for this procedure.

Place the water vehicle afloat, start the engine and warm it up for one or two minutes.

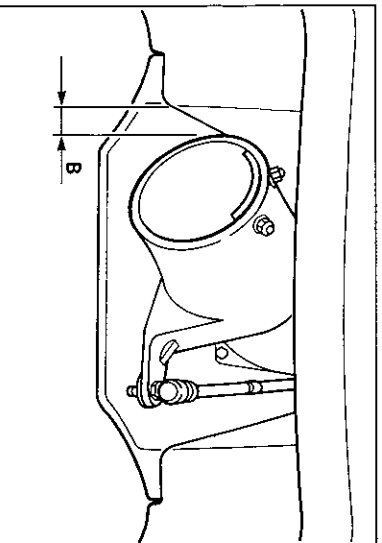
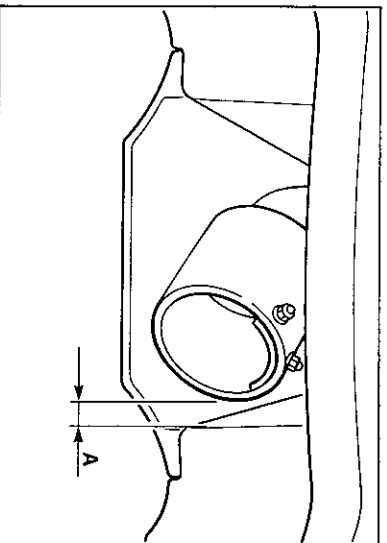
By turning the throttle stop screw by hand, adjust the engine speed to specification. Turning the throttle stop screw clockwise increases the engine speed, and turning it counterclockwise decreases the engine speed.

Trolling speed 1,200 ~ 1,300 r p m



STEERING CABLE INSPECTION

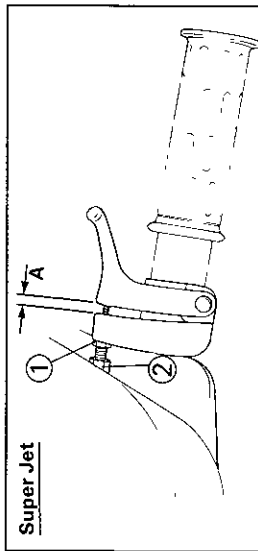
- 1) Check the smooth operation of the handlebars and steering nozzle



- 2) Turn the handlebars from lock to lock and check that the clearances between the steering nozzle and the hull are even on both right and left sides

A=B

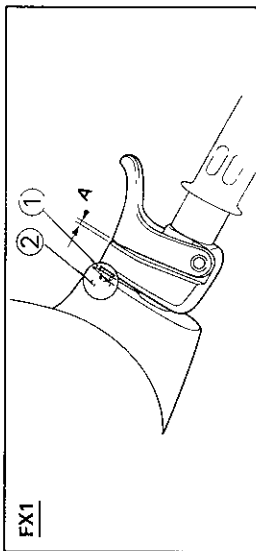
If steering is stiff or misadjusted, ask your Yamaha dealer to service it

Super Jet

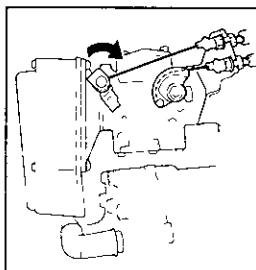
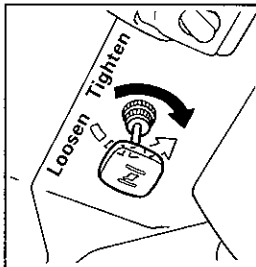
THROTTLE CABLE INSPECTION AND ADJUSTMENT
 1) By pulling or releasing the throttle lever, check that it moves back to the set position smoothly. If not, ask your Yamaha dealer for service.

2) Throttle lever free play should be within specification. If it is not, adjust it by loosening the lock nut and turning the adjuster so that throttle lever free play is within specification with the carburetor at idle position.

- ① Lock nut
- ② Adjuster

FX1

Throttle lever play
 $A = 7 \sim 10 \text{ mm (0.27} \sim 0.39 \text{ in)}$



2K6700

CHOKE CABLE ADJUSTMENT

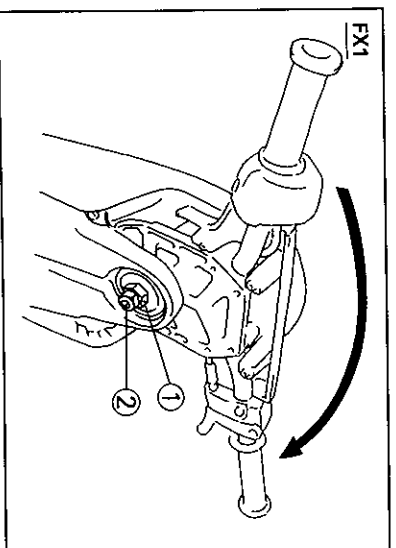
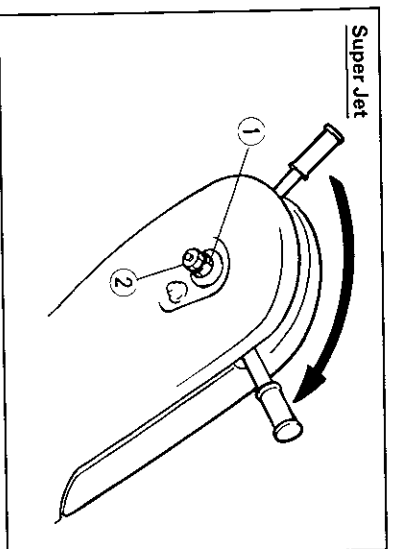
Pull the choke knob out until it stops. Release the knob. The knob should not move. If it moves back on its own, tighten the friction adjustment slightly. If the knob difficult to move, loosen the friction adjustment slightly.

STEERING FRICTION ADJUSTMENT

The amount of friction in the steering can be adjusted to suit rider preference

- 1 Remove the handle cover by loosening four screws (FX1)
- 2 Turn the handlebars fully to the starboard (right) side
- 3 Loosen the lock nut
- 4 Tighten or loosen the adjusting nut until the desired amount of friction is reached
- 5 Hold the adjusting nut with one wrench while tightening the lock nut
- 6 Reinstall the handle cover securely (FX1)

- ① Nut (For friction adjustment)
- ② Lock nut



Tightening torque

29 Nm (2.9 m • kg, 21 ft • lb)

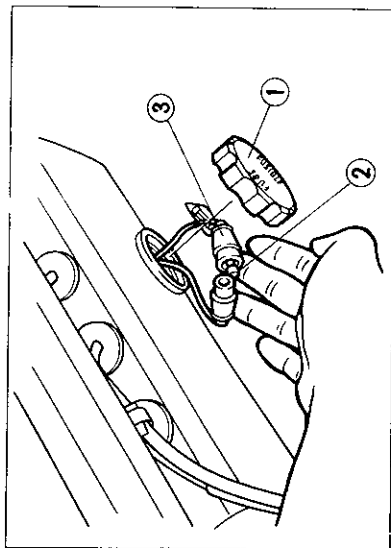
FUSE REPLACEMENT

The fuse is in the electrical box. To replace the fuse, remove the grommet, pull out the red lead, and bring it out of the fuse box. Open the fuse box and replace the fuse.

- ① Cap
- ② Fuse (Recommended fuse 10A)
- ③ Fuse box

▲WARNING

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



RIDE PLATE ANGLE (TRIM ANGLE) ADJUSTMENT

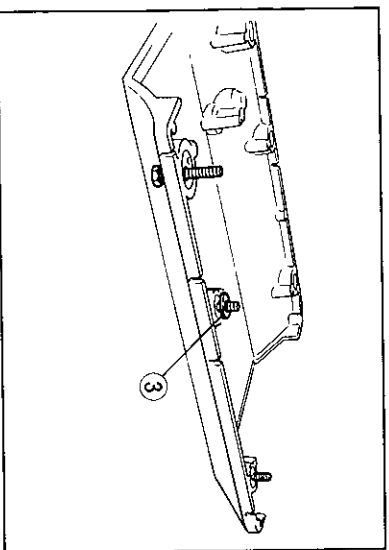
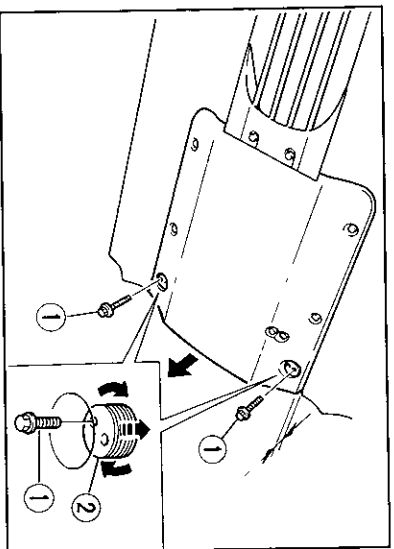
(for Super Jet)

The height of the ride plate can be adjusted to suit the operator's preference. Increasing the ride plate height provides more "hook", with the tendency for the bow to stay in the water. With less "hook", the bow tends to ride more out of the water, and the water vehicle "squats".

- ① Bolt
- ② Jack bolt

NOTE

This adjustment requires special shim washers, which can be purchased from your Yamaha dealer. LOCTITE products are also required. Unless you have mechanical skill, this adjustment is best left to your Yamaha dealer.



- 1 Remove the six ride plate mounting bolts
- 2 The rear end of the jet pump cover will move up and down 10 mm (0.04 in) per turn by the jack bolt
- 3 Add shim washers to achieve the desired amount of hook

- ③ Washer 10 mm (0.04 in) thick
(P/No 92990-06200)

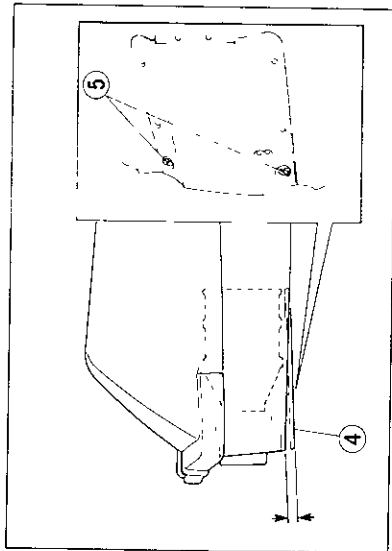
Rear end height: (Hook)	Counter measure
0 ~ 10 mm (0 ~ 0.04 in)	Just fitting
15 ~ 20 mm (0.06 ~ 0.08 in)	Insert 1 pc of washer before fitting
25 ~ 30 mm (0.10 ~ 0.12 in)	Insert 2 pcs of washer before fitting

- 4 After adjusting, be sure to tighten the six ride plate mounting bolts

CAUTION:

- Do not attempt to use more than two shim washers. The ride plate could be damaged
- Coat the jack bolts with LOCTITE (572) before reinstalling them
- Coat the mounting bolts with blue LOCTITE (242) before reinstalling them. Otherwise, bolts may come loose which could allow the ride plate to fall off

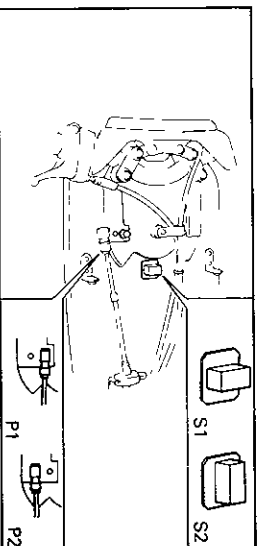
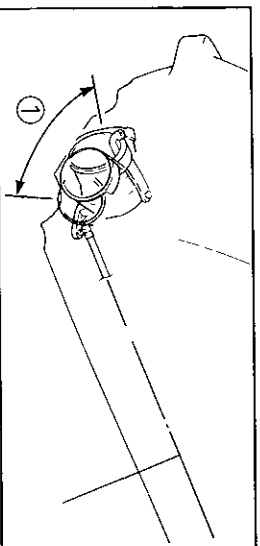
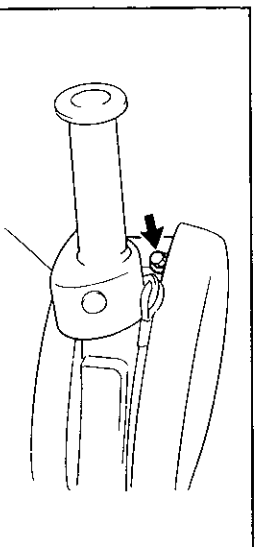
- ④ Adjustable ride plate
⑤ Adjusting jack bolt

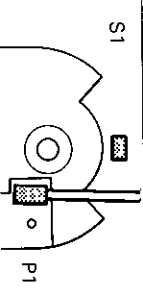
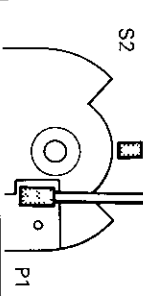
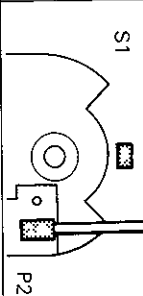
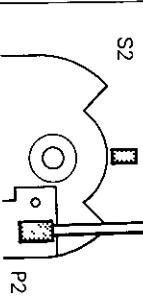


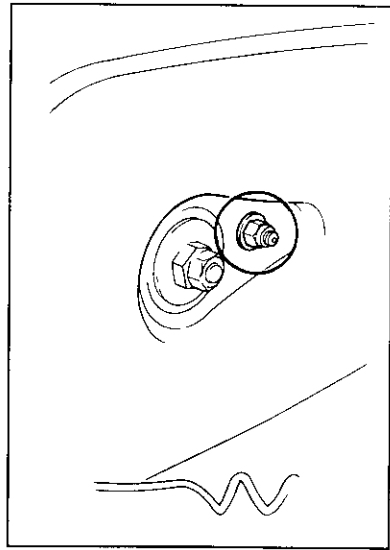
X2K770S*

STEERING NOZZLE ANGLE ADJUSTMENT (for Super Jet)

- 1) Remove the handle cover by loosening two bolts
- 2) Select the desired nozzle angle ① referring to the following table



Nozzle angle	Handle stopper and steering pivot position
18.5°	
20.5°	
22.5°	
24.5°	



3) Steering pivot position (P1 or P2) - Disconnect the steering cable by pulling back the outer sleeve and then re-moving the steering cable joint from the ball. Reinstall the cable joint on the ball in the desired position

4) Handle stopper position (S1 or S2) - Loosen the nut on the underneath side of the steering pole. Lift and turn the handle stopper to the desired position, then tighten the handle stopper nut

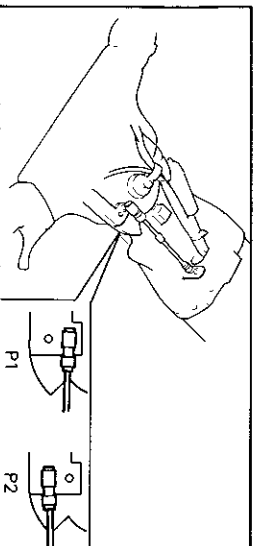
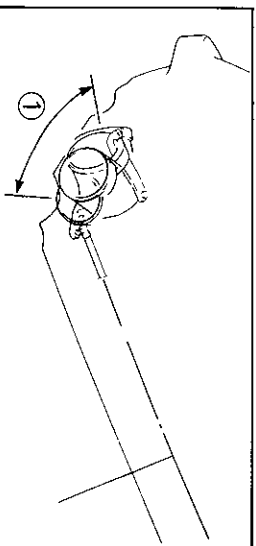
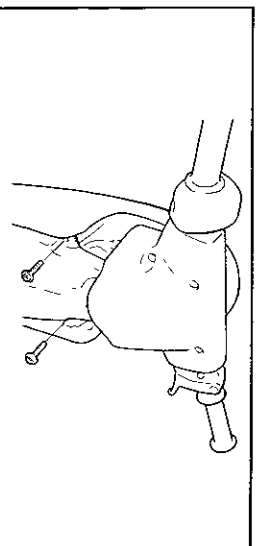
Tightening torque

32 Nm (3.2 m • kg, 23 ft • lb)

5) Reinstall the handle cover securely

STEERING NOZZLE ANGLE ADJUSTMENT (for FX1)

- 1) Remove the handle pad by loosening two screws
- 2) Disconnect the steering cable by pulling back the outer sleeve and then removing the cable joint from the ball
- 3) Select the desired nozzle angle ① by reinstalling the cable joint on the ball in position P1 to P2, referring to the illustration



Nozzle angle	Handle stopper and steering pivot position
18.5°	
22.0°	

- 4) Reinstall the handle pad securely

BATTERY

Check the level of the battery fluid and see if the terminals are tight. Add distilled water if the fluid level is low.

CAUTION:

Be careful not to place the battery on its side.

When adding the battery fluid or recharging, be sure to bring it out of the engine compartment.

When checking the battery, make sure the breather pipe is connected to the battery and not pinched shut by any part of the engine compartment.

WARNING

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

Antidote: EXTERNAL-Flush with water. INTERNAL-Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call physician immediately.

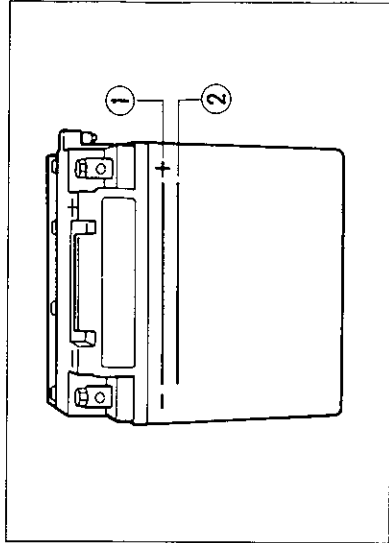
Eyes: Flush with water for 15 minutes and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc., away. Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN

Replenishing the battery fluid

A poorly maintained battery will deteriorate quickly. The battery fluid should be checked before every ride.

- 1) The level should be between the upper and lower level marks. If refilling is necessary, use only distilled water.



- ① Upper level
- ② Lower level

CAUTION:

Normal tap water contains minerals which are harmful to a battery, therefore, refill only with distilled water.

Recharging

WARNING

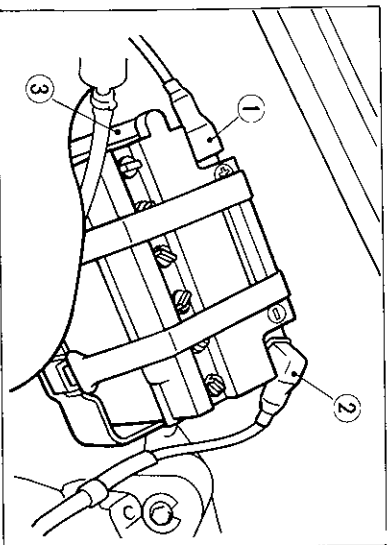
- When charging the battery keep it well away from sparks and open flames, as it gives off explosive gases
- When using a battery charger, connect the battery to the charger before you turn the charger on. This will prevent sparking at the terminals which could ignite battery gases

- 1) Remove the caps from the cells. Add distilled water if necessary to top up the electrolyte to the proper level
- 2) Connect the battery to a charger. Set the charging rate at 1.9 amps, and charge it for 10 hours

Connecting the battery terminals

- Always make sure the connections are correct when you insert the battery in the water vehicle. Make sure that the breather pipe is properly connected and that it is not damaged or obstructed

- ① Positive (+)—Red lead
- ② Negative (-)—Black lead
- ③ Breather pipe



EMERGENCY PROCEDURES

2H2000

TOWING THE WATER VEHICLE

If the vehicle becomes inoperative in the water, it can be towed to shore. The bow must be kept up out of the water during towing to prevent water from entering the engine compartment.

If the vehicle must be towed in an emergency using a tow rope, the operator should ride the vehicle, holding onto the handlebars and supporting his body weight on the gunnels. This will help keep the bow of the vehicle out of the water.

CAUTION:

- Tow the water vehicle slowly. water may enter the air intake and flood the engine compartment if the vehicle is towed too fast
- Use only the rope hole to tow the vehicle

WARNING

If the water vehicle is towed using a rope

- The water vehicle should only be towed in an emergency. The towing rope should be long enough so that the water vehicle will not collide with the towing boat when slowing down. A good rule of thumb is a tow rope which is three times the combined length of the towing boat and the water vehicle. A shorter length rope can be used if the water vehicle is towed very slowly.
- 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 water vehicle.

SUBMERGED WATER VEHICLE

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

- 1) Beach the vehicle and remove the hood. Drain the water from the engine compartment by turning the vehicle on its side. When the water is drained, turn the vehicle upright again.

CAUTION

Turning the water vehicle on its side with the hood removed could cause damage to the steering pole. Use two people to provide adequate support so the steering pole is not damaged.

- 2) Set the fuel cock to "OFF"
- 3) Remove the spark plugs and dry them with a cloth
- 4) Crank the engine without reinstalling the spark plugs until all water in the cylinders has been drained
- 5) Reinstall the spark plugs
- 6) Launch the vehicle again in the water, and operate the engine for at least 10 minutes. Repeat steps 2~6 if engine will not start
- 7) Turn the engine off. Remove the silencer cover

- 8) Spray a rust inhibitor into the carburetor while cranking the engine

- 9) Have your vehicle inspected by an authorized Yamaha Water Vehicle Dealer as soon as possible

CONNECTING JUMPER CABLES

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

WARNING

Battery electrolyte is poisonous and dangerous. It contains sulfuric acid which can cause severe burns. Avoid contact with skin, eyes or clothing.

Antidote: EXTERNAL-Flush with water. INTERNAL-Drink large quantities of water or milk, follow with milk of magnesia, beaten egg, or vegetable oil. EYES-Flush with water for 15 minutes and get prompt medical attention.

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

To connect the jumper cables

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

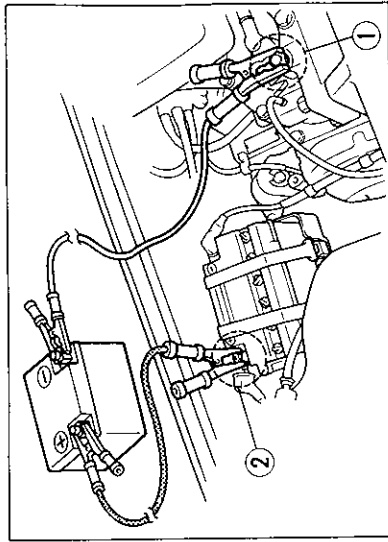
CAUTION:

Do not connect the end of the jumper cable to the negative (-) terminal on the vehicle battery! Be sure all connections are secure and correct before attempting to start the engine. Any wrong connection may damage the electrical system.

- 4) Start the engine, then disconnect the cables by reversing the above steps

CAUTION:

Do not turn the starter motor for more than 5 seconds. If the engine does not start in 5 seconds, release the starter switch and try again after 15 seconds. Continuous cranking for more than 5 seconds will discharge the battery and the engine will not start. The starter motor may also be damaged if it is engaged continuously for more than five seconds.



- ① Negative (-) jumper cable
- ② Positive (+) jumper cable

CLEANING THE JET INTAKE AND IMPELLER

If weeds or debris get caught in the intake or impeller, cavitation can occur, and though the engine speed rises, forward thrust will decrease. 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, beach the vehicle and check the intake and impeller. Always stop the engine before beaching the vehicle.

WARNING

Before attempting to remove weeds or debris from the jet intake or impeller areas, shut off the engine and remove the engine stop switch lock-plate from the stop switch.

- 1) Turn the vehicle on its side as shown.

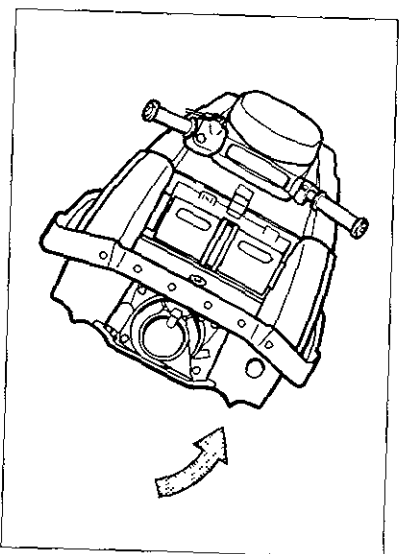
CAUTION:

Place a suitable clean cloth or carpeting underneath the vehicle to protect it from abrasions and scratches, and always turn the vehicle over on its port (left) side. When turning the vehicle on its side, support the front portion so the handlebars cannot be bent or damaged.

- 2) Remove any weeds or debris from around the drive shaft, impeller, pump housing, and steering nozzle. If it is difficult to remove them, consult your Yamaha Water Vehicle dealer.

CAUTION:

Always avoid running your vehicle in areas where weed growth is thick. If traveling in weeded areas is unavoidable, run 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 intake or impeller area and cause cavitation, follow the above cleaning procedure.



TROUBLESHOOTING

Although Yamaha Water Vehicles are given a rigid inspection before shipment from the factory, trouble may occur in operation. If this happens check the vehicle in accordance with the procedures given in the troubleshooting chart on next page. If repair is necessary, ask an authorized Yamaha Water Vehicle dealer. The skilled technicians at a Yamaha Water Vehicle dealer provide excellent service.

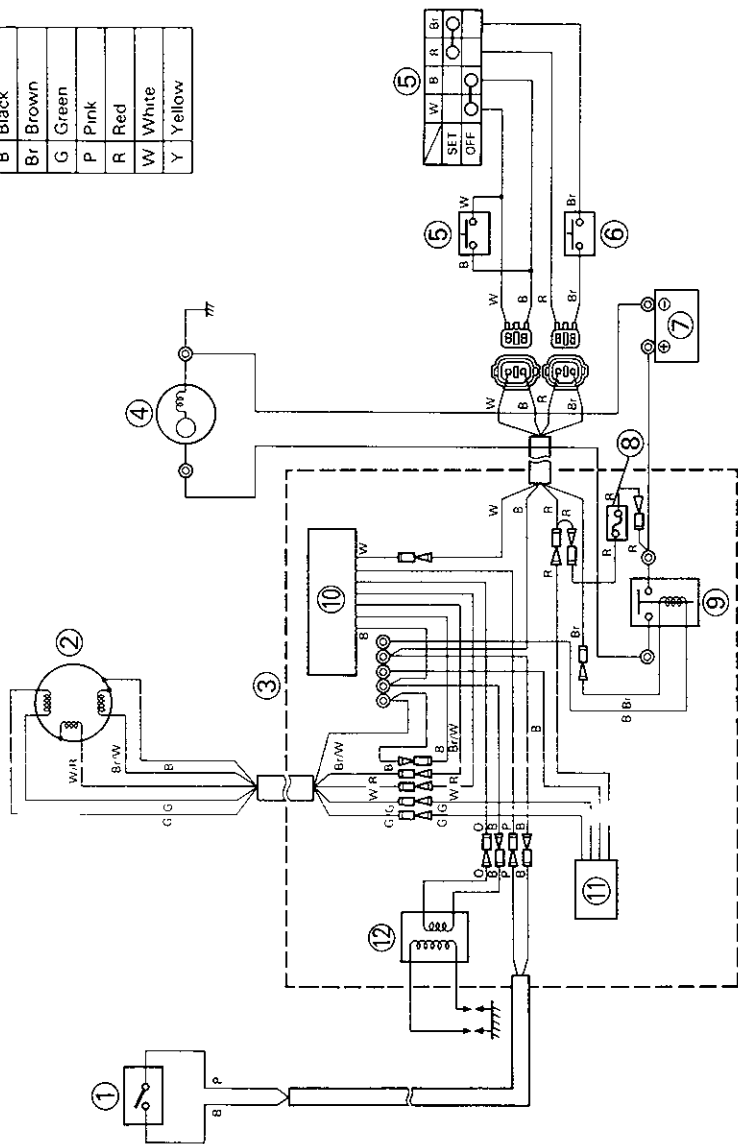
If replacement parts are necessary, use genuine Yamaha parts or the equivalent. Remember that failures which are the result of the installation of parts or accessories which are not qualitatively equivalent to genuine Yamaha parts are not covered by the limited warranty. Any problem in the fuel, compression, or ignition system can cause poor starting, or loss of power while riding. The troubleshooting chart describes quick and easy procedures for checking these systems.

TROUBLESHOOTING CHART

TROUBLE	POSSIBLE CAUSE	REMEDY
The engine will not start	- Starter motor does not turn over • Fuse • Battery • Stop switch - Starter motor turns over • Fuel • Spark Plug • Crankcase	- Check wiring and replace - Charge - Tighten as required - Install lock plate - Siphon & refill as required - Replace - Crank engine with plug out until clean - Release pressure - Turn in adjust nut
The engine runs irregularly or stalls	• Fuel tank • Choke • Fuel • Fuel Filter • Spark Plug	- Built-up pressure - Knob automatically return - Empty, stale or contaminated - Clogged or full of water - Fouled or defective - Incorrect heat range - Spark plug caps loose - Loose electrical connections - Spark plug cap leaking water - Siphon and/or refill as required - Replace as required - Replace - Replace - Tighten - Replace
The engine runs too fast	• Cavitation	- Jet intake clogged - Impeller damaged or worn - Clean - Replace
The engine runs too slow	• Engine overheat (Engine speed is reduced by the overheat warning device to 3,000 rpm) • Fuel Filter • Spark Plug	- Jet intake clogged - Clogged - Fouled or defective - Incorrect heat range - Spark plug caps loose - Replace - Replace - Replace - Tighten

WIRING DIAGRAM

B	Black
Br	Brown
G	Green
P	Pink
R	Red
W	White
Y	Yellow



- | | |
|----------------------|-----------------------|
| ① Thermo switch | ⑦ Battery |
| ② CDI magneto | ⑧ Fuse |
| ③ Electrical box | ⑨ Starter relay |
| ④ Starter motor | ⑩ CDI unit |
| ⑤ Engine stop switch | ⑪ Rectifier regulator |
| ⑥ Starter switch | ⑫ Ignition coil |

SPECIFICATIONS

Item	Model	Unit	SJ650	SJ700
DIMENSIONS				
Length		mm (in)	2,240 (88.2)	2,240 (88.2)
Width		mm (in)	680 (26.8)	680 (26.8)
Height		mm (in)	660 (26.0)	660 (26.0)
Dry weight		kg (lb)	130 (287)	132 (291)
PERFORMANCE				
Static thrust		kg (lb)	225 (495)	235 (518)
Maximum output		kW (hp)/rpm	37.3 (50)/6,000	47.0 (63)/6,250
Maximum fuel consumption		l/h (US gal/h, Imp gal/h)	21 (5.5, 4.6)	26 (6.9, 5.7)
Cruising range/at full throttle			0.8	0.7
ENGINE				
Engine type			2-stroke	2-stroke
Number of cylinder			2	2
Displacement		cc (cu in)	633 (38.63)	701 (42.78)
Bore & stroke		mm (in)	77 × 68 (3.03 × 2.68)	81 × 68 (3.19 × 2.68)
Compression ratio			7.2	7.2
Lubrication system			Pre-mixed	Pre-mixed
Cooling system			Water-cooled	Water-cooled
Starting system			Electric starter	Electric starter
Ignition system			C D I	C D I
Spark plug		NGK	BR-8HS/B8HS	B-8HS
Spark plug gap		mm (in)	0.6~0.7 mm (0.024~0.028 in)	0.6~0.7 mm (0.024~0.028 in)
Battery capacity		V-AH	12-19	12-19
Charging system			Flywheel magneto	Flywheel magneto

Item	Model	Unit	SJ650	SJ700
DRIVE UNIT				
Propulsion system			Jet pump	Jet pump
Jet pump type			Axial flow, single stage	Axial flow, single stage
Impeller rotation			Counter clockwise (Rear view)	Counter clockwise (Rear view)
Transmission			Direct drive from engine	Direct drive from engine
Steering (nozzle) angle			18.5°~24.5°	18.5°~24.5°
FUEL AND OIL				
Fuel			Unleaded regular gasoline	Unleaded regular gasoline
Recommended engine oil			Yamaha outboard motor oil/ Yamalube for outboards, or other outboard oil with TC-WII or TC-W3 rating	Yamaha outboard motor oil/ Yamalube for outboards, or other outboard oil with TC-WII or TC-W3 rating
Gasoline and oil mixing ratio			50 : 1	50 : 1
Fuel tank capacity		ℓ (US gal, Imp gal)	18 (4.8, 3.96) Including 5.5 (1.45, 1.21) reserve	18 (4.8, 3.96) Including 5.5 (1.45, 1.21) reserve

EM2005

* It differs on specifications

SPECIFICATIONS

Item	Model	Unit	FX1
DIMENSIONS			
Length		mm (in)	2,130 (83.9)
Width		mm (in)	630 (24.8)
Height		mm (in)	680 (26.8)
Dry weight		kg (lb)	121 (267)
PERFORMANCE			
Static thrust		kg (lb)	170 (375)
Maximum output		kW (hp)/rpm	47.0 (63)/6,250
Maximum fuel consumption		ℓ/h (US gal/h, Imp gal/h)	26 (6.9, 5.7)
Cruising range/at full throttle		hr	0.5
ENGINE			
Engine type			2-stroke
Number of cylinder			2
Displacement		cc (cu in)	701 (42.78)
Bore & stroke		mm (in)	81 X 68 (3.19 X 2.68)
Compression ratio			7.2
Lubrication system			Pre-mixed
Cooling system			Water-cooled
Starting system			Electric starter
Ignition system			C DI
Spark plug		NGK	B-8HS
Spark plug gap		mm (in)	0.6~0.7 mm (0.024~0.028 in)
Battery capacity		V-AH	12-19
Charging system			Flywheel magneto

Item	Model	Unit	FX1
DRIVE UNIT			
Propulsion system		Jet pump	
Jet pump type		Axial flow, single stage	
Impeller rotation		Counter clockwise (Rear view)	
Transmission		Direct drive from engine	
Steering (nozzle) angle		18.5°~22°	
FUEL AND OIL			
Fuel		Unleaded regular gasoline	
Recommended engine oil		Yamaha outboard motor oil/Yamalube for outboards, or other	
Gasoline and oil mixing ratio		50 : 1	
Fuel tank capacity	ℓ (US gal, imp gal)	14 (3.7, 3.08)	
		Including 3.6 (0.95, 0.79)	

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