# Watson Outboard Handbook

Thank you for purchasing your Watson outboard. We are sure you will be very happy with your purchase.
You must register your engine to obtain your warranty.

## Watson outboard 6HP Quickstart manual

What's in the box?

1x Watson Outboard
1x 600ml bottle SAE 10w-30 Oil
1x Tool Kit

Your Watson outboard has been shipped to you in the laying down position, this is because currently your engine has no fluids inside. The first thing you need to do is take note of the sticker on the outboard telling you which side to lay your engine down when it has been filled with fluids.

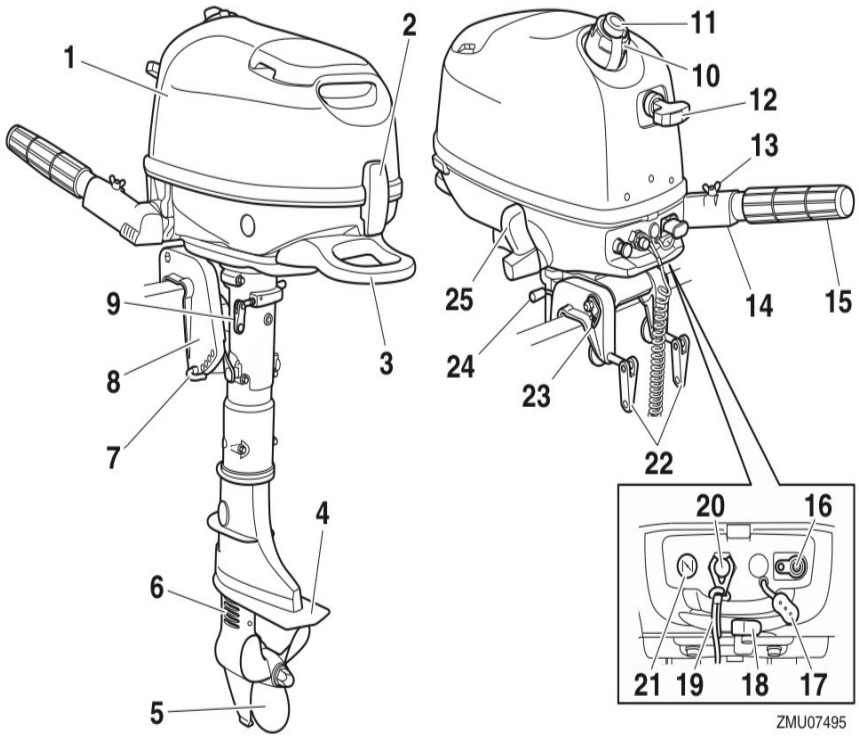
**Make sure you add the oil to the engine before you run it as this could cause unnecessary damage to the outboard.**

Your new engine requires a period of 10 hours break in to allow mating services of moving parts to wear in evenly and protect the longevity of your engine.

Run the engine in water, underload in gear as follows. For breaking in the engine avoid extended idling, rough water and crowded areas.

1. For the first hour of operation run the engine at varying speeds up to 2000 rpm or approximately half throttle.
2. For the second hour of operation run the engine at 3000 rpm or approximately three quarter throttle.
3. Remaining eight hours run the engine at any speed. However avoid operating at full throttle for more than five minutes at a time.
4. After the first 10 hours you can operate the engine however you see fit.

# Components

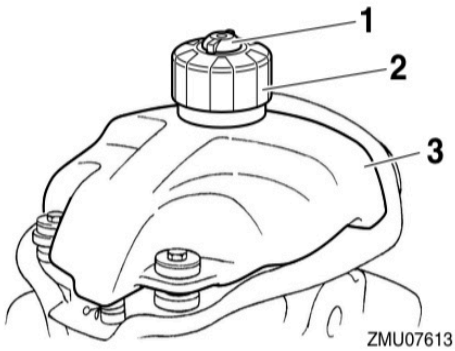



1. Top cowling
2. Cowling lock lever
3. Carrying handle
4. Anti-cavitation plate
5. Propeller*
6. Cooling water inlet
7. Trim rod
8. Clamp bracket
9. Steering friction adjuster
10. Fuel tank cap
11. Air vent valve
12. Manual starter handle
13. Throttle friction adjuster
14. Tiller handle
15. Throttle grip
16. Fuel joint
17. Fuel joint cap
18. Fuel cock
19. Engine shut-off cord (lanyard)
20. Engine stop button/Engine shut-off switch
21. Choke knob
22. Clamp screw
23. Restraint cable attachment
24. Tilt support bar
25. Gear shift lever

EMU44002

## Fuel tank (built-in fuel tank) (F2.5)

This outboard motor is equipped with a built-in fuel tank and its parts are as follows.




1. Air vent valve
2. Fuel tank cap
3. Built-in fuel tank

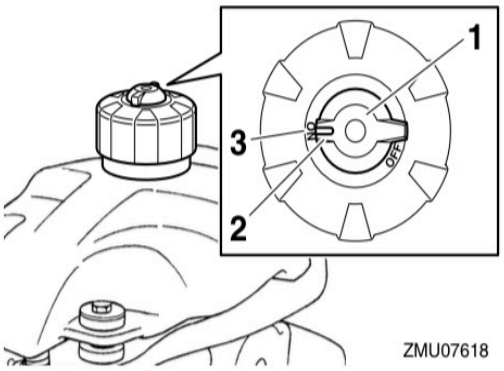
### Fuel tank cap

This cap seals the fuel tank. When the cap is removed, the tank can be filled with fuel. To remove the cap, turn it counterclockwise.

### Air vent valve

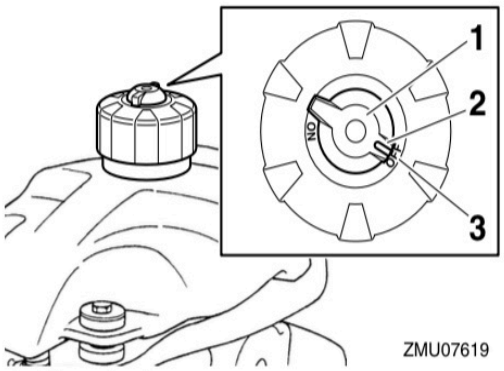
This valve is on the fuel tank cap.

To open the air vent valve, align the pointer on the air vent valve with the “ON” position.




1. Air vent valve
2. Pointer
3. “ON” position

To close the air vent valve, align the pointer on the air vent valve with the “OFF” position.

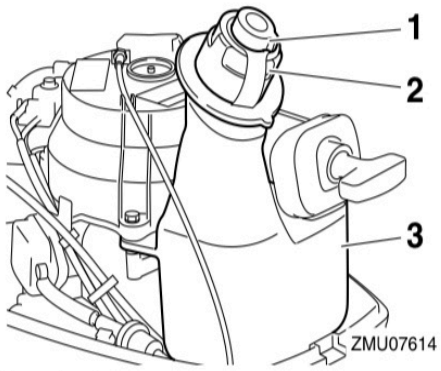



1. Air vent valve
2. Pointer
3. “OFF” position

EMU44013

## Fuel tank (built-in fuel tank) (F4, F6)

This outboard motor is equipped with a built-in fuel tank and its parts are as follows.




1. Air vent valve
2. Fuel tank cap
3. Built-in fuel tank

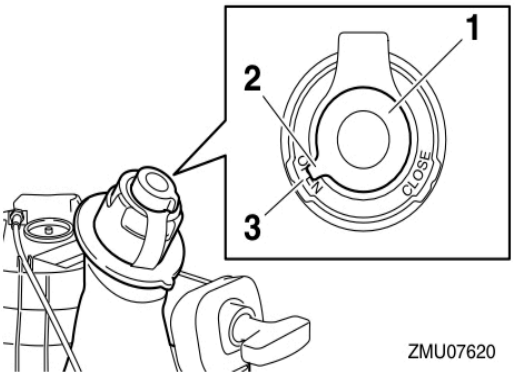
### Fuel tank cap

This cap seals the fuel tank. When the cap is removed, the tank can be filled with fuel. To remove the cap, turn it counterclockwise.

### Air vent valve

This valve is on the fuel tank cap.

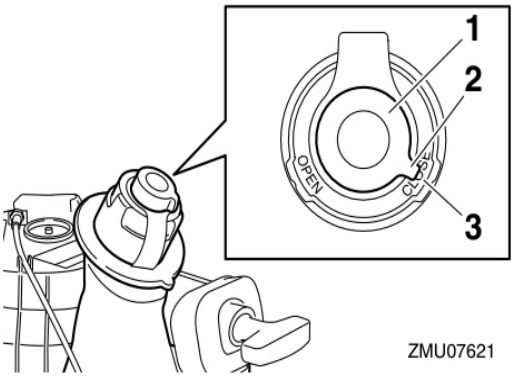
To open the air vent valve, align the pointer on the air vent valve with the “OPEN” position.



ZMU07620

1. Air vent valve
2. Pointer
3. “OPEN” position

To close the air vent valve, align the pointer on the air vent valve with the “CLOSE” position.



ZMU07621

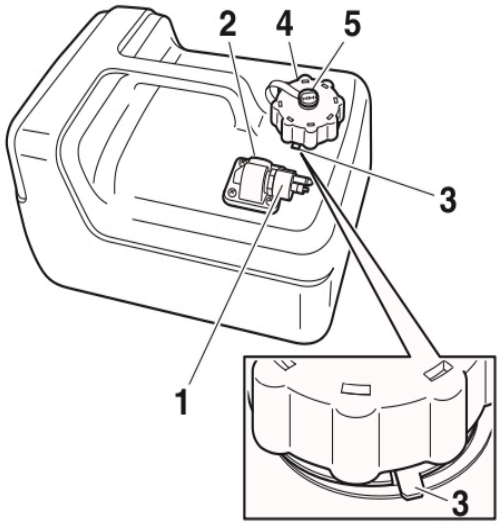
1. Air vent valve
2. Pointer
3. “CLOSE” position

EMU43102
## Fuel tank (portable fuel tank) (F4, F6)

This model can be equipped with an optional portable fuel tank. The parts of the fuel tank are as follows.

EWM00020
**⚠ WARNING**

**The fuel tank supplied with this engine is its dedicated fuel reservoir and must not be used as a fuel storage container. Commercial users should conform to relevant licensing or approval authority regulations.**



ZMU07460

1. Fuel joint
2. Fuel gauge
3. Pressure relief tab
4. Fuel tank cap
5. Air vent screw

**Fuel joint**

This joint is used to connect the fuel line.

**Fuel gauge**

This gauge shows the approximate amount of fuel remaining in the fuel tank.

**Pressure relief tab**

This tab is attached to the filler hole of the fuel tank.

**Fuel tank cap**

This cap seals the fuel tank. To loosen the cap, press and hold the pressure relief tab and turn the cap counterclockwise.

**Air vent screw**

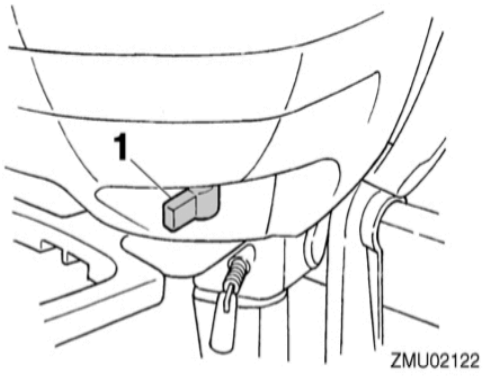
This screw is on the fuel tank cap. When turning the air vent screw counterclockwise, it is loosened and the pressure in the fuel tank is released to a certain pressure. Air is allowed to enter the fuel tank while operating the engine.

EMU42990

## Fuel cock

### F2.5

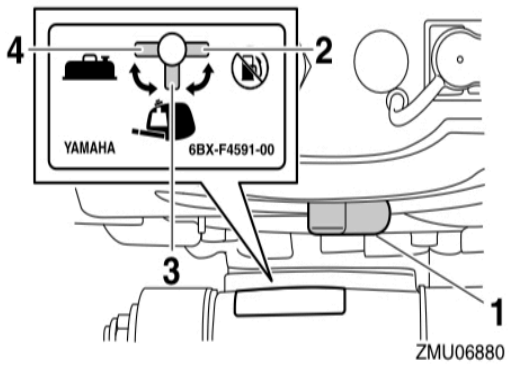
The fuel cock turns on and off the supply of fuel from the fuel tank to the engine.




1. Fuel cock

### F4, F6

The fuel cock turns on and off the supply of fuel from the fuel tank to the engine.
The fuel cock has 3 positions: the closed position, built-in fuel tank position, and portable fuel tank position. Depending on how the outboard motor will be used, align the fuel cock with the appropriate position indicated on the label that is affixed to the outboard motor.



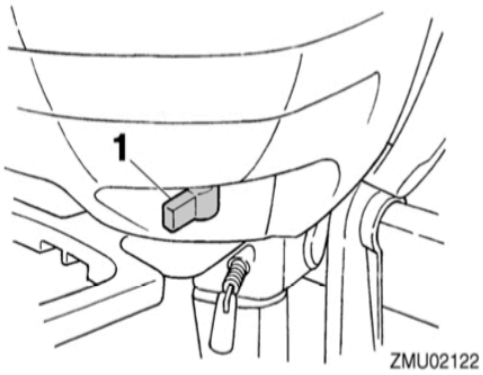

1. Fuel cock
2. Closed position
3. Built-in fuel tank position
4. Portable fuel tank position

EMU42800

## Close

### F2.5

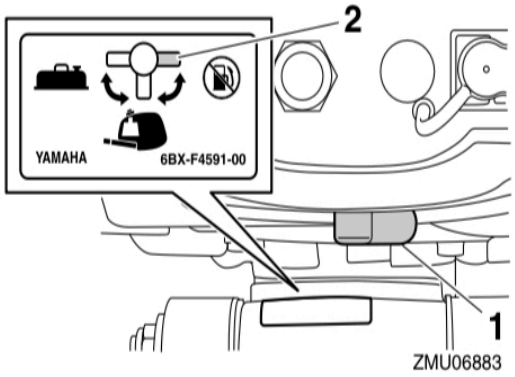
To stop fuel flow to the engine, turn the lever or knob to close position.
Always turn the lever or knob to close position when the engine is not running.




1. Close position

### F4, F6

To stop the fuel flow from the fuel tank to the carburetor, align the fuel cock with the closed position.
When the engine is not running, always align the fuel cock with the closed position.




1. Fuel cock
2. Closed position

EMU42810

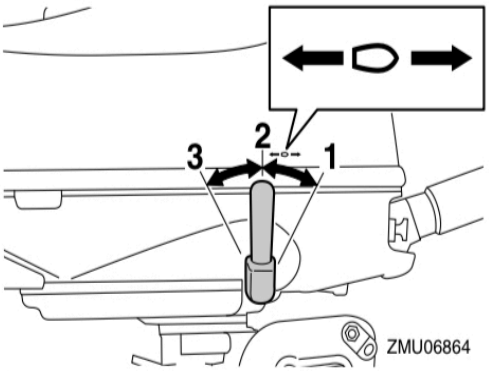
## Open

### F2.5

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

**F4, F6**

Move the gear shift lever forward to engage the forward gear or rearward to engage the reverse gear.



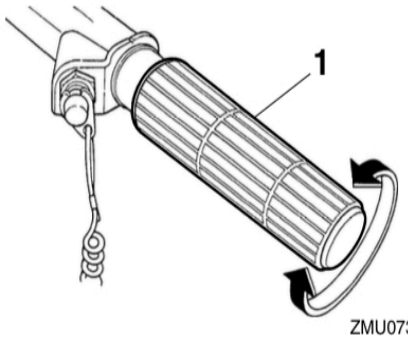

1. Forward position
2. Neutral position
3. Reverse position

EMU25942

## Throttle grip

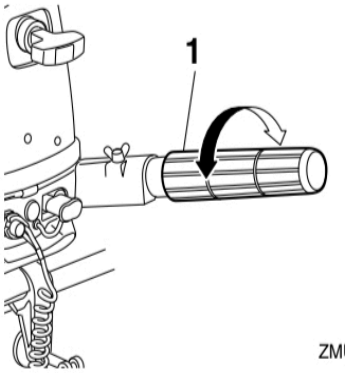
The throttle grip is on the tiller handle. Turn the grip counterclockwise to increase speed and clockwise to decrease speed.

**F2.5**




1. Throttle grip

**F4, F6**

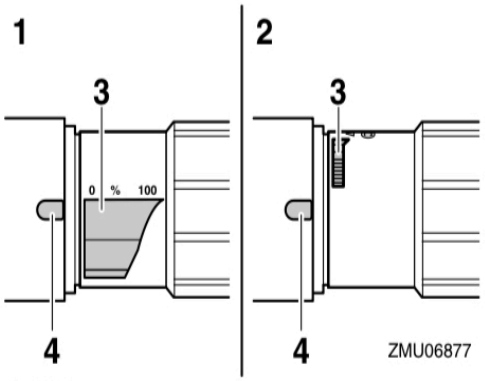



1. Throttle grip

EMU39711

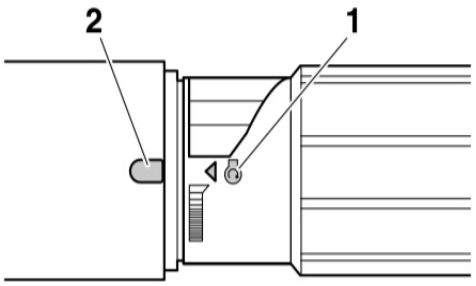
## Throttle indicator

The throttle indicator shows the throttle position. When the 100% position of the throttle indicator is aligned with the notch in the tiller handle, the throttle is fully open. When the 0% position of the throttle indicator is aligned with the notch in the tiller handle, the throttle is fully closed.




1. Fully open
2. Fully closed
3. Throttle indicator
4. Notch

The engine start mark "⏻" on the throttle indicator shows the throttle position for starting the engine.




1. Start mark "⏲"
2. Notch

EMU39243

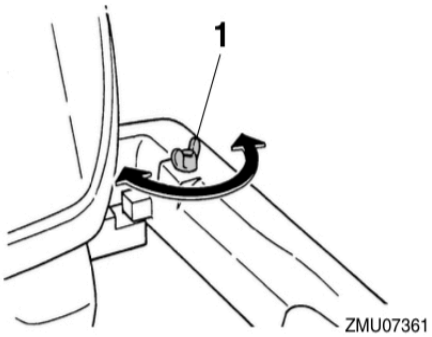
## Throttle friction adjuster

The throttle friction adjuster provides adjustable resistance when the throttle grip is turned, and can be set according to operator preference.

To increase resistance, turn the throttle friction adjuster clockwise.

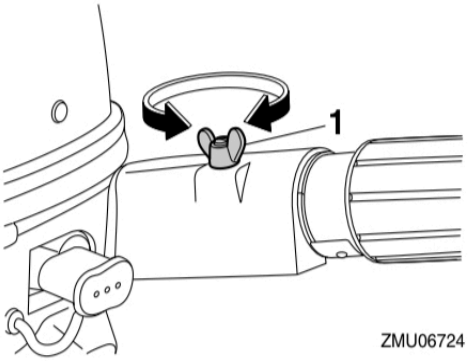
To decrease resistance, turn the throttle friction adjuster counterclockwise. When constant speed is desired, tighten the throttle friction adjuster to maintain the desired throttle setting. **WARNING! Do not overtighten the throttle friction adjuster. If there is too much resistance, it could be difficult to turn the throttle grip, which could result in an accident.** [EWM02261]

**F2.5**




1. Throttle friction adjuster

**F4, F6**

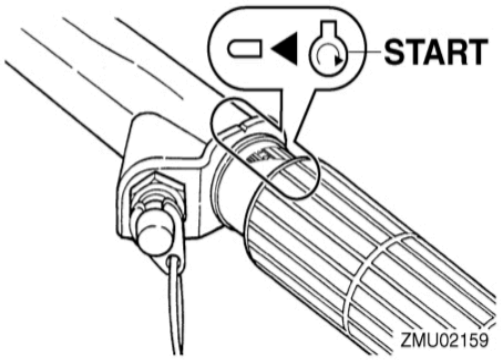



1. Throttle friction adjuster

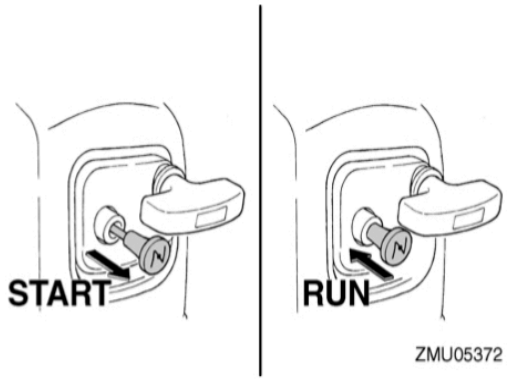
EMU25995

## Engine shut-off cord (lanyard) and clip

The clip must be attached to the engine shut-off switch for the engine to run. The cord should be attached to a secure place on the operator's clothing, or arm or leg. Should the operator fall overboard or leave the helm, the cord will pull out the clip, stopping ignition to the engine. This will prevent the boat from running away under power. **WARNING! Attach the engine shut-off cord to a secure place on your clothing, or your arm or leg while operating. Do not attach the cord to clothing that could tear loose. Do not route the cord where it could become entangled, preventing it from functioning. Avoid accidentally pulling the cord during normal operation. Loss of engine power means the loss of most steering control. Also, without engine power, the boat could slow rapidly. This could cause people and objects in the boat to be thrown forward.** [EWM00122]



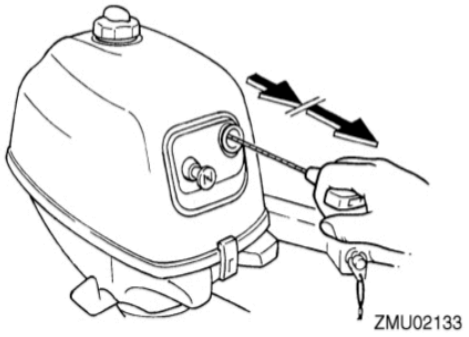

4. Place the choke knob in the "**START**" (start) position. After the engine starts, return the knob to the "**RUN**" (run) position.




**TIP:**

- When restarting a warm engine, place the choke knob in the "**RUN**" (run) position.
- If the choke knob is left in the "**START**" (start) position while the engine is running, the engine will run poorly or stall.

5. Pull the manual starter handle slowly until you feel resistance. Then give a strong pull straight out to start the engine. Repeat if necessary.



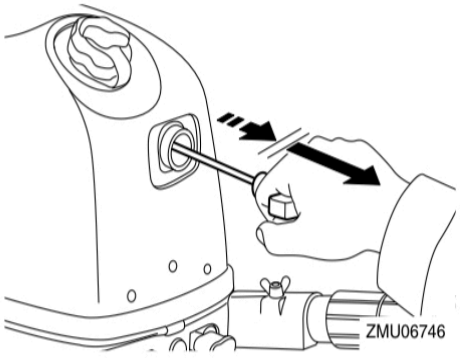

6. After the engine starts, slowly return the manual starter handle to the original position before releasing it.
7. Slowly return the throttle grip to the fully closed position.

**TIP:**

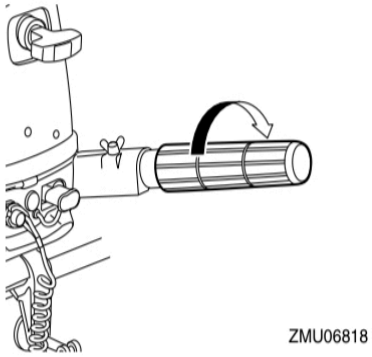
- When the engine is cold, it needs to be warmed up. For further information, see page 57.
- If the engine does not start on the first try, repeat the procedure. If the engine fails to start after 4 or 5 tries, open the throttle a small amount (between 1/8 and 1/4) and try again. Also if the engine is warm and fails to start, open the throttle a same amount and try to start the engine again. If the engine still fails to start, see page 92.

Procedure for starting outboard motor (F4, F6)

1. Move the gear shift lever to the neutral position.




6. After the engine starts, slowly return the manual starter handle to its original position before releasing it.
7. Warm up the engine. For further information, see page 57.
8. Return the choke knob to its original position gradually.
9. Slowly return the throttle grip to the fully closed position.




EMU36510
## Checks after starting engine

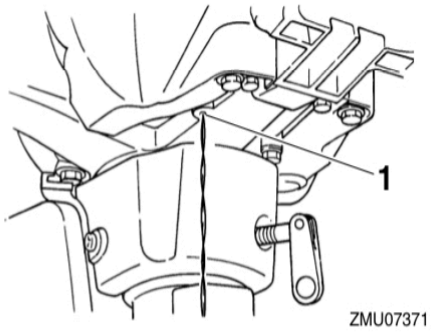
EMU36523
### Cooling water

Check for a steady flow of water from the cooling water pilot hole. A continuous flow of water from the pilot hole indicates that the water pump is pumping water through the cooling water passages. If the cooling water passages are frozen, it may take a while for water to start flowing out of the pilot hole.

ECM01810
**NOTICE**

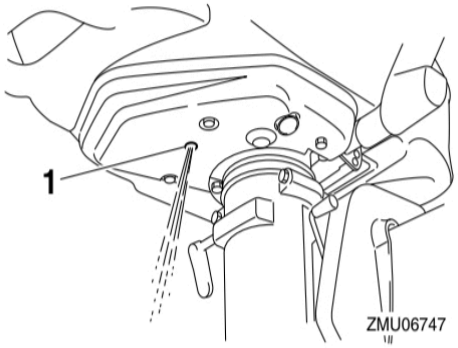
**If water is not flowing out of the pilot hole at all times while the engine is running, overheating and serious damage could occur. Stop the engine and check whether the cooling water inlet on the lower case or the cooling water pilot hole is blocked. Consult your Yamaha dealer if the problem cannot be located and corrected.**

**F2.5**




1. Cooling water pilot hole

**F4, F6**



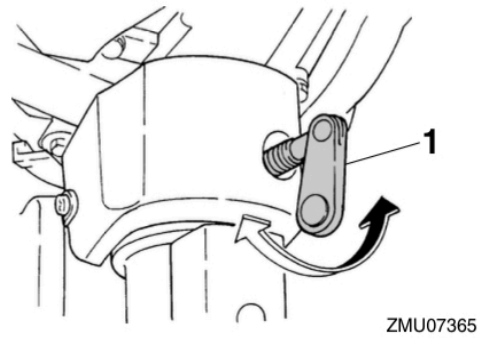

1. Cooling water pilot hole

EMU27670
## Warming up engine

EMU40070
### Warming up

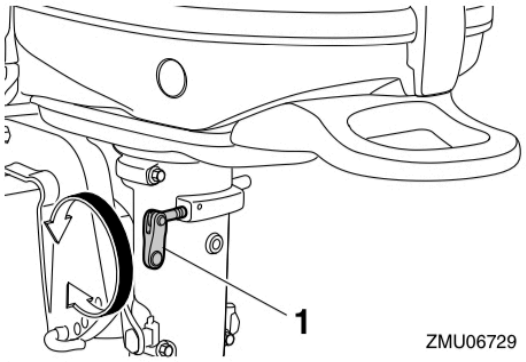
After starting the engine, return the choke knob to the halfway position. For approximately the first 5 minutes after starting, warm up the engine by operating at one fifth throttle

**F2.5**




1. Steering friction adjuster

**F4, F6**




1. Steering friction adjuster

To increase resistance, turn the steering friction adjuster clockwise.

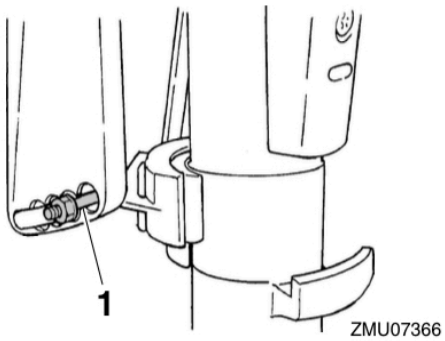
To decrease resistance, turn the steering friction adjuster counterclockwise.

EMU40101

## Trim rod (tilt pin)

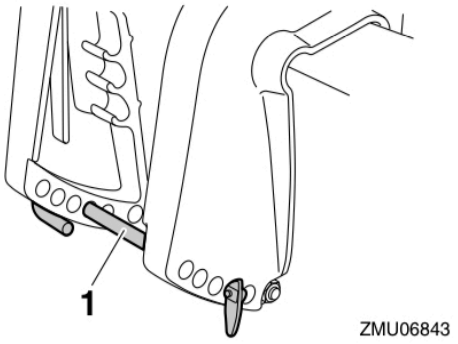
The trim rod (tilt pin) is used to adjust the trim angle of the outboard motor in relation to the angle of the boat transom.

**F2.5**




1. Trim rod

**F4, F6**



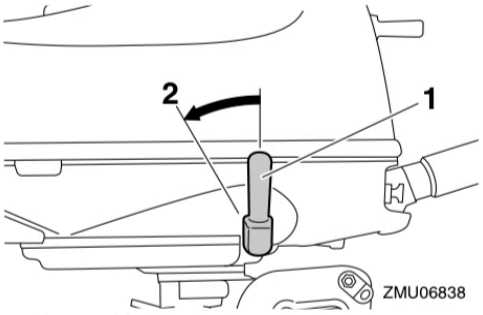

1. Trim rod

EMU39363

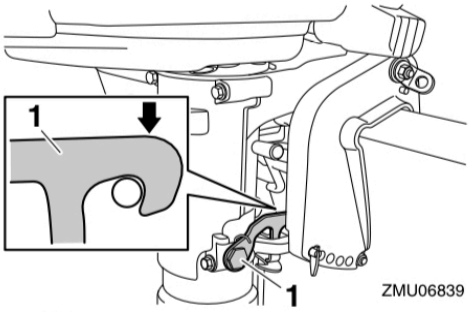
## Tilt lock mechanism (F4, F6)

The tilt lock mechanism is used to prevent the outboard motor from lifting out of the water when the gear shift lever is in the reverse position.

When the gear shift lever is moved to the reverse position, the tilt lock mechanism operates to prevent the outboard motor from being tilted up.




1. Gear shift lever
2. Reverse position

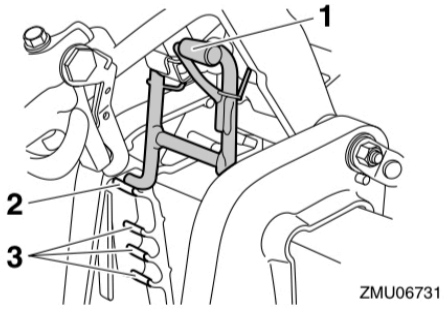



1. Tilt lock

When the gear shift lever is moved to the neutral position or forward position, the outboard motor can be tilted up.

EMU39832
## Tilt support bar (F4, F6)

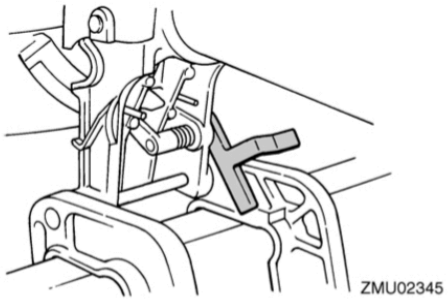
Use the tilt support bar to keep the outboard motor in the tilted up position or a shallow water cruising position.




1. Tilt support bar
2. Tilted up position
3. Shallow water cruising position

EMU42600
## Tilt support lever (F2.5)

To keep the outboard motor in the tilted up position, lock the tilt support lever to the clamp bracket.




ECM00660

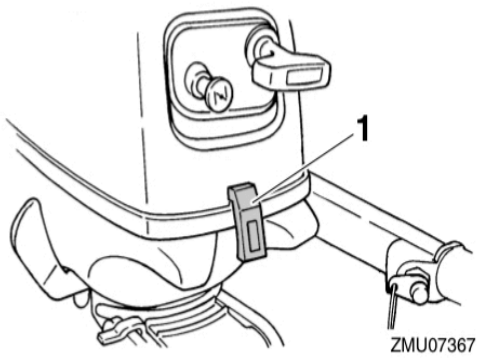
***NOTICE***

**Do not use the tilt support lever or knob when trailering the boat. The outboard motor could shake loose from the tilt support and fall. If the motor cannot be trailered in the normal running position, use an additional support device to secure it in the tilt position.**

EMU39263
## Cowling lock lever

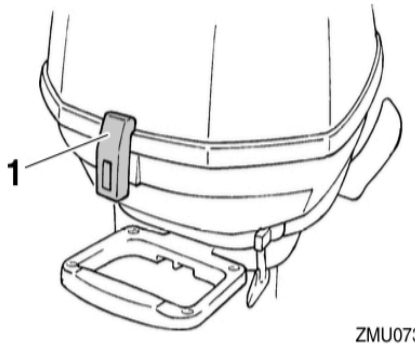
The cowling lock lever(s) is used to secure the top cowling.

**F2.5**



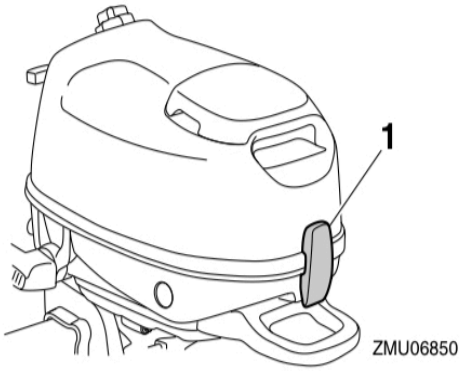

1. Cowling lock lever

**F2.5**




1. Cowling lock lever

**F4, F6**



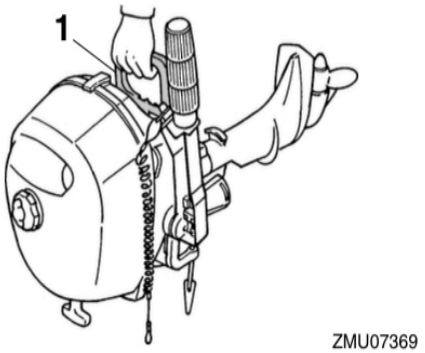

1. Cowling lock lever

EMU42850

## Carrying handle

**F2.5**

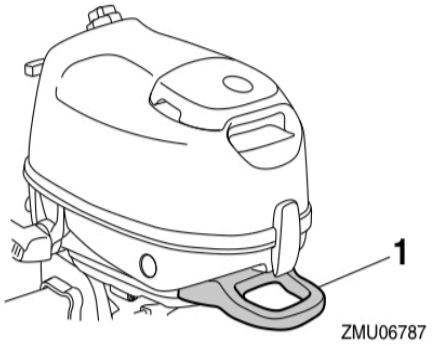
A carrying handle is provided on the rear of the outboard motor. It enables you to carry the outboard motor easily with one hand.




1. Carrying handle

**F4, F6**

The carrying handle is used to carry the outboard motor. For information on carrying and transporting the outboard motor, see page 70.




1. Carrying handle

EMU39731

## Installation

The information presented in this section is intended as reference only. It is not possible to provide complete instructions for every possible boat and motor combination. Proper mounting depends in part on experience and the specific boat and motor combination.

EWM02341

**⚠ WARNING**

- **Overpowering a boat could cause severe instability. Do not mount an outboard motor with more horsepower than the maximum rating on the capacity plate of the boat. If the boat does not have a capacity plate, consult the boat manufacturer.**
- **Improper mounting of the outboard motor could result in hazardous conditions, such as poor handling, loss of control, or fire hazards. If you are not able to mount the outboard motor properly, consult a Yamaha dealer.**

EMU42940

### Mounting the outboard motor

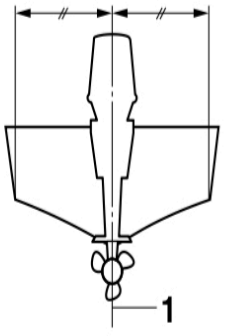
#### F2.5

EWM01720

**⚠ WARNING**

**Your dealer or other person experienced in proper outboard motor mounting should show you how to mount your outboard motor.**

The outboard motor should be mounted so that the boat is well balanced. Otherwise, the boat could be hard to steer. For single-engine boats, mount the outboard motor on the centerline (keel line) of the boat.




1. Center line (keel line)

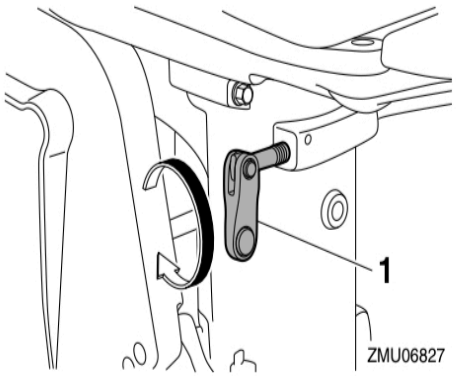
#### F4, F6

EWM02300

**⚠ WARNING**

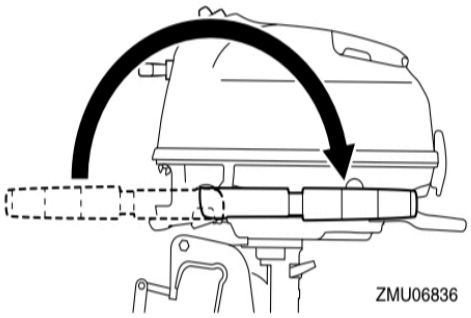
**Do not hold the top cowling or tiller handle when mounting or dismounting the outboard motor. Otherwise, the outboard motor could fall.**

1. Be sure to mount the outboard motor while the boat is on land. If the boat is on the water, move it to an area on land.
2. To prevent steering movement, turn the steering friction adjuster clockwise.

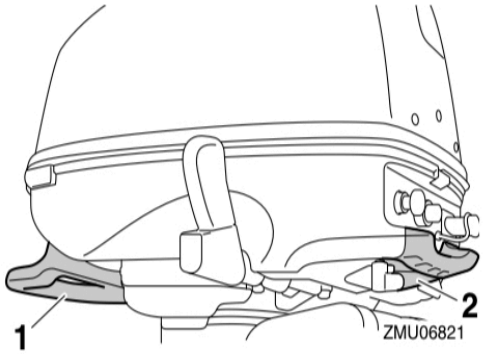



1. Steering friction adjuster

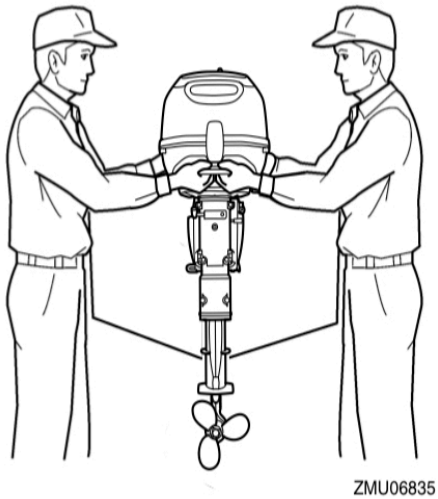
3. Turn the tiller handle 180° so that it is pointing rearward.



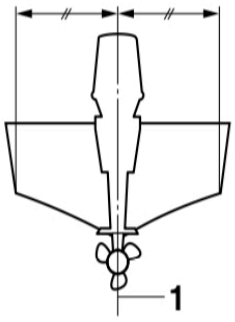

4. Hold the carrying handle and the handgrip on the front side of the bottom cowling and lift up the outboard motor using two people.




1. Carrying handle
2. Handgrip



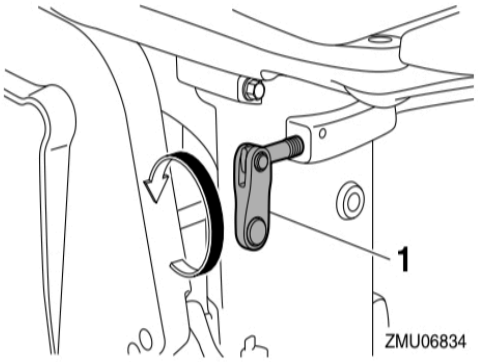

5. Mount the outboard motor on the center line (keel line) of the boat, and ensure that the boat itself is well balanced. Otherwise the boat will be hard to steer. For boats without a keel or which are asymmetrical, consult your dealer.




1. Center line (keel line)

6. Turn the steering friction adjuster counterclockwise to set the steering friction according to operator preference. **WARNING! If there is too much resistance it could be difficult to steer, which could result in an accident.**

[EWM00721]




1. Steering friction adjuster

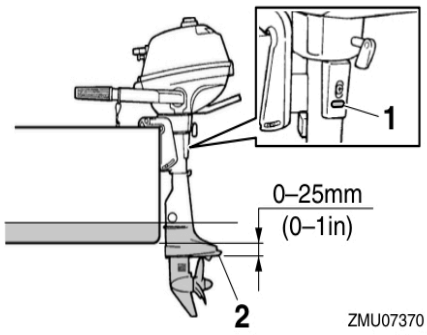
EMU39741

### Mounting height

To run your boat at optimum efficiency, the water resistance (drag) of the boat and outboard motor must be made as little as possible. The mounting height of the outboard motor greatly affects the water resistance. If

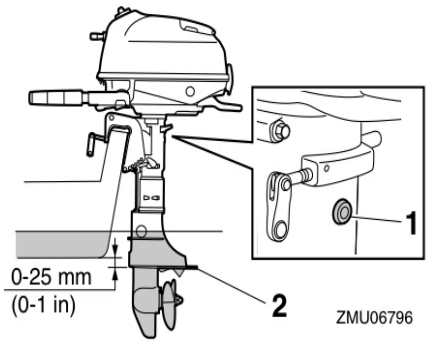
the mounting height is too high, cavitation tends to occur, thus reducing the propulsion; and if the propeller tips cut the air, the engine speed will rise abnormally and cause the engine to overheat. If the mounting height is too low, the water resistance will increase and thereby reduce engine efficiency. Mount the outboard motor so that the anti-cavitation plate is between the bottom of the boat and a level 25 mm (1 in) below it.

**F2.5**




1. Idle hole
2. Anti-cavitation plate

**F4, F6**




1. Idle hole
2. Anti-cavitation plate

ECM02170

***NOTICE***

- **Check that the idle hole stays high enough to keep out water getting inside engine even if the boat is in stationary with maximum load.**
- **Incorrect engine height or obstructions to the smooth flow of water (such as the design or condition of the boat) can create airborne water spray while the boat is cruising. If the motor is operated continuously in the presence of airborne water spray, enough water could enter the engine through the intake opening on the top cowling to cause severe engine damage. Eliminate the cause of the airborne water spray.**

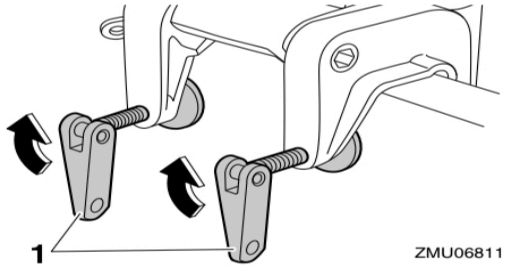
**TIP:**

- The optimum mounting height of the outboard motor is affected by the boat and motor combination and the desired use. Test runs at different heights can help determine the optimum mounting height. Consult your Yamaha dealer or boat manufacturer for further information on determining the proper mounting height.
- For instructions on setting the trim angle of the outboard motor, see page 62.

EMU39752

## Clamping the outboard motor

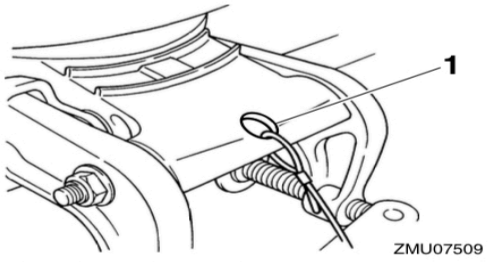
1. Place the outboard motor on the transom so that it is positioned as close to the center as possible. Tighten the clamp screws evenly and securely. Occasionally check the clamp screws for tightness during operation of the outboard motor because they could become loose due to engine vibration. **WARNING! Loose clamp screws could allow the outboard motor to fall off or move on the transom. This could cause loss of control and serious injury. Make sure the clamp screws are tightened securely. Occasionally check the screws for tightness during operation.** [EWM00642]




1. Clamp screw

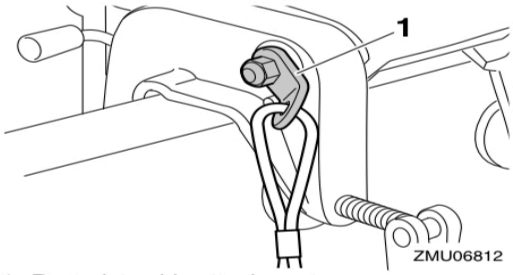
2. Attach one end to the restraint cable attachment and the other to a secure mounting point on the boat. Otherwise the engine could be completely lost if it accidentally falls off the transom.

**F2.5**




1. Restraint cable attachment

**F4, F6**



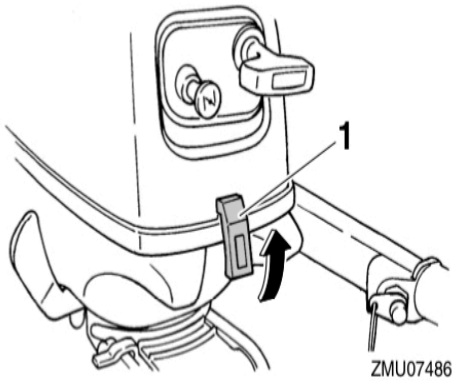

1. Restraint cable attachment

EMU43710

## Remove the top cowling

For the following checks, remove the top cowling from the bottom cowling. To remove the top cowling, pull the cowling lock lever(s) up and lift up the top cowling.

**F2.5**

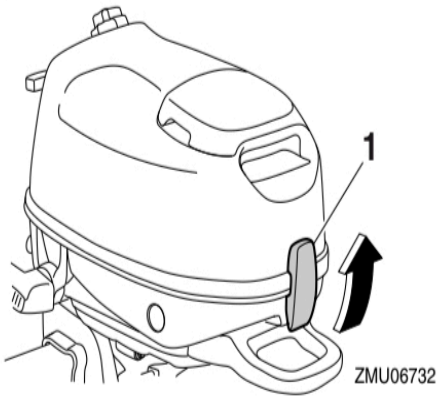



1. Cowling lock lever

**F2.5**


1. Cowling lock lever

**F4, F6**




1. Cowling lock lever

EMU36442

## Fuel system

EWM00060

**⚠ WARNING**

**Gasoline and its vapors are highly flammable and explosive. Keep away from sparks, cigarettes, flames, or other sources of ignition.**

EWM00910

**⚠ WARNING**

**Leaking fuel can result in fire or explosion.**

- **Check for fuel leakage regularly.**
- **If any fuel leakage is found, the fuel system must be repaired by a qualified mechanic. Improper repairs can make the outboard unsafe to operate.**

EMU36451

### Check for fuel leaks

- Check for fuel leaks or gasoline fumes in the boat.
- Check for fuel leakage from the fuel system.
- Check the fuel tank and fuel lines for cracks, swellings, or other damages.

EMU42970

## Controls

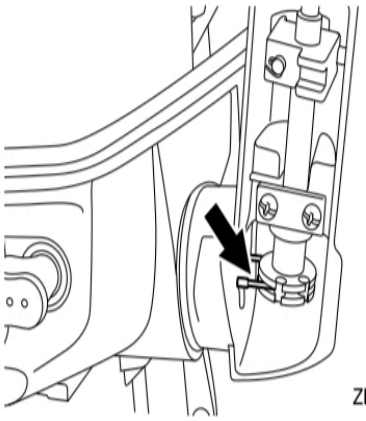
**F2.5**

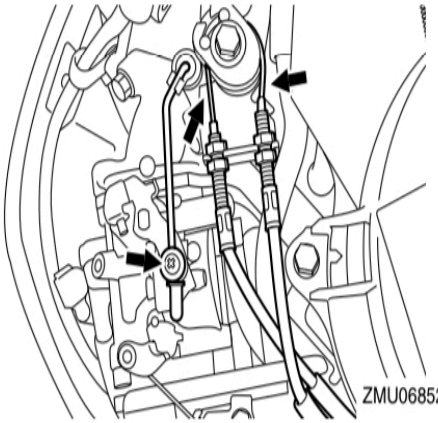
- Move the tiller handle fully to the left and right to make sure operation is smooth.
- Turn the throttle grip from the fully closed to the fully open position. Make sure that it turns smoothly and that it completely returns to the fully closed position.
- Look for loose or damaged connections of the throttle and shift cables.

**F4, F6**

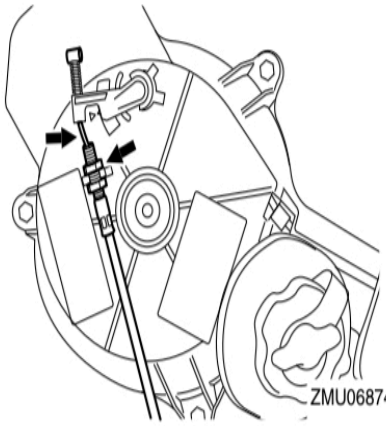
- Move the tiller handle fully to the left and right to check that operation is smooth.
- Turn the throttle grip from the fully closed position to the fully open position. Check that the throttle grip turns smoothly and that it completely returns to the fully closed posi-

- Check the throttle cable and throttle link for loose or damaged connections.


ZMU06851


ZMU06852

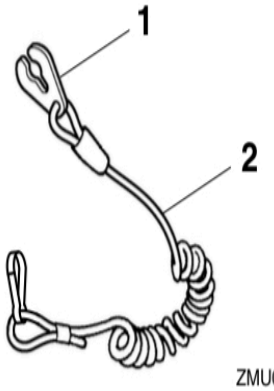
- Check the shift link and start-in-gear protection cable for loose or damaged connections.


ZMU06874

EMU36483

## Engine shut-off cord (lanyard)

Inspect the engine shut-off cord and clip for damage, such as cuts, breaks, and wear.



ZMU06873

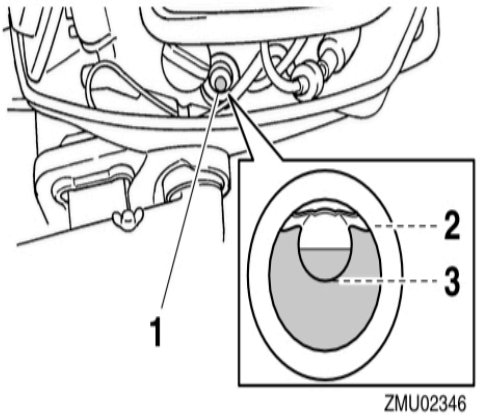
1. Clip
2. Cord

EMU42860

## Engine oil

### F2.5

1. Put the outboard motor in an upright position (not tilted).
2. Remove the top cowling.
3. Check the oil level using the oil level check window to be sure the level falls between the upper and lower marks. Fill with oil if it is below the lower mark, or drain to the specified level if it is above the upper mark.



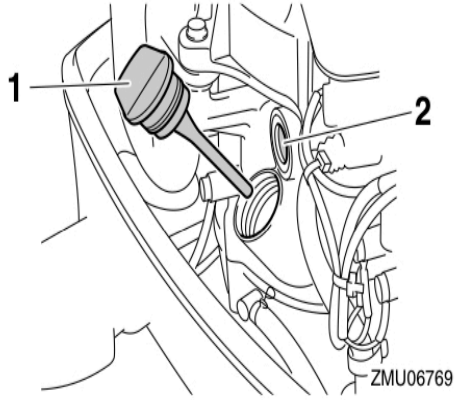
ZMU02346

1. Oil level check window
2. Upper mark
3. Lower mark

**F4, F6**

1. Place the outboard motor in an upright position (not tilted). ***NOTICE:*** **If the motor is not level, the oil level indicated on the dipstick may not be accurate.**

   [ECM01790]
2. Remove the oil filler cap and wipe the attached oil dipstick clean.

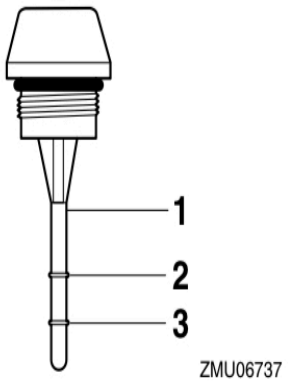



1. Oil filler cap
2. Oil lubrication check window

**TIP:**

The oil lubrication check window does not indicate the engine oil level. Use the oil lubrication check window to make sure that the engine is being lubricated with oil while it is running.

3. Install the oil filler cap and tighten it completely.
4. Remove the oil filler cap again and check that the oil level on the dipstick is between the upper and lower marks. If the oil level is not at the proper level, add or extract oil until the oil is between the upper and lower marks.




1. Oil dipstick
2. Upper mark
3. Lower mark

5. Install the oil filler cap and tighten it completely.

EMU27153

## Engine

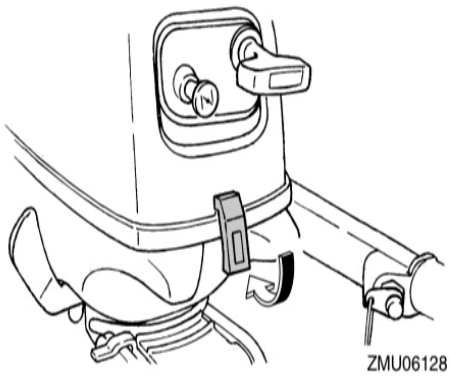
- Check the engine and engine mounting.
- Look for loose or damaged fasteners.
- Check the propeller for damage.
- Check for engine oil leaks.

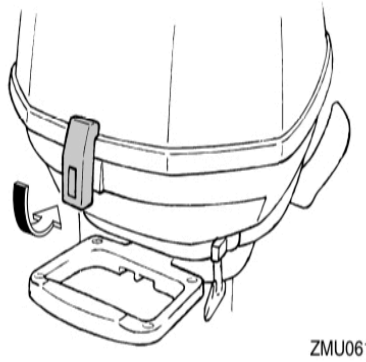
EMU42980

## Installing top cowling

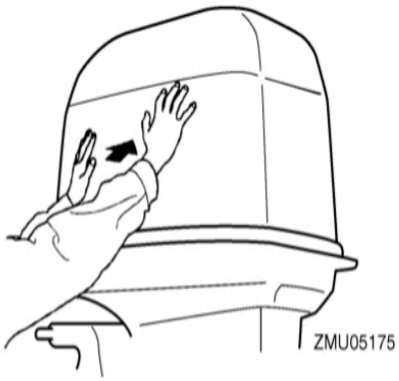
**F2.5**

1. Be sure that all cowling lock levers are released.
2. Be sure that the rubber seal is seated all the way around the engine.
3. Place the cowling on top of the seal.
4. Check to be sure it fits properly in the rubber seal.
5. Move the levers to lock the cowling as shown. ***NOTICE:*** **If the top cowling is not installed correctly, water spray under the top cowling can damage the engine, or the top cowling can blow off at high speeds.** [ECM01991]



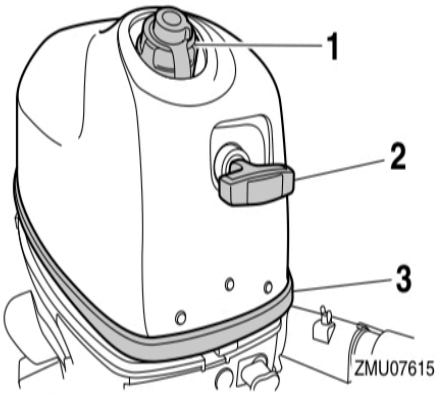




After installing, check the fitting of the top cowling by pushing it with both hands. If the top cowling is loose, have it repaired by your Yamaha dealer.



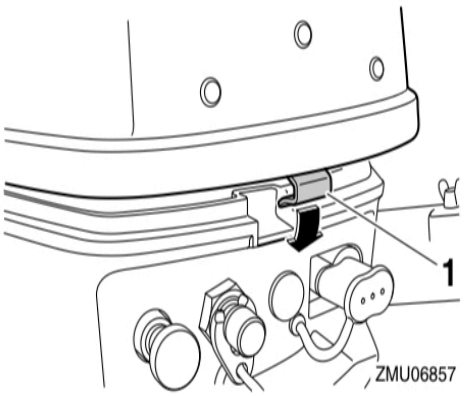

**F4, F6**

1. Check the rubber seal for damage. If the rubber seal is damaged, have it replaced by a Yamaha dealer.
2. Align the fuel tank cap and manual starter handle with their respective holes in the top cowling.



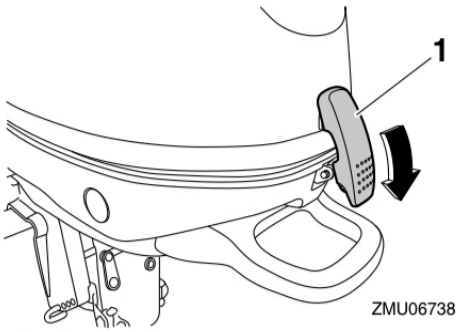

1. Fuel tank cap
2. Manual starter handle
3. Rubber seal

3. Hook the top cowling hook onto the bottom cowling, and then make sure that the fuel tank cap and manual starter handle fit properly into their respective holes.




1. Hook

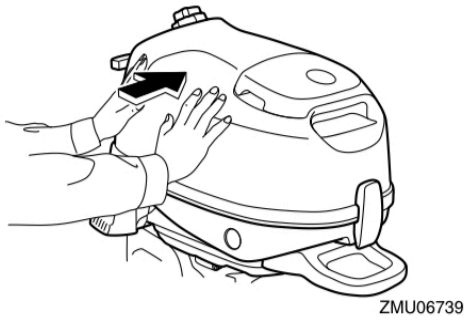
4. Check to be sure the rubber seal is seated correctly between the top cowling and the bottom cowling.
5. Pull the cowling lock lever down to secure the top cowling.




1. Cowling lock lever

6. Check the fitting of the top cowling by pushing it with both hands. ***NOTICE:*** **If the top cowling is not installed correctly, water spray under the top cowling can damage the engine, or the top cowling can blow off at high speeds.**

[ECM01991]




EMU43463

## Filling fuel

EWM01950

**⚠ WARNING**

**Be sure the outboard motor is securely fastened to the transom or a stable stand.**

EWM01830

**⚠ WARNING**

- **Gasoline and its vapors are highly flammable and explosive. Always refuel according to this procedure to reduce the risk of fire and explosion.**
- **Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you should swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.**

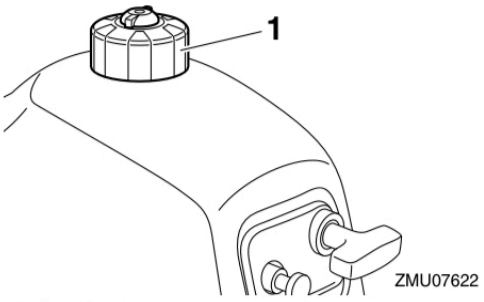
Before refueling, check the following points:

- Securely moor the boat in a well-ventilated area and stop the engine. If the boat is trailered, make sure that it is stable.
- Do not smoke and keep away from sparks, flames, static electric discharge, or other sources of ignition.
- If you use a portable container to store and dispense fuel, only use a locally approved GASOLINE container.
- To prevent electrostatic sparks, discharge any built-up static electricity from your body before refueling.

Filling fuel for built-in fuel tank

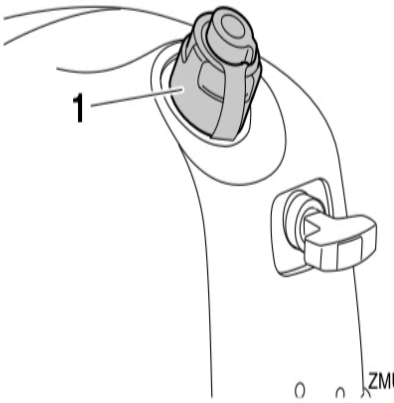
1. Remove the fuel tank cap.

**F2.5**




1. Fuel tank cap

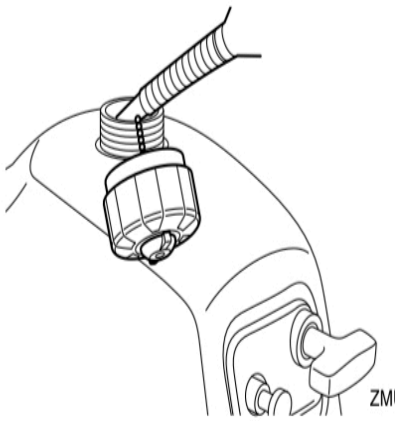
**F4, F6**



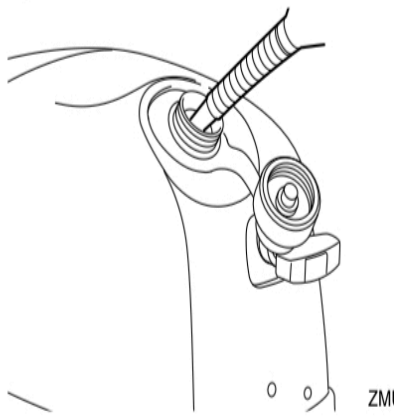

1. Fuel tank cap

2. Fill the fuel tank, but do not overfill it. **WARNING! Do not overfill. Otherwise fuel can expand and overflow if the temperature increases.** [EWM02610]

**F2.5**




**F4, F6**

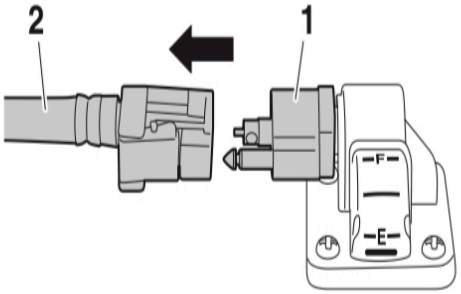



| Fuel tank capacity (built in type): |
| --- |
| F2.5MHA 0.9 L (0.24 US gal, 0.20 Imp.gal) |
| F4MHA 1.1 L (0.29 US gal, 0.24 Imp.gal) |
| F6MHA 1.1 L (0.29 US gal, 0.24 Imp.gal) |

3. Tighten the fuel tank cap until a click is heard.
4. Wipe up any spilled gasoline immediately with dry rags. Dispose of rags properly according to local laws or regulations. If you use a portable container to store and dispense fuel, only use a locally approved GASOLINE container.

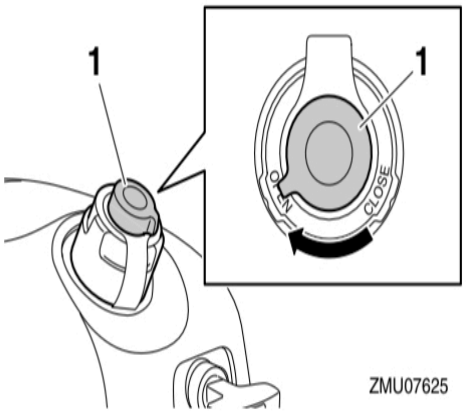
Filling fuel for portable fuel tank (optional) (F4, F6)

1. Disconnect the fuel hose from the fuel joint on the fuel tank.



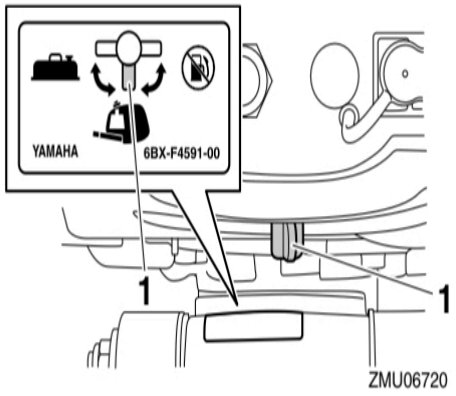

1. Fuel joint
2. Fuel hose

2. Turn the air vent screw clockwise to close it.



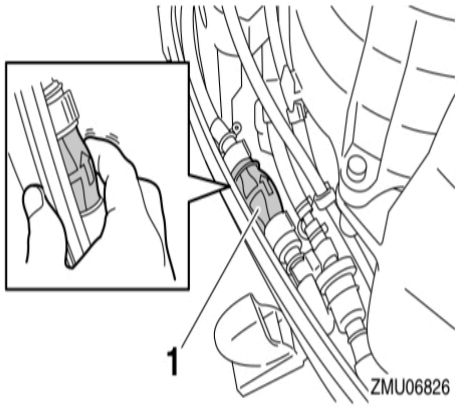

1. Air vent valve

2. Align the fuel cock with the built-in fuel tank position.




1. Built-in fuel tank position

3. Remove the top cowling, and then squeeze the primer pump in the bottom cowling repeatedly until you feel it become slightly firm.

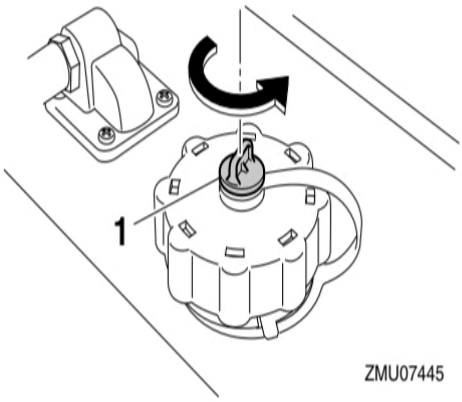



1. Primer pump

4. Install the top cowling.

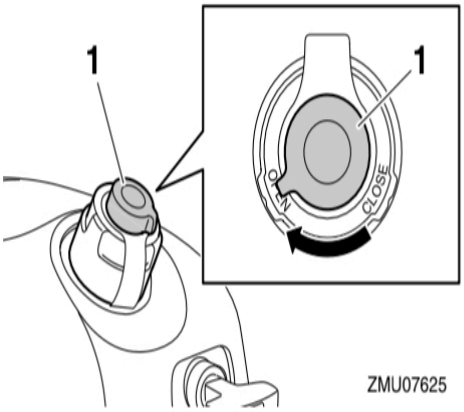
Sending fuel for portable fuel tank (optional) (F4, F6)

1. To loosen the air vent screw, turn it counterclockwise until it stops.




1. Air vent screw

2. If there is fuel in the built-in fuel tank, open the air vent valve to prevent pressure from increasing inside the tank due to fuel expansion.



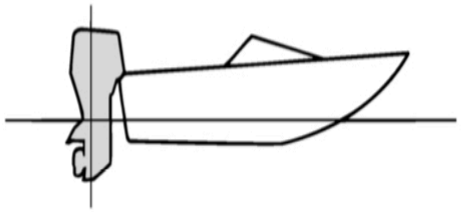

1. Air vent valve

3. Check the direction of the fuel hose. Make sure that the arrow of the primer pump points toward the outboard motor.

EMU40121

## Adjusting boat trim

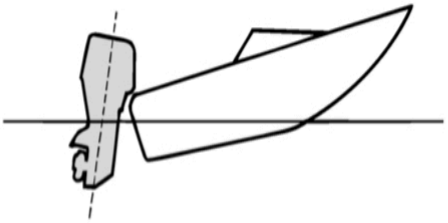
Generally, a boat is stable when the keel line of the boat is up about 3 to 5 degrees. With the bow up, the boat may have a greater tendency to steer to one side or the other. If this occurs, adjust the trim angle.



ZMU01784

### Bow Up

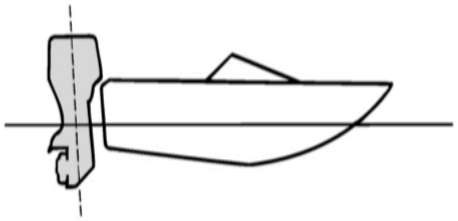
Too much trim-out puts the bow of the boat too high in the water. Excessive trim-out can also cause the propeller to ventilate, which reduces performance further, and the boat may "porpoise" (hop in the water), which could throw the operator and passengers overboard.



ZMU01785

### Bow Down

Too much trim-in causes the boat to "plow" through the water, decreasing fuel economy and making it hard to increase speed. Resistance at the bow is greatly increased, heightening the danger of "bow steering" and making operation difficult and dangerous.

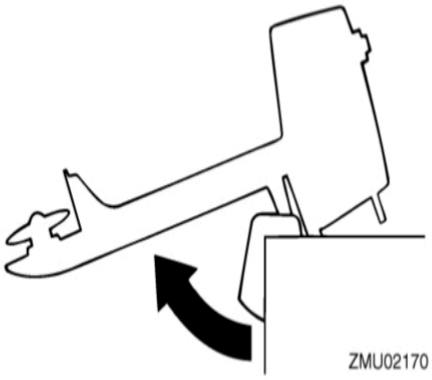


ZMU01786

EMU44132

## Tilting up and down

If the engine will be stopped for some time or if the boat is moored in shallows, the outboard motor should be tilted up to protect the propeller and lower casing from damage by collision with obstructions, and also to reduce salt corrosion.



ZMU02170

EWM00222

**⚠ WARNING**

**Make sure that no one is near the outboard motor when tilting the outboard motor up or down. Otherwise, body parts could be crushed between the outboard motor and the clamp bracket.**

- **Avoid accidentally pulling the cord during normal operation. Loss of engine power means the loss of most steering control. Also, without engine power, the boat could slow rapidly. This could cause people and objects in the boat to be thrown forward.**
- **Make sure that no one is standing behind you when pulling the starter rope. It could whip behind you and injure someone.**
- **An unguarded, rotating flywheel is very dangerous. Keep loose clothing and other objects away when starting the engine. Use the emergency starter rope only as instructed. Do not touch the flywheel or other moving parts when the engine is running. Do not install the starter mechanism or top cowling after the engine is running.**
- **Do not touch the ignition coil, spark plug wire, spark plug cap, or other electrical components when starting or operating the outboard motor. You could get an electrical shock.**

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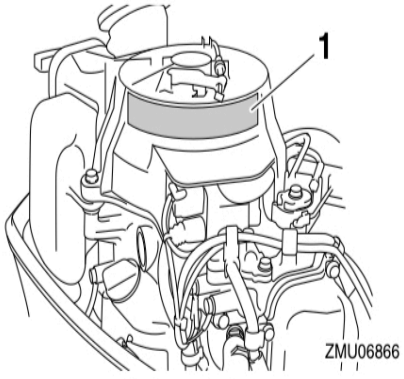
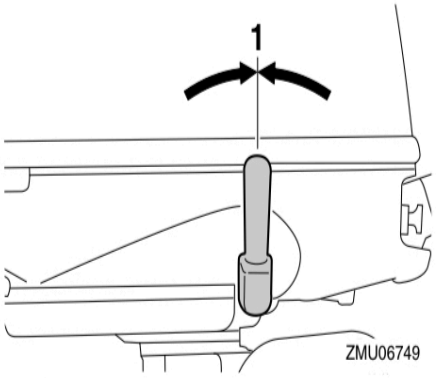
Before performing the following procedure, make sure to read the emergency starting label on the manual starter/flywheel magnet cover.



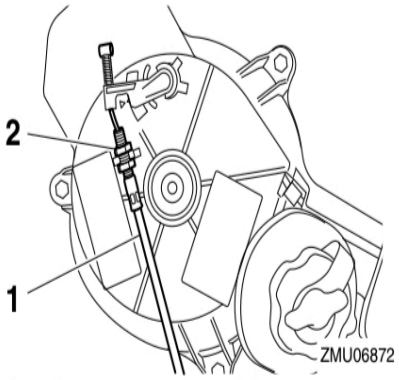

1. Emergency starting label

1. Move the gear shift lever to the neutral position.



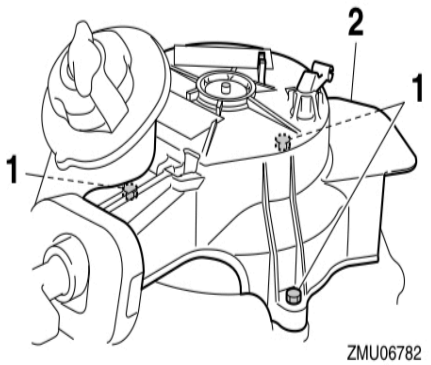

1. Neutral position

2. Remove the top cowling.
3. Loosen the nut, and then disconnect the start-in-gear protection cable.




1. Start-in-gear protection cable
2. Nut

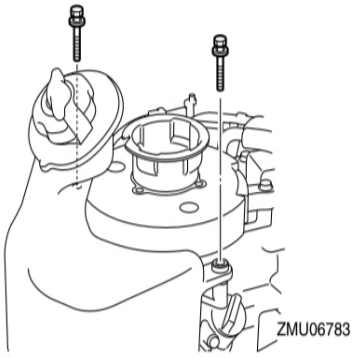
4. Remove the manual starter/flywheel magnet cover by removing the bolts.



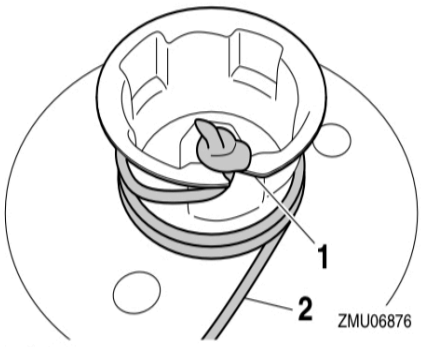

1. Bolts

2. Manual starter/flywheel magnet cover

5. Reinstall 2 bolts to secure the fuel tank.

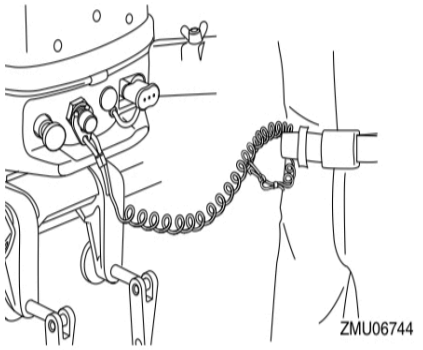



6. Insert the knotted end of the emergency starter rope into the notch in the flywheel magnet and wind the rope several turns around the flywheel magnet clockwise.

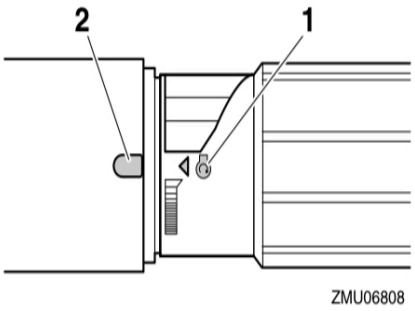



1. Notch
2. Emergency starter rope

7. Attach the engine shut-off cord to a secure place on your clothing, or your arm or leg. Then, install the clip on the other end of the cord to the engine shut-off switch.

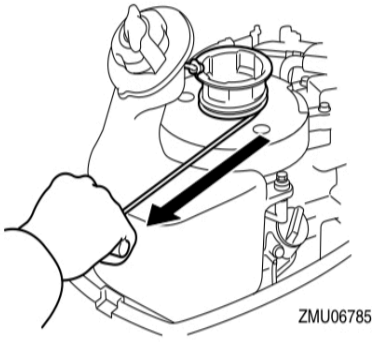



8. Align the engine start mark "⏻" on the throttle grip with the notch in the tiller handle.




1. Start mark "⏻"
2. Notch

9. Give a strong pull straight out to crank and start the engine.




**TIP:**

If the engine does not start after several attempts, pull out the choke knob.