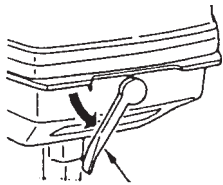


NOTE: DO NOT Allow the Engine to lay on the shift lever side when stored in the UP position on the motor bracket. This will cause the lubrication oil to fill the cylinder and **KILL** the engine. This is your rental responsibility and you will have to pay to have the engine removed, serviced and installed \$\$\$\$\$. **PLEASE ALWAYS** keep the engine either vertical or rotated to the **THROTTLE** side!

PRE-START

1. Make sure engine is full of **REGULAR** gas, not 2 cycle pre-mix.
2. Open engine Cover using the Hatch Lever. (diagram 1)



Hook Lever

Diagram 1

2. Check the oil to ensure it is filled to the proper level. (diagram 2)

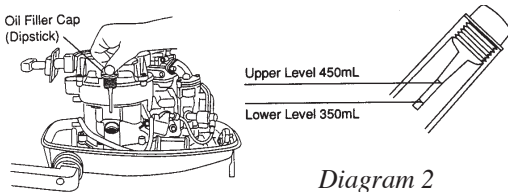
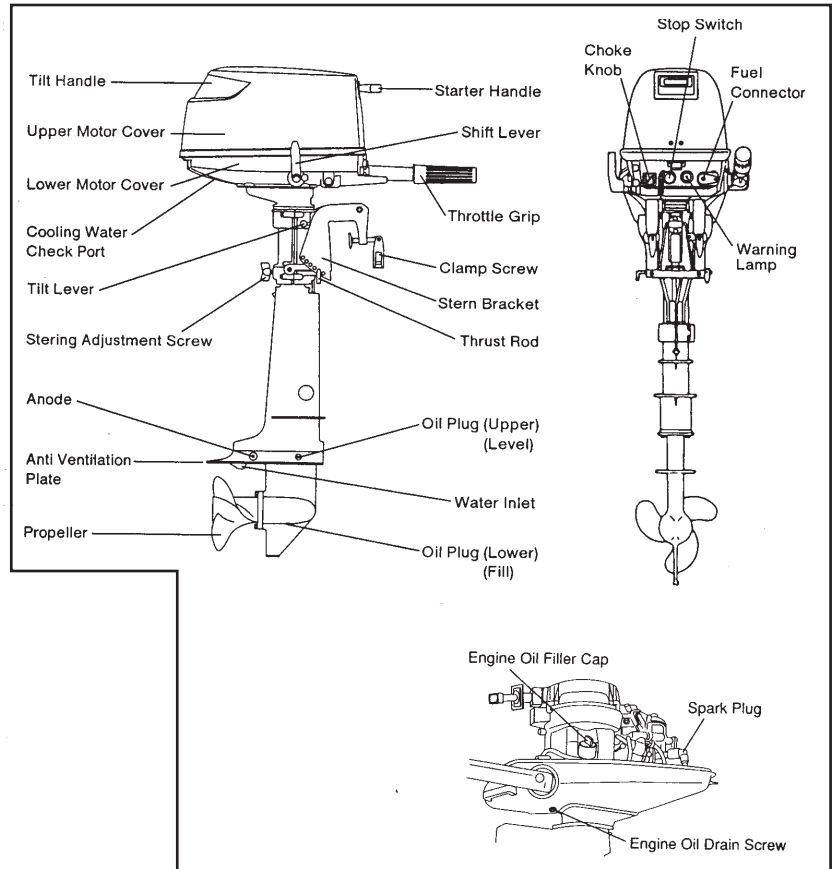


Diagram 2



STARTING THE ENGINE

1. Tilt the engine fully down into the water. The tilt lever is located on the back side, under the engine housing on the left side. (diagram 3)

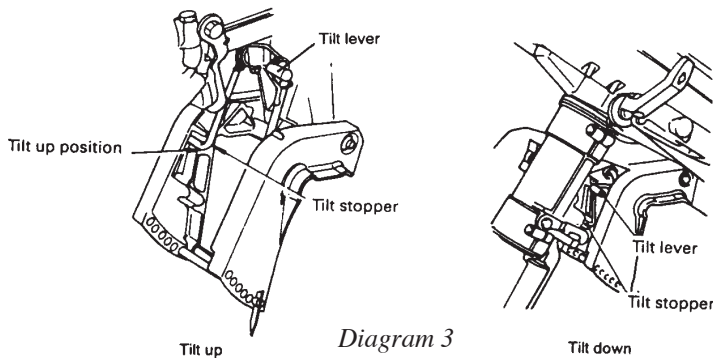


Diagram 3

2. Locate and familiarize yourself with the transmission shift lever, throttle and the control panel on the engine. (diagram 4)
3. Make sure the emergency shut off cord is attached. (red cord)
4. Open vent on top of gas cap.
5. Turn fuel knob on control panel to the on position.
6. Shift the transmission lever to neutral.

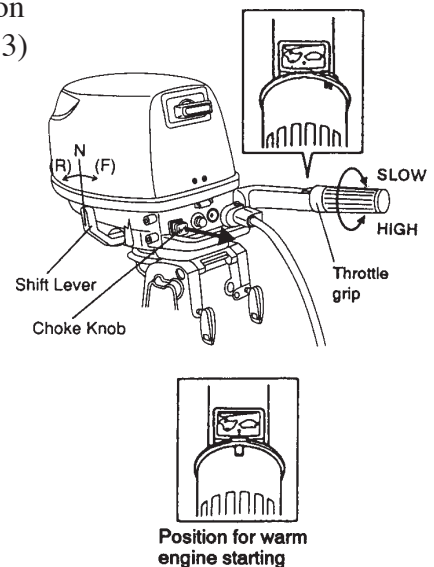


Diagram 4

7. Pull the choke out.
8. Twist the throttle until the two arrows are in alignment. (diagram 5)
9. Pull the pull cord to start engine. (Careful not to pull the cord to far out or you will destroy the cordage)
10. As soon as the engine turns over, turn the choke off and twist the throttle to idle. (clockwise)
11. Check to make sure cooling water is flowing out of the back of the engine. (if not turn engine off immediately) (diagram 6)

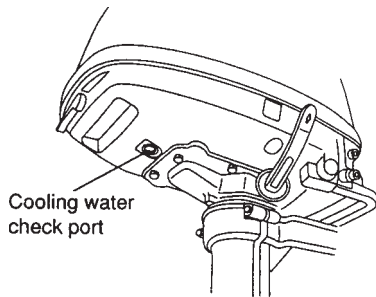


Diagram 5

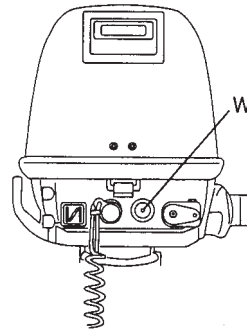


Diagram 6

12. Check to make sure engine oil pressure warning light is not on. (if it is, turn engine off immediately) (diagram 5)
13. If engine won't stay at one throttle position, adjust the throttle clutch. (diagram 7)

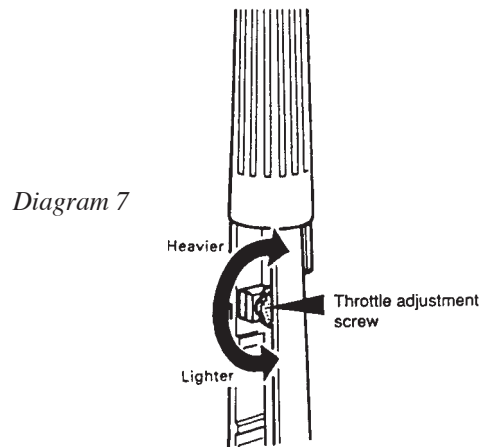


Diagram 7

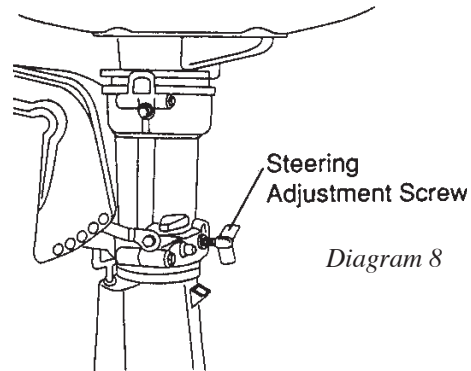


Diagram 8

14. If engine steering won't stay put, use the steering adjustment. (diagram 8)

TIP. Don't pull the cord more than once or twice with choke on. This will flood motor. It's best to alternate the choke on & off. After the engine kicks over turn choke off & pull cord until motor runs continuously.

STOPPING THE ENGINE

1. Turn the throttle down to idle and make sure transmission is in neutral.
2. Push the shut-off button until engine stops.
3. Close gas cap vent.
4. Tilt engine out of water. **Store either upright or on throttle handle side. NEVER store on shift lever side!**

STARTING THE ENGINE

- Tilt the engine fully down into the water. (the tilt lever is located on the back side, under the engine housing on the left side)
- Locate and familiarize yourself with the engine shift lever, throttle
- Make sure the emergency shut off cord is attached. (red cord)
- Check fuel supply. We don't keep the fuel tanks full as most people forget to close the vent and the fuel spills into the bilge when the boat heels
- Open vent on top of gas cap. (Note: open this 4 turns. It can be over-opened which is the same as leaving it closed)
- Turn fuel knob on engine to the on position.
- Shift the transmission lever to neutral. Verify this by pulling lightly on the starting cord to ensure you don't have the interlock closed.
- You 'MAY' need to use the choke. If it's a warm day, probably not. Best to try to start the motor without choke for a few pulls.
- Twist the throttle until the two arrows are in alignment (just a bit of throttle)
- Pull the pull cord to start engine. (MAKE SURE no-one is in the flight path of your arm or hand)
- As soon as the engine turns over, turn the choke off (if used) and twist the throttle to idle.
- Check to make sure cooling water is flowing out of the back of the engine (if not turn engine off immediately)

TIP. Don't pull the cord more than a few times with choke off. If it doesn't start, pull the choke out. If you over choke the engine, it can flood motor with fuel. It's best to alternate the choke on & off. After the engine kicks over turn choke off or you may flood the motor.

STOPPING THE ENGINE

- Turn the throttle down to idle and make sure transmission is in neutral.
- Push the shut-off button until engine stops.
- On the newer motors, you must have it in forward to tilt it up. (NOTE: The engine won't start in gear, put it back in neutral before starting.)
- Tilt engine out of water.
- **VERY IMPORTANT.** Make 100% certain that you have the motor facing up (there's a plaque on the engine telling you which side is up) IF you don't you will hydrolock the motor which will cost you a minimum of \$200 to repair.

OUTBOARD MOTORS ARE FUSSY BEASTS

Here's some info you should know

- 20% of the horsepower (and fuel) gets you 80% of the boat speed. It takes the rest of the power (and fuel) to get the last 20% of speed. On a Santana 22, that's only 1/2 knot faster. It's just not worth it. Typically you have 45+ minutes plus in fuel at 20% throttle... only 20 minutes at 80% throttle
- They have small carburetors which plug easily.
- The water cooling runs off the main shaft deep within the engine. No easy access. If it's not cooling TURN IT OFF or you'll end up buying a new motor
- They don't like warm weather as people leave the vents closed and the hot weather heats up the tank, forcing fuel into the engine, thusly flooding it.
- They don't like cold weather. You need to choke it in cold weather and too much choke, floods the engine.
- You MUST always store them on the correct side. All engine manufactures put an incredibly small label telling you which side is up. If you don't follow that, you will hydrolock the engine...meaning the oil fills the cylinder. Once hydrolocked the engine has to be dismantled to free it up. This gets EXPENSIVE \$\$\$. You are paying for it!
- It is mechanical operating in a difficult marine environment. Salt water is NOT the engines friend.
- Murphy will rule, if you need the engine, it won't start. Count on this and plan accordingly throughout your sail.
- Please refer to the troubleshooting page on common issues
- You own the boat on a bareboat charter. Let me say this again...it is YOUR boat. If you can't get the engine running or keep it running, this is your issue, not the front office. They will be unable to help you. Your options are limited to; waiving down a tow; sailing it back into the harbor; calling Vessel Assist (number as of 1/1/16 is 877-422-9869. This can change)

Engine Troubleshooting Guide

PROBLEM

POSSIBLE SOLUTION

Engine Won't Start

Fuel tank is empty

Fill the fuel tank with the right type of fuel. Note, we do NOT keep the tanks full as people abuse the boats and spill fuel into the bilge...a HUGE NO-NO

Kill switch is engaged

Make sure "deadman" cord is properly installed. Insert the kill switch clip firmly into place. Alternatively, try removing the clip and putting it back in place.

Engine is Flooded

If you see fuel in the water or smell fuel more than usual, you've probably flooded it. Turn off the gas, pull the starting cord a bajillion times and you 'might' dry it out enough to start. Usually it requires a new sparkplug be installed and the engine be serviced.

Pull Starter Won't Pull

Engine is in Gear?

The engine needs to be set to neutral in order to start. Slip the engine lever to neutral and try starting again.

Engine is Hydrolocked?

This is worst. The whole engine must be disassembled. We were serious about storing it on the proper side of the motor. This happens frequently with 4-stroke outboards.

Engine Won't Tilt Up

Engine must be in forward gear to Tilt Up.

Engine Won't Tilt Down

You must make sure the tilt lever is released. It is possible for this to get hung up. Look over the back of the engine to ensure the tilt arm is working properly

Engine kicks up when in reverse.

Look over the back of the engine to ensure the tilt arm and locking arms are working properly