

9.2 Outboard Motor

Notes on How to Troubleshoot an Outboard Motor

Equipment Needed

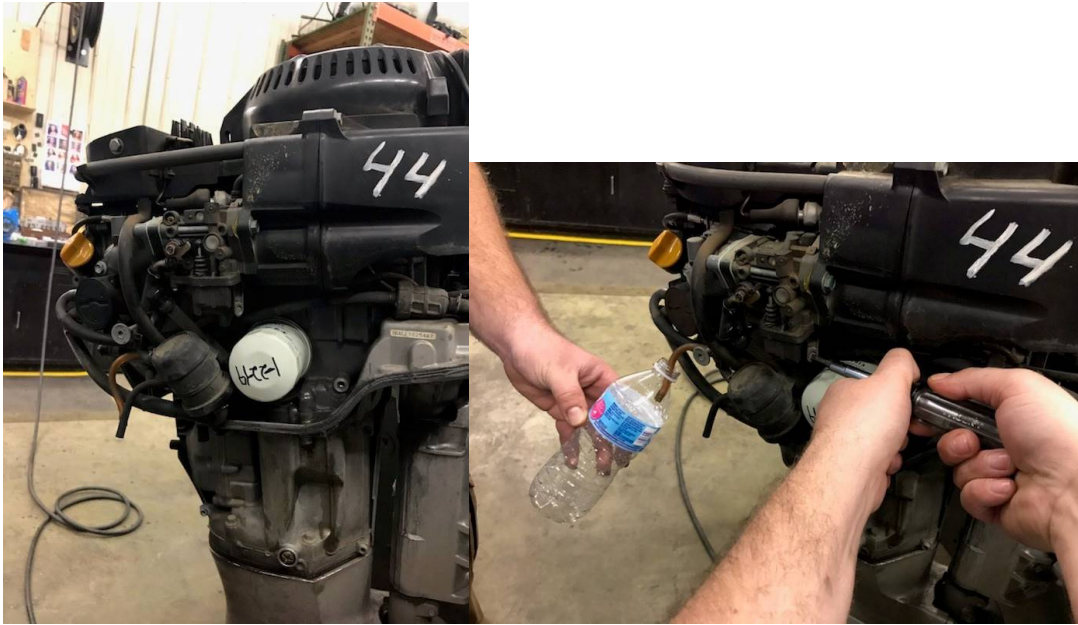
- Starting fluid
- Screwdriver
- Large wrench
- Sparkplug socket and ratchet
- Metric set of Allen wrenches

This guide is how to troubleshoot an outboard motor when it will not start

- 1) Make sure kill switch clip is still attached.
- 2) Check the fuel line on the gas tank and make sure there aren't any cracks/holes.
 - a) If the fuel lines look bad, replace them and retry starting the motor.
- 3) Ensure that the fuel pumping ball is working and moving fuel.
 - a) Check the fuel pumping ball by squeezing it several times. You should feel some resistance in the squeeze and hear the fuel squirting through if the ball works.
 - b) If the fuel ball is not working, replace it and retry starting the motor.
- 4) Check the gas tank for any water in the bottom of the tank or odd color of gas.
 - a) Water is pretty easy to see in the gas tank. It will look like little bubbles forming at the bottom of the tank.
 - b) If there is water at the bottom of the tank or the gas has gone "bad", remove all fuel from the gas tank, clean the tank with starting fluid, and replace the gas.
 - c) Retry starting the motor
- 5) If the motor is still not running try to pump the vapor lock out of the line or try to prime the carburetor to remove any vapor locks.
 - a) Remove the plastic shroud cowling (cover) from the outboard motor.
 - b) On 4 stroke engines you will also have to remove the air filter.
 - c) Put a few drops of gasoline or a short burst of starting fluid directly into the carburetor.
 - d) Try to start the motor.
 - e) Repeat this process several times while being careful not to add too much gas or starting fluid to the carburetor thus flooding the engine.
 - f) Wait a few minutes before repeating this process if you flood the engine.



- 6) At this point you may want to check the fuel line in the motor to make sure that it is getting gas.
 - a) locate the fuel line just before it goes into the carburetor (bottom left side of the motor)
 - b) Remove the fuel line from the carburetor.
 - c) If there is no gas in the line, you have a vapor lock.
 - d) Pull on the starting cord until gas moves through the line



- e) Reconnect the fuel line to the carburetor.
 - f) Check to see if motor starts.
- 7) If the motor will still not start you may want to check the carburetor for water
- a) Take the engine cowling off.
 - b) Take side plate off.
 - c) Locate carburetor drain screw.
 - d) Turn counter clockwise while draining fuel into container.
 - e) Check for water.
 - f) Tighten screw back.
 - g) If water is in the bowl, remove the fuel and clean the bowl with starting fluid.
 - h) Replace the bowl and check to see if motor starts.
- 8) If the motor is still not working there may be a problem with the sparkplugs. You will need to remove the sparkplugs to check them.
- a) Remove the cowling from the motor.
 - b) Disconnect the boot (sparkplug wire) from the sparkplug.
 - c) You may have to take side plate off to reach the bottom sparkplug.



- d) Use the sparkplug socket and ratchet to remove the sparkplugs.
- e) Inspect the sparkplugs for bad spacing and/or fouling.
- f) If sparkplugs are bad replace them.
- g) Check for spark (conductivity) by placing the bottom the sparkplug against bare metal on the motor with the sparkplug wire connected to the sparkplug. Pull the starting cord. If no spark is produced the coil in the motor is most likely bad and there is nothing left to do.
- h) Check to see if motor will restart.