

# STARTING & TROUBLE-SHOOTING GUIDE FOR MINI ATVS

## How to start the mini-atv for the first time

- 1) Hook up battery
- 2) Drain and replace engine oil. Mini ATV use regular oil 10W30
- 3) Do **not** use remote control for starting the first time
- 4) Put gas in the gas tank. Use high 93 octane gasoline
- 5) Turn key to ON. To start the unit for the first time, you must use the key to start it.
  
- 6) Fully choke the unit. We have two different models of chokes. One has the choke on the left handle bar (horizontal movement). The other has a vertical movement choke on the engine head. This engine head is on the engine and is up under the plastic body of the ATV. To start the unit, it has to be choked (left handle bar choke- slider should be all the way to the left (fully choked), other type=Engine head choke- slider should be all the way up (fully choked)
  
- 7) push red button on left handle grip. At the same time pull back on the left handle grip. You must PUSH that red button though and the red button has to be in the center position when you push it. IF you do not PUSH it in the center position, it will not start.
  
- 8a) Give it throttle-**first time starting** only  
A) First time start- Push the Throttle in all the way twice and release. This fills the gas lines with gas. If you pump it too much then you will flood the engine and you will not be able to start it. (if you flood it, you will have to let the unit sit for 20 minutes before trying to restart it again)
  
- 8b) Give it throttle- Starting **AFTER first time** (not the first start)- **ONLY** give it gas sparingly by barely pushing in the throttle on the right handle. Only push the throttle lever about 5% of the way in. If you push it too much you will flood the engine and the mini ATV will not start. Flooding the engine is one of the biggest problems causing the mini-atvs to not start. Do not push the lever in and out which is like pumping the gas pedal in a car, again you will flood the engine.
  
- 9) The mini ATV engine should start when you give it throttle.
  
- 10) After starting, let it idle for 5-10 minutes.
  
- 11) Adjust the choke: When adjusting the mini ATV choke, it is helpful to lift the back end of the ATV up and put a support under it so that the wheels can turn freely without the ATV moving. Adjust the choke to maximize the engine speed by adjusting the choke lever downward (on engine head) and to the right on models with choke on left handle bar. Move the choke back and forth to find the maximum engine speed. ( NOTE: ATVS our set at sea level. If you live in locations with high altitude you will need to do this.)
  
- 11B) You may need to adjust idle screws on the Carb as well. If you are not comfortable doing this we strongly recommend a trained or knowledgeable person do this. It is possible to damage your new ATV by doing this. You will want it to idle at 1000-1500 RPMS. Slowly depress the throttle all the way to full speed. The speed is set when there is a slight hesitation then the motor revs to high rpms. (See Carb Adjustments at bottom of page.)
  
- 12) After adjusting the choke, you can then remove the support under the back end. Now you are ready

to ride the mini ATV.

13) Adjust maximum riding speed (Throttle Screw) - When riding the atv, adjust the maximum speed control with the black long screw that sticks out of the right handle grip. When you loosen the screw, it increases the maximum speed, when you screw it in, it reduces the maximum speed. After adjusting the maximum speed to the desired setting, tighten the nut around the bolt tightly so that the bolt does not fall out. Also if the bolt is free to vibrate, it will change your maximum speed setting.

### **How to start the mini-atv the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and etc time**

- 1) It is now ok to try to start it either with the remote control or the key. To start it with the remote control, you may have to push the start button twice.
- 2) to start it with the remote control, Three things need to happen: key must be in the ignition, engine must be HOT (atv should have been running within the past 30 minutes), and the gas lines must be full of gas (you cannot remote start the atv the first time that you start it). **THE ENGINE MUST BE HOT.**
- 3) when starting the mini atv the 2<sup>nd</sup> time with the key, make sure that you give it only a little bit of gas by only pushing the throttle 5% of the way in.

### **Shutting the mini atv off if you started it with the key**

- 1) turn the key to the OFF position
- 2) Remove the fuse from under the seat. When you remove the fuse, it ensures that the remote control sensor on the mini ATV does not drain the battery between uses. We have found out that if you do not use the mini-atv for one week, often your battery will be drained and you will have to jump start it or charge it with a 4mAmp trickle charger from your local auto part store. To remove the fuse, remove the seat (the lever to remove the seat is under the seat). You will then see the fuse next to the battery. The fuse is in-line on the wires going to the battery. Remove the fuse to stop the battery from being drained when not being used. (Online information on Yamaha 3000 with remote start = The remote sensor is always ON on the machine so it will slowly discharge your battery. The only way to stop it from discharging the battery is to unhook your battery, or the battery will go dead. This happens will all remote starts.) (Artic Cat Snowmobiles - recommends that you unplug the remote start box if not using for a week or more. This is the same for all remote start snowmobiles)

### **Shutting off , if you started it with the remote control**

- 1) push the off button on the remote control. If you started the unit with the remote control and you turn the atv off with the key, it will not shut off. So if you started the unit with the remote control, then you need to stop it with the remote control.

## **Trouble-shooting:**

**1) Problem – Will not start with key.** If it is getting spark and fuel then it should start. Now we need to find out why it is not getting either spark or fuel.

**A) Problem – Will not start, engine will not turn over at all-no noise when starting:** when you try to start it with the key, there is no noise at all. The engine will not even try to start. You get nothing when you turn the key.

- 1) make sure the fuse is installed under the seat?
- 2) make sure the battery is connected.
- 3) make sure you are pushing the red button (20% of problems with starting) in on the left handle grip at the same time that you are pulling back on the left handle lever while trying to start it.

4) Check left handle grip to make sure that there are no loose wires (show picture) going into the left handle grip. Loose wires here will not allow you to start the mini atv.

5) Maybe rear kill switch is bad or the plastic cap cover is not pushing the sensor in. Unplug the kill switch in the back and see if the unit will start (kill switch stops the electricity from going to the spark plug).

6) Dead battery may be your problem. Take your battery to your local AutoZone. They will test and recharge it for you. IF you leave your mini ATV parked and unused for over 3-4 days, then you could have a dead battery. You must always disconnect the fuse after turning off your atv ignition switch to prevent dead battery problems. To charge the battery, it is best to only use a 2-5mAmp trickle charger. The battery is 12 volts on the mini atv.

7) We have found a few units that the wiring harness wire is not plugged into the coil. Make sure this wire is connected. This problem is very rare though.

8) Replace the spark plug with a better one such as an Champion 808, 889 or Autolite 9194 available at your local auto part store. Many customers say that this better spark plug makes a big difference much of the time. Sometimes if you flood the engine with too much gas, you will foul the spark plug. Some dealers replace all 4-stroke engine spark plugs with the two brands above and they say it saves them a lot of problems later on. It is a good idea that you do this also, even if you are not experiencing any starting problems.

9) change CDI

10) change Coil

11) change control box

12) change stator

13) change wiring harness (big group of wires connecting everything)

12) Are you getting spark? Pull the spark plug wire off the spark plug. Hold the wire about ¼ inch away from the spark plug. When you try to start it now, do you get a spark between the spark plug and the wire? If not, your problem is no spark.

**NOTE: Checking to see if you have spark should be the first thing you do if steps 1-7 do not solve the problem. If you are not getting spark check/change plug, if that is not it then check to see if there is power coming from the coil. If there is not, keep tracing back until you find the source of the problem, which you have probably figured out is electrical.**

## **B) Problem – Will not start with the key but the engine WILL turn over and over but it will not Start**

A) check to see if there is gas in the gas tank?

B) Is the gas line kinked - not allowing gas to the carburetor (show picture). Make sure the gas line going between the carburetor and gas tank is not bent at a sharp angle, thus not allowing gas to flow freely to the carburetor.

C) Is your unit flooded with gasoline. Did you give it too much gasoline by pumping the throttle. If so, you will need to wait 20 minutes before restarting.

C) 3.5) For handle bar choke units only : On units with the choke on the handle bar there is a petcock, which is a gas shutoff valve on the bottom of the carburetor. Make sure this Petcock is in the position of straight up and down which is open and allows the gas to get into the carburetor and engine.. Some units we receive with the Petcock in a position of off which is horizontal.

C) Use a can of STARTER FLUID (available everywhere) to squirt some gas into the air filter. Of course the air filter is the black or silver piece that allows air into the carburetor. The air filter is mounted on the side of the carburetor. Other people remove the spark plug and squirt starter fluid into the spark plug hole. Use only one spray= If you spray too much you can damage the rings in the piston = no compression

and you must change the rings in the piston= BIG PROBLEM.

D) **MOST COMMON PROBLEM**= Discharged battery may be your problem. Take your battery to your local AutoZone. They will test and recharge it for you. IF you leave your mini ATV parked and unused for over 3-4 days, then you could have a dead battery. You must always disconnect the fuse after turning off your ATV ignition switch to prevent dead battery problems. To charge the battery, it is best to only use a 2-5mAmp trickle charger. The battery is 12 volts on the mini ATV.

E) Loosen the bottom screw on the bottom of the carburetor=TOO MUCH GAS IN CARB. This allows excess gas or excess air pressure to escape. Then tighten this screw back up. This can often be the problem on 20% of the mini atvs that will not start.

F) Replace the spark plug with a better one such as a Champion 808 or Autolite 9194 available at your local auto part store. Many customers say that this better spark plug makes a big difference much of the time. Sometimes if you flood the engine with too much gas, you will foul the spark plug. Some dealers replace all 4-stroke engine spark plugs with one of the two brands above and they say it saves them a lot of problems later on. It is a good idea do this, even if you are not experiencing any starting problems.

G) Are you getting spark? Pull the spark plug wire off the spark plug. Hold the wire about ¼ inch away from the spark plug. When you try to start it now, do you get a spark between the spark plug and the wire? If not, your problem is no spark.

H) use clean 93 octane gas for best results

I) Loosen the gas tank cap to release vacuum in gas tank. This will ensure that gas can go to the engine

J) Change carburetor. This is only the problem maybe 1% of the time.

### **3) PROBLEM - Runs 1 or 2 minutes or only a few feet and stops**

A) if you do not adjust the choke after starting, then the engine will die because it is not getting enough air into the carburetor. Dies after one minute of running. ATV is moving very very slow.

B) plastic cap on rear kill switch is loose and not pushing on switch. When you remove the plastic cap over the kill switch on the back of the mini atv it stops the mini atv engine immediately. The cap is on there to push on the engine kill switch in the back, if it does not push against the switch hard enough, the mini atv engine stops. If you unplug the switch wire and your mini atv no longer has a problem, then this cap being loose is the cause of why your mini atvs engine is stopping.

C) fuel line is pinched. Inspect it carefully to make sure there are no kinks in it.

D) loosen gas cap on gas tank to allow air to flow in

E) if the unit dies after just going just a few feet, maybe the maximum speed adjustment screw on the right handlebar is screwed in too tightly. You must loosen this screw. This screw is the long black screw on the right handle bar.

F) For mechanics only, you can adjust the acceleration screw on the carburetor. See #9 below.

G) Change coil or Magneto

### **4) PROBLEM – Noisy, Chain jumping, sparks flying from rear axle, metal popping out of bearings**

A) you need to replace the rear axle bearings- Common problem.

### **5) Problem – rear axle looks bent**

A) chain is too tight.

### **6) PROBLEM - rear brake caliper comes off because bolts vibrate out**

A) put bolts back in, but first put LOCK TIGHT on the threads so that the bolts will not vibrate out.

### **7) PROBLEM – Gas is spilling onto the ground from the carburetor**

A) Gas spills onto the ground from the carburetor and will not stop. This is because the FLOAT inside the carburetor is stuck in the down position. The float inside the carburetor works to shut off the flow of gas to the carburetor. As the gas flows into the bottom bowl of the carburetor, the float inside rises. When it gets up to a certain position, the gas flow is shut off (same as the float in your toilet). If the float inside is stuck and does not rise, then the gas continues to flow and flow into the carburetor, then it overflows onto to floor. To fix this problem, remove the carburetor first, then remove the bottom bowl off the carburetor which is secured with the two screws. Then finger snap the float inside the carburetor to free it up and stop it from sticking. Reassemble the carburetor and you are ready. Hopefully, this fixes the problem. If not repeat. If this does not work, order a new carburetor.

### **8) Carburetor adjustments – for mechanics only**

A) there are two adjustment screws side by side about half way up the carburetor. The left one is the Idle screw which is set by the factory. Do not touch this one. The right screw is the acceleration screw. You should only turn this screw  $\frac{1}{4}$  turn at the time to adjust the mini atv engine acceleration while the engine is running. If the engine starts and dies, then starts and dies, then you can turn this right screw in a clockwise direction to increase the acceleration.