2-Stroke Troubleshooting Guide

Symptom	Check
Engine Won't Start	#1. Carburetor choke: Choke Lever up if engine is cold, if hot; choke lever down. (NT carbs)
	#2. Possible flooded engine: Try starting with throttle wide open. If no start go to step #3.
	#3. Check spark plug; Replace if black and worn electrode is found. Check spark fire by laying spark plug with wire connected on engine head fins while fast pedaling with rear wheel held up to spin engine over at a fast rate. If spark is now good pedal spin engine over repeatedly to clear a possible wet flooded cylinder. Re-install plug: If no spark, go to step #4. If spark is good and looks strong go to step 8.
No Spark	#4. Check blue and black wire connections coming out of motor and connections to CDI. If good and tight then remove kill wire and see if spark plug now has spark. If spark plug now has spark then look for an unwanted ground in the kill switch circuit. If spark plug still has no spark then go to step # 5.
	#5. Check magneto coil with an ohm meter. Look for approx. 300 to 380 ohms across blue and black wires, .25 to 3.25 ohms across white and black wires. Check for loose screws and or high corrosion. If open or shorted coils are found replace magneto coil. If magneto coil is known good and still no spark then go to step # 6.
	#6. Replace external CDI module. If still no spark replace spark plug and magneto. Then repeat steps 1-6.
Good Spark but Engine will Not Start	#8. Check for fuel restriction. Clean air filter: Remove line at carb. and check for fuel flow. Clean filter on tank valve. Make sure gas is not over rich with too much 2 cycle oil. 16 to 1 ratio with a brand new engine and 25 to 1 with a used engine. If Old gas replace with fresh gas/oil mix . If no start > go to step #9
	#9. Possible Flooded engine: Go to step #2. If No flooded engine is found; try giving a quick squirt of starting fluid at the air cleaner opening. If engine still does not start go to step # 10
	#10. Check throttle cable. Make sure it is moving slide valve up and down in carb. Still no start then go to step. #11.
	#11. Check for air leaks at carburetor intake manifold tube. Check for loose manifold nuts, Check for loose carburetor and or damaged intake gasket. If not already done clean clogged or dirty air cleaner. Make sure engine does not have fuel in bottom of crankcase due to unwanted entry of drip down gas from carb with a stuck float. Check float height and make sure float doesn't have any cracks. Remove engine and turn upside down to drain any wanted gas from crankcase and reinstall. If no start condition prevails go to Step #12
	#12. Check crankcase for possible air leaks. Check left and right oil seals on ends of crankshaft to see if correctly seated in front of bearings. Push the piston down to lowest position and plug exhaust and intake ports so you can use a hand held compression pump in the spark plug hole to see if any air escapes from crankcase. Be careful to not blow out the oil seals with too much pressure. If the crankcase gasket is leaking and needs replacing it's best to have a qualified mechanic replace the gasket. If no air leaks are found and you have a no start engine condition then go to step #13.
	#13. Run a cylinder compression check by removing the spark plug and installing a small engine compression gage. Plug the exhaust and intake ports with a custom made flat plate. Use a hand held electric drill or an air wrench to turn the crankshaft at the magneto nut. Note: If the engine turns over easily with the spark plug installed or a compression gage seated in the plug hole this means you have a blown head gasket, broken rings, or a possible hole in the top of the piston. You will now need to remove the 4 head bolts and head to make further checks. Note: If compression is good and no problem is found then proceed to step #14.
	#14. Replace or rebuild the carburetor and correctly set idle speed adjustment. If still you have a no start engine condition then probably it's best to consult with a qualified engine mechanic as somewhere in the trouble shooting process something has been over looked.
Engine does not reach max RPM	Check for clogged muffler. Clogged exhaust port. Fuel restrictions, Low compression, Poor ignition spark, Too much oil in gas or improper air/fuel mixture in carb. Clean carb. jets and air filter; Check for a possible crankcase leak or leaking oil seal.
Engine has high rpm but no pulling power.	Check clutch gear wheel for worn or greasy clutch pads. Replace worn clutch pads and adjust as required as described in owner's manual.
Engine idle is too fast or too slow	Adjust idle screw air fuel mixture settings. Refer to your owners manual. Adjust cable stroke slide valve adjustment at top of carb if possible, some early made YD CNS carbs do not have this feature.
Engine has high pitched squeal	Check for bent clutch rod. Check clutch adjustment. Refer to your owner's manual.
Clutch will not release	With clutch engaged check for 1/16" slight free play on the left side engine clutch arm to insure correct adjustment. Remove clutch cover on right side of engine and check for possible stuck clutch plate or bent clutch rod.
Engine will not spin over when clutch lever is released while pedaling.	. Clutch cable may be adjusted too tightly. Check for 1/16" free play in clutch arm on left side of engine. When clutch is engaged the clutch arm on the left side of engine should be setting in an approximate parallel line up with the side of the engine. Remove clutch cover and check to see if the clutch plate is stuck open in the disengaged position.
Engine backfires and is hard starting.	Check magneto Rotor for being on backwards. With piston at Top Dead Center the crankshaft key must be at 1 o'clock position. The 2 Rotor dentures need to be in almost parallel position with the 2 Magneto arms.. If not this way then remove the Rotor and turn it over. To learn more see the Great Magneto and Crank Mystery at www.grubeeinc.com