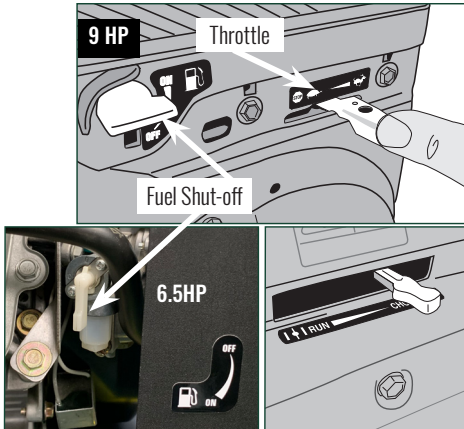




Troubleshooting Vanguard Phase I Pull-Start Engines

If you are experiencing issues with starting your engine please refer to the steps below for some of the most common problems and solutions. For our fastest service during our peak seasons, please send a note to support@woodlandpowerproducts.com and we will be in touch within 1 business day or, you can contact us at our main line 888-531-7253 and at the prompt, please press 2 for technical support.

My Engine Won't Start.



1. Check all the levers are in the correct position.

- First make sure all the levers are in the correct spot.
- Slide the throttle control lever all the way to the right. (Rabbit)
- Turn the fuel shut off control to the "On" position (6.5 HP engines have a red on of switch in front and a fuel shutoff on the side make sure they are both "on".)
- Move the choke lever to the right for "Full Choke."
- If all of that is correct, we must next determine if it is an ignition or fuel delivery problem.

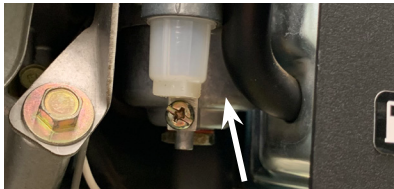
2. Determining whether it is an ignition or fuel delivery issue.

- Remove the spark plug, and pour a couple teaspoons of gas directly into the cylinder, and then replace the plug and cable on top.
- With all the levers in the correct position, attempt to start the engine.
- If the engine fires but does not stay running, then the ignition is fine and it is a fuel delivery problem.
- Most likely the float valve is lodged or the carburetor is dirty.



3. The float valve may be lodged.

- Locate the carburetor behind the air filter and give it a solid tap tap the bottom with the handle of a screwdriver. Or take a couple laps around your property with the engine off.
- Then try to restart the engine.



4. The carburetor may be dirty.

- If it still does not start, remove the airfilter then spray some carburetor cleaner (we recommend using the brand Sea Foam) into the base of the air filter housing so it goes into the carburetor. Then let it sit for a few hours, but preferably overnight.
- Again, try to start the engine.
- If this does not work, you must take it to a Briggs & Stratton dealer for warranty work.



5. Checking for an ignition issue.

- If there is an ignition problem, double check that the fuel lever is in the correct position.
- Make sure the spark plug wire is properly attached to the top of the plug.
- If it still does not start, you will need to take it to a Briggs & Stratton dealer for warranty work.

Are Your Fuel Levers in the Correct Position?

1. Fuel levers correct positioning. (see above)

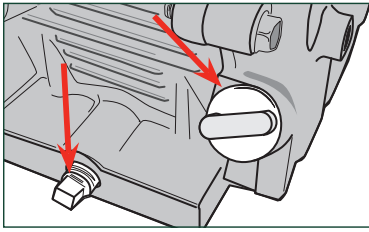
- Make sure all the Red or White fuel shut offs to the "ON." position.
- Move the throttle lever to the right for "Full Throttle."
- Move the Gray choke lever to the right for "Full Choke."

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Your Engine May Be Out of Oil.



1. Prepare.

- Place a shallow pan under the engine, then locate the yellow plastic butterfly caps at the base of the engine.

2. Drain the engine of excess oil.

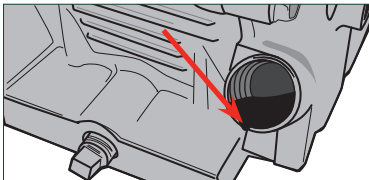
- Now remove one of the drain plugs at the base of the engine by using a 3/8 inch wrench or 7/16 inch socket.
- After the oil has drained, reinstall and tighten the oil drain plug.
- Wipe up any spilled oil with a cloth and remove the pan.

RECOMMENDED OIL CHART

The oil should be marked A.P.I. service "SF," "SG," "SH," "SJ" or higher.

Air Temperature	Type of Oil
Above 32° F	SAE 30 or SAE 10W30 oil
Below 32° F	SAE 5W30 oil

If synthetic oil is preferred 5W-30 is good in all temps.
SAE 10W40 is specifically not recommended.



3. Check you are using the correct oil.

- Using the chart to your left, determine which recommended oil you should be using for your engine.

3. Adding new oil.

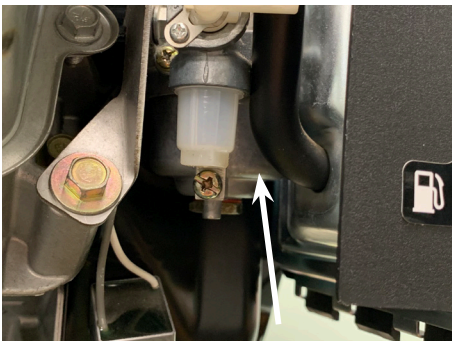
- Place a rag under the butterfly cap opening, and using a small funnel slowly pour oil into the opening.
- When the oil reaches the bottom edge of the butterfly hole it is at the proper level.
- Replace the yellow butterfly cap by hand and tighten.

IMPORTANT: Do not use a wrench or pliers to tighten, you can break the butterfly cap.

My Engine Only Runs on Choke or Starts and then Stops.

1. Engine will not catch, or will start and then stop.

- If this is the case, your float valve may be lodged, or your carburetor needs cleaning. .



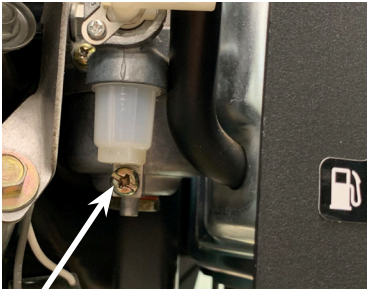
2. Dislodging the float valve.

- Start by locating the carburetor underneath the carburetor cover and give it a solid tap with the handle of a screwdriver.
- Or, you can even try taking a couple laps around your property with the engine off.
- If the float valve was lodged this will dislodge it.

3. Cleaning the carburetor.

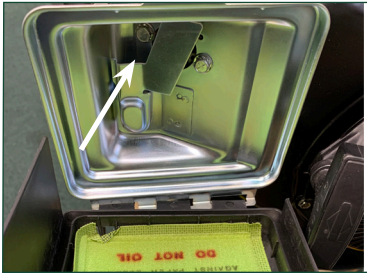
- Reference the instructions on how to clean your carburetor below.

Your Carburetor May Need Cleaning.



1. Preparing the carburetor.

- First, drain the carburetor of gas by locating fuel drain underneath the air filter.
- You will see a Phillips head screw sticking out to the side of the carburetor.
- Loosen the screw and gas will start pouring out of the carburetor
- Once carburetor is empty, re-tighten the screw.



2. Cleaning the carburetor.

- Remove the air filter exposing base, so you have clear access to the carburetor.
- Spray about a shot glass worth of carburetor cleaner, (we recommend using the brand Sea Foam) directly into the base of the air filter so it goes into the carburetor.
- The longer the Sea Foam stays there, the more it will clean it. It will start eating away at the gunk in the carburetor.
- Let it sit overnight.



3. Checking the engine.

- The next day, with the air filter still off, start the engine and let it burn out the Sea Foam in the carburetor.
- As it runs it will continue to clean itself.
- Once it burns up the Sea Foam in the carburetor, the engine may sputter and die.
- Spray carburetor cleaner directly into base of air filter to resuscitate it.
- Repeat the last step until the engine runs on it's own.

Is Your Recoil Rope Stuck or Hard to Pull?



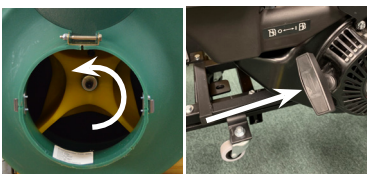
1. Did the engine stop while in use?

- Sometimes, while you are mowing, the Cyclone Rake may run out of gas. Due to the noise you may not notice this, meanwhile your mower is throwing debris into the blower housing.
- Remove the exit chute and open the safety cover.
- Clear out any debris and try restarting the engine.

2. Check to see if there is any oil.

- If there is no oil, check the drain plugs and fill plugs for any leaks.
- Now fill the engine with oil, and remove the spark plug wire.
- Now try to turn the impeller clockwise by hand to circulate the new oil.
- If the impeller now turns by hand, reconnect spark plug wire and try to start your engine again.

IMPORTANT: Always make sure to remove the spark plug wire before reaching into blower housing to avoid injury.



3. The recoil rope may have gotten tangled last time it retracted.

- Remove the spark plug wire and see if you can turn the impeller by hand.
- While turning the impeller counter-clockwise, slowly pull the rope at the same time and this should untangle it.
- If none of these scenarios work, it will need to be taken to a local Briggs & Stratton dealer for warranty work.

Thanks for being a Cyclone Rake customer and we hope this troubleshooting guide has helped resolve your issue!