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## **It won't start,,,,,,What now??**

Sometimes, it's just a bad day. You get to the track, everything is ready to go, roll up to the grid, pull the rope, and it just won't start. What do you do? Where do you look first? These are just a few of the questions we will answer in this month's installment of Chasen Racen Illustrated.

An engine needs three things in order to start, fire, fuel, and compression. Let's address the fire first. The ignition system on a Briggs is pretty simple and has only three components. The coil, the flywheel, and the spark plug are all we have. Sometimes, a flywheel goes dead, but that is rare, so we will assume the flywheel is good. The coil is for the most part pretty bulletproof as well. I have personally blamed a coil a number of times, only to find the problem elsewhere. The spark plug is more often than not the culprit of an ignition system problem. Repeated choking of the engine, or blowing in the fuel tank, can sometimes leave the plug wet with fuel and unable to fire. If the engine will not start, check the plug first, and replace. Be cautious not to go overboard choking the engine to avoid repeating the issue.

Let's look at the fuel side. This one gets a little more in-depth here, however, we will get you through it easily. If you blow in the tank, and don't feel the pressure build, there are a few possibilities. If the tank was empty of fuel, the bowl in the tank may simply be empty as well, and the pump has not had the opportunity to refill. Just pull a few more times and see if it fills the bowl. If that's not it, sometimes the diaphragm gasket is the root of the problem. Once it hardens, it will not pump the fuel to the bowl, and well, without the fuel, no dice. Another item that can create the same symptoms is the long pick up tube. It is simply pressed into the base of the carburetor, and sometimes they drop into the tank. Shine a light into the tank, and you will know immediately if this is the problem. To replace the tube, remove the tank, add a drop of red loctite to the top of the tube, and twist firmly into the carb with a pair of pliers. Be careful not to crimp the tube. If the tube is in place and you have this problem, inspect the tube for splits or cracks. On occasion the brass tube splits, and this will bleed off the pump pressure and create the same distress.

If blowing into the tank builds pressure, and the engine starts briefly, but conks out, we may have an issue with the other pick up tube. The short tube simply brings the fuel from the bowl into the carb. Blowing into the tank can start the engine even if the tube has fallen out, but the tank pressure isn't there to sustain running. To check for this, the tank must be removed. If this is the issue, re-install the short tube, using a 3/8 nutdriver.

Gently thread the tube back into the carb. Be very careful, as this is plastic, and it can bend or even break easily.

Just a couple more things regarding the carburetor; dirt and other contaminants can create problems, however, they are more of a performance issue, not a starting one unless severe. Remove the mixture screw assembly and the jet and inspect to make sure all the holes and passages are clear. Examine the pick up tubes as well to insure they are free of obstructions as well. A clean carburetor is a happy carburetor. Keep it and the tank clean and it will make your life much easier.

Compression. Other than a major failure, which is pretty easy to spot, not much else to discuss here. If the engine freewheels when you pull it over, a valve is stuck to the guide. Remove the plug; shine a light through the plug hole to inspect the valves. Pull the engine over slowly by hand and check to see if both valves move up and down. If one doesn't move, spray lubricant around the base of the valve in question, then take a small rounded bar, (I personally use my header ball driver) and gently bump it with my hand to free the valve. Make sure to use something free of sharp edges, as an edge will nick the valve and possibly the seat. If this is your issue, make sure you contact the builder, as further attention is usually required to keep from reoccurring.

One more item worth mentioning as it sometimes gets the racer is the starter clutch. Sometimes, dirt and grit finds its way into the ratchet and hangs up the ball bearings that drive the one-way clutch. This results in a VERY free wheeling situation. Simply bang the recoil a couple times with it on the clutch, and it will allow the bearings to fall back into place.

Hopefully this will help make one of those days a bit shorter and get you back into the race much faster. See you next month.