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## **Carburetor Troubleshooting**

The first thing that must be determined is whether the problems you are having are from the carburetor itself or something effecting the operation of the carburetor. We often see customers removing and rebuilding carburetors and not improving their issue. The mechanics at G&R Imports are hopeful these tips will help you diagnose and fix your issues.

Ignition components, fuel, emission and air cleaner assemblies have a big effect on carburetors we will start with these:

### **1. Ignition:**

Ignition parts will include coil, distributor, spark plugs, and wires.

Please check distributor timing (printed on ignition label under the seat). Look at the distributor cap and inspect for corrosion build up. Ensure the spark plug wires are in good condition and spark plugs are clean and properly gapped (gap information is printed on the emission label under the seat). Coil voltage should be at least 28000 volts when firing.

### **2. Fuel:**

Make sure the fuel system is clean and there are no restrictions in the hoses running from or back to the tank. Check the fuel filter for free flow and check fuel quality. Old fuel will cause larger issues with the carburetor and can build a residue on the valves. Aftermarket fuel pumps seldom have proper fuel pressure and can push fuel past the needle valve in the carburetor causing over fueling and flooding.

### **3. Emissions:**

We constantly see issues with the charcoal canister (usually located at the back of the cab mounted to the frame rail). They become clogged and will not allow the fuel tank and carburetor to vent. Make sure it is free flowing and fumes can exit through the charcoal canister.

### **4. Air Cleaner:**

The air cleaner assembly must have a clean air filter to allow clean air into carburetor. Every air cleaner box also has a heat rise system that collects hot air off the exhaust system and feeds it into the air cleaner box. We have seen failure in the small flapper that changes air intake from fresh air to this heated air. The carburetor needs fresh cool air after the choke has moved off. Please always check these before making any adjustments to the carburetor.

### **5. Carburetor inspection:**

Look at the linkage and exterior moving parts of the carburetor. Search for cracked and loose vacuum hoses. Before you remove anything on your carburetor, we recommend taking pictures of the vacuum hoses to make reassembly much easier. If you see worn linkage it will need to be tightened or replaced.

6. **Checking choke operation:**

Before starting your truck, the choke flap will be completely closed. Check that you can open the flap with your finger and that it closes easily (it is spring loaded). Spray with carburetor cleaner if it does not operate easily.

The choke and fast idle work off of water temperature flowing through the choke thermostatic piece on the side of the carburetor (#3 in the pictures). It will open the choke and lower the idle as the water warms up. You will need to touch the two hoses attached to the thermostat choke assembly and see if they have flow through them. They also should be warm. If they do not, you will need to find the obstruction. Suzuki's use a limiter mounted on the engine mount below the carburetor. These often become clogged. Low coolant level will also cause no flow through the choke assembly. Check for coolant leaks if this is the case.

Once engine starts there is a vacuum diaphragm on the left front of the carburetor that pulls the choke flapper open 1/8<sup>th</sup>"

Please see pictures of the carburetors below. The adjustable and important parts are numbered:

- 1 & 2 - These are the timing marks for the choke assembly
- 3 - This is the coolant ports to operate the choke assembly
- 4 - This is vacuum actuator to open choke flapper once started
- 5 - This is screw adjuster for idle when cold
- 6 - This is screw adjuster for idle when under load from AC or heavy alternator draw
- 7 - This raises idle when engine is under a load from AC or heavy electrical draw
- 8 - Idle adjuster screw when engine is warm
- 9 - Fuel mix screw for idle
- 10 - Electric solenoid for fuel
- 11 - Fast idle pull off, this lowers idle quickly when accelerator pedal is released
- 12 - Powered float bowl vent valve









