

## 600cc Carburetor Sheet

Almost all my experience with the 600cc carburetors has been with the Keihin FCR flat slide style on alcohol. So the information on this page will mainly apply to that style.

The 33mm are the normal setup for the F2 and F3 engines. They are generally setup according to the specifications in the chart below.

35mm FCR carburetors can also be used on the F2, F3. In my opinion they are a better choice. They don't take off as well on starts but they are hands down better once you are up to speed. They are also the choice when running an R6 on alcohol.

For the Suzuki GSXR my choice is the 37mm FCR's.

Here is a chart with the normal jetting required to use these carburetors on alcohol. The F2, F3 generally run a .101 main jet while the GSXR and R6 generally will use a .114 main jet.

	<b>33mm FCR</b>	<b>35mm FCR</b>	<b>37mm FCR</b>
Main Jet	.099 to .110	.099 to .110	.099 to .116
Main Jet Nozzle	.114 to .116	.114 to .115	.114 to .115
Pilot Jet	#80 to #95	#80 to #95	#80 to #95
Needle Jet	90-GKP*	90-FBK (modified)*	90-FBK (modified)*
Air Screw	1 Turn	1 Turn	1 Turn
Accelerator Pump	Connected	Disconnected	Disconnected
Low air screw (jet)	Removed	Removed	Removed
Valve Seat	2.2	2.4	2.6
Fuel Pressure	5 to 6 psi	5 psi	3-1/4 to 4 psi

\* The modified FBK needle is part number 600-10016. The needle are generally set in the middle slot clip position, however it is common to adjust these up or down.

## Maintenance

The most important thing about using carburetors is maintaining and cleaning them. They should be cleaned within two days of using them. Clean them with gasoline, mineral spirits, or a mild parts cleaner. In my experience don't use WD40, brake clean, or carburetor cleaner unless you remove the float valve first.

To clean, it is best to remove the bowls from the body. Use a brush to wash out bowls, floats, and entire body of carburetors. Get cleaner to go into all the jet orifices. The use compressed air to blow them off. Be careful not to blow intense air onto the floats or you may bend them.

When reattaching the bowls do not tighten the screws too much. Only use as much pressure as you can get on them by holding the hex wrench the long ways.

The float valve is the most sensitive part about cleaning; it can become deformed from using the wrong solvent. It also can become deformed from not cleaning. When the float valve becomes deformed it will not seat properly on the needle seat. When this happens the carburetor will push fuel out of the overflow because the float valve cannot seal off the pressure from the pump.

It is normal for the carburetors to push some fuel out the overflow lines when first starting the engine. If this happens, turn the pump off, start the engine, let run for about 45 seconds, then turn pump on. If they still leak, you will need to replace the float valves (part# 600-1006).

The accelerator pump circuit is also very important to keep clean (33mm only). You must blow compressed air or some aerosol cleaner through the tiny air passage that goes from the bowl gasket surface up through the accelerator pump nozzle in the bore. Hold the throttle valves up as you do this to verify that cleaner or air is passing through the orifice freely.

## Adjusting

Adjusting the FCR is sometimes more of an art than it is a science. But I will try to give you some pointers.

Pilot jet and air screw: only controls how the engine idles. Changing these will rarely affect performance out on the track. If engine idles ruff with a blurble, gets worse as the engine warms up then you need a smaller pilot jet. If the engine starts hard, and idles better when it gets warm, then you need a larger pilot jet. It may be necessary to go to a larger pilot jet in the cold weather to get the engine to start easier.

Needle Jet and main jet nozzle: Controls part throttle carburetion. Mainly changes starts and off throttle during cornering. Blurbleing and missing coming on the throttle and on the starts is an indication of being too rich on this circuit. Lower needle (move clip up) or go to a smaller main jet nozzle will make it leaner. The main indication of being too lean on this circuit is a hot engine.

Main jet: The main jet controls how much fuel gets to the engine at full throttle. If the engine is too rich it will run cool and may blow flames out the pipe at the end of the straight, and may develop an inconsistent or consistent miss. Too lean of a main jet will make the engine run hot and occasionally melt pistons.