

Filter Pods... you make the call

(An article pertaining to the use of pod filters on the V-Star 1100)

By Steve Schneider

Remove the air-box? Install pod filters directly to the carburetors? Clearly, the pod filter idea is not a new idea. I won't discuss the history here either. But, when it comes to the 1100 V-Star, there have been many variations. This is due to a wide selection of different filters that will fit under the tank and on the rubber carburetor elbows. With each choice, the carburetor must be jetted differently to compensate for the engines increased ability to draw air. This isn't speculation on my part, it is fact. With these statements in mind, I am led to an important question. Of the four different filters that people have been using to perform this "air kit", which one is the least restrictive? Everyone knows that if the engine can breathe, the engine can make horsepower. So here is what I did.

The four pod filters that have been used on the V-Star 1100, to my knowledge, are the UNI PK-92, the UNI UP-4229, the K&N RU-0981 and the K&N RU-0600. These filters were tested individually for pressure drop and flow capacity at a fixed pressure drop. With this data, it was hoped that a perspective could be obtained regarding how the filters related to each other... performance-wise.

Which filter was the most restrictive? Which filter was the least restrictive? These are the kinds of questions I wanted answers to. The data is as follows...

	UNI PK-92	UNI UP-4229	K&N RU-0981	K&N RU-0600
CFM @ 1" WC	52.06*	75.50*	73.62	97.35
CFM @ 1.5" WC	63.77	92.47	92.1	119.22*
ΔP @ 75 CFM ("WC)	2.00	1.04	1.05	0.62

* calculated values

As shown in the table above... the most restrictive choice is the PK-92 and the least restrictive choice is the RU-0600.

Is this data even remotely accurate? Let's talk about that. The filters were attached to an airflow chamber. The chamber in question was built to the ANSI/AMCA 210-99 standard, Laboratory Methods of Testing Fans for Aerodynamic Performance Rating. What this means is that the data obtained during this test is certifiable. I won't get into the specifics of the chamber construction, but I will mention that the nozzles used in this chamber have been built to the specifications outlined in the standard. Basically, you are taking my word for it at this point. This data is accurate to within about 2%.

What does all this mean? You decide...

I may work more on this later, but for now, just ponder the data.