STAGE ONE: GS1115 SUZUKI

Building a Bike With Usable Horsepower

BY JEFF PECK

Now that all of the work is done, we're going to tell you what we did to make the GS1000 into a very hard running 1115cc street racer.

The first thing we have to do is back track to the very beginning, it was the point at which the other Suzuki project bike we built, a 998cc version of the GS750, blew sky high. This destruction was the result of a stupid rider who didn't know the right moment for a little discretion with the throttle.

The destruction of the modified 750 motor was total, there was very little we could salvage and the only other thing to do was wait for a new victim to wander in the back door of Challenge Publications.

Oddly enough the first thing to come along was a nice new GS1000 Suzuki. Since we'd had so much success with the GS750, it only stood to reason the GS1000 would react even better to this kind of modification.

Naturally the results of the big bore kit on the 750 were on our collective minds and so we contacted Dan Ford at Competition Engineering once again, to see if he was up to the task of making the GS1000 produce some HPs. The very first thing we made Dan promise to do was not to recommend particular riders to use as test racers. It was a rider he had picked out who had blown the 998 up. With this promise written in blood, we embarked on this latest project.

Something Dan wanted to try to do with the GS1000 he hadn't done with the 750, was to make the kit a bore in kit. This means the result of this project would be something a GS1000 owner could buy, and then just have the cylinders bored to fit the new pistons. We wanted maximum size while still retaining a margin of safety in the liner thickness area.

After the smoke had cleared from around the calculator, Dan had figured an 1115cc motor would be just right. With the right dome construction on the pistons, compression should be right up at 11.0:1. Which is just about the maximum if you still want to use pump gas from your local fuel stop.

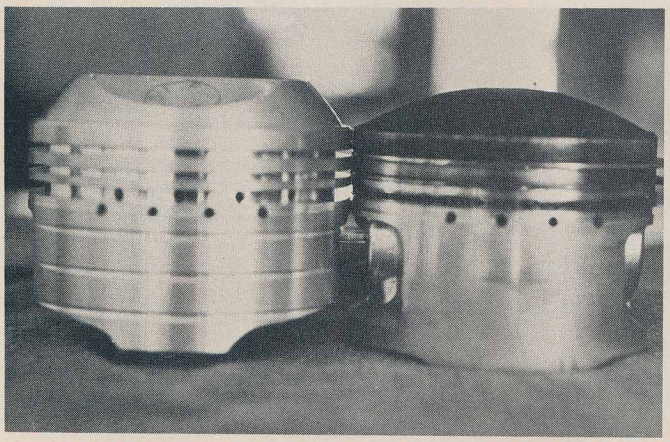
To make everything open and close properly, Dan uses Norris cams. Every time we've used Norris cams in the past we've always had very good luck and this time was no different.

Other than the boring out of the cylinders and the installation of the cams and pistons, everything else in the motor was stock Suzuki parts. Dan opted not to go with modified buckets on the tappets, because he felt the Suzuki ones would work very well. So far we've been shifting at 11,000 rpm and all of the shims are still in the right places. This includes a couple of missed shifts.

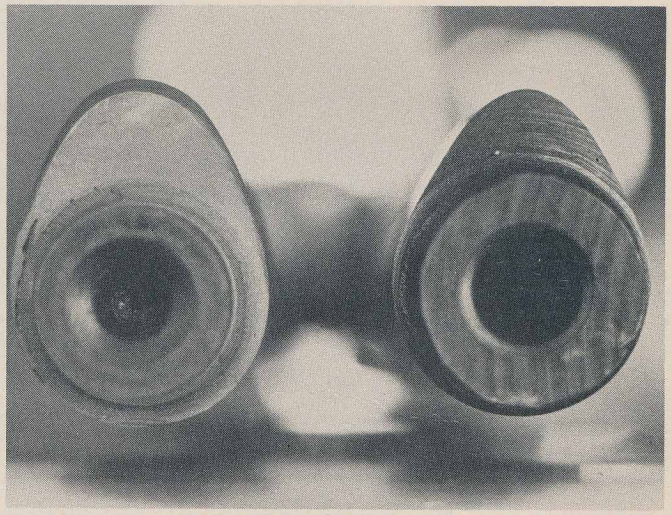
On the outside of the motor we used the same smooth bore Mikuni carbs we've had on the bike since we got it. The exhaust system is a Winning Performance model, which works very well with this big motor. The core size on the muffler is about an inch and a quarter, so the bike is very quiet when you're cruising around town. However, when you nail it the pipe lets loose with a loud blast of quickly exiting exhaust gasses.

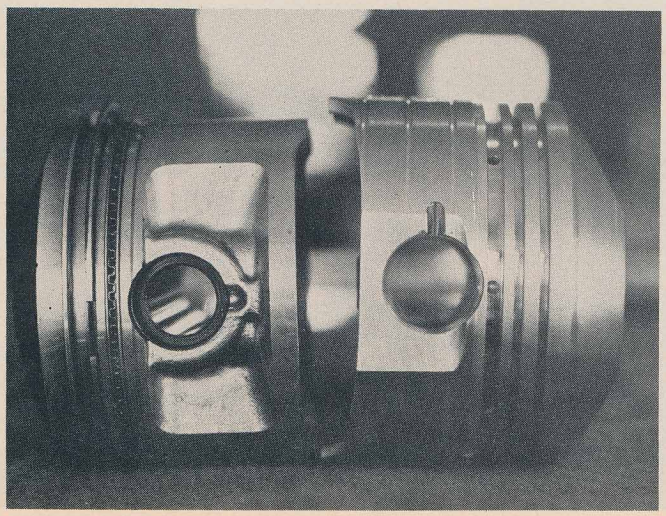
Also the small core on the Winning pipe hides any indication of lumpy

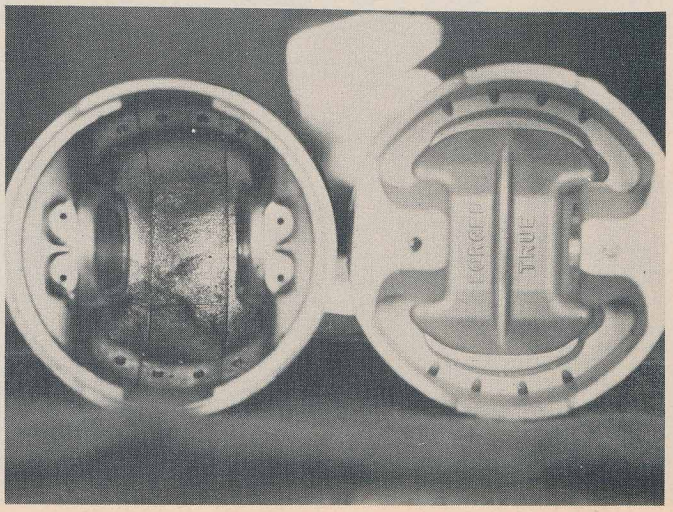
Such a nice mellow looking machine, who would think that all of that horsepower is lurking around inside.



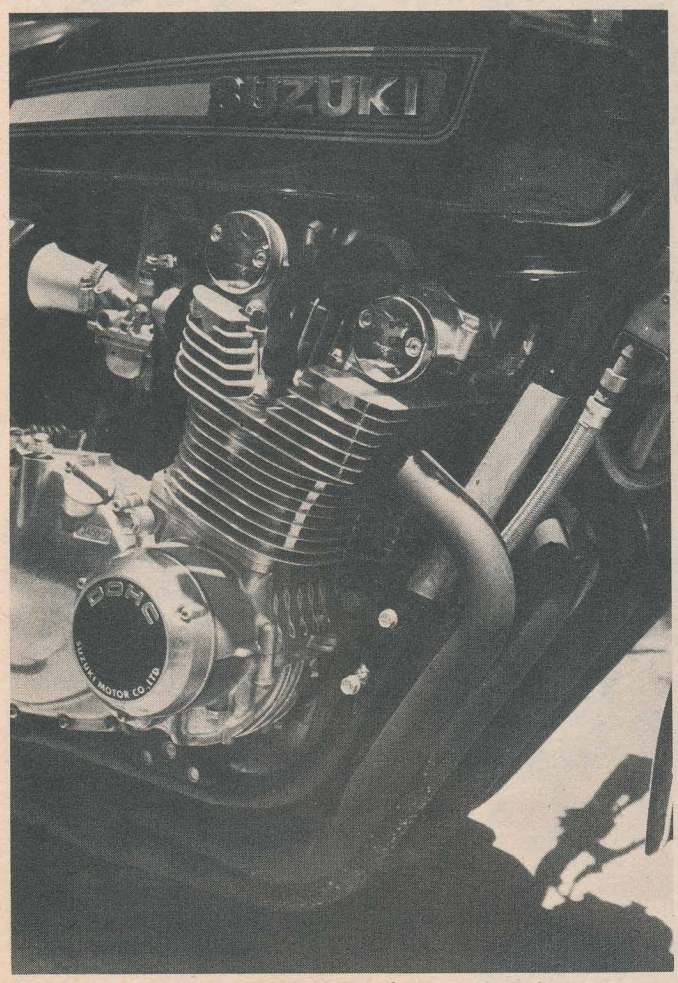
Special 1115cc Competition Engineering pistons and Norris cams make this bike perform head and shoulders above the competition.



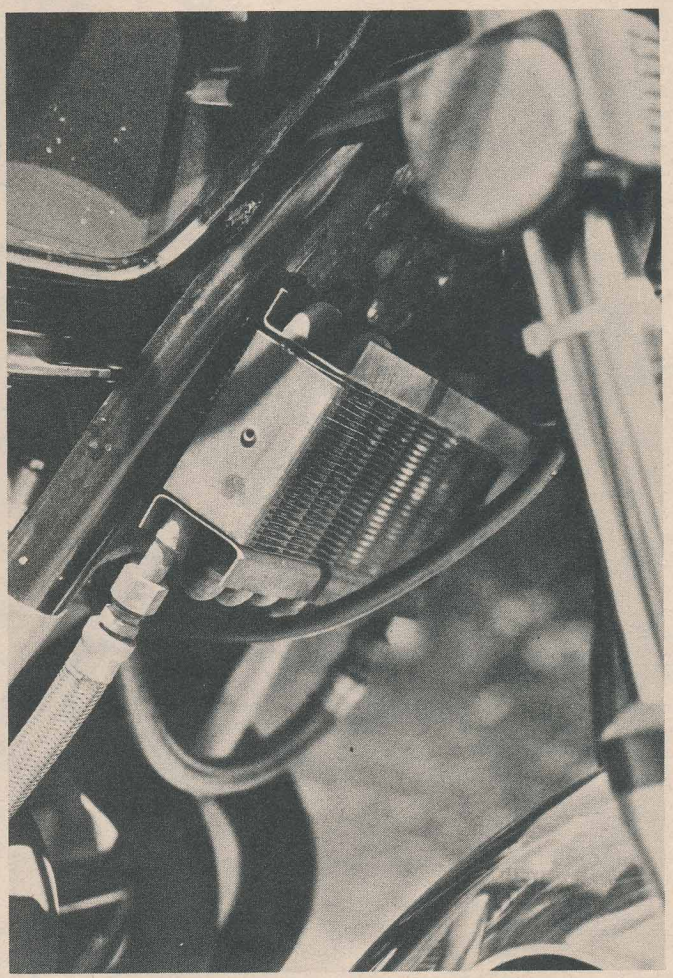




PHOTOS BY DAN FORD AND JEFF PECK



Winning Performance pipe lets the big motor breathe when it has to, but manages to keep it to a whisper when you're not on the gas.



DeRale oil cooler is used to dissipate some of heat that is gener ated by this big motor. You might notice the braided oil lines that are now available from DeRale for all of their kits.

idle from the motor and makes people think that the bike is just a stocker with a pipe on it. Quite a sleeper!!

On its first visit to the local racer road the GS1115 was duly broken in with a number of very strong victories. Since this was the maiden voyage for this motor, we were all wondering how it would perform.

Somewhere out there, is a fellow with an 1132 Kawasaki who lost very badly to this Suzuki, even though Dan was granny shifting it all the way. Also a very hard running 998 Suzuki saw the backend of this GS1115 in a couple of races. He had to reinforce the results.

As you can see the bike runs very well in a street racing application. Since all of your riding isn't always in the upper ranges of the rpm spectrum, the Suzuki also has proven to be a very nice bike to ride around town. There is a load of torque right off the bottom and it isn't a hard bike to ride. It's not pipey and doesn't try to load up even though we are still using the standard point type ignition system.

For getting on the freeway and blending into the flow of traffic, you have to be very careful. You will find the 1115 reacts so quickly to input from the throttle, you'll be exceeding the speed limit quite handily by the top of second gear.

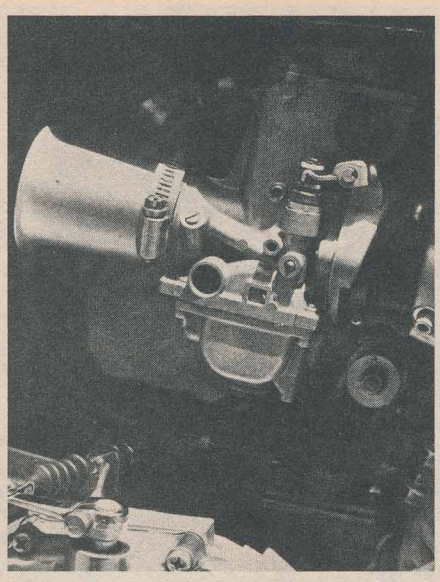
Some of the things we're going to be concentrating on here in the future are going to include a special article on degreeing in the cams and the benefits of doing this. Many times you'll have some horsepower lurking around inside your motor just waiting to be turned loose by the right degree. Keep your eyes open for that next month.

Also we're going to take some of Brother Willi Scheffer's information from his series on smooth bore carbs, and apply it to the carbs on the GS1115. They need a little sorting out.

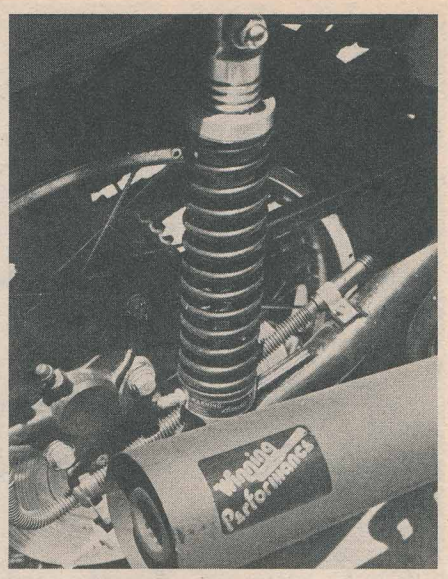
In-between all of this, I'm going to be out riding this little monster around on the street looking for likely victims. Afterall who would suspect that a bike that sounds as nice and quiet as this one, would go so fast!

If you're interested in getting more performance out of your four cylinder, get in touch with:

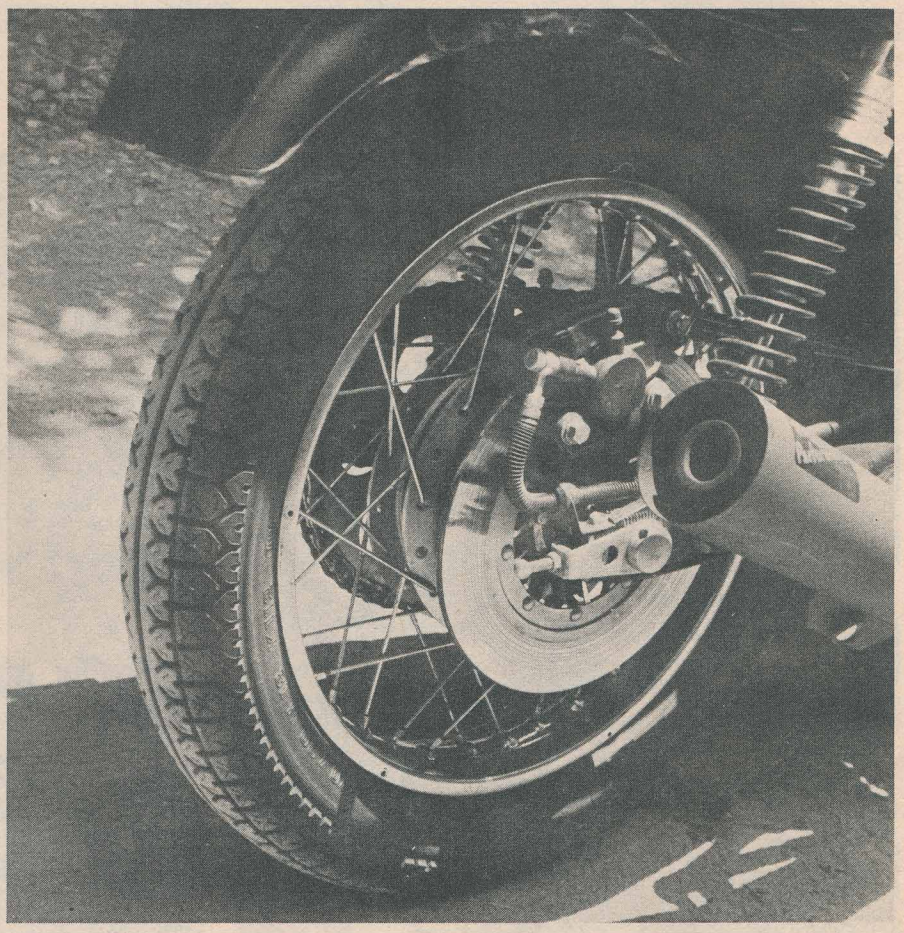
COMPETITION ENGINEERING
(213) 845-1536 ●



Smooth Bore carbs once again provide the ultimate in performance. Contrary to what some people might think, the smooth bores do have idle circuits. If they didn't the GS1115 wouldn't idle at 1000 rpm.



Having a bike that will go as fast as this one will is a lot of fun. Being able to keep it under control when you travel at velocities well above the national speed limit, is the business of suspension units like these ARNACOS. These shocks really work.



A big Continental 5.10x18 Super Twin helps the Suzuki get all of the power to the ground.