



T500 Suzuki racing tips courtesy Rob Greenhill

(in response to Chris Bradley sending Rob the race prep tips from this web site)

(Sadly Rob Greenhill has since passed away)

Dear Chris

Many thanks for the paperwork, it's very interesting, especially the info, on the factory racers, which extends our knowledge a bit.

Mr.Barnard's ideas on race preparation generally agree with what we know, although he does seem a bit conservative in what he regards as a narrow power band.

My idea of 'fun to ride' is having explosive power to blow the opposition into the weeds, and the fact that it doesn't start to happen until about 6000rpm is no great problem, even with a road ratio gearbox, a few laps in practice and you know where to change gear to keep on song.

We are fortunate enough to have a close-ratio box, but we've only recently fitted it. mainly because, useful though the road bottom gear is for getting off the line and out of hairpins, I found I was changing gear when the TZs were still feeding the clutch in. with the figures you have I don't think you need worry about the power band.

He doesn't mention ignition timing. The standard engine fires at 3.4mm BTDC. The official figure given me for the TR500 is 3.1mm, and it's not unusual to push it back to 2.5mm or so. This is one place to start conservatively. I have just fitted close squish heads. Theory says that maybe 20% less advance should now be required, and I am currently running at 2.6mm and going very well. If you have more advance than you need, your pistons will probably melt.

I think we talked about ignition systems, and we will ignore his suggested use of the GT PEI system. As I probably said, it takes about 3bhp to run the generator. His porting figures are a good starting point, leaving the transfer port as is, except for a mod which apparently the factory used, which is to use two cylinder base gaskets, which raises the barrel, and hence the transfer port, by 0.5mm.

His words on frame preparation accord with my views as applied to my first bike, a converted T500, Heavy? It weighs a ton! My Spondon is 30pounds lighter. It is made of stovepipe, as I found when I cut the seat extensions off. Find a frame that's rusted away for a decade or two, it might be lighter! Yes, the swingarm is too long. Shorten it if convenient, but don't worry too much, it won't spoil your fun as is. I have seen a frame with the top tubes cut away completely, replaced with lighter tubes straight from headstock to the region of the swingarm pivot, like a Seeley frame. Don't know how successful it was. We've gone some way beyond this basic engine development. Crank diameter has been reduced from 120 to 108mm, I have machined the crankcases internally to allow cylindrical stuffers to be closely fitted, resulting in a crank four pounds lighter than standard. Like the man says, this is a biggish engineering job, needing many night shifts. A manky place to work, but the factory does have its uses, I machined my squish heads from standard heads filled with weld, and yes, they cost me a mint! It was worth it though, that engine sings.

There's a tuning shop I've found in Newport, not too far away, called Taffyspeed Racing, who specialise in two-stroke tuning. They have a dyno and a pile of information on computer. I took the Spondon down the other day, which produced some useful information although it was a bit inconclusive as apparently the clutch was slipping on the dyno. Didn't while racing the week before, but dynos give the bike a hard time.

The idea was to finalise the ignition timing for maximum power with the squish heads, but the slipping prevented us obtaining a steady figure. It does seem to be turning out about 65 bhp at 7800, which surprised me as I thought it was peaking at quite a bit higher rpm. Anyway, the computer suggested extending the port timing to a figure which now seems a bit excessive in the light of your information, but we've done it now, and fitted new clutch plates, so we will shortly repeat the dyno exercise and see what we've got. I won't quote you any definite figures yet till I know if it works or not.

Next race meeting is Tonfanau on 6th July, so we'll let you know how it goes. Here we are allowed to race in the 500cc Classics and in the Forgotten Era. It's a busy day as the FE event is straight after the Classic, so its ten laps Classic, cross the finish line, and spin it round back on to the grid for the FE. And that happens four times in the programme. We don't usually do all eight races, but we get in the results in Motorcycle News which is always good for the ego! Tonfanau is on the site of an ex-army camp just above Towyn on the Welsh coast. I've put a couple of pics in, the blue thing is the Spondon and the incomplete red one is the first one, the converted road bike.



I am trying to get it together again, but each time I get an engine together there's a change of plan and she loses it again, hence its present state of disrepair. It did have a fairing but we wrecked it in a race bump.

So you know all this rubbish 'cos we just talked on the phone, Never mind, Crooks sounds worth a ring. This idea of the stuffers being unnecessary is an interesting possibility. Our technical director races Karts with very highly developed motors and we often discuss developments, I'll see if the kart boys can add anything useful. Re. drum brakes, just as a matter of interest I've checked, and the first GT550, the J in 1972, did have the same brake as the GT750, changing to a disk the following year. A mine of useless information. Right, we'll leave it there for now. I'm hoping to dyno-test the Spondon early next week before racing again the following Sunday, I'll let you know the results of both exercises.

Regards,

Rob Greenhill
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