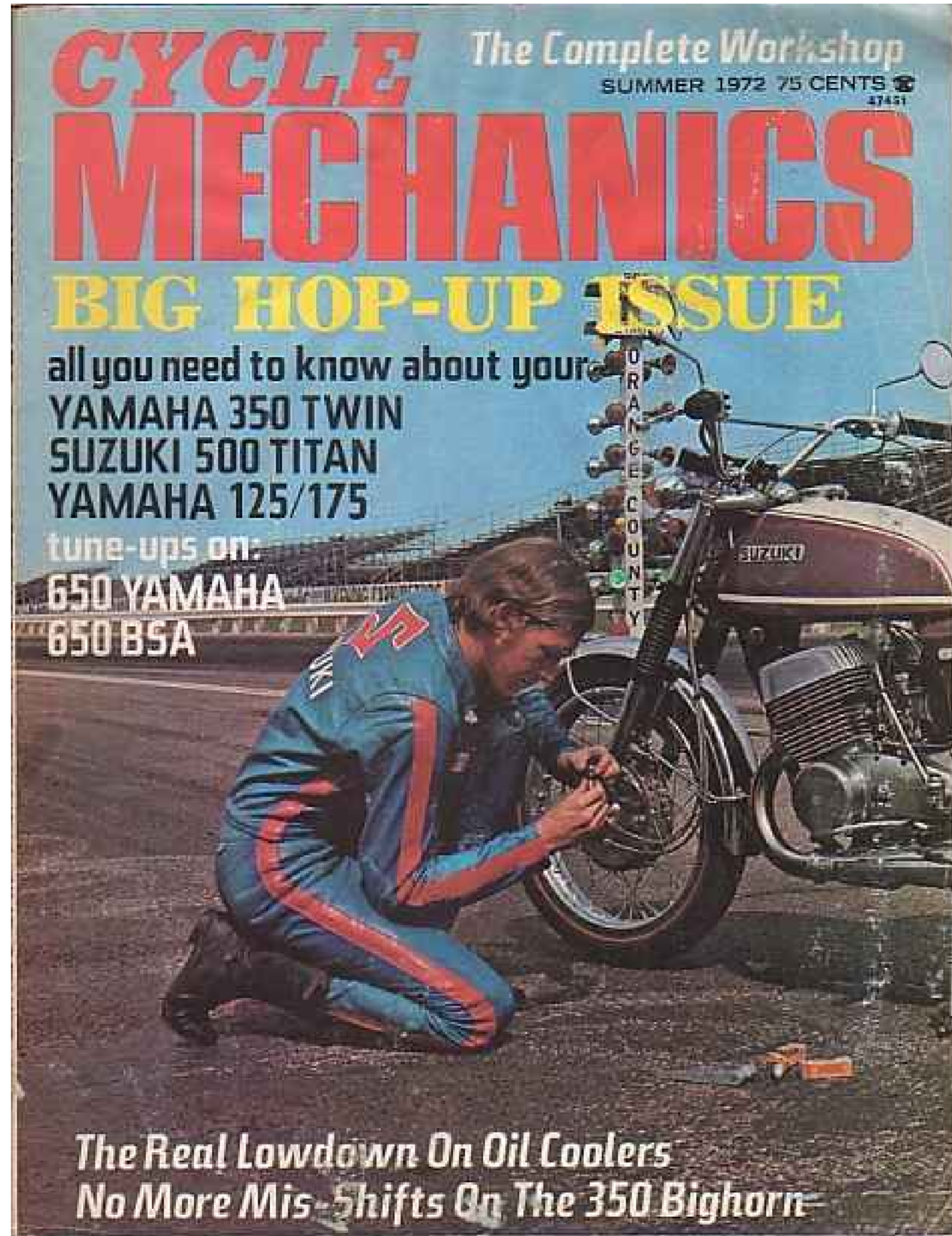


Hotting up the T500

with Ron Grant



Willie Hardin from the US Suzuki Racing Team checks the tuning on a T500 Titan

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SUZUKI 500 HOP-UP

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Ron Grant shares his tuning secrets

Over the past few years a multitude of Suzuki 500s have been sold to a vast cross section of riders, the majority of which were basically interested in primary transportation going to and from work, school or other day to day duties. As might be expected, there were also a number of purchasers of these bulletproof machines who, while they liked the longevity and reliability, also yearned for more performance.

There are very few two strokes for sale today that have less written on the subject of more performance than the Suzuki Titan. Up to now available information on this particular model has been sketchy and in most cases inaccurate and misleading. Now for the first time we can tell you all the tricks needed to transform the average go-to-Sunday-meeting road bike into a stoplight contestant.

In an effort to provide our readers with all of the necessary facts and figures, we contacted Ron Grant, who let his hair down and showed how he goes about putting together, not only his competitive racing machinery, but also a combination that works extremely well for road use.

One interesting sidelight is that, while the performance is startlingly different, the power spread is virtually the same as the stocker. This in itself is unique. In almost all cases (99 out of 100), when more power is dragged out of a given displacement you can count on losing at least a portion of the power band. Not so with the Suzuki 500.

This particular motorcycle responded very nicely to the modifications shown on these pages. We chopped almost a full 1.5 seconds off the ET at the dragstrip as well as increased the top speed by almost a full 10 mph (at the dragstrip), which in itself is certainly nothing to sneeze at. The only consideration between running at the drag and riding on the street is the change in countershaft sprockets. We went from the 15-tooth standard sprocket down to one that only had 13 teeth. This made a vast difference in the ET's. For average running around town and an occasional weekend trip to the drags, a compromise would be a 14-tooth cog providing you don't run the bike on the freeway all day at 80 mph. If this is your primary goal, stick to the stock gearing. Naturally, when the bike gets fine tuned, the rider may find it necessary to drop or raise one or two teeth on the rear once you get the gearing close with the countershaft sprocket.

One nice thing about the 500 Suzuki is that because of the wide power spread the gearing is not a critical factor as it is on many of the other late model two stroke super bikes. The engine pulls like the veritable freight train and hills, surprisingly enough, do not seem to present much of a problem. Top speed with standard gearing (with the rider tucked in) will be between 115 and 120 mph, depending on conditions and the size of the rider. The bigger the rider, the more frontal area and a slower top speed you can expect. Let's face it. his kind of performance is more than enough anyway.



Don't try this at home! (Muzz Ed. LOL)

Another nice thing Suzuki 500 owners will like is the lack of sensitivity the engine exhibits over the long haul. It isn't necessary to be continually tuning the engine. Set it and forget it. If the engine is put together properly in the first place, once the carburetion and ignition are straightened away, the owner can pretty much forget it just as he did with the stocker. Needless to say, this is a radical departure from the norm on most hopped up motorcycles. The area we feel needs the most help is that of excessive weight. The bike is very heavy, and if it would be possible to shed 50 or 75 pounds through the use of lighter components, this would also vastly improve the overall performance factor of your reworked Titan.

Probably the one thing that took the most time and energy to sort out was the carburetion. Ron spent a full five days doing nothing but coming up with the carburetion combination outlined in this article. Rather than make it necessary to substitute the standard carburetor (which worked delightfully), it was decided to try to utilize the stock items in an effort to keep the cost down. As it worked out, stock carbs proved to be just fine. The changes were as follows. The main jet was raised to No. 260, and standard T5 needle jets and standard needles are retained. The pilot jet was changed to a No. 35, and a 2.5mm cutaway slide is used in place of the 2mm standard slide. Also, ignition timing was changed from 3.4, which is standard, to 3.1mm before top dead center. This particular setup works best with the combination we are proposing in this article. Also, we may mention here that it is imperative you retain the standard mufflers. Do not under any circumstances deviate from the procedure and modifications we have illustrated in this article. To change the combination is sure to cost you performance. Regardless of how much you think you know, restrain yourself and stick with the steps outlined here.

In the area of cylinder modification work, we would strongly recommend sending your standard barrels to Grant and let him do his thing to them. He knows all the trick things and can guarantee the kind of performance you are looking for. On the outside chance you prefer doing your own port work, included here are the specifications needed for the necessary grinding work. The exhaust is raised 1 mm, and the port itself squared up slightly. Also, Grant recommends leaving the intake completely alone except for cleaning it up and smoothing out the path for the incoming charge. The transfer port, like the intake, should not be altered other than cleaning it up and smoothing the port walls to remove any irregularities and surplus metal.

If your taste should run to a combination a little more competitive, we have some additional news that may interest you. If you opt for the expansion chamber version that can only be used on the race track, here are the necessary modifications you will need to know before becoming competitive. To begin with, raise the exhaust port 4mm. Like the street bike, remove the same amount from each side of the exhaust port. Here again, don't touch the transfer port. From the top meeting surface of the cylinder to the top of the exhaust port the dimension should be exactly 36mm.

The intake port likewise should be cleaned up, and you can lower the bottom edge 1 mm. Carburetion requirements dictate something a bit more sophisticated, so we used a pair of TS250 hop-up kit carburetors (32mm) that were equipped with No. 240 main jets, T5 needle jets and a No. 35 pilot jet. The cutaway on the slide was 1.5mm, and we used a 6FJ6 needle in each carburetor. For adapting the spigot-type carburetor mount to the cylinders, Suzuki makes a manifold to take care of this. The part number is 13200-30700. Like the street bike, you will want to set the ignition timing at 3.1mm before top dead center. We mentioned before, you will probably want to use expansion chambers with this combination. The truth of the matter is it will be necessary to use modified pipes over the stock mufflers. This particular combination only works with the expansion chambers Grant sells for this purpose. Do not try to use the racing cylinders with mufflers or use the street version port carburetion setup with expansion chambers. Make up your mind which way you want to go, and then pursue that line of attack since each combination is different and precise.

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