

DUCATI TECHNICAL

Lack of oil pressure as well as other lubrication problems. The factory does very strange things. There is an oil hole and a groove on the drive-side. What unfortunately happens is this: In almost every case where the crankshaft goes away, you will find the thrust washer on the drive-side disappears, allowing the oil to pour through the hole and there goes the oil pressure to the lower end. We found that the welding up of this whole circular groove and making the new thrust washer of new material seems to solve the lubrication problem of the lower end for the most part.

The other thing we found that really helps is to replace the crank pin with one made of better material and heat treat it. The case-hardening found on the other parts is extremely thin and it does not seem to take long for the bearing to wear themselves through to the softer base metal. Also, we found that one long roller is far better than two smaller ones. When we got into manufacturing these lower end parts, we discovered that there was no big deal with the manufacturing technologies available today to make better than factory components. It just takes time and care.

The same can be said for the transmission pieces too. Although I would imagine that a number of Ducati riders have parroted what they have heard say, actually for the most part the gear boxes hold up fine. It isn't until you start making some real horse power or start riding your bike really hard that the transmission troubles really manifest themselves. But you really never know just how good a transmission is until you use it for awhile.

Take my super sport for example: The engine was virtually brand new when it was disassembled for the first time. A careful investigation of the gear box revealed some very sloppy tolerances. In fact a lot of them. We predicted transmission trouble very shortly. Well, we were wrong! The gearbox was still on the sloppy side but everything still looks good and believe me the bike has been run hard and put away wet plenty of times. A number of others have ridden it and as far as I know, no one has been bashful about screwing it on. We have seen other gearboxes set up a lot closer that gave trouble early in the game. Here again, material and heat treat are the key to success.

We have also found the Mikuni carbs way out perform the DelOrto's and the quality of the Japanese parts is better and more consistent. The lower speed circuitry of the Mikuni is far superior and lower-speed tractibility is really improved. Up until now this long winded piece sounds like a lot of sour grapes. Now for the \$64,000 question: Knowing what I know now, would I buy another one? You bet I would because it's the only game in town. The basic ruling chassis is superb (although I am going to make new tripple clamps to quicken up the steering) and while the choice may vary with personal taste, no one can fault it's road manners. The faster you go the better it feels.

It's unfortunate that the Ducati has these shortcomings when it takes little effort to make it right. It's too bad that the owner has to do the fixing. Knowing what the problems are and knowing how to solve them is the tough part. Having had my engine and gear box apart four times in the past year, I know that the fixes are not that tough or expensive but they have to be done sooner or later.

The Duke is a superb machine. It just needs to be honed and have the rough edges knocked off. If I sold my Super Sport, I probably would just go out and buy another one and fix it up all over again. If you like fine machinery, it's hard not to be emotional about this bike.

There are a lot of other things which we found (that can be done to improve reliability and power) that the factory should have taken care of. These are the

highlights. This thesis has turned out to be longer than I planned on, but anyway you asked for some comments, so here they are. I would also like to say thanks for the opportunity to allow me to share what we found with your readers. BOB BRAVERMAN, Powerhouse Productst, 7801 Alabama, Canoga Park, CA. 91304

PERSUADING MORE JUICE FROM YOUR ELECTRICAL SYSTEM

by Douglas F. Roosa

In my ongoing struggle to persuade a few more photons of light to fall upon the road before me, I write again of another modification to my 750 GT's lighting system. Thus modification involves the installation of relays into the headlight circuit as first detailed in the September 1977 Cycle magazine Tips section.

Relays are commonly used in automotive quartz halogen lighting systems to smooth out the voltage applied to the lamps and to prevent any arcing across the switch contacts. This is all well and good for motorcycle quartz lamps too, but in the case of Ducati, relay installation is done for a different reason - to provide a direct current path from the battery to the lamp, eliminating the longer, more resistive path through the small gauge wire and handlebar switches. Below is a circuit diagram showing the installation of these relays. It can be seen that the current path is direct from the battery to the headlight (through the fuse) with the handlebar switch now acting only as a relay trigger. Heavy 12 gauge wire is used on the primary side, with a 10 gauge ground wire run directly back to the frame. Wires from the handlebar switch are original. This modification I feel to be essential for adequate lighting, especially for those of us with the older "low watt" alternator. To realize maximum benefit, this modification should be coupled with the installation of heavier gauge wire in the battery circuit plus heavier ground wires throughout. I detail this modification in the technical section of the eighth issue.



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