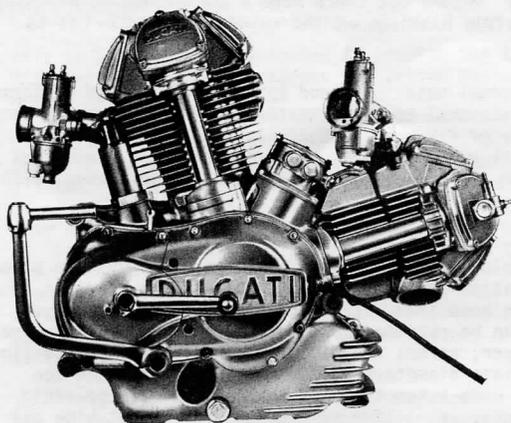


TECHNICAL



PREMATURE VALVE WEAR

I have a solution to a problem many Ducati owners seem to be having with premature valve guide wear. I have been experimenting with many different types of valve guides and materials. To date, the best valve guide I have found is from a 650 Yamaha turned down in a lathe to the same outside dimensions as the stock valve guide. The inside diameter is the same as the Ducati valve guide. These have shown very little sign of wear. Also, while the valves are out, check the new ones before installing them for any burrs or nicks. If they show any signs of being rough, polish the stem until smooth. This will prevent premature wear of the guides.

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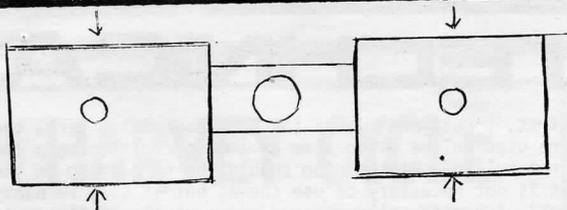
EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT SEX AND THE DUCATI

by Keith Quinn

You asked for it so here it is, a tech article on what was done to my 1974 GT last winter Within the confines of my bedroom. What else is there to do during the winter?

The front cylinder was removed and disassembled. There was some galling of the piston skirt so it was decided to go to .4mm over the pistone. Cylinder was sent to Engine Rebuilders for boring to the new piston size *.002" clearance. I could not obtain proper end gap on the rings supplied on the pistons so I traded them at Snyder Equipment for .6mm oversize and then filed the ends .009" Top .007" Middle and .005" bottom ring.

Next the head was torn down and the first thing noticed was a burned exhaust valve and a loose exhaust valve guide. The intake was AOK (there were 12,000 miles on the engine.) My trusty mechanic Phillip Dupuis at Snyder's removed the exhaust guide and sunk in a new and longer one. Then I rounded up a 4 Perfect Circle Teflon Valve Seals at Mohawk Motors Poarts in Montreal and installed them. The parts man at Snyder "Ben" recommened Norton 850 inner valve springs so I purchased 4 of those at Firmont Motorcycles. Firmont carries Norton Ducati Parts. Then I noticed that there was a lot of shrouding of the valve hed by the countersunk seats. These were widened and blended into the rest of the chamber. You'll be working near the valve seat here so go easy. The square end of a 3 cornered file works well. Just push the bronze away with the file end blending to the contour of the aluminum combustion chamber. Be thankful you only have two cylindrs and 4 valves. The factory is supposed to do this work buty they forgot one of my cylinders (among other things). Finally, the exhaust port was smoothened around the guide area with diemakers files. The valves were lapped and two shims were removed from the cam drive bevel gear. Each rocker arm was filed to remove casting imperfections and to eliminate potential stress risers. The hard chrome on mine was OK. All filing should be in a lengthwise direction removing as little material as possible. The bushings and rocker shafts showed signs of metal to metal contact and wear. To correct this I bored about twice the number of oil holes in the bronze bushing as shown.



The two holes in the center are almost as wide as the groove. Extra (slightly enlarged) small holes were drilled. The bushes were shortened in length about 1/16th of an inch to allow the groove to center itself under the off center oil hole in the rocker arm. This should also allow the bush to full float rotate reducing friction and wear.

The rocker arms were assembled with fewer side play shims. Only the shims necessary to center the rocker over the valve stem with the spring washer taking up any side play. This eliminates about 3 or 4 shims per cylinder and will aid oiling the side faces of the rocker and bush.

The rocker shafts were rotated 180 degrees to the unworn side. Everything was assembled with Lubriplate and the head and cylinder sprayed with Sperex Flat Black. (black side out).

If I ever have to re=do the exhaust valves I will try Hank Manley's Stainless Steel with thin stems in order to reduce the diameter of the guides. The new Ducati guides are not even tapered in the port area. Tsk, Tsk! Too bad Ducati never finished engineering the bike. Manley also sells opposite wound inner valve springs.

Last year I was only able to reach 105 mph in 5th at 6000 rpm. After 500 miles of break in I'm ready for another try for that extra 1000 rpm. in 5th gear or after a fifth. It has more poop than ever and the accelerator pumps are not yet operating.

By the way it's ditto for the rear cylinder. (De sama ting as de front) Jes maka sure you usa de pasta ona de gasket an plenti gattuso oil. An vino in de mechanic, it's make me so appi!

Next I broke it in but it felt as though it could have taken wide open throttle pronto.

The following is a rundown on the other changes done to the bike for more confort and reliability while touring:

K mart coils and mallory condensers, Rajah spark plug terminals, Automotive gas line filters, engine flywheel taken off, substitute master cylinder (Honda), handlebar pullbakcs-my design, highway bar and brackets (my design), coming soon from England - Swagman saddle bags, to be added later - a fairing.

Several people have commented that the bike looks better with black jugs. What will I do in my bedroom this winter? (Whata you mean mannn?!! Ed.) My engine is bored with black heads. Now if I could swing an even trade for Marko Mancinis 900 Black Beauty. !!

DUCATI VALVE SPRING TOOL

Have you ever done a top end job on a Ducati? If you have, you've no doubt found out that by removing the valve keeper, collar (also the valve spring retainer) may be removed along with the springs which are the hair-pin style or type.

This is fairly simple if a regular motorcycle valve spring compressor tool is used. The real fun starts when it's time to reassemble the head and you find that the springs will not engage in the collar unless they are partially compressed. Here we go again with one of those expensive Ducati factory tools. The average rider will usually resort to clamping them in a vise and compressing them enough to fit, then tying them down with wire. After fitting them in the head and under the collar, you cut the wire and hope for the best.

Being on the poor side myself, I am always looking for methods to save a few bucks. I had tried to come up with a tool similar to a regular valve tool without success. Then I hit on this idea and it works very well.