

CYCLE WORLD

AMERICA'S LEADING MOTORCYCLE
ENTHUSIASTS' PUBLICATION

NOVEMBER 1964

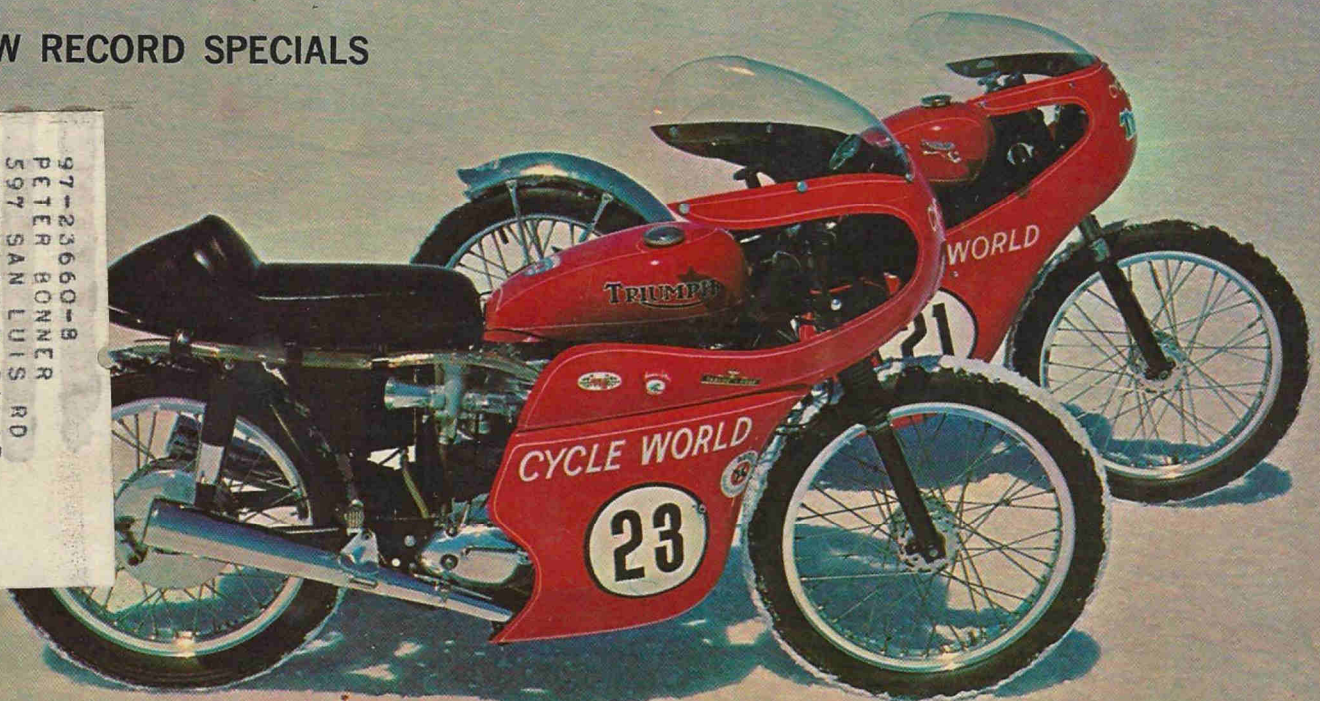
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TECHNICAL
TWO-STROKE
EXHAUSTS

CW RECORD SPECIALS

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PETER BONNER
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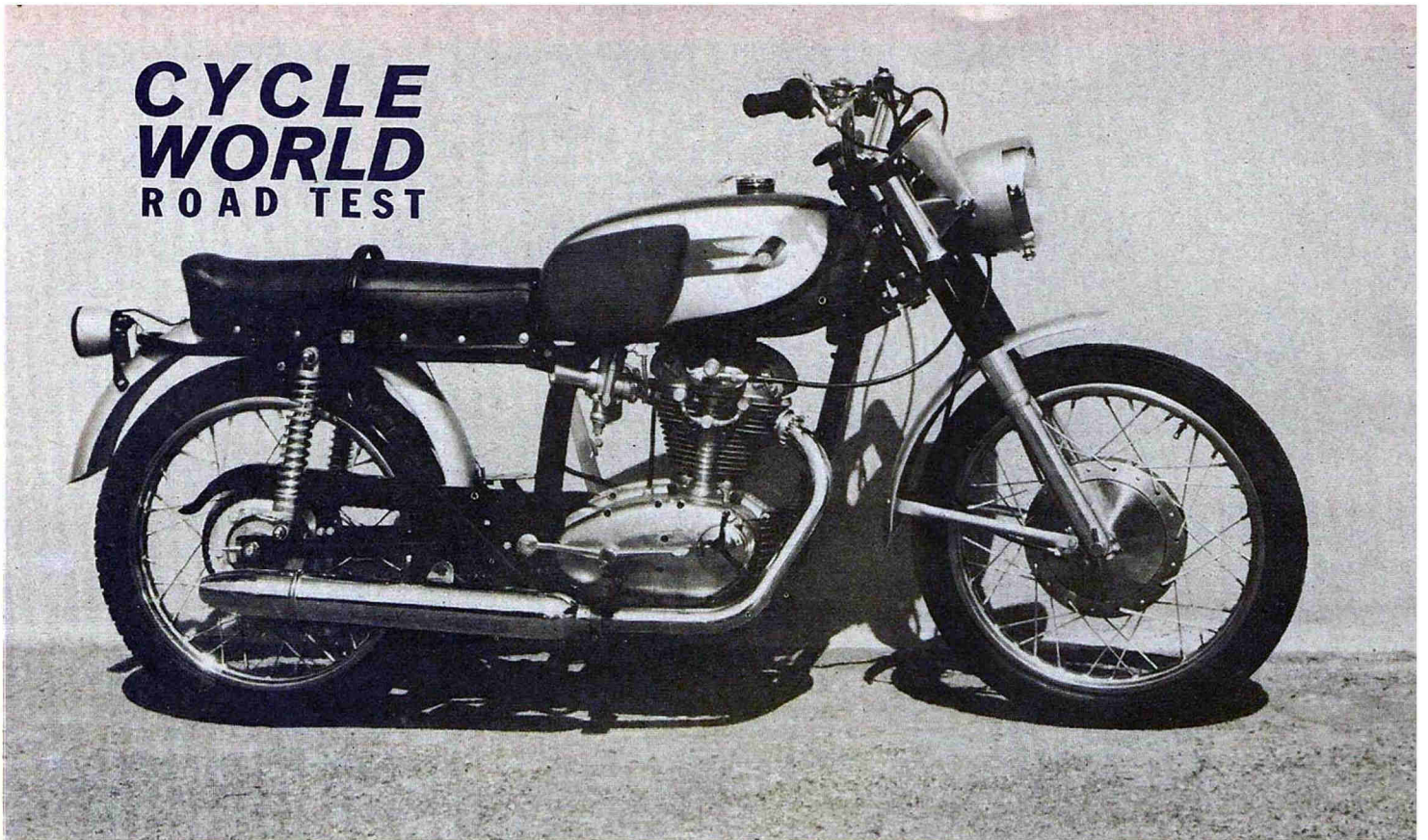


ROAD TESTS OF MATCHLESS 750
AND DUCATI 250 FIVE-SPEED DIANA

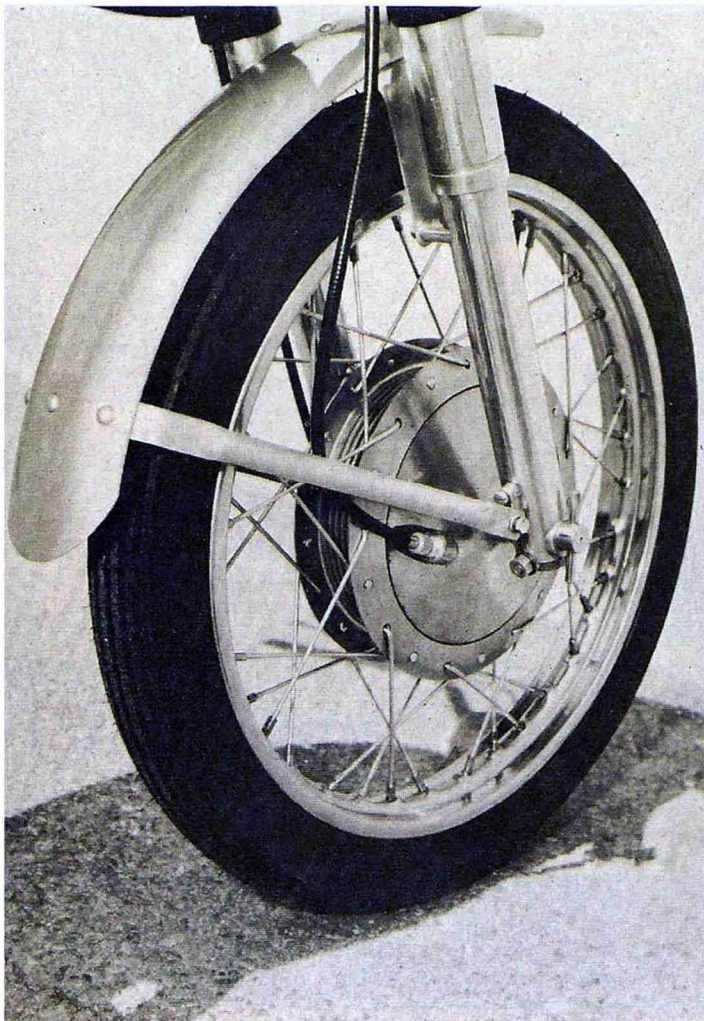
BONNEVILLE NATIONALS GARELLI 50 IMPRESSION DKW RETURNS
SIX DAYS TRIAL 4 AMA NATIONALS ITALIAN, FINNISH GRANDS PRIX
NEW FATH ENGINE GERMAN TRIALS BIKES ULSTER TT REPORT

CYCLE WORLD

ROAD TEST



DUCATI DIANA MK III

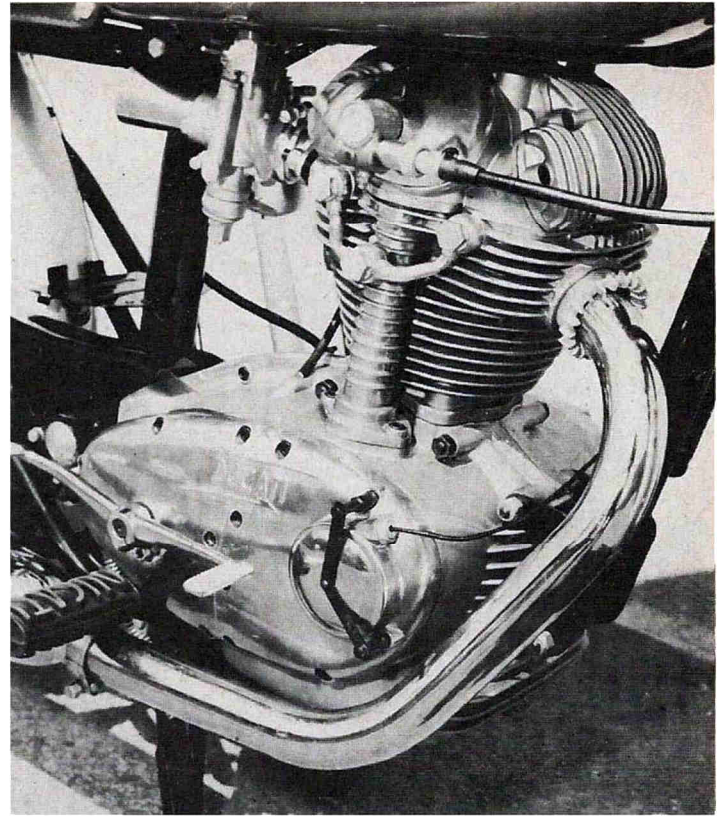
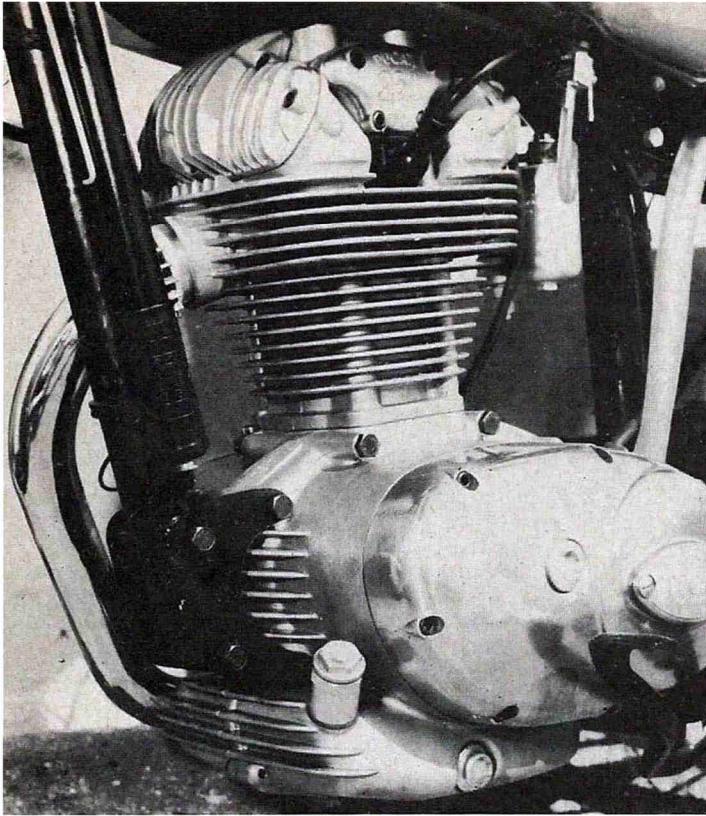


ABSOLUTELY ENCHANTED." That was the way we described the feeling of the entire staff when we tested the Ducati Diana Mk III last year, and a test of the recently announced 5-speed version of the same machine has not changed our minds a bit. Rather, we liked the 5-speed Diana even better, and that means we were all falling-down, drooling, in love with the machine. Whatever faults it has, and there are a few, can be traced to the fact that the manufacturers have done everything possible to make it a sports/touring motorcycle with the accent on "sports."

Although largely unchanged from the previous Diana, the newer version is a better bike for having a 5-speed transmission — an unmitigated blessing. Low and high remain the same as before, but there are now 3, instead of 2, ratios between, and the engine can be held somewhat closer to its peaking speed. In the stock Diana, this means that a standing-start 1/4-mile is covered in 16.1-seconds instead of 16.5 (as with the otherwise identical 4-speed Diana). Speed at the quarter-mile's end goes up by about the same percentage: from 79.5 mph to 81.0 mph. Bear in mind that this increase has come without *any* increase of power from, or stress on, the engine.

For the racing fraternity, the 5-speed transmission has even more significance. When dealing with a 4-speed transmission, a tuner must be careful that in boosting the engine's power output, he does not narrow the power range too much. No matter how much peak power an engine may develop, it will be of little value if the transmission has a few, widely-spaced ratios and the rider cannot keep the engine from "falling off the cam." In its present state of tune, the Diana has a lot of power, and it is spread over a wide rpm-range. It was this wide power range that made the 4-speed Diana such a marvelous performer.

However, now that the Diana has 5 closely-staged



ratios, the engine can be squeezed for even more power, even at the expense of narrowing the power range. This means a bigger carburetor, which we have suggested before, and a different exhaust system. The present very slow taper megaphone (supplied in a box; a muffler is fitted on the machine "as delivered") could be changed to one having a somewhat greater angle of divergence. Such a change in megaphones would narrow the power range, it is true; but it would also boost the peak power and the 5-speed transmission will allow the rider to handle a less broad power range very nicely.

Of course, the man who buys a Diana as a fast, light-weight touring machine will not care about any of that racing jazz, but he will be pleased by having a gear for every occasion. Those mountain grades where most small-displacement bikes can't quite pull top gear, and 3rd buzzes the engine too much, are where the 5-speed Diana shines. The tourist will also like the nice, positive feel the transmission has: it "snicks" through the gears in a very satisfactory manner. The one thing *nobody* will like about the transmission is that neutral is all but impossible to select with the bike stopped and the engine running. We soon learned to nip into neutral before coming to a halt, but even then it would sometimes take several tries. This small problem is probably due to having 5 sets of gears stuffed in where there were only 4 previously — which leaves little room for the neutral position.

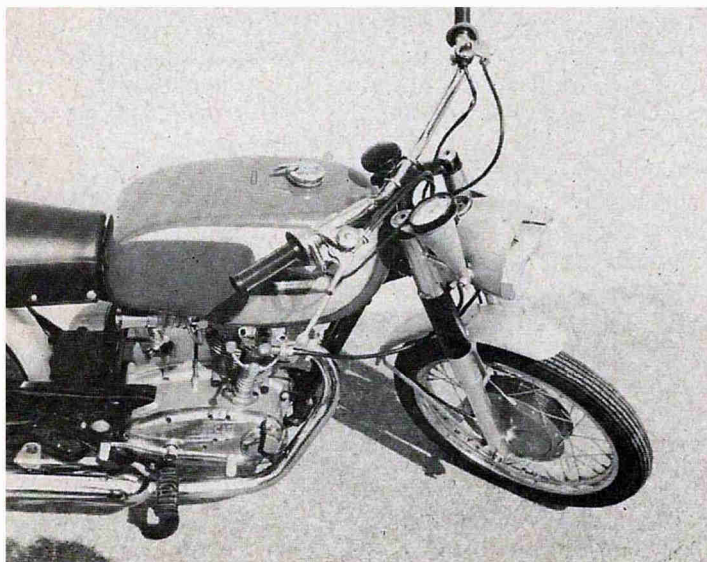
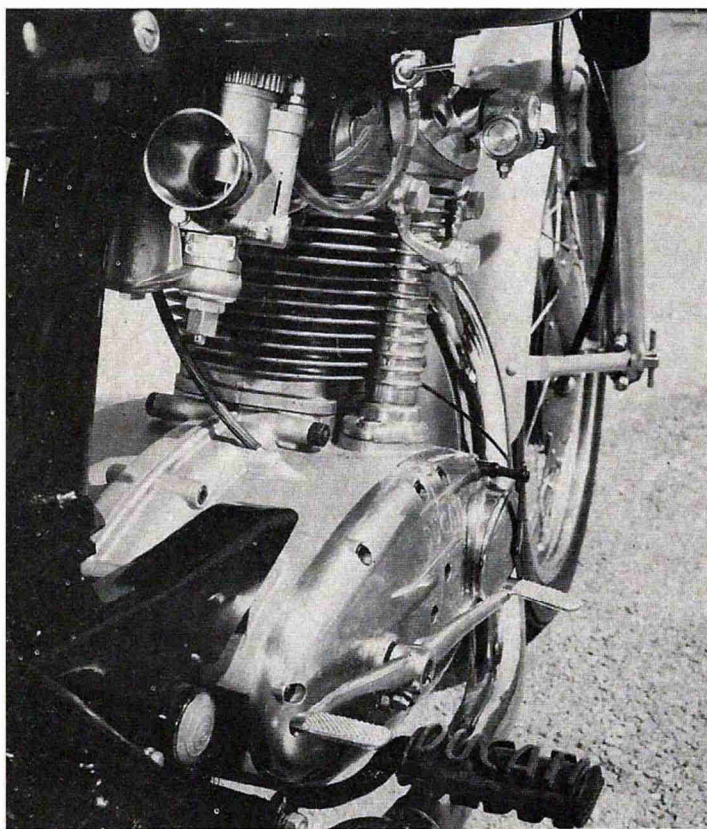
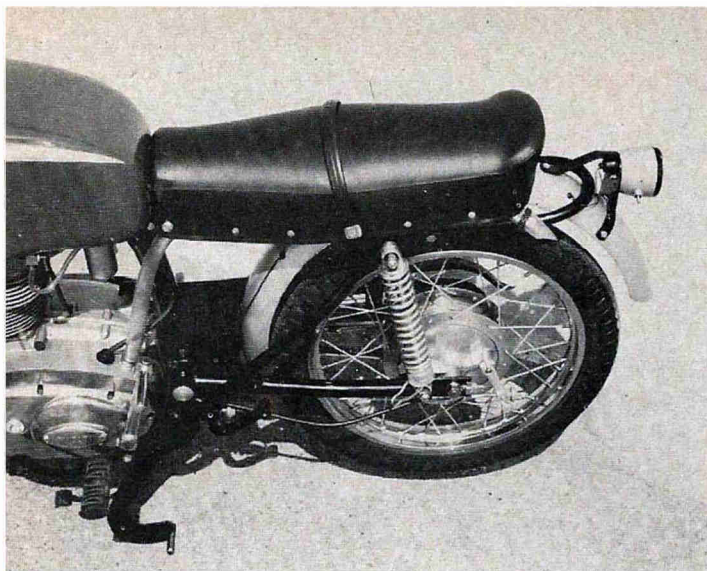
The other change in the Diana, the handlebars, we are not sure about. The confirmed road rider will like the new western bars better, as they are up where one can reach them without assuming the racing crouch. But, the rider who likes to take Sunday afternoon jaunts up through the mountain roads and make like Phil Read will miss the low, road-racer clip-on bars. Of course, these riders can always order the low bars, and it is probably true that the majority will like those now being supplied on the Diana.

At first, the touring-only rider may find the Diana's engine a bit radical. The engine will run smoothly enough once the machine is underway, but it is a bit too finely-strung to permit much plunking along with the engine at

idle. Also, it is something of a grouch about starting. The ignition system gets its current directly from a crankshaft-mounted generator, and a good, rapid run-through is needed to get enough spark for starting. And, too, there is a lot of ignition advance and the engine has a tendency to bite back — hard. After some experimentation, it was discovered that the Diana would start with very little urging if flooded with the float "tickler" and then given a couple of vigorous stabs at the kick lever.

The Diana is equipped, as standard, with a tachometer, and while riding along you will find that this little single winds at an astonishing rate. In normal cruising, the rider will be seeing about 6000 rpm on the tach constantly, and the engine will turn up to 10,000 rpm if he wants to force things. There is a red-line on the tachometer, however (at 8500 rpm), and this should be observed. Maximum power is reached at 8300 rpm, and while twisting the engine higher will get the speed up a little faster, it is an increase that will be paid for sooner or later. The headlamp is the same as fitted on the Ducati Monza, the pure touring 250 Ducati, and contains a speedometer. It is easily removed for racing.

Again, the racing rider will be doing things a bit differently. For racing, the Ducati engine can be modified to peak (with even more than the stock 30 bhp) at 9000, and the rider will probably use 9500 rpm. Obviously, engine life will be shortened, but not by as much as one might think. Even though the Ducati is a "single," and singles are not supposed to be turned too tight, it is a very exceptional single. The bore (2.92") is substantially greater than the stroke (2.28") and having such a short stroke (little more than the Honda 250cc twin) it can crank off a lot of rpm without suffering unduly in the process. Also, the rest of the engine, design and construction, is first-rate. The crankshaft and connecting rod (both very sturdy) run in ball and roller bearings, and are copiously lubricated by oil fed from a gear-type pump. To prevent oiling, the piston is fitted with two oil-scraping rings, in addition to the normal compression rings. The makers have obviously anticipated that buyers do not always observe rev limits because the engine has its valves



operated by short, light rockers from an overhead camshaft, with racing hairpin springs to close the valves. We tried the Diana at 10,000 rpm and even at that very high speed found no sign of valve float.

The overhead camshaft is driven by spiral-bevel gears, through a tower shaft, similar to the arrangement on a Manx Norton. Also similar to the Manx engine is the fact that all of the major engine castings are of aluminum, but where the Manx's cases, etc., are rather rough sand castings, those for the Ducati are cast in permanent molds and are beautifully smooth. Indeed, the Ducati has one of the loveliest (to those who like machinery, and we do) engines being made today. It looks right, and it is right — and it will stay that way. The engine and transmission share the same casing, so there are no external oil lines to leak. The oil supply for both is carried in a sump that is part of the crank/transmission casing.

More bright aluminum is found in the brake drums (which have iron liners, like the cylinder) and in the front forks. The parts are thus lighter, and while the forks may not work any better for having aluminum legs, aluminum brake drums do give better braking. We wish the Diana had aluminum wheel rims, as well, but we suppose that is asking for a bit too much frosting on what is already a marvelous cake.

The Diana is built for touring, and racing, and when one rides it a while it becomes clear where the emphasis has been placed. It is an exceedingly stable machine, and can be dropped over in a turn until things begin to scuff along the pavement without ever becoming unsteady. At the same time, the steering is light and precise. The suspension is properly set-up for fast cornering, which is to say it is rather stiffish, and the combination of stiff spring/damper units and small-section tires make the ride decidedly harsh.

Taken as a racing bike, the Diana 5-speed, like the previous 4-speed, has a great deal of merit. The purchaser can take it out of the box, break it in, fit the megaphone (supplied with the machine), substitute racing handlebars (obtainable from the distributor) and go racing. For a slightly more serious effort, road-racing tires and a fairing are good, of course, but the bike will make a respectable showing and provide its rider with vast entertainment in any case.

As a sports/touring bike it is equally good. The tight suspension, good handling and good performance make it the nearest thing to a good 250cc-class road racer you can ride around the public highways, and it is reliable enough to provide many an afternoon of hard riding.

Strictly on its merits as a touring bike, it does not score too well. It has no battery, and its lights seem to be rather uncertain performers when supplied with electricity only by the generator. Then too, one's posterior region tends to go a trifle dead after an hour or so in jolting contact with that hard saddle, and it's a new, softer seat this year! For touring, the very similar, but more comfortably equipped Ducati Monza (which has a battery, and many other miscellaneous items of touring-type hardware) is a better buy — and it too is now equipped with the 5-speed transmission.

Still, the sporting-type riders around the office swear a mighty oath that the Ducati Diana is the model to have (unless you happen to be one of the mud-plugger set, and want the Scrambler), and they may be right. It certainly is sporting, and beautifully styled and finished as well. It may even be that one of Ducati's Dianas will find a permanent home here at 745 West 3rd St., Long Beach, Calif. •

DUCATI DIANA 5-SPEED

SPECIFICATIONS

List Price	\$719
Frame Type	tubular, single-loop
Suspension, front	telescopic fork
Suspension, rear	swing arm
Tire size, front	2.50-18
Tire size, rear	2.75-18
Engine type	single-cyl., sohc
Bore & stroke	2.98 x 2.28
Displacement, cu. in.	15.2
Displacement, cu. cent.	249
Compression ratio	10.0:1
Bhp @ rpm	30 @ 8300
Carburetion	27mm (1.06") TT Dellorto
Ignition	flywheel generator & coil
Fuel capacity, gal.	4.5
Oil capacity, pts.	5.1
Oil System	wet sump
Starting system	kick, folding crank

POWER TRANSMISSION

Clutch Type	multi-disc, wet plate
Primary drive	helical gear
Final drive	single-row chain
Gear ratio, overall: 1	
5th	5.73
4th	6.15
3rd	8.00
2nd	10.3
1st	14.9

DIMENSIONS, IN.

Wheelbase	52.0
Saddle height	29.0
Saddle width	8.5
Foot-peg height	10.0
Ground clearance	6.5
Curb weight, lbs.	268

PERFORMANCE

Practical maximum speed	94
(after 1/2-mile run)	
Max. speed in gears @ 9000 rpm	
5th	109
4th	102
3rd	78
2nd	61
1st	42
Mph per 1000 rpm, top gear	12.1

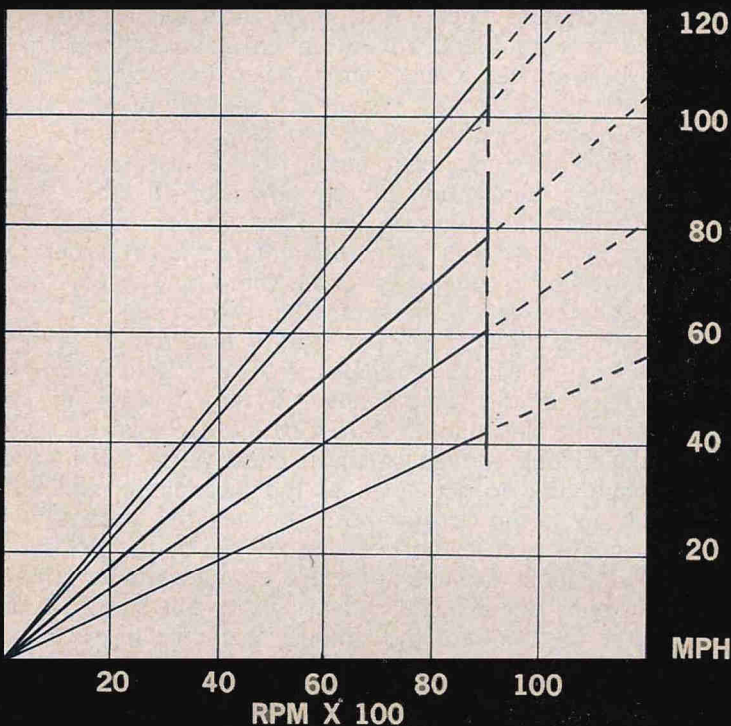
SPEEDOMETER ERROR

30 mph, actual	26.5
50	42.0
70	60.5

ACCELERATION

0-30 mph, sec.	3.0
0-40	4.2
0-50	6.6
0-60	8.5
0-70	11.4
0-80	15.3
0-90	21.3
0-100	29.0
Standing 1/4 mile	16.1
speed reached	81

ENGINE / ROAD SPEED



ACCELERATION

