The New Motorcycle Enthusiast Magazine 35c

CYCLE WORLD

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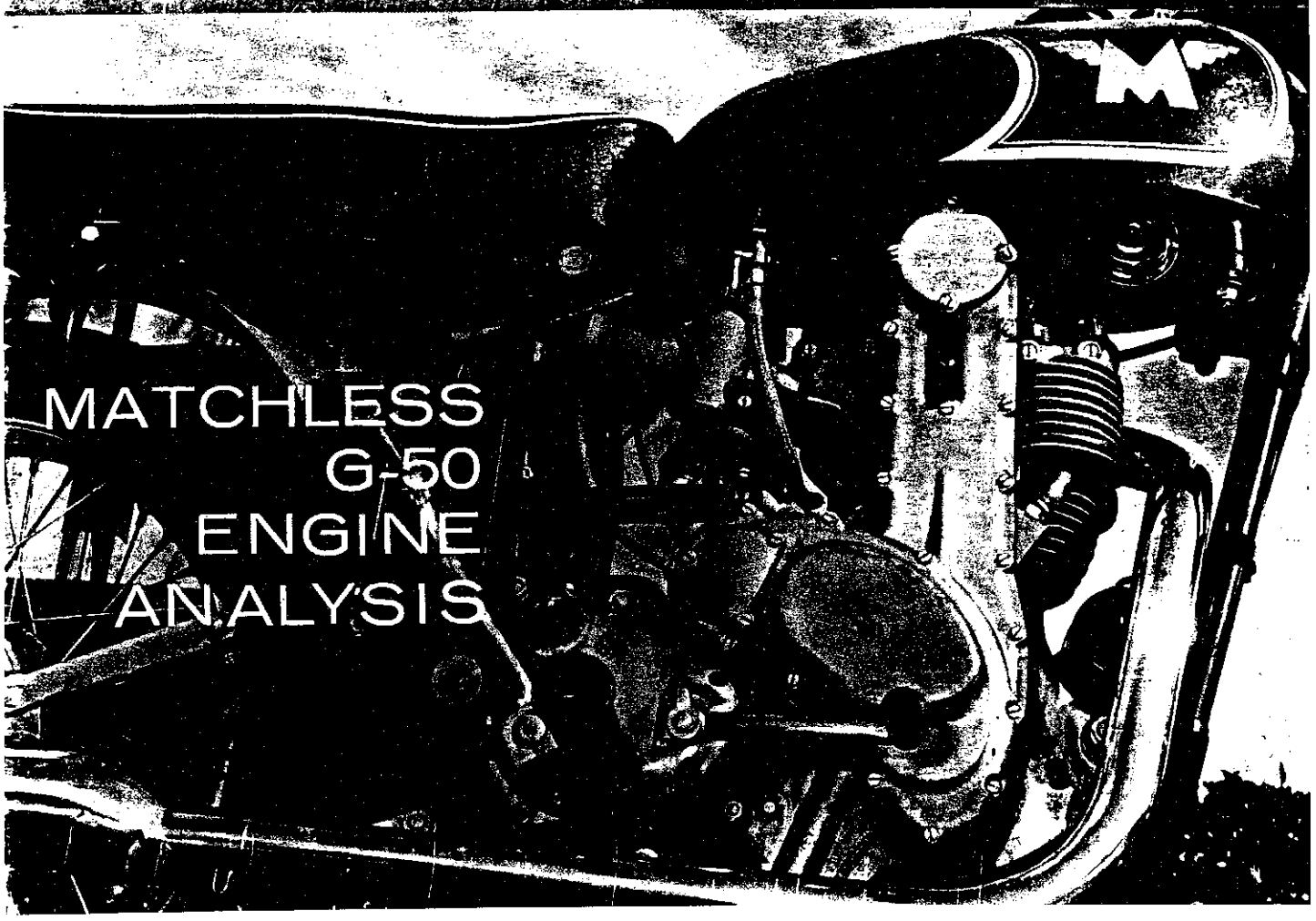
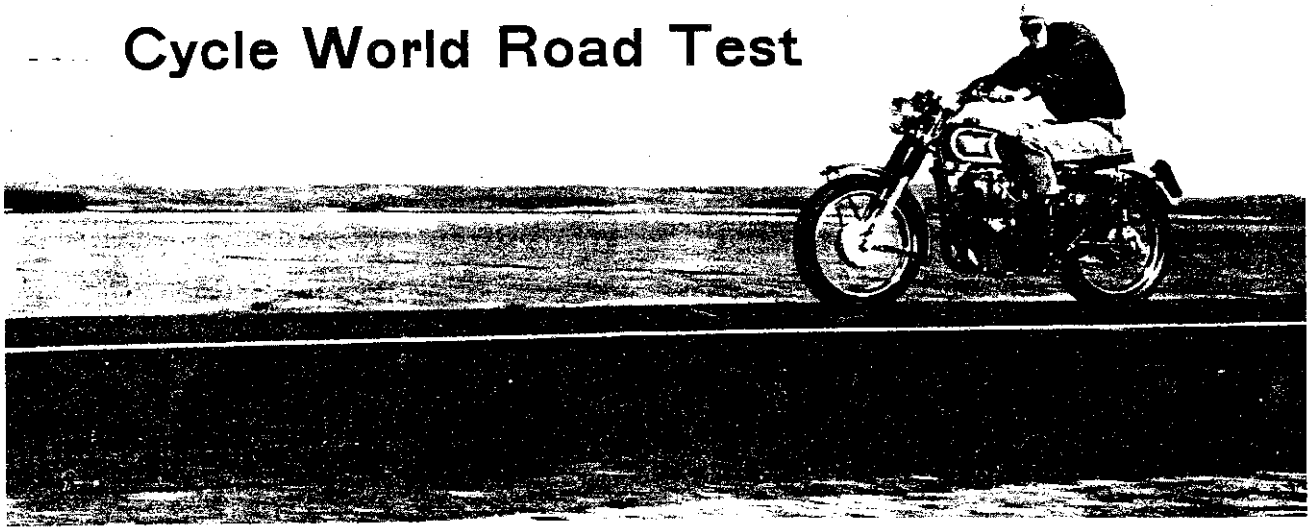
USMC Daytona Report · Night Speedway Racing, Part Two · Top Men In Europe
Eastern Competition Reports · Micro Rebel Mini-Bike Test · News From England

TESTS OF MATCHLESS G-50 CSR, GREEVES 250 MCS & YAMAHA YD-3

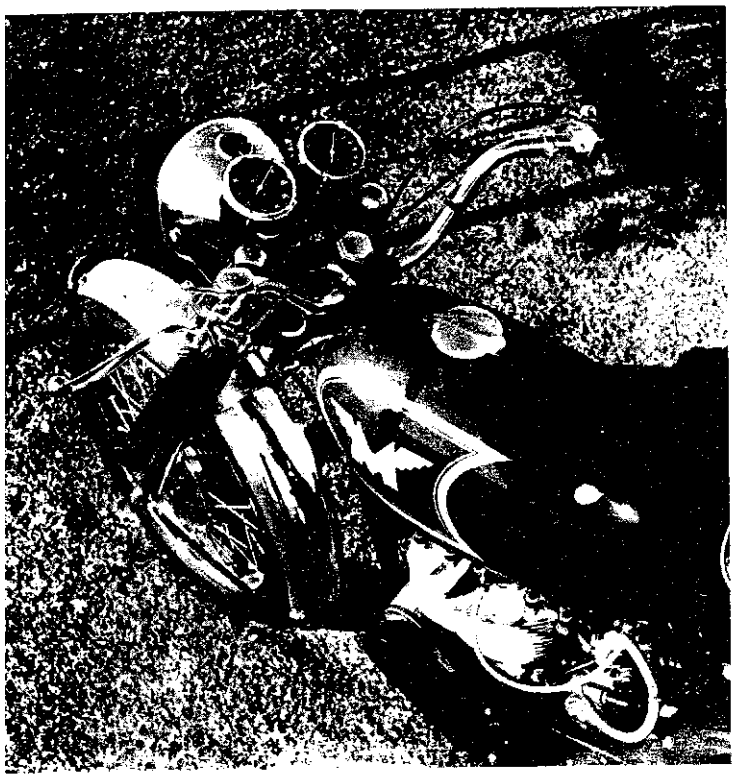


MATCHLESS G-50 ENGINE ANALYSIS

Cycle World Road Test



MATCHLESS G-50 CSR

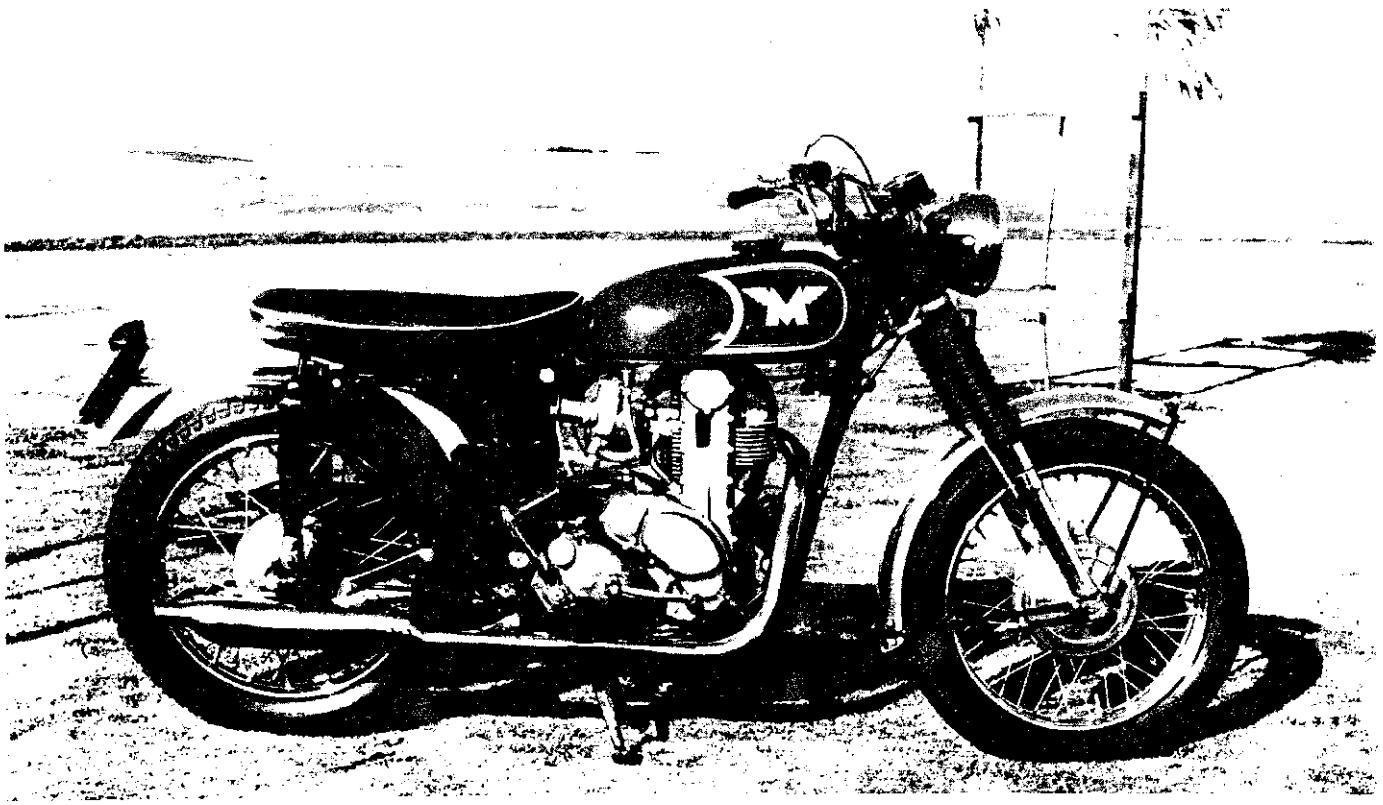


"MATCHLESS" is a word defined by our dictionary as "without equal, or peerless" and it would be very difficult indeed to find a better word to describe the motorcycles of that name. Matchless motorcycles are manufactured by England's Associated Motor Cycles Ltd., and are sold wherever people can afford these fast, durable, and high-quality machines. Of course, they have become particularly popular here in America — and for a very good reason.

Our country is the only place in the world where it is considered the grandest kind of fun to go charging about at high speeds over terrain that would founder a mule. Naturally, the axle-deep mud that is a feature of English and Continental trials presents some problems, as do the extended durations of some of their events. Even so, they have nothing to equal the bottomless sand pits and boulder-strewn washes that are so common in the U.S.A. Over there, weak parts may wear out or get bent a bit; here, they will be torn completely off.

Fortunately for their American owners, Matchless motorcycles are built to survive this sort of use and as a result, they have acquired a reputation for being nearly unbreakable. No matter how vigorously you may flail along, the Matchless will get you there — and it will, very often, get you there first. For the riders who want to get there in first place every time, Matchless has a few special offerings this year. The most exciting of these is the G-50 CSR, which combines Matchless' road/scrambles frame with the engine from the famous G-50 road racing machine.

The G-50 CSR frame is virtually unchanged from



the one used for the other large-displacement AMC bikes. It is of the "duplex cradle" type, with two tubes leading down from the steering head and all of the tubes brazed into the various lugs. The down-tubes continue back around to cradle the big G-50 engines, giving the separate transmission and the entire assembly a very sturdy look.

Ground clearance suffers somewhat from the sump pickup under the engine, as this protrudes below the frame-cradle an inch or so. For serious scrambles work some sort of guard will have to be placed under the frame to protect the sump from those boulders we mentioned previously. Otherwise, that lovely G-50 engine will suffer. Quite frankly, we are happy that they did not make such a guard a standard fitting, as it would be needed only for the most difficult conditions and there is little reason for having the extra weight when it isn't necessary.

At the upper end of the engine, the frame clears the cylinder head just enough to make it possible to check the valve clearances. A steadying plate leads forward from the cylinder head to the frame — the connection being made at a cross bracket that also carries the rubber mountings that support the fuel tank. Behind the engine and transmission there is a single, very heavy down-tube that completes the frame loop and forms the trunnion for the rear suspension's swing-arms. Extending yet farther back are two tubular loops, which form the mounting structure for the rear suspension's spring/shock units.

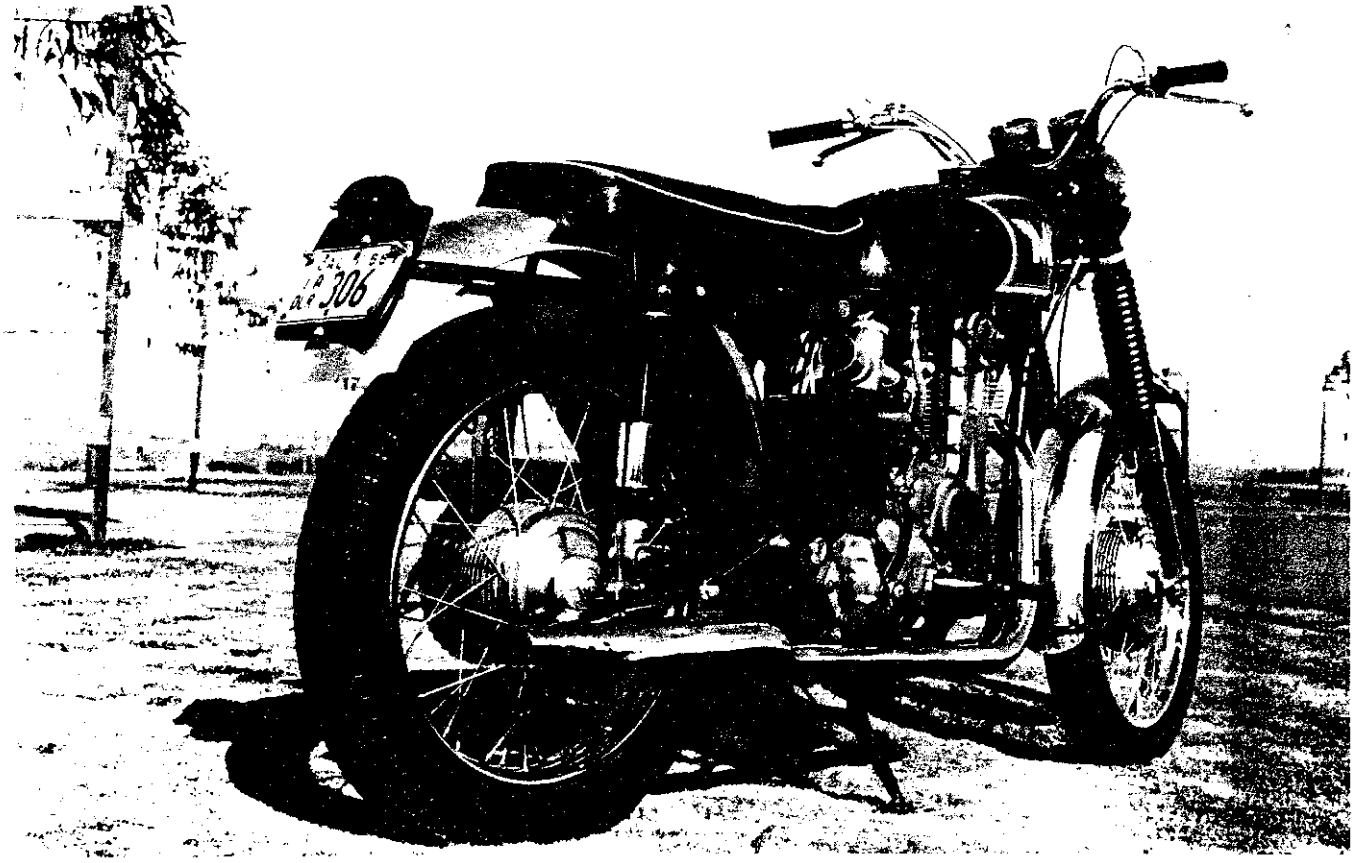
The front forks, which are of the "extended" type used on Matchless scramblers, pivot on a massive frame head that gathers all of the forward ends of the frame tubes. This is the point of maximum stress for most frames, and on the Matchless, it is anything but frail. Interestingly enough, this frame head incorporates a mounting for a side-car, so it is possible to carry a "side hack", though it would be a shame to encumber the G-50 in that manner.

The brakes, front and rear, are the 7-inch diameter, full width units used on the other "big" AMC machines. These are not overly large, considering the very high speeds that are attainable with the G-50 CSR, but they have detail refinements, such as their finned aluminum-alloy drums, that enable them to do the job without complaint. To be perfectly honest, before we started the test, we had some reservations about their effectiveness in pulling the machine down from, say, 110 mph. Our fears proved to be groundless, we are most happy to say, for not even our most vigorous usage brought to light any inadequacies. However, we did get the feeling that the brakes were having to work pretty hard and that the larger units on the G-50 road racing model are not entirely wasted effort.

The G-50 CSR transmission system is, like the machine as a whole, a mixture of the racing and touring model. The dry primary drive and clutch are carried over from the racing G-50, and a light, sheet-metal shroud keeps sand, rocks, twigs — and one's fingers and toes — from becoming enmeshed in the drive. Chain lubricators are a feature and they do their job messily but well.

The transmission is from the standard Matchless, and has ratios that are well suited for the kind of work for which the G-50 CSR is suited, but which handicap the bike slightly when standing-start 1/4-mile runs are attempted. First gear, particularly, was rather "tall". We managed to overcome the gearing handicap to a surprising extent by the simple expedient of slipping the clutch while getting underway. In this fashion, we were able to keep the G-50 engine turning fast enough to develop somewhere near its maximum torque and the bike would leave the mark in a very determined manner. It says a great deal for the Matchless' clutch that we were able to use this technique throughout the many performance runs we made without some sort of complaining. The clutch's capacity for abuse must be enormous.

Acceleration trials are not the G-50 CSR's strong point, but it does very well just the same. A few practice runs revealed that by feeding in the clutch a bit at a time and simultaneously winding on the throttle, trying to hold about 5000 rpm as the bike gathered speed, we got the best time. Unfortunately, the best time turned



in the first series of runs was 15.2 seconds, elapsed, for the quarter-mile. These runs were made with the muffler in place – per our normal procedure – but due to the fact that this particular machine seemed so much slower than it should have been, we removed the muffler and just ran with the straight section of pipe that was left. The result was the G-50 CSR was transformed.

The very first run made with the muffler removed trimmed a full second from our previous best time, and we finally got down to a very impressive 14.1 seconds. It is not too difficult to speculate upon the whole potential of performance had the bike been equipped with a properly tuned exhaust system employing a megaphone as the road racing G-50 is equipped. Actually though, the bare figures do not tell the whole story; the fact is that this new Matchless does not really come to life until you get up to about 40 mph. After that, it really begins to move. It will lift its front wheel completely clear of the ground on the shift into second, and then just pip it into the air on the shift to third. It has so much steam that it is hard to believe it all comes from only 500 cubic centimeters of displacement and one cylinder.

Just as surprising as the amount of power was the range of engine speed over which the power was delivered. It is not easy to get a super-tuned engine like the G-50 to spread the power over a wide rpm-band – but in this case it has been done. Apart from a tendency to balk if the throttle is cracked on too much from idle, the G-50 responds just like any 500cc single, and up to 4000 rpm seems to have about the same amount of power. However, from that point on the engine gets very fierce indeed, and it stays that way right up to the safe maximum of 7200 rpm.

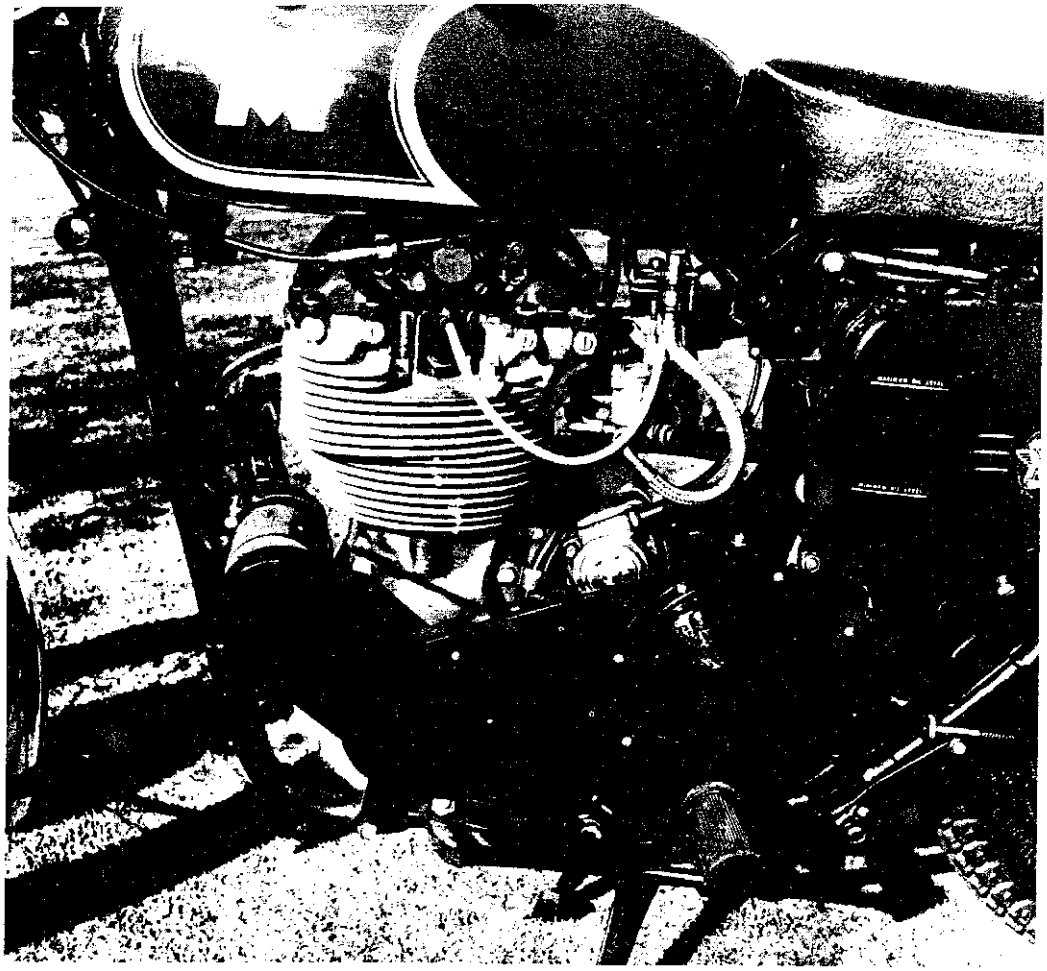
An unexpected bonus in all this was the smoothness of the engine. Improbable though it may seem, the G-50 engine is smoother than any other, single or twin, that we have ever tried. Theoretically, it shouldn't be so; but there is no denying the fact that it is.

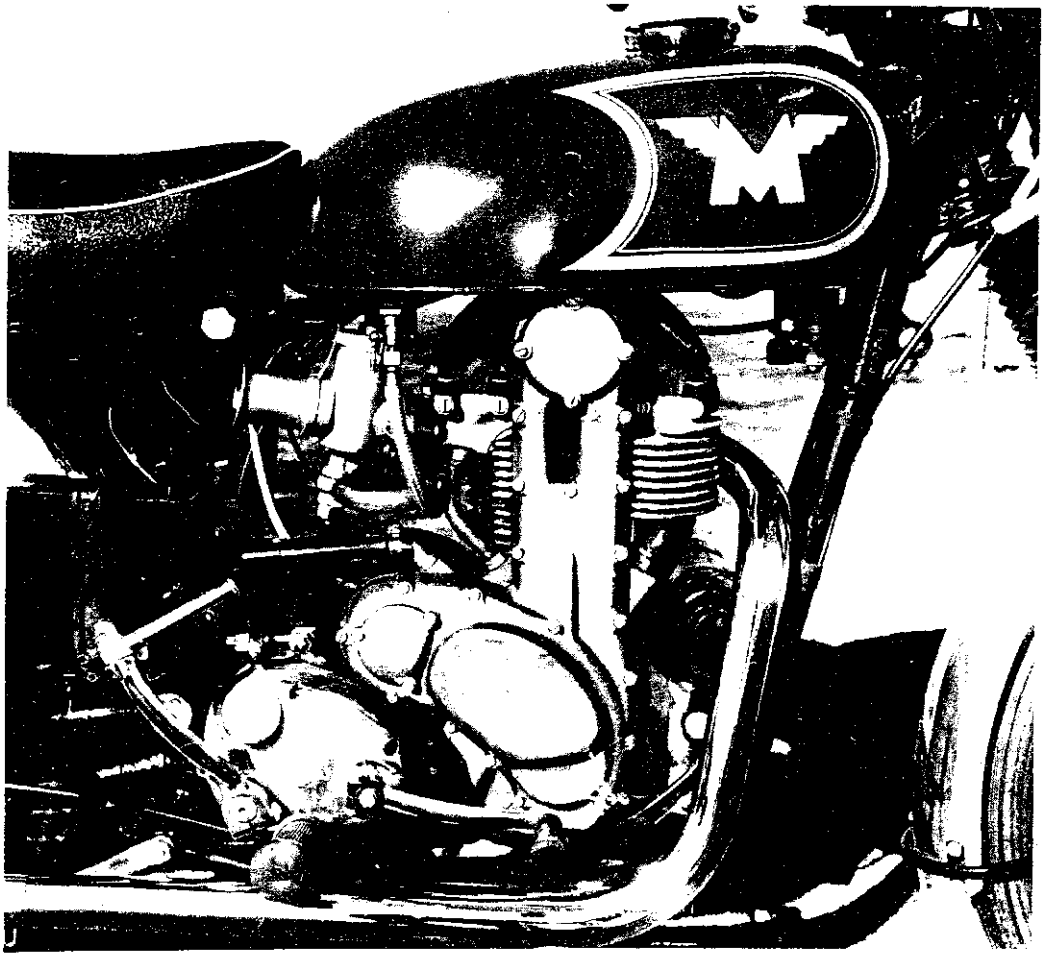
Cranking the G-50 engine into life proved to be the only problem. There is no compression release, and no manual retard for the spark, so a deft touch is needed. Once you find the combination, it fires readily enough, but there is no getting past the need for a good, strong right leg. Any attempt to be dainty about running the engine through will get you a good kicking.

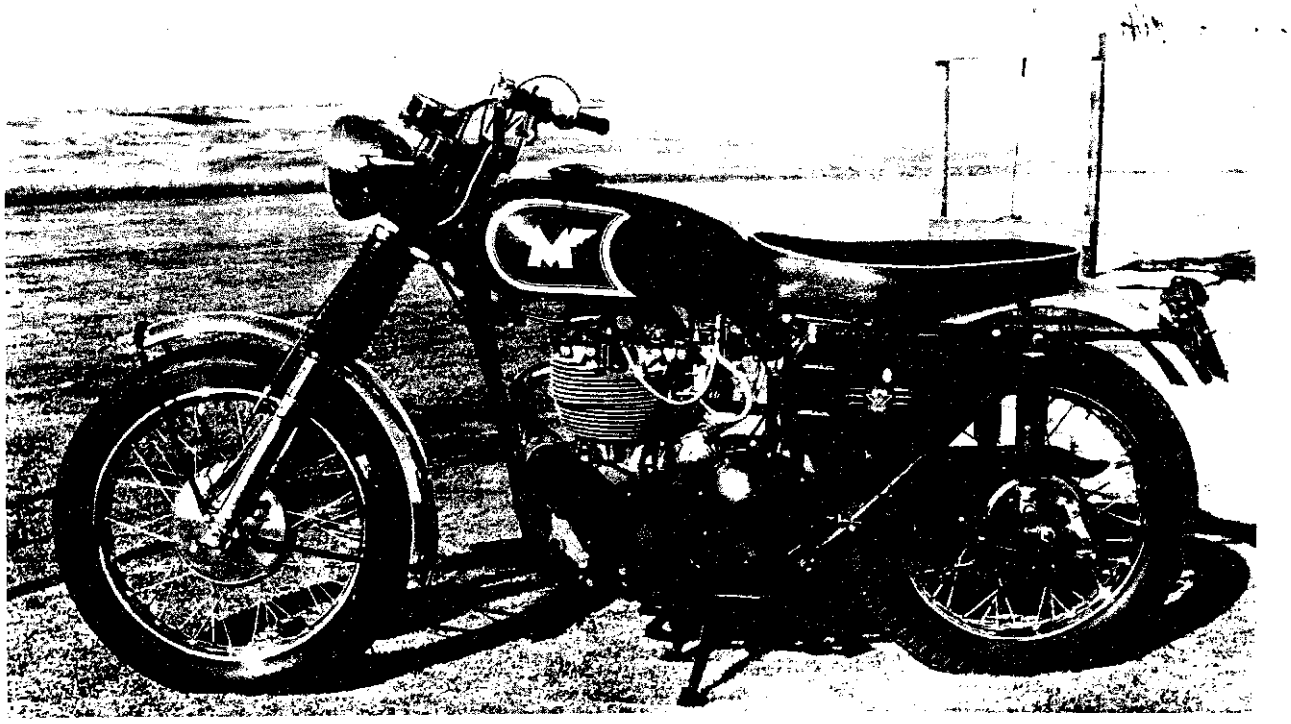
The bike given us for test had trials universal tires, and as these are not the best possible type to have on any serious "ear-holing" forays, we tested the G-50 CSR's handling qualities somewhat more cautiously than is our habit. In point of fact, there was never any indication of cornering deficiencies; the Matchless would sweep through the bends in a manner that encouraged all sorts of liberties. Given the right set of tires, this is a machine that will "road race" with the best of them.

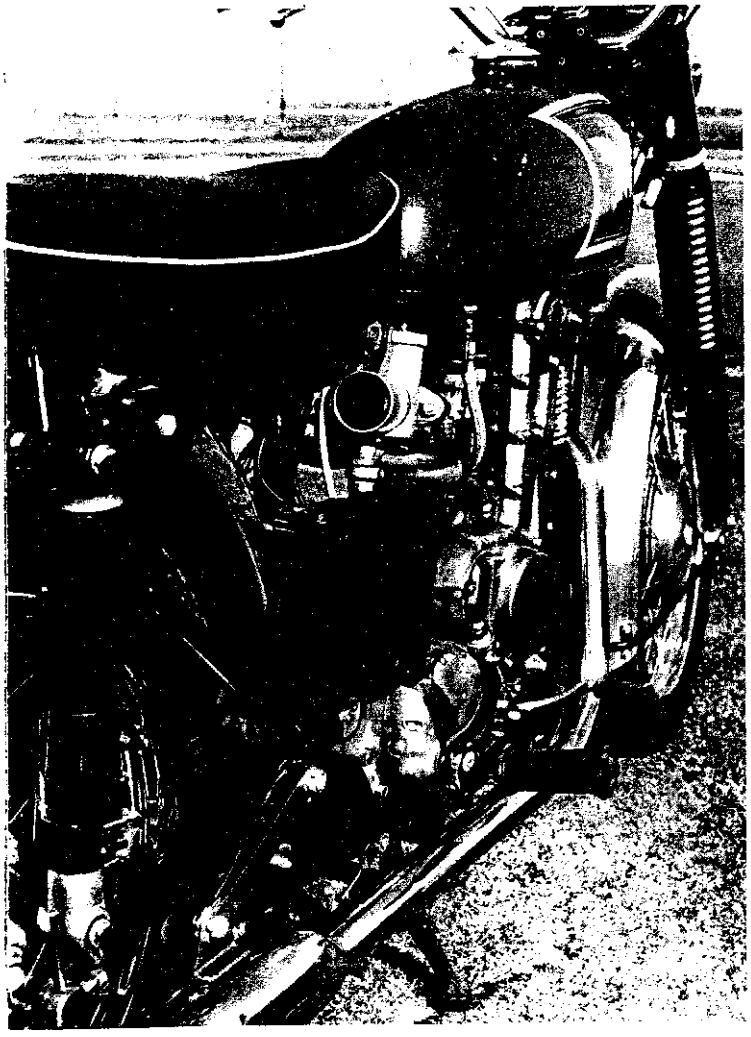
Its performance is just as impressive off the road. There is a great deal of steering lock, and the wheelbase is reasonably short, so the G-50 CSR is quite maneuverable. The stability out in the rough is every bit as good as it is on the road, too, and given high-traction, knobby tires, this Matchless is going to be very hard to beat in hare-and-hounds and scrambles events.

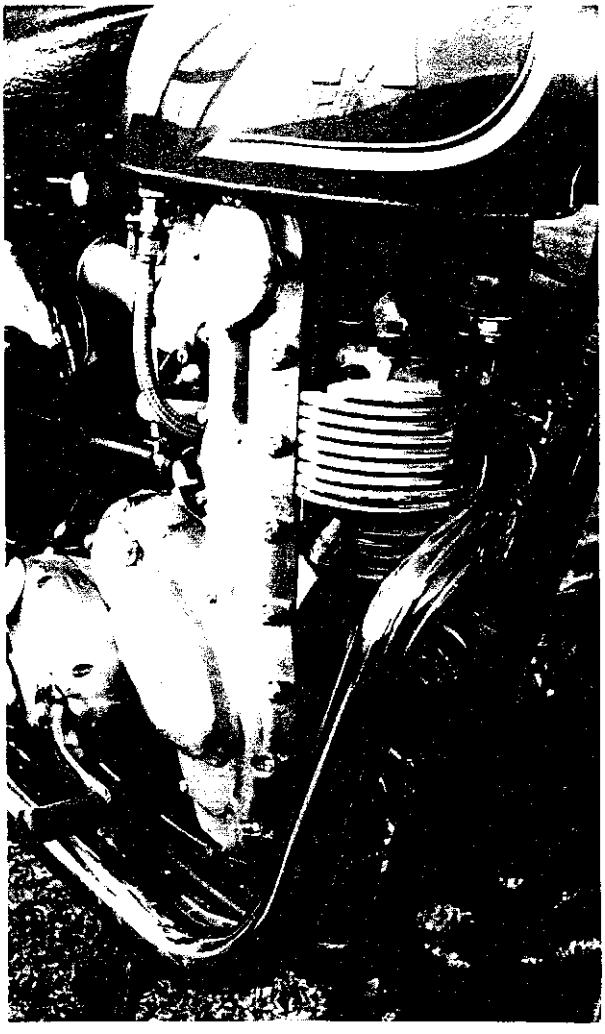
In evaluating this new Matchless, we were led to conclude that its dual road race/scrambles character is the result of a deliberate plan. Initially, we had rather wished that Matchless had either put lights on the G-50 racing bike, or else put the G-50 engine in a real, 100-percent, dirt-flinging scrambler. What they *have* done is much wiser; the man who buys a G-50 CSR will certainly have competition in mind – though it really is smooth and docile enough for touring use – and Matchless has provided a machine that stands squarely at the center of things. A few changes in the suspension, tires, and miscellaneous hardware and the buyer can have either a demon dirt bike, or a smooth and furious road-racing machine – and all sorts of shadings between the two. The G-50 CSR may well be the most versatile competition bike ever to come to our shores. •











MATCHLESS G-50 CSR

SPECIFICATIONS

List price	$1,550
Frame type	tubular, two-loop
Suspension, front	telescopic forks
Suspension, rear	swing arm
Tire size, front	3.25-19
Tire size, rear	3.50-19
Brake lining area, sq. in.	23.5
Engine type	single cyl. dohc
Bore & stroke	3.54 x 3.07
Displacement, cu. in.	30.25
Displacement, cu. cent.	496
Compression ratio	10.6
Bhp @ rpm	48.5 @ 7200 (est.)
Carburetion	1⅜" GP2 Amal
Ignition	Lucas magneto
Fuel capacity, gal.	2.0
Oil capacity, pts.	5.0
Oil system	dry sump
Starting system	kick, folding crank

POWER TRANSMISSION

Clutch type	multi-disc
Primary drive	single-row chain
Final drive	single-row chain
Gear ratio, overall:1	
4th	4.78
3rd	5.83
2nd	8.13
1st	12.23

DIMENSIONS, IN.

Wheelbase	55.0
Saddle height	32.5
Saddle width	10.5
Foot-peg height	10.5
Ground clearance	6.5
Curb weight, lbs.	385

PERFORMANCE

Top speed, average	121
best run	(7200 rpm) 121
Max. speed in gears @ 7200 rpm	
3rd	99
2nd	71
1st	47
Fuel consumption range, mpg	25/45
Mph per 1000 rpm	16.8

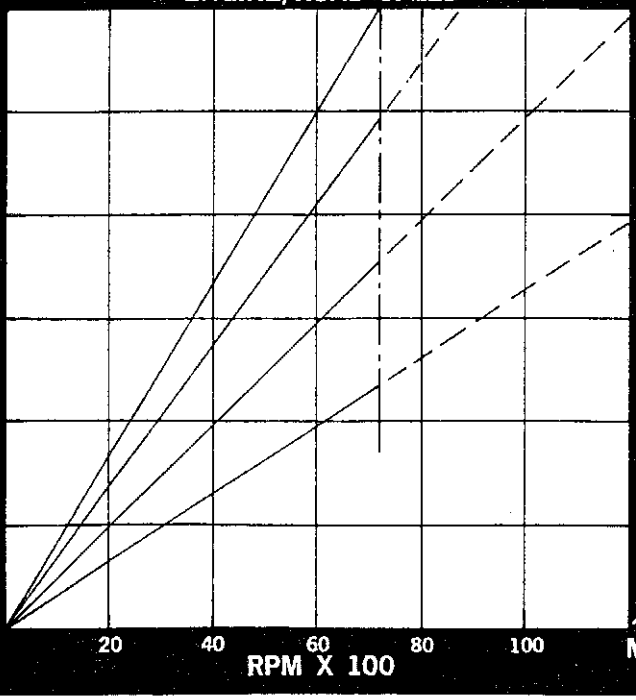
SPEEDOMETER ERROR

30 mph, actual	26.9
50	46.2
70	65.4

ACCELERATION

0-30 mph, sec.	2.6
0-40	3.3
0-50	4.7
0-60	5.7
0-70	6.9
0-80	9.1
0-90	11.5
0-100	15.6
Standing ¼-mile	14.1
speed reached	98

ENGINE/ROAD SPEED



ACCELERATION