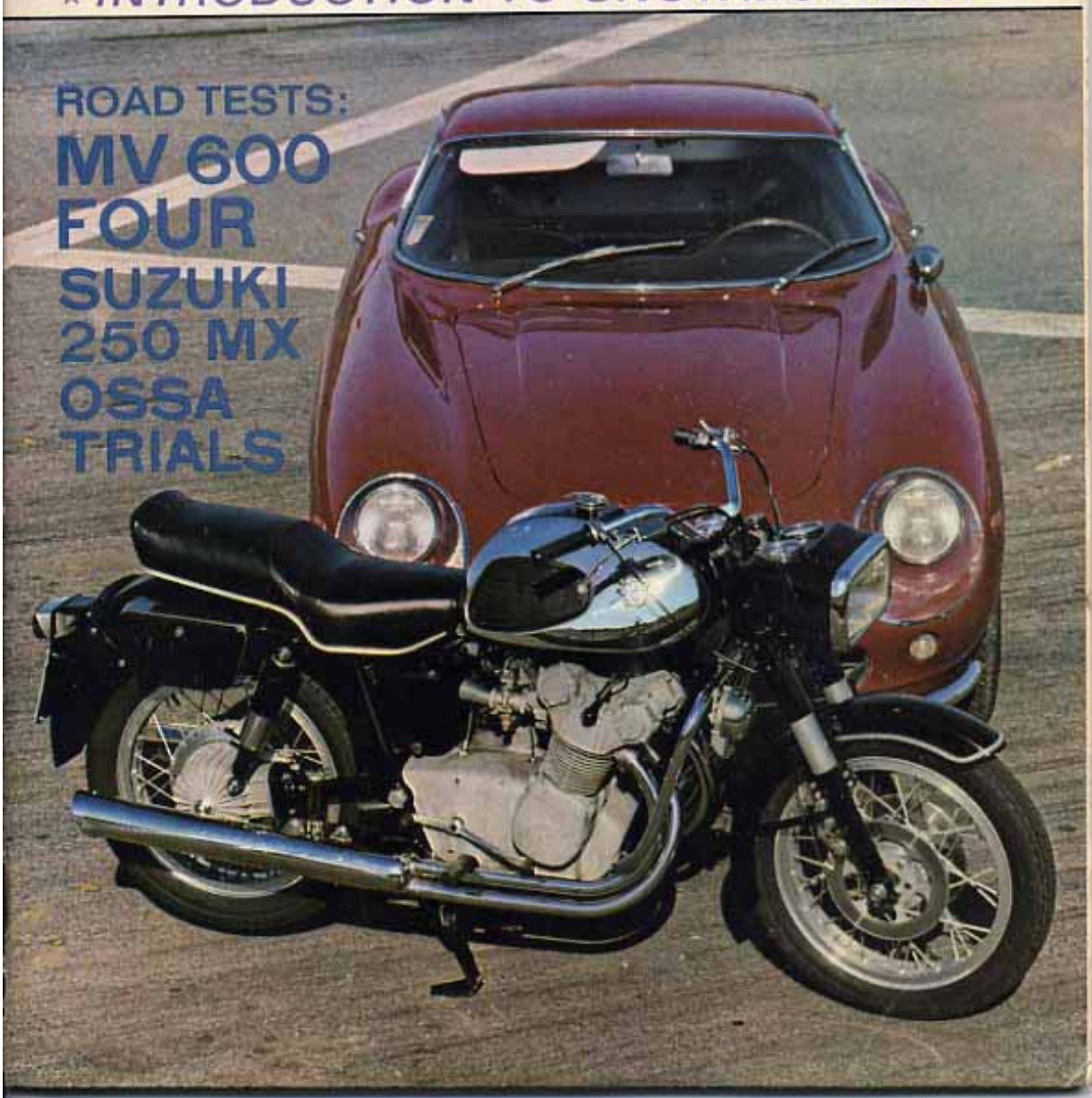
CYCLE WORLD

MARCH 1968

ICD FIFTY CENTS

AMERICA'S LEADING MOTORCYCLE ENTHUSIASTS' PUBLICATION

☆ INTRODUCTION TO SNOWMOBILES ☆



ROAD TESTS:

MV 600 FOUR

SUZUKI 250 MX

OSSA TRIALS



CYCLE WORLD
ROAD TEST

MV AGUSTA 600 FOUR

A SMOOTH RUSTLING WHISTLE, the quick tearing of thick silk, announces arrival of Count Domenico Agusta's 600-cc Four. This fascinating sound, an exciting whisper-pitched portent of power, comes as a surprise to those who recall the thunderous MV Agusta machines of the Grand Prix circuit, the championship roadburners of Hailwood, Agostini and Surtees.

The MV Agusta 600 Four is not a piece of high-strung racing machinery; it is a smoothly engineered, smoothly finished motorcycle expressly for the road.

The good Count's racing Super/Fours are the brutish forebears of the 600's powerplant, but in this machine the excessively peaky performance of the competition motorcycles has been replaced by broader, mid-range rpm flexibility that makes this MV perhaps the premier roadster of the world.

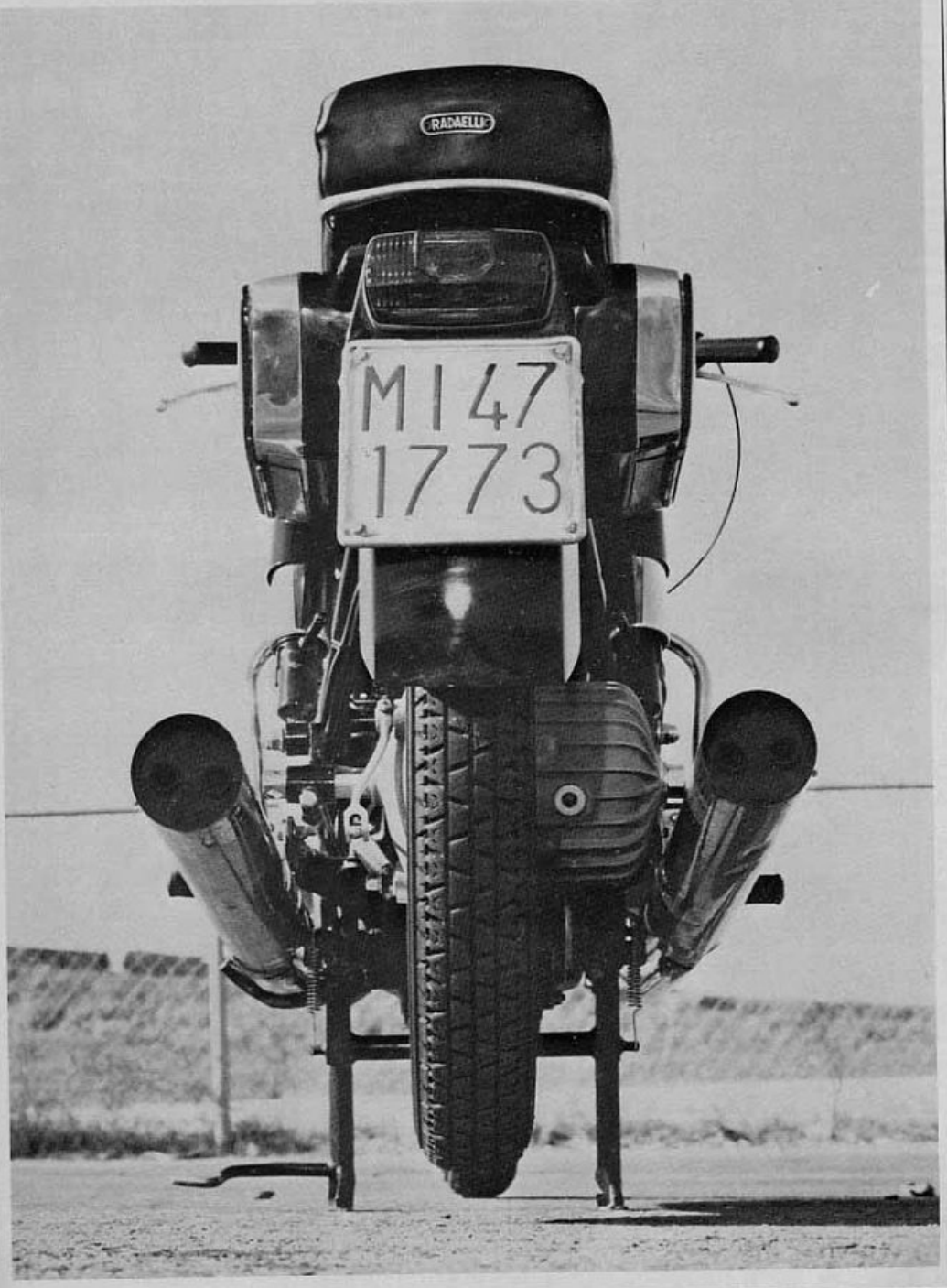
This statement is bold, indeed, but it is not made without careful consideration — and a great deal of very pleasurable riding.

In addition to that sound, first sight of the MV Four is impressive. Double disc brakes and massive rectangular headlight forward, hat-shaped ring and pinion gear housing at the rear, and the broad, humped fuel tank and formidable engine in between present a truly massive appearance. Yet, sheer size is not present for the sake of size, as it is with some American automobiles, for example. The bulk of the MV Four is functional. What needs to be big *is* big.

Astride the MV, however, much of that awesome largeness falls away. The short-legged rider finds the soft saddle positioned at such low altitude that even *his* feet are flat on the ground when the bike is at rest. The long of arm and leg discover that footpegs, handlebars and control levers are in equitable positions. Both long and short agree the MV is very close to universal comfort in a motorcycle.

Once rolling, the last trace of massive demeanor disappears completely.

The air cooled four-cylinder engine, turbine smooth, is responsive from fast idle (after a 2- to 3-min. warm-up period) to full throttle. In the lower gears, the Four quickly achieves maximum rpm and gears must be changed up quickly. Though gear spacing is excellent through the five speeds, wider ratios could have been employed, so wide


RADAELLI
M147
1773

is the MV Four's useful power band. Clutch lever and gear change mechanism work together in smooth accord.

If the engine is to be faulted in any respect, it is for lack of flywheel effect. Test riders were forced to maintain an inordinate idle rpm when stopped for traffic lights. Even lacking marked flywheel action, however, the Four delivers adequate getaway power without undue clutch slippage or overly high rpm.

Technically speaking, the powerplant is of double overhead camshaft design. The intake and exhaust camshafts both are driven through a gear tower located between No. 2 and No. 3 cylinders of the Four. This particular engine layout is best known for minimization of reciprocating valve train inertia, and for free breathing, as pushrods do not protrude into the intake or exhaust gas streams.

Thus, the MV engine's designers weren't forced into parsimony for intake and exhaust port area. The ohc layout, with its straight-cut drive gears, numerous bearings, and lobe-to-stem cam contact areas, contributes that which is perhaps the MV's outstanding characteristic — the beautiful sound.

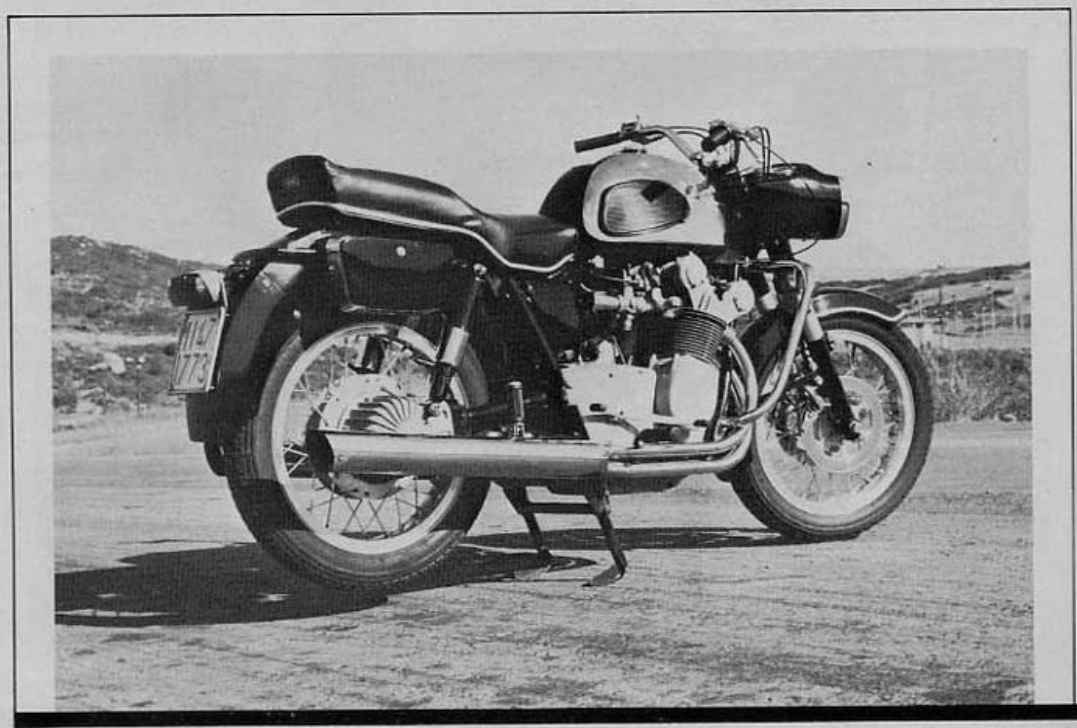
The valve equipment's audibility is directly attributable to the quietness of the remainder of the MV's power train. The primary gear drive (oil pump and distributor drives, too) also is between the middle cylinders. The constant mesh five-speed transmission delivers power, through the multiple-disc clutch, to a geared, slip-splined cardan shaft which turns the pinion gear, which turns the final drive ring gear. The drive shaft housing is employed as the right-hand swinging arm. The MV's shaft drive system showed no slack, or general jerky looseness, nor the characteristic sounds of chain drive motorcycles. Indeed, the shaft drive was one of the major contributors to the MV's overall quality of smoothness.

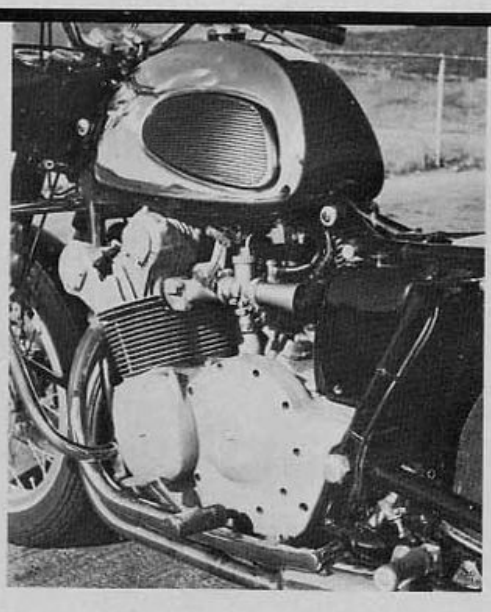
A pair of 24-mm Dellorto carburetors, each fitted to a U-shaped manifold, serve the left and right pairs of cylinders.

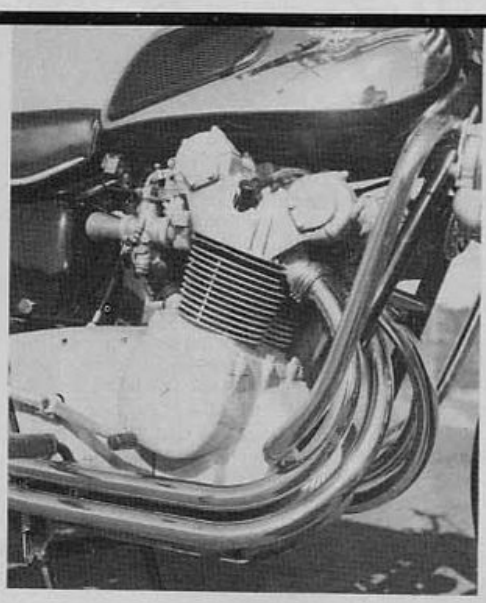
The test machine's induction system was not fitted with any sort of air filtration device. Rather, conical velocity pipes adorned the carburetor inlet orifices. Lack of filtered air may be well and good in a region where streets and highways are regularly washed with rain, but filtration seems mandatory in areas where abrasive dust is an ever-present fact of life — in the western U. S., for example. Ample space is available under the MV's fuel tank or split level saddle for an air filter cannister. The Count's designers could well busy themselves in readying such a device for export models of the MV Agusta 600 Four. True, restriction of intake air would reduce power output of the Four. But what is 1 bhp of 50 when a magnificent and expensive Italian engine can be prevented from grinding itself to uselessness with ingested grit?

The MV Four's electricals functioned without fail — with one major exception. The battery (rated at 12 V, 18 ampere/hours) simply wasn't up to the task of spinning the 9.3:1 compression ratio four-cylinder engine while at the same time supplying electric spark required for ignition and sustained combustion. Frustrated is a less than adequate word to describe the feelings of those who were forced to bump-start the hefty tourer so carefully designed and equipped for effortless electrical pushbutton starting. A U. S.-made light aircraft battery would prove a replacement of adequate power output and suitable size.

The MV's 12-V, 135-W generator (which doubles as starter) proved adequate to meet demands of the 45-W











headlamp and the 25-W power requirement of tail and brake lights. The headlamp — the shape of which is prohibited in some unenlightened states among the 50 — provided a broad swath of brilliant illumination for nighttime operations.

The roadable motorcycle, the machine that is to be driven at top legal speeds wherever it goes, must be equipped with means to decelerate at the rider's chosen rate, or stop smoothly, without incident, should the all-on panic situation arise. The MV's double-disc front and drum rear system accomplishes either chore with ease. The smoothness of the MV Four carries over into its braking equipment. Slowing for a bend is simply a gradual, lightly increasing pressure on foot and hand braking levers — accompanied by effortless downshifts. A full stop simply is greater lever pressure exerted more quickly — with care

being exercised to maintain maximum deceleration just short of wheel lockup. A number of braking runs, changing very high speed to low speed as quickly as possible, demonstrated that the double disc fronts tend to fade slightly as kinetic energy, converted into heat, is accumulated in the discs to the detriment of the entire system.

Suspension, hydraulically damped telescopic fork in front, and swinging arms with telescopic shock absorbers and coil springs at the rear, contribute mightily to precise handling and comfortable ride, but functioned most admirably under hard braking, as the MV Four showed no inclination to dive excessively on application of the front discs. This is another example of the ground-up engineering that produced the MV Four roadster — no touchy harshness of the GP racer in this integrated piece of machinery for bearing driver and passenger along public streets and highways. Again, smoothness is the most fitting description for MV suspension.

Without equivocation, it can be said the MV Agusta 600 Four is the most exciting of the world's touring motorcycles. It may well prove to be the finest road machine ever built. It already has proven itself to be the smoothest.

What place does this most exciting, finest, smoothest tourer have among the motorcycles of the world, the machines that are regarded by the majority as first line road machinery? The answer to this question must wait a year or two or more.

The MV Agusta 600 Four is an expensive machine. Its domestic price is approximately 1,160,000 lira — or $2000 U. S. Import duty, shipping charges, federal and state taxes, and standard markup for dealer profit could raise the American price of this premier machine to $3000 or more, an amount exceeded in the two-wheel realm only by the Clymer-Munch Mammoth, certain one-off specials, racers, and absolutely full-dress Harley-Davidson machines.

Because there are those who will settle for less at lower price, a safe prediction is that the MV Agusta 600 Four will remain a limited production item. Only one, to date, has reached U. S. shores, brought in by Gilberto Cornacchia of Rome, son of Franco Cornacchia, who gained fame in Europe in the mid-1950s as a racing manager and Ferrari driver. The lone MV Agusta 600 Four on U. S. soil is advertised for sale elsewhere in this magazine.

Additional machines may be brought into the U. S. as Guillietta Imports of Jersey City, N. J., holds an option to import MVs, but cannot do so until the motorcycles have undergone minor modifications to meet lighting requirements of federal safety standards.

When CYCLE WORLD's man in Italy, Carlo Perelli, reported (CW, Oct., '67) that the MV 600 Four is the "most fabulous roadster ever produced," editors were inclined to exchange knowing looks, say, "Ho hum," and write off the extravagance to the emotional nature of Italians. These selfsame editors now agree with the faithful Italian correspondent.

Thus, these editors are inclined to believe that high price, trade barriers, safety regulations, taxes and limited production will not altogether hamper import of the premier MV.

All considered, there are those who always buy the recognized best — Ferrari cars, Rolex watches, Nikon cameras, Russian caviar, and English china — hang the cost.

The MV Augusta 600 Four, the ultimate in motorcycling smoothness, no matter what price or difficulty, certainly is the machine that will be sought and bought by the motorcycle connoisseur. ■

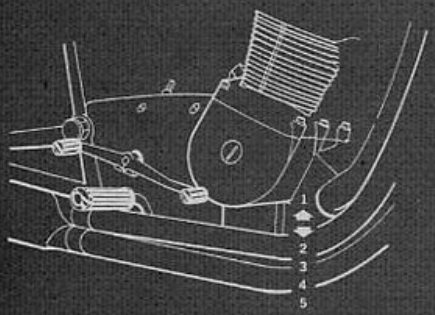




MV AGUSTA 600 FOUR

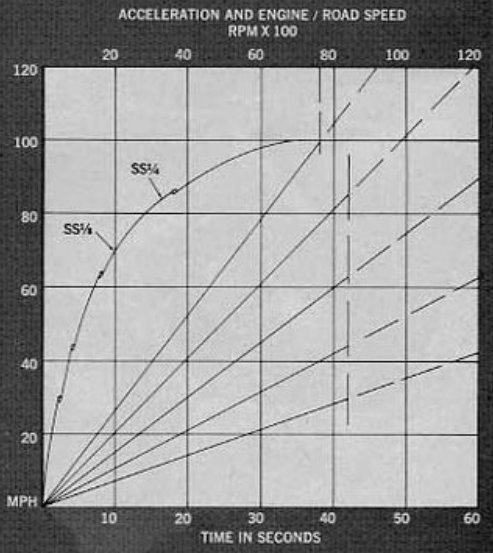
SPECIFICATIONS

List Price (In Italy, $2000)	$3500
Suspension, front	telescopic fork
Suspension, rear	swinging arm
Tire, front	3.50-18
Tire, rear	3.50-18
Brake, front, diameter x width, in.	9.875 x 1.187
Brake, rear, diameter x wdith, in.	8.000 x 1.772
Total brake swept area, sq. in.	184.5
Brake loading (test weight/swept area) lb./sq. in.	3.64
Engine type	transverse ohc 20° IL-Four
Bore x stroke, in., mm	2.28 x 2.20, 58 x 56
Displacement, cu. in., cc	36.1, 592
Compression ratio	9.3:1
Carburetion	(2) 24-mm Dellorto MB 24
Ignition	battery and coil
Claimed bhp @ rpm	50 @ 8200
Oil system	pressure, by gear pump
Oil capacity, pt.	6.5
Fuel capacity, gal.	5.8
Starting system	electric motor
Lighting system	12-V generator
Air filtration	none
Clutch	multiple disc, wet
Primary drive	(1.75:1, 1.066:1) gear
Final drive	(3.00:1) bevel shaft
Gear ratios, overall:1	
5th	5.60
4th	6.96
3rd	9.43
2nd	13.60
1st	20.00
Wheelbase, in.	55.2
Seat height, in.	31.6
Seat width, in.	12.6
Footpeg height, in.	11.25
Ground clearance, in.	5.9
Curb weight (w/half-tank fuel), lb.	505
Test weight (fuel and rider), lb.	673



PERFORMANCE

Top speed (actual), mph	99.3
Calculated top speed in gears (@8200 rpm), mph	
5th	106.2
4th	85.5
3rd	63.2
2nd	43.6
1st	29.7
Mph per 1000 rpm, top gear	12.9
Speedometer error:	
30 mph indicated, actually	29.4
50 mph indicated, actually	48.1
70 mph indicated, actually	67.6
ACCELERATION, ZERO TO —	
30 mph, sec.	2.5
40	3.6
50	5.2
60	7.2
70	10.2
80	14.4
90	21.2
100	
Standing 1/8th mile, sec.	9.92
terminal speed, mph	69.07
Standing 1/4 mile, sec.	16.41
terminal speed, mph	83.95



Weber BETTER MOTORCYCLE CAMS

Superior riders, more than likely, are straddling a Weber Motorcycle Cam . . . because Weber gives superior motorcycle performance.



Cams all look alike, but when you run Weber they don't feel alike. Sophisticated lobe engineering that gives higher **lift**, longer **duration**—made possible by the Weber HARDWELD process that wears and wears and wears . . . shows you performance in your bike the makers couldn't dream of.

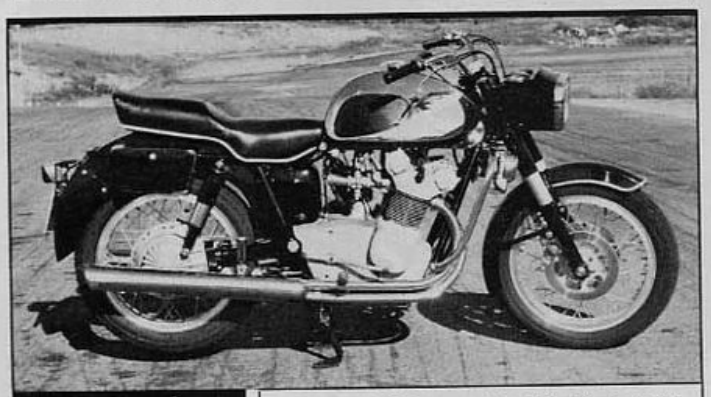
Your Bike . . . your Weber Cammed Bike . . . will shut off the stock breed like it was standing still. Weber grinds superior cams for any 4 stroke . . . Ariel, Benelli, BMW, BSA, Capriolo NSU, Ducati, Garelli-Rex, Gilera, Harley-Davidson, Honda, Indian, Kawasaki, Magnum, Matchless, Moto Guzzi, Norton, Royal Enfield, Triumph, Velocette, Vincent . . . you name it . . . Weber will cam it to win!

FROM ONLY $29.95 . . . and WEBER MOTORCYCLE CAMS CARRY A FULL ONE YEAR WARRANTY AGAINST WEAR.

Send 25c for new Motorcycle Cam Catalog with full technical data PLUS direct ordering information. Write us today!
Dealers: Contact Sales Manager, some areas still open.

Weber

Weber Speed Equipment
310 S. Center Street
Santa Ana 19, Calif. 92703
phone 714/547-2595



★★★★★★★
1967
MV 600
FOUR
★★★★★★★
FOR SALE
★★★★★★★

The MV 600 Four road tested in this issue of CYCLE WORLD, very low mileage, in near-perfect condition.

A rare opportunity to own a genuine, one-of-a-kind motorcycle and the only one in the U.S. My price includes air freight from Italy, U.S. Customs duty, etc., **$3,500.00,** or nearest offer.

GILBERTO CORNACCHIA
C/O S&A AUTOMOTIVE
Salvatore Dinatale
7819 SEPULVEDA BLVD., VAN NUYS, CALIF. 90023
PHONE AREA 213, 782-6033

SERVICE continued

tating the cam into the full advance position. The light should go out at the same time full advance is obtained. If the left-hand cylinder is slightly out, the correct timing can be obtained by varying the points gap. For each 0.001 in. that the points gap is increased, the timing will be advanced one degree. Closing the points will have the effect of retarding the timing.

What type (heat range) of spark plug are you using? If the plug is too hot, this will most likely cause pre-ignition, and also will mislead you when taking plug readings. The correct plug for your machine is an N 3 Champion or equivalent.

According to the information that I have, the 190 main jet you are using is far too small. It is recommended that a size 260 or larger be employed. However, before attempting to tune the carburetors, first check and adjust the float chamber fuel level. Also, check that both the throttle slides start to lift at the same time, and that they both obtain full throttle. There is a small booklet available from your BSA dealer that fully describes the operation and tuning sequence of the Amal GP2 carburetors fitted to your Spitfire.

It is characteristic of the big BSA twins to have a vibration period. However, the extent of vibration should not be intolerable. Check that all engine mounting bolts are tight. The factory balance 70 percent of the reciprocating weight on all their big twins. It may be worth the trouble of having your engine dynamically balanced to the same factor (70 percent), or it may be worth changing the factor to either 60 or 80 percent. The latter could have the effect of moving the vibration period to another rpm range that is more acceptable. If you have the time and the money, it could be well worth trying.

Any of the above tips also apply to BSA's 1967 Spitfire Mk III.

IT ISN'T O.J.

I just purchased a used '67 305 Honda Scrambler in Sept. and have only put on about 600 miles (1795 total) since I got it. It seems as though I have acquired a short in the wiring, but I'm not sure. I burnt out the taillight and headlight because of the tremendous amout of "juice" it was getting from somewhere. Now, when I start it, if I start it, the neutral light is real bright and flickers as the engine turns over. The engine also misses when not revved up and usually dies. I would like to get it fixed before winter, as I plan to ride it and would like it to start. What's wrong?

Larry Matt
Stillman Valley, Ill.

It is almost certain that your machine has a defective battery. There is probably an internal break or bad contact between the cell connectors that is causing a high resistance in the electrical system. This will cause a voltage rise, that will burn out bulbs, and cause the neutral light to be brighter than normal. It is quite a common complaint on Hondas, and can be quickly checked out by trying a known good battery.

■