





In an attempt to determine which of today's touring motorcycles work best—and why—*Cycle's* staff spent a month and a half with eight of them: the Harley-Davidson FLH 1200, Moto Guzzi 850-T Interceptor, Suzuki RE-5 and GT-750M, Honda GL-1000 Gold Wing, Norton 850 Interstate, Kawasaki Z-1B and BMW R90/6. We were surprised by what we found out. You will be too.

# EIGHT FOR THE OPEN ROAD

**T**he BMW R-90/6, Honda GL-1000, Suzuki RE-5 Rotary and GT-750, Moto Guzzi Interceptor, Norton Interstate, Harley-Davidson FLH and Kawasaki Z-1B represent the logical field from which a buyer might select a top-of-the-line, intermediate- to long-range touring motorcycle. What follows is *Cycle's* comparative evaluation of these eight bikes with regard to quality of workmanship, ergonomics (how well the motorcycle and its controls mesh with the average-sized rider), vibration control, suspension compliance, two-up suitability, acceleration, ease of operation both in-town and on non-Interstate roadways, overall noise level, and maintenance and conveniences.

The bikes are evaluated on a zero-to-nine scale, zero being unacceptable and nine being outstanding. Based on the scoring of eight test riders, the bikes will be comparatively ranked in each of these categories, and there will be an *overall* ranking based both on the scores of the categories and subjective staff opinion. To simply add the scores and determine a winner based on point totals is unreasonable; some categories are obviously more important than others, both to individual riders and in general.

You have noticed that the most popular touring bike of all time, the CB-750 Honda, is not included in the comparison. Why? Because the CB-750 Honda, although widely available at the retail level, is no longer in production. The four-pipe Four has been replaced by the new 750 Super Sport, and while the new Four will doubtless serve well as a touring mount it is neither marketed nor presented as such.

Accompanying the *Cycle* Magazine staff and participating in the scoring were two individuals selected for their touring experience: Bob Johnston, long-time *Cycle* associate, 25-year tourer and veteran of many cross-country jaunts; and Roger Hull, Publisher and Editor of America's finest touring publication, *Road Rider Magazine*. Johnston and Hull provided invaluable insight both in measuring



the capabilities of the motorcycles and in educating the staff about the qualities they and most other tourers consider critical in a long-distance bike. And most important, Johnston and Hull could be expected to provide the balance of age: Johnston is in his early forties, and Hull is past fifty. Between the two of them they have been on the road for over half a century.

There are many categories and considerations that this test cannot pretend to discuss: dealer networks, long-term reliability beyond our own experiences and what we learned on our 1400-mile trip, uncontrollable variations in pricing in different parts of the United States and Canada, and a legion of highly personal preferences that have always and will always contribute profoundly to the success and failure of different products and to the shape of the market. We cannot discuss in any absolute way appearance, the attractiveness or intrusiveness of different exhaust notes, or charisma—all of which we know to be important.

What we *can* discuss is how the bikes function—and function is what this comparison test is about.

# EIGHT FOR THE OPEN ROAD: PROFILES

## BMW R90/6

**T**he BMW is a traditional machine that has been, over the past 50 years, polished, honed, enlarged, softened and quieted to compete as a solid contender in the heavyweight touring field. Its unique engine assembly conceals busy paraphernalia within enormous aluminum center tunnel housing castings. This one casting assembly holds the crankshaft, clutch, transmission, alternator, starter motor, ignition and air-intake. The engine is lubricated within the tunnel housing by a high-pressure wet sump system. The gearbox parts spin in their own oil.

Protruding from the case castings are the two 180°-opposed cylinder/head castings. Having the same stroke as two smaller BMW engines, the increased displacement comes from massive over-boring. Valve actuation is accomplished with a conventional pushrod system.



The BMW fork incorporates soft springing with gentle damping and seven inches of travel. The rear shocks mate in softness with the fork. This year's disc brake is drilled for improved cooling and better friction efficiency in the wet. The cable-actuated master cylinder hides under the gas tank. The throttle twist uses a gear-driven cam, chain, and cable.

BMW uses a single-plate dry automotive-type clutch. The gearbox is a five-speed unit with wide spacing in the lower gears and close staging between fourth and fifth.

Five decades of experience with one basic design and constant improvement of engine, driveline, suspension, chassis and comfort bring the BMW into the 1975 touring era. Long-term reliability, comfort, torquey engine performance and design simplicity buttress the R90/6's popularity among long-haul tourers.





## HARLEY- DAVIDSON FLH-1200

**D**own where it counts, the big Harley-Davidson is pure anachronism, a machine existing out of its time. Not only does the FLH have design origins in the very remote past, it also may fairly be said to represent fundamental concepts about motorcycling rooted in another and much earlier period.

When this largest Harley-Davidson was assuming its form, Americans still equated sheer size and weight with value in most things, especially motor vehicles. The FLH reflects that kind of thinking: it glories in bulk, celebrates billowing dimension. For that reason alone, it remains to many the undiluted image of what a motorcycle is

supposed to be. Anything less is a toy.

Oddly enough, the massive FLH is remarkably insubstantial in some of its details. Its frame, for example, is a rather sketchy collection of tubes smaller than those used in bikes hundreds of pounds lighter, and various small fittings prove themselves unequal to all the pounding vibration radiated by that big 45° V-twin by falling apart.

Harley-Davidson has chosen to counter the effects of vibration on the rider with a piecemeal version of the Norton Isolastic system. But instead of rubber cushions between engine and frame, the FLH shake-stoppers are at the handlebar mount and under the cover plates on the

footboards. It works, after a fashion, unless the rider's knees touch the tank.

Indeed, most of the FLH's present shape seems to have been acquired piecemeal, with all but the foundations lifted whole from a supplier's shelf or fashioned from standard-section lengths of structural steel. Honda may forge brake pedals; Honda bends them from strap iron.

None of these niceties matter to the Faithful, for whom the FLH is the last "real" motorcycle left in all the world. They aren't really interested in what a machine will do; they care about what it is, and in their view nothing else quite qualifies as a motorcycle—or makes them genuine motorcyclists.

## HONDA GL1000 GOLD WING

**T**aken on specification alone, the big GL-1000 looks like nothing less than the perfect touring bike. It certainly has all the design features riders have said they wanted in a long-distance runner, and Honda has provided others that make the Gold Wing a genuine technological *tour de force*.

Vibration is fatigue's friend and the touring rider's mortal enemy. By giving the GL-1000 engine a flat-four configuration Honda has made all its internal dynamic pushes and pulls self-cancelling, and nothing emerges to buzz the handlebar or fuzz the mirrors.

Chains are messy and not entirely reliable, so there is a drive shaft back to the Honda's rear wheel. Other shaft-driven motorcycles with crankshafts disposed along their centerlines have problems with engine torque reactions, but these have been compensated in the Gold Wing with the reflected inertia of a contra-rotating alternator rotor.

To get adequate and equal cooling of the cylinders, front and rear, the engine has been given water jackets, a radiator, thermostat and pump. For power, it has belt-driven overhead camshafts, a liter of displacement, and four constant-vacuum carburetors. The power is there: one test rider complained that the Gold Wing was "characterless"; it was quickly and correctly pointed out that with the throttles open and 7000-plus rpm showing on the tach the Honda had all the character a prudent man could stand.

Overall, the GL-1000 is a demonstration of Honda's cleverness with things mechanical, from its trio of disc brakes to the placement of the transmission under the crankshaft (which minimizes length) and including such things as locating the fuel tank under the seat to lower the center of gravity. The "tank" you see is just for storage, and houses an air cleaner; an engine-driven pump transfers fuel from the real tank to the carburetors.

If all the above do not make the Gold Wing perfect, they at least make it brilliant. And it might be perfect if Honda's engineers spent less time in the computer room and more on a motorcycle.

**N**orton launched their Isolastic-equipped Commando in 1969, and in the following years variations and derivatives of that first Commando have kept Norton alive and well in the United States. Economic circumstances and basic inclinations led Norton to update piecemeal an engine designed generations ago. But the master-stroke for survival was the Isolastic running gear which successfully insulated the rider from the inevitable vibrations of a big vertical twin. Without the Isolastic chassis, Norton would have been dead in the United States as a touring machine, or anything else.

First distinguished by its enormous gas tank, comfortable seat and quiet mufflers, the Interstate (introduced in 1972) was the harbinger of softer, quieter, heavier, and more civilized Nortons. The British built the Interstate as a touring machine, though at first the concept of putting a great distance between your Norton and its parts-shelf seemed revolutionary. But it shouldn't have. Norton-Villiers had pushed and shoved the old twin forward into the 1970s, making the bike as modern as possible.

The new 850 electric-start Interstate showcases that effort. An American Presolite starter nestles behind the cylinders

and intersects the primary chain inside a revised chain case. But far more than electric starting is new. The crankcases have thicker walls and the crankshaft itself is stiffer than before. The Isolastic rubber bushings no longer need adjustment shims; now vernier-type threaded adjusters can quickly dial out any looseness. The Mark 2A intake-exhaust system, comprised of an effective air-filter box and super-quiet mufflers, smother combustion sounds. Meanwhile the inlet ports have been opened up to 32mm to improve mid-range and top-end response.

The new rear disc brake is carried on an enlarged swingarm and rear axle; the hub has a new cush-drive using a pre-loaded vane-damper. The quick-detachable rear wheel has been retained for the flat-tire bunch. And there's a score of important small changes, including inspection caps for the ignition and primary chain, left-side shifting, new instrument facia, revamped controls, etc. Touring types may be more interested, however, in the reprofiled saddle which, according to Norton, has greater seating area and support than earlier Interstates.

Norton Commandos which would blaze the quarter-mile in the twelves belong to the past. The reworked 850 is one-point-five seconds slower, and—for the long-haul-rider—a better machine for the loss.

## NORTON COMMANDO 850 INTERSTATE



## SUZUKI RE-5 ROTARY

**T**he Suzuki RE-5 Rotary whirled into the motorcycling experience late in 1974 and has been at the center of controversy ever since—because of the kind of motorcycle it is, and because of the way it looks. It is—briefly—powered by a single-rotor Wankel engine that is pleasingly simple in the abstract and astonishingly complex in reality. A triangular-shaped rotor spins eccentrically within an epitrochoidal center housing, each face of the triangle pulling in air-fuel mixture, compressing it, reacting to the ignition of the mixture and then discharging burned gases out a peripheral exhaust port. The rotor revolves around a shaft with a large eccentric, the eccentric corresponding to a throw on a normal crankshaft. As the mixture is ignited, the rotor is driven away from the interior surface of the housing; the bulge in the shaft converts this force into output shaft rotation. The rotor has three faces, each of which displaces 500cc.

That's the part that is pleasingly simple; there are essentially but two moving mechanisms. But because of a number of problems peculiar to Wankel engines,

the RE-5's support systems are to complexity what Attila was to pushy behavior. The Rotary demands precise intake charge metering—so the RE-5's carburetor weighs over five pounds, responds to the commands of no fewer than five cables, and has five mixture circuits. The Rotary needs a special kind of ignition so that the bike will behave itself in certain modes—so there are two separate ignition-point systems, one of which operates only below 1700 rpm in the deceleration mode. The Rotary has its own heat rejection problem—so the bike is equipped with elaborate water jacketing, radiator and oil cooler.

But complexity does not lead to unreliability; in the three exposures *Cycle* has had to the RE-5 (except for this one—it gobbled two spark plugs in 1350 miles), it has proven as trouble-free as any large, expensive tourer. Beyond its apparent toughness the RE-5 handles better than any other Japanese big bike, controls its engine vibration without deterioration-prone elastic motor mounts and offers the average-sized rider an average amount of long-distance comfort.

A photograph of a person riding a Suzuki RE-5 Rotary motorcycle on a paved road that curves to the left. The rider is wearing a black leather jacket with orange and white stripes on the back, blue jeans, and a silver helmet. The motorcycle is dark-colored with chrome accents. The background consists of green trees and a clear blue sky. The license plate is visible and reads 'CALIF 23 401'.

**EIGHT**  
OPEN ROAD



## KAWASAKI Z-1B 903

**T**he Kawasaki 903cc Z-1 can—and has—done everything. Carefully nursed, it will deliver 50 miles per gallon on high-test, low-test or no-test. Lash one to your friendly dynamometer and it will spin out just under 83 bhp at 10,000 rpm. If you're a good rider you could win the Daytona Production Race with one, or the Laguna Seca Production Race, or the Ontario Six-Hour. Dress one up in Pro Stocker guise, like Mike Brusco did, and it'll turn 10.0s at the drag strip. Leave one completely alone and it'll turn 12.4s, a half-second quicker than the next superest Superbike.

The engine, in the Z-1's case, is the message. Generally held to be the finest motorcycle powerplant ever offered for public consumption, the 903 was introduced late in 1973 after five years of development work. The engine's scope was immediately apparent. Designed to give good flexibility and good torque at low engine speeds to handle fifth-gear passing demands put upon it by laden touring riders, generous displacement and good breathing—in conjunction with mild cam timing and lift—resulted in power characteristics that are very nearly all things to all people. Japanese engineers seem unable to build torque engines that run out of breath at higher engine speeds. The Z-1 engine is torquey at 3000 rpm. At 6000 it turns into a monster, and at 9000 it'll have you hanging off the handlebars like a streamer. For a powerplant that does so much, the 903 is absolutely straightforward: four cylinders, low compression, double overhead camshafts,

five-speed transmission, four carburetors, breaker-point ignition. The engine was designed to be The King; it is.

The rest of the bike is adequate, honest and uninspired. The old-style rear chains were good for over 9000 miles before kinking necessitated replacement; special no-lube O-ring chains introduced in 1975 promise even better chain life. A bike as strong and heavy as the Z-1 can be expected to vaporize rear tires; it does, with 4000 mile regularity. Low-grade rear shock absorbers perform well initially and then deteriorate quickly.

Still, however uninspired the cycle parts may be, they surround the most appealing, most broad-spectrum engine in all of motorcycling—and the engine alone is worth the price of Kawasaki's mighty Z-1.

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## MOTO GUZZI 850T INTERCEPTOR

**O**nce upon a time in 1972, there were two distinct Moto Guzzi V-twins, the 850 Eldorado and the V7 Sport. Moto Guzzi's Eldo was a gigantic, lumbering *tourismo* machine which weighed over 560 pounds wet, had limited ground clearance and marginal brakes. But it was big, smooth and comfortable. In the earholer's corner, the 750cc Moto Guzzi Sport was a sleek, powerful roadburner which handled superbly, weighed under 500 pounds (but felt lighter), and—considering its speed—also had marginal stopping capabilities despite a four-shoe front brake.

By 1974 Moto Guzzi was trying to blend both machines into a new 850-T model for the American market. Gradually the

750cc Moto Guzzi Sports faded from the American scene, though at their departure the Sports had twin-disc front brakes. Thus in 1975 the 850-T Amalgam twin carries the Guzzi standard alone in the United States.

The factory created the 850-T by inserting an updated 850 Eldorado engine into the Sport chassis, cutting back the front brake to a single disc, substituting high bars for clip-ons, and replacing the Sport tank and seat with more touring-oriented components. In the parts department switch-around, the 850-T also got new side panels, megaphone-shaped mufflers, new switches and left-foot shift.

The amalgamation resulted in a much better looking tourer than the old Eldorado—which had the grace and build of a





lumber wagon. Alejandro de Tomaso (of Ford Pantera, Benelli six-and-four fame), the new directing force at Moto Guzzi, gave the 850-T its fresh appearance.

But the familiar Guzzi touring characteristics remain. The most obvious are the ultracushy saddle, the soft suspension, and the ca-chug-lope-lope-ca-chug exhaust beat. Below 4000 rpm, the engine—mounted crosswise in the frame—shakes the whole motorcycle. At idle, revving up the engine jerks the stationary bike slightly to the right. Spinning 4000-plus in top gear, however, the engine is both effortless and smooth. The Guzzi's layout lends itself nicely to shaftdrive, and for many long-haul riders, that feature alone covers a multitude of sins and shortcomings.

## EIGHT OPEN ROAD



**B**ig touring bikes represent manufacturers' long-term planning, and the machines usually evolve slowly and deliberately. Suzuki's GT750M is the senior touring veteran from Japan; it has progressed each year since 1970 with positive improvements.

When introduced at the outset of the Superbike era the GT750 LeMans featured the first successful water-cooled engine in a production motorcycle since the Scott Flying Squirrel. The GT750's cooling system has remained unchanged save the deletion of the electric fan which proved unnecessary. Benefits of liquid cooling are twofold: regulation of operating temperature and elimination of two-stroke piston noise.

Disc brakes are now common to all road bikes, but Suzuki's LeMans was the first with twin discs. The powerful front brake can be easily actuated with two fingers. The vastly improved front fork—much stronger than the drum-brake unit—is softly sprung. New rear shocks have better damping than earlier 750s and softer constant-rate springs. The GT750M's exhaust system routes the pipes and mufflers up and in closer to the chassis than before. The exhaust system and the relocated center- and sidestands produce substantially more ground clearance than the M-model's predecessors.

Major changes in port size and location match bigger 40mm carburetors and retuned mufflers. Ponderous performance has been replaced with near-Superbike

acceleration: six-tenths quicker and six-mph faster in the quarter-mile. The huge gear-driven clutch requires a light pull at the lever and has a broad engagement point. Final drive gearing has been raised by 16% to slow engine speed.

Current is produced by an alternator with a 280-watt capacity—enough for auxiliary lighting. A triple-point, battery/coil system handles ignition sparks. Touring considerations include the broad bench-type saddle, 4.5-gallon gas tank, 1000-mile range oil injection tank, rubber-mounted engine and shock-retained mirrors. Inherent in the GT750M are rumbling engine vibrations, continuous chain stretch, rapid tire wear, hard-acceleration smoking, and deceleration bucking. Sophisticated design of a simple engine hides most of the LeMans' two-stroke ills. The GT750 is familiar to all Suzuki dealers, has a record of exceptional dependability and often carries a bargain-basement price.

## SUZUKI GT750M LEMANS

# EIGHT FOR THE OPEN ROAD: SPECIFICATIONS:



**HONDA GL-1000**

Base price as tested	\$2895	<b>DRIVE TRAIN</b>	
Factory warranty	6 mo./6000 mi.*	Primary type	Hy-vo chain
Number U.S. dealers	1750	Clutch	Multiplate, wet
		Transmission	Five speed
		Final drive	Driveshaft
<b>ENGINE</b>			
Type	SOHC horizontally opposed four	<b>WEIGHTS &amp; CAPACITIES</b>	
Displacement	999cc	Weight, wet	647 lbs. (293.5 kg)
Bore & stroke	72 x 61.4mm	Fuel capacity	5 gal. (19 liters)
Compression ratio	9.2:1	Fuel reserve capacity	8 gal. (3.03 liters)
Lubrication system	Wet sump	Engine oil capacity	3.8 qts. (3.6 liters)
Carburetion	Four; 32mm; Keihin CV	Transmission oil capacity	3.8 qts. (3.6 liters)
Air filter	Dry paper		
Ignition system	Battery and coil		
Electrics	Alternator, 300 watt		



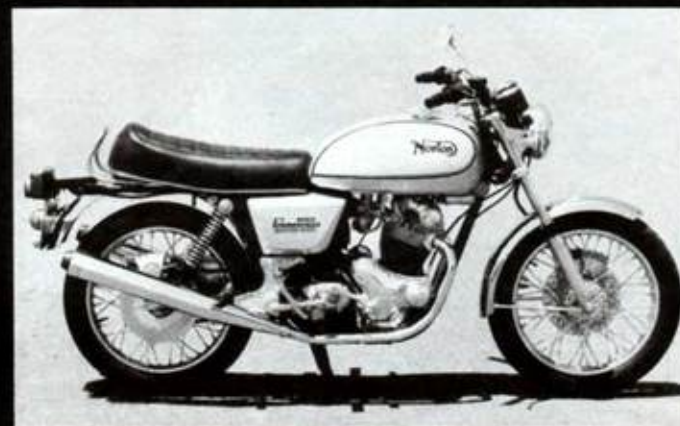
**BMW R90/6**

Base price as tested	\$3395	<b>DRIVE TRAIN</b>	
Factory warranty	6 mo./6000 mi.*	Primary type	Helical gear
Number U.S. dealers	400	Clutch	single disc, diaphragm spring
		Transmission	Five speed
		Final drive	Driveshaft
<b>ENGINE</b>			
Type	OHV horizontally opposed twin	<b>WEIGHTS &amp; CAPACITIES</b>	
Displacement	898cc	Weight, wet	484 lbs. (220 kg)
Bore & stroke	90mm x 70.6mm	Fuel capacity	5.8 gal. (24 liters)
Compression ratio	9.0:1	Fuel reserve capacity	.5 gal. (2 liters)
Lubrication system	Wet sump	Engine oil capacity	4.75 pt. (2.25 liters)
Carburetion	Two; 32mm; Bing CV	Transmission oil capacity	1.7 pt. (.9 liters)
Air filter	Dry paper		
Ignition system	Battery and coil		
Electrics	D.C. generator, 280 watt		



**KAWASAKI 903 Z-1B**

Base price as tested	\$2475	<b>DRIVE TRAIN</b>	
Factory warranty	6 mo./unlimited mi.*	Primary type	Spur gear
Number U.S. dealers	1200	Clutch	Multiplate, wet
		Transmission	Five speed
		Final drive	Roller chain
<b>ENGINE</b>			
Type	DOHC four	<b>WEIGHTS &amp; CAPACITIES</b>	
Displacement	903cc	Weight, wet	544 lbs. (247 kg)
Bore & stroke	66mm x 66mm	Fuel capacity	4.7 gal. (18 liters)
Compression ratio	8.5:1	Fuel reserve capacity	.6 gal. (2.2 liters)
Lubrication system	Wet sump	Engine oil capacity	4.2 qt. (4 liters)
Carburetion	Four; 28mm; Mikuni VM 28SC	Transmission oil capacity	4.2 qt. (4 liters)
Air filter	Dry paper		
Ignition system	Battery and coil		
Electrics	Alternator (watt NA)		



**NORTON 850**

Base price as tested	\$2895	<b>DRIVE TRAIN</b>	
Factory warranty	6 mo./6000 mi.*	Primary type	Roller chain, Triplex
Number U.S. dealers	600	Clutch	Multi disc, wet
		Transmission	Five speed
		Final drive	Roller chain
<b>ENGINE</b>			
Type	OHV Parallel twin	<b>WEIGHTS &amp; CAPACITIES</b>	
Displacement	745cc	Weight, wet	519 lbs. (236 kg)
Bore & stroke	73 x 77mm	Fuel capacity	6.6 gals. (25 liters)
Compression ratio	9:1	Fuel reserve capacity	1.2 gal. (5 liters)
Lubrication system	Dry sump	Engine oil capacity	2.96 qts. (2.8 liters)
Carburetion	Two; 30mm; Amal Concentric	Transmission oil capacity	44 qt. (0.42 liters)
Air filter	Dry paper		
Ignition system	Battery and coil		
Electrics	Alternator, 192 watt		



### SUZUKI GT-750M

Base price as tested ..... \$2145  
 Factory warranty ..... 12 mo./12,000 mi.\*  
 Number U.S. dealers ..... 1200

Electrics ..... Alternator (watt NA)

#### ENGINE

Type ..... Piston port, two-stroke, triple  
 Displacement ..... 738cc  
 Bore & stroke ..... 70 x 64mm  
 Compression ratio ..... 6.7:1  
 Lubrication system ..... Injected to crankcase  
 Carburetion ..... Three; 40mm; Mikuni CV  
 Air filter ..... Dry paper  
 Ignition system ..... Battery and coil

#### DRIVE TRAIN

Primary type ..... Helical gear  
 Clutch ..... Multiplate, wet  
 Transmission ..... Five speed  
 Final drive ..... Roller chain

#### WEIGHTS & CAPACITIES

Weight, wet ..... 556 lbs. (252 kg)  
 Fuel capacity ..... 4.5 gal. (17 liters)  
 Fuel reserve capacity ..... 9.2 gal. (3.5 liters)  
 Engine oil capacity ..... 3.8 pt. (1.8 liters)  
 Transmission oil capacity ..... 4.7 pt. (2.2 liters)



### MOTO GUZZI 850-T

Base price as tested ..... \$2699  
 Factory warranty ..... 3 mo./4000 mi.\*  
 Number U.S. dealers ..... 500

Electrics ..... Generator, 182 watt  
 East Coast (+15% West Coast)

#### ENGINE

Type ..... OHV 90° V-twin  
 Displacement ..... 844cc  
 Bore & stroke ..... 83 x 78mm  
 Compression ratio ..... 9.5:1  
 Lubrication system ..... Wet sump  
 Carburetion ..... Two; 30mm; Dell'Orto VHB  
 Air filter ..... None  
 Ignition System ..... Battery and coil

#### DRIVE TRAIN

Primary type ..... Helical Gear  
 Clutch ..... Dual disc, dry  
 Transmission ..... Five speed  
 Final drive ..... Driveshaft

#### WEIGHTS & CAPACITIES

Weight, wet ..... 522 lbs. (237 kg)  
 Fuel capacity ..... 6.6 gal. (25 liters)  
 Fuel reserve capacity ..... 1 gal. (4 liters)  
 Engine oil capacity ..... 3.7 qt. (3.5 liters)  
 Transmission oil capacity ..... 0.8 qt. (.75 liters)



### SUZUKI RE-5 ROTARY

Base price as tested ..... \$2475  
 Factory warranty ..... 12 mo./12,000 mi.\*  
 Number U.S. dealers ..... 1200

Electrics ..... Alternator, 280 watt

#### ENGINE

Type ..... NSU-Wankel rotary piston, single rotor  
 Displacement ..... 497cc  
 Bore & stroke ..... NA  
 Compression ratio ..... 8.6:1  
 Lubrication system ..... Wet sump plus rotor seal injection  
 Carburetion ..... One; 2-661; 18/32mm Mikuni HHD  
 Air filter ..... Oiled polyurethane  
 Ignition system ..... Capacitive discharge

#### DRIVE TRAIN

Primary type ..... Duplex chain  
 Clutch ..... Multiplate, wet  
 Transmission ..... Five speed  
 Final drive ..... Roller chain

#### WEIGHTS & CAPACITIES

Weight, wet ..... 573 lbs. (260 kg)  
 Fuel capacity ..... 4.5 gal. (17 liters)  
 Fuel reserve capacity ..... 1 gal. (4 liters)  
 Engine oil capacity ..... 2.3 qts. (2.2 liters)  
 Transmission oil capacity ..... 1.69 qts. (1.6 liters)



### HARLEY-DAVIDSON FLH-1200

Base price as tested ..... \$3555  
 Factory warranty ..... 3 mo./4000 mi.\*  
 Number U.S. dealers ..... 660

Electrics ..... Alternator, 300 watt

#### ENGINE

Type ..... OHV 45° V-twin  
 Displacement ..... 1207cc  
 Bore & stroke ..... 87.3mm x 100.8mm  
 Compression ratio ..... 8:1  
 Lubrication system ..... Dry sump  
 Carburetion ..... One; 38mm; Bendix  
 Air filter ..... Oiled urethane foam  
 Ignition system ..... Battery and coil

#### DRIVE TRAIN

Primary type ..... Roller chain, duplex  
 Clutch ..... Multiplate, dry  
 Transmission ..... Four speed  
 Final drive ..... Roller chain

#### WEIGHTS & CAPACITIES

Weight, wet ..... 780 lbs. (354.5 kg)  
 Fuel capacity ..... 5 gal. (18.9 liters)  
 Fuel reserve capacity ..... 1.2 gal. (4.5 liters)  
 Engine oil capacity ..... 4 qts. (3.8 liters)  
 Transmission oil capacity ..... .74 qt. (0.7 liters)

# EIGHT FOR THE OPEN ROAD: TESTS

**J**udgments concerning the quality of the motorcycles are necessarily confined to observations of exterior construction, to wit: the quality of the components and the care with which they are screwed together. *Cycle* staffers did not disassemble the motorcycles in order to measure internal tolerances and materials, and experience suggests there's not always a one-to-one relationship between exterior and interior quality. However, some problems such as fuel or oil leaks provide external evidence of second-class engineering or third-class assembly.

The quality of its paint, striping (hand-brushed), chromework, plastic parts—the finish and fit everywhere—puts the BMW at the top of this category. Example: BMW gives the shock springs an even black matte finish; this tough coating cannot show creeping rust, which the plated Japanese springs do. The Germans have tucked the disc-brake master cylinder under the tank and out of harm's way.

## QUALITY OF WORKMANSHIP

1. BMW R90/6 ..... 7.9
2. Honda GL-1000.. 7.5
3. Kawasaki Z-1 .... 6.8
4. Suzuki RE-5 ..... 5.6
5. Suzuki GT-750 .. 5.5
6. Moto Guzzi 850.. 5.4
7. Norton 850..... 5.3
8. H-D FLH-1200.... 3.4

The runner-up Honda has stick-on striping which spoils the effect of its rich paint. Its engine paint is a clever—though not too pleasing—way of finishing off engine cases. And it can wear off in spots. Honda is almost as successful as the BMW in routing things like turn signal wires internally, and in keeping the handlebar wires tied to the bars.

The Kawasaki has better chrome than the Honda; the Z-1 showed no signs of rusting around small bolts which marred the Honda. The 903 engine is an easier piece of hardware to detail than the GL-1000 but elsewhere the Honda assembly is superior. The Z-1 suffers from a severe case of orange-peel paint.

Scoring clumped the Suzuki RE-5 and GT-750, the Moto Guzzi 850-T, and the Norton Interstate together. The metallflake disease spoils the RE-5's glossy paint; metallflake was never neat and still isn't. Nevertheless, Suzuki has put the RE-5 together more carefully than the GT-750; the Rotary's oil-tightness, its allen-head socket screws and other small touches suggest a greater effort on Suzuki's part.

The Suzuki triple shares with the Moto Guzzi seamed (and unseemly) mufflers. The Guzzi has cheap-looking instruments, flimsy hand-controls, and a rash of orange-peel paint. But its beautifully cast and assembled engine saves the Guzzi.

Disregarding the engine department, the Norton would finish third. Hardware, paint and general assembly is very good indeed. But the weeping and dripping of gasoline and oil in the engine bay sank the Interstate.

Harley-Davidson's 74 Electra-Glide is messier yet. And the general roughness of finish and fit (from hand controls to the foot-shift Johnson-rod) dropped the big twin to last.

**E**rgonomics, as used here, refers to the natural ease and comfort with which the human body can fit on a motorcycle and operate its controls. While certain space relationships are fundamentally important, these motorcycles generally offered sufficient room for acceptable comfort. Within the established boundaries a one-inch difference in the distance between pegs and saddle is not significant when considered as a singular figure. Indeed the problem is broader and more complex than even a table of dimensions might suggest because each motorcycle requires the rider to position himself a bit differently. Thus, the real question, as pondered by test riders from five-eight to six-three and 135 to 220 pounds, was simply: how does the motorcycle fit and feel?

Hand controls are easier to judge. Federal standards, as set by the Department of Transportation, have forced the homologation of handlebar-control layouts, but not all manufacturers have met these standards equally well.

The BMW tops the list with the best space relationships between bars, pegs and seat for most riders. The carburetor air-intake tubes can foul riders' shins, but the boots of staff members served well as guards. The R90/6 has the most comfortable seat. It's firm but does not be-

## COMFORT: ERGONOMICS

1. BMW R90/6 ..... 7.0
2. Honda GL-1000.. 6.3
3. Suzuki GT-750 .. 6.1
4. Suzuki RE-5 ..... 6.0
5. Norton 850..... 5.1
6. Kawasaki Z-1 .... 4.8
7. H-D FLH-1200.... 4.1
8. Moto Guzzi 850.. 3.6



come abrasive after long stretches, and its broad contours fit an entire range of buttocks. Hand controls are well done, though testers were divided on the logic and convenience of the turn-signal switch (up for left, down for right), the reach-over positioning of the kill-switch stalk, and the location of the main ignition switch.

The Honda GL-1000 and the Suzuki GT-750 and RE-5 almost finished in a dead heat. The Honda saddle is a better piece than either Suzuki; the GL-1000 seat is a bit narrower but softer than the GT-750's *sitzer*. Most testers quarreled with the Honda's handlebars, which are too elevated and too far forward for many riders. The Gold Wing got the nod—bars are easier to change than seats.

The RE-5 saddle is both too narrow and too hard; moreover the tiller-type handlebars twist the wrists and forearms into an unnatural position.

Suzuki handlebar switches have a better layout than the Honda controls, which require an awkward move to change high/low beams. On the other hand, the Gold Wing's combined ignition switch and fork-lock is brilliant.

The new Norton bar controls are a match for the best Japanese (Suzuki) items. But the Norton ergonomic rating plunged thanks to its seat: wide enough, but tough, unyielding and uncomfortable.

Kawasaki likewise had a buckboard saddle. It's worse than the Norton, and the Z-1 rider is twice punished because the 903's firm suspension transmits far more road shock to the seat than does the Norton.

The Harley Davidson seat is certainly posh enough, though the saddle would bottom out against the frame unless the buddy-assist springs, located under the saddle, were dropped into place. That also cut down the hobby-horse action of

the saddle. The handlebar controls need revision. Turn signals operate *via* buttons on their respective bars; when the buttons are released, the signalling stops. Whatever the benefits of fail-safe cancelling, it's very difficult to use the throttle, clutch and one signal button simultaneously. The turn-signal buttons, located next to the grips, relegate the starter button (right bar) and the horn button (left) to more interior positions away from easy reach. And heavy gloves render all the buttons almost useless.

The Moto Guzzi 850-T finishes last because the horn and headlight flasher is combined on one self-centering rocker switch. Having any other function combined with the horn is clearly unacceptable and dangerous. The Guzzi compounds this grave circumstance: press the left side of the rocker switch with your left thumb and you get the headlight flasher—you must reach over to catch the right side of the switch to blow the horn, or push the switch dead-center to activate both. By instinct it's all wrong in a crisis situation.

The Moto Guzzi saddle was the cushiest perch in the lot. But mere cushion-effect alone does not guarantee comfort. Over the long haul, the mushiness gives the rider very little support. The seat has enough foam-rubber springiness so that the rider can rock-and-roll on the seat when he's trying to ride quickly. If he brakes hard, he'll rap his legs (above boot-level) on the cylinder heads. Riders with long legs will find the pegs too high relative to the seat. This immediately puts long legs into the heads. And after some time in the saddle, just the basic leg position will produce muscle cramps.

**S**o far as the human ear can tell, the Honda GL-1000 doesn't have a noise level. Consequently, the bike scored a perfect nine in this category. Not all riders liked the complete hush-up. When machine noises totally vanish, some riders feel they lose communication with the engine because they can't hear what the big water-pumper is doing. But most riders simply enjoyed the Honda's silent splendor.

Although it provides noise for communication, the BMW never overburdens its rider with sound. As heard from the saddle, the bike emits sound from four sources. At low speeds, one hears tappet noise in the valve chests. The driveshaft whines in town, but not on the highway, and never at an objectionable level. The exhaust note is subdued—but clear—under acceleration, and it falls away to soft hum under cruise conditions. Finally, holes in the brake disc raise a peculiar buzz when braking.

The Norton 850 is marginally quieter than the Z-1. The new Mark 2A intake and exhaust plumbing effectively silences the Norton without destroying that vertical-twin sound. The engine's mechanical noise gets lost in the wind at speed. That's less true of the Z-1 which generates its own busy-busy mechanical thrash and

## OVERALL NOISE LEVEL

1. Honda GL-1000.. 9.0
2. BMW R90/6 ..... 7.8
3. Norton 850..... 6.1
4. Kawasaki Z-1 .... 5.9
5. Suzuki GT-750 .. 5.4
6. Moto Guzzi 850.. 4.1
7. Suzuki RE-5 ..... 3.3
8. H-D FLH-1200.... 1.7

whine under the tank. And above 6000 rpm, the rider can treat himself to a determined exhaust bark.

Final-drive chain howl bothered most riders of the Suzuki GT-750. The dead-quiet engine did nothing to cover up the annoying chain-song on the highway. At low speeds, the Suzuki triple has the spluttering sound of a big two-stroke, and the clunky transmission proved equally unpleasant.

More objectionable than the 850-T's clunk-style shifting was its oppressive induction moan, the result of Guzzi's failure to fit an effective air-filter box (or, for that matter, any air filter/silencer system). Unlike the BMW, the Guzzi's cylinders are close enough to the rider so that valve clatter never recedes.

Rotary power is the origin of the RE-5's exhaust note, and the quality and intensity of that sound found no advocates among our testers. Its flat, throbbing sound is both loud and strangely piercing to human ears. Two or three constant hours in the saddle were enough to irritate staffers.

Only the Harley-Davidson produced more sound around the rider. There's all manner of noise. Without question, the handlebar fairing amplifies some sounds and directs them back at the rider, but this fact should not obscure a more important consideration: the motorcycle, as designed, is noisy. No doubt Harley-Davidson has silenced the engine as much as possible; but given the age and limitations of the design, there's only so much anyone—in Milwaukee or any other place—can do.

**A**cceleration grading reflects two distinct modes: through-the-gearbox full-blast wind-ups, and high-gear screw-ons. Predictably the Kawasaki Z-1, the world's only remaining Superbike, averaged 8.8 (9 is perfect) on eight score sheets. Its high-gear passing power is a match for the super-torquey BMW's, and high-rpm acceleration is unmatched by any other vehicle on the street. Honda's willing, free-spinning GL-1000 was close to the Z-1; it makes more power, but it has more weight to accelerate.

The GT-750 Suzuki finished third in the opinion of our testers; its weakness at low engine speeds in fifth is more than offset by its through-the-gearbox pulling power, the result of new-for-'75 breathing.

The BMW R-90/6 ranked fourth in this category. In high-gear roll-ons against the rest of the bikes, the R-90's light weight and superior low-speed torque made it the roll-on king, but use of the gearbox pulled the Z-1, Gold Wing, and 750 water-cooled past it in the rankings.

Norton's twin was, in *Cycle's* first Superbike Comparison Test, the quickest of the quick: 12.69 in the quarter. But improvements in noise control have over the years more than overpowered its 100cc increase in displacement, and it now finds itself, except for the FLH, the slowest bike in the field in terms of quarter-mile acceleration. But its solid torque and four-speed transmission elevated it to fifth in overall acceleration. The Suzuki Rotary was sixth, penalized in the minds of the testers by a lack of response not reflected in the hard data, and by not particularly brilliant through-the-gearbox acceleration (13.84, 94.63 mph). The Moto Guzzi 850 finished behind the RE-5 despite surprising quarter-mile figures: 13.66, 97.93 mph. But its high-gear pulling power was conspicuously absent—due to an ultra-tall

## PERFORMANCE: ACCELERATION

1. Kawasaki Z-1 .... 8.8
2. Honda GL-1000.. 8.4
3. Suzuki GT-750 .. 6.5
4. BMW R90/6 ..... 6.4
5. Norton 850..... 6.0
6. Suzuki RE-5 ..... 5.5
7. Moto Guzzi 850.. 5.1
8. H-D FLH-1200.... 2.9

fifth gear. Only the 74 was slower in a fifth-gear roll-on. Finishing last was the FLH; booming exhaust note and saddlebags-full of charisma notwithstanding, the 1200cc Vee-twin is 2.42 seconds and 19.51 mph slower than the average quarter-mile time of its seven competitors (13.34, 99.43 mph), and its high-gear acceleration from 55 mph was likewise the most leisurely. All bikes were run through the quarter-mile traps to determine an *actual* 55 mph. A pylon was placed midway down the strip. The bikes were run to the pylon at an actual 55, and then given wide-open throttle from the pylon to the end of the quarter, where the terminal speeds were monitored by the strip's Chrondek photoelectric beams. The Z-1 reached a speed of 80.60 mph from 55 mph; the BMW, 80.30; the Suzuki RE-5, 79.81; the Norton, 79.16; the GL-1000, 77.74; the 750 Suzuki, 75.74; the Moto Guzzi, 72.81; and the FLH, 70.42.

**T**here are three important sources of vibration in motorcycles, all of them in the engine. These are: primary shaking, created by reciprocating masses; secondary shaking, caused by piston acceleration reaching through the main-bearings and into the crankcase, and the twisting pulsations of individual power strokes.

Honda's GL-1000 shouldn't vibrate at all, and doesn't. Horizontally opposed engines are inherently balanced, with both primary and secondary shaking forces mutually cancelling. That leaves only power pulsing to cause vibration, and because the Honda is a four its pulses are relatively small and close-spaced. Further, each pulse is reacting against a substantial mass. Finally, Honda provides a very effective torque cushion in the GL-1000's drive train. The net result is that the Honda wins the Vibration Control category by a wide margin, and with a perfect score.

In second place, trailing well behind the Honda is the BMW, which also has an

#### COMFORT: VIBRATION CONTROL

1. Honda GL-1000.. 9.0
2. BMW R90/6 ..... 7.2
3. Suzuki RE-5 ..... 7.0
4. Norton 850..... 6.1
5. Moto Guzzi 850.. 5.6
6. Suzuki GT-750 .. 5.4
7. Kawasaki Z-1 .... 4.8
8. H-D FLH-1200.... 2.2

opposed engine. It has two fewer cylinders, however, and the torque pulsations from the BMW's two 450cc pistons can make a considerable commotion. It's all a matter of throttle: at steady-state, part-throttle cruising the BMW is very smooth; the longitudinal-axis shudder comes when you twist that grip.

Power-pulsing drops the Suzuki RE-5 into third place, close on the BMW's heels. The RE-5's rotor-mass is handled with counterweights. The only thing that can't be balanced is torque pulsation, and—as is true of the BMW—throttle makes that intrusive. But there also was a peculiar and very strong ragged quality to the Suzuki's part-throttle behavior and it was this most of all that was responsible for its placing.

Norton's venerable vertical twin is a prodigious producer of primary, secondary and torque vibrations, but the Isolastic engine mounting keeps much of it from travelling. Isolastic doesn't work at all engine speeds, but it does quite a nice job of stopping everything but the less-annoying low-frequency vibrations most

of the time and that's why the Norton was judged fourth.

The Moto Guzzi engine is a 90-degree V-twin, which means it's in perfect primary balance, has some uncompensated secondaries, and the expected twin-cylinder torque pulses. And it does the expected, going a bit harsh at high revs and thudding strongly when the throttles are opened wide at low engine speeds. Tall gearing made it an extremely smooth highway cruiser; the other stuff dropped it back to fifth.

There's a two-stroke triple in the Suzuki GT750M; it can be buzzy up near the redline, and an extremely tall fifth-gear made it torque-shake a lot. The bike is a dreamboat in fourth, and a change of sprockets would put it much closer to the head of the class instead of sixth.

Big in-line fours are shakers; the Kawasaki Z-1 is also a mover. It rasped and buzzed its way into seventh place in an unquenchable frenzy of secondary shaking and power pulses.

Eighth-place was solidly occupied by the Harley-Davidson FLH. There's every reason for a 45-degree V-twin to shake, as all three kinds of forces get in their licks, and a big one is going to vibrate a lot. The FLH is the biggest and it shakes the most, with a lot of amplitude and over an amazingly wide range of frequencies.

**W**hen suspensions should move, and do, they are being compliant. And among all the touring bikes in the sampling tested, only the BMW's suspension truly had that important quality of compliance; the rest revealed differing degrees of obstinacy when asked to cope with things like ordinary highway expansion seams.

The BMW R90/6 brings to touring precisely what touring requires: plenty of wheel travel adequately damped, soft springs and a fork that will move when it should. The tires don't offer a lot of help, so you feel some harshness on any textured surface; and the BMW's soft springs and damping can't handle lumpy roads, ridden fast. But the Bavarian twin is yards ahead of its competition in the way it sails along the average road at the average rider's pace.

With a little less static friction in its fork, and a lot better damping, the Moto Guzzi could be the BMW's equal in ride quality. But all the Guzzi has is soft springs: its fork has so much stiction it won't budge for the abrupt ridges BMW's fork absorbs so well, and once either wheel begins to move in response to bumps there's only friction to stop further lurches.

We rate the Harley-Davidson only fractionally behind the Moto Guzzi in terms of ride; that does not imply the two bikes are anything alike. Those big tires under the FLH simply gobble up the small stuff without sending any disturbance into the suspension. This heavyweight is very softly sprung and damped lightly, and it pitches disconcertingly on the wrong kind of road. The FLH is great on the Interstate; ungreat on the paved cowpaths.

#### COMFORT: SUSPENSION COMPLIANCE

1. BMW R90/6 ..... 8.1
2. Moto Guzzi 850.. 5.9
3. H-D FLH-1200.... 5.8
4. Suzuki GT-750 .. 5.7
5. Honda GL-1000.. 5.6
6. Suzuki RE-5 ..... 5.5
7. Norton 850..... 4.4
8. Kawasaki Z-1 .... 3.8

Fork stiction and pre-defeated damping are the Suzuki triple's main problems. The rear spring rates seem to be about right but the lack of control lets the bike's tail bob up and down, and the fork just won't move for most bumps the front wheel finds. This Suzuki never behaves really badly; neither does it ever give a genuinely smooth ride.

Two evils come to him who rides Honda's GL-1000: there is so much fork stiction that the connection between axle and handlebar is completely rigid much of the time; and the very high unsprung masses moving with the rear wheel (gears, gearcase, etc.) simply are more than the shocks can control. In this very important aspect, the GL-1000 fails and does so fairly emphatically.

The Suzuki RE-5 is just plain stiff-legged, with fork stiction, overly stiff springs and less-than-brilliant suspension



damping. You expect that combination to yield a harsh, rattling ride—and that's what you get.

Maybe the hundred pounds Norton's 850 acquired with electric starting is just too much for its suspension. Whatever the cause, our Norton couldn't cope with most kinds of bumps—and its misbehavior took forms not found in the other bikes. We were agreed that it didn't ride well; none of us could quite pinpoint what it was doing badly. Perhaps that's why the Norton 850's ride-quality score placed it seventh in a field of eight.

In contrast, everyone knew exactly why the Kawasaki Z-1 should be relegated to last place in this category: the bike's suspension amounts to rigid struts over most miles a touring rider is likely to cover. It has the whole bag of comfort-defeating suspension tricks, starting with stiction and ending with gruesomely stiff springs.

**R**ating the two-up suitability of the big tourers involves the blending of several categories: ergonomics, vibration, suspension compliance, mountain road handling, noise level and conveniences and cleanliness. (None of the bikes suffered an objectionable loss in acceleration or in-town operation with a passenger aboard.) An additional 600 miles was devoted to riding two-up, at a moderate to fast pace over a spectrum of mountain roads, open highway, and interstate. Weight of the rider/passenger duo was 325 pounds, and there was another 15 pounds of clothes and riding gear weight.

Clearly the best machine in this category was the BMW; its suspension supplies the least intrusive ride over all road surfaces. It has the most comfortable saddle. The rider was not relegated to a different riding posture by the addition of a passenger. The seat's coarse surface prevented the passenger from sliding into the rider when the brakes were applied. The passenger's leg positioning was best, and the BMW had the only usable rear hand rail. The ground clearance loss was not as severe as with the Harley-Davidson, Honda, Norton and Suzuki 750. With two-up another 57 pounds can be carried

before the BMW reaches its GVWR (Gross Vehicle Weight Rating) limit.

The Honda supplies passenger comfort comparable to the BMW. Passenger positioning is comfortable, and doesn't cramp the pilot. The triple disc brake system proved the strongest with two-up. Complete absence of running sound and vibration eliminates long distance fatigue. The rear shocks are supple but the fork is too rigid on bumpy roads. A hesitation in the throttle-to-rear-wheel connection causes the passenger's head to jerk if the controls aren't worked with perfect precision. The loss of ground clearance can be dangerous on mountain roads. Only 13 pounds of extra gear can be loaded on the Honda before the GVWR is exceeded.

pilot constantly, and is especially annoying when braking. Engine vibration is almost non-existent but drive chain buzzing can put the passenger's feet to sleep. The sharp exhaust beat is quite irritating for the passenger and leads to premature noise fatigue. Laden with the two testers the GVWR is exceeded by eleven pounds.

The Kawasaki Z-1 offers little compromise for touring. Engine performance makes it the fastest—even with two-up. Rigid suspension and harsh engine harmonics deliver a bone-jarring ride on rough roads and stinging vibration at brisk speeds. The saddle is shallow, hard, narrow, slippery. The slick, forward-tilted seat forces the passenger against the rider constantly. The high buddy pegs bend the passenger's legs uncomfortably. Loaded



## EIGHT FOR THE OPEN ROAD: TESTS

Suzuki's GT750M does well in the two-up category without excelling in any single area. The big saddle is firm without being too hard or too cushy. Its width spreads fully under the buttocks of both rider and passenger. A tremendous dual disc front brake compensates for the fast-fade rear. Rumbling vibration persists at low engine speeds. Hard braking will let the passenger slip up on the pilot. Reduced ground clearance requires caution in steep turns. With our two testers aboard, the GVWR is exceeded by 12 pounds.

The strong points of Norton's two-up comfort are the pilot's freedom of movement and a soft passenger perch. Engine trembling at lower revs walks the passenger's feet off the pegs. Handling with two-up is excellent, though the loss of ground clearance slows cornering speeds. Long rides are less pleasant because of the board-hard rider's section of the saddle. The Norton's GVWR allows for 21 lbs. of extra payload with two-up.

The Suzuki RE-5 excels in ground clearance and handling on tight mountain roads. The narrow saddle supports only the center of the rider's and passenger's posteriors. The forward slope of the seat keeps the passenger pressed against the

with *Cycle's* two people, the Z-1 is three pounds over its allowable GVWR.

Awkward riding positions cause the Moto Guzzi to rate poorly in two-up comfort. The extra-soft and slick saddle tilts forward to compress the passenger against the pilot. The over-poshness of the saddle lets the two riders find the seat bottom in 50 miles or less. The bend of the passenger's legs is the sharpest and least comfortable of the group. The Guzzi's chassis might otherwise contribute to near-perfect handling, but was impaired by collapsed fork springs and soggy shock action. No allowable payload weight figures are available.

Harley-Davidson's two-up ride and comfort limits are the least acceptable of the bikes. The tractor-type saddle is soft and equipped with auxiliary overload (passenger) springs. The pilot straddles the hard, narrow front horn of the seat. The passenger's lower back is punished by being sandwiched between the pilot and the rear hand-hold. A constant volume of running noises leads to early fatigue. Grounding of numerous parts occurs with hazardous ease. Though boasting an enormous 658 pound GVWR payload, the Harley is least able to carry extra weight safely.

### COMFORT: TWO-UP SUITABILITY

1. BMW R90/6 ..... 8.5
2. Honda GL-1000.. 7.0
3. Suzuki GT-750 .. 6.5
4. Norton 850..... 6.0
5. Suzuki RE-5 ..... 5.5
6. Kawasaki Z-1 .... 4.5
7. Moto-Guzzi 850.. 4.0
8. H-D FLH-1200.... 1.0

**T**ime and miles bring out the work/money cost required to keep man and his motorcycle in harmony. The following is a wrap-up of the convenience and maintenance features, good and bad, we found with each bike on the road, in the shop and through observation.

**Tools and Data:** The BMW comes best equipped to permit a rider to perform most any road-side service. The extraordinarily complete tool kit contains an abundance of high-quality wrenches, a tire patch kit, air pump, shop towel and a superb owner's manual. It's the only bike that provides for the removal, repair and replacement of a flat tire. Excepting the Harley, the rest of the bikes have small tool kits and sketchy owner's manuals. The Harley has no tools, tool box or owner's manual.

need for an engine oil filter. The Honda, Z-1, Rotary, BMW and Norton have easy-to-replace full-flow filters. Harley Davidson has retained a felt filter. The Moto Guzzi has a full-flow filter that requires removal of the engine sump plate for replacement.

**Center and Side Stands:** All machines, excepting the Harley Davidson, have center stands. The BMW and Honda roll up easily on their center stands; the LeMans, Rotary, Norton and, in particular, Moto Guzzi require a lot of effort to lift. The Harley Davidson's round side stand sinks into hot asphalt easily. Moto Guzzi and BMW have auto-return stands that flip up (letting the bikes fall if unattended) when relieved of their loads. Honda's short stand is too vertical when down and lets the arm fold if the bike moves forward

Neither the RE-5 nor LeMans have valves. The Kawasaki's plugs can be changed easily and timing is simple. Valve adjustment is basically a dealer task because of the special tools and spacers required.

Harley's simple single carburetor is the easiest to adjust. Brief familiarization with twin carburetor synchronization and tuning will permit most riders to set those on the BMW, Norton and Moto Guzzi. Multi-carburetor systems on the LeMans, Honda and Z-1 require vacuum gauge kits and precise settings for proper tuning—a dealer task. The Rotary carburetor is highly complex and must be set only by a trained dealer.

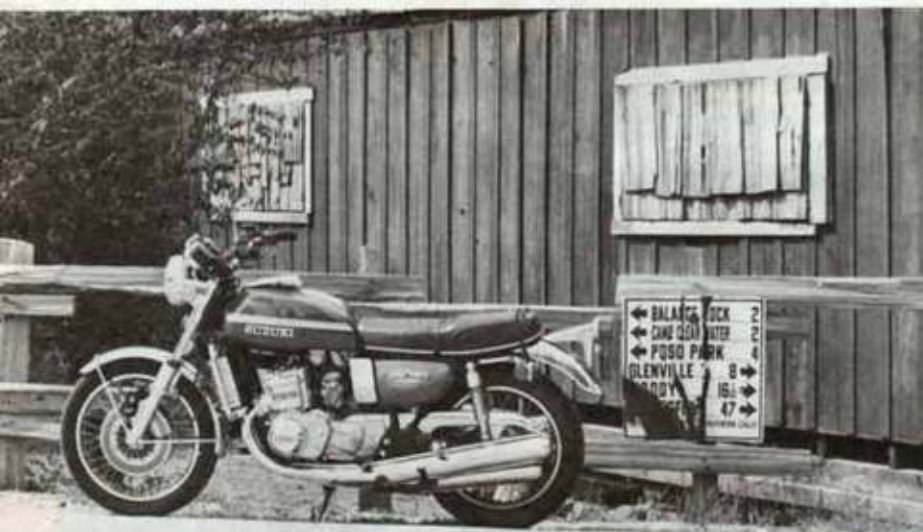
**Electrics:** All the tour bikes have electric starters and large batteries which demand regular observation for water level. BMW has the only really bright headlamp—one with a quartz halogen element. Excepting the dim lamp on the Moto Guzzi, the other bikes have adequate illumination. The Harley has optional spot-type lights available. Our Harley Davidson has a single-fuse system that shuts off all current flow, including power for the lights, when blown. Its failure could be dangerous at night. We had numerous ignition/lighting shorts in our test bike and the fuse popped every time the spots were switched on.

**Wheel Removal:** The BMW, Moto Guzzi, Z-1 and Norton have quick-change-type wheels. The Honda rear wheel can be removed only after the mufflers are loosened and moved aside. The Rotary and LeMans require caliper removal and fender-loosening in order to take out the dual disc front wheels. The Harley will have to be trucked to a dealer or service station for wheel removal.

**Cleanliness:** Shaft drives on the BMW, Honda and Moto Guzzi eliminate problems with chain lubrication and oil-flinging. The shafts and bevel gears should last the life of the motorcycles. The rest of the bikes' chains splatter the rear of the motorcycles and can (depending on lube amount) toss oil up on the rider and passenger. The Z-1, Rotary and LeMans use "endless" chains that require rear wheel, swing arm and sprocket cover removal to replace. The Norton and Harley have conventional master link chains.

The Z-1, Rotary and LeMans were free of engine oil leaks, though the chain lube spray soiled other areas. The BMW blew out the rear of the sump gasket. The Moto Guzzi had oil weepage from the aft section of the engine assembly. Norton's engine castings misted oil at all the seams, and using the Amal carburetor ticklers lets fuel drip on the engine cases. Honda's flat-four acquired an oil mist accumulation at the bottom of the cam drive cover. The Harley-Davidson sprayed oil from numerous seams and gaskets. Oil dribbled over the engine and on the legs of the riders and passengers. The Harley's gas cap leaks left fuel stains on the tank.

The full-coverage fenders on the Harley gave the best protection to the riders from water spray. Honda's semi-full-coverage fenders include flared mud-guards to



## EIGHT FOR THE OPEN ROAD: TESTS

**Gas and Oil:** The Norton Interstate supplies the biggest gas tank, 6.25 gallons, and longest cruising range. The Z-1, Moto Guzzi, Rotary, Harley-Davidson, and LeMans are good for 140 to 230 miles. The BMW's range is similar but a factory-optional 6.5-gallon touring tank is available. Honda's secluded five gallon gas tank virtually eliminates the possibility of installing a larger accessory container and its tiny filler spout causes overfilling and fuel spillage. Harley's split tanks require two fill-ups at every gas stop, and the twist caps sometimes leak. The BMW's gas cap came apart when its retaining rivet fell out.

The Honda, Z-1 and LeMans have convenient inspection windows to indicate the engine oil level. Suzuki's Rotary has an oil injection tank under the seat and an engine sump (with dip stick) to check and fill. BMW uses an automotive-type dip-stick extending below the filler hole plug. To fill and check the Norton the seat must be unlocked, fastening knob loosened and saddle lifted. Harley's oil tank is under the saddle and has a reasonably convenient lift-out dip stick.

Only the LeMans two-stroke has no

even slightly. As happened to us, the big Honda then rolls over on its side and requires two people to right.

**General Service:** The BMW, Moto Guzzi, Z-1, Honda and Norton provide simple access to spark plugs, points and valve adjustment. Replacement of the Harley and Rotary spark plug(s) is easy. The "74" has non-adjustable hydraulic lifters.

### MAINTENANCE AND CONVENIENCES

1. BMW R90/6 ..... 8.5
2. Honda GL-1000... 7.7
3. Kawasaki Z-1 .... 6.6
4. Moto Guzzi 850.. 5.7
5. Suzuki GT-750 .. 5.6
6. Suzuki RE-5 ..... 5.3
7. Norton 850..... 4.1
8. H-D FLH-1200.... 2.0





keep water and grime from flinging on the bike or riders. The BMW, Moto Guzzi, Rotary and LeMans provide the next-best protection from water. Norton's fenders are good rider-protectors but open areas at the upper-rear section let water drench the underside of the saddle and back of the engine. The Z-1's bobbed-type fenders allow water to spray the riders' backs.

**Miscellaneous:** All the machines except the Moto Guzzi have resettable tripmeters. Mileage has to be added mentally on the Guzzi to regulate gas stop intervals. Harley's speedo-instrument package is dangerously located down on the tank. The rider must look away from the road and peer almost straight down to see the instrument cluster when he wants to check speed or mileage. Pounding vibrations from the Big Twin would occasionally trip the odometer's mileage rollers over and give false distance figures. All the speedometers were about ten percent fast in their readings.

Fork and seat key-locks are provided on all the bikes except the Harley Davidson. A padlock is needed to secure the Harley fork.

The throttle twist effort of the BMW and Moto Guzzi is far too stiff and tiring. This year's Harley-Davidson has, for the first time, a spring-return throttle. Honda's special 17-inch rear tire relegates its owners to OEM replacement rubber only. Moto Guzzi failed to include a turn indicator light in the instrument cluster. Only

the BMW and Moto Guzzi have damper spring pre-load levers on the rear shocks. Norton's stock K 81 Dunlop tires are the best all-around tires of the group.

**T**he Suzuki RE-5 Rotary was the clear and unanimous winner of the Mountain Road Ease of Operation category. The rigidity of its chassis and its perfect geometry, together with copious ground clearance and lots of engine torque exactly where it should be, caused all testers to feel they could ride the Rotary quicker and with more confidence than any other bike in the comparison. The tires bite well, the long-wheelbase frame contributes to high-speed stability, steering is neutral and brakes are superlative both in terms of predictability and stopping power.

The Norton and the Kawasaki finished second and third, the Norton primarily because of its light, accurate steering (left-side ground clearance continues to be a problem) and the Kawasaki because

#### PERFORMANCE: MOUNTAIN ROAD HANDLING

1. Suzuki RE-5 ..... 8.3
2. Norton 850..... 6.1
3. Kawasaki Z-1 .... 6.0
4. Suzuki GT-750 .. 5.8
5. Moto Guzzi 850.. 5.4
6. BMW R90/6 ..... 5.3
7. Honda GL-1000.. 5.2
8. H-D FLH-1200.... 1.8

of its ground clearance and the ease with which its controls can be manipulated (the Z-1 still exhibits a tendency to oversteer around slowish corners, and a vague wallow intrudes on stability around fast ones).

Fourth was the 750 Suzuki GT: great brakes, reasonable stability, diminished engine torque due to '75 carburetion, port timing and mufflers, and improved but still improvable ground clearance. The Moto Guzzi was a controversial fifth: like most big-bore Italian motorcycles the rigidity of the chassis cannot be faulted, nor can the geometry. But the same components that give the Guzzi high ratings in terms of suspension compliance cause it to handle in an indecisive fashion in the mountains; the bike is, simply, soft when pushed hard. It's rear brake was grabby. Ground clearance on the V-twin 850 was second only to the Suzuki RE-5.

The BMW finished sixth, right behind the Interceptor. Unmatched for suspension compliance, the R90/6's long-travel front fork mushes around fast turns and permits the front end to dive alarmingly under severe braking. Cornering clearance won't win any prizes either, espe-

cially with the installed spill bar in place. The big twin is a dreamboat in most highway situations; it turns sullen in the mountains.

The GL-1000 Honda does not do well on twisty roads, for a number of reasons. It has a dangerous lack of cornering clearance; drive line snatch, never present in steady-state cruising, becomes hateful in on-the-gas off-the-gas terrain; and it can get to galloping around fast corners. Triple disc brakes and a hyper-horsepower engine see to it that you can go briskly if you want to; but it's a lot like work and not enough like fun.

The Harley-Davidson ranked eighth in terms of mountain road handling. Its cornering clearance is negligible (the floorboard, two floorboard brackets, brake lever, a frame lug and three spots on the muffler drag in right turns; and the side-stand, floorboard, clutch housing and two places on the muffler throw off sparks in left-handers). The rubber-mounted handlebars join with the FLH's long 'n' loose chassis and sprung seat to give the rider a feeling of disassociation; in the mountains, the FLH seems to be operating on remote control. The brakes (discs front and rear) are noisy but effective; the rest of the motorcycle is a ponderous, inaccurate, reluctant, heaving handful in the twisty-turnies. One tester said, "What worried me most about riding the 74 in the mountains was meeting another 74 coming the other way."

**F**rom time to time the touring rider discovers that cities congest his open road, and the ease with which these machines can operate in town basically depends upon the accuracy and smoothness of certain functions: braking, clutching, gear-changing and carburation. Other factors count too, including response to steering inputs, vibration modes, noise levels and the placement and operation of controls.

The Suzuki GT-750 and the Kawasaki Z-1 tied for first place. Both machines clutch, brake and carburete without any aggravating glitches. Vibration and noise remain at low levels. The bikes respond quickly to rider inputs and never fight back with their bulk. The Suzuki is more

#### PERFORMANCE: IN-TOWN EASE OF OPERATION

1. Suzuki GT-750 .. 6.6
2. Kawasaki Z-1 .... 6.6
3. Honda GL-1000.. 6.3
4. BMW R90/6 ..... 6.0
5. Norton 850..... 5.8
6. Suzuki RE-5 ..... 5.4
7. Moto Guzzi 850.. 4.5
8. H-D FLH-1200.... 3.0

comfortable, thanks to its seat, but the Z-1 engine has more snap. Both have clunky gearboxes.

Driveline snatch especially curses the GL-1000. The Gold Wing has a lot of wind-up/reel-out hesitation-&-yank when the throttle is opened and closed in the lower gears. And nothing can really mask the Honda's 650 pounds when puttering in traffic.

The lean BMW feels more agile round town than any other bike. At 490 pounds, it's far lighter than other machines, but low-speed engine vibration, driveline whine and brake buzzing dropped the R90/6 in the rankings.

Norton engine noise becomes very obvious in town, as does its grabby clutch and the low-rpm quaking. At stoplights the Interstate's non-folding footpegs catch the rider's legs, forcing them outward at awkward angles. Positioned anywhere, the legs still tag the pegs.

While engine thrash hurts the Norton, Suzuki's RE-5 bothers in-town riders with its exhaust beat. Stop-and-go riding certainly underscores the Rotary's agonizing mid-range vacillation. And the RE-5, with its heavy steering and tiller-bars, feels trucky when creeping along in traffic.

Engine throbbing, tall gearing and unpleasant braking put the Guzzi 850-T next to last. The side shakes are far more pronounced than in the BMW—and very evident at low speeds. The steep first gear makes smooth starts a problem. Only first and second are normally used in town, with occasional resort to third. The front brake begins to work early in its lever-arc, making it difficult for riders with small hands to get a firm grip; the rear brake of our test Guzzi would grab with little provocation.

The Harley-Davidson was the loudest bike as experienced from the saddle. Staff members didn't like the 74's weight; when stopped, riders had to balance the bike deliberately. Nevertheless the Harley-Davidson will crawl along at a snail's pace in traffic, and that's a blessing because drivetrain lash will cause the bike to lurch. The brake pedal proved clumsy in use, the long-throw shift lever was positioned badly, and the hand controls were unsatisfactory. (Continued)

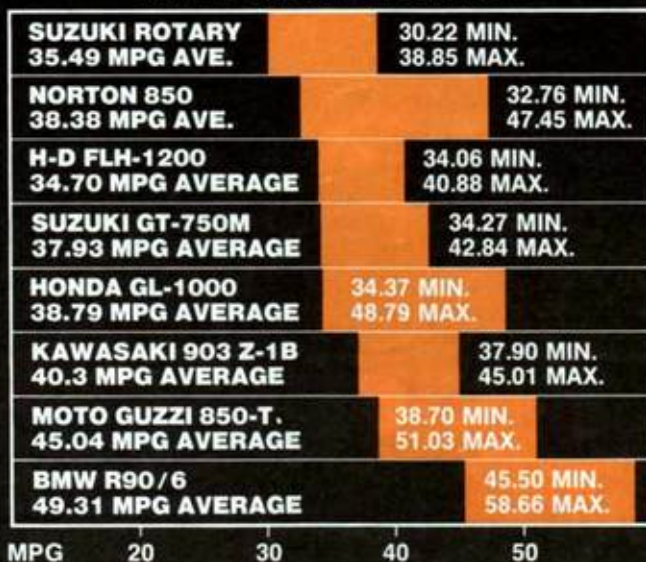
# EIGHT FOR THE OPEN ROAD: PERFORMANCE

	Norton 850	Moto Guzzi	Honda GL-1000	Suzuki RE-5	H-D FLH-1200	Suzuki GT-750	BMW R90/6	Kawasaki 903 Z-1B
Total Test Miles	1566	1555	1806	1735	1626	2040	2035	2182
Odometer Reading @ Actual 100 mi.	98.7	109.5	102.3	105.2	99.0	105.04	100.0	100.87
Speedometer Correction @ Indicated 60 mph	55.9	55.2	55.8	56.4	55.5	54.3	56.3	56.5
Oil Consumption	1 Qt.	none	1 Qt.	1 1/2 Qt.	1 Qt.	1 1/2 Qt.	1 Qt.	1/2 Qt.
Rpm In Top Gear @ Actual 60 mph	3186	3513	3488	3509	2900	3488	3680	3896
Recommended Fuel	Premium Leaded	Premium Leaded	Regular or No-Lead	Regular or No-Lead	Premium Leaded	Regular or Low-Lead	Premium Leaded	Regular or No Lead
Tune-Up Cost*	1 Hour	1.5 Hours	1.6 Hours	\$12.00-\$39.95	\$21.00	1.25 Hours	\$98.60 Major	\$37.40 Average
<b>Basic Parts Retail Prices</b>								
Oil Filter	\$ 5.60	\$5.00 (est)	\$ 2.14	\$ 9.14	\$ 3.95		\$ 4.50	\$ 5.80
Points & Condensor	\$10.78	\$16.00	\$11.28	\$15.75	\$ 4.50	\$30.73	\$11.30	\$29.60
Rear Tire	\$39.57	\$42.50	Bridgestone \$24.40 Dunlop \$48.10	\$29.99	\$39.90	\$29.99	\$39.36	\$33.26
Drive Chain	\$26.00			\$67.56	\$19.95	\$64.83		\$69.60
Clutch Plates	\$35.00	\$93.00	\$29.60		\$44.15	\$64.53	\$33.70	\$55.60
Headlamp	\$ 3.53	\$ 4.60	\$ 8.30	\$14.36	\$ 4.95	\$13.10	\$11.50	\$22.80
Throttle Cable	\$ 2.48	\$ 9.80	\$13.80	\$ 6.96		Inner \$ 3.10 Outer \$ 4.55	\$ 7.16	\$ 8.40 \$ 9.00
Clutch Cable		\$ 7.80	\$ 4.90		\$19.25	\$ 5.87	\$ 6.75	\$ 5.50
Piston, Rings Pin Per Set	\$31.60	\$39.00	\$22.33		\$40.40	\$50.98	\$49.85	\$25.00
Valves Per Set	\$40.32	\$51.20	\$69.20		\$58.10		\$84.00	\$74.00
Front Brake Pads Per Set	\$ 6.00	\$12.80	\$34.00	\$58.16	\$22.30	\$58.16	\$30.30	\$23.60
Air Filter	\$ 5.18	none	\$ 8.30	\$ 7.17	\$ 7.90	\$ 8.63	\$ 7.75	\$10.20

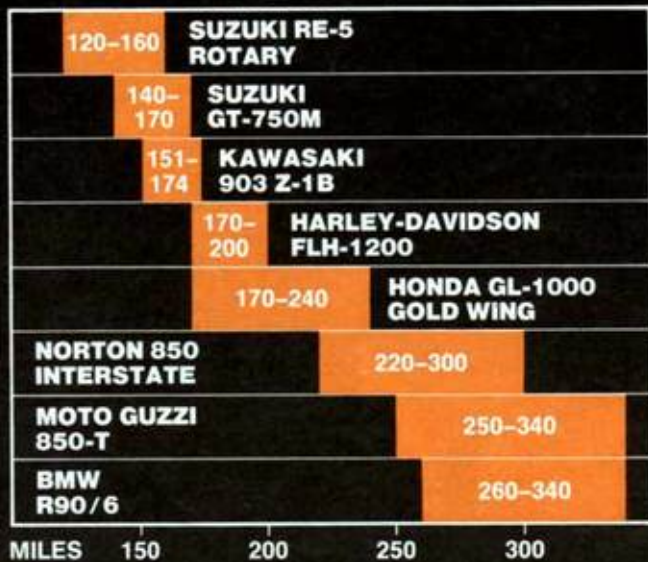
\* Set/sync carbs, plugs, ignition adjustment: per factory flat rate.



### FUEL CONSUMPTION RATE



### FUEL RANGE



### 1/4-MILE ELAPSED TIME

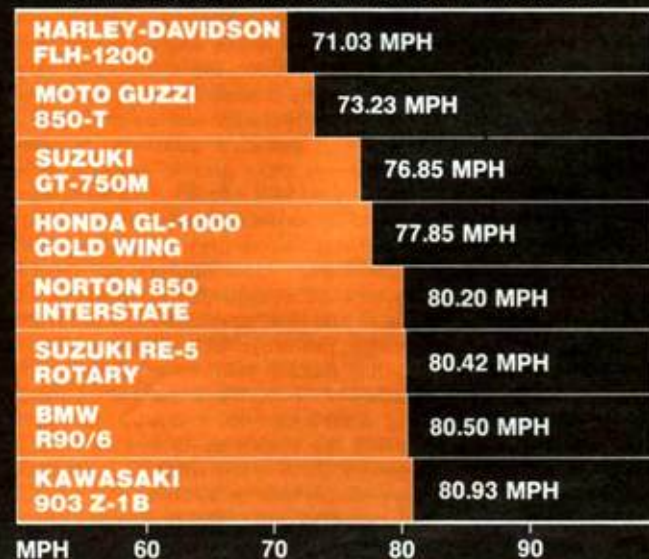


### 1/4-MILE TERMINAL SPEED



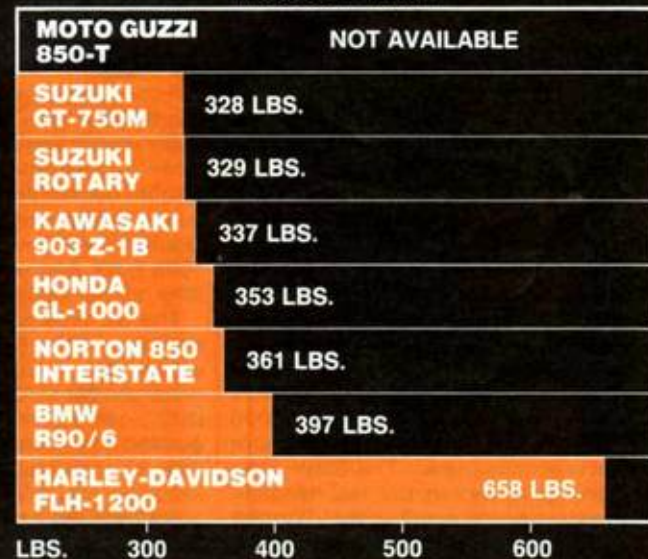
### PASSING ABILITY

TERMINAL SPEED IN TOP GEAR FROM 55 MPH IN 650 FEET



### GROSS VEHICLE WEIGHT RATING

MINUS CURB WEIGHT



# EIGHT FOR THE OPEN ROAD: CONCLUSION



To conclude with an overall rank order based strictly upon point averages in all the categories is to assume that all categories are equally important to all riders; to avoid a final ranking is to assume that the abilities of a given motorcycle are indistinguishable from the abilities of any other motorcycle. Patently, that is not the case; good bikes are better than mediocre bikes, and mediocre bikes are better than bad bikes.

Our overall ranking does not, once again, take into account a multitude of critical buyer considerations; inexplicable personal appeal often overshadows persuasive functional shortcomings. "Because I like it," has always been the most compelling reason for buying a particular model. Motorcycles, after all, are passion objects, and passions sometimes disagree with functional realities.

How the bikes work: that is what we set out to determine. Consider the overall ranking for what it is—the collective staff opinion of the editors of *Cycle* Magazine based on comparisons, impressions and hard data logged during the course of 13,000 total miles through all different kinds of terrain and under most riding conditions.

**1) The BMW R90/6 and the Honda GL-1000 Gold Wing.** If the BMW is an easy winner in the suspension comfort and ergonomics categories, the GL-1000 had perfect scores in vibration control and overall noise level. The BMW does extraordinarily well in the maintenance and conveniences scoring; the GL-1000 counters with its speed and acceleration.

Both have shaft drives; both are expensive, though the BMW is more so; the BMW deals more successfully with non-interstate terrain, but the Gold Wing's brake systems work better. The BMW's lack of weight is attractive to a few staffers; the Honda's understated luxury and the effortless way it spins out speed is attractive to all. Power delivery from the Gold Wing is willing but snatchy; from the R-90/6, smooth but a bit lazy. Both are highly efficient, restrained, sophisticated and balanced as touring bikes; but they have attained their superiority in utterly different fashions. The Gold Wing is brand new; its heritage comes only from a stack of engineering drawings, computer read-outs and Honda's very mechanistic understanding of what works. The BMW is a half-century old; some have called it a triumph of development over design, but a win, after all, is a win. It is supple, has the only touring-type suspension that really works, and offers the long-distance rider a nearly perfect seat. High-gear torque, decent acceleration through the gears, good vibration control, historic reliability and easy maintenance put the 1975 R-90/6 where it has been for some time: at the top of the heap.

The GL-1000 was born there, and not too long ago. It's faster, smoother, outwardly more sophisticated (certainly more complicated), and quieter than the BMW, but the R90/6 makes it up with comfort and a design concept from which time and dedicated development have extracted nearly every annoyance.

We have used all our tools—argument, discussion, logic, hard numbers, soft

opinions—to pry the two apart. We can't. They're both magnificent—and yards ahead of the rest.

**3) Suzuki GT-750M.** Think of the water-cooled two-stroke triple and the words, "tough," "useful," "obstinate" and "bargain" come to mind. Held to be quite revolutionary when it was introduced half a decade ago, the 750 has beaten down objections to its performance and concept with yearly improvements and an impressive long-distance record. It won but a single category—in town ease of operation—but its scores in others were consistently high. Alterations to its breathing and gearing for '75 probably hurt it as a straight-line tourer, but additional ground clearance and increased peak horsepower, together with a brilliant front brake and an unintrusive rear, made it much more fun—and safer by far—off the Interstates. It doesn't leak oil, accelerates with enthusiasm, has a klunky but decisive gearbox, handles better every year and in general does what its rider tells it to do. Shortcomings? Not enough cruising range (the 750 was the first to run bone-dry); and more engine vibration than most staffers felt necessary. In all other regards the water-cooled triple is just fine; approach it without the average motorcyclist's preconceptions and it'll dazzle with its efficiency and steadiness. Too, it's a bargain considering what it can do, and a bargain considering the prices of its competitors. It doesn't exactly know what it's supposed to be—Superbike or a tourer. We do. It's a tourer, and one that's practically unassailable.



**4) Kawasaki 903 Z-1B.** If ever there were a wolf in wolf's clothing, it's the Z-1. One of the two crudest bikes included in the comparison, the Kawasaki *makes* you like it with satisfactory high- and low-speed handling, two engines for the price of one, and a complete lack of pretense. What you see is what you get, and you'd better be ready for it. Below 6000 rpm the Z-1 is strong, harsh, and stiff; above 6000 rpm it is *fierce*, harsh and stiff. Accurate carburetion, good gear-staging, useful low-speed torque and a nice clutch gave it high marks around town; its general suspension stiffness and a granite seat penalized it in the ergonomic category; the same shortcomings sunk it to the bottom in the compliance evaluation; and all but the Harley-Davidson beat it in vibration control.

Touring categories aside, the staff felt the Z-1 worthy of the "Best Bike Regardless" award. Still, this *is* a touring comparison; as a tourer, the Z-1 makes a helluva Superbike.

**5) Suzuki RE-5 Rotary.** Suzuki helped clear a touring slot for the Rotary by warming over the GT-750 and presenting it more as a hotrod. Guess what: the GT-750 is still a superior touring bike, and the Rotary has one characteristic that would pull it towards the top of a performance-intensive comparison: it is the absolute king of the heavyweight Japanese handlers. You can stick it deep enough into a high-speed corner to hear "Nearer My God To Thee," and still come out the other end having dragged nothing against the pavement except your eyeballs. The bike is oil-tight and well screwed together,

provides adequate comfort and vibration control, good high-gear acceleration and (two scorched spark plugs aside) barely-decent touring range (better than the GT-750 and the Kawasaki Z-1). The penetrating quality of its exhaust cadence fatigued several testers, however, and it didn't score well in town, probably because of its overall length and jerky mid-range carburetion. Braking is superior, all handlebar controls are where you want them to be (only the BMW, the GL-1000 and the GT-750 scored higher in ergonomics), and the excessive throttle slop that intruded on our original test Rotary (January, 1975) has been mostly engineered out. Complicated the RE-5 is; and after only six months on the market, still alien. But Suzuki has armed the Rotary with the industry's best warranty support: if your engine comes unravelled within a year, you get a new one, free. Roadside motor repairs are a practical impossibility; the bike is very automotive in that respect. But *Cycle's* four separate exposures to the RE-5 have shown it to be exceptionally tough (two of them went from one coast to the other and back again without a single spark plug change). We said it in January and we'll say it again: the bike works.

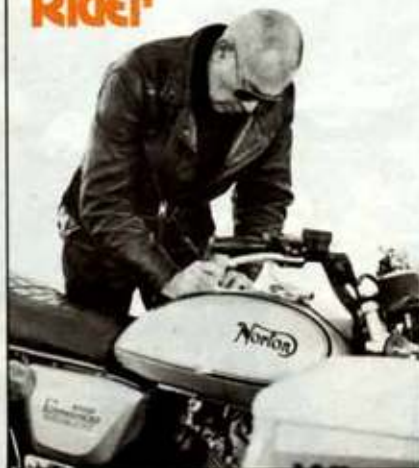
**6) Norton 850 Interstate.** The passage of time and the press of new legislation have loosened the Norton's grip on its own heritage. Because the engine makes so much noise, intake and exhaust muffling have to be even more rigorous than usual—so the Norton pays an extreme price in performance. Because Norton felt the market would soon find

kick-starting unacceptable, an electric starter has been grafted to the once-lean British twin—so the bike pays an extreme price in weight, and acceleration. That the 850 exists at all in 1975—and is legal in all states—is monumental. That it can compete against this kind of a field is a minor miracle.

But it was never designed as a heavy-weight tourer, so it competes without a great deal of success. It desperately needs a new front fork; more left-side ground clearance, and added measures of oil and gas tightness and low-engine-speed vibration control. Good mountain handling remains; it scored better in that category than every bike except the RE-5. It was originally laid out as a sporting bike, rewarding constant care and attention with spectacular tearing-around performance. Today it demands far less care and attention; but the rewards, still found on serpentine back-country roads, are less easily discerned on the Interstate. The Norton was born a sporting bike; it has retained enough of its original character to remain a sporting bike.

**7) Moto Guzzi 850T Interceptor.** The Moto Guzzi lacks the scope to be extended successfully from a back-road darter to a long-distance hauler. In its current incarnation (a hybrid made from softened Moto Guzzi Sport components and Guzzi Eldorado thinking), it is out of its depth. Narrow motorcycles function within carefully circumscribed boundaries; outside those boundaries they flounder. Compromise seldom helps, and it hasn't helped the Guzzi. A super-rigid, high-speed-proficient chassis comes to

## The Touring Rider



Roger Hull did more than come along for the ride and make us aware of the characteristics of the long-distance buff. He supplied us with a copy of Road Rider Magazine's 1975 Reader Survey based on a random sampling of 11,500 subscribers. Highlights of the survey: the median reader is in the 36 to 40 year old grouping; has been a motorcyclist from six to ten years; has covered between 25,000 and 50,000 miles; carries a passenger 10 to 25% of the time; lists traveling as his number one hobby, and motorcycle racing as his number 18 sport. By brand, 55.7% of Roger's readers ride a Honda, 35.7% ride a BMW, 20.1% ride a Harley-Davidson, 10.5% ride a Moto Guzzi, 10.0% a Suzuki, 5.7% a Kawasaki and 1.9% a Norton. While it is apparent that not all tourers read Road Rider, all Road Rider readers ride—and 81.5% of them consider Road/Touring to be the primary use of their motorcycle.

the engine and the main headlight; oil leaks and head gasket leaks spotted the engine's exterior and begrimed the right saddlebag; the rubber pad on the left floorboard came loose; vibration fractured a chainguard bracket; holding down a turn indicator button throughout a turn is unsatisfactory; low-speed drive train snatch marred the FLH's performance around town, and vibration and engine noise detracted from the 1200's comfort out on the Interstate. By all known yardsticks the Harley-Davidson is not a handler, and engine note to the contrary, it is painfully slow in terms of acceleration and top speed. The disc brakes work acceptably, its straight-line ride characteristics are not without appeal, and it offers good range and mileage.

People who know more about the FLH and its riders than we tell us the 1200 is a non-competitive motorcycle for non-

competitive riders; that the bike is not so much ridden as driven; that those who own Harley-Davidson Big Twins would not deign to possess anything else—*ipso facto*, the bike is, if not a technical success, at least a marketing success; and that the bike makes up for all its shortcomings with an added measure of inexplicable, intrinsic charm obvious to the faithful. Such charm radiates from the bike's sheer size, from its pounding Vee-twin pushrod engine, from its absolute uniqueness of feel and presentation and from its total lack of refinement. No one could accuse the 1200 FLH of being appliance-like, or impersonal, or non-involving. It could be argued by the faithful that the 74 is more than a motorcycle, different than a motorcycle. It could also be argued that the FLH, on the basis of function, is less than a motorcycle. We so argue. ●

