

Cycle

MARCH 1977 • 75 CENTS

**KAWASAKI Z1 24-HR.
ENDURANCE RACER**

**INSIDE LOOK:
ISDT YAMAHA IT400**

**CAN-AM
175 & 250
QUALIFIERS**

**1977 HONDA
GL1000
GOLD WING**

**YAMAHA'S
MUSTY, TRUSTY
XS650C**



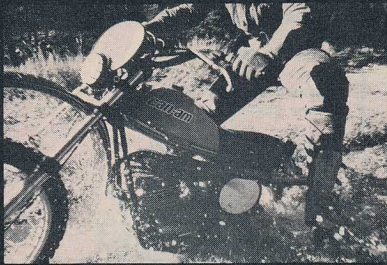
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This Month's Cover: What you see here is the classic one-time-only cover shot. Lying flat on his back, and with full understanding of what he was doing and the price he would pay, Dale Boller had his model ride off a ledge and right across Dale's supine body. Judge for yourself if it was worth it.

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HONDA GL1000

The Gold Wing is done in American Automotive Traditional: big, fast, luxurious and loaded with features.

● TWO YEARS HAVE PASSED since the introduction of the Honda GL1000, and from all sides a single cliché seems to cover the Gold Wing: that it's a two-wheeled automobile. Motorcyclists who love sporting roadsters say it with a snort; motorcyclists who ride far-ranging highways say it with respect; and non-motorcyclists utter it in awe. Invariably people with no knowledge of motorcycles are impressed by the Gold Wing because the big Honda has been done in American Automotive Traditional. The machine is big, roomy, powerful, well-finished, silent, civil, reliable and overflowing with *features*. All of this makes the GL1000 very much an American motorcycle built in Japan.

Even motorcyclists who champion sports-roadsters can't really deride the Gold Wing. What the machine does, it does very well. As a single-purpose motorcycle, the Honda tourer does not enjoy—and will not tolerate—the old bust-it-down-the-backroad and snap-it-through-the-corners routine. The Gold Wing belongs on the wide-open road, and the smoother the asphalt the better.

With an entire interstate system unfolding before you, there may be a lot of motorcycle things you just don't want to know about. Religious lubing of the chain is one; rickety-rack noises out the exhaust counts as another; a clattery engine makes a third. Two-thousand-mile service intervals are absolutely out; and while vibration is an unwelcome companion on any trip long or short, the big shake becomes an evil adversary during 700-mile days. So if the GL presents its rider with none of these aggravations, and if you think *that's* very automotive, then so be it. But understand that automobiles, and automotive motorcycles, can be nice.

Since the introduction of the Gold Wing, Honda has modified the bike, trying

to make it even more suitable for long-haul riding. The biggest single mechanical change has been a modification in the driveshaft unit. The driveshaft connects to the pinion gearshaft via a splined male-female coupling. Early Gold Wings had no external provision for lubricating these splines, so it was necessary to pull the rear end out and grease the splines at 6000-mile intervals. Sometimes grease would be expelled from the tight-fitting splines, permitting them to rust (condensation could collect in the unvented housing) or simply wear out. In 1976 Honda added an external grease fitting making it simple to lube the coupling. And a new internal seal kept the grease where it belonged—in the splines. The coupling must be lubed every 6000 miles with the recommended lithium-based multipurpose grease with MOS2-additive. Owners of early 1000s should know that there's a grease-zerk kit which can be retro-fitted to old Gold Wings.

Up in front, Honda has taken a backward step. Newly-reshaped bars come about as close as Honda ever will to apehangers. The rise amounts to about 10 inches; to make matters worse, the grips are far ahead of the seat. With a saddle height of 31.5 inches, the Gold Wing sits nice and low—just fine for short-legged folks. But most people with short inseams have neither long torsos nor telescopic arms. The big stretch-out makes the seat-to-pegs dimensions seem insufficient, though that's not actually the case. There's 20 inches, measured vertically, between the pegs and seat—more, for example, than the GS750 Suzuki. However, since the bars keep coaxing you forward, your legs tend to double back and get a bit cramped after an hour or so.

We tried pulling the bars back and down as much as possible, but that wasn't

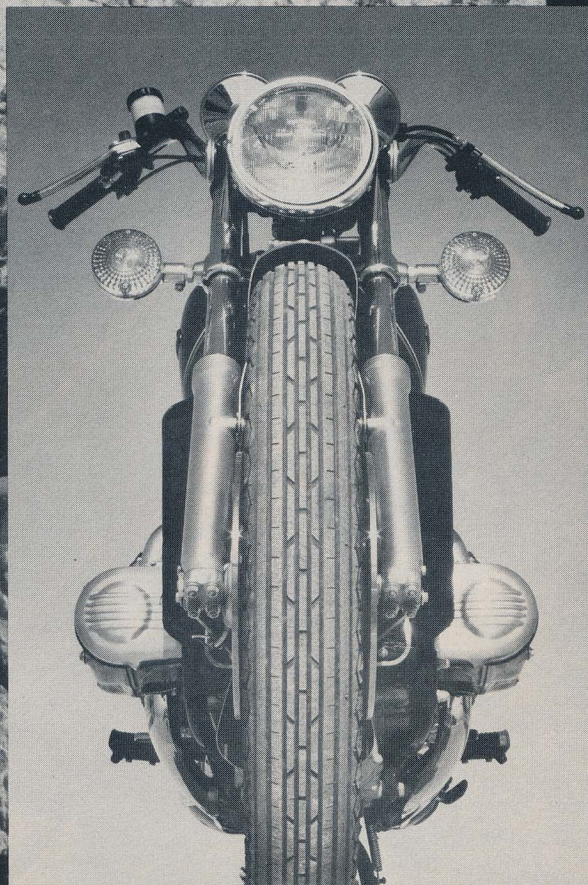
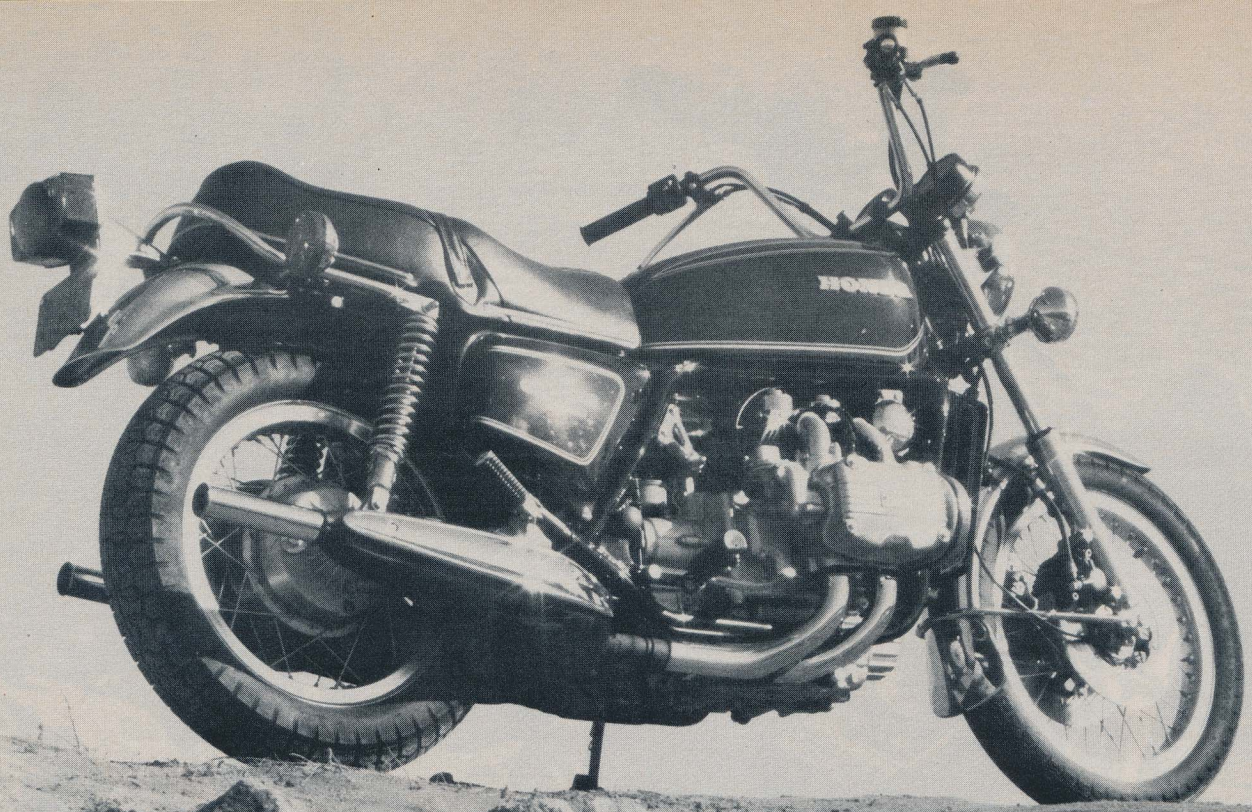
much. Both the left and right handlebar switches have been pegged to the bars so that the internally-routed wires can't be damaged by twisting. Consequently, the switch bodies can't be turned much after the bars have been rotated down and back. Within the limits imposed by the switches you can get the bars to a barely acceptable position because Honda has separated the clutch lever pivot-boss from the left switch body. For that reason you can reposition the clutch lever after the bars have been moved. The brake lever and master cylinder are likewise non-integral with the righthand switch and twistgrip.

No wonder handlebar set-backs are popular GL aftermarket items. But to get things perfect, most GL riders will need different bars. They'll accept the hassles of shortening all the cables and hoses and threading wires inside bars because—in the end—there's no good alternative.

The first GL1000 seats provided the basis for Gold Wing accessory *sitzers*. The initial Honda seat shape did not conform to normal humans, and the perch was hard. The new Honda seat has a better shape and there's more padding; nevertheless, the accessory kings of posh posterior perches won't be driven out of business by Honda's latest effort. After 250 miles in the saddle, a rider can still develop those old tell-tail slow-burning sensations.

Creeping saddle soreness cannot entirely be charged off to the seat itself. Unfortunately, the suspension has not been changed since the 1000's debut. The front suspension of our test bike seemed to have more compliance than other GL-Hondas we've tried in the past. While there isn't a great deal of stiction (static friction) in the front fork, the Gold Wing has yet to match the supple fork





HONDA GL1000

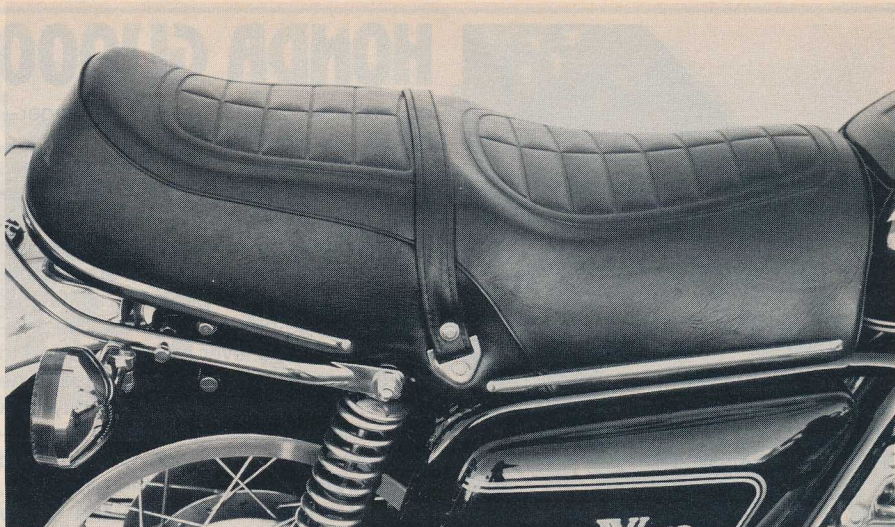
action of the BMW twins or the Yamaha XS750. The biggest change up front is the switch from ball bearings to tapered roller bearings in the steering head.

The major problem of the GL1000 lies in the rear suspension units, especially in rider-only situations (no accessories and no cargo). Even with the springs dialed to their lightest preload setting, the rear suspension moves very little in response to small irregularities in the pavement. Yet the springing is soft enough to permit the bike to snake gently in corners—though the pegs are so low that grounding prevents any big lean angles. More shock spring preload minimizes the wagging and produces more cornering clearance, but then you get a buckboard jolting when riding one-up over small bumps. Ride a GL1000 over a freeway constructed out of nine- or ten-foot slabs and your eyes will be rattling around in their sockets. Unless you're packing double, or carrying substantial baggage, you'll simply have to bear with this chopiness. Otherwise you must change shock springs, or dampers and springs. Frankly, we think anyone using a stripped GL as a luxury commuter would want softer springs immediately.

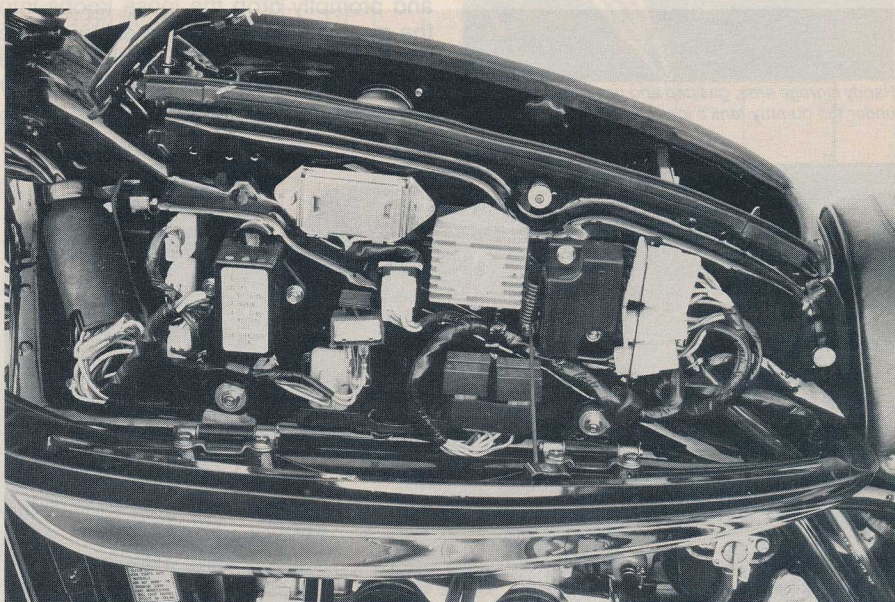
Honda knows all this, but the considerable weight of the GL works against any simple overall solutions. Honda must engineer the GL for maximum service, and we have long suspected that the bike has been sprung stiffly so that it maintains its straightline stability when packed or overpacked by enthusiastic long-distance riders. Added weight helps the GL's ride, but cross-country buffs should note that the Gross Vehicle Weight Rating of the GL is 1015 pounds. Since the motorcycle weighs 655 pounds wet, 360 pounds of rider(s), accessories and cargo would have the GL1000 at its GVWR maximum.

Honda most likely has a bigger problem with owners who overload Gold Wings than with those who complain about its harsh suspension one-up. The owner's manual gives the 360-pound figure as the "vehicle load capacity." It's a hard number to miss. Inside the front cover of the manual is an "Important Notice" printed in blazing red and pertaining to load capacity. Elsewhere the book devotes two full pages to "Accessories and Loading" and discusses the extreme care necessary in fitting accessories or carrying extra cargo on the bike.

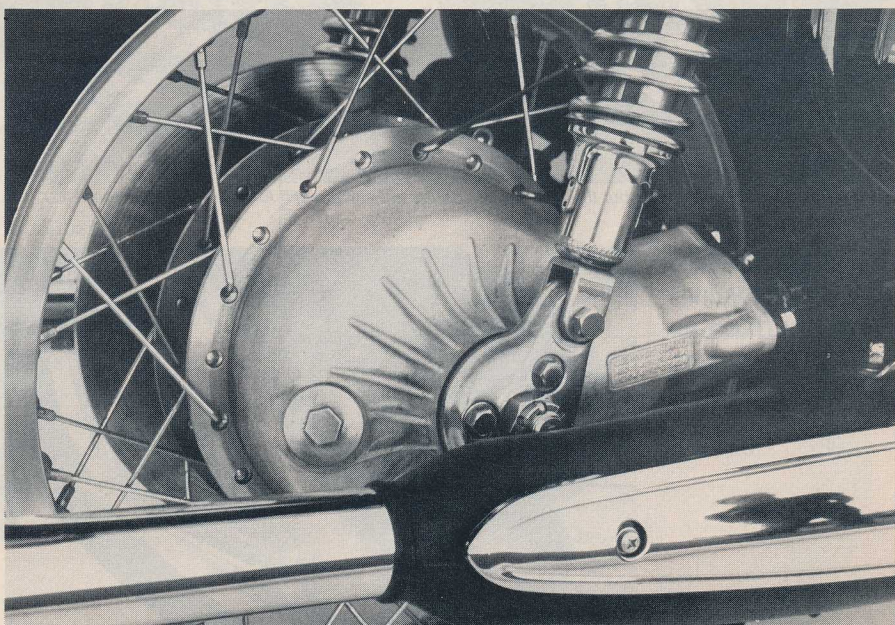
No doubt many Gold Wing owners do overload their bikes by stacking on frame-mounted fairings, bags, carriers, luggage, extra lights, etc. Perhaps some GL riders ignore the warnings, or have forgotten them, or never read them in the first place. Still other Gold Wing owners may implicitly assume that a huge touring bike which weighs 655 pounds could—or should—be able to carry more than a 190



The Gold Wing's seat has been repadded and reshaped to increase comfort on those high-mileage riding days.



The gas tank is a dummy. The electrical components are centralized under the flip-down left side panel.



The grease fitting for the driveshaft splines is located just forward of the rear-end casting on the top of the driveshaft/swing-arm member. The gear-oil specifications are cast into the rear-end housing.



Handy storage area, gas cap and gas-catch basin are under the dummy tank's lockable top panel.

HONDA GL1000

pound rider, a 135 pound passenger—and 35 pounds of extra gear.

A short summary of detailed changes completes the new-for-'77 list. The crankshaft has ignition timing marks done in red; now they're more easily picked out with a strobe timing light. The speedometer has a kilometer-per-hour scale just under the mile-per-hour figures. The position of the choke lever has been raised to make it more convenient to use. The screw knobs which hold the dummy-tank side panels up now have retaining washers—they don't come out. On old Gold Wings, riders would open the glove box, pull out the tool tray, undo the screw knobs (so that they could flash the side panels down and impress their friends) and promptly drop the loose knobs into the maze below. Finally the exhaust pipe headers have sprouted chrome shields that serve two purposes. First, the dressy covers hide the plain black header pipes.

Second, the covers act as cornering feelers since they give a little when scraping on the ground. Thus, there's less danger that the bike would be unexpectedly levered off its wheels.

The main engine features of the GL1000 are well-known, and they received detailed treatment in the April 1975 issue of *Cycle*. To review briefly, however, the Gold Wing is powered by a water-cooled horizontally opposed four-cylinder engine with single overhead camshafts. Toothed Gilmer belts at the front of the engine drive the overhead cams. The cylinders are cast into the crankcase halves following automotive practice; there are no separate cylinder castings so familiar in motorcycle design. Should the pistons or rings require work or replacement, the engine must be removed from the bike. The 72mm x 61.4mm unit is extremely compact, but the bores are spaced widely, giving the engine ample room for water jacketing and leaving plenty of metal for hot-rod types to stuff in larger pistons.

The one-piece crankshaft runs in three main bearings and of course carries two-piece rods. The primary drive, a Hy-Vo chain, runs off the end of crankshaft at the rear of the engine. Also at the crankshaft's end is a spur gear which in turn drives the alternator shaft. In order to counteract the engine's inertial torque reactions—which become evident when crankshafts are disposed longitudinally rather than transversely in motorcycles—Honda attached an extra flywheel to the rear of the alternator. By driving the alternator slightly faster than the crank, the much overplayed "torque reaction" was overcome because the alternator flywheel rotates in the opposite direction of the crankshaft and counteracts its inertia.

The Gold Wing is a dazzling example of Honda engineering, and the willingness of Honda R&D to break new ground when they deem it necessary or desirable. The engine layout meant the carb-intake/air-filtration system would pre-empt much of the space normally given to the gasoline tank. Therefore, the gas tank was moved to a lower position under the saddle although that placement required a fuel pump. The modular electrics and coolant reservoir tank went under the dummy gas tank's side panels. This rearrangement was all very logical and sensible—and daring in the conservative motorcycle world. Only Honda is probably confident, arrogant and brave enough to innovate in this radical fashion.

So different is the Gold Wing that the bike deserves a few quirks of its own. Quirks it has. Start a cold GL, and a great oil cloud engulfs the surrounding area. Particularly when new, before the rings seat in fully, a fair bit of oil seeps past the rings and into the combustion chambers. So every cold start produces a fog.

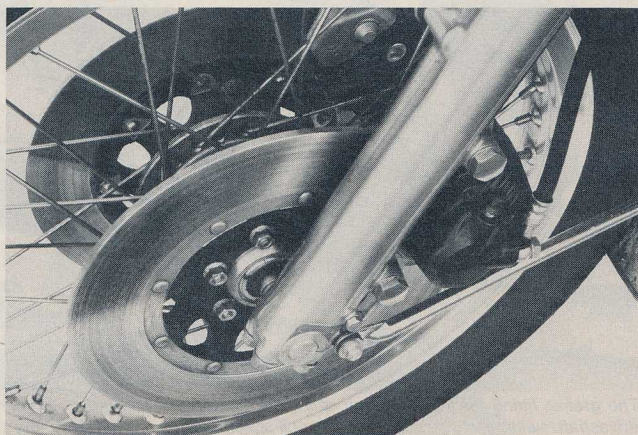
Gold Wings are also cold-blooded crea-

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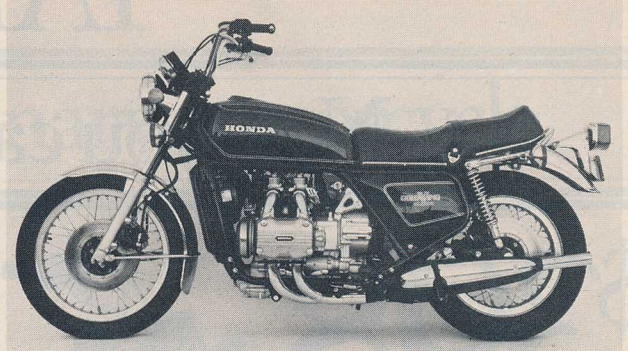
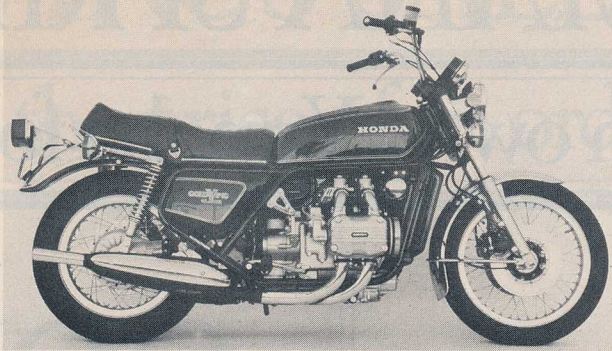


The front fork works pretty well, but the rear shock springs are still too stiff for rider-only situations.

The Gold Wing is motorcycling's all-time champ for smoothness.

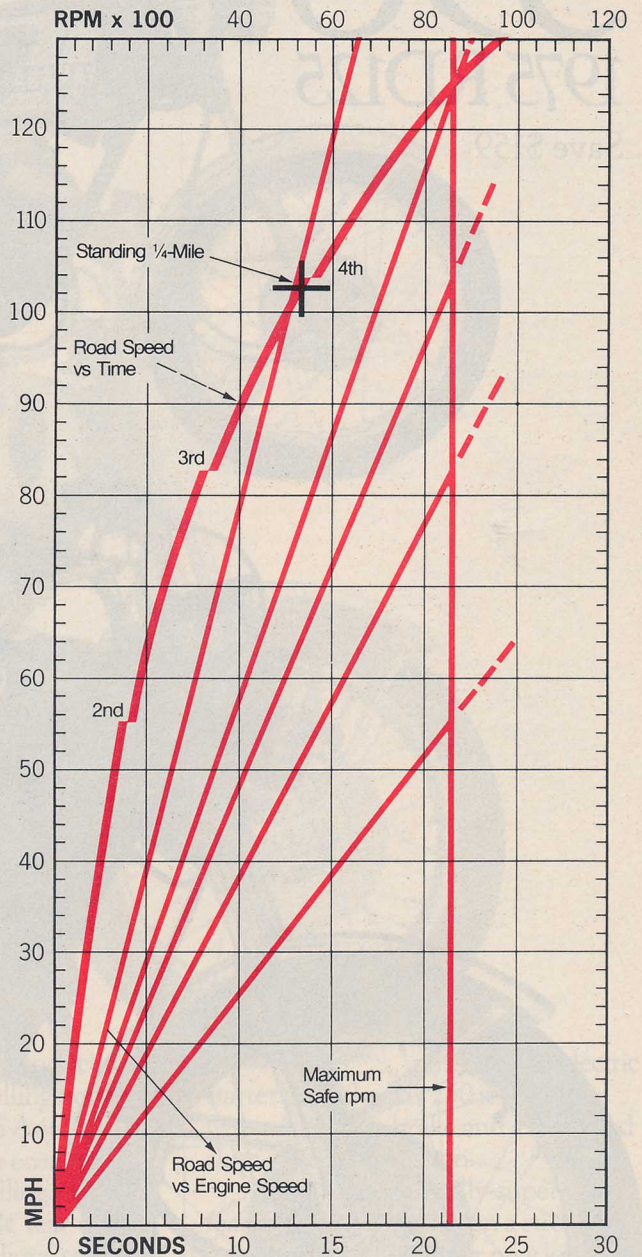


Stainless steel discs are riveted to alloy carriers. Calipers are floating type.



HONDA GL-1000

Price, suggested retail \$2938 East/West Coast
 Tire, front 3.50 × 19 Bridgestone Superspeed
 rear 4.50H 17A × 17 Bridgestone Superspeed
 Brake, front 10.75 in. × 1.69 in. × 4
 (275mm × 43mm × 4)
 rear 11.6 in. × 1.77 in. × 2
 (300mm × 45mm × 2)
 Brake swept area 302.3 sq. in. (1949.6 sq. cm.)
 Specific brake loading 2.66 lbs./sq. in.
 Engine type Four-stroke sohc
 horizontally opposed four
 Bore and stroke 72mm × 61.4mm (2.834 x 2.417)
 Piston displacement 999cc (61 cu. in.)
 Compression ratio 9.2:1
 Carburetion 4; 32mm Keihin CV
 Air filtration Paper element
 Ignition Battery and coil
 Rake/Trail 27° / 4.5 in. (11.4cm)
 Mph/1000 rpm, top gear 17.2
 Fuel capacity 5 gal. (19 liters)
 Oil capacity 3.8 qt. (3.6 liters)
 Battery 12V, 20AH
 Primary transmission Hy-Vo Chain; 1.708
 Transfer Gear Reduction825
 Final drive reduction 3.40
 Gear ratios, overall (1) 11.89 (2) 8.18 (3) 6.39
 (4) 5.26 (5) 4.50
 Wheelbase 60.5 in. (154cm)
 Seat height 31.5 in. (80cm)
 Ground clearance 5.3 in. (13.3cm)
 Curb weight 655 lbs. (297.1kg)
 Test weight 830 lbs. (376.5kg)
 Instruments Speedometer, odometer,
 trip meter, tachometer, water temp, gas level gauge
 Standing start ¼-mile 13.22 sec. @ 102.73 mph
 Average fuel consumption 37.8 mpg
 Speedometer error Indicated 30, actual 29.32
 Indicated 60, actual 57.36



would run 145-160 miles before emptying the main gas tank.

The Gold Wing still requires careful filling at the gas station. The gas filler neck is quite small, making it impossible to ascertain the gasoline level. The result can be overfilling and spilling the gas into the well which surrounds the filler neck. The excess gas drains down on the pavement under the bike creating a wasteful mess and advertising the rider's incompetence. A larger filler neck is needed.

There's no braking problem with the Gold Wing's triple discs. The GL1000 puts so much weight on the front tire under braking that the double discs are more than showy cosmetic touches. The lever has an even pull, and there's a good linear relationship between the lever pressure and the stopping force generated by the powerful front discs. It's possible to howl the front tire. Better yet, the rear disc brake action can be controlled even when the front discs are applied vigorously. The foot-pedal feel has been carefully worked out; your foot can sense how close the rear is getting to lock-up, and thanks to this monitoring sensitivity, the rider can back off the brake in small increments.

Not only is the GL1000 excellent in the engineering fundamentals of engine and brakes, the motorcycle abounds with little features. The glove-compartment proves marvelously convenient for extra gloves, eye glasses, maps, cigarettes or whatever. The headlamp warning light notifies the rider if a filament burns out. Should that happen during the daylight hours with the always-on headlamp, it's useful for a touring rider to know he must replace the sealed beam before nightfall. Even the rubber pad on the sidestand has a wear line indicating the point at which replacement is needed. We're just wondering when Honda will build an electronic eye to control headlight dimming at night. And why not? Fine cars have had this feature for years, and the Honda dimmer is badly positioned for easy use.

We imagine a vast number of Gold Wing owners treat their bikes just like cars: lots to polish, nothing to service. Basic service intervals occur every 6000 miles, and an interested owner could handle everything on his own—whether inside his garage or on the road. Riders who hate to wrench but like to travel know that Honda has more dealers across the United States than any other manufacturer, and that's a comforting thought for any guy who can't use a screwdriver.

Perhaps more than anything else, the Gold Wing is reliable as an anvil. Yes, there are better-handling touring bikes, and long-distance cruisers with more comfortable suspensions, and other tourers that weigh far less and carry much more. But the Gold Wing has an aura of invincibility; it will always be there, always be well-mannered, always predictable. The Gold Wing, like a good car, is something the travelling man can take for granted. And that speaks volumes. ●

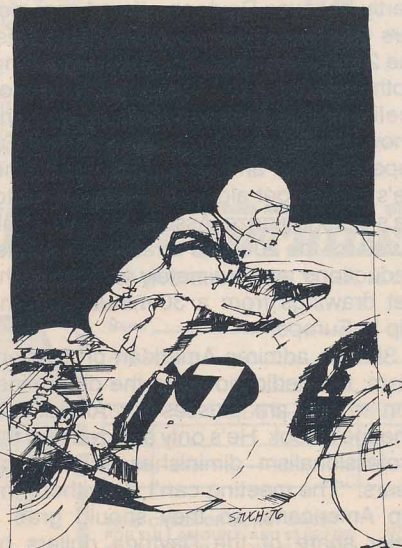
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