

FULL TEST: HONDA 750 AUTOMATIC

cycle guide

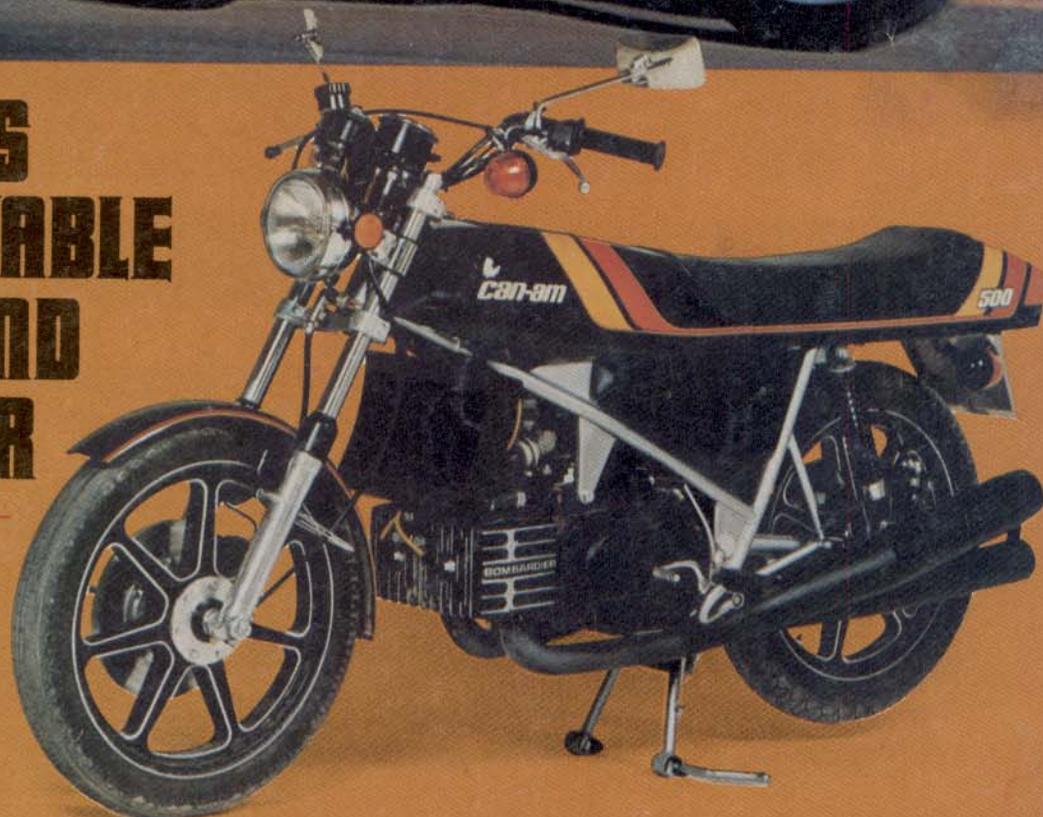
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**The No-Shift
Revolution
Begins**



**CAN-AM'S
UNBELIEVABLE
330-POUND
Z-I EATER**

**DAYTONA '76:
RIDING TO IT
BEING AT IT
RACING IN IT**



NEW MOTOCROSSERS: TWO BULTAGOS AND AN OSSA G.P.

HONDA CB750A AUTOMATIC

Thirty-five years after Oldsmobile stunned the automobile world with the first successful mass-produced automatic transmission, Honda does the same for the motorcycle world with the CB750A

As a confirmed motorcyclist, it's perhaps difficult for you to understand the CB750 Automatic. It seems so senseless to you, like it was designed to eliminate some of the most appealing aspects of motorcycle riding. You *like* shifting gears, working the clutch, and counting all the upshifts and downshifts every time you start and stop. You've mastered the coordination necessary between the gearshift, clutch, and throttle, and you really enjoy the feeling you get from being in complete control of the engine.

And for those lazy days when you aren't up to being cold or don't feel like shifting, there's the Monte Carlo or the Torino or whatever that 4000-pound lump in your driveway is called. You can just get in, stick the thing in Drive, turn on the radio, and turn off your brain. But being a true motorcycle enthusiast, you don't have much use for a motorcycle that thinks it's an automobile. If that was what you wanted, you'd drive a whole car, not half a car, not a two-wheeled *thing* that does your thinking for you.

Fine.

But there *are* other people out there, people to whom keeping track of five or six footshift gears and a hand clutch is just too much hassle, especially when added to all the other lifelong fears they've harbored about motorcycling—like the apparent sensation of instability caused by balancing on two wheels, the dread of falling down if they lean too far, bodily vulnerability in a crash, getting wet or cold, fear of ridicule by their friends, limited cargo capacity, and on and on.

You couldn't get some of these people on a motorcycle at gunpoint. Their inbred anxieties about two-wheeling run so deep

that for them, the idea is out of the question. Forget it. No way. Not even with automatic shifting, automatic stopping, automatic turning, or automatic anything else.

However, some people in that non-riding populace are more receptive to motorcycling. They've toyed with the idea of buying a street bike from time to time, but something always stopped them—usually not a financial roadblock, but something closely connected to those terrible aforementioned trepidations about motorcycles. Yet their intrigue with two-wheeled vehicles, as easily dissuaded as it is, is not dissipated. It lingers on, keeping them right at the brink of decision, waiting for someone or something to come along and push them over the edge. Four cylinders and electric starters won't do it. Dynamic balancers and banks of warning lights won't either. Nor will shaft drives, water-cooling, disc brakes, or self-cancelling turn signals. But an automatic transmission? *Now* you're talking.

The Automatic eliminates the hand-and-foot coordination and gear-position awareness required on a normal motorcycle; without that to worry about, the cautious, uneasy beginner can divert his attention to other important things, like which way the throttle turns, where the brakes are, and keeping himself alive.

Too, the Automatic will appeal to some enthusiasts who already own motorcycles. It has good potential as an open-road touring mount, it's easy to ride in traffic, and it draws a great deal of attention from riders who do not delight in gear-snicking, peg-grinding sessions on their favorite back road.

But the importance of this motorcycle is

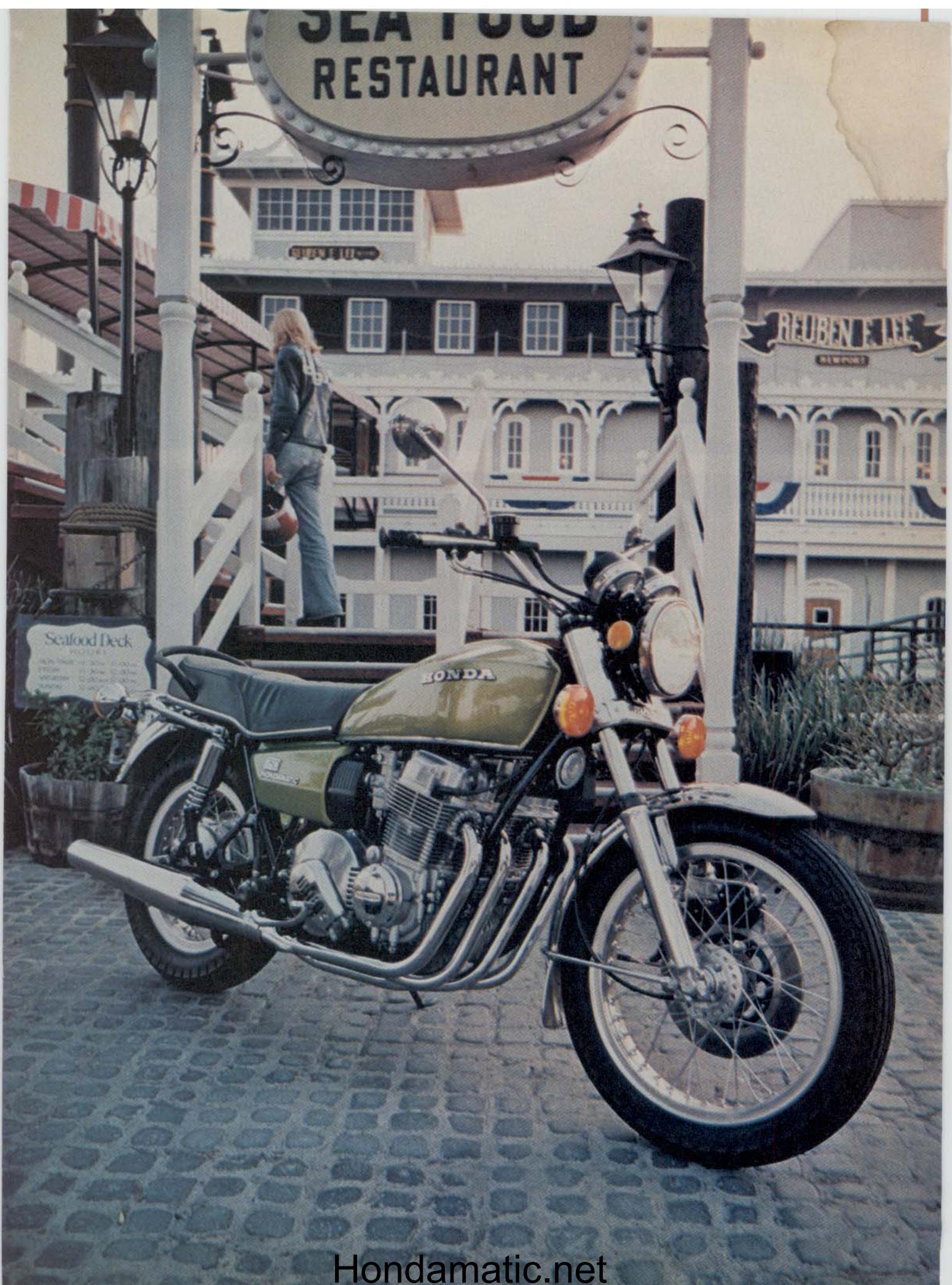
not with the enthusiast market. Its true significance lies in the way in which it could expand the market like so many Hondas before it have.

THE BIKE: The CB750A, as this model is named, is essentially a CB750F Super Sport with a Hondamatic semi-automatic transmission grafted in place of the usual five-speed manual box. But that's really oversimplifying matters. The "A" model has undergone extensive detail changes in all areas—changes meant to help the Automatic fulfill its unusual mission.

First, the transmission itself: The heart of the system is a hydraulic torque converter just like those used on many automatic-transmissioned cars. How a torque converter works is a subject too complex to fully explain in the course of a motorcycle road test, but essentially, it is a fluid clutch that delivers power from the engine to the gearbox without any metal-to-metal contact.

Instead of having a bunch of metal plates like a normal motorcycle clutch, the torque converter is a sealed housing containing oil under pressure along with two main components, the pump and the turbine. The pump is connected to the crankshaft, and the turbine to the gearbox. Both are shaped something like soup bowls and sit inside the house facing, but not touching, each other. Both components have a network of specially-shaped vanes that deflect the oil in the converter.

When the crankshaft turns the pump, its vanes deflect oil into the vanes of the turbine, making it turn also. One simple way to understand this action is to imagine two electric fans facing one another, with one plugged in and running, the other not. The air deflected from the blades of the





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running fan causes the blades of the other fan to rotate. And it is this same principle that makes a torque converter pump turn the turbine.

This fan-blade description actually better describes a fluid coupling, which is similar to a torque converter. A torque converter is a fluid coupling with a stationary third vaned member, called a stator, between the pump and turbine. The stator helps deflect the flow of oil between the two moving members more efficiently, therefore permitting a better transfer of power between the engine and transmission. That might sound like a small technicality, but it results in a *big* difference in the efficiency of a torque converter as compared to a fluid coupling.

The Hondamatic has two speeds in its gearbox—Low and Drive—and is called a semi-automatic because it never shifts gears on its own. If you start out in Low, the gearbox *stays* in Low until you shift it into Drive by lifting the short foot lever on the left side of the engine. If you start out in Drive, which has a slightly higher gear ratio than Low, the gearbox stays in Drive. There is no upshifting or downshifting in Drive, and no “passing gear” or the like.

The reasons for the lack of total automatic shifting are twofold. The first is simplicity: Automatic shifting would require additional, complex components. Second is safety: An unexpected upshift or downshift while banked over in the middle of a hard corner could cause a fall.

The single-overhead-cam CB750 engine required some extensive modifications before it became a suitable partner for the Hondamatic transmission. The dry-sump oiling system was changed to a wet-sump type so the transmission could utilize the same oil supply that lubes the engine. Since the engine rpm does not vary so greatly with a torque converter, a different camshaft was needed to produce better power in the most frequently used middle rpm ranges.

A motorcycle with a torque converter conceivably could be put on the sidestand while it's running and in gear, which might result in the bike moving on its own or falling down after the rider got off. So the CB750A has a special shift linkage connected to the sidestand that automatically puts the gearbox in neutral when the stand is extended, and prevents any gear from being engaged until it is retracted. In short, the bike can't be driven with the stand down.

A further complication is the bike's ability to coast when the engine is off, even when in gear. If you parked the bike on a hill using the sidestand, there would be

nothing to keep it from rolling away. To overcome this, the CB750A has a unique parking brake incorporated into the rear brake. To engage it, you pull out a little plastic knob under the left side of the gas tank, then mash on the brake pedal. A ratcheting device on the brake pedal pivot locks the pedal down, just like the emergency-brake pedal on some cars. To release the brake, you push the knob back in and tramp down on the pedal. That releases the ratchet, allowing the pedal to work normally.

Previous CB750 Hondas have always had a terrible lack of response when the throttle was quickly opened at low rpm, and this condition would have been intolerable on the Automatic, since it cannot be “revved up” past that flat spot before engaging a forward gear. With an automatic transmission, normal full-throttle starts are made simply by turning the throttle wide open from an idle, and the 750 never would have been able to handle that.

Knowing this, Honda's engineers completely redid the carburetion by deciding on 24mm Keihin slide/needle carbs instead of the usual 28mm units and developing an accelerator pump system to eliminate the infamous flat spot. There's actually only one accelerator pump, located on the second-from-the-left carb, but a series of hoses and passages connects the pump to the throats of the other three carbs. Any time the throttle is moved to a wider-open position, a little spray of fuel is injected into the venturi of all four carburetors to eliminate that momentary lean condition.

An electrically-controlled diaphragm on the throttle linkage also speeds up the idle when the transmission is put in gear. This allows a reasonably slow idle speed in neutral without the fear of stalling when in gear. It also eliminates much of the lurch that would occur when engaging a gear from neutral, since the neutral idle doesn't have to be as fast.

The rider is no longer in complete control of engine rpm, so the tachometer has been eliminated and its usual pod used as an instrument and indicator light housing. The right-hand pod carries indicator lights for high beam, oil pressure, parking brake, and turn signals, plus an electric fuel gauge and an illuminated gear position indicator. As you shift gears, one of three large, bright lights tells whether you're in Neutral, Drive, or Low. The left-hand gauge is still a conventional speedometer, but with markings that show the safe speed ranges in Drive and Low.

The CB750A uses the same basic frame as the Super Sport model, but with a one-inch longer swingarm and a one-degree steeper steering head angle, apparently to make the steering feel lighter without causing the bike to be twitchy or steer too quickly. The exhaust system is also the same basic four-into-one unit used on the



Super Sport.

The wheel and rim combinations are ideas borrowed from the GL-1000 Gold Wing. A 4.50 x 17 Dunlop K87 sits on the back, with a 3.50 x 19 Dunlop F6 rib-pattern on the front. Both wheels use the Gold Wing-type, thick-shoulder DID alloy rims. A single hydraulic front disc and a rod-operated rear brake do the stopping chores.

The styling also smacks of Gold Wing in some places, like in the peaked chrome front fender with built-in rear mudflap, and in the long, valanced rear fender. The 5.1-gallon fuel tank is .3 gallons larger than the CB750F tank. A Super Sport-style gas filler lid is used, also concealing the sending unit for the gas gauge.

The seat height is about the same as on the “F” model, but the seat is narrower at the front, has more padding in most places, and features dipped-in-the-middle styling like on the CB500T twin. The cushioned passenger grab rail is some sort of industry first, and gives the seat its own particular character. Flipping up the seat reveals the battery and detachable kickstarter that slips on a short shaft protruding from the left side of the engine.

ENGINE AND TRANSMISSION: When we first learned of Honda's plans to build a torque-converter automatic, we wondered what sort of contrived, Mickey-Mouse affair it would turn out to be. Not that the company builds cobby motorcycles or anything, but the complexities of automatic transmissions just didn't seem to lend themselves to a “normal” motorcycle engine design. But nothing could be

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further from the truth. For not only does the CB750A look like a conventional motorcycle, the transmission performs as smoothly and efficiently as your Hydramatic or Fordomatic or any other automotive automatic. You just open the throttle and ride away—that's all there is to it.

The shift pattern has Neutral at the very bottom, with one snick up for Low and another snick up for Drive. It doesn't require much force to move the lever, since you're not mechanically shifting gears, but sliding a hydraulic valve to a different location. The actual gear changing is done with hydraulic pressure.

When engaging Low from Neutral, the bike creeps a little, so you should have the front brake on before you lift the lever. The creeping is barely noticeable in Drive, but still requires a wee pinch of either brake to keep you from rolling on level ground. On most uphill grades, the creeping tendency acts as a hill-holder to keep you from rolling backward, especially in Low.

Opening the throttle from a dead stop in Drive revs the engine to a certain rpm and simultaneously moves the bike forward. The engine rpm remains about the same if you don't change the throttle setting, but the bike just keeps gathering momentum until it reaches the maximum speed allowed by that throttle opening. It's just a smooth, continuous flow of power uninterrupted by lurches, surges, or sudden changes in rpm.

For better acceleration, you can start out in Low and shift to Drive at any speed below 60 mph, which is the maximum recommended speed in Low to prevent overrevving. But even in Low, the initial acceleration isn't too terribly neck-snapping. The bike jumps out to about 10 mph almost immediately, but between 10 and 40 mph, not much happens. Over 40 the pace starts picking up, and by the time you're ready to make the 60-mph upshift to Drive, you're accelerating almost as quickly as a conventional CB750. The upshift to Drive brings a mild forward lurch and a drop in rpm, and the acceleration from there upward is quite adequate, although not as forceful as a CB750F at full tilt.

Truthfully, the acceleration at highway and freeway passing speeds is excellent, since the torque converter allows the engine to stay near its peak torque rpm. You can get quick bursts of passing speed without having to downshift, and the 50-to-70 or 60-to-80 acceleration is better than what you could get in fifth gear with a CB750F.

For sheer acceleration reasons alone, cafe racers and cruisers on Burnout Boulevard aren't gonna go for the CB750A, but

A SHORT STORY

Big bikes frighten me. (Define "big" as anything over 500cc.) I hate to admit to a fear of large-displacement motorcycles, but at least I'm not alone. I've talked to lots of women who say they're not confident about handling large bikes. The power of a big machine isn't intimidating, but the weight—up to 700 pounds, in some cases—is. It seems many women feel they just don't have the strength or experience to balance all those pounds.

My fears are compounded by the fact that I'm sort of short (5 foot 2), and my feet will never touch the ground flatly on anything larger than a Chappy. No matter what I ride, it's either the "tiptoe" or "butt-off-to-one-side" trip for me.

So maybe you can understand why, when asked to try Honda's new 750 Automatic, I became panic-stricken. Remember the old man on the tricycle on the Laugh-In show? I was positive I was going to keel over at a stop just like he used to.

When I first heard Honda was introducing an automatic-transmissioned motorcycle, I thought it was a terrific idea, especially from the standpoint of novice women riders. All the neat aspects of motorcycling could be experienced immediately, just by tapping it into Drive and turning on the gas. No more clutch-throttle learning hassles—at least not at first.

Then I learned the Automatic was a 750. "There goes its appeal to women," I thought. "Lots of them are ready for an automatic transmission, but not for one in a 750-sized monster."

Over the course of a week, I managed to collect my nerves and ride the bike. It was simple to operate and



enjoyable to ride. You just raise the sidestand, click the gearshift twice to put it in Drive, and go. While riding, the bike's 538 pounds never felt like too much for me, and the motorcycle was very easy to maneuver. But it wasn't easy to hold up when standing still.

I understand that Honda may advertise the 750 Automatic in women's magazines like *Glamour* and *Cosmopolitan*. I hope the company does. After all, the average American woman stands a couple of inches taller than I do and probably won't have the problems I have. I think most women will like the bike, especially first-time riders. Despite my fears, I liked it. I may even redefine "big." But please Mr. Honda, or whoever decides such matters: Introduce a 350-sized Automatic. Either that or market a platform-style riding boot soon. I'm getting tired of trying to stop near a curb.—Suzanne Whitfield

a lot of conservative riders will. It's a piece of cake to ride in traffic, and even pleasant on a back road, provided you're not trying to set fast time from Santa Barbara to Santa Cruz on Highway 1.

Passengers seem to prefer the Automatic over most regular bikes because it's so smooth, especially if they're of the non-riding variety. Most passengers never know when a rider is going to upshift or downshift on a conventional bike, so those unexpected lurches scare them. The Automatic, on the other hand, doesn't hold any such surprises in store. The bike won't necessarily make anyone a better rider, but it will make some people better passengers.

The engine seems to have about three inherent quirks, all related to carburetion. The first one is its extreme cold nature, due partly to the leanness of the fuel mixture. With the accelerator pump, the mixture at the lower and middle throttle openings can be much leaner—and too, the misers at Honda were quite concerned about gas mileage, so they have the bike running about as lean as it can. The engine doesn't respond at all when it's cold, even at full choke, and it takes a long, long time to warm up.

The second quirk is an offshoot of the first one, or at least we think it is; the tech people at Honda aren't sure themselves. At any rate, until the engine reaches its full

operating temperature, it surges ever so slightly at highway speeds. When fully warm, this surging doesn't exist. But for the first 10 or 15 miles after a cold start, you can feel the bike continually speed up and slow down by a few mph, even though you're holding the throttle at a constant setting.

The third quirk is the way the engine stalls if the bike is sitting still and the throttle is quickly blipped open and closed in Low or Drive. The bike moves forward the instant the throttle is opened, but the engine usually stalls when you shut it off. Automatic-transmission cars use a diaphragm—or dashpot, as it is called—to force the throttle to return more slowly, and prevent the stalling.

The lean carburetion, combined with easy riding, allows the CB750A to get some astounding mileage figures. We averaged 47.4 miles per gallon during our test, which included as many hard-and-fast riding sessions as easy ones. Our best tankful netted 53.4 mpg, our worst 39.3.

Actually, one tankful earned a miserable 29.5 mpg, but we threw that figure out in all fairness because of extenuating circumstances. During that period we conducted demonstrations for dozens of curious friends and riders on the relative merits of the motorcycle, most of which were made with the engine running but

the bike not moving. We whacked the throttle open from idle a zillion times to graphically illustrate the merits of the accelerator pump; we endlessly put the transmission in and out of gear; we did what seemed like hundreds of rev-the-engine-against-the-brake demonstrations in Low and Drive; and we did a lot of other fuel-consuming stuff that didn't move the odometer a lick.

HANDLING: At 538 pounds dry, the CB750A is a *big* motorcycle. That's 35 pounds heavier than the CB750F we tested a year ago. The additional weight comes mostly from the torque converter and all its associated hardware, plus the huge 20 ampere-hour battery replacing the 14 amp-hour unit used on earlier models.

The small change in steering geometry seems to have kept the Automatic from *feeling* any heavier, though. It steers and maneuvers easily, although it'll never be mistaken for a CB200.

One must bear in mind that this *is* a CB750, and that 538 pounds makes it about 138 pounds heavier than the "big" 650 twins of eight or ten years ago. So even though this bike is meant to interest beginners, commuters, and relatively inexperienced riders, it will prove too intimidating for many of them.

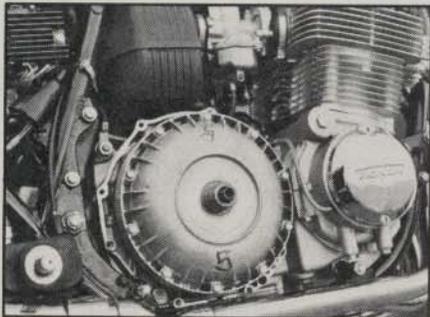
The Automatic is not a handful around town, however. Short-legged people may

feel a bit uneasy at first when straddling the rather wide mid-section, but the bike never feels overly bulky or clumsy when maneuvering through traffic or poking along in a parking lot. Without shifting and clutching to worry about, rookie riders can pay more attention to handling the motorcycle properly.

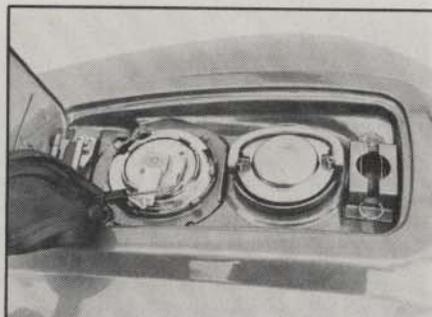
On the highway and open road, any feeling of bulk that may have existed in urban traffic is transformed into a feeling of security. The Automatic tracks dead straight ahead on almost any kind or angle of road surface, and is unaffected by all but the meanest of crosswinds. Rain grooves make the front wheel dance a barely-perceptible jig, but the motorcycle never diverts off course when it occurs.

The A's back-road scratching ability is not too bad, but slightly below that of the F model for two basic reasons. Although the suspension is about the same as the F's, the 35 additional pounds compress the springs further in a hard corner, making things drag sooner. Also, the torque converter's lack of solid connection in the drive train makes it harder to regulate the exact amount of power you want while in a corner.

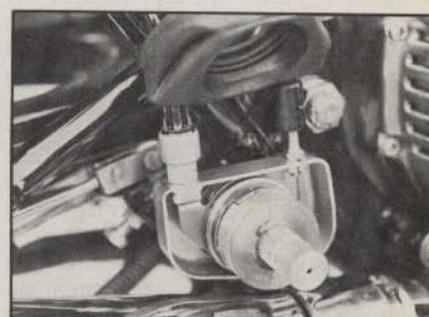
Still, the Automatic corners with reasonable ease, precision, and stability. Ours never wobbled or wallowed in some wavy corners, and we could extract only a mild



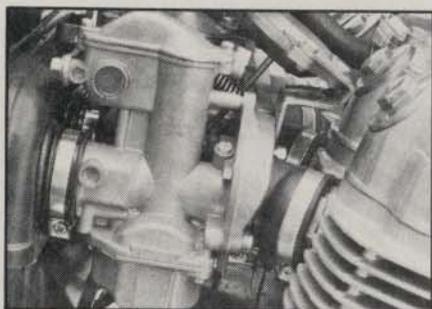
The CB750A uses a hydraulic torque converter in place of the standard clutch, with a semi-automatic, hydraulically-operated two-speed gearbox.



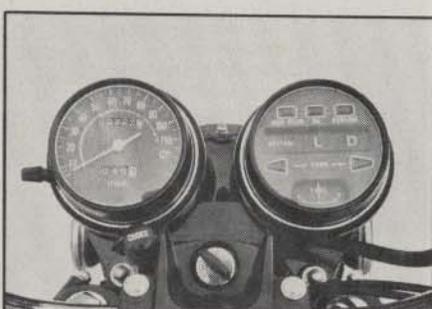
Flipping up the key-operated lid on the gas tank exposes the aircraft-type filler cap and sending unit for the electrical gas gauge.



A cable-operated ratchet mechanism on the brake pedal allows the rear brake to function as a parking brake for the free-wheeling 750 Automatic.



The four carburetors are 24mm Keihin slide/needle units, smaller than those on other 750 Fours, but a piston-type accelerator pump on the No. 2 (second from left) carburetor delivers a squirt of gas to all four intake throats every time the throttle is turned open.



An instrument cluster in what normally is the tachometer case contains warning lights for high beam, oil pressure, and the parking brake—plus a gas gauge, turn signal indicators, and the illuminated transmission indicator quadrant.



This separate shift linkage pops the gearbox into neutral when the sidestand is extended, and prevents the engagement of any gear until the stand is retracted.

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twitch if we hit something like a deep rut while turning hard. We could drag the metal warning balls on both footpegs if we tried, along with the muffler and brake pedal on the right. But considering that the bike is not intended for maximum cornering or anything of the like, it handles itself very well.

COMFORT AND RIDE: The Automatic's seat is more comfortable than the average saddle, and the overall ride is quite pleasant, although not the best we've ever sampled. It took two solid hours of riding in exactly the same spot on the seat to give our testers a case of numb butt. Moving to another spot after that helped a little. After three hours, though, a gas station or rest area was a welcome sight. But a short leg-stretching got the blood circulating again, and the seat then felt good for another hour or so. Some out-and-out touring machines don't have a seat quite as good as the CB750A's.

The seat/peg/handlebar relationship is good for all but the super-short or super-tall. The handlebars can be moved back or forth quite a bit to compensate for varying arm lengths without putting the grips at a funny angle, and the brake pedal height adjustment puts the pedal where you want it.

We didn't care for the hard, waffled handgrips, but the choice of grips is largely a matter of taste. We also thought the throttle return spring was too stiff. On long, steady-speed rides, the rider's right wrist would tire prematurely just from overcoming the throttle spring.

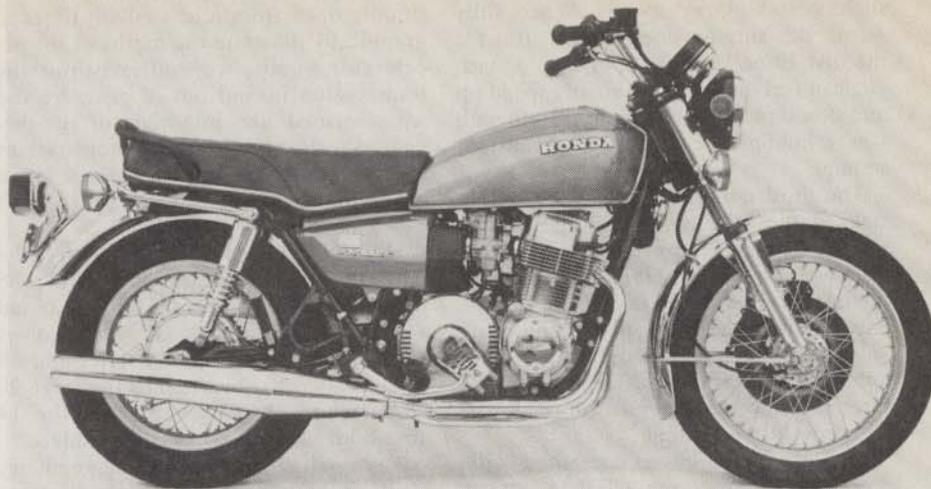
Our tall testers grumbled about the fore-and-aft location of the footpegs. As one rider said, "The damn things are *exactly* in the place where I want to put my legs when I'm stopped."

The CB750A vibrates a little at certain speeds, but not all the time. Some high-frequency buzzes can blur the mirrors and tingle your feet at 60 mph or so, but it'll happen one minute and go away the next. Much of it depends on the road, the grade, the tune of the engine, and even the outside temperature, all of which can affect the engine rpm at any given speed because of the "slip" of the torque converter. At its worst, the vibrations are mildly annoying, and at their best, they're nearly negligible. And at 76.7 decibels, the exhaust note is never annoying.

BRAKING: As devices for stopping the motorcycle, the brakes on the CB750A are just fine. They provide enough power to lock either wheel, and enough feel and sensitivity to prevent them from being locked accidentally. The motorcycle stops in a straight line almost every time, and the brakes will only fade slightly when used under racing-like conditions.

However, as devices for getting unfriendly attention, the brakes on our test bike were without peer, especially the front disc. Grabbing a handful of front brake at almost any speed resulted in a

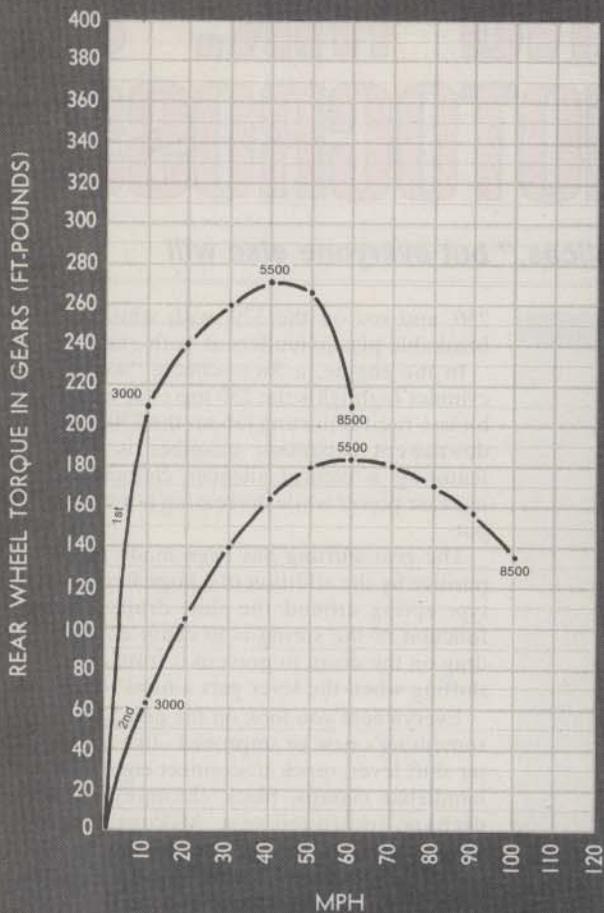
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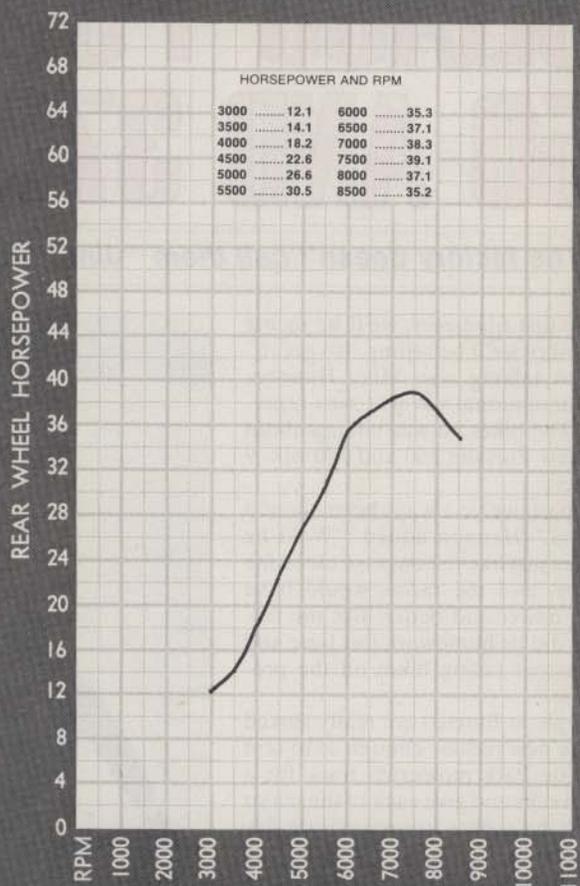
SPECIFICATIONS

Engine type	four-stroke
Cylinder arrangement	transverse parallel four
Valve arrangement	single overhead camshaft
Bore and stroke	61 mm x 63 mm
Displacement	736.4 cc
Compression ratio	8.6:1
Ignition	battery/dual coil/dual point
Charging system	12-volt, AC generator, voltage regulator, selenium rectifier
Carburetion	four 24 mm Keihin slide/needle with common accelerator pump
Air filter	disposable paper element
Lubrication	wet sump, 5.8-qt. (5.5-L) sump capacity
Primary drive	Morse Hy-vo chain, 1.351:1 ratio
Clutch	none, hydraulic torque converter
Starting system	electric and left-foot kick
Transmission	2-speed, left-foot shift
Overall drive ratios	(1) 8.63; (2) 5.79
Transmission sprocket	17-tooth
Rear wheel sprocket	48-tooth
Drive chain	3/8-in. pitch, 3/8-in. width (#530)
Front fork	5 in. (127 mm) travel
Rear shocks	5-way adjustable, 3.8 in. (96.5 mm) rear wheel travel
Front brake	single-action hydraulic caliper, 11.8-in. (300 mm) disc
Rear brake	drum, single-leading shoe, rod-operated
Front tire	3.50 x 19 Dunlop rib
Rear tire	4.50 x 17 Dunlop K87
Frame	tubular mild steel, double front downtubes
Steering head angle	27 degrees, 10 minutes from vertical
Front wheel trail	4.5 in. (115 mm)
Wheelbase	59 to 60.2 in. (150 to 153 cm)
Length	88.3 in. (224 cm)
Weight	538 lb. (244 kg)
Weight distribution	45.4% front, 54.6% rear
Ground clearance	6.2 in. (157 mm), at crankcase sump
Seat height	32.2 in. (818 mm), unladen
Handlebar width	31.8 in. (808 mm)
Handlebar grip height	43 in. (109 cm)
Footpeg height	12.5 in. (317.5 mm)
Instrumentation	speedometer, tripmeter resettable to zero, gas gauge
Speedometer error	30 mph indicated, 27 mph actual 60 mph indicated, 58 mph actual
Gas tank	steel, 5.1 gal. (19.5 L)
Gas consumption	47.4 mpg (20.1 km/L)
Best 1/4-mile acceleration:	
In Drive	17.83 sec., 82.87 mph (133.3 kph)
In Low	15.59 sec., 88.23 mph (142 kph)
Stopping distance from 30 mph	33 ft. 5 in. (102 m)
Stopping distance from 60 mph	144 ft. 9 in. (44.1 m)
Sound level per SAE XJ 331a	76.7 db(A)
Suggested retail price	\$2169

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This graph shows the amount of rear wheel torque available at any speed, at any rpm, and in any gear. Maximum acceleration will be obtained by shifting gears at the points where the consecutive lines intersect.

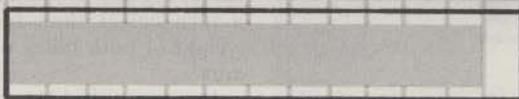


This graph shows the amount of horsepower delivered to the ground as measured by a Patraco MKIII rear wheel dynamometer. These figures may vary from the manufacturer's claims, or from those obtained on a different dynamometer.

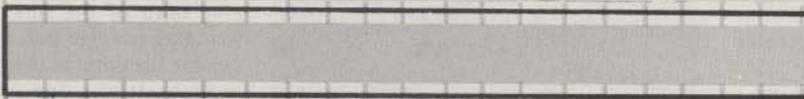
MILES PER HOUR

0 10 20 30 40 50 60 70 80 90 100 110 120 130

1 ST GEAR



2 ND GEAR



5 15 25 35 45 55 65 75 85 95 105 115 125

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piercing, high-pitched squeal that had about the same effect on innocent bystanders as a thousand fingernails scraping across a 50-foot blackboard. That squeal would bring old ladies, grown men, little kids, cats, rats, and bats to their knees, eyes crossed, lips pursed, pleading with the rider to please, *please* let off the brake.

The squealing was caused by the brake pucks becoming glazed, and sanding the pucks and the disc only relieved the condition for the duration of one or two stops.

After a while, the brake began squealing the whole time the bike was being ridden, even when no pressure was applied to the lever. Only a series of trial-and-error adjustments to the caliper bracket made the noise stop when the brake was not in use, but the horrendous din remained during normal braking.

RELIABILITY DURING TEST: Aside from the disc brake squealing, nothing went haywire during the test. And with no clutch cable, a self-adjusting hydraulic front disc brake, and a very reliable push-pull dual-cable throttle system, the only adjustments we made were to the rear brake rod and drive chain.

During the drive chain adjustment, we

noticed that the rear wheel would not point directly at the front wheel when the marks on both chain adjusters were even. We had to pull the left adjuster about 1/4-mark further back to get the wheels aligned.

Many riders we talked to were concerned about the reliability factor of the torque converter or other transmission components. So are we. But in a normal short-term test, in which nothing failed in the Hondamatic system, it's impossible to make any intelligent remarks about the converter other than "it worked perfectly," which it did. And it showed no signs of doing anything wrong, even when we purposely abused it.

CONCLUSION: Our only serious question about the CB750A deals with its size. If the automatic transmission is truly a better way to coax new riders into motorcycling, then why introduce the concept on a 538-pound, 750cc Four?

We asked the public relations people at American Honda that question, and they explained it this way: The automatic transmission idea began three or four years ago, when the CB750K—something-or-other was the biggest bike in the line and the Honda used most extensively for touring. At that time, the automatic was being developed for the 750 in hopes of adding a new dimension of smoothness and riding ease to an already smooth-and-easy touring bike.

But the Gold Wing came along and upstaged the 750 as the top-of-the-line tourer; so rather than ditch the automatic transmission idea, the designers just reaimed their sights and built the bike to also appeal to newcomers and non-cafe types in addition to tourers who were fed up with shifting.

Of course, they realized most new bikers wouldn't care for such a huge motorcycle, but they continued development on the 750 because the engineering problems and power losses caused by using an automatic transmission are not so great with a big-bore bike as with a smaller one. So it was more practical to develop the Hondamatic on a big bike. We strongly suspect that if the CB750 Automatic is successful, we'll see several smaller versions.

The CB750A is not a joke or a toy. It is not a profiling, pavement-scratching pseudo-racer. It is not the ultimate tourer or the epitome of commuter bikes. It is a motorcycle designed for a specific purpose—to make riding a two-wheeler simpler than ever—and it carries out that design quite neatly.

First it was the step-through Honda 50 in the early sixties; then it was the 750 Four in 1969; and last year it was the GL-1000 Gold Wing. Those motorcycles were milestones—not just for Honda, but for the entire sport of motorcycling. They either broke new ground or attracted new riders or revolutionized existing markets or created new ones.

They made history, those three. And the CB750A makes four. 