ROAD TEST & 24-HOUR TEST:

HONDA CB900F

You Don't Have to Envy the Europeans Anymore.

At first glance, Honda's long-awaited CB900F may be mistaken for a CB750F, and the beholder may assume that the new 900F is nothing more than a 750F with hogged-out cylinder bores, an oil cooler and different paint. Not so. Included in the list of items on the 900F which differ from the 750 are engine, engine mounting system, carbs, exhaust system, gearbox, drive chain, tires, shocks, front suspension, frame, handlebar and saddle. These changes add up to more than a simple improvement in performance. The CB900F not only goes faster than the 750F but is also smoother and more comfortable and, yes, it even handles better.

Once you've ridden the CB900F, you'll know that this *is* the big bike that sporting riders have been waiting for from Honda since 1972, when Kawasaki eclipsed the Honda 750 four by introducing the 903cc Z-1. Since that time, Honda's entries into the one-liter class have always been single-faceted machines which never quite possessed the broad appeal of a good sports-touring bike. The GL1000, introduced in 1975, was a pure tourer. The six-cylinder CBX which surfaced in 1978 was a high-performance machine that wasn't really suitable for either touring or tackling twisty roads.

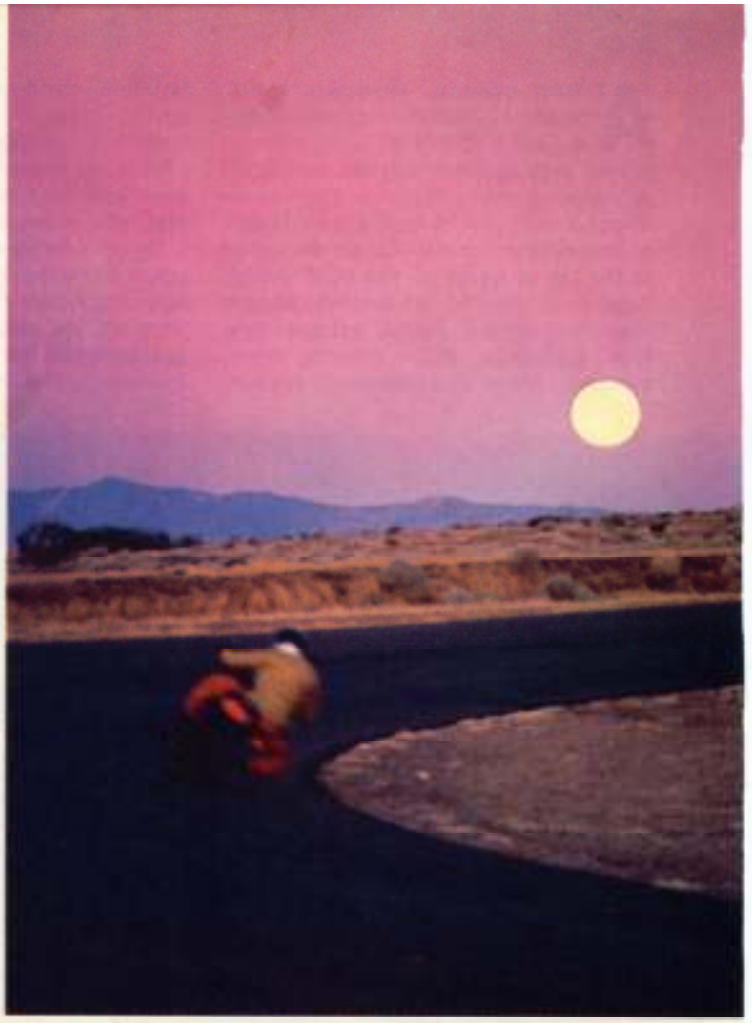
Then we heard about the CB900F. It was released in Europe two years ago at the same time that the new twin-cam Honda 750s were unveiled here, and it's essentially the same engine design and uses the same bore centers. The design of this DOHC four-cylinder engine was originally intended to be used as either a 750 or a 900, so this isn't a strung-out 750.

The 900 first came to America last year in the shaft-drive CB900 Custom. There was still no word of the 900F, and some sporting riders gave up hope, believing that Honda wouldn't sell two 900s here, especially since the Custom version is aimed dead-center at the American market.

Perhaps Honda waited to bring the 900F to America until they were sure they had a market for it. Maybe they wanted to give those 40,000 CB750F owners something to move up to, or perhaps they finally had a clear hole for a big-bore sporting bike since the CBX, which now carries a small fairing and saddlebags, has moved from the pure-performance to the performance-touring category. Or maybe they simply wanted to wait and Americanize the CB900F. Whatever the reason, the wait is over.

After reading and hearing so much about the CB900F from Europe during the past two years, we were delighted to hear that the 900F was at last coming to America and doubly pleased that *Motorcyclist* would have the opportunity to be the first publication to test it. We also decided to cook up something special for the occasion. In addition to our usual testing venue—

PHOTOGRAPHY: RICH COX, ART FRIEDMAN, PATRICK BROLLIER, MARC HEMSWORTH



street riding, highway cruising, canyon-road charging and acceleration measurement—we arranged to spend 24 hours shrieking the 900's engine at redline and grinding away its footpegs at Willow Springs Raceway.

We had several reasons for subjecting the CB900F to 24 hours of punishment at Willow. Honda has been pushing the bike's endurance-racing heritage (much of the development of this engine design was done in Honda's successful RCB endurance roadracers), and a full-tilt 24-hour charge around Willow Springs is a good short-term test of whether the CB900F actually lives up to the standards of durability set by its racing relatives. A second reason for this sort of testing is to see whether the 900F matches its reputation as a sporting machine; Willow Springs is considered the definitive high-speed handling course. Thirdly, *Motorcyclist* conducted a 24-hour test of the Suzuki GS1000 at Willow when that bike was first released, for our March 1978 issue. The chain-drive GS1000 has been discontinued for 1981, and the CB900F is heir-apparent to its special slot in the market, a big bike for riders who value handling above all but also demand a well-rounded package. Finally, a full night and day of racing-speed riding around Willow Springs would be fun. It would be especially fun if the American version of the Honda CB900F lived up to the reputation it has developed across the Atlantic.

Notes from a tester: Smoothness. Amazing smoothness. This hard-running corner-charger is at least as smooth as the Gold Wing. It has the same glassy-smooth feel as the Yamaha XS1100. It's much, much smoother than the CB750F, which is pretty vibration-free already.

Americanizing the CB900F didn't mean stepped seats or small tanks. Every important difference we can find between the 1981 CB900FB brought to America and the 1980 CB900FA and the 1979 CB900FZ sold in Europe is an improvement to the American machine. Perhaps the most significant of these changes is rubber-mounting the engine, as was done with the CB900 Custom. However, the forces created with the F's chain final drive presented some problems that Honda didn't have to contend with on the shaft-drive Custom. The chain-drive powerplant is pulled to the rear during acceleration, and to counter this torque reaction, Honda uses special front mounts for the DOHC four-cylinder engine.

The F's 901.7cc engine is identical to the 900 Custom's: same camshafts, 8.8:1 compression ratio, 16 valves, 32mm CV carbs, 64.5mm bore (compared to 62mm in the 750) and 69mm stroke (also 62mm in the 750). The differences between the F and C drivetrains are in the exhaust systems, gearboxes and final drives. The F has lighter, more efficient four-into-two exhaust plumbing instead of four individual pipes as on the Custom. The F's mufflers are also different that the European version, having a cross-over pipe which the European model lacks, and are significantly different than the 750F's exhaust system too.

The 900F has its own transmission ratios and lacks the Custom's dual-range feature for its five-speed gearbox. And of course the F has a No. 530 chain instead of a shaft final drive. This is the same O-ring chain used on the CBX, and it's made of slightly more durable material than the 750's chain.

Tester's comment: Is this transmission a crash-box?

As delivered, the CB900F's gear-shifting was downright bad. About every fifth shift, it either failed to engage the next gear or popped back out of gear when power was applied. It was impossible to keep the transmission in gear for a full run at the dragstrip until the lever was lowered a notch. Even then it had to be worked so forcefully that the shift-lever rubber was pushed off in a few runs. Oddly enough, the transmission worked pretty well at Willow. We still missed some shifts, but fewer than we expected.

Back on the street, it shifted slightly better after 24 hours of shifting seven to ten times a minute than it had before the racetrack session began. However, its shifting during street riding could never be termed good. Even with 3000 miles on the bike we still had plenty of chances to impress street-corner on-lookers with our expertise when the engine suddenly sang to 14 million rpm as the transmission sprung out of gear or when we tried to grind it loudly into the next cog. Since the 900F uses the same transmission found in Honda fours since the invention of the poppet valve, we put the 900's troubles down to lever location, shift-shaft-to-footpeg relationship and the workings of various linkages. The linkage used with the rearset footpegs in the Sport Control Kit might improve matters (as it did with the 750). However, with the stock pegs, once you've repositioned the lever, the only solution is to shift forcefully and positively.

The rest of the driveline is just fine. The clutch is smooth and light, and even though it developed a gronking noise during high-rpm starts by the end of the 24-hour racetrack session, it still engaged smoothly. The 900F is also mercifully free of the excessive lash which we found so annoying in our test of the Custom.

The fact that the CB900F runs in the magic 11-second bracket at the dragstrip was almost overlooked in our concern about the transmission. Our official time, recorded by our staff dragstrip tester Jeff Karr, is 11.96 seconds at 112.4 mph. However, since Jeff had been out of commission for the two previous months with a broken arm, P.W. Gleason, a pro dragstrip launch-artist, had run our street bikes for February and March tests. We figured that Gleason was about two tenths of a second quicker than Karr, which wasn't quite true. Gleason's best time on the CB900F was only .12-second quicker than Karr's at 11.84 seconds and 112.8 mph.

No matter who rides it, the bike is a hot-rod and definitely the fastest 900 so far. The best time ever recorded in a road test of a stock 903cc Kawasaki was 12.19 seconds at 112 mph. The 900 Custom and Suzuki GS850 are firmly in the 12-second bracket.

Baking out in the desert. Willow Springs has neither willows nor springs. The racetrack is a thin ribbon of asphalt, 2.5 miles around, stretched out on a bleak desert hillside near Rosamond, California, not far from Edwards Air Force Base. It costs $1500 to rent exclusive use of this barren little strip of pavement for 24 hours. (Talk about inflation—that's over three times the 1978 price.) You supply your own food, lights, shelter, gas, pit crew, insurance and ambulance.

The CB900F came off the production line and was promptly air-freighted to Los Angeles for our test. Unfortunately, it still arrived late, putting us on a tight schedule. We had a choice: start the 24-hour test at 5:00 p.m. one evening or wait until several days later. Although no one relished the idea of learning or relearning the track at night, we settled for the 5:00 p.m. starting time. It turned out to be a satisfactory choice because we had good weather (a rarity in that part of the desert) with no strong winds, severe cold or exhausting heat. Best of all, we had a full moon and a clear sky, although the nighttime temperatures dropped down into the 40s (without the 120-mph wind-chill factor).

We'd planned on running the bike absolutely standard with only the mirrors removed. But then Technical Editor Minton, who hates to see any motorcycle left stock, talked us into replacing the stock headlight bulb with the Osram 80/100-watt bulb discussed in the accompanying sidebar. At the last minute, we also decided to remove the uncomfortable passenger grab strap and the sidestand. The centerstand, which is very easy to hoist the

These photos tell the story of the bike's 24 hours of hammering (clockwise from upper left). Moonbeams and the bike's own lights were the only night lights. Rich shot the moon setting at dawn. Jeff is seen in mid-afternoon in turn 6. Next to him, Art (bottom) and Dirk (middle) keep it rolling. Above Ken dragging his knee is a morning pit stop. Jeff races through turn 2 and the desert.

Want The European 900F? Here's How To Get It.

The only thing you might have wished for from the European CB900F that the American version lacks is rearset foot controls, pegs and a low handlebar. Don't fret. Honda will sell you a conversion kit for the bike, as they do for the CB750F and CBX. To find out how it goes on and works, we obtained one of these Sport Control Kits. At the time we tested the CB900F, the kit was not yet available for it, so we obtained a 750 kit which we installed on a 1981 CB750F.

The Sport Control Kit is more than just different handlebars and footpegs. That approach inevitably leaves you with cables that don't route properly, kinked brake hoses and wobbly linkage. The Honda kit consists of not only low one-inch-rise handlebars and new footpegs, but all the pieces needed to connect everything as neatly as the original equipment: a new throttle assembly, clutch cable, throttle cables, front brake hose, muffler/footpeg mounts, shift lever, shift linkage, brake pedal and various fasteners.

It took our Technical Editor about an hour and a half to install the kit, so anyone should be able to do it in four hours or less. Installation was straightforward and required no special tools. The tank, seat and headlight beam had to be removed to hook up various components. Good instructions and exploded-view drawings help the installer, and when the job is completed, the new pieces look like original equipment.

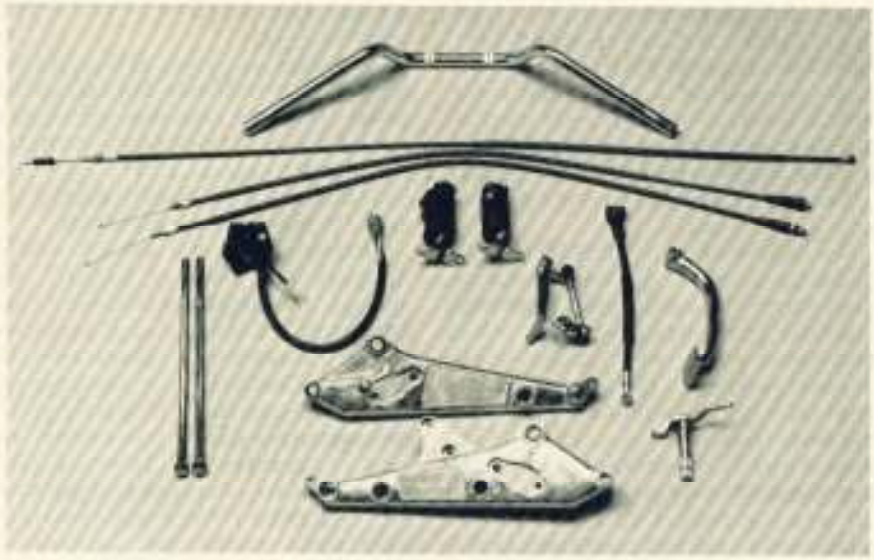
The entire staff rode the kitted 750F and agreed that the footpeg position was a major improvement (some called it perfect) and even improved the seat's comfort. At highway speeds, the riding position was considerably more comfortable than the stock American version. The heim-jointed shifter actually improved the shifting, and we missed fewer shifts than on the standard 750F.

No one really liked the handlebars, even though we generally prefer low-rise handlebars. The kit's bars seem to drop at too steep an angle, putting excessive pressure on the outside of the rider's hands. Handlebars are a very individual item, and some riders are bound to like these. However, the components of the kit should work with any low-rise handlebars, so you can find bars to fit your style.

The kitted bike was not as stable as a stocker, which surprised those staffers who hadn't ridden a similarly equipped CBX with the same problem. On the racetrack, the kitted 750 wobbled even in a straight line at very high speeds (well over 100 mph), and it felt less stable while cornering even on the street. Apparently, additional changes are necessary to get back all of the F's famous stability when you install the Sport Control Kit.

The CB750F kit carries Honda Code No. 099852 and a suggested retail price of $153.50. That's fairly expensive, especially if you have to spend another $15 for a set of bars that suit you. You can get a different CB750F rearset footpeg kit for $95 from Racer's Supply. However, that won't be as detailed or look as much like orginal equipment as the Honda kit. You also won't be able to order replacement parts through your Honda dealer. (Part numbers for the pieces of the kit are listed in the instructions.) The 900F kit should cost and perform about the same. The Honda Sport Control Kit is a top-quality, well detailed product and will make your bike (except for the 85-mph speedometer) a replica of a European version.

One more thing. There's going to be a CB900 F2 introduced in Europe this year. Except for the gold-painted ComStar wheels, the primary difference between it and the U.S. version is its fairing, which is like the one on the 1981 CBX. Honda will offer this same fairing with paint and brackets to match the CB900F later this year. You don't have to envy the Europeans anymore.



The kit (top) comes with everything you need, right down to the cables, wires and footpeg rubbers. What you get are the European bike's pieces, so spare parts are available. With the kit parts, the CB750F actually shifted better than stock. (We added the safety wire.) The angle of the bars wasn't quite right for most of our staff test riders.

PHOTOGRAPHY: PATRICK BROLLIER

Two items which distinguish the 900F from the CB750 are the oil cooler (above) and the rubber-mounting system for the engine (left). Those mounts make the bike extremely smooth. The front mounts were designed with chain-drive forces in mind.

Most maintenance tasks on the 900F are simple and straightforward. The paper air filter element is easy to reach, but it must be replaced after several cleanings.

Although it doesn't make the brute torque of an XS1100, the CB900 engine does have more usable power than the 750. It carburets crisply, and everything except the transmission works smoothly. Shifting problems are probably due to the relationship between peg position and shift lever position, pivot and angle. Shifter rubber has fallen off here.

That front-fender scoop first seen on the '81 CB750F is claimed to direct air on the 900's oil cooler. The 900's rear dampers look like Yamaha's old Thermo-Flow shocks and work very well, although they increase unsprung weight. The 900F has its own two-into-four exhaust system and sounds throatier than all other Honda fours.

bike onto, would be adequate for our needs. Finally, we also installed a hook-up for a Widder Lectric Vest in anticipation of the cold night weather.

The bike had 837 miles on it after the 90 mile ride to the track. Staffers Cox, Friedman, Karr and Vreeke were in charge of riding duties. They were joined by three members of Honda's Product Research Department—Bob Doornbos, Dirk Vandenberg and Jon Row—who all showed an admirable willingness to wring the bike out as hard as we did. Our pit crew consisted of staffers Clark and Kimball backed up by Zeke Giesecke and Marc Hemsworth.

The rules were simple: go as fast as you like without deliberately over-revving the engine. Otherwise, show it no particular mercy. That meant that we'd all be lapping at near-racing speeds—within a second or two of the fastest each of us could go. By the 20-hour mark, Vreeke and Karr were waging a war to see who could turn in the fastest lap time. We also had a mileage goal. The GS1000 had gone 1533 miles back in 1978. We wanted to go farther.

We decided to start with 15- to 20-minute riding shifts to give everyone some practice before it got dark. Then we'd ride stints of 30 minutes to an hour for the rest of the time.

So, a few minutes after 5:00 p.m.,

cameras clicked, stopwatches started and the big black bike howled into turn one singing its 9500-rpm song.

The first thing you notice on the racetrack is the CB900F's handling. Despite its hefty 578-pound wet weight, the big F has all the elements of first-class handling: effortless steering, precision, stability and lots of cornering clearance. Whether inching along in traffic or flying through Willow's turn eight at 125 mph, the 900F steers with very little effort. We were surprised and pleased at how easily it changes direction and how well balanced it feels at speeds just this side of reverse. When most bikes have you dabbing a foot to stay balanced, the 900F feels secure.

This low-speed manageability could mean high-speed instability, but not with the 900F. The CB750F is famous for its steady handling, and with beefier fork tubes (39mm instead of 37mm), wider tires, reservoir shocks and possibly (though no one at Honda could say for sure), a stronger frame, the 900F's chassis is even more impressive. The fork stanchion tubes are the same size as the GL1100 fork tubes used on last year's Honda factory superbike roadracers.

On the street, the CB900F seems to steer too precisely to be true. You don't have to guard against a tendency to fall in deeper in mid-turn or fight to keep it leaned over when you mash on the brakes. Just point it where you want to go, and the 900 goes around the corner without a twitch. It also responds readily to direction changes.

You can't go fast enough on the street to make it show a suggestion of instability. The only way we ever got it to even hint at a wiggle was to chop the throttle while running through Willow's turn eight tapped out in top gear (135 mph). Then it would waggle its tail just a little bit, but not enough to ever alarm anybody. In fact, we barely noticed it after a few laps.

For hot-lapping around the racetrack, we set the Showa VHD shocks on the stiffer of their two compression-damping settings and switched rebound-damping settings between the No. 2 and 3 positions with fairly equal results. The shocks never faded during 24 hours of racetrack use and promise to be quite durable—even more than the GS1000 dampers, which were getting tired by the end of their trial at Willow. We settled on the middle shock pre-load position and 15 psi of air in the fork (which has a balance hose connecting the two legs) by the end of the racetrack outing.

Most of our staffers, who hang off slightly or extremely while cornering quickly, dragged little more than the footpegs and the corner of the centerstand foot on the racetrack. By keeping our bodies in line with the bike, we could nick the pipes and on occasion the dyno cover. However, even dragging the pegs requires some pretty intense lean angles, especially with some shock preload and 10 psi or so in the fork. The 900F has much more cornering clearance than average for big street bikes.

With that kind of room to lean, tires get a real workout. The CB900F comes with either Dunlop or Bridgestone rubber, and we got to try them both. We started with the Dunlops, which were looking pretty bald by 19 hours into the racetrack portion of the test. We were fairly sure that they'd wear out before the racetrack session was over (the GS1000 tires did too), especially since they already had 800 hard miles on them. The spare wheels which Honda supplied had Bridgestone tires on them, so that's what we used to finish the test on. (Wheel changing was a straightforward operation and took about 15 minutes.) Most riders voiced

a slight preference for the Dunlops because the Bridgestones spun a little more readily when accelerating out of corners. We can't predict which brand will last longer.

It's hard to be smooth while trying to ride fast at night. At first, you watch your headlight beam and follow the track's inside edge through turns. Then you find landmarks—bushes, pylons, skid marks, paving changes—to use as shut-off points, acceleration points and apex markers. Your world becomes that headlight beam. Sometimes it seems as if there's no track beyond it. Leaning over for a turn shortens the headlight's range, giving you the impression that you're running out of track. Hitting the brakes shortens the beam even more when the front end dips, and the track seems to shrink again. You brake harder. Suddenly you're going 30 mph too slow.

The only way to break out of the mesmerizing effect of that beam is to look ahead past it or out at its edge. We were aided by a big bright moon which lit up the track when behind us and reflected off the pavement to show the way when in front of us. But even with the help of the moon there were dark spots. Other hazards awaited us too: faceshields fogging in the cold night air, suicidal rabbits bunny-hopping across the track, coyotes in pursuit of the rabbits, and other scurrying creatures. Rich did some bunny-bashing during the GS1000 test, but the fauna escaped from the Honda test with no casualties.

That connect-the-dots sort of nighttime riding means lots of abrupt changes in throttle setting. During the day you can rush around smoothly, dialing the throttle open evenly as you exit the corners and keeping it on until the exact instant when you have to shut off and dive for the apex of the next corner. But that smooth flow is interrupted at night when you misjudge something or dodge a bunny. You frequently turn the throttle on and off in mid-bend. You shut off too soon and go through a corner a gear too high. You grab the brakes unexpectedly when a furry silhouette scampers along the edge of the track.

Nighttime racetrack riding demands a bike that's forgiving, just as street riding does. It made us appreciate the CB900's broad, smooth powerband and even throttle response. There's none of that CV-carb abruptness (even though the 900 has CVs), and there's much more mid-range power than with the CB750.

We also appreciated the controllable, ultra-strong disc brakes. The 900F has the same twin-piston calipers first seen on the 1981 CB750F. Each caliper uses two live pistons placed side by side on the outside of the discs. This permits Honda to use a longer, narrower puck than with a conventional caliper. This in turn permits them to narrow the swept area on the disc which allows them to lighten the disc, since the unswept area can be partially cut away. The caliper also has more mechanical advantage since it's braking the outer edge of the rotor. The results are brakes which are very powerful and durable, yet still progressive enough to give excellent braking control when some of us ran off the track at night into the dusty gravel at the edge. Over-braking in that sort of traction would be instant disaster; underbraking would postpone disaster just a little longer. We had three off-track ex-

Let There Be Light: The Osram Solution

Although the Honda CB900F has an H4 quartz-halogen headlight that is as bright as any other original-equipment headlamp, it still falls a little short on a pitch-black racetrack at 130 mph. With learning our way around Willow Springs Raceway in the dark looming as a prospect in our near future, it was easy for Technical Editor Minton to persuade us to replace the stock 55/60-watt headlight bulb with an Osram 80/100-watt unit.

The Osram bulb plugs right into the stock socket and uses the standard beam and lens. It has high and low beams, and the dimmer switch functions normally. The only possible electrical problem will be with bikes that don't have enough charging output to support the extra draw. Most bikes that come with H4 beams should have enough juice to run the brighter beam as long as there aren't a lot of other electrical accessories drawing power. The CB900F was at its limit with the Osram bulb on high beam, an electric vest and electric gloves all drawing extra wattage.

The bulb we used was an Osram No. 64194. The high beam is rated at 200,000 candlepower and the low beam puts out 160,000. By comparison, a 60-watt high beam puts out 134,000 candlepower and a 55-watt low beam makes 123,000. But the lower wattage bulbs have an advantage, too. A 60-watt beam is rated for a minimum of 250 hours of life, with the low beam lasting 500 hours. The 80-watt low beam of the bright bulb lasts 150 hours, and the 100-watt filament is rated for 75 hours minimum life. This means added expense and maintenance.

The additional candlepower of the 80/100-watt Osram bulb turns a dark road into something akin to daylight at normal speeds, and projected enough light to make us feel comfortable at over 100 mph on the racetrack at night. The difference with a stock bulb is quite dramatic. The low beam of the Osram is brighter than a normal bulb's high beam. The headlight beams are about the same shape as stock (since the standard lens and reflector is retained), but the Osram is brighter throughout the beam's spread and penetrates the night much deeper.

Unfortunately, anything brighter than the standard 55/60-watt bulbs are illegal virtually everywhere. However, we rode the 900F for several weeks on the street without provoking any tickets and seemingly without annoying other drivers when the low beam was used. Even on the occasion when one staffer imprudently roasted an on-coming police car with the high beam, the headlight received no undesirable official attention. Since everything looks stock, a street rider who chooses to install the bulb is not likely to get a ticket for it. It will certainly benefit nighttime roadracers.

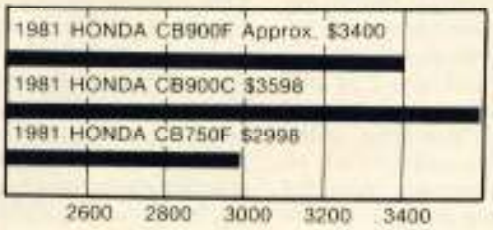
Osram is the company which supplies all the original equipment bulbs to General Motors. You can get more information on their bulbs by writing Osram Corp., Dept MC, Box 7062, RD No. 3, Jeanne Dr., Newburgh, NY 12550, or phone (914) 564-6300. However, they're sold through distributors. Ours came from Helmet House, Dept. MC, 2115 Colorado Ave., Santa Monica, CA 90404, or phone (213) 828-6405. The suggested retail price is $30, which is cheaper than a couple of driving lights. It gives a dramatic improvement in nighttime visibility and makes riding in the dark safer.

80/100 Watt weed-burner (left), brings safety to high-speed night riders. Its life is less and it costs more than the normal H4 bulb but is worth the expense.

PHOTOGRAPHY: JIM BROWN

HONDA CB900F

PRICE



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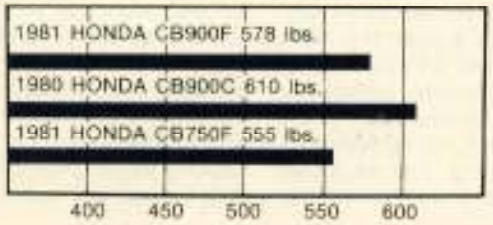

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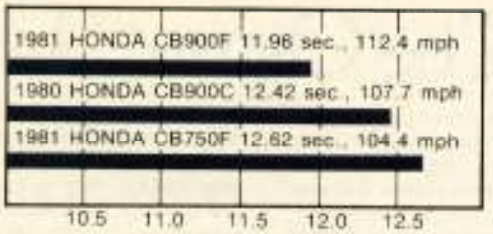
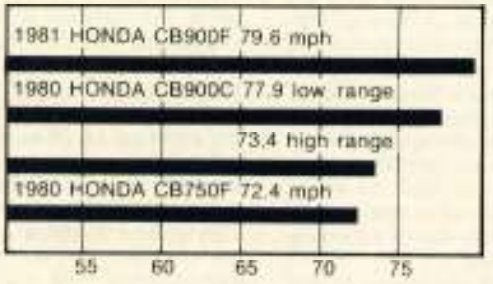


HIGH-SPEED PASS, TERMINAL SPEED



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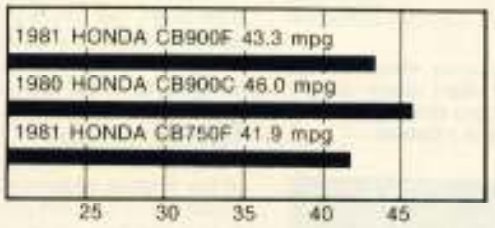
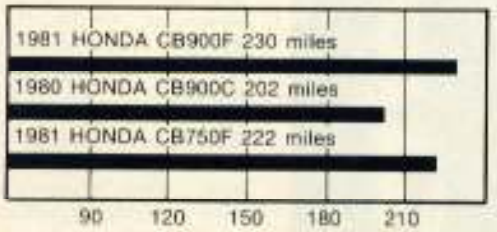


AVERAGE TOURING RANGE



Suggested retail price ..... Approx. $3400
Warranty ..... 6 months, 6000 miles
Number of U.S. dealers ..... Approx. 1800
Recommended maintenance intervals ..... 4000 miles

ENGINE

Type ..... Air-cooled transverse in-line 4-stroke four
Valve arrangement ..... DOHC, 4 valves, adjusting shims on top of buckets
Displacement 901.7cc
Bore x stroke ..... 64.2 x 69mm
Compression ratio 8.8:1
Carburetion ..... 4, 32mm Keihin constant-velocity, common accelerator pump
Ignition ..... Battery powered transistorized, 2 magnetic triggers
Lubrication ..... Wet sump, 4.7 qt., oil cooler
Charging output ..... 260 watts AC
Battery 12V, 14AH

DRIVETRAIN

Primary transmission ..... Link-plate chain & jackshaft, 2.041:1
Clutch ..... 15 plates, wet
Final drive ..... No. 530 O-ring chain, 44/17

CHASSIS

Front suspension ..... 39mm Showa, 6.3 in. travel, air pressure adjustable
Rear suspension ..... Dual Showa VHD dampers with reservoirs, 4.3 in. wheel travel, adjustments for compression damping, rebound damping, preload
Front brake ..... 2, single-action calipers with dual live pistons, 270mm discs
Rear brake ..... Single-action caliper with dual live pistons, 300mm disc
Front tire ..... 3.50V19 Dunlop rib
Rear tire ..... 4.25V18 Dunlop K127
Rake/trail ..... 27.5°/4.33 in. (110mm)
Wheelbase ..... 59.6 in. (1515mm)
Seat height, unladen ..... 32.0 in. (813mm)
Fuel capacity ..... 5.3 gal. (20 lit.)
Wet weight ..... 578 lbs. (262kg)
Colors ..... Black or silver
Instruments ..... Speedometer, tachometer, odometer, resettable tripmeter

PERFORMANCE

Fuel consumption ..... 22 to 48 mpg, 43.3 mpg ave.
Average touring range ..... 230 miles
Best ¼-mile acceleration ..... 11.96 sec., 112.4 mph
200-yd. top-gear acceleration from 50 mph ..... 79.6-mph terminal speed
RPM at 60 mph, top gear ..... 4100 (observed)
Calculated speed in gears at (redline) ..... (9500) 1st 55 mph; 2nd 78 mph; 3rd 100 mph; 4th 120 mph; 5th 139 mph

cursions and no disasters. Braking on the street and track was just as impressive—lots of power and control. We'll repeat what we said when we first used the new twin-piston calipers on the '81 CB750F: these are the best production-line brakes we've tried.

It's almost 4:00 a.m. The only thing that's keeping you alive is the Widder Lectric vest pumping heat in under your leathers. It's so cold that everyone else has gone inside the motorhomes, while you're out here trying to maintain a 70-mph average in the freezing night. They're probably all asleep. Even the rabbits have gone back in their holes to warm up. That bunch outside turn six hasn't shown up for half an hour. Where's your relief rider? You can't stop until he's ready to go and flashes you the pit sign. What if you crashed now? No one would know. If the bike's lights went out, they'd never find you until morning. You'd just have to lie there and be eaten by the gila monsters. What if the bike broke down now? You'd have to push it in by yourself. At least then you might get warm . . .

We didn't expect anything except the tires to wear out or break during the 24-hour thrash. Most modern sporting bikes should stand up to this sort of use, even though it isn't exactly normal. Nonetheless, Honda supplied a spare bike—still in the crate—just in case some three-cent part broke or fell off. In addition, they also supplied a set of spare wheels and tires, which were the only parts we used. We even completed the entire test with the same spark plugs (NGK D9EAs) that came in the bike. During the racetrack portion of the test, the bike used a quart of oil about every three or four hours (210 to 300 miles) and smoked visibly when the throttle was snapped shut at redline when entering corners. However, back on the street after the racetrack session, oil consumption returned to a normal rate—less than a quart every 1000 miles.

The only other problem—which was no fault of the bike's—was a battery voltage drop. We'd been running the 80/100-watt headlight using *both* beams and had a Lectric Vest and gloves plugged in. This lowered battery voltage enough so that the starter motor was reluctant to operate after a pit stop. With slightly less load, the battery quickly recharged.

Running for 24 hours at racing speeds didn't really cause any problems. We lubed the chain hourly and it went the distance on two adjustments. There were no oil leaks. Nothing came loose. The brake pads had plenty of service left. In fact, the bike gave every indication of being ready to go another 24 hours. It just needed riders.

Somehow, when the sun comes up after a long night of any strenuous activity, it seems like you're almost done. However, we were only halfway to the end. The dangers of darkness were gone and our faster riders settled down to rack up some fast lap times. The quick-time battle evolved into a two-man contest between Jeff and Ken. Both had been turning 1:48s at night with an occasional 1:47 from Jeff, the more experienced night racer with three 24-hour races under his kidney belt. With daylight to help them, the two rapidly dropped their lap times into the 1:43 bracket, then into the 1:42s. Jeff seemed to be more consistent and was the first timed with a 1:41, but Ken finally bagged the prize (a worn-out Dunlop K127) when he was timed at 1:40.9 early in the afternoon.

The rest of us were content to stay below the 1:50 mark, and several riders experimented with running the track backward. This added about two seconds to lap times, but a couple of riders found that they preferred to ride the track counter-clockwise.

After a cold night with little sleep and plenty of exertion, the last thing you want is to ride an uncomfortable motorcycle. However, everyone was still rarin' to ride the 900F. Besides the freedom from vibration afforded by the rubber-mounted engine, the CB900F coddles the rider with its seat, riding position and ride. A slightly different consistency makes the seat more

comfortable than the 750's. Long rides on the 900F confirmed that the saddle is more comfy than an average big bike seat and quite adequate for touring. It's also low enough to let short-legged riders feel a bit more secure than on other one-liter machines.

The handlebar is lower than the CB750F bar, but not as low as the European model's cafe-type bar. The American 900F's bar has a four-inch rise, too high for the racetrack's 100-mph pace but a perfect compromise for street use. It's not so high that it holds you bolt upright in the wind's blast at highway speeds and not so low as to be awkward or uncomfortable in city traffic. The "semi-up" bar (as Honda's in-house literature describes it) leans you comfortably into the wind at highway speeds and is positioned well in relation to the seat and footpegs.

With full-soft suspension settings, the 900F's ride is absolutely first-class. Compliance was still good even when the suspension adjustments were tightened up for the racetrack. Honda gives credit to high-technology features like the stiction-reducing dual Syntallic bushings in the fork, but basic items like choice of tires, springs and damping rates are just as important as the high-tech pieces.

The 900F is quite plush enough to make a successful tourer, especially if your touring plans include rushes down those squiggly lines on your road map. The 5.3-gallon tank offers plenty of range at our 43.3-mpg average, too. (We didn't include the racetrack session—where we averaged 21.9 mpg—into that average.) Your highway mileage will probably be closer to our 48-mpg high fuel-consumption figure.

By the time we'd done our midday wheel change, it was obvious that, barring a crash or major failure, the CB900F would easily break the GS1000's 24-hour test distance. With about two hours to go, the 900 howled past the 1533-mile mark, but we kept right on wringing it out to the end. The tripmeter showed 1690 miles when the "24 HOURS" pit sign came out that evening. We'd averaged 70.4 mph including tire changes, pit stops and everything. The 900F had run near redline for 24 hours without a hiccup. The brakes had slowed the bike over 4000 times. The transmission had even endured 9000 high-rpm shifts (and the engine had survived some horrific over-revving when we missed shifts). Almost 77 gallons of gas had gone through the engine. Nothing had broken, which was a good thing, since the Editor had to ride it home.

Ironically, the bike's closest call came in the first turn after the racetrack, where an unseen oil slick almost put it flat-side-down turning onto the freeway on-ramp.

After 24 hours of intense thrashing and 1400 miles of street use which was only conservative by comparison, the CB900F is easy to recommend to a sporting rider. Its only flaw is a cantankerous gearbox. On the plus side are superbike performance, excellent handling, plush comfort and an impressive display of reliability. Even the price—which will probably be somewhere in the $3300 to $3400 range—is right. That's about $600 less than all the other superbike prices we've seen, although one of Kawasaki's 1000s may be close. The owner will also probably save money on the CB900F's insurance, since most insurance companies have higher rates for bikes over 1000cc.

As always, price wouldn't matter if the CB900F wasn't such a well-rounded motorcycle. It joins the Suzuki GS1000 as one of the very few motorcycles capable of blending racetrack speed and handling with long-distance touring comfort. And it brings its own touch of style.

The dream sporting riders had of the European Honda CB900F is now here in real steel. The lines are already forming at Honda dealers, but you're going to have to wait behind some of us who have already put our orders in. M

Off The Record

It gets pretty discouraging. You take a bike out to the racetrack and spend all day and all night beating it up, and what do you get? A sore neck. The motorcycle will not break. Think of the shame! We're supposed to be professional bike-destroyers, licensed to kill. We can't even get a little oil leak or a few loose nuts and bolts out of a brand new bike that should still have some bugs in it—even with 24 hours to do it. It's humiliating.

Not only that, but here I am, the formerly proud owner of two GS1000s, forced to admit that this new upstart from Honda is better able to do what I want a motorcycle to do than my Suzukis. I mean, this 900 handles better, stops better, vibrates less, rides as well, has a saddle that's almost as good and is nearly as fast at the dragstrip. Boy, you talk about depressing news . . .

—Art Friedman

Two years ago, the box-stock lap record around Willow Springs Raceway was held by a CBX at 1:43 and some change. Since then it has been bested more than once, most recently by Whitney Blakesley, a local AFM club racer who rarely loses. He set the new record at an incredible 1:38 en route to stomping the open-classers once again. You can bet his Kawasaki KZ1000 MkII is as close to being illegal as the rules permit. The best I could get out of the CB900 was in the low 1:40s. That's real fast for a showroom stocker with highway handlebars, plush suspension, tall gearing and cornering acceleration limited by high-mileage tires. If the CB900 was tuned to its full potential, geared for the track, fitted with stiffer suspension and a set of Pirellis or Metzelers and otherwise race-prepared, I'm willing to bet that the three-second gap could be closed to near Blakesley's 1:38. Not too shabby at all, considering the CB900 is at a 100cc disadvantage. Yes, it was worth the wait.

—Ken Vreeke

Last year, when Honda refused to import the European version of the CB900F into the United States, some of us felt we were purposely being neglected. To others it appeared Honda was simply baiting us, fattening us up for the kill. As in most cases, the actual reason behind its no-show last year was basic marketing strategy. At that time the sale of CB750Fs was still on the upward swing, and importing the European 900F would have been like slitting their own necks. This year the 750F sales finally leveled off and Honda felt the 750F would be able to hold its own in spite of its bigger brother horning in. If you're one of those who waited with bated breath, consider it well worthwhile, because the delay actually gave Honda the time to improve the European model one step further. This American version is better than its European counterpart. It has bigger diameter forks, a rubber-mounted engine and more sophisticated rear shocks. And it's an absolute dream on the racetrack, comparable to the full-fledged racing superbikes of several years ago. Honda was smart, real smart. They didn't want to get into a horsepower war with Suzuki and Kawasaki, but yet they've produced a machine which will likely cut deeply into the superbike market. I guess that's why they're number one.

—Rich Cox

It's been a long time since I've ridden a big street bike that's as well behaved as the CB900F. It's a bike with almost no weak points, and a lot of strong ones. It makes a more than adequate tourer, with its smooth ride and vibrationless engine. And it's a joy around town with its crisp carburetion and 11-second power. More amazing to me is the fact that about the only thing you need to do to make the bike racetrack ready is remove the rearview mirrors. Really.

The only place where the Honda guys fell short was in the gearbox design. Like the Honda 750s, the 900 is a pretty miserable shifter. The action is stiff enough to form a callous on your shifting toe, and missed gears are common if you get at all sloppy with your shifting practices. Missed gears at the dragstrip had the engine flailing away above 12,000 rpm on several occasions—a tribute to the motor's durability and the gearbox's ineptitude.

In spite of its incompetent cog-box, the CB900F is still my favorite superbike of all time.

—Jeff Karr