





When we tested the '79 CR250 last year, we found out early on that we had a disagreeable job ahead of us. The bike's best feature, a truly marvelous motor, was wedged into a frightening combination of chassis and suspension. Both the front and rear suspension went rigid over any kind of roughness, and the CR would climb up over any berm that got in its way.

We said as much in our test and stood by our words—and also took a few lumps. A number of readers wrote in and told us just exactly what they thought of our opinion, but it was satisfying, at least, to read the many letters from Honda owners agreeing with us in all respects, and offering their solutions to the problems.

So, it wasn't without a little bit of interest that we waited for the 1980 offering from Big Red. Would it be just as grim as last year? Would it be just as fast? Would Honda even offer us one to test? As it turns out, the answers are no, maybe, and thankfully, yes.

The CR's changes for 1980 are major. The frame is now a double-downtube, much more rigid than the single of years past. Both the forks and shocks have been redesigned, and these three things alone have made the CR almost a pleasure to ride, certainly much better than last year. Oops! Did we say almost? Well, there are a few things that need a little work. We'll get into them soon enough.

#### Start in the middle

In order to wrap a double tube frame around the motor, Honda went to a center port design on their cylinder this year. Obviously, if last year's jug was used, the head pipe would have to be bisected by a frame tube, so now the exhaust port is located directly across from the intake, which the engineers say will improve cylinder scavenging and generally benefit mid-range power.

They are apparently right. None of the porting has been changed from '79, aside from a fractionally wider and taller exhaust port; yet the two motors are as different as night and day. Honda decided to go the stump puller route, and after the new pipe was built to fit and the ignition system changed, they

## HONDA CR250

# THE REVENGE OF THE HOLES HOT SPECIAL



Massive improvements for 1980 move the CR250 a little closer to the head of its class

By the Editors of Dirt Bike





**Big news for this year is new rear shocks. Units are adjustable, need better springs.**



**'80 forks feature air caps, better damping than '79. They work very well.**



**Shifter is too low and short to be agreeable. Kickstarter is best attacked with the right boot.**

wound up with a 250 short shifter, in the truest sense of the words.

The power is actually deceiving at first. If the rider is used to a smaller bike or a peakier 250, he will instinctively try to rev the Honda out down a straight, and after a couple of laps come in complaining about a gross lack of

power. We found that the best way to ride the CR was to treat it like an open bike, taking each corner a gear higher than normal, and shifting far sooner than felt comfortable. The result? It works! With a minimum of fuss, the CR250 will grunt right up behind most other bikes in its class. Once the rider rearranges his thinking to the low-end power, he'll be losing very little in the straights.

Much as we hate to leave a good thing alone, we had to try to drag more horses out of the CR motor. After a visit and lengthy discussion with Eyvind Boyeson, of Boyeson reeds fame, we decided to try out his product on our test bike, and were amazed by the difference it produced. The Honda picked up more and smoother power throughout the range, and a whole bunch more grunt. What was an easy bike to ride stock turned into a torquer capable of satisfying the most power-hungry members of our testing crew.

A few more improvements have been made to the motor. The base gasket area of the lower end has been strengthened up to lessen the chances of the cylinder warping if the bolts are improperly torqued, a problem which has cropped up on older bikes. The pipe has been redesigned to fit the new frame and cylinder, and reshaped to suit the new powerband. One of the side benefits of the new pipe is a noticeable reduction in noise output—a feature that's always welcome.

The carb and airbox remain the same as last year's bike, and the air filter is still rather difficult to get to. But, as Honda says, the CR does have a chrome bore—once that one's worn out you need a new cylinder—and they wanted to make sure the filter sealed as securely as possible.

#### **Both ends now**

The forks have been redesigned, incorporating double bushings internally



**New cylinder was built to fit double-tube frame, porting and lower end are essentially the same as last year.**

on both the sliders and the tubes to reduce flex and friction. Air caps are now stock, and although their internals are still the "sealed unit" design of the past, the valving has been improved. Where last year's forks would beat you half to death, this year's have all the ingredients to soothe the savage beast.

The shocks are also a new design, complete with aluminum reservoir body and the same neat internal bushings that the forks use. Both of the mounting eyes use bushings now, to lessen the chances of bending, and the rebound damping is adjustable for a soft or firm setting: Extend the shaft out all the way, turn it and feel for the clicks, then compress the shock to line up the eyes. That's after you remove the springs, of course. The whole procedure is explained in the owner's manual.

The one really weak part of the rear



suspension is the shock springs—the ones on our test bike displayed a remarkable ability to sack out. On our first test session we had to run the preload up to the stiffest setting to get the bike to turn, and by the end of the day we were looking for more preload. The new Honda owner would be wise to consider the purchase of some stronger units.

The swingarm rides on needle bearings this year, very smooth and fine, and it is a reasonably strong design.

## HONDA CR250R Specifications

NAME AND MODEL	Honda CR250R
ENGINE TYPE	Two-stroke, reed valve
BORE AND STROKE	70x64.4
DISPLACEMENT	247cc
HORSEPOWER (CLAIMED BY FACTORY)	37 bhp at 7500 rpm
CARBURETION	36mm Keihin
FACTORY RECOMMENDED JETTING:	
MAIN JET	185
NEEDLE JET	2.9
JET NEEDLE	28G
PILOT JET	.60
SLIDE NUMBER	2.5
RECOMMENDED GASOLINE	Premium
RECOMMENDED OIL (MFR.)	Hondaline
FUEL TANK CAPACITY	2.2 gallons
FUEL TANK MATERIAL	Plastic
GAS/OIL RATIO	20:1
LUBRICATION	Pre-mix
AIR FILTRATION	Oiled foam
CLUTCH TYPE	Wet, multi-plate
TRANSMISSION	Five-speed, constant mesh
GEARBOX RATIOS:	
1	1.90:1
2	1.59:1
3	1.24:1
4	1.00:1
5	0.84:1
GEARING, FRONT/REAR	14/49
IGNITION	CDI
PRIMARY KICK SYSTEM?	Yes
RECOMMENDED SPARK PLUG	NGK B9EV
SILENCER/SPARK ARRESTOR/QUALITY	Yes/no/reasonably quiet
EXHAUST SYSTEM	Up-pipe, left side
FRAME, TYPE	Double downtube
WHEELBASE	1440mm (56.7 inches)
GROUND CLEARANCE	335mm (13.2 inches)
SEAT HEIGHT AT TANK	950mm (37.4 inches)
STEERING HEAD ANGLE	28 degrees, 15 minutes
TRAIL	114mm (4.5 inches)
WEIGHT WITH ONE GALLON GAS	228 pounds
RIM MATERIAL	Aluminum alloy
TIRE SIZES:	
FRONT	3.00x21 Bridgestone
REAR	5.10x18 Bridgestone
SUSPENSION:	
FRONT, TYPE AND TRAVEL	Air/spring forks, 11.8 inches
REAR, TYPE AND TRAVEL	Gas/oil shocks, 11.4 inches
INTENDED USE, MFR.	Motocross
COUNTRY OF ORIGIN	Japan
PRICE, APPROX.	\$1798
PARTS PRICES, HIGH-WEAR ITEMS:	
PISTON ASSEMBLY, COMPLETE	\$37.90
RINGS ONLY	\$9.20
CYLINDER	\$135.06
SHIFT LEVER	\$24.60
BRAKE PEDAL	\$23.80
FRONT SPROCKET	\$9.40
DISTRIBUTOR:	
American Honda Motor Corp.	100 W. Alondra Blvd.
Gardena, California	
OVERALL RATING, FROM 0 TO 100, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:	
HANDLING	94
SUSPENSION	90 (97 for forks and 80 for shocks)
POWER	94
COST	97
ATTENTION TO DETAIL	96
EFFECTIVENESS, STONE STOCK	93

During the course of our test, none of our riders complained of flexing, quite a contrast to last year's effort. Also new in the bearing department is the steering head, which now sports tapered roller bearings, known the world over for being able to handle that kind of load much better than loose balls.

Both the front and rear wheels consist of light conical hubs laced to a strong set of rims, and wrapped with Bridgestone knobbies. Yes, gone are the claw action tires of the past. The lacing job and spokes are first-rate—we only had to tighten the spokes once before they seated in.

Brakes are good and progressive, but the front could be stronger; the rear is almost perfect. Even though the motor is running very little flywheel weight, we never stalled the engine when braking, unless it was an obvious case of rider error. If we stalled and were still moving, it took very little effort to bump-start the bike and get back in the hunt. Whatever the reason, it works.

### A day at the races

Our first time out on the CR we spent about two hours breaking in the new motor. All the testers complained about the stiff shifting, and most of the

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blame was pointed at the shifting lever. The shift shaft exits the cases below and in front of the footpeg, forcing the use of a short shifter which must be rotated to an extreme angle to comfortably reach the foot. In this position, the shifter must be pulled up and back during an upshift, causing a lot of strain on the ankle.

We modified the problem by installing an accessory lever with a rounded pedal-end—much easier on your foot than the flat blade of the stocker—but didn't entirely cure it. We feel that the answer would be a lever made in more of an "L" shape to bring the lever more parallel to the foot; however, there's nothing on the market like that yet. If the stock shifter bothers you, best to go to an accessory folder. The stock one will cost an arm and a leg to replace when you break it, anyhow.

We had no complaints with the motor, although the torque power took a little getting used to. Once we got used to short-shifting, we had no trouble keeping up with a slightly modified YZ250 on the tight Indian Dunes International Course, although we would lose a little ground at the end of a straight.

The forks came stock with 10 pounds of air in the tubes, and we left it at that. After some riding, we noticed a pronounced amount of front-end wash-out and came in for a look. The rear shock springs were set on the lightest preload and the springs were starting to sack. We bumped it up to full firm and took it back out. No problems—return of the front-end bite.

Next day out, same track, different riders. A few minor complaints about the height and shape of the bars, a few more complaints about the shifting.

The springs were obviously still sacking out, causing a few complaints about the rear end po-go-ing in the rough. There were a few suggestions that replacing the springs might make the shocks very liveable.

While every tester was riding the bike, we had no reports about an unmanageable motor, bad forks or frame flex. Everyone agreed that the '80 was a big step ahead of last year's model.

The coming Sunday was race day, and the CR was picked by a staff rank amateur, possibly the rankiest, to campaign in the event. Preparations for the race included a change of gear oil, a new plug to replace one that had been fouled, the new shifter, basic maintenance, and a set of Boyeson two-stage reeds—in an effort to get the winning edge.

Come Sunday, another staffer lost

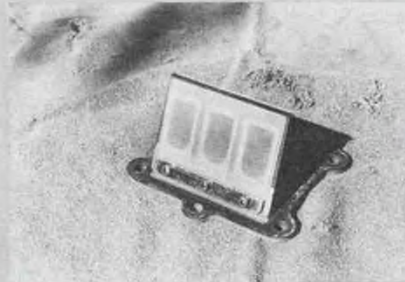
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## QUICK TRICKS FOR THE CR

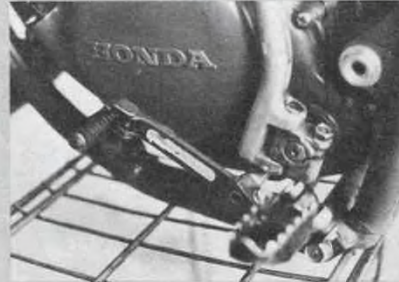
We tried out a number of new products on the CR while we were racing it. The first two items on the list were a folding shift lever and brake pedal made by International Motorsports. The shifter has a much better feel than the flat blade of the stocker, is amazingly strong, and has a folding tip to keep it out of the way. The brake pedal is also a folder, and bolts right up to the stock equipment. They are both available for \$21.95 and \$25.95 respectively, from Hi-Point Distributing or through your dealer.

Boyeson two-stage reeds were used in place of the stock reeds to extract more power throughout the range. They should be installed in the stock reed cage, with the reed stops cut off and filed smooth. Available from JT Racing, 303 West 35th St., National City, California 92050. They'll set you back about \$29.95. LOP handles the Midwest and Limantour Corp. handles the East.

We used Spectro two-stroke gear lube in the transmission, and wound up with much smoother shifting. By all means, replace the stock oil as soon as possible.



Certain local pros, we're told, have been having luck gaining top-end power by using a 38mm Lectron carb with a 5-2 needle and a #50 powerjet. We haven't tried this combination but have heard good reports. Another trick the pros use is disconnecting the rev limiter, which is the little green wire coming out of the ignition. Once it's out of the circuit, the 250 will rev like a banshee. We don't recommend it, and neither does Honda. Without



that little green wire you will most likely blow the motor to shreds.

Try using about four pounds of air in the forks, and scrounge up some stiffer springs for the shocks. The shocks work better on the "firm" setting, although most experts are replacing them altogether.

Last, but not least, if you have a strong desire to look like a refugee from the Honda factory team, look for their Hondaline gear at your local dealer. □





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since the races were at different times the CR250 was signed up in two classes: 250 Novice and 250 Senior. Four races in a day would prove to be quite a workout.

A few problems presented themselves. The first was the shock springs, again. Even at full bump there wasn't enough preload for good turning, so the springs were taken off and a set of spacers from Works Performance shocks were made to fit. This gave us more preload, but forced the spring into coil binding at full compression, which wound up compounding the suspension problem on the rough track. New springs or different shocks are the only answer.

After two races, it was clear that 10 pounds was too much air in the forks. We dropped it down to four pounds per and the Honda was much happier. Once again, we had the problem of pogo-ing—having the whole bike hop up into the air—whenever the whoops were huge. Our conclusion was that the shocks were the main cause, but we had no springs along that would fit. We may try different springs and dampening setting in the future. We'll let you know how it works out.

The motor received mixed reviews. To the Senior rider it was magnificent;

to the Novice it was far too much. We won't mention names, but that squid Clipper was seen looping the CR out of at least a half-dozen turns.

The results? Two moto wins for the Hunk, and a first turn crash/last place finish and a DNS for the squirrel.

### Bits and pieces

Even though the Hunk won his Class, he was heard to remark after the race: "I would never, under any circumstances, ride that track with those shocks again. Not even with a gun to my head." Clipper was unavailable for comment.

If you like the power of the stock Honda, you will absolutely love it with Boyeson reeds. The stockers are good, but the others are great.

One way that we compensated for the soft rear and its effect on handling was by raising the forks in the triple clamps to the bottom of the handlebars. We would not recommend this as it puts the air valves in the fork caps dangerously close to the bars. Better to work on the shocks or find (or make) some bar-back holders.

During the racing, the stiff-shifting Honda became much smoother. The only change we made was the gear oil. We used Spectro Two-Cycle Gear lube. It must be good oil.

The chain is held in its path by two skateboard wheel-type rollers, which do an admirable job of keeping everything rolling along.

Everyone was happy to see the new fuel tank—it has a nice large inlet on top, and an equally large cap. Bravo!

Some testers said the seat was too hard; some said it was fine.

Once the CR is warmed up, it should never take more than one kick to start. And a very light kick, too.

Detailing on the bike is excellent, and the CR has to be the best looking bike on the market, by far.

### The bottom line

If we sound like we like it, you're right. At this point we would replace the shocks with something like Fox's or Kayaba's, but the stockers are probably worth working on if you're on a budget. If you like lots of power, we wouldn't hesitate to recommend the trick reeds. Everything else we would leave stock.

How does this relate to you? If you're a Novice, you may have a little trouble getting used to it. If you're a Junior or an Intermediate you'll most likely love it, and should think about replacing the shocks. If you're an Expert, you'll never even ride it with those shocks anyhow, and you'll want more top end, but there are plenty of people who'll supply that. The CR isn't going to be the answer for everyone, but at least this year it won't be scaring them away. □

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