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HONDA CR250R: TRICK, COOL & QUICK!

DIRT BIKE

MARCH 1981
\$1.25 UK65P

**RUNNING HOT
WITH BURLESON:
TIME TALK**

**YAMAHA YZ465H:
STILL THE BIG GUN?**

**KTM 125 LC:
POWER PUMPER**



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1981 HONDA CR 250R ELSINORE

WATER WORKS!

Who turned on the bubble machine?

Never, repeat never, in the history of testing bikes, have we ever had so many people interested in a test bike. Every time we unloaded the Honda 250 from the vomit colored DB Toyota, a crowd gathered around and circled the bike like Indians around a wagon train. Very disconcerting, to say the least.

There we were, ready to test our brains out, like good editor types

should, and all of these folks were standing around saying "Wott'l she do?"

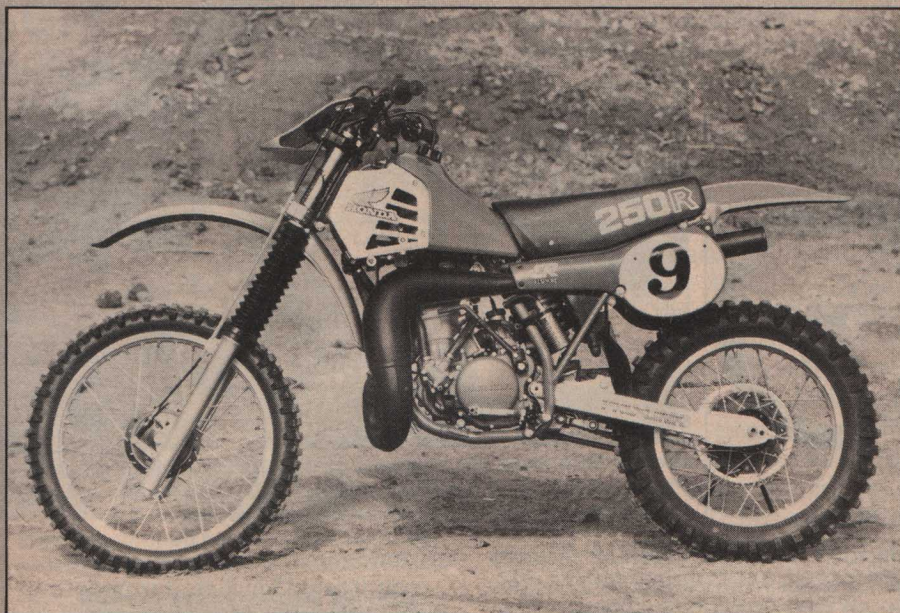
We can't blame them for their curiosity, though. Ever since we saw the advance photos of the newest techo-bike from the Big H, we had the same feelings—rampant curiosity.

Consider: two radiators mounted forward of the odd shaped gas tank. Darth Vader styling. Freaky scalloped

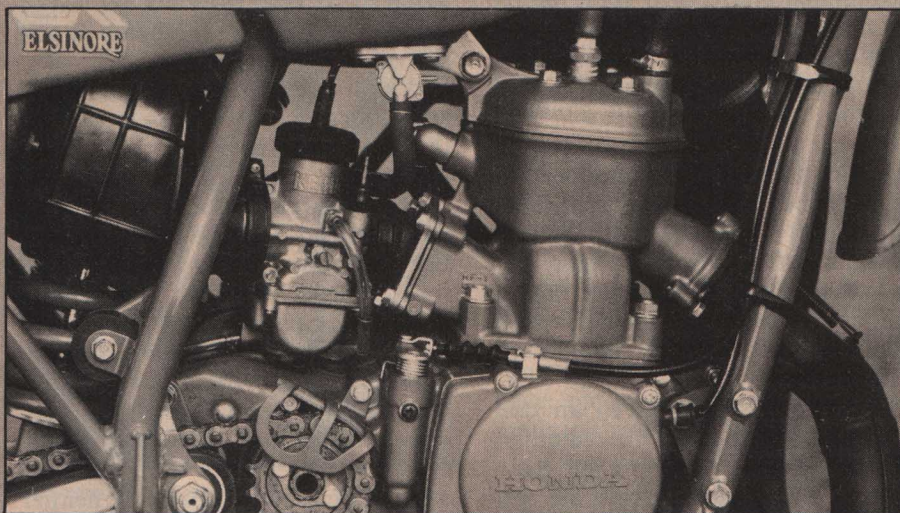
scoops that shovel air into coolers. One big shock mounted in the middle of the chassis. A number plate that looks like a giant hangnail. No fins on the cherry-red engine. Weird. Genuinely weird.

We found out a number of things about Wet Red. Firstly, it's the fastest 250 Honda ever, and possibly the fastest 250 MXer around, period. We'll have to test the rest of the





Space age looks will make the newest Elsinore a winner on the showroom floor. Swoopy plastic draws long looks whenever the bike is unloaded.



Detailing and quality on the Honda's castings make everything else on the market look like a reject from a high school pottery class.

mid-sized iron before we can nand it the Hole-shot Trophy, though.

What will she do?

Plenty. This is a very fast motorcycle. There's not much power low in the rpm range, but the midrange is very healthy. Healthy enough, in fact, to lift the front wheel nice and high if you're not paying attention. Once past the powerful midrange punch, the engine revs out with a crisp, clean hook. The intensity at peak revs is enough to lift the front wheel once again. The double-wheelie machine?

With this sort of blast, it's best to ride the 250 like a 125. Buzz it. Scream it. Wind it out until you think something should break, then shift and do it all over again. Ride without restraint,

and the Honda will get down the old pike very smartly, thank you.

We have not ridden a harder accelerating 250 to date. Honda claims 40 horsepower at the countershaft. While we tend to take this figure with a grain of salt, we can report that we've seen dyno readings of 35-plus at the rear wheel on the first preproduction bikes that appeared on this shore. Enough—more than enough.

Production bikes feel as strong as the proto bikes that we rode in Japan at the Honda factory. When running through the gears in an aggressive fashion, the acceleration is fantastic! A very close-ratio gearbox keeps things happening suddenly, and it is difficult to keep the front wheel on the ground,

if the traction is in the ball park. On a baked-dry track, the Honda is, understandably, a handful.

Wheelspin is a real problem, and the rider must pay attention to the business at hand. With the correct body position and a fresh knobby on the rear, forward motion is sudden and bordering on violent. Point A to point B is not much more than aiming and pulling the trigger. Hang on, force the front end down and try not to overshoot the next turn.

If that sounds like your idea of fun, then quite possibly this Honda is the bike for you. If you like to roll the throttle on and finesse the lines, you must look elsewhere.

This does not mean that the Honda is good or bad. It just means that it has to be ridden like a full-blown works bike. The bottom line is this: The 1981 CR250 is the closest thing to a *factory stadium bike* that we've seen come off the assembly line. Acceleration is instantaneous, abrupt and unforgiving. It also means that it works, if the rider is capable and quick enough to handle what's being delivered.

High and wet

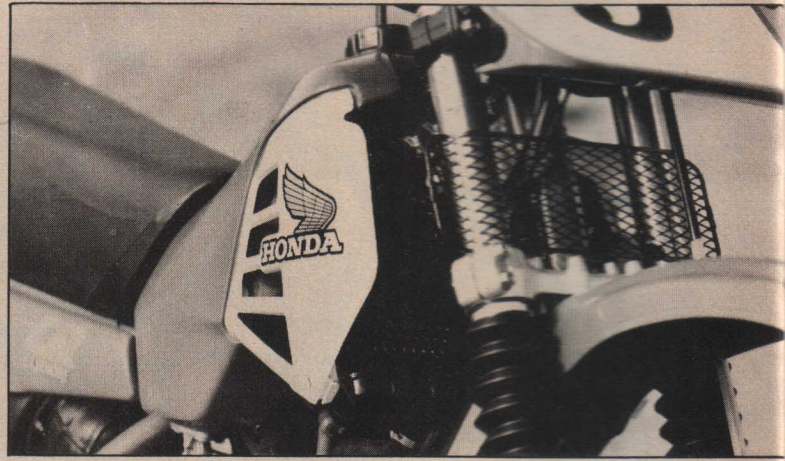
Can you feel the radiators? Yes. You know they're there. Even though the gas tank capacity has been reduced to two gallons, the feel of the CR is slightly top-heavy. You *do* adjust to it after a period of time.

Rather than mount the radiators on the forks like Yamaha, Honda has chosen to mount them on the forward edge of the gas tank. This eliminates the feeling of extra weight on the steering, but still leaves it rather high.

Honda popped for two smallish radiators, rather than one big one, and spread the wet out wide. None of the complications of the YZ are present in the Honda, but there is a whole lot of plumbing to contend with. The Honda 250 actually weighs more than the 490 Maico. This means that either the Honda is very heavy or the Maico is very light.

Right about this time, you might be asking the musical question, "How come they water-cooled the 250?" Fair enough. We feel that Honda did it for two reasons: an engineering exercise and marketing value.

We studied some engineering charts from Honda that showed the power loss expected from a typical 250. An air-cooled engine had a 30 percent loss



Twin radiators are very light and mount on each side of the tank. Plastic scoop on sides directs air to radiators; they fold in easily if the bike is dropped, then spring back into shape.

of peak horsepower when the engine reached maximum heat saturation, while the water-cooled engine showed a slight eight percent loss. In a 15- or 20-minute moto, the average rider would never get his typical air-cooled engine *that* hot, but a hard working pro on a hot day most surely would.

Honda explained that the horsepower loss came primarily from cylinder distortion, rather than a spoiled gas/air charge. We've seen some other charts from the Kawasaki folks that show a chrome bore (or electrofusion) barrel does not experience the same distortion that a steel-lined barrel does. Still, watercooling *does* enable Honda to successfully use a steel liner with all the accompanying virtues: long life, low cost, easy to modify and the ability to accept an overbore.

We rode the Honda in several races—one of them an hour-long Grand Prix put on by the Desert Rats, M.C. At the end of this race, the barrel and the radiators were warm but not hot. You could lay your bare hand on the barrel.

This means that a lot of fluid is swirling around that cylinder. To be exact, 55 liters complete a circuit each and every minute. We still don't understand why Honda chose to go with twin radiators instead of a single one. Perhaps they thought the weight distribution would be improved or that there would be a weight savings. But, the complexity of all the hoses, fittings and bracketry seems to defeat that possibility.

If, indeed, Honda chose to utilize two radiators for a sound engineering principle, why not then make the second radiator smaller than the first.

Consider: The first radiator receives the hot water from the engine and does a good job of cooling it down. The water is then transferred to an identical radiator and cooled some more. You can feel the difference in the operating temperatures of the two radiators after only a few minutes of hard running.

One genuinely viable reason for the choice in radiator styling and location seems to be for keeping everything narrow and tucked in. Both coolers are aluminum and feather light, but the system holds 42 ounces of liquid. That's about a quart and a half, which makes for about three pounds of coolant.

The tank has been given an odd shape to accommodate the radiators, and the capacity is down a bit from previous 250 Hondas. There are still two gallons of gas that can be carried in the tank; the same amount as the 1980 YZ250G. We were not able to go a full hour in that GP on the stock tank, by the way, even with a larger countershaft sprocket in place. At the 45-minute mark, you're pushing your luck. Accessory tank manufacturers will go bugnuts trying to make something for this particular machine without having it look like a giant frog died directly behind the bars.

Pro-Links and novice forks

Say, Sport, how does that single shock work? Just great! Thought you would never ask. In fact, the rear end needed virtually nothing in the way of adjusting with all of the test riders. Everyone gave the Pro-Link a rave review. It felt smooth and supple on the small bumps and positively ate the large bumps, much like a well-dialed-

in Mono.

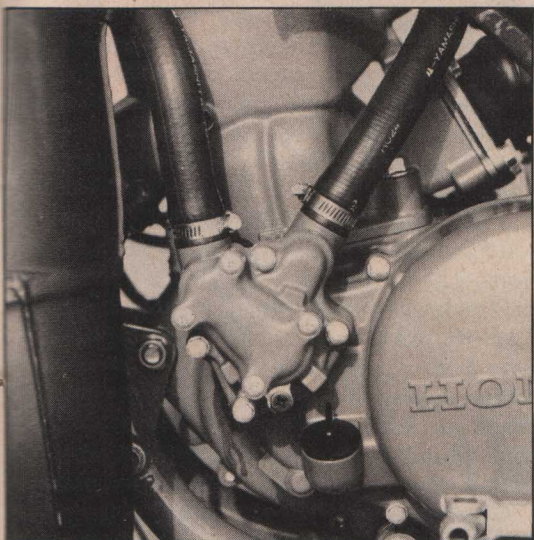
You'll find 12 inches of superb travel at the end of the long aluminum swingarm. Rebound damping can be adjusted to four different positions. Preload as well can be altered to suit the rider. We were thoroughly satisfied with the rear end as delivered, and never tampered with success. Like the man once said, "If it ain't broke, don't fix it."

We wish we could say the same for the front end. For the first time, the Elsinores are coming with Kayaba forks instead of Showa. Showa is a suspension company with the controlling interest owned by Honda, which should explain why Showa forks have been stock on Hondas for a long time. As of this date, we've never seen a set of forks from Showa that could be rated as excellent. Apparently neither did the engineers at Honda. Hence, the move to Kayaba, the same folks who make forks for Yamaha, Suzuki and Kawasaki.

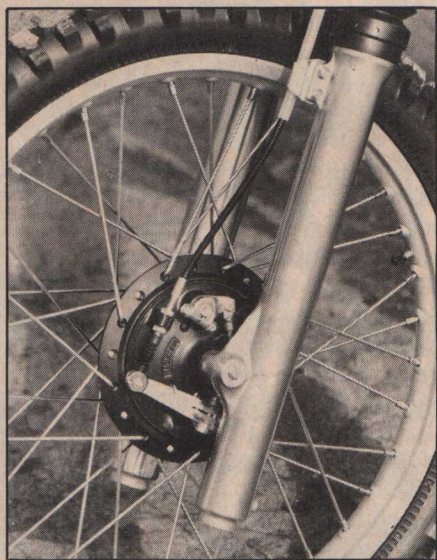
However, these KYB forks are made to Honda's specs, not Kayaba's. They are an odd 41mm fork tube size and appear to be a fairly sturdy and flex-free set of suspenders. However, they don't work all that well. In fact, they don't work as well as a set of 1980 Yamaha 38mm KYB forks. Perhaps Honda should have let the Kayaba engineers go about their business and copy what works.

It's not that the Honda forks aren't smooth; they are, at certain times. Mostly, we were concerned with the pronounced dive when braking for a corner. This would cause the front wheel to tuck under, and the tire would slip and push badly. In the deep

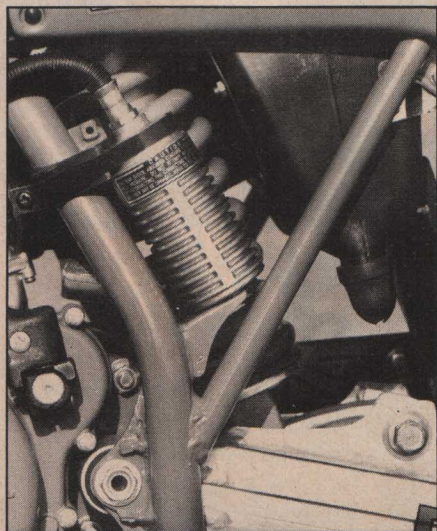
1981 HONDA CR 250R ELSINORE



Water is pumped from an impeller in the cases through the two radiators.



All new, 41mm forks offer an even foot of travel.



Reservoir for the Pro-Link shock is nestled between frame tubes, engine and the air box.

sand this was so severe we actually floundered through the turns.

We tried more air in the forks—four to seven pounds seemed about right—and the diving reduced somewhat, but then the rebound of the forks was so quick, the front end would pogo. And when landing from a jump with the air pressure up, the front end would hit the ground and actually bounce off rather than hit and stick.

At first we thought that going to a heavier oil would cure the problem, but the forks showed a distinct tendency to “hydraulic,” or lock up on sharp and square-edged bumps. A heavier oil would aggravate this. More than likely, a totally different set of fork springs might help; ones strong enough to work without an air assist. Also, if the compression stroke holes were opened up a bit and the rebound holes reduced, the forks could be put in the ball park. On medium bumps and rollers, the action of the forks was fine, but when the bike was pushed hard, the action became confused and handling suffered.

Handling

With the power on over rough terrain in a straight line, the Honda 250 is magic. When the power is chopped, some head shaking is there to bother the rider. It's not too bad at slow to medium speeds, but when coming down from fourth or fifth gear, it's something the rider has to brace for. It never put anyone on his head, but it made the bike dance uncomfortably.

As long as a corner was hard packed, the Honda seemed happy to snap and hold a tight line or to punch off a berm. But, if the turn had bad bumps

in it or the surface was loose and sandy, the CR250R would get a split personality. One time the bike would arc through the corner nicely; the next time, it'd climb over a berm or push the front wheel. Again, we think all of this can be traced back to the wallowing action of the forks and is not any inherent flaw in the chassis.

On flat, sweeping TT-type turns, the Honda was a blast. The rear end would hang out nicely, and the front end could be pointed in a desired direction with only a slight body shift.

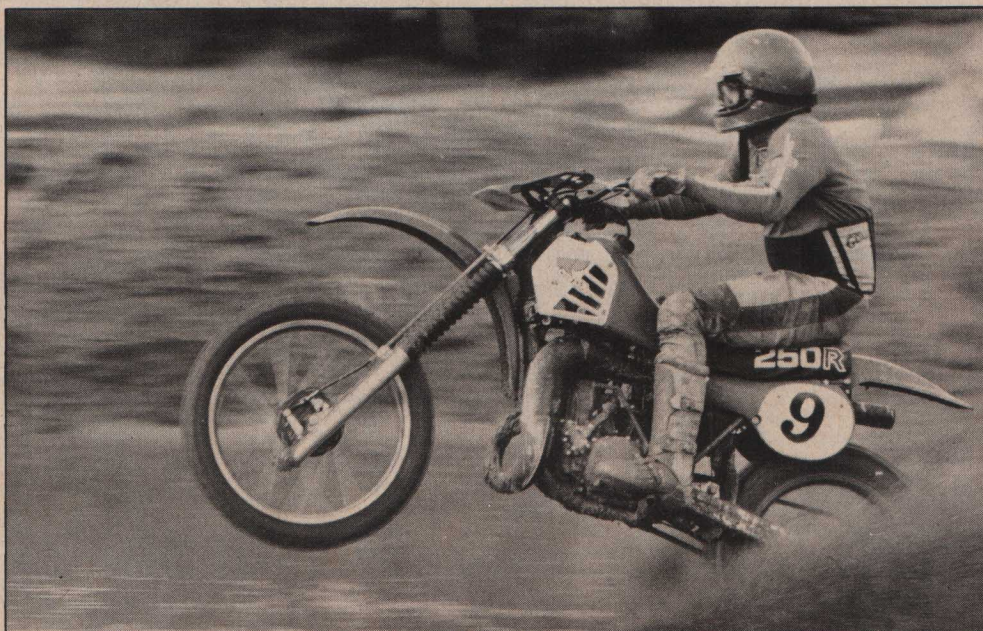
When trying to flick the Elsinore through some “S” turns, there's a slight feeling of top-heaviness. After a half hour of riding, this feeling goes away, but if you switch around from bike to bike, you rediscover it on the Honda each time.

Bits and pieces

This was the easiest starting and cleanest running test bike we've had in years. The Elsinore invariably fired up in one kick, cleaned out right away and didn't have a sign of a hiccup, blubber or gasp, from idle up to the melting point.

During the Grand Prix, our test rider got a great start. This was a dead engine start with the rider holding his bike. He was able to light the bike off in gear on the first kick while sitting on the bike, and he turned a second-row position into a top-three slot by the first turn.

A nifty screen keeps rocks and debris from being thrown into the radiators. An incredibly bizarre number plate hangs over this screen, like the lid on a grand piano. This plate takes some getting used to.



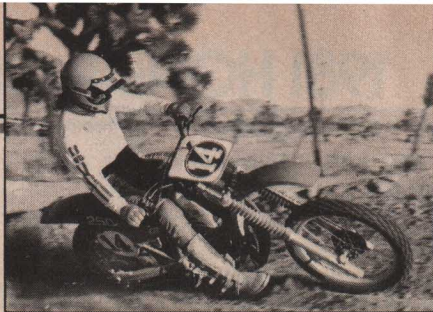
HONDA CR250R

We dropped the bike a few times, and the plastic scoops on the tank did not get ripped off, as we originally feared. Instead, they folded neatly in and then popped back into place.

Several riders mentioned that they got toasty legs from the belly of the pipe.

An ultranifty hollow aluminum shift lever has a piece of rubber tubing inside instead of a spring. Clever.

Probably the strongest front brake to ever grace a dirt bike can be found on the CR250R. One finger does it. Actually, it's so strong it comes under



the category of overkill. Perhaps time and crud will take that edge off.

A large filler cap rides on the top of the plastic tank—a small but welcome change after years of mini spouts for Elsinores.

The rear brakes must be rated as tops. Strong, progressive and positive. It only takes a small bit of time to ad-

just to how all brakes should really be.

A new word seems to have been coined with the emergence of the 37-mm carb. It's a Keihin, but it has a lot of parts that look very Mikuni. The folks at Honda refer to it -tongue in cheek- as a Scottish carb: a McKeihin.

The Honda seemed unaffected by water, no matter how grim the conditions. The first day we rode the bike, the track was a mud bog. To clean the bike off, we ran it up and down the river a few dozen times. It never even wheezed, despite all the water. Enduro riders will want to get their hands on some Honda wheels—for sure. Those brakes weren't even fazed by the water.

Gearing the Elsinore up will require some effort. You can get a one-tooth-larger countershaft sprocket on the bike by filing a tiny bit on the case. It'll accommodate last year's countershaft sprockets, by the way. To get any more top speed out of the bike, you'll then have to drop teeth on the back.

We received some inquiries about the possibility of the Elsinore working in the desert. After all, the watercooling would give it a distinct edge over all the other air-cooled bikes on a boiler day. Unless someone figures out how to slip in some wide ratio gears, that's out of the question. The gears are spaced closely together. Low is very tall, and fifth is not that far from low. Then, there's that tank problem...

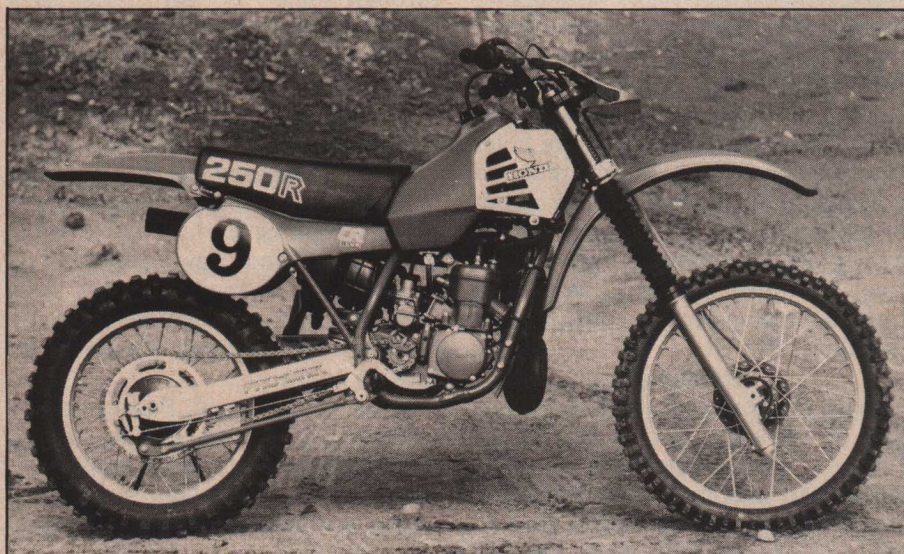
Workmanship and detailing on the bike are second to none, with the only quibble being some sloppy welds on the aluminum swingarm.

Chin scratching and tire kicking time

Here's the bottom line: So far, this is the fastest 250 motor we've ever ridden. The chassis is in the ball park, and the rear end is pure gold. We're still puzzled about the forks. Perhaps we can even get them to work to our satisfaction. We'll keep you posted on that as we learn more.

Honda, in effect, made a stadium bike for the masses. Nothing was held back in the way of trickery. It's a bike that'll rocket from corner to corner and is happiest bouncing off of high, man-made berms. Yup. It's a Super Bowl bike. An Astrodome bike. It's a bike for the '80s, with every trick in the book as standard equipment.

The only thing is this: If you're not ready, willing and able to ride the bike in a frenzied, intense Super Bowl fashion, the riders on slower bikes will beat you on a rough, outdoor track. □



HONDA CR250R

NAME AND MODEL	1981 Honda CR250R Elsinore	WHEELBASE	1485mm (58.5 in.)
ENGINE TYPE	Reed valve, water-cooled two-stroke, single	GROUND CLEARANCE	329mm (12.6 in.)
BORE AND STROKE66mm x 72mm	SEAT HEIGHT	955mm (37.6 in.)
DISPLACEMENT	246cc	STEERING HEAD ANGLE	29.5 degrees
HORSEPOWER (CLAIMED)	N/A	TRAIL	4.8 inches
CARBURETION	37mm Keihin	WEIGHT WITH ONE GAL. GAS	240.5 pounds
FACTORY RECOMMENDED JETTING:		RIM MATERIAL	Aluminum alloy
MAIN JET	160	TIRE SIZE AND TYPE:	
NEEDLE JET	Fixed; no optionals	FRONT	3.00x21 knobby Bridgestone M-21
JET NEEDLE	28H—2nd groove	REAR	5.10x18 knobby Bridgestone m-22
PILOT JET75	SUSPENSION, TYPE AND TRAVEL:	
SLIDE NUMBER	3.5	FRONT	Telescopic, air/oil 305mm (12.0 in.)
RECOMMENDED GASOLINE	Premium 92-100 R.O.N.	REAR	Pro-Link, single-shock 305mm (12.0 in.)
FUEL TANK CAPACITY	2.0 gallons	INTENDED USE	Motocross
FUEL TANK MATERIAL	Plastic	COUNTRY OF ORIGIN	Japan
LUBRICATION	Oil in gas, pre-mix, 20:1	RETAIL PRICE, APPROX.	\$1998
RECOMMENDED OIL	Hondaline oil	DISTRIBUTOR:	
OIL CAPACITY	N/A	American Honda Motor Co.	
AIR FILTRATION	Oiled foam, two-stage	100 West Alondra Blvd.	
CLUTCH TYPE	Wet, multi-plate	Gardena, California 90247	
TRANSMISSION	Five-speed, constant mesh	PARTS PRICES, HIGH WEAR ITEMS:	
GEARBOX RATIOS:		PISTON ASSEMBLY, COMPLETE	\$38.86
1	2.850:1	RINGS ONLY	\$6.30
2	1.800:1	CYLINDER	\$187.90
3	1.471:1	SHIFT LEVER	\$33.00
4	0.955:1	BRAKE PEDAL	\$24.80
5	0.833:1	FRONT SPROCKET	\$10.80
GEARING, FRONT/REAR	14/54	OVERALL RATING, 0 TO 100, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:	
IGNITION	C.D.I.	HANDLING	92
PRIMARY KICK SYSTEM?	Yes	SUSPENSION	Rear: 98, front: 90
RECOMMENDED SPARK PLUG	Champ. N-2G, NGK B8Ev, NDW24E5G	POWER	98
SILENCER/SPARK ARRESTOR/QUALITY	Silencer, average noise level	COST	95
EXHAUST SYSTEM	High-pipe, left side	ATTENTION TO DETAIL	99
FRAME, TYPE	Semi-double cradle chrome moly tubing	EFFECTIVENESS, STONE STOCK	94