

# HONDA XR250R



Being the middle brother to the XR200R and the XR350R ain't so bad

**R**iding a 250cc four-stroke in enduros just might not be such a funny idea anymore. In the past, four-strokes have suffered from being too heavy, too slow and too ill-handling to be considered serious threats in the competitive 250cc class. Maybe that's why Honda didn't even make a 250cc four-stroke in 1983. But whatever the reasons, Honda has jumped back into the class in a big way with a completely revamped 250. It is no longer an XR500R with a 250 motor.

The new 250R is based on the new XR200R frame and running gear. No more needlessly heavy frames, no more needlessly bulky hubs, no more gigantic cases for the little cylinder and no more fooling around. Yes, Honda is serious about their mid-sized four-stroke effort, and the results should speak for themselves.

## TECHNICALLY SPEAKING

Honda's objective for the XR250 was to essentially make it a punched-out 200. They used the same frame, the same swingarm, the same wheels, the same rear brake and the same engine . . . almost. The 250 has an eight-millimeter larger bore than the 200 and uses 24mm carburetors. The head is new, featuring larger valves on the intake and exhaust. The shape of the combustion chamber is somewhat changed on the new 250, and the intake and exhaust valve timing has also been changed.

The 250 shares the same front disc brake as the XR350R and XR500R. Unlike the 350 and 500, which have Showa suspension units on them, the 250 utilizes KYB suspension

PHOTOS: CHARLES MOREY

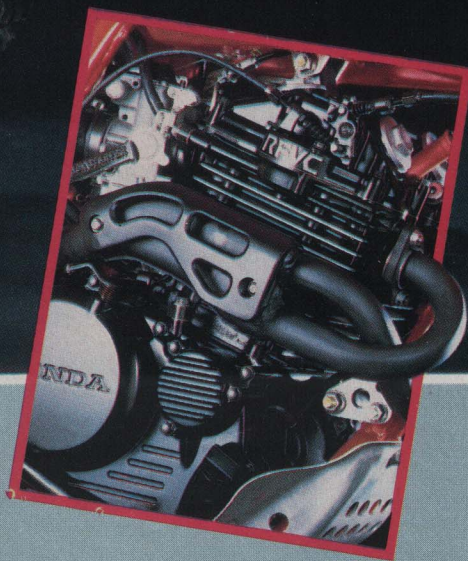






front and rear. Fork tube diameter is 38mm. The clutch uses spring dampers instead of rubber for longer service, and five plates are now used.

Other pieces the 250 has in common to the XR200R include the aluminum Pro-Link and the steel swingarm. Honda has included the nice pieces from the bigger bikes, like an automatic cam chain adjuster, a front disc brake, Radial Four-Valve Combustion chamber and dual carbs, while keeping the weight down by also sharing the smaller parts with the XR200R. Other nice features include tapered roller steering head bearings, straight-pull spokes, notched rims to prevent tire slippage, aluminum skid plate, sealed O-ring chain, folding rear brake pedal and shift lever,



gear-driven counterbalancer and an item new to the XR line—handlebar brush guards.

Since the 250 is based on the 200, you would expect it to weigh less than the 350. It does. It weighs about 16 pounds less than the 1983 XR350R, yet it is only 1.3 horsepower down. These figures prompted even more comparisons to other XRs. The 250 weighs only 10-pounds more than the XR200 of 1983, yet it puts

out 6.6 more horsepower. That's fine and dandy, and it proves that Honda has produced a bike that falls squarely in-between the XR200R and the XR350R. But what really counts is how the XR250R compares with the other 250cc enduro bikes available. How does it compare? Glad you asked. Compared to the 1983 Kawasaki KDX250B3 and the Yamaha IT250K (both tested in the September '83 issue of *Dirt Rider*) the Honda is still shining brightly.

At 240 pounds with an empty tank, the XR250R doesn't exactly sound like a lightweight, but it really isn't that far off the class leaders' weight. The Kawasaki KDX250 weighs in at 234 pounds without gas (six-pounds lighter), and the Yamaha IT250K weighs in at 235.5 pounds without gas (4.5-pounds lighter). If you were

# HONDA XR250R

Make/model.....Honda XR250R  
 Serial number.....Frame:  
 JH2ME0606EK00008  
 Engine: ME06E-5000120  
 Price.....\$1,825  
 Number of dealers (U.S.).....1,800  
 Warranty.....None  
 Customer service.....American Honda  
 Motor Co.  
 100 W. Alondra Blvd.  
 Gardena, CA 90247  
 213/327-8280

## ENGINE

Type.....Single cylinder, four-stroke  
 engine with Radial Four  
 Valve Combustion Chamber.  
 Displacement.....249cc  
 Bore x stroke.....75.0 x 56.5mm  
 Compression ratio.....10.0:1  
 Horsepower/rpm  
 (measured).....21.3 @ 9,000 rpm  
 Torque/rpm  
 (measured).....14.0 @ 7,000 rpm  
 Carburetion.....Dual port, two  
 24mm Keihin carburetors  
 Exhaust.....Dual steel exhaust  
 into steel spark  
 arrester/silencer  
 Ignition.....Solid-state CDI  
 Lubrication.....Wet sump  
 Air filtration.....Oiled polyurethane foam

**DRIVE TRAIN**

Transmission.....Six-speed  
 Primary drive.....3.10:1 (gear)  
 Final drive.....3.46:1(13/50)  
 Gear ratios (internal).....1st 2.77:1  
 2nd 1.94:1  
 3rd 1.45:1  
 4th 1.13:1  
 5th 0.92:1  
 6th 0.79:1

## CHASSIS

Frame.....Steel, diamond design

Rake/trail.....25.8°/4.1 in.  
 Front suspension.....KYB leading-axle  
 air/spring fork,  
 38mm stanchion tubes,  
 9.5 in. travel (measured)  
 Rear Suspension.....Pro-Link with KYB  
 gas/oil shock, four-way  
 adjustable rebound damping,  
 9.0 in. travel (measured)  
 Brakes.....Front—Twin-piston  
 caliper disc  
 Rear—Drum  
 Wheels.....Front—1.60-21 D.I.D  
 Rear—2.15-17 D.I.D  
 Tires.....Front—3.00-21  
 IRC Vulcanduro VE32  
 Rear—4.60-17 IRC Vulcanduro VE32

## MEASUREMENTS

Weight (wet, no fuel).....240 lbs.  
 Weight (wet, tank full).....257 lbs.  
 Weight distribution.....115.5/124.5 lbs  
 (48/52%) (Fr/rr, wet, no fuel)  
 Weight distribution.....125/132 lbs.  
 (49/51%) (Fr/rr, wet, tank full)  
 Wheelbase.....53.7 in.  
 Fuel capacity.....2.7gals.  
 Reserve capacity.....0.2 gals.  
 Sound test.....103 dbA  
 Ground clearance.....12.4 in.  
 Seat height.....35.6 in.  
 Swingarm length.....22 in.  
 Swingarm pivot  
 to center of countershaft.....2.8 in.

## PARTS/COST

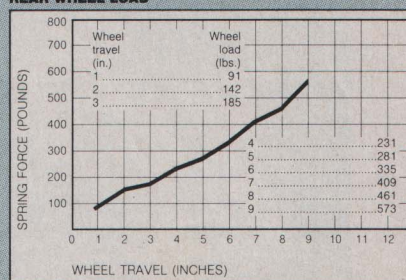
Maintenance manual.....\$2.49  
 Carburetor jets.....Main—\$3.53  
 Pilot—\$4.26  
 Needle—NA  
 Needle jet—NA  
 Sprockets.....Front—\$13.08  
 Rear—\$57.89  
 Handlebar levers.....Right—\$10.21  
 Left—\$10.21

Shift lever.....\$19.51  
 Piston kit (complete).....\$40.80  
 Rings only.....\$13.34  
 Cylinder.....\$130.87  
 Head.....\$198.97  
 Clutch plates.....Friction (5)—\$4.41 ea.  
 Steel (4)—\$2.88 ea.  
 Air filter.....\$9.76  
 Brake shoes.....Front—\$13.14 ea. (2)  
 Rear—\$4.31 ea. (2)  
 Chain.....\$67.98  
 Seat.....\$113.80  
 Fenders.....Front—\$38.07  
 Rear—\$33.63  
 Fuel tank.....\$131.46  
 Clutch cable.....\$6.95  
 Throttle cable A.....\$9.18  
 Throttle cable B.....\$9.67  
 Front Brake Hose.....\$17.12

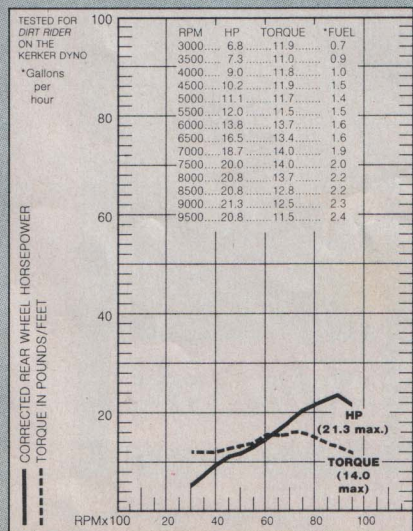
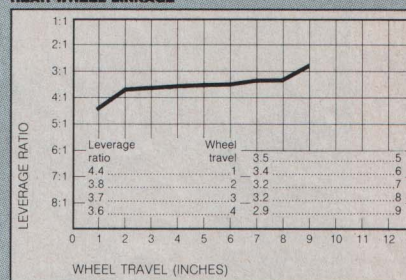
## OPTIONS

Quartz 12V/55 watt  
 halogen headlight.....\$25.46  
 Regulator.....\$34.61

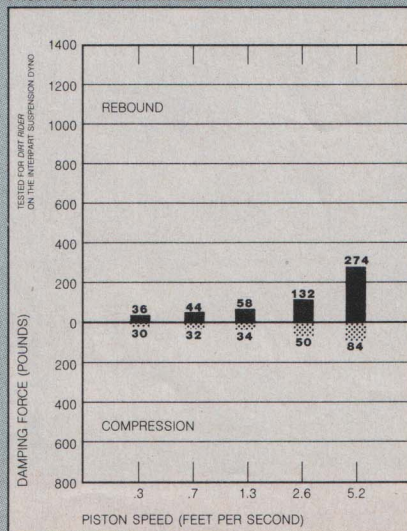
### REAR WHEEL LOAD



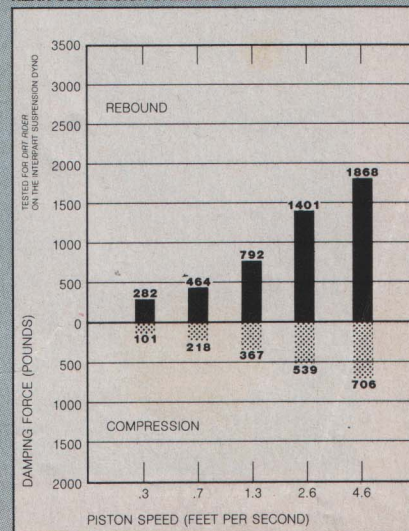
### REAR WHEEL LINKAGE

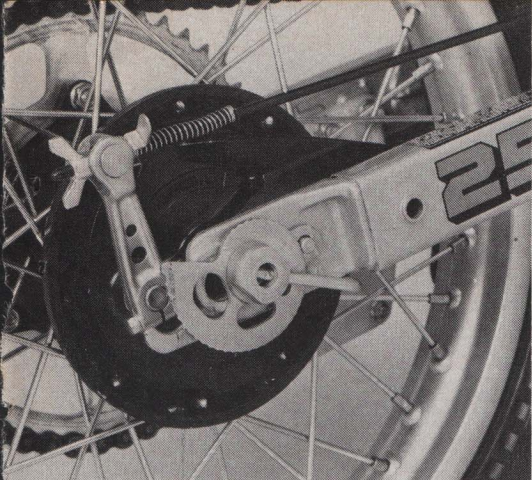


### FRONT SUSPENSION DAMPING

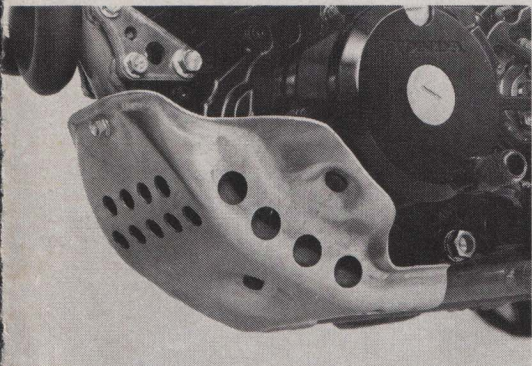


### REAR SUSPENSION DAMPING

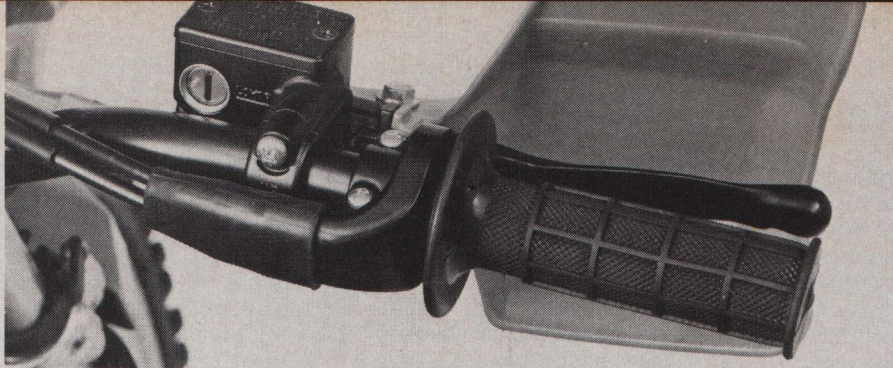




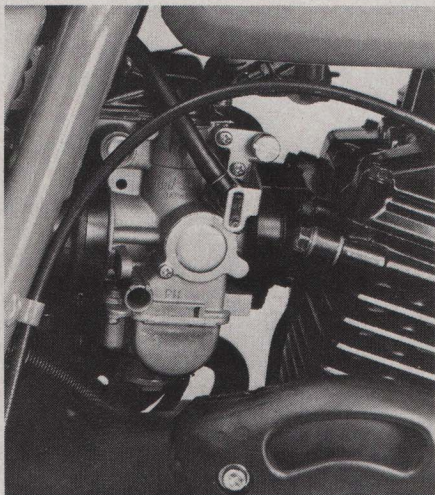
Quick-change brake components make repairs easier on the trail and even in the garage.



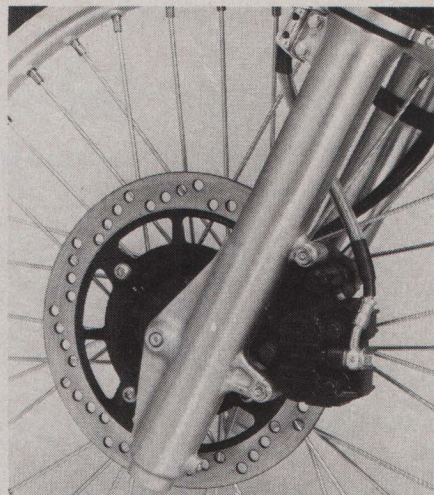
The skid plate made itself useful several dozen times during our testing.



Handguards that look like IT units fell off after a spill. They're a good idea, though.



Honda went full out with the XR250R and used dual carburetors and exhaust.



Honda's twin-piston caliper disc brake adorns the grown-up XR200R. It's not all that strong.

to replace some parts with lighter ones on the 250, it would be a pretty close race in the weight department. On top of that, the XR250 isn't that far behind in the horsepower race. Compared to the Kawasaki, the Honda is down only 4.3 horses. Think about that for a while. In the 250cc motocross class, the difference between the Honda two-stroke and the Suzuki two-stroke is almost four horsepower. The two bikes are almost a dead heat in a drag race. Think about that for a little bit longer. The XR, a four-stroke, is only six-pounds heavier and only gives up 4.3 horsepower to the KDX. Pretty interesting figures for a four-stroke. Suddenly it's starting to look like Honda has produced a super-competitive four-stroke for the enduro market—with a few problems.

While the peak horsepower is close, the midrange is a mile off. At 5,000 rpm, the XR puts out a measly 11.1 ponies, while the KDX is up to a healthy 20.2 horses. That's enough to make a big difference in anybody's book.

## ON THE GAS

In our book, the XR250R needs some more midrange power. If you work quickly with the gears and keep the bike between 8,000 and 9,000 rpm, you can go pretty darned fast. On the other hand, if you want to chug up some nasty rock bed or up a terminally insane uphill, the XR250 has great response right off the bottom of the powerband. It's only every-

where else in the powerband that gave us problems.

You need good midrange power for quick response on trails or to pop the front wheel up for a series of whoops. Out on a long, enduro-type trail in a national forest, we found the XR to be in need of a few more horses. Not to the point where it felt like an old XR200, but just to the point where we wished there was a bit more oomph.

The XR250R is seriously underpowered for riding desert, Baja or cross-country. *Dirt Rider's* Charlie Morey picked the XR250R as his first choice for the reincarnated Barstow-to-Vegas desert race. Charlie practically locked the XR up so no one else would "steal" it from him. Thanks, Charlie. We're glad you insisted on riding the 250. Some of the sections of the B-to-V were top speed for 15 miles at a time. Bob Carpenter rode the Husqvarna 500XC and Karel Kramer rode a Husky 250CR (see sidebars in "Competition"). The 500XC is geared for over 100 mph and the 250CR would go close to 80 mph. The XR250R only got up to around 65 mph. Compared to 100 mph, 65 mph is boring.

But Honda didn't intend for the XR250R to be a desert bike in the first place, so you have to ride it in the woods to really get a feel for what it can do. The frame geometry is definitely set up for the woods. Its wheelbase of 53.7 inches, combined with a super-steep rake of 25.8 degrees and 4.1 inches of trail testify that

the 250 was never intended for cross-country use. The short swingarm, 22 inches, might even be a tad too short for woods riders. Many of our testers commented that the bike felt "busy," with the rear end constantly moving around. Charlie said he would really like to see a longer swingarm on the bike for the higher speeds common in Southern California. Even a typical desert enduro would require more stability out of the mid-sized XR.

The rear suspension was voted down by an almost unanimous vote of the "Official *Dirt Rider* Testers" for a couple of reasons. First, although not exactly the bike's fault, the rear spring was much too soft for our testers who ranged in weight from about 160 to 190 pounds. All needed to bump up the preload on the shock spring past the optimum point. We highly recommend a stiffer optional spring for anyone in this weight range. Even though we ran the preload stiff, we still had problems with the XR250R bottoming out on big compression gulleys. You know the type; you drop into it at a steep angle and the other side is just as steep but with no transition between the two. On ordinary bumps or jumps, we didn't have to face the bottoming problem. We did, however, have to face the problem of the rear shock. It seems that after a few hard minutes of riding, the shock absorber doesn't like to absorb shocks anymore. Too small of a shock body? Maybe. Too small of a shock reservoir? Maybe. Heck, maybe it

just doesn't work that great after it gets really hot. In the average enduro, you probably won't notice any problem since the shock has time to cool down and isn't subjected to constant pounding for 10 minutes. But if you ride National-caliber enduros or hare scrambles races, you are probably going to want to do something about it.

The front fork was a much more complicated issue. One tester, a local pro motocrosser, thought it was fine for what the bike is intended to do. Another tester, a "B" level enduro rider, thought it was too

stiff and should have the oil level lowered to give a plusher ride over the long run. Another tester, an intermediate motocrosser, was sure the fork was too soft. He also thought the fork was the cause of the rear end problems.

The seat was another area of concern. One tester thought the part of the seat that extends up onto the gas tank sticks up too high. It constantly caught him in a most unpleasant manner—a potentially nerve-wracking experience. You know you should be up high on the gas tank to properly weight the front end, but you are scared to death that you'll end up rolling

around on the trail moments later—a victim of the "safety" seat. Not every tester mentioned a problem with the seat extension, so we won't tag it as a major problem. But if you are that one guy who gets nabbed repeatedly, you will probably consider it a major problem.

Another complaint that has become common knowledge to all the XR-series riders is the seating position in relation to the standing position. While standing, the XR feels comfortable. When seated, the XR feels comfortable. But the transition from sitting to standing or standing to sitting is a long road to travel. The relationship between the seat and the pegs leaves the rider with his legs bent more than on any other motorcycle, including Honda's own CR line. To stand up, the rider has to actually make a concerted effort, not just merely lift himself off the seat a couple of inches. What usually results is that riders become lazy when riding an XR and finally just don't bother to stand up when they should. The body is subjected to too much abuse and the rider gets tired sooner. It isn't the fact that his four-stroke is any heavier than his friend's two-stroke, it's just that he isn't standing up enough.

While we're ranting and raving, we might as well tell you that we were disappointed that the trick new handlebar brush guards didn't hold up under pressure. Charlie was gracious enough to crash test the XR250 somewhere in Arizona, and he discovered that the brush guards weren't all that durable. When one broke off, he took the other off so the bike wouldn't look lopsided. Bob wished he had had the hand guards on when he smashed into a broken-off log that stuck out into a trail. The log broke his little finger. He wished it had broken the hand guard instead.

The XR250R sports the same front disc brake as the XR350R and the XR500R, but it feels distinctly different. Although it has a good, progressive feel to it, the disc is not exactly overpowering. We do feel, however, that the brake will stop the bike adequately under almost any condition. Just don't try to lock the front wheel up. Under normal riding conditions, we found that it couldn't be done. Maybe we could argue that this is a good point and that you can't hurt yourself with this disc brake, but we would prefer it to be nice and progressive (which it is) but with more overall stopping power when really yanked.

A minor problem? Yes, but so are most of our complaints about the new XR250R. At least they are minor enough that, overall, we feel the bike is an excellent alternative to a two-stroke enduro machine. It just isn't perfect... yet. We intend to fiddle and play with the 250 until we can get it as close to perfection as possible. After some work on the fork, shock and maybe with a longer swingarm, the XR250R might be able to please everyone that rides it.

DR



## OPINIONS

The XR250R is a fun little scoot. It really turned out to be what I had hoped it would be. I loved the XR350R last year, and the new 250 handles at least as well. The 250 also has enough power to be a lot more fun than the old XR200R.

One thing that is nice about the XR250R is that you can pop the clutch coming out of turns on the trail and the bike will respond a lot better than most four-strokes I've ridden. It revs out real nice.

The stability of the bike is a bit shakier, though. When you chop the throttle after a high-speed section, the front end gets real busy, especially in the sand.

—Gary Thompson

Age/Ht./Wt.: 23/5'8"/172 lbs.

Motorcycle(s) currently raced/ridden:

Honda CR250R

Riding ability: Novice motocrosser

I think the XR250R fills a gap that has needed to be filled. The XR200R has always been a lot of fun, but it was just too darn slow. The XR350 is obviously a lot quicker, but it is a lot heavier. The new 250 gives us the best of both worlds—sort of. It should have more horsepower, but for tight woods running, you can hardly beat it.

Yet with the advent of RFVC, dual carbs, etc., I feel the XR has lost some of its original pluses. I no longer feel like I can climb anything when on the XR250R. With

peak horsepower coming at 9,000 rpm (2,500 rpm later than the KDX250, and 1,500 rpm later than the IT250), it's a little bit more work than it used to be.

—Bob Carpenter

Age/Ht./Wt.: 23/5'9"/185 lbs.

Motorcycle(s) currently raced/ridden:

Honda CR250R, Suzuki RM250E

Riding ability: Pro motocrosser

Boy, they almost did it this time. The XR250R is still too heavy, too short (wheelbase) and underpowered. But not by much! This one's a real fixer-upper.

With a few pounds shed, a slightly longer swingarm and more punch, the XR will make a fine trail machine or enduro mount. Not that it's all that bad in stock form...

I put more miles on it than anyone else on staff, both in the mountains and in the desert. It shines brightest on rocky hillsides and in tight woods where its torque, tractability and quick turn-in characteristics prove their worth. It's no desert bike, but with some mods, it'll make a lot of riders very happy.

—Charlie Morey

Age/Ht./Wt.: 36/5'10"/180 lbs.

Motorcycle(s) currently raced/ridden:

Can-Am 320 Trials, Honda XR250R,

KTM 495 MXC

Riding ability: "B" enduro rider