

1997  
XR400



# NEW '97 XRs & YZs!!

DIRT  
BIKE

# DIRT BIKE

WPS  
34355

AUGUST 1996

Attn. retailer: Please  
display until Aug. 15

## SPECIAL REPORT ON THE HOTTEST THUMPERS EVER



1997  
YAMAHA  
YZ125

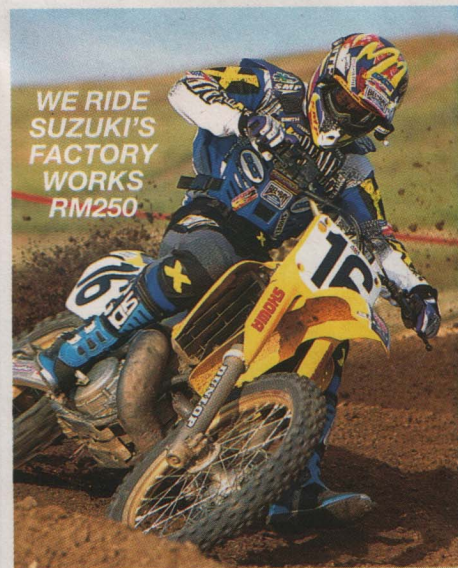


WORLD  
CHAMP  
VERTEMATI  
500

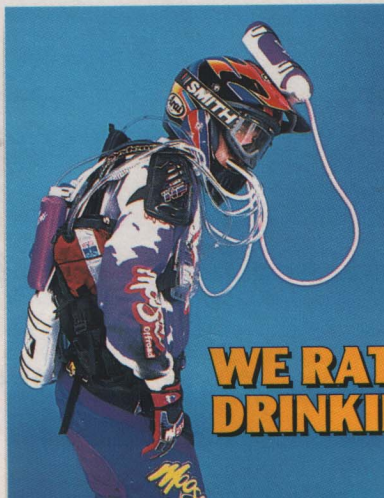


## 400cc 4-STROKE SHOOTOUT: HONDA vs. HUSKY vs. KTM vs. HUSABERG vs. CCM vs. SUZUKI!

DO-IT-YOURSELF TIPS:  
HOW TO REBUILD YOUR RM,  
CR, KX, YZ & KTM FORKS!



WE RIDE  
SUZUKI'S  
FACTORY  
WORKS  
RM250



WE RATE THE NEW  
DRINKING SYSTEM

## FIRST TEST OF THE '97 RM250?

McGRATH  
SPEED  
SECRETS

9 170364 54066

SEYMOUR

AUGUST 1996

£2.20

# THE LIGHT HEAVY



*CCM C25 350 vs.  
Honda XR400R vs.  
Husaberg FE400 vs.  
Husqvarna WXE410 vs.  
KTM 400 EXC vs.  
Suzuki DR350*

*By the thumping dudes of DIRT BIKE*



# EAVY WEIGHTS



It's kind of a bum deal. You just got off a middleweight four-stroke and expect thunderous applause from the heavens. You expect people to line up and shake your hand. You wait for the inevitable compliments: "Man, you were really riding that 400 great," or "Hey, you were riding the wheels off that little thing." When the applause comes, though, it's never as satisfying as it should be. You might get a "Good ride" or two, but nothing you feel is worthy of your incredible feat.

Here's the problem: everyone assumes you are riding a 600. First, they look exactly like 600s, and second, you *were* probably riding the wheels off of it. Actually, it's easy to ride fast on small thumpers, but for some reason, people think they are slow. So you naturally want a huge neon sign saying "Hey, you bozos, I just blew your doors off and I was on a 400! You hear? A little, stinkin' 400!"

The truth is that 350s and 400s can go as fast as, or faster than, big four-strokes in most situations. They just *feel* slow. The power is so smooth and hitless that if you go for a short test ride, the only thing you remember is how weak the bike feels. If you rode longer, you might realize how fast the cornering speed is, how



good the traction is, how forgiving the power is, and how all those things more than make up for the ho-hum acceleration.

However, if you have a middleweight, the last thing you want everyone to know is how good the bike really is. You just want them to know that you are riding with a 200cc displacement disadvantage

and making up for it with sheer talent.

We gathered up the six contenders in the light-heavyweight class and put them on tracks, trails, scales and dynos and discovered three things: 1, they are all different—*way* different; 2, they are all good at some things; 3, they are all bad at some things.

Here's how it all breaks down.



**CCM C25 350  
ELECTRIC START  
MR. ROTAX RIDES AGAIN**

● When someone sees the CCM 350 for the first time, no matter who he is, he gets confused. You see him stop and stare, and eventually smoke starts coming out of his ears. If he had a computer screen, you would see things like "Syntax error" or "System shutdown" displayed. If he's old enough, he's trying to superimpose an image of an exotic BSA-powered motocrosser from the '70s over this modern-looking machine in front of him. The two images don't mix, and a meltdown occurs.

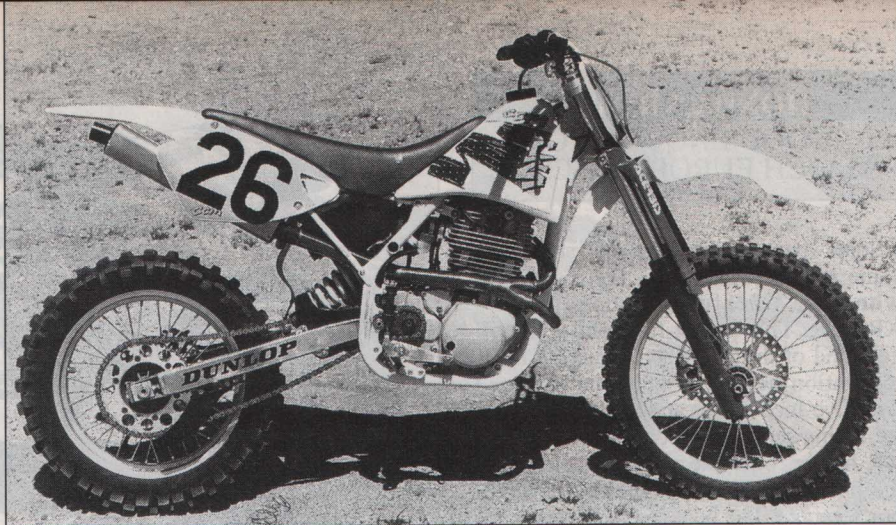
**TECH TALK**

CCM is an English company primarily devoted to building four-stroke motocrossers. The bikes don't use BSA engines anymore (thankfully), but Rotax motors instead. We know, Rotax motors are almost as dated as BSA motors, but they are reliable and capable of producing big power. The company also dabbles in 350cc trail bikes with electric starters, as you see here. The truth is that it's almost the same machine as the big 600cc motocrosser, it just has a smaller Rotax motor with an electric starter and a battery. It's also available with a lighting kit.

The bike is beautiful. We still have grim memories of the last English bikes we tested, which were in the dying years of Can-Am. Those bikes were crude, ill-designed and probably did permanent damage to the image of English craftsmanship. The CCM is just the opposite. Everything is well-designed, perfectly fitting and usually polished until it shines. However, the bike has some strange features. For example, the WP rear shock is mounted directly to the swingarm and laid down at about 45 degrees. To get the room to do this, the swingarm has to be fairly long—about 24 inches—and there is very little clearance between the lower shock mount and the front of the tire. That also creates a very high lever ratio, meaning the stock spring has to be extremely stiff. It's certainly not conventional, but the CCM guys must know what they are doing, because it all fits together and works. The fork is a Marzocchi 45mm conventional, just like most other European bikes currently use.

The motor looks exactly like the big Rotax motor that we got used to seeing in ATCs. It's also used extensively in dirt-track; old-timers might even remember it from the Can-Am days, it's that old. It still is an air-cooled four-valver with a belt-driven, overhead cam. In this case the bore and stroke have been reduced so

◀ *The Suzuki, Husky and Honda show just how different middleweight four-strokes can be. You have a grunter, a screamer and America's trail bike.*



that it displaces 350cc. The engine weighs about 90 pounds, which contributes to the bike's total weight of 285 pounds.

**PERFORMANCE TALK**

It's hard not to like riding the CCM. It handles great. This seems odd; how can a bike with the world's heaviest, widest motor and a swingarm that's two feet long work so well? The bike actually turns well, though, and is stable in the straights. Also, overall, the bike just feels right. Usually with limited-quantity, handbuilt bikes, you have to put up with hard seats and odd ergonomics. The CCM actually feels downright Honda-like in those departments.

The suspension is fairly motocross-oriented. That's good because the others, which are, for the most part, enduro-oriented, are far too soft for anything but the most casual trailriding. The fork is especially good, being the stiffest of the Marzocchis. The rear is okay initially, but seems to go through its travel too quickly. On bigger bumps, the rear end kicks badly. Increasing the rebound damping does not seem to help. This is noticeable on motocross tracks and in the desert, but is no problem on trails.

The Brembo brakes are good—perhaps a little too good in the rear. The brake pedal provides an imprecise feel, which often winds up with a locked-up rear wheel.

*Who would have guessed that the British knew how to build such good motorcycles? Everything made by the CCM guys is top rate. Everything else is so-so.*

◀ *Good frame, bad engine. The CCM looks trick and feels trick. The real trick is how slow it is.*

**THE CATCH**

So the CCM is well-made, fun to ride and, in general, handles well. What's the catch? The motor. None of these bikes feels particularly fast, but the CCM is impressively slow. It has by far the worst bottom-end power, and is so slow-revving that it seems you will never get to the top end. Up there it's still slow, but at least tolerable. Part of the problem is a horribly oversized 39mm Dell'Orto carburetor. A 36mm carb would be closer to the mark. If you open the throttle too fast at low rpm, the bike hesitates. However, if you don't give it enough gas, you never get it to rev. Making things worse are gaps in the gear ratios. The bike barely has enough power to pull the jump from first to second on flat ground, and you have to slip the clutch going uphill.

We know the engine doesn't have to be this way. We have ridden bikes with 350cc Rotax motors that were a lot of fun, even if you couldn't call them fast. George Earl at Up-Tite Motorcycles has a lot of experience with getting the most from these motors. His mods include (predictably) replacing the carb and the pipe.

Other than that, Mrs. Lincoln, we are pleased with the motor. The clutch seems able to handle a lot of abuse, the shifting is decent and then there's that magic button. Electric starting is a wonderful thing on a four-stroke. You can actually ride harder when you know that a stall won't result in 15 minutes of kicking.

The other catch is the price, so we have simply chosen to ignore it for the purpose of doing this comparison. We have a hard time knowing what any bike is worth, simply because some people will pay a lot to have something that isn't garden-variety common. The CCM definitely isn't common. So it takes a very uncommon person who wants it badly enough to find it, buy it and fix it. ●

## HONDA XR400R

### GOOD ENOUGH TO MATCH EUROPE'S BEST?

● Somewhere in some weather station on some icecap somewhere, there's a rider who hasn't heard all about Honda's XR400R. That won't last long. He will get wind of the XR when someone at the ice station next door gets one mounted with five-inch spikes and starts a one-man ice-racing series. In just a few months, the XR has become the universal dirt bike; the bike most likely to be in your neighbor's garage. The bike is a perfect size for a casual trail bike, plus—who would have guessed?—it's actually half decent on a motocross course. Spud Walters even took one to several top-three finishes in the Sound of Thunder Series against the hottest full-size motocross thumpers in the world. If there is such a thing as America's Dirt Bike, this is it—and it got there in about six months.

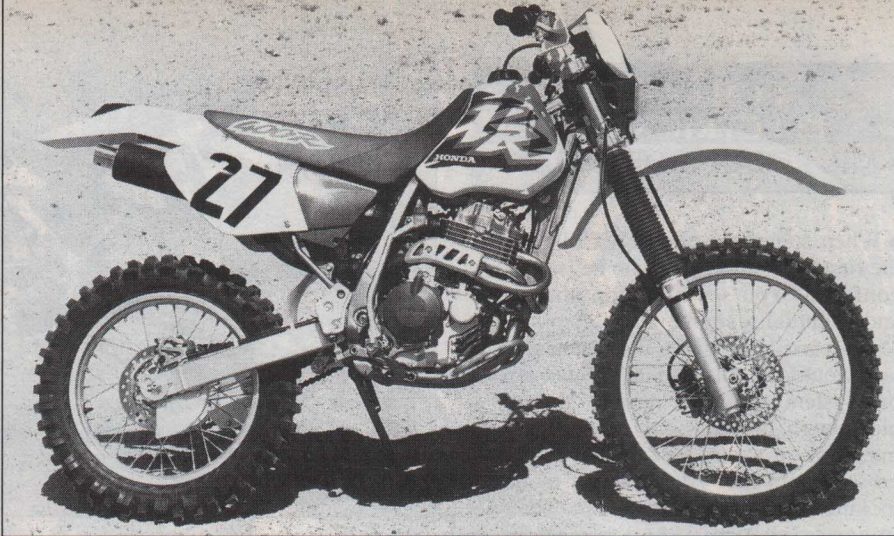
#### TECH TALK

Honda's XR400R was cast in the image of the XR600R. Why not? Even though the 600 has been around for years, it's still one of the best-selling dirt bikes in the world. The 400 is just without some of the 600's most limiting problems, such as an engine that's as wide as a Buick. The 400 engine is about four inches narrower than the 600 engine. The 400 has an air-cooled, four-valve engine and a five-speed transmission. There's nothing groundbreaking there. Honda wanted to keep things conservative and hold the price down. The engine definitely has nice features. For instance, you can rebuild the top end without removing the motor from the frame. The clutch is also easy to get to. That's a good thing because when you race the Honda, clutch plates, and even pressure plates, have a short lifespan. The bike comes with a baffle in the exhaust, which messes up the jetting horribly. We took it out and put up with the increase in noise.

The 400 has Showa suspension, front and rear, but once again, there's nothing that will stagger the technological world. The fork isn't that different from what Honda was using in '87, aside from the lower legs, which are made from extrusions rather than castings. The shock has a rather extreme lever ratio and a very stiff spring, which is a tradition with XRs, and frankly makes very little sense. The brakes are basically the same units that Honda uses on the CRs.

#### PERFORMANCE TALK

Somewhere, probably on that ice station, there's someone who doesn't think the 400 has an awesome power delivery for a trail bike—but that's only because most of his brain has frozen. The XR has excellent low-end power, decent midrange and top, but more than that, it has power that is 100% usable. That was the secret discovery that motocrossers found. You



▲ Tuners have jumped on the XR400. Already, we have seen XRs that produce more horsepower than the CR250. The weak spot still is the clutch, whether the engine is stock or modified.

◀ The bike of the year: The Honda XR400R not only has sold right out of the showrooms, but has increased interest and sales in other four-strokes.

gestion. In the air, sometimes the bike bogs as if it has some kind of fuel starvation problem. These things don't really slow you down, but they are annoying.

As for suspension, the bike is good but, once again, not without fault. It's as if

can gas it early in the turns without worrying about the rear end breaking loose or the bike doing anything squirrely. You just go through the turn that much faster. Also, the XR's short, light feel makes it handle exceptionally well in turns.

Remarkably, the bike feels gentle and secure for such a quick-handling, turn-oriented machine. This is another perfect example of power that affects handling in a big way. The XR shouldn't be stable at all—it's short-wheelbased, tall and has sensitive steering. However, the bike never does anything scary, simply because the power delivery is so good. Of course, it's matched against a very stable group of bikes. All of the Euro thumpers are stable, even by Amtrak standards. The XR stays put, but not as well as the Euro machines.

That doesn't mean it's perfect, though. The XR doesn't carburet that well, especially off the bottom. On rough ground, the bike hiccups and burps like it has indi-

the rear end is set up for motocross and the front end is set up for trailriding. No matter where you are, one end or the other is doing something not quite right. Both ends are overdamped and have to have the rebound clickers turned almost all the way out. Overall, the bike still is better on the trail than it is on a motocross course.

#### DETAILS

Overall, we have learned a lot about the XR since its introduction in late '95. We know that the brakes are hard to improve upon. We know that it's easy to get more horsepower out of the engine. We know that the bike is comfortable and, for the most part, reliable. We also know that it has changed the way America looks at four-strokes. Honda has probably increased sales of all four-strokes, simply by creating interest with this bike. It's the four-stroke that we all are most likely to buy, just because it's a Honda. So we can consider ourselves lucky that it's a great bike. ●

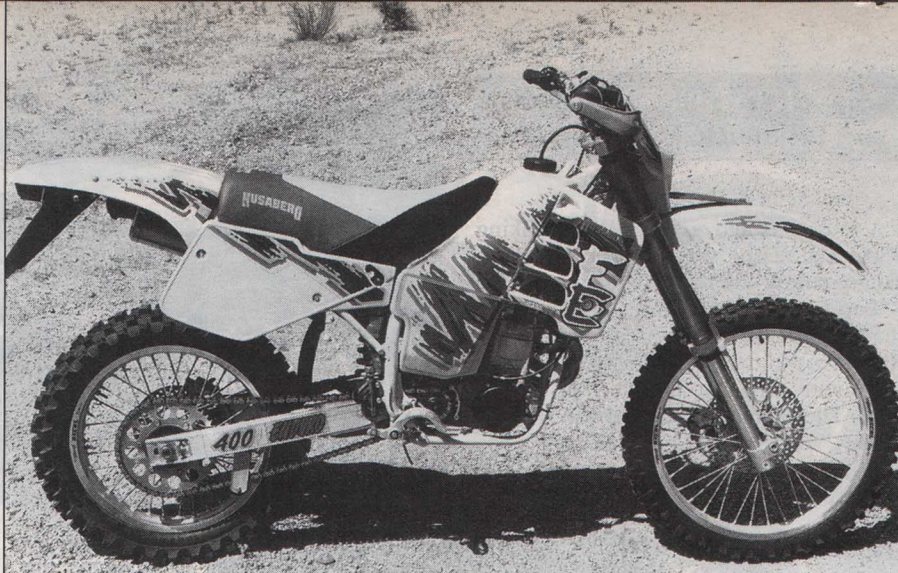
## HUSABERG FE400 THE RACER'S CHOICE

● If Honda made the average rider take notice of four-strokes, then it was Husaberg that got the serious racer's attention. In case you hadn't heard, Husaberg won the 500cc World Motocross Championship. That was once the most coveted title in all of motorcycle racing, reserved for the teams with the biggest budgets and the best riders. Husaberg, a company scarcely larger than the average hot-dog stand, shouldn't have had a chance. Evidently, though, those Swedes knew their hot dogs. Since Husaberg's start, the company has made the lightest, fastest, best-performing racing four-strokes in the world.

It's much harder to win the heart of the trailrider than it is to win world championships, though. For years, people have considered Husabergs as too high-strung, fragile and expensive to do something as pedestrian as go cow-trailing. The FE400 might be the breakthrough in that respect. It's still a racer at heart, and it's still expensive, but it also has an easygoing nature that almost anyone could love.

### TECH TALK

The people who designed the Husaberg motor haven't made any significant changes to it since its inception. Sure, there have been changes in displacement and updates to parts, but the motor uses the same basic design it used back in '89. There is no oil pump—the pressurization of the crankcases is what moves the oil through reeds to the various parts of the motor. It's a super-lightweight design that raised some eyebrows initially. People thought it couldn't be reliable. In fact, the motors did develop a reputation for



Last year Husaberg was purchased by KTM. Expect an immediate increase in the quality and reliability of all Husabergs, along with a \$500 parts allowance.

breaking, but it had nothing to do with the oil system. Instead, it was various crank designs, rocker arms and different materials that weren't up to par.

Because the engine hasn't been redesigned in so long, now Husaberg has at least had time to sniff out and fix most of the problems. The 400 always has proven to be the most reliable model anyway. As of last year, KTM became the majority stockholder in Husaberg, and has been working to improve quality control.

The chassis is virtually unchanged, too. Husaberg resisted the urge to change to Marzocchi forks, which probably is a good thing. WP forks remain decent front suspenders when set up properly (which the 'Berg's are). The Marzochis are good trail forks, but no one seems entirely satisfied with the '96 version on motocross-style terrain yet.

The bike still has some very strange features, like an air filter that's hidden in the left side of the fuel tank. Air goes into the filter, through the backbone of the frame and into the Dell'Orto carb. Several years ago, the engineers discovered that this system didn't flow enough air, so they sawed a hole in the frame and added a secondary filter. It's an afterthought that remains on the bike to this day. Brakes are the same Brembo units that are on the Husky, CCM and KTM.

### PERFORMANCE TALK

The Husaberg rips. It has, by far, the best acceleration of all these bikes. Of course, that might be like saying you are the tallest man on Pygmy Island, but even regular two-stroke guys get off the 'Berg and say things like, "Not bad."

The bike makes its power through revs. You don't just lug the bike and expect it to outrun the others. You could, but frankly the low-end power is a little weak—it just doesn't like low revs. Scream the 'Berg, and it's happier, and you will be happier. On top, it does vibrate more than the others, but you learn to deal with it.

The Husaberg is the only Euro bike that has well-thought-out gear ratios. The

KTM, Husky and CCM all are geared way too tall. Once you regear them, there are odd gaps in the ratios. The Husaberg has a six-speed tranny that works out perfectly. First gear is low—almost a granny gear for really tight stuff. So you spend most of your time in second. When you get on a wide-open road, you have sixth so you aren't buzzing your brains out. The Husaberg also is the narrowest and lightest bike. With credentials like that, of course it's going to handle. It has an odd feel—definitely Euro. It likes to have the throttle open when it turns, and it holds a line like it's welded to the trail. All of the other bikes have larger fuel tanks that make moving around difficult. The Husaberg has virtually nothing that keeps you from climbing right over the front fork. This is a bike that clearly was designed by people who like riding fast.

### SWEDISH SATISFACTION

Is the WP/Ohlins suspension up to par with the others? We were surprised, but the Husaberg has the best overall suspension in the shootout. It also has the stiffest overall suspension in the shootout. With the exception of CCM, it seems like the other manufacturers all went overboard with soft forks, trying to appeal to the trailrider set. That initial cushiness might feel good on a brief test ride, but on a long ride with a wide variety of terrain, almost everyone prefers the Husaberg's stiffer front end.

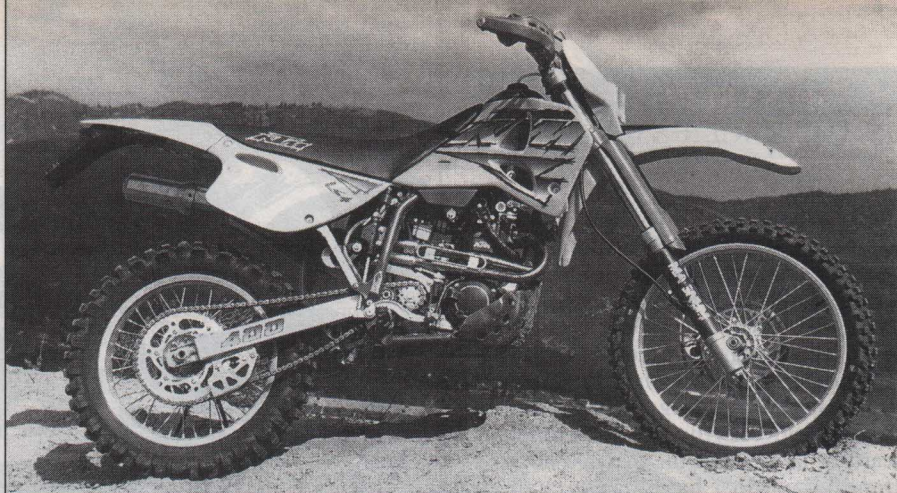
In the rear, the Husaberg also gets high marks, but it doesn't stand out as much, simply because the Honda, KTM and Husqvarna are more competitive in that department. Overall, we have to conclude that the Husaberg has a great overall package. With advantages in weight, horsepower and suspension, the bike just can't be dismissed. Some people claim that Husabergs just aren't reliable enough to be considered by anyone but a hardcore racer. We think those days are in the past. Our test bike ran flawlessly, and we can't imagine why only hardcore racers would be interested in superior power, handling and suspension. ●



If you take 15-35 lb. pounds off of the others, you would be left with a Husaberg. The FE400 is the lightest and fastest and has the best suspension.

## KTM 400 EXC THE ORIGINAL 400

● A few years ago, everyone was making 350s. The reason was found in European racing rules—there, a class existed for 350cc four-strokes. Even though all of the bikes needed just a little more power, they came to the U.S. as 350s. It was up to private shops to make up the difference. Then someone at KTM had an idea. “Why,” he asked, “don’t we make the U.S. model a 400? They don’t have a 350cc class, they just want bikes that are



▲ *From our experiences, this is the most reliable bike in the group. The KTM is just as Japanese as the Japanese bikes, but with a stronger clutch.*

◀ *The KTM is a great bike: a great, BIG bike. It has a fantastic powerband, though, and it finally turns—all good tricks for a bike with few changes.*

less intimidating than full-size 600s.” Presto! The KTM 400 EXC was born.

Initially, however, the 400 didn’t offer real advantages over 350s, and it used the same chassis as the KTM 620, which was probably the clumsiest of all the 600s. Now the bike is back with a few changes that make a big difference.

### TECH TALK

The 400 still is just like the 620 except for a 6mm-smaller bore and a 20mm-shorter stroke. However, both of KTM’s four-strokes got changes this year, and those changes seem to benefit the 400 more than its big brother.

Probably the most significant improvement is the new fuel tank and seat. The old rider position was far too rearward on the bike, causing the front end to wander. The new fuel tank loses some capacity, but it’s well worth the trade. The rider now can move much farther forward. The fork offset also has been reduced for better cornering manners. On top of that, the fork itself is different. Last year, KTM used Marzocchis on the two-strokes and WP on the four-strokes. Now the entire line uses Marzocchis in the front and Ohlins in the rear.

The motor itself is unchanged. It’s still liquid-cooled and has four valves. It got a new, larger clutch with Japanese plates

last year, but didn’t get the counterbalancer that comes on the RXC street-legal model. Also unlike the RXC, the bike uses a 38mm Dell’Orto carb—in specification, that’s unchanged from last year, although the new bike carburetors much more smoothly. No one can tell us why. It might be a great mystery of the universe.

### PERFORMANCE TALK

The KTM is the third-most powerful bike of the lot, and it might actually have the broadest powerband. The bike almost revs as high as the Husaberg, and it has almost as much low-end as the Honda. The power just pulls long and reasonably hard, making it a very easy bike to ride at a casual pace.

Once you start pushing the envelope a little harder, though, you’ll discover that the gear ratios aren’t very accommodating. First is okay for everything except the very tightest trails, but then it’s a long way to second. Even though the powerband is broad, it’s not *that* broad. We regeared the bike with a 14-tooth countershaft sprocket (down from the 15) and found this brought second gear down enough that we rarely had to use first. On really tight trails, we still had to downshift and, unfortunately, the gap was still there. First gear became a touch too low.

Even the physical shift from first to second is a little far. Riders missed shifts frequently. Eventually, they would learn to leave it in second and abuse the clutch. You can hammer the clutch without much trouble, although eventually it gets a little grabby.

In more wide-open stuff, though, the bike is a blast. It’s the only bike that you can rev or lug, depending on your mood. The KTM also is super-tractable. It hooks up and finds traction extremely well. It isn’t what you would call a wheelie bike, though. The front end sticks to the ground like it’s filled with lead.

### TURN ME IN

Downsizing the fuel tank was a stroke of genius for the KTM guys. The bike went from being a clumsy monster to a slightly oversize, but otherwise good-handling, machine. When you ride it, you might get an initial impression that the bike is a little on the large side, but you learn to live with it.

The bike handles like a Husaberg with a few extra pounds strapped on. It’s extremely well-planted and stable. Its turning ability is assisted by the broad, smooth, featureless powerband. Like the Honda, you can roll on the power without having to dump in everything at once, and that ends up giving you a lot of speed through the turns and a head start down the next straight.

Suspension-wise, the bike has an excellent rear end coupled to a slightly soft fork. The Ohlins shock does a great job on everything right up to motocross-level stuff. The fork is good for trails with rocks roots and the like, but has a hard time in deep whoops. Heavier fork oil helps significantly.

Possibly one of the most endearing features of the KTM is that it starts. Yes, the kickstarter is still on the wrong side, but it rarely requires more than one kick. Part of the secret is having the kickstarter shaft mounted fairly low on the engine, instead of awkwardly high, like the Husky and the Husaberg.

Convenient details like that make the KTM an extremely smooth, well-refined overall package. Even though it doesn’t win any category, it’s still one of the favorite bikes in the shootout. ●



## HUSQVARNA 410 WXE AS GOOD AS THE 610?

● Big four-stroke shootouts are a little repetitive these days. The Husky 610 always wins. Year after year, other big four-strokes come and go, but the big Husky always is a winner—and why not? It's the fastest, and close enough to being the lightest. With small four-strokes, it isn't so easy for the Husky. The 350 was always a little too big and heavy to pull itself around. Now the 350 is a 410. Has Husky found the secret formula?

### TECH TALK

This basic motorcycle has been around for a long, long time. The plastic has changed and the displacement has changed, but the bike isn't that different from the original liquid-cooled 510 that appeared in '86, right at the end of the Swedish Husqvarna era. The Italian Husqvarna people have improved the reliability of the bike tremendously by beefing up parts and adding weight, but the basic motorcycle is the same, from the massive single-backbone frame to the oil-pumpless (same as Husaberg) engine design.

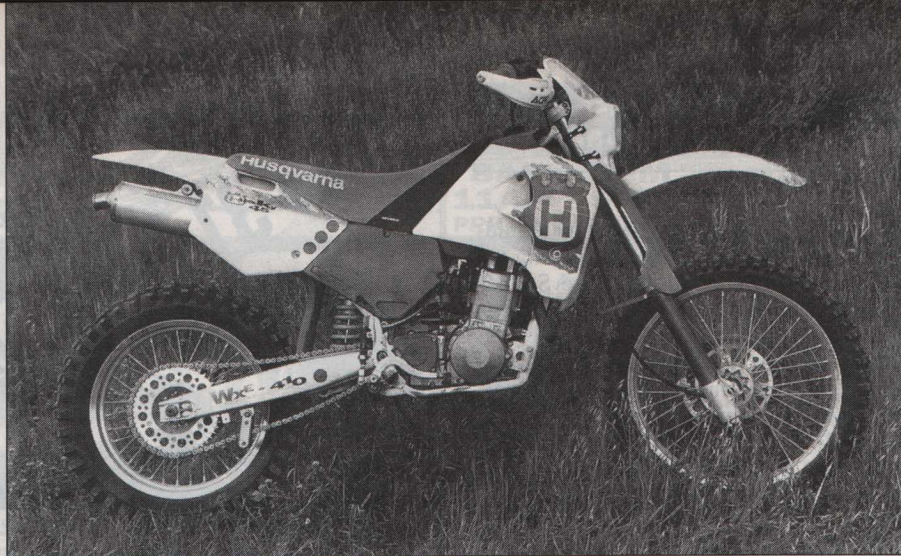
Some things have even come full circle. Originally, the bike came with a Husqvarna fork that was manufactured by Marzocchi. Now the bike once again has a Husky/Marzocchi front end, amazingly similar to the fork of the past. The biggest difference is that now the fork has the compression damping in one leg and the rebound in the other, like all other current Marzocchi forks. The Brembo brakes are back, too, although the rear shock is made by Showa, not Ohlins as it was in '96.

Even the top end has come full circle. The bore was 91.5mm in '86. With the various displacement changes, the bore climbed as big as 98mm. Now it's back to 91.5. We haven't tried it, but we would bet that an '86 top end would fit right on the '96 model. The bike also hangs on to its double exhaust system. There's nothing wrong with double pipes on a four-stroke—Honda is using two completely separate exhausts on its factory Baja racers—but the Husqvarna system is heavy and poorly designed. Most riders scrap it immediately.

### PERFORMANCE TALK

The Husky is a runner. Like the Husaberg, it likes to be revved. If you think you're revving it normally and are a little disappointed in the power, then you aren't screaming it high enough. Wind it up to your normal shift point, count to three, then shift. Scream it to the point where it sounds unhealthy. On the dyno, the Husky was king, although in the real world it falls somewhere between the Husaberg and the KTM. After all, it weighs 23 pounds more than the 'Berg.

We need to confess that when we first



▲ *Is the 410 Husky as good as the 610 Husky? For the most part, yes. You just need to buy a different countershaft sprocket and hire someone to start the bike.*

◀ *Near winner: The Husqvarna offers a lot. Maybe too much. It might have won if it had less weight and fewer quirks.*

rode the bike, we were horrified by the stock gearing. Even first gear was way too tall for most of our tight trails. We tried going from a 15-tooth countershaft sprocket to a 14-tooth; it wasn't enough. Then we went to a 13-tooth counter and it was about right. The jump between gear ratios improved, too, although, like the KTM, we still would like to see first and second closer together.

Also like the KTM, the Husqvarna is a big machine. It's the heaviest of the group, and on tight trails it can be a bit much. However, if you ride nothing but the KTM and the Husky back to back, the Husky will feel small and light by comparison.

In some areas, that's a good thing. If you are on a pile of rocks, you want a bike that's substantial enough to stay put. That's the Husky. It's one of the most stable of the group, and this is a very stable group of bikes.

The fork is set up for rockpiles, too. It's super-compliant. If you ride on anything resembling a motocross track, replace the word "compliant" with "mushy." The fork is just a little too soft for general-purpose riding, as are most of the forks in this test. Also, just like most of the rear shocks in this test, the Husky's Showa is stiffer. It is still no motocross

bike, but the rear end doesn't require any modification to get into a race. The fork needs at least a 10cc increase in the oil level and perhaps a switch to heavier oil.

### MISHAPS

Our staff had kind of a love/hate relationship with the 410. Tim loved it, Ron hated it. The love centered around its good performance on the trail, and the hate centered around its bad starting habits. It would occasionally flame out and require maybe a million kicks to re-light. Sometimes it wouldn't start cold, other times it wouldn't start hot.

It also was the only bike to give us mechanical trouble. The kickstart lever broke, then the exhaust pipe broke in several places. It also boiled over twice. We replaced the stock pipe with an Up-Tite two-into-one megaphone (\$300), eliminating several problems at once. Almost ten pounds disappeared, the cold starting problem disappeared and, of course, the cracks in the head pipe disappeared. The bike gained low-end torque but became much louder.

We know by reputation that the Husky is a reliable machine, and none of our troubles were serious. It remains a good bike, and it's only an electric starter or a strong left leg away from being a great bike. ●

## SUZUKI DR350 BARGAIN SIZZLER

● It would be impossible to compare middleweight thumpers without including the bike that created the class: the Suzuki DR350. There were 350 four-strokes before the DR, like the TT350 and the Honda XR350, but they came and went without making an impact the way the DR did. Maybe it was because of Team Suzuki's effort at the ISDE, maybe it was because it was the right time for this type of bike, but chances are that there would be no middleweight four-stroke class today if not for the DR.

The DR never had a reputation as a top-notch performer, even when it was introduced in '90. Racers considered it a trail bike in need of heavy modification if you were interested in competition. Now years have passed and the DR hasn't changed much. Does that mean racers should write it off completely? Hardly. Now the DR is priced literally thousands cheaper than the other bikes here.

### TECH TALK

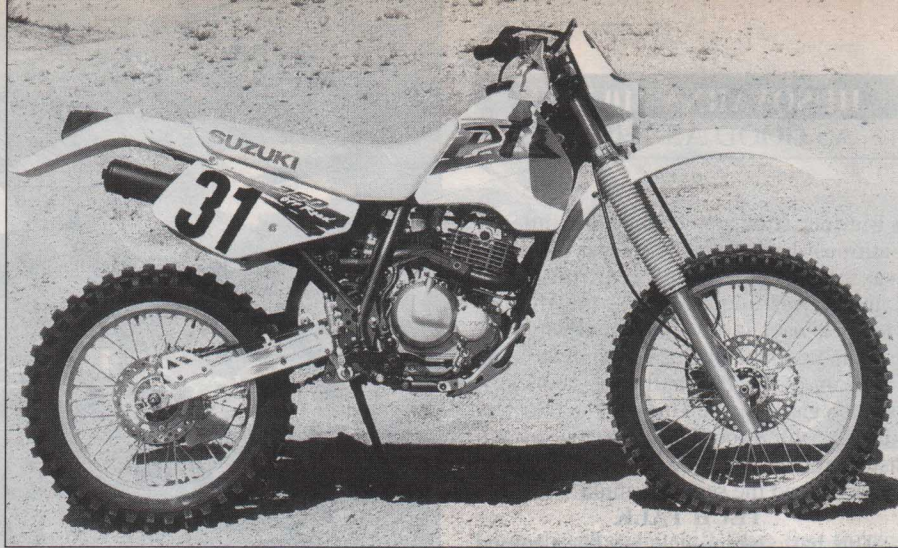
On paper, the DR really isn't lacking much. It's an air-cooled four-valver, just like the XR400. Its weight isn't much more than that of the Husky 350, and its peak power isn't that much less than that of the CCM. It is designed to be a trail bike and nothing else, though. It is by far the quietest bike in the shootout. The Honda might start off as soft-spoken, but that's with the baffle in place. Honda expects that to be removed as soon as you get out of earshot of the dealer, as evidenced by the fact that it isn't even jetted properly with the baffle in place. The Suzuki's muffler, on the other hand, can't be altered. The baffle stays in place and the bike is designed to run that way.

The chassis has some interesting features, some of which are designed to keep the price down. The swingarm, for example, is part casting and part extrusion and is *glued* together. Racers, for the most part, don't trust the joint and reinforce it with welds of their own, but we have never heard of one coming apart.

The suspension was a little dated back in '90. Does that mean it's come back into style today? Not really—but it's an interesting thought.

### PERFORMANCE TALK

Can an outdated budget bike compete with the other racers in this shootout in any category? You bet. The DR's engine wins the torque shootout. It makes the most power way down low of any of these bikes. Ain't life weird? After that, the DR gets pulled by everything except, perhaps, the CCM, but we could blame most of that on the DR's restrictive exhaust and its 50cc disadvantage. The DR excels in full-on horror rides where the rocks are huge and the traction is bad. As long as the trail is slow, the DR is in its



▲ Suzuki started it all in '90. There were middleweight thumpers before that, but none had the impact of the DR.

◀ If you want a good low-speed play bike, the Suzuki is an all-time bargain. Try to race it and you risk a major meltdown.

of the other bikes in turn-to-turn races. But it's much closer than we imagined.

### THE DR IS OUT

No, it's not the engine that keeps DRs from winning races. It's the suspension. The fork and shock are soft and underdamped. Maybe we should take some of the XR's excess damping and give it to the DR. Also, the DR's suspension fades rapidly.

You can tell that the bike was designed for the every-other-week-end trailrider, even

element—with the possible exception of its cooling ability. The engine gets hot enough to burn right through your boots if it doesn't get enough air.

When you get to steep hills, the DR runs out of juice early, although it probably fares better than some because the DR will keep chugging forward no matter what. As long as you keep the throttle open, the DR keeps going. The carburetion is almost perfect, without any of the hitches or bogs that are common on little four-strokes. It does, however, detonate when it gets hot.

Eventually, the lack of power catches up to the DR, though. It can't keep up with most

by the rider positioning. The handlebar has a lot of sweep, obviously designed for riders who spend most of their time sitting down. The seat is good and comfy and the controls are all easy to use.

You should ask: overall, is the DR still a bargain, considering its suspension and top-end power need help? Well, you could unplug the pipe for \$200 and update the suspension for \$400, and that still leaves it the least expensive bike of the group. It would still be the most limited from a racer's standpoint, but it would be right in the hunt for everyone else. It all depends who you are and what you want. The DR should at least be a contender. ●

## HEAD TO HEAD WHO WINS THE LIGHT- HEAVYWEIGHT TITLE

● The tough part about comparing this group of motorcycles is that they appeal to almost everyone. From the guy who wants to leave a motorcycle at his week-end cabin in the woods to Spud Walters, who wants to beat the big bikes in the Sound Of Thunder Series, anyone might be lining up to buy a 350 or 400cc thumper. Here's how they stack up, category by category:

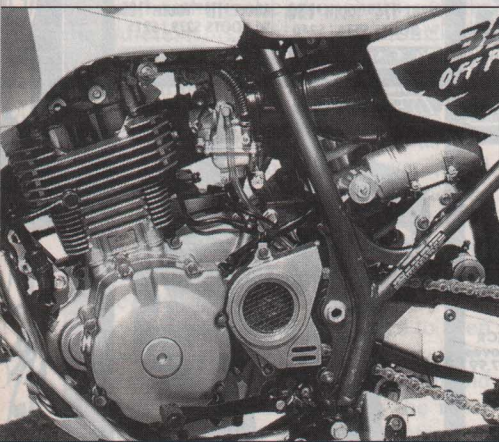
### ACCELERATION

1. Husaberg; 2. Husqvarna; 3. KTM; 4. Honda; 5. Suzuki; 6. CCM.

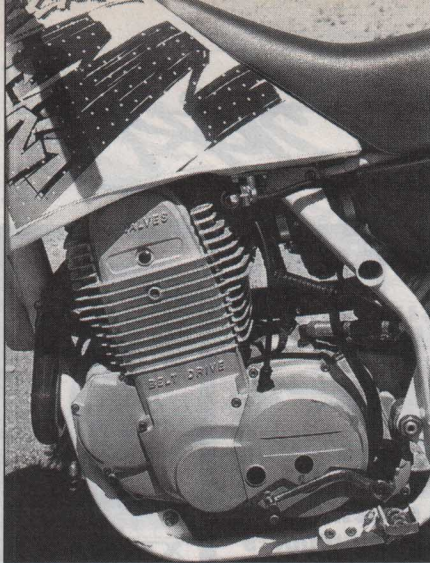
There's no contest here. The Husaberg combines more power with less weight. It will get from corner to corner faster than any of the others. It's much closer between the KTM and the Husky. The KTM makes more power down low and the Husky makes more on top. The Honda is just a tick off, with its superb low-end and midrange. The Suzuki will beat the CCM in two out of three races, but if the CCM rider has good throttle control, he might pull ahead once in a while.

### BEST TRACTION

1. KTM; 2. Honda; 3. Husqvarna; 4. Husaberg; 5. Suzuki; 6. CCM.



**Torque champ:** Today, the DR is more of a play bike, but it still can teach a thing or two to the others about low-end power.



**How far off is the motor?** In stock form it's a little slower than the DR350. We think that with a smaller carb, the bike would improve tremendously.

The KTM is the easiest bike to keep going, but it's handicapped by bad gear ratios. The Honda and the Husqvarna aren't far behind. The Husaberg is a screamer, which is fine if that's the way you ride. The Suzuki actually belongs much higher on the list because of its great low-end power, but its weight and suspension keep it from hooking up on rocky hills. The CCM is handicapped by poor carburetion.

### CORNERING

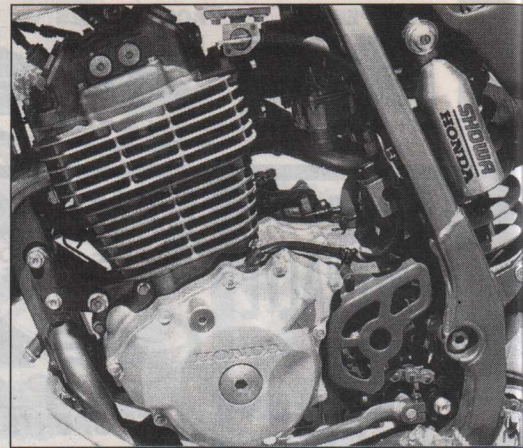
1. Honda; 2. Husaberg; 3. Suzuki; 4. Husqvarna; 5. CCM; 6. KTM.

If the turn is smooth, then the Honda is sheer magic. Its only disadvantage is that it's difficult to move around on and can get nervous in bumpy turns. The Husaberg is just the opposite—it's stable and climbing all over the bike is super easy. The Suzuki is good in turns because of its motor, but once again, if it's rough, the bike moves a few places back in the standings. The Husky is secure in turns but a little large and heavy, as are the CCM and the KTM.

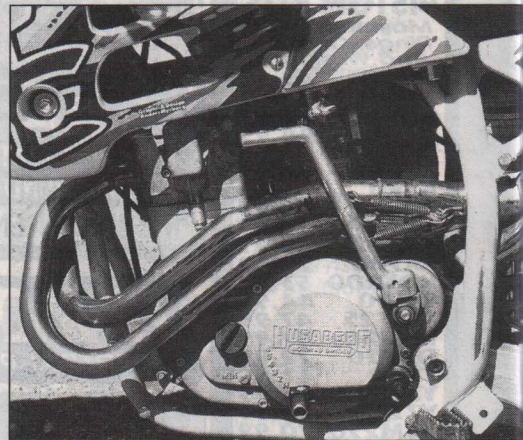
### STABILITY

1. Husaberg; 2. CCM; 3. Husqvarna; 4. KTM; 5. Honda; 6. Suzuki.

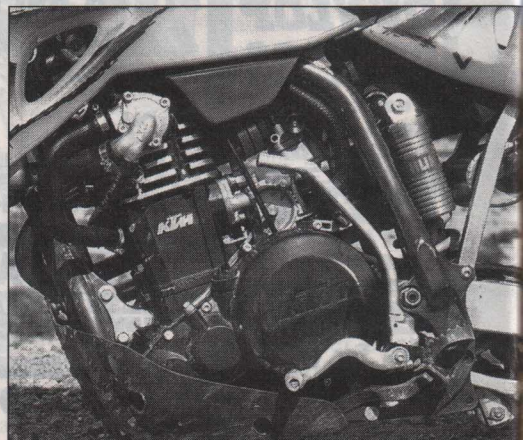
Consider first through fourth a virtual tie. All of these bikes are super-stable and stick to their lines like glue. The Honda



**Even though the XR isn't the lightest, it feels like a featherweight compared to some of the others.**



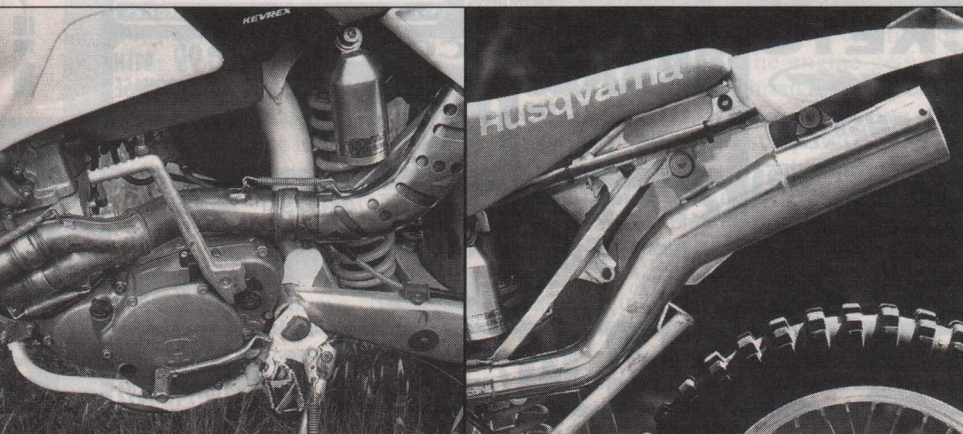
**How reliable is the Husaberg?** Most of the problems with rocker arms and cranks are things of the past. However, Husabergs have a bad reputation and only time will tell if it's still justified.



**Powerband of the gods:** The KTM starts making power at low revs and basically never stops.

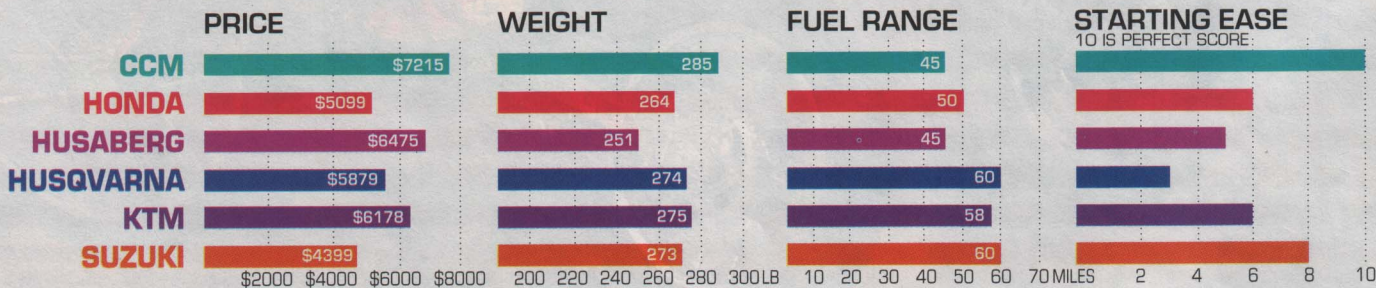
◀ We installed an Up-Tite pipe on the Husky after the stocker broke. It was 7 lb. lighter and made more power everywhere. It was, however, quite the boot-burner.

**Team Euro:** The CCM, KTM and Husaberg come from three wildly different countries and have wildly different goals. The CCM has an MX heritage, the 'Berg has ISDE roots and the KTM is designed to be a general-purpose trail bike. ▶





## 400cc 4-STROKE SHOOTOUT



and Suzuki are more likely to be bounced off their intended paths by rocks, roots or anything on the trail.

### FRONT SUSPENSION

1. Husaberg; 2. CCM; 3. KTM; 4. Honda; 5. Husqvarna; 6. Suzuki.

Most of the bikes are too soft, even for casual trailriding. The exceptions are the Husaberg and the CCM. The Husqvarna can be made to outperform the Honda with a simple change in oil level, whereas the Honda needs stiffer springs.

### REAR SUSPENSION

1. Husaberg; 2. KTM; 3. Husqvarna; 4. Honda; 5. CCM; 6. Suzuki.

This group of bikes, as a whole, has better shocks than forks. Perhaps it's because

their smooth and underwhelming power doesn't tax the rear end as much. Whatever. The Husaberg, KTM and Husqvarna all are excellent, with the Honda not far behind. The CCM fell short only on motocross terrain because of a tendency to kick. The Suzuki was fine on pavement.

### OVERALL PERFORMANCE

1. Husaberg; 2. Honda; 3. KTM; 4. Husqvarna; 5. CCM; 6. Suzuki.

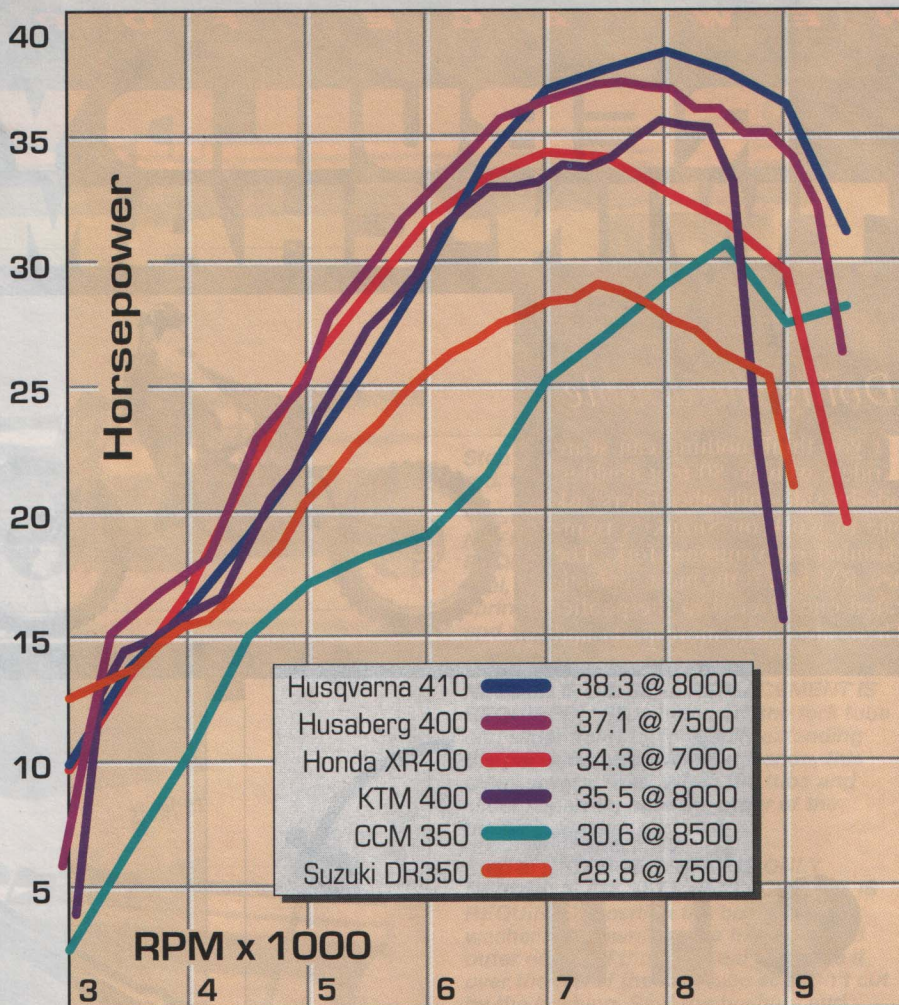
When it comes to performance, we believe that motocrossers, trailriders and enduro guys all have certain things in common. They want light weight, a good motor and good suspension. The Husaberg wins in all categories. Sure it's more expensive than most, but we don't know

how much excess money you have. That's your department; we just tell you how the bike performs.

After that it gets more difficult. The Honda might be the most popular bike of the year, but it's not perfect. We would like to see better carburetion and suspension, but that's getting picky. Overall, it's a great trail bike that can easily be made into a great racer.

The KTM has a wonderful motor, but it's trapped in a huge chassis. It's remarkable how improved it is over last year's KTM, with just a better riding position and different front end—but it still could lose a pound or 20.

The Husqvarna would have finished



	Husqvarna WXE 410	Husaberg FE400	CCM C25 350	Honda XR400R	KTM 400EXC	Suzuki DR350
<b>Engine type</b>	Liquid-cooled, 4-valve, OHC, 4-stroke	Liquid-cooled, 4-valve, OHC, 4-stroke	Air-cooled, 4-valve, OHC, 4-stroke	Air-cooled, 4-valve, OHC, 4-stroke	Liquid-cooled, 4-valve, OHC, 4-stroke	Air-cooled, 4-valve, OHC, 4-stroke
<b>Displacement</b>	410cc	400cc	350cc	397cc	398cc	349cc
<b>Bore and stroke</b>	91.5mm x 60.8mm	86.0mm x 60.2mm	79.5mm x 70.4mm	85.0mm x 70.0mm	95.0mm x 56.2mm	79.0mm x 71.2mm
<b>Carburetion</b>	34mm Dell'Orto	38mm Dell'Orto	39mm Dell'Orto	36mm Keihin	38mm Dell'Orto	33mm Mikuni
<b>Fuel tank capacity</b>	2.4 gal. (9.1L)	2.2 gal. (8.5L)	2.2 gal. (8.5L)	2.5 gal. (9.5L)	2.3 gal. (8.7L)	2.5 gal. (9.5L)
<b>Gearing</b>	15/48	15/52	15/48	14/48	15/50	14/47
<b>Lighting coil</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Spark arrester</b>	Yes	No	Yes	Yes	Yes	Yes
<b>EPA-legal</b>	No	No	No	Yes	No	Yes
<b>Running weight w/no fuel</b>	274 lb.	251 lb.	285 lb.	264 lb.	275 lb.	273 lb.
<b>Wheelbase</b>	58.9" (1495mm)	58.7" (1490mm)	60.0" (1524mm)	56.1" (1425mm)	59.5" (1511mm)	57.1" (1450mm)
<b>Rake/trail</b>	N/A	N/A	28°/NA	25.2°/3.8"	28.0°/NA	27.7°/4.7"
<b>Ground clearance</b>	14.6" (370mm)	15.4" (390mm)	13.7" (349mm)	12.2" (310mm)	14.2" (361mm)	12.2" (310mm)
<b>Seat height</b>	37.2" (945mm)	37.4" (950mm)	36.5" (927mm)	36.6" (930mm)	37.0" (940mm)	36.2" (920mm)
<b>Tire size and type:</b>						
<b>Front</b>	90/90-21 Metzeler Unicross	90/90-21 Michelin MS11	90/90-21 Pirelli MT18	80/100-21 Dunlop K490	90/90-21 Michelin Baja	80/100-21 Bridgestone
<b>Rear</b>	130/90-18 Metzeler Unicross	130/80-18 Michelin MS11	130/90-118 Pirelli MT18	110/100-18 Dunlop K695	130/80-18 Michelin Baja	110/100-18 Bridgestone
<b>Suspension</b>						
<b>Front</b>	Marzocchi conventional, adj. reb./comp., 12.2" (310mm) travel	WP inverted, adj. reb./comp., 11.6" (295mm) travel	Marzocchi conv., adj. reb./comp., 11.8" (300mm) travel	Showa conv., adj. reb./comp., 11.0" (279mm) travel	Marzocchi conv., adj. reb./comp., 11.8" (300mm) travel	KYB conv., adj. comp., 11.0" (280mm) travel
<b>Rear</b>	Showa alum. piggyback, adj. prel./reb./comp., 12.6" (320mm) travel	Ohlins piggyback alum., adj. prel./reb./comp., 12.9" (328mm) travel	WP alum piggyback, adj. prel./reb./comp., 12.6" (320mm) travel	Showa alum. piggyback, adj. prel./reb./comp., 11.8" (300mm) travel	Ohlins piggyback alum., adj. prel./reb./comp., 13.0" (330mm) travel	KYB remote res., adj. prel./reb./comp., 11.0" (280mm) travel
<b>Country of origin</b>	Italy	Sweden	England	Japan	Austria	Japan
<b>Suggested retail price</b>	\$5879	\$6475	\$7215	\$5099	\$6178	\$4399
<b>Distributor/manufacturer</b>	Cagiva North America, 237 West Pkwy, Pompton Plains, NJ 07444; (201) 839-2331	Husaberg Motorcycles, 1906 Broadway, Lorain, OH 44052; (216) 246-1062	CCM America, 310 S. 12th St. Grand Jct., CO 91501; (970) 241-5037, (800) 259-5037	America Honda, 1919 Torrance Blvd. Torrance, CA 90501 (310) 783-2000	KTM Sportmotorcycle, 1906 Broadway, Lorain, OH 44052 (216) 246-1062	American Suzuki, P.O. Box 1100, Brea, CA 92621 (714) 996-7040

much better if it didn't have so many bugs. On top of the bug list is starting. Hard-starters like this do more to drive riders away from thumpers than anything else.

Likewise, the CCM would have finished much better if it just had a motor. We can't believe that anyone at the facto-

ry actually test-rode this model before deciding to produce it. The engine is so weak that it's difficult to evaluate the rest of the bike.

The Suzuki might well be considered the winner of this test if we had evaluated it on a performance-for-the-buck basis. It

can be made much better than stock with just a few changes (we know; we have done it), but in stock form it's limited.

As we tested them, though, the Husaberg wins. Will it run forever? Will it run for months? We don't know.

But it sure runs now. □