

ENDURO TEST:

KTM 350 Enduro

Borrowing from the MXers for a factory-built Enduro weapon.



BY MIKE GILLIES

It's been years since Open-class enduro riders have had a whole herd of serious two-stroke machines to choose from. When the Japanese stopped building big-bore, two-stroke enduro machines in 1985, the hard-core open-class riders had to choose a European enduro bike, or modify a motocross bike to handle the various demands not found on closed courses.

KTM's 350 Enduro fits both bills, because while it is a ready-to-run enduro bike, it also ranks high on the list of MX technology debtors. By using most of the 250 motocrosser's suspension components (softer fork springs are the only difference), identical brakes, and the 500 motocrosser's frame and transmission, KTM in effect has converted a closed-course racer to a cross-country machine.

Obviously, the major difference between the 350 and the 500 is in engine displacement. The 350's liquid-cooled, two-stroke powerplant is essentially a 500MX engine with a smaller bore; it shares the 500's stroke, but the crankshaft has been rebalanced to match the smaller piston's weight. KTM contends that a 500's bottom-end surge is really more of a hinderance in tight, tree-infested woods, citing that most riders—even KTM's top factory enduro rider Kevin Hines—can be more consistent without a violent blast of power right off idle. Consequently, the factory reduced the bore on the 500 by 14mm, which brings engine displacement down to 344cc, and makes the bore and stroke dimensions undersquare (75mm bore and 78mm stroke).

And while those measurements might suggest that the 350 is a low-revving stump-puller, that's not the case. The KTM has a mellow low-end surge, with a noticeable rush as the revs climb. And climb they will, with a peak rpm that will embarrass many 250s. Still, that style of power is exactly what KTM engineers had in mind when building a 350 to compete with the 430s and 500s the competition offered. And that theory works well when put into practice; the 350's low-end power is great for unraveling tight sections.

Unfortunately, the gearbox spoils KTM's otherwise-sound theory on power delivery. With internal ratios that are identical to the 500's, and a rear sprocket that's two teeth *smaller* than the big bike's, the 350 has sizeable gaps between first, second, and third gears. Further, even with a final drive ratio that's higher than the 500's, in the 350 first gear is extremely low, and not much use above a walking pace. Second gear, on the other hand, is too tall for many situations where first is too low, so in tight sections, you're faced with either constantly revving the engine in first gear, or fanning the clutch in second.

To cure the first-to-second gap, KTM does offer a lower second gear, part #565-33-010-000, which closes up the gap between first and second, but of course, widens the gap between second and third gears. A better fix might be in the works, however. KTM reportedly is working to fatten the 350's low-end even further, to lessen the effect of the existing gearing. The fix consists of a 38mm Dell'Orto carburetor, which reportedly provides better response than the current Bing.

Likewise, the KTM's suspension doesn't quite live up to its potential. The White Power shock is directly off the 250MX, and with the 350's extra weight, offers a ride that's plush, but not overly prone to bottoming. With adjustments for both compression and rebound damping, the shock can be tuned for a wide range of damping characteristics. Just two or three clicks on either adjuster makes a noticeable difference in performance, and was the furthest we had to deviate from the stock settings to dial in the shock. The White Power

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“upside-down” fork, too, is a part taken from the 250 motocrosser, but comes with a softer spring on the 350. The fork will bottom occasionally with a 150-pound rider, but under most conditions works quite well and provides good compliance.

Still, while the suspension’s action borders on excellent, the motocross-length travel and soft springing create an annoying combination. According to KTM, the engineers relied on softer spring rates—and the accompanying sack they cause—to lower the seat height from the motocross bike’s. As a result, though, the 350’s front end dives heavily under braking, and the accompanying steering-geometry changes make the bike difficult to steer. Also, even when the bike is level, the 350’s seat remains fairly tall for tight, rocky sections, which is a definite minus if you lose your momentum and need to put a foot down.

At a faster pace, however, the 350 is quite confidence inspiring, particularly when rushing over unknown terrain. The

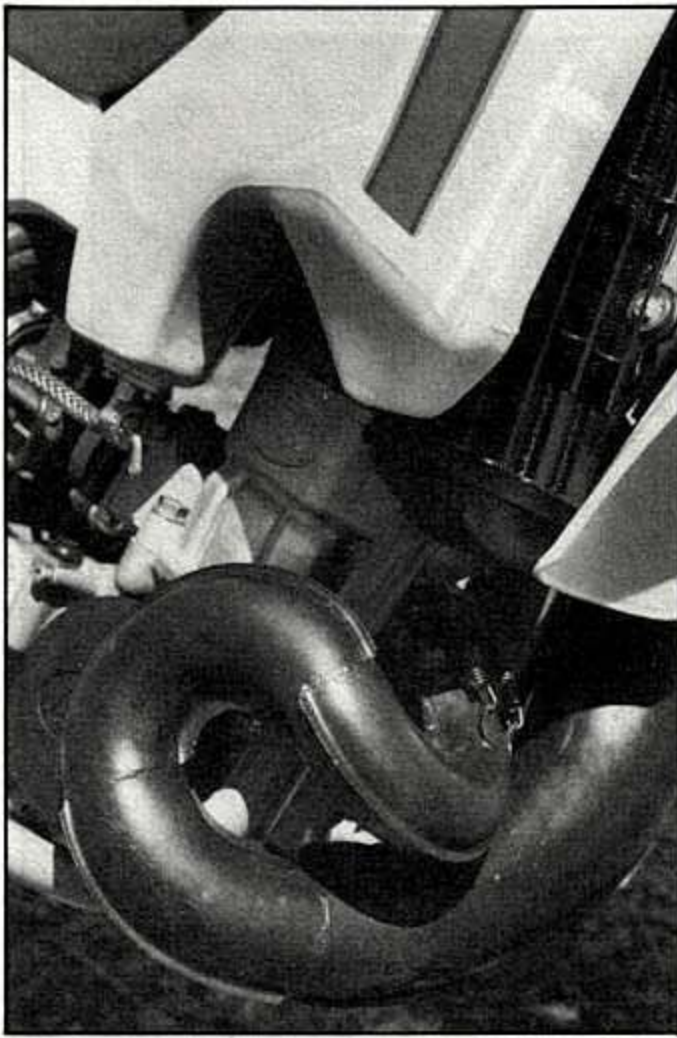


KTM's good ergonomics owe much to its seat
And nothing to the wide fuel tank.

KTM’s handling is very predictable, due mostly to the suspension’s compliance and MX-derived long-travel. Combined with the 350 formidable top-end power, the chassis allows a quick pace in the desert and on fireroads.

Adding to that sense of confidence at speed are the 350’s brakes. Carried over from the 500 MX’er, the KTM uses a four-piston Brembo caliper on a floating disc, which is easily among the most powerful off-road braking systems available. Moreover, the front brake offers excellent feedback, and isn’t prone to lock-up once a rider learns that only one finger is necessary—even with excellent traction. The rear Brembo is also powerful—too much so, perhaps. Locking the rear wheel accidentally is a frequent problem. Still, it’s a vast improvement over last year’s brake, which tended to overheat and go through pads like toast at a diner.

One piece that’s not so successful, however, is the Enduro’s massive, 3.7-gallon fuel tank, which incorporates radiator



Snaking exhaust stays out of harm's way

A sly method of reducing vulnerability.



White Power "upside-down" fork is superb

Topped only by Brembo's floating disc.

air-deflectors as its leading edge. While it's narrow enough in the rear, the abrupt width change as the tank flares outward at the forward edge makes it difficult to spread your legs wide enough to shift your weight forward. As an alternative, KTM offers the 2.3-gallon tank from the 250/500MX as a no-cost option at the time of purchase. And with a narrower

tank the KTM's ergonomics would be close to perfect.

Starting is one feature that needs no improvement on the KTM. When cold, with the enriching-circuit open and two pumps of the Bing's Amal-like 'tickler' button, the 350 usually started in three kicks; once warm, the engine fired with one kick. Even better, the lever effort re-

quired to kickstart the Enduro is remarkably light; it's more in line with a 125 or 250 than an Open-classer.

Once started, however, life on the KTM gets increasingly more difficult. Front brake notwithstanding, riding the 350 quickly requires a high level of concentration. Between the search for the right gear, dealing with the sagging MX suspension—not to mention the 3.7-gallon tank's obtrusiveness—hustling the KTM through the woods can be like studying for finals at an Alice Cooper concert: There's too much going on to distract you from the task at hand. Consequently, you have to divide your time between time-keeping, and dealing with the Enduro's quirks.

And that's where KTM missed the mark of Open-class enduro supremacy; instead of working as a cohesive whole, the 350 often feels like the mixed-matched parts it's made from. The parts themselves are quite good, but in modifying them for enduro work, KTM simply didn't finish the job. Less suspension travel and a better match between the gearbox ratios and powerband would have completed the package; as it stands, the 350 Enduro ends up needing many of the same modifications enduro riders make to their motocross bikes. Which points out that, while KTM seems to be making factory-prepped enduro bikes, the customer still has to finish the job. ●



The 350's high-speed manners would do justice to a desert racer.

But a rocky riverbed will expose its MX roots.

KTM 350 ENDURO

Importer: KTM America, Inc.,
435 W. Bradley Ave.,
El Cajon, California 92020

Category	enduro
Suggested retail price	\$3689
Engine type	liquid-cooled two-stroke vertical single
Port arrangement	one reed-valve controlled intake, four main transfers, three booster transfers, one exhaust
Bore and stroke	75.0mm x 78.0mm
Displacement	344.6cc
Compression ratio	9.0:1 (corrected)
Carburetion	one 38mm Bing slide/needle
Gearbox	5-speed
Front suspension/wheel travel	White Power, 40mm stanchion tube diameter/11.5 in. (293mm)
Rear shock/wheel travel	White Power, 11-position adjustable compression damping, 7-position adjustable rebound damping, 35mm spring preload range/13.1 in. (334mm)
Weight	241 lbs. (109.3kg)
Wheelbase	59.0 to 59.3 in. (1498 to 1507mm)
Seat height	36.9 in. (938mm)
Steering head angle	27.0 degrees from vertical
Front wheel trail	4.80 in. (122mm)
Fuel capacity	3.7 gal. (14.0l), no reserve
Warranty	30 days on engine, frame and swingarm
Available color	white only