

# ALTERED STATES

*In an out-and-out drag race, the WR will nearly vaporize the 360, or even a KX500, for that matter. The only problem is that someone has to hold on while it's making all that power.*

## Noleen YZ360 vs. Noleen WR500

**Y**amaha couldn't do it alone. The company either wasn't interested or could not spare the resources to make a modern Open-class motocrosser. If you were to ask the average guy in the pits, he might even tell you that Yamaha doesn't make an Open-classer at all.

Not true. There are two super-potent Open bikes available, each with the Yamaha name written all over it. One of them might even be the best bike you can ride in the Open class. With the help of Noleen Racing, both the YZ250 and the WR500 play bike can be made into Open-class MX bikes. Fast ones.

### THE LOWDOWN: NOLEEN 360

The YZ250 transformation consists of installing an Ohlins YZ360 kit. This bumps the displacement to 363cc by increasing the bore 14mm. Noleen does some of its own porting to the Ohlins barrel, and includes a pipe, silencer, intake

manifold and reed, Power valve, two piston sets and a longer rod. The stroke remains the same as stock; the longer rod is used simply to change the angle at which the crank is driven. That's beneficial for some geometrical reason only someone much smarter than we are would understand. The kit sells for \$1206, which isn't so bad when you consider all the parts you get.

There are some other things that really should be done, too. The crank should be rebalanced to handle the bigger firing impulses. That costs another \$170, but we recommend it if you want to keep all the fillings in your teeth. Our test bike had a modified fork and an Ohlins rear shock. The fork valving costs \$147. There seems to be little doubt that the best-made shock available to the general public is an Ohlins. A complete shock is a little bit pricey at \$559.

That adds up to a lot of money. We have over \$2000 in modifications on a bike that already costs over \$4200. So you can look at this as a \$6000 new Open-class bike, or you can think of it as a way to make your old YZ into an entirely new machine. Perhaps you already have to replace the top end on your Yamaha, for some catastrophic reason. To tell you the truth, we have seen enough riders spend over \$6000 for exotic thumpers that the price of the YZ360 no longer seems high to us.

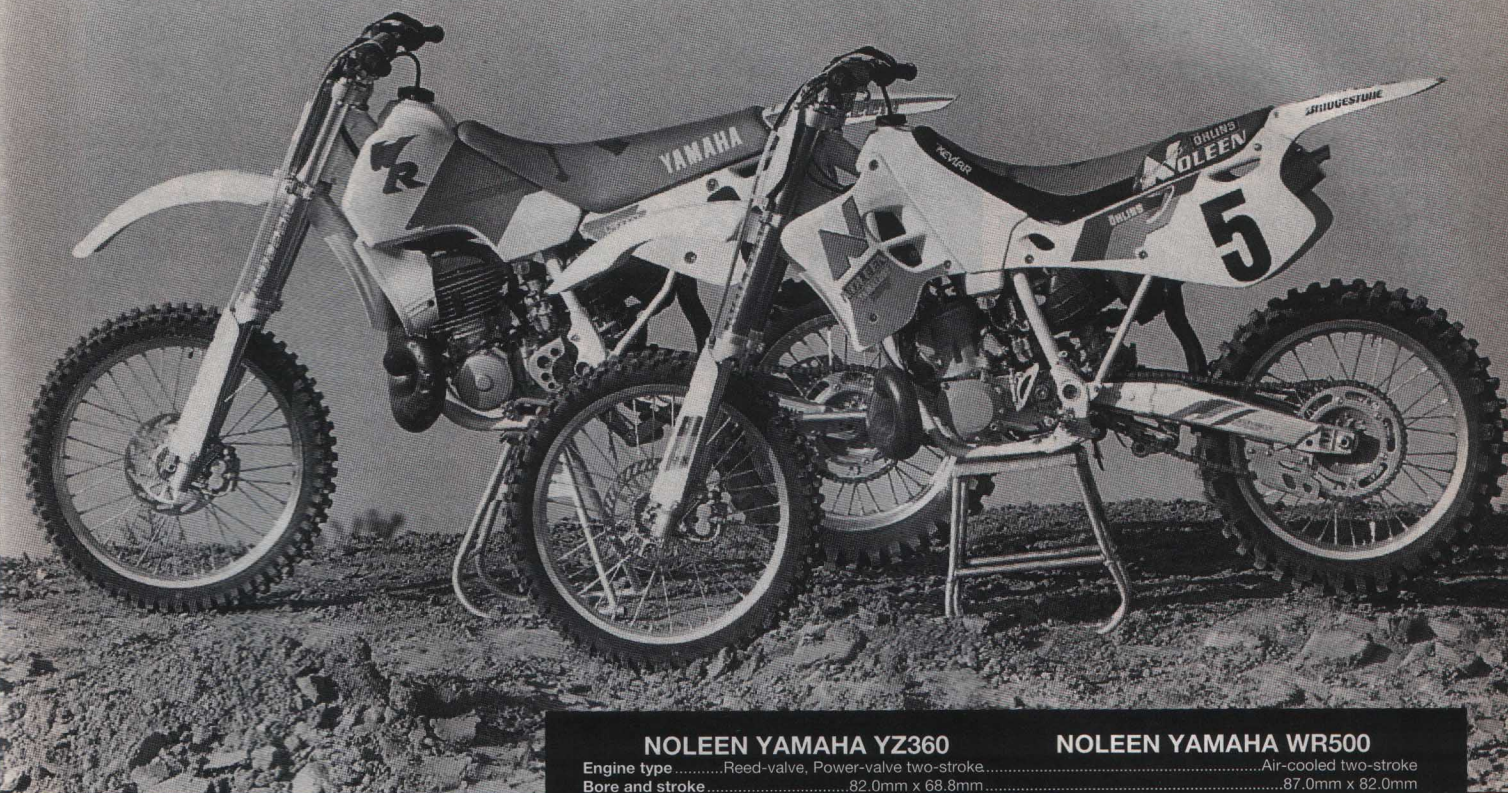
### THE LOWDOWN: NOLEEN WR500

As for the WR, that's an even more ambitious project. Yamaha didn't even want to give us a WR for a motocross test this year. "That's not what the bike's made for," they said. The truth is, though, that the bike wasn't *made* for anything. It's a collection of leftover parts that Yamaha thought could be marketed for non-









racers. They figured that a non-racer wouldn't mind if his bike isn't the fastest or the lightest. We don't buy it. There's no reason a non-racer wants a poor-running motorcycle any more than a racer would want one.

The biggest problem with the WR is the motor. It coughs and sputters off the bottom and detonates on top. Noleen approached the project with the attitude of making the engine run like it should, and trying to pick up some horsepower along the way. That meant \$229 of porting and head work, plus a \$169 pipe and a \$54 silencer. Then there is the same \$170 crank balancing treatment used on the 360. Jetting is critical on the 500. It's a very finicky bike. Noleen machines 3/4mm off the slide and uses a Q4 needle jet, a 410 main and a 50 pilot. With race gas, the bike runs well with the airscrew turned out 1-3/4 turns. With pump gas, 1-1/4 turns works best.

Like the 360, we treated our 500 to an Ohlins shock and a fork rework.

#### ON THE TRACK

There's no question that the WR500 is better than stock. It's a lot better. It's also the fastest non-alcohol 500 we have ever tested here in the *Dirt Bike* wonderland, where new bikes fall from the sky like rain. If you have enough room (and nerve) to hold the WR's throttle open long enough, you will feel like you are on the Enterprise and Worf just leaned on the Warp 10 button by accident. Your eyes water, drool leaks out of the corners of your mouth and the bike shoots ahead like

a rocket without a guidance system. No, quantity of horsepower is no problem.

What is a problem? Using that power is difficult. The bike still doesn't have very much low-end torque. It runs cleanly off the bottom, even on pump gas (unlike a stocker), but doesn't start making the real power until the revs get higher. That's when crazy things begin to happen. Typically, a rider will come out of a corner and notice the soft bottom-end. He will fan the clutch to get the bike going (what a mistake), and then something like 60 horsepower is dumped on the track all at once. No matter how far forward you are sitting, if there's traction, the front end will come up and the bike becomes a handful. The super-wide desert fuel tank also adds to the bulky feeling of the bike.

Its saving grace is that it does handle well. The bike turns and the suspension is outstanding. It might be a little on the stiff side for non-MX applications, but overall, everyone seems to like the fork and shock. The way to ride the WR effectively is to let the chassis do all the work. Don't

fan the clutch unless you know where you are going. There's a small rpm range where the bike is above the no-power zone and below the super hit. A good rider can keep it there most of the time, and save the top-end power for the straights. Once you get the hang of it, the WR is as competitive on an MX track as any bike on earth. It just requires more work and skill to take advantage of its strong points. We have no trouble imagining Damon Bradshaw winning Nationals on a bike like this. He probably loves it.

The YZ360 couldn't be more different. The engine seems eager to go, right from rpm #1. Low-end power is excellent and it revs quickly through a very usable mid-range and a strong top-end. The 360 is, in fact, very powerful. It's just that the WR is hyper-powerful and makes the 360 seem sedate by comparison.

The 360's biggest advantage is that it's always in the powerband. It's always ready to go, so there are no wasted rpm zones. Such ultra-responsiveness might be a disadvantage in low-traction situa-

#### NOLEEN YAMAHA YZ360

Engine type	Reed-valve, Power-valve two-stroke	Air-cooled two-stroke
Bore and stroke	82.0mm x 68.8mm	87.0mm x 82.0mm
Displacement	363cc	487cc
Carburetor	38mm Mikuni	38mm Mikuni
Mainjet	410	410
Needle	.59, middle position	.Q8, middle position
Pilot	45	50
Slide	Stock	Machined 0.75mm
Air screw	1.5 turns	1.75 turns
Timing	1.3mm BTDC	1.4mm BTDC
Actual weight (no gas)	217 lb.	238 lb.
Price (stock)	\$4199	\$4499
Engine mods	\$1376	\$623
Suspension mods	\$706	\$706
Contact	Noleen Racing	Noleen Racing

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## OPEN-CLASS SPECIAL

tions. We did have some riders complain that the 360 was easy to stall, too. That's characteristic of large-bore engines. After all, the bore of the 360 is only 5mm smaller than the bore of the WR500, but the stroke is 13mm shorter. We would like to see a little more fly-wheel on the bike.

Handling the Noleen 360 is a delight. Stock, the YZ is a great-handling bike. With the Ohlins shock and reworked fork, it goes one step beyond great. Again, both ends are a little on the stiff side, but even small riders get along quite well with it. Noleen will set up the shock and fork for a rider's exact weight, anyway.

The biggest disadvantage that the 360 has is that the YZ250 is so good that no one will really want to mess with it. Anyone who does take the risk, though, will be rewarded. The YZ360 is everything the YZ250 is—only better.

### OFF ROAD

We took the two bikes off the track for a day to find out how they stack up as enduro/desert bikes. As we expected, the WR is a

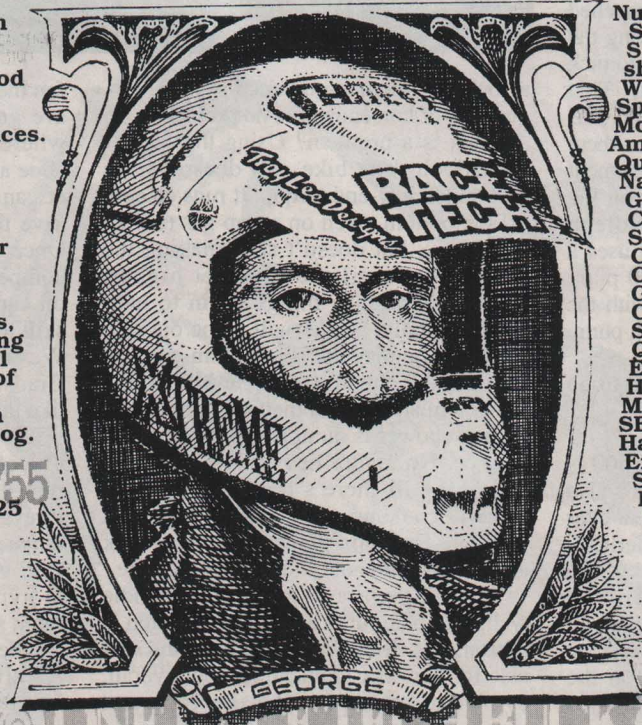
*Jim Holley knows YZ490s inside out—nothing about the WR surprised him. Kohji Ohkawhara, on the other hand, thought he was going to ride a 250. He was VERY surprised when the 360 almost torqued its way out of his hands. ►*



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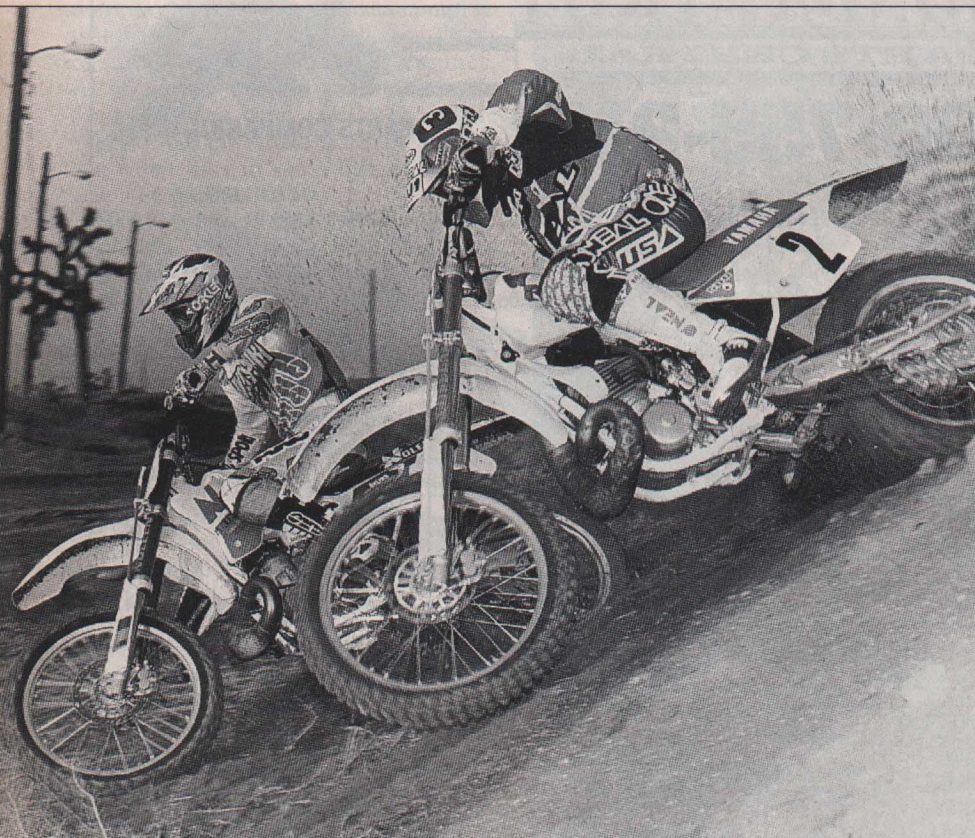


Nuclear MX Srs., Carolina Spring Srs., MEGA Srs., S.E. Region Championship, CMC Pac West NMA World Mini GP, CMC Spring Classic, Mammoth Mountain MX, AMA Amateur Regional Qualifiers, AMA Amateur Natls, NMA Ponca City GNC, CMC Trans Cal, CMC Midsummer Night Srs., Kawasaki Race of Champions, Winter Olympics, Score, AMA Grand Natl Cross Country, AMA Natl Hare Scrambles, AMA ISDE Qualifiers, AMA Natl Enduro, AMA Natl Hare N' Hound Srs., Rocky Mountain Enduro Circuit, SE&TRA Enduro, SE&TRA Hare Scrambles, NERTRA Enduro, NETRA Hare Scrambles, ECEA, SERA Enduro, SERA Hare Scrambles, FTR Hare Scrambles Srs..

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If you must ride a Yamaha in the Open class, you must ride one of these.

much more agreeable machine when it has a lot of space. In the desert, where you can open the throttle and count to 100 before letting off, the WR's power isn't nearly as intimidating, and the sharp hit seems more controllable. Even on tight trails, where horsepower is a liability, not an asset, the WR worked fine. At low rpm, it *isn't* a powerful bike. You can ride it all day in the lower half of the powerband without getting near the hit. Just stay away from that clutch. The bike rarely stalls, although the wide tank still makes it feel a little cumbersome.

We still like the 360 better, though. The universally delightful powerband is good anywhere, on or off the track. We would think that a 360 could hold its own on a bomb run, then blow by the few bigger, faster bikes as soon as the course gets a little rough. Again, though, we would like to try the bike with a little more flywheel, just to see how much better it can be.

So why don't you see more Yamahas competing in the Open class? The 360 is super-competitive and the 500 is a brutal extreme in horsepower. Well, frankly, the Open class is already so small that if the class were taken over by Yamahas, they still wouldn't have an overwhelming presence at the track. Those quantities are big enough for a small company like Noleen, though. To be honest, if the only 360 at the track is ours, we think that would be just fine. □

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