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YAMAHA UNLEASHES ITS RADICAL NEW SECRET WEAPONS:
'91 WR500 & WR200!

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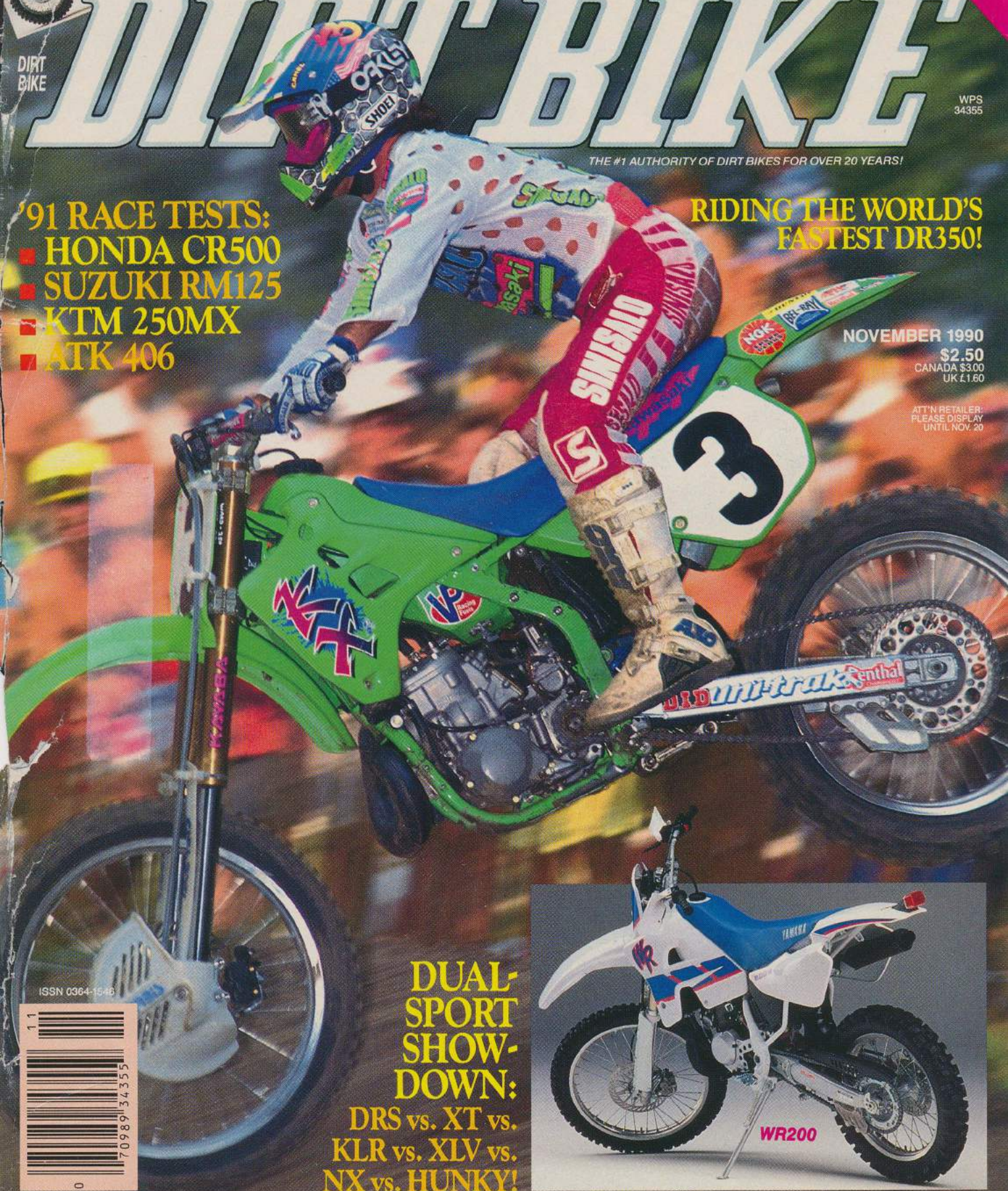
- '91 RACE TESTS:**
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 - SUZUKI RM125
 - KTM 250MX
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ON THE COVER: Why didn't Jeff Ward win the 250 championship? He tells all on page 56, while Yamaha's new enduro surprises are on page 30. Wardy photo by Chris Hultner. Cover design by DeWest, separations by Valley Film.



WARNING: Much of the action depicted in this magazine is potentially dangerous. Virtually all of the riders seen in our photos are experienced experts or professionals. Do not attempt to duplicate any stunts that are beyond your own capabilities. Always wear the appropriate safety gear. *Dirt Bike* does all of its testing and photography legally on public land, or private land with permission from the owner(s), and we abide by the local laws concerning vehicle registration and muffler/spark arrester requirements. We are not responsible for quality of aftermarket accessories we use.

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Aftermarket companies could make the old YZ490s haul with some serious suspension and minor motor work, but the beasts still look dated. Yamaha upgraded the complete package top-of-the-line with suspension, a more mellow motor, disc brakes and all-new styling.

ITs FOR THE '90s!

KDX killer & an all-new YZ490

By the DIRT BIKE Staff

Yamaha's research and development people chuckled as they read our DT200 test (July '89) and saw the DT200-motored YZWR we had built. They had just finished testing the DT200 to find out if it could be pumped up to run against the KDX200. No, the Japanese street-trail bike was too heavy and dated, so they had slipped the DT200 motor into a YZ125 chassis and started fabricating guards when our test came under their scrutiny. The R&D people laughed at our cobby attempt, but it proved that there was definitely interest in reviving Yamaha's old IT200 or building an all-new WR200. Their WR250 was selling well, so why not

expand the line to go against Kawasaki's KDX200?

That was only half of the story, the best-kept secret in the last year-and-a-half. Yamaha's Ed Scheidler was sick and tired of us magazine types taking pokes at the YZ490 for being a violent, pingy, poorly suspended Open-class motocrosser, so he sold the Japanese corporate types on the idea of redefining the YZ490. Why not wrap it in a chassis like the WR250's, get rid of the pingy, add a lighting coil and call it a WR500? The bike would appeal to the off-road crowd, being an air-cooler, but it would also be state-of-the-art enough to kick butt in motocross (Doug Dubach won the Mammoth Mountain 500 Pros on a prototype WR500). Design the bike to do it all—motocross, hare scrambles, cross-country, enduro or desert racing.

These new models would complement the popular and competitive WR250, giving Yamaha the most complete off-road lineup of any Japanese manufacturer. Best of all, most of the components would come from existing stockpiles (this from an IT, that from a YZ and that from the WR) and the bikes would be designed in America, by Americans, for Americans. Sound hot? You know it!

INSIDE THE ALL-NEW WR200Z

If you read our DT200 test, you know that the motor is case-reed with an electronically controlled Power Valve. A servo motor, powered by the battery and controlled by the ignition, raises or lowers the exhaust valve height to match revs. But the WR wouldn't

have a battery, so they incorporated a capacitor into the system to provide constant juice to the servo motor. The ignition is like the WR250 and its lighting coil powers the 12V/35W halogen headlight and '79/'80 IT taillight.

Porting of the DT/WR200 mill is to Scheidler's specifications and the cylinder is coated with a ceramic composite for incredible life and performance. According to Scheidler, "Put a new piston in it and it feels like a brand-new motorcycle!" A 30mm TMX D-slide carb, 2mm larger than the DT200, mates with a huge YZ-style airbox and reed block to feed the cylinder, and a DT-style dual-walled pipe and steel silencer keep the WR quieter than the KDX, although an aluminum silencer may see final production.

A plate rides where the AutoLube rode on the DT motor, but the six-speed's gear ratios are the same. The DT's clutch held up well to abuse, so the WR's should, too. We'd like to see a quick-change clutch cover, like the KDX200 has, on the WR200. Dual radiators cool the WR, like the DT200, except the overflow reservoir rides inside of the right tank shroud instead of behind the left side panel, as with the DT200 and KDX200.

For suspension, the WR200 gets the 1991 YZ-style shock (except it's a Showa), linkage, Delta box tapered swingarm and frame and 1990-style 41mm YZ forks, totally revalved to provide a plush ride and resistance to bottoming. The shock is fully adjustable and offers 12.2 inches of rear-wheel travel, while the inverted KYB forks offer 11.8 inches and are adjustable for compression and

You be the judge—is the WR200 the wildest-looking 1991 dirt bike or the ugliest thing you've ever seen? With the unique integral fender/headlight and overall styling, one thing is for sure—it won't be mistaken for anything else on the planet!



GARRR Magazine

Damon Bradshaw tests the speedway capability of the 1991 WR200. Basically a DT200 in a YZ chassis, the WR200 can change from a hare scrambles mount to a competitive enduro bike with the addition of a roll chart holder and/or computer. It has more suspension than a KDX200 . . . and a taller seat height.

preload only. Steering head angle is 27.6 degrees with 122mm of trail, and the WR has more turning lock than a KDX. Damon Bradshaw tested one of the later prototypes and was jazzed with the bike. He felt the suspension and handling were much better than the RMX and KDX that Yamaha had along for comparison, so if these settings see production, the WR200 will be a serious off-road scalpel.

A snail adjuster and true quick-release rear axle ease dealing with flats on the trail, but the front axle is not a quick-release unit. As they do on the '91 YZs, the fork guards wrap around to provide more protection. The rest of the plastic is all-new, with a slim headlight shell and integral wide front fender. Likewise, the rear fender is also very wide and flat. The 2.6-gallon tank has space-

age looking shrouds and a safety seat that contours around the gas cap. Side panels are also all-new and the pipe was designed to keep the silencer from sticking too far rearward, where it would be vulnerable. However, seat height is a whopping 39 inches.

A TT225 odometer rides behind the headlight shell. Tires will most likely be Dunlop K490/695s. Zerk fittings on the linkages and swingarm pivot ease routine maintenance. This is one trick-looking machine and, if the production model is anywhere as good as the pre-production unit, Kawasaki is going to have some serious competition for the KDX200. We can't wait for the early 1991 (probably February) release!

GIVING THE YZ490 NEW LIFE

Before tucking the YZ490 air-cooled motor into a 1991 YZ250-style frame, Yamaha put a new head on it to get rid of pinging. Compression dropped from 6.9:1 to 6.7:1 in the process and ignition timing was retarded a bit, from 2mm BTDC to 1.7mm. The YZ490's boost bottle remains on the WR; Yamaha tested with and without it and found low-end power to be less violent with the YEIS bottle. A power-smoothing, lighting-capable ignition is standard on the WR500, although the headlight isn't. A new pipe and 2mm smaller (38mm) round-slide carb tone down power a bit, too. Overall gearing is a tad taller (14/50), but the internal ratios are unchanged from the YZ490. An O-ring chain is standard and the silencer is notched to accept a slip-on spark arrester.

An all-new frame is based on the WR250 but is beefed up in high-stress areas and gives

the WR500 a steeper head angle and longer swingarm than the YZ490. Linkage ratios and shock angle are the same as the YZ and WR250. The subframe is unique to Yamahas—it can be removed totally, like a CR500, or just the left subframe can be removed, like the YZ and WR250. Vibration is isolated from the hands via rubber-mounted handlebars.

Because the Delta box swingarm is 20mm longer than the WR250, it has more wheel travel (12.4 inches). It also gets snail adjusters and a quick-release rear axle. Suspension components are shared with the YZ/WR250, although spring rates and valving are exclusive to the 500. KYB 43mm inverted forks and piggyback shock are fully adjustable for compression, rebound and preload. A removable sidestand bolts to the swingarm.

Besides the 3.43-gallon gas tank, which is laminated to hold the tank stickers better, and left-side air scoop, the WR500 gets plastic identical to the WR250. Graphics will be a bit different. Lighting, a spark arrester and an odometer are all that are needed to make the WR500 enduro-ready. Tires will either be Bridgestone M23/22s or ED-11/12s. The front disc rotor is smaller than YZ models to prevent bending on rocks and such.

Every complaint we've had about the YZ490 over the years has been given attention, save one. Shifting hasn't been upgraded as with the WR250 and YZ, so the \$100 Race Tech shifter linkage may be the only modification needed to make the WR500 as much fun to ride as the less versatile CR and KX500. □