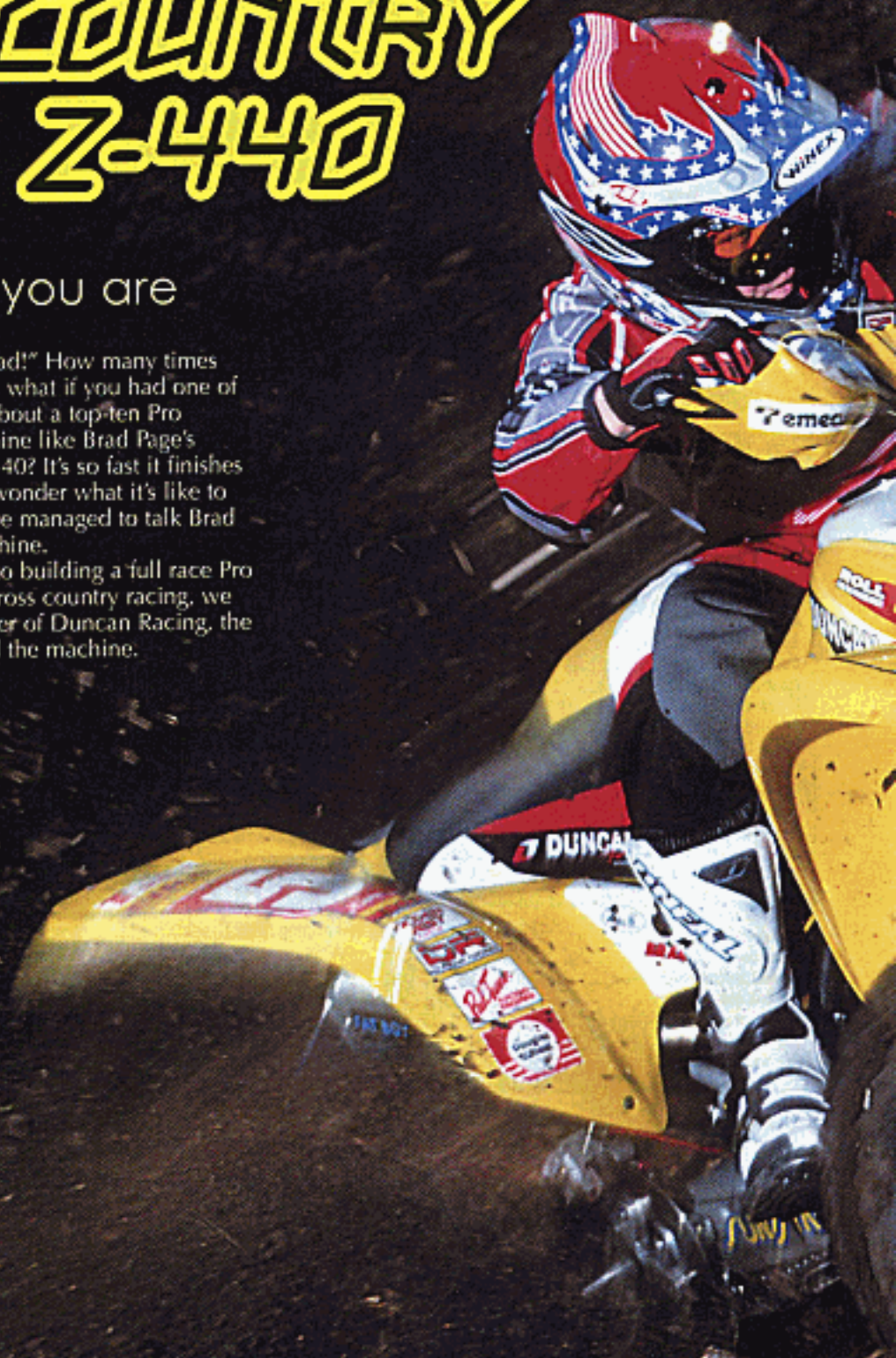


BRAD PAGE'S DUNCAN RACING CROSS-COUNTRY SUZUKI Z-440

It's ready when you are

"I could have won if I had his quad!" How many times have you heard that one? Well, what if you had one of the top GNCC racer's quads? How about a top-ten Pro Production-class cross country machine like Brad Page's Duncan Racing-modified Suzuki Z-440? It's so fast it finishes in the top ten in the Pro class. Ever wonder what it's like to ride a quad like that? We did, and we managed to talk Brad Page into letting us test his race machine.

To get the details on what goes into building a full race Pro Production quad for national level cross country racing, we interviewed Loren Duncan, the owner of Duncan Racing, the performance company that prepared the machine.





ATV Action: For our readers who are new to cross country racing, what separates a Pro Class race quad and a Pro Production Class machine?

Loren Duncan: Pro class machines can run any frame and engine combination available. For some time now, that meant a fully modified Honda 250R two-stroke, or a four-stroke motocross motorcycle engine in a racing chassis, like a Roll Design Lobo II. The performance level of a combination like that is very high but so is the price, usually close to \$20,000.

Production class machines must use the frame and engine cases of a production ATV as it is sold at a dealer. That leaves a lot of room for modification, but with the core of the machine coming from a stock ATV, it's a much more affordable way to race. A national-level production class machine like Brad Page's runs roughly \$15,000.

ATV Action: Where do you begin with a machine like the Suzuki Z-400?

Loren Duncan: The stock frame isn't designed for a rider as fast as Page, racing week after week, so we pull the motor and reinforce the shock mounts, and the lower front engine mount.

ATV Action: What does the engine need for Pro Production class racing?

Loren Duncan: As you know, Brad's machine and some others are going as fast as the Pro Class quads, so we take the stock engine, and turn it into a full-race motor.

ATV Action: We have a tough cross country loop at our test location and we know how the stock Z-400 feels on it. There are parts where the stocker really needs more power. Page's bike is completely different it has more power than we can use, even on the fastest parts of the loop!

Loren Duncan: We're getting close to 14 more horsepower from our

DUNCAN SUZUKI Z-440

engine and it revs quite a bit higher than stock also.

ATV Action: For as strong as it is on top, the power is very broad. It's pretty easy to ride for a full-race engine.

Loren Duncan: Even if they make unbelievable top-end power, engines that are weak off the bottom don't win woods races, even for riders as skilled as Page, so we worked with a number of different combinations of cam, carburetor, compres-

sion and ignition to get the power where we wanted it.

ATV Action: You mean it could be even faster on top?

Loren Duncan: We could have built the engine to make more peak power but we didn't want to make the power delivery too abrupt, or sacrifice reliability.

ATV Action: What goes into the engine?

Loren Duncan: Brad Page's race quad uses our

National Kit, which increases the engine size to 450cc. The kit also includes the exhaust system, cams, head porting, modified valve guides and all the detail items, like the three-angle valve job and the heavy duty valve springs and titanium spring retainers that we use on Page's machine's engine.

ATV Action: Does Page's machine have any tricks in addition to what's included

in the National Kit?

Loren Duncan: Page's machine has a Vortex X10 ignition, which lets us choose from ten different ignition curves. With the turn of a dial, we can control the way the engine hits. A handlebar switch lets the rider select from two different curves. A dry, low-traction course calls for milder power delivery to help the machine hook up. We can also dial up harder-hitting power for wet, tacky terrain.

BRAD PAGE'S DUNCAN RACING CROSS-COUNTRY SUZUKI Z-440 RIDER/SPONSORS

Major Sponsor/Team Name: Duncan Racing International

Main Sponsors: Roll Design, Golden West, Temecula Motorsports, ITP, IMS, Douglas Wheel

Associate Sponsors: Elka Suspension, Hinson, Vortex Ignitions

Contributing Sponsors: TAG, Yupon Gear, Edelbrock, GPR, Maxima, Pro Design, Motion Pro, Braking,

Outerwear, ONE, Works Connection, AC, Sunstar, Tsubaki

Apparel Sponsors: O'Neal, Winex Helmets, Smith Goggles

Rider Brad Page
Rider weight 170 lb.
Residence Tompkinsville, KY
RACING SERIES GNCC XC Series
CLASS Pro Production 4-Stroke Class
MACHINE
Quad 2003 Suzuki LTZ 400
Quad weight 350 lb.
Overall width 46"
Wheelbase standard
Frame/mods Frame & Sub-Frame reinforced by Roll Design & DRI then powder coated

MOTOR MODIFICATIONS

Motor OEM LTZ Motor with Duncan Racing 450cc National Kit, \$1995
Kit Includes: Fat Boy 4 Exhaust System, Piston Kit, sleeve, DRI Flow Tested Head Porting & 3-Angle Valve Job, Modified Valve Guides, DRI Camshafts, HD Valve Springs w/Titanium Retainers

Bore 95.0mm
Stroke Stock
Porting DRI Flow Tested (ported with guides out)
Piston DRI Special
Rod Stock
Head DRI Ported & 3-Angle Valve Job
Valves/cam OEM Valves, DRI Camshafts Crank Stock
Ignition/timing VORTEX X10 Ignition with multiple power curve options, \$399.00
Spark plug/ NGK
Carburetor Edelbrock, from \$445
Airbox/filter/oil Pro Design Pro Flow Kit, \$130

(Includes: Billet Flange, K&N Filter,

Outerwear)

Exhaust Pipe Fat Boy 4 Complete Stainless



System, \$499
Fuel TRICK
Motor Oil Maxima Premium 4
DRIVE SYSTEM
Clutch basket/plates/springs Hinson Basket, \$225, DR-C24 Clutch Kit, \$175
Chain Tsubaki Omega O-Ring, \$99
Sprockets f/r Sunstar/Sunstar
Gearing f/r 15/40
FRONT END
A-arms Roll Design Lobo II XC Front Suspension Kit, \$2995 (includes: Roll Gull Wing A-Arms, Tie Rods, Elka Shocks, Crown Series Stainless Brake Line Set)
Spindles OEM
Front shocks/wheel travel Elka Shocks 11.0"
Steering stem Roll Design, \$349
Steering stabilizer GPR
REAR END
Swingarm/length Roll Design 19.5", \$1095
Rear axle/carrier Dominator/\$449.00, Millennium Carrier, \$269
Rear shock/wheel travel Elka Rear Shock/ 11.00", \$775.00
Rear Linkage Elka Billet Rear Link, \$198.00 (adds 1" in travel)
TIRES/WHEELS/HUBS
Tires f/r ITP XCR
Tire sizes f/r 22-7-10, 20-11-9
Wheels f/r Douglas Ultimate
Beadlocks f/r Douglas
Hubs F. DRI Billet F. Hubs \$349, R. stock
BRAKES
Calipers f/r f. stock oem/ r. ATV Innovations \$349
Pads f/r Braking
Discs f/r Braking Standard/Wave

Brake lines Crown Series f, \$110, r, \$40
Brake fluid Maxima 550

HANDLEBARS/CONTROLS

Handlebars TAG T2, \$95
Throttle Thumb
Clutch lever Works Connection, \$130
Cables Motion Pro
Grips TAG
Tether kill switch Pro Design

MISCELLANEOUS

Nerf bars AC
Front bumper/grab bar DRI Chrome F. Bumper, \$169.00
Skidplates AC
Fuel tank IMS
Seat stock with DRI Team Seat Cover
Body plastic OEM Yellow
Footpegs Roll/IMS Cast Stainless w/kick up, \$239.00
Graphic & Seat Cover Kit: DRI Team Graphic Kit, \$119.00

OTHER PRODUCTS

DRI Billet Shift Lever \$89.95
DRI Chain Guard \$29.95
DRI Billet Thumb Throttle Cover \$39.95
POWDERCOATED Frame, Sub-Frame, Swingarm, Lower A-Arms powder coated by POWDER TECH, El Cajon, CA

CONTACT INFORMATION:

Duncan Racing International, Inc.
Sales: (866) 379-7223, (619) 258-6310
Tech Info: (619) 258-6306

SPECIAL NOTES: Exact replicas (or similar) of this machine are available from Temecula Motorsports: (909) 698-4123.

DUNCAN Z-440



What does a Pro Production machine that beats Pro class quads feel like? The power and suspension can make a regular rider feel like some kind of ATV-riding superhero. For Brad Page, who is an ATV-riding superhero, riding his machine is just good fun.

ATV Action: Any other trick stuff?

Loren Duncan: We're running an Edelbrock carb on Page's race quad. The stock carb can't adequately feed the Suzuki engine when it's heavily modified.

ATV Action: Did you need to change anything on the Suzuki engine to help it hold up for race use?

Loren Duncan: The 400's engine has proven to be pretty solid, considering the extra power we're getting from it and the way Brad Page rides it. The only reliability item we've changed is the clutch. The stock clutch really can't take hard riding when the engine is modified to make a lot more power. A Hinson clutch takes care of that area for us.

ATV Action: How about the suspension and chassis modifications?

Loren Duncan: The stock Suzuki suspension is fine for trail riding, but racing speeds push it beyond its limits. For racing, you need shocks that are rebuildable also, to keep the suspension performance consistent. On the Suzuki, the stock front shocks are sealed, non-rebuildable

units, so we replaced them with Elka shocks. The Stock Suzuki rear is rebuildable but we wanted a more durable shock with more travel, so we used an Elka shock on the rear also.

ATV Action: What's the story on the Roll Design A-arms?

Loren Duncan: The gull-wing shape lets us use longer shocks for more front suspension travel. Roll Design parts are made from chrome-moly steel, which is lighter and stronger than the stock A-arm material, too.

ATV Action: Why was the swingarm changed?

Loren Duncan: A few reasons: with a championship on the line, we can't take the chance of the swingarm cracking. The Roll Design swingarm eliminates that problem. We also wanted to increase the rear suspension travel and the Roll swingarm and Elka linkage did that for us. Roll Design's swingarm also has a chain tensioning system that's easier to use.

ATV Action: We were surprised how fluid the suspension was on small impacts, like rocks and roots.

We didn't expect a fast rider's suspension to be so plush. How did you accomplish that?

Loren Duncan: It's a combination of things. The extra travel allows the initial travel to be very compliant. The Elka shocks are also higher quality parts than the stock shocks, so the feel is better.

ATV Action: All of our test riders are heavier than 170-pound Brad Page, but there were only a few spots on our cross country loop where we felt the suspension bottom. Even when we did bottom it, there was no solid jolt through the bars or pegs. Is that a function of the extra travel or the valving and spring rates you settled on with Brad Page?

Loren Duncan: Both, and the better bottoming system on the Elka Shocks. A shock's bottoming cushion is an important part of the suspension.

ATV Action: So, if we decided we wanted to take a whack at the Pro Production class championship, could we have Duncan Racing make us a Brad Page replica quad?

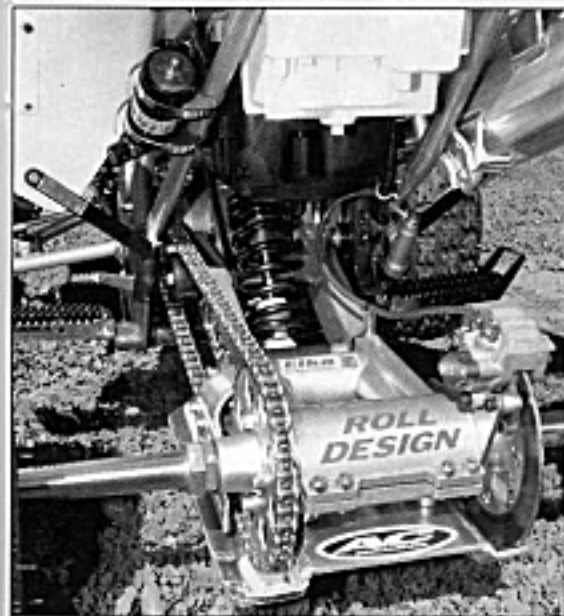
Loren Duncan: You could order it from us piece by piece and do the final assembly yourself, or you could order an assembled, ready-to-race replica from Temecula Motorsports (contact: [909] 698-4123). You could order it exactly as Page's machine is, or with just those items your racing budget allows for now. Temecula Motorsports can even ship machines to customers.



Do national-level race-quad modifications make sense if you're not a national-caliber rider? The truth is, you have to be very skilled to make full use of a machine like Page's. Most of the time, we weren't even close to the machine's limits, but we had a blast trying!

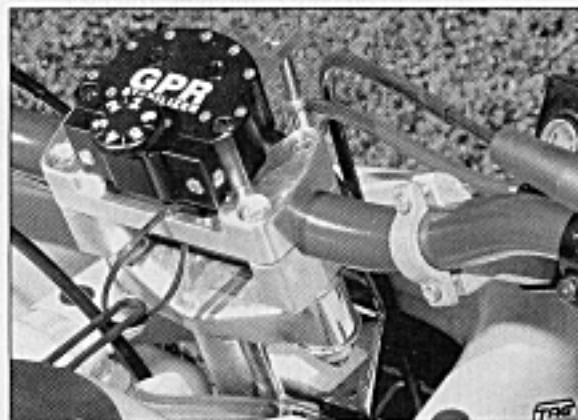
ATV Action: We're sure our readers would be interested in borrowing Page's quad like we did for this test session. Are there any plans for a test ride program for top pro's quads?

Loren Duncan: I'm sure that would be popular, but no, you guys are the only ones who get a free ride on this machine!



The rear end is modified to use a Braking rear disc from Honda TRX250R with an ATV Innovations rear caliper. This mod improves ground clearance and improves braking performance.

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A GPR steering stabilizer keeps Page's machine tracking smoothly and accurately and makes punishing terrain less fatiguing for the rider.



For someone with Brad Page's speed, top quality front suspension is a must. Elka units with Roll Design front end hardware ready the Z-400's front end for national cross country competition.



Duncan's National Kit increases the engine size to 450cc. Head porting and high performance cams release plenty of controllable power. A Vortex X10 Ignition has a thumb switch on the handlebars that allows the rider to change the ignition curve to fine-tune the powerband while riding. □