

**W**ow! Desert racing quads have come a long way. There was a time when all these machines sat ridiculously tall and had the turning stability of a double-decker bus. Exotic aftermarket frames and high-dollar suspension components were unheard of. Motors were tuned for top-end only; in the tight sand washes, the machines were really a handful.



**SCREAMING**



# DESERT Rs!

HEADED FOR THE RECORD BOOKS?



*We thought the seat on the No. Q2 quad (with the white tank) was too soft. But in every other respect, it's an amazing piece of machinery.*



*Desert racing goes high-tech! The combination of the Paul Turner pipe and PC 2000 cylinder with power valve (seen just above the exhaust manifold) produces smooth, strong power.*



*A 37mm Keihin carb gets the air flowing into both desert quads. Check out the double footpegs for more support. Though this machine has a Bilstein steering stabilizer (just below the left front motor mount), the team plans to use GPR stabilizers on both machines. They are adjustable on the fly and fully rebuildable.*

To see just how far desert quads have progressed, check out these two beauties from Duncan Racing, Roll Design and Golden West Cycle. Competing on these quads, John Gregory and Doug Eichner stand a good chance this year of taking home championships in the two most prestigious desert racing series on the continent, SCORE and The Best in the Desert.

### Two Series, Two Riders, Two Quads

Because each series requires a slightly different setup, Eichner and Gregory, competing as a team, race a different quad in each. The long desert races are extremely hard on machines and the advantage of having two quads instead of one is less wear and tear on each.

The three-race SCORE series includes the Baja 1000, Baja 500 and San Felipe 250. Speeds are high and the team's quad for this series (No. 1A) has a slightly longer swingarm for more stability at speed. The Best of the Desert series, held in Nevada, is run on tighter and more technical tracks. A slightly shorter swingarm (on the No. Q2 quad) lets the ATV whip around turns better. Because the Best of the Desert races are usually run at higher elevations, this quad's engine has slightly more compression, thanks to the smaller, interchangeable compression domes on the

PC 2000 cylinder.

Yes, aftermarket cylinders have found their way into desert racing, just as they have in motocross. In addition to interchangeable compression domes, Duncan Racing's PC 2000 cylinder for Honda's venerable 250R features an integral power valve assembly for a smoother, stronger powerband.

"That cylinder has proven very reliable," Loren Duncan said. "We don't recommend doing this, but we've seen them go 10,000 miles without a problem. A PC 2000 cylinder took Travis Spader to the GNC Pro class championship last year."

Duncan said this has been a banner year for the PC 2000 setup. Three-time GNC Pro champ Tim Farr is using the PC cylinder racing the GNC Pro class TTs. Plus, Tavis Cain has cinched the GNC A class and Chad Lohr is leading the Open Pro-Am, each using the PC cylinder. In the GNCCs, Brad Page and Matt Smiley are both running PCs and are tied for second. A PC won the last 24 Hours of Le Fud and set a new world record.

Other state-of-the-art motor features on Eichner's and Gregory's quads include NiCaSil cylinder treatment, mid-range porting, Baldwin heavy-duty gears, a Hinson/DR clutch, Keihin 37mm carb and Duncan Racing/Paul Turner Eliminator pipe.



## EICHNER/GREGORY DESERT QUADS

**Quads:** 2001 Duncan/Roll/GWC Desert Machines

**Quad weight:** 375 pounds

**Frame:** Roll Design LOBO

### MOTOR

**Type:** Honda TRX250R

**Displacement:** 275cc

**Cylinder:** DR PC 2000 (powervalve, mid-range porting, NiCaSil)

**Head:** Duncan PC 2000 billet w/interchangeable domes.

**Piston:** PC 2000

**Ignition/timing:** Hinson billet holder w/adjustable timing, standard setting

**Stator:** Stock w/Safari 200w lights

**Reeds:** PTR Pyramid reed valve

**Rod & crank:** DR Mod w/TMS Pro Series rod

**Carburetor:** DR Keihin 37.3mm w/DR Super Flow

**Airbox/filter/oil:** Stock/Uni/Maxima FFT

**Pipe/silencer:** PTR eliminator '98/Fat Boy Silencer

**Two-stroke oil/ratio:** Maxima 927/32:1

### DRIVE SYSTEM

**Clutch:** Hinson Basket, DR C-12 Clutch Kit, DR Quick Change clutch cover

**Transmission/oil:** Stock with DR Mods, Baldwin HD Gears/Maxima MTL Endurance

**Sprockets:** Sunstar

**Gearing f/r:** 14/37

### SUSPENSION

**A-arms/width:** Roll Design LOBO/50 inch

**Spindles:** 400EX

**Front shocks/wheel travel:** Custom AXIS/12.0 inch

**Steering stem:** Roll Design LOBO

**Steering stabilizer:** GPR (on No. Q2 quad)

Rear End

**Swingarm/length:** Roll LOBO/18.5-inch (on No. 1A quad), 18-inch (on No. Q2 quad)

**Rear axle/width/carrier:** Dominator/49-inch/Millinium

**Rear shock/wheel travel:** Custom AXIS/13.5-inch (on No. Q2 quad)

### TIRES/WHEELS/HUBS/BRAKES

**Tires:** ITP Holeshot

**Tire sizes f/r:** 22 x 7-10/20 x 11-9

**Wheels:** Douglas Ultimate

**Hubs f/r:** DR Billet/stock

**Calipers f/r:** 400EX/250R

**Pads & rotors:** Braking

**Brake lines:** DR Steel Braided

### MISCELLANEOUS

**Handlebars:** TAG Metals T2 CR Hi

**Handguards:** Golden West

**Lighting:** PIA Lights w/Eichner custom mounts

**Front bumper/grab bar:** DR Chrome/integral to frame

**Skidplates (front, engine and swingarm):** Roll Design & Doug Eichner

**Tank (gallons):** IMS dry brake 4 (expanded to 5)

**Footpegs/location:** Roll Design with 3-row support and kick up/down and back

**Contact:** Duncan Racing International, (619) 258-6306; duncanracing.com; sales@duncanracing.com.

### Nice Chassis, Too!

Providing a high-tech home for the Duncan motor is a Roll Design LOBO chromoly chassis. It's based on the Honda 250R chassis, but the geometry is unique and handling is much improved. As on a competitive MX quad, the stance is wider than stock and the overall length is close to an '88 TRX250R.

Up front, the LOBO uses Honda TRX 400EX spindles because they are lighter and stronger than those on an R, according to Duncan. (See, the EX is better in some ways!) For cross-country racing, ITP Holeshots tires have pretty much become the industry standard and they also work great for desert racing. The team mounts them on Douglas Ultimate rims.

An integral part of the LOBO chassis is the Custom AXIS suspension. Unlike the old desert quads, these ATVs sit at a reasonable



Roll Design now uses Honda 400EX aluminum spindles for all its R-based chassis. The Axis suspension is an integral part of the setup. Note the ITP Holeshots, Douglas Wheels and the gull-wing shape of the Roll/LOBO A-arms.

ride height, but still soak up the big, high-speed hits. In turns, they provide a very stable platform. Though Eichner is smaller and lighter than Gregory, he's a more aggressive rider and so the same shock settings work well for both riders.

### A Race-Winning Effort

Eichner, who has won titles in the GNC Open Class, MTGP stadium series and at France's 12 Hours of Pont de Vaux, appreciates his teammate's consistency. "John's a smart rider.

You know he's not going to trash the bike," Eichner said.

Gregory, who's been racing Baja for 12 years, is equally happy to be teaming with Eichner. "There are some really fast guys in the desert like Jimmy Stephensen, Eric Dollente and William Yokley.

But I'd bet money that all those would agree Eichner is the fastest guy racing the desert today. At 37, he's one of the oldest but he's as fast as ever. Plus, he's smart and doesn't tear up the bike," Gregory said.

Both Eichner and Gregory are quick to admit that having great machines plays a big role. "The machines are meticulously prepped," says Eichner. "That high level of support is so important," says Gregory. "The

bikes are totally dialed when we race. They're the best of the best."

Shortly after our photo shoot, both quads were completely torn down and rebuilt, including the entire motor — and that was after only two races on each machine. The frames were sandblasted, inspected for cracks (there were none), and powdercoated. Every bearing, bushing and grommet was replaced.

"They had about 1,000 miles on them and it was time to tear them down," said



The no-link Axis rear shock and LOBO chassis work great together. Note the stock airbox and beefy swingarm skidplate.

*Eichner and Gregory team up riding either of these two machines, depending on the event. For our photos, they had fun dicing on both machines.*



*With the IMS dry break fuel tank, the team can dump in four gallons of fuel in 10 seconds. The team expands the IMS tanks and increases the capacity by about a gallon. The tricky and dangerous process involves first filling the tank with boiling water to soften it, then applying air pressure to expand it. Don't try that at home, folks!*



Gregory. "A typical MX quad doesn't see that many miles in a lifetime! With the Baja 1000 and Vegas to Reno coming up, they have to be virtually new."

Last year the team raced 400EXs, but they're glad to be back on the faster and better-handling 250R-based machines. "The

R is still the machine to beat," says Eichner. "I love the sound and grunt of the EX, but with the PC cylinder we're getting lots of torque plus great top end, too." Though the team could go bigger than 275cc, their track record seems to indicate it isn't really necessary.

"The PC can outrun any Raptor or



*After putting in a few miles on the radical new featherweight Bozoquad 300, Doug Eichner deemed the machine not appropriate for desert racing. "The styling is great and I could flick the thing around in the air no problem," said Eichner, "but the ride is very harsh and the built-in tow-rope is positioned very poorly."*

## We Ride It!

Because the No. 1A SCORE quad was jettied a little rich for our test location in the Mojave Desert, we hopped on the No. Q2 Best in the Desert machine for a quick spin. Wow! Desert quads don't get much nicer than this.

Race results prove that the power is competitive with other similarly armored desert quads. The midrange and top are strong and the motor could probably pull even taller gearing than the 14/37 as tested. Of course, with the added weight of heavy skid plates, 30 pounds of gas and beefy tires, the 275cc machine doesn't get rolling as fast as a lightweight 250R duner.

Wide open, the machine tracks true and is completely stable, even with the shorter swingarm. And, the on-the-fly adjustable GPR steering stabilizer comes in handy.

As you'd expect from a quad built to handle mile after mile of whoops, the machine handles this kind of terrain with amazing ease. For a 155-pound test rider, the shocks feel just about perfect and landings from jumps are plush. In turns, there is very little body roll. Shifting is smooth, the controls work easily and the front EX brakes provide plenty of stopping power. The machine does it all.

Our only complaint was the overly soft and spongy seat. It's like sitting on an air pillow! Eichner explained to us that the plan was to come up with a seat that would be just a little softer than the overly stiff perch on the No. 1A bike. But they went "overboard," he said, and we agree.

Gregory, on the other hand, loves it. "Once you race with it, you dig it. You sit lower and it's better for all the turns you find in Best the Desert races," he said. It just goes to show that many things are simply a matter of personal preference!

DS650," said Loren Duncan. "Motor-wise, our Pont de Vaux Banshee is faster, but the PC has really closed the gap. Plus, the power is much more controllable and doesn't tire you out."

Now, with only a few races left in both desert series, the team is poised to take home both titles and it would be a first in desert racing. "We're leading both series now," Gregory says, "and with all the new quads coming out, it's more competitive than ever. It's not as easy as it used to be. So, it's great to dominate the sport!" ■