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THIS OLD TWO-STROKE: With a Duncan Racing engine kit, Ohlins suspension, ITP Sand Stars and other performance mods, this old two-stroke QuadRacer can now hang with any of the new four-strokes!



100-MPH QUADZILLA

DUNCAN RACING SUZUKI LT525R: THE CORVETTE OF QUADS

Story and Photos by Bill "WBG0" Lanphier

When most people think of a big two-stroke, Yamaha's Banshee 350 comes to mind. But Suzuki's LT500R, manufactured from 1987 to 1990, remains the biggest and baddest, mass-produced two-stroke the sport has ever seen.

"The open class for motocross motorcycles was established with the big 500cc singles and the LT500 quad developed a huge cult following," explains

Duncan Racing's Loren Duncan, who modified this 1990 LT, which is in his personal stable of machines.

"Other than Honda's TRX250R, no other older quad generates that kind of enthusiasm," he said. Loren picked up the LT in the early '90s, when a customer brought it and another quad in for repair. When the customer offered to trade the LT for work on the other quad, Loren quickly snapped up the LT and still rides it. Loren says

there are few chassis parts available for the 500, either from Suzuki or the aftermarket. The bulk of the parts are for the engine.

"The stocker was even slower than the '88 Honda 250R," Loren says. "If no motor mods had been available for the 500, there wouldn't be near as many of them still running around. The motor has great potential for modification."

Duncan tells us that the three most important mods for the LT are a pipe, porting and carb. "The stock pipe is very restrictive and ours helps the 500 more than on any other bike. The cylinder's rear transfer ports need a lot of redirection. The stock 38mm Mikuni was OK when the quad was released, but with a 39mm Keihin the quad is easier to tune, it runs more efficiently and it's easier to start."

In my own experience, the LT500 was harder to start than any other quad and this one is no exception. After our test, I learned from Duncan that the trick is to kick all the way from the top and get a lot of momentum going. "Just like with any other kick-start quad," Loren explains, "the people who own a 500 learn how to fire it up easily."

Duncan also said his bigger-bore LT525R is usually ridden in warmer conditions and isn't set up for the mountains where we tested it.

Duncan's mods to the LT also include a Powerhead (which bumps the mild stock compression of 7.2 to a more respectable 9:1), plus crank truing. "Some

people insist on a turbo mod to the crank, which they claim stirs up the fuel/air mixture. But in reality, the pressure is too low down there. The turbo mod was just a sales gimmick."

In addition to being rather slow in stock form, the LT500 powerplant had its share of problems. "The motor was basically the

the Banshee, the LT500 could suck dirt and Duncan has seen hundreds of destroyed 500s because of this. "On the Banshee, if you run with the airbox lid on and installed carefully, you're OK. But the LT can always suck dirt at the forward face of the filter. We do a mod so the filter clamps on, similar to the TRX250R's setup, and all

"The stock pipe is very restrictive and ours helps the 500 more than on any other bike..."



same for all years of production," Loren says, "but the '87 had only six head bolts and blew head gaskets. The '88 and following years had seven bolts. Other changes in 1988 were a smaller intake tract, which increased the velocity of the airflow, and stronger flywheel rivets, which were less prone to shearing." Like

SMOOTH SHOCKS: Suspension on the stocker is pretty good. The Öhlins make the LT500 even nicer.

the stock components are retained."

In stock form, the LT was capable of no more than around 75 MPH. But with mods, it can exceed 100! "The LT500 was the most fun at a TT," Loren says. "Barry McCarty



Some people insist on a turbo mod to the crank ... but in reality, the pressure is too low down there. The turbo mod was just a sales gimmick.

won lots of races and put on quite a show. At France's Golden Handlebar we had 15/33 gearing and could have gone even higher if we had sprockets. We'd come out of a sweeper tapped out in top gear. The 500 is damn fast."

Our site for testing Duncan's 500 didn't allow those kinds of speeds, but we could still get a good feel for the amazing power. This big two-stroke cranks out low-end power comparable to the new 450 four-strokes, and that's saying a lot. "The LT500 is very torquey," Loren explains, "and the powerband is very rider friendly.

But it vibrates a little and, being a big bike, it can fatigue you." Quads are generally bigger and heavier now than they were in 1987, and the LT500's chassis was considered massive when it was released. And it's still pretty big by today's standards. It feels bigger than the new 450s and the specs bear this out. Compared to Honda's 450, the seat is 1.5 inches lower, but the LT is 13 pounds heavier, the wheelbase is four inches longer, and it's an inch wider. "Riding the LT is like riding a fast couch," says Duncan. "The quad is so big is just bulls

TWO-STROKE KING: Suzuki's LT500R remains the largest-displacement two-stroke the sport has ever seen. With Duncan's mods, it may be the fastest, too.

its way through obstacles.

When Americans raced the Veronica Beach Race in Holland, which developed huge ruts and whoops, the LT500 was the choice. And, the way the bars, pegs and seat are laid out, it's for a big guy. It won't cramp you like the Banshee."

With Öhlins shocks, the quad feels like it could soak up the biggest hits, but it's still reasonably plush. "The stock shocks were actually better than those on the stock Honda 250R and Suzuki LT250R. But they would fade after about 20 or 30 minutes of hard riding. The Öhlins don't do that. Plus they can be set up for the +2-inch Laeger's swingarm we run. With our motor mods, the quad wheelies too much with the stock-length swingarm."

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DUNCAN RACING SUZUKI LT525R

Rider: Leonard Duncan

Builder: Duncan Racing International

Sponsors: DRI, Paul Turner Racing Exhaust, Escondido Cycle Center, ITP Tires, DWT

>>MACHINE

Quad: 1990 Suzuki LT500R

Claimed wet weight: 410 pounds

Frame: Stock

>>ENGINE

Type: DRI/PTR National Kit

Bore & stroke: 88 x 86mm

Porting: PTR National by Loren Duncan

Head: PTR Billet Powerhead

Compression: 9:1

Displacement: 525cc

Piston: Wiseco

Reed valves and cage: Pyramid

Crank: Trued and rebuilt By DRI

Carburetor: Keihin 39mm PWK w/Super Flow mods

Airbox/filter: Stock/DRI clamp on K&N kit

Pipe/silencer: PTR/Fat Boy 2

Fuel: VP C12

>>DRIVE SYSTEM

Clutch fibers and steels: DR C25

Clutch basket: Hinson

Transmission: Stock, DRI blueprinted

Chain: O-ring

Sprockets: Sunstar

Gearing f/r: 14/40

>>FRONT END

A-arms and spindles: Stock

Front shocks/travel: Öhlins/10 in.

>>REAR END

Swingarm: Laeger's round housing + 2 in.

Rear axle/carrier: Team/Laeger's

Rear shock/travel: Öhlins/11 in.

>>TIRES/WHEELS/HUBS/BRAKES

Tires: ITP Holeshot or Sand Star

Wheels: DWT

Brakes: Stock with Crown Series steel-braided lines

Parking brake block-off plate: DRI

>>HANDLEBARS/CONTROLS

Handlebars: TAG T2

Throttle: Motion Pro CR Twist

Clutch lever: Honda CR

Cables: Motion ProGrips: TAG T2

>>DETAILS

Front bumper/grab bar: DRI chrome/stock chromed

Seat cover: ONE

Body plastic: Stock w/ Maier nose piece

Graphics: Custom DRI

Footpegs: Stock chromed by Pacific Plating

Polished: DRI/Jim Brown

FOR MORE INFO: Duncan Racing International, (619) 258-6308, www.duncanracing.com



top **P&P:** A pipe and porting are the two most important motor mods, according to Duncan Racing. The combination of PTR's Powerhead and a +2mm Wiseco piston results in 25 percent higher compression and 25cc higher displacement.

bottom **FRONT RUNNER:** Ohlins front shocks add about an inch of front-wheel travel and work well with the relatively wide, stock front A-arms. The nosepiece is from Maler and tires are from ITP.



STABLE SWEEPER: Though many of the trails at our Hollister Hills (California) test area were tight, we found some faster sweepers. The LT is extremely stable and, even with a longer swingarm, turns well for a big quad.

“Riding the LT is like riding a fast couch. The quad is so big it just bulls its way through obstacles.”

BIG ROOSTER: Duncan's big LT525R shines here in the big open spaces of the Glamis dunes.

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In our testing on mountain trails, the turning radius feels pretty wide, but the LT is very stable and steering control is still precise, even with the longer swingarm. Despite the passage of time, you can still see some LT500s in the U.S., often at the big dune areas. "I'd guess there are somewhere between 5,000 and 10,000 LT500s still running around," says Duncan. "In 2007, I'll probably do 50 engine kits and at least that many rebuilds. I might sell 150 pipes for the LT. It's kind of like the old Ford Mustang and Chevy Corvette. Seventeen years later people still love their 500s and want to keep them going." ■



Enduro Honda

Duncan Racing's Care Package Gets Shipped Overseas

RIDER: Andy Lagzdins

AGE: 39

CLASS: Pro GNCC

Unlike Duncan Racing's formidable Banshee for France's 12 Hours of Pont de Vaux, which is assembled in the UK by ATV World (Duncan Racing's European distributor), this team Honda was built in America by top 10 GNCC competitor Andy Lagzdins and shipped to Europe for PDV.

With a Duncan 470 National kit and porting, plus DR exhaust and a JE

swingarm come from Roll Design and the shocks are from Elka Suspension. Additional frame gussets were added where the main frame meets the front top of the subframe.

Pont de Vaux is brutal and after eight hours of racing the Honda's tranny quit shifting, Lagzdins said. "It could be a bent shift fork, but that's only a guess. It was a brand-new tranny and I'm sure it looked fine before the race.

"There are known tranny issues with the '06



high-compression piston, the Honda cranks out a claimed 55 horses. "Instead of Honda's electric starter for the dead-engine PDV starts, the team stayed with kick starting. The electric starter isn't fast enough and it's more finicky," Loren Duncan says. "It's more of a recreational item."

The front end and

Honda motor and more than one team had problems at PDV," Lagzdins elaborates. "Honda hasn't made any changes for '07, so we'll probably run the '05 motor in the GNCCs this year. The '06 is racier and sportier. But, without an external oil cooler, it's designed more for MX than endurance racing."

—Lanphier ■



**ANDY LAGZDIN'S
ENDURANCE HONDA 470R**



SPONSORS

Duncan Racing, Dirt First, ATV World, DWT, Fat Boy 4 Exhausts, Goldspeed, Roll Design, Elka Suspension, Team Axles, Vortex, IMS-Roll, IMS, Pro Design, Dunlop, Maxima, Trail Tech, Motorcycle Factory

MACHINE

Quad: 2006 Honda TRX450R

Quad weight: 375 pounds

Frame: Stock w/gussets

Overall width: 49 in.

ENGINE

Type: DR TRX470R National kit

Bore x stroke: 98 x 62mm

Displacement: 470cc

Compression ratio: 12:1

Porting/head work: DRI HP4 kit

Piston: J.E. Forged

Ignition: Vortex

Carburetor: Keihin FCR 40mm

Airbox/filter: Pro Design Pro Flow kit/K&N

Exhaust: DR Fatboy 4 stainless

exhaust w/HQ muffler

DRIVE SYSTEM

Clutch: Hinson/DR

Chain: Regina X Ring

Gearing 1/r: 16/36

Sprockets: Sunstar

FRONT END

A-arms: Roll Design LOBO II

Front shocks: Elka, compression,

rebound, preload adjustable, 12 in.

wheel travel

Steering stem/steering stabilizer:

Roll Design/Elka S-3

READ END

Swingarm: Roll Design/Elka, +1 1/4

Rear axle: Team 2 + 2/Team taper roller

Rear shock: Elka, compression,

rebound, preload adjustable, 11.5

in.p wheel travel

Rear overall width: 49 in.

TIRES/WHEELS/HUBS

Tires: Goldspeed/MX

Tire sizes 1/r: 20 x 6-10, 18 x 10-8

Tire pressure 1/r: 10/8 psi

Wheels: DWT Ultimate Billet

Rear hubs: Team billet

Front hubs: Stock

BRAKES

Pads: Dunlop sport compound

Brake lines: DR Crown Series

DETAILS

Handlebars: Renthal Fat Bar CR

Hi bend

Clutch lever: Works Connection

Cables: Motion Pro Terminator

Grips: Spider

Tether kill switch: Pro Design

Nerf bars/front bumper/grab bar:

IMS-Roll Nerf Bars/DR/stock

Skid plates: PRM

Fuel tank: IMS dry break, 3.5 gal.

Lights: Trail Tech

Seat cover: DR/ONE

Body: Stock trimmed

Footpegs: IMS-Roll Stainless

Accessories: DR quick-change

clutch cover and chain guard