

# DUNCAN RACING SUZUKI LT500

*We test Mark Ehrhardt's Veronica Beach racer*

**W**hich riders do the '87 to '90 Suzuki LT500 QuadRacers appeal to? Well, it was the bike of choice for Mark Ehrhardt and Duncan Racing to ride in the Veronica Beach Race event. It's the only readily available production machine that Duncan Racing could modify to battle against the mega-displacement EML 650 and Jumbo 1000s in Holland. As an additional benefit, Duncan Racing can then turn around and sell us regular folks the same go-fast goodies that Mark used to defend his Veronica title.

Who exactly is the average Suzuki Quadzilla rider? Simply put, the LT500 is a favorite with riders who don't always want to ride on the ragged edge. These power freaks can ride slow if they want and just lug around within the LT500's ample low-end power sup-

ply. They also want a bike that kicks in the afterburners when they twist the throttle—and that is exactly what a Duncan Racing-modified LT500 will do. The key word here is "modified." That is because if you have the chance to ride a stock LT500, you will come away disappointed—they are just too slow!

#### **WHY IS THE LT500 SLOW?**

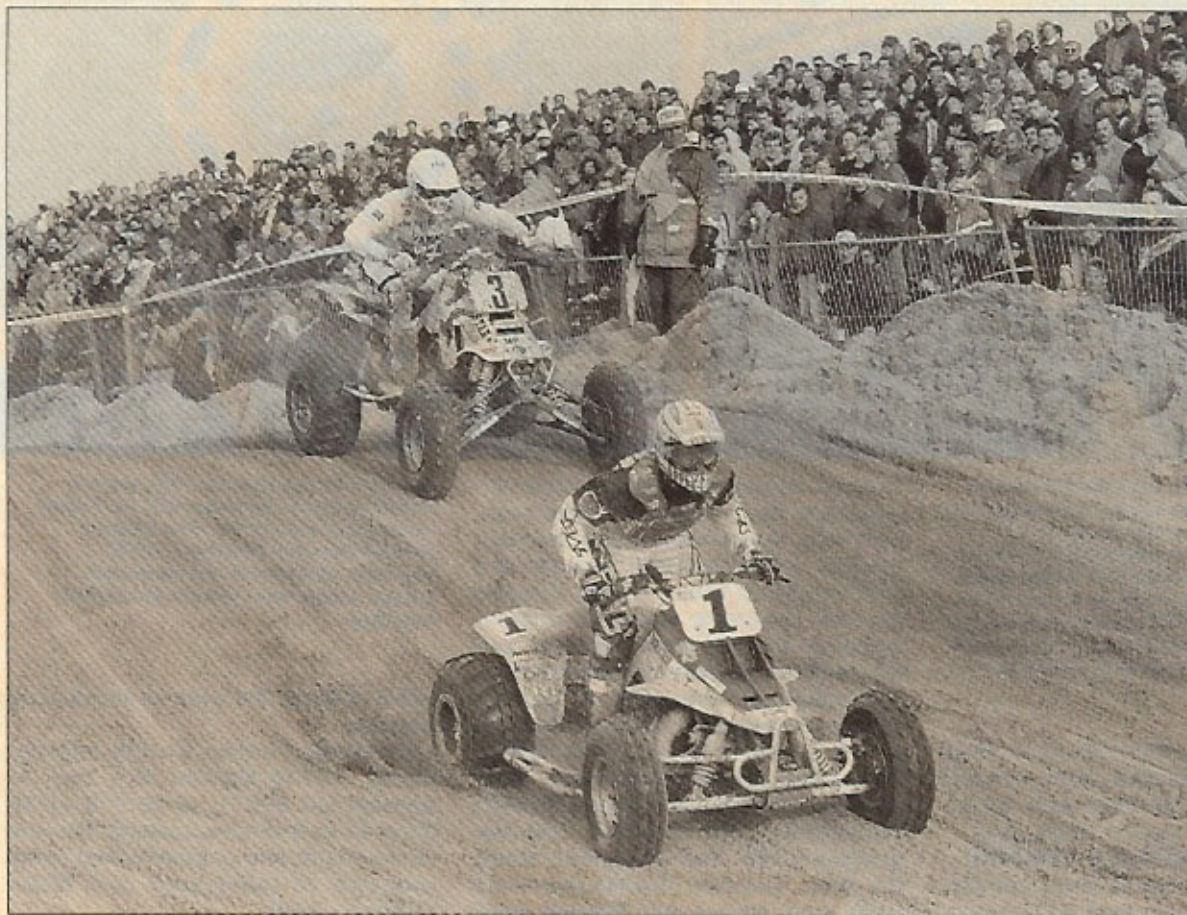
Where do we start? To begin with, the cylinder suffers from blatant port-design flaws. The problem is compounded further when the poorly flowing fuel is compressed by a head that uses a way-off squish angle. Then the burnt gases exit the exhaust port and instantly run into a wall! (The stock pipe is too curvy at the headpipe.)

#### **DUNCAN RACING'S FIX**

Duncan Racing gets things flowing better right off the bat by using a K&N

air filter (Mark is sponsored by and uses Uni filters) that guarantees only clean air heads down the boot to the 39mm PWK Keihin D slide carburetor with Duncan Racing Superflow mods. The metered fuel's entry is precisely controlled by a Duncan Racing Pyramid Valve as it heads through the re-angled, re-smoothed and re-timed port work. A re-chambered head compresses the fuel while a Champion N6YC spark plug ignites it. Burnt gases now exit through a correctly shaped and tuned Paul Turner pipe and Fat Boy round aluminum silencer combination. The end result? A 40% increase in power that can be felt from a lower bottom-end pull all the way up to the higher redline.

The Duncan Racing LT500R National kit retails for \$1050 and includes a Paul



◀ **Race-tested:** Mark Ehrhardt roosts the Duncan Racing LT500 down the whooped-out Scheveningen beachfront. Winner Wil van der Laan(3) outpowered Mark with the 930cc of his EML Jumbo 1000.



**Back home:** 3&4 WHEEL ACTION tests Mark's Duncan racer in America! Duncan transforms a Jekyll and Hyde LT500 motor into a torquey, broad, stronger-pulling and more reliable powerplant.



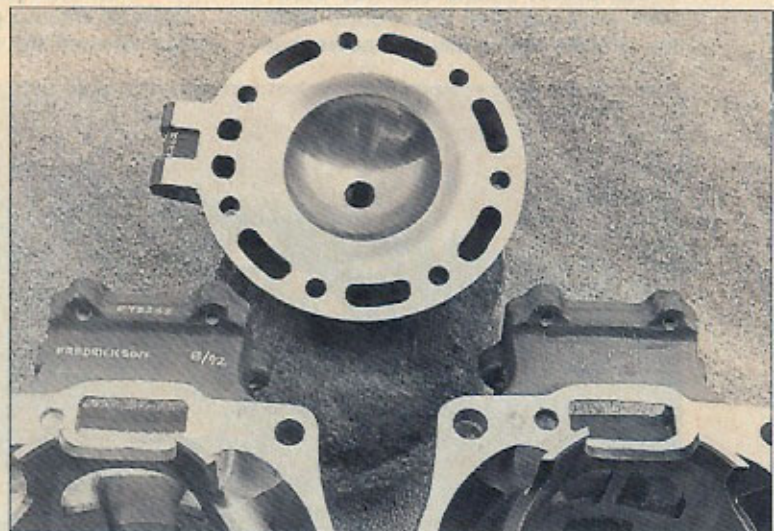
**Curves that kill:** The Paul Turner pipe/silencer combo is the single most important modification anyone can make to his LT500. The pipe is responsible for a solid 20% increase in power. With some setup savvy, the LT500 mill can be turned into a great powerplant. PEP suspension soaked up the deep Veronica Beach whoops that Mark was hitting at close to 100 mph.

Turner pipe, Fat Boy silencer, Paul Turner porting and head work, Pyramid Valve, Keihin 39mm PWK carb, jet kit, K&N filter and Champion spark plugs.

**EHRHARDT REPLICHA CHASSIS**

Renthal QuadRacer-bend handlebars, CEET non-slip seat and custom

Duncan Racing-trimmed fenders encapsulate Mark Ehrhardt's pilot compartment. Suspension duties are handled by a PEP steering damper and PEP modified stock LT500 Kayaba shocks, including anodized bodies, damping updates, travel increase and the addition of external compression adjustment on the back. A Tsubaki Omega O-ring chain delivers power to 22x14-10 Sand Tires Unlimited Mini Desert-Trax molded paddle tires. Front tires are 22x8-10 Sand Tires Unlimited Razorbacks; 10x6 front and 10x8 rear Douglas 0.190" Red Label rims house the tires. Graydon Proline aluminum nerfs, front bumper and stainless steel

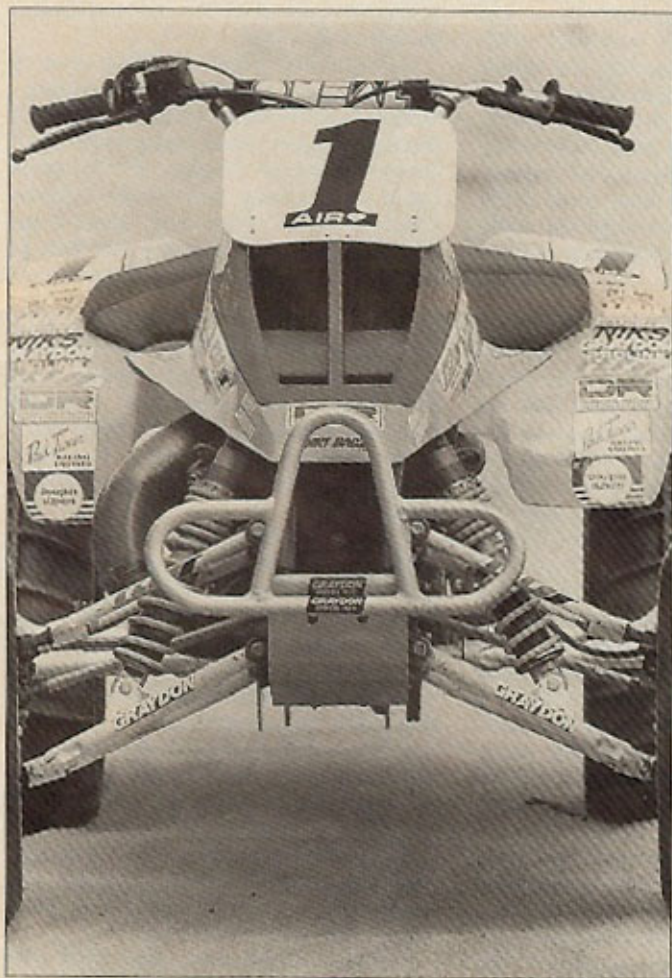
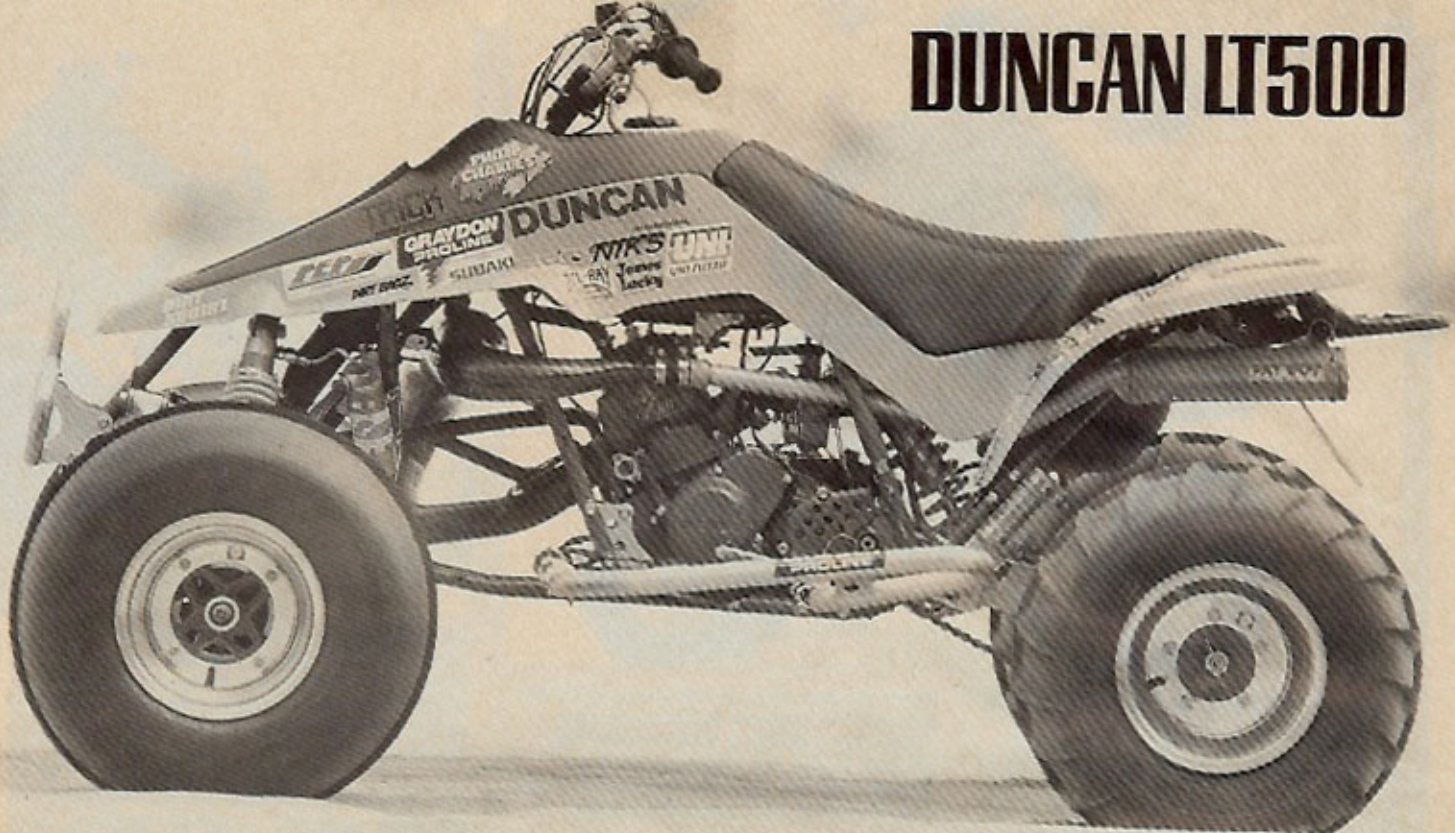


**Straight to the heart of the matter:** Smart cylinder porting (left) and head rechambering are the key factors behind Duncan Racing's LT500 success. Check out the removed intake bridge that allows for correct fuel flow.

brake lines put the wrap on the chassis package.

**Contact:** Duncan Racing International, 10734 Kenney St., Ste. A, Santee, CA 92071; (619) 258-6309. Send \$2 for the latest catalog that lists all the motor and chassis components required to build your own Mark Ehrhardt replica.

# DUNCAN LT500



Turntable: "The Mini Desert-Trax molded paddle tires offer lots of traction and stay on top of the sand so they don't lug the motor down," says MTGP Champion Mark Ehrhardt. Although they bounce in severe jumping conditions, the front Razor Backs track really well. "The Duncan motor makes the LT500 easier to ride with more power and better response throughout the powerband. The best place to ride the motor is in the middle."



## MIKE BOYD'S PLAY LT500 THIS IS WHAT OWNING A QUADZILLA IS ALL ABOUT

• What is the Suzuki LT500 engine of choice by Glamis regular Mike Boyd? The same engine that Mark Ehrhardt used to defend his Veronica Beach Race Championship with! That, however, is where the similarities end. While Mark is out at 6:00 a.m. running five miles at a five-minute-mile pace, Mike will be in the garage, shining, buffing or taking more parts off to be chromed!

Mike spent at least \$2000 on his

*Average Joe: Who is the average LT500 owner? He's single, loves pizza and Coca-Cola, drives a white Ford F150, likes to polish his bike and rides at Glamis' Hill #6. "It's the hardest to find and steepest hill," says Mike Boyd.*

LT500's cosmetics. The motor's water pump housing and ignition cover are highly polished and secured with chromed bolts. Surrounding the motor is a lustrous candy-apple blue powder-coated frame. The A-arms, swingarm, rear axle, rear brake stay, nerf bars, front bumper, handlebars, bar clamp, Safari Racing light frame, dual Cibie lights, pipe, motor mount plates, kick-starter and rear brake pedal all receive



*Show-stopper: "It really moves me along—it's just like a Cadillac," adds Mike! If both Mark and Mike showed up at Hill #6 on their LT500s, Mike's chromed and candy-apple blue Suzuki would draw all the attention!*

the chroming or high-polish treatment as well. Custom-trimmed fenders, a blue/white phase CEET seat and black grips make for an LT500 that is a looker as well as a runner.

For ground control, Mike runs a White Bros.-modified rear shock, Noleen Ohlins front shocks, Duncan Racing braided-steel brake lines, 10x7 front and 10x10 Douglas 0.125" Blue Label rims, Cheng Shin 22x8-10 Dune Tracker front tires and Skat-Trak 20x10-10 ten-paddle Haulers rear tires. •

## WHAT TO WATCH OUT FOR ON YOUR LT500 DUNCAN RACING TELLS IT ALL

• Blown head gaskets—the '87 LT500s used a six-stud head attachment configuration that was simply not enough to hold the pumping volume of a 500cc single. Stripped studs and blown head gaskets were commonplace on this model. Suzuki upgraded to a seven-stud head fastening system in '88 that eliminated the problem. Loren's advice regarding the '87 six-stud LT500s? Stay away from them (stripped studs can be repaired, but it's only a Band-Aid cure)! Six- and even seven-stud owners must carefully install the head, using a crisscross tightening sequence starting at 5 ft.-lb. of tightening torque. Once you have completed the six- or seven-stud pattern at 5 ft.-lb., move up to 10, 15 and then 21 ft.-lb. of tightening torque—do not exceed 21 ft.-lb.!

• Ignition side main bearings have a

problem with spinning (keep an eye on both sides). This is caused by poor center case aluminum, and can be seen every time the main bearings are removed from the case—small aluminum chips from the bearing seat will be embossed against the bearing race. To check yours, remove the ignition cover, grab the rotor and shake it up and down. If there's any play, the case's bearing seat has been worn by the spinning main bearing. The rotor side usually wears before the primary side. Duncan Racing warns that Loctite is a very short-term cure for loose and spinning main bearings. There are some shops which offer a service that repairs worn main bearing seats by machining and inserting a brass collar. Duncan Racing does not recommend this, since they have not experienced acceptable longevity. If your main bearings are spinning, there is only one cure—replace the case half (or halves)! If left alone, the loose bearing will allow the rotor to move around and waste the ignition stator. To perform a quick check

on your LT500, remove the ignition cover, grab the rotor and shake it up and down. If there's any play, it means the case's bearing seat has been worn by a spinning main bearing. The rotor side usually wears before the primary side.

• Early-model LT500's rivets came loose on the magneto, allowing it to wobble. The magneto rotor was superseded on the later models. If you have an '87, replace the rotor with the superseded part. Owners of '88s might want to check with their dealer to make sure they have the updated part.

• The cylinder can crack near the rear base nuts with sloppy installation or when the boost ports are opened too much by a performance shop.

• Loctite the primary drive gear nut. They have been known to come off. Loren uses Loctite 271 (red) and tightens torque to 65-72.5 ft.-lb.

• Watch the frame tabs. The rear shock reservoir bracket will be the first to fail. It cost Barry McCarty a championship in '91. □

