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DUNCAN RACING SUZUKI LT500R

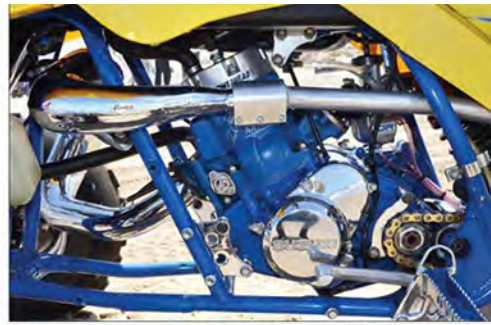
MODIFIED MONSTER—THE LEGEND

Photos by Pat Carrigan



Suzuki's LT500R is the stuff of ATV legends. Think a four-stroke 450 is fast? Imagine the performance potential of a 500cc, liquid-cooled, power-valved two-stroke! Most of today's riders can't even comprehend what a machine like that would be like, but Suzuki offered the mighty 500 from 1987 to 1990. Its massive power earned it the nickname "Quadzilla," and it developed a following that's still going strong today. Duncan Racing (DR) applied the best of today's performance technology to the legendary LT500R and invited *ATV UTV Action* to experience the results.

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The liquid-cooled, reed-valve, power-valve, 500cc, two-stroke engine from 1990 was advanced even by modern standards. Duncan Racing's National midrange engine kit boosts the power dramatically, but it's very controllable.

LEGENDS LOOK BETTER IN HISTORY

There's no question that the LT500R was the most shocking high-performance sport quad of its time. But like most machines from the late '80s, it was far from perfect. Modern sport ATVs have better engine and suspension tuning right from the dealer. Duncan Racing strove to dial the Suzuki in and give it the balance and handling of a modern quad while they built on and refined its incredible engine performance.

MODIFYING THE MONSTER'S MOTOR

Suzuki's liquid-cooled, reed-valve, power-valve 500 was a state-of-the-art two-stroke for the late '80s. Though reed valves were common on two-stroke ATV engines at that time, power valves (variable exhaust ports) were rare. Duncan Racing developed its Paul

Turner National LT500R engine kit to cure the stock 500's breathing and jetting problems while unleashing the full potential of the high-performance engine design.

Duncan Racing's clamp-on air filter retains the stock airbox, but eliminates the stock intake's sealing problems. A DR-modified and pre-jetted Keihin PWK carburetor and Pyramid reed valve replaces the less-advanced, flat-slide, stock, Mikuni carb and stock reed cage to improve throttle response, boost power and simplify jetting. The LT500's stock porting and cylinder head shape limit the engine's performance and make destructive detonation hard to avoid. The Paul Turner/DR porting and head increase power and reliability. The Suzuki's stock exhaust limits breathing and power output even on the stock engine. A DR/Paul Turner pipe and Fat



Duncan Racing's modifications build on the LT500R's legendary power and eliminate the reliability problems and dated suspension that held the machine back when it was first introduced.

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Suzuki's LT500R is one of the most powerful production sport quads ever made, but the machine is far from perfect in stock form. Duncan Racing built on its strengths and polished its rough edges.



Fully adjustable Elka Stage 4 shocks bring state-of-the-art suspension to the 1990 Suzuki 500.

Boy 2 silencer make the high-performance engine run stronger and cooler. A DR clutch kit with a Hinson clutch basket reliably transmits all the power to the rear wheels and is far more durable than the stock clutch components.

HIGH-PERFORMANCE HANDLING FOR THE HIGH-PERFORMANCE ENGINE

The Quadzilla is one of the most powerful ATVs ever made, but like most ATVs from the late '80s, its stock shocks weren't even as good as some of today's trail quads. DR brought the Suzuki's suspension in line with its engine performance with Elka Stage 4 shocks. These shocks offer adjustable high-speed-compression damping, low-speed-compression damping, rebound damping and spring preload. They're also rebuildable and re-valvable. Duncan Racing sets up each set of Elka shocks individually to suit the rider, the machine and the riding conditions the suspension will be used in.

DR prepared the LT500R we rode for dune riding with a 2-inch-plus Laeger swingarm and Skat-Trak paddle tires on Douglas wheels. The Laeger swingarm helps keep the Quadzilla's front end on the sand under hard acceleration and includes a convenient Honda-style chain-adjustment system. It also eliminates the cracking problems that affect the stock Suzuki swingarm as age and hard use take their toll.

RIDING IT

The LT500R was built for performance-crazed riders, with no concessions for curiosity-seekers or posers. There's no electric-start button and no reverse. You have to kickstart this machine, and you have to be ready to kick it like you mean it. The Duncan Racing LT500R starts with one or two kicks because it's so perfectly tuned, and it even idles like a trail quad—even the sound of the 500 idling is enough to give you chills. It's like shotguns going off in the distance.

Click the Suzuki into gear, ease the clutch out, and the big motor moves the machine like it weighs nothing. A little throttle provides so much pull you really pay attention to where you're pointed before giving it more. A run through the gears leaves no doubt the machine could leave a new, strong-running four-stroke 450 in a haze of roost and two-stroke race-gas exhaust.

Once we got accustomed to the 500's crisp, forceful acceleration, it became clear how clean-running and controllable it is. We've ridden stock LT500Rs and though they're powerful, they don't respond as well or pull anywhere near as hard.

The Elka suspension took no getting used to. It was gloriously smooth—even at low speeds—and seemed to have a limitless ability to handle big impacts and jump landings. If you're lucky enough to own a Quadzilla and are still

riding it with what's left of its original suspension, Elka shocks can make the machine more enjoyable than it has ever been.

ENJOYING HISTORY

Riding a legendary two-stroke high-performance quad is always a special experience. Riding one that's carefully tuned and prepared by one of the country's top performance shops is incredible. Duncan Racing enlarged all the greatness the Quadzilla is known for and removed its rough edges and weak points. The DR LT500R is better than the legend ever was. ☐

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Duncan Racing has been modifying, tuning and perfecting the LT500R since it was introduced in 1987. The 2-inch-plus Laeger swingarm helps keep the 500's front end on the ground and ends the cracking problems that affect stock swingarms that have seen lots of hard use.

DUNCAN RACING LT500R

Quad: 1990 Suzuki LT500R

Builder: Duncan Racing

Sponsors: Duncan Racing

International, Paul Turner Racing
Exhaust, Elka Suspension, RK Chain,
Maxima, Fasst, DWT Wheels, Skat-
Trak, Ricky Stator

Motor

Engine Kit: DR/PTR National Midrange
Kit, \$1499 (base price)

Kit includes:

Duncan/Paul Turner Racing Pipe, Fat
Boy 2 Silencer

PTR/DR National Porting

PTR Billet Powerhead

Pyramid Reed Valve

Pre-Jetted Keihin 39mm PWK

Carburetor

DR Clamp-On Air Filter Kit (goes inside
stock airbox)

Additional Project LT500R Features

Piston: Forged w/ DR Mod

Crank: Rebuilt by DRI

Ignition/Flywheel: OEM DR Flywheel
Mod

Pipe Triple Plate Chromed, \$120

Drive System

Clutch: DR C25

Clutch Basket: Hinson Billet Basket,
\$249.95

Transmission/Mods: DR Blueprint

Chain: RK 520 O-ring

Sprockets Front/Rear: Sunstar Gearing
Front/Rear:13/42

Front End

Front Bumper/Grab Bar: DR Chrome

Front Bumper, \$69.95

A-Arms: OEM

Front Shocks: Elka Stage 4, \$1595

Rear End

Swingarm/Length: Laeger Round
Housing +2"

Rear Axle/Width/Carrier: Team Axle w/
Laeger Carrier

Rear Shock: Elka Stage 4, \$1095

Tires/Wheels/Hubs

Tires Front: Skat-Trak Mohawks

Tire Sizes Front: 21x7x10

Tires Rear: Skat-Trak 8-Paddle Edge

Tire Sizes Rear: 20x11x9

Wheels Front/Rear: DWT Red Labels

Hubs: Front, Stock; Rear, Team

Brakes

Calipers Front/Rear: OEM

Pads Front/Rear: OEM

Brake Lines: Crown Series Front,
\$109.95; Rear, \$39.95

Handlebars/Controls

Handlebars: Flexx Bars, \$349.99

GPR H-Mount w/ Anti-Vibe Rubbers,
\$85/\$22

Throttle: Thumb w/ Billet Cover

Clutch Perch: Works Connection,
\$169.95

Cables: Motion Pro

Grips: Spider

Lights

Ricky Stator Light Kit, \$239.95

Details

OEM Rear Grab Bar Chrome

Fuel Tank: OEM

Seat: OEM w/ Custom One Seat Cover

Body Plastic: OEM Yellow Fenders w/
Maier Black Front Nose Piece

Graphics: Custom DRI

Footpegs: OEM Chrome

Other Special Setups

Chroming: Pacific Plating



Suzuki's 500cc, two-stroke sport quad produces instant, massive power. You have to feel it to believe it.