



Between 1987 and 1990, Suzuki sold one of the best dune, desert, and recreation high performance quads ever made. The Suzuki LT500 QuadRacer was, for its time, the largest displacement liquid-cooled two-stroke ATV ever made.

This was back when the future of racing two-stroke performance quads looked bright. These big bore behemoths were fast, furious and fun. Unfortunately, they were also short lived.

SNAP, CRACKLE, & POP

The first batches of LT500 QuadRacers to roll off the assembly line were not without their problems. A lot of the machines were plagued by a sketchy reliability record. Engine durability was the major problem, and some of these early Q-Racers earned a reputation for hand grenading cranks, pistons, and bearings.

Even so, the 500 QuadRacers were hot. It wasn't long before savvy engine performance shops came up with remedies that made the LT500 QuadRacers more durable and even better performers.

Unfortunately, after a short three year run, Suzuki chose to retire the LT500 QuadRacer from its line and discontinue it for good.

It was soon relegated to dinosaur status in the high performance quad ranks as manufacturers switched from making state-of-the-art two-

stroke high performance quads to mass producing tamer but better selling 4x4 and utility ATVs.

BRINGING BACK A CLASSIC

Duncan Racing International has a well deserved reputation for high quality race-proven performance modifications. They have built engine hop-up kits for ATVs since the very beginning of the sport in the early seventies.

Duncan's many improvements for the LT500 QuadRacer have stood the test of time. We contacted them and wanted to know how to make a classic machine like the Suzuki LT500 into a more powerful, faster, and more reliable rocketship.

COMMON PROBLEMS WITH THE 500

"The Suzuki 500 requires a much higher degree of workmanship than Honda or Yamaha ATVs," says Duncan Racing's Loren Duncan. "That severely limits the talent pool to work on your Suzuki. The main bearings get loose in the center case. The primary reason is Suzuki's very poor quality aluminum in the original cases. It is best to repair or replace them with new and improved OEM (Original Equipment Manufacturer) cases. Some people install inserts for the bearings, but they are only a short-term repair because the inserts come out also.

"At Duncan Racing, we have had over 250 LT500 cases apart to follow these problems. We have seen flywheel rivets fail. This is usually because of the poor quality units supplied from the manufacturer. We either repair or purchase new upgraded OEM flywheels.

"Another item that is of poor quality on the Suzuki 500 is the stock airbox," says Loren. "The stock air filter does not seal properly to the airbox. We fix this by installing our DR adapter and modify the box for a clamp-on type filter.

"We also found that a lot of 500 QuadRacer owners were using poor quality fuel and pre-mix in their machines. For maximum reliability, all LT 500 should run on race gas. We feel that TRICK Racing fuel or VP C-12 are excellent choices. One of the best pre-mix oils that we recommend is MAXIMA 927 mixed at 32:1.

"You should look out for water pump failures on the LT500s as well," adds Duncan. "The culprit is the bearing/shaft assembly which gets loose in the clutch cover. The fix is to install

DUNCAN RACING SUZUKI LT500 QUADRACER

How to make one of the best big bore duners even better

By the rebuilding specialist at Dirt Wheels

a new clutch cover (in severe cases), and put in a brand new shaft/bearing assembly, along with a new mechanical seal and oil seal. These should be installed by a competent technician who knows the specifics of this engine.

DUNCAN RACING LT500 MAKEOVER

We started our Suzuki rebuild with a 1990 SUZUKI LT 500 that had been sitting idle in the back of the Duncan Racing shop for several years.

Since the engine was an unknown, it was felt the transmission, crankshaft and clutch would all have to be rebuilt or refurbished before starting any new performance modifications. After performing checks on all these items and making sure the engine was up to snuff, Duncan proceeded to modify the stock motor.

ENGINE REBUILD

The first item of business was to install one of Duncan Racing's LT500 high performance engine kits. This kit included a Paul Turner Pipe, Fat Boy Silencer, Paul Turner National Porting, PTR adjustable compression



A Duncan Racing PTR National engine kit with a Powerhead and DR Super Flow carb mod gave our LT500 a major boost in power. The mighty liquid-cooled two-stroke is still a potent weapon in the dunes.



Brian Radovich launches off a Pismo dune aboard the Duncan Racing LT500. We upgraded the stock Suzuki suspension with a set of Ohlins shocks up front and a revalved Suzuki shock on the back end. The suspension mods made it a much better all-around race and play machine.

Powerhead, a Pyramid Reed Valve, Keihin 39mm PWK carb with a Duncan Racing carb mod and jet kit, a K&N Filter, and Outerwear filter cover.

The next item on our modification list was purely cosmetic. We had Duncan apply their Triple Plate Show Chrome package to our Paul Turner pipe.

To get the Suzuki's clutch up to speed, we also installed a Hinson Billet Clutch Basket with a DR-C25 clutch kit. These mods help solve any reliability issues with the older clutch.

SOLVING ANOTHER PROBLEM

One area that needs special attention on the LT500 QuadRacers is the stock airbox. Duncan Racing has come up with a replacement mount for the stock air box where the filter clamps onto a rigid hose attachment instead of the flimsy stock airbox's faulty design.

Like its Yamaha Banshee counterpart, the Suzuki LT500's stock airbox is the weak link in preventing sand and dirt from getting into the engine and making short work of your motor's internal moving parts.

MORE CHROME

Since we wanted our LT500 to look as good as it ran, we had Duncan apply chrome to various odds and ends on the machine.

Our list of aluminum items that were chromed consisted of the mag cover, clutch cover, power valve cover, water pump cover, and the pipe clamp.

FRAME, SHOCKS & INCIDENTALS

Our LT500 QuadRacer chassis was left stock as were the original A-arms. It was felt the machine was already more than wide enough for dune riding and the handling of the big Suzuki has always been predictable and stable in this environment.

In the suspension department, the stock suspenders were long gone so we bolted on a set of Ohlins front shocks. This gave us an additional inch of travel (10 inches) over stock and offered more adjustability for varying riding conditions. We also had Duncan rebuild our stock Suzuki rear shock with PPS supplying the new valving on the rear shock along with DR shock covers installed front and back.



The Ohlins shocks are pricey at \$795 a set, but a necessary addition if you want to fully utilize the extra power on hand with the DR engine kit for the LT500 QuadRacer.

LT500

A set of DR front and rear steel braided brake lines replaced the stock rubber hoses for increased feel and improved braking performance.

Other items, such as a DR chrome front bumper and TAG Metals T2 CR Hi-bend handlebars, were added for looks and comfort.

A DR chromoly +2 inch round housing swing arm replaced the stock Suzuki unit to help keep the front end down and the machine hooking up in the dunes. A Tsubaki 520 Omega O-Ring Chain with 14/40 gearing was installed to replace the rusted stocker and get the power to the ground.

We also replaced the stock Suzuki thumb throttle with a Motion Pro CR-type twist throttle and cable. BRAKING brake pads and a billet aluminum gas cap were added as well as a Honda CR-style clutch perch, along with a DR rear caliper block-off plate.

MORE CHROME

A few other items we had chromed on the LT500 were the front A-arms, swing arm, kick starter, foot pegs, steering stem, rear brake pedal, grab bar, grill, and rear brake stay.

MORE STUFF

The stock Suzuki 500 headlight was



Tag T2 CR high-bend handlebars, with a Motion Pro CR type twist throttle and CR perch assembly, give the LT500 a racer-like feel. The trick Ricky Stator billet light kit system offers much better nighttime visibility thanks to one of his stator rewinds that increases output up to 200 watts.

replaced with a set of Ricky Stator lights. These units project a brilliant beam of light through dual lenses for much improved night riding ability. In the wheel department, we replaced the stock Suzuki rims with Douglas Red Label .190s.

Since this was a duner, we mounted Sand Tires Unlimited Razorbacks (22x8x10) up front, with Sand Skate II's (20x11x10) on the back.

TEST RIDE REPORT

All these modifications had us itching to ride our revamped and renewed Duncan Racing 500 Quad-

Racer. We headed out to one of our favorite dune areas and proceeded to put the mighty LT500 through its paces.

Since it had been quite a while since we last tested an LT500, we were amazed at how competitive it was against a wide variety of machines we encountered during our comparison.

We raced it against Raptors, Banshees, DS650s and heavily modified 400EXs in the dunes. It easily beat up and flat out rode away from everything except the most radical high performance quads we ran it against. Only highly modified Banshees, built-up DS650's and heavily modified Raptors were in the same league with our Duncan Racing LT500 QuadRacer.

The big Suzook 500 has the same large feel and demeanor of the equally large Bombardier DS650. It was quicker accelerating than almost any four-stroke powered racer we ran it against, especially in the lower gears. The handling and stability were predictable and the machine's revamped suspension allowed it to easily handle the mega-leaps we repeatedly engaged in.

Overall, our modified LT500 QuadRacer was very competitive against its much more expensive four-stroke rivals, as well as being easier to ride than its two-stroke Banshee cousin. It

also costs a lot less to bring it up to speed, versus what you have to spend to extract more performance from the thumper engines, or even the cost of purchasing dual pipes, carbs, and pistons on the Banshee.

Our recommendation? If you happen to own one, keep it. Sure, it is a certifiable pain to remedy some of the LT500's reliability shortcomings, but once you do, you will have one of the fastest and most cost-effective big bore racers on the dunes. Not a bad thing when you think about it.

ADDRESS:

Duncan Racing International
10734 Kenney Street Suite A



The stock Suzuki airbox is junk and will leak dirt into your expensive top-end like a sieve. You can fix it with one of DR's clamp-on air box adaptors (\$25), a clamp-on K&N filter (\$44), and an Outerwear cover (\$13.95).



Suzuki's LT500 was always known for its legendary low-speed torque and eyeball-watering top-end acceleration. With the addition of the DR high performance engine kit, reliability is improved and the powerband strengthened and broadened.

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DUNCAN RACING PRICE LIST:

- DR/PTR national engine kit (with powerhead).....\$1449.00
- DR super flow carb mod\$60.00
- Pipe chroming triple plate show Chrome\$75.00
- Pipe clamp (billet alum).....\$45.00
- Hinson billet clutch basket\$ 225.00
- DR-C25 clutch kit\$125.00
- Complete DR engine rebuild (plus parts & machine work)\$450.00
- *DR Clamp-on air box adapter\$25.00
- Clamp-On K&N air filter\$44.00
- Outerwear\$13.95
- Ohlins front shocks\$795.00
- Rear shock revalve (plus parts) . \$225.00
- F. Steel braided brake line\$109.95
- R. Steel braided brake line\$39.95

- DR-5000 chrome front bumper ...\$149.95
- Tag T2 CR high handlebars.....\$94.95
- Motion Pro CR type throttle.....\$18.95
- Throttle cable\$21.95
- Motion Pro clutch cable\$22.95
- CR OEM perch.....\$65.00
- DR block-off plate\$12.95
- Billet fuel cap\$69.95
- Braking brake pads\$29.95 ea
- Tsubaki Omega O-Ring chain\$85.00
- Round housing rear swingarm (spl. order)+chrome, & carrier.....\$1000
- All chrome plating special order call for pricing.

*Customer must install air box modification