

# DUNCAN RACING DREAM RAPTOR

Building a budget quad for only \$24,000!

*By the cost-crunching staff of Dirt Wheels*

□ Suppose you could spend any amount of money you wanted to re-make your high performance quad into the machine of your dreams? Given an unlimited budget, how would you go about splurging literally thousands of dollars on your ATV? That is a question few of us ever get to indulge in these increasingly frugal and cost-conscious days. But let's suppose for a minute that a rich uncle, generous grandpa, or pos-

sibly even a crazed, lotto-winning parental unit were to suddenly bequeath you untold riches.

## CHAMPAGNE DREAMS AND RAPTOR SCREAMS

If you owned a Yamaha Raptor, one of the first places you might look to invest your new found riches is with the proven performance technicians at Duncan Racing International (DRI). The company prides itself on building

first class, high quality engine, suspension and chassis performance kits and only carries the biggest names with the best reputations in the business. Their engine performance kits are race proven and they are so confident in them that they carry a performance guarantee to refund your money if you are not satisfied with any of the products they offer. The fact that they have been in business for over 20 years tells





*We liked the clean lines and no-nonsense look of this extremely detailed example of form-fitting function. If you've got the dough, it's got the go.*

*With the arm-ripping extra muscle of the DRI 740cc big bore engine kit, you can lug the Duncan Raptor a gear high in any corner and immediately leave a roost in your wake when you nail it.*



*With a wider, longer chassis, and more and better suspension travel, our Dream Raptor was more stable and better handling through the rough.*

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you something about the way they do business, and it's not from refunding customers money, that's for sure.

Company owner Loren Duncan called us up and wanted to know if we would be interested in testing a hand-built, finely detailed Yamaha Raptor that they had lavished a ton of moola on. When asked how much, Loren estimated that the complete rebuild on the machine, including the stock Raptors retail price of \$6499, would come in at over \$24,000!

We gasped and wondered just how you would go about spending that much money on any vehicle without resorting to gold plating? Loren told us to rest assured, the money was all well spent, and that the end result was a machine that would not just look good, but perform better than any other Raptor we had ever seen or ridden.

## IS SEEING BELIEVING?

Loren agreed to lend us the Dream Raptor so we could see for ourselves what a money transfusion could perform. We wanted to know, if given an unlimited budget, how would you spend it to transform this mighty beast into an even fiercer and bolder all-around fun machine?

To start the project off, the first order of business was to strip the stock Raptor down to the frame. Next the stock paint was removed, a primer coat added and then the chassis was Powder Coated by Powder 1, a professional painting outfit located near Duncan's shop in the San Diego suburb of Santee, California.

Visually, the quad got a new DRI team graphics kit and seat cover, as well as the usual assortment of spon-



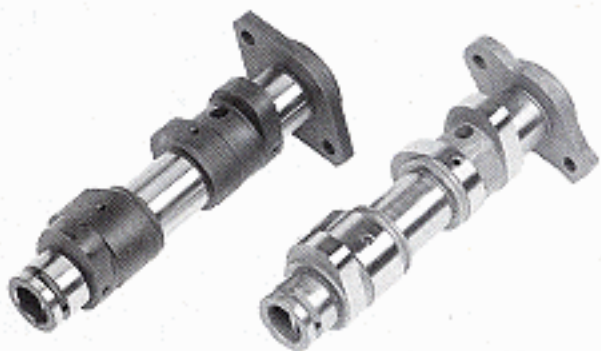
*Team Duncan Racing's Tavis Cain had no problem uncorking monster air leaps off the table tops at Glen Helen Raceway. The Duncan Dream Raptor has beaucoup suspension, a ripping motor and razor sharp handling. A potent combination.*

sors' stickers and decals. Tag grips, a Motion Pro twist throttle, Works Connection adjustable clutch perch, frame guards and trick DRI handguards to help protect the rider's hands help round out the visual detailing of the Dream Raptor.

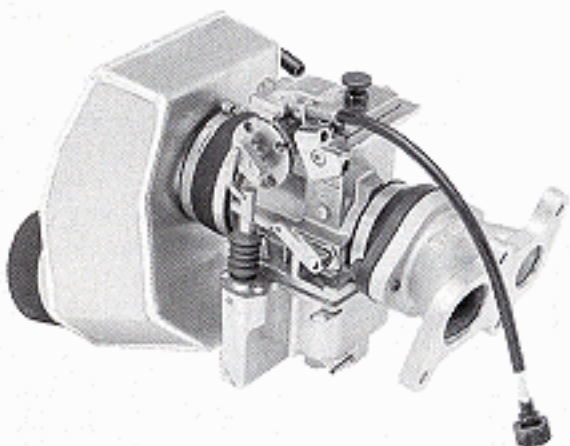
## MONSTER MOTOR PACKAGE

To get even more power to the ground, the Duncan Dream Raptor gets one of DRI's 740cc "National" Raptor engine kits. It consists of a Fat Boy 4 Complete stainless steel exhaust system, a DRI port job, big bore kit and high performance camshaft.

Complementing this big bore engine kit is a single Edelbrock carb



*Hotter DRI cams offer a stronger hit on the low and mid with even more overrev on the top.*



*An Edelbrock carburetor kit gets more juice to the bigger mill. It helps pick up the bottom and mid-range throttle response.*

which replaces the stocker's twin 33mm Mikuni's. A Vortex X10 CDI programmable ignition also allows you to change engine ignition mapping with the flip of a switch mounted on the handlebars. A Hinson billet clutch basket with a six-spring inner hub pressure plate and DRI heavy duty clutch kit brings the Raptor's transmission up to speed to handle the extra horsepower the motor is now capable of.

## DREAM RAPTOR PRICE LIST

### ENGINE MODS

\*DRI 740cc "NATIONAL" Raptor Engine Kit \$2196.00.

**Kit includes:** Fat Boy 4 Complete Stainless Exhaust System, DRI Flow Tested Porting and 3-Angle Valve Job, Big Bore Sleeve-Installed and bored to DR61E 12-1 piston (105mm, 105.5mm, 106mm), Headgasket, Camshaft, HD Valve Spring w/titanium retainers, Shortened Bronze Guides, Hardcoats #2000 Camshaft.

**Kit requires:** Center Case Machining. Engine disassembly required for machining.

Edelbrock Carburetor Kit 42x25 \$674.00.

\*VORTEX X10 CDI Programmable Ignition \$399.00.

(Includes dual curve handlebar switch)

Hinson Billet Clutch Basket \$225.00.

\*Hinson 6-Spring Inner Hub Pressure Plate Kit \$155.00.

DRI DR-C36 HD Clutch Kit \$165.00.

\*ACE High Capacity Oil Tank w/Steel Braided Lines \$149.95.

Pro Design PRO FLOW Air Cleaner Kit (620) \$149.95.

Motor Oil Maxima Premium 4 10W/40 Fuel: Trick

### CHASSIS

DRI Chrome Front Bumper \$169.00

\*DRI BILLET Front Wheel Hubs \$399.00.

Roll Design Lobo II Front Suspension Kit \$2399.00.

**Kit includes:** Roll Gull Wing A-Arms, Tie Rods, ELKA Long Travel Shocks,

\*"CROWN" Series Front Brakelines.

Roll Design Steering Stem (cast stainless head and base)

\$349.00.

Clamp Kit for C/S Bars \$89.95.

TAG T-2 Oversteer Handlebars \$94.90.

\*GBR Steering 2.0 Damper Assy. \$420.00.

Roll Design Swingarm (ground housing design) \$1055.00.

(Length 17.5", +1/2" over stock length)

Round Housing Millinium R. Carrier. \$299.00.

\*DRI Stainless Axle Nut. \$99.95.

\*ELKA Rear Shock. \$775.00.

\*ELKA Rear Linkage. \$198.00.

\* Linkage features (when used with Elka Rear Shock) allows for 2 inch additional travel. Lower ride height, Sober Initial Travel for Pusher Ride. Give machine a more progressive suspension.

\*TEAM Industries Rear Axle. \$380.00.

\*TEAM Industries Rear Wheel Hubs. \$129.00.

Rear Brakeline "Crown Series" Steel Braided. \$39.95.

Front and Rear Disc BRAKING WAVE Rotors \$130.00 each. Front and Rear Brake Pads BRAKING \$29.95 each.

Roll/MS Cast Stainless Footpegs \$299.00.

Roll/MS Cast Stainless R. Brake Pedal. \$129.95.

BMS Heel Guards. \$149.95.

DRI Billet Aluminum Shift Lever \$89.95.

Front Tires ITP Hole shot 21x7x10 \$56.00 each.

Rear Tires ITP Holeshot XCR 20x11x9. \$79.00 each.

Front Wheel DOUGLAS Ultimate Shamrock. \$240.00 each.

Rear Wheel DOUGLAS Ultimate Shamrock. \$240.00 each.

Goaring 15x10 (sometimes 16x10)

Trabaki Omega O-Ring Chain.

### ACCESSORIES

DRI Team Graphic/Seat Cover Kit \$119.00.

DRI Thumb Throttle Cover. \$39.95.

DRI Chain Guard. \$29.95.

DRI Block Off Plate. \$15.95.

Works Connection Pro/Adjustable Perch. \$129.95.

\*Works Connection Frame Guards. \$59.95.

TAG Grips. \$15.95.

Motion Pro Clutch and Throttle Cable. AC Grab Bar. \$44.95.

AC Chassis Skid. \$129.00.

AC Swingarm Skid. \$99.00.

**EXTRAS:**

Powder Coating done Professionally by POWDER 1

Chrome done by Pacific Plating.

**SPECIAL THANKS**

Tomocula Motorsports, Roll Design, BMS, Elka Suspension, Pro Design, Vortex

Braking.

**TOTAL COST TO BUILD** \$24,000.00 plus

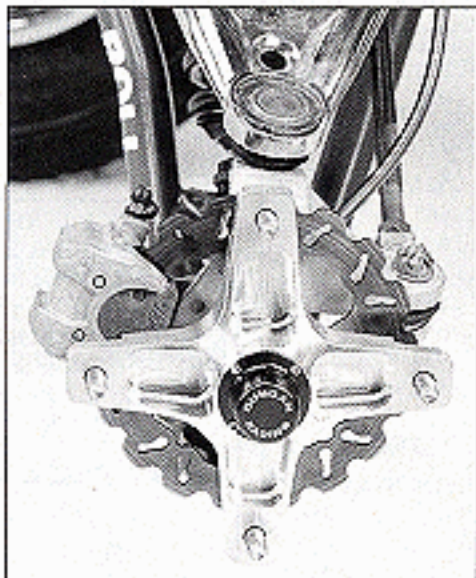
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To make sure there is plenty of oil available for increased engine cooling, a new ACE high capacity aluminum oil tank with heavy duty steel braided lines replaces the stock unit. A Pro Design PRO FLOW air cleaner kit replaces the stock Raptor air intake system for improved air flow and a better all around seal than the sieve-like stock Raptor air intake system.

### CHASSIS WORK

The next items to get updated on our Dream Raptor were the stock chassis components. A DRI chrome front bumper was bolted on up front along with a Roll Design Lobo II front suspension kit. The kit includes a Roll Gull Wing A-arms, tie-rods, ELKA long travel suspension and Crown series steel braided front brake lines.

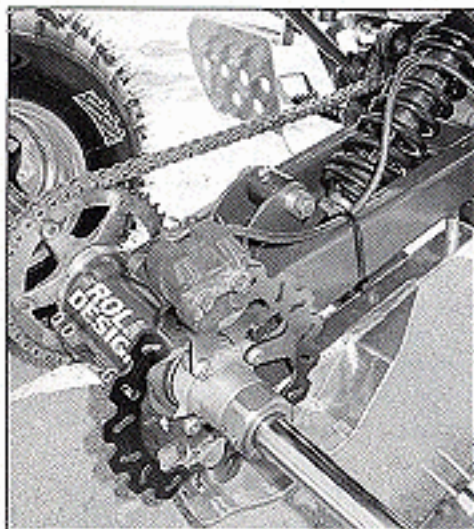
To allow for different types and higher-mounted handlebars, a Roll Design steering stem was installed with a clamp kit for oversized bars. We mounted a set of Tag T-2 handlebars and installed a GBR steering damper onto the bars. This steering damper has a multi-adjustable knob that enables the rider to dial in the amount of stiffness you want in the bars while you're riding. This helps



*Braking pads and Wave Rotors help strengthen the braking ability of the machine while the trick billet aluminum front wheel hubs give it that Raptantacious look.*

take the head shake out of the bars at speed and provides a safer, more secure ride in rough conditions.

A new Roll Design rear swingarm with a round housing design replaces the stock Raptor swingarm. It measures out to 19 inches which adds an additional 1-1/2 inches over the stock length for a steadier ride through rough whoops. A DRI stain-



*On the back end, the Dream Raptor has a cool 11.5 inches of travel (stock is 10.1) courtesy of the linkage-equipped Elka shocks. The Elka Raptor linkage allows for the extra suspension travel without having to increase the machine's overall ride height.*

less steel axle nut is also mounted as is a new Elka rear shock with adjustable compression, rebound and preload. The Elka shock also has their new rear linkage system which allows for the shock's additional travel, yet still retain a low ride height with its initial softer travel for a plusher ride.

Team Industries' rear axle and rear

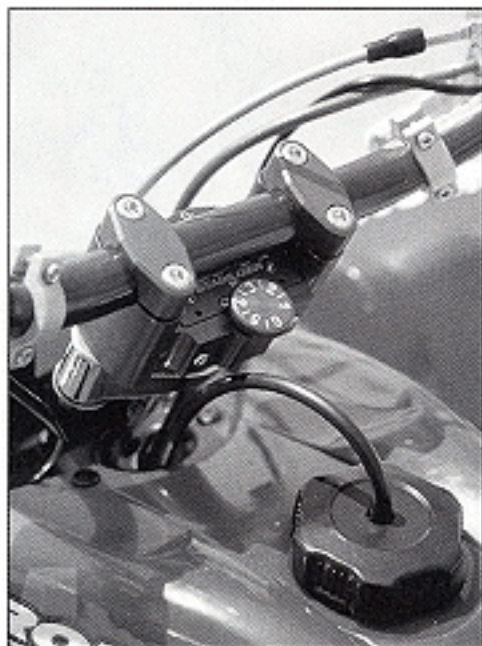
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hubs replace the stockers for increased durability and strength and a set of Crown series steel braided brake lines replace the stock rubber units. Both the front and rear Raptor discs were replaced with Braking Wave Rotors and Braking disc brake pads.

For a more secure rider's perch, the stock footpegs were replaced with Roll/MS cast stainless steel footpegs. These aggressive looking monster pegs have double the area of the stock pegs and provide a much better grip. A new cast stainless rear brake pedal is also beefier and stronger than the stock unit it replaces. IMS's polished metal heel guards give the machine a stronger replacement over the stock plastic guards. The steel Raptor shifter was replaced with a slick-looking, beefy billet aluminum unit from IMS as well.

## WHEELS & TIRES

On the front and back ends of our Dream Raptor we installed a set of Douglas Ultimate Shamrock series aluminum rims with built-in bead-locks and DRI billet wheel hubs. These are some of the lightest and trickiest looking wheels on the market



◀ A GBR steering damper on the front offers a much smoother high speed ride over extremely choppy ground.

chain guard, rear brake block-off plate, AC grab bar, chassis and swingarm skids, and 15/40 gearing, along with a Tsubaki Omega O-ring chain. Maxima Premium 4 10w40 was used in the engine and Trick racing gas was used to get the maximum benefit from the extensive motor mods.

## TEST RIDE

Since we had replaced almost every item on the stock Raptor with something trickier, stronger, lighter or higher performing, we now had a machine that was for all intents and purposes not a Raptor. An unlimited amount of money had been poured into this machine and virtually nothing was left stock. The real test now was what sort of improvement had we gotten with our infusion of cash?

Well, to start with, we now had one of the hottest looking vehicles at the track. From the trick bead-lock equipped Douglas rims with their billet centers to the flashy graphics and decals, our Dream Raptor definitely has eye-appeal.

It sits long and low and the extended height steering stem and extra

and really help give the machine a racy, unique look.

For added traction, ITP Holeshots (21x7-10 front) and XCR rears (20x11-9) were slipped over the Douglas rims. These rugged tires are a great all-around performance knobby with excellent puncture resistance and good wear characteristics.

## ODDS & ENDS

A few of the other items installed on our Dream Raptor were a DRI

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wide handlebars give it a mean, lean, and racer-like appearance. The long travel Elka shocks with the extended Roll Design gull wing A-arms help keep the overall height of the machine down while at the same time giving it additional and plusher suspension travel.

Out on the track and trail, the motor puts out an incredible rush of brute horsepower and overall acceleration. The DRI 740-kitted Raptor has incredible stump-pulling low-end acceleration and rockets into a mid-range hit that spits rooster-tails of dirt with each shift. We experimented with the Vortex CDI ignition by switching between the high and low settings. On the low setting, we found the motor to have a bit better low-end power, yet still pull strongly on the top-end. When we switched to the high setting the very bottom dropped off a slight bit but the mid-range was even stronger and it seemed to pull a bit more rpm on the top.

Overall, we felt the DRI Raptor engine had outstanding torque and power characteristics. It was extremely easy to ride, with loads of low-end, and it could easily pull a

gear high and still rev to the moon. We had no problems with clutch wear and tear and the Hinson clutch has a well deserved reputation for reliability and performance. If you modify your Raptor motor, you will have to beef up the clutch to handle the increased loads it will be running under.

All the power in the world will still not do you a lick of good if you can't make it stop, turn, and get around the track. That is where this particular machine shines. With the lowered Roll Design front end and Elka long travel shock with the new rear shock linkage, the Raptor's turning and cornering skills are much improved.

Our machine was set up more for the trail than the track, so it wasn't as low as it could be, but we still felt it handled the quick turns, braking and stuffer bumps, and launches off of jumps incredibly well. You can ride it much more aggressively and drive it deeper into rough corners with complete confidence. The suspension action soaks up the worst braking bumps with ease and you find yourself driving harder into rougher and rougher terrain.

Going fast is all about confidence. The Duncan Dream Raptor is a pay-as-you-go confidence building



*Tavis gets on the gas hard coming out of a loamy So Cal corner. The Dream Raptor is easy to move around on and wickedly fast.*

course. The more money you spend, the more confident you feel. While the price to build this all purpose masterpiece is high, the adage that you get what you pay for certainly applies here. You pay a lot, you get a lot. The bottom line payout for you will be the confidence you get with your new ride. Only you can determine if the investment is worth the return. □