

# FIRST LOOK: NEW 2024 ATVs & UTVs CAN-AM, POLARIS, YAMAHA & KAWASAKI

NOVEMBER 2023

# DirtWheels

THE #1 UTV/ATV MAGAZINE



## UNLEASHED! NEW CAN-AM MAVERICK R DETHRONING THE RZR PRO R?

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• 2024 POLARIS RANGER 1500  
• YAMAHA 6-SPEED YXZ1000R

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• ALL-NEW KAWASAKI MULE PRO 1000  
• YAMAHA WOLVERINE X2 1000



## DUNCAN LOBO 305R

A 25-YEAR-OLD CLASSIC  
HITS THE TRACK ONCE AGAIN

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## REBORN CLASSIC

# DUNCAN RACING/ ROLL DESIGN LOBO TRX305R

A 25-year-old ATV racing icon is restored to perfection

By the staff of *Dirt Wheels*

□ When it comes to sport quads, it's been said by many industry insiders that Roll Design's Lobo is the best of the best, especially for West Coast racing. When you consider that very few new Lobos are manufactured today, the appeal of the legendary machine becomes even greater. "When you ride a Lobo, it's like driving a sports car with short tires and fast steering. You don't just cruise one; you've got to ride it," says Loren Duncan, owner of Duncan Racing International.

Lobo frames are hard to come by nowadays. "It's just so time-consuming and cost-prohibitive. Right when COVID started, Doug Roll built a batch of two or three frames. I know, because we built two of them, and one was featured in *Dirt Wheels*," said Duncan, who speaks reverently about working with Roll Design. The fit tolerances, attention to detail and hours upon hours of testing that go into every Roll Design product speak volumes, and Roll's insistence on perfection means he has a hand in every frame and part that leaves his shop. "I've never had to use a hammer to put a Roll Design part together," claimed Duncan.

### HOMEcoming

One of Duncan's customers recently purchased a used Lobo. "This quad is a 1998 Lobo chassis built by Roll Design. The original customer bought it directly, and we built the motor—a PC 305cc. The original owner rode the crud out of it for 20 years. It just shows how much punishment these machines can take," claimed Duncan. This Lobo eventually found its way home. Duncan continued, "Another client of ours bought it, and we did a ground-up restoration on it."

There have been many new inno-

ventions for sport quads since this particular machine was created over two decades ago, but it was decided to stick with what already worked. "Other than adding a GPR stabilizer, which wasn't available for a Roll chassis at the time, we tried to keep it as true to form as we could, but we went through everything," said Duncan.

### A SOLID FOUNDATION

"The chassis was in remarkably great condition," claimed Duncan. Once the plastic fenders were removed and the chassis cleaned up, the prognosis was much better than expected. "We didn't find any cracks in the chassis, and if you had seen this thing beforehand, you never would have believed it," claimed Duncan. "Roll Design is just head and shoulders above the rest, especially on the vintage stuff."

Parts that worked in 1998 aren't necessarily what's considered the best today, but Duncan wanted to keep this build historically accurate. "What was popular in the late 1990s was running 400EX front spindles, and this had those, so we kept 400EX spindles on it." The original spindles were in excellent condition and just required some freshening up, which is good since these parts were discontinued years ago.

### BIGGER ISN'T ALWAYS BETTER

"This motor package has been around for a long time. I can't even tell you how many races these PC motors have won," claimed Duncan. "We make four PC motors—a 275cc, which is just a big-bore bolt-on with stock cases. It's even more reliable than a stock motor. And then, everybody likes big motors. We've got a 340cc and the new stro-

ker 370cc," said Duncan. "But, people get very misled and caught up in displacement, and the thing about the big engine is that it doesn't rev, whereas the 305cc is super popular because it has a lot of roll-on torque, but it revs a lot better than the bigger-bore motors. It's a little more versatile."

Duncan Racing engines are designed to endure the worst possible racing scenarios. "Our cylinders are Nikasil coated, while most everybody else is still running a sleeve. So, we've got a large flange on it, and we've got to bore the cases to set it on there," said Duncan. "I'm a huge proponent of Nikasil bores for heat dissipation and longevity. We've had PC cylinders finish races with no coolant because there was an accident or a ripped hose; it's the Nikasil. A steel liner would only make it a quarter of a lap," claimed Duncan. The PC 2000 cylinder also allows for 25 percent more coolant capacity than a standard cylinder. "We tested these cylinders for two years before we sold them," claimed Duncan.



Originally built in 1998, this Roll Design Lobo features a polished PC 2000 305cc power-valve engine with plenty of low-end grunt and fast-revving mid- to three-quarter range power.



## **DUNCAN RACING TRX305R "LOBO BUILD SHEET (MX TRIM)**

Builder: Duncan Racing International  
Contributors: Paul Turner Racing, Hinson, RK Chain, GPR, Maxima, SSI, GBC, ODI

### **MACHINE**

1998 DR/Roll 305cc Lobo ATV completely refurbished by Duncan Racing

Quad weight: 350 lb.

Chassis: 1998 Roll Design Lobo MX

### **MOTOR**

Motor (type and origin): Two-stroke Honda TRX250R base. Equipped with Duncan Racing PC 2000 305cc power valve, Nikasil-plated)

Engine kits include PC 2000 power valve cylinder & billet PC 2000 head, Paul Turner Eliminator pipe, Fat Boy silencer, DR Keihin 39mm PWK carb w/ SuperFlow mod, Pyramid reed valve, K&N. Complete PC 2000 engine kit, \$3999

Bore/stroke: 73.50/72

Displacement: 305cc

Porting: PC 2000 midrange

Head/head mods: PC 2000 head

Piston/piston rod/crank: PC 2000

piston

Ignition/ignition timing: OEM TRX250/

Billet bearing holder

Spark plug/spark plug gap: NGK

BR9EVX .028"

Reed cage: Pyramid reed valve

Carburetor type and size/carb

modifications: Keihin 39 w/ DR Super

Flow

Airbox material and brand/air filter

brand/air filter oil: OEM box, K&N filter

Pipe/silencer: Paul Turner Eliminator

pipe & Fat Boy silencer

Radiator origin/material: GPI aluminum,

\$199

Fuel/fuel octane: VP C12

Two-stroke oil/two-stroke oil ratio:

Maxima 927/32:1

Engine oil: Maxima MTL Endurance

### **DRIVE SYSTEM**

Clutch basket/plates/springs: Hinson

Basket/DR C12 clutch kit

Transmission/tranny oil: HD trans

gears, Maxima MTL

Chain/chain lube: RK 520 O-ring

Chain/Maxima chain wax

Sprocket brand: f/r: Sunstar gearing f/r:

15T C/S & 38T rear

Chassis: 1998 Roll Design Lobo

Lobo chassis assembly; Lobo frame,

A-arms, steering stem, swingarm,

shocks

Price starts at \$18,000

### **FRONT END**

A-arms: Roll Design Lobo

Spindles/hubs: TRX400EX/billet front

hubs (discontinued)

Front end overall width: 50 inches w/

tires

Front shock brand: Axis Shocks

Steering stem: Roll Design

Stabilizer: GPR, \$549

### **REAR END**

Swing arm brand and material/

swingarm length: Roll Swing arm

If you go back and watch videos of Duncan Racing builds on the *Dirt Wheels* website, you'll notice that each machine features an exhaust note that is strong and completely void of any flat spots, hiccups or backfires. It's the details, like the DR SuperFlow mod on the Keihin 39 PWK carburetor, that take these engine builds to the next level. "We just cut any bell obstructions so that the air flows better through the venturi. We generally will use the 39 PWK [carburetor] for a little stronger mid- to top-end pull. The PC 2000 305cc build has good throttle response on the bottom, but it really comes to life between half and three-quarter throttle," said Duncan.

### **SUSPENSION**

We're used to seeing Elka shocks on most of the newer Lobo builds we've featured in *Dirt Wheels*, but this Lobo was originally built with Custom Axis shocks when founder Mike Hallock ran Custom Axis. "These are the original shocks, which we went through and serviced, but they were in excellent shape." The Roll Design Lobo A-arms and swingarm are designed for precise cornering and the abuse that motocross inflicts on pro-level ATVs.

### **PRO RACER TEST RIDE**

Our test ride took place on a private motocross track, which is best

described as having more natural terrain with a combination of tight turns and fast flow. "The power is very linear and easy to ride without being super snappy," said pro racer and frequent *Dirt Wheels* test rider Josh Row. "It has the new Vortex twist throttle from Motion Pro, and I was really happy with the throttle response and clutch engagement. It's really strong off the bottom, especially with the smaller tires. These bikes are so light compared to the TRX450R that I'm used to. It's really easy to flick around."

Now in his early 30s, Row isn't old enough to remember a time when 2-stroke sport quads dominated the



Rear axle/rear axle width/axle carrier: Dominator axle, \$617/rear bearing carrier, \$252/Anti Fade Lock Nut \$266 / 49" wide

Rear shock brand: Axis  
**TIRES/WHEELS/HUBS**

Tire brand f/r: BC tires  
 Wheel brand f/r: DWT beadlock  
 Tires and wheels: \$1299

Rear hubs brand and material: OEM rear hubs

**BRAKES**

Master cylinder f/r: TRX450/TRX250R  
 Brake calipers f/r: 400EX/250R  
 Pads f/r: OEM  
 Rotors f/r (diameter and brand): OEM

Brake lines: Crown Series steel-braided, \$199

Brake fluid: Maxima 550

**HANDLEBARS/CONTROLS**

Handlebars brand and bend: ODI, \$94.95

Throttle type: Motion Pro New Vortex SE, \$69

Clutch perch: Works Connection, \$159.95

Cut-off switch: Pro Design, \$45

**DETAILS**

Nerf bars/front bumper: Custom Roll aluminum nerfs (JSR nets), DR chrome front bumper, \$249  
 Skid plates brand/skid plate location: N/A

Fuel tank material/fuel capacity: IMS Tank, \$289/stock capacity

Seat cover: DR/Pro Top by Zip \$199  
 Body material and brand: Maier OEM-style plastic/white front nose piece/tank cover

Footpegs: Roll Design S/S, \$259

**OTHER SPECIAL SETUPS AND PRODUCTS**

Polished components: Complete engine, \$1250

Chromed components: Steering stem, sub-frame, upper A-arms, \$495

Powder-coated components: Frame, swingarm, lower A-arms, rear brake pedal

**OTHER SPECIAL MODS/SETUPS**

Quick Change clutch cover mod discontinued  
 Billet shift lever  
 DR "Race Team" graphics kit, \$199  
 DR dual O-ring steel exhaust flange, \$99.95

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**NOTES:**

Paul Turner Racing products (pipes/silencers/engine components) are a proprietary division of Duncan Racing International and have been since 1989. PC 2000 power cylinder, Pyramid reed valve, Paul Turner Racing engines/exhausts and Fat Boy 2 silencers are proprietary products of Duncan Racing International Inc.

tracks, but he still appreciates them as much as the racers that were there. "I hadn't ridden a two-stroke on a motocross track in a long time, but it was a lot of fun. The GBC Mini Master tires worked and handled the terrain well. Jump landings were super controllable, and the brakes worked great."

The Roll Design/Custom Axis suspension combo also works great on or off the track. "The suspension handled really well, and all around, the bike felt super light and nimble. There were some good-sized doubles I was hitting, and it didn't blow through the stroke at all," said Row. "We also rode this same quad out at the Dumont sand dunes,

and it was always predictable and, again, felt very light."

**PERFECTION COMES AT A PRICE**

To build this same machine from the ground up today would easily push beyond \$35,000. Loren Duncan has something to say to those that might balk at what it costs to build a Lobo. "I think some don't appreciate the amount of time that goes into some of these vintage builds. You could be watching Barrett-Jackson, and a guy has 10,000 hours in a car. People can't see it, but I can see it. There are 250 to 300 hours in this Lobo," claimed Duncan. The motor alone is entirely polished, which

took a tremendous amount of time and attention to tedious detail.

"We've spent an entire day before just trying to refurbish a brake caliper, because you can no longer get the parts, and you've got to fix what's there or make something that you don't have," claimed Duncan. "I'm restoring a couple of LT250Rs right now. Back in the day, I had all of the parts in stock. I could do a complete rebuild and transmission and have the thing in and out of the shop in a couple of weeks. Today, I've got to Time-Sert 20 holes. I've got to try to make the clutch washer work because they're discontinued; it just takes a lot of extra time." □