



TEAM STAMINATOR

**DUNCAN
RACING/ATV
WORLD PONT
DE VAUX TEAM**

By Bill "WBGO" Lanphier

The Duncan Racing/ATV World team is dead serious about the 12 Hours of Pont de Vaux, the high-speed endurance race in France that remains the premier world-class event of the year. The team's lineup for the 2003 event included two highly modified Yamaha Banshees, a trick YFZ450 and a wild W-Tec KTM 540 from Holland.

"The Banshee is still the machine to beat at PDV," Loren Duncan says. "Our team and French teams have won twice on Laeger's Banshees and, prior to that, we won three times on Banshees with stock chassis. We chose to also race the W-Tec because it did well for us last year and we also wanted to get involved with Yamaha's new YFZ.

"In five years," Duncan continues, "I think single-cylinder, DOHC four-strokes will rule the performance industry. We'll see even bigger-bore four-strokes, much higher tech than the 660R Raptor, which has late 1970s valve-train technology; it's just a workhorse. The YFZ, on the other hand, with its short stroke and light piston, accelerates so hard."

Because of time limitations — the YFZ is a relatively new machine and Duncan Racing/ATV World assembled it in just a month — the team didn't go too crazy with the motor. Major mods include rejettin' the stock carb, a K&N filter mounted to a Pro Design flange, Fat Boy 4 exhaust and a Hinson nine-plate clutch kit.

The frame is stock and no reinforcing was done. However, to run at the maximum-allowed front width of 50 inches, the front of the machine is outfitted with Roll Design Lobo II A-arms in the stock forward location. In back, a slight bend toward the front of the Roll

swingarm gives more clearance and allows more suspension travel for the Elka shocks, which are used front and rear.

In back, a Honda 250R brake caliper compliments the 250R-style rear axle from TEAM Industries. The stock YFZ calipers are retained up front.

THE YFZ AT PDV

With any new machine, there are bugs to work out — the YFZ at Pont de Vaux was no exception. "The charging system was the main issue," Duncan explains, "and every YFZ at Pont de Vaux experienced problems, even machines like ours with a stock electrical system. The charging system would overcharge the battery and literally fry it. The battery on one YFZ got so hot it started melting the fender. Because it's difficult to trouble-shoot electrical problems during a race, all we could do was to keep replacing batteries. We did discover that turning on the lights, even during the day, drew enough power to keep the battery alive a little longer."

Top speed was another issue for the YFZs at Pont de Vaux. Stock for stock, the YFZ and Banshee are closer but, with many years of R&D on the Banshee and only a few months on the YFZ quad, modified Banshees are faster, particularly on a high-speed track like PDV.

"On a motocross track," Duncan says, "the YFZ is faster. But on the long straights at PDV, it's down maybe 10 MPH compared to the modified Banshees. On a paved road, maybe 20 MPH. Before PDV next year, we will have lots of time to do work on the cylinder head and valve train. There's certainly more speed to be had from the machine.

"We'll also put stronger front brakes on the



Two W-Tecs finished in the top 10 at PDV in 2003, including this one from Duncan Racing/ATV World. Check out the wild leading arms (instead of A-arms) which have now proven extremely durable after two years of competition at the 12 Hours of Pont de Vaux.

DR/ATV WORLD W-TEC 540

From Holland, the W-Tec features, instead of conventional A-arms, leading arms which pivot forward. In the rear, the tube swingarm supports the axle at two places — on the outside of the sprocket and brake hub! With a powerful KTM 525cc motor, the machine is 100 percent race ready.

Last year, in its first year of production, three W-Tecs finished in the top 10 at Pont de Vaux. This year, after losing a chain and blowing a center case gasket, Duncan Racing's W-Tec finished seventh overall. The unique chassis still performed admirably, though, and the team plans to race it next year. For a full test of the W-Tec, check out the December 2002 issue of *ATV Sport*.

DR/ATV WORLD W-TEC

RIDERS

David Baldwin (Great Britain), Lindsay Duke (Great Britain), Richard Cole (Great Britain)

MACHINE

Frame: W-Tec chromoly

ENGINE

Type: Liquid-cooled, 4-valve, KTM 525 four-stroke with 540 kit

Major engine mods: Custom flow-tested head, Carillo crank

Exhaust: Scorpion

Clutch: Duncan Racing heavy duty

Transmission: Stock KTM

Front suspension: W-Tec chromoly leading arms, PEP ZPS shocks

Rear suspension: W-Tec round tube chromoly swingarm, (2) PEP ZPS shocks

Rear axle: W-Tec chromoly

Tires f/r: Goldspeed Supermoto

Tire sizes: Front 225/40/10, Rear 165/70/10

Brake calipers: W-Tec

Handlebars: Renthal QuadRacer bend

Throttle: Motion Pro CR-style twist

Nerf bars/front bumper/grab bar/skidplates: W-Tec

Lights: Ricky Stator 100W

Body plastic: W-Tec



Duncan Racing/ATV World attacks Pont de Vaux in full force. Competing against 120 other teams, three of the four Duncan teams finished in the top 10.



1



2

1. Mods to the YFZ make a great machine even better. Because of time constraints, the team ran only 70W lighting. 2. Roll A-arms increase the front width to the maximum allowed 50 inches. But, because Yamaha did its homework, the team was able to leave the wheelbase stock. 3. The stock front brakes are retained but, in back, the team runs a 250R-style rear axle, carrier and braking.

YFZ," Duncan says. "Part of the problem was that the guys rode like they were in a 20-minute moto rather than a 12-hour race. They charged too hard into corners and cooked the front rotors. Still, we'll do more testing with rotors, pads and maybe calipers."

Fuel economy was another issue at PDV. The YFZ didn't get as good gas mileage as the team anticipated and they plan to run a larger fuel tank next year at Pont de Vaux.

"The oversized tank we used at PDV was so new," Duncan says, "I carried it over on the plane. We were getting only about an hour and ten minutes per tank. Our Banshees were getting 15 minutes more per

tank and that translates into one less pit stop over the course of 12 hours."

A BETTER YFZ

"Still, we're happy with the YFZ," Duncan continues. "Yamaha hit a home run with the YFZ and it's way better than most people, even Honda, I'd guess, expected. The stock motor is a stout little runner compared to the others in the class and the rear suspension is a big positive."

"The Elka and Roll suspension components take a really good bike and make it great, with improvement across the board. More stability under hard braking, better over the jumps and, going through the whoops, the tires stay



3

on the ground better. Our exhaust and jetting made a huge gain. We just didn't have the time to really build up the motor this time around and it will probably take more than a bolt-on kit to get the YFZ as fast as the modified Banshees. But, it can certainly make the podium now and one day it could be the machine to beat at Pont de Vaux."

DR/ATV WOLRD YAMAHA YFZ450

RIDERS

Paul Rowlands (Great Britain), Tavis Cain (USA) and Chad Lohr (USA).

MACHINE

Quad: 2004 Yamaha YFZ450

Wheelbase: Stock

Frame/modifications: Stock/none

ENGINE

Type: Liquid-cooled, 5-valve DOHC 4-stroke single

Displacement, bore, stroke, compression: Stock

Piston, head, valves, stator, ignition: Stock

Carburetor: Stock rejetted

Airbox: Pro Design Pro Flo flange with custom K&N filter

Exhaust: Fat Boy 4

Radiator: Stock

Fuel: 98 octane

Engine oil: Maxima Premium 4

DRIVE SYSTEM

Clutch: Hinson nine-plate kit

Transmission: Stock

Chain: Tsubaki 520 O-ring

Sprockets: Sunstar

Gearing f/r: 16/38

FRONT END

A-arms/overall front width (in.): Roll Lobo II/50

Front shocks/wheel travel (in.): Elka/11

Steering stem/steering stabilizer: Roll/GPR

REAR END

Swingarm: Roll w/stock linkage

Rear axle: TEAM Industries 250R-style

Rear shock/wheel travel (in.): Elka/11

TIRES/WHEELS/HUBS

Tires: Goldspeed

Wheels: Douglas Ultimate w/beadlocks

Rear hubs: TEAM Industries

BRAKES

Brake calipers f/r: Stock/250R

Pads, rotors: Braking

Brake lines: DRI Crown Series

Brake fluid: Maxima

HANDLEBARS/CONTROLS

Handlebars: TAG CR Hi

Clutch lever: Works Connection

Shift pedal: DRI billet aluminum

Cables: Motion Pro

Grips: TAG

Tether kill switch: Pro Design

DETAILS

Nerfs, grab bar, skidplate: AC Racing

Front bumper: Duncan

Foot restraints: IMS

Fuel tank: IMS oversize

Lights: Ricky Stator 70W

Seat cover: ZIP

Body plastic: Stock trimmed

Powdercoated by Powder 1: Swingarm and A-arms.

Contact: Duncan Racing International (866) 379-7223; www.duncanracing.com.

**RIDERS**

No. 2 Banshee: Doug Eichner (USA), John Mitchell (Great Britain)

No. 7 Banshee: Joe Maessen (Netherlands), William Waggot (Great Britain)

MACHINE

Frame: Laeger's Pro Trax

ENGINE

Type: DR/PTR 350 National Kit

Displacement: 350

Major engine mods: DR National Kit; National porting, PTR midrange pipes, Keihin 34mm PJ w/DR Superflow mod, PTR power head, Pyramid reed valve

Clutch: Hinson basket w/DR C33 clutch kit

Stator: Safari 125W

A-arms: Laeger's Pro Trax

Shocks: PEP

Swingarm: Laeger's w/CR 500 linkage

Rear axle: Team Industries LT500R style

Tires: Goldspeed

Brake calipers f/r: TRX250R/Yamaha FJ1200 motorcycle four-piston

Handlebars: Renthal

Throttle: Twist

Nerf bars/front bumper/grab bar:

AC/Duncan/AC

Skidplates: OMF

Lighting: Ricky Stator, 60W (x 2)

Body plastic: Stock trimmed ATVB

While faster on a motocross track, the YFZ is a little slower than the Yamaha Banshee (pictured) on the high-speed Pont de Vaux circuit. However, as the aftermarket learns more and more about the new Yamaha, that gap will close.

DUNCAN BANSHEES

"The two identical Banshees we raced at Pont de Vaux are perfect, given the need for endurance, reliability and speed," says Duncan Racing's Loren Duncan. The No. 2 machine, ridden by five-time PDV champ Doug Eichner, was a strong candidate to win at PDV but bad luck bumped the quad to second overall.

Making the Duncan Banshee extremely competitive at Pont de Vaux is the very strong and reliable motor, which has been outfitted with Duncan's National kit. While the Pro Trax suspension does allow a little more body roll in the corners, according to Duncan, the excellent weight transfer and great traction, particularly when the track is rough, more than makes up for that.

To eliminate the need for chain adjustment during the race, the Banshees are outfitted with burly 530 O-ring chains instead of the more conventional 520 size. This year, the teams again ran an LT500-style aftermarket rear axle, which is larger and beefier than the standard 250R-style. However, because the new supplier, TEAM Industries, builds such a durable product, Duncan tells us, next year the team will probably switch to a lighter Banshee- or Raptor-style rear axle.