

DUNCAN KFX450

World Champ

By the staff of *Dirt Wheels*

□ At this year's White Brothers Four-Stroke World Championships, (see story elsewhere in this issue) two KFX450s pretty much dominated the

racing action. There was one good running Cannondale and a Honda CRF powered machine in the mix. Heck, there was even a Predator in

the top three in one moto. But, all four motos (two TT & two MX) were won by green machines.

One machine was prepared by the Trailer Trash team at Trinity Racing, piloted by Jeremy Schell, and the other was a product of Duncan Racing, ridden by Doug Eichner. Doug ended up taking the overall win and his second Four-Stroke World Championship.

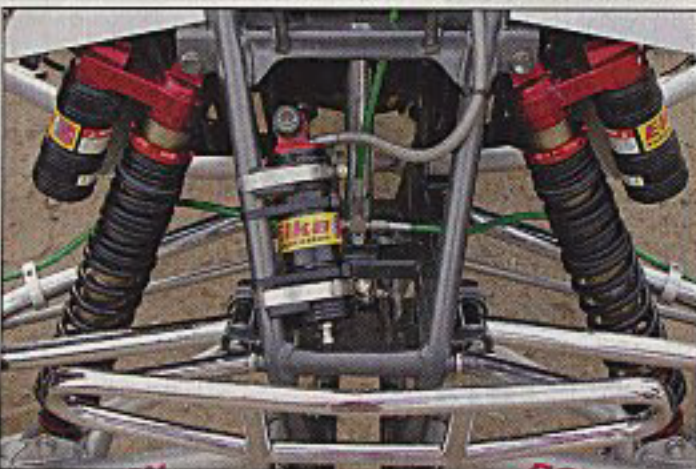
Shortly after Doug finished counting up his winnings, the Duncan Racing crew let us take an inside look at their Pro Production KFX450 racer. They even let us take it for a few laps around the *Dirt Wheels* test track. The only stipulation that they had was you break it, you buy it.

SAVING \$?

With an estimated price tag of \$26,000, we made sure to hammer the machine hard to get our money's worth. Seriously, with the new Pro Production rule in place, Duncan Racing is finding new ways to get the most out of a stock chassis and engine combination.

"This actually saves our customers nearly \$10,000 over building a 250R-

◀ *Doug Eichner has a distinct advantage over his competition at any racing event. His Duncan Racing-prepared machines are some of the best ATVs anyone has ever raced.*



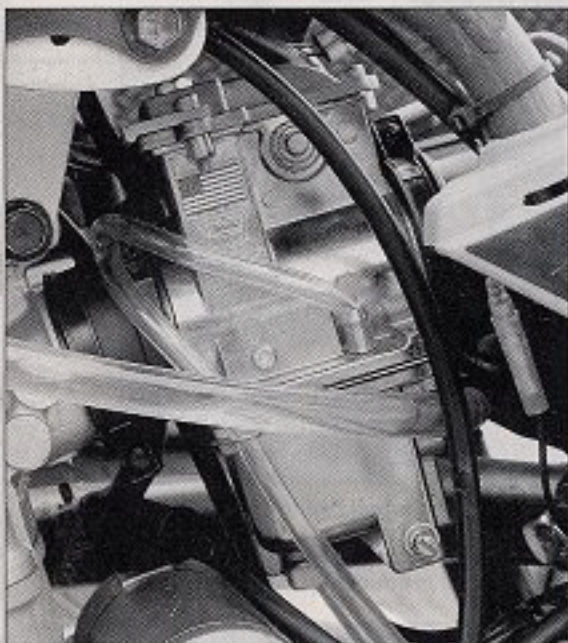
Duncan uses Eika suspension on all of their racing machines. The reservoir in the center is from the rear shock. By placing it up front, it stays cooler due to the increased airflow and greater oil capacity from the longer oil line.



The rear disc holder is modified to accept a Honda 250R rotor for increased ground clearance and the custom calliper from ATV Innovations keeps the brakes cooler.

KFX450

This Elka-equipped KFX450 sits about four inches lower than a stocker. It handles like a go kart and corners like it's on rails. >

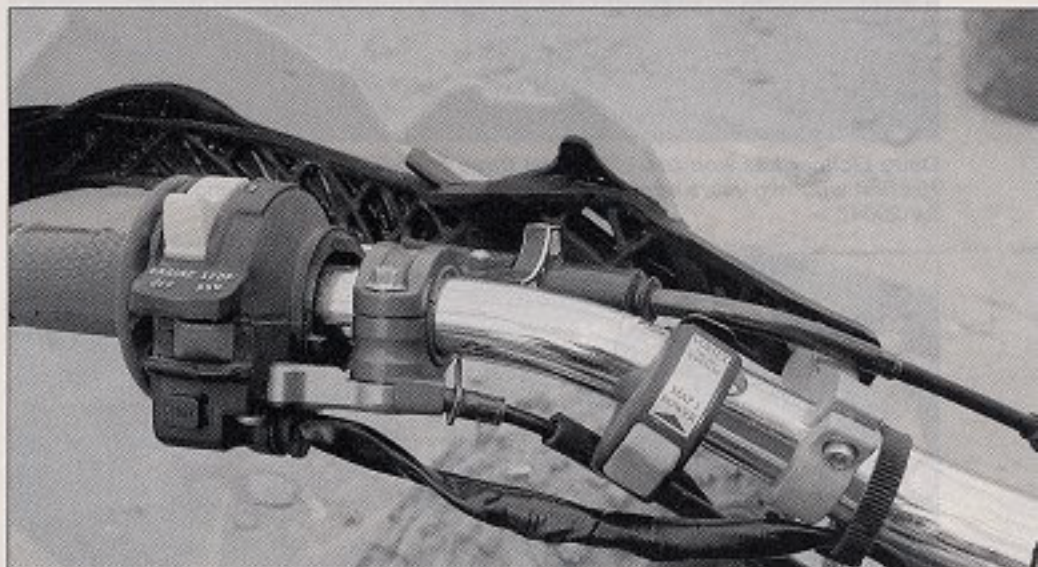


A larger Edelbrock carburetor replaces the stock unit. The bigger 450cc engine needs more fuel and air to make it bark.

Duncan relocated the reverse control to the small lever near the starter button. To the right of the lever sits the controller for the adjustable ignition. >



If the stock KFX/Z-400 motor needs anything, it's air. Duncan uses a Pro Design Pro flow/K&N system. They also remove the air box lid, snorkel and backfire screen.



based machine from scratch," says rep Lenny Duncan. "This is the exact same machine that Travis Cain races on the ATVA MX circuit. Near replica machines can also be purchased from Temecula Motorsports at (909) 698-4123."

INSIDE

What's been done to this KFX400 to make it so special, you ask? Everything! Duncan starts by reinforcing the frame and sub frame, then it gets powdercoated. Next, a new Roll Design swingarm (\$1095) is installed along with the Roll Design Lobo II MX front suspension kit (\$2995).

The kit includes Roll Gull Wing Arms, tie rods, fully-adjustable Elka shocks with eleven inches of travel, and a Crown Series stainless brake line set. The rear suspension is also handled by a fully-adjustable Elka shock (\$775) and an Elka linkage component (\$198) that helps provided one of the eleven inches of travel.

Further out on the front end, this machine features a set of Douglas Ultimate beadlock wheels and 20-inch ITP MXR tires bolted to Duncan's own billet hubs (\$349). Out back the tire and wheel combo is bolted to stock KFX hubs mounted on a RPM Dominator axle (\$449) smoothly turning in an RPM Millennium carrier (\$269). To turn the front end, Duncan or DRI (Duncan Racing International) uses Tag T2 handlebars (\$94.50) mounted on a Roll steering stem (\$349).

DRI uses a large ATV Innovations caliper to slow the rear Braking brand 250R Wave rotor. Up front the stock KFX calipers are utilized with Braking brand pads and standard round rotors. Maxima brake fluid fills the Crown Series stainless lines all the way around. Controls remain stock.

ENGINE TRICKS

Inside that massively reworked chassis sits an OEM KFX motor with a Duncan Racing 450cc National kit

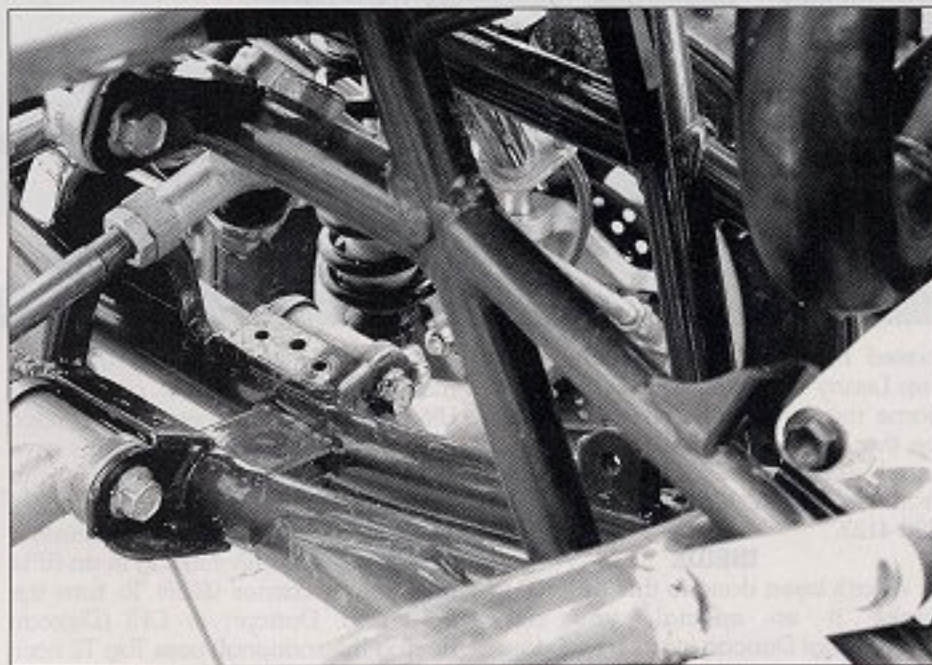
KFX450



Doug Eichner has won two of the last three Four-Stroke World Championship titles. His first win, two years ago, came on a Honda 400EX. Will he change brands again for 2004?



Duncan gives equal billing to all of its sponsors. They work with every one of their supporters to help develop, market and sell products worldwide.



The Vortex ignition mounts in the stock location and plugs into the stock wiring harness. The small white dial on the bottom is for fine-tuning the main adjuster mounted on the handlebars.

◀ Duncan removed the stock oil tank to save weight and to try and extend clutch life. Their findings are not known yet so it's not recommended that you do the same.

(\$1995). The kit includes a Fat Boy 4 exhaust system, DRI piston kit, sleeve, DRI porting, valve job, modified valve guide, DRI camshaft, heavy duty valve springs with titanium retainers. The bore was increased from 90mm to 95mm while the stroke remained stock as did the valves and crankshaft.

We knew from testing the Fat Boy 4 pipe on a stock Z-400 that this engine would rip; to get more out of the engine you have to put more into it. So DRI added an Edelbrock carbure-

tor (\$445) and a Pro Design Pro Flow system (\$129) complete with a K&N filter and Outerwear. The air-box lid was turned into a Frisbee and thrown at Alan, the mail room guy.

Duncan claims this machine only weighs 350 pounds and one of the ways they reduced weight is by removing the dry sump oil tank. Warning!!! This will definitely void any type of warranty you think you might have. However, so will most other modifications and even think-

ing of racing your quad will let the manufactures off the hook for repairs. Duncan is still testing this concept to help save clutch life. However, they do not recommend this modification.

OTHER SETUPS

Since the KFX and Z400 came out, racers have been trying find new ignitions to allow the engine to rev higher before hitting the rev limiter. Until now, the only option was to install a Suzuki DRZ dirt bike ignition and complete wiring harness, and it was quite costly.

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DRI helped develop and now is the exclusive U.S. importer of Vortex ATV ignitions (\$399). The unique feature of this ignition is that it allows the rider to adjust the power curve via a remote thumb switch mounted on the handlebars. Up to ten power curves can be programmed into the system and two can be activated on the fly. The others can be adjusted like setting clickers on a shock with a small box that replaces the stock ignition mounted on the left side of the airbox.

To get the power in motion DRI installed a Hinson clutch basket (\$225) and their own clutch plate kit (\$175). It is transferred through a Tsubaki Omega O-Ring onto Sunstar 15/38 sprockets, and Maxima lubes them all.

DRI used this machine to debut the new GPR steering damper that sits directly below the handlebars allowing you to run a bar pad. Another hot setup that first found its home on this machine is the new Works Connection clutch lever with integrated reverse actuator. On this machine you can put it in reverse without taking your hands off the handlebars. The key now sits on the right front fender.

ACCESSORIES

Stronger, larger Roll/IMS foot pegs (\$239) replaced the stockers. AC Racing outfitted the Eichner championship winning machine with nerf bars and skid plates while DRI used their own chrome bumper (\$169) up front. Throttle was controlled by a Motion Pro 1/4 turn twister and the grips were from Tag.

DRI uses stock bodywork with a Full Bore nose piece that covers the absent light fixtures saving additional weight. Just for show, DRI offers billet shift levers (\$89.95), chain guards (\$29.95) and a billet thumb throttle cover for KFX and Z400s. To top off this project, DRI uses their \$119 seat cover and graphics kit to fly the team's colors.

RIDE TIME

The real question is how does it run. Will \$26,000 make you a better rider? Yes. Is \$26,000 all you need to win a championship? No. What we found when riding this machine is how much better everything works. Not how it's better than stock; how it works better than every other KFX/Z-400 we have tested.

The power is probably the mildest improvement. However, with the adjustable ignition, you could put every ounce of power exactly where you wanted it. For tight sections of the

KFX450

track, you could call up more bottom-end power and let the engine lug around corners and jump over doubles out of them. For the long straights and uphills, make a switch for more mid-range and top-end at the halfway mark and the quad would pull hard forever.

It wasn't as lightning fast as the modified Roll/IMS/Yoshimura Z-450 we tested in the June issue, and it didn't have as much torque as the FST Z-500 we tested in the November 2002 issue. What it did have is smooth tractable power throughout the two powerbands we used.

The different powerbands were very subtle so you didn't have to change the settings if you didn't want to. During the Four Stroke race, Doug used his low-end setting only on the start and at the bottom of the steep Glen Helen uphill. The rest of the lap, it was set to rev.

RACE TIME

The biggest asset this machine has is its chassis. Even with a stock frame, Eichner's DRI quad handles like it is

KFX450

on rails. It sits three to four inches lower than stock and has a go kart-like feel. Over the jumps, it flies straight and is not picky on its landings. While we were getting used to the power, we overjumped a few obstacles with no ill effect. It was equally as forgiving if you came up short.

Most race quads are set up for precise landings and moderate abuse; this quad didn't care how it was treated. You could come down on one wheel or on all fours with a very neutral feel and get right back on the throttle. We didn't care for the long throw twist throttle, but everything else was set up perfectly.

It turned on a dime, stopped at a touch and took off like a bat out of heck.

It's no wonder why Doug took the crown this year. We could probably say that about every race he wins. If his talents, along with the Duncan equipment are the ingredients for winning, then we now have the recipe. DRI at (866) 379-7223 can help you with some of the ingredients. As for the talent part, well, you are on your own. □

24 HOURS ON THE KAWASAKI V-FORCE

A modified
KFX700
goes the
distance at the
24 Hours
of LeFud

By the staff of *Dirt Wheels*

Every other year, the windswept desert plains of the Plaster City BLM (Bureau of Land Management) OHV park plays host to aspiring racers looking to set new off-road endurance records. Located 20 miles west of the Southern California city of El Centro, which is near the Mexican border, this is the battleground where dirt bikes and ATVs are pitted against each other and the elements in a battle

of attrition and contest of survival of the fittest.

At this year's Precision Concepts sponsored FRT (Fudpucker Racing Team) event, a group of ATV racers lead by Southern California's Doug Eichner took on the 10-mile long, whoop-infested, sandy course on one of Kawasaki's all new V-Force KFX700s. The goal of course is to set a new distance record at the end of 24 hours of competition.



It takes a dedicated team effort to do well at an event such as the 24 hours of Le Fud. Allan White, Lenny Duncan, Marc Spaeth, John Gregory, Danny Rudd and Doug Eichner raced their Duncan Racing Kawasaki KFX700 V-Force for 24 hours straight to nab the overall ATV win.



A set of Tag 2 alloy handlebars was added to the big Kawie to help smooth out the ride for the six-member team.

The longer and tougher the race, the more Doug Eichner likes it. Doug was in his element at the 24 Hours of Le Fud.



Fuel consumption was a issue on the V-Force. Even with a 4.1-gallon IMS fuel tank, the KFX700 could only get four laps around the 10-mile course before coming in for a refill. The dry break filler allowed for rapid refills to get it back out on the course as soon as possible.

24 HOURS V-FORCE

MAKING IT TO THE FINISH

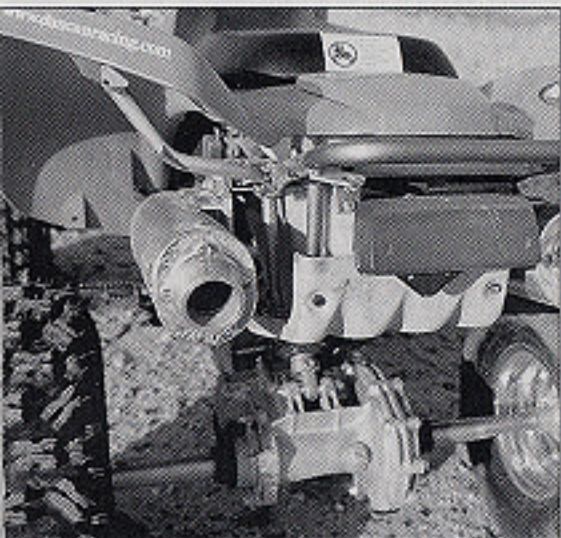
Not only would the racers have to battle the track and each other, the weather would also play a part in this titanic off-road duel. The riders would have to contend with the fierce desert windstorms that gusted with winds from 20-50 mph during most of the race. Even with these severe weather conditions, the V-Force-mounted team was able to capture the top finishing quad position with a total of 94 laps around the rugged, warp-speed course to complete a total of 940 total miles in 24 hours of non-stop racing action.

This would be one of the first long term tests of the new Kawvie 700, which uses a twin cylinder, 699cc V-twin, liquid cooled, four-stroke engine mated to a fully automatic transmission.

Doug and his race team of Allan White, Marc Spaeth, John Gregory, Lenny Duncan and Danny Ruid were able to pound out a determined ride with only 46 minutes of combined down time for the entire 24 hour event. A remarkable achievement for a previously unproven vehicle in the midst of a tough competitive event.

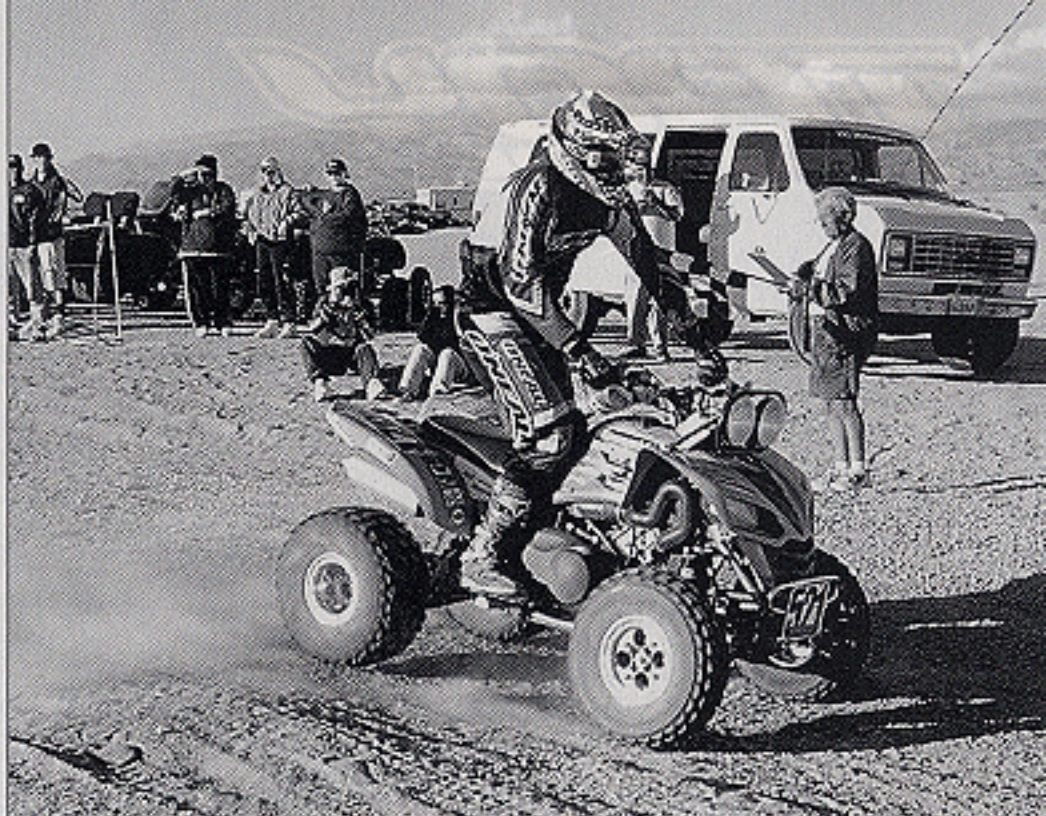
OUTFITTING THE MACHINE

Duncan Racing, Roll Design, Golden West Cycles, Temecula

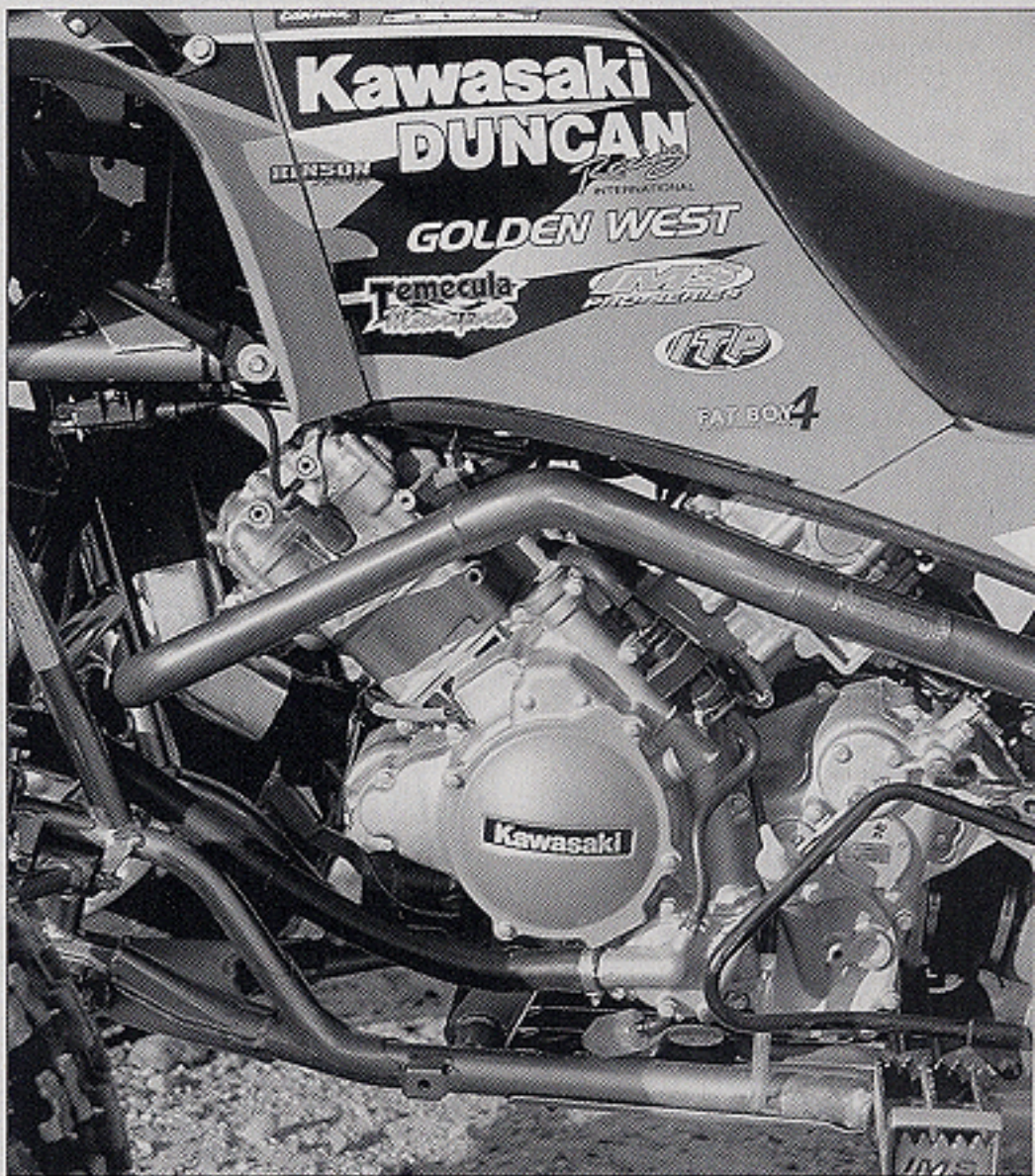


A set of Duncan Racing Fat-Boy 4 dual exhausts helped perk up the power-band on the mighty 700 V-Force racer. All the team riders felt the motor was solid and easy to ride over the course of the 24 hours of competition.

While it may take a village to raise a child, it takes an army of sponsors to do well at a race like this. Endurance racing requires attention to detail, logistical planning, well thought out setup and careful planning. A dollop of good luck doesn't hurt either. ➤



Some 24 hours, 94 laps, and 940 miles later, the Duncan Kawasaki KFX700 rolled across the finish line a winner.



24 HOURS V-FORCE

Kawasaki, ITP, IMS Trick Fuel, and Douglas wheel all helped contribute to the overall success of Doug Eichner's KFX700 project vehicle. To get the power up and running, a set of Duncan Dual Fat Boy 4 exhausts were installed on the V-Force. The stock carbs were run with only minor jetting changes to accommodate the new pipes.

A set of Elka zero pre-load front shocks with triple rate springs were run up front while a replacement Elka rear shock was installed on the back end of the machine to handle the non-stop punishment that a 24 hour race entails.

Roll Design supplied a new steering stem with a GPR steering stabilizer to help smooth out the ride over the fifth gear sandwashes which make up a large part of this desert course. A set of Tag 2 handlebars in a CR high bend with a twist throttle were also installed for a more comfortable feel on the machine over the course of the race.

To allow for more laps between rider changes, an IMS 4.1 gallon fuel tank

24 HOURS V-FORCE

with a quick fill dry break was installed for the thirsty twin cylinder motor. Douglas' new Shamrock aluminum rims with billet centers replaced the stock Kawasaki rims (ten-inch wheels in the front and nine-inch wheels in the rear). ITP XCT Holeshot knobbies (23x7-10 front and 22x8-9 rear) were added to help smooth out the ride and provide good hookup in the sand and hard pack desert terrain.

A Duncan Racing front bumper and Roll Design turn up footpegs were added along with a set of dual Ricky Stator H.I.D. headlights on the front end for extra nighttime candlepower. Trick Racing fuel (Aqua 108 octane) was used in the motor along with Maxima fluids and oils in the tranny and drivetrain.

The stock Kawie oil and air filter were used with the airbox lid left on and the snorkel tube removed.

PROBLEMS

The biggest concern during the 24 hours of competition turned out to be fuel consumption. The team found that they could only do three



Douglas heavy duty shamrock aluminum rims with ITP Holeshot XCT knobbles held up extremely well to the rough desert conditions. Only one flat was recorded during the race.

24 HOURS V-FORCE



A GPR steering stabilizer and Roll Design steering stem made it easier to hang on and steer the big KFX700 through the tons of high speed whoops that dominate the 24 hour track.



Ricky Stator supplied the dual H.I.D. headlights that lit up the night sky. These babies provide a massive increase in illumination over the stockers and used the stock stator system on the Kawie 700.

laps around the 10-mile course before having to come back in and refuel, even with the 4.1 gallon fuel tank.

One of the fuel tank vent lines had to be disconnected from the frame when a vapor lock problem surfaced early during the race. The vent has a one-way valve on it and by removing it from the frame the problem soon vanished.

About three quarters of the way thru the race, the riders noticed that the back end had a slight vibration, especially while braking, but it later smoothed itself out and wasn't a problem at the finish.

Finally, a rear shock overheated midway through the night and was

24 HOURS V-FORCE



Mark Spaeth pilots the mighty Kawie 700 V-twin under the railway trestle as he navigates his way over the 10 mile long, whoop-filled desert course. At times the winds gusted so badly that you could hardly see the trail in front of you.

replaced. That was the extent of the problems encountered on the machine in the course of 24 hours of non-stop competition.

FINAL RESULTS

Amazingly, the big Kawasaki V-Force had a relatively trouble-free ride over the course of this rough and tumble 24 hour race. All the team riders felt it had plenty of power, from the bottom to the top. They also all felt it was easy to ride, with the fully automatic transmission. Sure, it is on the heavy side with a dry weight of 516 pounds, but it remains an agile, and powerful machine with a smooth running, monster V-twin, four-stroke engine. It is both predictable easy-to-ride and stable handling.

With their overall ATV win at the 24 hours of LeFud, Eichner and his teammates have proven the new V-Force is a formidable race and recreational quad that can handle heaps of abuse and keep running strong. It is a machine that has to be taken seriously from here on out.

FRT 24 HOUR ENDURANCE

RESULTS:

OVERALL ATV

1st..... Kawasaki 700
Team riders:..... Doug Eichner, Allan White, Marc Spaeth, John Gregory, Lenny Duncan, Danny Rudd
Total laps94
Mileage940 miles
Sponsors:.....Kawasaki, Duncan, Roll Design, IMS, ITP, Temecula Motor Sports, O'Neal, Smith, Douglas, Golden West Cycles, Hinson, One Industries, Tag Metals, Maxima, K&N, Motion Pro, GPR. □

□ Tavis Cain is a friendly cuss, but he can be blunt and to-the-point with his answers about ATV riding and racing. The 2001 Amateur Racer of the Year grew up in McKinleyville, California, and an early riding partner was Dana Creech, who is still a close friend. Since then he's turned his attention to racing, doing well at both motocross and TT, as well as insane freestyle riding for the "Huevos" series of videos. Plus, he's performed in front of thousands of spectators at stadium events. All of this, and he's just twenty-one years old. We predict more success for this northern California resident.

Dirt Wheels: Tavis, what was the first ATV you ever owned?

Tavis Cain: It was a Suzuki LT250 QuadraCee.

DW: A classic. Was it the first quad you raced?

TC: I don't know if you'd call it racing. I did about a lap, then pushed it off the track.

DW: Where was that first race?

TC: It was in Phillipsville, California, near Eureka. Me and Dana Creech used to race there; it's where we got started.

TAVIS CAIN

Built for speed

DW: If someone came up to you and said he wanted to get into racing, what would you tell him?

TC: Go out and buy one of the good factory quads that are coming out these days. The Suzuki, Kawasaki, Predator, whatever. Widen it up before you go out on a motocross track, before you go big off jumps and fast in corners. If you go out on a stocker and try to go too fast you'll probably get hurt. Then just work your way up. Don't let anyone push you to try things that are beyond your ability. It can be a risky sport if you're not prepared. Take it slow at first.

DW: Who do you train with?

TC: I train a little with Dana, but mostly I train by myself, up near McKinleyville, California, at my parent's track.

DW: Do you do mostly laps, or weights and aerobics?

Tavis was riding this 250R-based machine in the stadium series, but he's on a Pro Production KFX400 for the 2003 national season. His Kawasaki is decked out with Roll Design parts, ITP tires, Elka suspension, and One Industries graphics. Tavis says the handling and power are great, but it was like going from riding a bull to a Cadillac.



TC: I do it all. I go out and ride two twenty-minute practice motos. This year I'm training really hard. I want to be in good shape. Last year, that was my downfall. I was running out of strength in the second moto. So I'll go out now and do twenty-minute motos, I'll run the treadmill for three or four miles. I also lift a lot of weights.

DW: Who do you fear most on the race track?

TC: I try not to fear anyone, but if I have to say, it's probably the elderly guys. Doug Gust, Tim Farr, they know what it takes to win. They're smart, they'll set you up. They don't get out of control. But I try not to fear anyone out there.

DW: What's been your favorite race so far in your career?

TC: Racing TT in 2001 I won every race of my A class. That was awesome. Then in motocross, just the memories of getting started in Phillippsville, with Dana Creech, those were great times.

DW: What's been your biggest payday so far?

TC: Probably freestyle first. Not

even doing Division Four stuff, but doing shows around California, doing freestyle at monster truck events. Those paid really well. Other than that it's probably been the indoor series.

DW: What's been your biggest accomplishment so far?

TC: Winning the 250A class and receiving the trophy for amateur rider of the year in 2001.

DW: Who do you think the next big star in ATV riding is going to be?

TC: Matt Bartocek, was. He was on a mission and on a roll, man. He was riding the best ever, he was really up and coming. Hmm. Probably Dunk, Jason Dunkelberger. Also probably Gilbert Attix.

DW: If you were to stop quad riding and racing today, what would you do?

TC: Marry my girlfriend, Jessica, and raise a family.

DW: Would you rather be in a "Huevos" video or a Playstation video game?

TC: "Huevos."

DW: What do you haul your quads with?

TC: A 2000 Chevy pickup. For Nationals we use a box van and a 40-foot trailer.

DW: What's your favorite meal?

TC: Sushi.

DW: Should there be a National on the west coast?

TC: Definitely. No doubts about it.

DW: What suggestions do you have for the ATVA?

TC: Get more involved on the west coast.

DW: If the factories would listen, what would you tell them?

TC: Wake up and smell the coffee. ATV riding is where the money is being spent. It's on quads, more than bikes. Why won't they put five freakin' percent of their money into pro ATV races and help us out? We're working our tails off. Now that the Production class is here, I think you'll see even more interest in ATV riding.

DW: Whom do you credit with your success?

TC: My mom and dad, and Loren Duncan Racing. □