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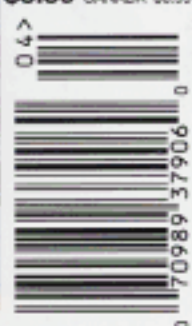
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TRX450R vs. YFZ450

Duncan mxers go head to head

By the staff of *Dirt Wheels*

□Duncan Racing International has backed some of ATV racing's top riders for over two decades. The California-based tuner has powered machines of past champions like Bob Sloan, Mark Earhardt, and Travis Spader in all racing arenas.

These days, their primary racing focus is on two riders, Tavis Cain and the veteran Doug Eichner. Cain jumped right into Spader's spot on the DRI team when Travis stopped racing a few years back and Eichner has been with DRI since the early '90s. Along with winning championships, the two hired guns are paid to help develop the same engine packages that DRI markets to other racers as well as the general public.

Currently the two riders are assigned to different brand machines. Eichner rides the Honda

TRX450R and Cain pilots a Yamaha YFZ450. When we candidly asked the two riders if they thought they were on the best machines available to them, here is what they said.

Tavis: "For motocross the YFZ suits me better, especially how I practice. I ride mostly Supercross tracks to train and the YFZ has better acceleration out of the turns and it sits lower to the ground for better cornering. The YFZ is just as good as my old 250R with a full race chassis underneath it. The power is a lot better." Tavis Cain is concentrating solely on winning the ATVA GNC MX series in 2005.

The Honda TRX450R mounted Eichner is going for his third consecutive WORCS title, plus he will be doing selected ITP Quad Cross events in '05. Here's what he says

about riding the Honda: "For doing the WORCS races which take place on high-speed Grand Prix style tracks, the Honda is a little bit better. It's more reliable than the Yamaha. When you get into the tight sections it's nice to have the Honda; it has a milder powerband than the Yamaha. The YFZ's power tends to hit a little harder, which can get you into trouble in tight spots. The Honda's steering is more predictable. The red machine is more forgiving in the longer races and doesn't tire me out at all."

WHAT WORKS FOR DRI?

The Duncan Racing team has a long list of sponsors, parts suppliers and contributors that help make their race machines what they are today. Although the two quads we tested were different brands, they



The Duncan/Honda powerplant is very mellow. Eichner likes it the best because it won't wear him out or get him in trouble in the woods.



The Duncan YFZ450 engine is a rocket. It's strong hitting bottom end and mid range power suits Tavis' riding style best. Look for Tavis to be up front in the first turn every time in 2005.



They even look fast sitting still. Well, the YFZ was faster in motion. Duncan riders Tavis Cain and Doug Eichner will race these exact quads at the Glen Helen MX opener. Find out how they did next month.

were built with nearly identical parts. Basically, the frames were left stock (except for the addition of strengthening gussets), the engines were completely reworked by Duncan, and virtually every other OEM part was replaced with after-market products. For chassis and suspension components, DRI has always relied on Roll Design.

On the front ends, Lobo A-arms are used to bring the quads to 50 inches wide using 4-1 offset wheels. Out back, Roll swingarms measure 1/2-inch over stock and are constructed of steel instead of aluminum. Travel is controlled by Elka's latest Elite model long travel shocks along with Elka's linkage in the rear.

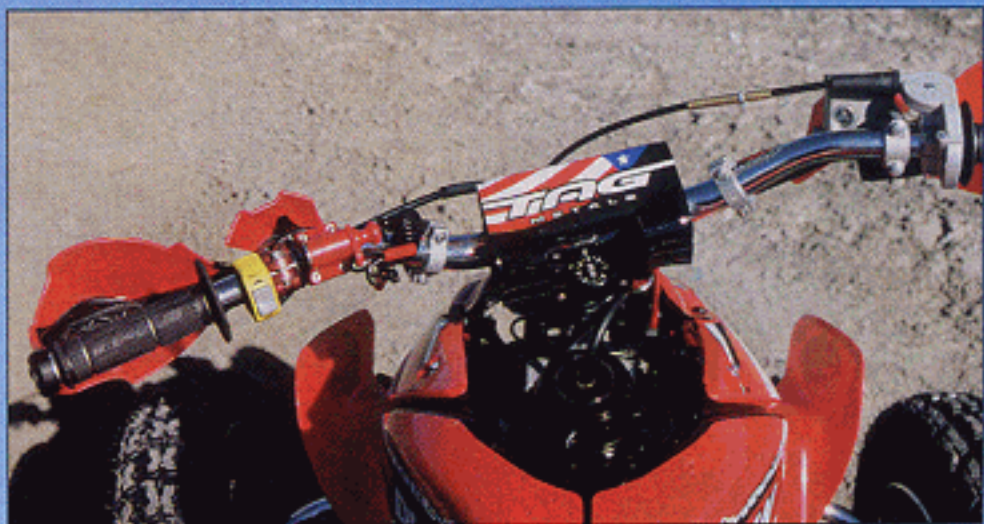
Team Industries supplies the axles and rear hubs on both machines and they carry Douglas' Ultimate Shamrock wheels outfitted with ITP MXR4 tires. Power is delivered to the ITP meats through Tsubaki O-Ring chains and Sunstar sprockets. Tavis' YFZ was running 15/38 gearing while Eichner's Honda was equipped with a 15/37 arrangement for the higher GP speeds. Also, the Honda was equipped with AC Racing skidplates and the YFZ goes without.

Both machines utilize IMS/Roll wide footpegs. The pegs on the Yamaha are located almost an inch lower than stock.





Duncan uses a custom, red, Quad Tech nose piece on Eichner's Honda. They are only available through Duncan Racing.



The button next to the left handle grip operates the programmable, adjustable Vortex ignition. On the YFZ450, it provided a noticeable difference and stopped the rear tires from slipping on a dry track.



DRI relies on a Team brand axle and hubs on the rear of their race machines. A Roll Design swingarm, Elka shock and linkage provide a smooth working environment for all of the components.



◀ A Duncan billet aluminum hub rests among Roll Design A-arms and Elka shocks. Roll and Duncan have a working relationship that dates back to the beginning of time.



It was easier to clear large jumps with the Duncan YFZ450 because no matter how you came out of the corner before it, there was plenty of power on tap.

SHOOTOUT

Other odds and ends include Galfer brake pads, rotors and Crown Series steel braided lines. Cain's mechanic Glenn Schlude installs his own ATV Innovations 250R caliper on the rear of the YFZ450. AC Racing nerfs protect the riders as do Pro Design tethers.

To control each machine Tavis uses a 400EX thumb throttle mounted on Tag CR high bend bars with Tag grips, Works Connection levers, Motion Pro cables and Acerbis Handguards. Doug uses the same setup on his Honda except he prefers a Motion Pro Vortex twist throttle as opposed to a standard thumb throttle. Stock, trimmed bodywork is used on both machines except for the custom, one off, red nose piece on Eichner's Honda from Quad Tech, (949) 859-7823. In race trim, the Duncan YFZ weighs in at five pounds less than their 350-pound TRX450R. Tavis' YFZ450 has one more hot setup in the form of an ATV World stainless battery box kit.

WHAT ABOUT THE POWER?

Although Duncan Racing International sells all of the parts they run on these race machines (except for the ITP tires and Douglas wheels they get through Golden West Cycle), their claim-to-fame is motor work. Specifically, the kits in their race machines are known as a National Kit. For the top half of DRI's four-stroke National Kits, head porting, valve seat machining, billet camshafts (one for the Honda), oversized exhaust and intake valves (four in the TRX, five in the YFZ), springs, guides and titanium retainers are needed. Inside the cylinder, DRI uses their own designed JE built 12:1 compression piston. On the YFZ, DRI increases the bore 1mm to reach the 450cc limit.

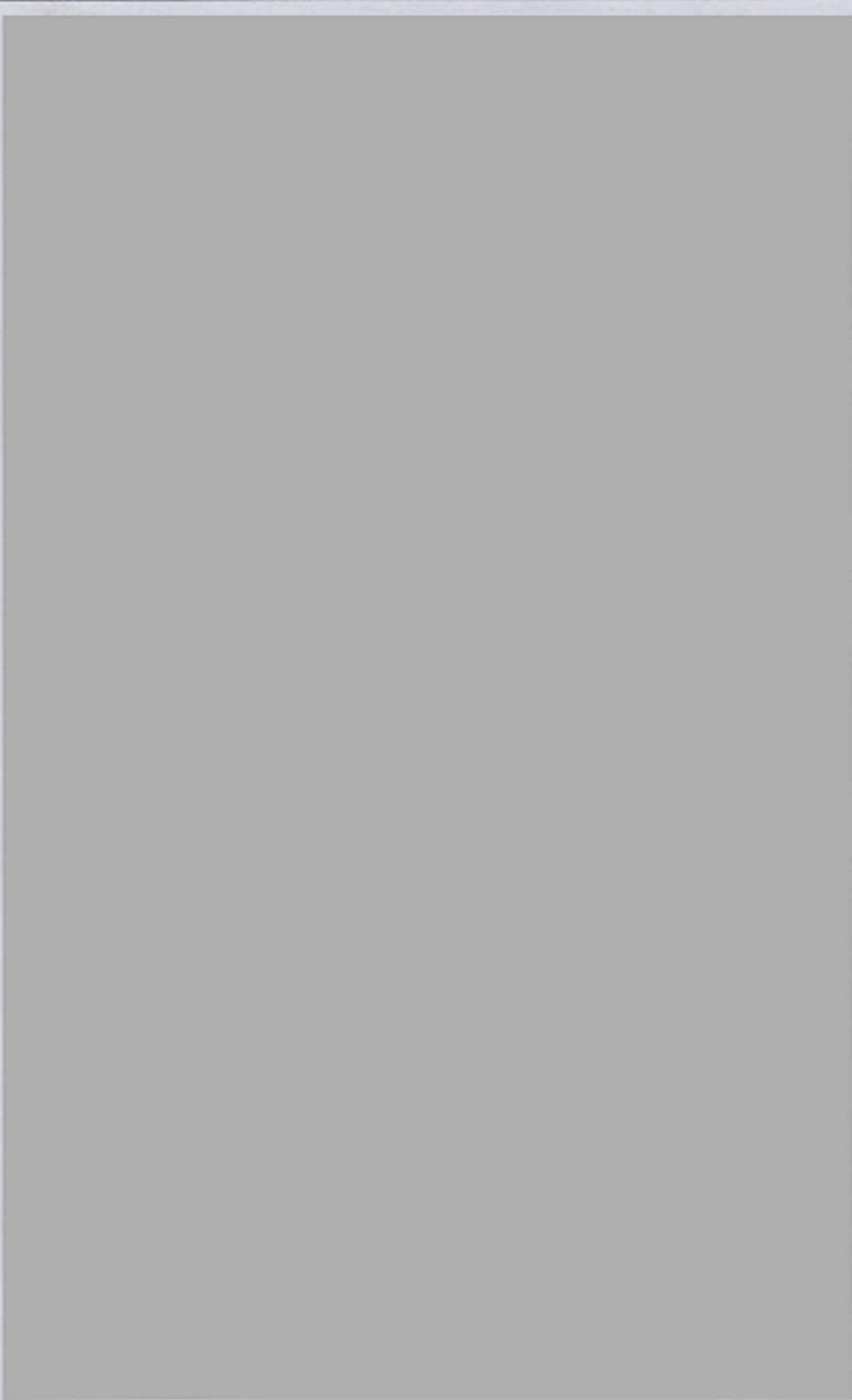
On the outside of the TRX motor DRI relies on a Edelbrock, Eichner signature model carburetor (\$526) (Tavis uses the stock FCR carb) and Vortex X10 programmable ignitions (\$399). For air flow, K&N filters are used on both machines connected to Pro Design Pro Flow kits nestled into stock airboxes. Exhaust gas is expelled through Duncan's own stainless steel Fat Boy 4 complete exhaust systems that retails for \$525. This complete internal engine parts list totals up to \$2475 on the Honda and \$2675 for the YFZ. To transmit power, DRI utilizes a Hinson clutch basket, their own plates and Maxima Premium 4 10w30 motor oil.

VP C12 is the recommended race fuel of DRI.

During a pre-season test session at the Elsinore MX park, the Duncan crew let us take both of their race machines out on the track. Plus, we captured some action shots of Doug and Tavis doing laps. Our opinions of both machines are consistent with what we felt during our own project YFZ versus TRX shootout that we featured in the June 2004 issue.

The DRI YFZ450 was a rocketship, the heavily modified engine is crisp, powerful and fully capable of clear-

ing any jump on the track. Track conditions on our test day were very dry and hard-packed. It allowed us to take full advantage of the Vortex Ignition system. The two setting system was programed with a standard curve and one for loose conditions. It wasn't hard to tell the difference between the two settings. With a handfull of throttle the YFZ's hard hitting power would normally send the machine spinning out of corners. In the loose terrain mode, power was restricted on the bottomend allowing the machine to grab trac-



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tion before powering up. No matter how you entered or exited a corner on the DRI YFZ, there was enough power and traction on tap to straighten up and attack obstacles. Even if you didn't hit a jump correctly, you could easily adjust your attitude in the air for a correction.

WHAT DO WE THINK?

The rest of the DRI YFZ package was flawless, the chassis felt well put together and tight. The Roll suspension turned on a dime and the Elka shocks were dialed to use their full potential. It's no wonder Tavis Cain was always up front in the first turn and captured as many podiums as he did in 2004. This quad was the best built YFZ450 we have tested yet.

DRI's Honda was near perfect as well. The chassis felt solid and well put together. It was very comfortable to ride and ultra easy to control. All of the controls from the twist throttle to the brake pads worked great. Eichner's settings were a tad too soft for our rider's weight, so the quad bottomed if jumps were not executed perfectly. Also on takeoff, the springs wouldn't catapult our

SHOOTOUT

testers as high as the YFZ did. The additional 1/2-inch in swingarm length was just what the Honda needs. It forced the front end to stay planted on the ground.

In the power department, the Honda's mellow delivery was very easy to manage. It never did want to squirt out from under you or spin out. It hooked up and moved forward when you hit the throttle. However, this power setup is so mellow we had trouble clearing some obstacles that were easy on the YFZ. The Vortex ignition didn't seem to make a noticeable difference. With this machine, you need to be smoother into the turns and roll on the throttle early to get a good run out of them. It takes a different style to ride the Honda fast on a MX track. For the desert, dunes or woods, the smooth, strong power of the DRI National Kit would work great but for MX it falls behind the Yamaha. Eichner has proven he can win on the Honda but not in the motocross arena. He is at a big disadvantage riding the Honda in MX competition. The Honda power lacks the bottom end hit that is

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sometimes needed if you can't take the perfect line in every corner. That scenario often comes up when trying to pass another rider. From our brief test session with the Duncan team, it looks like Tavis Cain has the equipment needed to take the National MX title away from Gust this year. However, it's going to take a lot of training and a little luck as well. We wish him the best. As for Eichner in the WORCS series, he's been nearly unbeatable for two years now and we don't expect much to change. He even won a race on a Duncan V-Force back in 2003. Now that's talent! As for his bid to win any ITP Quad Cross races this year, it will be tough. More top riders are showing up there and we think he would have a better chance at victory on a DRI YFZ450. Eichner and DRI are always working to improve their engine program and with more time on the MX track, hopefully they can make the TRX engine competitive with the YFZ. Duncan Racing International can be contacted in California at (866) 379-7223 or online at www.duncanracing.com. □