



IMS Rider Logan Holladay throws some sand along side Avenger pilot Nick Hengtgen. The IMS quad finished first in all of our tests except in the drag race.

HONDA DONERS

IMS Vs Avenger

*By the staff of Dirt Wheels
Photos by Sarah De Boise*

□Not a day goes by when we don't receive several calls from people wanting to see their products tested in Dirt Wheels. From readers to manufacturers, they all beg for the chance. One such day recently we had two calls from two different individuals claiming they had the best all around dune ATV.

As it turns out both quads that were described to us (Honda TRX450R's) were very similarly built using tons of aftermarket goodies from different companies. After choosing a date and location we took delivery of both specimens and a shootout was born.

CONTENDERS

The Avenger quad was assembled by a company of the same name in Bakersfield California. Avenger's primary business is fabricating custom, long-travel A-arms and swingarms for some of today's hottest MX racers and dune fanatics. Works brand shocks were mated to the Avenger suspension products.

IMS, builder of oversize gas tanks, heel guards, bumpers and more created the competition in this shootout. The IMS quad used Roll Design arms and Elka Dune Edition shocks to soften the ride.

Both quads retained the stocks frames and lighting. Everything else was unique.

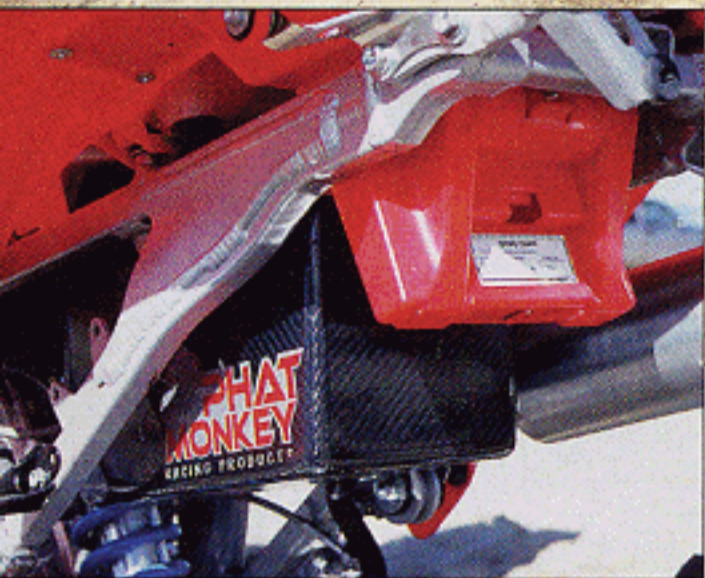
ENGINES

Since having power is your number one priority in the dunes we'll dissect the motors first. Avenger chose local engine guru Curtis Sparks to build the power plant in their machine. Sparks installed a 470cc displacing piston, ported the head and slightly altered the cam. Sparks used a 41mm CRF dirt bike carb and his own complete exhaust system. To fuel the hot Honda, Sparks uses a secret, very expensive fuel from VP called

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In true dune fashion, IMS made the Honda completely unique looking by installing blue Maier fenders on the rear and yellow ones up front. A sweet looking Quad Tech seat cover ties them together nicely.



A new company call Phat Monkey is working closely with Avenger on developing carbon fiber parts for ATV's. Their first product for the TRX450R is this custom airbox.



One of the coolest parts on the Avenger quad was the pair of titanium footpegs. They would have been even better attached to some sort of heel guards.

MR9. It runs about \$15 a gallon. WOW! Curtis also uses his own ignition to bring spark to the Honda.

Avenger kept the stock thumb throttle intact and it was rather stiff. The clutch pull was also on the stiff side. On the good side, this Honda was very easy to start and ran like a top all day.

IMS called upon Duncan Racing to increase the bore on their Honda. The guys at Duncan also installed

The Avenger quad was more predictable carving in the dunes. The Sparks motor had plenty of juice to throw a mean roost like this one without trouble.

their usual Vortex ignition. A Fat Boy 4 exhaust finished off the power enhancing goodies. To cool this power plant IMS installed a Fluidyne oversized radiator and removed the stock Honda electric fan.

A Motion Pro twist throttle controlled the amount of fuel that made its way through a 40mm CRF450 dirt bike carb. The twist throttle was mounted to a set of Universal's Solex bars and covered with Spider's grips. Other goodies on the engine included a Duncan Racing clutch cover and case saver.

The Duncan motor was a little tricky to start. We had to just slightly put tension on the throttle to get it to fire. Our testers struggled with this most of the day. After a slight adjustment in the cable the starting action was improved but still not easy.

SUSPENSION

Going fast on smooth sand is only half of the equation for having fun. Try riding Glamis the week after Thanksgiving. The chopped up sand is rough enough to jar your teeth loose. Plus, many of the places where people run drag racing grudge matches are more whooped out than a MX national at Southwick. Suspension in the dunes is important.

Avenger's long travel arms were chromed and stretched two inches longer than stock. The older style Works shocks supplied 11.5 inches of travel up front and a full 11 inches in the rear. The shocks had full compression and rebound adjustments.

IMS used Roll Design long travel A-arms up front and the stock



If carbon fiber is in your budget, than Quad Tech has a Honda nosepiece that still allows you to run your stock headlights. Carbon fiber is becoming a must have over chrome these days.

swingarm in the rear. All three arms were outfitted with Elka's new Dune Edition shock absorbers. They are specifically designed for sand riding and feature High/low speed compression adjustments and a rebound adjuster. The Elka/Roll combo adds about two inches of front and rear wheel travel to the Honda.

DUEL IN THE DUNES

To see who had the better all around dune machine, we jumped right into some side-by-side drag race tests. On every run, the Curtis Sparks 470cc engine would give the Avenger quad the holeshot. It was only about a two quad length lead but it was consistent. After the initial jump off the start, the quads would run an even



The Elka equipped IMS quad was much more comfortable to jump. Along with better working suspension, the IMS/roll footpegs and heel guards made the riders feel safer.

race the entire three hundred yards. Both machines topped out at about ninety miles per hour.

The Sparks motor had a more explosive power and felt like it was at its limits. Lots of engine vibration was felt throughout the chassis. The Duncan motor was smooth and easy to hang on to. This is the most powerful TRX450R motor Duncan has ever built. It would make a great motocross, desert or woods motor as well. However with a stock swingarm, our riders needed to stay over the bars of the IMS quad to keep the front end down. Even in stock trim, the Hondas front end is very light.

CHOP SUEY

Our test day followed a big holiday weekend at Pismo. The entire dune area was chopped up and rough. It was a perfect setting to test suspension. Pismo also has several tight trails that get huge three-four foot rollers formed because of the traffic.

The Roll/ Elka equipped IMS quad was night and day better in this department. The new Elka Dune Edition shocks are literally magical. Initially they feel ultra soft and make the choppy sand feel smooth. When you need extra damping for G-outs, whoops or jumps, it's there as well. You could tell IMS built this quad for long dunes rides. It was comfortable. A host of IMS products contributed to the comfort factor including over-

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In our drag race tests, the Sparks powered Avenger quad consistently beat the Duncan powered IMS machine. However, the Duncan motor was never more than two quad lengths behind after three hundred yards.

sized footpegs with heel guards, anti vibrate steering stem and AC Racing nerfs for added protection.

The Avenger quad was sparsely outfitted in the controls area. OEM parts were either chromed or removed for weight savings. Avenger used their own Titanium footpegs that looked trick and worked well. Avenger built this quad for show as well as go.

The IMS team had a few billet parts but what made it really look unique was the blue and yellow plastic combination from Maier. IMS also installed a Quad Tech carbon fiber front nosepiece and seat cover. Both quads retained the stock headlights. Riding the dunes at night is an experience you don't soon forget.

Avenger used a nice looking Factory Effex graphics kit and seat-cover to spruce up the stock red bodywork. Under the seat, a carbon fiber airbox was provided by a new company called Phat Monkey.

TRACTION

Coincidentally, both machines in this test featured the same tire selection. The Avenger team chose to mount their Sand Stars on a set of ITP's polished C-Series Sport wheels. They really stood out compared to the rather plain black ITP GP wheels the IMS guys choose to use.

In the sand bowls of Pismo we liked the control of the Avenger quad better. The longer swingarm helped the quad stay flat and more predictable. The IMS machine would turn almost too sharp if you were not paying attention. You could make a control-



This 470cc big bore was the fastest and best running Duncan motor we have ever tested. It was super smooth in the sand and would be great for any application.

lable carve to a point, and then the back would want to come around on you.

Plus the IMS quad had slightly stiffer steering even though it was not equipped with a damper. We found with our Roll stem on our Honda, we needed to add a shim to the clamp for a freer turning handlebar. This quad needs the same adjustment.

However, both machines were a blast to ride in the sand. We would

have no problem taking either of them out on a weekend trip. But before we choose an overall winner we would have to consider what changes we would make to create the perfect quad.

On the Avenger quad, we would definitely want to change out the shocks. No amount of adjusting could make their selection as good as the Elka Dune Edition units. We would

also like to lighten both the throttle and the clutch if possible. For safety, we would have to fashion a set of heel guards to the titanium footpegs.

For the IMS quad, a slightly longer swingarm is on top of the wish list. After that, a few ten-cent adjustments to the throttle and steering would make it great. That's why we choose the IMS/TRX470R over the Avenger machine. □

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CONTACTS

IMS	(800) 237-9906
Avenger	(661) 343-3422
Duncan	(866) 379-7223
Sparks	(661) 872-4343
Elka	(800) 557-0552
Works	(818) 701-1010

