

**FIRST TESTS: ALL-NEW HONDA 250 SPORTRAX,  
MINI SPORTSMAN & SCRAMBLER 90, ARCTIC CAT 250 4x4,  
SNO-TRAX BANSHEE & WARRIOR!**

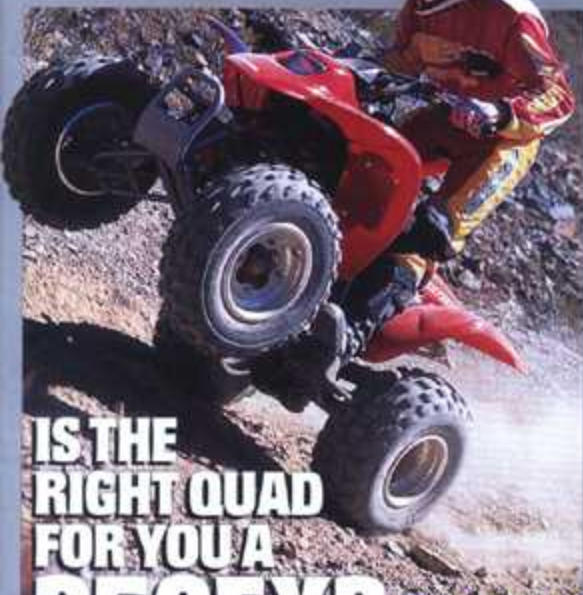
MARCH 2001

WPS  
37000

# dirtwheels

www.dirtwheelsmag.com

MAGAZINE



**IS THE  
RIGHT QUAD  
FOR YOU A  
250EX?**



Also, retailer  
Passes display  
until Mar. 1

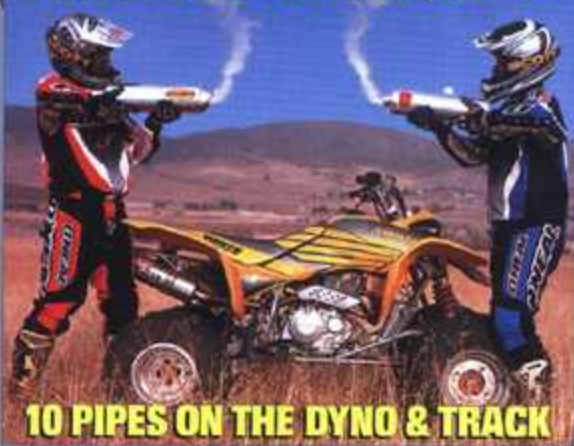
**HOW TO  
TURN YOUR  
QUAD INTO A  
SNOWMOBILE**

**SPECIAL GUIDE  
TO USA'S TOP 20  
SAND DUNES**

**400EX PIPE SHOOTOUT:**

**WE RACE  
BAJA  
ON OUR  
RAPTOR!  
PAGE 120**

**GRIZZLY 600 vs.  
SPORTSMAN 500  
4x4 SHOOTOUT!**



**10 PIPES ON THE DYNO & TRACK**

\$4.99 CANADA \$5.99

A  
M  
C



0170992-37906

ISSN 1080-4841

# HONDA 400EX EXHAUST SHOOTOUT



White Bros. R4



White Bros. E Series



Stroker SX1



Pro Circuit T-4



Graydon



FMF Power Core



CT Racing



Big Gun



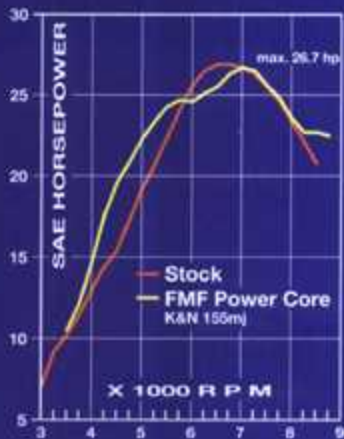
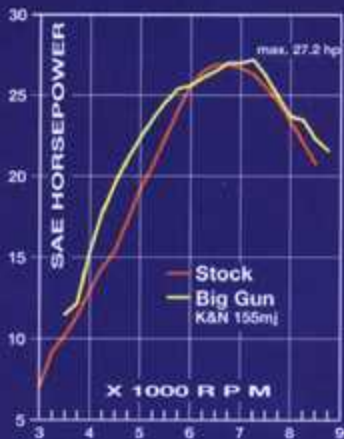
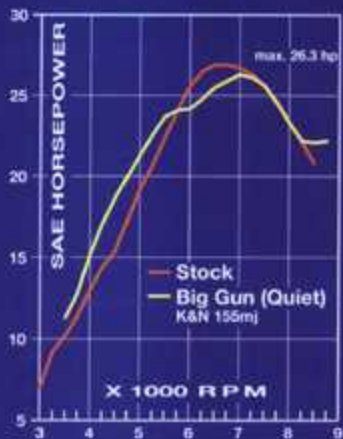
Yoshimura

FMF vs. Pro Circuit vs. White Bros. vs. CT vs. Graydon vs. Stroker vs. Big Gun vs. Yoshimura

By the hop-up specialists at Dirt Wheels

□ Honda's Sportrax 400EX is one of the most popular high performance sport quads sold today. As good as it is, though, the typical 400EX owner is always looking to extract a little more performance from it. This is the American way. We like to modify, hop-up and generally improve things, especially our motor vehicles. When searching for more power, the first thing we look at is

normally the exhaust system. For the 400EX there is no shortage of performance companies that manufacture and sell pipes for it. With so many to choose from, it causes one to wonder exactly which one is best. To answer that question, we gathered up the top ten brands to go head to head in our official *Dirt Wheels* pipe shootout.



## THE CONTESTANTS

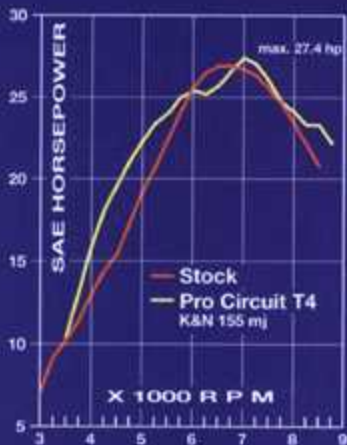
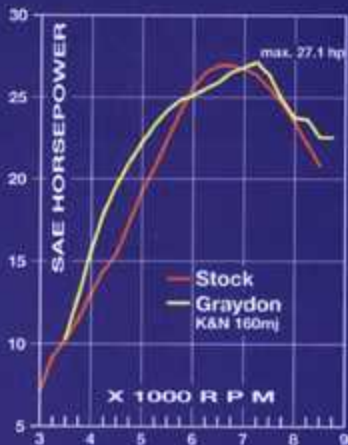
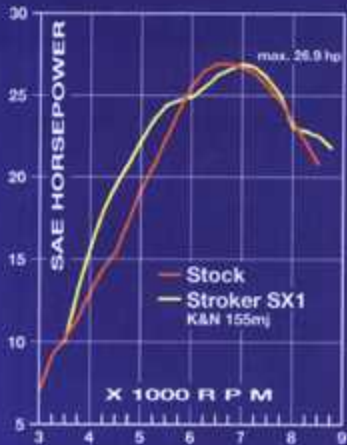
When it comes to exhaust systems, Pro Circuit, FMF and White Brothers are the heavy players. They began by making pipes for dirt bikes and have been around for a long time. A large part of their business today is ATV pipes, so of course they were first on our list. Next we have three new up and coming companies in the world of dirt bike and ATV pipes. Big Gun, Yoshimura and

Stroker have quickly gained a good reputation amongst hard core ATVs. Rounding out the list are two pipe companies that specialize in ATVs. Graydon Proline and CT Racing were the early pioneers of hot rod quads and are still going strong today.

For this shootout we choose to compare only silencers, instead of the entire exhaust system. Most of the performance companies agree that the

400EX's header pipes do a pretty good job of extracting the exhaust gases. For a totally built motor with a larger carb, long duration cam and big bore kit, a set of larger diameter header pipes might be necessary. In the case of low-cost improvements, however, replacing only the silencer should satisfy most 400EX owners.

We required that every silencer be equipped with a spark arrester. This is



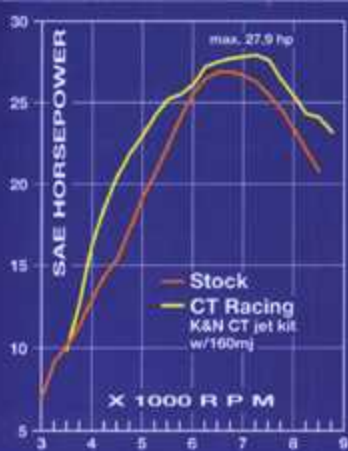
a standard requirement for all ATVs at most public riding areas. It is also a good idea for ATVs ridden on private land to have spark arresters as well. The only time that a responsible ATV owner should ride his machine without a spark arrester is on a closed course race track. The power gained by removing the spark arrester is barely noticeable. So keep it in unless you ride only on a MX track.

### THE RULES

Power and lots of it is the number one priority that most people want from the aftermarket pipe they buy. To clearly see how all of the pipes compare in the power department, they will have to be dyno tested. Not only will we measure peak horsepower but we'll be looking at the powerband as well. Having a strong, smooth power delivery in the midrange is just

as important as seeing higher numbers in peak rpm. The power will be measured at the 400EX's rear wheels, which gives a better idea of how it translates to the real world.

To confirm what the dyno reveals, we'll also test each pipe on the track. It doesn't matter what the numbers say on paper if the results aren't also felt in a seat of the pants evaluation. Keep in mind that a dyno only measures power



A couple of interested spectators look on as Dennis Mahan puts our pipe contestants through several runs on the K&N dyno.

BRAND	HP @ 4000rpm	PEAK HP	SOUND LEVEL	WEIGHT	PRICE
Honda	13.0	25.9	88dB	8.6 lb.	\$187.50
Big Gun (standard)	15.4	27.2	98dB	3.8 lb.	\$299.95
Big Gun (quiet)	15.2	26.3	94dB	3.9 lb.	\$339.95
CT Racing (12 dia)	16.3	27.9	102dB	6.0 lb.	\$299.00
FMF Power Core	14.7	26.7	100dB	4.6 lb.	\$269.99
Graydon	15.6	27.1	99dB	5.2 lb.	\$295.00
Pro Circuit T-4	15.9	27.4	95dB	3.6 lb.	\$250.00
Stroker SX1	15.7	25.9	94dB	5.0 lb.	\$235.00
White Brothers E-Series	14.7	27.9	95dB	5.1 lb.	\$259.95
White Brothers R4	15.1	27.1	97dB	3.9 lb.	\$344.95
Yoshimura RS-3	15.5	27.6	95dB	4.8 lb.	\$338.00

**BRAND**

Honda  
 Big Gun (standard)  
 Big Gun (quiet)  
 CT Racing (CT jet kit)  
 FMF Power Core  
 Graydon Proline  
 Pro Circuit T-4  
 Stroker SX1  
 White Brothers E-Series  
 White Brothers R-4  
 Yoshimura RS-3

**HARDWARE**

welded  
 Allen  
 Allen  
 bolts  
 Allen  
 bolts  
 Allen  
 rivets  
 rivets  
 rivets  
 Allen

**S/A TYPE**

baffle  
 screen  
 screen  
 discs  
 screen  
 discs  
 screen  
 Krizman  
 discs  
 screen  
 screen

**JETTING**

148 main  
 152-155 main  
 152-155 main  
 160 main  
 152-155  
 160 main  
 155 main  
 155 main  
 155 main  
 155 main  
 155 main

**PHONE**

Dealer  
 (909) 948-7029  
 (909) 948-7029  
 (562) 945-2453  
 (310) 631-4FMF  
 (562) 531-7142  
 (909) 738-8050  
 (760) 948-2871  
 (714) 692-3404  
 (714) 692-3404  
 (900) 628-4722

# SHOOTOUT

## ENOUGH TALK. PUT 'EM ON THE DYNO

K&N, the makers of air filters, graciously offered to let us use their Dyno Jet Dynamometer. They have no ties to any of the pipe companies, so we figured their shop would be a fair, unbiased place to conduct the horsepower comparisons. To establish a base we first ran the Honda 400EX completely stock. The aftermarket silencers were put on the dyno using their jetting recommendations, and a K&N air filter without the airbox lid. Since the aftermarket pipes flow exhaust out faster than stock, they recommend these intake mods be followed to achieve the best results. All of the pipes came with instructions on what main jet size to use. CT and Graydon were the only ones to furnish the jets in the box. CT's jet kit also included a pilot jet and needle.

After we bolted up each silencer and gave it a turn on the dyno, we printed out the graphs and laid them side by side for comparison. By looking at the dyno charts provided you can get a good idea of the power characteristics of each pipe.

Some provide a significant

comparison is Big Gun's standard model at 3.9 pounds. The heaviest is CT's at six pounds. All of the silencers look good and were of high quality. We especially liked the clean welds of both White Brothers pipes. A bonus point goes to the Graydon silencer since they offer it with a choice of anodized colors (black, gold, red and blue). We ran into no problems mounting each pipe in the shootout, although the White Brothers E model had holes that weren't perfectly lined up.

The Pro Circuit and FMF silencers use a snug sleeve to fit their silencers to the header pipes whereas all the others use a clamp system. After mounting, the Yoshimura's silencer had a loose fit to the quad's frame.

CT, Graydon and the White Brothers E-Series use the disc style of

spark arrester on their pipes. The screen type is used on the rest except for the Stroker. It uses the Krizman type, which is a style of deflector to catch the sparks.

All of the silencers use insulation material wrapped around a perforated pipe to deaden the sound. Occasionally the silencers will have to be taken apart to repack with new insulation. Bolts or Allen screws are used on the Big Gun, CT, Yoshimura, Pro Circuit and FMF pipes. For the rest, rivets are used to hold the silencers together. This means that they will need to be drilled out and replaced when it comes time to repack the silencer. It's not a big deal but you will need a rivet gun and extra rivets. Screws make it easier but rivets don't vibrate loose. Take your pick.