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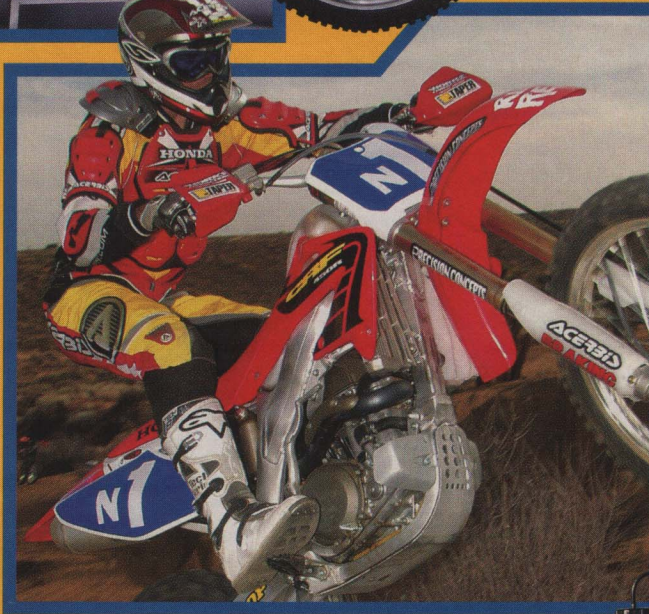
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KT M 470EXC and 450SX



**Thumper
Racing's
go-fast
alternatives**

By the over-bored Dirt Bike staff

Besides the excellent power throb, the Thumper 470 featured superb suspension that was plusher and more controlled than stock. ESP gets high marks for their valving and spring mods.

National Enduro Champion Mike Lafferty made the trek to Texas to help us evaluate the Thumper Racing big-bore 400s.

Mike Lafferty has officially joined the four-stroke revolution. Following his decimation of the field at the Delaware City national enduro last fall aboard a KTM 400EXC, Mike has decided to race the four-stroke at most 2002 national enduros and GNCCs. The thing is, he can run whatever displacement he wants, as there aren't any displacement limits on the Pro Row of these two series. Junior could run a 400, 450, 470 or even 540, and KTM is developing its own factory 450cc kit (we tested an early version last month). KTM already has a 540cc kit for the 520, but it costs more than \$1000, and the 450cc kit will likely be costly as well.

What about the thumper fan who wants more from the RFS400 but doesn't want to wait to pay more for the factory kit? Thumper Racing made its name punching out four-strokes for more performance, and it has already developed 450cc and 470cc kits for the 400 EXC, MXC and SX. Also, looking ahead to the new displacement limit for 2003 motocross, Thumper is developing a long-rod 450cc kit for 520 KTMs. Here's the skinny on the pumped-up Thumper Racing 470EXC and 450SX.



The heart of the Thumper Racing 470 is a 97mm piston. Combine the monster slug with the 400's tiny crank (compared to a 520), and you get a bike with the 520's low-end yank that still revs like a CRF/YZF.



THUMPER 470EXC

Going big in the bush

● As popular as the 520 is, some people might have trouble finding one and settle for the 400 instead. The thing is, the 400 is more of a revver and doesn't have that awesome low-end boost that propels one up and over gnarly obstacles. So Thumper Racing set out to get as close to 520cc as possible without having the extra gyro effect of a 520, which makes the bigger machine a handful in the twisties. Gary Hazel put a 520 cylinder on the 400 to create this 470EXC, but Thumper is developing an aluminum sleeve to drop into a 400 jug to give it a 97mm bore, then he'll have the sleeve treated with Nikasil. This gives more 520-like boost without the higher costs of having to buy a 520 jug.

For this project, Hazel secured Mike Lafferty and his new ML-Series Big Gun pipe, which is longer than the John Dowd MX pipe for quietness and a little more tame power delivery. Other than massag-

ing the jetting, that's pretty much it for motor mods.

On the McKool Ranch, we had a blast with the Thumper 470. Extra boost let us short-shift and be lazy with the clutch, yet the bike would still leap forward almost like a 520 when we'd goose the throttle. The 470 was never a handful in the tighter woods sections, yet it ripped on the wide-open grass-track sections. We could also wheelie over roots and logs with a blip of the throttle, whereas you'd have to work at it with a 400. This is truly the workingman's works-bike engine.

Thumper also worked on making the 470 a better handler and tougher for banging through the north Texas trees. Scotts' 18mm offset tripleclamps and steering damper tamed the tendency to push in slick, flat corners and deflect off-line in rocks and roots. Both the WP fork and shock got the E.S.P. treatment. George Capodiecì revalved both ends for initial plushness and resistance to bottoming, something the stock WPs lack.

Also, George tried a new concept with the Thumper 470EXC, milling the upper legs to accept Honda 43mm fork seals. Not only does this eliminate a lot of seal stiction, Honda seals are longer lasting and cost considerably less than KTM seals.

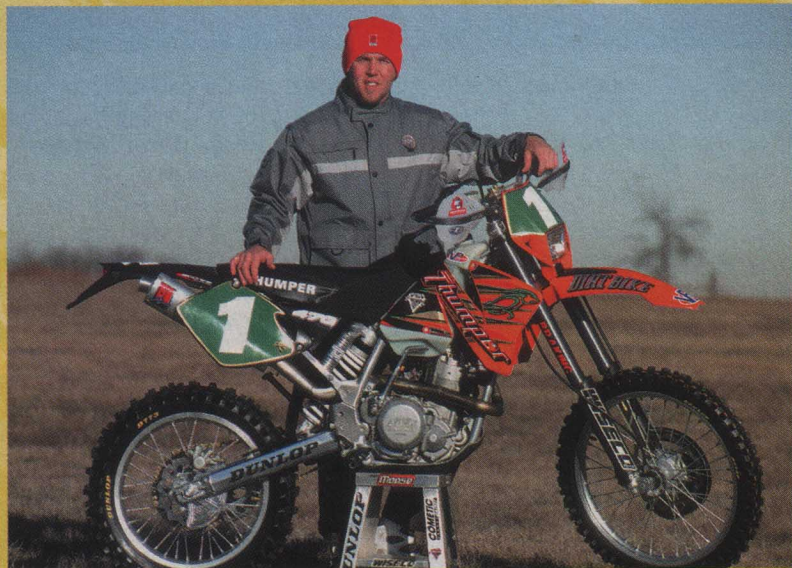
Hazel set the machine up for tall drinks of water like Tom Webb and Lafferty, so the Scotts clamps let him move the new Moose Flex bars forward and up. Enduro Engineering naturally got the nod for handguards, clutch hose and easy-pull hydraulic-clutch lever, and Thumper added a tall seat foam, which is much softer than the stock chunk of granite. And pucker power was improved with the addition of Bracing Wave rotors. Additional armor consisted of Moose sprockets (14/51), an RK O-ring chain, a Scotts rear shock fin and E-Line's carbon-kevlar skidplate and front rotor guard. And Thumper's serviceable oil filters replaced the stock paper filters for added protection against engine wear. ●

KTM 470EXC and 450SX



If you couldn't get the mighty 520 or simply want more snap out of your 400RFS, Thumper Racing can boost displacement to 470cc and turn your Katoom into a stump puller that revs.

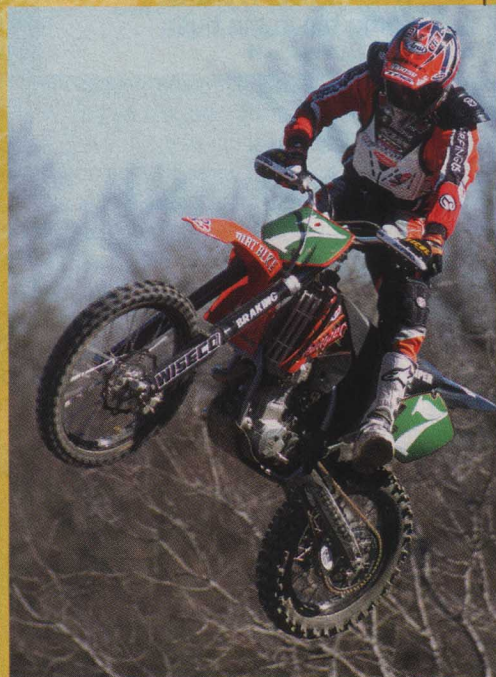
Of all the conditions at the McKool ranch, Wolfster couldn't find one where he'd prefer the stock 400 over the Thumper 470EXC. Even in slick clay mud and exposed roots, the torquier 470 would float over obstacles without sliding or spinning.



470EXC PARTS LISTS

Thumper Racing 470cc kit.....\$500.00	E-Line carbon/kevlar skidplate ...129.95
TR/ESP Fork mods.....245.00	E-Line chain guide.....59.95
TR/ESP Shock mods.....273.00	E-Line c/k front rotor guard109.95
Thumper tall seat foam.....69.00	RK O-Ring chain120.00
Thumper seat cover65.00	Scotts 18mm t-clamps/damper...680.00
Big Gun exhaust (Lafferty)599.95	Thumper Pro-Tec thr. cable guide.....20.00
Braking Wave rotors (fr/rr).....214.00	Moose front sprocket.....20.00
E.E. clutch line.....39.95	Moose rear sprocket.....50.00
E.E. clutch lever39.95	Reusable oil filters (ea).....65.00

450SX



Thumper is looking ahead to 2003, when the four-stroke displacement drops to 450cc for 250MX. It's developing two 450cc kits—one to punch out 400s and another to sleeve down the 520 to a long-rod 450.

Although Junior prefers his signature Big Gun muffler to the shorter Dowd Replica, he came away impressed with the extra power and smooth delivery of the Thumper 450SX.



KTM 470EXC and 450SX

THUMPER 450SX

Not afraid of the CRF450R

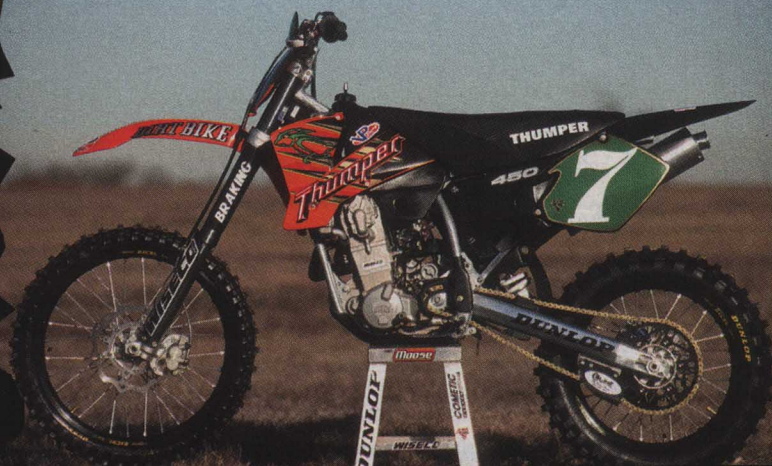
● Thumper has actually developed two kits for the 400SX; one uses a 94mm piston that yields 447cc and will be legal for 2003 MX/SX, and the other uses a 95mm piston for 453cc. While 50cc doesn't seem like a lot, it makes a big difference in the personality of the 400SX. Where the stocker is sleepy at lower revs and demands careful gear selection and timing, the 450SX snaps to attention off of the very bottom and climbs into the midrange much more quickly. Add the Thumper Racing cam, which has more lift and longer duration, and you get even more low-end throttle response, putting the TR 450SX in the league of the YZ426F and CRF450R. Thumper also added boost with the John Dowd stainless-steel Big Gun muffler. The end result is a high-revving motor with the low-end of the 520, but without all that spinning crank mass.

The second half of the project was getting that extra power to the ground and setting up the 450SX for the *Dirt Bike* test crew. Hazel installed Moose Flex bars with the risers in the most-forward position, and Enduro Engineering's clutch lever, hose and master-cylinder guard. George Capodiecì revalved the WP suspension to eliminate the tendency to fall through the travel and bottom out prematurely. The E.S.P.-modified fork and shock make the bike ride higher in the stroke and transfer less weight going into and coming out of corners. Although the stock tripleclamps make the front end push, Dunlop's new D773 tires had us hooked up on the slick clay-loam, but the suspension netted the biggest handling improvement.

Since Guy Cooper and Junior would be pounding the Thumper 450, Thumper also went with the Excel Pro wheel kit for strength and style-points. The Thumper tall seat foam benefitted both Junior and Coop alike, as the shorter Cooper stands up a lot, and the seat makes that easier. And, since we'd be riding the machine off-road, Hazel armed the beast with E-Line's carbon-kevlar skidplate, chain guide and front rotor guard and an RK O-ring chain. □



Thumper's 94mm piston brings displacement to a 2003-legal 447cc, while the 95mm piston kit yields 453cc. The TR cam adds boost across the board, too.



THUMPER 450SX PARTS LIST

Thumper Racing 450cc kit.....	\$500.00
Thumper racing cam	150.00
TR/ESP Fork mods.....	245.00
TR/ESP Shock mods.....	273.00
Thumper tall seat foam.....	69.00
Thumper seat cover	65.00
Big Gun exhaust (Dowd)	599.95
Excel Pro wheel kit	1150.00
Braking Wave rotors (fr/rr).....	214.00
E.E. clutch line.....	39.95
E.E. clutch lever	39.95
E.E. clutch m/c guard	29.95
E-Line carbon/kevlar skidplate ...	129.95
E-Line chain guide.....	59.95
E-Line c/k front rotor guard	109.95
RK O-Ring chain	120.00
Dunlop D773 (fr/rr, ea).....	80.00
Reusable oil filters (ea).....	65.00