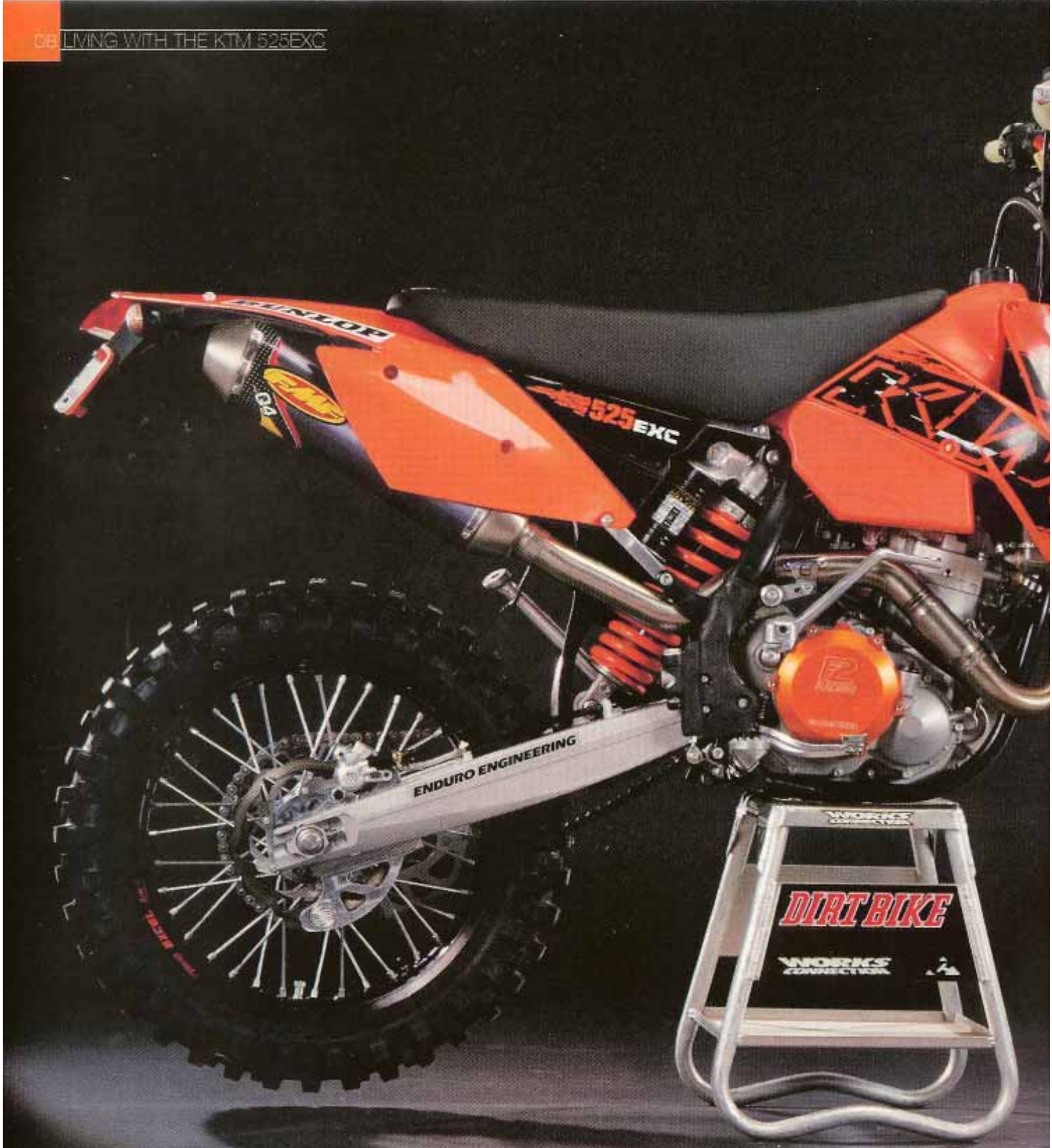


▶ For the die-hard dirt enthusiast, KTM answered their prayers when they announced that the '07 525 EXC would be street legal in all 50 states. Not 49 mind you, but 50. That meant that California fell into the mix, and hey, I live in California. So in one fell swoop, the big guy upstairs has listened to my slanted pleas for the ultimate dirt experience.

I've always slobbered for this machine. I live close to the incredibly palatial Dirt Bike offices and lurking nearby are hills and forest roads that are punctuated with riding Meccas, and having a quiet, well performing, lightweight

LET THE FINE-
TUNING BEGIN

The Wolf Wagon gets unplugged and firmed up

By Tom Webb

With the main goal of retaining quiet power, our KTM 525EXC mods focused on F2's Power Back kit which totally enhances the power, big suspension mods via Slavens, and a gaggle of mods from handguards and steering dampers to exhaust system evaluations.

racing type machine has been on the Christmas wish list since I street legalized my Zundapp 100 in 1970.

The fact that it's a KTM means it's a darn good base. And it's a 525. Good. Big meat, lots of bottom power, subtle enough suspension and a family heritage for off-road. However, bikes made to run on the street and machines made to churn nasty roots up vertical hills usually run on opposing wavelengths. This one, as good as it is, feels stifled, overheats a little too quickly in nasty terrain and seems to exhibit far less mustard than a production 450XC. Since I'm buying this machine, I decided to clean things up a bit. At the same time, the suspension, albeit well rounded, lacks the initial cush that I crave, and tends to get wallowy in the mid-stroke. This translates into a lack of plushness and a too-soft motif when I'm charging, or being just plain stupid, depending on the situation.

I decided to attack this project on three fronts. First, performance. I could live with the stocker, but I really want something that I can actually enter an enduro on and feel competitive. This is a double-edged sword since it cannot be fudged out of its EPA legal status if riding on the pavement was a priority. So I have the street legal mode, and then the preferred off-road-only performance department. In order to coax out the perfect jetting and enhance the airflow of the machine, I got with F2 Racing, whose Power Back kits are flat stunning. With the suspension I turned to Slavens Racing. He's a rider, he doesn't re-engineer the wheel, and his KTM suspension mods are about the best I've used.

The Slavens suspension allows for a more attack stance in ugly terrain. When you tie in improved response, the reality of tight off-road is much more palatable.

POWER

When the bike was first ridden, there was a small list of downsides. These were that it ran hot—to the point of overheating—it was lean on the jetting side, the blinkers snapped off and the fuel tank doesn't have enough range.

In the standard mode the only change I made was to install a regular XCW spark-arrester muffler. The stocker is identical except that it has small internal tube that helps enhance its muffling ability. The problem is that it doesn't allow the exhaust to flow, which creates heat, jumbles up jetting, and offends the powerband. This one change is monumental. You can do the same thing by taking the stock muffler apart and removing the baffle, or fitting an FMF Q up. In this trim I left all of the EPA plumbing alone and just rode. It was pretty doggone decent.

The next step was to enhance the powerband and totally retain the quiet side of the machine. For this I turned to F2 Racing. The first thing F2 provided was their Demissions/Powerback kit. Not only does this kit provide everything needed to correctly remove emissions equipment, but it gives you all the pieces and instruction to get all the power you can out of the stock bike. The kit for the KTM also fixes some other problem areas, like addressing the engine cooling issue, and small things that make life pleasant. One thing about F2; each bike is dissected and that bike's particular needs are addressed. The KTM kit is not the same as Honda's. You get everything you need, nothing you don't and more than your money's worth.

Now the Powerback kits are always designed around the stock muffler. F2 sets up diagnostic equipment on the bike to remove any guesswork. On this bike, a wide band air/fuel meter was welded in the pipe, along with temp strips on all four corners of the radiators and head. Also, throttle markings were set, for the air/fuel calibration as well as rpm and speed. It showed that at idle it was lean, at mid-throttle lean, and at full throttle it was wasting fuel.

F2 removes the little fuel vapor pump and catch can, along with the purge canister in the airbox. The intake tract was bolted up and the fuel cap line re-routed to the frame, with a one-way breather inline, to

A BRP top clamp is rubber mounted and has a receptacle for a Scotts damper. The Scotts unit is inoffensive at slow speeds and performs miracles when the going gets nasty. The fork bleeders are SR Precision Parts and are small, out of the way, and perform flawlessly.

Enduro Engineering's new handguards are excellent. The new mounting system is U-shaped and makes room for cables and wiring.

Out back we installed a Cooliper onto the rear brake line, and it helps cool the fluid. Enduro Engineering's shark fin is both tidy and tough.

keep the fuel from spilling out. Next came jetting. The biggest factor in jetting is needle selection, and when you find the right one, the way the motor responds is magical. F2 went through 13 of them on the KTM until they found the right one. The bike was taken from 400 feet above sea level up to 9000 feet above and ridden, noting the air/fuel meter and performance. The correct jetting combos were added to the instructions, along with everything needed. The air/fuel ratios were now in the optimum range for pulling hard without wasting fuel, and wide open won't waste fuel or burn up your engine. With the stock '07 EXC muffler the bike can use some more air, so there was some strategic cutting on the airbox and filter cage, which is all in the kits' instructions. F2 says that the power is going to be restricted on this bike until you get rid of the restrictive stock end cap on this muffler. If you want the next big power increase everywhere, they show you how to modify your existing end cap in the Powerback kit's instructions. It doesn't require a re-jet and it's free. It raised the sound output 1dB at 4000 rpm and 2dB at 5000 dB, which made it 94 and 96 dB respectively. This was on a static test. The exhaust mod also got rid of some of the heat registering on the radiator's heat strips.

Speaking of the temperature issue, there are some easy ways to fix that. To see what really works and doesn't, F2 placed temperature reading strips on both radiators, on the top and bottoms to see what kind of stock temps could be found. The bike was ridden at 80 mph for about three miles in sixth gear, so the engine load from the road would generate heat and the temp strips would read. Then, the bike went to Parker, Arizona for some Baja pre-running. The temperature was 85 degrees and the bike ran through the desert up to 91 mph then the temps were noted on the strip. Finally, the bike was ridden in a fashion to create the most amount of heat possible. Climbing steep, rocky hills at slow speeds and at higher elevations makes for little airflow and a big load. Here the radiators got into the 190-degree range, which was 9-18 degrees higher than the other tests had shown. Lots of heat created, with low to zero air passing by the radiator and higher elevations, all create boiling radiators.

Fixes? Three things made the biggest differences. One, if you don't need the horn, then by all means get it out of the front of the radiator. It's a big airflow blocker. If you do need it, find somewhere else to mount it. Two, modifying the exhaust tip to get the extra power takes the exhaust outlet size from a .600-inch diameter to 1.100 inch. The increase in diameter was a huge step towards getting the pressure out. And pressure backed up in the cylinder is heat. Three, use the high-quality temp radiating tape in the F2 kit on the bottom of the radiators. The exhaust system's hottest point (about 360 degrees) is sitting just below the radiator bottom.

SUSPENSION

In standard trim the 525 suffers from balance issues; wallowy to harsh forks are under-sprung for 185-pound-plus riders mated to a mushy shock that allows the rear end to ride low in the travel, wallow, bottom and compromise the steering precision. For '07 KTM increased the fork spring rate from 0.42 kg/mm to 0.44 kg/mm, which was a much-needed change, but is still too light for a bigger guy's posterior. They left the shock spring the same as 2006, 8.8 kg/mm. Slavens Racing fit up WP 0.46 kg/mm springs up front and a progressive rate Slavens PDS-02C spring (8.3 kg/mm- 17.5 kg/mm) in the rear to balance it out.

According to Jeff, "My approach is to fine tune the existing parts within the WP suspension components, *not* gut it and install over-priced valving kits and poor quality reservoir bladder kits. The stock WP valves work fine and accessory bladder kits have a long list of problems, such as they leak nitrogen into the fluid, leak fluid to the outside of the reservoir, reduce the nitrogen volume, and turn the shock into mush.

"In the forks, I machined the rebound piston's orifice for a mild flow increase and machined the leading edge of the pistons to allow the shim stacks to respond more quickly to small trail trash and give the front end a more planted feel. On the rebound check valve (often mis-labeled as the 'mid-valve') I massage the shim stack and adjusted the shim stack lift height to balance the hydraulic pressures within the cartridge. If you've ever had check valve shims that are bent and cupped away from the piston, this is a

LET THE FINE-TUNING BEGIN

Slavens Racing revalves the stock shock and installs one of their Progressive rear springs. The new action is ironically both stiffer and more plush, which translates into big smiles for the off-roader.

Dunlop tires, a 742 front and a 755 rear, are good all-around performers. Enduro Engineering's saddle is taller, which is good for Webb's rickety knees.

A Dirt Tricks Ironman sprocket, a 50-toother (45 is stock) is incredibly strong and very light. It lasts and laughs at abuse.

We have nothing but praise for the stock exhaust, once the inner tube is removed. Power is broad, the DB level is only slightly higher than stock, and it's strong. We did install an E-Line guard on the header, and this has saved our pants, which kept getting torched by the hot exhaust.

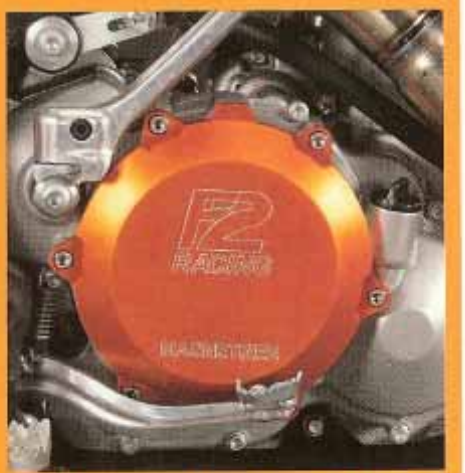
pressure imbalance that needs attention. The compression base valve shim stack was tuned for quick response to rocks and roots without causing bottoming issues. The base valve was also machined, like the rebound valve, for increased flow and response.

"The fork air chamber length is set at 125mm, 85/150 Maxima suspension fluid, compression clicker at 20 and rebound at 18. The shock rider sag is set at 105-110mm with the rider setting directly above the footpegs, and the static sag should end up between 20mm and 40mm with both clickers at 22. There is a lot of confusion about KTM sag specs. KTM's have an inch more travel (13.2) in the rear than most Japanese bikes; therefore they require more sag to fall within the industry standard of one-third of the total travel."

Slavens continued on about the rear damper. "In '06 WP made some much-needed changes to the shock that increased the overall fluid flow volume. These changes, carried over to the '07 models, make it much easier to tune the shock without doing the major surgery needed for previous years. The shock received compression valving changes to the primary and secondary pistons, new fluid, and a Slavens progressive rate spring. The final step is to bleed the oil gas (air bubbles) from the shock oil using the WP vacuum bleeder machine. This $3000 gem is the exact same machine that the WP factory technicians use at the factory and in the field when tuning shocks for the KTM team riders. Bleeding the shock by hand is a joke and leaves the shock full of air; this causes inconsistent damping and premature fade."

At 5 pounds 14 ounces, the full FMF Ti Q4 system shaved just about three pounds off of the tonnage. While bottom power was a shade softer than stock, mid to top was superb, and the DB range is totally off-road legal.

The KTM Hard Parts Q offered good power gains and kept the decibel level right on line with the production XC muffler. It's also just under one pound lighter than the KTM unit.



F2's Magnetizer clutch cover has built-in magnets that pick up floating metal parts that can plague any four-stroke. After a couple of rides, just pop off the cover, clean off the shavings, and Voila, things are good.

THIS AND THAT

In no particular order here are a multitude of mods, witche's brews and bolt-ons that I tinkered with.

- I switched from the stock 15/45 gearing to a 14/50. This made for a top speed of about 90 with a low enough initial cog for tight trail work. I used an Ironman steel sprocket; they're tough and light.
- I fit a BRP top clamp with rubber-mounted bars and a Scotts damper. I like this combo mucho, then I took off the Magura bars simply because they had a centering hole for the left side light switch. It stressed me out; I installed a KTM Hard Parts Renthal Big bar with Enduro Engineering's new handguards. Love 'em.
- I tested four muffler combinations. Stock, stock with the baffle removed, a KTM Hard Parts Q and a full FMF Ti Q system that included a Ti header and Ti Q rear muffler. Quite honestly, the stock system with the baffle removed is super quiet and makes strong overall power. The Hard Parts Q worked really well, mirroring the modified stocker but with a little more kick on top. Also, it was lighter by a pound. The FMF Ti system was hugely pricey, but the weight savings was nearly three pounds and though it didn't make quite as much bottom power, the mid to top was impressive and the sound level mirrored the modified stocker.
- The stock Pirelli tires are decent for road and trail. Once I shaved them down I installed a Dunlop 742 front and 952 rear. Great meats, good control and a high wear factor make them good choices.

SO...

I really like this machine in stock trim. Now I salivate over it. The F2 Power Back kit is flat incredible and this machine, which was lethargic and soft in stock trim, now barks, doesn't hot stall, gets great gas mileage and works in my terrain, which runs from 3000 to 7000 feet. Add in the Slavens suspension which is nearly as miraculous and I've got a stunning wagon that has my smile nearly splitting my head open like a melon. Great stuff; now I need to go beat it up, so get off me! ❑