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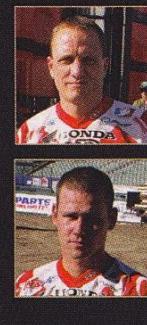
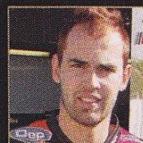
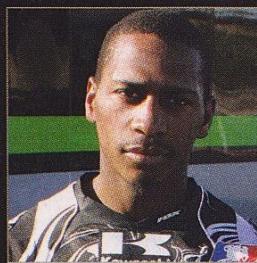
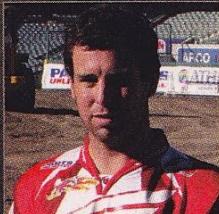
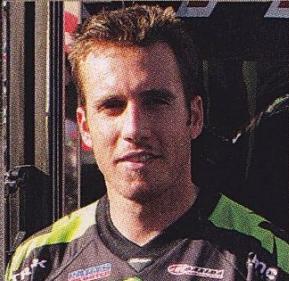
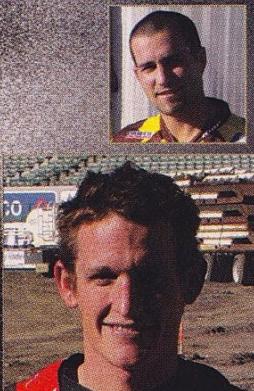
# CLOSE AND PERSONAL

## 2006 SUPERCROSS AND SUPERCROSS LITES WORKS BIKES

Story by Karel Kramer • Photos by Adam Campbell, Drew Ruiz and Jimmy Lewis

Every year the entire *Dirt Rider* staff invades the early supercross events, skulks through the pits and twists arms to get the skinny on a bunch of bitchin' eye candy that we can't buy. Well, the photos of the eye candy are still here, but we also decided to concentrate on the aspects that allow these athletes to perform at their very best. For each featured bike, we have provided the height and weight of the rider and all the changes made to allow the bike to fit him better. Some of the changes are new, and they reflect the size and weight of the four-strokes that are now dominating the sport indoors and out. Some common mods aren't needed on four-strokes, and they are losing favor.

Before you get carried away thinking you would ride better with a chopped subframe or higher footpegs, you have to realize where development is taking these riders. When you think about supercross, no doubt you worry about the death-defying jumps, but the factory development strategy is all about whoop sections. That is where races are won and lost. Engine development, suspension setup and riding position are optimized for the whoops, even if it means slightly handicapping the bike for other portions of the track. The radical ergonomic changes that many short and even average-sized riders are utilizing are aimed at keeping the bike from hitting them in the butt when hanging off in the whoops! These are finely tuned weapons, but they are focused on a narrow goal. It would be like taking an exotic target or sniper's rifle out hunting. Sure, it is more accurate, but is it the right tool for the average hunter? No, and these bikes may be no better for a weekend warrior on an outdoor track than a stock bike. But that doesn't make them any less addictive to eyeball and dream about. Let the drooling begin.





## #4 RICKY CARMICHAEL

RC's physique demands changes in his Suzuki RM-Z450 and in his Fox gear. He's small for a 450, but his legs are disproportionately large from extensive cycling. Fox customizes his pants to add room for his legs and knee braces. (Virtually all of the top SX riders save Kevin Windham wear knee braces on both legs.) It also shortens the arms of his jerseys so the elbow pad falls at the correct place; you won't see him with the cuffs whacked off and hemmed. His height also calls for a seat with almost no padding in front and a hump at the rear. It uses a modified stock seat foam. The Carmichael-bend ProTaper bar is mounted closer than stock, and the ultrasharp footpegs are taller than stock but in the standard position from front to rear. The subframe is cut slightly to lower the rear of the seat. The suspension travel is not limited, so the rear tire will hit the fender. The sound of the tire hitting bothers some riders, but not RC. The champ's suspension has a lot of shock rebound damping for control, but he runs less now than he used to. Suzuki makes little or no effort to make the 450 more powerful. All engine development is geared to find more effective power.

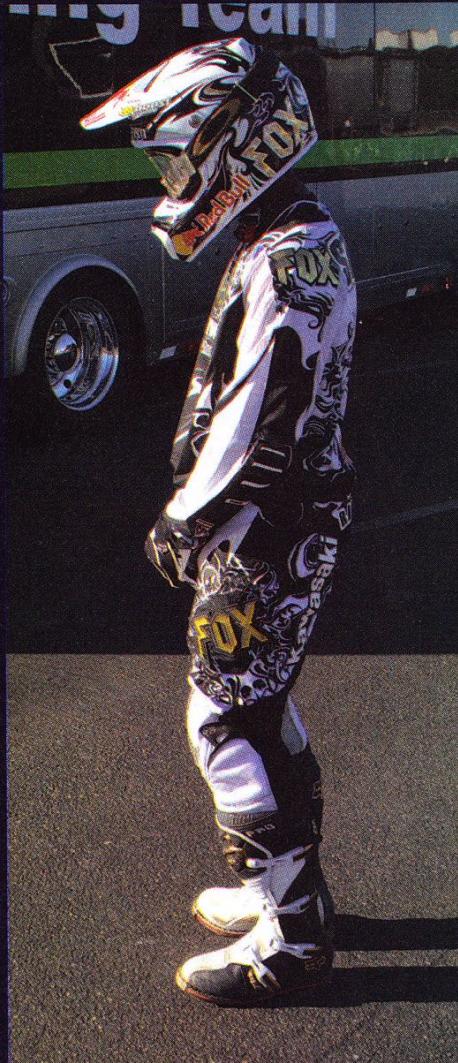


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### #9 IVAN TEDESCO

Although Hot Sauce is new to Suzuki and the RM-Z450, he has personalized his ride. He cuts his seat low with a hump, though it has standard foam. Tedesco runs a hot-start on the right side of the bar. He uses a ProTaper bar with a ProTaper half-waffle grip with the waffle ribs cut off to get a smaller outer diameter. He runs the stock peg location, but the footpegs are wider to the rear side. As with teammate RC, the rear shock is set up low with a lot of rebound. He runs the clutch lever out with zero play. The front brake is out and with almost instantaneous action. He doesn't want as much high-rpm power as RC but likes a motor with more bottom and mid.





## #7 JAMES STEWART

Bubba used to make a lot of changes to the KX250 two-stroke to help it squat in the rear. The lower subframe and shortened rear suspension were to aid hook-up. He likes the feel of the KX450F, and hookup isn't as elusive on a four-stroke. As a result, the subframe and shock travel are stock, and no changes have been made to affect the feel of the chassis stiffness. He does personalize the riding position a bit, with a bar clamp 5mm back from stock with a Carmichael-bend bar laid slightly back from the angle of the fork. He runs Renthal medium half-waffle grips (full waffle for mud), and he likes a firm clutch that engages well away from the bar. The clutch cable is never lubed. He runs a stock seat but won't race with a new seat; it has to be ridden on and broken in first. There is a normal clutch in the cases, not a slipper clutch. The engine is set up to have minimal engine-braking and a lot of bottom power and not so much top. He runs the suspension on the bike balanced from front to rear, but it feels stiff compared to most of his fellow riders' bikes.



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## #26 MICHAEL BYRNE

Byrner runs a handlebar clamp in the standard position with a standard sub-frame. He uses a new Renthal soft grip that is half-diamond pattern and half-waffle. He prefers his suspension stiff, using stiffer springs than Bubba, since he is heavier. He runs a handmade seat with the densest foam they can make, and he cuts a step in the seat. As with Chad Reed, he wears the Thor helmet with the earholes cut out so he can hear the bike easier.



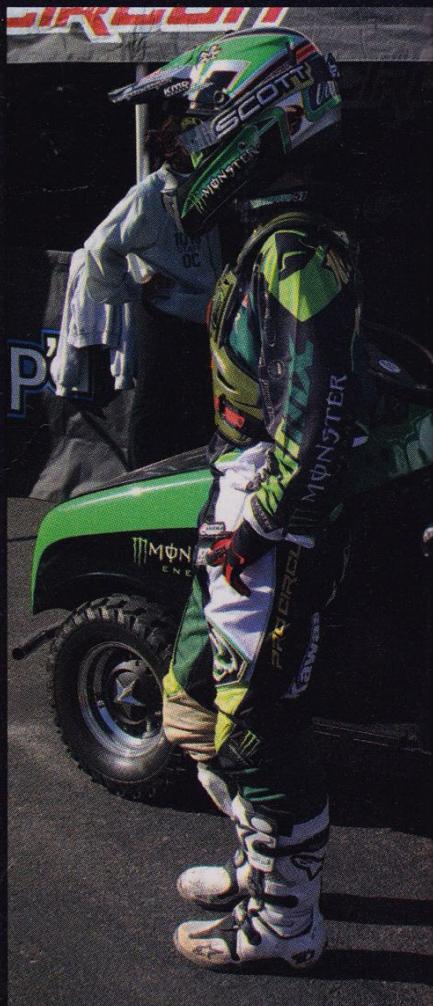


Team Monster/Pro Circuit/Kawasaki KX250F • Age: 23 • Height: 5'8" • Weight: 175 lb

## #51 RYAN VILLOPOTO

Since he is currently the shortest, lightest and probably youngest of the front-runners in the SX Lite class, even RC looks down at young Villopoto. As a result, Villopoto's bike shows many changes to the riding position and setup.

The RC-bend bar is mounted in lower clamps (mount available for the PC triple clamps). The footpegs are up 5mm, the subframe is lowered 3mm at the lower mounts and a Pro Circuit link arm drops the rear of the bike an additional 5mm. The travel is not shortened, so the rear tire touches the rear fender more than stock. The front brake lever is run in close to the handlebar. This changes the leverage, so the brake is more progressive in feel. Villopoto doesn't cut the seat, but he does like one that has been broken in. PC also bends the shifter up slightly to make shifting more efficient for the taller pegs and size 8 boots.





## #8 GRANT LANGSTON

The Pro Circuit riders all run approximately the same suspension setup for SX, and Langston uses the Pro Circuit link arm to lower the rear of the bike. Since he is heavier than flyweight teammate Ryan Villopoto, his bike has stiffer springs. He runs a Renthal 997 handlebar, standard-position bar mounts and a standard subframe. One of the very sharp footpegs is in the stock position, but the one on the right is 5mm higher to compensate for a shorter leg; Langston broke it and it healed shorter. Langston likes a stock seat, but as with Stewart, he only races with a seat that has some break-in time on it. He runs the front brake close to the bar but uses a normal clutch setup in terms of free-play, engagement and distance from the bar. For supercross, he likes grip tape on the sides of the bike to aid control in stadium whoops.

The Pro Circuit team riders use off-the-rack Thor Phase gear personalized for sponsors. Langston cuts the cuffs off the jersey unless he's racing in the cold.

Team Monster/Pro Circuit/Energy/Kawasaki KX250F • Age: 17 • Height: 5'5" • Weight: 134 lb



**92****S & CONSTRUCTION****SCOTT USA****thor**AUTOMOTIVE  
FINISHES**PPG****Team Yamaha YZ450F • Age: 23 • Height: 5'11" • Weight: 170 lb**

### **#123 BRETT METCALFE**

Yamaha of Troy runs a combination of works and GYT-R parts on its bikes. Metcalfe uses the GYT-R pegs mounted 5mm higher than stock with a subframe 5mm lower than stock. The rear tire touches with a stock subframe, but it doesn't seem to be a problem for Metcalfe. He runs a Renthal 997 bar cut to 31 or 31.5 inches and fit with Renthal soft full-diamond grips. The bar is mounted in clamps that are 5mm higher than stock. As with many of the other light riders, he likes a broken-in stock seat for racing. His suspension is very firm.





## #22 CHAD REED

Reed and teammate Heath Voss ride bikes that are largely identical. But even though Reed is smaller and lighter than Voss, his whole bike is stiffer. Stiffer suspension, chassis setup and even tighter steering head bearings. Their engines feature more hit than stock. As with many of the top riders who put in a lot of practice hours, he runs a glove with no palm padding. The new Thor helmet has ear-holes that aren't completely open. Reed likes the ear pads opened up to better hear his bike. The team claims the riding position is virtually stock. In a column in *Australasian Dirt Bike*, Reed wrote that he agreed to try the four-stroke for '06 but felt sure he'd prefer the proven two-stroke. After testing he was shocked to find that he "hated" the two-stroke after trying the four-stroke.





Team Honda CR250R/CRF450R • Age: 34 • Height: 5'10" • Weight: 170 lb

## #5 MIKE LaROCCO

This is the first year for the Rock on a 450 in SX, but his bike setup remains mostly the same. He likes a taller bike with a standard seat and seat height. He

is the only top Honda rider running Kayaba suspension, and he runs a level suspension balance with average stiffness. The brakes are extremely sensitive, and both levers engage away from the bar. Once he is on the track, LaRocco

doesn't use the clutch much, so the more bark that the engine can make, the better, but it still pulls long. Most of the other factory bikes have a white-colored magnesium carburetor body, but the carburetor body on LaRocco's bike looked production-based. His bar position is pretty conventional, but he was one of the first top riders to place the clutch lever high. At the time he claimed it was to compensate for wrist injuries.





## #2 JEREMY McGRATH

Although MC is not exceptionally tall, he innovated a forward riding style that influenced many riders during his career. He runs his bar mounts forward of standard, and he runs a rather straight McGrath-bend Renthal bar without much sweep and a Renthal half-waffle grip. In fact, he and Damon Bradshaw pioneered modern minimal-sweep bends. He uses a stock seat and footpeg location, but the seat is 15mm lower due to a cut subframe. He's picky about the front tire and insists on one with stiff sidewalls. He runs the suspension a bit soft by supercross standards and a little low in the rear. He employs a lot of shock rebound damping but not as much as Carmichael ran when he rode the CR250R. MC doesn't mind so much if a bike doesn't have abundant bottom power, but he likes strong mid and high-rpm power. His bike uses different internal gear ratios, so he runs a 54-tooth rear sprocket. The equivalent gearing on a stock bike would be 13/51. MC likes a powerful front brake but with the lever close to the bar. And he doesn't want the lever to have a hard, solid feel. "Mushy" sounds negative, but MC likes the lever to have give.

For the third round MC jumped up to the CRF450R (rumored to be Windham's unused bike), and he made the switch with only three days of practice.

Sobe/Samsung Mobile/Honda CRF450R • Age: 34 • Height: 5'11" • Weight: 191 lb



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Team Honda CRF450R • Age: 24 • Height: 5'6" • Weight: 145 lb

### #11 TRAVIS PRESTON

Preston used to run a tall seat, but now he has a stock seat with a hump. His bar mounts are still forward and tall. He employs the same suspension setup as Windham, and he runs the bike fairly level. He likes aggressive power. The actual powerband is like stock but with more everywhere.





## #10 ERNESTO FONSECA

Ernie has the most radically changed ergonomics of all the Honda team. He runs a drastically cut seat and a lower subframe. He further shrinks the riding position with footpegs 10mm higher than stock. He used to run the bar angled back but not any longer. He does place the bar mount a bit farther back than stock. One unique preference is a completely straight clutch lever, like something from the '70s. Honda had one left over from Jean-Michel Bayle, and Fonseca liked it. The rear suspension travel remains stock, but with the subframe cut, the rear tire hits the fender hard. Luckily, Ernie has no trouble finding new rear fenders. He weighs only 145 pounds, so he prefers softer suspension than other riders.

Team Honda CRF450R • Age: 28 • Height: 6'3" • Weight: 190 lb





### #132 BILLY LANINOVICH

Laninovich runs a lot of production parts on his bike and plays with the ergonomics very little. At his height that makes sense, as his bike is widely considered to have the best ergonomics in the class. He runs a full-width Renthal 996 bar with soft full-diamond Renthal grips. The bar mounts are on a works clamp, so the team isn't positive but believes it to be in the stock position or a bit rearward and at the stock height. The works footpegs are wider than stock and seriously sharper but are in the stock position. The subframe, linkage and seat are all standard. As with all the teams, the focus is on the whoop sections, so the front end is stiff to prevent it from falling into the whoops. But to quote the team, "The bike still turns since it is a Honda." The engine on both Western Region series bikes are identical. Each year away from the 125cc two-strokes, the riders move further away from an all-top-end motor and look for bottom, midrange and torque without giving away too much of the top they had in '04.





## #29 ANDREW SHORT

Short isn't exactly short, but he isn't as tall as teammate Preston, either. You would think he was extremely tall seeing his bar setup. He likes a high bar and high levers, with the front brake lever out and firm. The seat and pegs remain in the stock position. He's not abnormal with his suspension settings; for SX that means pretty stiff with a lot of control. Rumor has it that Honda was tired of privateer bikes being faster than the team bike, and for '06 it got serious about the CRF250R. Reportedly, the motor has a lot of bottom and a lot of power overall. It certainly looks stout on the track.





Team Red Bull/KTM 250 SXF • Age: 31 • Height: 5'9" • Weight: 170 lb

### #800 MIKE ALESSI

If you hadn't guessed from his many holeshots, Alessi likes an engine with a lot of high-rpm pull. He gives up the torque that teammate Ramsey favors to get all-out boost. Ramsey has 10 years riding SX, and this is Alessi's first, and so far it looks like Ramsey knows what he is doing. Alessi has been grabbing holeshots but wilts like a hothouse rose once the race leaves the start straight.

He runs a stock subframe, but the unique setup extends beyond the engine. He runs three foam doughnuts on the clutch-side grip and two on the throttle side.





## #25 NATHAN RAMSEY

Although NateDawg has a personalized riding position on his KTM, most of the changes are for sale from KTM's Hard Parts catalog. Even the stock bike has four positions for the handlebar, and Ramsey uses what would be approximately position two (bar clamp in the rear mounting hole with its offset forward) for the 10mm-narrowed Renthal 996 Twin-Wall bar/medium half-waffle grip combo. The triple clamps have 18mm of offset (an option on the stock clamp) instead of the standard 20. Most of the team riders made radical changes to the 250 SXF; in comparison, Ramsey uses a stock sub-frame and a standard seat base, seat foam shape and seat foam density. The team used to run flat seat bases on the old 125s, but the 250 four-stroke showed more power on the dyno when using the stock-type dished seat base. The only change that KTM doesn't sell is Ramsey's 5mm rearward pegs. Ramsey has his own engine setup (compared with teammate Mike Alessi) that features a lot of low-rpm torque. The only external alteration is a different FMF MegaBomb header, but the team claims the Ramsey package pulls a long time with more power everywhere in the rpm range than a stock SXF.

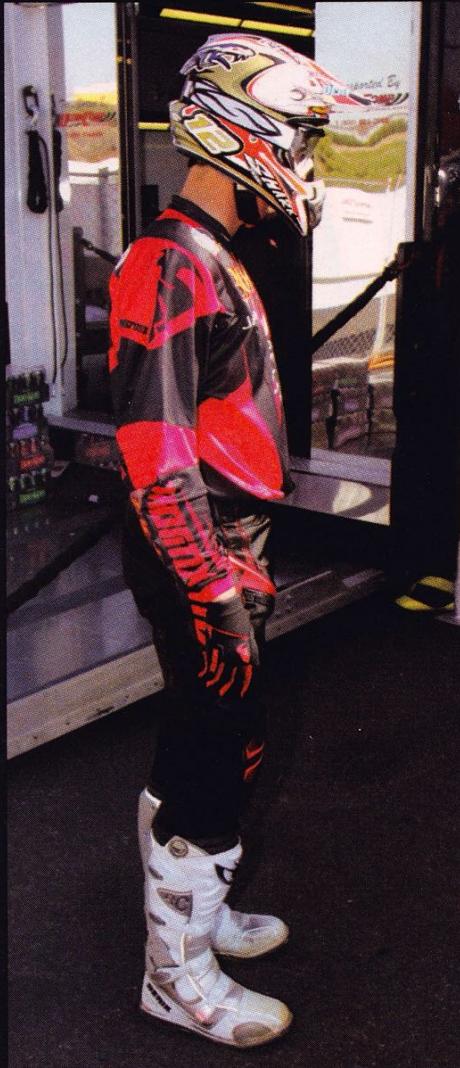


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Team BooKoo Honda CR250R/450R • Age: 28 • Height: 6'2" • Weight: 185 lb





## #12 DAVID VUILLEMIN

DV is nearly as tall as lanky Preston, and they are the tallest top pros on the circuit. That height shows on his bike.

Although he always used a stock seat on his factory Yamahas, with only days to set up a CRF450R for Anaheim 2, the Cobra tried a tall SDG seat on the bike. Because of his respect for large boots, the pegs remain in the stock location but the handlebar is mounted forward and high. The combination paid off, and as with MC, Vuillemin looked instantly more competitive on the four-stroke.

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