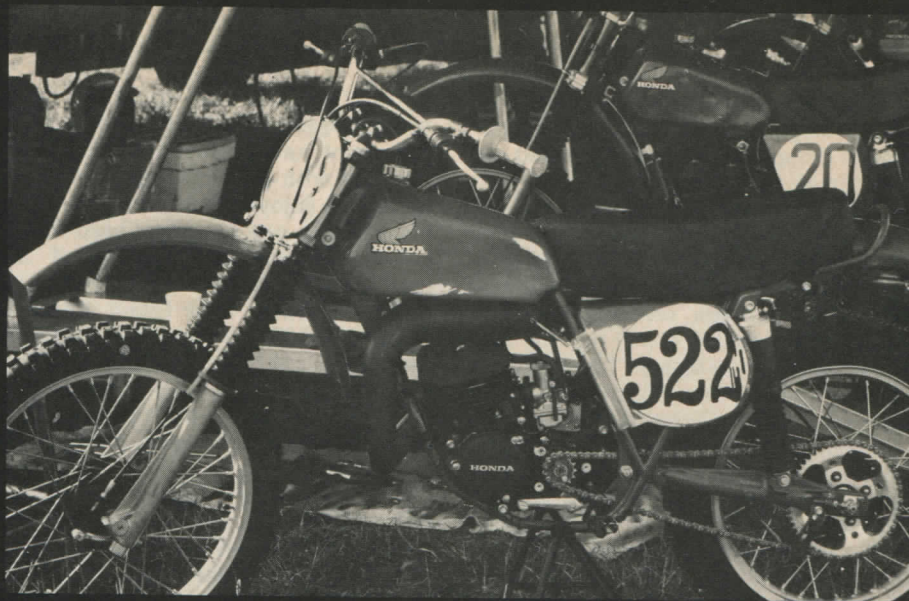


A LOOK AT THE FABULOUS HONDA RC125

No Exotic Materials, Just Exotic Design That May One Day Be Production.

By Fernando Belair



The RC125 Hondas are really different this year. Wonder how long it'll be before they come this way in production form;

EVER WONDER what's really behind those super fast factory 125 Hondas? What it is that makes them go and go, race after race? Well, you'd be surprised at how close to stock the modified Elsinores are and how far from stock the red "Fire Engine" works bikes are.

The Honda team began the AMA 125 National Championship series on their modified production bikes. According to everyone we asked, these rockets had little more than ported barrels, larger carburetors, special exhaust pipes and forward-mounted shock conversions. These are all modifications that can be obtained by the average racer if he has

enough cash to pay for what he himself cannot do.

It was on these machines that the team began its dominance of the AMA series. But after the first couple of races, the works bikes arrived from Japan. And they were very different. A little slower than the hopped-up production bikes, but much better handling, if you can imagine a bike that handles better than a 125 Elsinore. And it was on these bikes that the Honda team finished the series, taking 1st (Marty Smith), 2nd (Bruce McDougal), 3rd (Chuck Bower), and 4th (Mickey Boone). To top the whole thing off, the team finished every race entirely intact. Not a single DNF

INTERVIEW: MARTY SMITH

The Best 125 Motocrosser In The U.S. Tells What It's All About

WITHOUT A DOUBT, the most competitive class in American motocross is the 125. The reason is the riders. Nearly every one of them is high school age or younger. They're at that point in their lives when fear, the element that keeps most others back in the pack, just doesn't exist. These youngsters all ride with the aggressiveness of a de-hived swarm of bees. They attack relentlessly, each rider convinced that, one way or another, he can take the rider in front of him. If he's

successful, then he'll pursue the next rider with the same degree of confidence, until there are no more riders in front to cope with. At least not in that race.

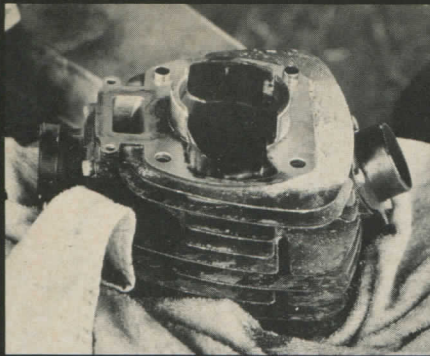
But, as we all know, there's always someone better, somewhere. Maybe you just haven't raced against him yet, but he's out there and you know it. The only way to be sure that there isn't anyone else left who is faster than you are is to do what California's Marty Smith did...capture the AMA's 125cc National Motocross Championship. And you've got to do it in the same convincing way that Marty did so that there's no doubt left in the minds of those who raced against you. The title was sewn up before the last race of the series in Ohio. Marty didn't even have to get his leathers out if he didn't want to, because no matter who won, he still would have been the best 125 motocrosser in the

U.S. by nearly twice the number of points held by the second-place man.

At 17, the heavily-tanned, trim youngster has a very conservative view of himself and his role in the sport. But that's about where his modesty ends. Like any young man his age, Marty is tremendously interested in women. But he doesn't confine that interest just to girls his age. Any attractive female is a prospective target. And he never takes no for an answer. Never quits trying. That's one of the things that, on the track, makes him such a fierce competitor.

Having covered the Mid-Ohio event, we spent the succeeding week with Marty, Bruce McDougal, Chuck Bower, and the entire team of mechanics as they prepared the machines for the Springville, N.Y. race.

The riders are generally free to do what they wish during the weekdays,

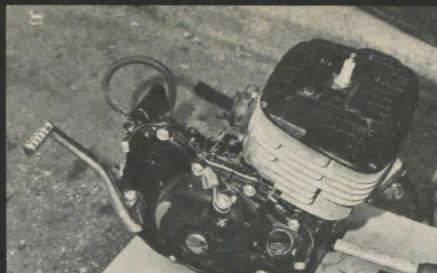


This bottom view of the cylinder shows the extra port for the reed cage.

for any rider. Impressive!

The machines that sewed up the crown for them, and on which they'll be competing in future important events, have been dubbed the "Fire Engine" machines because of their color. The bikes are entirely red. Frames, tanks, fenders, side panels, the works. The frame, naturally, is made from chrome moly. The swinging arm is aluminum and very light. Splitting above the now centralized exhaust port, the single downtube frame forms a double cradle beneath the engine, continues back to form the footpeg mounts and then sweeps upward to become the upper shock mounts. The two loops finally join again as the rear fender brace.

One of the major improvements over the standard bikes is suspension. While the riders believe that the steering geometry has not been altered, the front forks provide nearly eight inches of travel. And most importantly, the forks are of very thin castings that, along with the magnesium front hub, make the



The heart of the bikes is the new Case-Reed Induction engine.


front end very light. The rear shock absorbers contain no springs. They utilize pressurized nitrogen in place of the spring, while conventional oil handles compression and rebound damping. The shocks are mounted several inches forward of the standard position, thus providing more than seven inches of rear axle travel. Not only is this a tremendous amount of travel, but the gas/oil shock delivers a much smoother and more-easily-controlled ride than regular spring/oil shocks do.

Like the front hub, the rear unit is also of magnesium, and both wheels are laced to D.I.D. rims. Tires are a matter of personal preference. For example, Smith's bike has Trelleborgs, while Boone's is shod with Bridgestones.

The engine is unique. It sports both reed-valve and piston-port induction. Honda calls it Case-Reed Induction. The reeds are vented directly into the crankcase. The intake port is located in its normal position. Intake begins with the

first upward motion of the piston as the reeds immediately pop open. Then, as the piston skirt clears the lower edge of the intake port, regular intake begins. On the downward portion of the piston's journey, the closing of the intake port means the end of intake altogether. Thus, Honda has been able to get full use of the intake vacuum created in the crankcase, while maintaining reasonable port timing with regard to the duration and termination of the intake cycle.

With such an intake arrangement, the exhaust pipe becomes extremely critical to the performance of the engine. In order for the piston's up-stroke to open the reeds while, in fact, there is a direct passageway still open between the crankcase and the combustion chamber (the transfer ports), there must be a positive pressure wave in the exhaust pipe at this point in each engine revolution. Positive pressure exists in an exhaust pipe when the difference between the internal cylinder pressure and external cylinder pressure is one of attraction, the lower outer pressure drawing out the gases from the higher inner pressure. This insures that as the piston moves upward, and creates a vacuum in the lower end, the reeds will open to enlist fresh mixture, rather than having burnt gases return to the crankcase via the transfers.

While these machines, and the 250cc bikes (which have gas/oil suspension in the front, as well), are very expensive—in that they are handmade prototypes—it is hoped that what Honda learns from these unique racing machines will someday find itself onto a production bike. I don't know about you, but I can hardly wait. 

while the mechanics completely disassemble each and every machine, checking for possible breakage everywhere they look. Once satisfied that there is no reason to worry, the bikes are put back together with professional precision. Although the mechanics can be just as big a bunch of screw-offs as the riders can, when it comes to doing their jobs, they each have a great deal of pride in the detail of their machine preparation.

Meanwhile, while all of this wrenching is going on in the parking lot of the nearest Holiday Inn, the riders busy themselves with swimming in the motel pool, diving off bridges on the Interstates into rivers some 30 feet below, renting powerboats and going water skiing, or simply going back to the track where they raced on the previous Sunday and practicing.

At night, they try to talk their way >



into the local bars to do, as Smith put it, "some heavy swoopin'." Occasionally, though, they can be seen assisting with the mechanics' chores, since each rider is responsible for the maintenance on his practice bike and is therefore a fairly competent mechanic in his own right.

We all sat around at times, BSing at great length while downing beer after beer, and we discussed with Marty what it's like to be the Champ and how he got there.

CW: In the first place, when did you get into this evil world of easy money and fast women?

MS: I was about 14. I had this old 125 Yamaha MX that I used to trail ride on. And I really wanted to race it. My parents said that it was okay, so I entered a race at Carlsbad 'cause it's pretty close to my house. If I remember, I think I finished about 5th. It was a pretty good bike in those days, but not now. Everybody has too much new stuff.

CW: And how soon after that did you get your first sponsorship?

MS: When I was 15 I was doing pretty good. Most of the time I was winning, so I got picked up by Monark. John Olsen was the guy that sponsored me. I was with them almost a year. They were pretty good to me. They tried to give me as much as they could, but it was hard for them. It was a small company and they didn't have a whole lot of

money. Anyway, the Monark was a neat bike, just excellent. And I had a real sharp tuner who hopped it up.

CW: Jeff Burgess?

MS: Yeah, he was real good. He always worked so hard on it. It used to look almost new before each race. And they did some really trick stuff to it 'cause it sure was fast. I think that John R. (John Rosenstiel, Marty's mechanic and team-coordinator Dennis Blanton's assistant) does just as good, maybe better.

CW: Was the Monark as fast as your Honda?

MS: It was probably a little faster. I don't know how they would do in a drag race, but the Monark was probably faster in top gear. But it had really different power. There was more on the bottom. If you came out of a corner in the wrong gear, it would pull pretty good even though it wasn't on the pipe. But it didn't rev as fast as my Honda. Ya know, the new red bikes rev so fast. The Monark wasn't like that.

CW: What about the transmission on the Monark? Did you ever get it right?

MS: Yeah, that guy from KOB (Steve Kolseth), he put one of them shift kits in it and they kept adjusting it. I never had problems shifting.

MARTY



CW: Would you rate it as good as your Honda's trans?

MS: When it was adjusted, it could come close.

CW: When did you first ride for Honda?
MS: It was a Monday. I wasn't in school that day 'cause of Christmas vacation. I got a call from Denny (Blanton) and he asked me how would I like to ride for them. I told him yeah, and he asked me when I could come down to talk to them.

CW: When did you actually ride your first Elsinore, before or after you talked to Honda?

MS: I never rode one before. But I raced one that Sunday and I won. And that was on a stock bike. Except that I put a Mikuni on it and a different pipe. But the Japanese didn't like that and they made me take them off and use stock stuff.

CW: How did the bike feel compared to your Monark?

MS: It was weird. It kinda danced around more and it was tough to keep it on the pipe. You had to be real careful about being in the right gear an' all that. CW: How did it steer around the course?

MS: The Monark was better than that Honda 'cause I was used to it and it would go where you pointed it. But my new bike is just bitchen. I had one of those do-or-die turns in Ohio. I came in too fast and Hart was right behind me. So I just laid it down and she stuck. It surprised me. I really like the way it steers.

CW: What became of the Monark? How did you end your relationship with them?

MS: They kinda did it for me. They heard that I went and talked to Honda and then a couple of days later I got this letter in the mail that said how they couldn't afford to have a full-time rider racing for them anymore. I knew that they were sorta upset 'cause they were always telling me that they didn't have too much money. Nothing was different, it's just that they didn't want me anymore 'cause I had talked to Honda. Donny Emler was my mechanic then and he had my two bikes. He gave them back, but I had a couple of old spare parts and they didn't ask me for them so I kept them. Then I signed my contract with Honda, on the last day of the year.

CW: When did you start testing and racing the hopped-up Elsinores?

MS: Right away. They had all sorts of stuff they wanted to know about. But in the end, they just ended up with a pretty stock bike.

CW: That was your number 522 bike, right?

MS: Right. All they did to it was port the barrel, put on a bigger carb and a different pipe. Then they moved the

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shocks up and they changed tires for me 'cause I like Trellebogs.

CW: About changes on your bikes. Do you have to discuss it with anyone or do you get anything you want?

MS: It's really neat. All I gotta do is ask for it and Denny and John R. give me anything. But I try not to overdo it. I don't want to think that I'm too important. You know, get a big head and all that.

CW: But why try to be so modest? Afterall, you are the 125 National Champ.

MS: I know. But I try to remember that I'm just a rider. There was a whole lot of work done by mechanics and stuff that helped me win. And I also had a super bike.

CW: How about the new works bike? Is it much better than the one you rode before?

MS: Well, it's not as fast as the old one. There's a lot more power in the middle. The production one had more on the top. It also would pull lower. But the new one revs real fast and the handling is excellent.

CW: How does the handling differ from your practice bike? Have they changed the geometry or anything?

MS: I don't think so. It steers better, but what's really neat is the suspension. You don't land hard on it. There's a cushion kind of feel when you land. You can go so much faster on this suspension and you don't feel it as much. It doesn't tire you out.

CW: You didn't seem too tired after that first moto in New York.

MS: Naw. It was hard 'cause the dust was so bad, but I think I could have done 45 minutes.

CW: Could you have passed Hart? He's in really good shape.

MS: I probably could have. I was way behind for a while, but I caught up to him. That means that I was going faster. I would have tried to pass him on the uphill. I think my bike had power on his.

CW: What about the rest of the bikes?

MS: Dougal's (Honda teammate Bruce McDougal's) bike was faster 'cause he rides his old bike. He likes it better than the new ones. And them Kawasakis are fast. But they break sometimes.

CW: Well, if those guys have faster bikes, how come you're the Champ? What do you do that makes you faster?

MS: I always concentrate on every single turn. Go into it a little deeper and wait that extra second before putting on the brakes. Ya gotta learn to use the brakes. It's real important. Then when I'm in the turn, if I'm gonna square it off, I kinda help the bike do it with some body motion. That cuts down on the time it takes to get through the turn. Then, before you're ready to get back on the gas, there's a kinda feeling I

get that tells me that I'm gonna be ready to gas it in just a second. You know, that the bike's getting straightened up and everything. When I get that feeling, that's when I gas it. Just a little sooner than normal. And that gets me out of the corner faster.

CW: How about training? Do you do much?

MS: I run and I swim at the beach a lot 'cause it's a couple of blocks away from my house. I guess swimming is the most exercise I do. I also ride a lot during the week. I try to do it twice a week whenever I can. And then Honda always has new stuff for me to test out, so I get a lot of my practice in there.

CW: Now that you're the Champ, do you think you might get a raise in salary?

MS: I think I heard J.B. (Honda racing director John Blum) say something about it. I hope so.

CW: What do you do with your money?

MS: I save a lot of it, but I spend some too. My parents don't hassle me at all about it.

CW: You made more than \$1000 in win money in the past two weeks. When's the next big money event for you?

MS: The Evel Knievel thing at Snake River. He set up a \$125,000 purse for the motocross. If I can win my class, I can win more than \$6000, counting qualifying motos and contingencies.

CW: What would you do with the money?

MS: I need a new van. I think I'll get a Dodge and fix it up inside.

CW: Is that what you'll do now that the season is over?

MS: Yeah, and race on Sundays. I gotta race. I wouldn't give up racin' an' motocross for anything.

CW: Not even for women?

MS: Not even.

CW: What about the tootsies? Does racing help you there?

MS: Sometimes. If you do good and win it kinda does. You know, they come up and ask you for your autograph and stuff.

CW: And you swap them for a phone number, right?

MS: I did this one time. There was this foxy little Mona that was kinda hanging around all day, and then....

CW: Okay, okay.

MS: Anyway, it was excellent.

CW: What about during this series? You've made quite a name for yourself.

MS: Yeah, it helped. Me an' Dougal want to drive back and stop and see these two chicks in Kansas. But I think they're gonna fly us back home.

CW: They'll be there next year. And they'll be....

MS: Hey, do you have enough stuff for the interview already?

CW: Plenty. Why?

MS: You see that blond over by the Kawasaki truck?

CW: The one with the big...?

MS: Yeah, her. I'd sure like to swoop on her. See ya later.

The last we saw of Marty that day he was still working on the blond tootsie. Word has it he succeeded.

