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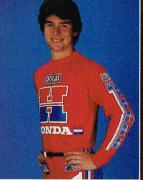
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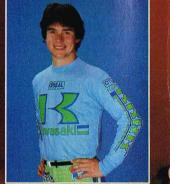
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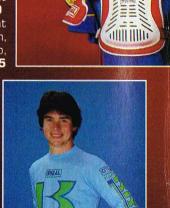
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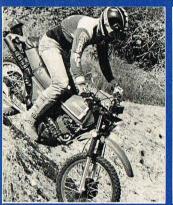


NOVEMBER 1983

VOLUME 13, NO. 11



JUMP LIKE A PRO



SUZUKI SP250



SPRING TUNING



TRI-ZINGER

SUZUKI SP500

KTM 125MX

6 DIRT BIKE / NOVEMBER 1983

TESTS

28 YAMAHA TRI-ZINGER Automatic three-wheeled fun device

30 1984 KTM 125MX
A full-scale attack on the Big Four
42 SUZUKI SP250/500 DUAL TEST
Cutting berms in the asphalt

FEATURES

25 FIRST ANNUAL DIRT BIKE OWNER'S SURVEY Here's your chance to tell it like it is

36 NEW KAWASAKI KXs FOR 1984

Team Green's new clean machines
EXPERIMENTAL SUSPENSION SYSTEMS Works Performance Pro-Gress and ATK

56 NEW HONDA CRs FOR 1984

More technology for the red racers

60 GARY BAILEY TEACHES TECHNIQUE How to jump like a pro

COMPETITION

46 ROSE BOWL SUPERCROSS

David Bailey takes the championship

51 THE PRIVATE LIFE OF PRIVATEERS The behind-the-scenes struggle of DB's Rose

TECHNICAL

38 BASIC ENDURO TIMEKEEPING
Beat the clock and bag a trophy
52 SPRING TUNING SECRETS

Low-bucks way to stiffen your springs

O FROM THE SADDLE Listen to the radio

O LAST OVER

The national garage 12 BITS AND PIECES

Mega-gnarly news

MR. KNOW-IT-ALL A matter of priorities

23 RIDERS WRITE Reader communication

24 NEW PRODUCTS

Awesome stuff

79 CRASH AND BURN How not to race Supercross, ON THE COVER:-Larry Baker hangs buns on the near-supersonic KTM 125. After a couple of jumps like this one, we

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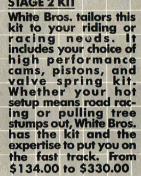
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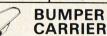
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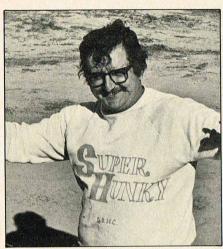
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From the Saddle



Listen to the radio By Rick Sieman

oward leaned his head back and poured the bitter-cold beer down his throat. A certain quantity of it trickled out of the corners of his mouth and disappeared into his rather thick beard. He then semi-suppressed a belch, hunched forward in a conspiratorial manner and fixed his somewhat bleary eyes on his best friend and riding partner, Wally. "It can't miss. I don't see what you're so worried about."

Wally ripped open his eighth bag of fried pork rinds with a particularly sharp tooth. "Man, I just don't know. What if it doesn't work?"

Howard snorted. "What have we got to lose? Look, we've been riding enduros for how many years now? Have we ever won a trophy? No! And we're good riders. Wally, we can keep up with anyone, but you know neither one of us can do any sort of timekeeping worth a rat's butt. I say we go for it."

Wally tilted his head back and yet another beer disappeared. "Run it by me again. I want to be sure I got it right."

Eager now, Howard lowered his voice, pushed a large pile of food, glasses and bottles aside and started: "Okay, here's how it works. When we sign up at the enduro, we make sure that one of us signs up about a half hour before the other. That ought to put us about 20 minutes—or 20 numbers -apart.

"Then, we make sure that those trick helmet walkie-talkies are on the same frequency. Now, let's say that you get number 47A and I get 65B. That should keep us well within the ten-mile operating range of the radios.

"We won't even bother with anything complicated. The guy in front rides real fast, way too hot, and if he burns a check, well, he just takes the penalty points and makes a mental note of the mileage. As soon as he clears the check, he radios back to the guy behind and lets him know where the check is and exactly what the mileage is. All the second guy has to do is look at his clock and chart and see when he should be there. After that, it's just a simple matter of riding in on time and zeroing the check."

Wally scratched his chin and looked heavily puzzled. "But what happens if the going gets tough? What if the second rider can't keep up the schedule?"

Howard rolled a cold slice of pizza into a tubular shape and stuffed the entire thing down his throat in one smooth motion. "No sweat. You know how enduros are; you have an easy section, then a tough section, then an easy section, and all you have to do is be wherever the secret checks are, right on time. If a tough section is coming up, the guy in front can warn the other rider about it, and he can get on the gas way before he gets into the rough stuff. If the whole enduro is tough and neither one of us can keep on schedule, so much the better. We can ride as well as anybody else, so we just ride as hard as we can and hope we do well.

"So, the way we work it is, one week you ride up front and the next week I ride up front. This way, we should each win a trophy at least every other race. Seeing as we haven't ever won anything, I figure we're way overdue."

Wally looked deep into his beer glass. "But isn't that sort of cheating?"

Howard threw his hands up in disgust and rolled his eyes skyward. "Hey, you read the enduro rule book, just like I did. Where does it say anything in there about not listening to music while you ride?"

"Music? What are you talking about?"

"Simple. These units we're going to tape to our helmets are more than just walkietalkies. They also pick up AM and FM, and will play tapes, too. These suckers will do just about everything. If anyone notices them taped to our helmets, just say that you play rock-and-roll while you ride to help you relax. The microphone will be taped to the inside of your full-coverage helmet where no one can see it, and the earphone is small enough to tuck inside of the foam in your helmet liner. Hey, these things cost us \$149.95 each, so you know they're deluxe. Any more questions? No? Good. Let's have some food and drink to celebrate all the trophies we're going to win. Say, Ramone...a pigeon taco for my friend here and I'll have the perro burger with the double side of fries. And a pitcher of suds. No, make that two pitchers of brew."

That very next Sunday, Wally signed up at the sagging card table that served the entrants at the Flaming Buzzards Deadly Bad Rock Nasty Gulley Bone Crusher 100-Mile

Enduro. He drew 27A. A short time later, Howard drew 47D. They viewed this as a good sign-being an even 20 numbers apart, just as they had talked about at Ramone's Bar and Grill and Bar.

At exactly 9:26, Wally pushed up to the starting line with the large radio taped to the top of his helmet. He drew puzzled looks, but no one said anything. At 9:27, he fired up his IT and snubbed it into gear. A minute later, he flipped the radio switch to "On" and started talking: "Hey, Howard? This is Wally. Do you read me? Ten-four, over and out, or is it over easy, or what?"

"Yeah, got you loud and clear, Wally. But, listen...cut out that World War II talk and just let me know what's happening, right?"

"Sure. Well, I'm doing about 45 or 50 and it's only a 24-mile-per-hour average to the three-mile speedo check. That should be no problem. You could maintain the first average on a street bike. Whoops! There goes the three-mile speedo check. Sure are a lot of guys with earlier numbers looking at me like I'm some kind of a nut case. Think I'll just wind it out, 'cause the course looks like it's heading for some rocky canyons. Four-ten, over and under, read me clear and loud, Roger back to you, no Smokies in sight, put the hammer up and the metal to the pedal, good buddy. I'll report back as soon as anything comes

"Look, can you please spare me all the CB stuff, Wally? Let me know when the terrain starts getting rough.'

"Okay, I'm coming up on mile 11 and it's an 18-mph section and there's no way I can hold that speed. I'll be lucky to average ten through here. Lots of rocks and rain ruts. Whew! Seriously hard work."

Howard listened to huffing and puffing sounds for a while, then heard Wally yell, "There's a check coming up at 14.6; it's right over a rise. Pretty sneaky."

Howard was already riding at this time and keeping an ear carefully tuned to the conversation: "Hey, 27A...what's that stupid-looking thing you got on top of your helmet?"

"Oh, that? Well, I like to listen to music while I ride. Keeps me real loose."

Howard blitzed through the smooth sections at a high rate of speed, and when he got to the first rocky section, he was so far ahead of schedule that he was able to cool it and still stay hot. When he came up at 14.2, he saw the rise that Wally had mentioned. A glance at his clock showed that he was eight minutes early, so he stopped the bike and checked his chain adjustment. With a minute to spare, he fired up his bike and rode slowly over the ridge...and there was the check, sitting innocently, waiting (continued on page 70)

NOVEMBER 1983 / DIRT BIKE 9

Last Over

something we can do to get it running?'

What could I say? I told him I'd try to

get him a new crank, but I wasn't about

to promise anything. He brightened up

considerably, and then left me to the job.

If he wasn't such an old friend, I would

have beaten him about the head and body

Into the Yellow Pages and on to the tele-

phone. I figured the first call should be to

the location of the old Bultaco shop in

town. To the "location," because the Bul

shop had sold out and left town years ago.

for a Bultaco Matador in stock?"

owners had left any parts behind."

crank and I want to fix it."

years? On the moon?'

different varieties."

"Not since March."

"Hi. I wonder if you would have a crank

"Are you sure you have the right

"Yeah, I was just wondering if the old

Uncontrolled laughing from the other

end of the line. "Yeah, they did, but we

threw out all that stuff years ago...heh,

heh! C'mon, you aren't really serious!"

"Really! I've got a Matador with a stuck

"Where've you been the last couple of

"I don't want to hear about it. Here, I'll

give you the number of a place in Orange

The Orange County Home for the Be-

wildered didn't have any Bultaco parts in

stock either, and for the next two hours I

made phone calls to every possible place in

the country. No luck. Smitty was now the

proud owner of a giant red hood ornament,

"... yes, and we have 342 stuffed alba-

trosses, as well as nearly 1,000 finches of

I just caught the tail end of a progress

report on the inventory of the Smithson-

ian Institute in D.C., and my eyes snapped

open as the speaker talked about all the

weird things in the "back room."

and I gave up and flicked on the TV.

County that may be able to help you."

and then forgotten all about it.

Maybe I'd get lucky...

number?'



The national garage By Paul Clipper

ey, man," Smitty said to me. H"you've got to get my bike working! I don't know nothing about this stuff, and you're my only chance. I just want to ride, ya know?"

I looked down at the naked piston of the ancient Matador and shuddered deep inside. "Smitty, you really should have gotten in touch with me before you went over to look at this bike. You would have saved both of us a lot of grief by not making that clown \$300 richer.'

"What do you mean?" he asked, obviously offended. "This is a great machine! He told me the whole story of the classic Bultaco Matador, and I wouldn't want anything else after learning about such a fine bike!"

"Classic, huh? Did it ever occur to you that something was wrong when it wouldn't kick over, mutoid?"

"He said all it needed was a spark plug and I'd be on my way."

"Smitty, the crank is seized! When you push down on the kickstarter, it doesn't move."

"He just said that the spark plug would set it straight, and the only reason he didn't do it was because he didn't have any spark plugs there. Honestly, I don't know why you didn't even try it....'

I looked down at the frozen crank and fought off the urge to hit him in the head with a fork leg. Smitty doesn't know a whole lot about bikes, obviously. I explained to him as sweetly as I could that nothing short of gravity and intense, direct heat would get that crank to move, and it wouldn't be much more than a puddle afterwards.

"You mean he lied to me about the spark plug?'

"' 'Fraid so. Maybe you could go and get your money back?'

"There's no way, Clip. He was packing out for Montana when I saw him; he's gone. But I do like the bike...isn't there

"We have easily 30,000 different sea shells from the Atlantic alone, classified by region. We have 242 of Alexander Graham Bell's first telephone poles, and 120 geared starter mechanisms for the first Model

I was on the phone to them in an instant. "Good afternoon, Smithsonian."

"Hi. I want to talk to your director in charge of motorcycles."

"That would be Mister Pneumus in the motorized biwheel division. Just a moment, please."

Click. Buzzz. Brinning.

"Arnold Pneumus here."

"Hi, Arnold. This is Paul Clipper from Hi-Torque Publications here. I'm looking for an engine part for a unique motorcycle, and you may be able to help me."

"I'll do my best. Is it a street bike or a dirt bike?"

Wow! Now I was getting somewhere. "A dirt bike," I replied.

"Okay, I've got the list right in front of me. You may not realize it, but the Smithsonian has the largest stock of motorcycle pieces in the known world."

"Really? I didn't know that...."

"Oh, yes! Here, let me give you a few examples. Top of the list-AJS Stormer non-unit transmission, 85 each. BVF carbs from early MZs, 43 pieces. Ceriana fork seals, 753 pieces. American Eagle transmission gears, assorted, 1,746 pieces."

"Wow! That's really amazing!"

"Hah! That's nothing! Need a set of Hatta forks for a Kawasaki Bighorn? We have 3,000 of them. How about CZ bars with the welded-on lever posts? We have 163 on the shelf."

"Hey! You could open up the classic bike shop of death!"

"Sir, the Smithsonian never sells any of its stock. We only loan pieces out to nonprofit organizations for study purposes." He was proud of his work, but he obviously wasn't an enthusiast.

'Well, that's exactly what I need," I said in my most official tone. "I'm doing an independent study project on the Bultaco Matador crankshaft, and I wonder if you have one in stock."

"We have 300 of them. How many do you require?"

I requested only one, please, and convinced him that Hi-Torque was a nonprofit organization by sending him a copy of my pay stub.

Smitty's out on the trail these days, for better or worse, thanks to a little rooting around in the nation's garage, and the last I heard, Arnold Pneumus was merrily counting his PAL spark plugs. One last tip. though: If you ever need to study one of the Smithsonian's Matador cranks, order at least two. They've got 299 in perfect shape, but one of them is a little tight.

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FACE GUARD



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Hi-Q NYLON M/X PANTS Personalized or with Team Name, or Plain

RACING BLUE with RED trim, or GOLD with BLACK trim. SPECIFY. Heavy nyl pants as described at left, available plain or with your choice of up to 10 Waist Sizes: 24-26-28-30-32-34 36-38-40

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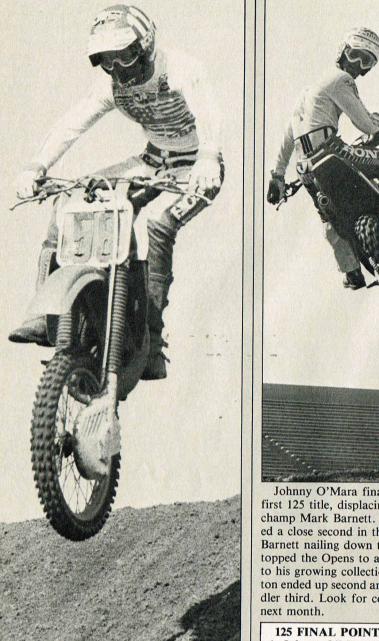
CHAIN BRACELET \$3.99



10 DIRT BIKE / NOVEMBER 1983

Bits & Pieces





Johnny O'Mara finally nabbed his first 125 title, displacing perennial champ Mark Barnett. Jeff Ward finished a close second in the 125 fight, with Barnett nailing down third. Broc Glover topped the Opens to add another title to his growing collection. Kent Howerton ended up second and Danny Chandler third. Look for complete coverage

125 FINAL POINTS STANDINGS
1. Johnny O'Mara (Hon)462
2. Jeff Ward (Kaw)454
3. Mark Barnett (Suz)441
250 FINAL POINTS STANDINGS
1. David Bailey (Hon) 440
2. Scott Burnworth (Suz)403
3. Bob Hannah (Hon) 374
500 FINAL POINTS STANDINGS
1. Broc Glover (Yam)
2. Kent Howerton (Kaw) 438
3. Danny Chandler (Hon) 356
WRANGLER GRAND NATIONAL
FINAL POINTS STANDINGS
1. David Bailey (Hon) 860

2. Mark Barnett (Suz)......859

3. Broc Glover (Yam)......825

4. Jeff Ward (Kaw).....807



EUROPEANS TAKE CHARGE

Another 500 MX World Championship has been decided at the final round of the series. Hakan Carlovist and Andre Malherbe were both fighting for the title, with the final nod going to the big Swede, Carla. He finished the Dutch GP with just enough points to knock Malherbe's bid for a Championship into never-never land. Carla and his mighty Yamaha went six-four for the day's event, giving him the points needed to take the title. Malherbe posted a fourone score that left him a scant seven points shy of the title.

In the 250 World Championship fight, Georges Jobe lanced reigning World Champ Danny LaPorte's chances early by clinching the title two races before the final round. LaPorte, who started the year slow, won the final round at the Finnish GP. Danny ended up second in his bid for a repeat title performance; third for the year went to Kees Van der Ven on a KTM.

Although Team Yamaha's Jim Gibson started the year off with a bang, he fizzled, due to the relentless charges of Eric Geboers and Michele Rinaldi. Geboers and Rinaldi, both Suzuki mounted, ended the year first and second, with Gibson taking third in his rookie season.



ANSWER SWEEPSTAKES

Answer Products is running a sweepstakes that might net you a new Isuzu 4WD pickup, a 1984 Honda CR250, or an all-expense-paid vacation to Hawaii. Entry forms are available from your local dealer—all you have to do is fill out the coupon. Be sure to pick your favorite dealer, because if you win a truck, he gets a free trip to Hawaii. For more info contact Answer Products at (805)257-4411.

HANK SCOTT GIVES HONDA FIRST-EVER MILE WIN

Hank Scott, who joined Honda halfway through the year, has given the red team its first-ever mile win and its second dirt win. Held at the DuQuoin State Fairgrounds, Scott battled with Bubba Shobert and Jay Springsteen early on in the race. Springsteen dropped back with tire problems, and the real race developed between Scott and Shobert. At the checkered flag, Scott won by less than two feet.

JACK PINE NATIONAL ENDURO

The unveiling of a 500cc Husky Automatic at the Jack Pine National Enduro proved the undoing of Mike Melton (Hus) and John Martin (C-A). Terry Cunningham piloted the prototype 500AE to the win, edging out teammate Melton by just four seconds. This three-speed version of the Auto should see the dealer's showrooms in 1984, as the final stages of testing are being done right now.



RUMOR MILL

Rumor has it that Danny Chandler is going to Europe to compete in the 500 GPs for '84. Also going around is that he'll be on a Honda and will be teamed with Andre Vromans and Eric Geboers. formerly of Team Suzuki. Andre Malherbe has ticked off the final days of his Honda contract and no one seems to know what machine he'll compete on in '84. Graham Noyce will ride either a KTM or Cagiva in the 500 class. Georges Jobe is out of a ride, which is odd considering he's the 250 World Champ. American John Finkeldey will compete in Europe in the GPs on a bigbore KTM. Danny LaPorte and Hakan Carlqvist will return for Team Yamaha, but neither will compete in the Trophee and Motocross des Nations. Former World Champ Brad Lackey still hasn't finalized his plans for the coming year -he'll probably be a no-show. Yes, it's true that Team Suzuki has pulled out of GP racing altogether.

USA DOMINATES MOTOCROSS des NATIONS

America's team of Broc Glover, Jeff Ward, David Bailey and Mark Barnett stomped the Europeans in the 500cc MX des Nations. By taking three of the top four positions, the Americans made believers out of the highly touted Belgium team. Broc Glover won the first moto, followed by Jeff Ward, then Georges Jobe and David Bailey. Barnett had trouble and didn't finish in the top ten. Moto two saw Bailey take the win after Glover flipped and had to work back up to finish 12th. Andre Vromans was second, followed by Jeff Ward and Mark Barnett.

The 500 race was expected to be our tough one, considering the Belgians had so many good Open riders. The Trophee des Nations is held in Czecho and is run on 250 bikes. We'll have a full report next month.

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GOODWIN GETS THE AX FROM THE AMA

Mike Goodwin, Stadium Motosports promoter, has been axed from the 1984 Supercross lineup. He was told that the AMA would not sanction any of his events, which include the Coliseum, Rose Bowl, Anaheim, and others. On the average, Stadium Motosports events draw large crowds. The dispute stems from SMC's scheduled San Diego and Sacramento Supercross races, which were refused sanction from the AMA. Goodwin went ahead and joined up with CMC and is putting on the races anyway.





SUZUKI POP TOPS

At the Pasadena Supercross, George Holland's bike featured a fake gas tank. Actually, it housed the air filter, and the gas was held in the left side of the machine. Notice the air scoops on the front part of the tank. The top of the air filter/tank unsnaps for easy access to the filter.

(continued on page 68)

BAILEY WRAPS UP

GRAND NATIONAL TITLE

David Bailey has taken his second

and third titles for 1983. At the final

outdoor race held in Millville, Minneso-

ta, David copped a second overall that

awarded him the 250 outdoor title and

gave him the points to barely edge by

Mark Barnett for the Wrangler Grand

National Championship. Barnett went

two-two for the day, leaving him just

one point short of the Grand National



A MATTER OF PRIORITIES

• I receive a massive amount of mail here at the tastefully decorated <u>DB</u> offices. Even as I type this, I can see the Umerian ferns bathing in the soft glare of an amber bug light, and only the merest hint of corrosion at the base of the coffee can used as a plant holder. Plush? Don't ask! But, I digress. Back to the mail for the moment.

Many readers keep asking how to increase the performance of their particular motorcycle in the same breath as asking how to cure a chronic problem. Something like: "Dear Mr. K, I have a high-speed miss in my 250 Honda. By the way, how can I make it faster for under 50 bucks?"

A word of advice from one who ought to know: Before you even think of spending money on performance boosters, make sure that the basic business is taken care of first. That is, make sure your bike is mechanically sound. I can't tell you how many bikes I've been riding around with a trick-air-box and a \$150 pipe installed, while they exhibit the classic signs of smoke blowing associated with bad crank seals.

Dirt bikes are faithless creatures and will let you down in a moment should you ignore inspective maintenance. By this, we mean that you should regularly take apart the things you take for granted and inspect them. Things like swingarm bushings, steering head bearings, brakes, wheel bearings, etc. When items like these are kept fresh and tight, the overall performance of the bike will stay high. Let these things get sloppy and all the bolt-on goodies in the world won't help.

Putting money into an unsound bike is much like hanging streamers and tinsel on a cow with hoof and mouth disease. So, let moderation and common sense be your guide...or don't even consider getting a reply from this department!

By the way, there are those who persist in scrawling their letters to this department. As you might know, typewritten letters are given distinct preference, so conduct yourself accordingly. Address all correspondence, marriage offers, bribes or hate mail to: Mr. Know-It-All, Rondo Talbot—Purveyor of Facts, DIRT BIKE Magazine, 10600 Sepulveda Blvd., Mission Hills, CA 91345.

Mister Know-it-All

CHERRY PICKING IN MISSOURI

Dear Mr. Know-It-All,

At a recent race I got blown away by a guy who insisted that he had never raced before. I checked around later and found that he used to race Pro. His name is Vincent Clark. Do you think you could verify this old comet?

Vic Valdovinos Willard, MO

P.S. What can I do if he was that ood?

According to my files, a certain Vincent Clark is a 96-year-old retired flattracker who is registered as legally blind by the state of Missouri. He also has two wooden legs and drools a lot when gumming his breakfast, which is limited to gruel and egg whites. You should certainly be humiliated to be beaten by this former dirttrack racer. At this point, your racing career looks basically hopeless.

WIDOWMAKER—AN ARTIST'S VIEW

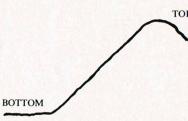
Dear Mr. Talbot.

I keep hearing about a monstrous hill that people keep attempting to climb. I would like to know just how tough it really is. The hill? The Widowmaker. I also heard that people try to do it on 750s and even 1000s. Is this true?

I wonder if you might be able to publish a photo of this hill for me and my fellow subscribers. If so, I would be very thankful. I would like to know why such bikes are used if all these new thumpers like the TT600 or XR500 are out. By the way, I love your magazine and always look forward to it for good

Matthew Gamlin Nicholasville, KY

Oh, yes indeed, Mr. Gamlin, there is a hill called the Widowmaker, and it is long and tough enough to demand not only big-displacement bikes, but exotic fuels as well. I'll do even better than running a photo of the hill. Here's an artist's rendering of the Widowmaker; study it carefully.



While the new four-strokes are good bikes and make excellent all-around hill-climbers, only the specialized hill-climbing bikes really stand a chance of getting over the top of a hill as tough as the Widowmaker.

LESS SOUND—MORE BRAINS

Dear Mr. Know-It-All.

I am 12 years old and have recently bought a 1982 YZ80. I think the bike is really great, but it is kind of loud for the areas where I ride. My question is, can anything be done to quiet the bike without changing the power characteristics? Do the advertised spark arresters, such as Answer Products, cut down on the noise any? I read your column all the time and look forward to hearing from you.

Scott Kopiel Shokan, NY

It is indeed refreshing to receive a letter such as this. You are clearly a fairly intelligent young lad, especially compared with the average minibike rider, who is about as astute as a lump of Cheddar cheese.

You most certainly can use a product like the Answer Product silencer/spark arrester, as long as you keep it freshly packed from time to time. All of the stock mini silencers are on the harsh side, stock. Congratulations on your "sound" approach.

BULTACO BULLY?

Dear Mr. Know-It-All,

I recently read a letter in the August '83 issue of *Dirt Bike* about a guy who liked his '72 Bultaco 250 and wanted to know what to do to his bike for under 50 bucks. What you replied was not very nice to a person who wanted your advice: "Why don't you drill a 5/16-inch hole in your tank, insert a brass pipe in it," and so on. Just because you don't like Bultacos, you can't pick on him. He may like them. Why don't you be nice for a change? One of these times someone is going to get back at you!

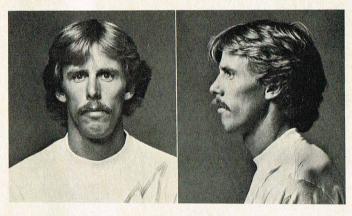
R.C. WA

W m not

I am not a bully by nature. The occasional brusqueness of my replies comes from the inherent fatigue and pressure of dealing with rampant stupidity of a mind-bending nature. Your idle threats fit neatly into that category. Consider: The fellow sought advice and honesty. Should I have told him to go ahead and waste his money on that wretched relic? Should I have encouraged him to sink hard-earned bucks into a rolling rat hole? Would I be able to sleep soundly at night if I had encouraged him to put one more dime into that pile of pot metal, fiberglass and electrical danger called Bultaco? I think not.

One more thing, R.C. from WA, wherever or whatever that is: I know karate, jujitsu, kung fu and several other Oriental words. So there!

DO NOT TRY TO CATCH THIS AMAN YOURSELF.



NAME: Bob Hannah. AKA: Hurricane II, Buckwheat.

CONSIDER HIMARMED.

If you put Bob Hannah on one of the new 1984 Honda CR motocrossers. you better keep your goodbyes short.

Bob not only shows you how fast a motorcycle can go, he shows you how to make it go even faster. Same goes for 1983 Supercross Champion David Bailey. As well as everybody else on Team Honda.

Together they pushed our 1983 factory machinery to the limit. And the difference it made for our produc-

tion lineup is

ready for you to experience.

crossers based

on principles

developed by

Team Honda.

On some of

the world's

toughest

tracks.

Honda. Refined by Roger

DeCoster. Tested by

Moto-



Bob Hannah and David Bailey's accomplices include (clockwise from upper left): 1983 125 National Champion Johnny O'Mara, Danny "Magoo" Chandler, Goat Breker, Brian Myerscough. so fast. So light.

So responsive. You'd swear they were handcrafted works bikes.

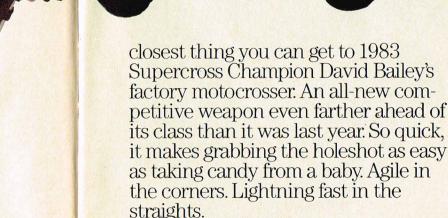
The CR500R. With a new 491 cc. engine that combines outrageous horsepower with plenty of tractable



Partner in crime David Bailey snatched the 1983 Wrangler Super Series, 250 National and Supercross Championships and got away clean.

Machines





And the CR125R. So radically





Bob "Hurricane II"

Hannah.

powerful from idle up, it makes the term "on the pipe" almost obsolete. Incredibly light, compact and tough. Based on the machine that makes the Johnny O'Show go.

For 1984, we've taken the world's most advanced motocross technology and made it available to you.

Resulting in production machines so far ahead of their time, using them on your competition ought to be a crime.
The perfect crime.





HASBER CHARGED WITH ATAC.

promising top-end

system like ATAC

deserves an engine

A revolutionary

punch.

that's

just as

The chamber is too good for the competition.

Which is why only Honda can offer the Automatic Torque Amplification Chamber (ATAC™). A system proven on our Grand Prix motocross machines. Available now on the 1984 CR125R and CR250R.

ATAC consists of a sub-chamber attached to the expansion chamber. It utilizes exhaust resonance to dramatically boost low and midrange power.

As rpms build, a simple linkage system driven off the crankshaft gradually closes a butterfly valve on the sub-chamber.

ATAC, our exclusive Automatic Torque Amplification Chamber, works to improve low and mid-range torque. The ATAC system closes off progressively as rpms build, leaving high-rpm duties to our new expansion chamber, which is designed for maximum peak horsepower.

At high rpm, the sub-chamber is completely closed and only our new expansion chamber is in use. It's designed for peak horsepower to complement ATAC.

With ATAC, the CR125R and the CR250R are able to deliver loads of low and mid-range torque without com-

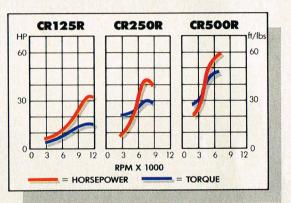
advanced.

So we cut weight from our new 31-horsepower, 123 cc powerplant's crankshaft and ignition rotor for immediate throttle response.

Our 246 cc water-pumper has

also been completely

redesigned. It's stronger, lighter, more compact. And with 43 horsepower,[†] it's more powerful than ever.

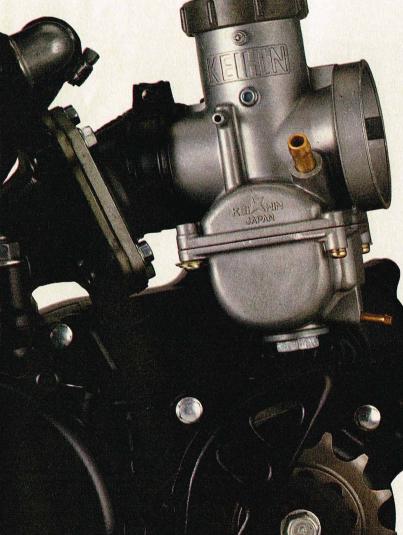


Our open class engine has more displacement than last year's. Which means 58 horsepower and 48.5 ft/lbs of torque are at your disposal. We've increased the flywheel effect to keep the engine churning out tractable power through low and mid-range rpm. And an eight-petal reedvalve helps provide even smoother power delivery.

So no matter which class you ride, ride a Honda CR. Because if you don't, there's only one defense for you.

Insanity.





LASTSERION NA HONDA WORKS BIKE.

Motocross Action magazine named each of the 1983 Honda CRs the best bike in its class.

Total domination of the sport. From the open class right down to the 125s.

utilizes Honda's unique linkage to provide truly progressive spring and damping rates.

This year, we've lengthened the shock and linkage to reduce the shock's



backbone for a lower center of gravity and better handling. Redesigned lightweight frame features bolt-on rear section for simplified maintenance.

The most advanced motocross machinery available.

And when production technology reaches such a peak, there's only one way to improve it.

Steal from the works bikes.

Which is why this year's Pro-Link™ rear suspension works better than ever. It's a single-shock system that

You can now adjust the compression damping 16 different ways and select from 22 different settings for your rebound damping.

All three CRs come stock with beefy 43 mm air-adjustable forks that feature fully-adjustable compression damping.

To make sure our suspension

Reservoirmounted compression damping knob makes adjustments easy. This year's Pro-Link utilizes a longer shock and longer linkage for more consistent performance, less fade and improved wheel control.

responds even more quickly, we've cut the unsprung weight. By using redesigned aluminum alloy hubs in the rear. And lightweight hydraulic disc brakes up front.

They're the exclusive twinpiston caliper stoppers that have already earned a reputation for excellence on our street, enduro and works motocross machinery. Complete with fade-resistant drilled discs. You

Our exclusive twinpiston caliper front disc brakes provide outstanding stopping power and reduced unsprung weight.

can even adjust the amount of free play in the lever to your own preference.

And on the CR250R and CR500R. rubber-mounted handlebars reduce rider fatigue.

With all this technology and attention to detail, it's clear why they're after us.

We know too much.



ALWAYS WEAR A HELMET AND EYE PROTECTION. Designed for operator use only. CRs are designed for motocross use only and are sold "AS IS" without warranty. Specifications and availability subject to change without notice. †SAE net taken at the crankshaft. © 1983 American Honda Motor Co., Inc. For a free brochure, see your Honda dealer. Or write: American Honda, Dept. 684-DB4, Box 9000, Van Nuys, CA 91409.

MOST WANTED LIST.



Engine 123 cc single-cylinder reed-valve inducted liquid-cooled two-stroke

> with ATAC . 34 mm piston valve

Transmission Six-speed Suspension

Front: 43 mm air-adjustable forks with adjustable compression

damping, 11.4-inch travel

Rear: Pro-Link with adjustable compression and rebound damping, 12.2-inch travel

Brakes Front: Hydraulic disc with twin-

piston caliper Rear: Drum

Dry Weight. . 191.4 pounds



Engine 246 cc single-cylinder reed-valve inducted liquid-cooled two-stroke

with ATAC 36 mm piston valve

Transmission Five-speed

Suspension Front: 43 mm air-adjustable forks with adjustable compression

damping, 12-inch travel Rear: Pro-Link with adjustable compression and rebound

damping, 12.2-inch travel Front: Hydraulic disc with twin-

piston caliper Rear: Drum

Dry Weight. . 211 pounds



491 cc single-cylinder reed-valve Engine inducted two-stroke

Carburetor 38 mm piston valve Transmission . Five-speed

Front: 43 mm air-adjustable forks Suspension with adjustable compression

damping, 12-inch travel Rear: Pro-Link with adjustable compression and rebound

damping, 12.4-inch travel Brakes Front: Hydraulic disc with twin-

piston caliper Rear: Drum

Dry Weight. . 224.9 pounds

Riders Write

THREE-WHEELERS AT BLACKWATER

Dear Dirt Bike,

I would just like to say that I thought the large picture of the three-wheelers at the Blackwater 100 was just great. But, I would also like to say that the writeup left a lot to be desired. The article left out the fact that team Honda unloaded but didn't race the course that we raced. Also, it left out the number of racers, how many classes, and maybe most importantly, the results. The article left out any mention of the overall winner, who just happens to be my dad, Donnie Huggins, and the fact that a girl raced in the 200 class and finished fifth. That was me.

By the way—what river crossings? Those of us who knew what was going on had absolutely no trouble with them. Sue Huggins

Well. Sue, we were having so much trouble getting around the course on two wheels that we found little time to pity you folks on the three-wheelers. Actually, we turned all of that information over to DIRT WHEELS Magazine, and if you want to see a little more ink on the race, look up their November issue. And yes, you and your dad are listed in the results.

GORILLA TALK

Dear Dirt Bike,

While practicing in a nearby tight woods section, a laurel stub made a medium-horrible slice in my new 4.50 x 17 Red Dot. I held the wound open with a pair of tweezers and added a couple drops of Super Glue, deflated the tire to close the slit, and put the cut part on the bottom so the bike's weight would hold the thing together. It has held through two trailrides so far and seems healed for the duration. Be sure you don't use too much, or you'll have a rear tire permanently attached to your garage floor.

They say that if you put a number of gorillas in a room full of typewriters, they will eventually compose a masterpiece of literature. The article on the Blackwater 100 was very, very close. How many of you guys work at the dimly lit Dirt Bike offices, and how old are you?

Mark Zachary Cashiers, NC

Zack, there are about three of us who are allowed into the building anymore, and all of us are old enough to know better. So once we have all these tires glued to the floor, what do we do next?

\$4.89 FOR A FRONT FENDER? Dear Dirt Bike,

After reading the article on the \$6000

Honda in your September issue, I couldn't believe some of those ridiculous prices. However, you printed that the front fender sells for a measly \$4.89, so I ran right down to my Honda dealer to order one. I figured that at that price I might even buy a spare. But when I asked the guy at the counter how much it was going for, he said a modest \$32.95 apiece. Gee, those prices sure get inflated on the way from California to Ohio! What's the deal?

Kerry Blake Marietta, OH

Yo, Kerry, we're a bunch of airheads. It seems that the price sheet we used was an early one, with a few mistakes. You caught one of them. The true price is \$32.25, so sorry. Now all we have to do is get our deposits back from the dealer for the 211 fenders we ordered.

SO WHO WON, ALREADY?

Dear Dirt Bike,

I have entered your Free-Wheelin' Free Wheels Sweepstakes no less than five, count 'em, five, times, and I haven't won yet! That doesn't bother me too much; I know the odds, but you never, ever let us know who did win! Well, once, and he lived in Alaska, for Pete's sake! How do I know you're not keeping the bikes for your greedy little selves? Print the names of the winners, already!

Chip Lezy Hampton, VA

DIRT BIKE CONTEST WINNERS TO DATE

In the Free-Wheelin' Free Wheels Seattle Sweepstakes- Michael Ricks of Anchorage, AK, won a Honda 250.

In the Free-Wheelin' Free Wheels Houston Sweepstakes-Perry Wiesner of Mississauga, Ont., Canada, won a Honda 125.

In the Free-Wheelin' Free Wheels Pontiac Sweepstakes—James Hartigan of Pearl River, NY, won a Honda 125.

In the Husky Swede Dreams Sweepstakes-Steve Senger of Big Fork, MN, won a Husky.

In the Suzuki Sweepstakes—Bill Zimmerle of Ringwood, NJ, won a Suzuki RM125.

In the Free-Wheelin' Free Wheels Pittsburgh Sweepstakes-David Holder of Tampa, FL, won a Honda 125.

> Address all correspondence to: DIRT BIKE Magazine 10600 Sepulveda Blvd. Mission Hills, CA 91345.





GAS IT!

Have You Hugged

Your Bike Today?

Four Strokes Truck

Two Strokes SUCK!

DUNLOP

New Products



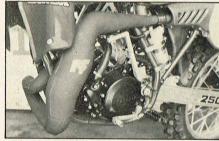
FOR HUSKY HOODS ONLY

Husky Products' hooded sweatshirt features the Husky logo on the front and across the back. It's light blue, made of 50-percent cotton and 50-percent creslan acrylic and is used by various members of Team Husky's enduro and ISDE team during those cool and chilly riding days. What a sales pitch! To get one, go to an authorized Husky dealer. They sell for \$19.95.



HOLESHOT HANSEN SHIRTS

Donnie Hansen designer shirts are now available in several styles. First, the designer model is a styled fit, and it retails for \$18.95. The T-shirt is an Anvil brand with a logo on the front and back; it sells for \$7.95. Then there's the long-sleeve T-shirt, which sells for \$12.95. Send the dough to Donnie Hansen Inc., 28032 Ellis Court, Saugus, CA 91350.



ROUGH ROOSTER

The Roost Factory says their CR250 pipe makes for more snap throughout the range, with the largest gain coming in top-end performance. Also, the pipe sits a full two inches higher than the stocker, making it less prone to dings and crushing. All of the stock mounting hardware is used, and the Roost Factory pipe sells for \$104.50. Roost Factory, 1430 W. 259th St., Harbor City, CA 90710; (213)530-8401.



BEL-RAY ADDS ANOTHER GRADE

This new Bel-Ray LT-56 shock oil has been developed for single-shock rear suspension systems. Team Honda has used the LT-56 all year and recommends it for use on all CR rear suspensions. It's a single-grade five-weight that has a high viscosity index, which means minimal loss at higher temperatures, according to Bel-Ray. It's available in one-quart bottles from your dealer.



NEW METZELER FOR 125s

Metzeler is now offering a 4.10 x 18 tire that is specifically tailored to the wants and needs of 125 and 175 bikes. Its tread design is an updated version of the Multicross model. With a new rubber compound, the combination of rubber and tread, along with the four-ply nylon carcass make the tire good for both hard and soft terrain. Ask your dealer for more info about the new little Metz.



MALCOLM SMITH TOTAL LEG PROTECTION

These knee and shin guards are anatomically engineered and manufactured in Sweden. They offer complete leg protection. They're designed to be worn under Levi's or leathers; just take out the existing knee guards in your gear. With an adjustable length and a hinged knee, the MS guards form-fit onto your leg and stay in place. They cover areas that are usually overlooked, like the inside calf and ankles. Malcolm says they offer over 70-percent leg-coverage. Both adult and kid sizes are available. Slide a note or call Malcolm Smith, 7563 Indiana Ave., Riverside, CA 92504; (714)687-1300.



JR MUFFLER CATALOG

JR Manufacturing's new catalog is filled with every size of steel, aluminum, clamp-on or weld-on silencer or spark arrester known. They are a division of Answer Products and offer an alternative to the top-of-the-line Answer mufflers and spark arresters. For a free catalog contact JR Manufacturing, 27967 Beale Court, Valencia, CA 91355; (805)257-2614.



MUGEN MEG. BAJA QUEEN

Mugen developed this megaphone for the winning Al Baker/Jack Johnson '83 XR500 Baja bike. They say it increases power and saves 3½ pounds of ugly fat over the stocker. It has a repackable silencer and bolts on in place of the original muffler, using the stock hardware. It's made for racing and sells for \$65.00 plus shipping. A call to Mugen should provide some info on their accessories for Honda four-strokes. American Mugen, 6944 Santa Fe Ave. East, Hesperia, CA 92345; (619)244-1181.



BOOT BAGGIES

Trim Racing Products makes a boot bag that will keep the rest of your gear clean and away from your dirty stompers. It also has a little pocket to carry your socks and gloves in. All team colors are available. Call Trim Racing Products toll-free at (800)841-2300.

LET THE WORLD KNOW ABOUT YOUR BIKE!

THE FIRST ANNUAL OVNER'S SURVEY

Was it good? Bad? Would you buy another one?

By the Staff of Dirt Bike



S ay, sport. What kind of luck have you had with your bike during the last year? We don't mean at the track. We mean at the parts counter. What broke on your scoot? Did you lunch your gearbox? Fry your electrics? Or just run through 14 sets of rings?

Well, here's your chance to share that information with other riders. The First Annual *Dirt Bike* Owner's Survey!

In order to keep the survey up-to-date, we are including only 1982 and 1983 motorcycles. And naturally, only dirt bikes. Street bikes need not apply.

As soon as we receive sufficient numbers on how the various bikes did in the reliability department, we'll put together the facts and figures and let you know what worked.

And what didn't.

MOTORCYCLE BRAND	SIZE (cc)
YEAR (MARK ONE)	982
MODEL	
□ MOTOCROSS □ENDUR	RO 🗆 DUAL-PURPOSE 🗆 TRAIL BIKE
	ark any area you've had a problem with. At the end of omments you might care to add. Keep 'em clean, as
EXHAUST SYSTEM	
ELECTRICAL	
TOP END/PISTON, RINGS 🗆	
GEARBOX 🗆	
CLUTCH/CLUTCH BASKET	
WHEELS/SPOKES	
HUBS/WHEEL BEARINGS 🗆	
CHAIN/SPROCKETS	
PLASTIC PARTS	

BRAKES
AIRBOOTS/MANIFOLDS 🗆
FILTER/AIRBOX 🗆
FRAME BREAKAGE/CRACKS 🗆
CONTROLS/CABLES
CARB/JETTING
NUTS/BOLTS/FASTENERS 🗆
RADIATORS/COOLING SYSTEM 🗆
SEIZURES 🗆
STICKERS/DECALS
RODS/CRANKS 🗆
FORKS/SEALS []
SHOCK/SHOCKS
SPEEDO/ODOMETER, ENDURO,
DUAL-PURPOSE BIKES
HEADLIGHT/TAILLIGHT, ENDURO,
DUAL-PURPOSE BIKES
VALVE STEM ANGULARITY 🗆
MISCELLANEOUS—SPECIFY
HOW DO YOU RATE THIS BIKE? POOR AVERAGE GOOD EXCELLENT
COMMENTS, IF ANY
WOULD YOU BUY ANOTHER? □ YES □ NO

Okay. That's it. We don't need your name or address or hat size. If you don't want to rip this page out of the magazine, just photocopy it. It should take us at least 90 days or so to get all of the results figured out, so keep an eye out for the amazing *Dirt Bike* Owner's Survey!

Send all surveys to *Dirt Bike* Magazine, Dept. Feedback, P.O. Box 9502, Mission Hills, CA 91345-9502. □

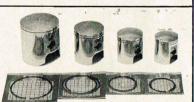
Genuine Suzuki Factory Parts



CABLES

eplace your worn cables with GENUINE FAC-TORY SUZUKI parts. They are designed to fit each year and model exactly.

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CLUTCH RM 80 all years . RM 100/125 all years RM 250/370/400/465/500 all years PE 175/250/400 all years	\$ 6.25 6.75 7.95 7.95	
FRONT BRAKE RM 80 all years RM 100 all years RM 125/250/370/400/465/500 all years PE 175/250/400 all years	\$ 6.25 6.75 7.25 7.50	
REAR BRAKE Cable or rod depending on model an RM 80 all years RM 100/125 all years RM 250/370/400 a, b, c RM 250/465/500 n, t, x, z, d PE 175/250/400 all years	\$	



PISTONS RINGS

GENUINE FACTORY REPLACEMENT PIS	STONS.
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RM 125 all years	20.95
RM 250/370/400 all years	25.95
RM 465/500 all years	29.95
PE 175 all years	22.75
PE 250/400 all years	26.95
STD. AND OVERSIZE. PLEASE INDIC	ATE

GENUINE FACTORY REPLACEMENT F	RINGS.
RM 80 all years	\$11.95
RM 100 all years	12.50
RM 125 all years	12.95
RM 250 a, b, c	14.50
RM 250 n, t, x, z, d	7.95
RM 370 a, b	18.95
RM 400/465/500 all years	8.95
PE 175 all years	13.95
PE 250/400 all years	17.50
STD AND OVERSIZE PLEASE INDI	CATE



NUMBER PLATES SIDE PANELS

ORIGINAL EQUIPMENT. Designed to fit each

FRONT NUMBER PLATE	
All models, all years	\$ 9.99
SIDE PANELS	

SIDE PANELS		
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RM 250/400/465/500 n, t, x, z, d	17.95 each	
PE 175 all years		
PE 250/400 all years	15.95 each	
Please indicate right or le	ft panel.	

SWING ARM BEARING AND SPACER KIT

Consists of two GENUINE SUZUKI swing arm bearings

and two spacers.	
RM 80 all years	\$15.25
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RM 250/370/400 n, t	24.95
PE 175 c, n, t, x	14.95
PE 175 z, d	23.50
PE 250/400 all years	32.95



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PE 175-400 singles 1977 to

MANUAL

Over 180 pages of photos, draw- Every RM owner should have ings, charts, info on how to one of these valuable parts repair, service and maintain your manuals. Enlarged pictures of each system, describes each

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FACTORY PORTING: Same spec's used by National & Inte national racers. Each porting job is designed for the type of power you need. Whatever it takes to put YOU in the wir

ALL RM'S 1981-82, -83 MODELS	 \$120.00
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ALSO AVAILABLE IN STOCK...NEW FACTORY CYLINDERS PORTED AND READY TO SHIP TO YOU...CALL FOR PRICES

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- special factory clearances
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\$30.00 + PARTS

CRANK REBUILDING: RACING factory spec's are followed We use special factory tolerances and only "GENUINE SUZUK PARTS". There's more power here... when done our way.

PACK UP YOUR CYLINDER OR CRANK AND SHIP TODAY. FOR PORTING INCLUDE YOUR PISTON ... ANY QUESTIONS?

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Replace your stock aluminum driven plates with SUZUKI STEEL OPTIONAL ones. They grab harder and last much longer. The hot set up for the aggressive rider. RM 100/125 all years . . \$ 4.95 each



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RM 100/125 n, t, x, z, d (new folding)	
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RM 175/250/400 b, c, n, t, x	9.95
PE 175 z, d	10.90

STATOR



SUZUKI FACTORY replacem	ne	n	t	as	SS	SV	
RM 80 all years							\$69.95
RM 100/125 m, a, b, c, n, t.							79.50
RM 125 x, z, d							83.95
RM 250/370/400 all years .							
RM 465/500 x, z, d							79.95
PE 175/250/400 all years							73.95

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chain guide roller. The design may vary from picture, depending on your yr. & model.

RM 80 t, x RM 80 z, d RM 100 n, t, x RM 125/250/465/500	8.95
t, x, z, d	11.75
PE 175 z, d	11.95 10.25

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GENUINE SUZUKI, consists of inside plastic assy, and grip, complete throttle grip assembly RM 80/100 all years \$8.95 RM 125/250/370/400/465/500 all years 9.95 PE 175/250/400 all years 9.95



			-
RM 80 d			\$ 4.95
RM 125 x, z, d			11.95 ea.
RM 250 z, d			10.50 ea.
Please in	dicate	right or left	side.

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Consists of two main bearings, two crank seals

and "O" ring when indicated RM 80 all years RM 100/125 all years RM 250/370/400 all years 28.95 RM 465/500 x, z, d 26.95 PE 250/400 all years



HEDOILD IVI	dillin
Consists of GENUINE FACTORY rod, lead bearing, crank pin and two thrust washers.	ower
RM 80 b, c, n, t, x	\$31 89
RM 80 z. d.	\$01.00
(NEW IMPROVED BEARING)	35.95
RM 100/125 m, a, b, c, n, t, x	
RM 125 z. d	
(NEW IMPROVED BEARING)	47.95
RM 250/370/400 all years	50.95
RM 465/500 x, z, d	58.50
DE 175 all years	44 95

58.50

HANDLE BARS

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"SUZUKI WORKS"... Made by Answer Products and used by MARK BARNETT...4130 chromoly Available in gold, yellow, red and blue. RM 80 to RM 500 all years



GENUINE SUZUKI same as used by the factory team. You can't buy any better

RM 80 all years	Ś	8.25	pair
RM 100/125 all years		8.95	
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PE 175 c, n, t, x		0.95	
PE 175 z, d		4.95	
PE 250/400 all years		0.95	
REAR		0.50	Pull
RM 80 all years	S	8.25	nair
RM 100/125 all years	۲	8.95	
RM 250/370/400/465/500 all years		9.95	
PE 175 all years		0.95	
DE 250/400 all voors			
PE 250/400 all years		10.95	pair



GENUINE SUZUKI, designed to fit e	
and model, exactly. IMPROVED des	ign.
RM 80 all years\$	5.25 pai
RM 100 all years	6.10 pai
RM 125/250/370/400 all years .	6.25 pai
RM 465/500 all years	6.50 pai
PE 175/250/400 all years	6.75 pai

KILL BUTTON SWITCH ASSY.

SUZUKI FACTORY replacement part.	
RM 80/100 all years	\$10.95
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PE 175/250/400 all years	12.50

SWING ARM PIVOT SHAFT AND NUT KIT.

Consists of FACTORY pivot shaft and Castle

RM 100/125 m. a. b. c. n. t RM 125/250/465/500 x, z, d RM 250/370/400 a, b, c, n, t 10.95 10.95 PE 250/400 all years

TOP END **GASKET KIT**







GASKET SETS GENUINE SUZUKI

Complete set of factory gaskets to rebuild

your cycle									
RM 80 b, c, n, t, x, z .								\$ 7	7.5
RM 80 d								8	3.9
RM 100/125 m, a, b, c,	n,	t						8	3.4
RM 125 x, z, d								11	1.2
RM 250/370/400 a, b,	C,	n	, 1	t				11	1.5
RM 250 x, z, d								12	2.5
RM 465/500 x, z, d					4		1	14	1.7
PE 175 all years								11	1.5
PE 250/400 all years						*		14	1.5

SUPER FLOW



Replace your stock air filter and reeds In creased air flow means MORE POWER and better performance.

DON'T start your engine without them

BOYESEN DUAL STAGE RACING REEDS.

A fusion of space age materials and dual stage reeds. Quicker throttle response...more power. "get the hole shot"

RM 80 all years	\$10.
RM 100/125 a, b, c, n, t	12.
RM 100/125 x	12.
RM 125 z, d	25.
RM 370/400 a, b, c, n, t	12.
RM 250/465/500 x, z, d	30.
PE 175/250/400 n, t, x, z, d	12.
DS-TS 100 thru 400	

MAC'S PHASE III RACING **FILTERS**

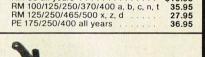
NEW, UNIQUE dual stage foam air filter. Proven effective in National and International motocross racing. More flow for better power. The secret of the system is the inner stage of foam the "X-3"...flows air at an unusual high rate of speed, yet stops dirt down to sub-micron

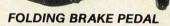
RM 80 all years (special cage) \$12.95	
RM 100/125/250/370/400 m, a, b, c, n, t 11.95	j
RM 125/250/465/500 x, z, d 9.95	,
PE 175/250/400 all years 12.95	j
BEL-RAY FOAM AIR FILTER OIL 2.50)

FENDERS

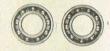
ORIGINAL, stock, made to fit perfectly for each year and model. No drilling holes...bolts right on.

FRONT	
RM 80 b, c, n, t	\$27.95
RM 80 x, z, d	24.50
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RM 125/250/465/500 z, d	31.50
PE 175/250/400 all years	29.50
REAR	
RM 80 all years	\$19.95





ORIGINAL FACTORY replacement assy. RM 125/250/465/500 x, z, d



WHEEL BEARING KIT

The best FACTORY bearings you can buy. RM 80/100 all years \$ 8.95 pair 10.95 pair RM 250/370/400/465 all years 11.95 pair PE 175/250/400 all years

10.95 pair RM 80 all years \$10.95 pair 11.95 pair RM 125/250/370/400/465 all years 12.50 pair PE 175/250/400 all years 13.95 pair



SPROCKETS...CHAIN

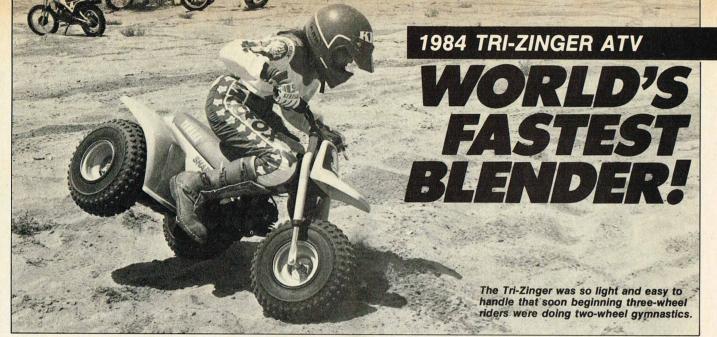
D.I.D. CHAIN. Pre-stressed, special heat treated for hardness. The winners choice. RM 80 all years RM 100/125 m, a, b, c, n DS 100/125...TS 100/125 26.95 DIAMOND CHAIN. As hard as it's name. The chain used by racers demanding the best. RM 125/250 t, x, z, d \$35 PF 175/250/400 all years 35.95 36.95 RM 370/400/465/500 all years 34.95 SPROCKETS COUNTER SHAFT. Made from top grade steel, case hardened, over 60 RM 80 all years

RM 100/125/250 all years RM 370/400/465/500 all years PE 175/250/400 all years 10.95 10.95 SPROKETS REAR Hardened alloy, light weight, wears twice as long as any others \$29.95

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on your Suzuki motorcycle is our "catalog". In the Chicago area we have two retail stores, and sell and service all Suzuki motorcycles. Please visit us if you're in the area. 617 W. Wise Rd., Schaumburg, IL or Rt. 12, Lake Zurich, IL. TO ORDER CALL 1-312-438-6300 WE SHIP UPS-COD OR CHARGE IT USING YOUR VISA-MASTER CHARGE OR AMERICAN EXPRESS CARD

MIDWEST ACTION CYCLE • RT. 12 • BOX 163 • LAKE ZURICH, IL 60047



Three-wheeled automatic fun device

By the ever-observant Staff of Dirt Bike, who watched a whole bunch of people get silly on this thing.

When we arrived at Yamaha to pick up the Tri-Zinger, some suspicions were immediately confirmed. There were unmistakable black tire marks all over the cement, and in the background we could hear what sounded like a large blender at maximum rpm. Moments later, a large mechanic slithered the Tri-Zinger on two wheels around a Coke machine and squealed to a halt with a large ear-to-ear grin in place. "Uh, just checking it out for you."

As we were to find out later, the Tri-Zinger is everyone's favorite toy. Even fullsized adults are not immune to making fools out of themselves on the Zinger. And why not? It starts so easily that even a smallish kid can light it off. No mysteries whatsoever.

Neutral is at the bottom and there's a little button that says "start." Give an easy tug on the starter cord and the T-Z burps politely to life and idles without protest. To get going, you flick the bar-mounted switch to "run," move the lever up to get the sucker in gear and give it a bit of gas.

Being an automatic means that there's no stall factor to work against for rank beginners. A bit of pressure with the thumb gets some revs and the T-Z moves briskly off. An adjustment screw in the throttle lets you limit the amount of throttle the new rider can achieve. As confidence improves, this can be let out more and more until the full, snappy nature of the yellow Zinger can be appreciated.

It has enough beans to haul a 200-pound adult around the pits with ludicrous ease. Naturally, the trike is scaled for smaller riders, and big folks look really dumb with their knees up around their ear lobes. But pull them around, it will! Wheelies are actually possible if the rider gets his weight



1984 TRI-ZIN	IGER YT60L
Engine type Air-cooled, 2-stroke, reed-valve, single Bore and stroke 44.0mm x 39.2mm Displacement 59cc Carburetion 12mm Mikuni (VM12SC) Gas/oil ratio Automatic oil injection	Rear None Wheelbase 860mm (33.9 in.) Ground clearance 101mm (4.0 in.) Seat height 490mm (19.3 in.) Weight, w/oil and gas 54 kg (119 lbs.) Retail price \$599
Fuel tank capacity 4.0 L (1.06 gals.) Transmission Single-speed automatic Ignition CDI Suspension: 2.0 in.	Country of origin

back some and thumbs it quickly.

New riders were cautious at first, but we soon observed them lifting the inside wheel on turns, like the guys over at the Dirt Wheels offices.

The T-Z has just enough power to make it fun, but not enough to get the rider into trouble. The unit itself is very light and can even fit in the trunk of a normal family car with no problems. You can get two or three of them in the back of any decent-sized sta-

Features include a safety cord on the back that can be yanked by the teacher should the first-time rider get out of control. This shuts off the small two-stroke engine immediately and brings a puzzled look to the kid's face, as he was really expecting to take the door off a nearby van.

Straight gas goes into the tank; an injection bottle holds oil for what seems like forever. Fill up the tank on the Zinger and you'll get several days riding out of it. Miserly fuel consumption is an understate-

All things considered, the Tri-Zinger is a delightful toy and one that will surely be abused by the larger members of the family whenever Junior makes the mistake of parking it.



may very well end up in somebody else's pocket.

The Sensation of Suzuki.

The Suzuki Championship Sale.

Nine winning Suzukis from the winner of all nine 125cc World Cham

Manufacturer's suggested retail price. Actual price set by dealers. Taxes, license, freight, options and other dealer charges extra. Prices may change without notice. Availability is limited.





EXCLUSIVE: FIRST TEST!

1111111

Stand back, Honda, Kawasaki, Suzuki & Yamaha. Get ready for the new challenger

By the Staff of Dirt Bike

M ake no mistake about it, 1983 was a great year for 125 motocrossers. The Big Four came out swinging, with fast, light racers bristling with trickery. This made it difficult for a 125 European bike that was merely "good" to cause much of a fuss or make a dent in the MX marketplace. Thus, the KTM 125 was relegated to the small but faithful band of hard-core enthusiasts who appreciated the good midrange power and ultra-reliability of their white bikes.

One other point—and a less-than-minor one. You had to be a real gonzo KTM freak to own the 125. It retailed for over \$2400, while the Japanese counterparts sold for the mid-1700s. That's a big enough spread to discourage a full-on charge with money in fist to KTM dealers, beating on the counter and demanding a Katoom.

It sort of makes you wonder why anyone would pay an extra 700 bucks just to have something different. Well, after talking to

many KTM 125 owners (and KTM dealers), they said that the white wonders were incredibly reliable and actually cost less to race and maintain over a full year than a Big Four 125.

In this respect, we must somewhat agree. Nothing is more clapped out and tired than a Big Four 125 MXer that's been raced or ridden hard for five or six months. By that time, the frames are sagging, the cases are a mass of air leaks, and the dogs on the gears are barking loudly.

Things like forged pistons do make a difference. That's why they cost more in the first place. We know of riders who have raced for a full year with the same piston on a KTM 125, 1983 flavor. When you become aware that no Japanese motocrosser comes with forged pistons (they're all cast!), the price differential seems almost worth it.

Almost.

You see, there was still one last fly in the

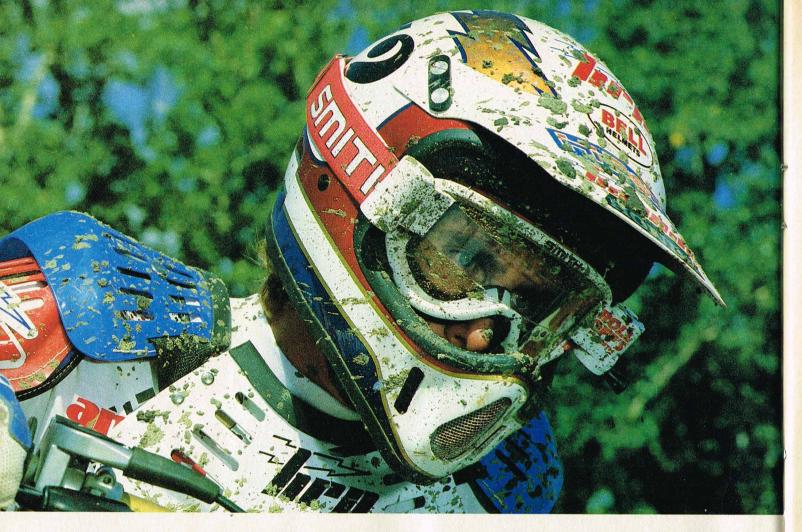
KTM's appeal to the mass market: It wasn't as fast as all of the other 125 racers out there. Sure, it could turn good lap times in the hands of a skilled rider, but it was most assuredly not going to be right up there in the first turn dicing with the quick Kawasakis and the Power-Valved Yamahas. It also weighed a good ten pounds more than the competition. Eastern riders accepted the slight weight penalty and learned to love the sensible power of the KTM for hare scrambles and muddy tracks. All few hundred of them.

STOP THE PRESSES! HOLD THE MAYO!

What we have here is just about all of the barriers removed with the emergence of a new-no, make that all-new KTM 125. The biggest news is that it's a rocket! Probably more important is the fact that it'll be priced right smack against the Big Four. No more \$700 spread just to ride white.

In 1983, the retail prices of the other 125s

NOVEMBER 1983 / DIRT BIKE 31



"ROLL OFF'S WORK IN ALL CONDITIONS OR I WOULDN'T USE 'EM!" Bob Hannah.

"Clear vision makes a big difference when you're trying to pass to win in the mud or dust on the last lap," says Bob. He knows no matter how wet, muddy or dusty track conditions are, he can just pull the Roll Off's™ button and have clear vision.

Roll Off's enable you to have this advantage continuously while racing or trail riding. Old style layered tear-offs only give you two to four fresh views. They also cloud and distort vision. With Roll Off's riders look through only one layer of super thin film.

It is a film advance system mounted on the goggle lens that works much like camera film. The thin film stretches between the two canisters and is wound up on the take-up side. As your goggle becomes too dirty to see clearly, simply pull the Roll Off's button, advancing the film to a clear section restoring clear vision. Each roll of replacement film is good for 25 to 30 clear views.

Now you can have the competitive advantage of clear vision for an entire event, no matter how bad the conditions.

See your accessory dealer today for a set of Roll Off's and replacement film. They come pre-mounted on Smith or Scott clear Lexan® lenses.

Also, check out the complete line of high performance Smith SMX and Turbo Fan goggles.

Your dealer can supply you with Smith goggles, lenses and goggle accessories for any off road riding need.

Write for our free detailed brochure.

SMITH

Smith Goggle P.O. Box 2999, Ketchum, Idaho 83340

1984 KTM 125

were as follows: Honda, \$1738; Kawasaki, \$1739; Suzuki, \$1739; and Yamaha, \$1769. For 1984, plan on at least a \$100 price increase across the board, possibly more.

The 1984 KTM will sell for right around \$1970.

If the 100-buck differential scares you, consider the fact that the KTM comes with the very latest Metzeler tires, while the Big Four are equipped with throwaway O.E.M. rubber. Priced a set of Metzes lately?

GOODIES AND OTHER ENTICEMENTS

In order to bring the KTM 125 in at a more attractive price, the factory will have to make more of them. And they surely don't want them sitting on the dock while riders choose between their favorite shade of red, green or yellow.

So, a White Power Super Adjuster shock comes stock on the Katoom. This is the same quality unit that riders are paying over \$400 for. A magnesium Dell'orto carb is stock, and the usual gaggle of aluminum shifters, mufflers and brake pedals is there to tempt.

Double-leading shoe brakes are front and rear, and both stoppers are adjustable. With a wrench and an owner's manual in front of you, you can dial them in anywhere from a tire squealer to a gradual speed reducer. Regina Extra Gold chain is stock—one of the finest chains available at any price. Nordisk rims, Magura controls and new-styled plastic top off the package. Also, the forks are the same 40mm units found on the 250 water-cooler—plenty big for a 125.

LESS IS MORE

KTM realized that the weight of its 1984 offering would have to be reduced, so they went the entire enchilada with exotic materials and weight-saving techniques. Hollow axles and swingarm pivots greet the eyes. The engine weighs an incredibly light 36½ pounds, with the carb! Magnesium cases and side covers help get the weight down.

That Regina chain is a slightly smaller—but plenty strong—428 size. This also allows the sprockets to be thinner and lighter. Hubs and wheels are the same as those on the 250, which are among the lightest around. A new trimmer aluminum swingarm saves a few ounces. The Nipponden-so radiators are also fabricated of aluminum, rather than the previous brass and copper efforts.

Engine mount bolts are tiny 6mm items, and sculpted aluminum plates act as motor mounts. Everywhere you look, there are 10mm heads on fasteners, much like the Suzuki attention to reduced nut/bolt/washer size. Savings here? Surely not more than a few pounds, but it all adds up. Hold the titanium axle nut in your palm and it feels as if a good breeze would lift it away.

The result of all this attention to detail is a pre-production bike that hit the undeniably accurate *Dirt Bike* scales at 193.75



The 40mm forks (Marzocchi) are the same as those found on the 250 bikes.

pounds, with no gas in the tank, but all the vital oils and cooling fluids nestling happily in their respective pockets.

When you consider that our bike was a pre-production machine and sported things like fiberglass radiator shrouds, a sand-cast shock body and a solid 495 front axle, you can see that another pound or two less will be expected on the production unit. How does this stack up against the 1983 offerings of the competition?

Well, the numbers read like this: Honda, 192.5 pounds; Kawasaki, 195.1 pounds; Suzuki, 191 pounds; and the Yamaha, 193 pounds. We already know that the Honda will be at least a pound heavier in 1984 and we might see weight gains on some other bikes. All things considered, the KTM is now right in the ballpark, weightwise.

RIDING THE WHITE KNIGHT

After firing up and thoroughly warming the engine of the first complete 1984 KTM 125, we ran it through the gears to get an overall feel. The thing was a missile! It pulled murderously hard through the midrange and revved out plenty strong. Like any other racing 125, there's not a lot of low-end power available and you have to make the engine sing to move forward quickly.

The rpm buildup was *not* mellow; the thing exploded and revved quickly. It hits with a bang and the rush is frantically continued as each higher gear is engaged. There are no gaps in the gearbox and all the rider has to do is stir the stick and leave the Magura Duo throttle pinned.

We had a fresh YZ125 with us for comparison, and the Katoom was impressively faster, perhaps as much as three good lengths ahead through the gears. The most impressive part of the powerband is in the mid-range. Here, it pulls almost like a 250, with more power than seems possible out of the tiny 125 engine.

A few things were immediately noted by



Now the Katoom is competitively light and can be tossed around like the other 125s.

our testers. The bike feels ultra-light and is very slim at the seat/tank juncture. This makes for easy front-to-rear moves. The layout is a pure racing stance, with the rider situated very close to the bars; the tank is short and the saddle extends forward more than past KTM layouts. The saddle is not a safety type, which, quite frankly, was not missed by any of the riders.

SUSPENSION

Our bike came equipped with a too stiff spring, even for 190-pound riders. Even after backing off the preload to the top of the adjusting rings, it was too firm, causing a slight chattering when accelerating over the small bumps. On the crushers the White Power shock was excellent, taking any hit without protest or bottoming out. The KTM reps took notes to notify the factory, saying that because of our comments, the production bikes would come with a softer spring, with the heavier one as an option.

The White Power is a high-quality, widely adjustable unit with a new aggressive distributorship for parts and service by the White Brothers, of four-stroke fame.

Up front, we were a bit less happy with the 40mm Marzocchi forks. At best, we'd rate them "above average"—no more. Admittedly, we did not have the pre-production bike for our normal lengthy testing period and did not have time to play with fork oils or springs. However, they are the same basic units found on the 250LC, and we've never found those to be exceptional. Also, a certain amount of flex was detected in deep sand. There doesn't seem to be quite enough surface on the triple clamps to give sufficient grab.

HANDLING

With the forks up in the clamps to their maximum height, the KTM was a turning fool, able to carve inside the turns with a nod of the head and a slight body shift. Steering was superb!

NOVEMBER 1983 / DIRT BIKE 33



Over bumpy whoops the bike tracked straight and true as long as the power was on hard. With the throttle trailing there was some headshake, but nothing to bring big eyes to the rider. A softer spring in the rear will no doubt cure this and allow the rider to dial in the right amount of preload to retain the steering qualities.

With the light weight and great power, the riders were able to lift the front end while turning without even thinking about it, even on fast sweepers. Flicking the bike through S-turns showed that it liked directional changes. Berm shots had the front end diving a bit too much for our tastes, but the rear end was ultra-stable and exiting the turns under power was predictable.

BITS AND PIECES

Shifting was better on this KTM than any other Katoom we've ever ridden. None of the notchiness we've experienced on the water-cooled 250 was noted. Dare we say it? The 125 KTM shifts like a Japanese bike, but even better, because you can upshift under full power without blipping the throttle or using the clutch.

Some of the testers thought the aluminum shift lever was a bit too short, but others liked it just fine.

The brake pedal was way too high as delivered, and even with the adjusting bolt all the way out, it demanded that the rider lift his foot from the peg to get braking action. We cured this by removing the stock bolt and putting in one about a half inch longer. This allowed us to lower the brake pedal, and braking improved dramatically.

You won't find any hose leading to a reservoir on the White Power shock. It's the new piggyback style with the reservoir cast into the body. Compression adjusting is accomplished by reaching under the left-side panel, and the rebound knob is at the bottom of the shock in the usual location. Like many White Power shocks, the rebound adjusting knob is on the stiff side and may require pliers to turn it. Still, it's a simple operation.

The airbox is roomy and resides under the saddle. Oh yes, the saddle. Unlike previous KTMs, on which the saddle seems to be made of mahogany, the seat on the 125 is slightly softer, more like plywood. We're told it will break in with time.

A very short kickstarter is on the left side, and the bike proved to be a one-kick starter just about all of the time.

Jetting on the machine was slightly rich, but after an hour or so of riding, we leaned out the needle position on the magnesium Dell'orto carb and performance improved notably.

The gas tank is huge for a 125, holding about 2.4 gallons of pre-mix. This should be enough for more than one hour at MX racing speeds and an easy 50-plus miles in hare scrambles. As usual, the Acerbis gas cap's little rubber seal fell on the ground about ten times when checking the gas. Isn't it about time this irritating glitch is cured?

There's no conventional liner in the KTM. Instead, there's a new coating

(possibly a nickel alloy?) which has been thoroughly tested on the KTM works bikes and is said to be nearly indestructible. They have even deliberately run dirt through an engine and have ruined pistons and rings without hurting the coating.

Travel at the front is about 300mm, a hair less than 12 inches, while there is 320mm or 12.6 inches of stroke at the rear.

Saddle height is 37½ inches, but feels taller because of the firm seat. The foam looks to be quite thick, and shorter riders will no doubt trim more off to suit them-

You can find needle bearings on the shock linkage, which is great. However, there are no zerk fittings. There should be.

Other nifty details include a Heim joint on the rear brake arm and Timken tapered bearings on the steering head.

Oh yes, a word about the lightest clutch pull we've ever experienced on a full-sized bike. Its one-finger action encourages use. The clutch itself is an all-metal unit with sintered plates. It should prove to be long lasting.

Grips were Magura and hurt the palms after extended riding. Save them for mud runs and put on something more comfortable for general racing use.

The trim plastic side panels are quickly disconnected and require no tools to remove or replace. A good idea.

THE INEVITABLE COMPARISON

Clearly, the 1984 KTM 125 is a marvelous machine with only a few niggling flaws. It is definitely faster than any other 125 we tested in 1983. And now the weight and the price are right on target.

It would have won the 1983 125 shootout by a landslide if it had been in existence six months earlier. The only question that remains: What will the competition have to bring up against the KTM 125? If it isn't extremely impressive, we already have the winner of the 1984 125 shootout.



1094 KTM 125MY

1984 K I I	W 125MX
ngine type Water-cooled, 2-stroke, single	Wheelbase
ore and stroke 54mm x 54mm	Ground clearance
isplacement	Seat height
arburetion	Steering head angle (rake) N/A
actory recommended jetting:	Trail
Main jet	Wet weight, no fuel
Needle jet CF-272	Rim material Nordisk aluminum alloy
Jet needle	Tire size and type:
Pilot jet	Front
Silde number	Rear 4.60 x 18 Metzeler Perfectcross
ecommended gasoline Premium, 92+ octane	Suspension, type and travel:
uel tank capacity 9.08 L (2.4 gals.)	Front 40mm Marzocchi telescopics,
uel tank material Plastic	300mm (11.8 in.) travel
ubrication Oil in gas, pre-mix	Rear Single White Power shock, Pro-Lever,
Recommended oil Kal-Gard	adj. comp./reb. damping, 320mm (12.6 in.) travel
Oll capacity, gearbox 500cc	Intended use Motocross
Air filtration Oiled foam in	Country of origin Austria
still airbox	Retail price, approx
Clutch type Wet, metal, multi-plate	
ransmission 6-speed	Distributor:
learbox ratios:	KTM America
1	1905 Broadway
2	Lorain, OH 44052
3	Lorain, Ort 44002
4	
5	Parts prices,
6	high-wear items N/A
Gearing, front/rear	Overall rating of bike, keeping intended use of
gnition Motoplat external rotor	machine in mind:
rimary kick system? Yes	Handling Excellent
Recommended spark plug Bosch 340S2S	Front suspension
Gilencer/spark arrester Silencer only,	Rear suspension Very good
aluminum, rebuildable	Power
xhaust system High-pipe, left side	Cost
rame, type Chromoly, single downtube,	Attention to detail Very good
split cradle	Effectiveness, stone stock Excellent

1984 TEAM GREEN LINEUP

KX60, KX80, KX125, KX250 & KX500



ore power" is Kawasaki's slogan for 1984. All of the motocross lineup have motor updates that result in snappier powerbands for the green buzzers. Cosmetically, they're still green, but now a blue safety seat flows onto the tank. The numberplate/rear fender combo on the 125 has been retired and a conventional fender/ side panel arrangement takes its place.

Both the 60 and the 80 have few changes in the suspension and chassis department. In '83, they proved tops, and this year, refining the package should make them even better. A scaled-down front disc brake, similar to the 125, finds its way onto the KX80. Radiator scoops and side panel styling on the little KXs get the reshape to give them sleeker lines.

Getting the mega-rad changes for '84 is the Kawa 125. Ironically, this is also the bike that has the least amount of attainable information at this point. We do know that more power is the big news. A new cylinder that uses a carbon-fiber reed valve starts the process. The airbox and air cleaner are





	KX60	KX80	KX125	KX250	KX500
Engine type	2-stroke, reed valve	2-stroke, reed valve	2-stroke, reed valve	. 2-stroke, reed valve	2-stroke, reed valve
Bore and stroke		48mm x 45.8mm		70mm x 64.9mm	86mm x 86mm
Displacement	60cc	82cc	N/A	249cc	499cc
Carburetion	24mm Mikuni	29mm Mikuni	N/A	38mm Mikuni	38mm Mikun
Gas/oll ratio		32:1	N/A	32:1	
Fuel tank capacity	0.9 gals	1.2 gals	N/A	2.1 gals	2.7 gals
	6-speed				
Gearing, front/rear					
gnition			N/A	CDI	CI
Suspension:					
Front		10.0 in	N/A	11.8 in	
Rear		10.0 in	N/A	12.4 in	12.4 ir
Wheelbase	42.5 in		N/A	57.7 in	58.3 ir
Ground clearance		12.2 in	N/A	13.8 in	13.4 ir
Seat height		32.3 in	N/A	38.2 in	
Dry weight (claimed)			N/A	212.7 lbs	222.7 lb
	\$819			\$2299	\$249

bigger and there's a new carburetor design rather than steel. Eight-way-adjustable ends are modified and updated and should make for superior action over the '83 KXs.

The KX250 and 500 feature adjustable suspension systems at both ends. KYB forks have a more progressive feel and eight-way-adjustable compression damping. Rearward, the Uni-Trak shock has added adjustable compression damping to complement the rebound capabilities of the shock. Both of the machines have more snap, and the 500 has a dual-plug setup with new port timing, reeds and carb that should get rid of the detonation problem.

KX60

Sealing the leaking-pipe blues is a new O-ring setup at the exhaust manifold. More power has been helped along by an improved airbox and a two-stage air cleaner. A folding shifter hits the tiny KX and a rebuildable muffler is stock for you powerconscious minettes. Showa forks are fitted to the 60 (the only KX to get them) and are coupled with the KYB-based Uni-Trak rear. Travel is 7.9 inches at both ends. The safety seat is a brilliant blue and the stickers have been restyled.

Lookswise, the big news is a front disc brake. In theory, the disc is essentially the same as on the 125, but smaller. The 80's disc is 200mm, while the 125's is 240mm. Both hubs feature straight-pull spokes for increased strength and aluminum spoke nipples have found their way onto all the bigger KXs to help keep the weight down.

The Showa forks have been replaced by KYB units that have a more progressive stroke and less stiction. In the engine department, different porting, a new carb slide and reed valve setup are said to perk the rocket up even more. This, with a new ignition curve, gives the KX80 more lowend and mid-range punch. A rev-to-themoon top end remains unchanged.

News on the 125 is an all-revised engine that they say has big-time serious power. A larger airbox and air cleaner, coupled with a new carb design, flow the fuel. The reed valve is a new carbon-fiber number and all porting has been redone. Hoggedout water passages in the cylinder and a larger-capacity radiator should keep things cooler. An alumimun shifter, brake pedal and kickstarter have been added to help shed some fat, and a spiffy aluminum front fender stay give a "works" look to the 125.

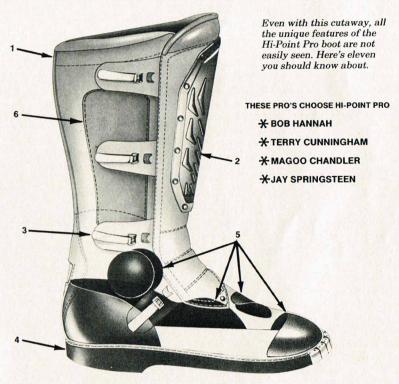
KX250

No big changes here, just refinements. Additional power has come about through a new pipe and carburetor. A beefed-up clutch that rides on needle bearings takes the transmission heat. Like the 125, the 250 gets aluminum parts to further reduce the weight. The shifter, kickstarter and brake pedal are molded from the light stuff,

that will flow the fuel. Both suspension forks replace the "unadjusters," and their action is more progressive to give a better ride. We're told that the five-speed gearbox has been dumped in favor of a sixspeed. With the new aluminum pieces, the weight has been lowered to 212.7 pounds, bone dry. That's three pounds lighter than last year's bike.

Problems plagued the '83 500, mainly in the ping and detonation department. They say this is no longer true. A new pipe, carb and port design have driven these bugs from the big KX. Dual spark plugs, lower compression and a rethinking of the power delivery have cured the pings. Again, we're told that the 500 is a six-speeder, replacing the five-speed unit of '83. Internally, the clutch has been strengthened to take up the broader powerband. Adjustable forks and shock, along with new lightweight parts, keep the weight down while making it manageable. New fork sliders have a works-type clamping arrangement for better non-flex action. For those inquiring minds who want to know, the 500 is not water-cooled.

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- Stainless cam action buckles. Makes buckling a snap. Allows you to cinch the boot as tight as you want. Replaceable straps.
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- Padding sewn on the inside of the leg to protect the calf area.
- Built-in water barrier.
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- Available in sizes 5 thru 14. Special Mini MX boots in youth sizes 1 thru 7.
- 10. Expertly constructed for long life.
- 11. The most important is that Hi-Point Pro boots are readily available at your Hi-Point Racing Products dealer. Buy a pair today.

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BASIC ENDURO TIMEKEPING

Decode the confusion

By Tom Webb

h, the joys of riding an enduro. Thoughts of crossing babbling brooks, carving up wooded hillsides and slicing through miles of tight saplings in perfect dirt come to mind. Yes, these are the pleasures of an enduro. For enduro virgins, the variety and beauty of the terrain is a turn-

The ugly truth is that first-timers are intimidated by a crossbar riddled with clocks, computers, gadgets and charts. Riding is fun; mathematics and calculation are negatives. But every enduro rider will also tell you about the euphoria of getting through a tough event, the feeling when you zero a tricky check and the helplessness of getting to a check early. This means zip now, but once you ride an enduro, you get the fever.

BASICS: WHAT'S THE POINT?

Like any sport, there are rules that have to be followed in the staging of an event. Regulations must be adhered to. Once you know the basics, timekeeping becomes much clearer.

An enduro is nothing more than a motorcycle version of a sports-car rally. The club will give you a set of speed averages, and your job is to maintain these speeds from point A to point B.

Say you're entered in a car rally. Your schedule tells you to start at 30 mph. You're to maintain this speed for a set amount of time and then switch to another speed. How do you maintain 30 mph exactly? You could keep the needle of your speedometer glued to the 30-mph number. But that's chancy. Stop signs, crosswalks, etc., will mess up this system. Another way that's much simpler and far more accurate is to use time and the car's odometer.

You know that you have to maintain 30 mph for a set length. The first thing to do is get a reading from your odometer. Let's say the car is brand new and the mileage is 000.0. Next, mentally get a fix on how fast 30 mph really is. You know that to travel 60 mph you'd have to cover exactly one mile in one minute. At 30 mph, you cut it in half. This means that you must travel a half mile in one minute.

The odometer reads 000.0; the time is 12:00. You get under way, and at 12:01 38 DIRT BIKE / NOVEMBER 1983.



Most endures have tough sections where timekeeping is secondary to negotiating the terrain. These areas are called "special tests" and are used to snare late points from the rider.

your odometer should read 000.5. You've traveled five-tenths of a mile in one minute. You're on time!

At 12:02, it reads 001.0; 12:03, 001.5; 12:04, 002.0; 12:05, 002.5, and so on. You can now maintain 30 mph with no guesswork at all. Stop signs and other delays only mean that you'll have to speed up a little to get back on track. Enduro racing is similar in nature and a whole lot more fun, because you're on a bike, not in a car, and a trail is much more interesting than Interstate Highway number whatever.

CHARTING, THINKING, RULES

There's no questioning the fact that enduros require some thought. At first, you're a space loon. As time goes on, timekeeping gets easy and becomes almost routine. Most enduros cover tough, physically demanding terrain. The speed averages are mixed up and plotted to certain portions of the course to make things interesting. With unknown terrain and different speed averages, you're forced to think and ride, not just berserk it and finish.

Job number one in enduros is to navigate and master the course. Job number two is to maintain the set speed averages for the event. You're trying to ride and keep pace with the exact speed average the club sets throughout the entire enduro.

During the event, there are checkpoints. You have no idea where they are placed, so maintaining the average is critical. These secret checks are manned by club members who mark your score card once you arrive at the secret checkpoint.

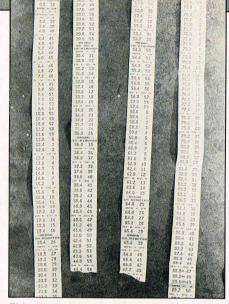
If you hit the checkpoint on time, you don't lose points. By arriving early, you lose two points for the first minute and five points for each additional minute. If you're late, it's one point for each minute.

You can see that timekeeping is mucho important and that by arriving early to a check, you are docked big-time points. Whenever in doubt, it's always better to be slightly late.

SCHEDULES, PLOTTING MINUTE BY MINUTE

Every enduro provides a schedule that contains all speed averages, mileages and times of the event. This schedule, or route sheet, is the riders' life blood. It tells the rider how fast he'll have to go and for how long. The route sheet will not tell you where the checkpoints are located.

All this becomes clear once the route sheet is broken down, minute by minute. Here's an example of a route sheet and a breakdown of the agenda:



This is what a cut-up version of a Jart chart looks like. It lists all the mileages and times from the start to the finish of the run. This one shows mileage on the left, time on the right. Notice that there are no hours showing, just minutes. All of the good digital enduro clocks show only minutes and seconds; this way there's one less figure to decipher.

JART CHARTS

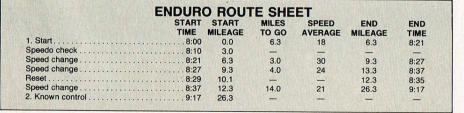
There's a company that takes the route sheet, breaks it down, scribes it minute by minute, and prints the entire day's schedule for the rider. Jart makes these printouts for nearly every enduro held in the U.S. They are available from the sponsoring clubs and can be purchased at the sign-up area of the event. These Jart charts are computerized and free of error. The bottom line is that the Jart charts save time and make life easy for the rider.

ROUTE SCHEDULE—ROLL CHART— TIMEKEEPING

You've got a route sheet, and it's full of times and mileages. Once the route sheet is broken down minute by minute, or you have bought a Jart chart, you then install it in a roll chart holder. This little goody houses the entire chart and is manually advanced by twisting a knob. At any point during the enduro, you can glance at the chart and see what mileage you should be at and exactly when you should be there. By matching the roll chart to the clock and odometer, the rider can tell whether he is on time or not.

ENDURO MUST-HAVES

Three things are critical: a clock, an odometer and a roll chart. Any good wristwatch, preferably digital, works fine





critical: have your clock set to key time and have your odometer zeroed out.



Here riders are assembled at the threemile marker on the course. From the start to this marker the territory is free and there can be NO checks.



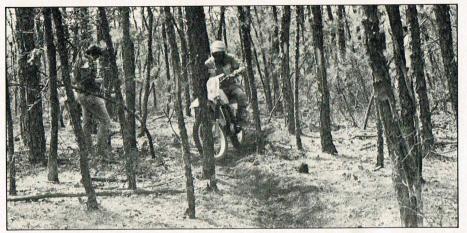
Any good wristwatch will work as a clock. Digital types are easier to read than sweep-hand models.

for a clock. Most enduro bikes are equipped with a speedo/odometer. Motocross bikes will have to get an odometer. Most current MXers can use their enduro brother's existing parts. For example, a YZ will take an IT drive unit, cable and speedo, and they bolt on with no mods. If in doubt, contact Countdown Engineering, as they sell enduro kits for all late-model moto-

Finally, the roll chart holder. These go for under 20 bucks from a number of companies and are musts. Countdown, Hi-Point, Clairmont Cycle and Malcolm Smith all sell them.

Riders with fat wallets might consider one of the popular digital clocks on the market. With big numbers, they are easy

ENDURO TIMEKEEPING



There's a good chance that in terrain like this you won't have much time to look at your instruments.

to read and don't require the rider to take a hand off the bars when he wants to check the time.

Usually, the roll chart mounts on the crossbar, toward the left side for ease of advancement. If you have a wristwatch, it goes on your left wrist. You don't want to take your throttle hand off the bars for any reason. A separate clock or combo mounts right next to the roll chart. Combos house both the clock and roll chart in one unit. These are the most practical and the easiest to read.

ENTERING, THEN DIALING IN THE START

By sending in your entry, you've made a big step. Most enduro riders pre-enter the race. Why? Because every event holds a drawing in which the entries are picked at random. This drawing decides the riders' starting numbers. On the average, an enduro has four riders per minute. Once your entry has been yanked from the pile and a number has been assigned to you, another important step has been completed.

Every enduro has what's known as a key time. Normally, this is 8:00. The drawing decides which group of riders will start at what time. For example, let's say you draw 27A. You'll be grouped with riders 27B, 27C and 27D. It means that all four of you are to leave 27 minutes after the first rider wanders off into the unknown.

Key time is posted at the start, so when your time rolls around, 27 minutes after the first group takes off, you have to be armed. Basically your clock must read 8:00 when you leave, not 8:27. The reason is that the entire enduro is set up around the 8:00 key time. Along the course you'll see signs. They have the posted mileage and key time for that point of the enduro. So, when that starting time rolls around, you set your watch back 27 minutes. In practice, it's easier to simply adjust your clock a few minutes before the magic key time. For example, when riders number 25 are ready to take off, your clock should read 7:58. On your takeoff, the clock must read 8:00 as the starter waves you into the unknown.

can simply play the silent-student part, or the leech. Leeching isn't illegal, but a healthy way of capitalizing on a better timekeeper's abilities.

DOING IT YOURSELF!

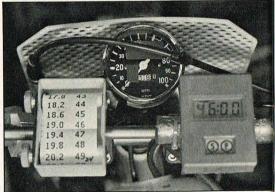
While you're trouncing through the wild, try to match the numbers of your odometer and watch to the figures on your roll chart. Don't panic! If your watch and odometer read 1:00 at 20.0 miles, but your roll chart reads 1:00 at 20.4 miles, you know that you're .4 of a mile off the pace and are late.

On the other hand, if your odometer reads 20.4 and your clock says 12:58, then you're early and could possibly hit a checkpoint and burn it!

Don't expect to be a threat to Dick Burle-







hat an enduro dashboard looks he left is the roll chart, center ometer, and on the right is the clock. "On time" is when your odometer reads 19.0 miles and the clock 46 minutes. "Early" is when the odometer reads 19.2 miles-you're hot. "Late" is 18.8 miles-you are then .2 off the pace and have to gas it.

NUMBERS AND TIME

Now you're set. You've got a watch, a speedo and a roll chart. A Jart chart, which you bought at sign-up, is fitted into the roll chart, and visions of hand-carved trophies cloud your mind. What's next?

Before you start, we suggest the following: Try to ride the event with an experior checks his watch is a lesson.

If a buddy cannot be located, carefully scout the riders who have been assigned to your number. Of the three competitors, one should look competent. This means he's on a sharp bike, and his bars are filled with all the correct enduro gear. Many times you

enced buddy. Having someone around who is savvy about the enduro world will make your first enduro a teacher-and-student affair. Watch, study and remember. Every time he stops and adjusts, rolls his chart

Speed-Average Breakdown

3 mph 1 mile per 2 minutes

33 mph . . . 1.1 miles per 2 minutes

.3.5 miles per 6 minutes

.6 mile per minute

Timpir	20
5 mph 5 mile per 6 minutes	20.
6 mph1 mile per minute	
7 mph 7 mile per 6 minutes	Manage And Association of Control
8 mph 4 mile per 3 minutes	
9 mph 3 mile per 2 minutes	
10 mph 5 mile per 3 minutes	
11 mph 1.1 miles per 6 minutes	
12 mph 2 mile per minute	
13 mph 1.3 miles per 6 minutes	
14 mph 7 mile per 3 minutes	
15 mph5 mile per 2 minutes	
16 mph 8 mile per 3 minutes	
17 mph 1.7 miles per 6 minutes	
18 mph 3 mile per minute	127
19 mph1.9 miles per 6 minutes	18
20 mph1.0 mile per 3 minutes	18
21 mph7 mile per 2 minutes	19
22 mph1.1 miles per 3 minutes	19
23 mph2.3 miles per 6 minutes	19
24 mph 4 mile per minute	20
25 mph2.5 miles per 6 minutes	
26 mph 1.3 miles per 3 minutes	
27 mph 9 mile per 2 minutes	
28 mph 1.4 miles per 3 minutes	
29 mph2.9 miles per 6 minutes	Here's wh
30 mph 5 mile per minute	like. On th
31 mph3.1 miles per 6 minutes	
32 mph 1.6 miles per 3 minutes	is the odo

Every time you leave a check you should see a sign like this. This tells you the correct mileage and key time for that check. You can match your odometer to the course mileage if there's any discrepancy.



Around the start of all enduros, the club will have the course clock. Here you'll find the riders setting their clocks to key

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son on your first run. You're learning: this is a painful process, so don't put too much weight on the outcome of this race. Instead, ride and have fun, all the while keeping tabs on the roll chart and what your clock and odometer say.

RULES

First, always start the event with your odometer reading 00.0, or zeroed. Make sure you have your clock set at the course key time. There are many rules in an enduro; pay attention to the following:

Speedo check: This is the first three miles of an enduro and is used to calibrate your speedo to the one that the club uses. Basically, at the end of three miles there will be a sign along the trail that says you've gone 3.0 miles. You can check your speedo against the posted mileage to see if there's any discrepancy.

Secret checks: These are checkpoints placed along the course in a random fashion. You don't know where they are, so riding on time is important. Remember, if you're early, it's two points for the first minute and five additional points for each minute thereafter. Late points are one point for each minute late. Once you arrive at a check, there cannot be another secret check for three miles. This is known as free territory. For example, let's say you hit a check at 26.0 miles. There cannot be another check until the mileage reads 29.0.

Other free territory areas include the speedo check, or the first three miles of the race. Known controls and gas stops also have free territory. A known control is the finish of a loop or the completion of the race. This means that three miles from the end of the run is in free territory. Example: You know that the race ends at 90.0 miles. From 87.0 miles until the finish, there cannot be a check, so you can arrive at the finish early. This is the only time you can be early without sacrificing points.

As you can clearly see, keeping time is about one-third of enduro racing. The other two-thirds is rider ability. Knowing the rules and the how-tos of enduros is the key to a better understanding of the overall ball game. We threw a couple of terms at you: speedo check, secret check, free territory and known controls. There are more. Timekeeping is an art, a learnable art. The more you do it, the better you get.

What we've done is hit the basics. The bottom line is this: Enduro riding is fun and if you've never entered one, you shouldn't be intimidated. With any new sport you've got to learn to walk before you run, and enduros are no different. We'll bet that once you ride one, the fever will take over and there will be no looking back. And after a few rides you'll be wanting an article on advanced timekeeping techniques.



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SUZUKI SP250/500 DUAL TEST





Use care in any high-speed off-road work. The big SP is much more at home on the pavement.

By the Staff of Dirt Bike

reet-legal trail bikes are a bizarre breed of machine. They've come a long way since the old DT Yamaha and, like their off-road brothers, are refined and sophisticated. The Suzuki SP250 and 500, while not wild dirt-oriented bikes, are good middle-of-the-road, legal trail machines. Technology is focused around reliability and fuel stinginess and a little toward handling. Both SPs take their street chores quite seriously. Since the majority of the on/off-road market never sees much dirt work, the bikes must be easy to ride, start and operate. Super-long travel and highrevving powerbands fit the dirt-minded but have no niche in the street world. Compromise is the only answer.

ALTERED SEATS

Change has not found its way to the '83

SPs. Both bikes are identical to last year's equipment, except for cosmetic stuff like colors and stickers. Blue seats and gold rims give a nice racy look, but beyond that, very little has evolved. Dependability is their forte. Proven four-stroke engines put out decent power and are quite tractable. Counterbalancers in both engines keep vibration down, and the five-speed transmissions are geared for moon use. Any off-road work will warrant a smaller countershaft sprocket, as tall first gears make for clutch slipping in tight trail usage.

The 500 is the same basic design that has been with the DRs for years. It's a tank and will run forever with almost no maintenance. Starting takes a knack, as the kickstarter is long and bottoms your foot on the ground. After a long initial warm-up, you can start pounding the streets. Wandering off-road should be done with prudence, as the 500 wallows and pounds your spine into soup on easy trails. Marginal suspension takes a dip in the road fine, but crossing a rutted trail is another story. Too, the semi-knobs tackle the street in okay fashion, but give no security in the dirt. If you're not careful, the 300-plus-pounder will spit you into never-never land.

A good 40 pounds lighter and fitted with better rear suspension is the 250. Fire roads and trails can be negotiated with some confidence. Again, the tires never really grab enough, so slow speeds are the norm. Starting the 250 is a cruise, and vibration is almost nil. On the pavement, the bike is pure joy, but don't expect to smoke the tires, as the power output is decent, though not overwhelming.

Both bikes have nice tool kits that will hold a few trail goodies mounted on the rear fenders. A low seat height lets even

SP500



Because the 250 is much lighter than the 500, its trail manners aren't that horrible. Better suspension and a chugger motor are pluses.

short riders touch the ground flat-footed. The 250 seat measures at 32.7 inches, the same as a Kawasaki KX80. Archaic throttles have seen their day, as has the tach that is fitted to the 500. There's a second plastic toolbox located on the sides of the bikes to go along with the fender-mounted model. Buddy pegs for the doubles-minded are located at the right spot so the passenger doesn't interfere with the pilot.

In reality, both SPs are street machines fitted with a few trail options. Longer travel, torquey motors and some ground clearance let them travel down a trail slowly. Dreams of jumping off-road and slamming down a rocky river bed, then popping back on the highway, are nothing more than a vision. As it is, the bikes are economical and fun if you use them for sporting and plonking, not aggressive riding.





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		01 000
Engine type	4-stroke, SOHC, 4-valve	4-stroke, SOHC
Bore and stroke		
Displacement	249cc	498cc
Carburetion	Mikuni BS34SS	Mikuni BS40SS
Ignition		CDI
Transmission	5-speed	5-speed
Fuel tank capacity	9.5 L (2.5 gals.)	9.0 L (2.0 gals.)
Wheelbase		1455mm (57.3 in.)
Ground clearance	260mm (10.2 in.)	265mm (10.4 in.)
Seat height	830mm (32.7 in.)	870mm (34.3 in.)
Dry weight (claimed)		139 kg (306 lbs.)
Suspension:		
Front	7.7 in	7.7 in.
Rear	7.5 in	7.7 in.
Tires:		
Front	3.00 x 21 semi-knobby	3.00 x 21 semi-knobby
Rear		4.60 x 18 semi-knobby
Intended use	On/off-road	On/off-road
Approx. retail price		\$2098
Country of origin	Japan	Japan
Distributor	U.S. Suzuki Motor Corp	U.S. Suzuki Motor Corp.
	3251 E. Imperial Hwy.	3251 E. Imperial Hwy.
	Brea, CA 92621	Brea, CA 92621
	Broa, Gri GEGE	

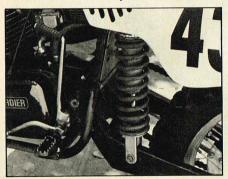
SUZUKI SP250



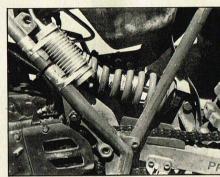




What started out life as a 1979 XR500 dual-shocker is now a single horizontal-shock Works Performance experimental machine.



Ride side of the ATK shows the ATK torque-eliminator, which is claimed to be essential for the side-shock approach to work properly. This is available right now for most bikes.



Left-side view of the Works Pro-Gress unit gives a better idea of the radical angle of the custom-made WP shock. Short and stout, the Works shock runs a spring with a rate over 800 pounds!



The ATK proto bike is based on a 560 Rotax engine in a special C&J frame. A version of this bike will likely be for sale in the near future. The price tag? Somewhere below the \$4000 range.

I f you feel that progress in rear suspension development has stagnated, then take a close look at the two bikes shown here. Both are experimental machines, not for sale to the general public, and are more or less rolling test beds for the theories of their designers.

While the two rear suspensions are worlds apart in appearance, they are both trying to do the same thing: simplify the rear suspension without giving up any of the obvious benefits of long travel. Both systems completely eliminate any links or rotating parts.

This offers several advantages that are unarguable: They're much simpler to build and maintain, and both complete systems are lighter than a comparable link/single-shock system.

They differ only in shock location/angle and one other area: The ATK system has a rather mild rising rate and the Pro-Gress setup has numbers that are more in line with conventional thinking. Both are startling to look at and draw crowds whenever the bikes are parked.

ATK SIDE SHOCK

At first glance, one is tempted to think that the ATK simply cannot work. After all, the single shock is mounted on one side of the swingarm. The other side is bare. And further inspection shows that the two arms are not even close to lining up. But, as Horst Leitner, designer of the ATK system, says, "It makes no difference what the angle is, just so it remains rigid and does not flex. I make the swingarm lower on the left side to allow the shock to be the proper length. On the right side, it's more conventional in shape, because it's easier to make it that way. There's a tremendous amount of bracing on the left side and it's actually much stronger than it needs to be."

We saw one very distinct advantage with the ATK side shock. Leitner removed and replaced the shock within a matter of minutes with no special tools. Try that sometime with your Uni-Trak.

The ATK side shock uses either a Honda/Ohlins, Showa or White Power shock. Horst has several working models and brought two of them with him for us to ride. One was Showa-equipped and the other had the Honda/Ohlins shock. Of the two, we much preferred the Ohlins-based unit.

Even though the ATK is not designed primarily to achieve a rising-rate suspension, there is some change as the shock goes through its stroke. The first inch of shaft travel offers 3.5 inches of axle movement, while the last inch yields 2.8 inches of rear wheel movement. Leitner estimates his complete system, even with the beefier swingarm, weighs about five pounds less than the standard single-shock approach.

He also noted that by having the shock off to one side, he was able to run a larger airbox and let the carb go straight into the barrel, rather than angle around like most gassers. This one change alone accounted for a four-horsepower gain in the 560 Rotax engine. Of particular interest is the fact that the ATK Rotax engines are preproduction 1984 engines that will see their way into the Can-Am and KTM lineup, as well as a few other Continental efforts.

Specifics on the ATK system are as follows: The shock is 16¼ inches long and offers 4¼ inches of shaft travel, including collapsing the rubber bumper. This gives the ATK rear end a full 13 inches of travel. The spring varies a great deal with bike and rider weight differences, but is normally in the 400- to 500-pound range. Zero preload is normal, states Leitner, even though individual riders can add a bit to suit their riding preferences. Horst likes no preload, because he says that it makes the rear wheel more responsive to small bumps and the wheel will more faithfully stay in contact with the ground when braking over bumps.

While the machines we rode were not for sale to the public, Leitner plans to offer an entire bike for something in the \$3900 price range. It will have a special C&J frame, the 560 Rotax engine (with performance goodies by Ron Woods) and, of course, will come with the single side shock and an ATK torque-elimination device. The rider will be able to specify his choice of forks, shocks, etc. We'll let you know more on

this as it develops. By the way, the entire bike is claimed to weigh in at slightly over 250 pounds, dry. We did not have a chance to slip it on the *DB* scales.

WORKS PERFORMANCE PRO-GRESS

It's obvious that the ATK bike is a pure racer, while the machine Gil uses for development is more of a Baja cruiser/high-speed trail bike. Based on an XR500 engine, the frame is your basic C&J with a specially modified C&J swingarm. There are also considerable frame mods done to fit in the near-horizontal shock.

Quite naturally, the designer, Gil Vaillancourt, owner of Works Performance shocks, uses a Works shock to get the job done on his machine. The shock is made from scratch and is all fabricated out of high-quality aluminum and chromoly.

Specifics on the shock are: length, 12-1/2 inches with a mere 2-3/4 inches of shaft travel. A mlghty 825-pound spring is used and Gil uses anywhere from 5/8-inch to 3/4-inch preload to get the rear end setting right. Actual travel with the Pro-Gress is 11.83 inches. As with the ATK, the Pro-Gress leaves a great deal of room for a sensible airbox and pipe routing.

The numbers on the rising rate are different from the ATK. The first inch of shock travel gives up 5.2 inches at the rear wheel and the last inch measures out at a

On the left, Gil, of Works Performance fame. Next to him, Horst Leitner, the multisprocket man of ATK.



ATK SIDE SHOCK & WORKS PERFORMANCE PRO-GRESS

Getting rid of all the extra pieces

3.87-inch rate. Gil also claims a five-pound weight savings with his approach.

The Pro-Gress can be applied much easier to four-strokes than two-strokes. XL500/600s and XR250/500s are likely candidates, but as this is strictly a developmental test suspension, the cost is fairly high should the rider desire to have one. Right now, Gil is much more interested in selling the concept to a major manufacturer than trying to build individual bikes for people.

As with the ATK bike, the Pro-Gress bike has massive gussets where needed. According to Gil, there are forces that exceed 6000 pounds at either end of the shock that must be dealt with.

DUELING DESIGNERS

Having both of the bikes and their builders at the track at the same time was fascinating. Both agreed that they were trying to reach the same goals, but mutual agreement ended at that point. Leitner feels that a rising-rate suspension is not needed. while Vaillancourt insists that it's the only way to fly. Both men are good riders and set up their own bikes to suit their riding styles. When we asked the designers to ride each other's bikes, it was the source of much high-level discussion, each trying to persuade the other of his approach. Frankly, each hated the other's rear suspension. Being much more tolerant, the DB folks slung an editorial leg over both mounts and put some time in on the bikes.

RIDING THE FUTURE WAVE?

We can't say that for sure, but we can say that while both rear suspensions feel much different, they both work. The ATK unit felt much better when the bike was ridden hard and fast...it seemed to respond to heavy throttle. The Pro-Gress was more comfortable at trailriding or cruising speeds, which is what the bike was set up for. It would be unfair to compare a firebreathing 560 racer to a mellow Baja cruiser. Suffice it to say that both suspensions worked considerably better than, say, a stock TT600...by the proverbial long shot.

We can say that riding the ATK was a strange experience, as the bike was equipped with an ATK torque-elimination sprocket setup. This meant that when we backed off the throttle while going into a corner, the front end did not settle. Also, heavy application of throttle does not make the rear end squat or the front end wheelie. Our short riding session did not allow us to get used to this; more time will be required to evaluate this system.

CURIOUS? INFORMATION FOR THE ASKING

ATK LEITNER CORP.—Attn: Horst Leitner, 2650-C Walnut Ave., Tustin, CA 92680; (714)731-5114.

WORKS PERFORMANCE PROD-UCTS—Attn: Gil Vaillancourt, 8730 Shirley Ave., Northridge, CA 91324; (213)701-1010. □

TWO NEW EXPERIMENTAL REAR SUSPENSIONS

MILLER HIGH LIFE SUPERBOWL OF MOTOCROSS

BAILEY: SUPER CROSS KING!

Glover makes it three in a row & Bailey takes the stadium crown

By Paul Clipper

Thursday, August 4, 1983. Today the Rose Bowl track was unveiled to the press and riders alike, and a very unique Supercross track it was. Berms were laid down right on the turf of the stadium, and the first practice session would have the honor of ripping big roosts out of that fine grass surface. All of the top motocross guns were there, along with a fully packed contingent of privateer hopefuls.

We watched as they poked their way around the virgin track, checking out the corners and getting a feel for the jumps. A set of sharply peaked doubles in the middle of the stadium stood out like wolves' teeth on the grassy floor, and we watched, visibly impressed, as the riders worked their way up to taking the 60-foot section of track in two jumps.

Things were serious here; the tension was thick. This was The Race—the L.A. Superbowl, moved to Pasadena. Big money, big crowd. The chance to strut your stuff in the most widely covered Supercross race in the world, and there wasn't a soul in that first few hours of practice who wasn't thinking about walking away The Winner on Saturday night.

There would be a full field of riders on Saturday, no doubt about it, but there wasn't one person there on that steamy Thursday who could be kidded into believing that the Superbowl of Motocross was any more than a match race between two fierce competitors. David Bailey came to Los Angeles with a ten-point lead over MarkBarnett, and Wrangler Super Series aside, one of them would leave the Rose



Posters, T-shirts, and his very own raincoat—do you get the feeling that somebody expected David to win?

Bowl with the Supercross Series Championship and a very fat paycheck. This is what you could call the "incentive system" of motocross.

Saturday, August 6, 5:00 p.m. The temperature inside the Rose Bowl was finally throttling down from a high of 105 degrees, and all of the last-minute preparations were being finalized for the evening of racing. The last practice session buzzed out onto the field, and we stood around in the infield making small talk with our competing photographers. There wasn't much happening now, and it seemed like everybody had gotten the track well wired. Nothing to do but wait for seven o'clock.

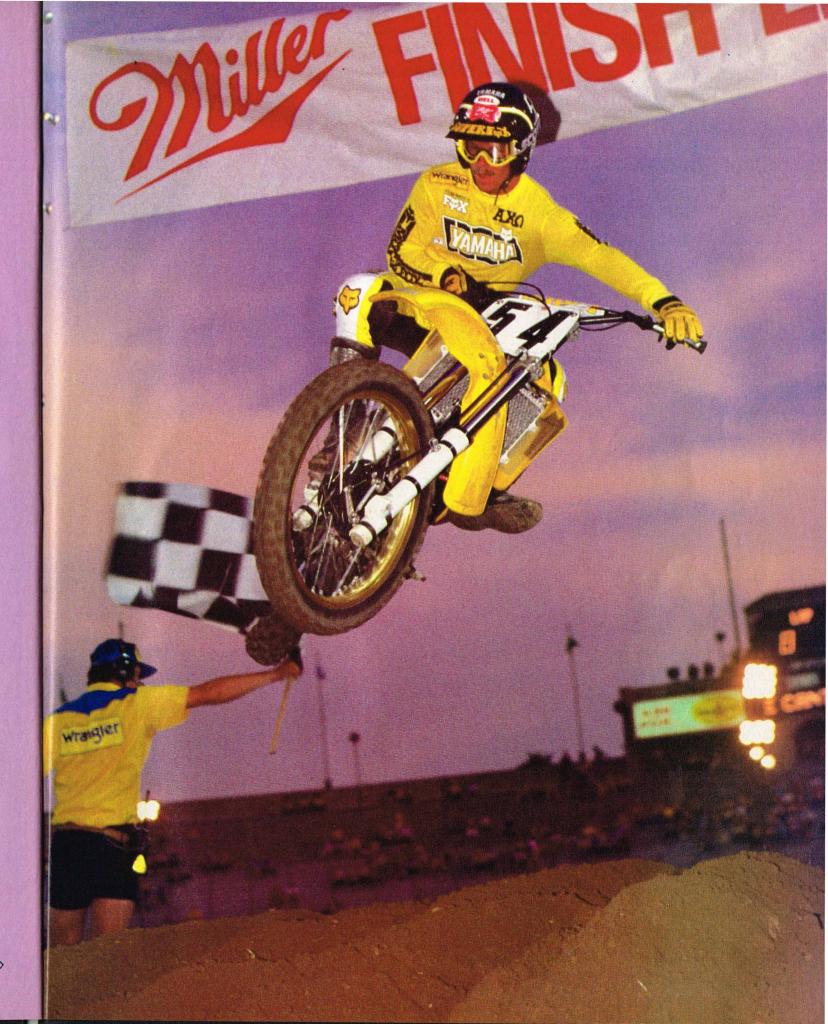
All of a sudden, a roar went up from the slim early-entry crowd in the stands, and we snapped our heads around in time to see Ron Lechien flying down the front straight 20 feet higher than anyone else had been all day. A moment ago things had been quiet in the stadium, now turmoil brewed in the infield. Lechien had just double jumped a set of jumps more than 45 feet apart—they weren't made to be doubled, no way—and as we marveled openmouthed over this apparent triumph over gravity, Jeff Ward blasted up to them and did the same thing!

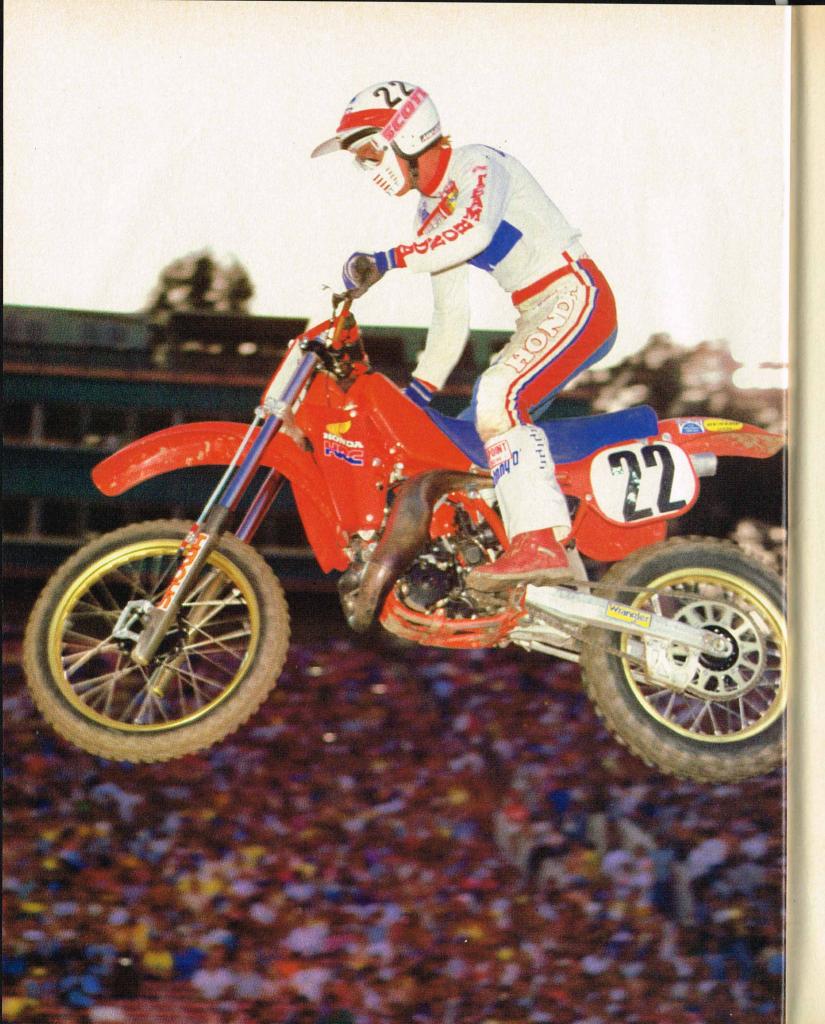
Now things were ugly in the pits. If the front straight jumps could be doubled, all of the front-runners would have to do it—and the last practice was winding to a close. There'd be no chance for Glover, Barnett, Bailey, or most of the rest of the riders to try it out; they would have to go for it



Glover tied up the Main with characteristic ease and became the only rider to ever win the L.A. event three times.

Everyone was pumped at the Superbowl. Yamaha support rider Donnie Cantaloupi styles for smiles.





MILLER HIGH LIFE SUPERBOWL OF MOTOCROSS

THE BATTLE BEGINS

Because of their respective standings in the Championship, Bailey and Barnett weren't pitted together in the first heat race. Instead, it was Bailey and Team Yamaha's Broc Glover doing battle for the first three points of the night. Bailey grabbed the holeshot coming out of the first turn, only to be swooped by Glover a few turns later. As expected, the two leaders sailed over the front straight doubles like a pair of jet fighters, and in the confusion following the air show, Suzuki's Alan King got by Bailey, taking over second place.

Glover is a ferocious competitor when faced with an open track in front of him, and he too had a reason for doing well this night. Glover was one of the five racers sharing two-time wins at the L.A. event, and he definitely wanted to pull the hat trick tonight. Maybe the added pressure was too much for him, because he was obviously choking and was all over the bike, trying to keep it on the track.

Seeing his chance, Bailey smoked by Glover and King to regain the lead, and a tooth-and-nail fight between the Yamaha and Honda pilots ensued. Glover continued to have trouble with the track, causing a few of us to wonder if his front tire was flat. As well as he stayed on Bailey's tail, there was no way he could get around him. Bailey flew over the finish line doing a one-handed pancake cross-up, obviously pumped about moving three points closer to Barnett.

The second heat was Barnett's chance to get even. He and Honda rider Johnny O'Mara went elbow to elbow for the holeshot, but while they were fighting among themselves, Suzuki teamster Scott Burnworth manhandled the lead. The other two riders weren't too concerned about this, and after taking a couple laps to get everything sorted out, Barnett roosted past his teammate for the lead.

O'Mara took a little longer to get his act together, and by the time he got past Burnworth, Barnett had a seven-second lead on him. The smoke-a-thon that followed resulted in the fastest lap times so far for the night, with Barnett and O'Mara slaughtering the mega-gnarly front straight, lap after lap. Barnett neither gained nor lost ground over O'Mara, and he took the win with a comfortable margin. Barnett's three points nullified Bailey's three. Each still had plenty of work ahead of him.

CLOSE STRUGGLE

The first Semi was the most exciting race of the night, with Bailey narrowly leading Glover off the start, followed closely by Burnworth and Barnett. The four chargers roared around the track. Bailey and Glover swapped the lead a couple of times, and



Everything was mellow until the last practice, when Jeff Ward and Ron Lechien started doubling a pair of monster jumps on the front straight. Then everybody had to do it.



By riding a safe Final event, Bailey won the championship without taking any chances. His ride wasn't very exciting to watch, but it certainly was effective.

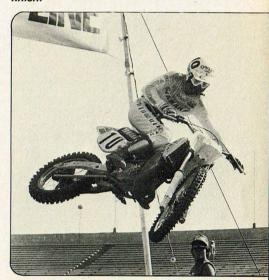
Burnworth took a heart-stopping handstand off the giant doubles while still holding his position.

Between the third and fourth lap Barnett started gathering steam. He passed Burnworth and zipped by Glover when the Yamaha pilot bobbled in a corner. Glover clearly wasn't enjoying the giant double, and seeing that he had a firm hold on third place, he decided to save his strength for the Main. By the sixth lap Barnett was heavy on the gas, and he drove past Bailey and started pulling away. With a good cushion behind him, Barnett backed off and took the win easily, followed by Bailey, Glover, Burnworth, O'Mara, and Honda rider Brian Myerscough.

Lest you think there were no races other than those dominated by the Big Three, let



Suzuki's Scott Burnworth caused a stir by getting a front-of-the-pack start in the Main, finally settling for a fifth-place finish.



Warren Reid was one of the Monster Doubles' casualties when he was thrown on his face during his heat race. The fall wrecked his shoulder and took away most of his ambition.

MILLER HIGH LIFE SUPERBOWL OF MOTOCROSS

us digress here for a moment to examine the fate of the other riders. Danny Chandler, not a Supercross rider by nature, drove to a win in the third heat, a race that was riddled with crashes. Ron Lechien came off his Yamaha over the giant double, and in a spectacular move managed to hold on and remount, although obviously shaken. Not so lucky was his teammate Warren Reid, who had moved up into second place, only to bail off on the double, wrecking his shoulder and effectively putting him out for the night. Tough luck for a nice guy.

The same thing happened in the fourth heat to Kawasaki's Jeff Ward, who was earlier a favorite to win the Superbowl. He

DB's Jim Holley became the top privateer of the evening, riding like a lunatic and finishing eighth.





A third-place finish marks the Superbowl as one of Magoo's best Supercross finishes of the season. It certainly does look like he's having a good time, doesn't it, Ollie?

50 DIDT DIKE / NOVEMBED 1083

had been in fine form throughout practice and was absolutely smoking in the heat, reeling in Yamaha rider Donnie Cantaloupi, when he mistimed the jump and endoed heavily. He got back up in time to finish third. The diminutive Kawasaki rider went on to win the second Semi with a badly twisted knee, although his luck wouldn't carry him through the Main.

Team *Dirt Bike* even had a couple of riders out on the track, with Jim Holley finishing sixth in the third heat and transferring directly to the Semi. He finished a safe seventh in the Semi, earning a spot in the Main. Mickey Dymond was riding *Dirt Bike*'s RM250 test bike, and although he did badly enough in his heat to have to ride a Quarter-final, he won the Quarter going away and was all set to smoke it in the Semi. Alas, his machine suffered sprocket mounting problems and he never made it to the start.

THE LAST ROUND

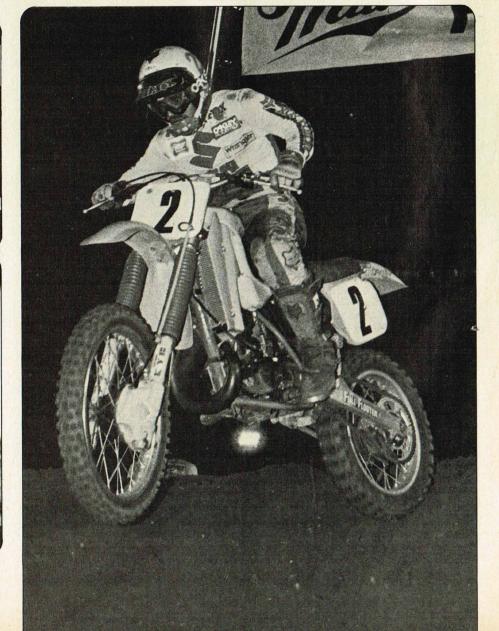
As 18 riders thundered down the starting

line, it was anybody's guess as to who would take the lead. Out of the first turn it was Glover, and then a quick glance back revealed Barnett picking himself up off the track! "That's it, he's out of it," we thought, but then the "Bomber" leaped back on the bike and passed three-quarters of the field before anybody even knew he had fallen. He simply slashed through the pack like an enraged hornet. By the second lap he was in sixth place, after one of the most brutal displays of riding talent ever witnessed by this writer.

By the fourth lap Glover was enjoying a comfortable lead—so comfortable that he chose to occasionally forgo the giant double in favor of two safer single jumps. Chandler was in second and Burnworth in third, followed by Lechien, Barnett, and—of all people—Holley. But where was Bailey?

Bailey was four places behind Barnett, riding a safe race, much as we expected him to. Anymore, a championship is not won

Barnett won his heat, won the Semi over Bailey and came in second in the Main, but none of it was enough to keep Bailey off the throne.



by berserking your way into the lead of an important race, it's more a numbers game—knowing just how far back you have to be and then riding within that limit. David was-watching the pit board and maintaining his position, and with the amount of money that was involved, we don't blame him.

Glover was smoking, however, with his eye locked on his third Superbowl win, and before the race was ten laps old he was into lapped riders. Sadly enough, one of them happened to be Jeff Ward, who had suffered another crash and was struggling to pick up positions. Chandler was holding second place, although Glover was doing the usual trick of picking up at least a second a lap. By this point it was Glover's race, no questions asked.

Through the final laps of the race the big battle was for second place between Chandler, Lechien and Barnett. The three diced back and forth, and soon it was a battle between Barnett and Chandler, ending with Barnett squeaking by on the next-to-last lap. The Suzuki kingpin finished second, but Bailey knew where he had to be and was there at the right time.

Glover won more than just another Supercross, being the first rider to win the L.A. Superbowl three times; he was very happy. Bailey was crowned Supercross King immediately following the race, and he was happier still. But was Barnett sad? Not on your life. He picked up some second-place bucks, and moved up to the lead in the Wrangler Super Series standings. The next three races would be a contest between Barnett and everyone else, and if he could have seen the writing on the wall, he may have been a little less enthusiastic.

But the big season wasn't over yet on this Saturday night, and no matter what the future would bring we had finally witnessed a fitting Supercross finale at the last indoor race of the year. Now if they only hadn't run out of ice, it would have been perfect....

RESULTS: WRANGLER SUPER SERIES, ROUND 24 ROSE BOWL STADIUM, PASADENA, CA

1. Broc Glover	Yam
2. Mark Barnett	
3. Danny Chandler	
4. Ron Lechien	
5. Scott Burnworth	Suz
6. David Bailey	Hon
7. Johnny O'Mara	Hon
8. Jim Holley	Yam
9. Brian Myerscough	Hon
10. Clint Hardick	Suz
11. Alan King	
12. Kent Howerton	Kaw
13. George Holland	Suz
14. Jeff Ward	Kaw
15. Daniel Conway	Hon
16. Steve Martin	Hon
17. Ricky Johnson	Vam
18. Billy Liles	Kaw
To. Dilly Ellos	Naw
WRANGLER SUPER SERIES	

POINTS STAND											ı	וכ	E	N	1/		
. Mark Barnett																1	731
. David Bailey																	729
. Broc Glover	1	Į,				1											690
. Jeff Ward																	
. Bob Hannah				1	V			ı									640
. Johnny O'Mara																i.	635
. Ron Lechien						-											505
. Warren Reid					u												478
. Brian Myerscough							1				10		1				468
. Scott Burnworth																	

THE PRIVATE LIFE OF PRIVATEERS



Jim Holley

While everyone watched the drama for the Supercross Championships unfold between Bailey and Barnett, there were things happening that made for high excitement a bit further back in the pack.

When the factory riders have their own private battle over the gold, it's up to the privateers to battle for the scraps. At most Supercross races it's unheard of for a privateer to break into the top ten. And they simply do not win Quarter-final events leading to the Main.

Or do they?

Dirt Bike had two entries in the Superbowl. One guy was our regular all-time cover-shot specialist, Jimmy Holley, on a YZ250 that wasn't much tricker than the hardware you see at your local track. The other was Mickey Dymond, a good, solid Pro just starting to make an impression on the National scene in the 500cc class aboard a Maico. Both of them desperately needed a good showing at the prestigious Superbowl to help push their careers along.

And, as luck would have it, both had some great moments...mixed with some truly bad luck.

THE JIMMY HOLLEY STORY

In the first heat our very own Jimmy Holley got knocked down in one of the first turns and got going next to last. Savvy trackside observers mentally wrote him off after that escapade. However, Holley is made of sterner stuff than most might think. He kicked his bars straight and proceeded to ride as fast and as hard as he could. By the midpoint of the short heat he was already up to mid-pack, cutting through the other privateers as if they were parked and waiting for a toll booth.

From mid-pack on, Holley had to deal with the faster privateers and some factory riders. He dispatched them with steady pressure and daring passes. When the checkered flag came out, Holley had worked up to an incredible sixth-place finish! To celebrate, he flipped the bike into a declining, inverted sideways pancake gyration that had the crowd gasping. Somehow, he straightened out the bike before it touched the ground.

In his next race, the Semi, Jim rode steadily and solidly and crossed the line in seventh place. This transferred him directly to the Main event and guaranteed him a decent paycheck for the night.

Now, most privateers are content just to make the Main and have no real hopes of running up front for any length of time. Someone forgot to tell this to Holley, as he was third through the first turn with a daring outside-to-inside pass on most of the field that took him from mid-pack to a dicing spot with the front-runners. He ran in a solid fourth spot for most of the race, eventually getting passed by a few decent riders like Bailey and O'Mara. He ended up with an eighth for the night, one of the most impressive rides of the year . . . and all this on a YZ painfully close to stock. We wonder what it takes for Holley to get a factory ride?

Press time flash! Holley just took a fifth overall at the 250 class in the Washougal Nationals, pressing Cantaloupi all the way. Cantaloupi was on a works Yamaha.

FROM DYMONDS TO DEMONS

After being a fully sponsored Maico

Mickey Dymond

rider all year, Mickey Dymond found himself up against the proverbial wall right before Superbowl time. With Maico stopping its racing efforts due to financial problems in Germany, Mickey didn't even have enough spare parts for his 250.

Dirt Bike offered our spare project Suzuki RM250 for Mickey to use in the Superbowl. After riding the bike in local Expert races, Dymond had racked up four straight victories and two seconds. The defeat, by the way, came at the hands of Ricky Johnson aboard a works Yamaha.

Our bike was a basically stock 1983 RM250 with a 1982 head and 1982 ignition timing. We also had Boyesen reeds on the bike and a modified airbox. An Answer muffler (aluminum) was added to the pipe. Everything else in the engine was left stock. Jetting was carefully dialed in. Bars and side panels were changed for looks and rider comfort. An Ohlins shock was installed on the rear, with technical advice on the damping and preload by Steve Simons and Stig Petersen of Ohlins. Mickey ran stock forks instead of Simons UDX, mostly (continued on page 70)

NOVEMBER 1983 / DIRT BIKE 51

MAKE YOUR SPRING STIFFER FOR FREE!

SPRING SECRETS

Can you divide, multiply & fill a bucket with cold water?

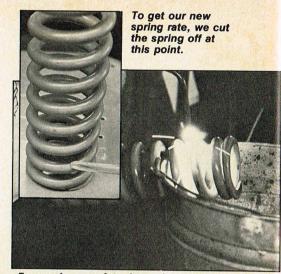
By Rick Sieman, with special thanks to Gil Vaillancourt of Works Performance Products for technical assistance



I have a KDX175 and my rear shock spring is way too soft. My dealer wants almost 50 bucks for a heavier spring. Is there anything I can do to stiffen the rear end without popping for the half a hundred? Thank you severely.

Marvin Grinder Spinoza Flats, UT

This mythical letter is actually representative of many we've received here at *Dirt Bike*. The problem is not isolated to the excellent KDX enduro bike. Nope. Just about any rider who gets better on his bike will find out that the standard spring(s) that came on the bike were made for that mythical "average" rider.



For maximum safety, hang the spring over a bucket filled with water before torching off the unwanted coils.

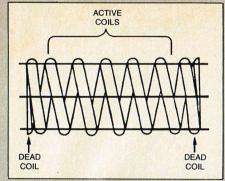


The owner of a new bike will often not notice that his spring is too soft at first, because of the sensation of a fresh, tight new bike and the attendant careful riding. However, once he gets the unit broken in and scratched up a few times he may find himself resorting to the preload adjustment rings.

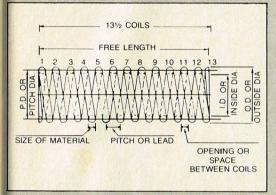
And, no matter what his owner's manual states, increasing the preload will not keep the shock from bottoming out under hard riding conditions. The answer, of course, is a heavier spring. Naturally, the correct amount of sag in the rear end and *reasonable* amounts of preload will have substantial effects on the action of the rear end, but it's possible to have the right amount of sag for the rear suspension and still have a too soft spring.

SAVE BIG BUCKS— MODIFY YOUR OWN SPRING

Let's say you've exhausted all the normal preload and have, in fact, determined that your spring is too soft. You can avoid spending anywhere from 40 to 75 dollars for a shock spring and equivalent bucks for fork springs. Yes, the *DB* low-bucks approach to customizing your springs works



The dead (or inactive coils) are those that touch at both ends.



Basic info needed to determine spring rate.

on the fork boingers as well as on the rear suspenders.

You're going to need access to a set of torches and a decent bench grinder to get the job done right. First, here's how the procedure is done, then we'll show you how to calculate just how much you want to cut off your spring to increase the stiffness.

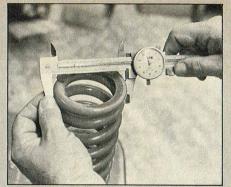
WAIT A MINUTE, DIRT BIKE! HOW CAN CUTTING A SPRING MAKE IT STRONGER?

Hah! Gotcha, didn't we. You see, a number of things determine the rate of a spring, among them the thickness of the wire, the diameter of the coils (to their centerline) and the number of active coils. As a rule of thumb, the fewer active coils, the higher the spring rate—all other things being equal. Since we can't change the thickness of the wire or the diameter, this leaves the number of active coils as the only variable we have control over.

Dead coils are those at each end of the spring that make contact with something. If you have a spring with, say, ten coils, then two of them are dead (inactive) and eight of them are live (active) coils. But enough theory for now. Let's get back to the actual operation of making our springs stronger.

STEP-BY-STEP SPRING MODIFICATION

Once you've determined just how much you need to cut off your spring to make it stiffer, here's the procedure. Put some water in a bucket and lay the spring over the edge. Not only will this make a solid holder for the spring, but it will give the hot coils and sparks a very safe place in



A number of factors determine the actual rate of the spring, including the diameter of the wire...



...and the thickness of the wire.

which to drown themselves out.

A mark should be scribed on the coil where the cut is to be made. Heat up the coil with a normal welding tip until it's cherry red and just starting to turn yellow. When the metal starts to puddle or melt, turn off the acetylene. The oxygen will feed the hot spot and the wire will literally burn. At this point, you are merely feeding oxygen to an existing point of combustion. The wire is actually burning! Of course, you can simply take a cutting torch and blaze it off, but this technique is much cleaner and very easy to master. You might experiment with a scrap piece of metal first to get the feel.

Next, place the shortened spring firmly on a flat surface or in a sturdy vise. Then start heating the top coil about an inch from the freshly cut end, very slowly. Do not overheat it. Once it turns cherry red, you can squeeze it gently together with a sturdy set of pliers.

The key here is *gentle* pressure. If you force it too much, there's a chance that you'll crack the spring and render it useless. Remember, easy pressure and fairly low heat—just enough to let the coil start to sag under a light squeeze.

After the first part of the coil has been bent down a bit, back up another inch and heat some more, then gently put additional pressure on the coil. After a few minutes of coaxing and sensible use of the torch, the top (freshly cut) coil will be flattened out to the approximate desired shape.

Now you have to flatten it so it'll fit flush against the top (or bottom) of the shock. A grinder is essential. You probably won't

have access to one as strong as the one at Works Performance, but the job can be done with a bench grinder. Plan on taking about a half hour of work with the average home bench grinder. You can also take the shock spring to almost any machine shop and talk the guy into surfacing it for you for a few bucks.

One word of caution: After you heat and bend the top coil, do not quench it in water to cool it down too quickly or you might make the spring take a set. Wait a few minutes until all the color has disappeared from the spring. Your spring is now ready to be sanded clean and repainted. And, if your calculations were correct, you would now have the new heavier spring rate you were after, at no cost to you.

HOW TO FIGURE OUT HOW MUCH TO CUT OFF

First off, you should know what the rate of the spring you're using is. That's easy enough. All springs are coded in some fashion and the owner's manual tells you what the different springs are. Some use a grind mark, while others use paint to identify the rate.

Let's say you're starting out with a 600-pound shock spring. If your shock is too soft, a ten-percent increase in poundage would be a logical place to start.

You have to take the rate of the spring (600 pounds) times the number of active coils (in this case, 8.875 coils) and divide this by the desired rate. Sounds like tough math, but it isn't. Here's how it looks on paper:

600 pounds <u>x 8.875</u> active coils 5325.000

Now, take this number and divide it by the rate you want, which in our case is a ten-percent increase, or a rate of 660 pounds. On paper, again, here's the story:

8.0682 660) 5325.000

This leaves you with the magic number of 8.0682, which is the number of active coils that will give you a 660-pound spring. Pretty neat, eh? In our spring, that means that we would have to cut off 7/8 of one full coil to get what we were after.

Once again: It's only the active coils that count. So, out with the torch, zap on the grinder, and 7/8 of a coil later, you have your 660-pound spring.

VARIOUS WORDS OF WARNING, SOME OF THEM DIRE

Don't get in over your head. And don't try to ask a spring to do too much. One of the things you *must* watch out for is coil bind. A spring should never be forced to bottom out against itself. If, for example, you have five inches of available spring movement and the shock travels 4-1/2 inches, it's clear that you should cut no more than half an inch off that particular spring.

It's not too difficult to calculate just how

52 DIRT BIKE / NOVEMBER 1983

Gil checks the rate in his spring tester

and finds that his math was right on the



much available spring travel you have in any spring. Merely measure the thickness of the wire, count the number of coils and then measure the space between the coils and count the number of spaces. Basic biker math.

SPRING RATES EVEN YOU CAN UNDERSTAND

A typical straight-rate spring is a very easy animal to understand. Let's say you have a 100-pound spring. This means that when the spring is compressed one full inch, it'll have 100 pounds of force. If you did this one inch of compression on a bathroom scale, the scale would read 100 pounds. When the spring is compressed two inches, it'll read 200 pounds, at three inches, 300 pounds—and so forth. Of course, there are progressive springs, but the math on them is complex that not even Rondo Talbot understands it.

PRELOAD, CONFUSING THE ISSUE

Preload is close to black magic to many. Let's go back to that 100-pound spring we were talking about. If you added 1/4-inch of preload to that spring, the first inch of travel would yield 125 pounds of force. One-half inch of preload would bring it up to 150 pounds, and so on.

However, preload affects only the first inch of travel. After the first inch of travel, the spring will still gain only 100 pounds with each additional inch of travel, no matter how much the preload. This is where a lot of people blow it. Ideally, a light preload will let the wheel react to small bumps properly. Way too much preload will make the finest shock (or forks) feel miserable on the small bumps, then the suspension will still wallow through the midstroke.

CAN I DO THE SAME BASIC STUFF TO FORK SPRINGS?

Of course you can. You just have a much longer spring and may have to count a lot more when you add up the active coils. Let's assume you have an 18-pound fork spring and you feel that it's too soft. Your calculations show that if you cut off three coils, you'll end up with a 20-pound fork spring, which is what you want.

Fine. Go for it. But make sure that you make up the space you take away. If you cut off two inches of fork spring, you must replace those two inches with some sort of a spacer. If not, the forks will tend to sag and dive too much from lack of proper preload. The same, naturally, is true of the rear. If you don't have enough threaded area in your shock body to make up for the removed coil area, you will have to fabricate a simple spacer to take up the

MYTH DESTRUCTION FOR YOUR AMUSEMENT

Some years ago, several companies offered "booster" springs for forks. These were said to stiffen up the stock fork (continued on page 69) For performance above and beyond stock...

Reed

accelérated

Take the Boyesen For greater control...increased horsepower...quicker response... and reduced risk of engine damage. All through low-cost, easilyinstalled Boyesen Racing Reeds. Because your reeds are fundaperformance course. mental to performance, here's why you'll switch!

	BOYESEN VS. STOCK	Explanation
1. More control!	✓	Boyesen's patented two-stage design operates more freely over a wider RPM range than standard spring-restricted one-stage reeds.
2. Greater low-pressure (low-throttle) response!	V	Boyesen's top reed is very soft because low throttle conditions require a low-resistance reed.
Faster opening and closing!	1	Lower effective inertia is achieved through Boyesen's dual-stage design: a thin, short, lightweight top reed and a rigid, flow-through primary reed.
4. Greater flexibility!	✓	A one-stage reed operates effectively only within a narrow RPM range. Boyesen Racing Reeds feature a Space-Age fiber material and dual action for optimum response over a wider RPM range.
5. No engine damage if broken!	Some	Broken metal reeds destroy an engine. Although a few manufacturers feature fiber reeds as stock, you'd better double-check to make sure you're not taking a big chance with your expensive engine.
6. Greater velocity!	✓	Boyesen two-stage reeds feature two openings that maintain a flow velocity greater than one opening of equal size.
7. Greater flow areal	✓	Greater flow area is achieved because Boyesen Racing Reeds allow you to substitute a screw plate for your reed stop. Without a reed stop, your original reeds will whip and flutter and be destroyed in a short time.
8. Longer overall life!	V	On an uncoated reed block angled at more than 45°, Boyesen Racing Reeds outlast single-stage metal reeds by a minimum ratio of 100:1. And while most manufacturers now use a rubberized block coating to help metal reeds go past their normal fatigue life, there's no guarantee against breakage. Take a chance on breaking a metal reed and you gamble with engine destruction.

It's easy to replace your original one-stage reeds with Boyesen Racing Reeds. Complete easy-to-follow instructions are included. So switch to Boyesen for better performance and a more satisfying ride. Ask your dealer or distributor.



We're building our reputation, race after race after race...

Boyesen Engineering R.D. 1, Box 826 Lenhartsville, PA 19534 215-756-6818

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FIRST LOOK! AME IM HOMOMA CRS FOR 1984

A sneak peek at next year's motocross weapons By the Dirt Bike Staff

The new Honda CR racers are more than just a change in sticker position and a new coat of paint. By not making any radical design changes, the Honda engineers may fool a few people into thinking they're the same old CRs, but a close-up look will reveal trickness galore. If specifications are any indication, the new machines should spray the tracks with more horsepower than last year and be even easier to ride.

RAMPS AND BUTTERFLIES ABOUND

The top feature this year is the ATAC system, which is Honda's version of the variable exhaust port that was first introduced by Yamaha as the YPVS. Unlike Yamaha's system, though, the ATAC

works by changing the volume of the expansion chamber and not the height of the exhaust port.

The system consists of a sealed chamber connected to the headpipe. A butterfly valve between the two is sprung open at low and no rpm, and it closes as the engine rpm increases, actuated by a ball and ramp/lever mechanism similar to the Yamaha system. The theory is this: butterfly open—pipe volume is high, producing more low and mid-range power; butterfly closed—pipe volume is low, increasing top-end power and revving ability.

The ATAC is used on the CR80, 125 and 250, and if it works the way they say it does, they should have more bottom end

and be easier to ride, while at the same time still be able to rev out to maximum horse-power. We haven't had a chance to ride the CRs yet—haven't even heard them run—but we are definitely excited about this new system and will let you know how it works as soon as we get a test bike (maybe next issue...).

The CR500 gets its new 491cc from a lengthened stroke, and

chain has been moved over to a left-side drive, making for a narrower, lighter-weight swingarm, and a right-side kickstarter

engine cooling is improved by new plastic air scoops. The

along with a more tucked-in brake pedal. Front suspension travel is 12 inches, rear is 12.4 inches, and the claimed weight

SUPER STOPPERS

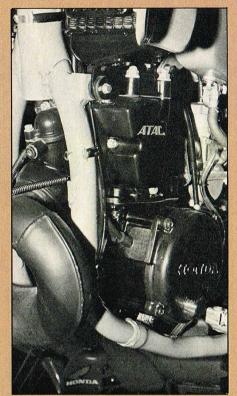
Another obvious change to the 125, 250 and 500 is the front disc brake, something we're not surprised to see yet welcome with open arms and itchy right-hand index fingers. The disc is 5mm thick and drilled for lightness, but the big news is the caliper design. Where all past disc-braked bikes used a single piston caliper, the new Hondas



With the ATAC built into the side of the cylinder, the CR250 engine has a decidedly spacey look. Many engine parts have been lightened, and the clutch is now aluminum. A new-design rear hub is smaller for less unsprung weight, and the handlebars are rubber mounted to deaden vibration. The new fuel tank has a recess for the safety seat, which should make for a very comfortable ride.



A totally redesigned engine is the main highlight on the new 125. The thrust of the new design is to increase power and lower weight. There is a slight weight gain overall due to the new 43mm forks, but fork flex should now be a thing of the past. Travel is shorter than on the big bikes, at 11.4 inches, while the rear stroke is 12.2 inches. New plastic looks sturdier, with a cleaner design.



The CR250 ATAC system is molded right into the cylinder. The ATAC adds a degree of complexity to a formerly simple area, but if it works, it's worth the added maintenance.

use a dual piston design that allows a larger pad area in contact with the disc, making for multiple minor benefits that add up to an unreal front stopper. You may need a larger pair of goggles just to keep your eyeballs from rubbing against the lenses.

CUTTING WEIGHT

All of the bikes have had internal engine components trimmed down and redesigned to save weight and improve throttle response. The weight savings are very slight overall. The 250 scored the best, with a 1.8-pound claimed reduction, and the 125 gained slightly more than a pound due to the new forks. Of course, these are claimed weights, and we won't know the absolute truth until the well-oiled *DB* scales are put into action.

SUSPENDER SMOOTHING

The Pro-Link links have been changed to provide a better rising-rate ratio, and they look suspiciously like the Simons links we used on last year's 480. The shock absorbers all feature different damping rates to complement the new ratios and feature adjustable rebound and compression damping on the bigger bikes. Forks have all benefitted by revised spring and damping settings, and the 125 has been fitted with a set of 43mm tubes, just like the 250 and

All in all, it looks like a good year for the Honda motocrossers. Sensible changes throughout the line, not intended to take the market by storm, but rather to keep them in the top spot they so deservedly won last year. Look for tests on all the new Honda machines real soon.



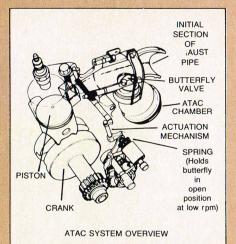
The CR80 picks up a few of the big-bike features this year, including the bolt-on rear frame section and larger-diameter forks (up to 33mm from 31mm). The engine has been completely redesigned, including the addition of a mini ATAC system, and is said to have better power delivery throughout the range. Suspension travel is up, with 9.4 inches in the front and 10.0 in the rear.



A lighter engine is one of the main features of the CR60. Part of this weight loss can be attributed to a thinner cylinder liner—designed to transfer heat more efficiently than the old, thicker liner. The 30mm forks are new, with 8.0 inches of travel; the Pro-Link rear delivers 8.3 inches. The weight remains the same as the '83 bike.



The new disc brake is small, light, and powerful looking. We can't wait to give it a squeeze!





The CR125 uses the ATAC molded right into a header pipe section. Linkage is internal, driven from crank.



New Pro-Link linkage should move the system closer to perfection.



Left-side drive, right-side kickstarter.

Now you can kick the 250 and 500 with your right foot whilst sitting. Some of us liked it better the old way....

BAILEY AND O'MARA REALLY CHECKED YOUR BIKE THIS YEAR.



It's no secret that David Bailey is a triple crown winner. Or that Johnny O'Mara owns the 125 title.

What you may not realize is you're the one who really came out on top. Look:

We take all the experience, all the long, grueling hours, all the races Bailey and O'Mara have won. We

hours, all the races Bailey and O'Mara have won. We take all this knowledge and put it into our new CRs.
So you get a machine that's been tested, developed

and refined. A motorcycle that gives new definition to the words "handling," "performance" and "reliability." That keeps on going no matter how tough the going gets.

In short, because we're champions you end up with a winning machine.

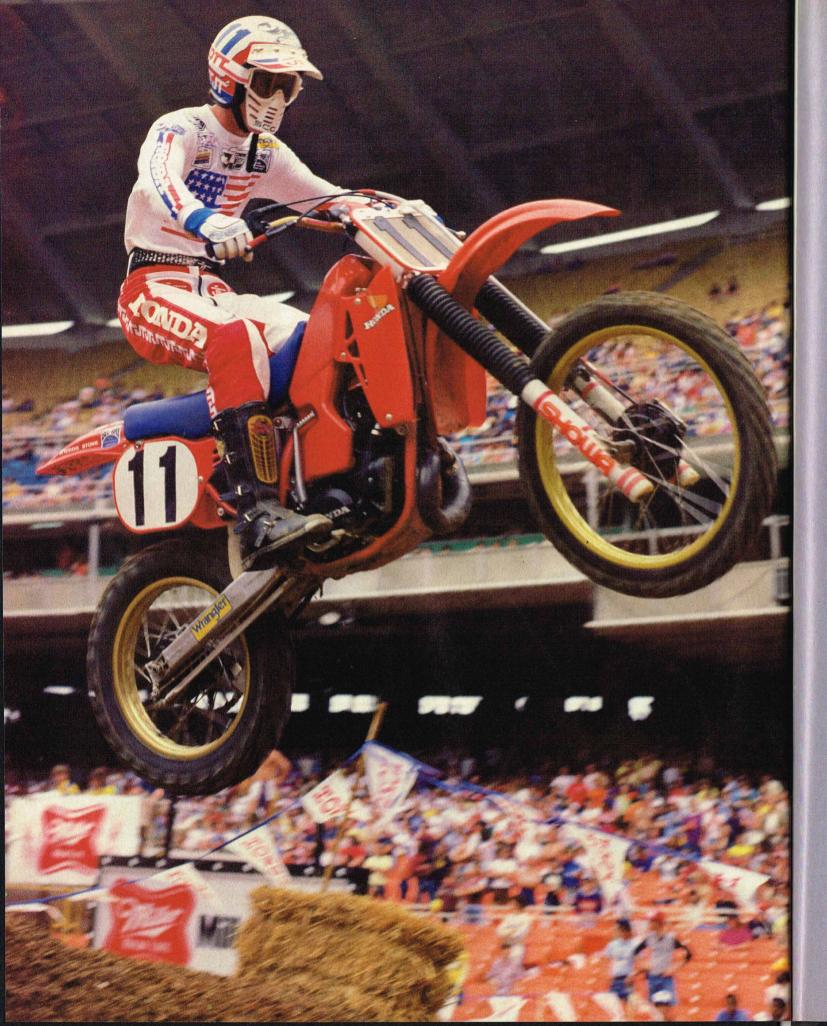
Honda. Nobody puts your bike through as many checks as we do.



ALWAYS WEAR A HELMET AND EYE PROTECTION.

© 1983 American Honda Motor Co., Inc





GARY BAILEY TEACHES TECHNIQUE

HOW TO JUMP LIKE A PRO

Breaking old habits

By the Dirt Bike Staff, after much needed help from the Professor himself



When conducting a school, Bailey gets right down and shows you where the best line is. This is a demonstration of pre-jumping, and if you look close, you can see that the rear wheel of Kenji's bike is just lifting off the ground. By sitting down up the slope and then lifting off the back of the bike, you can start the jump anywhere you want.

when you attend a Gary Bailey Motocross School, you'll be lucky if you ever get to take a lap around a track. Actually, he should call his school the Gary Bailey Riding School, because what he teaches is the technique necessary to control a motorcycle through any terrain, a skill that is useful to all riders, not just motocross racers.

We've sat in on a number of his schools, and the dramatic improvement in our own riding abilities is enough to convince us that this is the real thing. This information has to be passed on, and through the next few issues we're going to try to do just that.

ASSUME THE POSITION

The first thing Gary tells us is that to control the bike you have to sit on it right, and this is how it's done: Plant your butt at the front of the saddle with your knees well in front of the footpegs. Your head should be over the top of the handlebars, and your elbows should be bent and pointed up. Your face will be not much more than eight inches from the bars, and you'll

probably have to crank the levers down real low just to reach them. This is the "attack" position and the right way to ride a motor-

Look at the "other" way to do it: butt on the middle of the seat or back farther, elbows at your sides and hands lying on the grips. In this position, anytime the back end hits something and bounces up, it'll smack your rear end and, if you're not lucky, pitch you over the bars. With your arms low, every time you hit a bump or land from a jump, all the force is transferred right to your spine, and this gets painful after a while. With the elbows up, the arms are free to work as shock absorbers along with the forks, and, seated on the center of the bike, you are practically immune to any of the gyrations the bike is going through.

The proper body position is the first thing you must learn in order to improve your riding. You can't assume this position if your bars are too wide, so cut them down to fit better. Just as a guideline, Gary tells



One of the best examples of good riding style is Broc Glover. He is always forward on the bike, always in the attack position, and nearly always in the lead. When he lands from this jump, you know he's going to hit like a feather and then disappear.

WITH BOWS OF HOLLEY... & MAGOO & BAILEY & BURLESON & HANNAH &...

... all the stars of the dirt bikin' world. Slip a DIRT BIKE subscription under the Christmas tree this year, and we'll keep the action coming to your home each and every month!

DIRTRIKE

REGULAR SUBSCRIPTION PRICE 1983 DIRT BIKE CHRISTMAS SPECIAL:

CHRISTMAS SUBSCRIPTION SPECIAL!

Ordinarily it would run you \$21.00 to get DIRT BIKE at the newsstand each month for a year—that is, if they aren't sold out. Even with a subscription, it's still \$14.98 to get all the tests, tricks, events and enduros, and the most reliable product evaluations available on planet Earth. But right now for Christmas you can get DIRT BIKE delivered to your door for a mere \$10.98 a year!

HOW TO SUBSCRIBE FOR YOURSELF:

- 1. Fill out the Subscription Coupon on the attached envelope.
- 2. Put it in the postage-paid envelope attached, along with your check or money order.
- 3. Drop it in the mail and get ready to enjoy 12 issues of DIRT BIKE delivered to your door for one full year! Then figure out what you're going to buy with the extra \$10.02 you just saved!

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- 1. Fill out the upper portion of the Subscription Coupon on the attached envelope.
- 2. Carefully complete the Personalized Gift Card below in your own handwriting. You may then do one of two things:
 - A. Mail it to your friend just before Christmas, or
 - B. Include it with your Subscription Coupon and we will send this Personalized Gift Card to the recipient in a special gift envelope.
- 3. Put the Subscription Coupon (and the Personalized Gift Card, if you wish) in the attached postage-paid envelope, along with your check or money order.
- 4. Drop it in the mail and find something to do with all the Christmas shopping time you just saved, not to mention the \$10.02 jingling in vour pocket!

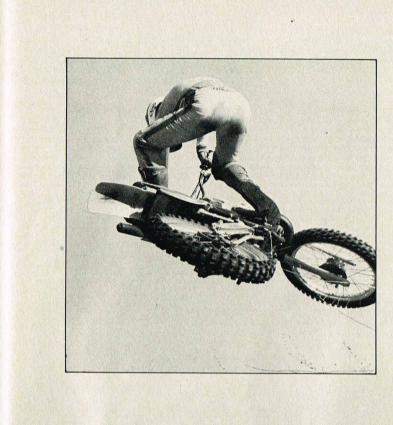
TWELVE **ISSUES OF** DIRT BIKE ONLY

> PERFECT GIFT FOR YOU OR YOUR FRIEND!

tester



Gentleman Jim Holley, DIRT BIKE







YOUR DOOR!

12 GIANT ISSUES

DELIVERED TO

DIRTRIKE

PERSONALIZED CHRISTMAS GIFT

Merry Christmas! This is to let you know that this year I am giving you a subscription to DIRT BIKE Magazine—the Number One off-road magazine on planet Earth, with the most reliable tests, technical tips, trails and how-tos known to man. NOTHING HAS BEEN SPARED TO BRING YOU THE AWESOME DIRT BIKE WORLD-all from me!

Merry Christmas from:

INDIVIDUAL RECEIVING SUBSCRIPTION

State/Zip



Johnny O'Mara demonstrates good form off a stadium jump. The upper part of his body is over the bars, his knees are bent and slightly forward of the pegs, and his butt is twisted slightly sideways to correct for a cross-up.



Drop-away jump, just lifting off the seat as the ground drops away. Notice the finger on the clutch, ready for a burst of power as the rear wheel hits the ground.

us that nearly every one of the top Pro riders runs bars that are less than 311/2 inches wide. Bob Hannah has been known to run bars as narrow as 29 inches, and you know how fast he can go, right?

SAILING WITHOUT BAILING

Everybody knows how to jump, right? You just ride up to the mound of dirt, hit it, and fly into the air. No problem. But, if you've ever crashed off of a jump, you may find it valuable to learn the most controlled way to do it.

You now know how to sit on the bike and how to keep your arms up. Now find



Nould you expect anything else from the Professor's son? David is showing perfect form off this tabletop jump. Notice how the knees are ahead of the footpegs, the arms are up, and the head is over the bars. And yes, he did go on to win the race.



Larry Roeseler shows that it doesn't really matter where your rear end winds up, just as long as the arms are up and the weight is forward. Notice the fingers on the clutch and brake-an excellent habit to get into.

a low jump and jump it in the normal way -just ride up to it, and keep the throttle on as you go over it or even goose the throttle a bit. Classic jump position, right? Front end high, good landing on flat ground. Practice this in the new body position for a while and then try the old way with the weight way back and the arms stretched straight. You will become a believer.

What if you're faced with a tabletop jump or a set of doubles where you have to land on the down side of a mound? In this case, experience will tell you that you should land with the front end low for best



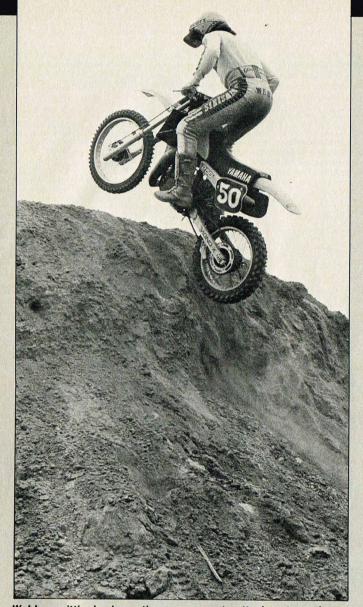
Mike Bell slips into a bad habit at the Washington Supercross. His arms are down, forcing him back on the seat. If the jump landing were flat, he'd get a nasty shock to his spine.



Gary claims that everyone should learn how to do slow vertical wheelies. Not only are they fun, but they teach you how to react when you stand it up too far off of a jump.

control and to keep from slamming the forks into the ground. Find a suitable practice jump, take it in the same position as our front-end-high jump, but when you hit the jump itself (make it a low, safe one at first), roll off the throttle. When you back off the throttle right before a jump, you'll come off front end low, the right attitude for a tabletop jump. Get used to the feeling of "voluntary endo," and then practice to get your distance down pat.

Another useful maneuver Gary teaches is what we call the "bunnyhop," also known as pre-jumping in the more elite cir-



Webb unwittingly shows the wrong way to attack a steep slope. His knees are way forward, which is good, but with his elbows down like that, he'll have to straighten out his arms when the back end kicks forward. This increases his chances of having the rear of the seat hit him in the butt and will leave him without a good arm position when the forks compress.

cles. You can do a bunnyhop over any kind

of bump with a little bit of practice. Here's

how to start: When you ride over a bump,

you can feel the suspension react. When the

back end of the bike rolls over the bump,

it feels as if it wants to hop off the ground.

All a bunnyhop is is accentuating that feel-

ing by quickly rising out of the saddle-

like trying to rapidly lift the bike by the

footpegs with your feet. Try it over a few

bumps. Soon you'll get to the point where

you can lift the back of the bike almost at

To use the pre-jump on a jump, just hit

the uphill surface of the jump in a crouch

and then unweight the bike right before the

point you want to clear. For instance, if

there's a nasty bump right at the lip, rise

up and pre-jump right over that spot. It

takes a whole lot of practice to master this

technique, but when you do it successfully, it feels as if you're flying. This is also a good way to get more distance on a normal jump.

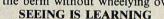
A drop-away jump is probably the easiest type of jump to conquer—just ride right off of it. Most people, however, waste a lot of energy by standing up before a dropoff, which is entirely unnecessary. Practice going off of dropoffs sitting down, and you'll naturally stand up just before you land to absorb the impact.

Keep in mind that your landing off of any kind of jump will be smoother if you land with the throttle on. Having power at the back wheel when you hit will keep the front end light and use much less suspension travel, lessening the overall shock. If you must make a turn right after the jump, you'll have to practice just the right amount of throttle control to squirt you smoothly into the berm without wheelying over it.

Asano-san shows the right way to climb the same cliff. Sitting

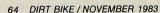
in the middle of the seat, he's in no danger of being pitched

forward, and the arms are set to absorb the front-end impact.



Most of this is probably new to the average rider, and although you may go fast now, by using the proper techniques you will be able to go faster with much less effort. All it takes is practice and concentration on the right body position.

To illustrate the right way to do things, we've dug out photos of the top Pros in action, and also a few shots of us doing it completely wrong. Study the photos so you get an idea of what all of this is supposed to look like and then go try it yourself. Don't just do a million laps the next time you're at the track—practice the right way to ride for a change, and you'll rediscover how much fun it is to just fool around on a bike for a day!



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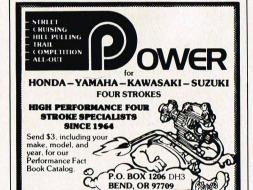
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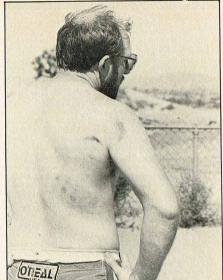
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BITS & PIECES (continued from page 13)



SKIN FLICKS

It seems that Andy Poole, the U.S. Metzeler rep, is at it once again. You might recall that Poole raced the Viewfinders GP a few years back and got thoroughly run over. We ran a photo in DB showing tire tracks all over his back.

Keeping true to form, Poole went out with the DB staffers to Sunrise Cycle Park to race MX and got nailed again. While bending down to pick up his bike, Vet Expert Ronnie Gibson landed on his back and used the unfortunate Poole for traction.

Notable quotes—Gibson: "He was excellent traction, and I was able to get very good drive to the next turn."

Poole: "I don't mind getting run over: it's a way of life with me. But Gibson had a Dunlop on the rear of his Maico. Now that hurt!"

MORE CARB FACTS AND FIGURES

Ever since we've been experimenting with the new magnesium Bing carb, more interesting figures have been emerging. For example, when comparing the new mag Bing with an old Type 54 Bing, we found out the following: Cubic feet per minute of airflow, Type 55 carb: 177.1 cfm. Cubic feet per minute of airflow, Type 54 carb: 166.5 cfm. Both carbs were 40mm units, by the way.

When we ran a 40mm Mikuni against the Bing Type 55, we found another notable difference: 168 cfm for the Mikuni versus 177.1 for the Bing. A 40mm Keihin carb was also checked. It pulled 170.9 cfm, which was appreciably better than the Mikuni, but still not as good as the Bing.

While we're still testing the Type 55 on different bikes, we're having a lot of grief fitting one to the YZ250; clearance is a real problem. It appears, though, that the RM250 might comfortably accept the magic mag Bing.

SPRINGS

(continued from page 54)

springs and make the forks work better. Hundreds were sold, most often to owners of Yamaha enduro bikes.

Think about this for a moment. If you had a set of 20-pound fork springs and then added a 100-pound "booster" spring on top of them, in effect you would be softening the actual spring rate. Preposterous, you say? Impossible? Not really.

The formula for figuring out rates with double springs is as follows: Take the individual rates multiplied and divide them by the individual rates added. Therefore, we have 100 x 20 ÷ 120, or an actual spring rate of 16.6 pounds. Obviously, the initial feel of the forks would be stiffer, but only because of greatly increased preload. The mid-stroke rate would actually be less than with the stock spring. There would be a slight gain in resistance to bottoming out with this setup, as the oil level would be raised a bit.

HELPFUL HINTS AND **COMMON SENSE**

You might run into kg readings instead of pounds when you check your owner's manual. Do not be intimidated. Should you want to change them into something real 'Mericans understand, merely take the number and multiply it by 56 pounds. For example, you have a 7.9 kg spring: 7.9 x 56 pounds = 442.4 pounds.

Ideally, your spring should be matched to your damper. If you run a horribly heavy spring that the shock is not capable of controlling, then you'll have a rear suspension that'll bounce around like a basketball every time it recoils from a bump.

When you do increase your spring rate, you should also (normally) increase your rebound damping. Most modern shocks have some sort of adjustment that will let you change the rebound settings.

To increase the rebound on forks it may be necessary to go to a heavier fork oil, as very few forks have adjustable rebound, even though many of the Showa and KYB units do offer adjustable compression damping.

Here's a great formula to have handy if you want to calculate the rate of a spring you don't know the rate of: RATE = 11.5 x Wire Diameter to the fourth power (D⁴) ÷ by 8 x Number of Active Coils x Mean Diameter cubed. You won't be doing this between rounds of the TV boxing match.

manual. IF ALL THIS LOOKS LIKE TOO MUCH WORK...

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...do what we usually do. Send your spring to Gil at Works Performance and have him do it for you. For \$19.95 plus \$5.00 for shipping and handling, WP can modify your spring properly. Call first to see if your spring will take the new rate without going into coil bind.

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(continued from page 51)

because he prefers rubber-mounted bars. The UDX items are solidly fixed, metal-to-metal mounted.

If you wonder just how strong our pet RM was, consider this: Mickey pulled six straight holeshots with it before he showed up at the Superbowl.

In his heat Mickey was running strongly in the top five when a lapped rider fell in his path and created a multi-bike pileup. This meant that he had to ride in the Quarter-final to try to make the final Semi. In the Quarter-final, Mickey simply ran away with the overall win, leaving a large number of factory riders and quick privateers a quarter of a lap behind.

Fate twisted a cruel knife into Mickey's chances when he was dragged over to be interviewed for his win by the TV folks. The five or six minutes of talking to the media was enough to keep him from getting to the pits in time for emergency repairs. When Tim Norton, Dymond's mechanic, went over the bike, he found bent and broken sprocket bolts, much to his horror. Working frantically, Tim had to drive the bent and twisted fasteners out of the hub and replace them. They had no spare rear wheel. Such is the life of a budget privateer.

Tim got the last nut tightened down just as the Semi went off the line. Mickey joined the fray over a full lap down and was never able to catch up, even though he rode like a demon. He was so far back when he started that he never even made the top 16, the cutoff point to qualify for the Consolation race, his last chance to make the Main. Norton scrambled around to find the AMA referee to explain how the TV interview had robbed Mickey of his chance and the official agreed. He radioed the starter to hold the Consolation event until Dymond could report to the starting line. and the gate fell as he was frantically making his request. Mickey never even got to try.

His five minutes of fame in front of the cameras had cost him a shot at making the Main and some serious bucks. Instead of several thousand dollars in his pocket, Mickey and Tim picked up their 200 bucks for winning the Quarter-final, packed up and went home.

WITH A LITTLE HELP FROM SOME FRIENDS

Guys like Holley and Dymond scramble to make it from race to race. They live on a tight budget and often have to share rides to get to the races.

Holley is helped by O'Neal, Metzeler, Kal-Gard, Hi-Point, Scott, Arai helmets, 100%, PJ1, and his dad.

Mickey sports Answer Products riding gear and is helped by Metzeler, Bel-Ray, Scott, Ohlins, and Trick Racing gasoline.

Without the help of active and aggressive companies like these, racing would consist of little more than a parade of factory bikes. Our hats off to these fine companies.

FROM THE SADDLE (continued from page 9)

to be zeroed right down to the last microsecond, without a chance of snaring unwary riders. Just to show a bit of class, Howard rode into the check at exactly 30 seconds past the minute, even though it wasn't a tie-breaker check. Right on the money! One of the checkers looked at him sort of funny: "Look, Harry. It's another one of those bozos with a Walkman on his helmet. Is this some kind of fad, or what?" Howard chuckled, stuffed his card back in his jacket pocket and motored quickly out of the check.

Everything worked to perfection as Howard zeroed the next four checks and hit two tie-breakers dead center. When Wally told him that it was all clear to the end of the first loop with no checks, Howard nailed it and arrived at the pits in time to share a sandwich with his riding partner during the 40-minute lunch break. Wally looked at his watch and took off while Howard gassed up and checked his bike over.

The next two checks on the second loop were harder to zero, even though Howard rode as hard as he could through the easy sections. The enduro was definitely getting tougher.

Howard listened intently as Wally described the ever-worsening course in a shaky voice: "Holy smoke! You won't believe the size of this downhill! My speedo reads 64.9 right at the top, and I think I can see a check at the bottom, but I'm not sure it's a check and...aaaaaaaarrrghhhh! Oh, no! Look out, you stupid...whoa... whoops!" The radio went dead for a very long time, then sputtered back to life.

Howard yelled, "Wally, are you okay? What happened?"

"Yeah, I'm okay now, but some jerk cut me off halfway down the hill and I did the endo of death. My bars are bent a little bit and I lost my visor, but other than that, I think I'm okay. The radio seems to still be working. It took a pretty good hit, though. I had to tape the front part back on. Anyway, Roger, wilco, and ten-four. No bears in sight."

Howard groaned.

In the remaining 35-plus miles, Howard dropped 217 points. Later on, when they figured up the results, many folks were amazed at how sudden and sure was the collapse of what looked like a high-point ride.

Howard and Wally stopped off later that night at Ramone's Bar and Grill and Bar and talked about what went wrong. They attempted to drown their considerable sorrows with lots of beer, but not even the coldest brew from the freezer could make them feel better.

We don't have access to the exact conversation that went on between the two, but

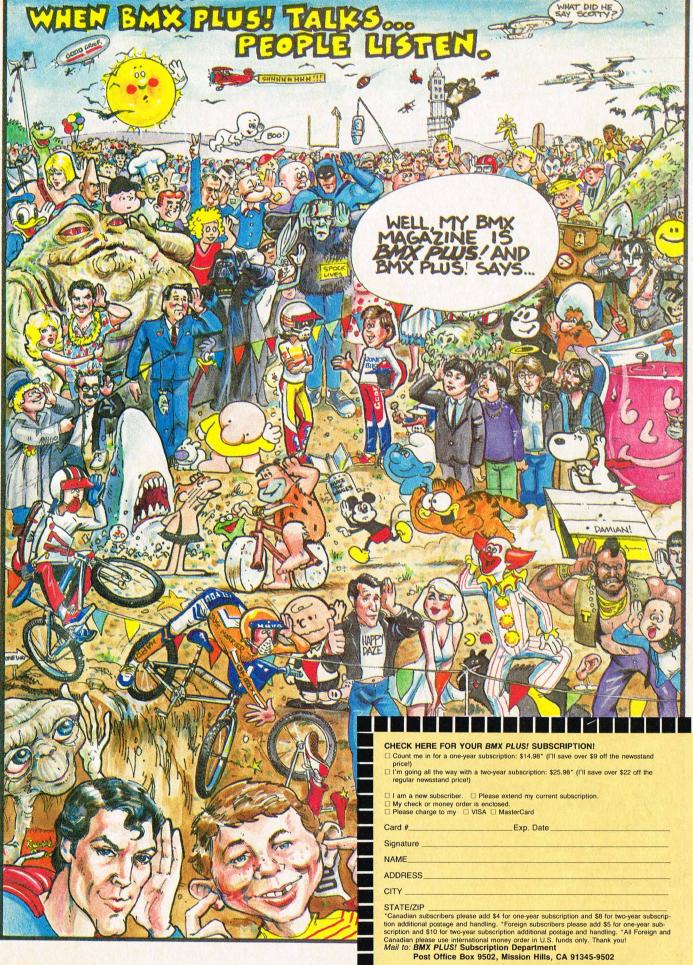
Felipe, the waiter, told us of the fragments of conversation he heard between the two men...

"... Well, how was I to know that the fall would turn on the FM radio stations and still transmit my conversation? ... It sure was the weirdest station I ever heard...and that group? Gag Splenzo and the Polka Wimps! And when I tried to ignore the punk and new-wave music, what did I get in my earphone but the stock market report Did you ever try to figure out where the check was, when the words you're saying are mixed up with the soybean reports? ... Don't go blaming me... Well, you're the one who crashed ...how about you riding up front next time...ah, go blow it out your..." and so forth and so on.

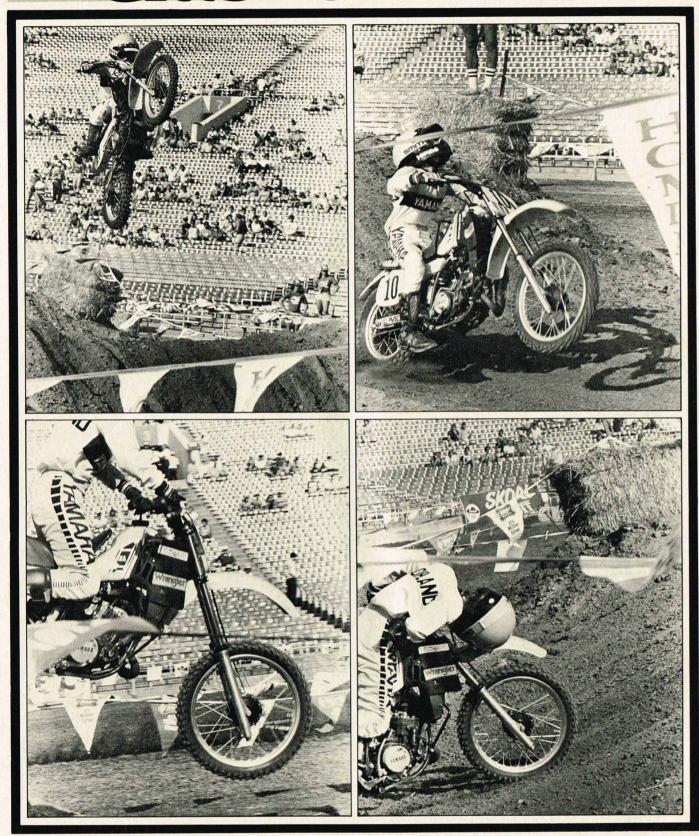
Word somehow got back to the enduro association and they took all the earned points for the year away from Howard and Wally

But, according to Felipe, they didn't give up there. Right before Ramone threw Howard and Wally out at closing time, they were talking about hiring an airplane to fly over the two of them during the next enduro and radio signals to them. Ramone's brother-in-law, a gunrunner from Bolivia, was available for that sort of work, and if he could just scrape up enough money to put some new silk on the wings of his cropduster, it looked like Howard and Wally were still hunting for trophies. But that's another story entirely.



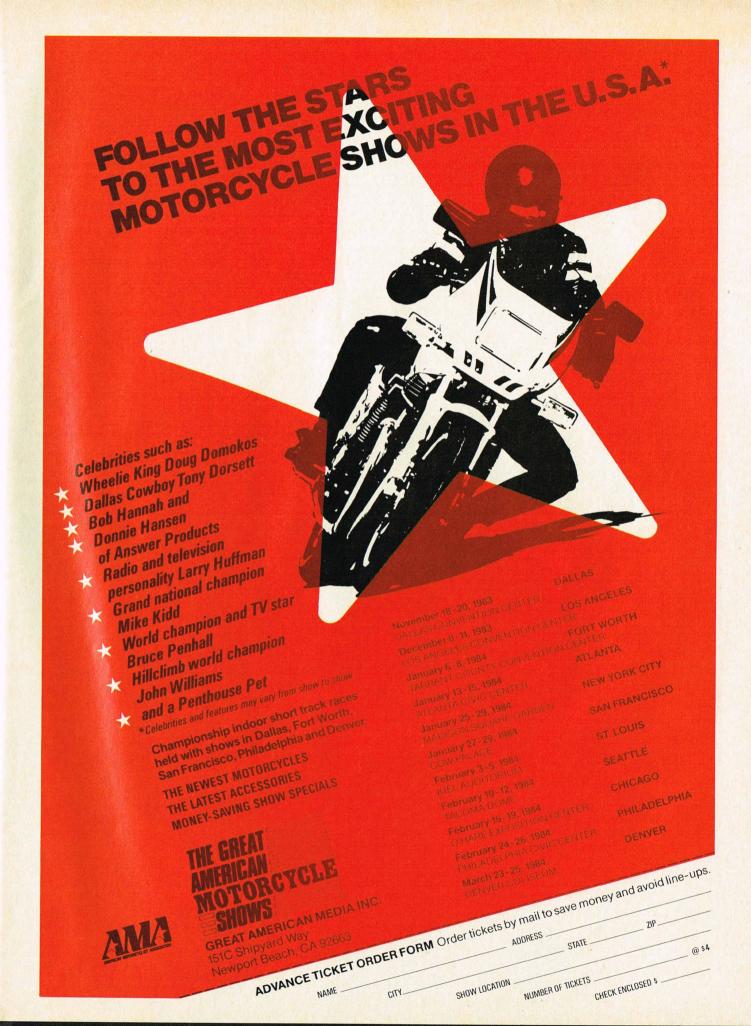


Crash & Burn



Super save at the Superbowl. One of the few mini racers to attempt the double jumps saves it...sort of.

(Rick Sieman photos)



Inside the Honda ATC*200X, there's more than horsepower.

There's brainpower.
Design advantages
that are the direct result
of 14 years of building
three-wheelers.

Such as the first full suspension system ever put on a four-stroke three-wheeler.

Hydraulic disc brakes front and rear.

A frame designed for optimum weight distri-

bution and advanced geometry that provides precise steering and handling.

of torque

over a wide

powerband.

been the leader in

been the leader in

four-stroke technology

even longer than we've

192 cc four-stroke

engine with closeratio five-speed transmission and manual clutch.

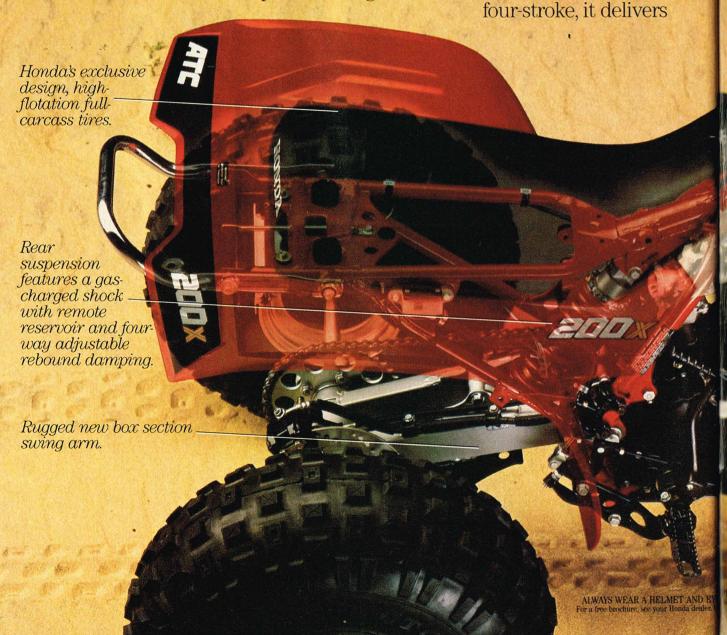
And we've

A high-performance engine designed specifically for our threewheeler. Because it's a four-stroke, it delivers three-wheeler technology.
So with a head start
like that, it shouldn't
surprise you that the
ATC200X beat everything on three
wheels in the
1983 Baja 500.

After all, it takes more than muscle to be the leader.

It takes some quick thinking as well.

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Long-travel front suspension with fourbolt, forged aluminum triple clamps.

Exclusive large-diameter, narrow cross section front tire for precise steering.

Lightweight aluminum alloy wheels.

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