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YZ125 & 250 POWER VALVE TRICKS!

DIRT BIKE

JUNE 1982
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STEVE WISE: "WHAT ARE THEY AFRAID OF?"

CAN-AM 500 THUMPER: SUPER SONIC!

SUZUKI'S NEW HI-FLYING DRs

MAICO 490E: OPEN CLASS CHAMP?

HONDA CR80R: LITTLE RED ROOSTER

ISSN0364-1546

JUNE 1982
VOLUME 12, NO. 5

DIRT BIKE

CAN-AM 500 SONIC

ATLANTA & DAYTONA

MAICO 490 ENDURO

THE ALL-NEW DRs

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On the Cover: Jim Holley and Steve Schmitz playing around on Suzuki's new DR playbikes during a normal afternoon test session at Indian Dunes. Before you ask, that's Holley on the top and Steve on the bottom; the shot is not a fake; and no, they didn't kill each other. Photo by Paul Clipper; color separation by Valley Film.

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DIRT

THE ROTAX ROCKET

New king of the 4-strokes?

By the Staff of *Dirt Bike*

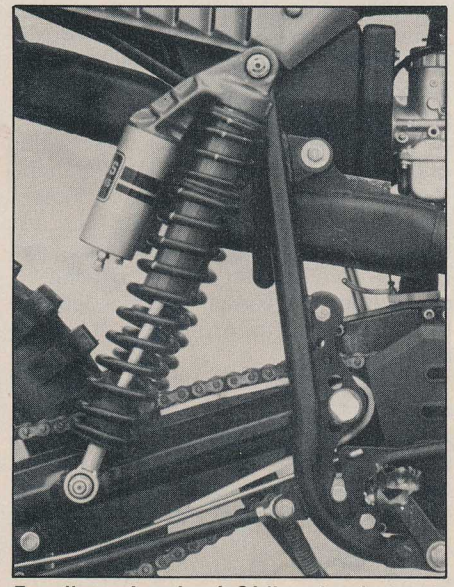
Wheelies were a snap on the big Sonic; John Rudder demonstrates.

Nineteen eighty-two must be considered the year of the 4-strokes. Not only have a large number of interesting new thumpers appeared, but we've also seen the emergence of the long-awaited 500 single from Can-Am. After being held off from release time after time, riders started to wonder if it was ever going to happen.

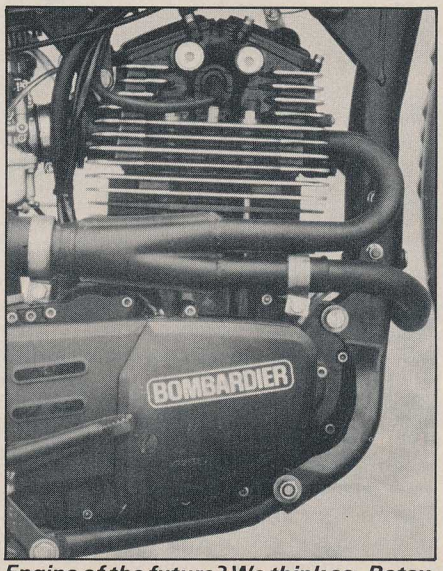
Well, it finally did happen. A massive Sonic 500 magically appeared at the plush *Dirt Bike* facilities, all orange and gleaming. First impressions? The bike is huge, with a tall saddle and plenty of air between the fenders and the tires, indicating long travel. Oddly, when we put a tape measure to the seat it measured only 37.5 inches, but it feels much taller because of the rather square shape of the saddle that keeps the rider's thighs from settling neatly.

Along with the large dimensions, we found that the Sonic is a heavy machine. A trip to the impeccably balanced and well-oiled *Dirt Bike* scales (accurate to plus or minus .0000001 dram per buie) showed 307 pounds, full of gas and oil. This is not a bad figure, however, when one considers that the gas tank holds almost 3 gallons of gas, 3 quarts of oil in the backbone of the frame and over 18 ounces of oil in each fork leg. The claimed dry weight is 269 pounds, and after deducting all of the various liquids contained within the Sonic, the figure seems to be in the ballpark. It's still in the same weight category as the Honda XR500 and the Suzuki DR500, even though its dry weight is the lightest.

A glance at the Sonic shows that a great deal of the weight can be taken off. The muffler is gigantic and very heavy, but it does do a very good job of keeping the noise down. A lot of weight could be saved by replacing the 530 chain and sprockets with 520-sized hardware. We've been told that this could mean as much as a 4-pound weight reduction.



Excellent piggyback Ohlins shocks lend almost 13 inches of travel to the rear end.



Engine of the future? We think so. Rotax of Austria makes the big 4-stroke powerplant for Can-Am.

Sadly, there still are no *light* big 4-strokes available on the market, unless you choose to build your own. Even then, as *Dirt Bike* found out, it takes a massive dose of money and time to end up with a 242-pound (dry) Honda XR500.

Happily, the Can-Am has a lot going for it, in spite of its typical 4-stroke bulk. The suspension, both front and rear, must be considered the best of any big 4-stroke around. Period. Ohlins shocks ride on a strong aluminum swingarm at the rear, and up front a pair of odd-looking Marzocchi forks do a more than reasonable job.

It only takes a few hot laps around a motocross track to realize that the Sonic can be slammed into deep whoops and bad bumps without any serious grief coming to the rider. The word 'plush' comes to mind. Aggressive riders will want to firm up the last part of the stroke at both ends, but most riders will be as happy as clams at high tide with the way things work.

Apparently, someone did a lot of research on the suspension—it's well balanced, front and rear. No awkward rear-end hops or front-end diving could be detected. We had no desire to mess with the oil level, or to add air to the forks. Also, the manual states that the forks come stock with Bel-Ray 10-weight fork oil.

A WORD ABOUT THOSE FORKS...

Ahh, yes, they are definitely bizarre and are ugly enough to scare Buck Rogers into a coma. Reservoirs about the size of a large dill pickle are attached to the bottom of each fork leg. The recommended pressure in each one of these units is 55 psi, and they have a bladder in them, rather than the more common O-ring piston separator.

Smooth power—and lots of it—made for easy sliding.

We're still not sure of the intended purposes of these "jampots," but more than likely they are supposed to balance pressure buildup from the top part of the fork. No information could be gathered from Can-Am, and contacting the Marzocchi people in Italy is considered hopeless by most intelligent life on this planet.

Odd appearances aside, the 42mm Marzocchi magnesium forks stroke well under most conditions, yielding harshness only when the front wheel makes contact with squarish bumps at moderate to high speeds. We have to rate them at least twice as good as the XR500 forks. Too, there are a number of simple and effective damper rod modifications for the 'Zoke forks that make them even better.

TO THE REAR, PLEASE

A very tidy aluminum swingarm goes almost unnoticed, as it's painted flat black. Why the Can-Am folks chose to do this is beyond us. The piggyback Ohlins shocks let the rear wheel move 12.9 inches, surely the longest rear-end travel around. As with the front end, the rear end can be described as plush. Small chatter bumps are ignored by the Ohlins; medium choppers are taken in stride without a whump. It's only when the Can-Am is pushed at higher speeds and then slammed into some gruesome stuff that the rear end protests. And it's no fault of the shock. It's merely the bike's way of letting you know you're tossing 300 pounds around.

Overall, the Can-Am has no bad habits of any sort in the suspension department and must be considered worlds above anything else offered in the big 4-stroke class. To give a relationship, if the Can-Am were given a "10" in the suspension rating, then the Honda would be a 6 and the Suzuki a 5.5. The Yamaha, which we haven't tested yet, does not offer impressive figures on paper and should not challenge the Can-Am in the travel battle.

HANDLING

Again, we have to give the Sonic high marks in handling. While not a Maico in the corners, it nonetheless has no bad manners and is very stable at higher speeds under all but the most violent conditions. The rider will not have to clamber forward to make the front end bite and there's no head shaking when coming down from speed over rough ground.

Much of the stability must come from the frame (which is hefty and strong, with a massive downtube and backbone and a pair of tubes cradling the engine). A few times during our testing sessions, the Can-Am landed slightly out of shape but—with a squirt of power—it jumped back into line without a quiver.

We found no front-end pushing or plowing. The big Sonic would merely go where it was pointed. Even though the bike was tall, it could be leaned over at fairly severe angles without any problems.

The Can-Am was relatively insensitive to weight shifts. A slight inclination of the upper body was usually enough to load the front end properly for tight cornering on flat turns. You couldn't really call the turning ability of the bike *quick*. No way. There's just too much mass there to flick around like a 125. But, all things considered, it's an amazing chassis.

THE GOOD PART

Naturally, the beauty of any big 4-stroke is the powerplant. Even a mild Honda, or a TT500, can bring good feelings to a dirt rider. Tweak the motor a bit, get a mellow exhaust sound going and it's pure giggles. In our honest opinion, the Rotax-engined Sonic produces more and better power than any other stock 4-stroke you can buy. And, it also produces more and better power than most of the modified bikes around. Simply put, the Sonic has the best engine available.

To get an XR Honda to run as strongly as a Can-Am, you'd have to invest between 300-400 dollars in aftermarket goodies. And, as we found out with our Project Honda XR, reliability vanishes in direct proportion to the amount of horsepower produced in the XR/XL500 engine.

In a head-to-head drag race through the gears, the Can-Am will absolutely slaughter any other production 4-stroke. Power starts building directly from idle; there are no peaks or flat spots in the entire rpm range. When necessary, the Sonic can be overrevved from corner to corner without any apparent harm. At no time did we induce valve float.

On most MX tracks, the rider will not have to resort to anything lower than 3rd gear, even on tight corners. If the engine is not good and hot, though, punching the throttle hard at low rpm will often make the bike stumble and hesitate before it picks up revs properly. Be warned.

With stock gearing (15/48), top speed of the Sonic is about the same as that of the XR500; 83 to 85 miles per hour. The en-

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SIMPSON

CAN-AM 500

gine feels strong enough to pull a true 100 mph with the right gearing.

If you'll recall, *Dirt Bike* had a chance to ride the Can-Am that was ridden in Baja to a high-class and overall finish. This was a kitted version of the stock engine and was more or less stripped. This same machine was entered in the Six Days event prior to the Baja and actually pre-ran the Baja with the same piston and rings. We rode it in the Barstow to Vegas non-event and were dutifully impressed not only with the power, but also the obvious reliability, even in its most potent state.

GLITCHES

Obviously no one has ever made a perfect bike, and the Can-Am has more than its share of minor bugs. In no particular order, here they are:

- Top mounts on the shocks are too far outboard and allow the shock ends to prang the rider in the back of the legs. It's extremely irritating and could have easily been designed out, as the Ohlins come with excellent heim joints.
- The brake pedal is a cheap and simple piece that is positioned too high and could badly damage the right side case cover in a simple fall.
- The front brake is marginal at best and appears to have the typically weak Can-Am backing plate that is prone to breakage.
- That square-shaped saddle prevents the rider from settling down near the tank. Come to think of it, though, if the saddle had a more sensible shape, then the tank would be truly gruesome.
- Pegs appeared a bit on the weak side; an easy slideout badly warped one of ours.
- The headlight/numberplate combination appears to have been designed by the same individual who did the wretched fender that we disliked so much in the Can-Am 175 Qualifier test. The funky shape just does not fit in with the contours of the bike. In fact, it may not fit in with anything that's legal.
- The Sonic has what may go down in history as the worst kickstand ever designed. The bike has to be leaned well away from the rider to get the stand up *or* down. Then, when it's being used, the stand locks so far over center that it almost catches in the spokes of the front wheel.
- Clutch feel is heavy, much like an old 1973 Maico.
- All of the stick-on striping on the sides of the tank fell off within 15 minutes of riding.

CAN-AM SONIC 500

ENGINE TYPE...4-stroke single, SOHC, 4 valves
BORE AND STROKE.....89mm x 79.4mm
DISPLACEMENT....494cc (30.14 cubic inches)
HORSEPOWER:34 hp at 7200 rpm, at rear wheel
CARBURETION.....36mm Mikuni
FACTORY RECOMMENDED JETTING:
MAIN JET.....390
NEEDLE JET.....176-Q6
JET NEEDLE.....611-4
PILOT JET.....35
SLIDE NUMBER.....3.0
RECOMMENDED GASOLINE.....Premium unleaded
FUEL TANK CAPACITY:2.82 gallons (10.7 liters)
FUEL TANK MATERIAL.....Plastic
LUBRICATION:Dry sump, oil-in-frame backbone
RECOMMENDED OIL, ENGINE.....Valvoline racing oil, SAE 20W50
OIL CAPACITY.....0.72 gallons (2.71 liters)
AIR FILTRATION.....K&N gauze-type
CLUTCH TYPE.....Multiplate, 8 plates, oil bath
TRANSMISSION.....Constant mesh, 5-speed
GEARBOX RATIOS:
1.....2.909 (32/11)
2.....2.000 (24/12)
3.....1.400 (21/15)
4.....1.118 (19/17)
5.....0.913 (21/23)
GEARING, FRONT/REAR.....15/48
IGNITION.....Nippondenso CDI
PRIMARY KICK SYSTEM?.....Yes
RECOMMENDED SPARK PLUG: NGK D8 ES-L
SILENCER/SPARK ARRESTER/ QUALITY.....Both, very quiet exhaust
EXHAUST SYSTEM.....Twin headpipes, right side
FRAME, TYPE....Single downtube, split cradle
WHEELBASE.....58.54 inches (1487mm)
GROUND CLEARANCE..11.96 inches (304mm)
SEAT HEIGHT.....984mm
STEERING HEAD ANGLE (RAKE):29.4 degrees
TRAIL.....140.8mm
WEIGHT, FULL OF GAS.....307 pounds, 278 pounds, dry
RIM MATERIAL.....Sun, aluminum alloy
TIRE SIZE AND TYPE:
FRONT.....3.00 x 2, Dunlop K-139
REAR.....5.10 x 18, Dunlop K-190
SUSPENSION, TYPE AND TRAVEL:
FRONT.....42mm Marzocchi air/oil telescopics, with res./11.8 inches (300mm)
REAR....Dual piggyback Ohlins on aluminum swingarm, 12.93 inches (328. 5mm)
INTENDED USE.....Off-road riding, enduro, racing
COUNTRY OF ORIGIN.....Canada
RETAIL PRICE, APPROX......$2999
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PARTS PRICES, HIGH-WEAR ITEMS....N/A
OVERALL RATING, 0 TO 100, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:
HANDLING.....97.5
SUSPENSION.....Front, 95; rear, 97
POWER.....98
COST.....85
ATTENTION TO DETAIL.....88
EFFECTIVENESS, STONE STOCK.....97

GOOD THINGS

- Shifting, after a few days of riding and an oil change, is very good. Far better than either the Honda or the Suzuki.
- It's quite possibly the easiest starting thumper ever made. Just line up the yellow dot in the small glass window on the side of the engine, engage the compression release and give it a light boot. Definitely the hot ticket.
- The tires are some very high quality Dunlops—a K-190 at the rear and a K-139 up front.
- Regina chain is standard; premium stuff.
- The gas tank holds a lot of gas for a 4-stroke. Count on 100 miles at trailriding and maybe 70 at racing speeds.
- Sun rims. Again, good stuff.
- The cam is belt-driven, instead of chain-actuated like everyone else's. Good.
- Carburetion is Mikuni; ignition is an ND CDI.
- A fine resettable odometer comes stock for enduro riders.
- Snail-type adjusters make for easy chain adjustment.
- A K&N filter comes stock.

THE BOTTOM LINE

We feel that the superb Rotax engine is worlds above anything else offered. It's quite possibly going to be the most important 4-stroke engine of the next 5 years, if not in sales alone, at least in technological impact.

Can-Am wrapped this engine in a good, solid frame and gave the bike a useable long-travel suspension system. Sure, there are a few glitches and rough edges to the machine, but all things considered, the Sonic has just rewritten the rule book. The only reason any other big 4-stroke can even be considered is price. □

SUZUKI.
PERFORMANCE ABOVE ALL

SP-500

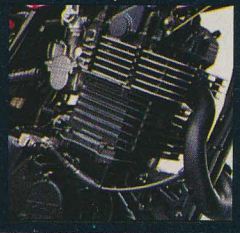
CYCLE WORLD magazine named the 1981 SP-500 the best dual-purpose bike of the year. For 1982, it's still the best.

The potent 4-stroke SOHC engine features counterbalancers for smoothness and a Twin Swirl Combustion Chamber for increased power and fuel efficiency. Long-travel suspension has been further refined by adding front air forks.

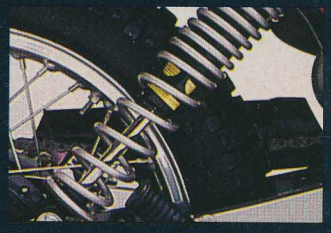
Tough off-road features and racy styling are visible everywhere: Fenders, footpegs, aluminum alloy rims, full floating rear brake... even a folding gear shift lever.

The 1982 SP-500. Nothing tops it in the dirt and on the street.

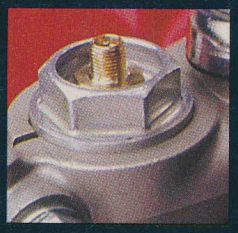
4-stroke TSCC engine: This potent thumper features Suzuki's exclusive TSCC design for even greater power and fuel efficiency.



Long-travel suspension: Features leading axle forks in front and laid down gas/oil shocks in the rear.



Front air forks: Provide better handling in the dirt and a smoother ride on the street.



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