

Samurai shootout! Japan's best 250cc MXer

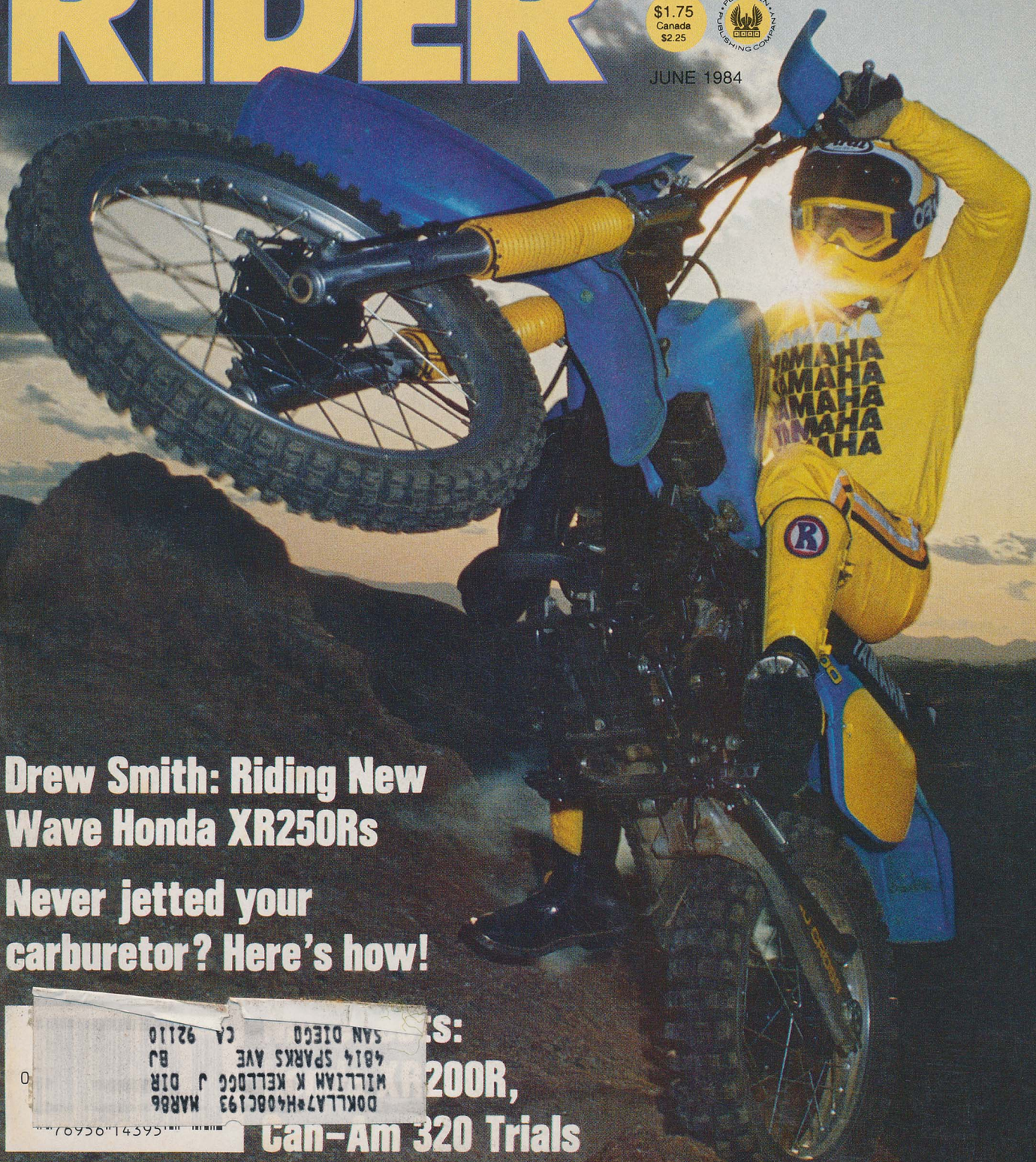
DIRT RIDER

Yamaha IT200L NEW BLUE CONTENDER

\$1.75
Canada
\$2.25



JUNE 1984



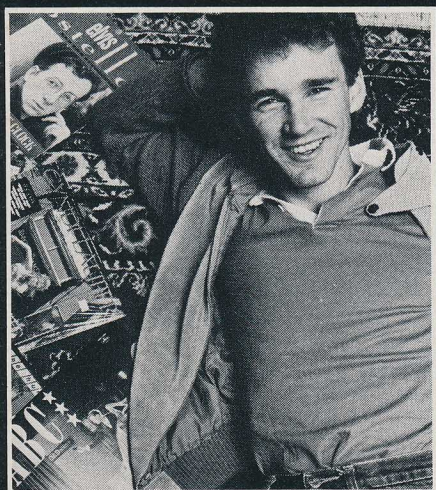
**Drew Smith: Riding New
Wave Honda XR250Rs**

**Never jetted your
carburetor? Here's how!**

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Can-Am 320 Trials

DIRT RIDER

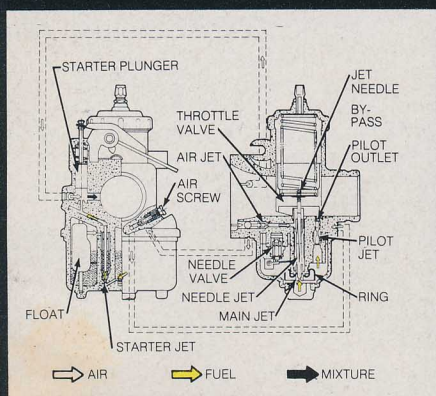
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ON THE COVER
There's a new challenger to Kawasaki's KDX200. Yamaha's hot new IT200L could put Team Blue "on time." Photo by Rich Cox.

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Can-Am 320 Trials

For those who prefer a Limey flavor

More punch, a larger powerplant and a stepped-up campaign. That's the story behind Can-Am's new 320T. The 320T made its first appearance in May of 1983 at the Scottish Six Days, and its pilot, Steve Saunders, went on to win the British championship. Then the 320T traveled across the Atlantic last December where it got its first taste of battle in the States at El Trial de España. Can-Am's Jeff Smith, a two-time world motocross champion (and two-time winner of the Scott Time Trial), shared the bike with enduro ace John Martin. John topped the Novice class (his first trial), while Jeff was the low-point man in Senior Novice. Shortly after the first units arrived here, Can-Am signed 1981 National champion Curt Comer Jr. Comer was scheduled to ride at least the first eight world rounds.

The 320T, which Comer will campaign with an Armstrong/Can-Am logo overseas, evolved rather obliquely from a four-stroke trials machine—the CCM. CCM—later acquired by Armstrong—was first launched by English motocrosser Alan Clews in 1972. Sort of. Originally Clews bought a couple BSA frames and engines to build some personal race bikes. Yet every time he finished one, some bloke wanted to buy it. Within 18 months, Clews decided his future was in building, not racing.

Clews marketed his first CCM trials bike, a thumper using a 350cc BSA motor, in 1978. The sale of 150 units was enough to deplete his BSA motor inventory and send him searching for a new powerplant.

He found it—a two-stroke engine in Italy at the Hiro factory. Sammy Miller, the English trials great, had helped to develop the powerplant from a 250cc motocross motor with plans of marketing his own Miller motorcycle. (That's why the name "Miller" appears on the primary cover.) Both CCM and Miller were to use the engine, but Miller backed away from the venture. (Miller currently rides an Armstrong in local competition. Last fall he registered his 1000th career victory—the equivalent of a win a week for 20 years.)

CCM began building its Hiro-powered model late in 1979. Then in 1981, Armstrong, a large auto parts manufacturer seeking to diversify, purchased CCM. Clews remained behind and cur-



PHOTO: BRIAN WANGSON

The 320T is nine pounds lighter than the 310T. The aluminum skid plate is rubber padded.

rently serves as sales director.

A year later, Can-Am began searching for a manufacturer to produce their off-road machinery so their Valcourt (Canada) facility could be used solely for the production of snowmobiles and heavy equipment. Can-Am also felt that an alliance with a small manufacturer would allow for rapid updating of their off-road product, something that had been a problem in the past.

Smith explored the possibilities. Finally he and Clews, former racing mates, got together. Can-Am provides the input (for the motocross and enduro bikes, and, now, with the signing of Comer, for the trials bikes), while Armstrong builds the machines. The Armstrong name remains on bikes sold in Europe, but all units may eventually carry the Can-Am marque.

The fact that Can-Am markets a trials bike powered by a Hiro motor might seem unusual, especially when one considers that Bombardier uses Rotax engines in its other motorcycles. But the explanation is simple: SWM has an exclusive contract for the Rotax trials motors.

The Armstrong has seen its share of success during the past few years. John Lampkin (England) finished ninth in the 1982 world series. And, as mentioned earlier, Steve Saunders won the British title last year.

CAN-AM CANS & CANT'S

Our test evaluators of the Can-Am 320T included current and former National champions Bernie Schreiber and Lane Leavitt, plus several local riders with National-series competition experience. As with past trials tests, we'll offer individual comments and then summarize. As always, none of the following statements have been attributed in order to guarantee candid comments:

"The motor's excellent... The bottom end needs to be dialed. (See Curt Comer's comments elsewhere in this text for tips.) There's good midrange, a lot of power, and it comes on smooth, controllable and predictable.... The power reminds me of a Bultaco, but there's not as much engine braking.... It reminds me of a Bultaco motor with a frame they're still trying to dial in.... Shifting into third was a problem sometimes (Can-Am suspects a burr on the shifter drum of the test unit).

"The bike's handling is comparable to anything, except for a fault or two. The steering stops are totally inadequate and that hurts an excellent design. It just flat won't steer tight enough. (The full lock turning radius of the SWM Jumbo is as much as one-and-one-half-feet narrower. Removing the plastic caps from the 320T's stops narrows the difference, but the tank width makes filing the stops useless.)



WHAT'S DIFFERENT ABOUT THE 320T?

- A larger displacement 321.7cc motor (80 x 64mm).
- A nine-pound weight loss.
- A beefier front end. Triple clamps now have two pinch bolts.
- Increased bar setback in the top triple clamp.
- Marzocchi shocks in place of Betors.
- A longer (almost 15 inches) header pipe to improve torque.
- A beefier fork brace.
- Refinement of the one-piece seat-and-tank section. The tank was narrowed, while the capacity was reduced to 1.25 gallons.
- A straight rear brake arm on the backing plate.
- Square Reynolds 531 frame tubing.
- Michelin tires.
- New red-and-white color scheme.

"The overall design is good. Clear lines. Everything's tucked in. There's no unessential junk.... The pegs are really forward and the bars are back. (The peg position is the most forward of any of the eight bikes tested by Dirt Rider this past year.) The pegs and motor forward and the bars back are good for muddy or hilly trials. You can get more body weight back for mud sections, and it's easier to push and keep your weight over the rear wheel at the same time.... The front end feels heavy.... A heavy front end doesn't feel as flicky in the easy sections, but it won't come up too soon or too much when you're climbing hills.... The bike has a very British feel to it. They ride mud climbs in third gear wide open and the bikes keep going slower and slower and you need front-end grip to keep them from suddenly looping back when they grab traction.... The bike wants to go straight. Sometimes you have to muscle the bars.... The front end seems heavy, but it's not a heavy bike.... You can't hop and pop it as easily when you want to.... It really grips good if you keep your weight back more than you do on most bikes. Maybe that's why the bars were moved back.

"The shocks seemed harsh.... The rear suspension feels hard, but it works.... The

shocks don't collapse much when you sit on the bike, but they seem to work... (see Curt Comer's tips for shock setup). The rear brake went away as soon as it got wet.... The rear brake pedal gets slippery. It should be larger and grippier.... I'd rather see the front brake cable routed in front of the fork leg where the tire can't throw as much mud onto it."

COMER COMES TO CAN-AM

Curt Comer Jr. picked up his bike early in January of this year. *Dirt Rider* checked with him after his first few rides and got back to him again before he left for Europe in mid-February.

Curt's initial evaluation: "It's a very stable bike. The power comes on soft and torquey—something like a Bultaco. It pulls tall gears real well. It feels good to me."

Before heading overseas, Curt added, "I like the stability combined with the quickness of handling. I'm still impressed with the torque. I'm riding some practice sections a gear taller than in the past.

"I did quite a bit of experimenting with the power. The bike comes with an extra-thick head gasket—0.035 inches—to make the power soft so anybody can ride it. It's easy to cut thinner gaskets to tune the power, and the engine has a sealing

ring so you can run with no gasket at all. I experimented with different gasket sizes and reducing flywheel weight (Saunders trimmed half the width of the flywheel on his bike). No gasket and the stock flywheel seems to be the hot setup for an expert rider. The motor is real responsive, yet it has enough flywheel inertia so it's still sewing machine smooth.

"I discovered the combination of moving the pegs back and removing the gasket made the front end as light and responsive as I want it.

"I'm getting real comfortable with the bike. I'm riding all my regular sections the same or better now after a month. The torque and stability are the bike's big pluses.

"I'm really enthused with the bike and Can-Am as a company."

Curt made several changes while setting up his bike:

- Handlebar switch (due to personal preference).

- Moto-X Fox shocks. (Curt's tip for shaping Marzocchi shocks: Speed up the damping by using 95cc of 2.5-weight PJ1 oil. Use the softest preload setting; cut the bottom bumper in half to increase travel.)

- Peg relocation. Curt moved his pegs back a half inch by cutting and rewelding the peg teeth.

- Compression increase (by removing the head gasket).

- Carburetor tuning:

1. Reduced the main jet to 130 to pick up top-end revs.

2. Went to a richer 107 needle jet.

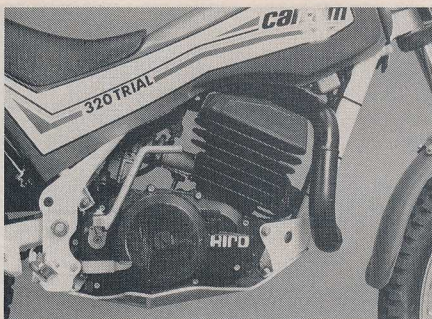
3. Went to a leaner 3.5 slide to cure a slightly "fluffy" idle. (An alternative used by Steve Saunders is to file 0.020 inches off the stock slide.)

4. Switched to a richer 25 pilot jet to allow the air screw to turn out more.

SUMMARY

The Can-Am stacks up as a capable machine. The motor is strong and ideally suited to those who still prefer "older style," less-slingshot-more-grunt type power. The overall weight is competitive. The rear suspension can be easily modified or set up to suit most tastes. Some riders may prefer a lighter front-end feel, a change that can be accommodated by peg relocation. Some, especially taller riders, may prefer switching to the 310-model handlebar clamp still available from Can-Am. The steering radius problem is not so easily corrected without a factory trimming of the gas tank.

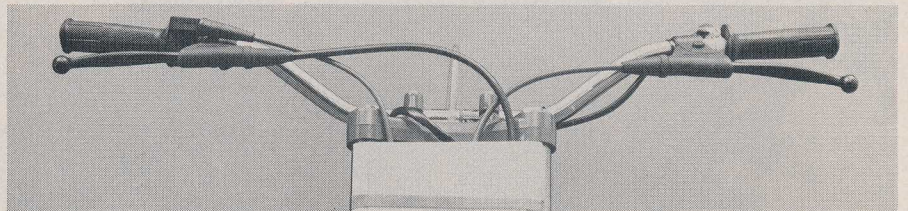
The 320T is best suited for riders who prefer straighter "English" sections, especially over wet, muddy terrain. The bike has proven its ability to win in championship competition and, therefore, attracts championship riders. Can-Am's interest in backing the bike in National competition this year should yield additional development input from both sides of the Atlantic, as well as attract new customers. **DR**



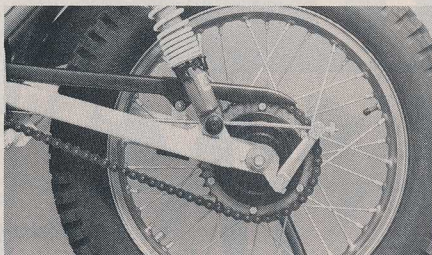
The 321.7cc motor has an 80 x 64mm bore and stroke. The tank/seat section lifts off after releasing two tie-wraps and a rubber band.



A Marzocchi fork offers six-and-one-half inches of travel. The high-tensile steel fork brace is quite sturdy.



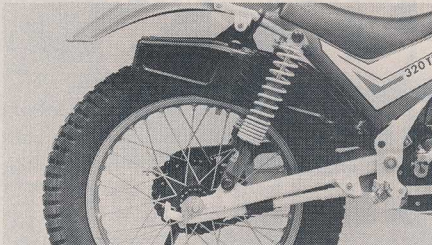
A Wassell aluminum handlebar is mounted to a beefier triple clamp with more bar setback.



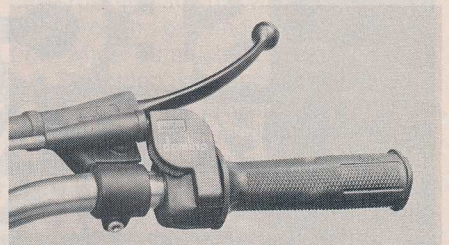
Michelin rubber is found on gold-colored Akront aluminum rims. The enclosed chain guard, similar to Montesa's, is excellent.



Carburetion is handled by a 27mm Amal. Note the sturdy footpegs and the well-protected chain tensioner.



The shocks are Marzochis (six inches rear wheel travel). The seat is solid foam.



The throttle assembly is the popular Domino brand made in Italy.

Make/model	Can-Am 320T
Price	\$2459
Distributor	Can-Am
	P.O. Box 6106
	Duluth, MN 55806
	218/628-2881

ENGINE

Type	Air-cooled,
	two-stroke single
Displacement	321.7cc
Bore x stroke	80 x 64mm
Compression ratio	NA
Carburetion	27mm Amal
Ignition	Kokusan CDI

DRIVE TRAIN

Transmission	Six-speed
Primary drive	3.588:1
Primary kickstart	Yes
Final drive	3.08:1 (12/37)
Gear ratios (internal)	1st 3.08:1
	2nd 2.77:1
	3rd 2.13:1
	4th 1.58:1
	5th 1.00:1
	6th 0.63:1

CHASSIS

Frame	Reynolds 531
	square-section tubing, single
	cradle with integral skid plate
Front suspension	Marzocchi fork (35mm),
	6.5 in. travel (measured)
Rear suspension	Marzocchi shocks,
	6.0 in. travel (measured)
Brakes	Internal expansion drum (125mm)
Wheels	Akront aluminum
Tires	Front—Michelin 2.75-21
	Rear—Michelin 4.00-18

MESASUREMENTS

Weight (wet, no fuel)	204 lbs.
Weight distribution	47/53%
	(Fr/rr, wet, no fuel)
Wheelbase	52.0 in.
Fuel capacity	1.25 gal.
Ground clearance	11.2 in.
Seat height	28.8 in.
Swingarm length	17.0 in.
Footpeg height	15.3 in.
Footpeg to front axle	36.5 in.
Footpeg to rear axle	15.5 in.
Front axle to center of crank	25.8 in.