



100 SHOOTOUT!

Racing in the 100cc class is one of the best ways to learn good riding habits. There isn't much room for mistakes. Failure to pick the best line through a corner means lost time that can't be picked up on the straightaways. The gearbox must be constantly stirred to keep the engine up in the most effective power range.

A good rider can take a sharp corner at a greater speed on a 100 than with a larger machine. He will shut off the power later, lean the bike to a greater angle with more control and exit with the power on sooner.

Riders with more powerful machines often tend to let the engine slop them through a corner, throwing great, hairy rooster tails and not really going anywhere. Do this with a 100cc machine, and you'll have a stranglehold on last place.

The two machines tested here represent the most heavily advertised 100s available to the competitive rider. Both are touted as "race ready" and sure winners. Only one bike really is.

HODAKA SUPER RAT

At right around five hundred bucks, the Super Rat represents the best dollar-for-dollar buy in the 100cc class. This is a strong statement, but the performance of the Rat backs it up.

Throwing a leg over the Hodaka and settling in the saddle gives the rider an immediate impression of straddling a much larger bike. It doesn't feel small. The bars are wide and the entire machine has a big-bike feel.

Starting is simple. One quick jab at the lever, and the engine is crackling with that typical ear-shattering, small-displacement, two-stroke noise.

Getting under way reveals the required up-for-low shift pattern characteristic with all Hodakas. More than one rider got the pattern backwards during the testing. Most irritating; we would like to see Hodaka come out with a conventional down-for-low shift pattern like the rest of the world.

After familiarization with the handling, the bike was pushed to its limits around a full-sized MX course.

The little Rat is simply amazing. The rider can flick it in and out of

corners without even thinking about it. The front end will not wash out when the bike is leaned over and under power.

On very tight hairpins, the rider can merely slam a foot on the ground and almost bodily place the bike in the desired slot. Of course, lighter riders will have a more difficult time performing this maneuver, but our gang of animals tossed the machine around like it weighed a mere hundred pounds. The relatively low center of gravity makes this task easier.

On rough straights, the shortish wheelbase makes itself known. There is some pogo effect and the rear end becomes busy. Test riders had to be particularly careful over short, steep jumps, or the Rat would have a tendency to "loop" over backwards. This will hold true for all short-wheelbase machines.

THE SUSPENSION cannot be bottomed out, even from the two-hundred pounders. This is not to say the suspension is perfect; far from it. But at least everything works. Front forks are better than average, but transmit much of the impact to the rider's hands and shoulders.

SUPER RAT vs. BAJA

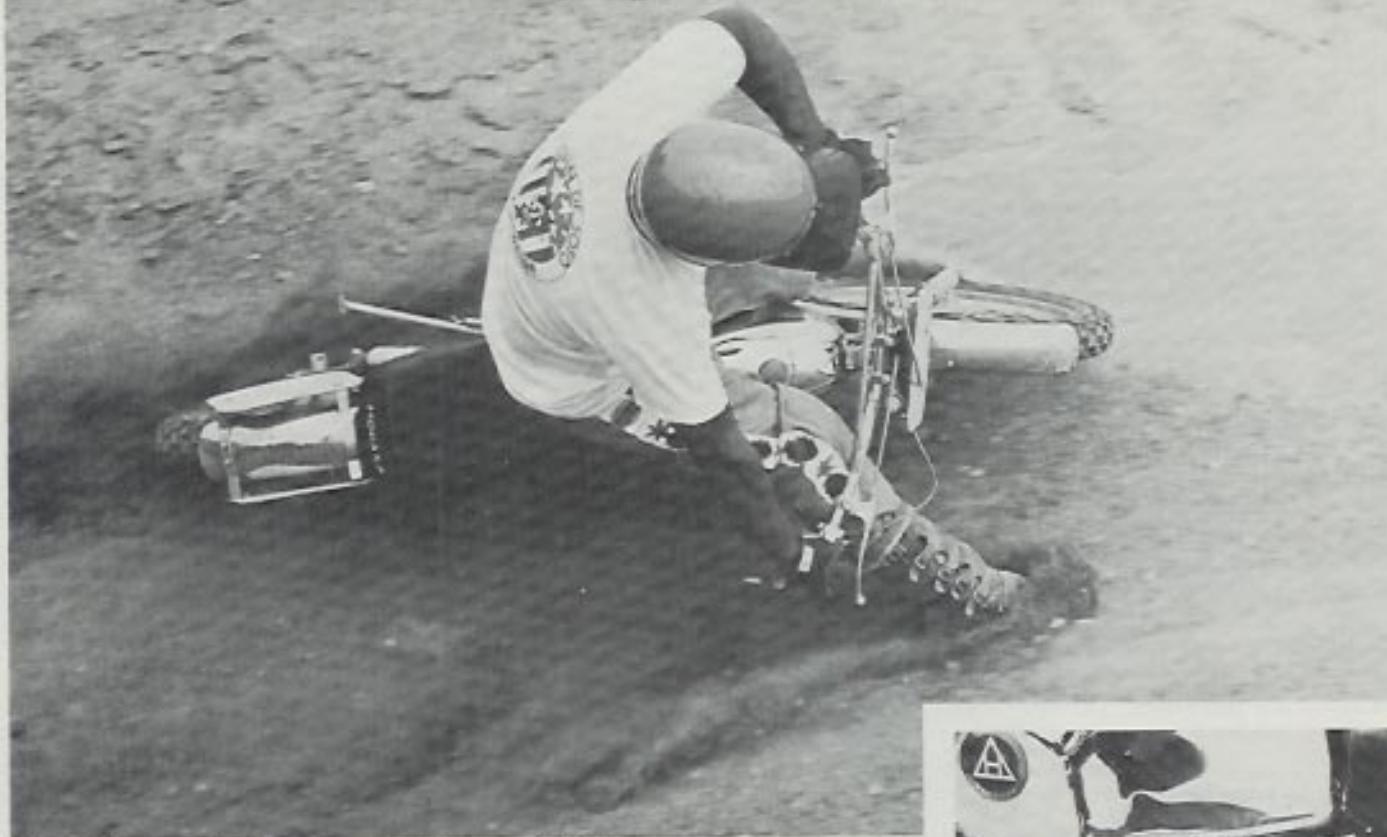
Only one is truly "race ready"



Time-honored "rag-in-hole" method was used in place of lost cap.



Journeyman Trailers delivered the Baja to our test site in one of their new units. As you can see, it has room for three bikes and at least one foo-foo dog.



John DeSoto lays the Rat down until bars touch his knee.

The shocks are stiff, and lighter riders will probably change these in short order. The over-springing on the shocks probably contributes to much of the pogo sensation previously mentioned.

Sliding can be accomplished on the Super Rat, but this seems to slow down the actual cornering time. While sliding, test riders had to "saw" at the bars to prevent them from crabbing in.

Again, the short wheelbase is part

of this. Under normal cornering conditions, however, no problem of crabbing in is experienced.

Most quick 100s are on the peaky side. Not so with the Super Rat. It's easy to keep the engine up on the "r's," and it will pull fairly well from 4500 or so.

On level ground, acceleration is good, but climbing hills lets you know right away that it's only a hundred. Heavier riders were forced to low-gear for steeper grades, but the little

Sam Cullen Jr. works Super Rat through a tricky "S" section.



Hodaka engine is light and compact. Air cleaner is inadequate.

engine would scream its guts out instead of dying.

We received the Hodaka from Hodaka of Simi Valley in brand new condition, with zero miles on it, and were a shade hesitant about revving the engine so highly. But the Hodaka people told us to "try and break it 'cause you can't no way, fellas."

It didn't break.

This engine has been around for what seems like a century, in one form or another. Hodaka's success in the desert shows the inherent reliability of the design.

WHILE THE SHIFTING pattern is clumsy, the gearbox works fine, with one exception: When slamming the lever down (to shift up), it's possible to miss a gear completely and go right to the next higher one. This means an immediate drop in revs

and a search for the right gear.

The shift pattern is frustrating. Example: The DIRT BIKE editor went sailing into a corner at full revs in third gear, snicked at the lever, engaging fourth instead of second. Result: One destroyed berm, one bent brake lever and a mouth full of the Rough Rider Motocross Course. Most disconcerting.

Brakes are good, with the exception of some noticeable rear-end hop while braking on bumpy downhills. The large surface of the rear brake lever is appreciated. You just can't miss that rubber covered tab.

Bits and pieces on the Super Rat:

Overall finish is good, but on the garish side. After all, fire-engine orange and chrome aren't exactly conservative. But you will never mistake a Hodaka for anything else.

The Rat could use a better air cleaner set-up; the standard unit is marginal—nothing more. The little wing nut holding the cover of the cleaner in place can snag leathers; it should be covered with tape.

Footpegs are spring-loaded and rubber covered, but slippery when wet. Controls can be reached without moving the boot from the pegs.

The heat shield works, but could be improved, as some heat passes through. When standing, the rider can feel the expansion chamber against the thigh, but not overly so.

When retracted, the kickstand sticks out at a clumsy angle that can catch the unwary rider on the calf. It's better to remove the stand and

Forks were on the stiff side, but could not be bottomed out.

DeSoto takes full advantage of top of berm.





Super Rat was an easy slider as long as power was kept on.



Rear shocks were nothing fantastic, but did an adequate job.

use it for stirring paint or something like that.

DURING OUR TESTING, the oil filler plug fell off. We restored to the time-honored "stuff-a-rag-in-the-hole" technique used by all Hodaka riders. There are metal replacement items on the market that don't fall out. Hodaka owners will sooner or later buy one.

Forks and engine remained oil-tight during the test, and other than the filler plug, nothing vibrated loose or fell off. Decent tires finish up the package, and the steel rims are more than strong enough for lightweight riders.

The Super Rat, truly race-ready, is genuine fun to ride. Upkeep should be minimal, as the engine is not highly stressed.

More power can be had from the engine, but reliability will suffer. There are a number of reed-valved/big-ported Hodakas running around, but these units are temperamental and fragile for the large part.

A beginner will do well to leave the Rat in standard form until he is ready to move up to a larger machine. It's a good all-around compromise on power and reliability.

HODAKA 100 "SUPER RAT"

Price: Suggested retail, approx. \$535

Engine type: Piston port, 2-stroke, single

Displacement: 98cc

Bore and Stroke: 50 x 50mm

Compression Ratio: 13:1

Carburetion: 24mm Mikuni

HP @ RPM: Claimed: NA; Actual: NA

Clutch: Multi-plate in oil on crankshaft

Primary Drive: Straight cut gear

Final Drive: Chain

Gear Ratios: (Overall)

1 42.23

2 26.43

3 18.53

4 14.70

5 12.35

Air Filtration: Porous polyfoam

Electrical System: Magneto flywheel

Lubrication: Oil mist in gas—premix

Recommended Fuel: Premium

Recommended Oil: NA; 16:1 mixing ratio

Fuel Capacity: 2.8 gal.

Frame: Tubular

Suspension: Front: Telescopic forks

Suspension: Rear: Swingarm with shocks

Tires: Front: 3.00x19; Rear: 3.25x18

Wheels: Front: Steel; Rear: Steel

Dimensions: Wheelbase: 50.5"; Ground

Clearance: 11.2"; Seat Height: 33";

Weight: Claimed: 173 lbs.; Actual: N/A;

Instruments: None; Brakes: Front: Single leading; Rear: Single leading

Pounds per Horsepower (actual road-weight): N/A

HARLEY-DAVIDSON BAJA

The 100cc Baja sells for \$670, almost \$150 more than the Super Rat. For this difference in price, one would expect a better motorcycle. This is not the case. Where does the Baja fall short?

Swing a leg over the Baja, and one thing becomes immediately apparent: The Baja is a tall bike. Too tall, in fact, for a five foot, nine inch test rider. Almost anyone but a six-footer will have to stand tippy-toes to touch the ground.

This is puzzling when one considers the fact that most 100cc bikes are sold to younger, smaller riders. Some light is shed on the subject when one realizes that the frame used in the Baja originally came from Italy with 16-inch wheels. Adding proper dirt tires makes it one of the tallest bikes ever tested by DIRT BIKE.

The machine has an awkward feel to it. Bars are too short and the seat is wide near the tank. Grips are made of a hard plastic and are thick, with convoluted edges. Hands will cramp and tire quickly unless these grips are changed.

A whopping 12 inches of ground

Landing from jumps of this height causes suspension to bottom out.





Baja is light, and front end can be lofted with body weight shift.

clearance adds to the high center of gravity. This translates into unsure handling when the machine is cornered. Leaning the Baja over, riders get the feeling they are on the end of a long stick that will surely fall.

If the wheelbase were longer, perhaps this uneasiness would not be as pronounced, but the Baja tapers out at only 51 inches, not enough to justify the height. Add a steeply raked set of front forks to the machine, and you end with a bike that does not like to be pushed through a corner.

The Baja is not a willing slider. If the rider forces the bike to slide, it will give no warning when the limits of adhesion are reached; the rear wheel will hop out suddenly.

Best cornering is achieved when the bike is allowed to follow the natural groove, and no tricky stuff is attempted. Even then, the results are average—nothing more.

MUCH OF THE poor handling can be traced to the marginal suspen-

sion. The Baja is billed as having Ceriani forks. Some explanation is necessary here. Ceriani makes forks for a large number of Italian and foreign motorcycles. They are not all the high-quality Ceriani units that have gained favor throughout the world. Many are cheaper items, with totally different internals; they are intended for economical street bikes as a strictly utilitarian fork. On these bikes, OK. On a competition bike? No.

A 110-pound test rider bottomed and topped out these forks easily. Heavier riders felt metal-to-metal contact even over moderately rough ground.

The shocks are not any better. These, too, received much criticism. Poor damping and excessive rebound made the rear end shudder and skip from side to side.

In the past year or so, the Bajas have been dominating the 100 class in desert and cross-country racing. A close look at one of the winning

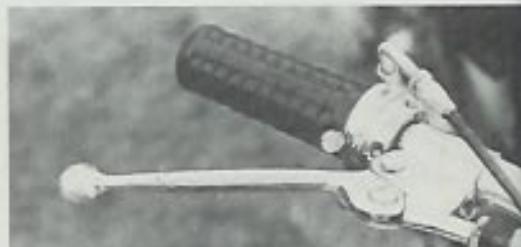
Bajas reveals how this has been accomplished. Massive changes are necessary to get the bike to work right. The first item to be replaced is the stock front end. Most of the top riders put in Ceriani's—the good ones.

Rear shocks are replaced with Girling or Ceriani's. The swingarm gets lengthened and the frame raked. Stock bars are discarded, along with the controls, and a wide set of bars with malleable levers and narrow grips. The engine is left basically stock, but the ports get some cleaning up and a new piston ring is installed.

Once the motorcycle receives the aforementioned changes, it is a first-rate tool for cross-country charging. These changes don't come cheap, but they are absolutely necessary to make the Baja competitive.

THE STRONG POINT of the Baja is the engine. It has a great deal more low-end torque than the Hodaka, and will lug willingly.

The weak point of the engine is said to be the rings. Serious racers



Control levers stick out at an awkward angle and are hard to use.



Rear sprocket is overlay type held on with four bolts.



Metal loop at front of seat could cause serious hangup.



Baja is very tall, making sliding difficult for short riders.

replace the standard items with Webcos, but we experienced no problem with our test bike at any time during the test session.

The Baja is happiest when negotiating medium-deep sand and moderate whoop-de-dos. With the Baja in stock condition, anything else gives the rider an uneasy feeling. It is not a confidence-inspiring motorcycle.

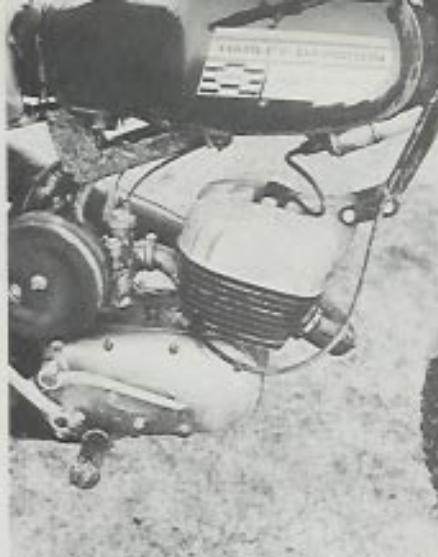
Bits and pieces on the Baja:

The rear brake is cable-operated—and nearly useless. After repeated adjustments, the cable stretches until all the adjustments are used up; then the brake arm contacts the footpeg, rendering the rear brake inoperative. Front brake works fine.

The hand controls poke out at an awkward angle, and should be replaced with some sort of conventional items.

On the edge of the gas tank (near the seat) one finds a loop of metal. This is strategically placed to make an instant soprano out of the hapless rider who gets caught on it in the crotch area.

The front fender is of the low-mounted variety, but the rear edge is much too close to the tire. A wayward rock or stick could jam the wheel.



Engine location is high, offers no protection to vitals.



Air cleaner, not shielded from direct dirt blast, needs re-designing.

The Baja comes standard with a Filtron air filter, which is a definite plus. It would be even better mounted in a still air box.

Gear shifting was crisp and easy. Neutral was no sweat to locate.

Overall finish and detailing is better than average, with the gas tank looking particularly outstanding. The gas cap did not leak.

Footpegs need some redesigning, and the bike comes without a kickstand.

SUMMATION AND COMPARISON

The Super Rat emerges as clearly the better of the two bikes, both as an overall package and on a dollar-for-dollar basis.

On acceleration, the Hodaka will simply run away and hide from the Baja. The Baja has better low-end power and is more tractable.

The Hodaka Super Rat is the end result of a long developmental process on a basically sound design. The Baja is a rehashed Italian street bike that needs more work before it can claim to be race-ready.

Properly set-up, the Baja is a winner. That has been proven.

The question remains: Is the rider willing to go through all that work just to ride a Harley?



Frame is well gusseted, and no flex is detected at any time.

BAJA 100

Price: Suggested retail, approx. \$670

Engine type: Piston port, 2-stroke, single

Displacement: 98cc

Bore and Stroke: 50mm x 50mm

Compression Ratio: 9.5:1

Carburetion: 24mm Dell 'Orto MB-24A

HP @ RPM: Claimed: NA; Actual: NA

Clutch: Multi-plate oil bath on transmission shaft

Primary Drive: Helical gears

Final Drive: Chain

Gear Ratios: (Overall)

1 39.63:1

2 25.68:1

3 17.78:1

4 14.45:1

5 11.18:1

Air Filtration: Filtron

Electrical System: Magneto flywheel

Lubrication: Oil mist in gas—premix

Recommended Fuel: Premium

Recommended Oil: H-D 2-stroke

Fuel Capacity: 2.5 gal.

Frame: Single tube backbone

Suspension: Front: Medium Ceriani telescopic forks

Suspension: Rear: Swingarm with shocks

Tires: Front: 300x21; Rear: 3.50x18

Wheels: Front: Steel; Rear: Steel

Dimensions: Wheelbase: 51.2"; Ground

Clearance: 11.7"; Seat Height: 34"

Weight: Claimed: 212 lbs.; Actual: N/A

Instruments: None; Brakes: Front: Single leading; Rear: Single leading

Pounds per Horsepower (actual road-weight): N/A





