A NEW NAME IN THE HORSEPOWER GAME

By Paul Boudreau

KANEMOTO Racing

The name Irv Kanemoto may not strike a particularly familiar note with most motocrossers, but road racers all over the world know him as an accomplished and respected mechanic, engine builder and race tuner. Gary Nixon, perhaps one of America's greatest motorcycle racers, places his trust and confidence in Irv Kanemoto and he, in return, prepares the Suzuki road racing bikes which Nixon uses to make his mark in the world.

Lately, Irv has turned some of his talents and time to developing motocross engines. Working with him is Keith Bontrager, who also has a background in road racing and who prepared the machines used by Scott Pearson to win his class at this year's Laguna Seca and Louden, New Hampshire, AMA road races. Jim McGreene, who engineers the Protopipe exhaust systems used by Kent Howerton, Terry Clark, Billy Grossi and on Irv's road racing Suzukis, rounds out the Kanemoto team.

Together, under the name Kanemoto Racing, they are breathing fresh air into a stagnating power kit industry. "Certain things make good ports," says Bontrager, who handles cylinder preparation and helps design the exhaust pipes, "and shine isn't one of them." He feels that many of the large, established kit-building companies are selling to the public inferior products which bear little resemblance to the equipment they use on their shop racing bikes.

Our Kanemoto-equipped RM125A showed a definite power advantage over some other kit bikes.

"Porting is an art," says Bontrager, who does most of the porting work himself. "Anyone can scribe the cylinder walls and grind out the ports to those marks, but the real artistry comes in shaping the interior of the port. The manner in which the fuel-air charge enters the combustion through the transfer ports determines to a great extent what kind of power the engine will produce. Unless the shape of the port is correct, something that can only be determined by eye and feel, then the power won't be right. It's like making a sculpture. The finished product is only as good as the artist who does the work. I don't believe underpaid kids working on a production line cranking out cylinders can do the job correctly."

Jim McGreene, a die maker by trade, uses his skills to fabricate exhaust pipes that are unique to the industry. Unlike most pipes that are built from flat sheetmetal rolled into cones and welded, McGreene's Protopipe units are fabricated from stamped sections like the pipes found on most production race bikes. This technique, though expensive, difficult and time-consuming, makes for a better finished product.

In order to be fully effective, an exhaust pipe must offer a smooth, progressive contour to the escaping gasses and sonic waves. Additionally, in order to develop optimum horsepower and torque, the dimensions of the pipe along the various stages of its length must conform exactly to a given formula, regardless of how the pipe snakes and winds through the frame. Therefore, the pipe builder must work to meet both criteria.

"Pipe building is all craftsmanship," says McGreene. "The subtle angle

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KANEMOTO Racing

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KANEMOTO HORSEPOWER FOR THE RM125 SUZUKI

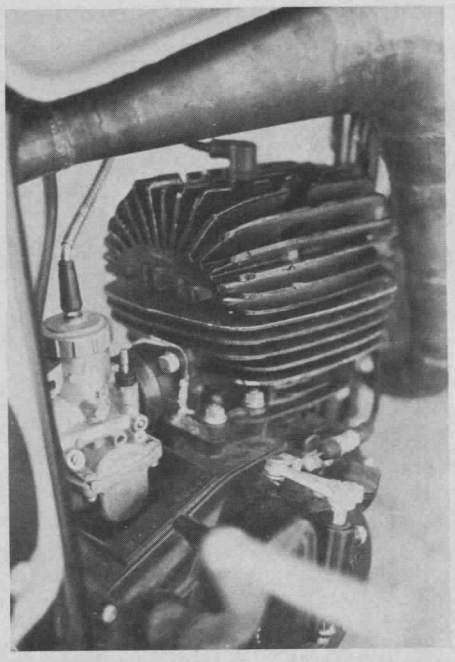
Kanemoto Racing brought two projects to our Indian Dunes race testing facility. One was a ported cylinder and exhaust pipe for our stock RM125 test bike, along with a 34mm Mikuni carburetor. The other was their own maxed-out RM125 which they use as a test bench for their engine and chassis modifications. In addition to a special cylinder, head, exhaust pipe and carburetor, it was equipped with Fox shock absorbers and the front suspension from an RM250. This suspension swap is a bolt-on affair and improves steering quickness and gives the front wheel more bite when laying it over in the turns.

The Kanemoto special was undoubtedly the best performing 125cc race bike we've tested to date. Besides being a good handler, it delivered an abundance of horsepower in all the right places. Like any purebred racing machine, it had to be kept on the pipe. But the excellent mid-range torque made possible by the sophisticated exhaust design made the job fairly easy. The hard part was holding on. It would take an expert rider in top physical condition to maintain the speeds this bike was capable of reaching. Even though we felt this bike was suited for only a small group of above-average riders, it represented the degree to which the men of Kanemoto Racing could take their know-how and workmanship.

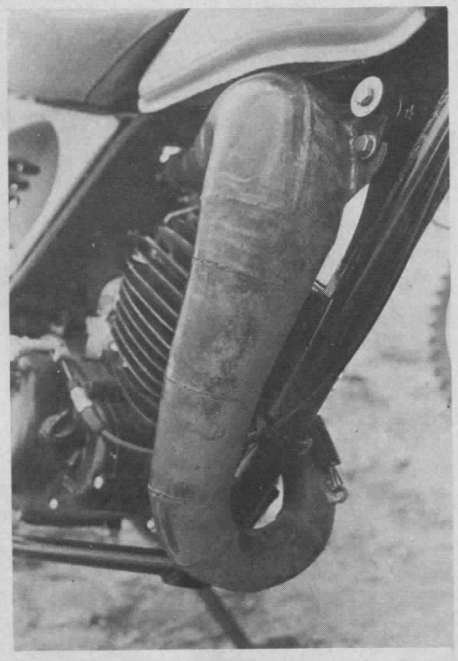
The top end kit for our stock test bike was much more down to earth and within the abilities of the average rider. Our test rides indicated that the kit produced a strong mid-range response with a substantial increase in peak output that allowed the rider to leave it on down the straights for that extra advantage going into the turns.

In competition, our modified RM125 showed a marked power superiority, even over other RMs equipped with kits from the well-known speed shops. It was pulling the competition so bad on the straights that, after the race, the other riders came by our pits to check it out. They said our bike was making dents in their chest protectors. Now that's the kind of reaction you can't get from a dyno.

How do they do it? Keith Bontrager summed it up simply: "We concentrate on the little things. We've all had years of road racing experience and we know what works. After that it's a matter of pride. The name Kanemoto is one of the most respected in racing and we intend to keep it that way."



Special head, cylinder, carb and pipe produce some big numbers in the horsepower category.



Tapered head pipe, three-stage diffuser cone and die-formed sections where the pipe curves under the tank spell the big difference in Kanemoto pipes.

RM250 forks make the Kanemoto bike a real handler.