

125 HONDA MAGIC

Race prepping Little Red

By Ned Owens

When Honda finally released its long-awaited "Little Red" — the CR125R — it was met with mixed reviews. There are some definite problems with the new little Honda.

The package — in stock trim — shows a lot of potential, but in several areas the new little Elsinore just doesn't meet the standards set by some of the bikes in its class.

Two of these areas are real majors — the rear suspension and the engine. That doesn't leave much, and what remains also needs close scrutiny before the CR is ready for upper-level, local competition.

We spent an afternoon with one of California's ace tuners — Harry Klemm. Here's a guy who's probably more successful for consistently developing high-performance equipment for competition machines than nearly any other tuner in motocross. We picked Harry's brain for some of the developmental feedback that he's found while campaigning a pro racing effort on the CR125R.

Engine

If you've been smoked with some regularity by the "N" Suzukis to the first corner or in any other power situation, then you're well aware of the limited power of the CR. It seems that one of the biggest problems with the engine is overheating. The stock head, while exhibiting good radial fin design, has neither enough separate fins or large enough fins to ensure good cooling. This is the first area that has to be tackled in the engine. DG's radial head, with fins, has nearly four times the cooling surface area of the stock head. It also raises compression slightly. This change allows the machine to rev higher and pull stronger throughout the power range.

With the cooling problem alleviated, the next improvement comes with a switch from the 32mm Keihin stock

carb to a specially jetted 34 Mikuni. This improves the high revs again, but also helps bring in the power earlier and provides more throttle response throughout. With the carb and head, the CR — a fresh one — should be as fast as a stock RM-N.

Basically the pipe is a good design that complements the stock carb and head, but it needs modification when used with the new parts. If the pipe only needed a single cut-and-weld operation, the stocker could be used. Unfortunately, it needs several small changes that negate the use of the stock pipe. Here, DG offers their new press-formed expansion chamber that makes best use of the carb and head.

Klemm feels that although a slight performance gain can be had with a replacement CDI, the stock unit is quite good and he normally doesn't replace them.

Inside the barrel, the stock porting is comparatively mild, especially compared to earlier CRs, which were far too pipey. Rather than go hog-wild inside, Harry specifies some modest but effective changes to the port timing and flow of the transfers. This allows the engine to be stronger everywhere without giving anything up on the bottom.

Apparently, a lot of CR owners are a little weird about their chromed aluminum cylinders. They are good units when used with the proper piston and rings, but won't take a lot of mistuning abuse. Some owners who have seizing problems have found that the replacement cost is around \$200 for this intricate casting. Part of the seizing problem can usually be traced to a leaking intake manifold. If the manifold and reed assembly are removed, then not only new gaskets but a good fuel-proof gasket sealer should be used to seal all the surfaces around the intake. The attachment bolts are pretty far apart and a certain

amount of warpage can be detected after a while, especially if the bolts are overtightened.

If you have managed to seize and score the barrel, DG offers an iron liner replacement that provides four overbores. Since the stock piston with its iron ring can't be used in an iron bore, the liner is designed to fit the earlier-model CR chrome-ring pistons. DG is developing a single-ring piston for use in the liner that will replace the double-ring piston. This will let the engine react quicker because there is less drag on the piston.

If you are still using the stock barrel, then plan to ring the top end after about two hours — not including break-in time. This is the only way you can ensure that the motor will be fresh and strong, otherwise a loss of power is evident.

Suspension

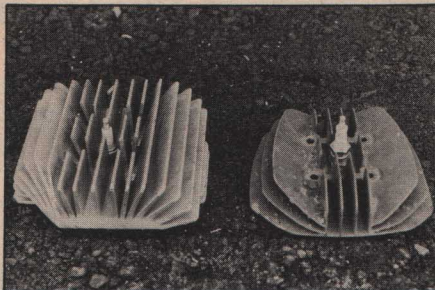
Both ends of the CR need work, but most of the attention should be paid to the rear. The stock shocks are not particularly happy in their role — at least with the stock swingarm design. The first step is an improvement in swingarm strength with the replacement of the stocker with a longer, stronger aluminum unit. The longer arm not only changes the relationship of the engine to the wheels, but it provides a higher suspension leverage ratio that helps the stiff, stock shocks greatly. They still aren't right, but they're better. An increase in travel is another side benefit.

DG is currently working with the new combination internal spring/air shock from Kayaba. This new unit has only one pressure setting and uses comparatively light pressures — 58 psi seems to be ideal for the average fast rider. (These shocks were just being introduced at this writing, so keep an

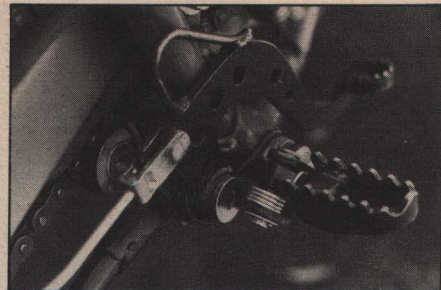
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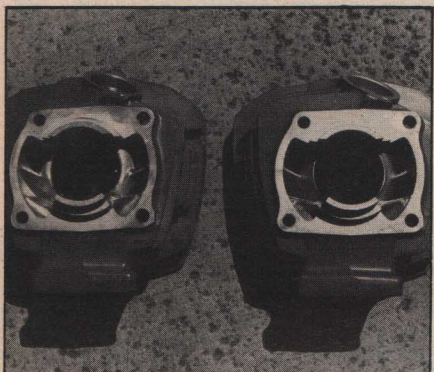
Air caps are added to the unmodified forks. Directing valves to the rear avoids fouled cables.



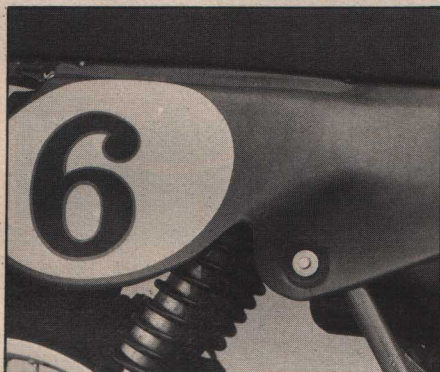
Finning area is greatly increased on DG radial at left over stock.



Brake lever snags Scott boots — new right boot is apparently being offered.



Ported cylinder (at left) has greatly improved breathing over stock unit. An iron liner is available to provide normal overbores on the all-aluminum cylinder.



FIM side panels not only make bikes legal at some tracks but are not as brittle as the stockers.



New Kayaba air shocks feature internal springs and single pressure operation. They'll be available soon.



Seat attachment bolt is easily cross-threaded — keep an eye on this.

(PRICE SHEET)

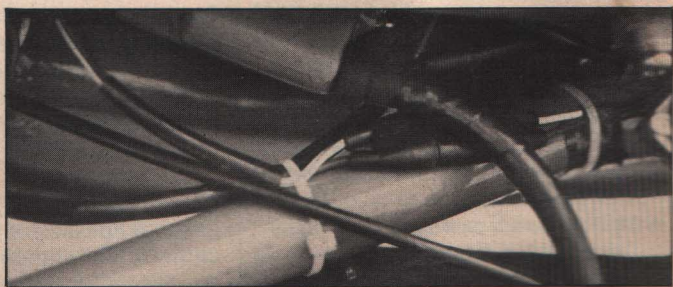
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Radial head	64.50
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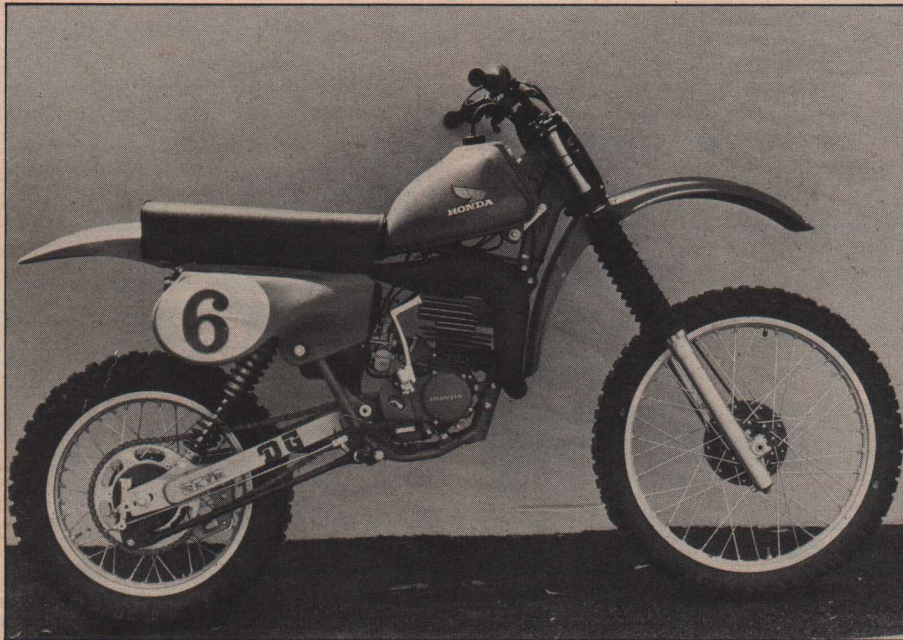
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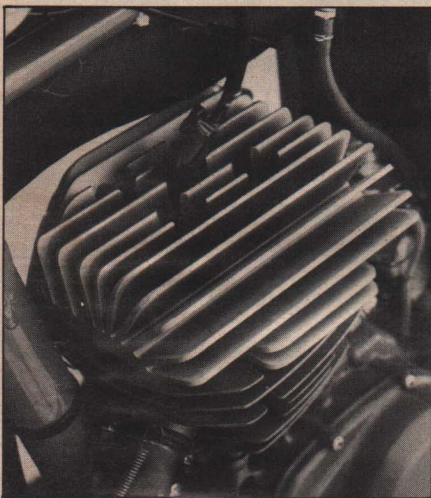
Wires under tank should be secured to keep them from melting on pipe.



Gold-colored swingarm adds one inch of length, changes suspension leverage ratio. Stock shocks are better as a result.



DG's plastic "Works" tank will be similar to tank at top but will have the stock mounting points of the stocker (bottom).



eye on an evaluation soon in DB. — Ed.)

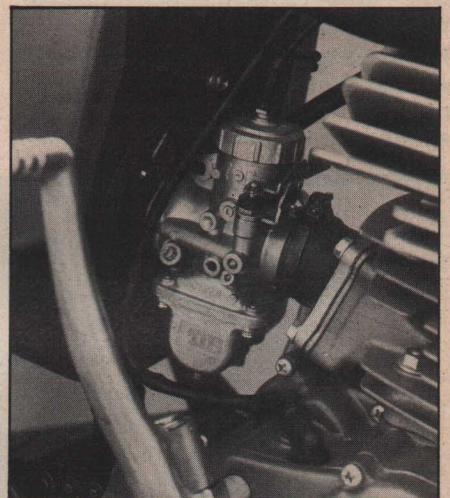
Another word on swingarm mods: Whenever any maintenance has to be done on the swingarm pivot bearings or when the engine is removed, be sure to keep the pivot bolt well-greased. Otherwise, the bolt can be very difficult to remove.

Up front, air caps are added to the stock forks. It seems that the stock springs sack out pretty rapidly, so running between 5 and 13 psi helps overcome this condition and provides a wider spring tuning range. Harry uses PJ-1 10-weight fork oil of the factory-specified amount.

A problem with past Honda CR125s was the weak steering stem that needed near-constant attention to lubrication and tightening torque. But for the new CR125R, Honda has

CR100R KIT

Currently under development and available soon is a sleeve-down kit for the 125 to make it a 100 class contender. This kit includes a sleeved cylinder (exchange) piston and ring set, special radial head, five-stage porting, special clutch springs, high pro pipe, a Mototek CDI, air filter, and a 30 or 32mm Mikuni carb. The sleeve kit as well as the rest of the pieces are available separately, or as a complete kit for approximately \$410. Check with your local DG dealer for a parts price breakdown and date of availability.



remedied this with a very well-designed and constructed steering head, stem and bearings, so this is no longer a sore spot.

Wheels and tires

Probably one of the most controversial items to come up in the last several years is the application of a 23-inch front wheel on the Honda MXers. There are certain advantages, such as a larger tire contact "footprint" and less chance of dropping into holes, but the disadvantages are critical.

The largest single problem with the 23-inch front wheel, at this stage of the game, is the lack of variety of tire choices. The standard "claw action" tire is good on extremely hard-packed, adobe-like surfaces, but is downright scary in the mud. In some types of mud

the tire fails to clean itself and becomes quite treacherous.

While it's true that some tires work better in mud, sand or on hard-pack than others, the rider with a 21-inch front wheel has a wide selection of rubber compounds and knob designs to choose from, each of which should provide the optimum traction for the conditions. The owner with the 23-inch setup doesn't — yet — have this same choice.

So, many riders are switching to a 21-inch front wheel assembly, even though it causes adverse geometry changes. It seems that the tire selection advantage outweighs the negative aspects of the front end changes. It's not a happy trade-off, at this stage, but hopefully more tire manufacturers will come out with the

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new larger tire. Metzeler has even hinted at it.

Some riders are going to the 21 in front and using half-inch shorter shocks to compensate for the

difference. Even with the loss of travel in the rear, this seems to be the best interim setup. DG has put together a rim and spoke kit for the Honda front hub if the rider decides to go to a 21.

On the plus side, Harry has seen no weak spots in the spokes' or hubs' design and feels that they are very good units. No hassle here.

Brakes

Klemm recommends grooving the shoes on a diagonal to give them a self-cleaning capability with mud, dirt and brake dust. He recommends this for all Japanese brakes. Something to keep an eye on, though, is the floating rear brake torque arm. If reverse force is applied — such as rolling backwards on a hill and jamming the brake on, or when holding the brake to remove the mag nut or sprocket nut — the arm can bow out away from the swingarm. Obviously it is an unusual occurrence and something that is not necessarily a design flaw, but should be noted.

Another strange thing crops up on the rear brake lever. The wire loop across the top of the lever unfortunately gets wedged under the pivot on the side of the Scott plastic boots. It doesn't seem to be a problem with regular leather boots, but Scott is offering a special right boot to owners of the CR. Check with your Scott dealer on this one.

Miscellaneous

FIM-style side panels will not only make you legal in some races, but they are a little more flexible and resist cracking at the mounting bolt, unlike the brittle stock side number panels. Besides, they're in fashion, heh heh.

Be sure to tape or zip tie the wiring under the tank to the frame cross-tube or backbone to keep it from flopping around and melting against the hot pipe. It has happened.

Bolts that tend to come loose with some regularity are those two that hold the rear chain guide in place. The guide takes quite a bit of thrashing, so keep an eye on these.

The seat support gussets on the rear part of the frame are a little flimsy and can get tweaked at an angle. If you aren't careful, it's really easy to misalign and strip the seat mount bolts or the welded-in nuts. The tabs on the seat can be slotted so the seat will lock in place without removing the bolts from either side.

Although the stock air filter setup is somewhat of a pain to work on, Klemm feels that the design offers sealing and filtration that is optimum. It seems that the ones that are the most hassle to service are the best units. Strange.

DG will soon be offering a plastic replacement tank for the metal stocker that is a mix of the factory replica tank design but with the stock mounting position. It's not that the stock tank is that heavy, but one good rap on the side and it's dented.

If the rider tosses a chain, the chances are that it will bunch up on the front sprocket and smash the cases. The stock side cover is of no protective value here and a suitable guard is not presently available. Pay close attention to chain maintenance and alignment. □

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