

HONDA CR125

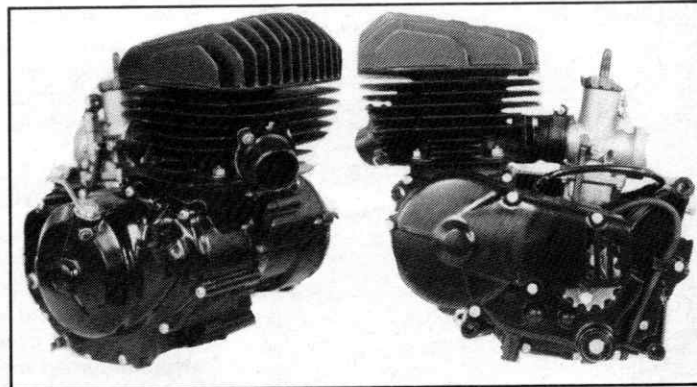
All of the Japanese motor-cycle manufacturers are renowned for superb quality and technical excellence, hence their domination of the two-wheeler market world wide. Honda have a top place in the league table earned by their dedication to research and development in order to ensure that their machines are made to the current 'State of the Art'. Their attitude is exemplified by their preoccupation with the four stroke motor, even though the two stroke provides more power at less manufacturing cost. One can almost sense their distaste when they found that a two stroke would be necessary for a range of competition bikes for Scrambles, Motocross, Enduro and Trail use. The introduction in 1973 of the CR250M — known to most as the Elsinore, commenced a series of 248 and 123cc motors that are about to have a significant impact on 125 National, 125 International and 250 National due to the outstanding efforts of Haydock Park Motorcycles Ltd., in collaboration with Honda U.K. Ltd.

Haydock are marketing, as sole distributor, the CR125 Mark 3 for kart racing at just £500 complete with exhaust and carburettor. This is substantially lower than its competitors and the motor has already chalked up many victories with complete reliability to show that even more performance will be available with development. The motor has a 56mm bore and 50mm stroke and has a single cylinder that is air cooled as required for the CIK International class C2.

There is a centrally placed spark plug in a domed combustion chamber so that squish is annular between it and the crowned piston. The barrel has a cast iron liner that will take plenty of rebore yet remain under 125cc. The head fastens to the barrel by four short studs and in turn the barrel is secured to the crankcase by another four studs.

The engine is piston timed through two very large ports separated by a bridge. There are a pair of transfer passages, of unequal size each terminating in their own window in the cylinder. The back small transfer passages feed a third transfer port which is not a booster type as it isn't fed through the piston.

The exhaust port has small side 'ears' that provide the maximum area when pressure is at its highest. The remainder of the port being narrower helps reduce the strain on the rings as they traverse the port. There is straight cut primary gearing to the clutch drum and Haydock report that the unit has

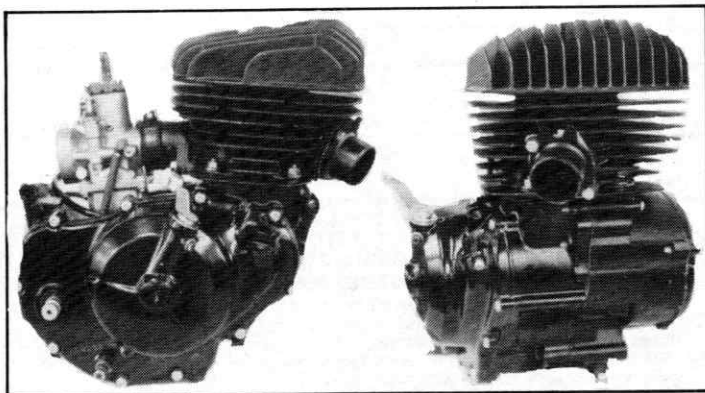


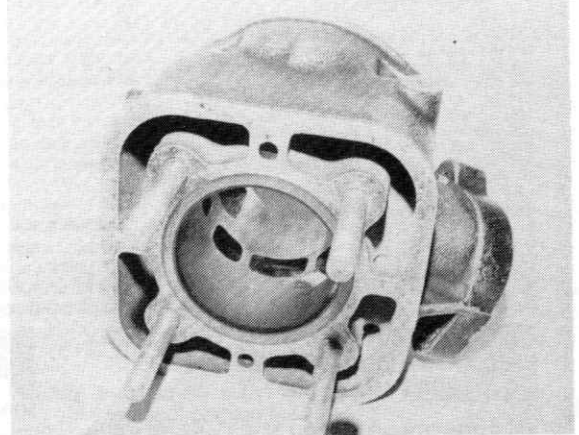
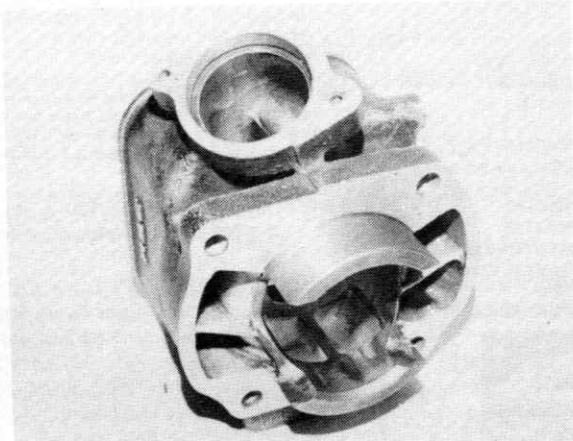
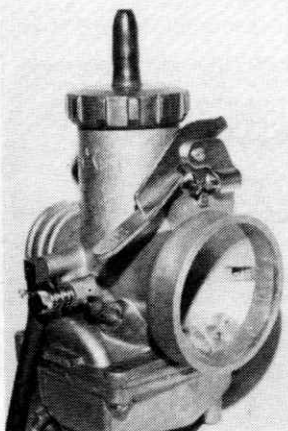
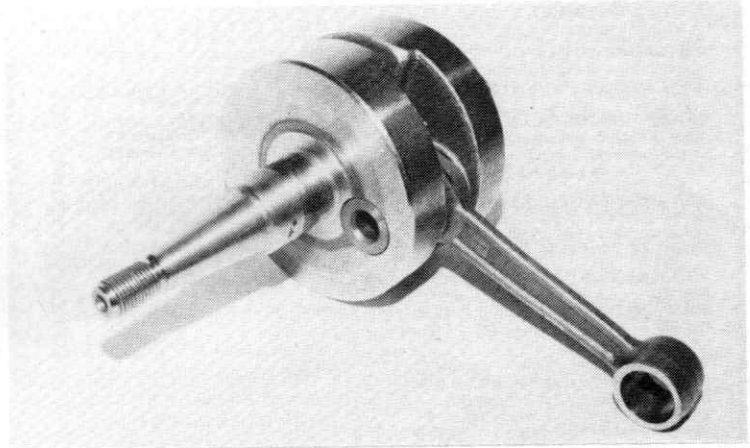
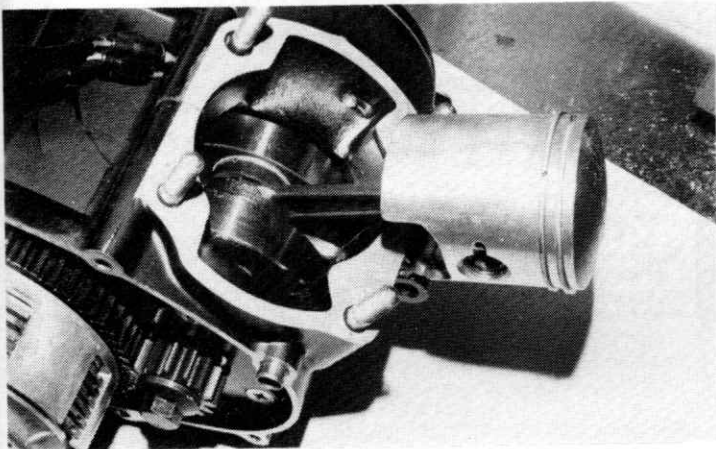
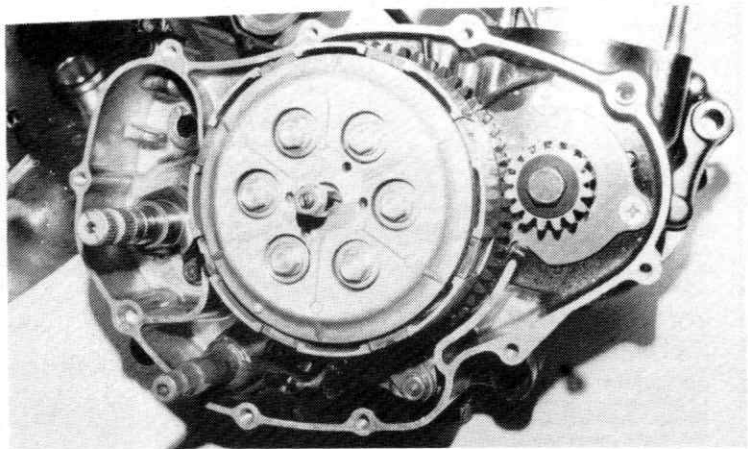
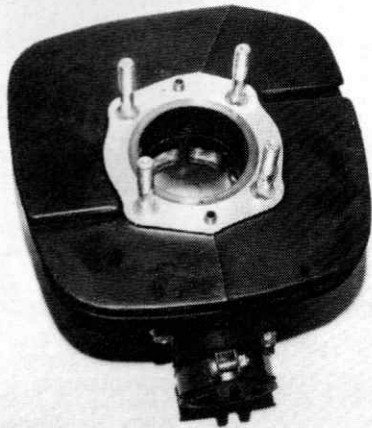
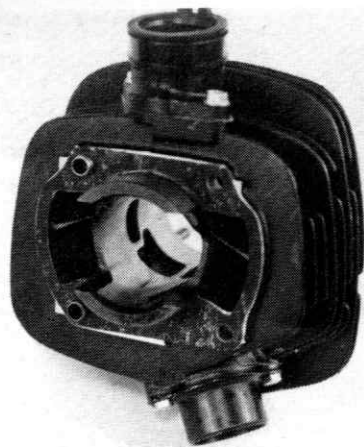
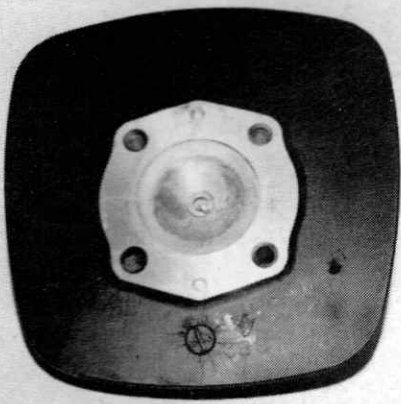
stood up well to kart competition. The clutch plates are more than adequate and there has been no necessity to fit the Mugen stronger clutch springs. It is a six speed gearbox and at present suitably splined 14 and 15 tooth out-put sprockets are available whilst 17 and 18 tooth versions are in course of production. The gear change emerges from the lefthand side so tends to suit a chassis with the engine on the right but, as our illustrations show, it is perfectly feasible to convert the motor oneself to a righthand change.

A Keihin 32mm carburettor comes as standard and works well. The exhaust is a Scrambles system that is very suitable for kart racing once tailored to the chassis. Ignition is by a Japanese CDI unit and 12,000 rpm is being achieved by the engines that Haydock are racing. The latter's attitude is to race what they sell and they are therefore perfectly happy to sell their motors at the end of a meeting to put paid to any rumours that they have something special not generally available.

There are several versions based on the CR125 that differ somewhat from the Mark 3 currently being sold for karting. The MT125 had a higher first gear with 2nd and 3rd closer together than was used for road racing. These ratios seem less suitable for karting. The CR125RZ, the Red Bullet, has reed valve induction and the barrel will not fit the Mark 3 bottom end. The MT125 Mark 3/W is a piston timed water cooled engine for road racing and next year this will have reed induction and a chrome bore. Haydock can supply a Mugen conversion for the MT125 and CR125 Mark 3 that comprises a new head, cylinder and piston for about £160 that will convert it to reed induction. For the man who wants to race a water cooled motor, either because his local regulations permit it or to take part in the CIK C1 class, can buy a kit of new head and cylinder for about £190 to convert his air cooled CR125. Another conversion includes radiator and pump driven by the engine for about £400.

There is a great deal going for the CR125 for it is reasonably priced, capable of winning as it comes yet more development is possible, and is robust enough to stand up to the abuses inflicted by kart racing. Spares are cheaply and readily available through a large number of motor-cycle dealers and the motor can be converted from air to water cooling according to taste. It is pleasant to have Honda quality within our sport but what is particularly important is that the company are actively supporting this involvement. For too long the firms concerned with gearbox kart racing on the engine front have put absolutely nothing back by way of acknowledgement or assistance on return for the valuable publicity they have gained. This could be the boost the 125cc class has been waiting for and it could help bridge the gap between the direct drive 100cc and gearbox divisions.





ILLUSTRATIONS ABOVE:

The major components of the CR125 Mark 3, in this example modified for a righthand gear change. The two righthand illustrations at the bottom show the water cooled barrel conversion — no water circulates through the crankcases so a standard bottom end and gearbox can be used.