



The world's motorcycling second guessers had Honda's forthcoming CB750 figured for a twin. Now the wraps are off, that twin turned out to be a four-cylinder 750 that bears close resemblance to the factory's 500-cc competition motorcycle - and the resemblance to the GP bike is more than skin deep. The 750 in the accompanying photograph is powered by an engine in most respects identical to the power plant for the production machines, which are to start coming off production lines in mid-1969. However, tank, lighting, suspension, and seat are CB450 components; the frame obviously is closer to a testbed than a production unit. The engine is a transverse in-line Four with sohc valve train operation. Honda uses a dohc arrangement in the current CB450 engine. The reason the sohc system is used is to make the CB750 engine more compact. Central location of the single camshaft obviates the necessity for out-thrusting cam covers, which could create difficulty in location of the power plant in the frame.

The power takeoff is between the left and right-hand pairs of cylinders, a practice identical to that used in Honda GP motorcycles. A gear at the center of the crankshaft transmits power to the countershaft, to the gearbox, and through internal gears. This power takeoff system permits the crankcase width to be narrower than if power were delivered from one or the other outboard ends of the crankshaft. The 750's crankcase is scarcely wider than that of the 450 engine.

Four carburetors, similar to those used with the 450 Twin, feed the 750 Four. The exhaust system appears to be four racing style megaphones, but these in reality are mufflers, complete with conical baffles. Honda as yet has provided no information on the 750 ignition system.

Likewise, the factory has come up with no concrete performance figures for the Four. However, output of the 325-cc CB350 engine is 36 bhp at 10,500 rpm. If the piston displacement of the new engine is double that of the 350, and if its horsepower development is more or less a linear function of displacement, then it can be assumed that the output of the 750 engine is approximately 75 bhp at 9500 rpm, or perhaps 80 bhp at 10,000 rpm. Those power figures, once commonplace for automobiles, can only be regarded as astonishing for a production motorcycle.

No information is available on drive components, but knowledgeable enthusiasts agree that, if the engine is capable of such a high power output, then the conventional multi-disc wet clutch, used for the CB450, is inadequate for the 750. Hence, an educated guess is that a dry clutch, similar to the Honda's GP

machine, will be used on the new production motorcycle.

The 750 employs a dry sump lubrication system, a feature not found on Honda production machinery since the C71. As do Triumph and BSA Twins, the Honda 750 carries its oil tank under the seat. Major reason for installation of the dry sump system is the double cradle frame - used by Honda for the first time on the 750. The double cradle's bottom tubes prevent an oil sump from being located under the engine. If an under-engine wet sump were used, the 750 engine could not be mounted on the frame, unless the frame were lowered, which would result in insufficient ground and cornering clearances.

If engine output is assumed as 80 bhp at 10,000 rpm, the 750 Honda should achieve 120 mph with ease, with quarter-mile e.t.s well down in the 12-sec. bracket. When the new model is put on the market, early next year, it will be the highest performance production motorcycle in the world, says Honda.

As with the 450, a telescopic front fork, and De Carbon shock absorbers and a swinging arm at the rear comprise the 750's suspension system. The front tire is of 3.25-19 size, larger than that of the 450; the rear tire is a 4.00-18 casing, also larger than that used on the 450.

To all appearances the 750's braking system is identical to the 450's twin leading shoe front and single leading shoe rear array. And the 750 is a big machine - with wheelbase at approximately 55 in.

The Japanese were treated to a look at the 750 in October at the Tokyo Motor Show.