

For Those Not Willing To Compromise Either Function Or Style Image

Talk to an American about custom bikes, and he will probably begin discussing an exercise in modern art that is very far removed from functional design. Ask an European a similar question, and he will probably leave you with an image of a streetable racer.

We call them cafe racers over here, and although they have been extremely rare in the past, the trend seems to be catching on. Manufacturers think so, too, and one, England's Paul Dunstall, is even importing modified bikes to satisfy the demand.

Dunstall is no newcomer to speed equipment. Both his Norton and Honda cafe racers and his all-out competition versions have enjoyed considerable success in England. And, because Dunstall offers both complete bikes and individual components, mounts can be easily tailored, both performance and appearance-wise, to suit individual taste.

In order to acquaint us with this new trend, Dunstall left us an immaculate, fully modified 750 Honda for test. A handsome, partial fairing with a tinted bubble shield sets the bike off. Then there are clip-on bars, a huge gas tank, and seat suitable for two. Other less obvious changes are footpegs set slightly higher and farther to the rear, modified shift and rear brake controls, and some subtle engine modifications to improve performance, particularly at higher speeds.

One of the most popular ways to increase engine performance without extensive internal modifications is through the substitution of a different exhaust system. Racing exhaust systems for four-stroke motorcycles are relatively easy to manufacture, but are often much too noisy for street use, especially considering the lower noise level standards being imposed by governments all over the world.

Designing a more efficient exhaust system without additional noise proved to be quite a problem. Working closely with Dr. Gordon Blair, of Queen's University in Belfast, Ireland, an exhaust pipe and muffler configuration was developed. The exhaust pipe design was entirely Dr. Blair's, while one of Dr. Blair's students, Sam Coates, and Paul Dunstall helped work out the silencer design and dimensions.

Actual development of the exhaust system on the motorcycle was left up to Paul Dunstall, who used both road testing and an American-made engine stand to determine the system's effectiveness. Finally, a combination was discovered that not only increased power throughout the rev range, but also emitted a very low noise level of 83dbA, using the noise measurement method employed by the state of California in 1973.

The exhaust system's four header pipes merge into a balance tube which connects all four pipes under the transmission. Just aft of the balance tube each set of two pipes extends outward and connects into a huge muffler on each side of the machine. These mufflers are located well off the ground to provide adequate cornering clearance.

In addition to the exhaust, Dunstall fits pistons which raise the compression ratio to 10.25: 1. Other than these pistons and the exhaust, the Honda Four is completely standard.

As mentioned earlier, the Dunstall Honda comes equipped with a partial fairing. It and the remaining 'glass components were designed by Doug Mitchenall, who was with Avon fairings for a number of years. The fairing is pleasantly rounded and mates nicely with the angularly shaped gas tank and dual seat. The injection molded fiberglass is extremely well finished and is highly resistant to cracking from vibration and stress.

Other changes to the Honda CB750K2 are the substitution of 19-in. Boranni aluminum alloy wheel rims to both wheels. Those weigh about 60 percent less than steel rims, increase rear wheel diameter by an inch to raise the gearing slightly, and provide a small increase in ground clearance for cornering.

The only bugaboo here is the sidestand's proximity to the ground. Even with the height increase and high mounted muffler the stand drags at a ridiculously low angle of lean, drastically decreasing the rider's cornering ability to the left.

Girling suspension units at the rear help stabilize the Dunstall Honda's tendency to "snake" through turns and the spring rate seems ideal for a rider of moderate weight.

A curious form of front fork stop to limit the turning arc is necessary because of the clip-on handlebars. These fork stops are attached by means of the pinch bolts on the lower triple-clamps and were found to be slightly loose after two of our testers got into wobbles at over 100 mph. Retightening these bolts and snugging up the swinging arm bolt reduced this alarming wobble to a great degree and made the tester who made the ultimate top speed runs feel more comfortable.

Riding the Dunstall Honda is a sheer joy out on the highway, but not around town. The clip-on handlebars are of moderate width (24 in.) and these, coupled with a 4.10-19 Dunlop TT100 00 tire on the front (as also fitted to the rear), made the steering at rush hour traffic crawl speeds a bit of a chore. It's nothing you can't live with, however, and out on the road the Dunstall can be thrown confidently around high speed corners to the right with gusto, but care is necessary when turning to the left because of the low sidestand. Most owners will modify this stand for more clearance as it unnecessarily limits cornering ability of an otherwise superb machine.

The exhaust wears well on the nerves and gives a slight power increase in the moderate rpm range. Very little more is available at the top than with the standard Honda exhaust system, however.

For this reason, Dunstall has substituted a 19-tooth countershaft sprocket in place of the standard 18-tooth item. This also raises gearing and at 70 mph the big Honda is merely loafing along at 4200 rpm. Even with the higher gearing the engine has so much torque that frequent use of the gearbox is hardly necessary - unless you're really in a hurry.

Although our test Dunstall Honda 750 was in an excellent state of tune, performance figures weren't really what we expected. The machine was very new and tight inside, which hampered both top speed and acceleration slightly. Still, we weren't too disappointed with our standing quarter-mile times, even considering that clutch slip set in after the first run. Had the machine had standard gearing and stronger clutch springs installed, we feel that our standing quarter-mile times could have been brought down into the high 12-sec. bracket.

And after studying the dynamometer results on the Honda 750 engine using the Blair exhaust system, we found that maximum power is developed at 7000 rpm, a figure we slightly exceeded during our top speed run of 121 mph which corresponds to 7250 rpm.

All things considered, the Dunstall Honda 750 has several interesting attributes: handsome cafe racer styling, a quiet exhaust system which increases engine power slightly, and modifications which have made it a better handling machine. We wonder, though, if it was necessary to go to the 10.25:1 compression ratio pistons even though they are fine quality units manufactured of lo-ex spun cast aluminum.

It seems to us that a camshaft change would have been much simpler, somewhat cheaper, and considerably easier for home mechanics to install.

Although the Dunstall was modified, all the attributes for which the Honda CB750 machines are so well noted were there in spades. The engine started with a flick of the starter button, and ran silently and oh so smoothly at all engine speeds. There was just a trace of piston noise under heavy engine loading at low to moderate rpm, and just a trace of exhaust smoking because the piston rings hadn't seated properly. In typical Japanese fashion, the engine didn't leak a drop of oil, even from the area of the rear chain oiler.

Several items vexed us slightly, but we were assured that they would be cleared up on production versions. One was that the pivot rod for the rear brake extends outward from the frame too much and it is easy to contact when depressing the rear brake, reducing the amount of force you could put on the brake pedal.

Another was the closeness of the center two exhaust header pipes to the oil filter housing on the front of the engine. On our test bike, it would be necessary to remove these pipes to change the oil filter element. Also, there's that clearance problem between the sidestand and the left hand exhaust pipe leading into the muffler.

In summary, the Dunstall Honda 750 is a cafe racer's delight. It combines exquisite styling with ample performance, yet still retains the capability of packing double. What else is there?