

900 SS Cont'd

bike, its actual displacement is the same, 864cc. Why Ducati calls it street 860s just that and its sports/racing 860s "900s" is anyone's guess.

In spite of it all, the three weeks and 1800 km we spent aboard the big Duke were most enjoyable, the bike's good qualities outweighing its short-comings many times over.

Engine & Performance

The Ducati's engine is based on the 864cc version of the factory's famous 90° V-twin. The engine has one cylinder lying forward almost horizontally and the other stands. The lightweight conrods run side by side on a common crank pin. Each cylinder head contains a shaft-driven, overhead camshaft operating two valves in a hemispherical combustion chamber. A second set of rockers operating from underneath the cam closes the valves. A helical-gear primary drive is used to transmit the power to the wet, multipalate clutch and five speed gearbox, which shares the 5 liters of 50 grade oil in the engine's wet sump.

The engine has no chains anywhere inside it — an expensive way to build a four-stroke. The engine is of all-alloy construction and forms a stressed member of the duplex, open cradle frame. Both the 750SS and the 900SS use accelerator pump equipped Dellorto carbs and a capacitive discharge ignition system (incorporating transducers under the tank). The carbs provide a lightening throttle response in the big Duke that is most uncharacteristic of torquey twins, and the electronic ignition no doubt does its part towards making the bike a reliable starter.

It is essential that the bike be placed on its centerstand before attempting to swing the engine into life. This is necessary because the kickstarter swings a long way out from the motor as it is folded out and also because the lever (to get a full swing) swings right down to ground level when the bike rests on its wheels because of the low mounting of the engine.

The engine spins a 220 W alternator which charges a 12 AH, 12 volt Yuassa battery. Provision exists for the motorcycle to be started and run without the battery, but the transducers must first be isolated from a relay under the tank. The charging circuit's output proved more than ample to run the machine's powerful headlight during the test.

No oil was used by the engine throughout the test, which was just as well since Ducati has its usual hexagon head cast onto the top of the dipstick and a spanner is necessary to check the oil level. A small amount of oil weeped from the tach drive on the front cylinder head.

So long as one followed the starting procedure detailed in the very useful owner's manual, the Duke would invariably fire on the first or second lick, provided the rider gave the engine a healthy swing to overcome the 9.5:1 compression ratio. Other wise one's efforts were treated with nothing more than a disinterested wheeze. Priming of the inlet tracts of a cold engine is achieved by the automotive technique of opening the throttle a couple of times to operate the accelerator pumps.

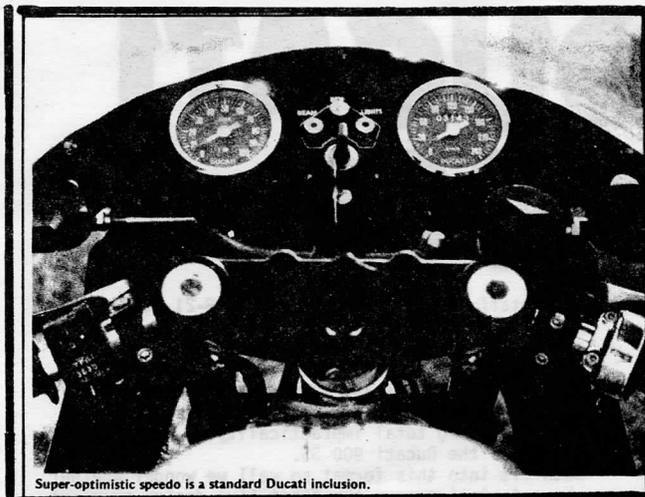
On the Dyno & Dragstrip

The factory makes no claims for horsepower or torque so it was left to the Stewart Car Company dynamometer to gauge the power of the beast. On test the bike produced 36.3 kW at 6500 rpm (almost identical to the output of the two 750 Hondas tested recently) and a gigantic 57.8 Nm of torque at 4000 rpm (nearly 30% more than the Honda made at 7000 rpm and almost as much as the Z1000 produced at 6000 rpm).

Unlike the two Hondas and the Kawasaki which showed quite distinct peaks on their power curves, the Duke's power varied only slightly between 5600 and 7500 rpm.

This corroborated perfectly with the big Duke's tractable performance on the street, where, from anything over 3000 rpm a sudden twist of the wrist requarded the rider with instant and immediate strong acceleration (far stronger for example than the 1000 could manage from similar revs).

Although the Ducati was on the dyno for a short while, the pipes blued extensively as far back as the mufflers. It was a baffling event. The engine itself showed no signs of overheating at all, normally idling and reliable



at the end of the test, and that all our test bikes share the same cooling facilities and none of them suffered discolored pipes. Could the Lafracanti mufflers be restricting gasflow at high revs and causing substantial heat buildup in the header pipes? It seems a possibility, although the distributor advised that no other models on the dyno had the problem.

At the Sydney International Dragway the Ducati achieved a best standing 400 meters time of 12.9 seconds, 0.4 seconds faster than the Honda CB750F1's best time, but a full second slower than the Z1000. The tall first gear was not suited to dragway racing, although once underway the five close gears kept the engine right on the boil.

In order to get the back wheel spinning it was necessary to start from a position on the startline which had a light coating of rubber on top of the tarmac, and care had to be taken to keep the bike running straight and true while the rear wheel was spinning as the limited steering lock made corrections of fishtailing a dicey business. Once the rider was familiar with the machine, consistent 13 seconds dead times could be run. The clutch took the dragstrip testing in its stride, returning to its normal adjustment after only a brief period.

It was at the dragstrip that we also confirmed our suspicion about the accuracy of the veglia speedometer. Although the needle moved steadily and smoothly, the instrument read 9 km/hr too high at 100 km/h and 15 km/h too high at 160 km/h. The tach was also checked, but this proved quite accurate. Why one and not the other Veglia?

The Duke's small narrow cross-section and fairing for the rider to tuck in behind helped the model score a significantly higher top speed than either of the Honda 750s, which possessed a similar maximum power. The Ducati's top speed could have been even higher than the 206 km/h recorded had the optional 36 tooth rear sprocket been fitted. The bike was still slowly increasing speed, but as the tach was showing redline revs (and the speedo was on its third lap of the dial) we called it quits at that. The bike proved rock steady at these speeds and the rider was never concerned over the road surface or slight bends.

The engine proved quite economical for its 900cc displacement (and the Dellortors) and the fuel tank's capacity of 18 liters gave a workable touring range of nearly 300 km. Vibration from the engine was minimal and rarely intruded on the rider's comfort. A slight buzz between 4400 and 4800 (and even that was not annoying) was all the big V-twin produced.

When we picked up the model at 1300 kms the engine was still very tight and it continued to free up noticeably until about 1500 km was clocked. The owner's manual mentions a 3000 km running in schedule and it seems the Duke just a long time to bed in. Our performance figures and dyno testing were not taken until 2800 km in fairness to the bike. The triple disc brakes also kept improving during the early stages of the test. The drive chain too seemed to need running in as it stretched quite a deal early in the test, but improved as the kms mounted.

Transmission

The SS models of last year were the first converted to left side gearshift (Japanese pattern), rightside foot-