

GS650G



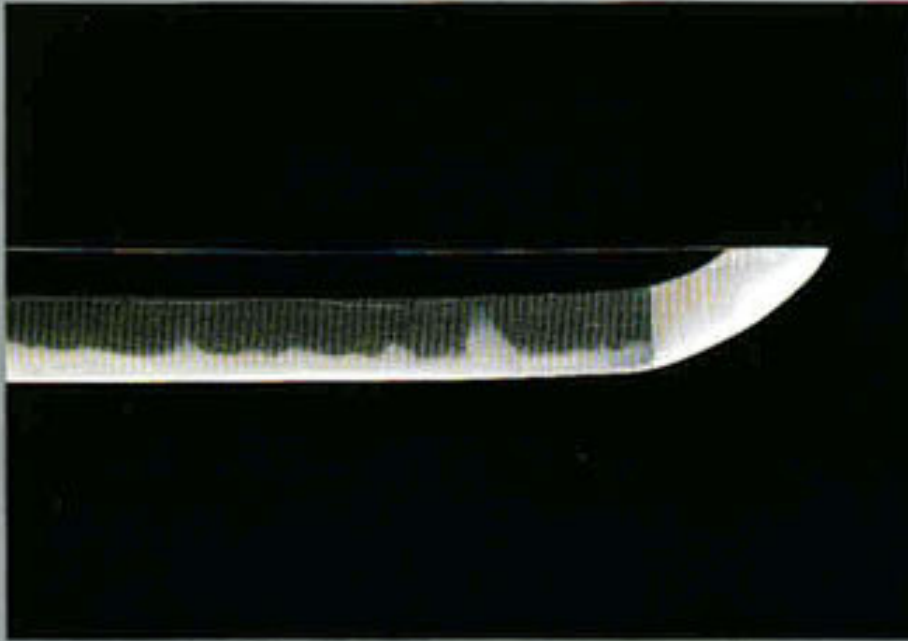
KATANA



SUZUKI

Suzuki GS650G 'KATANA'

The embodiment of the centuries old traditions of Japan's master swordsmiths in a work of beauty and mechanical precision.



Of all the things created by the Japanese over the ages, many believe the Japanese sword or 'KATANA' to be their greatest cultural asset. To the Japanese, it is the embodiment of their ability to find the artistic in everything while at the same time keeping firmly in mind practical limits. This was especially true of the development of the Japanese sword. On the one hand, the steel of which it was forged had to be soft in order that it not break easily. On the other, it had to be hard so that the sword would cut cleanly without bending. To meet these conditions, a whole new steel making technology was evolved which together with the constant pursuit of beauty resulted in the Japanese sword. This is the kind of thinking that lead to the development

of the Suzuki GS650G sports motorcycle, appropriately named 'KATANA'.

The appropriateness of the name is even more apparent when you look at the GS650G 'KATANA'. First, in the beauty of its sharp, functional lines into which so much power and performance have been compacted. Next, in the challenging aggressiveness of its newly developed engine that like the hard/soft steel of the sword blade is responsive to the conflicting needs of both high and low speed power demands. And then in the coiled strength of its suspension system that offers both comfort and performance.

The Suzuki GS650G 'KATANA'. Created by Suzuki for a very special breed of sports riders

Hydraulic Anti-Dive Fork and Twin Dome Combustion Chamber writes a new chapter in motorcycle performance.



flow route of fork oil consequently supporting the increased load on the front wheel, it becomes possible to make soft setting of the front fork. Handling stability is greatly improved without compromising riding comfort. What's more, if a ground shock is encountered while Hydraulic Anti-Dive Fork

Hydraulic Anti-Dive Fork for perfect handling stability. When braking on corners or at times of sudden braking, the front fork is subject to go down, that is its spring compressed by an amount equal to the increased load distribution on the front wheel.

To prevent this, Hydraulic Anti-Dive Fork is employed in the GS650G 'KATANA'. Its usefulness is proven in the racer RG-500. Using this epochal mechanism, in which the pressure of brake oil is used to control the

is in operation, the operation is temporarily suspended in order to restore the soft suspension. That is, the shock is smoothly absorbed. The rider's eyeview and posture remains steady, and while braking on night journeys the headlight beam no longer faces downward. Floating of rear wheel in braking is much reduced to prevent slip spinning. In all, the loss of vehicle stability during powerful braking is greatly reduced. Soft riding comfort and rugged performance is the pleasure offered by the GS650G 'KATANA'.

Twin Dome Combustion Chamber
As every rider knows, the heart of his machine is its engine. The heart of the GS650G 'KATANA' is a newly developed Twin Dome Combustion Chamber DOHC 4-stroke, 4-cylinder engine

that boasts some pretty impressive performance specifications. Maximum output is 72 HP/9,500 rpm. Maximum torque is 5.85kg·m/8,000 rpm.

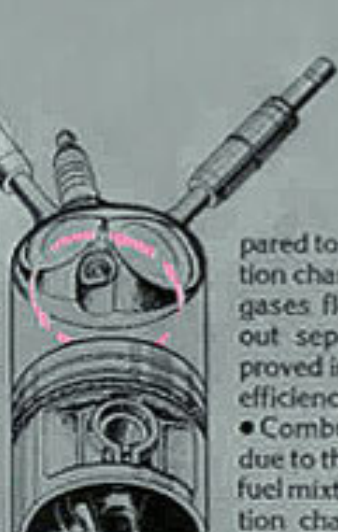
Moreover, this new engine offers exceptional throttle response making the GS650G 'KATANA' a truly high performance sports motorcycle.

- The combustion chamber consists of two oval domes, the centers of which are out of line with respect to the centers of the intake and exhaust valves, surrounded



by a large conical squish zone.

- Each of the two domes has an arc shaped profile that was developed after extensive experimental testing. When com-



pared to a hemispherical combustion chamber, intake and exhaust gases flow more smoothly without separation resulting in improved intake and exhaust system efficiency.

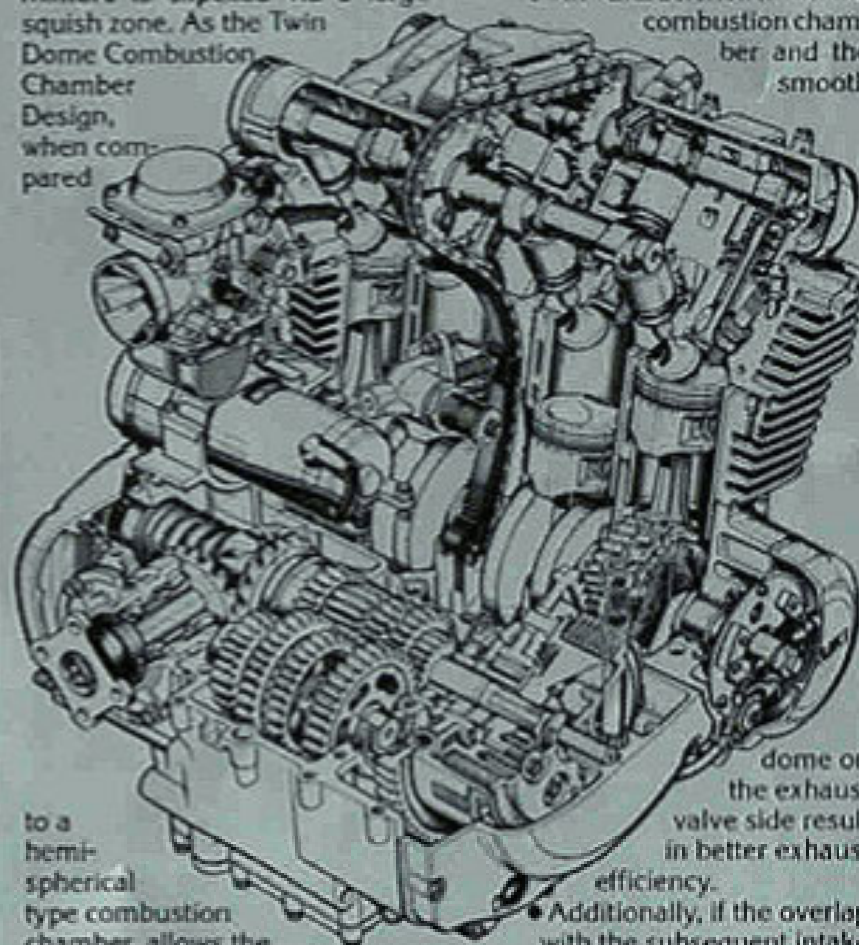
- Combustion is also improved due to the dome profile. The air / fuel mixture entering the combustion chamber swirls around the walls of the chamber, ensuring that the air and fuel are uniformly distributed. In addition, the design enables a flatter piston head in order to minimize disturbance of the swirl. The Twin Dome Combustion Chamber design also makes possible a reduction in the

volume of the combustion chamber. In this way the Suzuki designers were able to provide both a high compression ratio and exceptional swirl characteristics.

- Just before the completion of the compression stroke, the gas mixture is expelled via a large squish zone. As the Twin Dome Combustion Chamber Design, when compared

that the spark occurs closer to the center of the combustion chamber the engine offers faster combustion and shorter burn time. Engine performance is thereby greatly enhanced.

- During subsequent strokes, the swirl characteristics in the combustion chamber and the smooth

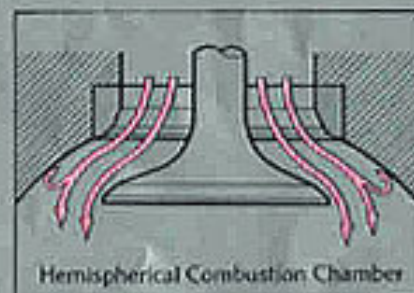
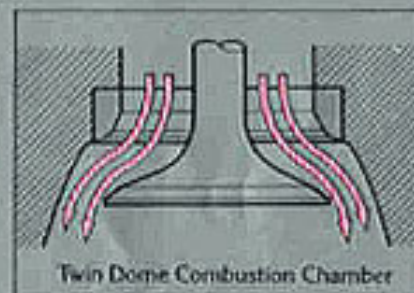


to a hemispherical type combustion chamber, allows the spark plug to be so positioned

dome on the exhaust valve side result in better exhaust efficiency.

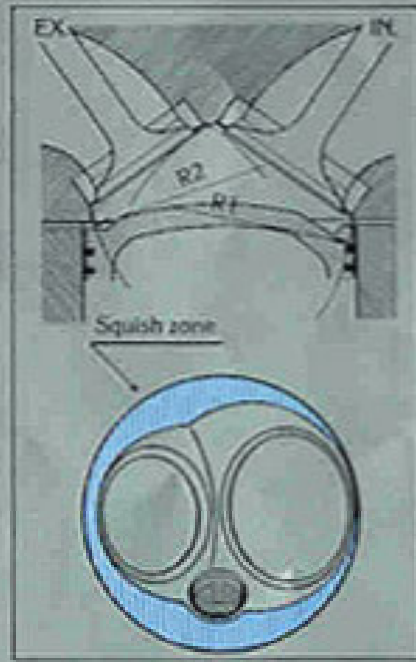
- Additionally, if the overlap with the subsequent intake stroke is reduced, the high com-

burstion efficiency of the economical operation Twin Dome Combustion Chamber engine provides power to spare.



Performance and Quick Response

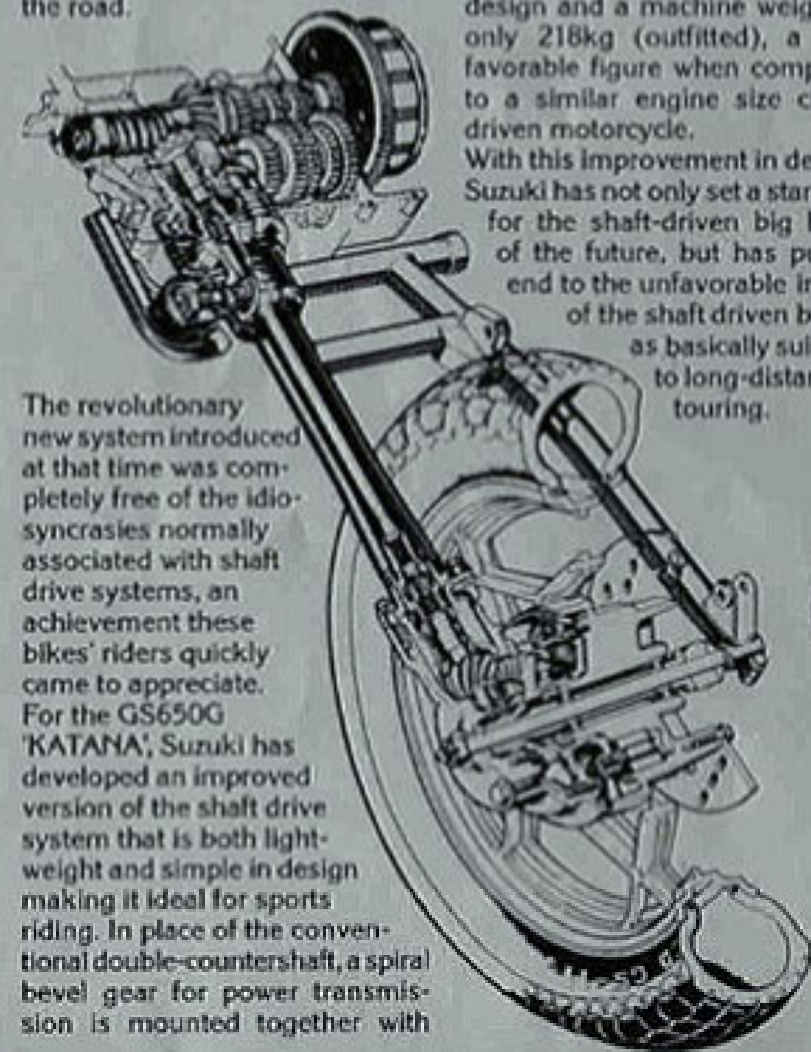
Performance, especially high performance from a motorcycle engine requires more than simple high power output. It also goes beyond the kind of high fuel efficiency people expect today to include such things as quick and positive throttle response. And that's the kind of overall performance you can expect from the GS650G. The new high performer in the incomparable Suzuki GS line up.



Shaft drive, triple disc brakes and a spirited fuel tank and seat design, the Suzuki GS650G 'KATANA'-dedicated to sports riding.

A new shaft design for sports riding.

Suzuki's expertise in designing shaft driven motorcycles was established when its GS1100G and GS850G machines took to the road.



The revolutionary new system introduced at that time was completely free of the idiosyncrasies normally associated with shaft drive systems, an achievement these bikes' riders quickly came to appreciate. For the GS650G 'KATANA', Suzuki has developed an improved version of the shaft drive system that is both light-weight and simple in design making it ideal for sports riding. In place of the conventional double-countershaft, a spiral bevel gear for power transmission is mounted together with

a mechanical damper to absorb shocks on the same axle shaft. This has enabled a reduction of the longitudinal dimensions of both the engine and the wheel-base resulting in a more compact design and a machine weight of only 218kg (outfitted), a very favorable figure when compared to a similar engine size chain-driven motorcycle.

With this improvement in design, Suzuki has not only set a standard for the shaft-driven big bikes of the future, but has put an end to the unfavorable image of the shaft driven bike as basically suited to long-distance touring.

Adjustable rear shock absorbers combine comfort with performance.



The GS650G 'KATANA' mounts a pair of powerful, adjustable rear shock absorbers that make possible a wide variety of settings to suit various road conditions, travelling speeds, weight factors, and the preference of the rider. With 5 possible spring settings, and 4 stage adjustment of the damping force, 20 settings are possible. When taken together with the front fork this makes for a very comfortable ride while at the same time matches the high performance characteristics of the bike. For the experienced rider, or the rider becoming familiar with the GS650G 'KATANA', it promises to make riding both an enjoyable and personal experience.

