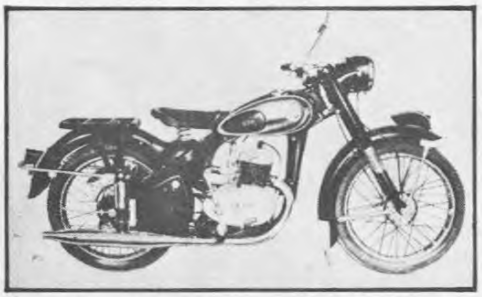
History Of Suzuki

By C. D. Bohon

In 1978 The Company Will Sell One Million Motorcycles Worldwide

Suzuki is the other Japanese motorcycle manufacturer named after its founder. It's also the oldest, with roots burrowing back to 1909, when Michio Suzuki, son of a cotton farmer, after seven years' apprenticeship launched himself at the age of 22 into the cotton loom manufacturing business. His "factory" was an old silk-worm raising hut his father gave him. Michio designed and built his first loom in four days from scraps of iron and wood he promoted in the local neighborhood. His first customer was his mother.

Grinding-off the footpegs of a GS1000 as you navigate a favorite bit of pavement and meditate on how the convolutions of history have brought you to the present moment, you may not think young Michio's sally into the weaving business has much to do with motorcycles. But it does. For Michio built-up his hut-works to be one of Japan's largest and most innovative loom makers, with major export contracts throughout Southeast Asia and even as far away as India. And by 1937 Michio and his son-in-law, Shunzo, (who, following a Japanese custom, he had adopted so he could have a male heir), had decided to build cars and motorcycles. A prototype motorcycle engine was built that year, but, unfortunately, the details of its construction have been lost. The first Suzuki automobile, however, was, we know, an open touring car based on the Austin. The engine was a Suzuki designed 750cc four-stroke side-valver, water-cooled, with 13 horsepower on tap at 3500 rpm—really not bad for that era. It was coupled to a four-speed constant mesh helical-gear transmission. Gearbox and crankcases were cast aluminum.



The Colleda series was the first Suzuki effort that looked like a real motorcycle. The name means "This is the one!" and was coined in 1954.

Suzuki appeared to be off to a good start in the civilian motor vehicle field, but then Japan's militarist government stepped in and informed Suzuki civilian autos and motorcycles were "non-essential commodities" and could not be produced. Instead the government suggested Suzuki turn its attention to munitions manufacturing. It did. From the late Thirties until the end of WWII in 1945.

After the war, in a wildly uncertain economic climate, Suzuki built anything it could—farm implements, electric heaters, pliers, window-raising springs, drum covers—to keep the thousands of workers on its payroll working. The company got back into the loom making business, too, and looked like it was on its way to a smooth economic recovery. But Japan in those days was teetering on the edge of revolution and Suzuki, representing as it did to many, the bad old days and ways of the militarist Thirties (which Suzuki certainly did not profit from) was crushed by an ugly-tempered six-month strike that crippled its production.

Michio Suzuki, now 63 years old, perhaps preoccupied by the way street rabble-rousers targeted his company as an example of capitalist ogrery, pedalled-off frequently to his favorite fishing hole to find some peace and quiet. Perhaps there he remembered how delighted his mother had been when that first loom he made had worked so much better than the one she and his father had worked so hard to buy. It was on one of these fishing trips, perhaps when Michio was passed once too often by one of those smokey motor-bicycles like this fellow,—what's his name?—Honda—was turning out, which were equipped with light engines driving the rear wheel by some Rube Goldberg arrangement of pulleys and belts, that Suzuki decided his company ought to get back once more into the motor industry and make it a little easier for a fellow to go fishing.

After looking at some of the ghastly efforts other Japanese makers were selling, Michio decided that the Suzuki motorbike would have its engine placed in the center of the machine (most makers mounted the motor to the rear of the frame, often above or to the side of the rear wheel; some mounted it above the front wheel). It would also use the bicycle's chain to transfer power from the engine to the rear wheel. Suzuki didn't bother buying-up old war-surplus engines, or buying units from other manufacturers, but instead set-about designing its own

Michio Suzuki founded his company to produce cloth looms back in 1909.

Shunzo Suzuki's bicycle ride to a fishing hole inspired the first motorcycle.

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motor. Every part for the 36cc two-stroke engine was built by Suzuki: the oil seal for the crankshaft was handmade from leather, the flywheel magneto and the high-voltage coil were handmade from scratch. Even the carburetor was fabricated by Suzuki workers.

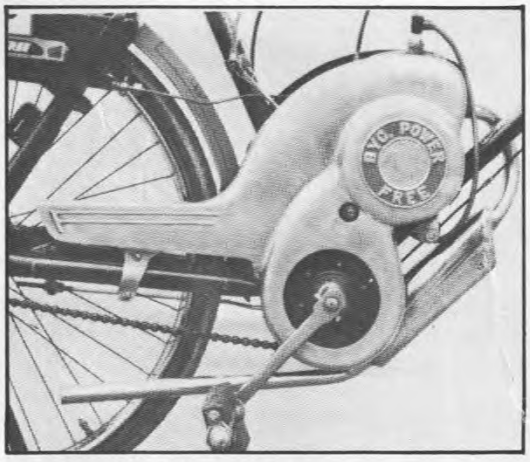
The company had high hopes for its new product, but the first machines, marketed in 1952 called "Power Free" to indicate you didn't need to pedal this bicycle, were disasters. The leather crankshaft oil seal didn't seal at all, the flywheel ran out of control and turned on its own momentum, and the carburetor float didn't float and gasoline flooded-out and sprayed all over everything. Eventually the problems were straightened out, more or less, and the company set out to improve the overall design of the bike. A double sprocket gear system was developed for the machine, which enabled the rider to pedal and assist the engine, or to pedal with the engine disconnected, or to disconnect the pedals and have the engine alone propel the machine. This was such a revolutionary invention in Japan that the country's patent agency granted Suzuki a money subsidy to continue research into motorcycle engineering development.

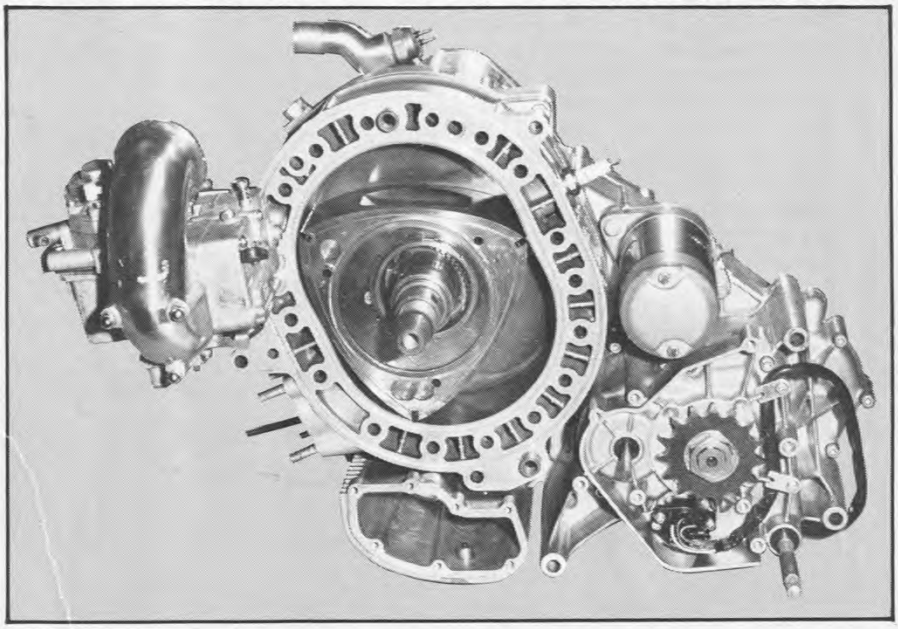
Shortly the Power Free got a two-speed transmission, and was joined within a year by a bigger brother, the 60cc Diamond Free. Within two years of its entry into the motorbike field, Suzuki was building 6000 machines a month—or so it claimed. But early production claims by manufacturers don't always jibe with figures officially recorded with the Ministry of Commerce and Industry. The probable reason for this is that Suzuki Jidosha Kogyo (Suzuki Automotive Industries), as the motorbike division of Suzuki soon came to be called, supplied its motors to a number of motor-bicycle makers who then included Suzuki-produced motors into their manufacturing statistics. A single producer of motor-bicycles might make a few engines itself, use Suzuki as its principle supplier, and when demand was strong enough also buy engines from Bridgestone, Shin Meiwa or maybe Honda. Transmissions for some of the machines might come from Kawasaki. So all of these early production statistics have to be taken with a grain of salt.

Suzuki—now commonly known by its initials, SJK—did not build its own complete motorcycle until May, 1954, when the Colleda (Japanese for "This is the one!") CO was marketed. The Colleda was a true motorcycle, not a moped or "motor-bicycle." It marked a major turning point for Suzuki, which could have continued making engines for others, as did Bridgestone, Kawasaki and a number of other companies, but chose instead to butt heads with industry leaders Tohatsu and Honda and carve-out a seat for itself in the cut-throat world of Japan's seething motor industry.

To do this Suzuki made the Colleda something special. It abandoned the two-stroke motor, which at that stage of development in Japan was unreliable and inefficient, and designed a 90cc (48 by 50mm) four-stroke single-cylinder engine with in-unit three-speed transmission to power the new machine. Suzuki engineers paid particular attention to the details of easy maintenance and reliability, incorporating a reverse flywheel magneto behind the points for easy ignition timing and service. An oil filter was standard. The Colleda was one of the few Japanese bikes of that era to have an automatic advance. It was the first Japanese motorcycle to come equipped with a speedometer. Tailoring its product to satisfy two markets, Suzuki made the Colleda available with either a heavy, but strong, channel frame, or a light "sporty" tube frame. For both versions springing was telescopic/plunger.

The Colleda four-stroke was reasonably successful, but SJK was not entirely satisfied with it. The company's engineers felt a two-stroke motor could be designed that would be just as reliable, develop more power and be cheaper to manufacture. From this belief came the Colleda ST, Suzuki's first "modern" two-stroke, a very pretty, very CZ-ish 125cc (52 by 58mm) single with a cast-iron cylinder and alloy head and four crankshaft bearings. The CO's plunger rear suspension had proved troublesome and was dropped on early STs, leaving the rear rigid. Suzuki was more interested in reliability than comfort. Concern for reliability extended to the machine's electrical components, too, an area which, hard as that may seem to believe now, Japanese manufacturers of that era sorely neglected (the first Honda Dreams didn't even have taillights). The ST got a Suzuki-developed six-pole flywheel magneto to run the ignition and a 25-watt battery-operated headlight. Other Japanese bikes used 15-watt headlights, and magnetos to spark both the ignition and





Above—After Shunzo's "fishing hole inspiration," he ordered the firm to produce a motorized bicycle. This tiny 36cc two-stroke was built in one month and was quite successful. Right—Suzuki would like to forget the money and years spent on the RE5.

lighting. Before marketing the ST, Suzuki ran five prototype machines 10,000 kilometers (6200 miles) each in one continuous endurance run. Fifteen test riders, working in three shifts, saw to it each bike covered at least 250 miles a day. This may not seem like much in 1978, but keep in mind Suzuki had no test track then and public roads were both crowded and as a rule, unpaved.

The new Colleda was popular and established Suzuki as a substantial motorcycle manufacturer. In 1956, following-up on the ST's success, the company introduced the SJK Colleda TT, a 250, and Suzuki's first twin. This bike had a rugged pressed-steel backbone frame, Earles fork and rear swing arm. The headlight was heavily cowled and, sprouting from stalks on the side, were the first turn signals mounted in what is today the standard position. Below the headlamp was a standard-equipment foglamp. With a four-speed transmission and 16 horsepower on tap, the "big" SJK could run as fast as the OHV Meguro 500cc single and the sidevalve Rikuo 1200cc Harley-like vee-twin. Suddenly Suzuki was a company to reckon with in the motorcycle market.

In 1957 Suzuki became the second Japanese company, after Honda, to begin mass-producing motorcycles on automated assembly lines. Soon the company was trying-out some venturesome ideas, including an electric starter-equipped moped, the Selped, which was a major success, and a bike with an electro-magnetic clutch, which was a failure. In 1960, a version of the 250, the TA, had coupled, hydraulically-actuated front and rear brakes. The system was actuated by pressure on a foot pedal which, operating via a single master cylinder, engaged the front and rear brake drums, the rear drum getting pressure at a ratio of nine-to-five over the front brake. This was to minimize nose dive and prevent wheel lock during hard braking. The front brake could also be engaged by a conventional hand-lever/cable arrangement, either independent of, or in conjunction with, the hydraulic system. It was a good design and worked well, but the public didn't like it and didn't buy it, just like they didn't buy today's Moto Guzzi with integrated braking.

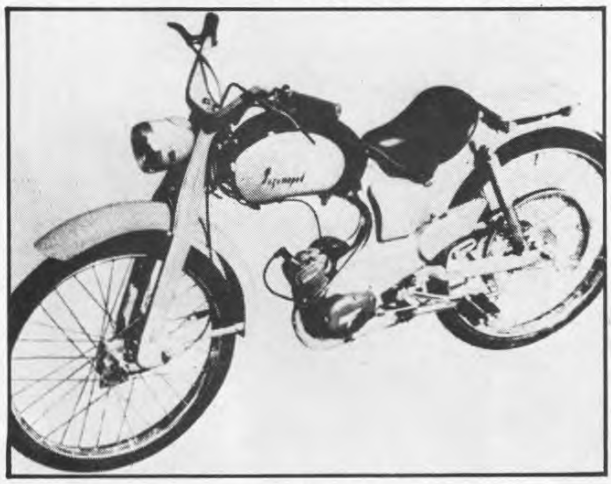
For a while it looked like Suzuki had a good chance to challenge Honda as Japan's No. 1 motorcycle manufacturer, but the company abandoned that chase and instead decided to branch-out into car-making, turning over one entire factory to production of the Suzulight, Japan's first minicar and that country's equivalent of Germany's Volkswagen. The Suzulight was based on the British Lloyd but was powered by a Suzuki-designed 360cc two-stroke motor. From the late Fifties Suzuki was as much concerned—if not more so—with establishing itself as a major manufacturer of automobiles and light trucks as it was with building motorcycles.

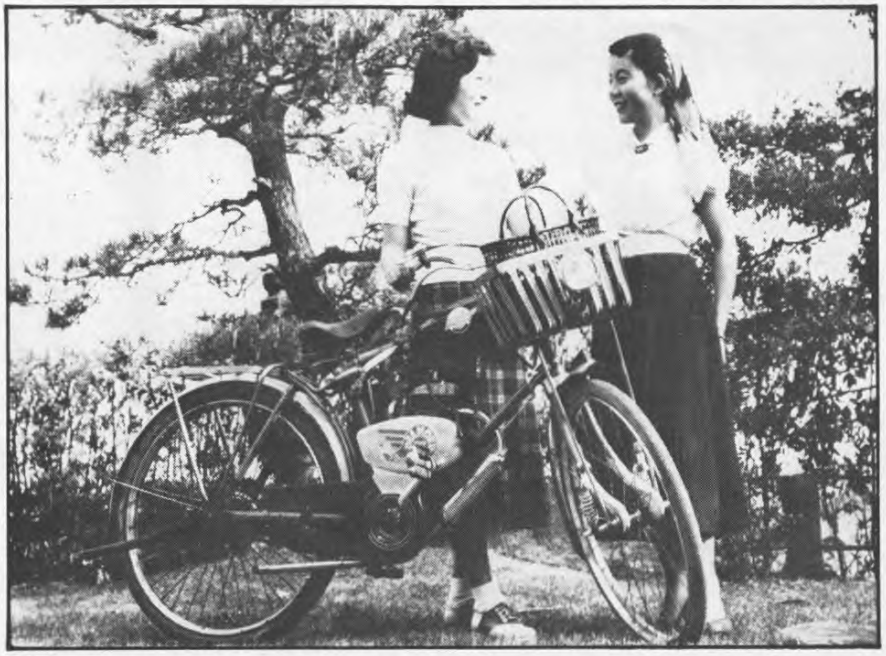
But Suzuki nonetheless made it into the No. 2 spot among motorcycle makers, holding 17 percent of the home market by 1964. A few years earlier the company had followed Honda to the Isle of Man, fielding piston-port 125s which ran 9 mph down on the Hondas and 14 mph down on the winning MV Agusta. The next year Suzuki tried rotary disc valves on 125 and 250 machines at the Island. Their best rider in the 250 event could only manage 82.5 mph, not even in the same league with Honda's winning 98.4 mph.

Things changed in 1962. Suzuki snared ace rider and engineer Ernst Degner away from East Germany's MZ, a company with consummate knowledge about what makes a two-stroke go fast. The 1962 50cc Suzuki GP machine, a rotary-valve single, put out 9.0 horsepower at 11,500 rpm and got to be World Champion. By 1967 Suzuki's GP 50 was a twin with 17.5 hp on tap at 17,300 rpm. And the company had built a three-cylinder 50cc engine which developed 19 horsepower at 20,000 rpm and was equipped with a 14-speed gearbox to keep the motor spinning in its 500 rpm powerband, but the FIM, aghast at this technological onslaught in what was supposed to be the "tiddler" class, banned it.

In 1963 Suzuki won the World Championship in the 125cc class with a two-cylinder rotary-valver putting-out 26 horsepower at 12,000 rpm. By 1967 the vee-four RS67 could toss-out 42 horsepower at 16,500 rpm from its 124.6cc. For 250 class races by 1965 Suzuki could dish-up the RZ65, a brilliantly conceived but temperamental square four that could develop 58 horsepower at 13,000 rpm and propel its rider to speeds in excess of 145 mph.

In conjunction with this racing effort, Suzuki expanded sales into the world marketplace, opening branches in Britain, Europe, and the USA. The U.S. branch, a wholly-owned subsidary of SJK, was established at Anaheim, California in 1963. By that time Suzuki was the world's largest manufacturer of two-stroke motors and quickly seized the No. 2 spot in U.S. sales behind Honda. Suzuki did this by providing the U.S. motorcyclist with some positively stunning little machines, in particular the 250 X-6 Hustler, introduced in 1965, which delivered searing acceleration from its six-speed 29-horsepower motor. The company's Posi-Force lubricat-





The "Suzumoped" of the late Fifties replaced motorized bicycles such as the Diamond Free (at right) and put Suzuki on the road to financial security as sales soared into the tens of thousands for several years. Suzus helped perfect mass production.

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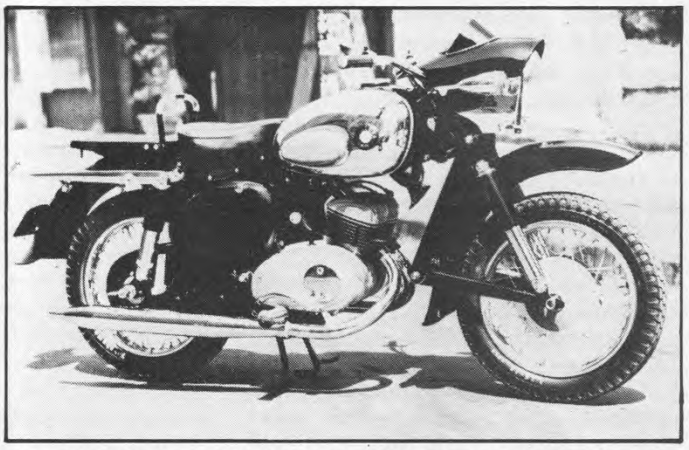
ing system, which eliminated the need for mixing oil and gas in the fuel tank, was introduced in 1966. In 1967 the company entered the budding superbike field with its sturdy 500cc Twin, the Titan, which surprised a lot of folks who claimed an aircooled two-stroke couldn't be built bigger than 350cc because of heat-dissipation problems. In the early Seventies came the splendid three-cylinder two-strokes (which have been described as being "as reliable as stones" by motorcycle magazines), cooled by "ram air" induction, or water-cooling, a modern era first for the GT750.

Meantime Suzuki hadn't neglected the dirt, charging into international motocross competition in the late Sixties. Suzuki's first efforts at designing a dirt racer began in 1965, but the company didn't race until 1967 with 250cc RH machines. Two men combined to make Suzuki's motocross effort a success: Engineer and team manager Ishikawa, who holds a Masters degree in mechanical engineering from Michigan State University, and Sweden's Olle Pettersson, an experienced motocross rider who went to Japan in 1968 and provided Suzuki's engineers sound practical advice on how to design their bikes to meet the European elite. By 1970 Suzuki's RH dirtsters produced 30 horsepower and weighed just over 194 pounds. Joel Robert and Sylvain Geboers rode them in GPs and shattered European domination of motocross. Not long after, Roger DeCoster emphasized the new Japanese superiority by taking a Suzuki RN72 to the 500cc world title.

Recently, because of U.S. rider tastes and EPA regulations, we've seen Suzuki turn away from the two-stroke motors which made it famous, and develop some very sporting, but nonetheless "me too" four-strokes. Suzuki didn't plan to be a "me too" four maker. Remember the RE5 rotary? Had the public accepted that machine, without a doubt Suzuki would have introduced a whole line of rotary-engined machines. When that idea flopped, the company had to scramble to come up with a new game plan. The safest bet seemed to be to produce what riders were buying from Honda and Kawasaki: big four-cylinder overhead cammers. Only Suzuki chose to punch the horses, pare the fat, and come up with something just a little special among the four-strokes. Only time and sales will tell us if they've succeeded with the GS approach.

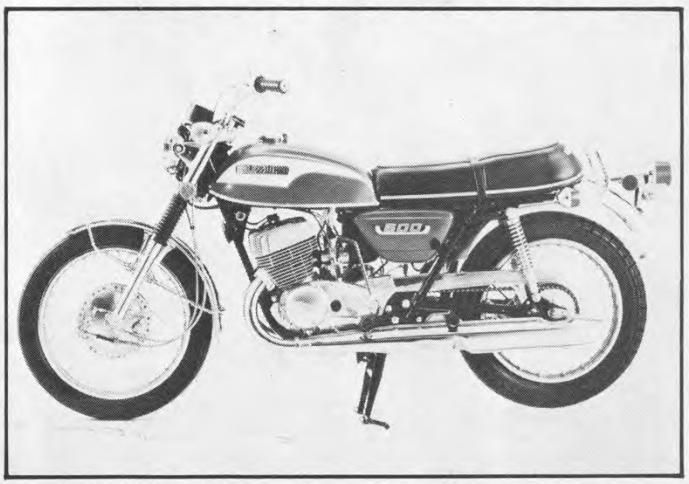
Before we leave Suzuki, let's put one rumor to rest: The EPA did not kill the two-stroke road bike in the USA; the American rider did. Japan's anti-pollution laws are the toughest in the world, far tougher than the latest California standards. But in 1978 the Suzuki Cerro became the first two-stroke engined automobile to meet Japan's exhaust emission standards—standards so tough *no American automobile can meet them.* Yet the Suzuki did. The motor: a 28hp 539cc three-cylinder air-cooled *two-stroke.* M

An early four-stroke in the Colleda series (1954) had a three-speed transmission and produced four thundering hp at 5000 revs from 90cc. Weight also thundered: 188 lbs.



The 1956 Colleda TT 250 had impressive technical specs but was a styling debacle. It was fast (81 mph), had a four-speed and featured a fog lamp below the huge headlight.

Suzuki put itself on the map in America with the 1965 X-6 Hustler, a two-stroke twin with oil injection that performed equal to the 500cc four-strokes of the time.



The world's first 500cc two-stroke twin was expected to run hot and seize by almost everyone. Instead it was the most-often picked "Best Buy" in motorcycle history.