The SUZUKI COBRA THE BIKE WHICH COULDN'T BE BUILT!

The bike which couldn't be built - the Suzuki 500cc Dual Stroke". So went the proud boast of the Suzuki advertisements of the late 60's. For a buying public conditioned to two-stroke BSA Bantams and Villiers engined motorcycles, the 500cc Cobra twin was simply too large to run without seizing. Only Scott had been able to make large capacity two-strokes successfully and then only by using water-cooling, but there had been others who had tried hard to succeed. For example, in the 20's, Dunelt made 500cc single cylinder two-strokes for over seven years. Putting out a mild 5hp the Dunelt had tested the large two-stroke market but had not exactly tested the limits of metallurgy.

The Cobra from a sales pamphlet

Two-stroke manufacturers however, were anything if not innovative and in 1921 the English Stanger factory built a 538cc two-stroke V-twin which utilised a spring frame. The engine however, not surprisingly, tended to overheat and foul its plugs and the company went under in 1923. The Germans have always been innovative in the field of two-strokes (witness Maico, Zundapp and DKW) and from the early days they tried to build large two-stroke motorcycles. For example the Vis Fabrik built the interesting Vis-Duplex in 1924. This machine was a horizontally opposed two-stroke twin of 496cc built "in line" with the duplex frame.

The Vis-Duplex, much like similarly bikes suffered from overheating of the rear cylinder and was only built in very limited numbers. DKW had more success with a series of 500cc and 600cc air and WATER-COOLED twins in the late 20's and 30's although they also experienced overheating, fouled plugs and abysmal fuel consumption, particularly under racing conditions. Their racing 250cc and 350cc supercharged two-strokes gained much greater success. Such innovation continued with the German Schliha Company building some strange 498cc and 596cc two-stroke singles in the early 30's. The interesting thing about these short-lived two-stroke bikes was that they utilised overhead valves (I'd like to know more about these machines!).

Puch, tried with its split singles to give the 500cc two-stroke an advantage pre-war and Zundapp experimented with a twin in the 50's but no-one succeeded in putting a civilised large capacity two stroke on the road in any large numbers until Suzuki launched the T500 in 1967. Not only did they make a big two-stroke that worked but they built one which was more reliable than many four-strokes of the time, required less maintenance and featured oil-injection direct into the crankcases along with massive and durable main roller bearings. The Cobra was also disgustingly fast for its capacity and put many contemporary 500cc and 650cc four-stroke twins to shame

In Australia the T500 was also exceptionally good value and proved to be what a large number of motorcyclists were looking for - a simple, robust and comfortable machine able to cruise effortlessly, across our vast distances, admittedly with some vibration and a prodigious thirst. Its value was clear, as for example in May 1970 the T500 sold for $775 as compared to a Kawasaki Mach III which sold for $965, a Honda CB450 for $905 and the Triumph Daytona 500 which sold for $895. 1967 first saw the introduction of the Suzuki 500 twin. Initially known as the 500/FIVE (to celebrate its five speed gearbox) the model was possibly the first large capacity Japanese bike to demonstrate some sporting potential. Japanese technology was just waiting to be unleashed on the unsuspecting British motorcycle industry and the Cobra was to herald the arrival of the Superbike era. Sadly for the Suzuki 500 its generous performance and sound engineering was soon to be eclipsed by the release of the Honda 750 and the Kawasaki 500 triple a year later

The 500/FIVE itself was a short-lived model, seemingly only seen in any number in the United States, and was quickly replaced by the Cobra. The most significant change to the original model was given little publicity at the time despite its dramatic effect. The swingarm of the 500 Suzuki was actually changed from 52.7 inches on the 500/FIVE to 57.3 inches on the Cobra. This is a very radical change on any bike but on the Suzuki 500 the longer wheelbase contributed to the bikes reputation for sure-footed and stable handling. For Australian riders it was also very useful as the extra length of the machine made for a comfortable tourer with plenty of room for mounting carriers, saddlebags or panniers.

The first Cobra from a sales pamphlet - note the short wheelbase.

The Suzuki Cobra was a relatively simple two-stroke which utilised the same 70mm bore and 64mm stroke as its 250 trail-bike cousins were to use (and in turn as the 750cc water-cooled triple would also use). The Cobra had a true capacity of 492cc and a mild compression ratio of 6.6:1 but still managed to produce 46hp at 7000rpm. The Cobra produced this power through a whopping great pair of 34mm Mikuni carburetors - the biggest the company had ever used and only to be seen again on the company's 400cc trail and motocross singles! Despite the large carbies the engine is very tractable and does not require great amounts of throttle to move away from a standstill. This tractability could be attributed to what the Suzuki factory at the t ime described, wait for it, as the "Homo-pressure" type carburetor (I'd like to know what the Japanese PR man's real intention was when he came up with that one)? The Mikuni's actually have probes in their intakes (this is getting worse!) which compensate for changes in altitude and pressure.

In fact one of the pleasant discoveries of riding a 500cc Suzuki twin is to find that theories of buzzing two-strokes do not apply to this engine. The Cobra produces readily usable power from low revs and does not need, nor necessarily like high revs, in order to obtain a good rate of knots. The Cobra puts out 37.5 lb ft of torque at 6000rpm, compare that to the contemporary BSA 650cc Lightning which produced 39 lb ft of torque - at 5750rpm and you'll see what I mean. The big carbies carry two penalties with them, the first and easiest to live with is the intake noise. Despite the large airbox and air filter the engine intake noise is very loud and cannot be avoided. Give the throttle a twist and the resultant howl from the carbies drowns out the rather uneven plip-ploppy exhaust note. If you were pulled up for speeding on a Cobra it was hard to say you didn't know how fast you were going, you certainly didn't need a speedo to tell you, the superb intake howl told you clearly enough.

The less useful attribute of the big carbies was fuel consumption. Thirty-five mpg wasn't all that good at high speed although fourty-five mpg was more common around town. At country cruising speeds fifty mpg was not impossible. The low rev power available from the engine permitted the factory to build a fairly high geared gearbox for a 500cc motorcycle. The Suzuki copes well with touring pulling 3000rpm at 50mph and 4000rpm at 65mph. The Suzuki indicates 80mph at 5000rpm and the engine feels comfortable at these speeds and not at all fussed. The bike will top at least 110mph (theoretical top speed being 117mph). I have seen 116mph on the speedo in 4th gear; but allowing for speedo error this could not have been more than 102mph.

The Suzuki 500 was taken to the Daytona 200 mile race in 1968 and in a very mildly modified form it proved fast and reliable finishing 5th and 9th out of a field of 80 machines. This ability to run fast and strongly without any adverse effects on the motor contributed to the bike's instant popularity with the production racers. In England for example the Suzuki ran basically unchanged and without special cylinders or exhausts and won the Isle of Man Production TT Races twice.

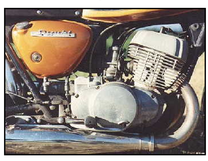
Barry Sheene rode a road racer version with the help of frame maker Colin Seeley and won several significant races on it. Jack Findlay went on to win a world championship race (the 1971 Ulster GP) on a 500 Suzuki that was so similar to the production engine that it is still said to be the closest thing to a championship victory on a road bike. The Cobra evolved into the T500 Titan in 1970 and eventually into the GT500 in 1976.

The more common Cobra. One with a longer wheelbase

The model finally faded into obscurity at the end of 1977. A production span of 11 years is nothing to be sniffed at and indicates that the Suzuki was well put together and was able to enjoy a loyal following. the low purchase price maintained throughout its life probably contributed to its popularity. The Cobra was produced for 3 years before the Titan was introduced. The Cobra didn't run for this long without changes and except for the swingarm mentioned previously, the most significant changes took place in the motor. The pistons and cylinders were changed in 1969 and naturally enough early pistons should only be used with early cylinders.

The Cobra pistons can be easily recognised by the transfer port windows in the piston skirt. These windowed pistons not only cost more to manufacture but were reputed to be stronger than notched pistons due their full circumference skirts. In practice if the engine was mightily abused and revved beyond 7 grand for too long, as for example on the race track, there was an off chance that the piston skirt would fracture and fall off with disastrous results.

The windowed pistons were also claimed to run quieter than notched pistons. This is unlikely in practice and significantly the piston to cylinder clearance of a Cobra piston was 0.0071-0.0075 inches. The later pistons ran with a much closer tolerance of 0.0026-0.003 inches. The early Cobra barrels can be recognised by the fact that they have only 10 fins while the later ones have 11 fins and slightly altered ports. Whilst few of the early barrels survive there are heaps of the early windowed pistons around.



The engine has a certain presence

One shop in Perth has boxes of the early pistons sitting around gathering dust. Suzuki 500's are noted for piston longevity and the bike is likely to wear out before the motor requires a rebore, barring bad maintenance or extreme rider abuse, of course. Another change occurred after engine number T500-10659. From then on crankshafts were supplied with larger diameter con-rods (the outer diameter of the big end end of the rod was increased from 41.5mm to 46.5mm. If a rebuilt crank is to be used in an early engine then the crankcase stuffing ribs must be ground down, on both upper and lower cases, by 0.040 inches.

A solid looking motorcycle

Most importantly, Cobra gearboxes took a recommended 1200cc of oil whilst later models (from the T500L on) took 1400cc. Prolonged high speed running could starve fourth and fifth gear of oil and overfilling was ineffective as the extra oil merely flowed into the clutch chamber. The engine needs to be split and a rubber partition installed on the primary oil transfer chamber of the lower crankcase half. Suzuki supplies a part for this purpose (part no. 99104-08800).

Riding the Cobra exposes the Cobra's weak points. The suspension, particularly the front, is too soft and under-damped. At speed the front end pogoes up and down although never enough to get the steering out of shape. One way to stiffen the forks up is to add some heavier oil and to place a spacer inside the forks to give the springs some pre-load. A harder nut to crack is the front brake. The front brake should be pretty good and it was by the standards of the day. The front brake was a full width 8" twin leading shoe drum and its fitment received rave reviews from the press at the time. One American magazine said as much, "the brakes are superb with predictable action and high fade resistance. The front unit can be encouraged to completely stop the front wheel at any speed". As I found the front brake absolutely useless, during the test ride, I can only assume the other bikes that particular magazine tester had ridden were not fitted with brakes from new! The Cobra's front drum is not a good brake for a machine of this weight and power, requiring far too much lever pressure to be effective.. It is interesting to note that praise for the Suzuki's front drum diminished markedly after Honda released the disc brake on its new 750 Four. For some reason the Suzuki factory did not release a 500 Suzuki with a disc brake until 1976. Well overdue and too late to save a worthy motorcycle from extinction.

SPECIFICATIONS - SUZUKI COBRA - YEAR: 1968

ENGINE: Air cooled two stroke twin, bore 70mm x stroke 64mm
CAPACITY: 492cc
GEARBOX: 5 speed
BRAKES: Front: 8" twin leading shoe drum Rear: 7" drum
DRY WEIGHT: 412 lbs
TOP SPEED: 11O MPH
ACCELERATION: Standing 1/4 mile - 13.8 sec
POWER: 46 HP at 7000 rpm
TORQUE : 37.5 lb ft at 6000rpm
ENGINE No.s: 12518 - 34218

SUGGESTED READING
SUZUKI TWO STROKES__ROY BACON: OSPREY 1984
SUZUKI 500 TWIN__OWNERS WORKSHOP MANUAL: HAYNES
JAPANESE MOTORCYCLES_C.J. AYTON: MULLER 1981
CHILTON'S REPAIR MANUAL_CHILTON BOOK COMPANY 1981
CYCLE WORLD ANNUAL__CYCLE WORLD 1968

SUZUKI 500 FANS - T500 and GT500

The road machines - the T500 and the GT500

THE MIGHTY SUZUKI TITAN

THE BRUTE WITHOUT BULK!

The Suzuki Titan was a shot in the arm for lovers of fast and loud motorcycles who could overcome the blanket dislike of two-strokes that was common at the time. As discussed in the article on the Suzuki Cobra (see Australian Classic Motorcycling Issue No. 20), the predecessor to the Titan, this was one 500cc twin which had solved the un-reliability, peakiness and generally messy nature of two-stroke riding. The Suzuki 500 was a relatively smooth, ultra-reliable, economical, light machine which provided an impressive high speed, good acceleration and stable handling at a very reasonable purchase cost.

The off-set to all of this was noticeable vibration through the pillion pegs at over 60 mph (nothing compared to a certain 650cc British twin, though), a cloud of blue smoke from the ample exhausts when cold, significant piston/ring rattle at low revs (sometimes sounds like a can of nuts and bolts has been dropped in the inlet port) and of course a nauseating "bop, bop, burble, pop, bop, bop, burble, pop" from the pipes at low speed which could never replace the sound of a Norton Commando or a Triumph Trident on song.

1970 Titan riders were tough Marlboro men, presumably!

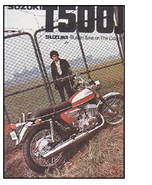
Of course this was all irrelevant to the average young motorcyclist of the time who was being asked to choose between aging (even then) British twins, Honda 450's and Yamaha and Kawasaki 350's. The Titan was a full 500cc, a most popular size at the time, when 650cc was considered big. Many young riders entering the rapidly growing bike market did not have pre-conceptions of what a bike should be. They were looking for fast and flashy bikes and performance was the name of the game. The big two- strokes were delivering the performance and beginning to dominate the Grand Prix, though that was really of little interest here before the age of live television coverage or video.

Helping to sell machines like the Suzuki 500 was their superior performance over comparable machines and their ultra-reliability and low maintenance. Hard as it is to admit now, the British competition was its own worst enemy, as perusal of contemporary journals will reveal. Quality control was at an all time low, model changes were often made for the worst, cost cutting led to dreadful bastardised machines and reliability on the road was truly dismal. Simple things such as constantly breaking cables, vibration, and more serious mysterious seizures, short-lived bearings and burnt valves all helped to persuade the young buyer to go Japanese. No wonder rattly two-strokes became machines of some standing and attracted a loyal following that is still strong today.

A little disclaimer at this point perhaps. British bikes were, and are, capable of giving good service when ridden and maintained in the manner their designers intended. There were also serious faults with the British industry in the 60's and while the performance of British bikes slowly improved it was often at the expense of reliability and smoothness. But British bikes have a charisma and an appeal that is at the heart of the Classic motorcycling movement and that is why enthusiasts collect bikes as varied in performance and value as Vincents, Panthers, Ariels and Bantams. No matter what make it is or how bad it performed at the time an old bike has a nostalgic value to someone that can never have a price put on it. This no doubt will even be the lot of early Japanese machines as the late 60's/early 70's rider grows older and nostalgic for the good old days that they experienced!

The Titan at it's flashiest - the T500J of 1972

Anyway, the last time we were talking about the Suzuki 500 twin we discussed the questionable advertising hyperbole that accompanied the release of the Cobra i.e. "the bike that couldn't be built" etc. Well by the time the Titan was released in 1970, this was clearly arrant nonsense and the factory was proclaiming the machine's seemingly effortless power instead. The bite of the "Cobra" was exchanged for the strength of a "Titan". Understandable, for by now Kawasaki had released the 500 Kawasaki which had eclipsed nearly every bike for sheer power, acceleration and speed, albeit at the expense of handling and reliability! Thus the Suzuki advertisements of the time highlighted the steroidal, masculine features of the Titan instead.



Is the on-looker tougher than the bike - the long and lean T500J model of 1972

"THE BRUTE WITHOUT BULK", the pamphlet leads, "this is the giant of the motorcycle clan - yet it looks clean as a whistle with the grace of a gazelle. Does this make the point? Well, demand has caused this to be the first mass-produced 2-stroke, twin-carburetor 500cc model in the world. A cool 6,500rpm puts the full 47hp at your command with a top speed of 192kph. When you want to stop, a dual safety system of oversized brakes and super-grip high speed tires quiets down the brute right now....smoothly. The non-glare, speedometer and tachometer is a vote for safety. Big features and small - such as Suzuki's famous Posi- Force Lubrication and the newly-designed fuel tank luggage rack - all set out in a yummy Candy Colors with red-lined tires make this the fair- haired brute you've been looking for."

"The fair haired brute you've been looking for"! Somehow I think the Suzuki ad-men got that bit of market research all screwed up. They also had a nice turn of phrase when they described the auto lubrication system..."Posi-Force lubrication is the world's most advanced lubing system...it spews pure oil, never polluted by fuel gas, directly over the ....big end" etc! A touch of class?

A 1972 T500J model with wrong mudguards and tail-lights, but hey who's being picky?

For those who didn't read the article on the Cobra, I'll just recap a bit. The Cobra, being the bike that couldn't be built, was a sensation in 1968. A big two-stroke that ran faultlessly, didn't foul plugs, performed like a 650 four stroke; but was light and cheap to buy. It had strange handling, the thirst of a cane-cutter and by today's standards woeful brakes. It looked kinda dumpy too, in typical 60's Japanese style, with a velour seat, a short wheelbase and a watermelon shaped petrol tank. To many of the buying public though it was a hit, everything worked together fine. The engine and gearbox are well balanced for the road, the engine comes on strong over four thousand revs, (up to a claimed 47 bhp at 6,500), and there is no need to constantly screw open the throttle around town as there is ample low down pulling power. Not what the un-initiated would expect from a two- stroke!

So what changes had been made to the Cobra to convert it into the more appealing Titan. Well some obvious changes were made to the appearance. The petrol tank was now a more pleasing shape, reminiscent of a familiar British design, as was the more conventional seat. Additionally, the front mudguard was much lighter and less valanced, the sidecover and oil tank were redesigned, the rear shocks were no longer shrouded and had exposed springs, American style cow-horn bars were introduced, new instruments and a passenger grab rail. Whilst the Cobra had the headlight cowl, instruments and rear shocks all colour co-ordinated, the Titan was very shiny with abundant chrome wherever possible.

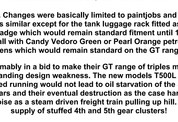
The Titan was designed to bring the Suzuki 500 into the 70's, its styling was much flashier, less discreet and more colourful. The Cobra had more in common with Suzuki's earlier mid 60's styling efforts with its bulbous, tall tank, complete with chrome side panels and knee rubbers, large sidecovers and studded seat.

Enginewise, the Titan was little changed externally; but gone for good were the Cobra's 10 finned barrels to be replaced by 11 finned barrels with altered porting and new stronger pistons with larger piston porting. Quieter running was possibly one benefit of the new pistons as the piston to cylinder liner tolerance was much closer in the new motors. One outcome of the new pistons was a spate of piston skirt failures when the standard pistons were used in a sporting mode, i.e. over-revving the motor for extended periods. This was easily solved by using the heavier, stronger GT 750 pistons whose engines had precisely the same bore and stroke dimensions as the 500.

The only other significant change to the motor was the dropping of the 34mm carburettors for 32mm Mikunis. There is no evident loss of power as a result and the intake howl is much the same; but, fuel consumption dropped markedly from 35mpg on the Cobra to around 50mpg on the Titan. Cruising at 65mph in the country it was possible to return 63mpg, which is not to bad on a loaded two stroke now is it?

Whilst the changes between the Cobra and the Titan were quite marked there was little change to the character and performance of the machine. Feel and handling had been improved by the use of a longer swingarm much earlier and the test riders of the time while unable to get overly excited about the handling commented favourably on the bikes open road stability.

This stability was enhanced by the standard fitting of a friction steering damper.



A beautiful bike in its day the T500R of 1971,.

Model changes were pretty limited for the Titan for a number of years. Changes were basically limited to paintjobs and minor ancillaries for four years. The T500-II of 1969/70 came in Candy Gold with a Suzuki "S" badge on the tank, the T500-III of late 1970 was similar except for the tank luggage rack fitted as standard. 1971 saw the T500R arrive in memorable Candy Lavender (purple to you and me) and White and with a new metal "Suzuki" tank badge which would remain standard fitment until 1975. In 1972 the T500J was gaudier than ever with large chrome plastic sidecover ornaments. This model was probably the most attractive of all with Candy Vedoro Green or Pearl Orange petrol tanks. A noticeable change for this year was the adoption of a larger tail-light lens which would remain standard on the GT range as well.

1973 and 1974 saw the death knell for T500's as we know them. Presumably in a bid to make their GT range of triples more attractive the Suzuki factory de-tuned the T500. Significantly they also modified the lower crankcase half of the motor to resolve a long-standing design weakness. The new models T500L & M were designed to accommodate 1400cc of gearbox oil, some 200cc more than the earlier models. This modification ensured that high speed running would not lead to oil starvation of the 5th, 4th and 3rd speed gear clusters. The bane of T500's until now, the inadequate gearbox oil supply could, over time, lead to pitting of the gears and their eventual destruction as the case hardening deteriorated. It is easy to tell if the gearbox on an early model is on the way out, when riding the bike the gearbox will make as much noise as a steam driven freight train pulling up hill. Perusal of any T500 enthusiast's garage will unearth a comprehensive supply of stuffed 4th and 5th gear clusters!

The cynical marketing exercise of de-tuning the Suzuki T500 to make the GT range more attractive did not work. The GT380 and 550 triples were overweight, peaky and unattractive. The T500 had a loyal following and still sold steadily if unremarkably. The subtle changes to the inlet port and the carburettors had robbed the T500 of approx. 3hp and returned the fuel economy to near Cobra standards. The Suzuki factory has a lot to answer for!

The following chart illustrates the factory marketing ploy;

MODEL WEIGHT BHP TORQUE PRICE

1972 T500J 400lbs 47 @ 7000rpm 5.3 kg/m @ 6000rpm $895

1973 GT380 392lbs 38 @ 7500rpm 3.9 kg/m @ 6000rpm $939

1973 GT550 412lbs 50 @ 6500rpm 6.1 kg/m @ 6000rpm $1215

1973 T500K 400lbs 44 @ 6000rpm 5.4 kg/m @ 5500rpm $925

Other than the gearbox, there was no real change for the better in 1973 through to 76. In 1976 we saw the Suzuki factory finally make some significant changes for the better, well overdue and as usual with Suzuki, some bad always accompanies the good.

The 1975 GT500 was a great advance on the Titan featuring a bigger tank, electronic ignition and a front disk brake...and about time too!

The year 1976 saw the unveiling of the GT500, same motor, same strangled power; but, the brakes were finally sufficient to cope with the bike's weight and power. Despite statements to the contrary by enraptured road testers the Suzuki T500's twin leading shoe drum brake had always been woefully inadequate. The GT500 wore a single front hydraulic disk brake, identical to that which had been fitted to the GT380 and Gt550 since 1973! The forks were similar as well having 35mm stanchions and identical triple clamps to the GT range. The instruments were also identical to those found on the GT range.

The 1975 GT500 engine was a significant advance

A non-GT item of inestimable value was the fitment of the Pointless Electronic Ignition (terrible name that!) or PEI system which disposed of the twin points/alternator used on the T500. The PEI system consisted of a rotor, CDI unit and single coil which fired on every stroke (i.e it has a wasted spark). A simpler system, which does not need adjustment and provides a more powerful spark and yet Suzuki had been using this system on their 250 trailbikes since 1970! Why the wait, Suzuki?

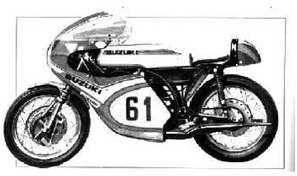
The last of the line in 1976, the GT500

Another example of parts rationalisation was the use of the GT750 fuel tank on the GT500. A cheap plastic insert replaces the unnecessary radiator access flap on the front of the tank. The tank gave welcome extra range to the 500; but didn't really suit the machines lines. A new seat accompanied the change of tank. Thus modified the Suzuki 500 twin saw out its days and in 1977 the GT500B was the end of the line and hardly any of this model were ever delivered by the factory. The last few GT500s on the showroom floor were heavily discounted and moved away to make way for the new four cylinder four stroke range. The King was dead! Significantly the GT triple range, which had stifled development on the Titan, died with it. There was not much sorrow ar the demise of the triples; but the 500 had earned a loyal following.

T500 fans had watched frustrated while watercooled versions of the motor had produced formidable power on the track and gained triple disk brakes and suitably sporty styling. None of this development was realised on the road, however. The Suzuki factory was distracted by its RE5 Rotary engined fiasco and blinded by its range of triples. What would a lightened, better framed, watercooled twin with triple disks in 1973 have performed like? The race bike was able to give 85bhp by 1975. If Suzuki had put a cheap, lightweight, sporting replica on the road in 1973 it would have become a Classic and beaten the RZ500 Yamaha and the RG500 Suzuki race replicas by 10 years. If only?

SUZUKI 500 FANATICS

The factory racers - the TR500 - Air-cooled and water-cooled



1971 Daytona TR500

The TR500 found its origins in... Boulogne, France. Pierre Bonnet was the French Suzuki distributor and the works team indeed was based there for their first serious onslaught on the Grand Prix world in 1962. By 1967 Jacques Roca, a talented Spanish-French racer and technician had joined forces with Pierre Bonnet after being the distributor for Derbi. Shortly after the new T500 roadster was issued by the Japanese manufacturer, Roca built and raced a racing version that was so impressive that Suzuki, which had officially retired from world championship racing, built a full-race version of the new machine, as well as a 250cc version from the smaller parallel twin.

The author's '72 Daytona TR500

Suzuki realised in the late sixties that racing victories made for great advertising. Suzuki had a good 500cc bike so why not make good use of it. the company developed a racing model from the production version, utilising a new Norton Featherbed inspired frame, called the XR05.

The author's Daytona TR500 showing the featherbed inspired frame

America was where the big sales potential was, so where else to start racing a big 500 but at Daytona. In 1968 the first machine appeared and caused a sensation. it looked mean and went like stink. Shame about the handling though.

Brian Ferguson with the author's Daytona TR500 at a remote road-testing site

The XR05 in 1968 could pull 135mph and produced 63.5hp at 8000rpm. The bike weighed 135kg. The 1969 model managed 64.5hp at 8000rpm and with new gearing was good for 147mph. Ron Grant ran to 5th at the 68 Daytona 500 on the TR500 and Itoh managed 9th.

The author's Daytona TR500 at Wanneroo raceway

In 1970 the TR500 produced 70.5hp at 8000rpm with a speed of 152 mph. The bike still ran a Ceriani 9" twin leading shoe front drum brake and Ceriani forks.

For 1971-2 the TR500 ran 71.5 hp and 154 mph from a dry weight of 130.6 kgs.

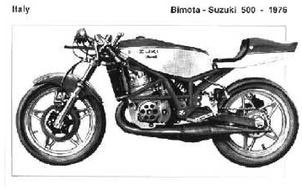
The author's Daytona TR500 in the pits at Wanneroo

The big change for 1973 was water-cooling for the motor. The TR500III made 73 hp at 8000rpm and pushed 140kg. A new frame was introduced for this model which ran twin disks up front and a single disk at the rear. Jack Findlay came first at the Isle of Man on this model.

The 1974 TR500 produced 78 hp at 8700 rpm and could pull 160 mph!

Ken Rick's water-cooled TR500 - this bike was ridden to success at the 1974 Marlboro Series in New Zealand

The end of the road came in 1975 when new barrels were introduced and the bike was producing 80 bhp reliably at 8900 rpm.

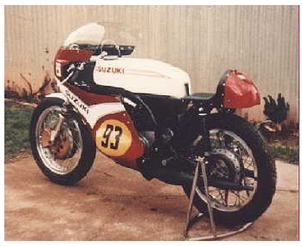


The Bimota water-cooled TR500 of 1976

The ultimate Suzuki 500 was produced in 1976 when Bimota entered the scene. The Bimota-Suzuki 500 used the TR500 MkIII water-cooled motor with a dry clutch and a six speed gearbox. The Bimota used a tubular space frame with a monoshock rear suspension with a Koni F1 shock absorber. The Bimota-Suzuki was an Italian Suzuki initiative and if anyone knows where one is, I want one (for free)!!!

A NZ Steve Roberts built Suzuki TR500 with a non-standard tank, restored by John Woodley

A factory Suzuki TR500 with Ceriani forks and brakes. (pic supplied by Michael Pettifer)



An excellent reference on Suzuki racing machines is "Team Suzuki" by Ray Battersby.

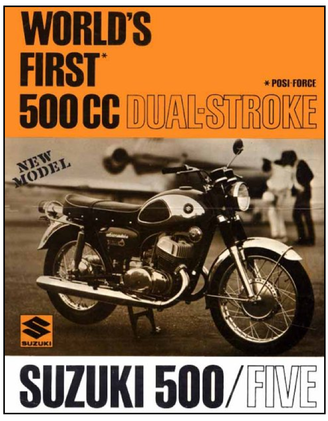
Suzuki Daytona TR500 with a John Woodley built frame

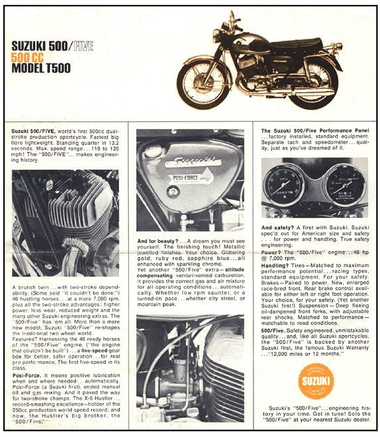
----------o----------

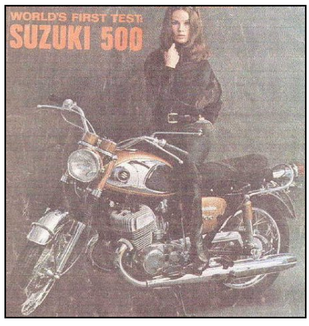
THE 500 SUZUKI PICTURE GALLERY - COBRA or T500/5

T 500 Cobra 1968
Overall Length: 2195mm (86.4in)
Overall Width: 865mm (34.1in)
Overall Height: 1105mm (43.5in)
Weight: 190kg (418 lbs)
Engine type: Air-cooled 492cc twin, 2-stroke.
46 hp/ 7000rpm, 5.5 kg-m/ 6,000rpm.

The Cobra or T500/5 .





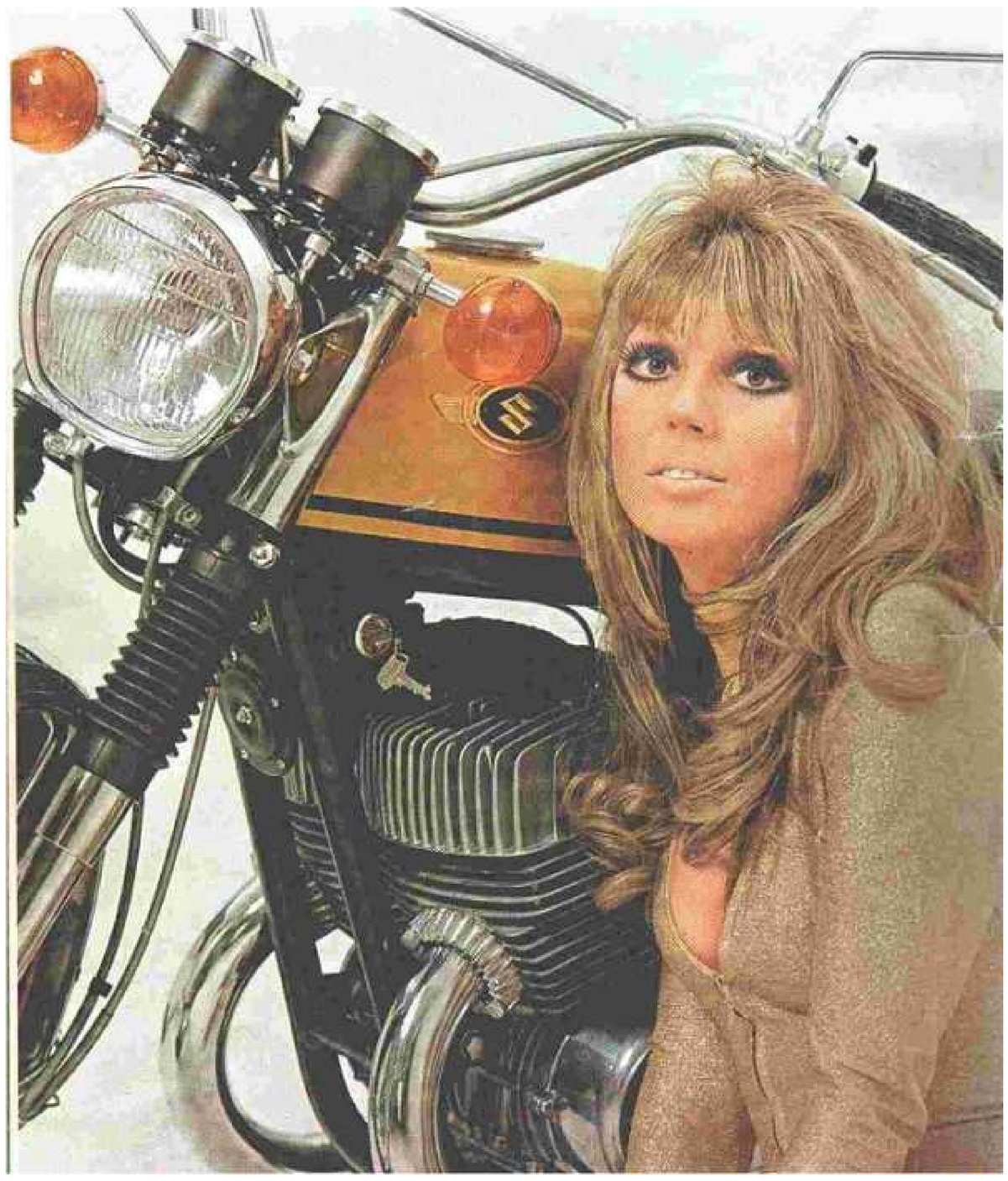


The Cobra racing against modern machinery at Wanneroo Western Australia.

Suzuki Titan

THE 500 SUZUKI PICTURE GALLERY - T500II -1969

T 500II Titan 1969
Overall Length: 2172mm (85.5in)
Overall Width: 835mm (32.9in)
Overall Height: 1125mm (44.3in)
Weight: 187kg (412 lbs)
Engine type: Air-cooled 492cc twin 2-stroke.
47bhp/7000 rpm, 5.5 kg-m/6,000rpm.



Suzuki Titan

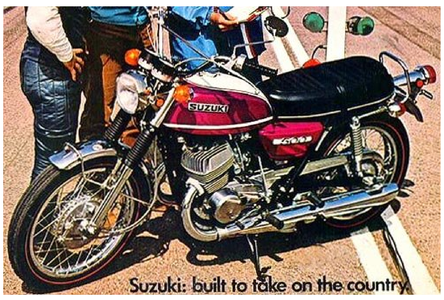
THE 500 SUZUKI PICTURE GALLERY - T500III -1970

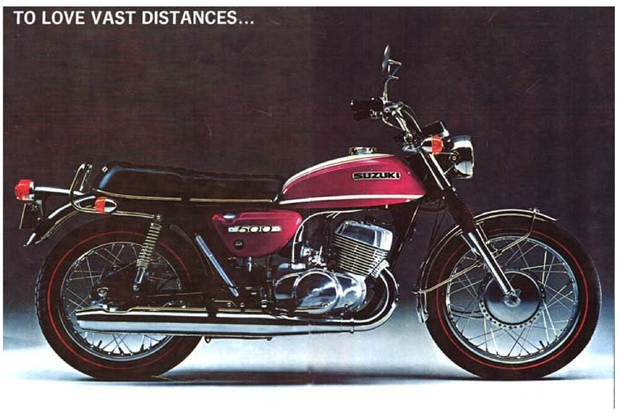
T 500III Titan 1970
Overall Length: 2195mm (86.4in)
Overall Width: 865mm (34.1in)
Overall Height: 1105mm (43.5in)
Weight: 187kg (412 lbs)
Engine type: Air-cooled 492cc twin 2-stroke.
47bhp/7000 rpm, 5.5 kg-m/6,000rpm.

Suzuki Titan

THE 500 SUZUKI PICTURE GALLERY - T500R -1971

T 500R Titan 1971
Overall Length: 2195mm (86.4in)
Overall Width: 865mm (34.1in)
Overall Height: 1105mm (43.5in)
Weight: 187kg (412 lbs)
Engine type: Air-cooled 492cc twin 2-stroke.
47bhp/7000 rpm, 5.5 kg-m/6,000rpm.





Suzuki Titan

THE 500 SUZUKI PICTURE GALLERY - T500J -1972

T 500J Titan 1972
Overall Length: 2195mm (86.4in)
Overall Width: 865mm (34.1in)
Overall Height: 1105mm (43.5in)
Weight: 187kg (412 lbs)
Engine type: Air-cooled 492cc twin 2-stroke.
47bhp/7000 rpm, 5.5 kg-m/6,000rpm.

Flat bars suit the T500J

Suzuki Titan

THE 500 SUZUKI PICTURE GALLERY - T500J -1972

Osi Dirilgen's T500J from Maennedorf (near Zurich), Switzerland

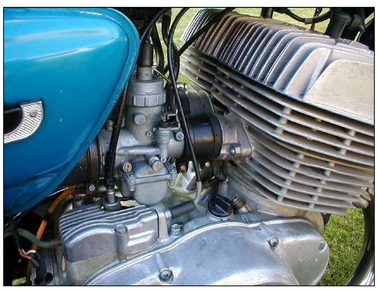
Osi has probably taken a common act of the the time and replaced the plastic chrome T500J side-cover/oil tank emblems off and replaced them with T500R emblems.

In a wonderful state of preservation.

Suzuki Titan

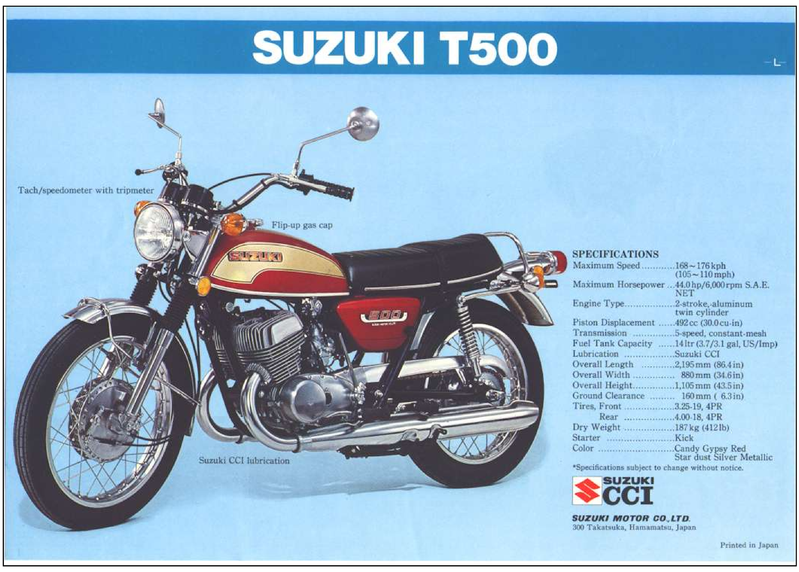
THE 500 SUZUKI PICTURE GALLERY - T500K -1973

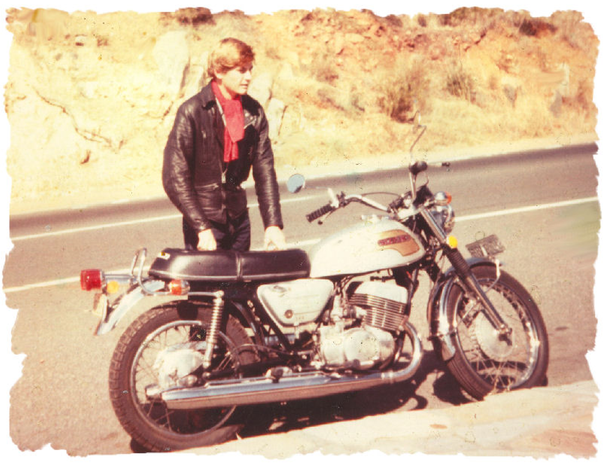
T 500K Titan 1973
Maximum Speed: 168-176km/h (105-110mph)
Maximum Horsepower: 44hp at 6,000rpm
Maximum Torque: 5.40kg-m (39.0 lb-ft) at 5500 rpm
Engine Type: 2-stroke, aluminum twin cylinder
Piston Displacement: 492cc (30.0cu-in)
Transmission: 5-speed, constant mesh
Fuel Tank Capacity: 14l (3.7/3.1gal US/Imp)
Lubrication: Suzuki CCI
Overall Length: 2195 mm (86.4 in)
Overall Width: 880 mm (34.6 in)
Overall Height: 1105 mm (43.5 in)
Tires, Front: 3.25-19, 4PR
Tires, Rear: 4.00-18 4PR
Dry Weight: 187kg (412 LB)



THE 500 SUZUKI PICTURE GALLERY - T500L -1974

T 500L Titan 1974
Maximum Speed: 168-176km/h (105-110mph)
Maximum Horsepower: 44hp at 6,000rpm
Maximum Torque: 5.40kg-m (39.0 lb-ft) at 5500 rpm
Engine Type: 2-stroke, aluminum twin cylinder
Piston Displacement: 492cc (30.0cu-in)
Transmission: 5-speed, constant mesh
Fuel Tank Capacity: 14l (3.7/3.1gal US/Imp)
Lubrication: Suzuki CCI
Overall Length: 2195 mm (86.4 in)
Overall Width: 880 mm (34.6 in)
Overall Height: 1105 mm (43.5 in)
Tires, Front: 3.25-19, 4PR
Tires, Rear: 4.00-18 4PR
Dry Weight: 187kg (412 LB)





Suzuki Titan

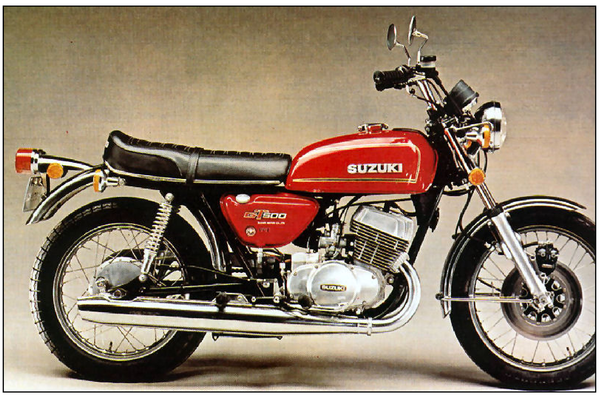
THE 500 SUZUKI PICTURE GALLERY - T500M -1975

T 500M Titan 1975
Maximum Speed: 168-176km/h (105-110mph)
Maximum Horsepower: 44hp at 6,000rpm
Maximum Torque: 5.40kg-m (39.0 lb-ft) at 5500 rpm
Engine Type: 2-stroke, aluminum twin cylinder
Piston Displacement: 492cc (30.0cu-in)
Transmission: 5-speed, constant mesh
Fuel Tank Capacity: 14l (3.7/3.1gal US/Imp)
Lubrication: Suzuki CCI
Overall Length: 2195 mm (86.4 in)
Overall Width: 880 mm (34.6 in)
Overall Height: 1105 mm (43.5 in)
Tires, Front: 3.25-19, 4PR
Tires, Rear: 4.00-18 4PR
Dry Weight: 187kg (412 LB)

Alec Stewart's T500M

THE 500 SUZUKI PICTURE GALLERY - GT500A -1976

GT 500A 1976
Maximum Speed: 168-176km/h (105-110mph)
Maximum Horsepower: 44hp at 6,000rpm
Maximum Torque: 5.40kg-m (39.0 lb-ft) at 5500 rpm
Engine Type: 2-stroke, aluminum twin cylinder
Piston Displacement: 492cc (30.0cu-in)
Transmission: 5-speed, constant mesh
Fuel Tank Capacity: 17l/4.5gal US
Lubrication: Suzuki CCI
Overall Length: 2195 mm (86.4 in)
Overall Width: 880 mm (34.6 in)
Overall Height: 1105 mm (43.5 in)
Tires, Front: 3.25-19, 4PR
Tires, Rear: 4.00-18 4PR
Dry Weight: 395lbs



Suzuki Titan

THE 500 SUZUKI PICTURE GALLERY - GT500B -1977

GT 500B 1977
Maximum Speed: 168-176km/h (105-110mph)
Maximum Horsepower: 44hp at 6,000rpm
Maximum Torque: 5.40kg-m (39.0 lb-ft) at 5500 rpm
Engine Type: 2-stroke, aluminum twin cylinder
Piston Displacement: 492cc (30.0cu-in)
Transmission: 5-speed, constant mesh
Fuel Tank Capacity: 17l/4.5gal US
Lubrication: Suzuki CCI
Overall Length: 2195 mm (86.4 in)
Overall Width: 880 mm (34.6 in)
Overall Height: 1105 mm (43.5 in)
Tires, Front: 3.25-19, 4PR
Tires, Rear: 4.00-18 4PR
Dry Weight: 395lbs

SUZUKI GT500

Travel long and far.

On the affordable tourer built and outfitted for speed, comfort and durability.

GT500 is the spirit of speed. A big, fast touring bike with long-touring features. Powerful 2-stroke, twin-cylinder engine matched with 5-speed gearbox. This engine gets plenty of fresh oil, too – CCI lubrication to all rotating parts and cylinder walls. GT500 has a big 17 liter tank. It consumes gas sparingly. Brakes crisply. Runs long, smoothly and quietly, dependably for long years, stably at high speed.

Engine
This 2-stroke, twin-cylinder engine with efficient 5-speed transmission is famous for delivering high performance. CCI lubrication protects its reputation for smooth-running dependability completely.

Front disc brake
High-performance touring motorcycles require a braking system that matches their capability. This powerful front disc brake is designed to assure positive stops.

Front fork
The front fork is designed to work efficiently with the front disc brake for safety, comfort and stability during an abrupt stop. It's telescopic and oil-dampened.

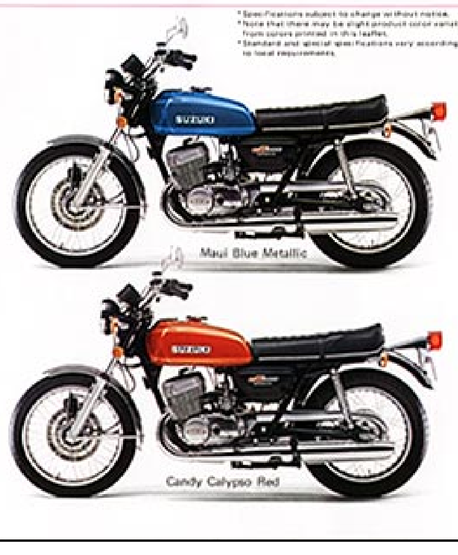
Instruments
This rider-oriented design angles instruments toward you and a hood helps prevent glare. The cluster includes speedometer, tachometer and tripmeter. And a turn signal indicator above the ignition switch.

Rear suspension
The oil-dampened, 5-way adjustable rear suspension system is designed to absorb road shocks before they're transmitted to the rider. You ride comfortably and always in control.

Specifications

Maximum Speed:	168–176kph (105–110mph)	Lubrication:	Suzuki CCI
Maximum Horsepower:	44.0hp/6,000rpm S.A.E. NET	Overall Length:	2,205mm (86.8in)
Maximum Torque:	5.40kg-m (39.0 ft-lb)/ 5,500rpm	Overall Width:	880mm (34.6in)
Engine Type:	2-stroke, 2-cylinder	Overall Height:	1,135mm (44.7in)
Piston Displacement:	492cc (30.0cu-in)	Ground Clearance:	160mm (6.3in)
Transmission:	5-speed, constant mesh	Suspension, Front:	Telescopic, oil-dampened
Fuel Tank Capacity:	17.0 ltr (4.5/3.7 US/Imp gal)	Rear:	Oil-dampened, 5-way adjustable
		Tires, Front:	3.25S19-4PR
		Rear:	4.00S18-4PR
		Dry Weight:	179kg (395 lbs)
		Starter:	Kick
		Color:	Maui Blue Metallic Candy Calypso Red

* Specifications subject to change without notice.
* Note that there may be slight product color variations from colors printed in this leaflet.
* Standard and special specifications vary according to local requirements.



SUZUKI MOTOR CO.,LTD.
300 Takatsuka, Hamamatsu, Japan

Printed in Japan