

Suzuki Vitara ALLGRIP Full Hybrid SZ5 – Road Test

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Kim Henson assesses the Full Hybrid all wheel drive ('ALLGRIP') SZ5 version of Suzuki's latest Vitara.

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The Vitara compact SUV has long been a favourite among buyers, offering good performance, affordable running costs and top notch reliability, in addition to everyday



versatility for family motoring.

From the spring of 2022 the Vitara has been offered in 'Full Hybrid' (140 volt) form, alongside 'Mild Hybrid' (48 volt) versions. In every case these are 'self-charging hybrids', meaning that there is no need nor provision for 'plugging in' the car to recharge the propulsion battery pack, and there is no 'range anxiety' as the petrol engine ensures that you should get where you are going without any drama nor worry.

Interestingly... right across the Suzuki model line-up the firm now offers 'hybrids for all', including (depending on the model chosen) 12 volt/48 volt 'Mild Hybrids', higher voltage (140 volt) 'Full Hybrids' and a plug-in hybrid (the Across).

The most recent Vitaras are boldly styled, notably having a 'clamshell' type bonnet incorporating side louvres, and with pronounced 'body side character lines'. In my opinion the car certainly stands out in appearance in a good way, compared with many of the sometimes bland-looking compact SUVs on offer from other makers.





'Full Hybrid' drivetrain

As with the S-Cross, the latest Vitara is built at Magyar, Hungary, and some versions (like our test car this week) incorporate Suzuki's 140 volt 'Full Hybrid' technology. In fact the Vitara was the first model in Suzuki's range to feature this.

In case you are wondering about the differences between the 48 volt 'Mild Hybrid' Vitaras and the latest 140 volt 'Full Hybrid' versions, here goes...

The Mild Hybrid versions are powered by a 1.4 litre Boosterjet (turbocharged) engine and 48 volt drivetrain – and this arrangement is still offered in the latest versions equipped with



a conventional manual gearbox.

On the other hand the new Full Hybrid versions, on sale in the U.K. from the spring of 2022, are equipped with Suzuki's efficient 1.5 litre K15C naturally-aspirated four cylinder engine, working in conjunction with a 140 volt power supply; importantly these incorporate an EV (Electric Vehicle) mode.



The Full Hybrid (1.5 litre K15C) variants have Suzuki's six speed Auto Gear Shift (AGS) transmission – an automated manual transmission (by contrast with a traditional automatic gearbox).



The AGS transmission assembly is much lighter in weight than a conventional torque converter type automatic gearbox, helping fuel consumption and emissions performance.

The system has steering wheel mounted 'paddles' for the driver to change ratios manually, if preferred. Otherwise the transmission will change up and down through the ratios on its own in 'automatic' mode.

The latest Full Hybrid version of the Vitara is offered in three forms. To start with, the front wheel drive SZ-T is listed with a start price of £22,749 and the range-topper 'SZ5' is priced at £24,749 in two wheel drive form, and at £26,549 in 'ALLGRIP' four wheel drive form. In each case these prices are *after* deducting a customer saving offer of £2,750 currently being applied by Suzuki.

In addition, for Suzukis purchased before 31^{st} December 2022, the car will come with two years free servicing.

(Note: Check with a Suzuki dealer or the Suzuki U.K. website, for full details of any offers applicable at the time you are interested in buying; these can change).

It is worth mentioning that if you feel that you don't need the Full Hybrid set-up, you can currently (at the time of writing, 9th December 2022) buy a 129 PS, 1.4 litre Boosterjet (turbocharged) Vitara with the 'Mild Hybrid' 48 volt system and six speed manual gearbox, for £20,999 (for the front wheel drive variant) after the £2,750 customer saving offer has been deducted. Don't think that this is a basic, 'pared-down' model, for the SZ-T comes with a high level of standard-fit equipment, including (as examples) a comprehensive raft of safety systems (that include Dual Sensor Brake Support – Automated Emergency Braking), Apple CarPlay and Android Auto phone connectivity, Adaptive Cruise Control, Sat Nav, a DAB radio, electric front and rear windows, a removable boot floor (for twin level availability) and 17 inch aluminium alloy road wheels (for the full list of gear, please see Suzuki's website and/or the Vitara brochure).

It should be noted that the above price includes the only single tone non-metallic paint

finish offered (white). Single tone Metallic paintwork, in a range of four colours, costs an additional £535, while the neat two tone finish, with a choice from six colour combinations (in each case incorporating a 'Cosmic Black Pearl Metallic' finish to the roof), adds £835.

The WLTP fuel consumption 'Combined' figure for this model is 52.7 miles per gallon, which is very good I feel.

For another £2,000 you could step up to the SZ5 trim level Mild Hybrid Vitara, with the same engine, transmission and fuel consumption as the SZ-T, but which provides additional features, such as, among others, keyless entry and start, also a large panoramic 'double' sun roof. The same paint colour options apply as for the SZ-T.

Weight-saving measures (which aid fuel consumption and minimise emissions) during initial development of the current Vitaras include the use of high tensile steel and other engineering changes, with the result that the Vitara is still one of the lightest SUVs in its class, weighing just 1,268 Kg (2,795 lb), and the ALLGRIP Select four wheel drive system adds only 47 kg (104 lb).

ON TEST

Back to the Full Hybrid (140 volt) Vitara which is the subject of this road test...







Buying choices start with the SZ-T version, priced at £22,749 after Suzuki's customer saving offer, and, as mentioned above, notably incorporating Suzuki's naturally-aspirated 1.5 litre 115 PS K15C engine, driving the front wheels via an automated manual 'AGS' six speed transmission.

The WLTP 'Combined' fuel consumption figure is 53.0 mpg.

At the top of the Vitara tree is the SZ5 Full Hybrid model, offered with front wheel drive and from £24,749, or with the proven ALLGRIP Select four wheel drive system, for which an additional £1,800 is required, currently making a total of £26,549. Our test car was this version, with ALLGRIP four wheel drive. To this must be added £535 for single tone metallic paintwork (again the only non-metallic colour is white) or £835 for the twin tone finish, as applied to our test vehicle. This brought the total cost of 'our' car as tested, in early December 2022, to £27,384 (after Suzuki's very useful customer saving of £2,750).

I should add that Suzuki's pricing structure across their range is commendably transparent, with a very comprehensive list of features included in the price of the vehicle. For the Vitara the only extra cost items that need to be chosen are ALLGRIP four wheel drive, if required, and metallic paintwork, if desired.

Full Equipment

All the Full Hybrid Vitaras feature a wide range of standard-fit safety systems, which include (as examples) seven airbags (including a driver's knee airbag), Dual Sensor Brake Support forward obstacle detection system (providing warnings to the driver, plus Automated Emergency Braking), radar-operated Blind Spot Monitor (alerting the driver to vehicles approaching from either side of the car), Rear Cross Traffic Alert, Lane Departure Warning (at speeds over 37 mph, alerting the driver to lane changes made without using the turn indicators), Traffic Sign Recognition, etc, etc, but our test car was also equipped with 'ALLGRIP Select' four wheel drive (with Hill Hold Control – to prevent running back – and Hill Descent Control).



Standard 'convenience' equipment on both the new Full Hybrid models includes (as examples from an extensive list): Smartphone connectivity, a navigation system, an engine auto start stop system, Bluetooth built into the audio unit, keyless entry and start, Adaptive Cruise Control incorporating a speed limiter, a telescopic and height-adjustable steering wheel, driver and front seat passenger seat height adjustment, electric front and rear windows, also automatic air conditioning, in addition to the extensive array of state-of-theart safety measures.

Our SZ5 also came with 17 inch polished aluminium alloy wheels, attractive quilted suede upholstery, a rear parking camera system plus front and rear parking sensors, and a very large panoramic tilt/slide sun roof.

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What is 'Full Hybrid', and how does it work?

As with the S-Cross that I road-tested recently, on the Vitara the higher voltage drivetrain in the new Full Hybrid models is more efficient (compared with 'Mild Hybrid' variants) in the manner in which it operates in conjunction with the petrol engine. Vitally too, it provides an 'EV' mode. When this is activated – automatically – the car runs on electric propulsion only, with the petrol motor shut down. The set-up switches between electric and petrol propulsion and back again according to driving conditions and available charge in the propulsion battery pack.

Maximum power output for the Full Hybrid models is quoted as 115 PS at 6,000 rpm, and maximum torque is 138 Nm (101 lb.ft) at 4,400 rpm.

The SZ-T and the front wheel drive SZ5 versions operate with low emissions of 121 g/km (WLTP protocol) and the official Combined fuel consumption (WLTP) is quoted at 53.0 miles per gallon.

By contrast the SZ5 equipped with ALLGRIP Select four wheel drive (as in the case of our



test car) produces CO2 emissions of 132 g/km, and the Combined consumption figure is $48.4\,$ mpg.

The Full Hybrid models incorporate a 140 volt lithium-ion battery and inverter, plus a new Motor Generator Unit (MGU). This is a belt-driven assembly that acts as a starter motor and a power generator, and it is positioned on the output side of the AGS transmission. This enables output from the MGU to be delivered straight to the driveshafts. The aim here is to fill the 'torque gap' experienced during gearchanges, thereby aiding transmission smoothness.

A chain-driven reduction gear is featured as well, to reduce the rotational speed of the MGU and thereby increasing the amount of torque applied directly to the car's drive wheels.

The MGU assists the petrol engine during start-off, and operates in conjunction with the 140 volt battery. This stores electrical energy recovered during deceleration and braking, as well as featuring an idle stop function that works via the MGU.

The Engine Control Unit (ECU) uses engine speed and throttle position to assess when the driver will accelerate, then applying electric motor assistance to provide extra torque.

In addition the hybrid set-up collects kinetic energy and generates electricity by stopping the engine and disengaging the clutch during deceleration, thus increasing the EV driving range.

The system does all this automatically, with no need nor facility to 'plug in' the car to a mains electricity supply; from the driver's point of view this self-charging system is easy to live with – it just works, without intervention.

Drive modes

There are two selectable drive modes; 'Standard' and 'Eco'. A single dash-mounted switch controls changing between these modes, depending on conditions, and can be used to



increase the frequency of EV motoring.

In Standard mode, power is prioritised; the MGU more often helps the petrol engine to permit more enthusiastic driving enjoyment.

In the Eco setting, fuel economy is the priority, and the air conditioning system will not operate.

When driving in Standard mode, the driver can select any one of the four settings for the ALLGRIP Select four wheel drive system. These include Auto (front wheel drive only, by default), Sport (which optimises engine response), Snow (providing traction and stability on very slippery surfaces) and Lock (for extricating the car from snow, sand or mud; a limited slip differential is built-in, to brake a slipping wheel and transfer torque to those wheels having grip).

By contrast, with the car set to Eco mode, only the 'Auto' setting can be used.

During development of the current ALLGRIP Select system, Suzuki engineers have enhanced it by adding a 'feed forward' function, aiding traction/vehicle stability. The system engages four wheel drive when it senses that this is required (normally just the front wheels are driven). Crucially, in the current models so equipped it allocates torque to the rear wheels even *before* any slippage occurs, so the system controls the vehicle to prevent grip being lost, rather than reacting to that situation (as happens with conventional four wheel drive systems).

A 'Hill Hold Control' facility is also provided; this useful aspect is used during hill starts, and prevents the vehicle from rolling backwards, for two seconds.

In addition to the 140 volt hybrid system battery, there's a 12 volt lithium-ion battery plus a 12 volt conventional lead-acid battery, to operate lower voltage systems such as the lamps, instrumentation and the heating/air con systems.



I suggest that in order to get the best from the vehicle in terms of fuel consumption, low emissions and optimum performance, if you buy a Vitara it pays to study the vehicle's very comprehensive handbook, which fully explains how to operate the various drive systems and other aspects.

On the road...



The Vitara test car pausing during a journey, near Bristol.

My test driving, for just over a week, was in the top of the range SZ5 Full Hybrid ALLGRIP version of the Vitara, equipped as standard with the 'ALLGRIP Select' four wheel drive system.

I, and all my passengers, liked the roomy, airy interior, and the quilted finish seat



upholstery was also appreciated by all, from an aesthetic viewpoint and for comfort on short or long journeys.

Another plus point is that the front and rear passenger doors open wide, making entry to, and exit from, the car, easy for young and older people alike.

From this driver's viewpoint, there was a clear view of the road ahead from the comfortable driving seat, which, like the front passenger seat, is adjustable for height as well as fore/aft travel. In addition I appreciated the rapid and very easy way in which the steering wheel/column could be adjusted for reach (moving the wheel closer to the facia, or further away from it) and for height (which aided comfort and also enabled a perfect view of the instrument panel to be gained).

Clear instrumentation (notably the all-important speedometer) is always a positive feature of Suzukis, and in addition to the twin main dials, located between them there's an information panel providing data related to current and accumulated fuel consumption, mileage range and other functions.

Clear too was the standard-fit centrally-positioned touch screen set-up, divided into four sections and enabling different functions, including the sat nav system and the radio, to be selected easily and quickly. Again to get the best from the car, my advice is to study the handbook (plus the separate 'audio system' book) before you drive it.

I'm pleased to report that it is not necessary to work through a menu system to operate such aspects as the heating and air conditioning systems, which can be accessed, and their operations changed, via controls located beneath the display screen. I feel this is safer than 'menu only' control, and, for example, enables 'demist' functions to be operated instantly without the need for fumbling through a menu (especially dodgy in a car that is new to you), as is required so often in many of today's vehicles.

Both the front and rear windscreens are heated in the Vitara, and when activated these cleared condensation very quickly indeed – within a very few seconds – from the glass. This



proved very useful during the 'cold weather' spell which arrived while I was testing the Suzuki.

The front and rear seats proved to be accommodating, supportive and comfortable.

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I rate the ride quality very highly as well, with the supple, well-controlled suspension providing smooth progress in all conditions, and handling uneven surfaces without disturbing the passengers. Everyone who travelled in the car during my time with it commented favourably about this aspect.

They also all liked the wonderful, very large aperture/electrically-operated sun roof (standard-fit on the SZ5), divided into twin panels and with a lifting, as well as a sliding, facility for the front one. The roof is a lovely feature for warm days. A separate blind/cover is fitted beneath the sun roof, and is easily moved into place when required.

Storage spaces can be found all around the interior, including... front and rear door bins (incorporating bottle holders), a sensible-size glovebox, an elasticated pocket on the back of the front passenger seat, plus a useful 'box' compartment forming part of the centre console (and with a 'front' arm rest on top).

The twin separate and very effective interior lamps located above the windscreen gave good light for our map reading when required and these are operated by a simple 'push-on/push-off' action.

Anything that I didn't like? My only gripe about the Vitara's interior was that, while head room was in plentiful supply for both front and rear seat occupants, rear seat leg room for an adult sitting in the centre of the rear seat was somewhat compromised. This was due to the rearward intrusion of the centre console's storage box into an area that would otherwise be available for the legs/knees of the rear seat's centre passenger. Of course for buyers who don't often carry five adults, this aspect may not be relevant, and anyway I realise that the



Vitara is a compact SUV.

The good news is that unless the front seats are set right back towards the rearmost extent of their travel, there is good leg room available for the rear seat passengers sat on either side of the car.

Dynamics

The Vitara felt solid and stable in all the road and weather conditions that we experienced during our test driving, and it was a nimble machine for driving along twisting country roads, sometimes covered with mud and leaves. Handling/roadholding characteristics were impressive.

Braking was effective and progressive too, and the 'conventional' manually-operated parking brake (which I prefer, compared with an electronic system) did its job very well.

Visibility was good, day and night ... The wipers and washers, front and rear, cleared the screens very well, and the 'intermittent' setting for the rear wiper was appreciated.

The headlamps illuminated the way ahead very well on both dipped and main beams.

Progress on the road

I found that the car provided eager acceleration when required, from rest and on the move, and for most of my driving I used the 'Auto' mode. The extra assistance provided by the Full Hybrid system was welcome.

A switch from 'Auto' to 'Sport' mode (simply by rotating the centre console mounted mode dial) immediately transformed the character of the car (and altered the instrumentation colour to a sporty red). With this setting activated I found that on-the-move acceleration felt – and was – very rapid. It is important to note that use of the Sport mode does not affect the already excellent handling of the car, but amends the drivetrain parameters to provide more



rapid acceleration. Using the Sport mode does sap fuel consumption, so I used it sparingly!



I did try the 'Eco' setting, but to be truthful could detect little difference between this and the default 'Auto' mode, in terms of fuel economy, so most of my driving was with the car in the more versatile 'Auto' set-up engaged.

Starting from standstill, and gaining speed gently, the car initially operates in EV mode only (i.e. running on just the electric motor, with the petrol engine shut off). However, if more power is required and more accelerator movement is applied, the petrol engine cuts in.



The transition between EV and petrol operation (and back again), and the activation of the regenerative electrical charging system, were delivered in a truly seamless manner; brilliant.

In normal driving during my road test the propulsion battery would be charged up as required, and as indicated by the white 'charging' lamp on the facia (aided by 'regenerative' braking and with electrical power from kinetic energy also harnessed when descending hills).

When the car's software/computer system detected that conditions were appropriate, the green 'EV' lamp on the facia would illuminate, at the same time as the petrol engine stopped, and the car would continue in 'electric only' mode for some time. The distance during which the EV mode worked varied according to conditions, but by my estimation this could be for a mile or so at a time. Eventually the system would switch operation back to petrol power, when the sensors gauged that this was required.

It is worth noting that the engine auto stopping and restarting facility will only operate if the car's systems sense that this is appropriate. As examples, and among other conditions, this may NOT function unless and until the batteries are at optimum operating temperature and voltage, nor if the coolant temperature is low, nor if front or rear heated screens are turned on, nor if the temperature setting is 'Low' and A/C switch is 'on'. As mentioned earlier, I feel it's worth studying the car's handbook at the start if you buy a Vitara, to get the best from it in terms of performance and operating economy.

The car was generally very quiet and felt refined in operation, especially when cruising at high speeds. For the record, at an indicated 60 mph the petrol engine needed just 2,200 rpm or so in top (sixth) gear, and at 70 mph the tachometer needle showed around 2,600 rpm.

The petrol engine was audible as revs increased when accelerating hard and when hill climbing, but I did not find the sound intrusive. There was a little noise evident from the



tyres, but to me this just underlined how quiet the Vitara was in mechanical aspects.

Sometimes when climbing fairly steeply, I found that the transmission would, of its own accord, select second gear, resulting in the petrol engine running at fairly high rpm, but by gently easing pressure on the accelerator pedal, this signalled to the gearbox to change to third or fourth gear, while still maintaining good progress up the gradient.

The Vitara is not aimed at 'serious' off-roading, but from my own driving in several different Suzukis and in various difficult deep mud/sand/grit/wet grass conditions, I suggest that the commendable abilities of the ALLGRIP Select four wheel drive system need to be experienced to be fully appreciated. In fact I'd go further and say that for those who live, or frequently travel, in country areas, especially in winter time, and/or for those who may need to park in, or cross, muddy fields, tracks, etc, the reassurance of the ALLGRIP Select all wheel drive system would be worth the investment of the additional £1,800 required (over and above the equivalent front wheel drive variant).

I found the car easy to park and to manoeuvre in tight situations, with a good steering lock (plus usefully-weighted steering – at all speeds), and the standard-fit reversing camera was very handy, especially at night. Proximity warning sensors are also installed, helping vehicle positioning.

Load compartment

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The 'boot' is spacious, even with all the rear seats in use (for dimensions as measured by me, please see our 'Tech. Spec.' section). When fewer passengers are on board, and more luggage space is needed, it is easy to rapidly fold forward the two-thirds:one-third ratio sections of the rear seat back.

With the seatbacks folded forwards the forward section of the floor isn't perfectly horizontal (the seat backs rise slightly towards the front), but nearly so. According to Suzuki's figures



the capacity of the 'boot' ranges between 289 to 642 litres (10.21 to 22.67 cu.ft). (As a point of interest, in fact this is only marginally smaller in capacity than the load compartment of the larger S-Cross that I road tested recently).

In everyday motoring reality this means that the Vitara benefits from a spacious and versatile load compartment.

Beneath the boot floor is a handy wide, shallow tray, housing the tyre inflation kit but in addition it provides room for other small objects.

On each side of the main boot is a compact but useful 'walled' compartment that I found very useful too in daily use, for items such as cameras, hot drinks flasks, etc.

Petrol consumption?









During my week of driving, during which I covered approximately 360 miles, the overall consumption figure achieved was 47.7 miles per gallon. This included town, country lane and open road travelling, and was very close to the official WLTP 'Combined' figure of 48.4 mpg for the ALLGRIP Select four wheel model (it's worth noting too that it's an impressive 53.0 mpg for the front wheel drive SZ-T variant). I reckon that's pretty good for an all wheel drive SUV in real world use. Of course if you don't feel that you need four wheel drive, you could gain £1,800 on the purchase price and around 4.6 miles for every gallon used (WLTP Combined consumption figure), if you opt for a front wheel drive version.

VERDICT

An excellent compact SUV. A friend described it as 'A happy car'; I agree. I found it fun to drive, spacious, practical, economical and likeable – and the Vitara promises to give reliable



service for the long-term, as has been proven with Suzuki models over many years. As covered in my text, my only reservation personally is the compromised leg room for the centre passenger, when carried, in the rear seat, but for many buyers this wouldn't be a problem.

I feel that the Vitara represents good value for money too, and current customer savings of £2,750 off the list price make the Vitara even more appealing at the moment (9th December 2022), but check with your local Suzuki dealer, and/or Suzuki's website, for current offers from the firm. For example, the website currently advises that if you buy a new Suzuki before 31st December 2022, it will come with two years' free servicing (always, in each case, check for terms and conditions applicable).





Wheels-Alive Tech. Spec. in Brief:

Suzuki Full Hybrid Vitara ALLGRIP SZ5









List price as tested: £30,134 (including £835 for the two tone metallic paintwork – 'Ice Greyish Blue Metallic' main bodywork, with 'Cosmic Black Pearl Metallic' roof).

However, please see Suzuki UK's website for current offers, notably at the time of writing a 'customer saving' of £2,750 from Vitara list prices, in this case the total is £27,384.

Note 1: Starting 'On The Road' list price £29,299, or + £535 making £29,834 with single tone Metallic paintwork, or +£835 for two tone metallic paintwork, totalling £30,134 as above, for our test car). Currently deduct £2,750 from these figures, as above.

Note 2: Vitara prices currently start at £20,999 (after deducting a Suzuki 'customer



saving' offer of £2,750) for the front wheel drive 'Mild Hybrid' Boosterjet (turbocharged) SZ-T.

Note 3: The Vitara range-topper SZ5 'Full Hybrid' model in front wheel drive form starts at £24,749 (again, after deducting a Suzuki 'customer saving' offer of £2,750).

The figures below apply to the Full Hybrid ALLGRIP SZ5 model:

Propulsion: K15C, 1462cc four cylinder 16 valve petrol plus 140 volt Full Hybrid system, driving through an Auto Gear Shift (AGS) six speed transmission

Power: 115 PS @ 6,000 rpm

Torque: 138 Nm (101 lb.ft) @ 4,400 rpm

0 - 62 mph: 13.5 sec

Top speed: 111 mph

CO2 emissions: 132 g/km (WLTP)

'Official' Combined fuel consumption: 48.4 mpg (WLTP)

Actual fuel consumption achieved on test drive: 47.7 mpg over 360 miles

Fuel tank capacity: 47 litres (10.34 Imp. gallons)

Approximate driving range on full tank at our achieved mpg: 490+ miles

Dimensions:

Length: 4,175 mm (13.70 ft)



Width: 1,775 mm (5.82 ft)

Height: 1,610 mm (5.28 ft)

Ground clearance: 175 mm (6.89 in)

Kerb weight: 1,315 kg (2,899 lb)

Luggage compartment:

Capacity (Suzuki figures): 289 to 642 litres (10.21 to 22.67 cu.ft)

Luggage compartment approximate measurements (by Kim):

Length of load bed (seats up): 77 cm (30.5 in)

Available length of load compartment (seats down) – Note: measurement taken in approximately mid-way setting of front seats on runners, so length can be slightly more, or less, depending on seat positions): 152 cm (60 in)

Width of luggage compartment (max.): 140 cm (55 in)

Width of luggage compartment (min.): 104 cm (41 in)

Height (from floor to beneath roof tailgate cross-beam): 75 cm (29.5 in)

Warranty: Three years/60,000 miles (and 12 year anti-perforation warranty), and with one year AA Suzuki Assistance.