Suzuki Across Plug-in Hybrid SUV – Road Test

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Suzuki's first plug-in hybrid vehicle… driven and assessed by Kim Henson.

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With four wheel drive, sophisticated plug-in hybrid technology (delivering rapid

performance together with low emissions and impressive fuel consumption figures), Suzuki's Across large SUV provides buyers in this market with a distinctive and fascinating alternative model.



With smart contemporary styling gilding a strong body shell, Suzuki's Across is the first result of collaboration between Toyota and Suzuki, and arrived in Britain in November 2020. (The second model produced from this fusion of interests is the Swace self-charging hybrid estate car, as road-tested recently on Wheels-Alive).

For potential buyers, the fact that both Toyota and Suzuki have long-standing strong

reputations for build quality and reliability, is good news indeed. The Across – based on the RAV4 – is built around Toyota engineering (and that well-respected company already has a long and positive history of producing hybrid petrol-electric models), with many individual touches from Suzuki, including detailed styling cues (notably including the front grille and bumper arrangement) as well as badging.



Suzuki offers just a single, very high specification version of the Across, which provides buyers with a wealth of useful and welcome safety, security, drivetrain and interior comfort features. I am not going to list them all here (there are many!), but as examples these include the technically clever ‘E-Four’ all-wheel drive system, LED headlamps incorporating

bi-beam projectors (combining both high and low beams), LED Daytime Running Lights ('DRL'), leather-trimmed seats – heated in the front and back of the car, together with a heated steering wheel, Dual Zone Automatic Air Conditioning, a nine-inch multimedia touchscreen (that works with Apple CarPlay for iPhone, Android Auto and Mirrorlink for compatible smartphones), a DAB digital radio, and a tailgate that can be opened by placing/ 'waving' a foot beneath the rear of the car. The car runs on standard-fit 19 inch aluminium alloy road wheels (shod with 235/55SR19 tyres), incorporating a black gloss coating and polished faces.



The interior – featuring much soft padding and designed to provide a luxurious feel – features a variety of storage spaces, including side trays for the driver and front seat passenger, a centre tray and a console box, plus cup holders. The rear seat incorporates a centre arm rest too.

With all seats occupied, the spacious luggage compartment has a capacity of 490 litres (17.30 cu.ft), with the capacity increasing to 1,168 litres (41.25 cu.ft) with the rear seats folded. Useful aspects include the provision in the boot of a mains voltage (220 volt) electrical outlet plus a 12 volt accessory socket.

The Across list price of £45,599 includes metallic or mica paint finishes as a no-cost option; six different colours are available.

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DRIVETRAIN

Look beneath the boldly-styled surface and the proposition becomes more interesting still, with a four cylinder 2.5 litre petrol engine working in conjunction with a powerful, front-mounted electric motor and producing a combined total of 306 PS. On paper this translates into especially lively performance when required, and provides a zero to 62 mph acceleration time of just 6 seconds (plus a top speed of 112 mph).



More importantly, in terms of CO2 emissions the vehicle is WLTP-rated at just 22g/km and the ‘weighted’ Combined WLTP figure for fuel consumption is 282 miles per gallon (or 1 litre per 100 km.).

The low emissions figure, helped greatly by the comparatively long range available on electric power only of more than 46 miles, qualifies the car for a low Company Car Tax Benefit-in-Kind band of just 7 per cent (for 2021/22). This is a major attraction for company car users, and compares with most typical PHEV models from other manufacturers, which have shorter ranges on electric propulsion only (usually between 28 and 35 miles), and are rated at around 10 per cent or more for Benefit-in-Kind purposes.

The front-mounted electric motor in the Across has a maximum output of 134 kW and 270 Nm (199 lb.ft) of torque. It is designed to deliver prodigious quantities of torque at low speeds, and to work in tandem with the petrol engine at higher road speeds, for rapid acceleration.

Electrical energy for this motor is stored in a high capacity (18.1 kWh/50.9 Ah) 96 cell, 355 volt lithium-ion battery, which is located beneath the vehicle's floor.

It is notable that using electric power only the Across can cover up to 46.6 miles – said to be a class-leading range.

The car's petrol engine is a Toyota A25A-FXS Dynamic Force unit, designed and built with a long stroke and high compression ratio, and incorporating both direct cylinder fuel injection (DI) and port fuel injection (PFI). The fuel injection is varied according to driving conditions, to deliver maximise power and fuel efficiency, while at the same time minimising emissions. The system includes 'six hole' injectors to optimise fuel atomisation and efficiency.

The petrol engine acts as a charger for the battery and delivers assistance to the electric motor at higher speeds, if needed.

HYBRID SYSTEM OPERATIONAL MODES



The plug-in hybrid set-up incorporates four driver-selectable modes (which can be chosen by push-button on the centre console, according to driving conditions and the state of charge of the hybrid system's battery), starting with the default 'EV' setting, in which the car is driven purely by the electric motor, even when under full acceleration.

When the driver chooses 'Auto EV/HV' mode, or 'HV', the petrol engine aids propulsion power when required, for example when the accelerator is pressed hard.

As its name implies, the 'Battery Charger' setting is engaged when battery power is low, to bring into play the petrol engine to fully re-charge the battery.

Of course, the car can also be plugged into the mains electricity supply to recharge the battery in a cost-efficient manner.

By means of a rotary control knob on the centre console, the driver can also select one of three driving modes. These are ‘ECO’, with the control knob rotated anti-clockwise, ‘SPORT’, with the control rotated clockwise, and ‘NORMAL’, by engaged by pushing the button on top of the control knob.

With the ‘ECO’ setting operational, the drivetrain operates to give optimum economy, with the emphasis on ‘gentle’ throttle responses and smooth progress, and helped by restricting operation of the air conditioning system.

By contrast, the ‘SPORT’ setting sharpens up steering feel and accelerator responses, for a more sporty drive.

As its name implies, the ‘NORMAL’ setting is intended for normal everyday motoring.

With the gearshift lever in its usual ‘D’ position, by operating the ‘–‘ paddle shift switch, the shift range can be chosen by the driver by operating the ‘–‘ and ‘+’paddle shift switch. The gearshift range can then be changed by using the ‘paddles’ on the steering column. This brings into play driver control to over-ride the transmission’s normal ratio changing behaviour (for example, a lower ratio can be held onto, giving better acceleration, as well as greater engine braking effect when decelerating). There are six ‘ratios’ from D1 to D6, and the one selected is displayed on the multi-information screen ahead of the driver.

Shift range changes can also be made with the shift lever in the ‘S’ position.

RUNNING GEAR

Toyota’s sophisticated ‘E-Four’ electronic four wheel drive system has been developed to deliver effective 4×4 performance at the same time as excellent fuel consumption and emission levels.

It incorporates an additional, rear-mounted 40kW electric motor, that operates in conjunction with the front-mounted electric motor already described. Using the two motors, the system cleverly and automatically varies front:rear torque delivery all the way from 100:00 to 20:80.

In addition to giving peace of mind and enhancing handling/stability when driving, and especially cornering, on slippery roads, the system is helpful when pulling away on low friction surfaces such as snow or mud.

Built into the E-Four system is ‘AWD Integrated Management’ (‘AIM’), a sophisticated set-up that controls drive force distribution, engine throttle control, transmission change scheduling and Electric Power Steering (‘EPS’) assistance, all according to prevailing driving conditions.

Pitch control is applied when accelerating or decelerating, to minimise transmission of motor torque to the car’s occupants, and to reduce any impact from this on the driver, for less stress when driving.

‘Trail Mode’, activated at the push of a button, is an automatic limited slip differential control system, that on slippery surfaces helps to give optimum control and grip. It does this by applying the brakes to any wheels that are losing grip, and simultaneously redirecting torque to those wheels that still have traction. The system also alters the throttle and transmission gearchange pattern to keep the vehicle moving in such conditions.

Aiming to provide excellent ride and handling characteristics, the Across is endowed with MacPherson strut front suspension and double wishbone rear suspension.

Enhancing fuel efficiency as well as handling and stability is a body structure that incorporates hot-stamped steel, high strength sheet steel and aluminium, to provide a highly rigid, light-in-weight assembly.

SAFETY

The Across is bristling with standard-fit safety systems, including:

‘Pre-Collision System’ (‘PCS’) – Uses millimetre-wave radar and a monocular camera to monitor the road ahead to help avoid collisions with other vehicles, cyclists and pedestrians. Braking assist and automatic braking is activated if required.

‘Lane Tracing Assist’ (‘LTA’) – Helps keep the car in the centre of a marked lane.

‘Road Sign Assist’ (‘RSA’) – Displays road signs on the multi-information display screen.

‘Dynamic Radar Cruise Control’ (‘DRCC’) – Maintains a safe distance from the vehicle ahead.

‘Blind Spot Monitoring’ (‘BSM’) – Warns the driver of a vehicle in a rear blind spot.

‘Rear Crossing Traffic Alert’ (‘RCTA’) – Alerts the driver to approaching vehicles, when reversing out of a parking space, etc.

‘eCall’ – In the event of an accident, this useful system (which provides great ‘peace of mind’) alerts the emergency services by a phone message that includes the exact location of the vehicle.

‘Brake Hold’ – When the car comes to a halt (for example at traffic lights), the electrically-activated parking brake maintains brake pressure to prevent the vehicle from rolling away until the accelerator is pressed.

‘Kick’ operation tailgate – Not a safety feature as such but it could avoid dropping armfuls of ‘things’ while fumbling for a key..! The tailgate can be opened by someone with the car’s key on their person, by placing/ ‘waving’ a foot beneath the right-hand side section of the rear bumper.

A spare wheel (‘space saver’ type) – is included as part of the car’s standard specification. Now this is a very welcome feature, not found so often these days. It could minimise disruption to your journey and time spent at the edge of a road, helping you get the car driving again as soon as possible and safely on to your destination in the event of a ‘flat’.

THE REALITY

The interior of the Across is beautifully-finished and welcoming. Once aboard, entering via the wide-opening doors, the seats are accommodating, supportive and comfortable (and are heated, front and rear), and there is excellent head and leg room for all occupants. The rear seat’s folding arm rest incorporates twin cup holders, for use with the arm rest in its ‘operational’ position.





The crystal-clear and easy to follow instrumentation/driver information was also welcomed by this road tester.

The instrument panel ahead of the driver displays speed, fuel quantity and battery power use/charging levels, as well as a temperature gauge for the petrol engine, plus a multitude of trip computer functions.



Some readouts are usefully repeated on the large touch-screen in the centre of the facia, and in most respects this too proved to be easy to work out/operate.

Especially welcome to me was the positioning of controls for the dual zone air conditioning, also for the sound system, separately from (and below) the touch screen… much easier to

assimilate and much safer to operate.

I was surprised that there is no built-in satellite navigation system on the Across (connection of a smartphone is required)…

There are plenty of storage compartments and open trays, etc, around the interior; I felt that a few larger ones would have made the car more handy still in this respect.

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The handbook supplied with the car is comprehensive (running to nearly 600 pages) and includes much useful information on how to get the best from all the various systems built into the vehicle. There is a handy informative section too on ‘do-it-yourself’ maintenance, covering (for example) renewing the air conditioning filter, key fob battery changing, wiper blade insert fitting, plus many other aspects – most welcome.

DRIVING AND LIVING WITH

A very major plus point of the Across, compared with most plug-in hybrids currently available, is its long driving range on electric power only, via the hybrid system and front electric motor. This is said to be 46.6 miles on a full charge of the hybrid battery (which takes about six hours using a normal 13 amp domestic electricity connection).



If you recharge the car from a ‘wallbox’ or a ‘fast charger’, the battery can be ‘topped up’ much more rapidly, the length of time required depending on the system.

A charging cable with a conventional household style three pin plug is supplied with the car. The additional cable for a charging point is available from Suzuki dealers, and costs about £120; I feel that this should be included within the vehicle price.

During my time with the car I recharged the hybrid battery several times, on each occasion at home and using the cable/plug/socket assembly designed for 13 amp domestic circuitry.

With regard to the charging cable set-up, aspects that I particularly liked included the fact that the charging cable was sensibly long, the automatic illumination of the charging socket area on the vehicle (very helpful/handy if recharging the car during hours of darkness), and the way that the charging cable is safely secured in its socket on the vehicle, and can't be withdrawn, if the vehicle is locked (and being charged).

Interestingly, on the test car the driving range on electric power only on a full charge was indicated on the dash display as being 50+ miles, and this proved to be about right on journeys in my home county. When the electric power runs out, the petrol engine cuts in automatically, so there is no range anxiety as can often be experienced with a 'pure battery power only' electric vehicle.

I found that the changeover from electric to petrol power (and back again) was imperceptible. Power delivery was seamless and progress was always smooth, whether using electric or petrol propulsion.

With 306 horsepower available, this is a high performance vehicle, and there's real exhilaration in the way that the car can be accelerated from standstill – and oh-so-quietly.

Performance on the move is equally impressive. Torque delivery from low speeds is particularly strong, and is considerable at all speeds. Instant, rapid acceleration is available when needed and at all times noise levels were low, even with the petrol engine operating. With the electric motor operating on its own, the vehicle was near-silent, with just a low hum evident.

Cruising at high road speeds was truly effortless and progress was refined.

The fact that the car can be used for reasonably long journeys on electric power only was welcomed in general use, and the Across is far better in this respect than most other plug-in hybrids.

An important point… As with plug-in hybrids generally, the more often that the hybrid

battery is charged from a mains electricity supply (rather than using the car's petrol engine to do the job – which of course uses fuel), the better will be the overall fuel consumption and emissions performance.

For someone using an Across mainly for local journeys, the driver would seldom have to run the petrol engine, as most trips can be undertaken on electric power only.

On longer excursions, inevitably the electric power in the hybrid battery will become exhausted after about 45 to 50 miles have been covered, at which point a recharging point would need to be sought, or the car can be driven using petrol power (during which operation, if the driver wishes, the hybrid system can be set so that the petrol engine recharges the battery, albeit with some fuel consumption cost of course).

With the vehicle operated for most of its time on petrol power, miles per gallon consumption figures in the low fifties can be expected – and were achieved in my use of the car. Making more use of recharging the hybrid battery and using battery power, in mixed use I found that the car returned overall figures of between 55 and 74 miles per gallon. The best displayed overall figure I achieved was 74.1 mpg.

My overall average fuel consumption, using electric power when possible, worked out at 61.3 mpg, over 319 miles. At this rate of consumption the vehicle's driving range is in excess of 740 miles – very impressive and reassuring.

I should add that my time with the car coincided with periods of exceptionally high winds and heavy rain, so I would expect that overall figure to be improved upon in 'normal' weather conditions.

I found that the car handled far better than I had expected for a large SUV, and compared with others I have driven. It was easy to drive, composed and enjoyable.

The steering was weighted perfectly for this driver at all speeds, and the suspension, plus the large diameter wheels/tyres, coped very well with almost all surfaces I encountered

(although very serious dips and bumps in the tarmac could be felt a little as the suspension did its job).

Grip in plenty was provided, and cornering – with little body roll – felt safe, even on twisting country roads covered with surface grime and wet leaves.

Braking was impressively good too, and while personally I prefer a manually-operated handbrake, the electrically-operated parking brake (which automatically releases as you drive off from a standing start) proved to be very effective and worked well.

I found that the Across was easy to manouvre when parking or turning in tight spaces, and the reversing camera is excellent (and imperative since rearward vision without it is limited, due to the high rear end and large pillars at the back of the car). However this is a large vehicle so of course parking spaces need to be chosen with care.

During my week of road testing the weather was ‘wintry cold’, and welcome features, in addition to the main heating/aircon system, included the heated seats (incorporating two heat settings), the heated steering wheel, also the heating of the front and rear screens plus the side mirrors.

Following cold morning starts the front and rear windscreens soon cleared of ice and condensation, even when the car was running in ‘pure electric’ mode.

The screen washers and wipers, front and back, worked effectively, and the headlamps provided excellent illumination of the road ahead, in dipped and main beam modes.

LOADS OF PRACTICALITY

The tailgate opens high, and from bumper level, revealing a flat-floored wide, long and deep luggage compartment. Even with the three rear seats occupied, there is plenty of room, and loading/unloading is very easy. With the rear seat backs folded forwards (very quick and easy, by use of push-buttons on top of the two thirds;one third split folding backrests), there

is a cavernous flat-floored load space, more akin to that of a van than a family car.

My tape measure tells me that these are the vital statistics worthy of note; all measurements approximate:

With the rear seats occupied:



The available load compartment behind them measures 37.5 in (95.25 cm) from front to back, at each side, and 39 in (99.06 cm) in the centre.

The minimum available width (between the wheel arches) is 37.25 in (94.61 cm).

The maximum available width (into the ‘alcoves on either side, behind the rear wheel arches) is 59 in (149.86 cm).

The height, measured from boot floor to tailgate aperture rim, at top, is 31 in (78.74 cm).

With the rear seat backs folded:

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The length of the ‘flat’ floor (rising a little towards the front of the vehicle) measures 61.5 in (156.21 cm) at each side, and 63 in (160.02 cm) in the centre. However, with the front seats set approximately mid-way on their runners, by my reckoning there is an additional foot (30.5 cm) or so of length available, in terms of ‘overhang’ at the forward end of the load floor created by folding the seat backs.

Lifting the boot floor reveals the ‘temporary’ use spare wheel – what a reassuring sight that is, I feel, in an age in which spare wheels are seldom found in today’s cars.



Spare wheel plus optional charging point cable.

VERDICT

A well thought-out, carefully-engineered, beautifully-finished and effective modern vehicle, capable of returning excellent fuel consumption and emissions performance, provided that the most is made of frequently recharging the hybrid battery, so that the vehicle can spend most of its time operating on electric power only. It’s enjoyable to drive, comfortable, and roomy for both passengers and luggage.

In terms of everyday versatility, the fact that the car can be driven on pure electric power for upwards of 45 miles, on petrol/electric power combined, or just using the internal

combustion engine, makes this Suzuki a very practical choice and there is no ‘range anxiety’, as can be experienced with pure electric vehicles. In addition, with a realistic overall driving range in excess of 740 miles, one seldom has to stop to refuel.

The Across is not cheap to buy, and road tax payments are high in the early years of ownership, but fuel costs promise to be low overall.



WHEELS-ALIVE TECH. SPEC IN BRIEF:

Suzuki Across Plug-in Hybrid SUV

Engine: Four cylinder, 16 valve 2.5 litre (2487cc), petrol, direct injection plus port injection, Euro 6d compliant.

Power: 185 PS @ 6,000 rpm.

Torque: 227 Nm (167 lb.ft) @ 3,200 – 3,700 rpm.

Front electric motor: 134 kW, 270 Nm (199 lb.ft).

Rear electric motor: 40 kW, 121 Nm (89 lb.ft)

Combined maximum power: 306 PS.

Transmission: E-CVT automatic; four wheel drive .

Performance:

0 – 62 mph: 6.0 seconds

Top speed: 112 mph.

Fuel consumption (‘Official’ figures):

WLTP figure: ‘Weighted’ Combined, 282.4 mpg (petrol engine, WLTP Combined, 42.9 mpg).

During our road test, over 319 miles, average 61.3 mpg.

Fuel tank capacity: 55 litres (12.10 Imperial gallons).

Approximate range on full tank at our actual achieved mpg: 740+ miles.

EV only driving range: 46.6 miles

CO2 Emissions, WLTP: 32 g/km.

Warranty: Three years/60,000 miles, but for the hybrid components five years/60,000 miles. (Note: Interestingly, longer warranties are provided by Toyota on their RAV4 models, on which the Across is based, but bear in mind that pricing structures differ too).

Dimensions: Length 4,635 mm (15.21 ft), Width 1,855 mm (6.09 ft), Height 1,690 mm (5.54 ft), Wheelbase 2,690 mm (8.83 ft), Ground clearance 190 mm (7.48 in), Kerb weight, including all options, 1,940 kg (4,277 lb), Luggage capacity, 490 to 1,168 litres (17.30 to 41.25 cu.ft).