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Bullseye

Lamborghini sets sights on booming SUV market with 478kW Urus

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N'tertainer

Namyang-born, Nurburgring-tuned Veloster N tops new Veloster range



By RON HAMMERTON
and TUNG NGUYEN

HYUNDAI ripped the covers off its second-generation Veloster at this month's Detroit motor show, revealing an all-new model that is topped by a potent N performance variant that is unlikely

to make it into Australian showrooms.

The car-maker's local arm will ask its parent company to reconsider its left-hand-drive-only policy for its all-new Veloster N coupe when it goes into production in South Korea in September this year, arguing that because Australia is getting a right-hand-drive version anyway, the

development costs would be significantly lower than for a stand-alone model.

The Veloster N gets the top-shelf 202kW/353Nm 2.0-litre turbo engine that will debut in Australia in the i30 N in March-April.

It develops peak power at 6000rpm and peak torque between 1450 and 1470rpm –

a relatively narrow band by modern turbo standards.

Developed alongside the i30 N at Hyundai's Namyang test centre in Korea and the Nurburgring in Germany, the Veloster N shares most of the high-performance mechanical goodies with its five-door hatch counterpart.



Both will be launched only with a close-ratio six-speed manual gearbox, but an eight-speed dual-clutch transmission would be added in about the third quarter of 2019.

The Veloster gets electronically controlled sports suspension with multiple modes, including a track-focused N mode. The suspension can transfer load to reduce dive and bodyroll during braking, cornering and acceleration.

Like the i30 N, the Veloster N drives only through the front wheels, but the drivetrain

features a limited-slip differential with torque vectoring to aid cornering under throttle.

While the N is unlikely to find its way to Australia any time soon, the rest of the Veloster range is expected in showrooms in the second half of 2018.

Forgoing the 1.6-litre naturally aspirated entry-level of the outgoing model, the new Veloster will instead open with a new 2.0-litre atmo four-cylinder engine producing 110kW of peak power at 6200rpm and 179Nm of

maximum torque at 4500rpm, up 7kW/12Nm, and it is paired with either a six-speed manual or automatic transmission.

The carryover 1.6-litre force-fed four-cylinder unit, developing 150kW at 6000rpm and 264Nm from 1500-4500rpm powers the Veloster Turbo.

While power matches the outgoing Veloster Turbo, torque in the new model is down 1Nm, however an overboost function will raise outputs to 274Nm under maximum acceleration.

Turbo versions will be available with a six-speed manual or seven-speed dual-clutch automatic with paddle shifters, as well as gaining an Active Sound Design system to enhance intake and exhaust audio, and a quicker steering rack.

Also specific to force-fed Velosters will be a McPherson strut front suspension set-up with a multi-link rear, stabiliser bars all round and 18-inch alloy wheels shod in Michelin Pilot Sport 4 rubber.

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Across both the base and Turbo versions of the Veloster, three driving modes – Normal, Sport and Smart – are on offer, in addition to Torque Vectoring Control (TVC) that applies braking force to the inside wheel mid-corner for “an incremental margin of cornering precision during enthusiastic driving”, according to Hyundai.

Retaining the first version’s asymmetrical ‘2+1’ door design, the new-generation Veloster wears new sheet metal courtesy of a collaboration of designers from Seoul, South Korea and Irvine, California.

Up front, a new hexagonal grille flanked by optional LED headlights and integrated daytime running lights keeps the new Veloster in line with its i30 stablemate, while a sculpted bonnet and chiselled lower chin add to the new model’s aerodynamic profile.

Large 18-inch wheels that fill the bulging wheelarches also combine with a lower

roofline and windscreen positioned further towards the rear for a squat stance and more coupe-like profile.

From the back, tail-lights contour the slim rear window glass, while an aggressive diffuser nestles a centre-exit chrome exhaust and a subtle spoiler is mounted on the roof.

As standard, the base Veloster will be equipped with a 7.0-inch colour touchscreen display that includes radio and auxiliary inputs, however stepping up to the Turbo will net buyers an 8.0-inch unit with satellite navigation, eight-speaker sound system and Android Auto/Apple CarPlay compatibility.

Autonomous emergency braking is available across the Veloster range, as well as lane keep assist, high beam assist on LED-equipped versions, driver attention warning, reversing camera, six airbags, blind-spot collision warning and rear cross-traffic alert. **MM**

G-Force

Second-gen G-Class steps into the future with hi-tech E-Class-inspired interior



By JUSTIN HILLIARD

NO NEED to adjust your screens, this is the next-generation Mercedes-Benz G-Class – previewed in its rugged, off-road-focused form ahead of an Australian launch in AMG guise during the third quarter this year.

Trainspotters may be hard pressed to spot any obvious sheet-metal changes, but the G-Class is now 53mm longer and 121mm wider than before, despite retaining its classic look that can be traced back to the G-Wagen 460 from 1979.

The distinctive doorhandles, external door

hinges, exterior protective strip, exposed rear door-mounted spare wheel, unique indicator lights and surface-mounted bonnet from its predecessor carry over with minimal changes.

However, a keen eye will notice the narrower, more precise panel gaps and better-balanced

transitions between surfaces.

The most obvious change is how the wheelarches and bumpers are deeply integrated into the rest of the body, eliminating their previous add-on look.

According to member of the board of



Daimler AG responsible for group research and Mercedes-Benz cars development Ola Kallenius, the second-gen G-Class has reset the standard for dynamic off-roaders.

“The new G-Class is setting the bar higher still in all relevant areas – in terms of

performance both on and off the road, as well as with regard to comfort and telematics,” he said. “Our ‘longest-serving’ model series is therefore ideally equipped to continue its success story. In short, the new ‘G’ is still a ‘G’, only better.”

As such, the G-Class’ all-terrain chops have been further enhanced for the new model, thanks to a ladder-frame chassis, three 100-per-cent differential locks and a low-range off-road reduction gear.

Another key component is an all-new

independent suspension set-up that consists of a double-wishbone front and rigid rear axles, with the former directly mounted on the ladder frame. This configuration resulted from a collaboration between Mercedes-Benz and Mercedes-AMG.



As such, ground clearance to the front axle gear is 270mm, while maximum wading depth is up 100mm, to 700mm, and departure and approach angles are up one degree, to 30 and 31 degrees respectively.

Five Dynamic Select driving modes – including Comfort, Sport, Eco, Individual and G-Mode – are available, allowing the driver to adjust engine, transmission, suspension, steering and assistance system settings, as well as the adaptive dampers, when optioned.

G-Mode makes its debut in the G-Class and

overrides the chosen alternative driving mode when one of the three differential locks or the low-range off-road reduction gear has been activated.

The system adapts chassis damping, modifies steering, adjusts accelerator characteristics and avoids unnecessary gearshifts to enable optimum control and maximum off-road capability.

A steady diet of strong, high-strength and ultra-high-strength steels for the body shell, and aluminium for the wings, bonnet and

doors, has resulted in an overall weight loss of 170kg.

By being lighter on its feet, Mercedes-Benz claims the G-Class benefits from reduced noise, vibration and harshness (NVH) levels while improving driving dynamics and comfort.

Steering is now handled by an electromechanical rack-and-pinion system, which has allowed assistance features such as park assist to be added.

Overseas markets will initially take delivery of the G-Class in G500 guise from May, with

this variant motivated by a 4.0-litre twin-turbocharged V8 petrol engine.

Producing 310kW of power and 610Nm of torque from 2000 to 4750rpm, the G500 consumes 11.1 litres of fuel per 100 kilometres on the combined cycle test while emitting 263 grams of carbon dioxide per km.

The G500 sends drive to all four wheels via a nine-speed torque-converter automatic transmission.

While the G500 is not planned to land Down Under, the yet-to-be revealed Mercedes-

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AMG G63 has already been confirmed for an Australian launch, with a diesel-powered G-Class to join it towards the end of this year.

Like its other AMG siblings, the G63 is expected to employ the G500's bent eight, albeit with a more potent tune – potentially up to 450kW/850Nm like the E63 S, but Benz is yet to announce specifics.

As previously reported, the G-Class interior has been subject to a significant redesign with a focus on upholding its off-road character, while adding top-class luxury appointments.

High-quality materials are in abundance, while the round headlights are mimicked by the side air vents and the loudspeakers are in the shape of the aforementioned indicators.

The grab handle facing the front passenger returns, as do the chrome-accented switch controls.

Nevertheless, the most drastic additions are the optional dual 12.3-inch displays, dubbed Windscreen Cockpit, that project the digital instrument cluster and multimedia system in Classic, Sport or Progressive forms. **MM**

Mechanical bull

Heavyweight SUV segment goes hyper with new Lamborghini Urus



By TUNG NGUYEN

LAMBORGHINI has finally revealed the production version of its Urus crossover, which the brand is calling the world's first super SUV thanks to its 478kW/850Nm twin-turbo V8 engine, 3.6 second 0-100km/h time and \$390,000 before

on-roads pricetag.

The third model in the supercar-maker's stable next to the V12 Aventador and V10 Huracan, the Urus – as mentioned – is powered by a new front-mounted, force-fed 4.0-litre V8 aluminium engine that produces peak power of 478kW at 6000rpm and maximum

torque of 850Nm from 2250-4500rpm, making it the world's second-most powerful production SUV behind the 527kW/874Nm Jeep Grand Cherokee Trackhawk. It is also the first Lamborghini model to utilise a turbocharged powerplant.

For comparison, the soon-to-be-replaced

Porsche Cayenne Turbo S thumps out 419kW/800Nm from the same engine configuration, the Range Rover Sport SVR develops 405kW/680Nm from its supercharged 5.0-litre V8 and the Tesla Model X P100D makes do with a 310kW/830Nm all-electric powertrain.



Tipping the scales just under 2200kg, the Urus sends power to all four wheels via an eight-speed electro-hydraulically controlled automatic transmission with a Torsen central self-locking differential and torque vectoring that enables a 0-100km/h sprint in just 3.6s, 0-200km/h in 12.8s and a top speed of 305km/h.

Although the Tesla Model X's all-electric

system will pip the Urus to 100km/h by 0.5s, the new Lamborghini SUV will shame thoroughbred sportscars including the Aston Martin V12 Vantage S, Audi TT RS, BMW M4 CS, Jaguar F-Type SVR and Mercedes-AMG GT S in the landmark triple digit dash.

However, when not on full throttle, the Urus' engine can deactivate cylinders to improve

fuel efficiency, which is clocked at 12.7 litres per 100km with CO2 emissions of 290 grams per kilometre.

Tucked behind wheels that range from 21- to 23-inch in diameter, carbon ceramic brakes measuring 440x40mm in the front and 370x30mm in the rear scrub speed "in all conditions and environments", according

to Lamborghini.

The rear-biased torque split of 40:60 can accommodate up to 70 per cent to the front axle or 87 per cent in the rear to maximise traction, while the back axle also sports the rear-wheel steering system carried over from the Aventador S for improved low-speed manoeuvrability and high-speed stability.



In addition to Lamborghini's standard Strada, Sport and Corsa driving modes – which increasingly dial up steering, suspension, engine and stability settings – the Urus' Tamburo drive-mode selector also offers Terra, Neve and Sabbia settings for off-road, snow and sand conditions respectively.

An Ego driving mode also allows drivers to customise individual settings.

Suspension is taken care of by an adaptive air system that can lower or raise the Urus' ride height according to road conditions.

Borrowing styling cues from the brand's first SUV, the LM002 from 1990, the Urus wears a muscular body characterised by

an imposing front fascia with sleek LED headlights, gaping air intakes, and large, hexagonal-themed front grille.

A prodigiously sloping roofline enables seating room for five despite its Volkswagen Group MLBEvo underpinnings, while the Urus' heavily-sculpted flanks also invoke Lamborghini's iconic wedge shape.

The Italian supercar-maker's iconic Y-shaped tail-lights adorn the rear, as well as a substantial diffuser, quad exhaust pipes and subtle roof-mounted spoiler.

Inside, the Urus adopts the same 'driver is a pilot' theme as its siblings with cockpit-inspired switchgear including flip-up engine start button, lever-style gear selector and

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driver-orientated controls.

Lamborghini's third-generation infotainment system is standard in the Urus, with two colour touchscreens positioned in the centre stack – the lower display handling climate control settings, as well as handwriting and keyboard inputs, while the upper screen houses infotainment and vehicle systems.

As standard, the Urus will come equipped with a wireless phone charger, Bluetooth connectivity, voice controls, front and rear parking sensors, autonomous emergency braking, electronic tailgate, and eight-speaker sound system.

However, buyers will have the option of specifying their Lamborghini SUVs with a TV tuner, digital radio, card rear, head-up display, Bang & Olufsen 1700W 21-speaker sound

system and Lamborghini Smartphone Interface with Apple CarPlay, Android Auto and China's Baidu-Carlife connectivity.

Sports seats are standard for front occupants with 12-way electric adjustment and heating, although buyers can option 18-way adjustable seats with cooling and massage function.

Second row seats can be folded and stowed to increase boot capacity from 616 litres to 1596L or customers can option two electric rear seats in lieu of the bench-style three pews for a four-seat layout.

The cabin is finished in high-end materials including leather, Alcantara, carbon-fibre, aluminium and wood.

First Australian deliveries of the Urus are expected around the second quarter of 2018. **MM**

Upper limit

Lexus' 5-metre-plus LF-1 Limitless concept previews future flagship SUV



By ROBBIE WALLIS

LEXUS has lifted the lid on its LF-1 Limitless concept, with the wild-looking SUV previewing a “flagship crossover” for the Japanese manufacturer.

Revealed at the Detroit motor show, the LF-1 Limitless cuts a striking figure with a

conspicuous, angular design befitting a Lexus concept vehicle.

The LF-1 Limitless is designed to combine high performance and opulent luxury, with autonomous capability and the possibility of catering to a diverse range of lifestyles.

Lexus Australia chief executive Scott

Thompson said the chances of the LF-1 Limitless making it to production would depend on the interest it generates as a concept.

“Once we gauge consumer interest and obviously interest from media, then we will start to plan for the future,” he said.

“There is definitely an opportunity in the

marketplace we have identified above RX to complement LX in the marketplace.”

When asked if Lexus Australia was keen to bring a production version Down Under, Mr Thompson said: “Absolutely. It’s a pretty good-looking car. I think it will complement our range.”



Designed by Toyota's Caltex design studio in southern California, the LF-1 Limitless' design is based on the concept of fusing the shapes of molten metal and the sharp edges of a katana.

From the front, the eyes are immediately drawn to the aggressive three-dimensional spindle grille now synonymous with Lexus, pinched by the LED headlight signature that runs along the line of the bonnet and down towards the front of the wheelarches.

In profile, the design is underscored by a long bonnet, 22-inch wheels and a sloped, coupe-like rear end, with creases running through the bodywork aiding the angular look of the concept.

At the rear, the LF-1 Limitless features a split rear roof spoiler, a long, flowing tail-light signature that runs along the length of the tailgate and a subtle diffuser around the rear apron.

The rear spoiler is intersected by a pane of glass, which helps provide an uninterrupted view for passengers from the rear window to the panoramic glass roof above the cabin.

Large sculpted openings behind the rear wheelarches give the impression of being oversized exhaust outlets but are in fact air vents for the brakes.

Measuring 5014mm long, 1986mm wide and 1605mm tall, with a 2974mm wheelbase, the LF-1 Limitless is only 66mm shorter than the Toyota LandCruiser-based LX570

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upper-large SUV, while being 6mm wider with a 124mm longer wheelbase.

The cabin has been designed with the theme of hospitality in mind, with a minimalist cockpit that allows the driver to concentrate on the task at hand.

Analogue buttons and knobs have been replaced by motion-activated controls and a minimalist display, with the majority of drivetrain functions confined to the steering wheel, including gear selection buttons and manual paddle shifters.

The metallic interior trim is finished in the same titanium colour as the exterior with a satin finish, which contrast with brown leather trim and white perforated leather seat upholstery.

A four-dimension navigation system, which adds the element of time, is accessible via haptic

controls on the dashboard that also control other infotainment and comfort settings, while at the rear the two-seat second row is divided by an additional haptic controller in the centre console that controls the rear air-conditioning and infotainment screens.

In terms of autonomy, the LF-1 features Chauffeur mode, which controls the vehicle's by-wire steering, braking, acceleration, lights and signals.

Lexus has not specified the engine underpinning the LF-1 Limitless, saying only that it is rear-wheel drive and describing powertrain choices as "vast".

The concept could be powered by fuel-cell, hybrid, petrol or battery electric power. By 2025, every Lexus model will be available with either a full-EV or hybrid variant option. **MM**