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Power of one

€2.7 million Mercedes-AMG Project One hits 200km/h in under six seconds

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Shapeshifter

New-gen Megane RS adds two doors and automatic transmission option



By HAITHAM RAZAGUI

ENDING months of teasing, leaks and speculation, Renault's fourth-generation Megane RS hot hatch has broken cover at the Frankfurt motor show sporting flared guards to house its fattened footprint and a grunty new 1.8-litre four-cylinder turbo-petrol engine.

Producing 205kW of power at 6000rpm and a meaty 390Nm of torque all the way from 2400 to 5000rpm, the new direct-injection Megane RS engine outguns its larger 2.0-litre predecessor, which in top RS275 Cup Premium tune churned out 201kW at 5500rpm and 360Nm at 3000rpm.

No 0-100km/h acceleration time has yet been claimed, but an improvement over the RS275's 6.0-second sprint is likely, particularly when the new six-speed dual-wet-clutch transmission is specified. Purists are catered for by the standard six-speed manual. And despite its more family-friendly five-

door body and availability of an automatic dual-clutch transmission, Renault promises its new RS will continue to deliver as a driver's car.

In addition to inheriting four-wheel steering from the Megane GT warm hatch and wagon, the new RS features a unique suspension set-up with front and rear tracks respectively



widened 60mm and 45mm over the standard Megane, hydraulic compression stops at all four corners – a rally-bred feature that debuted on the smaller Clio RS – and a choice of 18- or 19-inch alloy wheels.

Drive is still sent exclusively to the front wheels, with the broad spread of peak torque also suggesting the new engine will be flexible

and tractable during everyday use, with a healthy dose of mid-range punch for when this performance-oriented Megane is driven as Renault Sport intended.

GoAuto understands the 205kW/390Nm Megane RS engine is a development of the 188kW/320Nm 1.8-litre mill fitted to the Alpine A110 sports coupe, which in turn is

a bigger-bore version of the 147kW/260Nm 1.6-litre turbo-petrol used in a Clio RS.

For comparison, the Volkswagen Golf GTI develops 169kW/350Nm from a 2.0-litre turbo-four and a Peugeot 308 GTI 270 extracts 200kW/330Nm from its force-fed 1.6-litre unit. These respectively result in 0-100km/h times of 6.4s and 6.0s.

Hyundai's i30 N, which was revealed to media in July but will also be making its public debut at Frankfurt, is powered by a 2.0-litre turbo-petrol producing 184kW in standard guise and 202kW/353Nm in the i30 N Performance. Both will be manual-only from launch, with respective 0-100km/h claims of 6.4s and 6.2s until an eight-speed dual-clutch



auto comes on stream in 2019.

Styling-wise, the Megane RS's bulging wheelarches accommodate the broader stance and feature extractor vents behind the front wheels, with another pair bookending a fatter rear bumper that incorporates the hallmark Megane RS trapezoidal central exhaust outlet within its functional diffuser.

Up front, chequered-flag-style LED driving lights have migrated from the facelifted Clio

RS and join Renault Sport's familiar F1-style aerodynamic blade running across the bumper's width, which has also been extended to meet the bulkier front guards.

Finishing off the effect, which is overall more purposeful than aggressive, are slim 'flat floor' side skirts that serve as another nod to Renault Sport's F1 racing heritage, and a new RS-specific paint finish called Orange Tonic to join the iconic Liquid Yellow that has been a

Renault Sport calling card for some time.

Inside, the already sporty cabins of the Megane GT-Line and GT left Renault Sport little room for tweaks, but the new RS manages to provide an even more scene-setting ambience with red contrast stitching, carbon-look trim, a unique steering wheel and enhanced driving mode selection that includes a Race option in addition to the standard Megane's Eco, Normal and Sport settings.

Inevitably, even sportier Megane RS variants will be in the pipeline, with sights firmly set on swiping Honda's front-drive Nurburgring lap record currently held by the Civic Type R (235kW/400Nm and \$50,990 plus on-roads) with a 7:43.8m time that trounced the former 'Ring-leading Volkswagen Golf GTI Clubsport S by almost 5.5s.

As reported, Renault will fast-track the new Megane RS to Australia as soon as right-hand-



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drive production begins. It was initially not expected to arrive until this time next year, but a Renault insider in Frankfurt told GoAuto this week that “you might be pleasantly surprised” with the still-to-be-confirmed launch date.

Renault is unable to provide even indicative pricing until closer to launch, but the transition from coupe-like, manual-only three-door to a more useable five-door shape with automatic transmission availability should broaden the model’s appeal enough to achieve economies of scale that lead to a competitive price.

If Renault Australia can replicate final pricing of the third-generation Megane RS with this latest model (\$44,990 driveaway for the RS265 Cup and \$48,990 driveaway for the RS275 Cup Premium), it will run closely against the less powerful Volkswagen Golf GTI (from \$41,490 plus on-road costs) and make Peugeot’s 308 GTI 270 (\$49,990 plus on-roads) look expensive.

Regardless, Australia’s appetite for fast Renaults, combined with the latest Megane’s more mainstream positioning, is certain to result in record RS sales Down Under. **MM**

Winning formula

Eight examples of Formula One-derived 740kw-plus Project One headed to Australia



By ROBBIE WALLIS
and TERRY MARTIN

MERCEDES-AMG has moved into top-echelon hypercar territory with the unveiling of the Project One at the Frankfurt motor show this week – a 740kW-plus (1000hp) two-seater supermodel that borrows heavily from Formula One hybrid

technology but heads straight for the open road.

This is not a track-only special or a flight-of-fancy concept but an exclusive near-production super-high-performance hybrid coupe that has a €2.27 million (\$A3.38m) sticker price and, according to figures quoted by Mercedes, can accelerate from standstill to 200km/h in less than 6.0 seconds and push

on to a top speed of beyond 350km/h.

The blistering performance stems from a heavily reworked version of the 1.6-litre 24-valve V6 petrol engine and electric motor system used in the Mercedes-AMG Petronas F1 racing car that in this application can rev to 11,000rpm but is tuned for everyday use.

Developed at Mercedes-AMG's high-

performance powertrain division in Brixworth, England, the mid-mounted combustion engine is backed by four electric motors: two at the front, which are claimed to spin to 50,000rpm (some 30,000 higher than current “state-of-the-art” road cars) and provide drive to the front wheels one that drives the hi-tech electric turbocharger (with up to 100,000rpm) and a



bigger motor that is installed directly onto the engine and linked to the crankshaft via a spur gear in similar fashion to the MGU-K (Motor Generator Unit – Kinetic) used in Formula One.

Mercedes claims that the use of an electric turbocharger completely eliminates turbo lag and makes the force-fed V6 more responsive than a normally aspirated V8.

The Project One's formidable power is sent to all four wheels via Mercedes-AMG's 4Matic+ variable all-wheel-drive system, with the front wheels each powered by a 120kW electric motor, while the rear wheels are fed 500kW courtesy of the hybrid V6 set-up.

It uses an automated eight-speed manual transmission developed from scratch

specifically for the Project One, which can be operated in automatic mode or manually via steering-wheel-mounted paddle shifters.

Mercedes estimates its regenerative braking technology can recover up to 80 per cent of energy under everyday driving conditions, while the electric turbocharger can use parts of the surplus energy from the exhaust system

to generate electricity, which can then either be used for additional drive power or storage in the car's lithium-ion battery.

The lithium-ion battery cells and the cell cooling system which are stored in the vehicle floor behind the front axle are the same as the ones used in the Mercedes Formula One racecar.

Drive modes can range from pure EV (with



up to 25km emissions-free driving) to a dynamic mode similar to that used by its F1 counterpart.

Providing “specific indications of what to expect from the upcoming production model”, the Project One is understood to have another 18 months of development work ahead of it before first deliveries from the 275-unit production run are made.

As GoAuto has reported, Mercedes-Benz has received eight Australian orders for the left-hand-drive-only model, with the first expected to arrive in the second half of 2019.

When it does arrive, it will face competition from other forthcoming hypercars such as the Aston Martin Valkyrie and McLaren BP23.

The design starts with a hulking front apron with air inlets across the entire front bumper, which feed air through the front of the car, out through the black inlets on the bonnet and into the roof-mounted intake tract.

It also contributes to additional downforce for the front wheels, as does the automatically extending front splitter and active ventilation louvres on the front wheelarches.

In profile, the most notable features are the roof-mounted, F1-derived air intake, which then extends into a black, vertical shark fin which improves lateral stability while cornering at high speeds.

The car’s profile also shows a cabin positioned towards the front of the vehicle, as well as ample use of black carbon-fibre around the side sills and wheels. Doors open both forwards and upwards.

The Project One has a multi-link suspension design front and rear and sits on 10-spoke, forged aluminium wheels

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with a radial carbon-fibre semi-cover measuring 19 inches at the front and 20 inches behind, with three ventilation slots per spoke for brake cooling.

At the back end, the subtle lip spoiler can extend into a large aerofoil wing, which combined with the hulking two-section carbon-fibre diffuser contributes to aerodynamic efficiency.

The large central exhaust outlet with two smaller apertures is a nod to Formula One, while the large, mesh rear apron adds a muscular look to the vehicle.

Front and rear lighting signatures come in the form of three-part rhomboid LED lights,

offering an air of simplicity in an otherwise complex design.

It has an F1-inspired rectangular steering wheel, which can control normal functions such as cruise control, infotainment and phone, as well as the traction control, driving modes and an LED display giving rev readouts.

Two 10.0-inch screens are on display, one for the instrument cluster and the other for the infotainment screen.

In-cabin storage is available behind both seats, while the rearview mirror has been replaced by a screen linked to a rear camera. **MM**

Wicked wagon

Audi's new RS4 Avant swaps out V8 for Porsche-developed 331kW/600Nm V6



By DANIEL DEGASPERI

AUDI has unveiled its fourth-generation RS4 Avant at the Frankfurt motor show overnight as a more spacious alternative to the RS5, utilising the same 2.9-litre twin-turbocharged V6 engine but trading a bit of performance for an extra dose of practicality.

For the second generation running there will

be no RS4 sedan, while the high-performing wagon will arrive in Australia in the second quarter of 2018 priced in the “vicinity” of \$150,000 before on-road costs according to an Audi Australia spokesperson – a pricetag that would leave the latest Audi Sport model \$7900 cheaper than RS5 Coupe, and \$8511 below its Mercedes-AMG C63 Estate rival.

Conversely, however, for the first time this RS4 Avant will enter the Chinese market in what Audi Sport GmbH managing director Stephan Winkelmann described as providing “fresh impetus for growth” in that market “as the only high-performance Avant in its segment” where the C63 Estate does not sell.

The same 331kW power output of the outgoing

4.2-litre naturally aspirated V8 model has been retained for the downsized engine produced in an Audi-Porsche collaboration, and also seen in the latter brand’s new Cayenne and Panamera.

However power is no longer produced at a heady 8250rpm, but over a 5700rpm to 6700rpm band, while 600Nm of torque is produced between 1900rpm and 5000rpm –



compared with its successor's 430Nm from 4000rpm until 6000rpm.

As before, the RS4 Avant is an automatic-only proposition, however the former seven-speed dual-clutch transmission has been swapped out for an eight-speed torque-converter configuration.

The 4.1-second zero to 100km/h claim of the 1790kg RS4 Avant leaves it 0.2s slower than what the same powertrain manages to deliver in the 125kg-lighter RS5 coupe, however it is also 0.6s faster than the 80kg-heavier outgoing RS4.

Meanwhile combined-cycle fuel consumption of 8.8 litres per 100km is 1.9L thrifter than the previous V8-engined Avant.

Once again Audi Sport will offer a mechanical limited-slip function for the back wheels as an option that it calls a rear sport differential.

While the standard RS suspension lowers the RS4 Avant by 7mm compared with an A4 with its optional sports chassis, an option dubbed RS sport suspension package will also be available, encompassing Dynamic Ride Control (DRC) adaptive dampers, carbon-ceramic brakes and a sharper steering set-up.

The package further ramps up the top speed from 250km/h to 280km/h.

Audi Sport used the Nogaro Blue 'hero' colour of the original 1999 RS4 Avant to showcase the new model at the Frankfurt show.

The performance division of the Ingolstadt brand also made links between the styling of the RS4 Avant and the Audi 90 quattro IMSA GTO racecar of which its designers took inspiration from "many motorsports details" such

 Audi Sport

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as C-shaped large front air inlets and a wide hexagonal grille with gloss-black honeycomb mesh inserts and 'quattro' lower lip badging.

Optional matrix LED headlights further add dark-tinted headlight bezels, while the RS4 Avant pushes its wheelarches out by 30mm compared with a standard A4 Avant to house the chassis' wider tracks.

Unique rear guards also push out from the rear doors to create a diagonal side character crease, replacing the single line of the standard medium wagon range and melding into dark-tinted tail-lights that also extend further out.

It teams with an RS spoiler and gloss-black

diffuser, as well as large, twin oval tailpipes.

While 19-inch forged alloy wheels are standard, 20s will be optional.

Inside, seats with aggressive bolstering are standard, with a honeycomb pattern optional, while the sport steering wheel, gearshifter and illuminated sills all wear RS badging.

The head-up display and Virtual Cockpit cluster further score RS-specific detailing with graphs for torque output, tyre pressure and g-forces.

Various carbon, alloy and gloss-black detailing is further available, while "the Audi exclusive program covers just about any other special request". **MM**

Urban renewal

Honda targets inner-city commuters with retro Urban EV concept



By HAITHAM RAZAGUI
and ROBBIE WALLIS

HONDA has used the Frankfurt motor show to unveil its Urban EV Concept, which will preview the battery technology to be used in a full-electric production vehicle from the Japanese car-

maker due on sale by 2019.

However, no details have emerged on the capacity, output or charging times of the EV concept's electric powertrain other than it will "include a high-density, lightweight battery pack, integrated heat management and the evolution of energy transfer functions".

Speaking with GoAuto in Frankfurt, Honda Europe senior vice president Philip Ross confirmed that production versions of the Urban EV Concept would be built in right-hand drive and will launch first in Europe in 2019 before being considered for roll-out across other markets.

"It won't be made in Europe, it will be made in Japan," he said.

Asked what was behind the model's European focus, Mr Ross said it fitted Honda Europe's "advanced and sporty mantra".

"We believe that if we can make a great car for Europe, then it will be great for all the



other parts of the world as well.”

Being a pure-electric vehicle, launching first in Europe fits with Honda’s goal that electrified vehicles will account for two-thirds of its global sales by 2030, led by the European market reaching this level five years earlier in 2025.

However, Mr Ross did not expect pure-electric cars such as the Urban EV Concept to account for more than 5.0 per cent of overall Honda sales in Europe.

As to whether the production version of the Urban EV concept will make it to Australia, Honda Australia public relations manager Neil McDonald told GoAuto it was still too early to speculate on which markets outside Europe will get it.

The tiny concept car is built on an entirely new platform, and, at 3896mm long, is 100mm shorter than the Jazz light hatch.

While the technology underpinning the concept may be new, Honda has gone for a simplified, old-school design philosophy for the Urban EV.

Exterior design is reminiscent of a Volkswagen Mk1 Golf, or even the Honda N360 hatchback from the 1960s, with its diminutive proportions, two doors and circular headlights.

The concept has a low stance with minimal overhangs, flared wheel arches and multi-spoke

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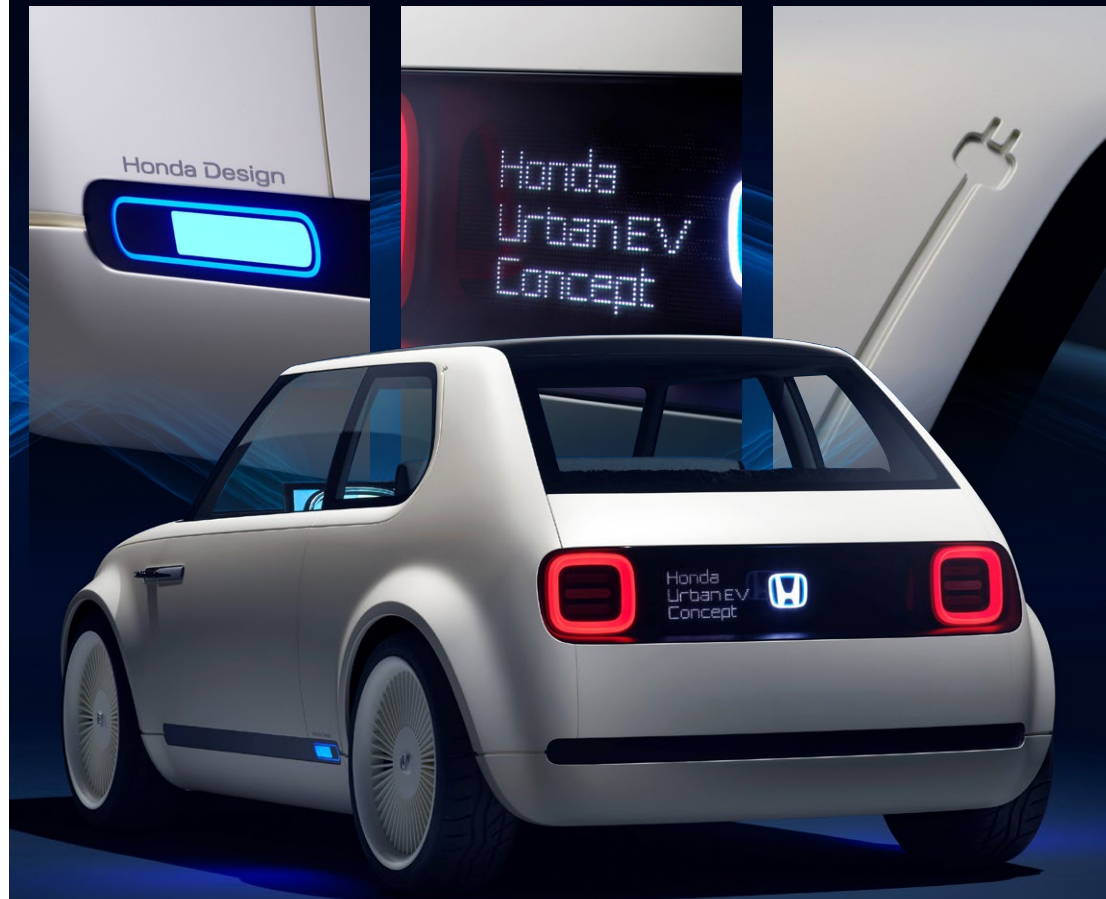
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body-coloured wheels in beige, while the front fascia features ringed LED lights and the Honda emblem are finished in blue – new styling feature that will be adopted for all Honda electric vehicles (EVs).

In place of a traditional front grille, Honda has put in an LED screen that can display interactive multilingual messages, including greetings, advice for other drivers on the road or updates relating to charging status. The charging cable connection is housed on the bonnet.

Slim A- and B-pillars help give the Urban EV a compact appearance as well as clear visibility from the cabin, while at the rear, square LED tail-lights combine with another display screen.

Traditional door mirrors are eschewed in favour of slimline cameras that project onto door-mounted screens, while the cabin can be accessed from rear-hinged, front-opening doors.

Inside, four occupants can sit on two bench seats that evoke a lounge feeling, with the front rows upholstered in natural grey fabric, while the seat backs squabs and arm rests are finished in wood.

The large, floating dash is also trimmed in wood, and features a massive wraparound screen that runs behind the console and into the doors.

Honda has gone for a minimalist look with the Urban EV cabin, with the steering wheel, pedals, indicator stalks and a couple of dials comprising the entirety of the interior. **MM**