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ALL-NEW RANGE ROVER SPORT REVEALED

"THE FASTEST, MOST AGILE, MOST RESPONSIVE LAND ROVER EVER"

- New, modern interpretation of Range Rover Sport completes three-model Range Rover portfolio
- Transformational on-road dynamics with world's best all-terrain performance gives unrivalled breadth of capability
- Impeccable composure and refinement delivering exceptional ride comfort
- Superbly crafted, luxurious and more flexible interior with new 5+2 seating option
- Weight saving of up to 420kg*, like for like TDV6 engine, brings agility and exceptional performance, with 15 percent CO_2 reduction and greatly improved fuel economy
- Features Range Rover premium chassis and lightweight aluminium architecture
- Customer-focussed technology package debuting Land Rover's 'connected car' suite of technologies

New York City, USA, 26 March, 2013 – The all-new Range Rover Sport, revealed to the world today on the streets of New York, is the ultimate premium sports SUV – the fastest, most agile and responsive Land Rover ever. The Manhattan skyline was the perfect backdrop for this world premiere with more units of Range Rover Sport sold in the United States than any other global market and New York being the model's best-selling city.

Developed alongside the highly-acclaimed all-new Range Rover, the new Range Rover Sport now delivers the brand's best-ever on-road dynamics together with class-leading, genuine Land Rover all-terrain capability. The new, technology-packed, Range Rover Sport, presents customers with a more assertive and muscular exterior, more luxurious interior and the flexibility provided by the option of occasional 5+2 seating.

Exploiting Land Rover's breakthrough lightweight suspension design and innovative dynamic chassis technologies, the Sport's all-new, first-in-class aluminium architecture achieves a weight saving of up to 420kg*. This transforms the vehicle's dynamic performance, enabling it to blend agile handling with exceptional comfort, offering a unique mix of sporting luxury and a dynamic, connected driving experience, along with CO_2 emissions reduced to 194g/km.

Speaking ahead of the official world premiere at the New York International Auto Show, Land Rover Global Brand Director John Edwards said: “The all-new Range Rover Sport is a vehicle that has been designed and engineered without compromise. With Land Rover capability at its heart, it is one of the most road focussed vehicles we’ve ever produced, but of course still offers unsurpassed all-terrain capability. It is a vehicle which is designed to be driven. We’ve taken ride, handling and agility to another level for Land Rover to deliver a truly rewarding, sporting drive, together with unmatched luxury, capability and versatility.

“Building on the success of the recently launched flagship Range Rover, the new Range Rover Sport also employs a vast array of new technologies which help to transform its performance, refinement and all round capabilities,” adds Edwards.

Design: assertive, powerful and muscular

The dynamic new Range Rover Sport has a bold and progressive exterior design that is assertive, powerful and muscular, hinting at the improved driving performance, and positioning the vehicle clearly between the Range Rover and the Evoque through a clear, shared design DNA.

Land Rover Design Director and Chief Creative Officer, Gerry McGovern, said: “The new Range Rover Sport is the ultimate luxury SUV. A new Range Rover Sport for a new era. Relevant, sustainable and utterly desirable. Alongside the all-new Range Rover, and the Range Rover Evoque, the new Range Rover Sport represents the third distinct product in Land Rover’s product revolution. Firmly establishing it as a powerhouse British brand, with exceptional Design at its core.”

With a fresh interpretation of the previous model’s distinctive design, the new vehicle has a sleek and contemporary appearance combined with enhanced use of space. The new Sport is just 62mm longer than its predecessor, yet at 4850mm, it is shorter than other 7-seater SUVs and most E segment sedans, bringing greater manoeuvrability and ease of parking. However, a significantly longer wheelbase (increased by 178mm) provides greater room and improved access for rear passengers.

Shorter overhangs at the front and rear, plus additional width (+55mm) give the new vehicle a more modern stance.

With its ‘faster’ windscreen angle, streamlined and rounded profile and lower, dynamic sloping roofline, the new Range Rover Sport is 8 percent more aerodynamic than the outgoing vehicle (Cd 0.34). The new Sport is 149mm shorter and 55mm lower than the all-new Range Rover on which it is based and model-for-model weighs 45kg less.

While it was developed alongside the Range Rover and shares some commonality with its sister vehicle, the all-new Range Rover Sport benefits from 75 percent unique parts, a significant number of which directly influence the way the new Sport looks and feels.

To maximise personalisation, customers will be offered a choice of wheel designs ranging through 19-, 20-, 21- and 22-inches in diameter including the iconic “Viper’s Nest” wheel design, now available for the first time across all Range Rover models.

Capability: the broadest range of abilities in an SUV

The new Range Rover Sport has been engineered to deliver dramatically improved on-road driving dynamics, with more connected and agile handling complemented by enhanced ride and refinement. The lightweight aluminium suspension is fully-independent, with wide-spaced double-wishbones at the front and an advanced multi-link layout at the rear.

Wheel-travel is class-leading (260mm front and 272mm rear) and provides exceptional wheel articulation of 546mm to deal with the toughest conditions. Maximum ground clearance is increased to 278mm (+51mm) and the upgraded air suspension system automatically varies between two ride heights, while the next generation ground-breaking Terrain Response® 2 system automatically selects the most suitable terrain programme.

Fifth generation air suspension provides up to 115mm of regular movement, from the lowest setting ‘access height’ (now 10mm lower at 50mm for easier entry and exit) to the standard off-road height. An automatic extension, triggered by sensors, and a manually-selected extension, both raise the Sport by 35mm, giving a total movement range of 185mm.

The re-engineered air suspension system with its new +35mm intermediate setting means that the off-road mode can remain available at much higher speeds (80km/h up from 50km/h) than was possible before, which is valuable in terrain with long, rutted dirt roads.

All-new, the electric power steering is characterised by a lighter, more direct steering feel. A choice of two full-time 4WD systems will be offered. One system provides a two-speed transfer case with low-range option, for the most demanding off-road conditions with a front-rear 50/50 percent default torque split, and 100 percent locking capability.

The alternative system is 18kg lighter and features a single-speed transfer case with a Torsen differential, which automatically distributes torque to the axle with most grip, working together with the traction control systems to deliver excellent traction in all conditions. The default front-rear torque split of 42/58 percent is designed to provide a rear-wheel drive bias for optimum driving dynamics.

Powertrains: two engine choices from launch, with new Hybrid and two further diesel engines to follow

At launch, all-new Range Rover Sport customers will have a choice of two engines – a supercharged 5.0-litre 510PS V8 petrol engine and a 3.0-litre 292PS SDV6 diesel engine. The powertrain line-up will be expanded in early 2014 by the addition of a 3.0-litre 258PS TDV6 and high performance 4.4-litre 339PS SDV8 diesel engine. In addition, an innovative, high-efficiency diesel Hybrid model will be available to order in 2014.

Across the range, acceleration times for the 0-60mph dash start from 5 seconds, while fuel consumption is cut by up to 24 percent – depending on model – and CO_2 emissions start as low as 194g/km. All petrol and diesel engines in the new Range Rover Sport are paired with the advanced electronically controlled ZF 8HP70 8-speed automatic gearbox.

The weight reduction measures on the new Range Rover Sport open up the future possibility for the fitment of a smaller, lighter power plant, such as a four cylinder engine. A model which could have an overall weight of less than 2000kg, a reduction of over 500kg* from the previous lightest model.

Sustainability: first in class with lightweight aluminium construction

The all-new Range Rover Sport is the first vehicle in its segment to feature an advanced all-aluminium body structure, which not only contributes to outstanding agility and driving dynamics, but also delivers significantly reduced weight and enhanced sustainability.

Engineered in parallel with the highly-acclaimed new Range Rover, the new model's lightweight aluminium body structure employs a combination of pressed panels, plus cast, extruded and rolled aluminium alloy parts, so the strength is concentrated precisely where the loads are greatest. The vehicle's platform is 39 percent lighter than the previous model's.

In 2014, the new Sport's improvement in efficiency will be raised to a new level with the introduction of an ultra-efficient diesel Hybrid achieving CO_2 emissions of 169g/km.

All models across the range are fitted with an advanced intelligent Stop/Start system which improves fuel consumption by up to 7 percent.

Interior: modern and luxurious with a strong sporting character

The new Sport provides an interior with distinctive Range Rover Sport design cues, superior detailing and craftsmanship.

A design benchmark in its segment, the Sport interior offers a unique blend of style and understated luxury with strong, elegant lines, top quality materials and an extra dash of sporting character. Strong, architectural forms within the interior have been enhanced by a cleaner, purer surface treatment, beautifully executed with more luxurious soft-touch surfaces in key touch points around the cabin.

The sporting ambience of the interior is also reflected in the smaller diameter, thicker steering wheel, vertical gear shifter, higher centre console, configurable mood lighting and more generous seat bolsters. The Sports Command Driving Position (CDP) combines the supreme sense of confidence and control offered by the Range Rover, with a more sporting seating position similar to the Evoque.

Interior packaging is optimised to create a more spacious rear cabin with 24mm more knee room, while occupants also benefit from the wider cabin. New, neatly integrated third row, occasional 5+2 seating can be specified. These powered seats leave a flat floor with no loss of boot space and are split 50/50.

Technology: customer-focused vehicle and safety features

The new Range Rover Sport has been developed as the ultimate ‘no compromise’ vehicle that will fit perfectly into its customers’ lifestyles. It has been engineered to incorporate the latest developments in customer-focused vehicle and safety technologies to enhance comfort, confidence and safety behind the wheel.

New or enhanced chassis technologies for the new Sport include Adaptive Dynamics featuring continuously variable dampers (CVD), and on more powerful models, a dedicated Dynamic mode in the Terrain Response® 2 system for enthusiastic on-road driving. This system is combined with twin-channel Dynamic Response active lean control, a Dynamic Active Rear Locking Differential, and Torque Vectoring by Braking, which transfers torque to the outside wheels during cornering, reducing understeer.

The new Range Rover Sport offers a comprehensive connectivity package enabling customers to stay seamlessly connected to their vehicle, business and family lives. 'Connected car' technology allows the driver to check the status of the vehicle via an App installed on their smartphone and also provides support features such as Stolen Vehicle Tracking, Emergency Call and Land Rover Assist Call. Finally, a high bandwidth Wi-Fi Hotspot can be installed in the vehicle so that passengers can use the internet and get the best data connection for their smartphones or tablets.

A new, optional colour Head-Up Display presents key vehicle and navigation data without the driver needing to look away from the road, using laser technology for superior clarity and contrast.

The new model introduces a digital camera system which supports three driver assistance features that help deliver improved driver awareness: Lane Departure Warning, Traffic Sign Recognition and Automatic High Beam Assist. Another unique innovation on the Sport is the new Wade Sensing™ feature that provides 'depth' information when driving through water, made even more beneficial to the driver now that the Sport's maximum wading depth has increased by 150mm over the previous model to 850mm.

Conclusion

The all-new Range Rover Sport, with its greatly enhanced versatility, is destined to continue the outstanding success of its predecessor, which quickly became one of Land Rover's most popular models following its introduction in 2005, with sales exceeding 380,000 units to date.

Designed and engineered at Land Rover's development centres in the UK, the new model will be produced in a state-of-the-art low-energy manufacturing facility at Solihull, UK.

On sale during the third quarter of 2013, the new Range Rover Sport will ultimately be introduced in 169 markets worldwide. Customers will have a choice of three equipment levels from launch (HSE, HSE Dynamic and Autobiography Dynamic), and a SE derivative available on TDV6 models from early 2014. An extensive choice of colours, finishes and details will enable customers to create the ultimate bespoke SUV.

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ALL-NEW RANGE ROVER SPORT

– PRESS PACK CONTENTS

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1. RANGE ROVER SPORT DESIGN

The all-new Range Rover Sport has been designed to capture the distinctive DNA of its predecessor, but with a bold evolution which has placed it firmly at the heart of the marque's striking new three-model portfolio between the Range Rover and the Evoque.

Range Rover Sport occupies a unique position within its segment, and the new model builds on those core strengths with a design which confirms its status as the definitive premium Sports SUV. With its 'faster' windscreen angle, streamlined profile and sloping roofline, the new Sport is 8 percent more aerodynamic than the previous model and achieves a drag figure of Cd 0.34.

While it was developed alongside the Range Rover and shares some commonality with its sister vehicle, the all-new Range Rover Sport benefits from 75 percent unique parts, a significant number of which directly influence the way the new Sport looks and feels.

"The new Range Rover Sport is the ultimate luxury SUV. A new Range Rover Sport for a new era. Relevant, sustainable and utterly desirable. Alongside the all new Range Rover, and the Range Rover Evoque, the new Range Rover Sport represents the third distinct product in Land Rover's product revolution. Firmly establishing it as a powerhouse British brand, with exceptional Design at its core," said Land Rover Design Director and Chief Creative Officer, Gerry McGovern.

1.1 Bold and progressive exterior design

The dynamic new Range Rover Sport has a bold and progressive exterior design which positions the vehicle confidently within the latest Range Rover line-up. With a fresh interpretation of the current model's strong design DNA, the new vehicle has a sleek and contemporary appearance, with its sloping roofline offering a distinctive sporting character.

The new Sport is just 62mm longer than its predecessor, yet at 4850mm, it is shorter than other 7-seater SUVs and most E segment sedans, bringing greater manoeuvrability and ease of parking. However, a significantly longer wheelbase (increased by 178mm) provides greater room and improved access for rear passengers. The new Sport is 149mm shorter and 55mm lower than the new Range Rover on which it is based and model-for-model weighs 45kg less.

Exciting new interpretations of Range Rover Sport design cues include the signature clamshell bonnet, floating roof and side fender vents. The vehicle also features bold new versions of the powerful wheel arch graphic, horizontal body feature lines and distinctive rocker mouldings which are key elements of the model's strong DNA.

While retaining the powerful Range Rover Sport character, the front end has a more modern, streamlined appearance, with its slimmer lights, rearward sloping grille and more sculpted corners.

“The ‘S’ in SUV is taken to another level with the new Range Rover Sport. It’s dramatic and powerful with immense road presence. It has a low centre of gravity that promotes a dynamic stance while communicating its athletic capabilities. Its sporting characteristics are further emphasised by the vehicle’s high belt line, short overhangs and distinctive silhouette, there really is nothing else like it,” said Gerry McGovern.

Eye-catching details

Eye-catching design details serve to emphasise the new Range Rover Sport’s more dynamic and contemporary character. The side fender vents are executed with a more dynamic, sloping treatment. Matching twin vents are executed in the bonnet, enhancing the powerful and sporting character of the vehicle.

Designers have also continued the classic Range Rover Sport two-bar theme, reflected in the twin strakes on the fender vents, the two bar front grille, and the twin lines in the tail lamp graphics.

Near-flush side glazing, combined with a premium gloss black finish to the pillars, enhance the bold Range Rover Sport’s floating roof graphic – which can be highlighted with three contrast roof colours of grey, black or silver – while also emphasising the more streamlined form of the body. Brembo brake calipers finished in red and a black design theme, which removes all brightwork from the exterior, are also available on HSE Dynamic and Autobiography Dynamic vehicles to create a more bespoke appearance.

At the front, the large outboard air intakes and bold trapezoidal shapes housing the central bumper beam and skid plate send out a strong, high performance message. The same trapezoidal theme is repeated at the rear, with the skid plate flanked by large twin exhaust outlets.

The front lamps continue the bold evolution of the Sport, with highly distinctive LED signature graphics which feature a new distinctive graphic. The slimmer design creates a more aggressive, technical appearance.

At the rear, the lamps have a more compact treatment with a striking new design that uses LED technology. The main tail and stop lamps echo the headlamps’ distinctive design language, while the direction indicators use a new interpretation of the ‘twin line’ graphic from the current model.

Both front and rear lamps flow round into the shoulders of the body with the distinctive tapering blade graphic featured on the other vehicles in the latest Range Rover portfolio.

1.2 Modern, luxurious interior with a strong sporting character

“Strong Range Rover architectural elements are combined with a less is more pared down approach to create a sporting luxury environment that promotes greater driving engagement.

“The use of top quality materials and material finishes applied with the highest levels of precision enhance this exciting and cocooning design. It’s simply a great place to be,” said Gerry McGovern.

The interior has a sophisticated and modern appearance, incorporating distinctive Range Rover Sport design cues and providing the driver with a luxurious and sporting cockpit. For the new model, the strong, architectural forms of the design have been enhanced by a cleaner, purer surface treatment, beautifully executed using top quality materials.

Building on the signature Range Rover Sport interior architecture, the centrepiece of the cabin is the bold intersection between the strong horizontal elements of the instrument panel and the vertical lines of the centre stack. The dynamic character of the cockpit is enhanced by the faster angle of the centre stack, with its striking satin chrome pillars which flow from the instrument panel through into the rear cabin and the aluminium accents that flow from the centre console into the fascia.

The centre console is mounted higher, positioning the controls closer to the driver and creating a more cocooning sensation for the front occupants. This cocooning feel is emphasised by the strong visual graphic of the fascia mid-section trim accents linking to the doors, and surrounding the occupants with a band of contrasting colour.

The sporting ambience of the interior is also reflected in the smaller diameter, thicker rimmed steering wheel, vertical gear shifter and seats with more generous side bolsters.

The front and rear seats feature a more sculptured design with enhanced padding to the front and individual seating in the second row. Special attention has been given to providing increased rear seat comfort, offering improved rear legroom (+24mm knee room) and shoulder-room, plus the choice of 60/40 or 40/20/40 split rear seats and the option of powered third row occasional 5+2 ‘secret’ seating (which folds away into the floor) for enhanced versatility.

Superior materials, superior craftsmanship

Every new Range Rover Sport is crafted using the highest quality materials, with carefully selected colours and textures to enhance the model's unique blend of luxury with a distinctive sporting character. The use of more technical finishes and veneers gives the cabin a more dynamic and contemporary feel.

Material quality has been raised to a new level, with more luxurious soft-touch surfaces in key touch points around the cabin, such as the fascia mid-section.

Luxurious soft-touch surfaces are offset by authentic metal details which are cool to the touch and stunning to look at. These include the striking satin chrome pillars each side of the centre stack with an immaculate noble plated finish, and the choice of distinctive aluminium finishes on the centre console, fascia ends and door trims.

The obsession with quality and traditional craftsmanship can be seen in the beautifully tailored twin-needle stitching used to finish the sumptuous leather seats and leather-wrapped interior surfaces. The impeccable stitching is specified precisely by Range Rover experts, from the length and direction of the stitching, to the spin, thickness and material of the thread. Even the size and shape of the needle is defined, to guarantee the highest quality finish.

1.3 Individual choice for discerning customers

To maximise personalisation, the new Sport offers even more individual choice for customers to enable them to create their own bespoke vehicle, with an outstanding selection of colour themes and finishes.

An expanded choice of special features includes innovations such as colour-themed interiors with duo or tri-tone designs, a stunning range of factory fitted alloy wheels from 19- and 20-inch (one design each) to 21-inch (three designs) and up to 22-inches (two designs) in diameter including the iconic "Viper's Nest" wheel available for the first time across all Range Rover models.

Customers wishing to emphasise the new vehicle's more sporting character can select a 'Dynamic' pack on HSE models (available as standard on the Autobiography derivative) with unique trim options and performance features.

These features extend from striking design elements like a gloss black grille and exterior details, body-coloured bumpers and side sills, and unique interior colour themes and finishes, to performance items such as a Vmax uplift to 250km/h / 155mph [5.0 S/C], special 21- and 22-inch alloy wheels, and red Brembo brake calipers.

The full range of design options available to Range Rover Sport customers will include:

- 11 interior colour themes, plus additional choice of seat colour
- 4 aluminium interior finishes, 3 real wood veneers
- 3 headliner colours
- 19 exterior paint finishes
- 3 contrast roof colours – Corris Grey, Santorini Black or Indus Silver
- 7 alloy wheel designs, on 19-, 20-, 21- and 22-inch
- Atlas Silver, Dark Atlas or Gloss Black finish for the exterior accents
- Illuminated tread plates

2. DYNAMIC CAPABILITY

The all-new Range Rover Sport marks a significant step forward for the model, adopting advanced lightweight vehicle technologies and new powertrains from the highly acclaimed new Range Rover, to transform the driving experience for customers seeking the ultimate premium sports SUV.

This unprecedented investment in premium technologies has reinforced the Range Rover Sport's unique proposition in the SUV segment, delivering significantly improved on-road handling with enhanced capability in challenging off-road conditions.

"The all-new Range Rover Sport is the result of a huge engineering effort to deliver numerous breakthrough technologies," said Nick Rogers, Range Rover Vehicle Line Director. "With its aerospace-inspired body, the dynamic performance of this vehicle on all terrains has been transformed. We are confident that this vehicle is not only the most capable vehicle in its class, but also has the broadest range of capability of any Land Rover product ever."

2.1 Connected on-road dynamics

The new Range Rover Sport has been engineered to deliver dramatically improved on-road driving dynamics, with more connected and agile handling complemented by enhanced ride and refinement.

The vehicle's state-of-the-art aluminium monocoque platform – engineered in parallel with the new Range Rover – is 39 percent lighter than the previous model's steel semi-monocoque plus chassis frame design, leading to significantly improved agility and performance.

This new stiff and light structure is supported by an all-new lightweight front and rear suspension concept, which has been designed to deliver a much broader range of dynamic capabilities across all terrains.

An all-new steering system, totally re-engineered four-corner air suspension, and the latest chassis and stability technologies – including upgraded Dynamic Response and Adaptive Dynamics systems – also contribute to the step change in ability.

"After just a few moments behind the wheel, customers will appreciate that this all-new Range Rover Sport offers the most dynamic driving experience of any Land Rover vehicle," said Nick Rogers. "Thanks to the all-aluminium monocoque body structure, we have delivered a vehicle which is half a ton* lighter and significantly more agile, dynamic and responsive, while retaining the all-day comfort and composure that you would expect of a Land Rover."

The advanced vehicle specification, together with meticulous tuning by vehicle dynamics specialists has enabled the new Sport to provide an engaging and responsive driving character, while being composed and confident in all conditions.

Its on-road dynamics are characterised by lighter, more direct steering, with increased handling agility and reduced body roll delivering flatter, more confident cornering. Ride comfort and refinement have also been improved, delivering enhanced bump absorption and a more effortless, supple feel.

State-of-the-art lightweight suspension

Underpinning the enhanced driving capability of the new Range Rover Sport is a state-of-the-art new lightweight suspension. The result of an extensive Land Rover research programme to identify a next-generation suspension concept for premium AWD vehicles, the new systems use a clean sheet design engineered to deliver best-in-class vehicle dynamics.

Primarily constructed from lightweight aluminium components, the suspension is fully-independent and double isolated, with wide-spaced double-wishbones at the front and an advanced multi-link layout at the rear.

The new suspension system delivers class-leading wheel travel – with 260mm of movement at the front and 272mm at the rear, compared to less than 200mm for most competitor vehicles – providing exceptional wheel articulation and composure to deal with the toughest conditions.

The lightweight chassis architecture is combined with a next-generation four-corner air suspension to optimise the vehicle's versatility both on- and off-road. The air springs now offer variable ride height (+35mm and +65mm, rather than a single +55mm position on the previous model), which delivers 10mm increased maximum suspension lift (up to 50km/h) and are also cross-linked for maximum axle articulation.

This fifth-generation air suspension system provides up to 115mm of regular movement, from the lowest setting 'access height' (now 10mm lower at 50mm for easier entry and exit) to the standard off-road height. An automatic extension (triggered by sensors) and a manually selected extension, both raise the Sport by 35mm, giving a total movement range of 185mm. To achieve superior performance, both in terms of ride quality and the ability to change swiftly between different ride heights, the air suspension hardware has been completely re-engineered. Ride quality has been improved through the fitment of new low-hysteresis front air springs, which are able to absorb small irregularities much more effectively. The springs use a thinner, suppler material, which is protected by a metal casing.

Advanced technologies enhance dynamics

The performance of the suspension systems on the new Sport is enhanced by the use of advanced chassis and vehicle technologies to optimise vehicle dynamics.

More powerful models are equipped with a dedicated ***Dynamic mode*** in the Terrain Response® 2 system, providing a more sporting bias during enthusiastic on-road driving, with a firmer ride, tighter body control, reduced roll and more responsive steering and performance.

Dynamic mode activates unique calibrations for a wide range of vehicle and chassis systems including the power steering, throttle and transmission responses, damping and lean control, and settings for the traction and stability systems.

To deliver the ultimate sporting driving experience, Dynamic mode is specified in combination with a number of key technologies including Dynamic Response active lean control, a Dynamic Active Rear Locking Differential, and Torque Vectoring by Braking.

Significantly reducing the amount of body lean during cornering, ***Dynamic Response*** transforms vehicle handling and occupant comfort. A next-generation two channel system, it is capable of controlling the front and rear axles independently, allowing it to be tuned to deliver increased low-speed agility, along with enhanced control and stability at high speed.

The ***Dynamic Active Rear Locking Differential*** features an electronically controlled differential which can vary the degree of lock-up almost instantaneously to further optimise traction, handling and cornering stability. The rear diff reacts 70ms faster than the outgoing car.

Torque Vectoring by Braking uses the car's brake system to imitate the effect of a torque vectoring differential, constantly balancing the distribution of engine torque between the four wheels during cornering, resulting in improved grip and steering, and a reduced level of understeer.

The system operates using the car's Dynamic Stability Control (DSC) module, and monitors the vehicle 100 times per second. As the car accelerates through a corner, the system uses yaw sensors to detect the beginning of understeer. To reduce understeer, imperceptible levels of braking are used to correct the vehicle attitude, while engine torque is transferred to the outside wheels which have more grip, thus maintaining traction and steering control.

More powerful Sport models are also equipped with ***Adaptive Dynamics***, featuring continuously variable dampers, providing the optimum balance of ride and control by offering infinitely variable damper settings between soft and firm extremes.

The Adaptive Dynamics system monitors vehicle movements at least 500 times a second, reacting to driver or road inputs virtually instantaneously to give greater control and minimise body roll, providing a composed, flat ride.

A key element of the vehicle's agile and engaging character, the all-new ***Electric Power Assisted Steering (EPAS)*** system features variable-ratio speed-sensitive assistance. The system has been meticulously tuned for a more responsive, confident and intuitive character. Geared for 3.0 turns lock-to-lock the system provides a faster overall steering ratio, but is slower just around the on-centre position for enhanced stability and control at speed.

Sports Command Driving Position enhances confidence and control

The all-new Range Rover Sport provides drivers with a Sports Command Driving Position (CDP), which combines the supreme sense of confidence and control offered by the Range Rover, but with a more sporting, less upright seating position which is similar to that in the Evoque.

The Sport's CDP offers an elevated and reassuring view of the vehicle's surroundings, and the new model has been carefully developed to retain the excellent visibility over the bonnet which contributes to the unique Range Rover character.

Meticulous development work on the vehicle package and pillar design ensured that the outstanding all-round visibility of the current vehicle has improved. Despite the vehicle's sleeker, more aerodynamic profile, it still offers a seating position which is 50-to-100mm higher than its direct competitors.

In development, like all Range Rovers, the new model was given headroom targets, taking into account provision for off-road head movements, which were rigidly enforced, resulting in more generous headroom, and enhanced clearance during off-road excursions.

Intuitive display technologies

The all-new Range Rover Sport offers the driver an enhanced set of displays and controls, introducing the latest technologies in an elegant, uncluttered layout with state-of-the-art functionality.

For the first time on Range Rover Sport, high series models feature the state-of-the-art 12.3-inch high-resolution display technology for the main instrument pack, as pioneered by the

Range Rover. This is accompanied by an 8-inch high-resolution touchscreen display on the centre console for infotainment and secondary functions, with optional Dual View.

The screen graphics on both displays have been ingeniously designed to create the impression of 3D surfaces, beautifully lit and with subtle chrome detailing. Each display is able to adapt its content according to the driving situation – for example, in Dynamic mode, the two primary dials in the 12.3-inch display adopt a sporting red colour scheme, with the current gear position presented prominently between the two dials. The Hybrid model will have its own unique display content, with an easy-to-understand power gauge.

The new model is the first Range Rover to offer a Head-Up Display, using laser technology for superior clarity and contrast. The colour display projects key vehicle and navigation data directly into the driver's field of vision. The height and brightness of the display can be manually adjusted.

Throughout the cockpit, the control layout has been significantly simplified, with 50 percent fewer switches to deliver class-leading ease-of-use.

The intuitive approach is reflected in the other major controls, such as the perfectly-placed vertical gear shifter, the rotary Terrain Response® 2 control, the simplified Heating, Ventilation and Air Conditioning dials, and the twin five-way toggle switches and auxiliary functions on the steering wheel.

2.2 Class-leading off-road capability

Building on Land Rover's legendary history for tackling the toughest climates and road surfaces, the all-new Range Rover Sport has been developed to achieve class-leading all-terrain capability, with supreme composure in all conditions.

Terrain Response® 2 and off-road technologies

The Sport enhances its class-leading status through the introduction of the ground-breaking next-generation version of Land Rover's Terrain Response® system, which takes the capabilities of the award-winning system to a new level.

Developed by a small team of Land Rover specialists, ***Terrain Response® 2*** features an Auto setting which uses sophisticated 'intelligent' systems to analyse the current driving conditions, and automatically select the most suitable terrain programme.

Ensuring that the vehicle is always driving using the optimum mode, the new system is able to switch completely automatically between the five settings: General, Grass/Gravel/Snow, Mud/Ruts, Sand and Rock Crawl. Like all Terrain Response® systems, each setting

optimises driveability and traction by adapting the responses of the car's engine, gearbox, centre differential and chassis systems to match the demands of the terrain.

While it functions completely automatically, Terrain Response® 2 will also provide the driver with additional advice, such as when to select low range or the off-road ride height, when the system calculates that it is necessary.

Stuart Frith, Range Rover Sport Chief Programme Engineer, explained: "Land Rover's Terrain Response® 2 enables even non-expert drivers to benefit from the system's full capabilities, confident that the vehicle is automatically configured in the best possible way for each moment of their trip. So however tough the conditions, the Range Rover Sport will be ready to tackle the journey."

Another unique Land Rover innovation, introduced for the first time on the Range Rover Sport, is the new ***Wade Sensing***™ feature. Wade Sensing™ uses sensors in the door mirrors to provide the driver with information when driving through water, which is particularly beneficial when visibility is poor and at night. A visual display and warning chimes alert the driver as the water level rises around the vehicle.

To complement these innovative features, the new Sport can also be fitted with a unique suite of all-terrain technologies to help maximise performance and safety, including Hill Descent Control (HDC), Gradient Release Control (GRC), Hill Start Assist (HSA), Dynamic Stability Control (DSC), Electronic Traction Control (ETC), and Roll Stability Control (RSC).

The operation of these braking and stability systems is enhanced by the latest Bosch 6-piston brake modulator which delivers faster responses and smoother, quieter and more precise operation.

Full-time intelligent 4WD systems

The new Range Rover Sport offers a choice of two full-time intelligent 4WD systems, each able to find drive on the most challenging low-grip surfaces.

One system provides a two-speed transfer case with low-range option for the most demanding off-road conditions, with a 50/50 percent default front to rear torque split. Optimum traction is maintained through an electronically controlled multi-plate clutch in the centre differential which distributes torque between the wheels at anything between 100 percent front and 100 percent rear. This is combined with sophisticated electronic traction control systems.

The transfer case offers selectable high and low range, using a two-speed fully synchronized 'shift on the move' system which allows the driver to change range from low to high at speeds up to 60km/h without having to stop the vehicle, providing exceptional driving flexibility. The high-range provides a direct drive ratio of 1:1, while the low range ratio is 2.93:1 giving an extremely low crawl speed.

The alternative system is 18kg lighter and features an all-new single-speed transfer case with a Torsen differential and 42/58 percent default front to rear torque split that is designed to provide a rear-wheel drive bias for optimum driving dynamics, whilst maintaining off-road performance. The Torsen centre differential constantly varies torque distribution between 62 percent front and 78 percent rear depending on conditions and grip available. The traction control system has been optimised to work in harmony with the differential to deliver excellent traction in all conditions.

To further optimise traction and stability in extreme conditions, more powerful Sport models are also specified with the Dynamic Active Rear Locking Differential in combination with the twin-speed 4WD driveline. The locking rear differential has been further optimised to work in conjunction with the electronic torque vectoring system.

Engineered for total capability

From the very start of its development process, the all-new Range Rover Sport has been designed and engineered to deliver the incredible breadth of capability for which the marque is famous.

The new body structure was optimised in parallel with that of the new Range Rover, representing the most extensive optimisation process ever undertaken by Land Rover. This involved unprecedented use of advanced computer simulation – demanding well over 1000 years of processor time – to deliver outstanding strength and durability, excellent safety and minimum weight.

To analyse the punishing off-road loads which really push a car's structure to its limits, such as the crunching 'ditch drop' impact, engineers turned to the specialised and incredibly powerful simulation tools more typically used to model crash events.

The new Sport features enhanced body geometry for all-terrain conditions, with a smooth underfloor that helps to provide 51mm more ground clearance than its predecessor at 278mm (measured at the off-road ride height) and approach and departure angles of 33 and 31 degrees. The vehicle underfloor has been specially designed to provide a smooth surface, with a smooth transition between suspension components, to reduce susceptibility to damage or interference.

Wading depth has also been improved significantly – an increase of 150mm over the previous model to 850mm – thanks to an innovative air intake system, which draws air between the inner and outer bonnet panels at the sides of the vehicle before it flows down into the engine's intake system.

The re-engineered air suspension system with its new +35mm intermediate setting means that the off-road mode can remain available at much higher speeds (80km/h vs 50km/h) than was possible before, which is valuable in terrain with long, rutted dirt roads.

The all-new suspension offers outstanding wheel articulation, and this is further enhanced when the Dynamic Response active lean control system is fitted. If this system detects off-road conditions, it isolates the stabilizer bar and reduces the level of roll compensation, thus allowing greater wheel articulation and increasing the contact patch with the terrain. When operating in Dynamic Response mode, wheel articulation is a class leading 546mm, compared to typical competitors' offering of less than 450mm.

Stuart Frith, Range Rover Sport Chief Programme Engineer, said: "The new Range Rover Sport may have a sophisticated, sporting appearance, but it's a true Land Rover at heart – it really has an exceptionally broad range of capabilities. We have put the Sport through Land Rover's legendary testing regime, where it has survived 18 months of gruelling tests in the harshest conditions imaginable."

Land Rover toughness and durability

With an unprecedented engineering development process using state-of-the-art virtual simulation tools, followed by Land Rover's punishing on- and off-road test and development regime, the all-new Range Rover Sport has been engineered to achieve exceptional durability and reliability.

While the initial engineering and optimisation was conducted almost exclusively using computer simulation, vehicle performance and robustness is verified through extensive physical testing, using both driven and rig-based regimes.

Well over 20,000 physical tests have been completed across all components and systems, with a fleet of development vehicles covering countless thousands of miles over 18 months of arduous testing in more than 20 countries with extremes of climate and road surfaces. This included 60,000 miles of durability testing in China, Land Rover's biggest market.

Prototypes were driven in challenging off-road conditions such as sand, mud and snow, and their durability was put to the test in extreme exercises to verify deep wading, underfloor

vulnerability, snatch recovery and towing at maximum GTW. Further extreme strength tests include worst-case scenarios, such as driving into kerbs at speed, bridge jumps, ditch drops and sideways kerb strikes.

Punishing longer test regimes provide the ultimate challenge for durability and reliability including the month-long 'king of the sand' durability test in intense Middle East desert heat, a 5,000 mile flat-out endurance drive at the Nürburgring circuit in Germany, and gruelling off-road test cycles involving thousands of miles at challenging UK proving grounds.

2.3 Range Rover Sport powertrain

The all-new Range Rover Sport features an enhanced line-up of powerful petrol and diesel engines, all available with fuel-saving Stop/Start paired with an advanced 8-speed ZF automatic transmission, which deliver outstanding performance with immediate responses and a dynamic and connected character.

The substantial weight saving of up to 420kg* delivered by the aluminium platform has helped to deliver a step change in the performance on offer, together with significant gains in fuel economy and CO_2 emissions.

Among the powertrain innovations on the new Sport is the return of the SDV8 turbodiesel with its massive reserves of torque, and the arrival of the exciting high-efficiency diesel Hybrid, which are both available to order in early 2014.

All models across the range are fitted with an advanced intelligent Stop/Start system which improves fuel consumption by up to 7 percent.

The weight reduction measures on the new Range Rover Sport open up the future possibility for the fitment of a smaller, lighter power plant, such as a four cylinder engine. A model which could have an overall weight of less than 2000kg, a reduction of over 500kg* from the previous lightest model.

Formidable 510PS Supercharged V8

The 510PS 5.0-litre V8 supercharged engine retains its place at the performance pinnacle of the Range Rover Sport line-up. With huge reserves of power and torque, the scale of the performance on offer is reflected in the 0-60mph time of 5.0 seconds (0.9 seconds faster than the outgoing model) – achieved with a rich sporting soundtrack generated by a carefully tuned exhaust system and sound symposer on the intake system.

Despite the performance boost, fuel efficiency has been improved by 14 percent over the outgoing model, with CO_2 emissions of 298g/km. For the first time, the engine is fitted with an advanced intelligent Stop/Start system.

The V8 has a compact and lightweight all-aluminium design, with class-leading low levels of internal friction. For the new Sport, the engine has been re-optimised around a state-of-the-art new Bosch engine management system.

The engine features high-pressure direct injection with an industry-leading centrally-mounted, multi-hole, spray-guided injection system. Efficiency is further enhanced by an innovative (cam torque actuated) dual independent variable camshaft timing system (VCT). A sixth-generation, twin vortex system (TVS) supercharger is fitted, which offers superior thermodynamic efficiency and extremely refined noise levels.

Responsive and ultra-efficient TDV6 / SDV6 turbodiesels

The responsive and ultra-efficient 3.0-litre V6 turbodiesel has been significantly upgraded for fitment in the new Range Rover Sport. The V6 is available in two versions (258PS TDV6 and 292PS SDV6) delivering major power increases over the equivalent units in the outgoing model which boasted 211PS and 256PS.

With 600Nm of torque, both variants deliver outstanding performance along with exceptional efficiency. The SDV6 model hits 0-60mph in just 6.8 seconds and achieves CO_2 emissions of 199g/km – down 13 percent.

The 258PS TDV6 reaches the same benchmark in 7.1 seconds with CO_2 emissions of 194g/km, representing a 15 percent improvement over the same model.

To achieve the unprecedented blend of refined performance and remarkable efficiency, the TDV6 engine has been extensively optimised for the new vehicle. It uses a new eight-nozzle low-flow injector design for more precise injection and improved fuel atomisation, a revised intake system with twin intercoolers offers enhanced charge cooling, and the engine features the latest tandem solenoid intelligent Stop/Start system.

Both TDV6 and SDV6 variants feature the innovative parallel sequential turbocharging concept which delivers outstanding performance and responsiveness throughout the rev range.

Range Rover's outstanding SDV8 turbodiesel

Scheduled to make its return to the Range Rover Sport line-up early in 2014, the much acclaimed 4.4-litre 339PS SDV8 diesel offers huge reserves of torque and completely effortless performance.

Designed exclusively for Range Rover, the 4.4-litre 'super-diesel' develops a staggering 700Nm between 1750 and 3000rpm, surging from 0-60mph in just 6.5 seconds. The engine's outstanding fuel efficiency is reflected in CO_2 emissions of 229g/km.

The SDV8 achieves its incomparable blend of supreme driveability and refinement through advanced diesel technologies, most notably innovative parallel sequential turbocharging. The increased power output of the current version of the SDV8 engine was achieved through a revised intake system with twin intercoolers and an optimised calibration. The updated installation also achieves a 10kg weight saving, through the use of cast alloy engine mounts (in place of iron) and a redesigned sump.

Innovative high-performance diesel Hybrid

Available to order early 2014, the Range Rover Sport line-up will be joined by the ultra-efficient diesel Hybrid model, which provides outstanding performance (0-60mph in sub 7-seconds) with exceptional CO_2 emissions of 169g/km to offer customers the first high-performance diesel hybrid within the SUV segment.

To ensure that there is no compromise to the Sport's peerless breadth of capability, the vehicle has been engineered from the start for a hybrid derivative. As a result, the Hybrid model delivers the same dynamic and responsive driving experience as the other models in the range, as well as their class-leading off-road performance.

The advanced Hybrid powertrain is fully compatible with the vehicle's all-terrain systems, including the twin-speed full-time intelligent 4WD system and the Land Rover Terrain Response® 2 programs.

Advanced 8-speed automatic transmission

All petrol and diesel engines in the new Range Rover Sport are paired with the advanced electronically controlled ZF 8HP70 8-speed automatic gearbox, which has been tuned by Land Rover engineers to combine silky-smooth shifting with exceptionally rapid responses and outstanding fuel economy. With eight closely-spaced ratios, gearchanges are almost imperceptible, with each shift completed in just 200 milliseconds.

Controls include the sporting vertical gear shifter, plus the option of steering wheel-mounted paddle-shift. Either system enables the driver to take control of gear shifting manually – the

transmission will also accept multiple downshifts, maintaining an absolutely smooth transition between ratios.

The transmission is tuned to select torque converter lock-up as early as possible to reduce slip and energy loss. The wider ratio spread, tall 'overdrive' top ratio and the fact that no more than two internal clutches are open at any one time, all contribute to improved fuel economy and lower emissions.

Transmission Idle Control disengages 70 percent of the drive when the vehicle is stationary and the engine is idling in Drive, significantly reducing consumption in urban conditions. In cold conditions, the transmission selects a lower gear to speed warm up and quickly get the engine up to its efficient operating temperature.

The hydraulic actuating system has been designed for increased efficiency, with improved pump design and gear control elements.

2.4 Enhanced efficiency drives improved sustainability

The new Range Rover Sport demonstrates Land Rover's commitment to enhancing the sustainability of its products and operations.

With its all-new lightweight aluminium structure and optimised powertrains – including the innovative diesel Hybrid derivative – the new Range Rover Sport addresses the growing consumer need for more socially acceptable vehicles in a carbon-conscious world.

The new Sport's greener credentials stem from a comprehensive approach to reducing environmental impact throughout the life-cycle of the vehicle, from development and manufacturing, to customer use and end-of-life.

First in its segment with lightweight aluminium construction

The all-new Range Rover Sport is the first vehicle in its segment to feature an advanced all-aluminium body structure, delivering significantly reduced weight, improved performance and enhanced sustainability, thanks to the manufacturing process's reduced CO_2 footprint.

This lightweight architecture underpins the next generation of Range Rover SUVs – including the recently launched Range Rover flagship model – and is the result of a £1 billion investment programme. The next-generation platform design continues Jaguar Land Rover's leadership in such aerospace-inspired, high-performance lightweight aluminium structures, having pioneered this technology in mass production since 2003.

The all-aluminium monocoque body structure in the new Sport helps to reduce the combined body/chassis weight by 39 percent compared to the previous steel semi-monocoque plus chassis frame design.

Not only is the aluminium structure incredibly light, it is also incredibly strong. The body has been engineered to withstand the same punishing off-road impacts as all Land Rovers. The joints in the shell are riveted and bonded together using aerospace techniques adapted for automotive use. This structure means that traditional energy intensive construction methods, such as spot welding, are not required, and the new Range Rover Sport is produced in an all-new state-of-the-art bodyshop.

Optimised structure is lighter, stronger and more refined

Engineered in parallel with the all-new Range Rover, the new model's lightweight aluminium body structure has been subjected to the most extensive development and optimisation process ever undertaken by Land Rover.

Engineers used the latest 'multi-dimensional' CAE optimisation tools, which made it possible to minimise the weight, while simultaneously delivering outstanding stiffness and refinement together with excellent safety performance.

A key factor in the creation of such a weight-efficient body is the way different forms of aluminium components are employed within the structure: pressed panels, plus cast, extruded and rolled aluminium alloy parts, are combined in a rigorously optimised structure where the strength is concentrated precisely where the loads are greatest.

The resulting optimised structure protects occupants using an incredibly strong and stable safety cell, and provides a very stiff platform for superior NVH and vehicle dynamics.

Innovations to further reduce weight and enhance performance include the first automotive use of high strength AC300 aluminium within the crash structure. In another automotive first, the entire vehicle bodysides are pressed as single aluminium panels – thus reducing the amount of joints, eliminating complex assemblies and improving structural integrity.

Lightweight technologies cut weight by up to 420kg*

Land Rover engineers have combined the state-of-the-art lightweight structure with substantial weight reductions throughout the chassis, driveline and interior systems, to deliver total model-for-model weight savings of up to 420kg* compared to the outgoing vehicle.

The dramatic weight reduction was achieved through an incredibly rigorous development and optimisation process in which every possible weight saving opportunity was aggressively pursued. Key weight-saving technologies in the vehicle include:

- All-aluminium door construction, including high performance lightweight aluminium side intrusion beams
- All-new lightweight front and rear suspension design with all-aluminium front and rear subframes
- Optimised spring, damper and anti-roll bar designs
- All-new lightweight aluminium final drive units and optimised driveline components including new single-speed 4WD system with Torsen differential
- High precision lightweight magnesium castings used for the cross car beam and front end carrier
- SMC plastic tailgate
- Lightweight high-strength steel seat structures

Streamlined aerodynamics

The aerodynamic performance of the new Range Rover Sport was optimised during an intensive development campaign using state-of-the-art computational fluid dynamics (CFD) simulation tools, involving the equivalent of 1.5 million hours (or over 170 years) of processor time.

Special aerodynamic innovations optimised during development were:

- ***Active vanes*** – the new Sport features active vanes in the main upper grille aperture, which improve aerodynamics by blanking off the grille when cooling airflow is not required. Electronically controlled, they automatically adjust to one of 16 positions. Standard on TDV6, SDV6, SDV8 and Hybrid models.
- ***Aerodynamic underfloor panelling*** – more extensive lightweight panelling has been incorporated to create a smooth, flat profile under the vehicle. Additional deflectors have been added around the front and rear suspension components, with front and rear undertrays around the main driveline components.
- ***Enhanced air flow*** – detail features to improve air flow include near-flush glazing on the A-pillars and vehicle side glass; separation edges incorporated in the rear lamps and D-pillars; optimised shaping of the door mirrors and upper rear spoiler.
- ***Unique 21-inch alloy wheels*** – on the Hybrid vehicle with directional spokes for optimised aerodynamics.

Careful attention has also been given to water management on the vehicle, including a hydrophobic coating on the front side door glass to help keep it clear of droplets, carefully shaped roof panels to avoid unwanted drips when the tailgate is opened, and a rear wash wipe which is designed to avoid annoying drips.

Low-CO_2 powertrain technologies

The advanced diesel and petrol powertrains in the new Range Rover Sport have been extensively optimised to minimise fuel consumption and CO_2 emissions.

To ensure the greatest possible fuel efficiency, the latest Sport powertrains incorporate a comprehensive selection of low-CO_2 technologies, including:

- ***Stop/Start system*** – all derivatives of the TDV6, SDV6 and 5.0 S/C models are available with an advanced intelligent Stop/Start system which improves fuel consumption by between 5 and 7 percent. The system features a Tandem Solenoid Starter with a dedicated secondary battery for instant restarting.
- ***Smart regenerative charging*** – the electrical charging system has an intelligent power management system which prioritises charging when the car is decelerating, capturing the wasted kinetic energy and reducing the fuel demand of the electrical system.
- ***High-pressure direct injection*** – both petrol and diesel engines feature the latest high-pressure direct injection technology for more efficient combustion.
- ***Optimised low-friction designs*** –state-of-the-art engine designs which have been carefully developed to minimise frictional losses.
- ***Electric fans*** – TDV6, SDV6 and SDV8 diesels have electric fans in place of viscous fans, to minimise parasitic losses when no cooling is needed.
- ***Low viscosity transmission fluids*** – the 8-speed automatic is specified with the latest low viscosity fluid to maximise efficiency.

The new Sport further reduces fuel consumption by adopting energy efficient Electric Power Assisted Steering (EPAS) in place of the previous hydraulic system, cutting CO_2 emissions by over 3 percent.

Drivers may also make use of a new ECO Driving feature which provides them with information and feedback via the 8-inch touchscreen about the level of fuel consumption they are achieving, to help them adopt more economical driving habits.

Sustainable by design, with lifecycle approach

In order to minimise the car's overall ecological impact, the all-new Range Rover Sport has been designed with a lifecycle approach, aiming to minimise the environmental impact by considering the entire lifecycle of the vehicle: from development and manufacturing, through customer use, to end-of-life recycling and re-use.

Each element of the lifecycle was analysed with a view to consuming fewer natural resources, using more sustainable materials and minimising the generation of waste. The development process has included a full lifecycle assessment in line with ISO 14040/14044.

The new Sport's aluminium construction makes a major contribution to its reduced carbon footprint. Up to 75 percent of the aluminium material is sourced from recycled content, including closed loop recycling of waste metal from the manufacturing process, resulting in a significant saving of energy and CO_2 emissions (body panels made from recycled material use only 5 percent of the energy required for new aluminium).

Further energy is saved during the manufacturing process, which does not require highly energy intensive processes like welding.

Recycled and renewable materials have been used wherever possible in the new Range Rover Sport's design. High specification vehicles uses up to 26.7kg of recycled plastics, diverting over 11,800 tonnes of plastic from landfill during the carline's life. Natural and renewable materials, such as the luxurious leathers and veneers, represent 28kg of each vehicle.

2.5 Customer-focused vehicle and safety technologies

The all-new Range Rover Sport has been engineered with the latest developments in customer-focused vehicle and safety technologies to enhance comfort and confidence behind the wheel, from premium interior features to advanced chassis and driver assistance technologies.

Innovations introduced on the latest Sport include driver assistance features such as Traffic Sign Recognition and Flank Guard, enhanced Park Assist functions with Perpendicular Park, advanced customer support features like Emergency Call, and other valuable features like Wade Sensing™ and a Head-Up Display using laser technology.

Smart driver assistance technologies

The new Sport is packed with smart, relevant technologies to ensure that drivers enjoy a relaxed and stress-free experience behind the wheel.

The new model introduces an innovative digital camera system which supports three driver assistance features that help deliver improved driver awareness. Mounted next to the rear view mirror, the forward facing camera captures a view of the road ahead which is analysed by a sophisticated on-board computer.

Lane Departure Warning is designed to warn the driver via a vibration in the steering wheel if an unintentional drift out of the lane begins. If the vehicle drifts from the centre of the lane, and the system does not detect an obvious lane-change manoeuvre or use of the indicators, the vibration alert is triggered. This is reinforced by a graphic in the instrument cluster.

The system is deactivated below 60km/h so it does not interfere in urban conditions. The driver can adjust the system's sensitivity (two levels) and the alert intensity (three levels), or can turn the system off completely.

Traffic Sign Recognition uses the camera to identify traffic signs on either side of the road and on bridges, providing the driver with information about the latest detected speed limit, cancellation signs and overtaking regulations via the instrument cluster display.

To indicate how recent the information is, the displayed sign fades away in a series of steps as the distance increases from the location of the sign. The driver can also use the system to provide a warning of speeding, by configuring the system to flash the speed limit sign in the display when the vehicle exceeds the displayed limit by a set amount (which can be varied by the driver).

Automatic High Beam Assist switches the headlamps automatically between high and dipped beam, helping to maximise visibility and avoid the distraction of switching the lamps manually. The system identifies the headlamps or tail lights of other vehicles so that dipped beam can be activated when required. Ambient lighting levels are also monitored so high beam is not used in built-up areas.

Another innovative feature is ***Flank Guard***, which helps alert the driver to potential impacts on the sides of the vehicle during tight manoeuvres such as in multi-storey car parks, where it is easy to collide with pillars, barriers or other vehicles.

The new feature is enabled by the addition of extra distance sensors on the vehicle (now 6 sensors front and rear, instead of 4), which provide wider coverage around the vehicle than conventional park distance sensors.

The driver is warned of potential impacts by audible beeps, while the central instrument cluster display provides a graphical image indicating the proximity of objects using distance bars. Using information on the vehicle's steering angle and trajectory, the system only warns when there is a threat of impact, for example ignoring close objects if the vehicle is steering away from them.

Additional driver assistance features available include an enhanced ***Adaptive Cruise Control*** (ACC) which operates even when the vehicle is travelling slowly or is stationary.

Adding to the standard ACC functionality, which maintains a pre-set time gap to the vehicle in front, the new ***Queue Assist*** feature extends the ACC function to allow the vehicle to come to a stop when it reaches a traffic queue. When the car in front moves off, the driver can resume ACC operation by briefly touching the accelerator. The car then accelerates back to the pre-set cruising speed, maintaining the selected time gap to vehicles ahead.

To offer enhanced awareness in today's congested traffic conditions, Range Rover Sport drivers can also specify advanced new technologies to alert them to nearby vehicles which could create a hazard.

Blind Spot Monitoring uses side-mounted radar sensors to survey potential blind spots either side of the vehicle, and alert the driver when vehicles are detected within this area. The system is optimised to work at lower speeds commonly encountered in urban conditions or on congested motorways.

It is now combined with ***Closing Vehicle Sensing***, a new feature which extends the function of the system by scanning a zone much further behind the vehicle, to detect vehicles which are closing quickly from behind and which could cause a threat during a lane change manoeuvre. Drivers are alerted by a rapid flashing of the existing Blind Spot warning light in the corresponding exterior mirror.

A further additional new function, ***Reverse Traffic Detection***, uses radar detectors in the rear of the car to warn about potential collisions during reversing manoeuvres, such as reversing out of a parking space. The system is active when reverse gear is selected and can detect a vehicle approaching from either side, alerting the driver to a potential collision.

Other driver assistance technologies which help to reduce stress behind the wheel include the ***Adjustable Speed Limiter Device***, which enables the driver to set their own personal maximum speed, the latest ***Surround Camera System*** incorporating T-Junction view, Trailer reverse park guidance and Trailer hitch guidance, and ***Adaptive Xenon*** headlamps.

Electric Power-Assisted Steering with advanced Park Assist functions

The new Range Rover Sport's electric power-assisted steering also enables customers to benefit from a range of advanced Park Assist features, including:

- ***Park Assist*** – which helps to identify a suitable parallel parking space, and then automatically steers the vehicle into place

- ***Park Exit*** – which helps drivers exit tight parallel parking spaces, by automatically steering the vehicle back into the main carriageway
- ***Perpendicular Park*** – which extends the function of the system to help the driver to reverse into perpendicular spaces, using sensors to help identify a suitable space where the vehicle can be parked and the doors on each side opened safely

Each of the functions provides the driver with clear instructions via the cluster display, and uses the Park Distance Controls, Flank Guard and Camera systems (where fitted) to help warn the driver of objects in close proximity during the manoeuvre. Multiple shuttles back and forward may be required to complete the manoeuvres safely and accurately.

Advanced Land Rover customer support features

The new Range Rover Sport offers a number of advanced new Land Rover customer support features, with a range of valuable services to enhance safety, convenience and security. The features, which utilise a telematics module and mobile SIM chip, plus the vehicle's GPS locator, include:

- ***Emergency Call*** – provides the ability to notify emergency services either automatically, in the event of a crash, or manually via an in-car button, with the current location to ensure an appropriate response. A trained operator will call through to the vehicle while emergency services are dispatched.
- ***Land Rover Assist Call*** – in the event of a breakdown, an in-car button is provided to contact a trained Land Rover Assist operator, automatically providing the current location to ensure the optimal response time.
- ***InControl App*** – provides a solution for Apple or Android smartphones enabling customers to locate their vehicle (and get directions back to their car), check fuel level and range, and see any alerts (e.g. Washer Fluid Low). Customers can also log all their journeys and have them automatically e-mailed to them, to enable company expenses to be completed. The App also allows customers to locate their preferred or nearest dealer, manage theft alerts or contact Land Rover Assist (if they are no longer with their vehicle).
- ***Stolen Vehicle Tracking*** – in the event of a suspected break-in to their vehicle, customers will automatically receive a notification. If the vehicle has been stolen, customers confirm this with Land Rover's secure operating centre which will coordinate with local enforcement authorities to track, immobilise and recover the vehicle.
- ***Wi-Fi Hotspot*** – provides a high bandwidth Wi-Fi hotspot so passengers can use the internet on smartphones and tablets from a single data contract. The hotspot uses the antenna on the roof to deliver excellent connectivity.

Powerful braking and enhanced active safety technologies

The new Range Rover Sport has been engineered with a powerful all-disc braking system for confident stopping in all conditions, featuring (on more powerful models) six-piston lightweight Brembo front calipers for enhanced performance and reduced weight.

The generous disc diameters of 380mm front / 365mm rear (or 360mm front / 350mm rear on less powerful models and those fitted with 19-inch wheels) provide huge thermal capacity, capable of achieving outstanding stopping performance, whether solo or towing a trailer.

The Electronic Park Brake (EPB) activates directly on the rear brake calipers, and has been carefully optimised to provide smooth and refined automatic disengagement when the car moves off.

Stopping power of the new Sport is complemented by a comprehensive suite of active safety technologies, designed to enhance braking, stability and traction.

The full suite of active safety features on the new Range Rover Sport includes:

- Dynamic Stability Control (DSC)
- Roll Stability Control (RSC)
- Electronic Traction Control (ETC)
- Trailer Stability Assist (TSA)
- Hill Descent Control (HDC) and Gradient Release Control (GRC)
- Hill Start Assist (HSA)
- Engine Drag torque Control (EDC)
- Anti-lock braking system (ABS)
- Electronic brake force distribution (EBD)
- Emergency brake lights (EBL)
- Emergency brake assist (EBA)
- Corner Brake Control (CBC)

Engineered for maximum occupant protection

The all-new Range Rover Sport has been engineered to meet and exceed the most stringent global safety standards, and was developed in parallel with the new Range Rover which was recently awarded a maximum five-star safety rating by the independent testing organisation Euro NCAP.

The Sport's optimised body structure protects occupants using an incredibly strong and stable safety cell, which is complemented by a comprehensive system of airbags and restraints.

The crash structure was created using state-of-the-art computer simulation tools, which allowed engineers to conduct a significant number of ‘virtual’ crash tests long before physical prototypes were available. Vehicle crash performance has been verified during a rigorous programme of 70 full vehicle crash tests and over 20 sled tests.

Designed to minimise peak impact forces and intrusion into the safety cell, while delivering maximum occupant protection, the aluminium body structure includes key features such as the use of high strength AC300 aluminium within the crash structure and a composite reinforced B-post area to maximise side impact protection.

The occupant safety package includes driver and passenger airbags, side curtain and thorax airbags (including an extended curtain airbag which covers passengers occupying the third row seats), and active front seat belts linked to the vehicle’s emergency braking functions.

Pedestrian safety has been given a high priority, with a carefully optimised design for the front-end, bumpers, bonnet and cowl area to minimise potential injuries. Key measures include a raised bonnet A-surface, bonnet and bumper profiles optimised for energy absorption, along with the careful optimisation of the coupling of surface parts with under-body structures to maximise energy absorption.

3. UNCOMPROMISED REFINEMENT AND VERSATILITY

Befitting its status as the ultimate luxury sports SUV, the all-new Range Rover Sport's more agile handling is accompanied by significantly improved levels of refinement and comfort, with the kind of premium features which make every journey a welcoming and luxurious experience.

At the same time, the new vehicle's appeal is extended further by new levels of versatility, with a more spacious and flexible interior which has the option of occasional 5+2 seating, and the capability to take on whatever task is required, from towing a horse box to transporting the family on their vacation.

"We have developed the all-new Range Rover Sport as the ultimate 'no compromise' vehicle, one that will fit perfectly into our customers' lifestyles," said Nick Rogers, Range Rover Vehicle Line Director. "More space, more seating versatility and more luxury, are all wrapped up in an incredibly capable vehicle which will take customers wherever they want to go."

3.1 Refined and luxurious experience

The new Sport's more rewarding driving dynamics are complemented by significant improvements in refinement and comfort, with reduced noise levels and enhanced ride quality.

Both front and rear seat passengers will also appreciate the added comfort and convenience available in the luxurious leather-trimmed cabin, with their comfort being assured by the latest interior technologies.

Superior NVH for all-day comfort

At every stage of the development process, Land Rover engineers have applied meticulous attention to detail to ensure that the new model delivers all-day comfort, with low noise levels and refinement which approaches the highest luxury car standards.

All unwanted sounds and traces of harshness were eliminated through the use of advanced computer simulations earlier in the engineering phase, followed by painstaking optimisation with test cells using sophisticated analysis tools such as specialised acoustic cameras.

Powertrain refinement has been enhanced through the use of new dual-isolated engine mounts on the diesel models. Overall engine noise levels have been further reduced, particularly on diesel models where combustion noise has been significantly lowered, assuring a refined sound quality across the full operating range.

Under hard acceleration there is sporting acoustic reward to reflect the responsive performance – notably on the V8 S/C petrol model which features a sound symposer on the intake system – while the engine remains hushed at cruising speeds.

A special acoustic lamination applied to the windscreen glass helps to further reduce combustion noise as well as wind noise, which has been minimised through analysis with computational fluid dynamics, and exhaustive wind tunnel tests. Key areas, such as the shape of the A-pillar and door mirrors, were optimised early in the development process.

The new Sport's body structure has been designed using the latest 'multi-dimensional' CAE optimisation tools to achieve outstanding stiffness and refinement. The structure incorporates extremely stiff chassis attachment points, to further minimise the transmission of noise and vibrations, while the use of stiff, lightweight alloy suspension components, along with carefully optimised bushes, help to eliminate road noise.

Other innovations to enhance refinement include the mounting of the air suspension compressor on the main vehicle battery to dampen unwanted vibrations.

All operating sounds within the new Sport, from door closing sounds to the noises made by switches and motors, have been rigorously analysed and refined to create a harmonious and premium sound quality for all occupants.

Enhanced ride quality

The new Range Rover Sport's state-of-the-art chassis and suspension has been meticulously tuned to offer composed, confident progress in all conditions.

With its class-leading wheel travel and upgraded four-corner air suspension, the vehicle combines outstanding poise and stability with excellent ride isolation on all surfaces. Carefully optimised damping ensures that the vehicle delivers a supple and absorbent ride, along with excellent composure and body control.

Premium interior features, with exclusive audio and seamless connectivity

The luxury experienced on the Range Rover Sport has been raised to a higher level with the latest premium interior features and technologies.

Travelling pleasure starts with exclusive new state-of-the-art audio systems developed with ***Meridian***, a world leader in audio technologies and digital sound processing, which promise stunning sound quality in all seating positions.

Three levels of branded Meridian system are available, ranging up to the stunning 1700W** Signature Reference system which has 23 speakers including a subwoofer to offer the ultimate surround sound experience. *(** Power ratings are at a practically audio distortion free level of 0.2% THD + N (Total Harmonic Distortion plus Noise).)*

The three systems feature state-of-the-art amplifiers which incorporate Meridian's latest digital processing technology to ensure perfectly optimised sound quality, along with high-efficiency speakers for exceptional clarity and dynamics.

Range Rover and Meridian audio specialists have also applied the sophisticated Audyssey MultEQ XT audio tuning system, which digitally corrects any imperfections created by the cabin environment to deliver accurate, enveloping, and distortion-free sound throughout the vehicle.

Range Rover Sport customers place a high priority on the ability to stay seamlessly connected to their business and family lives.

The connectivity package includes:

- Handsfree mobile phone via Bluetooth, enabling the phone to be controlled via the 8-inch touchscreen or steering wheel controls
- Bluetooth audio streaming, to play music stored on a phone, or other portable Bluetooth device, via the car's audio system
- Voice control, with intuitive 'Say What You See' display prompts
- USB connectivity for iPods/MP3 players or memory sticks.

Travelling in the perfect climate

To ensure that the interior is maintained at the perfect temperature, whatever the weather outside, the new Sport features a completely new climate control system which is based on class-leading technology.

The result of an incredibly rigorous development programme using CFD simulation tools, the new system has been tested in punishing real-world conditions in temperatures ranging from +50 to -30 deg C.

Three versions are available: the standard 2-zone system, an optional 3-zone system (featuring separate temperature controls for driver, front passenger, and rear seats), or the optional premium 4-zone system, which has an additional climate control unit in the rear compartment, and separate controls for driver, front passenger, and each side of the rear cabin.

A sophisticated control system ensures that the climate control responds quickly and accurately, with discharge air temperature sensors on all outlets, and dual solar sensors in both front and rear compartments. With its independent heating and cooling capability in the rear compartment, the 4-zone system offers a significant improvement in rear seat luxury, with multiple outlets at face and foot level.

For an even more luxurious travelling experience, the new Sport offers a full-size sliding panoramic glass roof to create a truly special sensation of space and light for all occupants. Significantly larger than the previous model's roof, the new roof has been cleverly engineered to maximise its length and width – with no unsightly supporting structure – to deliver an uninterrupted vista and enhanced headroom.

To maintain a comfortable interior temperature and to provide a sense of privacy, the toughened glass roof has a dark tint, and is treated to offer a high degree of solar protection. When additional shade or privacy is required, an electric fabric sun blind with a solar reflective coating can be extended across the full surface of the glass. An alternative fixed glass panoramic roof will be available in early 2014.

Added comfort and convenience in every detail

Each aspect of the new Range Rover Sport has been meticulously refined and optimised with premium luxury in mind, with added comfort and convenience in every detail. New and enhanced features include:

- ***Enhanced seating*** – high series models now offer 14-way power adjustable front seats with new features including climate control, adjustable bolsters and winged headrests, plus 5-mode massage and seat articulation. Rear seats now offer adjustable recline and climate control, with a choice of 60/40 or 40/20/40 split, while the versatility of occasional 5+2 third-row seating can be specified as an option.
- ***Premium infotainment*** – digital and satellite TV or DVD playback via 8-inch Dual View front touchscreen, full Rear Seat Entertainment (RSE) package with twin 10.2-inch video screens and a dedicated touchscreen remote control, Dual View and RSE systems are supplied with 'White Fire' infra-red wireless digital headphones, giving CD quality sound.
- ***Customer Configurable Mood Lighting*** – sophisticated LED ambient lighting with variable colours which can be adjusted by the customer to suit their taste and mood.
- ***Powered tailgate*** – power operation using the remote control key fob, buttons on the tailgate, or from the driver's seat. Remote close from the key fob is a new feature.
- ***Keyless entry and start system*** – Smart Key system enabling keyless entry and start.
- ***Soft door close*** – for additional convenience, the new model is offered with power latching on all doors.

- ***Power operated child locks*** – power operated child locks on the rear doors are fitted as standard.
- ***Cooler compartment*** – a generous cooler compartment in the front centre console armrest is available as an option.
- ***Timed climate control*** – the climate control system includes a Park Heater facility that allows the car to be pre-heated or cooled. The timer can be set using a recurring 7-day calendar, or as a single event up to 16 days ahead.
- ***Heated front screen/seats/wheel*** – for cold climates, the new model offers a heated windscreen, plus individually adjustable heated front seats and steering wheel.
- ***Flexible load area*** – a luggage management system with floor mounted loadspace rails gives a flexible solution to secure baggage.

3.2 Uncompromised space and versatility

The all-new Range Rover Sport's streamlined exterior conceals a surprise in the form of a more spacious and versatile interior, exploiting the longer wheelbase and skilful packing of the new model, with occasional seating for up to seven.

This additional capability makes the vehicle even more ready to take on whatever task is required of it, from towing a horse box to transporting the family on vacation. With a wider range of lifestyle accessories also available from Land Rover dealers, customers have everything they need to get the most from their Range Rover Sport.

Stuart Frith, Range Rover Sport Chief Programme Engineer, said: "The added space and seating flexibility makes this a car you can buy with your head, as well as with your heart. We have added a new level of versatility, without any compromise to the Range Rover Sport's incredible breadth of performance.

"Internally we've nicknamed the third-row seats as 'secret' seating, because you would never guess that such a sleek car could house 5+2 seating. However, clever packaging means that the vehicle is as versatile as it is good looking."

More spacious interior with versatility of occasional 5+2 seating

The all-new Range Rover Sport's significantly more spacious interior raises the vehicle's comfort and versatility to a new level.

Meticulous development work on the vehicle package ensured that the overall roominess – particularly in the rear compartment – was significantly increased, and supported the option of occasional 5+2 seating. Extensive optimisation using the 3D CAVE virtual simulator verified that the space, practicality and visibility provided by the interior delivered the best possible experience for all occupants.

Interior packaging was optimised around a 178mm longer wheelbase, enabling a more spacious rear cabin with 24mm more knee room, while occupants also benefit from a wider cabin with increased shoulder and elbow room.

A slightly lower rear seating position along with a larger rear door aperture, have also significantly improved the ease of access.

Rear seat comfort has also been enhanced by the availability of rear seats with adjustable recline and heated and cooled facility, together with vastly improved second-row climate control performance as part of the optional 4-zone system, which has an additional climate control unit in the rear compartment.

For additional seating versatility, neatly integrated third row seats can be specified which provide occasional 5+2 seating. These seats split 50/50 and are designed to be suitable for children and teenagers, or adults on short journeys. The second row seats tip and slide forward to provide access to the third row using a convenient lever on the backrest with one-hand operation. The second row seats also have 100mm fore/aft movement to allow customers a flexible choice of space in the rear seat rows and in the luggage compartment.

The third row seats have power operation as standard, and can be raised/lowered electrically using controls mounted on either side of the cabin and within the boot. When folded, the third row seats leave a flat floor in the luggage compartment, with no loss of boot capacity compared to the 5-seat model.

Enhanced luggage and stowage space

The luggage compartment is accessed via a power operated single tailgate, and offers 9 percent more boot space compared to the outgoing model, even in vehicles equipped with third row seating.

The interior package and luggage space of the Hybrid vehicle are identical to non-hybrid models, since the vehicle was designed from the outset with the battery pack and hybrid hardware located under the floor.

Interior stowage space has been increased on all models, with a larger glove box, more generous door bins, twin 44oz cup holders in the centre console, very large central armrest stowage, plus improved cup holders in rear armrests.

Towing capability and lifestyle accessories extend versatility

The all-new Range Rover Sport further improves the model's position as the best towing vehicle in its class with a 3,500kg trailer capability, and the availability of a new electrically deployable towbar – just one of a huge range of dealer-fit lifestyle accessories which enable customers to extend the versatility of their vehicle.

Key additional features to enhance the towing experience include the Surround Camera system with Tow Assist for easier hitching and reversing, and the Trailer Stability Assist system.

Other features available for the first time on Range Rover Sport include electrically deployable side steps, and a comprehensive choice of exclusive wheel designs and finishes in sizes now extending from 19- to 22-inches.

The full range of lifestyle accessories provides a wide selection of functional items including: roof rails and cross bars complemented by an extensive roof carrying range, new tow-mounted bike carriers for up to 4 bikes, exterior features including side protection tubes, side steps and stainless steel undershields, interior load carrying aids including loadspace liners, luggage guards and a rail system, and a new lockable security box.

All comparisons and data are based on manufacturer's estimates and are market dependent.

*****Lightest 'weight from' figure on previous Range Rover Sport is 2535kg; lightest 'weight from' figure on all-new Range Rover Sport with future four-cylinder petrol engine is sub 2000kg – representing a weight saving of over 500kg.

*Comparing equivalent models using the V6 diesel engine, the new Range Rover Sport 'weight-from' figure is 2115kg, compared to 2535kg – representing a weight saving of 420kg.

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