



## **TE FORD KUGA**

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## The Ford Kuga – an introduction

- A new addition to Ford Australia’s SUV portfolio – a compact SUV (sports utility vehicle)
- Ford Kuga wears Ford’s signature styling DNA
- 5-star ANCAP safety rating
- Impressive on-road driving dynamics with substantial off-road ability
- “Intelligent” Haldex AWD system and two distinct series – Trend and Titanium
- Powered by Ford’s acclaimed Duratec 2.5-litre 5-cylinder turbocharged petrol engine
- High level of standard equipment on all Ford Kuga models include Dynamic Stability Control (DSC) with combined Anti Rollover Mitigation (ARM), ABS with Electronic Brakeforce Distribution (EBD) and ‘Ford Power’ start button
- AWD system distributes engine torque up to a ratio of 50:50 front-to-rear
- Optimised noise, vibration and harshness (NVH) contribute to relaxed driving and ease of communication
- Plastic front guards reduce weight and provide enhanced damage protection
- Ford Kuga is built at Ford’s Saarlouis plant in Germany
- Ford Kuga will be available with myFord Capped Price Servicing
- Ford’s latest compact SUV delivers in the areas of smart technology, quality, sustainability and safety
- Price:                   \$38,990\* – Trend  
                                  \$44,990\* – Titanium

*\*Manufacturer’s List Price: This is the manufacturer’s list price for the **vehicle only**. A number of other components, including a dealer delivery fee, stamp duty, registration, compulsory third party (CTP) insurance and other statutory charges may be payable by a customer in relation to the purchase of this vehicle. As a manufacturer, Ford is not able to quantify the amount of these charges as they vary depending on a range of factors and individual circumstances, including the Ford Dealer the customer purchases the vehicle from, the State or Territory where that customer purchases the vehicle and the customer’s age, driving record and other personal factors. The final transaction price for the vehicle will be as negotiated by the customer with their chosen Ford Dealer.*

## **1. Overview**

The Ford Kuga is Ford Australia's latest entry into the highly competitive compact SUV market and promises a blend of rewarding on-road driving quality and surprising off-road capability.

“With the Ford Kuga we are delivering to customers a highly capable, expressive and charismatic vehicle,” said Brad Brownell, Vice President Marketing, Sales and Service for Ford Australia. “The Ford Kuga will appeal to those customers looking for something a bit different and help extend Ford Australia's model range.

“Its distinctive design DNA – shared with other Ford products in our portfolio - Ford's acclaimed on-road vehicle dynamics and premium-like product quality are just some of the highlights Ford Kuga will deliver to customers in this competitive market segment.”

Importantly, the Ford Kuga customers will have peace of mind as the compact SUV will be available with myFord Capped Price servicing.

### **Sound foundation**

The Ford Kuga is based on Ford's acclaimed C-car architecture – already well proven in the Ford Focus. With Ford Kuga, the designers and engineers have successfully integrated key driver and passenger requirements for a compact SUV into the distinctive design.

The exterior is handsome and sporty; demonstrating how the company's flexible design form language can be applied successfully to the crossover genre.

Well-balanced and with good proportions, the dynamic Ford Kuga provides spacious accommodation for driver and passengers despite being based on a compact footprint. A high-quality interior has been designed to complement the exterior to offer a highly practical and contemporary vehicle.

The Ford Kuga comes with full-time, 'intelligent' All-Wheel-Drive (AWD) and will be

available in a choice of two distinct series levels – Trend and Titanium. Both models are powered by Ford’s acclaimed Duratec 2.5-litre 5-cylinder turbocharged petrol engine.

A high level of standard equipment includes Dynamic Stability Control (DSC) with combined Anti Rollover Mitigation (ARM), and ABS with Electronic Brakeforce Distribution (EBD), both significant driver assistance technologies, plus Ford Kuga models are equipped with a ‘Ford Power’ start button. The Ford Kuga also gains a strong safety structure that makes extensive use of high-strength steels, which helps contribute to a 5-star ANCAP safety rating.

The Ford Kuga has been styled and finished with a high level of attention to detail. Every aspect of the car has been designed and manufactured to promote positive emotional responses from the driver and passengers.

Ford Kuga also demonstrates Ford’s acclaimed driving dynamics, a strong and competent safety pedigree, high levels of quality and craftsmanship and a competitive crossover package. A high seating position, ‘intelligent’ AWD and sensible stowage areas also make the SUV a very attractive proposition.

“We’re confident that the Ford Kuga’s arrival will raise the bar in the hotly contested crossover segment,” Bob Graziano, President and CEO, Ford Australia, said. “The vehicle’s styling and a long list of features will appeal to customers across a number of segments.”

## **2. Charismatic design**

Martin Smith, Ford of Europe Executive Design Director, headed the design team during the Ford Kuga's creation.

“It was important that we made the Ford Kuga instantly recognisable as a Ford model, but we also wanted to retain a design relationship with the original concept,” Smith said.

“I believe we have achieved these targets in the final design – we've captured the character of the concept with the car's appearance being both rugged and dynamic to show off its on- and off-road capabilities.”

Styling details alter depending on whether the Trend or Titanium series level is selected.

The Ford Kuga adopts a bold face, with bold upper and lower trapezoid grilles and dramatic, swept-back headlamps.

Below the lower trapezoid is a purposeful skid plate which further signals the car's tough, off-road capability. Circular fog lamps situated either side of the lower grille are standard equipment on both series.

The sculpted, muscular bonnet features distinctive power blisters which also strengthen the structural rigidity of the pressing. Underlying the Ford Kuga's stylish exterior is an incredibly strong safety structure, which makes extensive use of high-strength steels that provide the SUV with a 5-star ANCAP safety rating.

“The design elements in the Ford Kuga combine to reinforce our ‘energy in motion’ philosophy,” Smith said. “The powerful form language and bold graphics merge to give the car the impression of movement, even when it is parked.”

When viewed in profile, the Ford Kuga is as athletic as a modern running shoe. Bold graphics are evident from front to rear, with a rising belt-line and kick-up at the rear window.

Bold wheelarches are filled with standard 17-inch alloy wheels on the Trend with 18-inch alloy wheels available as standard on the Titanium.

The bold wheelarches are linked by integrated rocker mouldings, which extend along both side doors and run parallel with the high, pronounced shoulder line. The side 'undercut' further highlights the dynamic intent. Collectively, these elements make the vehicle look muscular and strong.

The unique door mirrors have integrated side indicators and the design has been optimised to deliver exceptionally good levels of Sound Quality and Vibration (SQ&V) as free airspace is created between the mirror housing and the door.

Brushed aluminium-effect roof rails neatly top off the profile view and add symmetry to the chrome used on the waistline.

A standard fixed panoramic glass roof section on the Titanium further adds a premium touch.

With a wheelbase of 2690mm the overall footprint of the Ford Kuga is compact and its proportions are balanced by relatively short front and rear body overhangs.

The rear design is equally purposeful and gives the vehicle a solid stance, and incorporates distinctive design signatures that make it instantly recognisable as a Ford.

A rear diffuser-like skid plate extends visibly from beneath the rear bumper and houses the sporty-looking twin exhaust pipes, which are standard on both the Trend and Titanium. The lower skid plate also houses the low-slung fog lamps. The large, split rear lamps are a dominant horizontal feature of the rear end.

Other neat details include a third LED brake light integrated into the body coloured rear spoiler and rear parking sensors blended into the painted bumper on Titanium models.

Surfaces are kept clean and clear with the pair of large Ford ovals being supplemented only on the metalwork of the tailgate with distinctive badging.

A carefully selected palette of eight exterior body colours has been chosen to complement the charismatic nature of the Ford Kuga.

These colours include:

**Blazer Blue**

**Frozen White**

**Dark Micastone** (soft grey)

**Lunar Sky** (light bronze)

**Mars Red**

**Midnight Sky** (slate blue)

**Moondust Silver**

**Panther Black**

The exterior design features naturally incorporate a wealth of practicality that provides much more than first meets the eye. The 'liftgate in liftgate' tailgate offers maximum flexibility and convenience with separate access via micro switches to either the upper tailgate section only or both sections simultaneously.

The size of the open upper section has been engineered to allow convenient access to the luggage compartment. When the upper section is opened access can be gained to the luggage area without having to move the standard tonneau cover, enabling smaller items to be placed in the luggage compartment quickly and easily.

The quick-release tonneau cover can also be completely removed.

The high ride height, large surface bumpers and tailgate design help avoid damage to the sheet metal during a low-speed rear impact.

Ease of repair is also helped at the front by the use of plastic front mudguards. Not only does the use of plastic mudguards aid in overall vehicle weight saving, they also provide greater resistance to dents.

A lower finishing panel in matt anthracite hugs the lower edges of the entire car, offering resistance to long-term dirt accumulation and providing a degree of protection against flying debris. It also visually enhances the off-road styling.

### **High style interior**

The interior has a spacious feel, with or without the large panoramic glass roof fitted as standard on the Titanium model.

The clean, ergonomic design of the instrument panel and centre stack converge into a large centre console for maximum accessible storage. All interior components contribute to a comfortable surrounding for the driver and front seat passenger. The high seat position contributes to the light and airy environment for front and rear passengers and provides the driver a commanding view of their surroundings. The bonnet is visible to the seated driver and front seat passenger and enhances the 'on top of the road' feeling.

“With the Ford Kuga we wanted to give the driver and their passengers an ‘affordable yet premium’ finish with a range of complementary interior colours and high-quality finishes,” Smith said.

The eye-catching interior incorporates fine leathers on the Titanium as well as the use of high-quality fabrics and gloss finishes on key areas in the Trend. Colour-matched details and integrated colours highlight the instrument panel and door trims, creating a complete, unified look of design-led quality and sportiness.

Each of the two available series represents distinct choices for customers. Both the Trend and Titanium models offer ergonomically optimised cockpit layouts to make life behind the wheel as enjoyable as possible. On the Titanium, a highly contemporary ‘techno’ feel matches the vehicle’s top-of-the-range credentials, and is synonymous with the positioning



of Titanium series on other recent Ford products. Black leather trim is offered on the Titanium as standard.

The interior styling is perfectly complemented by attention to detail and the ergonomics of the primary controls; steering wheel, pedal positions and gear shifter as well as multiple seating positions, switches, in-car entertainment and infotainment features. All are carefully situated and all have their own special attention to detail.

Everything from the amount of pressure that is necessary to activate the 'Ford Power' start button to the thumb indents on the steering wheel are all carefully considered to offer the most inviting and satisfying experience to both the driver and passengers. Other thoughtful additions include additional stowage areas for small items plus dedicated areas for drinks, sunglasses, coins, pens and three 12-volt power outlets for additional electrical devices.

### **3. Interior environment**

The new Ford Kuga offers comfortable and spacious seating for up to five adults.

In order to optimise the driving environment, engineers developed the new Ford Kuga using a Computer Aided Virtual Engineering (CAVE) system. The CAVE combines a number of computers and digital projectors to create a virtual, full-sized interior of a car. A real car seat is fixed to the rig for the 'driver' who can then evaluate all-round visibility and comfort levels for reach and operation of controls.

This system proved invaluable in customer clinics to gauge reaction to the new car and provided a platform for aspiring Ford Kuga drivers to voice their opinions as the new model took shape. It also enabled the development team to make fast and efficient changes to a virtual representation of their designs.

The CAVE system is a good example of the many cost-effective measures that were introduced to benefit key areas of the car's development – with added benefits for the finished product and ultimately for customer satisfaction.

#### **Comfort and practicality for up to five adults**

Inside, the new Ford Kuga offers occupants the benefit of 1008mm of headroom and a shoulder width of 1422mm for the driver and front seat passenger.

Supporting the car's 'cockpit' feel driving position is a 6-way power adjustable seat for the driver in the Titanium that provides effortless adjustments for fore/aft, seating height and backrest recline.

The foam used in the seats is designed to offer optimum comfort, ergonomic performance and support. This is complemented by a choice of seat trims including leather on the Titanium with increased 'plus-padding', an additional layer of foam immediately beneath the leather trim that provides added comfort.

Second row passengers benefit from high levels of comfort and features. The comfortable rear seating provides 1395mm of shoulder room and 987mm of headroom, giving generous space to accommodate adult passengers.

Detailed actions taken by the Sound, Quality and Vibration (SQ&V) team mean that any wind, road and powertrain noise has been specifically addressed. The result is that front and rear passengers can easily have a conversation across the cabin's length without the need to raise their voices.

A further interior enhancement is the addition of three 12-volt outlets, positioned in the centre console, at the rear of the centre console and in the rear cargo area.

The second row seating has a 60/40 split and has been designed to fold completely flat to maximise the usefulness of the available load compartment in two-seat mode. There is also storage space under the second row seats, plus under the floor in front of the second row seats. A luggage compartment sill height of 758mm aids the loading of heavy items into the car.

### **Adaptable and functional**

Ford's customer research confirmed that potential owners wanted a wide area to access the load compartment for occasions when they need the full volume. However, equally they wanted to be able to access the load compartment quickly and easily for smaller items without opening the whole tailgate.

The result is that the Ford Kuga offers a convenience feature called 'liftgate in liftgate' – a similar feature is found on the Ford Territory. This provides the ability to open a portion of the liftgate for access to the main luggage compartment while parked in height-restricted conditions. This feature also enables easy access to the luggage compartment for when smaller items need to be placed into or removed from the car.

The seat backs of the second row fold flat to allow larger, more bulky loads to be transported. When the second row seats are folded forward to maximise the load area – to a

length of 1578mm to the back of the first row seats – they form a completely flat area without an awkward step to negotiate luggage over or around. It is not necessary to remove the headrests of the rear seats to fold them forward.

The Ford Kuga has a generous luggage capacity of 1355 litres when in two-seat mode, while the enclosed luggage compartment achieves a volume of 360 litres. Both the Trend and Titanium also come with a spacesaver spare tyre.

Four exposed D-ring tie-down points are located across the rear seat back and up the inner rear panel of the car. This helps to tether loose items safely and reduces noise levels of items moving around while driving.

A 'one-touch' push function for the rear tonneau cover makes loading easy.

## **4. Models**

The Ford Kuga's targeted two-series strategy – Trend and Titanium – achieves high visual and feature differentiation.

Both series are distinct and well-equipped, and have been developed to provide customers with a clear choice to match their taste - the cool and stylish Trend, or the modern, techno, premium Titanium.

### **Ford Kuga Trend**

The Ford Kuga Trend is the lead-in series and offers customers an extensive array of standard technology and features coupled with attractive visual styling for both the exterior and interior.

The interior colour theme has been devised to give the car a lively and sporty feel. The cloth seats and cool applications of Metal Grey and Anthracite trim highlights provide a sporty touch.

The Trend offers a comprehensive and impressive standard equipment list which includes:

- 'Ford Power' start button
- Trip computer
- Bluetooth® mobile phone integration
- Voice control
- Cruise control
- Follow-me-home lighting
- Sony CD audio system
- Green tinted glass
- Six airbags
- Front Sports seats
- Sports seat trim
- Leather-wrapped steering wheel
- Front fog lamps

- Air conditioning
- ISOFIX child seat anchorage provision
- Powered front and rear windows
- Powered, heated door mirrors with puddle lamps
- Rear tonneau cover
- A range of standard electronic driver assistance technologies including ABS, Dynamic Stability Control (DSC) and Traction Control System (TCS)
- 17-inch alloy wheels
- Twin exhausts
- Roof rails

The Trend series is designed to offer a contemporary and mainstream car at a very attractive price.

### **Ford Kuga Titanium**

The ‘modern techno’ Titanium has been created to sit at the top of the Ford Kuga range and provide customers with premium levels of quality and substantial visual and equipment differentiation.

Additional standard features in the Titanium include:

- Napoli leather seat trim and silver appliqué details
- Heated front seats with variable heating controls
- 6-way power adjustable driver seat
- Leather trimmed gear shifter
- Fixed-glass panorama roof
- Rain sensing wipers
- Auto headlights
- Rear view mirror with auto dimming
- Dual Electronic Automatic Temperature Control (DEATC) air conditioning
- Rear privacy glass
- 18-inch five-spoke alloy wheels
- Rear parking sensors

## **5. Powertrain**

### **Perfectly matched for ability**

Both the Ford Kuga Trend and Titanium models come equipped with Ford's proven Duratec 2.5-litre five-cylinder turbocharged petrol engine, which is mated to a five-speed automatic transmission with sequential mode.

The engine is perfectly suited to the Ford Kuga – delivering 147 kW at 6,000 rpm and 320 Nm between 1,600 and 4,000 rpm.

The Duratec engine delivers a fuel economy figure of 10.6 litres/100km (combined cycle: ADR81/02) and a CO<sub>2</sub> output of 244 g/km.

“The Ford Kuga has a ‘can-do’ attitude and the robust powertrain perfectly supports this,” Gunnar Herrmann, C-Car Vehicle Line Director, Ford of Europe, said.

## **6. Smart driver assistance technologies**

The new Ford Kuga features a wide range of modern driver assistance technologies and a high level of standard equipment.

Key features include:

- Standard 'Ford Power' start button
- Cruise control
- Headlight leveling control
- 'Liftgate in liftgate' mini tailgate opening
- Ford EasyFuel capless refuelling system
- Dual exhausts with chrome finish
- Silver-finish roof rails
- Infrared reflecting windscreen
- 3 in-car 12-volt power outlets
- 8-speaker Sony Car Entertainment System
- Bluetooth® mobile phone integration
- Prestige paint
- Green tinted glass
- Roof rails

The Ford Kuga Titanium also offers many existing Ford technologies focused on driver convenience and assistance. These include:

- 'Quickclear' heated front windscreen
- Dual-zone automatic climate control
- Auto headlights
- Rear parking sensors
- Rain-sensing windscreen wipers
- Front seatback-mounted flip-up tray tables
- Electrochromatic rear view mirror



### **‘Power’ start button (keyless start)**

The ‘Ford Power’ start button for easy, keyless vehicle activation is a standard feature of both the Trend and Titanium.

Centrally and conveniently located in the instrument panel, the ‘Ford Power’ start button gives an engine activation time of less than 500 milliseconds. Instead of a conventional ignition key, the driver is provided with an electronic key fob, which simply needs to be detected by the system when in, for example, the driver’s pocket, for fast and convenient vehicle activation.

To start the engine, the driver depresses the brake pedal and then pushes the button to fire the engine. A further push of the button switches the engine and ignition off, with a safeguard to prevent it being operated while the car is in motion.

The entertainment and vehicle systems such as the wipers can be activated without starting the engine by pushing the button alone.

The ‘Ford Power’ button is also used to switch off the engine. Once again, the engineers were keen to build in a more complex sequence to rule out the possibility of the button being briefly pushed or brushed against inadvertently. The ‘Ford Power’ button needs to be pressed and held for two seconds or to receive three short presses in a two-second timeframe in order to stop the engine.

### **Mini tailgate opening –‘Liftgate in Liftgate’**

A mini opening tailgate provides a neat opening for the main luggage compartment to place or remove relatively small items without opening the entire tailgate.

The ‘liftgate in liftgate’ feature also provides a reduced height opening for those occasions where height restrictions may prevent the complete tailgate from raising to its full extent, such as being in a garage.

### **Ford EasyFuel capless refuelling system**

Ford Kuga comes with Ford's award-winning EasyFuel capless refuelling system as standard equipment.

First launched on the new-generation Ford Mondeo and also available in the Fiesta and Focus, the Ford EasyFuel system is simple and easy to use, and is designed to prevent vehicle mis-fuelling and the associated damage, inconvenience and expense.

Benefits of the system are twofold; first, the lack of a conventional filler cap that needs to be removed prior to fuelling the car means that drivers have fewer things to touch, reducing the likelihood of fingers becoming tainted with fuel.

Secondly, the system features a special fuel inhibitor that provides major protection against misfuelling at the fuel pump.

The fuel filler neck aperture has been designed around the different sizes of fuel nozzle, and Ford has engineered the system to allow only a nozzle that matches the corresponding fuel type of the car to open and enter the filler neck.

The use of mechanical devices around the nozzle opening and a special flap at the top of the fuel filler neck operate together to seal the opening and provide the same assurance that the system is as secure as when a properly fitted separate cap is used on conventional filling systems.

The Ford EasyFuel system has been extensively tested in all crash impact modes including the standard 80 km/h rear impact followed by a rollover to confirm the system's safety.

### **12-volt power outlets**

Ford Kuga customers can stay connected courtesy of three 12-volt power outlets in the cabin. These can provide direct power for laptops, printers, vacuum cleaners and other day-

to-day appliances. Each of the outlets is conveniently located in the cabin – one in the centre console, one in the rear passenger area and one in the luggage area.

### **Connectivity module**

A new connectivity module hidden away in the centre console includes a USB port and auxiliary jack. Any portable audio device can be connected to the Ford Kuga's audio systems either via a conventional 3.5mm jack (*not included with the vehicle*) or the USB port which forms part of the connectivity module. The AUX connector allows control of the latest generation personal audio players through the main audio system.

The connectivity module enables functions beyond music entertainment as it also provides customers with voice control of audio systems and climate control. In addition, hands-free and voice control operation of mobile telephones is possible thanks to Bluetooth® technology.

### **In-car entertainment and infotainment features**

The new Ford Kuga offers a comprehensive array of in-car entertainment and infotainment features and systems. For added connectivity, the Sony single CD facility is enhanced with Bluetooth® voice control and connectivity for portable music and USB mass storage devices, which can be connected to the separate AUX-in socket located in the centre console.

The Bluetooth® handsfree and voice control system enables voice control for a mobile phone, audio system and, in the Titanium, the Dual Electronic Automatic Temperature Control (DEATC) system. Features include direct access to the phone book memory through the audio system and voice-controlled dialling for safer handsfree calling.

### **Panoramic roof (Titanium model)**

At 1050mm x 785mm the glass area of the panoramic Ford Kuga roof in the Titanium is one of the largest in the segment. To make sure the harsh summer sun is kept at bay, two

manual sunblinds are also fitted for those occasions when shade is desired. In addition, the roof glass has a special infra-red (IR) coating that has proven during internal tests to reduce reflection by 35 per cent, as opposed to five per cent for non-IR glass.

### **Roof rails**

Both the Trend and Titanium are fitted with stylish, arched roof rails. Applicable to either the solid roof panel or the panoramic roof, the roof rails are functional as well as decorative and able to take a load of 75 kg. The rails have two mounting points and provide high flexibility for cross-bar and positioning of the load.

## **7. Driving quality**

The Ford Kuga has been engineered with dynamic on-road driving attributes and exceptional off-road capabilities.

Using proven and established Ford C-car chassis components and technology as a solid basis, Ford's engineers tailored, tuned and calibrated each component and aspect of the ride and handling to ensure the Ford Kuga carries the Blue Oval family pedigree for strong driving dynamics.

“With the Focus we had an established portfolio to use as a basis and our shared technologies initiative within Ford Motor Company allows us even more possibilities to develop vehicles like Kuga,” Herrmann said.

### **Engineered to provide car-like qualities**

The challenge when developing the new Ford Kuga was to bring passenger car-like DNA characteristics into the crossover segment. Ford's engineers had a number of targets and areas that contribute to the Kuga's characteristics:

- A high level of agility, low level of steering wheel angle demand, avoiding a ‘big-car’ feel, despite a high seating position
- A high level of ride quality while still providing excellent body control
- A low level of roll angle and low roll velocity during cornering, despite the higher centre of gravity
- A high level of steering precision

The key overall target was to ensure that the Ford Kuga achieved high levels of ride, handling, braking and steering performance within the segment.

Although Ford's engineers have a wealth of proven and established technologies available to them it is important to understand that the Ford Kuga is not the result simply of a 'copy and paste' solution from other models.

Unique suspension and steering geometry had to be developed, but still based on reliable C-car components such as the front axle with MacPherson strut suspension, Ford's Control Blade independent rear suspension already fitted to many of the latest Ford models, a solid body structure and a low-friction steering system.

The Ford Kuga uses many systems and components in order to achieve the programme's targets:

- New front shock absorber valving
- Rear shock absorbers that are larger than those fitted to Ford's C segment cars
- New front suspension 'jounce' bumper
- New front and rear suspension top mounts
- Hydraulic rebound stops
- New rear anti-roll bar system
- New rear suspension knuckle and subframe to provide significant stiffness improvements
- New front and rear suspension geometry
- New hydrobush in the front suspension lower control arm
- New front and rear wheel bearings for improved stiffness
- Wide front track width –1575mm
- Long wheelbase –2690mm

### **Ford Kuga ride**

Despite its compact SUV dimensions, the Ford Kuga has a wide track and long wheelbase to help ensure the Ford Kuga maintains a solid on-road stance despite the increased centre of gravity.

To achieve a high level of ride quality for on-road usage combined with the demand of high body articulation angles for excellent off-road traction and manoeuvrability, the front and rear damper systems have been optimised.

The front shock absorbers utilise a new valving system. An industry-first from Ford, the valving system allows a better tuning in 'jounce' to rebound balance for better body control. The valving system helps to reduce suspension noise, thus contributing to the best possible ride and SQ&V characteristics.

Hydraulic rebound stops are located within the front shock absorbers of the Ford Kuga, further improving suspension noise suppression.

The improvements to the front shock absorbers had to be balanced with the rear. The rear shock absorbers of the Ford Kuga were therefore increased in size, in order to reduce the internal pressure level. This ensures an even better 'tunability' throughout the damper speed range, an especially important consideration in off-road conditions.

The improved tunability of both shock absorber systems was also key in minimising so-called 'headtoss', a term coined by Ford's engineers to describe the unpleasant lateral jerks usually associated with off-roading where a higher level of wheel travel occurs. This is further supported by a new anti-roll bar system with improved efficiency.

A new rear anti-roll bar system gives a significantly increased 'efficiency', which in driving dynamics terms means an optimised response time. These actions also enabled a reduction in the anti-roll bar diameter, a main parameter of headtoss-causing driving situations.

The positive headtoss characteristics are further enabled by front and rear suspension geometry that has been especially devised for the Ford Kuga.

They employ 'off-road optimised rollcentre' positions. The rollcentre positions can be tuned to create individuality to each car's driving dynamics. For the Ford Kuga, Ford engineers chose a high position to enable the desired low car-like roll motions during

cornering while at the same time allow for a quick steering response through optimised lateral load transfer.

### **Ford Kuga steering**

Front and rear geometry settings of the Ford Kuga are a key enabler to providing the desired car-like steering attribute targets. The Ford Kuga also includes a quick steering ratio, further improving agility, precision and manoeuvrability.

The high level of structural stiffness within the body and chassis systems were optimised on the Ford Kuga to ensure that outstanding driving quality is delivered. A new front suspension turret brace that reinforces the top mount attachment areas was developed to cope with increased loads. Stiff prop-shaft brackets that reinforce the tunnel area are also used.

Because of the 'intelligent' AWD capability of the new Ford Kuga, it was necessary to incorporate significant stiffness into the car while avoiding unwanted weight gain. To ensure this, Ford engineers developed a stiff rear suspension crossmember and new stiff cast knuckles.

These overall actions to maximise stiffness caused the camber stiffness on Ford Kuga to be raised by 40 per cent at the rear and 25 per cent on the front. Elastokinematics of the front and rear suspension have been adapted to these changes by the use of a number of new suspension bushes. Low roll motion and a direct and predictable steering response on a high level of agility form the basis for crossover steering precision and feel. Coupled with Ford's proven and established Electro-Hydraulic Power Assisted Steering (EHPAS) system enables speed-dependent steering efforts.

### **Ford Kuga handling**

The significant structural stiffness of the Ford Kuga was not only a key means to achieving the desired steering characteristics but also provide the key to outstanding handling performance.



Superior cornering capability with the highest level of 'steady state' and transient stability are the result of these efforts. Together with excellent steering performance, the Ford Kuga achieves conventional passenger car-like handling and gives the driver the highest level of confidence under all conditions.

Specific to the 'intelligent' AWD is an electronically controlled 'on demand' rear-wheel-drive system. The system transmits as much torque to the rear wheels as needed to ensure the best traction under all possible cornering and accelerating conditions, while being careful to avoid a negative impact on the fuel consumption.

The 'intelligent' AWD system continually provides levels of torque to the rear axle depending on the driver's style and driving conditions. Determined by acceleration levels, steering wheel angle and vehicle speed, among numerous other smaller parameters, the torque to the rear wheels can vary from 10 per cent for cruising on-road to 50 per cent when a more enthusiastic driving style is adopted.

The torque provided to the rear of the vehicle is based purely on the demands of the driver or driving situation. Coupled with our electronic Traction Control System (TCS) and Dynamic Stability Control (DSC), it gives instant and seamless reactions just when the driver demands it.

Various signals from the Ford Kuga's Controller Area Network (CAN) system such as vehicle speed, steering angle and driver's torque demand, among others, are used to transfer optimum torque to the rear axle.

With agile manoeuvring and stable handling the Ford Kuga delivers on the expectations of road ride and handling, continuing Ford's acclaimed reputation as a leader in driving dynamics. The combination of the 'intelligent' AWD system and the specific tuning of the chassis components make the Ford Kuga a highly capable and comfortable car for on- and off-road driving.

Equipped with disc brakes all-round, the Ford Kuga gives assured braking performance at all times. All models feature standard Anti-lock Braking System (ABS) and Dynamic Stability Control (DSC) with Anti Rollover Mitigation (ARM) and Electronic Brake Assist (EBA).

The ABS is specially tuned for Ford Kuga to give good brake performance and high levels of stability. Vehicle stability and short stopping distances are achieved by the use of individual rear wheel brake pressure control.

### **Integrated electronic systems**

To deliver a very high degree of stability and driver confidence the Ford Kuga is equipped with a complex and highly integrated network of electronic driver assistance systems. Each of these assistance systems is designed and calibrated to share its data with the other systems to ensure that all aspects will be considered for potential electronic intervention.

### **Dynamic Stability Control (DSC)**

The standard DSC system continually monitors the vehicle's progress and will activate only when it is needed during critical driving situations. This enables the driver to enjoy fully the Ford Kuga's driving qualities without suffering disturbing and possibly unexpected interventions from the DSC system. The seamless engagement and intervention of the DSC system also reduces the likelihood of the driver manually switching it off.

Dedicated axle software analyses and controls the yaw; making over- and understeer almost negligible. If the software determines too much body roll it will reduce the torque to the wheels and will apply the brakes to the wheel(s) as necessary.

The system is capable of individually braking only one wheel – or any combination of up to three wheels – if the situation demands it. This is especially important for increased performance, particularly in understeer situations where excessive speed entering corners can be reduced much more effectively. In oversteer situations – and depending on the road friction and Ford Kuga's stability levels – the intelligent logic of the DSC will decide to

brake either the front or rear axle, or both, to achieve an effective, comfortable and imperceptible level of DSC intervention.

The Ford Kuga's DSC system is so advanced it is capable of detecting variations in the car's behaviour due to consequential elements such as tyre wear or vehicle loads at any given point.

The DSC's 'matrix of events' will 'learn' the real behaviour of the car and adjust itself to significantly increase the performance and robustness of DSC interventions.

DSC is also capable of reducing the amount of torque transmitted to the rear axle down to 0Nm. This interface between DSC and AWD is used to stabilise the car in case oversteer occurs while the driver maintains a full-throttle position.

Several areas of tuning were focused on in developing Ford Kuga's DSC system:

- To achieve maximum directional support in critical driving situations and maximise the vehicle's active safety elements within their physical limits and tolerances.
- To offer maximum traction performance for on- and off-road driving.
- To adapt DSC tuning to the car to allow the passive elements to work at their full potential.
- To eliminate the need for the driver to switch between DSC modes when driving from one surface type to another by implementing robust tuning and intelligent DSC logic.

The Ford Kuga's state-of-the-art DSC system therefore incorporates:

- Anti Lock Braking (ABS) system including Electronic Brakeforce Distribution (EBD) and Corner Brake Control (CBC)
- Emergency Brake Assist (EBA)
- Traction Control System (TCS) which comprises:
  - Engine Traction Control System (ETCS) and Brake Lock Differential (BLD)
- Engine Drag torque Control (EDC)
- Anti Rollover Mitigation (ARM)

## **Accompanying systems for added driver confidence**

### *Electronic Brakeforce Distribution (EBD)*

Limits the brake pressure applied to the rear brakes to maintain stability by preventing rear axle lock prior to the front axle locking.

### *Corner Brake Control (CBC)*

Improves stability during partial braking and during EBD or ABS activation in bends by reducing pressure at the inner edge of the front wheels. This produces a stabilisation torque in case the vehicle 'turns in' too much.

### *Emergency Brake Assist (EBA)*

EBA is responsible for rapidly building up brake pressure when activated. The level of activation depends on the driver's intervention and is triggered by a rapid brake pedal movement in an emergency event. During this time the brake pressure applied by the driver is not high enough to achieve maximum brake forces, therefore the EBA increases the pressure applied to the brake pads until the system enters ABS mode. This results in the shortest possible braking distance.

The *Traction Control System (TCS)* consist of two parts:

### *Engine Track Control System (ETCS)*

Traction Control eliminates excessive wheel spin to guarantee optimal traction performance and stability. This becomes even more important for cars with off-road capability. The Ford Kuga's TCS will reduce the engine torque to a level that delivers optimal wheel slip to achieve maximum acceleration.

### *Brake Lock Differential (BLD)*

When necessary, one wheel on each driven axle can be braked to transfer torque to the wheel with the most grip – the BLD will control the torque distribution between left and right wheels. In addition, the 'intelligent' AWD system will control the torque distribution between the front and rear wheels. This ensures that each wheel will receive the optimum amount of traction torque for every road condition.

On high-friction surfaces TCS delivers maximum acceleration without the need for the driver to modulate wheelspin by adjusting the pressure to the throttle pedal. In off-road conditions the intelligent TCS logic will allow sufficient wheel slip to 'dig' through conditions such as deep sand or mud without the need for the driver to switch the system off – which otherwise may be expected.

Even in conditions where only one wheel is able to take traction forces, the TCS and AWD systems will make optimal use of the available surface friction. This is further testimony to the Ford Kuga's capability in off-road conditions.

#### *Engine Drag torque Control (EDC)*

EDC requests positive torque from the powertrain control system to compensate for the engine drag and powertrain losses during specific driving manoeuvres. Conventionally on low-friction surfaces the engine drag forces may slow the wheels too much causing them to slip. EDC is applied to re-accelerate the slipping wheel(s) and build up traction forces between the tyres and the road. EDC serves to support vehicle stability.

Ford Kuga's TCS has two elements that can be selected by the system to ensure good traction at all times:

- Reducing engine torque to a level which delivers optimal wheel slip to achieve maximum acceleration
- The ability to brake one wheel on each driven axle or transfer torque to the wheel with the most grip. This means that the TCS will control the torque distribution between front and rear wheels and that every wheel will receive the right amount of traction for the road conditions

#### **Anti Rollover Mitigation (ARM)**

An Anti Rollover Mitigation (ARM) system is integrated into the DSC system to further increase driving safety.

While ARM is braking the front wheels the engine torque is reduced to zero. These combined actions generate understeer and reduces the Ford Kuga's road speed in order to

reduce the lateral acceleration and minimise the possibility of a rollover. As soon as the potential rollover situation has passed ARM stops the braking and engine intervention for normal driving to resume.

The DSC, and therefore its integrated systems, can be switched off by the driver via the info display screen in the driver's console. However, for maximum safety, the ARM system will always remain active.

## **8. All-terrain with ‘intelligent’ AWD capability**

The Haldex ‘intelligent’ AWD system and the proven tuned chassis technology with MacPherson struts on the front and Ford’s acclaimed Control Blade rear suspension deliver exceptional driving dynamics to the new Ford Kuga.

The go-anywhere character and substantial off-road ability of the Ford Kuga comes to the fore in the Trend and Titanium. ‘Intelligent’ AWD contributes positively to normal road use and helps give the vehicle a sporty and dynamic feel for outstanding on- and off-road driving performance especially in difficult weather and surface conditions. At the same time, special actions have been taken to offer remarkable off-road skills and flatter the novice off-road driver.

“The Ford Kuga has been developed to provide off-road skills without ‘SUV sins’,” Herrmann said.

### **Optimised torque, fuel consumption and traction**

The AWD system used on the Ford Kuga Trend and Titanium is a so-called ‘intelligent’ system. It permanently monitors the driving situation and the driver’s demands to always react with optimised torque distribution. With driving torque permanently distributed to all four wheels driver intervention – by way of operating separate controls – is not necessary to operate it. Ford’s engineers have provided the car with optimal road holding, irrespective of surface conditions.

#### *Optimised fuel economy*

Although the driving torque is permanently ready to be distributed to all four wheels the ‘intelligent’ part of the system ensures that just the right amount of torque is transferred only at the point in time it is needed.

This ensures that optimal torque distribution during acceleration and deceleration is applied. A separate ‘slip control’ is applied for those occasions where the base torque is insufficient. The base torque transfer has been lowered to support the fuel economy of the

vehicle. This is possible because yaw rate and lateral acceleration are used at higher cornering rates to increase torque transfer, and thus optimise the Ford Kuga's balance to help maintain an excellent level of handling during enthusiastic driving.

These combined actions contribute to favourable fuel efficiency as they provide much the same control as when a driver manually switches between drive modes on a switchable system.

#### *Best possible traction control*

The active 'on-demand' coupling of the AWD unit provides optimal torque distribution during acceleration and deceleration, which is calculated from the engine and various electronic system signals including ABS, DSC and TCS. The on-demand coupling is integrated with the traction control system to provide torque to an individual wheel if it needs more torque than the remainder. In addition, a specific locking torque is applied to the coupling at standstill to prevent wheel slip during launch situations.

#### **'Intelligent' AWD in all situations**

As with many of the features and equipment fitted to Ford Kuga, the AWD system has been designed and integrated for simple and seamless operation. There are no additional buttons or levers that the driver needs to operate.

The 'intelligent' AWD system distributes the engine torque up to a ratio of 50/50 front/rear and uses technology that monitors information from a number of key areas to determine when and how much AWD power should be used. These parameters take into account the torque and speed of the engine, throttle position, steering wheel angle, yaw rate, braking system and the speeds of all four wheels among other signals. The Ford Kuga has a maximum approach angle of 21 degrees and a maximum departure angle of 24 degrees ensure that hills and descents can be tackled with ease and confidence.



*'Intelligent' AWD pre-charge*

Transmitting up to 10 per cent of torque to the rear wheels from a standing start means maximum grip is available instantly; some competitor systems require the vehicle to move before power can be distributed to the rear.

*'Intelligent' AWD when cornering*

Ford Kuga systems recognise lateral acceleration (enthusiastic cornering) and transfer exactly the right amount of torque to the rear wheels. This improves balance and grip and results in safe and assured handling.

*'Intelligent' AWD when accelerating*

The intelligent AWD coupling will lock and prepare to transfer torque to the rear axle when the accelerator is pushed aggressively. The system recognises that torque levels are about to increase, giving the driver virtually seamless intelligent AWD grip instantaneously.

*'Intelligent' AWD when wheels slip*

In addition to the intelligent AWD electronic sensors, a mechanical pump responds to any loss of forward grip on the front wheels by instantly transferring torque to the rear axle.

*'Intelligent' AWD when parking and manoeuvring*

On tight corners at low speeds torque is reduced to the rear wheels to optimise efficient and comfortable manoeuvring.

*'Intelligent' AWD and Traction Control System*

The Traction Control System (TCS) automatically modifies its operation to suit different conditions. For example, in sand some wheel slip is needed for best traction, but on road surfaces less wheel slip is best. The TCS will always account for the type of surface that is being driven on.

*'Intelligent' AWD and Engine Drag torque Control (EDC)*

Helps prevent wheels slipping and skidding as a result of engine braking in very icy or slippery conditions. The system senses wheel slip at high engine speed in low gears and uses the engine management system to increase torque output to compensate.

## **9. Safety**

The Ford Kuga joins a highly acclaimed and successful vehicle portfolio that is recognised for its safety standards and performance. Critical to this safety performance is a high-strength bodyshell that contributes to a 5-star ANCAP safety rating.

“We put a lot of resources into making our cars as safe as possible for our customers and all other road users,” Herrmann said. “We employ a whole-vehicle holistic and no-compromise approach.”

### **Systems overview**

A high quantity and standard of active and passive safety features have been incorporated into the Ford Kuga and, like all Ford models, this starts with the highly effective and stiff body structure that absorbs the impact energy in defined crush zones and provides high resistance to deformation of the passenger safety cell.

A high amount of Ultra High Strength Steel (UHSS) delivers a rigid, yet lightweight passenger cell, providing greater side and frontal impact protection.

Extra strong materials enable window pillars to be very slim and help maximise visibility. Through the implementation of more dual phase steels – located in the rocker, tunnel, A- and B-pillars – the integrity of the passenger cell has been further improved without significantly adding weight.

The new Ford Kuga builds on a strong heritage and no-compromise approach to safety, refining the Ford Intelligent Protection System (IPS) further through the use of its high strength steel and impact protection advances. IPS is a cohesive system of passive safety features, which work together to maximise occupant protection. This is supported by advanced and comprehensive active safety equipment that positively assists the driver.

## **Passive safety**

Ford's proven 'Intelligent Protection System' for the Ford Kuga incorporates a number of standard safety features. A total of six airbags include front and side airbags for front seats plus head and shoulder curtain airbags covering the first and second row of seats.

Additional standard features are anti-submarining seats with height adjustable headrests for all passengers; pyrotechnic safety belt pre-tensioners and safety belt load limiters for the front seats.

A driver protection feature already established in Ford of Europe's large and luxury car segment is the Horizontal Stroking Steering Column. In the event of a high-speed frontal impact the steering wheel strokes horizontally away from the driver, further reducing loads to the occupant's head and chest.

To provide the best possible occupant safety – including rear passengers and child seat safety – the vehicle deceleration 'crash pulse' of the Ford Kuga is optimised to achieve a low and distributed pulse level. An effective average deceleration level can only be achieved if a maximum of the front end length can be used for deformation and the passenger compartment intrusions are fully controlled.

The crash pulse for the Ford Kuga has been optimised and the passive restraint systems adapted accordingly to ensure that airbag activation, for example, is precisely tailored to the type of impact the vehicle is involved in.

Ford has also developed a front axle subframe system, which is designed to decouple from the body structure in the event of a frontal impact. Decoupling provides high levels of passenger protection and it is designed to release under a predefined load. Avoiding large deformation and accelerations within the passenger cell structure reduces loads to the driver and passengers. The decoupling feature is a technology that is proprietary to Ford Motor Company.

Ford Kuga front seat occupants also benefit from an advanced neck injury protection system. The advanced headrest shape provides minimal relative movement between the

occupant's head and upper body during low-speed rear impacts. The headrest is designed to allow guidance of the occupant, as early guidance keeps the head and neck free of impulsive movement, resulting in less neck strain.

Additional passive safety features support the driver and passengers in the new Ford Kuga.

Seatbelt reminders are fitted as standard for the front seat passenger and the driver to remind front occupants to correctly fasten their seatbelts. Unbelted occupants will be given an audible and visual warning. Seatbelt pre-tensioners are also fitted to the front seatbelts.

ISOFIX child seat fasteners are fitted on both outer rear seats of the second row for easy handling and to provide facility for a high degree of child protection.

### **Engineered for pedestrian protection**

The Ford Kuga has been developed to meet and exceed the latest pedestrian protection requirements. Special actions ensure the highest levels of pedestrian safety and injury mitigation in the event of a collision. These actions include soft bumper material, empty space between the bumper and the front panel and radiator, breakaway headlights, front wings manufactured from recycled plastic and a carefully shaped bonnet edge structure.

Under-bonnet components are located a sufficient distance away from the outer skin to avoid a direct impact with pedestrians. Parts located within the potential impact zone have carefully engineered features such as 'breakaway' wiper spindles and 'collapsible' bonnet hinges.

### **Active driver assistance**

Significant standard safety technologies provide high levels of driver control under all conditions. The standard Anti-Lock Braking System (ABS) has Dynamic Stability Control (DSC) with Anti Rollover Mitigation (ARM), and includes Electronic Brake Assist (EBA). These systems are detailed in the Driving Quality section.

Ford has also introduced an array of driver assistance technologies to the new Ford Kuga, including:

- Automatic hazard light activation under emergency braking
- ‘Quickclear’ heated front windscreen on Titanium
- Solar reflect Infra-Red (IR) windscreen
- Headlamp levelling control
- Power heated side mirrors with side indicators and puddle lamps
- Bluetooth<sup>®</sup> with voice control
- Auto headlights and wipers. Standard on Titanium series, sensors automatically detect reduced light or rain on the screen and switch on the headlights or wipers accordingly.

The ‘intelligent’ AWD system has been devised and engineered to incorporate high standards of its own safety features. The standard ABS with DSC is further enhanced with an Anti Rollover Mitigation (ARM) feature.

Active safety systems are a key element in assisting a driver to maintain control of the vehicle, reducing the risk of a collision. For the Ford Kuga, these include:

- Standard Anti-lock Brake System (ABS)
- Standard Dynamic Stability Control (DSC)
- Standard Traction Control System (TCS)
- Standard Electronic Brake-Force Distribution (EBD)
- Standard Emergency Brake Assist (EBA)

In addition high-visibility rear lighting is a standard feature of both the Kuga Trend and Titanium. The combination of high-mounted LED third brake light, and unique rear lamp styling and indicator bulbs using the latest illumination technology underline the safety commitment. The bulbs are designed to last the car’s lifetime too, reducing the scenario of a rear light not working.

## **10. Quality and sustainability**

Extensive durability testing was conducted specifically to ensure that the new Ford Kuga would satisfy the needs of diverse terrains and geographical territories. Testing in ambient temperatures of minus 40°C in territories including the northern region of Finland ensure that the SUV's go-anywhere ability is not unduly affected by the climate.

Ford Kuga is a fine example of Ford precision engineering, with innovative design, a tactile high-quality interior, outstanding styling and premium driving dynamics. In addition to having excellent driver assistance features and making journeys easier and more enjoyable for any passengers, the Ford Kuga has a number of technology features that underline its high quality and premium status.

Manufactured at Ford's Saarlouis plant in Germany, the new Ford Kuga is built alongside the new Focus.

The Saarlouis plant practices Ford's new product development process, devised to enable more new vehicles to be developed and manufactured in a shorter time and with negligible development issues.

The Ford Kuga is built with lasting quality, expressing craftsmanship and precision. The attention to detail is evident everywhere and extends to more than the chrome finish details, the harmony of colours, trims and materials and the precision of the craftsmanship.

Further highlights of the Ford Kuga's high build quality include:

- A unique door mirror design which also improves SQ&V by creating airspace between the mirror and door.
- A premium-style centre stack and centre console.
- Premium execution on window and mirror switches.
- Extra-durable door seals to prevent water seepage when wading.

Plastic front mudguards on the new Ford Kuga are a key factor in keeping the car's weight to a minimum. Proven to be up to 50 per cent lighter than steel, they are also resistant to

minor knocks and avoid expensive sheet metal repairs. Component weight reduction also contributes to reduced emissions through improved fuel economy.

“There are a number of actions and objectives that are applied to all of our vehicles irrespective of the class they are in,” Herrmann said. “We always use high-quality materials and excellent levels of craftsmanship and finish to get the best result. Our stringent durability testing proves to us that all aspects of every car are sufficiently tested to give long service lives and years of pleasure.”

### **Developed for best SQ&V performance**

The Ford Kuga has been built to provide a positive driving experience.

Significant efforts were made to reduce noise levels and improve the perceived sound quality inside the car to match the overall refinement. Low sound pressure levels and the source harmony for engine, road and wind contributions support the quality of the interior ambience. The Ford Kuga provides stress-free, relaxed driving through low noise levels.

This was achieved by detailed analytical preparation using state-of-the-art CAE tools, time spent in highly sophisticated Sound Quality and Vibration test facilities and a high number of test kilometres on test tracks and public roads.

Attention to detail was a key enabler for successful SQ&V development of the new Ford Kuga. Combustion noise has been specifically attenuated and is acoustically optimised with torque-based engine calibration and multiple pilot injection. The engine characteristic map has been adjusted to the different gears, using optimised injection capacities, timings and pulse timings for each gear.

#### *Enhanced Powertrain SQ&V*

Designing a premium powertrain sound quality was a key area of attention in the development phase of the new Ford Kuga. One important goal was to achieve a high level of sound refinement through the range that included low to medium engine speeds and also while cruising. At the same time a positive sound feedback from the engine during

accelerating manoeuvres was accomplished and the necessary level of aural feedback has been achieved during off-road driving.

Features incorporated to meet this objective include:

- *Air intake and exhaust tuning:* The design of the exhaust and the air intake systems has been refined in powertrain SQ&V test cells to meet the interior noise sound quality targets. Shell surface stiffnesses has been optimised, internal absorption and resonators have been developed and utilised
- *Engine mount isolation:* All engine mounts underwent a rigorous development program to improve the structure-borne noise isolation in all frequency areas under all load conditions
- *Attention to detail:* The level of detail given to maximise the SQ&V characteristics extends to the secondary noise paths, such as cables, hoses and ducts. For example, noise transmission through the gear shifter cables has been eradicated and power assisted steering and air conditioning lines have been tuned to suppress unwanted noises

#### *Road Noise Optimisation*

The main focus of road noise development was to achieve low levels on all road surfaces while retaining necessary aural feedback while off-road. This includes a smooth noise and vibration behaviour over smooth or rough roads as well as over impacts. A good balance between high-frequency and low-frequency road noise contributes to the Ford Kuga's excellent driving experience. The development work was conducted over a variety of critical on- and off-road surfaces at Ford's Lommel Proving Ground in Belgium, as well as public roads around Europe.

#### *Reduced Wind Noise*

Reduction of wind noise is a result of detailed engineering and development. Details on the Ford Kuga include an optimised A-pillar shape, while door mirror design, the flush execution of the door seals and the concealed wiper arms and blades all contribute to reducing wind noise.



Another key target was to minimise the transmission of noise into the passenger compartment. In order to achieve this, particular attention was given to door design. Improvements included making the door glass 3.85mm thick and introducing an additional seal between the door and body.

The combination of a number of small actions means that the Ford Kuga has comparable wind noise behaviour with some of Ford's large and luxury cars.

### **Ford environmental commitment**

Sustainability plays a key role in Ford Motor Company's global business. The development and integration of a sustainability management system encompasses the pursuit of improved air quality and fuel efficiency. Ford Motor Company is committed to socially and environmentally responsible manufacturing. Each manufacturing plant has a workforce dedicated to the task of analysing the use of energy and resources to identify and adopt changes to working practice and policy to make improvements.

All vehicles developed and manufactured by Ford of Europe comply with legal requirements, including those covered by the European End of Life Vehicle Directive. Covering recycling opportunities, the Directive also includes initiatives that impose boundaries on the materials used in vehicle production. For example, heavy metal restrictions are imposed on the use of lead, mercury, hexavalent chromium and cadmium. However, Ford of Europe is going beyond this; Ford cars were the first to receive the German TÜV organisation's allergy-tested interior certificate and achieved the British Allergy Foundation's Seal of Approval.

A number of materials introduced by Ford of Europe to the new Ford Kuga are further evidence of the company's commitment to embracing new materials and ensuring that, in theory, the materials can be used ad infinitum.

A recycling process to help produce the Ford Kuga's mudguards, which are moulded from resin, has already been proven. Ford Kuga energy absorbers moulded with Xenoy iQ

PC/PBT resin can utilise post-consumer PET bottle scrap as a feed-stock. This uses less energy and emits less CO<sub>2</sub> than conventional plastic manufacturing or recycling processes.

Use of modern materials, such as those used for the front mudguards, contributes to reduced overall vehicle weight reduction. This translates directly to improved fuel economy and reduced CO<sub>2</sub> emissions. New components unique to the Ford Kuga are made of recycled materials – the pedestrian safety energy absorber behind the front bumper skin, for example, is made out of recycled PET bottles.

### **11. Ford Kuga – an exciting SUV entrant**

“This compact SUV combines leading driving dynamics with a strong safety message and premium quality and craftsmanship,” said Bob Graziano, President and CEO, Ford Australia.

“Importantly too, the Ford Kuga is a logical fit into our Australian lineup.

“Ford of Europe has created an exciting entrant into the compact SUV segment and we’re confident our customers in Australia will be excited too.”

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## **12. Technical specifications**

<b>Model</b>	
Ford Kuga Trend	Five-door, five-seat compact SUV Ford Duratec 2.5-litre five-cylinder, turbocharged, petrol Five-speed automatic 'Intelligent' All-Wheel Drive (AWD)
Ford Kuga Titanium	

<b>Engine</b>	
Type	Ford Duratec 2.5-litre five-cylinder, petrol
Induction	Single turbocharger
Maximum power	147 kW @ 6000 RPM
Maximum torque	320 Nm @ 1600 – 4000 RPM
Fuel consumption	10.6-litres / 100km (combined cycle; ADR81/02)
CO2 output	244g / km (combined cycle; ADR81/02)
Emission class	EU4

<b>Transmission</b>	
Gearbox	5-speed automatic with sport and manual modes
Drive system	Intelligent all-wheel drive (Haldex)

<b>Chassis</b>	
Construction	Unitary
Front suspension	Independent with MacPherson struts
Rear suspension	Control Blade independent multi-link system
Steering	Electro-hydraulic Power-Assisted Steering
Turning Circle	11.5 m

<b>Wheels/Tyres</b>	
Trend	17-inch alloy (7.5x17) / 235/55 R17 V
Titanium	18-inch alloy (7.5x18) / 235/50 R18 V
Spare	Spacesaver (steel)

<b>Brakes</b>	
Braking	Dual circuit, diagonally split, hydraulically operated front and rear with disc brakes. Vacuum servo-assisted with electronically controlled four-channel brake distribution ABS and optimised brake assist, DSC with rollover mitigation.
Dimensions	300 mm diameter ventilated (front) / 302 mm diameter (rear)

<b>Towing Capacity</b>	
	750 kg braked / unbraked

<b>Off-road capabilities</b>	
Fording depth (maximum)	450 mm
Approach / departure angle	21 degrees (front) / 24 degrees (rear)
Ground Clearance	188 mm

<b>Dimensions</b>	
Length	4443 mm
Width	1842 mm / 2128 mm (without mirrors / with mirrors)
Height	1710 mm (including roof rails)
Wheelbase	2690 mm
Kerb weight	1653 kg (Trend/Titanium)
Track	1575 mm / 1585 mm (front / rear)
Fuel capacity	66 litres
Luggage volume	360 litres (rear seatbacks upright)
	1355 litres (rear seatbacks/cushions folded)
Shoulder room	1422 mm (front)
	1395 mm (rear)
Headroom	1018 / 1008 mm (with / without panorama roof)
	996 / 987 mm (with / without panorama roof)
Legroom	1057 mm (front)
	950 mm (rear)

<b>Safety inclusions</b>	
5-star ANCAP rating	
Intelligent Protection System	
Driver and front passenger airbags	
Driver and front passenger side thorax and pelvis airbags	
Side curtain airbags	
Anti-lock Braking System (ABS)	
Dynamic Stability Control (DSC) with Anti-Rollover Mitigation	
Traction control	
Emergency Brake Assist (EBA)	
Emergency Brake Hazard Warning system	
Driver and front passenger seatbelt reminder	
Immobiliser (EPATS – Encrypted Passive Anti-Theft System)	
‘Quickclear’ Heated Windscreen (Titanium only)	