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THE NEW RENAULT ESPACE, THE POISE OF A CROSSOVER WITH FLUID, ELEGANT LINES

Thirty years ago, the Renault Espace revolutionised the automotive world. Today, the new Espace has evolved to become an elegant crossover. To the agile handling and modularity of a family vehicle, it adds enhanced style, presence and driving pleasure, in keeping with the shifting demands and expectations of motorists. Thanks to the innovations it packs and the emotions it stimulates, the new Espace crossover is, more than ever, the embodiment of the Renault brand's design renaissance



«The new Espace remains faithful to the style of the concept car presented in Frankfurt, illustrating the 'Wisdom' petal – which expressed open-mindedness and pleasure – of Renault's design strategy daisy. The new Renault Espace is a crossover that is generous, not only in its proportions, but also in its technological content and equipment, as well as in the emotional experience it offers occupants. It is an invitation to the driver and passengers alike to sit back and enjoy every moment of every journey they make.»

Laurens van den Acker - Senior Vice-President, Renault Corporate Design

RENAULT ENDOWS THE ESPACE WITH THE PRESENCE OF A LARGE CROSSOVER

THE NEW ESPACE'S EXTERIOR: FLUID, ELEGANT LINES AND AN IMPRESSION OF STRENGTH

«The new Espace's high waist line, pronounced shoulders and low roof line ensure genuine poise, particularly for a large crossover. Its seductive front end, which features Renault's new brand identity, full-LED lighting and a characteristic lighting signature all point to its assertive personality.»

Christophe Dupont, Director of Design – D and E segments





By breaking away from its conventional MPV form to adopt the dynamic lines of a crossover instead, the new Renault Espace exudes unmistakable presence. Standing at 4.85 metres in length (in both its five and seven-seat forms) and 1.87 metres wide, the new Espace crossover is generously proportioned. Its contained height of 1.68 metres (63 mm lower than the current-generation Espace) and high waist line imbue it with a streamlined stance. This impression is accentuated by the vehicle's long wheelbase (2.88 metres, 16mm longer than the current Grand Espace) which also provides a more spacious interior. This impression of aerodynamic efficiency is confirmed by the newcomer's low drag credentials, namely a Cd of 0.30 and a CdA of 0.845 sq. metres.

Renault's new crossover is status-enhancing without going to excess and expresses a combination of :

- **Dynamism,** thanks to the design of its front end and generous shoulders,
- **Character,** with its large-diameter wheels (from 17 to 20 inches) and pronounced wheel arches,
- **Warmth,** through its interior layout, four-part Lumière panoramic windscreen and brightly-lit cabin.

Thanks to its assertive front-end stance, the new Renault Espace proudly bears the Renault badge along with the other identifying features of all the brand's models. The new Espace crossover's daytime running lights also boast a **distinctive signature.** Designed to form a clear asymmetrical 'C'-shape in the middle of each headlight, this signature gives the new Espace an emblematic lighting identity along with a strong 'high-tech' feel. It will continue to be rolled out on the brand's other upcoming models.

Full LED technology (Light Emitting Diode) is standard equipment for all versions of the model. The headlight units incorporate two Pure Vision LED modules which fulfil the functions of dipped and main beam lights. This technology endows the new Espace with lights that are both compact and extremely efficient. The precise and intense ray emits a light that is close to that of daylight. Twenty per cent more powerful than a halogen beam, it makes a significant improvement to night-time vision.

The **muscular impression** exuded by the new Renault Espace's side view is heightened by its pronounced wheel arches which house a range of standard wheels with up to 19-inch rims, and even up to 20 inches as an option.

The chrome **side window surround** suggests the slender form of a feather, while the rear quarter pillar suggests the silhouette of an aircraft tail. The careful integration of the door mirrors – set back from the base of the windscreen – marks an original approach to rearward vision that is characteristic of the Renault Espace's heritage.

To permit **light to pour in from the sky,** the new Espace comes with a standard **2.8 square metre** Lumière panoramic windscreen which incorporates a fixed glass roof over the front seats. A panoramic roof will be available as an option.

At the rear, the new Espace benefits from **generously dimensioned tail lights.** Their chiselled light guides and 'brushstroke' pattern provide Renault's new crossover with an assertive and striking lighting signature at the back, as well.

A **low roof line** further contributes to **the** new Espace's **streamlined look** and offsets the slightly higher ground clearance (16cm, 4cm more than the current generation Espace). The generous wheelbase of **2.88 metres** (16mm longer than the current Grand Espace) adds to the impression of dynamism, while at the same time freeing up additional cabin space.

The new Espace comes in a **range of nine sophisticated colours** that show off its body shape to the best effect:
- Eight metallic finishes: **Cassiopée Grey,** Platine Grey, Dune Beige, Céleste Blue, Glazed Chestnut, Etoilé Black, Pearlescent White and **Améthyste Black** (Initiale Paris version only).
- One non-metallic colour: Glacier White



THE NEW ESPACE'S INTERIOR: HIGH-TECH, COMFORT AND WELLBEING

«The new Espace's welcoming interior is suggestive of the pleasure associated with travelling in the comfort of a private jet. Like its forebears, the new Espace is roomy, bright and comfortable for all of its occupants. The body shape of the five- and seven-seat versions is identical, while Renault's large new crossover goes even further thanks to its special focus on the driver's enjoyment.»

Stéphane Maiore, Interior Design Studio Manager

A HIGH-TECH CABIN

The focal element of the innovative passenger compartment of versions equipped with EDC transmission is its **floating** console which fits seamlessly with the design of the new Renault Espace's cabin. Deliberately simple and uncluttered, it houses all of the essential controls which fall readily to hand: a multi-function rotary control, the Multi-Sense® system's shortcut key, the push-button assisted parking brake and the cruise control / speed limiter switch. The console is accentuated by light guides. The cabin's high-tech feel is further accentuated by a choice of four trim decor overlays and the flawless integration of the large, 8.7-inch, vertically-positioned display for the standard fitment R-Link 2® multimedia system.



The compact size of the EDC transmission's gear lever, which activates the electronic 'shift by wire' gear changes, frees up space for the floating console. The futuristic **design** of this gear lever is redolent of the aeronautical industry, while its asymmetric form imbues it with an original, almost sculptural feel. Its original ergonomic design and pleasing touch make it a functional wrist rest from which to use the R-Link 2® system.



True to the promise of its exterior styling, the new Renault Espace creates emotions on the inside too

In front of the driver, shielded by a cowling, sits a configurable display of entirely digital instruments with a high-resolution TFT screen instead of conventional dials. This system enables the driver to select which data is shown and how it is displayed. Within the driver's line of vision (at a focal distance from the eyes of two metres), like the instrumentation of an aircraft, **the colour head-up display** projects an image containing current speed, navigational information, over speed warnings and diverse driving aids.

Meanwhile, the **cabin's customisable ambient** lighting contributes actively to the sense of wellbeing inside the new Renault Espace. Depending on the selected driving mode, it is capable of adopting a green, blue, yellow, red or purple hue. Direct light guides outline the centre console to underline its high-tech feel, while indirect lighting underneath the console heightens the impression of lightness and emphasises the space available beneath its arch. Integrated light sources at the top of the B- and C-Pillars accentuate the new Espace's volume. **The dominant colour** of the instruments and R-Link® display, driven by the Multi-Sense® system, i**s that of the chosen ambient lighting**. This creates either an energising or a soothing atmosphere which can be adapted as a function of the time of day or the driver's mood of the moment.



CABIN SPACE

The length of the **room** available **inside the cabin** plays a major role in the immediate impression of interior space. This space benefits all occupants, especially passengers in the second row who enjoy knee room among the very best in the model's class (up to 308mm with five seats in place).
The new Espace comes with a number of **ingenious storage solutions.** Opposite the front seat passenger, the **Renault *Easy Life* drawer** – like that which has met with such success in Renault Captur – transforms the traditional glove box into a 12-litre large-capacity drawer that is attractive, practical and easy to access, even for the driver. It is opened by touch-control electronic unlocking. Between the two front seats, 7.4 litres of storage space are available underneath the armrest. A further 0.3 litres of stowage are to be found to the left of the steering wheel. To the right of the gearshift is a **lidded** 0.5-litre **storage space** on the console, incorporating a USB port, mini jack socket and SD card slot and a removable cup holder behind a sliding shutter. Underneath the console is a one-litre **open storage area** with two cup-holders. The drawer in the lower rear part of the console can contain up to 2.5 litres and is notably handy for passengers sitting in the second row. There are also door bins with a flocked inner finish which offer 2 x 2.5 litres in the front and 2 x 0.85 litres at the rear.

Boot space (five-seat version, up to the luggage cover) is **660dm³** which is particularly **generous** for a crossover.

The new Espace also offers **all-round hands-free entry.** The ingenious opening and closing of the powered tailgate is triggered by a movement of the foot underneath the rear bumper. In a practical touch, the maximum degree to which the tailgate will open can be adjusted, facilitating its use in confined spaces such as underground car parks or garages

COMFORTABLE

The **ultra-comfortable front seats** stand out through their particularly enveloping forms, while the wider head rests heighten the sensation of comfort. The top of the seat-back tailor-matches the build of each occupant, much like the protective collar of an overcoat. In the case of the Initiale Paris version, the '10-way' adjustability (eight electrical adjustments) provides the driver and passenger with ample freedom to find the ideal seating position. The seat height, seat-back angle and lumbar support are all electronically controlled by three buttons located to the side of the seat or via the R-Link 2® screen. Up to six seat settings can be memorised. Fore/aft seat travel is a useful 24 centimetres, while the length of the seat cushion can be adjusted through a distance of up to six centimetres.

At the back, there are **three** identical **individual seats** for **second row** occupants, while the third row accommodates two extra passengers. All the rear seats fold down into the floor and can be removed altogether if necessary to provide an entirely flat load space boasting a capacity of 2,040 cubic metres (see 'One Touch Folding Seats' description below).

The new Renault Espace offers a choice **between three types of ambience** and interior trim that can be combined with different equipment levels (depending on the choice of individual markets).

In France, for example, there will be three different ambiences founded on four distinct equipment levels:

LIFE equipment level: Brown dashboard, leather-trimmed steering wheel, Dark Brown fabric upholstery.

ZEN equipment level: Lune Grey or Brown dashboard. Nappa full-grain leather-trimmed steering wheel. Personalised decor for the floating console. Dark Brown mixed upholstery.

INTENSE equipment level: same as the Zen finish, but with Dark Brown Riviera leather upholstery.

INITIALE PARIS equipment level (see dedicated paragraph): dashboard with Lune Grey or Brown top-stitching, graded Lune Grey/Dark Brown or Dark Brown Nappa full-grain leather upholstery, and Nappa leather-trimmed steering wheel, door panel inserts and armrests.

ONE TOUCH FOLDING SEATS: THE MAGIC TOUCH THAT MAKES THE SEATS DISAPPEAR

In keeping with its Espace pedigree, Renault's new crossover takes a fresh approach when it comes to modular interiors and implementation. For example, the individual seats in both rear rows disappear completely into the floor. Here, too, the driver is in control: thanks to the new Renault Espace's one-touch* modularity, its seats fold away – either individually or all together – with a single click or press of a button, irrespective of the position of the head rest.

This effortless modularity* is very simple to use,
- Remotely
  - **do From the driver's seat…** it is possible to visualise and select the seat(s) to be folded using the R-Link 2® touch screen display.
  - **From the luggage compartment… seats** can be folded by pressing the corresponding button(s) for each seat on the control unit mounted on the left-hand side panel**.**
- Seats can also be folded by activating the manual lever located on the side of each one.

Folding away all the seats simultaneously is operated by a smooth mechanism whereby the seats disappear one after the other, like tipping dominos. After being electronically unlocked, the seats disappear ingeniously by means of a single mechanical spring action, aided by gravity.



THE DESIGN OF THE NEW RENAULT ESPACE FROM AN AERONAUTICAL PERSPECTIVE

Questions to Christophe Dupont, Director of Design – D and E segments and to Stephane Maiore, Interior Design Studio Manager

What were your sources of inspiration for the design of the new Espace?

CD: «The new Espace's contemporary, sweeping lines were closely inspired by the world of aviation. The style reflects the quest for aerodynamic excellence, fluidity and elegance that was at the heart of our preoccupations during the model's design. The new Espace features styling details that are the fruit of this aeronautical and high-tech inspiration.»



Which details?

CD: «On the outside, the rear pillar is shaped like an aircraft tail, for example. Inside, the centre console appears to float between the driver and front passenger. It houses the gearshift lever which itself evokes a futuristic, aviation-style joystick. The dashboard design was inspired by the wing section of an aeroplane and the instrument panel shield is angled in the style of a runway, inciting the driver to move forward. We should also point out the light guides which surround the centre console and on the door pillars, not to mention the graphic clarity of the information provided by the head-up display and R-Link 2® screen. Neither would not be out of place in the cockpit of an airplane…»

What was the rationale behind this inspiration?

CD: «The chief principles that guided the new Espace's design were the same as those currently employed in the world of aviation, namely aerodynamic efficiency, weight reduction, quality, reliability, ergonomics and comfort. Take private jets as an example: their design responds predominantly to the key priorities of functionality and efficiency. Yet they also evoke lightness and motion. Primarily functional, they are also beautiful. This aeronautical theme struck us as a means to bestow this generously-dimensioned family car with genuine poise.»

How about in-car comfort?

SM : «To express travelling comfort, our thoughts turned once again to the analogy of being on board a private jet. We paid particular attention to the design of the seats, to their easy and comprehensive adjustability and to comfort in every area. We also endeavoured to ensure harmony through the materials and fabrics we selected. We decided upon darker colours for the lower parts of the passenger compartment and lighter hues for the upper parts, suggestive of the contrast between the ground and sky.»

What are the other high-tech consequences of this inspiration?

S.M.: "With the new Espace, the technologies we employed and their design needed to reflect the promise of an enhanced driving experience. This impression is immediately created by the long floating console and unusual gear lever, while the design of the buttons and switches suggests precision and ease of use. The instrument panel – which has been placed back in line with of the steering wheel – incorporates a personalisable screen to enable information to be displayed in the desired format. Finally, the R-Link 2® system – which is an all-encompassing central information platform, complete with an 8.7-inch vertically-positioned screen – covers all the key driving functions. Characteristic of such fine attention to detail and still in the same high-tech vein, an animated graphic and an audio signature welcome the driver on board when the new Espace is fired up.».

NEW-GENERATION R-LINK®: EVER-MORE CAPABLE AND INTUITIVE

Renault's intuitive and innovative connected tablet has evolved further still to deliver an enhanced driving experience. Launched in the new Espace, R-Link 2® is the driving force at the heart of the car's various functions:

Flawless ergonomics for in-car use: the new Espace is available as standard with the R-Link 2® tablet which distinguishes itself from all similar systems through its unbeatable ergonomics. It has been thought through thoroughly for motoring use, yet it is as simple to use as a conventional touch-screen tablet.

A new, larger, vertically-mounted capacitive screen: R-Link 2® features a large, 8.7-inch, vertically-mounted display. The capacitive screen allows easy, intuitive two-finger zooming and scrolling. The decision to mount the tablet vertically, which corresponds with the driver's view of the road, makes its menus easier to use and ensures that information is displayed clearly. Deliberately located low down, the controls are within arm's reach, while the screen is positioned higher up, within the field of vision. Ideally situated, well lit, with clear, crisp graphics, the R-Link 2® screen provides the legibility and safety that are of paramount importance for use in a car.

Even more intuitively-integrated functions: In addition to the physical controls, the R-Link 2® display intuitively runs the technologies dedicated to the enjoyment of the driver and passengers: 4Control chassis, electronic damper control, driving aids, lighting and sound ambience and even the adjustment of the front seats (including massage settings), as well as the folding of the rear seats

R-LINK 2®: THE CONTROL CENTRE OF THE NEW ESPACE, RIGHT DOWN TO THE ADJUSTMENT AND FOLDING AWAY OF THE SEATS

Powerful navigation and a range of affordable services: A pioneer of in-car navigation with Carminat and subsequently a contributor to the widespread availability of guidance technology with the Carminat TomTom Live system, Renault is now introducing 3D TomTom Live connected navigation with R-Link 2® which incorporates TomTom Traffic for real-time traffic information.

Renault's R-Link Store® offers a comprehensive catalogue of applications designed specifically for in-car use, including Coyote® alerts, three Michelin applications (hotels, restaurants and travel), access to social networks and the reading out loud of e-mails.



A BOSE SURROUND AUDIO SYSTEM FOR A COMPLETELY IMMERSIVE EXPERIENCE

Long-time partners Renault and BOSE pooled their expertise to design a specially-tailored audio system for the new Espace which, for the first time, offers BOSE Surround Sound in a Renault, courtesy of BOSE Centerpoint® 2 technology. This high-performance system will be available as an option from the new Espace's second equipment level upwards, and will come as a standard fitment in the Initiale Paris version.

Following the blueprint of the Initiale Paris concept car, the new Espace crossover has reached another level in the domain of audio realism, by offering a completely immersive experience with Surround Sound. The 12 high-performance loudspeakers guarantee acoustic quality close to that of a live performance. The sound field is both panoramic and precise, the voices clear and natural. The instruments sound as if each one is emanating from an exact spot on the stage, revealing new details and subtleties. The sound is full and balanced in every situation and for all occupants of the vehicle, whether they be sitting in the front or rear, on the left- or right-hand side of the car.

«The intention with the new Renault Espace was to offer a listening experience of the same high standard as the comfort and feel of the driving. The introduction of Surround Sound creates a very natural impression, transforming the journey into a high-fidelity listening session, as if the performing artists were themselves on-board. This enables the driver and passengers to experience the full emotion of the music.»

Bénédicte Le Nindre, Product Manager, Espace

THE NEW RENAULT ESPACE'S BOSE SURROUND SYSTEM AT A GLANCE:

- **Surround Sound:** an immersive experience which allows the driver and passengers to be enveloped by a full and balanced sound, wherever they are seated in the vehicle.
- **12** high-performance **loudspeakers**, including a **subwoofer** for an expansive and enveloping sound quality worthy of a live performance.
- The **BOSE Energy Efficient Series® high-efficiency amplifier** controls the entire system, while consuming less energy than a conventional linear amplifier. pilote l'ensemble du système, en consommant moins d'énergie qu'un amplificateur linéaire conventionnel.
- **Centerpoint® 2 Technology:** BOSE's exclusive algorithm converts the signal from stereo sources into a multi-channel signal in order to deliver Surround sound.
- **BOSE digital signal processor:** tailor-engineered equalization incorporates the vehicle's acoustic characteristics to reproduce the selected track's musical subtleties.

RENAULT BRINGS ENHANCED PLEASURE AT THE WHEEL OF THE ESPACE



« The new Espace offers a driving experience that changes according to the colours of the driver's mood and a spectrum of on-road performance characteristics. Courtesy of the Multi-Sense® system – which controls all of the technologies that contribute to the pleasure of the travelling experience, including the 4Control® chassis and electronic damper control – drivers are able to select the ambience to inspire their driving and the atmosphere inside the car. The new Espace is capable of adapting its characteristics to deliver the appropriate sensations, making it a little like owning several cars all rolled into one. The new Renault Espace offers a palette of different moods which are delivered in an immersive manner by speaking to all the senses of the driver and all the other occupants. »

Gérard Payen, Deputy Programme Director



MULTI-SENSE®: A TECHNOLOGICAL REVOLUTION

Renault's Multi-Sense® system is the device that controls and co-ordinates the input of the technologies installed in the new Espace to create an immersive and enjoyable driving experience. Most notably, it manages the **4Control® chassis, electronic damper control, steering, engine, EDC transmission, instruments, engine sound and ambient lighting.**

The new Espace sees Renault explore a **whole new dimension** of driving **enjoyment.** It is a wholly immersive experience, giving rise to **more sensation**s and putting **the choice of emotions** in the hands of the driver. This immediate pleasure – felt at every moment and at all speeds – is born out of a new technology conceived by Renault called **Multi-Sense®.** In acting like an **orchestra conductor,** the Multi-Sense® system **attunes all of the technical features** to be found in the new Espace to the **drivers desires** of the moment. Whether the driver is seeking a sporty, calm or efficient atmosphere, the new **Renault Espace is able to adapt itself accordingly,** changing its personality in the blink of an eye. That also translates across to the harmonisation of the on-board ambience, particularly in terms of lighting and sound. Even the front seats are equipped to offer different types of massage.

Thanks to Renault's new Multi-Sense® system, the new Espace generates the desired mood and sensations via **four pre-programmed modes**: 'Eco', 'Comfort', Neutral' and 'Sport', in addition to a 'Perso' **mode** that is freely and easily **configurable.**

Each setting creates and coordinates **a specific driving emotion** thanks to:
- the engine response,
- the EDC transmission's gearshift calibration,
- the calibration of the 4Control® chassis,
- the suspension settings,
- and the degree of effort required to turn the steering wheel.

The **in-car ambience is harmonised** according to the driver's desire by adapting:
- the colour of the interior lighting (green, blue, white, red, purple),
- the presentation and colour of the information displayed by the instruments, as well the content,
- the engine sound,
- the intensity and frequency of the seat massages,
- the settings for the climate control system.

These modes and **settings are controlled either via** the **R-Link 2®** screen or by using t**he rotary control** on the **centre console.** The practical and clearly-presented menus, in addition to the shortcuts to key functions, offer intuitive access to all the **benefits** of Renault's **Multi-Sense®** system.
Thanks to this system, the new Renault Espace carefully **adapts** everything to the mood and desires **of the driver.**



4Control® expertise at the heart of the Multi-Sense® system

The 4Control® chassis (four-wheel steering) is a Renault innovation which controls the angle of the rear wheels. Out on the open road, the steering **precision** and **stability** of the car magnify driving **enjoyment** through corners. In built-up areas, meanwhile, the 4Control® chassis ensures an incomparable level of **manoeuvrability at low speed.** When parallel parking or conducting a three-point turn, its **outstanding agility** allows the driver to completely forget the vehicle's size. Thanks to the 4Control® chassis, the new Renault Espace boasts one of the smallest turning circle in its class. In emergency situations, the four-wheel steering technology reassures through the sensation of the swift r**esponse** it delivers. **Renault** is the **only** manufacturer to offer **such a system** in a **crossover.**

AN ARRAY OF TECHNOLOGIES TO THE BENEFIT OF DRIVING CONVENIENCE AND SAFETY (ADAS)

The new Renault Espace packs a plethora of driving aids and safety functions designed to warn or assist the driver.

Reassuring: adaptive cruise control, active emergency braking.

Alerts: lane departure warning, safe distance alert, excess speed warning with traffic sign recognition, blind spot alert.

Assistance: front, rear and side parking sensors, rear view camera, automatic dipped and main beam headlights, head-up display, automatic parking brake, Hill Start Assist, hands-free entry and hands-free powered tailgate.

The new Renault Espace can even park itself (almost) on its own, thanks to the Easy Park Assist system. After helping its driver to identify a parking spot – by measuring the available space with its sensors – the device subsequently assumes full control of the steering during the manoeuvre. The Easy Park Assist function takes the wheel for parallel, diagonal and perpendicular parking. In all cases, the driver retains control of braking and acceleration during the manoeuvre.





FOCUS ON EFFICIENCY

The new Renault Espace was designed to make driving fun. Renault's engineers have refined its aerodynamics, made the vehicle significantly lighter and equipped it with efficient, latest-generation downsized engines mated to EDC dual clutch automatic transmission.

250KG LIGHTER AND 20% MORE ECONOMICAL

The new Espace crossover has achieved a significant weight saving representing as much as 250kg compared to the long version of the Espace 4. This 13% reduction is evenly split between the body, chassis, powertrain and equipment (including the seats).

A new platform: the new Espace crossover sees Renault make use of its CMF (Common Module Family) modular architecture for the very first time and combines lightweight materials such as aluminium for the doors and bonnet Noryl plastic for the front wings and thermoplastics for the tailgate.

Refined aerodynamics: The Cd of 0.30 (0.031 lower than the current-generation Espace) and CdA rating of 0.845 sq. metres (down 0.086 sq. metres) yield valuable fuel efficiency savings, especially when driving on motorways.

The new Espace offers a choice between three 1.6-litre turbocharged engines – one petrol and two diesels – which are all the more efficient inasmuch as they power a particularly aerodynamic and light vehicle body. The targeted **improvement** in fuel consumption and CO_2 emissions has been achieved and exceeds **20 percent*** compared with the current-generation Espace and comparable performance.

* Fuel consumption and emissions data homologated in accordance with the applicable regulations.
[1] The CMF platform is a platform used by other Alliance brands

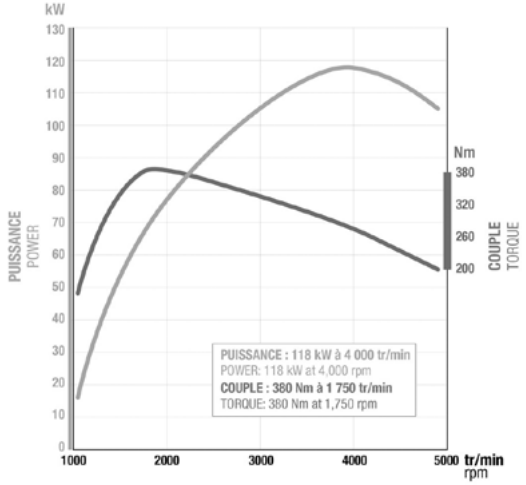
THREE POWERTRAINS ALL WITH USEFUL NEW TECHNOLOGIES

The new Espace sees Renault introduce two technological advances revealed at the 2013 Frankfurt Motor Show on a production model.

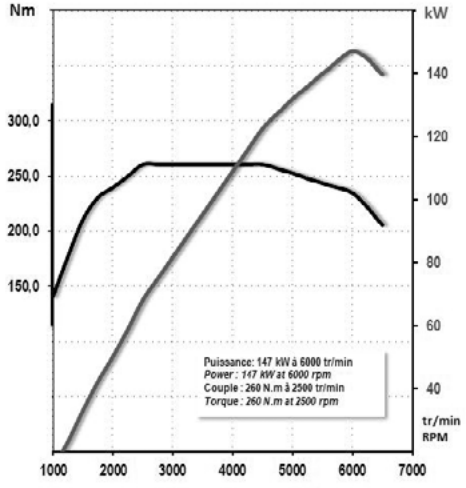
- **Twin Turbo technology** for the Energy dCi 160 powerplant: a small, low-inertia turbo is dedicated to performance at low revs, while the second turbo takes over at higher engine speeds. The ample torque is rapidly available to guarantee a driving experience that is smooth and lively, with excellent pick-up.

- **Automatic transmission with a new Shift-by-Wire control** (a first for Renault), for two of the three engines. This solution is used in Formula 1 and improves the precision and smoothness of gear changes thanks to better shift management. This transmission also yielded design benefits: the absence of a mechanical link enabled the designers to incorporate such hallmark features as the new Espace's floating console and compact, aviation-style gear lever.

ENERGY DCI 160 TWIN TURBO



ENERGY TCE 200



THREE TURBOCHARGED ENGINES, ALL THE SAME SIZE...

DIESEL :

Energy dCi 160 EDC with Twin Turbo technology: 1.6 litres, 160hp and 380Nm torque available from 1,750rpm.
The core-range engines for Renault's new large crossover stand out through their response and pick-up performance. They are also characterised by the excellent enjoyment they deliver thanks to the six-speed EDC dual clutch transmission which is both dynamic and easy to use. The association for the first time of the Energy dCi 160, automatic EDC transmission and the various Multi-Sense® driving modes combines to make the new Espace a vehicle that is totally committed to enjoyment and emotion. Finally, the Energy dCi 160 EDC unit provides the new Espace with one of the market's best fuel consumption ratings for its power output.



Energy dCi 160 Twin Turbo : moteur 1.6 Diesel avec technologie Twin Turbo
Energy dCi 160 Twin Turbo: 1.6 Diesel engine with Twin Turbo technology

Energy dCi 130 : 1.6 litres, 130hp and 320Nm torque available from 1,750rpm.
This powerplant is mated to a manual six-speed gearbox. It was designed especially for motorists for whom running costs and comfort are key priorities, such as fleet customers.

PETROL:

Energy TCe 200 EDC : 1.6 litres, 200hp (147kW) and 260Nm torque available from 2,500rpm.
For customers who prefer a petrol engine, the new Espace offers a new powerplant that focuses notably on dynamic performance and sensations, since the Energy TCe 200 is an evolution of the unit that powers the Clio R.S. Particularly efficient under the bonnet of the new Espace, it delivers a dynamic, sprightly drive. Mated to the new, close ratio, seven-speed EDC dual clutch transmission, it ensures brisk pick-up. Again, the combination of the Energy TCe 200 engine, automatic EDC transmission and the Multi-Sense® system's Sport mode ensure optimum enjoyment for the driver.

Power: Thanks to the new Espace's contained weight and carefully-honed aerodynamics, as well as to Renault's expertise in downsizing technologies, as proven on the race track by its engine specialists, it has been possible to equip the new Espace with a choice of 1.6-litre engines which combine driving enjoyment and low fuel consumption. The 160hp pumped out by the Twin Turbo Energy dCi 1.6 diesel engine equipped with EDC transmission and the Multi-Sense® system generate the level of driving enjoyment expected of a car like the new Espace and deliver the sort of performance associated with two-litre engines.

EDC transmission: the new Espace sees the introduction of two new gearboxes that are at the very cutting-edge of technology. The six or seven-speed automatic EDC (Efficient Dual Clutch) transmissions mated to two of the three engines available for the model blend comfort, dynamic performance and response with low fuel consumption. The Multi-Sense® system also influences the calibration of EDC gearshifts as a function of the selected driving style.

Stop&Start for all versions: all of the new Espace's engines are equipped with the smooth and flexible Stop&Start system, along with the recovery of deceleration energy.

Inspiration F1: a perfect grasp of sophisticated turbocharging technology is not the only parallel between the 1.6-litre **Renault Energy F1** powerplant and the 1.6-litre Renault Energy dCi. The Energy dCi 160 Twin Turbo unit benefits from a number of **technologies** borne out of **Renault's** expertise **in F1**, most notably in terms of cooling efficiency and friction reduction:
- **a transverse water flow** system ensures rapid and efficient **cooling** of the **combustion chamber.**
- ***U-Flex* piston rings** are extremely flexible and their 'U'-shaped profile allows them to adapt under the influence of heat and cylinder pressure to achieve the best compromise between efficiency and friction.
- friction further reduced by surface super finishing.

The **Energy dCi 160 Twin Turbo** engine features **1,800-bar fuel injection** and two-stage turbocharging.

RENAULT ESPACE: 30 YEARS OF SUCCESS FOUNDED ON A PEDIGREE OF INNOVATION

It took an avant-garde vision of the automobile and a certain degree of bravery for Renault to dare launch the Espace in the ultra-conventional automotive world of 1984. The company also needed to place its trust in innovation as it strove to procure lasting success for a vehicle that was initially impossible to classify and which subsequently became inimitable. The Renault Espace went on to popularise the concept of the people-carrier whilst at the same time creating a new segment that would break new ground: that of a spacious vehicle that was highly modular yet with the performance credentials of a touring car. Over the course of time, the Espace cemented its enduring appeal through the originality and richness of its range, to the point of establishing its concept and name as practically a brand in its own right. The Renault Espace has since continued to evolve and progress in every area and has remained unrivalled in the automotive market throughout four generations, yielding a production of more than 1,245,000 examples. Today, Renault has confidently taken a fresh look at the model, counting once more upon innovation in its bid to reinvent the Espace and win over new customers thanks to its unique vision of a dynamic and attractive family vehicle that offers driving enjoyment and personalisable travelling comfort.



«RENAULT QUALITY MADE»

THE PRIORITY FOCUS ON QUALITY FOR THE ESPACE

With the **new Espace,** Renault has **focussed** its efforts upon visible **quality** for the customer, and has put everything into achieving its objective. Here are several examples:

Design quality:

Efficiency: an efficient architecture and meticulous optimisation of the technologies, materials (aluminium, Noryl™, thermoplastics) and processes employed to enable the new Espace to shed as much as 250 kilograms compared with the equivalent former generation version.

Durability: the new Espace successfully passed the most difficult tests, including a simulation of three years' worth of motoring in just three months. The programme saw the new Espace cover 5.5 million kilometres and complete 520 hours of torture testing, as well as 450 hours of climatic tests. New features such as the new Renault Espace's One Touch Folding Seats system and hands-free powered tailgate were subjected to specifically developed tests.

Absence of vibrations when slowing down: improvements have been made to ride quality thanks to a new approach to body design, enabling the new Espace to offer a particularly high standard of travelling comfort.

Build quality:

Precision stamping: hot stamping consists of heating the metal sheets to 850C° for several minutes, before cooling them again rapidly. The result is superior mechanical strength, allowing for the sheets to be thinner. Thanks to hot stamping, the new Espace gains in quality what it saves in weight.

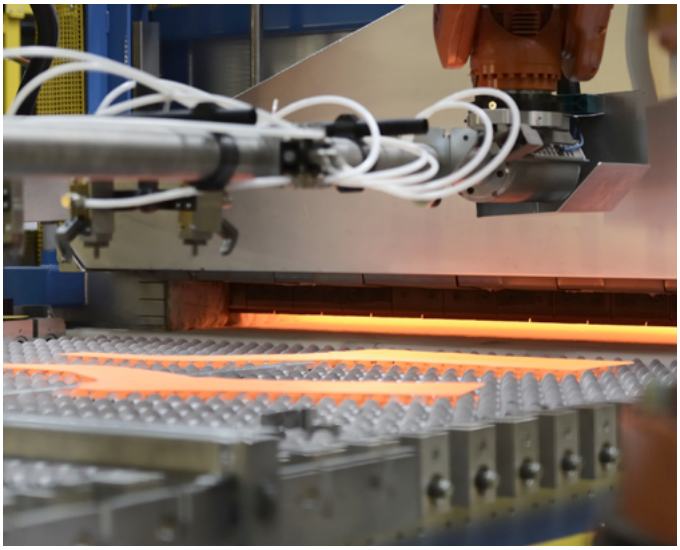
Rigorously fine-tuned: the new Espace's ambitious design called for precise adjustments to the body and tighter radii for the body panel creases. The Douai plant rose successfully to this challenge to enable the new Renault Espace to keep its styling-related promises.

Painstaking assembly: No fewer than 5,000 operations are carried out on each vehicle body. Above and beyond this, ongoing inspections are carried out in 45 key areas to guarantee the perfect geometry of the new Espace and the perceived quality of the vehicle's exterior.

Deep gloss paintwork: the new Espace is available in a choice of nine different body colours selected for their depth and lustre. The metallic finishes benefit from a highly durable lacquer coating. The quality of the paintwork is subjected to a rigorous 900-point inspection procedure.

See also «The Douai plant's quality drive»





Cabin quality:

Resistant, status enhancing materials: The interior of the new Espace benefits from the use of satin-effect chrome-finished parts. This enhances the appearance by limiting finger marks, in a similar way to the hard-wearing trim decor overlay that protects the centre console. Meanwhile, the seats of the new Espace's Initiale Paris version are upholstered in full-grain Nappa leather along with the steering wheel, armrests and door panel inserts.

Carefully designed appointments: Evidence of the focus on quality is provided by the attention to detail paid to certain areas, including the head-up display which stands out through its bright, multi-coloured graphics. The sound system incorporates an invisible antenna which uses avant-garde technology to ensure optimum reception. The BOSE system, meanwhile, is every bit as understated as it is acoustically advanced. Thanks to the use of full-LED Pure Vision technology, the new Espace's lights are both compact and efficient. The precise, intense beams emit a light that is 20% more powerful than a halogen beam and close to that of daylight. The long-life LEDs do away with the necessity to periodically change the bulbs.





THE DOUAI PLANT SHIFTS UPSCALE FOR EVEN HIGHER QUALITY



«Thanks to our new, ultra-modern equipment, carefully tried-and-tested new procedures and highly-trained employees proud to be working on the new Renault Espace, the Douai plant is ready for the quality challenge.»

Franck Naro, Director, Douai plant

In order to produce the new Renault Espace to the required level of quality, the Douai plant has undergone major and progressive changes over the past three years.

New equipment: The plant has invested in new presses and has inaugurated the hot stamping of sheet metal. Plastics are injected by three 2,250-tonne presses and a new 3,200-tonne press for the new Espace's front wings and tailgate. The paint shop is equipped with new lighting, capable of highlighting flaws that would be virtually invisible to the naked eye.

New procedures for the new Espace: Renault's large crossover uses a new platform that places the emphasis on weight reduction through the introduction of new materials such as aluminium. As a result, the Douai plant has developed **new processes** and taken a **rigorous** fresh look at existing ones. This has also helped to enhance the skill levels of certain crafts, such as the retoucher. The plant has moved to the process known as **full kitting** whereby each operator has at their disposal the parts that correspond exactly to the specification of the vehicle to which they need fitting. This eliminates the need to make choices, since the parts kit corresponds to the exact requirements, thereby eradicating the risk of mistakes.

The Douai plant has adopted a **variable-height** upholstery workshop. This does away with pit positions, allows clear space alongside the production line and introduces carts between the cars, including for the larger parts. The body of the vehicle can be raised or lowered according to the task to be performed.

When it launched its first prototype, the Douai plant implemented a programme of daily quality meetings based on vehicles taken at random from the production line. The new Espace is thus scrupulously scrutinised to ensure that it meets the required high standard of quality. This type of inter-workshop meeting soon earned the evocative internal nickname **"War Room"**, which provides a clue as to how stringent demands really are.



THE DOUAI PLANT'S QUALITY DRIVE



The new Espace is no ordinary product. It defines the 'image' of the Renault brand. Its designers have imbued it with all the ingredients necessary to produce an elegant vehicle with flowing lines. The Douai plant brought itself right up to date for the purpose, putting its production equipment at the service of the design intentions. The message "Targeting high-end quality" is proudly displayed on buildings around the site, reminding each employee that they are a contributor to this process.

Indeed, every profession and every department at the plant plays a part. The new Espace accordingly benefits from technologies hitherto unseen at Renault and aimed at producing a sophisticated vehicle that is capable of conveying emotion. The elegance of the brand's new crossover has been achieved in part thanks to a reduction in the weight of its parts. Hot stamping for the strong and resistant central chassis rail, a new plastic injection press designed for larger parts such as the tailgate, a new aluminium press for the opening panels... All-in-all, the new Espace has succeeded in shedding 250kg compared to its predecessor!

The opening panels are adjusted in a refurbished and partly-automated body assembly area. The use of aluminium is new and employees have gained additional skills to work with the new processes and operations. The body shop teams meet every Tuesday in the Conformity Room to painstakingly review the 45 key characteristics of the vehicle body's geometry, welding and exterior appearance... "We want to go the extra mile to produce a top-of-the-range vehicle. We demand exacting standards, with no margin for tolerance. We work as a team for the good of the vehicle. This teamwork is dialled into the new Espace's DNA," explains Michel Bauvin, a member of the Assembled and Painted Body Quality technical unit.

The new Espace is counting upon its power of seduction, towards which the depth and brightness of its colours play a significant part, as does its complex harmony which blends aluminium, sheet steel and plastic. Thanks to the new illumination of the factory's light tunnel, the exceptional lustre of the paint finish evolves as a function of the specified body colour. This reinforces visual acuity and assists the swift detection of flaws by the quality inspectors for an exceptional, impeccable finish.

The new crossover is then pampered during the assembly stage. On a single line – where the new Espace alternates with the other vehicles produced at Douai – the operators are supplied with specific parts kits and are able to take full advantage of the excellent ergonomics generated by the all-new variable-height upholstery workshop. They can consequently focus firmly on quality as they work in less strained and safer conditions.

Some operators, known as 'checkmen', play a key role in ensuring that all vehicles conform to the required standards, thanks to an automatic flaw log which forms part of a new digital tool. "My work involves looking at the vehicle through the eyes of the customer in order to spot problems and thereby ensure the highest possible quality," explains Dimitri Keller, one of the checkmen. "This digital tool was introduced into the process half-a-year ago and produces better traceability." As with the body shop, the Conformity Room is a place of lively activity and discussion where perceived quality is monitored.

Manufacturing the new Espace is a state of mind. This ethos was instilled into the men and women working at Douai during four days of training leading to a diploma known as the 'high-end factory passport'. On the agenda were high-end product culture, manufacturing standards, perceived quality, costs and well-being in the workplace. They all came out of it convinced that everybody involved – regardless of their involvement – has a key part to play when it comes to ensuring the quality of what is a superb product, with a highly rewarding design for those who put their full effort into it during their everyday work.