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SUMMARY

AT A GLANCE

- NEW SPANISH-BUILT PATHFINDER SUV TO GO ON SALE IN 2005
- TONE SHOWCAR OFFERS SPACE, FUN-TO-DRIVE DYNAMICS AND DISTINCTIVE STYLE
- 350Z ROADSTER TO BE INTRODUCED TO EUROPE NEXT SPRING
- FIRST DISPLAY OF EUROPEAN SPECIFICATION MURANO
- REVISED PATROL UNDERLINES ITS CREDENTIALS AS KING OF OFF-ROAD
- FCV X-TRAIL SHOWS THE FUTURE, TODAY

PATHFINDER

Nissan's new 4x4 SUV, the Pathfinder, is being shown for the first time in Europe and it will strengthen Nissan's position as a leader in the 4x4 market. It will be built in Nissan's factory in Spain and will be on sale across Europe from next Spring.

power and practicality

Powered by a 2.5-litre high output turbo diesel which produces 128kW (174PS) and 403Nm of torque, the Pathfinder allows active people the opportunity to pursue their hobbies and busy lifestyles. Its interior combines extreme practicality with roomy convenience. There are 64 different seating configurations, thanks to three rows of seats which can be individually folded flat to accommodate loads up to 280cm long. There are many different storage areas and even with the third row of seats in place, luggage space is impressive.

ALL MODE 4x4

The Pathfinder employs an enhanced version of the electronically controlled ALL MODE 4x4 system found on the X-TRAIL. The system allows the Pathfinder driver to select any one of four modes via an easy to use rotary control on the dashboard: 2WD, Auto, 4Hi Lock and 4LO. For normal dry conditions, the driver chooses 2WD, which sends power to the rear wheels only. When conditions become slippery, however, Auto mode is used which monitors levels of grip electronically and automatically distributes engine torque to where it is needed most, whether on road or off.

equipment levels

Pathfinder will be available with many features which are usually found on highly specified passenger cars. Among those available, there are Xenon headlamps, satellite navigation with Traffic Management Channel, Blue Tooth telephone system, leather upholstery, dual zone climate control in the front and air conditioning in the rear, an opening tailgate window and even an automatically dipping rear view mirror and rain sensing windscreen wipers.

manœuvre with confidence

There are also two signature Nissan features: a rear-view parking camera, as pioneered on Primera, allows for tight parking manoeuvres to be performed in complete confidence. And the Intelligent Key system which allows the doors to be unlocked and the engine started without having to insert the key into a lock.

immensely capable

The Pathfinder is an immensely capable vehicle, which combines the road manners, comfort, safety, and equipment levels of a passenger car, allied to the ability of a 4x4.

TONE

Nissan is unveiling for the first time its Tone show car which gives a hint to the future. Whilst spacious inside, and therefore highly practical, it has a typically distinctive Nissan design, yet is true to the company's Fun To Drive philosophy.

spacious, practical and fun

Although a car which will offer plenty of space for parents with kids, Nissan has recognised that the driving pleasure doesn't stop when babies are born. Thanks to a long wheelbase and a low roof line the centre of gravity is low, both the dynamic performance and the interior space are excellent.

attractive interior

Tone has been given a deliberately 'masculine' feel with extensive use of brushed aluminium for interior fittings and a sophisticated dark grey exterior body colour. Inside, a hint of purple shows through the perforated 'metallic' black and silver leather upholstery while light grey headlining contrasts with the predominantly black trim. Dramatically shaped sports seats are designed to keep the driver and front seat passenger firmly in place during cornering, enhancing the sporting concept and fun to drive philosophy which is at the heart of Tone.
Twin glass strips run the length of the roof – another feature seen on many recent Nissan show cars – and bathe the interior with natural light.

Nissan has demonstrated with Tone that it is possible to have a compact, spacious family-orientated car, which is attractive and rewarding to drive.

350Z ROADSTER

Enthusiasts looking to combine the enjoyment of Nissan's highly acclaimed 350Z with the added sensation and emotion only available from a soft top now have the answer: the 350Z Roadster.

The 350Z Coupe has met with widespread acclaim since it went on sale 12 months ago in Europe and its Roadster cousin takes the emotional and rational appeal of the legendary Z to a higher level. It will go on sale in Europe early in 2005.

open-air refinement

With its automatic roof folded away, the Roadster accentuates the noises and smells which stimulate the senses when driving a convertible. And while the Roadster offers impressive performance, it is never at the expense of refinement. Conversation between occupants is perfectly possible at motorway speeds and the audio system has been tailored to boost the sound frequencies which would be lost when listening to music with the roof open.

stirring performance

Power comes from the legendary 3.5-litre VQ V6 engine which produces 209kW (280PS) and 363Nm of torque. The engine's intake system and exhaust have both been tuned for maximum aural pleasure, to maximise the sensory pleasure when driving with the roof down.

All in all, the 350Z Roadster provides the excitement and visual drama of the Coupe, with added stimulation for the senses. Who could ask for more?

MURANO

Nissan's new-entry to the growing Crossover market will be displayed for the first time in its European guise at Paris Motor Show.

stunning design

With an eye-catching design which manages to combine the presence and strength of a 4x4, with the kind of curves and lines that would normally be found on a sports car, the Murano is set to be one of the new generation of products which changes the way Nissan is perceived. Its large, attractive alloy wheels are pushed out to the corners of the car, giving it a muscular stance and its kicked-up rear clearly echoes other Nissan models, such as the Micra and 350Z.

power and poise

The smooth and powerful 3.5-litre V6 engine from the 350Z is under the bonnet of the Murano and it is connected to a unique feature in its class. The Xtronic Continuously Variable Transmission provides smooth acceleration and impressive economy by allowing the engine to operate at its optimum speed at all times. For added interaction, the driver can select semi-automatic mode and it will provide six gears.

high-level interior

The Murano's interior is a spacious and comfortable place to spend time for its occupants. It has several surprising features, such as adjustable pedals and an adjustable reclining rear seat. Additionally, it is possible to fold down the rear seats when the rear hatchback door is open, saving the trouble of opening the rear passenger doors to fold the seats.

A colour rear-camera for precision parking is fitted and satellite navigation provides effortless progress to unfamiliar destinations. Xenon projector headlamps and a high-level Bose audio system underline the type of features which will be offered to buyers of the Murano.

With its iconic design, smooth, effortless performance and high-quality spacious interior, the Murano will allow buyers to enjoy a vehicle which perfectly mixes the best attributes of a passenger car with those of a 4x4.

PATROL

The King of Off-Road has benefitted from a bold set of revisions both inside and out to cement its position as the original, authentic 4x4.

Every exterior panel, bar the roof, has been changed. There's a bold new 'face', a new-look rear end and a new integrated side step, while revisions to the lusty 3.0-litre turbo diesel engine give more power and more torque. Additionally, the 'GR' moniker will be dropped from the name.

extra luxury

But perhaps the biggest changes can be found inside the vehicle. Although the Nissan Patrol remains a tough off-road vehicle at heart, Nissan believes there is no reason why users should not enjoy a little extra luxury while they work. As a result, the new Patrol has an all-new interior featuring better quality materials, greater comfort and more equipment.

There are better shaped seats offering greater comfort and support, and which are available in the option of Alcantara for the first time. As before, the top grade model has leather seat facings: both upholsteries are available in either black or ecru

colours, while the rear bench in five-door/five-seat versions slides forwards or backwards to create extra leg or luggage room as required.

The significant changes that have been made to the Patrol will reinforce its position as King of the 4x4s.

X-TRAIL FUEL CELL VEHICLE

Nissan is showing its 2003 Fuel Cell Vehicle which has significantly improved speed and range compared with the 2002 FCV which was shown at Frankfurt Motor Show in 2003.

Such is the progress that has been made with fuel cell technology, leasing of the 2003 FCV begun in Japan earlier this year.

Nissan will continue to develop innovative and creative technology for the future while introducing new products that are both friendly and protective of the environment, consistently striving for affordable and practical solutions.

PATHFINDER

THE IMMENSELY CAPABLE SUV

WITH THE ARRIVAL OF THE PATHFINDER, NISSAN'S SIX-STRONG 4X4 RANGE GENUINELY HAS SOMETHING FOR EVERYONE.

AT A GLANCE

- ALL NEW MODEL: NISSAN'S SIXTH 4X4
- POTENT 174PS COMMON RAIL TURBODIESEL
- EXTREME PRACTICALITY – 64 SEAT CONFIGURATIONS
- EASY FOLD SEVEN SEAT OPTION
- CAN ACCOMMODATE LOADS UP TO 280CM IN LENGTH
- ELECTRONIC ALL MODE 4WD SYSTEM WITH LOW RATIO
- REAR VIEW PARKING CAMERA
- INTELLIGENT KEY

Nissan's pre-eminence in Europe's burgeoning four-wheel drive market is further strengthened at the Paris Salon by the debut of the all-new Pathfinder.

With its seven seat interior, generous equipment levels and efficient, yet strong 2.5-litre turbodiesel engine, Pathfinder provides an unrivalled blend of MPV versatility, on-road performance and off-road ability.

adventurous

Nissan sees the new Pathfinder as the perfect vehicle for adventurous, active people who need a versatile car to complement their hobbies. Whether it's sailing, climbing, trekking, mountain biking, paragliding, riding or simply taking the kids and the dog to the beach for the day, Pathfinder is the ideal companion.

Its arrival expands Nissan's 4x4 range to six distinctly different models. It joins the new Murano crossover, also being given its European debut at Paris, and the newly revised Patrol, one of the last of the truly authentic 4x4s on the market.

The rest of the range includes the best-selling X-TRAIL compact SUV, the respected Terrano and market-leading Pickup – together they comprise the most comprehensive four-wheel drive range in Europe, with a heritage that stretches back more than five decades. Now there is a 4x4 model for every possible need.

strong reputation

To be built at NMISA, Nissan's plant near Barcelona in Spain, Pathfinder is due on sale in March 2005. But although new to Europe, the Pathfinder name enjoys a strong reputation in other parts of the world, notably America, where the model name was first introduced in 1986. Indeed, as far as America is concerned, the latest Pathfinder is the third incarnation of the model.

Dunehawk cues

While the name is new to Europe, the shape isn't – clues to the new Pathfinder's lines were revealed by the Nissan Dunehawk show car, which was unveiled at the 2003 Frankfurt Motor Show.

roomy cabin

Many of Dunehawk's design features can be found on Pathfinder. The body has gently curving sides that are narrower at roof and chassis level and wider at the belt-line. This helps create a roomy cabin without having to resort to a massive body by providing greater interior width where it's needed most – at elbow level.

Other signature features include the prominent wheel arch blisters, integral roof rack and the bold front end styling incorporating Nissan's three-section mesh grille split by the now familiar diagonal 'balanced angle strut' motif. The sharply raked C-pillar, formed by the rear door frame and which incorporates the door handle, is another design feature familiar to Pathfinder owners over the past two decades.

ALL MODE 4x4

Pathfinder reveals its four-wheel drive birthright with good ground clearance and short overhangs at the front and rear, and also features Nissan's advanced electronically control ALL MODE four-wheel drive system, as pioneered on the X-TRAIL.

"Pathfinder is more than a family car and it's more than a 4x4. Indeed, it's more than a combination of the two: put simply, it's immensely capable and is designed to cope with the emerging active family profile. It fits perfectly into Nissan's expanding four-wheel drive range."

Patrick Pélata, Executive Vice President, Strategy, Planning and European Operations, Nissan Motor Company

The advanced transmission system provides outstanding traction, not only off-road, but in marginal conditions on-road.

But Pathfinder has far greater depth than the typical 4x4. It has been designed first and foremost as a family car with a roomy and comfortable interior which is easy to use. Fully independent double wishbone suspension at the front and rear ensures a comfortable ride allied to outstanding dynamic on-road handling and road holding.

However, thanks to its separate ladder-frame chassis and its intelligent and highly effective all-wheel drive system, Pathfinder can live up to its name off the highway. It enjoys all the ability of a capable 4x4 but without forcing its occupants to endure a utilitarian approach.

common-rail turbo diesel

Power comes from Nissan's new 2.5-litre 'YD' series four-cylinder turbo diesel engine. It features second-generation common rail technology for lower emissions, a variable nozzle turbocharger for more power and lower emissions and a new balancer system for greater refinement.

It develops 174PS and, more significantly, an impressive 403Nm of torque, while still returning class leading fuel economy.

strong performance

Transmission choice lies between a six speed manual gearbox or a five speed automatic, with a manual sequential shift function. The improvements to the engine have given Pathfinder a class leading power to weight ratio, giving the vehicle better performance and fuel economy than its rivals – even those powered by 3.0-litre diesel units.

The high level of power and torque means Pathfinder is also a superb towing vehicle, capable of pulling up to 3 tonnes.

sophisticated drivetrain

Pathfinder's ALL MODE four-wheel drive system is an enhanced version of that found in X-TRAIL, adding a low ratio mode for serious off-road work. The system allows the Pathfinder driver to select any one of four modes via an easy to use rotary control on the dashboard: 2WD, Auto, Lock 4HI and 4LO.

For normal dry conditions, the driver chooses 2WD, which sends power to the rear wheels only. When conditions become slippery, however, Auto mode is used which monitors levels of grip electronically and automatically distributes engine torque to where it is needed most, whether on road or off.

In Auto mode torque is split 50/50 between the front and rear axles for maximum traction when starting off, with the system feeding all the torque to the rear wheels once cruising conditions are reached. The moment slippage is detected, however, torque is redistributed with a maximum

of 50 per cent available for the front wheels. Quite simply, the Pathfinder will react to the conditions electronically to ensure maximum levels of grip and stability – without the driver or passengers even realising.

low ratio control

When driving over snow, sand or rough road, it is possible to lock the system in four-wheel drive mode so that torque is evenly distributed to the front and rear axles, thus ensuring maximum grip under all conditions. The new 4Lo mode further enhances Pathfinder's ability off road. In 4Lo ratio, Pathfinder has a class-leading crawl speed which gives it superb traction over difficult terrain and excellent control on hill descents.

electronic stability programme

Another electronic chassis management feature is ESP, which combines with anti-lock brakes, traction control and active yaw control to take command of extreme vehicle behaviour on road. The braking system – which features ventilated discs front and rear – incorporates active brake limited slip, which facilitates starting off in slippery conditions by gently braking the wheel resting on a low mμ surface, allowing the torque to be fed to the wheels with greater grip.

practical interior

As a driver's car, then, Pathfinder clearly delivers. But it also delivers on a practical level. On most vehicles with three rows of seats, access to the rearmost set is usually best undertaken by contortionists – not on Pathfinder. Not only do the rear side doors open unusually wide – 85 deg – but folding and flipping the middle row of seats

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down and forwards to provide access to the back is a two action process taking just a couple of seconds. Other vehicles with a third row of seats require several operations, and considerable dexterity to perform the same task. Owners will appreciate the simplicity when their hands are full, it's raining and the kids are hungry and impatient to go home.

huge load area

Similarly, folding the rear and middle rows to provide a flat load area requires just three movements and, as a further enhancement, the front passenger seat also folds to provide a 2.8m long uninterrupted load area – ideal for frequent visitors to Ikea.

Despite its modest overall dimensions – Pathfinder is 4.74m long, just 2cm longer than the five door Terrano – when the third row of seats is in use, there is still a class leading amount of space behind it for luggage. There is also ample storage space for oddments throughout the cabin with a split level glove box, large double deck centre console, under floor storage in the middle row and cubby holes beside the third row of seats. Nissan recognised that kids always carry lots of items. So, for that reason, the cabin has a huge number of storage options which are tailor made for toys, sweets, drinks, electronic games and books. In such a big interior, parents could spend a lot of time trying to find a lost toy!

Cabin fixtures and fittings are on the highest level, with soft feel dashboard, subtle two-tone interior finish and discreet use of chrome detailing to underline Pathfinder's role as a comfortable family car rather than a no-frills SUV.

high equipment levels

The Pathfinder will offer levels of equipment which are only usually found on highly-specified passenger cars.

There will be three equipment levels with standard features, depending on model, like Xenon headlamps, a premium audio system, satellite navigation with Traffic Message Channel (TMC) and voice recognition, Blue Tooth telephone system, leather upholstery, dual zone climate control in the front and air conditioning in the rear, rear privacy glass and an opening tailgate window. There's even an automatically dipping rear view mirror, automatic headlamps and rain sensing windscreen wipers.

parking camera

There are also two signature Nissan features: a rear-view parking camera, as pioneered on Primera, allows for tight parking manoeuvres to be performed in complete confidence. And the Intelligent Key system which allows the doors to be unlocked and the engine started without having to insert the key into a lock. When loaded down with shopping, children and pets, there is no need to reach for the keys – the car will detect the key and when you press the door handle button, it will unlock the car.

All of the equipment on Pathfinder is designed to be easy to use and to make day-to-day life with the vehicle as painless as possible.

safety features

Safety equipment includes dual front air bags, side air bags on the front seats, active head restraints and an inflatable curtain air bag running the full length of the interior including the third row – so all occupants will have peace of mind. In addition, its reinforced body, strengthened front pillars, sills, cross members and roof and side impact protection will offer excellent levels of occupant protection.

With the road manners, comfort, safety and equipment levels of a passenger car, allied to the ability of a true 4x4, Pathfinder is an immensely capable vehicle.

NISSAN **PATHFINDER**

TECHNICAL INFORMATION		2.5 LITRE TURBO DIESEL ENGINE
Body type		5 door SUV
Seating capacity (option)	persons	7
Engine code		YD25
No. of cylinders, configuration		4, in line
Valves per cylinder		4
Air intake system		Turbo Charged Intercooler
Engine capacity	cm^3	2488
Max. engine power	kW(PS)/min-1	128 (174)/4000
Max. torque	Nm/min-1	403/2000
Fuel type		Diesel
Fuel supply		Direct injection common rail
Emission control system		Oxidation catalyst
DIMENSIONS		
Tyre size		255/65R17
Overall length	mm	4740
Overall width (without mirrors)	mm	1850
Overall height (with roof bars)	mm	1853
Overall height (without roof bars)	mm	1776
Wheelbase	mm	2850
Track (front and rear)	mm	1570
Approach angle	degree	33
Departure angle	degree	25
Ground clearance	mm	238

TONE

NISSAN'S LATEST SHOW CAR ADDS A NEW DIMENSION TO THE TRADITIONAL B-SEGMENT MARKET. PART SPORTY HATCHBACK, PART MINI MPV, TONE IS DESIGNED TO APPEAL TO BOTH THE HEAD AND THE HEART.

AT A GLANCE

- SHOW CAR THAT HINTS TO THE FUTURE
- DYNAMIC STYLE
- FUN TO DRIVE
- PRACTICAL AND ROOMY INTERIOR

Taking centre stage on the Nissan stand at the Paris Salon is a new variation on the traditional mini-MPV theme. Called Tone, the sporting five-door hatchback is a show car of real note and provides a serious pointer to a potential new model in the Nissan range.

fun to drive

A roomy five seater, Tone is aimed at parents who need a practical car in which to carry the family but who are not prepared to trade space for driving pleasure. Tone has been designed to combine the two, providing clever use of interior space with a fun to drive attitude.

3

big car features

As a vehicle which will have a busy life, reflecting the life of its drivers, it features the Intelligent Key which can be found on the Micra – the only car in its class to have it. Intelligent Key enables the doors to be locked or unlocked without trying to find the key. Using proximity sensors, it will unlock the doors at the touch of a button on the door handle, saving the driver the inconvenience of searching for the key when their hands are full. And the ignition works in a similar way. If the key is detected, the car will start without having to put the key in the ignition lock.

distinctive styling

Tone takes styling influences from the avant-garde Micra and mixes them with design cues from other Nissan concept and show cars. The result is as individual as the Micra yet Tone is demonstrably a member of the Nissan family.

arched roof line

The arched roof line, at its highest point above the B-pillar, has become a feature of Nissan road cars since the Fusion concept car became Primera. The pronounced waistline is fashionably high while the front and rear bumpers are fully integrated into the design.

boomerang lights

Other influences, however, come from the more recent Qashqai urban crossover concept that drew the crowds at the 2004 Geneva Show. Like Qashqai, Tone has highly distinctive boomerang LED rear lights that frame the tailgate and roof, while Tone's prominent triangular rear side windows are scaled up versions of those found on Qashqai.

"An enthusiastic driver does not become disinterested in driving the moment children have arrived, but finding a car that appeals on both emotional and practical levels is almost impossible. Tone is Nissan's answer."

Taiji Toyota, Product Chief Designer, Nissan Motor Company

At the front, the grille adopts an aggressive double-deck four-slot design similar to the grille on Murano, while the dominant headlights house powerful projector beams. With very short overhangs front and rear, the profile is dominated by bold 17 inch alloy wheels.

crossing boundaries

At just a little more than 4m in length, but sitting on a wheelbase of 2600mm – just 25mm shorter than the much larger X-TRAIL – Tone's overall dimensions allow it to cross boundaries.

sporting potential

By keeping Tone's overall height to 1542mm, the design team has ensured the proportions help to keep the centre of gravity low, without compromising the car's practicality. And a low centre of gravity is key to the Tone's 'fun to drive' philosophy.

According to project chief designer Taiji Toyota, Tone is: "…tall, but not so tall. We wanted a roomy interior and the benefits of a high driving position but we did not want to make the car look top heavy. With the long wheelbase and body we feel we have achieved a shape that will appeal on both a practical and emotional level."

sophisticated interior

Tone has been given a deliberately 'masculine' feel with extensive use of brushed aluminium for interior fittings and a sophisticated dark grey exterior body colour. Inside, a hint of purple shows through the perforated 'metallic' black and silver leather upholstery while light grey headlining

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contrasts with the predominantly black trim. Dramatically shaped sports seats are designed to keep the driver and front seat passenger firmly in place during cornering, enhancing the sporting concept and fun to drive philosophy which is at the heart of Tone.

Twin glass strips run the length of the roof – another feature seen on many recent Nissan show cars – and bathe the interior with natural light.

driver appeal

Accentuating its 'driver appeal', Tone has a dramatic and futuristic dashboard. Two deep set dials can be found behind the sporting three spoke steering wheel, but the centre of the dashboard is dominated by a brushed aluminium display panel housing a satellite navigation screen and controls for the climate control system.

tissue dispenser

Although designed as a car for the enthusiast, Tone's designers have not forgotten the practical needs of a parent. The glove box features a neat slot that doubles as a tissue dispenser – ideal for keeping sticky finger off the upholstery – while the brushed aluminium centre console-cum-armrest houses a deep storage area beneath its lid.

The backrest folds in an uncomplicated fashion to create a roomy and flat load area. Extra storage space can be found beneath the boot floor, which lifts to reveal a deep well, with a storage capacity of 90 litres, where valuables can be stowed out of sight.

Taiji Toyota, whose previous designs include X-TRAIL, Murano and the Chappo concept which led directly to the innovative Nissan Cube, says: "Just because children have arrived, it doesn't mean that an enthusiast driver will want to give up driving enjoyment. Tone will appeal to the driver who also happens to be a parent.

"Tone is a dynamic, sophisticated car with strong emotional appeal that also answers a parent's practical needs."

NISSAN **TONE**

SPECIFICATIONS		
Number of seats		5
Overall Length	mm	4055
Overall Width	mm	1705
Overall Height	mm	1542
Wheelbase	mm	2600
Wheel size	inch	17
KEY FEATURES		
LED Boomerang shaped rear lamps		
Intelligent Key system		
Advanced graphic interface		
Full length glazed roof panels		
Flat load area		
Trunk under floor compartment		

350Z ROADSTER

THE OPEN CAR FOR THE OPEN ROAD

BY TURNING THE ACCLAIMED 350Z INTO A ROADSTER, A NEW DIMENSION HAS BEEN ADDED TO THE Z.

AT A GLANCE

- STRIKING GOOD LOOKS
- AUTOMATIC HOOD RAISED OR LOWERED IN 20 SECONDS
- REAR-WHEEL DRIVE CHASSIS
- VENTILATED SEATS

adrenalin rush

Enthusiasts looking to combine the enjoyment of Nissan's highly acclaimed 350Z with the added sensation and emotion only available from a soft top now have the answer: the 350Z Roadster.

The Roadster will provide its owner with the thrills and sensations that can only come from driving a performance convertible.

dynamic appeal

Being given its European debut at the Paris Salon prior to going on sale in March 2005, the 350Z Roadster promises driving enjoyment, which has always been central to the Z philosophy, with the added bonus of fresh air fun: the best of both worlds.

Like its hardtop sibling – voted 2004's 'Greatest Drive' by the UK's Auto Express magazine – the 350Z Roadster stimulates the senses. Powered by the Coupé's award-winning 3.5-litre V6 engine and sharing the same chassis, the Roadster adds another chapter to the remarkable Z story.

With the roof open, the driver and passenger are treated to a stimulation of the senses. They will enjoy hearing the sporty sound of the engine intake and the exhaust, both of which have been tuned for aural pleasure. These sounds enhance the feeling of acceleration, while the wind-in-the-hair feeling also adds to the overall experience.

automatic hood

Key to the 350Z Roadster is its automatic vinyl soft top, which takes less than 20 seconds to raise or lower. The operation is simplicity itself. With the ignition on, the gearbox in neutral and the brake pedal depressed, the driver releases a single latch on the leading edge of the hood before holding a button to the left of the steering column to lower the roof.

When lowered, the roof folds away under a lightweight tonneau cover ahead of the bootlid, to reveal a pair of sculpted domes behind the two seats. A small glass wind deflector is fitted between the seats to reduce the levels of turbulent air entering the cockpit. With the roof down, the car's purity of design will turn heads. It retains the strength and athleticism of the coupe, while offering a different interpretation of the Z design heritage thanks to its roof which completely disappears behind the seats.

triple lock security

When raised, the simple act of turning the latch actuates a triple locking system, unique in its class, which secures the roof to the windscreen header rail in three places. As well as providing a more secure seal, the triple lock makes the closing process easier.

To ensure good rear visibility with the hood up, the Roadster has a glass rear window with heating elements.

wind tunnel design

The shape of the vinyl roof – which will be available in black or blue – the domes and the rear deck of the Roadster were honed in the wind tunnel where countless hours were spent directing the airflow to minimise turbulence and noise while at the same time maximising high speed downforce. Such is the lack of turbulence that relaxed conversation is possible at high speeds on the motorway with the roof down.

structural integrity

Nissan has engineered the 350Z Roadster to ensure the structural rigidity of the Coupe is carried over. The bracing cross strut that features in the luggage area of the Coupé, for example, remains on the Roadster, albeit largely hidden between the roof storage area and the boot.

"The same passion that created the 350Z can be found in the 350Z Roadster. It's a classic recipe, combining exhilarating driving sensations with the thrill of wind in the hair motoring."

Carlos Ghosn, President and CEO, Nissan Motor Company

Extra strengthening has been incorporated into Nissan's FM platform, however, to ensure the Roadster's levels of handling and grip match those of the Coupé and to eradicate body shake over poor surfaces. Structural reinforcements include a V-shaped crossbar in the centre of the floor connecting both sills and an A-shaped cross bar at the front. Additional strengthening was added within the door-frames and around the seats.

ventilated seats

The leather-trimmed seats themselves are unique to the Roadster, featuring a woven net centre section which allows fresh air to circulate around the occupants' bodies, further enhancing the fresh air experience. As in the Coupé, the driver and passenger seats are styled quite differently – the driver's sports seat is heavily bolstered for superior support when on the move, while the passenger's is geared to greater comfort.

driver's cockpit

Following the style set by the Coupé, the Roadster's cockpit is oriented towards the driver. Behind the steering wheel, the tachometer is given prominence and is flanked by the speedometer and a combination gauge for fuel and engine temperature. All three move with the steering column when the latter is adjusted. Further performance information is projected by three hooded dials on top of the dashboard: they are unashamedly angled away from the passenger.

excellent storage space

Although convertible sports cars are not traditionally renowned for their luggage carrying capacity, the 350Z Roadster provides more storage space than most. As on the Coupé, there is a large lockable

storage box behind the passenger's seat, while the boot is surprisingly large for a car of this type. Virtually square, it holds 130 litres of luggage and can comfortably accommodate a suitcase.

In all other respects, the Roadster mirrors the mouth-watering mechanical specification of the Coupé.

short throw gearbox

The 209kW (280PS) 3.5-litre V6 engine drives the rear wheels via a short throw six-speed manual gearbox with five close ratio gears and an overdrive sixth and a lightweight carbon fibre propshaft. The engine is mounted at the front but as far back in the chassis as possible, hence the FM or front/mid-ship platform nomenclature. This engine layout endows the Roadster with a weight distribution of 53:47, which is virtually ideal for optimum handling balance.

This state-of-the-art all-alloy 24 valve twin cam has Nissan's Continuously Variable Valve Timing Control System (CVTCS) to help it deliver optimum performance and torque under all conditions – whether standing start or high speed acceleration runs or low speed city driving. An ECU controlled 'drive-by-wire' throttle is linked to the standard traction control system to provide instant and safe acceleration under all conditions.

competitive performance

Highly competitive performance figures include a top speed of 245km/h (155mph) with 0-100km/h (0-62mph) taking just 6.4 seconds. Thanks to its massive torque figure of 363Nm – and a commendably flat torque curve – in gear acceleration is equally impressive.

Remembering that part of the appeal of driving a roadster is hearing the snarl of the engine, Nissan's engineers have retuned the intake sound of the V6 to accentuate the aural experience… especially when the roof is lowered.

balanced chassis

The poise and balance of the chassis is as much down to the optimum 53/47 front-to-rear weight distribution and a low centre of gravity as it is to the wide track and all-round forged aluminium multi-link independent suspension, which reduces unsprung weight.

Both front and rear suspension assemblies are mounted on sub frames, following race car design principles. Wide wheel arches cover 18-inch alloy wheels wearing Bridgestone RE040 tyres: 225/45R at the front and 245/45R at the rear. As with the Coupé, brake specialists Brembo has been entrusted with ensuring the Roadster stops as well as it goes: the Italian company's signature gold coloured callipers are clearly visible through the alloy wheels.

standard equipment

Equipment is also generous, the Roadster featuring power operated soft top, standard wind deflector, power operated ventilated seats, CD sound system, climate control, six speed manual transmission, 18 inch alloy wheels, ESP and Xenon headlights. The only options will be metallic paint, lightweight forged alloy wheels and a premium hi-fi developed especially for the car by Bose. The Bose audio system has a tailor made noise compression system which has been

developed especially for open-top driving. It boosts the sound frequencies which are potentially lost by driving with the roof down.

“If proof is needed that Nissan’s product-led revival is on track, one look at the acclaim for the 350Z is all that’s needed. The 350Z Roadster will enhance the legendary status of the Z badge still further,” said Carlos Ghosn.

NISSAN **350Z ROADSTER**

BODY		
Structure		Lightweight all steel body with rear double floor structure, front and rear strut bars. Aluminium hood.
ENGINE	**UNIT**	
Model		VQ35DE
Cam Design		DOHC continuously variable valve timing
Orientation		Longitudinal
Cylinder / Configuration		V6
Block / Head Composition		aluminum / aluminum
Displacement	cm^3	3498
Bore	mm	95,5
Stroke	mm	81,4
Compression ratio		10.3 : 1
Maximum Output		206kW (280PS) at 6200rpm
Maximum Torque		363Nm at 4800 rpm
Output per litre		58.89kW/ 80.04 PS
Induction system		Sequential multi-point electronic fuel injection
Valvetrain		4 valves-per-cylinder
Engine Mounts (3 mounts per vehicle)		2 hydromounted ; 1 rubber
Recommended Fuel (required)		Premium plus (RON/98), unleaded
Emission System		Closed loop feedback system w/ 3-way catalyst
Emissions Certification Level		Euro 3
Exhaust		Dual (Single each side)
TRANSMISSION AND DRIVE SYSTEM		
Drive configuration		Mid-mounted front-engine / rear-wheel drive
Type		6-speed manual
Clutch Type		Dual Mass flywheel, dry plate
Steering ratio		15.9 : 1°
Drive Shaft		Carbon Fibre Reinforced Plastic (CFRP)
Differential		Viscous-Limited Slip
CHASSIS		
Suspension arms front		Multi-link suspension using forged aluminum components
rear		Multi link (including track control rods and split damper & spring) using forged aluminum components
Stability control ESP with Traction Control (TCS)		Std

BRAKES		
Type		Brembo Brakes
Front		Ventilated Disc
Rotor size diameter and thickness		324x30mm
Rear		Ventilated Disc
Rotor size diameter and thickness		322x22mm
Brake Control		Power-assisted (vacuum)
ABS with Brake Assist (NBA)		Std
Electronic Brake Force Distribution (EBD)		Std
Number of Channels		4
Number of Sensors		4
WHEELS & TYRES		
Type / Size Cast aluminum (std)		FR : 8 JJ x 18", RR : 8 JJ x 18"
RAYS Forged aluminum (option)		FR : 8 JJ x 18", RR : 8.5 JJ x 18"
Tyres Bridgestone Tyres Potenza RE040		FR : 225/45R18 91W, RR : 245/45R18 96W
DIMENSIONS		
Overall length	mm	4310
Overall width	mm	1815
Overall height	mm	1328 (with hood raised)
Wheelbase	mm	2650
Track aluminum 18" wheels front	mm	1535
rear	mm	1545
Turning circle (wall to wall)	m	11,2
Luggage capacity (VDA)	l	130
Fuel tank capacity	l	80
PERFORMANCE		
Top speed*	km/h	245
Acceleration* 0-100km/h	sec	6,4

*Subject to homologation

MURANO

THE COOL CROSSOVER

HEAD-TURNING LOOKS, POWER FROM THE 350Z AND SUPERB EQUIPMENT LEVELS, MURANO IS SET TO TAKE NISSAN INTO NEW TERRITORY.

AT A GLANCE

- ICONIC STYLE STATEMENT
- POTENT 3.5-LITRE V6
- ELECTRONICALLY CONTROLLED 4X4 CHASSIS
- UNIQUE CVT TRANSMISSION
- STANDARD SATELLITE NAVIGATION
- COLOUR REAR VIEW CAMERA

The coolest crossover has arrived. Nissan's mighty Murano arrives at the Paris Motor Show ready to capture a significant slice of this burgeoning part of the 4x4 market – sales are due to start right across Europe in early 2005.

expanding market

Murano marks Nissan's first foray into the expanding crossover market, and is aimed at discerning buyers who will appreciate its dramatic looks, potent 3.5-litre V6 power and its sure-footed four-wheel drive chassis.

Its arrival underlines Nissan's pre-eminence in the European 4x4 market. As well as Murano and the new Pathfinder – making its European debut at Paris – the Nissan 4x4 range includes the highly successful X-TRAIL, Terrano and the newly revised Patrol.

well established

Murano, which has already proved to be a huge hit in North America where it has been on sale for more than a year, is likely to be bought by sophisticated and successful individuals looking for a distinctive car to match their urban lifestyle.

dynamic design

They want a vehicle that is easy, yet fun, to drive. They want a car that is practical and convenient for everyday use but with a dynamic design that reflects their core values. Murano fits the bill on every count.

The Murano on display at Paris is subtly different to the version that made its European debut at the Geneva Motor Show in March. That was an American specification model designed to introduce the shape to European eyes.

changes for Europe

In the interim, more than 1,600 changes have been made to Murano to ensure it is ideally suited to the demanding European market. Principle changes include small styling revisions – including a new rear number plate holder – and mechanical changes, including the adoption of an oil cooler, to cater for Europe's higher average speeds.

distinctive styling

Murano's design dynamism is immediately obvious. The bold exterior uses Nissan's new design language to develop a cool fusion of SUV styling cues with the luxury saloon features. There are styling similarities with the 350Z – notably the trapezoidal head and tail lamps and the geometric shape of the front of the car – and Murano also shares the rounded rear end styling that can be found on cars as diverse as the 350Z and the Micra.

The shape of the rearmost side window – triangular and with a sharply upswept lower edge – is also becoming a Nissan design feature and was integral to the award-winning Qashqai concept car that proved to be the star of both the Geneva and Birmingham motor shows.

Like 350Z and Micra, there can be no mistaking Murano for anything other than a Nissan. "Nissan design has reached a highly distinctive stage in its development", says Head of Design, Shiro Nakamura. "In today's crowded market, it is vital that Nissan cars can stand out from the rest. All our recent new models – Primera, Micra, 350Z and now Murano – do just that."

cool design

The combination of cool design and high quality continues inside where a feeling of spaciousness is matched by the sophisticated use of contrasting materials such as leather and aluminium: and that's real aluminium, not painted plastic. Murano will seat five adults in comfort thanks to its 'rugby ball' shape – the interior is at its widest in the cockpit area before it tapers front and rear.

Luggage area is similarly generous and features a simply yet highly effective rear seat folding mechanism: one-handed operation of a lever just inside the tailgate will fold the rear seat back to increase the load area.

adjustable pedals

Comfort and convenience features can be found everywhere, but perhaps the most welcome is the fully adjustable pedal assembly, which is available on left-hand drive versions. When coupled with a height and tilt adjustable seat and a steering column adjustable for height, the perfect driving position can be found for just about everyone.

Comfort is also ensured in the rear. As well as ample leg room, the rear seatbacks recline through an angle of 24 degrees.

engine from 350Z

Murano is powered by one of the world's finest engines and what is essentially the same power plant that drives the dynamic 350Z: the compact 3.5-litre V6 from Nissan's award-winning VQ engine family. America's leading motoring journal, Ward's Auto World Magazine has hailed the VQ unit as one of the "10 Best Engines in the World" every year since its debut in 1994.

For Europe, Murano's engine develops 172kW (234PS) and 318Nm of torque. To help achieve these impressive figures, the V6 power unit has many advanced features, including NICS, Nissan's variable intake system, as well as a continual variable valve timing control and a high, 10.3 :1, compression ratio.

CVT gearbox

Uniquely in its class, Murano has an advanced CVT automatic gearbox to provide seamless acceleration at all times. The CVT system is ideally suited to the high torque/high power VQ engine and helps provide brisker acceleration than many of its rivals with conventional automatic gearboxes.

Of particular note is the smoothness of both standing start and overtaking acceleration, with no deceleration pause for kickdown to cut in or for the gearbox to change ratios. Should the driver feel so inclined, however, the CVT unit features a six speed manual mode.

chassis dynamics

This performance is matched by the chassis dynamics and agility expected from a saloon rather than an SUV.

Murano has a monocoque body and sub-frame mounted suspension assemblies front and rear.

"Murano is clearly different, yet Murano is clearly a Nissan. Like the 350Z and Micra, its styling make a real statement, but it remains a practical and sophisticated car that continues our product-led revival and that will widen Nissan's appeal still further."

Shiro Nakamura, Senior Vice President and Head of Design, Nissan Motor Company

front suspension

The front suspension uses a tried and trusted coil spring over strut assembly with a transverse link and anti-roll bar. Careful attention to the suspension geometry has ensured high levels of stability at speed while the ride comfort has been enhanced by fine tuning the layout to reduce friction.

rear suspension

At the rear, a sophisticated multi-link system has been adopted with an aluminium upper arm to save weight. The coil springs and shock absorber assemblies are mounted separately to reduce friction and enhance the ride while lane change responses are improved by optimising the rigidity of the assembly.

Transmission of road noise is reduced by the use of double insulated bushes front and rear, while Murano uses ripple control shock absorbers, as found on the 350Z. A special oil seal at the tip of the dampers controls friction, virtually eliminating small road shocks. As well as promoting a smoother ride, the ripple control shock absorbers also enhance feel from the rack and pinion steering and, ultimately, control.

braking system

Murano stops as well as it goes. An all-round disc brake system – vented at the front – incorporates brake force distribution, anti-lock brakes and brake assist. European specification pads have been used, to ensure the system copes with Europe's higher speed potential. A foot operated parking brake is used, freeing up more space around the centre console.

ALL MODE 4x4 system

Murano is, of course, a 4x4 and features Nissan's unrivalled electronically-controlled ALL MODE switchable four-wheel drive system pioneered on the X-TRAIL. The driver has the option to set to system to 'Auto' or to 'Lock' it into four-wheel drive. In Auto, the system's bank of ECU and sensors constantly monitors progress, feeding drive to the wheels that need grip. In 'Lock' power and torque are distributed to all four wheels.

The ALL MODE 4x4 system ensures the ultimate traction on all surfaces, Murano also has ESP Plus as standard. This state-of-the-art dynamic control system enhances the grip provided by four-wheel drive by electronically controlling a spinning wheel as well as reducing both understeer and oversteer under extreme conditions.

safety features

Safety features include reinforced side members and sills for greater crash protection as well as seat belt pretensioners with two stage load limiters. Dual stage front airbags, side airbags and an inflatable side curtain are also standard.

There will be just one version of Murano on sale in Europe and so well equipped that options are virtually restricted to choice of colour. Among the standard features are many advanced items either available only as options on rival vehicles, or not available at all.

satellite navigation

As well as the unique CVT gearbox, every Murano will have satellite navigation as standard. The DVD-based system incorporates access to the Traffic

Message Channel (TMC) providing real-time traffic updates on a chosen route, while one disc maps 21 European countries including Ireland, Finland and Norway. The system's 7-inch LCD screen also doubles as a rear view monitor.

colour rear view camera

Like the Primera, Murano has a small wide-angle reversing camera incorporated into the rear number plate surround. Whenever reverse is selected, the colour screen gives a clear picture of what is happening behind the car, while width and depth lines on the screen help the driver to reverse more accurately.

Bose sound system

Other standard features include keyless entry with an anti-highjack mode, a high quality Bose sound system with sub woofer, and bi-Xenon headlamps with two projector-type bulbs in each headlamp assembly to reduce power consumption and reduced the distracting colour change between high and dipped beams.

"Murano takes Nissan into a new sector of the market so every sale will need to be a conquest. But we are confident that its head-turning looks, as well as its performance and the superb equipment levels will make that a comparatively easy task. Judging by the reaction we had to the car at Geneva, there are many people in Europe waiting impatiently for next February to arrives," says Patrick Pélata, Executive Vice President, Strategy, Planning and European Operations, Nissan Motor Company.

NISSAN **MURANO**

MODEL		
Body type		5 door
Available grades		SE
Seating capacity		5
ENGINE		
Engine code		VQ35DE
Cam design		DOHC continuously variable valve timing
Orientation		Transverse
Cylinder / Configuration		60° V6
Valvetrain		4 valves per cylinder
Block / head composition		Aluminium / Aluminium
Displacement	cm^3	3498
Bore & Stroke	mm	95.5 x 81.4
Max. engine power	kW(hp)/min-1	172(234) @ 6000 rpm
Maximum torque	Nm/min-1	318 @ 3600 rpm
Compress ratio		10,3
Fuel supply		Sequential multi point electronic fuel injection
Fuel type		Petrol - Premium plus (RON/98), unleaded
Emissions control system		Three way catalyst
DRIVE TRAIN		
Transmission		6 speed - Continuously Variable Transmission (CVT)
Driven wheels		4WD (part time)
CHASSIS		
Suspension	front	Independent strut suspension
	rear	Multi-link independent suspension
Steering		Engine Speed-sensitive power-assisted rack-and-pinion steering
Wheel size	inch	18"
Tyre size		225/65R18

WEIGHTS & DIMENSIONS		
Kerb weight min./max.	kg	1870
Gross Vehicle Weight	kg	2380
Max. pay load	kg	510
Max. axle weight front	kg	1235
rear	kg	1195
Max. vert. load on coupling point	kg	100
Max. roof load	kg	100
Overall length	mm	4770
Overall width	mm	1880
Overall height	mm	1705
Wheelbase	mm	2825
Luggage space - min. length	mm	926
- min. width	mm	1392
- min. height	mm	850
Luggage capacity (VDA)	l	under cover 438 / 476
max. with folded seats (VDA)	l	877
Fuel tank capacity	l	82
PERFORMANCE		
Fuel consumption		
Urban cycle	l/100km	17,2
Extra-urban	l/100km	9,5
Combined	l/100km	12,3
CO_2 mass emission	g/km	295
Max. speed	km/h	200
Min. turning circle (kerb to kerb)	m	12

PATROL

NISSAN HAS STRENGTHENED THE KING OF OFF-ROADERS

AT A GLANCE

- IMPOSING NEW LOOK
- MORE LUXURIOUS INTERIOR
- COMPLETELY NEW INSTRUMENT PANEL
- MORE ENGINE POWER AND TORQUE
- 17 INCH ALLOY WHEELS WITH NEW DESIGN
- GREATER LEVELS OF STANDARD AND OPTIONAL EQUIPMENT
- ONE OF THE LAST AUTHENTIC 4X4S

pioneering Patrol

For more than half a century, the Nissan Patrol has been a pioneer. An authentic and credible 4x4 right from the start, examples of each of the five generations of Patrol developed since 1951 spend every day working for their living right across the globe.

They can be found in fields, up mountains, down mines and in the world's trouble spots. Age does not trouble them: some of the oldest examples are still in regular use.

widest 4x4 range

This dependability underpins Nissan's credibility as a leader in the 4x4 market: Patrol is one of a burgeoning line-up of four-wheel drive models wearing the Nissan badge. From X-TRAIL to Patrol, via Terrano, Murano and its newly revealed Pathfinder SUV, Nissan's 4x4 range is among the widest on the market.

But the Patrol has only kept its position at the top thanks to a regime of constant development. The current fifth generation was introduced in 1998 and benefited from a round of mechanical changes in 2000, including the adoption of a new 3.0-litre turbo diesel engine, which replaced the previous 2.8-litre unit.

comprehensive changes

Now comes an even more comprehensive package of changes that go well beyond what's expected of a conventional facelift. Every exterior panel, bar the roof, has been changed. There's a bold new 'face', a new-look rear end and a new integrated side step, while revisions to the lusty 3.0-litre turbo diesel engine give more power and more torque. Additionally, the 'GR' moniker will be dropped from the name.

Power increases from 116kW to 118kW (158PS to 160PS) while the torque jumps from 354Nm to 380Nm (261lb ft to 280lb ft).

New 17inch alloy wheels (up from 16 inch) and a hard, coloured cover for the rear door-mounted spare can now be found on top grade versions.

extra luxury

But perhaps the biggest changes can be found inside the vehicle. Although the Nissan Patrol remains a tough off-road vehicle at heart, Nissan believes there is no reason why users should not enjoy a little extra luxury while they work. As a result, the new Patrol has an all-new interior featuring better quality materials, greater comfort and more equipment.

There are better shaped seats offering greater comfort and support, and which are available in the option of Alcantara for the first time. As before, the top grade model has leather seat facings: both upholsteries are available in either black or ecru colours, while the rear bench in five-door/five-seat versions slides forwards or backwards to create extra leg or luggage room as required.

soft feel surfaces

While the new seats enhance the feeling of well-being in the cabin, the real improvement can be found in the adoption of soft-feel surfaces for the top of the two-tone dashboard and for the door cappings. Wood effect trim and discreet chrome elements – such as for the door handles and instrument bevel rings – add to the ambiance.

The principal item of new equipment is the optional availability of an advanced satellite navigation system, the screen for which is fully integrated into the centre of the dashboard for ease of use.

PATROL

"The boom in sales of 4x4s right across Europe has seen the arrival of many new SUVs to the market. Good these 'soft-roaders' may be but none can match the robustness and authentic off-road ability of the Nissan Patrol. Now the Nissan Patrol is even better, with that legendary capability matched by refreshed looks, increased engine output and a luxurious new interior."

Mario Canavesi, Senior Vice President, Sales and Marketing, Nissan Europe

There are three new exterior colours – a new shade of silver, plus brown gold metallic and a dark blue metallic – bringing the available palette to nine colours.

separate chassis

As for the rest, the story remains as strong as ever. Built on a separate chassis for the ultimate in off-road ability, the Patrol nonetheless has sufficiently compliant suspension settings to provide a smooth on road ride with handling to match. Off road, superb axle articulation and long suspension travel means the new Patrol retains all the agility and go-anywhere ability expected of the name.

A full range of models includes short- and long-wheelbase versions (with three and five doors respectively, the latter with the option of seven seats) and no fewer than four trim and equipment grades ranging from an entry-level workhorse to the comprehensively-equipped flagship model.

loyal customers

Mario Canavesi said: "Our research has shown that the Patrol name has one of the highest recognition factors of all 4x4s in Europe – notably in France, Spain and Germany – and that owners remain very loyal to the vehicle. One in four current customers has previously owned a Patrol and there are more than 42,000 Patrols currently in use in Europe. Loyalty among owners of the three door versions runs at an exceptional 43 per cent. "Naturally, our customers are very important to us and all the changes we have made to the Patrol are as a direct result of their feedback. They asked for

greater luxury and more equipment but not at the expense of its ability. We have answered all their needs: it is a far more comfortable place to be… but the Patrol still has a 37.5 degree angle of approach.

King of the 4x4s

The significant changes that have been made to the Patrol will reinforce its position as King of the 4x4s.

MODEL		3.0 LITRE TURBO DIESEL ENGINE		4.8 LITRE PETROL*
		3-DOOR - SWB	5-DOOR - LWB	
Available grades		Comfort, Luxury, Elegance		Elegance
Seating capacity (option)		5	5 (7)	7
ENGINE				
Engine code		ZD30DDTi		TB48DE
No. of cylinders, configuration		4, in line		6, in line
Valves per cylinder		4		
Air intake system		Turbo, Intercooler		
Engine capacity	cm^3	2953		4759
Bore x stroke	mm	96.0 x 102.0		99.5 x 102.0
Max. engine power[1)]	kW(hp)/rpm	118 (160)/3600		180/4800
Max. torque (A/T)	Nm/rpm	380/2000 (AT: 354/2000)		400/3600
Compression ratio		17.9 to 1		9.0 to 1
Fuel type		Diesel		Petrol
Fuel supply		Direct injection		ECCS
Emission control system		EGR		N/A
DRIVE TRAIN				
Transmission		5-speed manual (4-speed automatic)		5 speed automatic
Gear ratio 1st M/T		4.556 / 4A/T: 2.784		3,540
2nd M/T		2,625 / 4A/T: 1,544		2,264
3rd M/T		1,591 / 4A/T: 1,000		1,471
4th M/T		1,000 / 4A/T: 0,694		1,000
5th M/T		0,836 / 4A/T: –		0,834
Reverse M/T		4.245 / 4A/T: 2.275		2,370
Transfer ratio		high: 1.000 - low: 2.020		2,020
Final drive ratio (A/T)		4,111 (4.375)		3,545
Final drive type (option)		Limited Slip Differential (Rear Differential Lock)		
Driven wheels		Part-time 4WD (rear wheel drive in 2WD mode)		
CHASSIS				
Suspension front		Rigid axle, 3 link, coil springs, stabiliser bar		
rear		Rigid axle, 5 link, coil springs, stabiliser bar		
Steering		Recirculating ball, power assisted with steering damper		
Braking system (option)		Ventilated Disc front, Ventilated disc rear, power assisted (Electronic 3 channel, 5 sensor ABS)		
Wheel size (option)		16x6JJ (16 x8JJ) for Comfort & 17X8JJ for Luxury & Elegance		17x8JJ
Tyre size (option)		235/80R16 (265/70R16) for Comfort & 275/65R17 for Luxury & Elegance		275/65R17

NOTE: Data is subject to certification by the relevant authorities and may therefore be subject to change.
* Russia only
1) In accordance with 1999/99/EC

MODEL		3.0 LITRE TURBO DIESEL ENGINE		4.8 LITRE PETROL*
		3-DOOR - SWB	5-DOOR - LWB	
Available grades		Comfort, Luxury, Elegance		Elegance
Seating capacity (option)		5	5 (7)	7
WEIGHTS AND DIMENSIONS				
Kerb weight min./max.2)	kg	2220/2300 (A/T: 2260)	2365/2495 (A/T: 2410/2465)	2460
Gross Vehicle Weight	kg	2850	3200 (A/T: 3110)	3150
Max. pay load2)	kg	630 (AT: 650)	835 (AT: 700)	
Max. axle weight front		1350	1500	1500
rear		1750	1800	1800
Max. trailer weight braked		3500 (A/T: 2500)		N/A
unbraked		750		N/A
Max. vert. load on coupling point	kg	140 (A/T: 100)		N/A
Max. roof load	kg	100 (200 on dedicated fixing points)		N/A
Overall length	mm	Comfort: overall lenght + 45 mm (with 265/70R16) Luxury: overall length + 50 mm (with spare tire cover)		N/A N/A
	mm	4475 Comfort, 4525 Luxury, 4575 Elegance	5045 Comfort, 5095 Luxury, 5145 Elegance	5145
Overall width	mm	1840 for Comfort, 1940 for Luxury & Elegance		1940
Overall height	mm	1840	1855	1855
Wheelbase	mm	2400	2970	2970
Track front (offset)	mm	1555(1605 with 265/70R16) for Comfort, 1605 for others		1605
Track rear (offset)	mm	1575 (1625 with 265/70R16) for Comfort, 1625 for others		1625
Luggage space min. length		380	980 (7 seater: 230)	230
min.width		1110	1110 (7 seater: 810)	810
min. height		1025		
Luggage capacity (VDA)	l	308	668 (7 seater: 183)	183
max. with folded seats (VDA)	l	1652	2287 (7 seater: 2226)	2226
Fuel tank capacity	l	95		

NOTE: Data is subject to certification by the relevant authorities and may therefore be subject to change.

* Russia only

2) Figures in accordance with EC directive. Kerb weight condition is without driver and including coolant, oils, fuel, spare wheel and tools. Pay load will be reduced depending on the options and/or accessories installed.

MODEL		3.0 LITRE TURBO DIESEL ENGINE		4.8 LITRE PETROL*
		3-DOOR - SWB	5-DOOR - LWB	
Available grades		Comfort, Luxury, Elegance		Elegance
Seating capacity (option)		5	5 (7)	7
PERFORMANCE				
Fuel consumption3) Urban cycle		14.3 (A/T: 13.9)		N/A
Extra-urban		8.8 (A/T: 9.1)		N/A
Combined		10.8 (A/T: 10.8)		N/A
$C0_2$ mass emission	g/km	288 (A/T: 287)		N/A
Max speed	km/h	160		190
Acceleration 0-100km/h	sec	14.8 (AT: 15.6)	15.2 (A/T: 16.3)	N/A
Min. turning circle (kerb to kerb)	m	10.2	12.2	N/A
OFF ROAD PERFORMANCE				
Approach angle	degrees	37,5	37	
Departure angle	degrees	30	31	
Ramp angle	degrees	31	27	
Max tilt angle	degrees	48		
Max gradient	degrees	39		
Max wading capacity	mm	700		
Ground clearance	mm	Comfort: 215; Luxury & Elegance: 220		

NOTE: Data is subject to certification by the relevant authorities and may therefore be subject to change.

* Russia only

3) In accordance with 1999/100/EC (Optional equipment, maintenance, driving technique, road and weather conditions may affect the official results).

FUEL CELL VEHICLE

NISSAN **X-TRAIL FUEL CELL VEHICLE**

Overall length/width/height	4,485/1,770/1,800mm
Seating capacity	5
Top speed	145km/h
Cruising range	Over 350km
Motor type	Coaxial motor integrated with reduction gear
Max. power – motor	85kW
Fuel cell stack	Polymer electrolyte type
Max. power – fuel cell	63kW
Battery type	Compact Lithium-ion (laminate type)
Fueling system	Compressed hydrogen gas
Max. pressure	35MPa

The Nissan X-TRAIL FCV delivers clean power without noxious emissions. The key to its high performance and efficient operation is the compact lithium-ion battery pack which adopts newly developed thin, laminated cell technology in place of conventional cylinder cells, contributing to a substantial improvement in interior space efficiency.

improved performance

The development of the X-TRAIL FCV has continued rapidly, with significant progress being acheieved over the performance of the X-TRAIL FCV shown at last year's Frankfurt Motor Show.

The current version (2003 model) on display in Paris can now cover 350km, which is 1.75 times further than the 2002 model. Power output has risen to 85kW, an increase of 50%.

And such is the progress that has been made in the development of the technology, the leasing of X-TRAIL FCV began earlier this year in Japan. By making them available commercially, Nissan has made an important step as part of its “Nissan Green 2005” programme, a mid-term action plan outlining the company’s efforts in technology development, recycling strategy and other environmentally-friendly initiatives.

five years of development

Nissan’s FCV development began in 1996, when the company initiated driving tests of a methanol reformer-equipped FCV, the R’NESSA FCV. Nissan subsequently launched a five-year joint R&D project with Renault in 2001 in which the two partners plan to invest 85 billion yen. Nissan is also taking part in the California Fuel Cell Partnership and has been conducting public road tests of the X-TERRA FCV since April 2001, using a base facility near Sacramento, California, in the United States.

zero emissions, power source of the future

Because of their outstanding efficiency and zero-emission performance, fuel cells are widely regarded as a promising mainstream power source for vehicles in the future. Issues that must be addressed to support their widespread use, include cost reductions and implementation of the necessary fuel supply infrastructure. Resolving these and other related issues will take some time.

Nissan will continue to develop innovative and creative technology for the future while introducing new products that are both friendly and protective of the environment, consistently striving for affordable and practical solutions.

NISSAN **RANGE SUMMARY**

AT A GLANCE

- NEW VERSION OF MICRA
- PRIMERA BENEFITS FROM EXTENSIVE REVISIONS
- X-TRAIL OFFERS SPACE, COMFORT, REFINEMENT AND ADVENTURE
- 350Z ENJOYS FIRST FULL YEAR OF SALES
- NEW PICKUP “HOBIE CAT” DERIVATIVE AIMED AT ACTIVE FAMILY LIFESTYLES

MICRA

Nissan’s Micra has been a stunning success since it was launched across Europe in January 2003. With its striking, distinctive design and high quality interior, the Micra has become the city-car of choice among young and stylish drivers across Europe.

new version

Nissan is building on the car’s strengths by introducing a new level of Micra. The new version will fit in the middle of the range, but will include details that were previously found on the higher levels.

On the outside, those with a keen eye will observe the addition of clear front indicator lamps and a new seven spoke design of 15” wheel cover have also been introduced. Two new colours – Emotion Red and Cocoon Green – have been added to the Micra’s already distinctive palet of five colours. In addition, body coloured powered door mirrors and door handles have been fitted.

Inside, new front seats offer improved support, as well as looking impressive too. Improved convenience comes from the addition of remote controls for the CD audio system and drive computer.

strong sales

Since it went on sale in January 2003, the Micra has sold over 260,000 units – a stunning achievement, passing all expectations. Indeed, several months after its launch production levels were raised to meet demand at the manufacturing plant in Sunderland, Great Britain where the car is built.

As well as its strong design, high quality interior, the engine range has never been broader and this has undoubtedly contributed to the appeal of the Micra since its launch.

dCi engine line-up

Last autumn, the Micra’s line up was strengthened by the addition of a high output 1.5-litre dCi common rail direct injection turbo diesel engine. With two different power outputs of 48kW (65PS) and 60kW (82PS) respectively, the diesel engine options give strong performance thanks to high

levels of usable torque of 160 and 185Nm at 2000rpm respectively, while offering class-leading levels of economy.

In addition to the diesel offering, three different petrol options are also available. With outputs of 1.0-, 1.2- and 1.4-litres, offering power outputs from 48kW (65PS) to 65kW (88PS) the Micra has an engine option for every need.

fun to drive

Although a city car, Micra is also a driver’s car. With variable assistance electric power steering and a nimble chassis, Micra drivers will enjoy its verve and agility. Its handling prowess combines perfectly with the spirited engine options – particularly the torquey high output diesel option – to provide an enjoyable driving experience which will leave a lingering smile.

useful features

Its modern, distinctive looks and its stylish interior are key parts of the Micra’s appeal, but it has more than just good design in it favour. The Micra offers many features which are usually found on upper-segment cars. Nissan’s innovative “Intelligent Key” system allows drivers to unlock and start the car by simply keeping the key in close proximity to the car – very convenient when both hands are full. And the Micra is the only model in its segment equipped with this technology. “Friendly Lighting” keeps the headlights illuminated for up to two minutes at the end of the journey to ensure the owner arrives safely at their front door at night. The Micra can be specified with automatic air conditioning and rain sensing wipers are also

available, further demonstrating that the Micra is equipped with the sort of genuinely useful and thoughtful technology which is normally found in cars in higher segments.

The interior of the Micra is a surprisingly comfortable and spacious place to spend time, for driver or passenger. A long wheelbase and high roof line give the interior a grown-up, airy feel. A sliding rear seat is standard on most versions, allowing drivers to maximise passenger legroom or boot space.

Combining style, sophistication, nimbleness and a wide range of engine options, the Micra is a class-leader in every sense.

PRIMERA

Demonstrating Nissan's commitment to strong, distinctive design, the Primera is a D-segment car which stands out from the crowd. Its striking looks set the standard in an area of the market where there is little variation. And the Primera benefitted from changes to its interior earlier this year, with even higher levels of technology, quality and comfort.

Available as a four- and five-door, as well as an estate, it is powered by a variety of engine options. The 1.9- and 2.2-litre dCi direct injection common rail turbo diesel unit gives smooth, effortless performance while returning impressive levels of economy. Power outputs of 88kW (109PS) and

102kW (138PS) respectively, as well as torque figures of 270 and 314Nm, for the diesel models demonstrate that long distances are easily covered in a Primera, especially with the six-speed gearbox which is fitted as standard to the diesel engine models.

Petrol engines are offered with displacements of 1.6-, 1.8- and 2.0-litres, giving power outputs of 80kW (109PS), 85kW (116PS) and 103kW (140PS). On the 2.0-litre engine, Nissan offers a Hypertronic 6 Speed Continuously Variable Transmission.

new, improved interior

The recent changes to the cabin have resulted in improved ergonomics, for driver convenience and comfort. A new design of steering wheel, with aluminium switches for the audio system, telephone and cruise control.

The centre console storage bins have been redesigned, giving more usable space, plus added comfort from the central storage box whose lid now acts as an armrest. Additionally, there are now aluminium effect door pulls and handles.

upgraded navigation system

Nissan's N-Form central control console has benefitted from improved display and the centrally mounted dials now have a Fine Vision feature which improves their visibility at night. The audio system has been upgraded, with a dashboard mounted six-CD player now available. Nissan's Birdview satellite navigation has been updated to

incorporate Traffic Message Channel (TMC). This enables the navigation system to navigate its way around traffic jams.

Another one of the Primera's industry-leading features has been up-graded. The standard rear-view camera is now colour, giving greater clarity, which will lead to better precision during rear-parking manoeuvres.

As well as all the changes to the interior, there have been significant changes under the skin. Improvements to the suspension settings have improved the car's ride and handling, resulting in improved stability at higher speeds, reduced harshness and pitch, while comfort enhanced on uneven surfaces. Changes to the steering have improved feeling and responsiveness.

segment leading safety features

Also available is Nissan's class-leading Intelligent Cruise Control, which is linked to the anti-lock braking system and the engine management system to automatically adjust speed to match traffic flow, takes the stress out of day-to-day driving – an important safety feature. In addition, the availability of Nissan's Tyre Pressure Monitoring System adds to the reassurance which comes from Nissan's renowned reputation for innovation and the application of useful technology.

Nissan's Primera continues to be the intelligent choice for buyers in the competitive D-segment across Europe.

X-TRAIL

The X-TRAIL was revised less than 12 months ago and those changes have cemented its place as the second best-selling model in the compact 4x4 market. Combining good looks, with genuine comfort, utility and strong performance, the X-TRAIL is the perfect blend of car-like qualities with the ability to tackle off-road challenges.

Since its launch, the X-TRAIL has attracted a new breed of buyer to the Nissan brand. They like its ability to offer understated, comfortable transport on a day-to-day basis, but can equally satisfy the adventurous spirit within them at weekends.

interior design

The X-TRAIL has a high quality interior with class-leading ergonomics, practicality and storage facilities. Its heater controls echo those of the 350Z. Its widely renowned ALL MODE 4x4 is intuitive to use and can be selected by a simple rotary switch. Nissan's DVD-based Birdview navigation system is an option, offering guidance on a seven-inch dashboard-mounted screen.

The X-TRAIL will sit five in comfort, with lots of space for all the passengers' luggage. Its light, airy cabin is relaxing place to be and can be enhanced by the large sunroof.

high output diesel engine

A 2.2 dCi common rail direct injection turbo diesel engine gives swift performance, while still retaining a high level of economy. A power output of 100kW (136PS) and a stunning torque figure of 314Nm make this engine the most popular

X-TRAIL

350 Z

PICKUP

choice among purchasers. In addition, two petrol engines are available with displacements of 2.0- and 2.5-litre. Power outputs are 103kW (140PS) and 121kW (165PS), with torque of 192 and 230Nm respectively.

With an advanced ESP+ system linked to an active brake limited slip differential, the X-TRAIL's on road dynamics are class-leading, allowing drivers to enjoy its road-holding in complete confidence. This is backed up by the latest generation of anti-lock braking technology, incorporating Electronic Brake Distribution and Nissan Brake Assist, as well as traction control.

strong sales performance

X-TRAIL allows drivers all the dynamic prowess of a car, with the spaciousness of a large estate vehicle, coupled with the off-road ability of a traditional 4x4 off-roader, thanks to its sophisticated ALL MODE 4x4 system. This is a vehicle which improves the flexibility that its owners demand in their lives and means they do not have to accept a compromise in their choice of day-to-day transport. A sales total of 32,950 for the first six months of the year represents an increase of 39% over the same period last year and underlines its universal appeal.

350Z

After months of anticipation, deliveries of the 350Z began 12 months ago and, as expected, the car was received with unanimous acclaim. A total of 4290 350Zs were sold in the first half of this year across Europe, surpassing Nissan's expectations.

Building on its unprecedented popularity in Japan and the US, where it is the country's best-selling sports car, the 350Z is a true sports car. The car has a classic front engine, rear-wheel drive chassis layout, giving it a perfect dynamic balance. Its race-tuned suspension, combined with a wheel at each corner and the "flat-ride" concept provide an enormous amount of grip.

true sports car

As with all great sports cars, the heartbeat of the 350Z is its engine. Mounted far back in the engine bay, giving the car a front:rear weight distribution of 53:47, Nissan's legendary V6 3.5-litre VQ engine has won international acclaim with over three million units having been produced. The power and torque figures are impressive – 206kW (280PS) and 363Nm respectively – but they only tell half the story. The manner of the power and torque delivery is what really sets the 350Z apart.

The engine is smooth, refined and has an eager response. From low engine speeds, there is instant acceleration available and as engine speed rises, the acceleration becomes more vivid. And like all great sports cars, the engine in the 350Z makes a lovely sound under acceleration, but is a refined cruiser on motorways and at high speeds. The six speed manual gearbox ensures that the enthusiastic driver always has the correct gear to

hand, but it also provides relaxed yet effortless progress in sixth gear. It has a short throw, meaning quick gear changes are second nature.

To complement the performance of the engine, the brakes on the 350Z are nothing short of awesome. Developed by leading specialists Brembo, their stopping power provides the strongest reassurance in unexpected braking situations. The 350Z is also equipped with an advanced Electronic Stability Programme which will intervene when it detects grip levels are marginal.

It is a strict two-seater, with storage space behind the seats, as well as a selection of other storage locations throughout the cabin. The interior of the 350Z is driver-orientated, with body-hugging seats and an adjustable steering wheel which moves with the three principal instruments. Three further dials are mounted centrally, facing the driver.

The 350Z is the living proof of Nissan's revival and represents the design-led, product-driven philosophy which will continue to drive the company's growth.

PICKUP

Throughout the range, the Pickup offers a sublime blend of hardworking utility and everyday usability which provides car-like characteristics but with immense levels of practicality.

Hobie Cat special edition

Nissan has entered into a partnership with Hobie Cat, the leading manufacturer of catamaran sailing boats and in recognition a new derivative of the Pickup model has been developed.

Reflecting the busy and active leisure-orientated lifestyles of sailors everywhere, the Pickup Hobie Cat has some special features which will enable it to support its owners in all of their activities, no matter how challenging.

special features

The Hobie Cat Pickup will be available in King Cab and Double Cab and will feature front fog lamps, chrome door mirrors and 17" alloy wheels. Its door handles and tube-type roll bar are finished in silver grey, as are the tube-type side steps and roof rails (which are only available on the Double Cab configuration).

Additionally, the Hobie Cat Pickup is available in a new, eye-catching orange as well as black and silver.

Alcantara trim

Inside, there is black Alcantara seat material, with a two-colour leather steering wheel, black trim and carpets and a silver-effect control panel.

Suspension settings have been tuned to improve ride and handling and although the Pickup Hobie Cat has features which improve the Pickup's comfort, it is still a serious workhorse, powered by a 2.5-litre turbo diesel engine and with a load capacity of 1 tonne.

broad line-up

With three cabin options - Single Cab, King Cab and Double Cab – the Nissan Pickup offers a wealth of seating and stowage options. But what is standard fitment across every cab and trim option is the combination of hard-wearing practicality with luxury touches that you'd normally expect to find in a passenger car or a Nissan off-roader. Everything from long-life floor covering to air-conditioning is available.

diesel engine

The 2.5-litre turbo diesel produces 98kW (133PS) of power and a torque figure of 304Nm. These power figures endow the Pickup with a towing capacity of upto three tonnes, depending on specification, among the very best in its class.

Under normal conditions the Pickup runs in rear-wheel drive for maximum economy, but a simple lever behind the gearshift selects two- or four-wheel drive while on the move. There is still the back-up of low-ratio four-wheel drive to haul the Pickup through challenging situations, even when laden or towing a trailer. A limited-slip differential can be specified to extend the off-road capability still further.

dynamic driving experience

While strong off-road, the Pickup also offers the dynamic responses to satisfy enthusiastic drivers. After all, it is the basis of the car that Nissan used to compete in the gruelling Dakar rally in January.

The Pickup was one of the sales successes for Nissan during 2003 with a 35% increase in sales to 39,654 units. And the first half of this year has

seen that trend continue, with January - June sales of 22,027 units, an increase of 23% over the same period of 2003. It is clear that its role as both a commercial workhorse and also that of a vehicle which complements the lifestyle of its owners is a winning combination.

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