All-New 2009 Nissan Z[®]: Sculpted, Engineered and Equipped to SHIFT_ Driving Excitement

 Super Evolution of the Iconic Nissan Z[®] Expands the Sports Car "Sweet Spot" With An Unmatched Balance of Performance, Style and Value –

In the first full redesign of the iconic Nissan Z[®] since its re-introduction as a 2003 model, nearly every piece and component has been rethought or redesigned – shorter wheelbase, greater use of lightweight body materials, new engine with more horsepower and improved fuel economy, a new 7-speed automatic transmission with paddle shifters, a world's first synchronized downshift rev matching system for the manual transmission, new high quality driver-centric interior and new available technology features.

But to get the full measure of the new model, now designated the Nissan 370Z, one need look no farther than the subtle upswept line of the new rear quarter window. Quintessentially Z^{\otimes} , the window harkens back to the original 1970 240Z – a car that revolutionized the sports car world with its unique combination of performance, style and, especially, value. The new 370Z solidifies the Z^{\otimes} 's position as one of the most desirable sports cars on the planet – at an affordable price – bringing true sports car performance to everyone.

"The fresh character of the 2009 Nissan 370Z is immediately apparent in the crisp new exterior design, which is sportier yet still immensely identifiable as a Nissan Z^{\otimes} ," said Al Castignetti, vice president, Sales, Nissan Division, Nissan North America, Inc. "One usually thinks of evolution as being linear. The new 370Z's 'super evolution' builds on the best features of both the first and last generations Z-cars – respectful but not retro, simple yet sophisticated, and 110 percent pure Z^{\otimes} ."

Solidifying the strengths of its immediate predecessor, the new 370Z was conceived as an "Everyday Sports Car," targeting segment-leading performance and a base

MSRP of around \$30,000 (final performance figures and pricing to be available at a later date).

"The new 370Z lives in the sweet spot of performance, style and value, a position that Nissan invented with the original Z^{\otimes} . It's an authentic sports car that you don't have to make sacrifices to own – or drive everyday," said Castignetti.

The new 2009 Nissan 370Z Coupe model is scheduled to go on sale in North America in January 2009, followed by a new 370Z Roadster for the 2010 model year.

The New Exterior: Not Just Sculptural, Functional

The 2009 370Z's dynamic new styling offers dual benefits – a more aggressive appearance and a lighter, tighter structure for enhanced performance. The new Z's wheelbase is nearly four inches shorter than the previous generation Z^{\otimes} (100.4 inches versus 104.3 inches), accomplished by moving the rear wheels forward in the 2^{nd} generation FM platform, while overall length is reduced by 2.7 inches (167.1 inches versus 169.8 inches). At the same time, the overall width been increased by 1.3 inches, the rear track by 2.2 inches and overall height reduced by 0.3 inches, giving the 370Z a much more aggressive stance.

The more compact exterior dimensions and expanded use of lightweight materials help reduce weight. For the first time, the Z^{\otimes} features aluminum door panels, along with an all-aluminum hood (the previous aluminum hood design utilized steel reinforcements) and an aluminum hatch.

At the same time, the body structure was extensively revised, improving front body torsion rigidity by 30 percent; a new front suspension cradle to reduce front body lateral bending; new rear structural reinforcements; and an underbody "V-bar" to help reduce rear lateral bending. Other enhancements include the use of a carbon fiber composite radiator housing and strengthening of the rear fender and hatch areas.

Rear body torsion rigidity is improved by up to 22 percent and rear body vertical bending rigidity is improved by up to 30 percent. The result is enhanced overall

solidity and handling capability. Even with all of the new body strengthening measures the overall body-in-white is lighter than the previous body-in-white.

"As every race car driver knows, weight is the enemy of performance and rigidity is the foundation for handling – but they usually work at cross purposes from each other," said Castignetti. "With the new 370Z, the engineers were able to build a body that is both stronger and lighter, enhancing Z[®]'s athletic performance abilities."

Along with its new structure and stance, the 370Z has a taut new skin – one that looks completely new, yet completely $Z^{\$}$. The exterior design incorporates intentional 240Z styling cues, a sleek aerodynamic shape, a "dynamic motion" feel with a dramatic cantilevered roof (with Nissan GT-R styling cues) and a "low visual gravity."

The coefficient of drag is 0.30 (0.29 with the Sport Package), the same as the previous generation 350Z Coupe. The new Z® also maintains the previous generation's zero front lift and zero rear lift when equipped with the rear spoiler, thanks to extensive aerodynamics efforts – including an "inverse area" front bumper design which smoothes the flow of air to the sides of the vehicle, while the rear design maximizes the control of air flow from the roof to the rear hatch. In addition, the front overhang was extended 1.2 inches and more than 200 rear quarter panel patterns were made and wind tunnel tested to counter the negative aerodynamic effects of shortening the wheelbase (versus the 350Z).

"The 370Z incorporates all of the signature Z[®] elements – the long nose, canopy cockpit, muscular fenders, vertical door handles," said Castignetti. "What's new is a more wheel-oriented, organic design with more of a sense of precision and agility."

One of the most distinctive features of the bold new exterior design is the headlight/taillight treatment, which features a fierce "boomerang" shape. High Intensity Discharge (HID) bi-functional xenon headlights with auto on/off feature are standard.

The hood's deep character lines continue over the windshield into the new, cantilevered roof design. The intense broad-shouldered rear shape is highlighted by the integration of the boomerang taillights and wide, flared rear fenders.

The 370Z's sleek silhouette is defined by its upswept quarter window design that is echoed by the dynamic upward curvature in the lower rocker panel and the sense of the taut sheet metal molding itself around the wheels and frame. Attention to detail and functionality is evident throughout the exterior design, including the addition of a flashing (repeater lamp) side marker lamp/emblem.

Performance body pieces are available as part of the optional Sport Package, including a front chin spoiler and rear spoiler. The 370Z is offered in seven exterior colors: Pearl White, Monterey Blue, Brilliant Silver, Magnetic Black, Solid Red, Platinum Graphite and a launch-year only, premium signature color, Chicane Yellow.

A Driver's Cockpit Equipped To Make Car and Driver Feel Like One

The interior design of the new 370Z continues the Z[®] tradition of enhancing driving pleasure, no matter what the road or traffic conditions offer. "As an Everyday Sports Car, every aspect of the interior needs to address two needs – support and enhanced driver performance during spirited driving and offer high levels of comfort and utility for normal commuting and around-town activities," said Castignetti.

The traditional 2-seat layout is built around a deeply scooped instrument panel with a full-length center console separating the driver and passenger's seat. In the rear is an open cargo area with enhanced storage and accessibility. The design focus incorporates a "layer concept," with an information layer, an operation layer and a holding layer.

The information layer provides enhanced visibility with easy access to all key data. The gauges are once again attached to the steering column, so the driver doesn't have to choose between the perfect steering wheel position and visibility of the gauges. The upper steering wheel opening in front of the gauges was also enlarged to provide a better view of the readouts.

Gauge size has been increased over the previous generation design, including a 15 percent increase in the tachometer, and the gauge angle has been adjusted.

The instrument panel retains the traditional 3-pod cluster with oil temperature, voltmeter and clock, while the speedometer and tachometer now include an "initial sweep" function, coming alive when the Z[®] is first started.

The operation layer includes the steering wheel, shifter and switchgear. The steering wheel is an all-new "oval" 3-spoke design, which offers baseball-style stitching, improved thumb grips and palm rest areas for improved feel on long drives. The surface of the leather-wrapped wheel is "shaved" to provide a more kidney-like shape to better fit in the hand. The shifter was also redesigned, with the manual transmission shifter padded in different areas to improve the accuracy of diagonal shifts and to feel softer in the hand for forward and backward motions.

The holding layer includes the seats, knee pads and door trim support. The driver's seat is uniquely different from the passenger's seat, with lower seat cushion cut-outs on the sides where the thighs rest – allowing the driver to push on the pedals without the seat fighting them. The seat also features an improved frame that helps it to better hold the driver in place during cornering. It also offers a 0.4-inch lower hip point than the previous $Z^{\$}$ driver's seat.

Both the driver and passenger's seats are structured with an anti-slip material in the main seating surface. The sporty woven cloth seats feature standard 8-way driver's/4-way passenger manual adjustments, with heated 4-way power-adjustable leather-appointed seats standard with the 370Z Touring model. Adjustable front seat Active Head Restraints are also standard.

The door armrests have been designed to provide extra support when cornering and the kneepads are better integrated to help the driver maintain the proper position while cornering. In addition, the available aluminum pedal pads utilize a new rubber insert material to improve grip and the accelerator pedal and brake pedal are completely new. The accelerator pedal is now floor-mounted (versus hanging) to provide better contact with the foot, less effort to operate and easier pedal-to-pedal foot/heel movement. The brake pedal is a new variable ratio design with enhanced rigidity and easier operation.

Interior packaging is also enhanced from the previous generation, including the removal of the rear strut brace (replaced with less intrusive structural reinforcements) and by adding a new "shelf" area behind the seats, creating an ideal area for storing briefcases. A retractable cover is standard on the 370Z Touring model. A locking glove compartment has been added.

Standard interior comfort and convenience features include Nissan Intelligent Key™ with Push Button Start, power windows with one-touch auto up/down feature, power door locks with auto-lock feature, a center console box with a new non-intrusive cover design, automatic climate control, rear window defroster with timer, two 12-volt power outlets, four cupholders (two in door panels, two in center console), dual overhead map lights and a AM/FM/CD/AUX 4-speaker audio system with illuminated steering wheel-mounted controls.

The 370Z Touring model adds standard 4-way power adjustable heated synthetic suede and leather-appointed sport seats with adjustable lumbar support, 6CD Bose audio system with eight speakers (includes dual subwoofer) and MP3/WMA playback, XM® Satellite Radio (XM® subscription required, sold separately), Bluetooth® Handsfree Phone System, HomeLink® Universal Transceiver and passenger seat map pocket.

An optional Navigation Package includes the touch-screen Nissan Hard Drive Navigation System with XM NavTraffic[®] with Real-Time Traffic information (XM[®] subscription required, sold separately), 9.3GB Music Box Hard Drive and Interface System for iPod[®].

The 370Z interior is available Black cloth or for 370Z Touring models, a choice of Gray, Black or Persimmon leather-appointed seating.

"Of all the tremendous enhancements to the new Z[®] interior, one that is easy to overlook is the enhanced quality – both in fit and finish and in the quality of materials and designs," said Castignetti. "Z[®] is proving once again that outstanding performance is available at an affordable price and so is outstanding quality."

Taking Performance To A New Level

Since so many aspects of a sports car's performance come down to the simple formulation of power-to-weight, the engineering teams behind the development of the new 370Z made that their priority focus. On the weight reduction side of the equation, they put the new Z[®] on an extremely restrictive diet. Beyond just the pounds shed with the body-in-white, every component throughout the vehicle was scrutinized. For example, fuel tank weight was reduced by 13.9 pounds, the exhaust system by 3.8 pounds, the audio system by 3.5 pounds and the 19-inch wheels by approximately seven pounds each for the fronts and six pounds for the rears – an estimated 225 pounds total.

Along with the reduced weight, the center of gravity was lowered through use of a lower engine positioning (-0.6 inches) and lower driver hip point (-0.4 inches). Rotating mass was reduced with a shorter carbon-fiber composite driveshaft. All of these weight savings were needed, of course, to counter the added weight of the Z[®]'s enhanced body structure and new technology and safety features. The net weight reduction is 95 pounds for the 2009 Nissan 370Z over the comparable 350Z Enthusiast model.

On the power side of the targeted class-leading power-to-weight goal, the new Z^{\otimes} picks up 26 horsepower utilizing the fourth generation of Nissan's award-winning VQ-series V6. The new 3.7-liter VQ37VHR engine with VVEL (Variable Valve Event and Lift) is rated at 332 horsepower @ 7,000 rpm and 270 lb-ft of torque @ 5,200 rpm, compared with the previous 3.5-liter V6's 306 horsepower @ 6,800 rpm and 268 lb-ft of toque @ 4,800 rpm.

Along with its larger displacement, the new engine gives better power delivery all the way to the 7,500 rpm redline, improved low-end power and more high-end torque, creating an entirely new driving experience. Approximately 35 percent of the engine's parts are new, versus the previous design.

Key to the enhanced performance is the VVEL system, which is able to optimize intake valve open/close movements, allowing the needed air to be sent promptly to the combustion chamber at the precisely optimized time.

Since the VVEL system can adjust to open the valves slightly, it improves fuel efficiency by reducing camshaft friction and fuel waste. It also provides cleaner emissions by allowing for quicker warm-up of the catalyst and by stabilizing combustion when the engine is cool. The engine also has a new "growl" from the dual exhaust system due to reduced back pressure, enhancing driving enjoyment.

The new engine is backed by a choice of two new advanced transmissions, both designed to improve driver performance. The new close-ratio 6-speed manual includes an available world's first synchronized downshift rev matching system, which allows drivers of any skill level to experience professional-like gear shift performance. The "SynchroRev Match" function automatically controls and adjusts engine speed when shifting to the exact speed of the next gear position, essentially "blipping" the throttle to smooth out any up/down shifts. This not only allows the driver to focus more on braking and steering, it improves vehicle balance and smoothness by reducing the typical "shock" when the clutch is engaged. The system can be deactivated with a button next to the shifter for drivers who prefer less vehicle intervention. The SynchroRev Match system is offered as part of the optional Sport Package.

"The SynchroRev Match system takes nothing away from the driver – you still have to engage the clutch and move the shifter – it just gives you a performance edge by smoothing out the gear engagement," said Castignetti.

Overall shift feeling has also been improved, with reduced vibration and noise (accomplished through improved lubrication) and a modification to the lever angle of the short-throw shifter.

The 370Z's new 7-speed automatic with Downshift Rev Matching (DRM) and Adaptive Shift Control (ASC) is designed to offer quick, manual-like shifting when operated in manual mode with a target time of 0.5 seconds between shifts. Drivers can use the standard paddle shifters or the shift lever. With new torque converter lock-up logic, the new 7-speed automatic feels more direct, like a manual transmission. The new 7-speed's wide gear ratios offer improved fuel efficiency, while the Adaptive Shift Control is designed to adjust to the driver's driving style.

"The combination of the new 3.7-liter engine and advanced new transmissions puts the Z® solidly at the front of the class in terms of responsive acceleration," said Castignetti. "Add in the enhanced handling from the revised suspension – which provides better grip, reduced understeer, improved road holding, reduced impact harshness and better ride – and you've got a new standard for thrilling performance."

Estimated fuel economy is 18 mpg City/26mpg Highway for both the 7-speed automatic and 6-speed manual transmissions – increases of 1 mpg City/2 mpg Highway for the automatic and 1 mpg Highway for the manual transmission versus the 2008 350Z.

The previous generation Z[®]'s suspension has also been rethought to reduce weight, improve strength and improve camber change and lateral displacement. The double-wishbone front suspension (replacing the lower multi-link setup in the 350Z) uses lighter forged aluminum arms and a lightweight rigid aluminum-alloy cradle, along with a lighter stabilizer bar with a 35 percent improved lever ratio.

The 4-link rear suspension is also now stiffer and lighter, with the rear cradle entirely integrated into a single part (no welding). All-new "high response" shock absorbers are utilized on each corner, with ride comfort improved through reduced shock friction.

The standard 370Z wheel and tire package features 18x8.0-inch front/18x9.0-inch 5-spoke lightweight aluminum-alloy wheels with P225/50R18 front/P245/45R18 rear Yokohama ADVAN Sport maximum performance summer tires.

Also available as part of the optional Sport Package are 19-inch RAYS forged lightweight aluminum-alloy wheels with Bridgestone Potenza RE050A P245/40R19 front/P275/35R19 tires.

The Z[®]'s already advanced braking system has been upgraded to include improved overall brake feel, better fade resistance and improved NVH. With adoption of the new variable ratio brake pedal, pedal stroke feel is more direct. The standard 4-wheel vented disc brake system includes Anti-Lock Braking System (ABS) with Electronic Brake force Distribution (EBD) and Brake Assist (BA). The optional Sport Package includes Nissan Sport Brakes with large diameter 14.0-inch front and 13.8-inch rear rotors (versus 12.6-inch front/12.1-inch rear standard rotors) with 4-piston front and 2-piston rear aluminum calipers.

Steering is provided by a vehicle-speed-sensitive power-assisted rack-and-pinion deign that has been reworked (including redesigned mounting bushings and a column insulator) to provide improved response. Unwanted steering kickback and vibrations are reduced with the addition of a solenoid valve that acts like a damper when there is a harsh impact load. The standard Vehicle Dynamic Control (VDC) system has also been revised with new electronic hardware and all-new logic.

The Nissan 370Z's long list of standard safety features includes the Nissan Advanced Air Bag System (AABS) with dual-stage supplemental front air bags with seat belt and occupant classification sensors; front seat-mounted side impact supplemental air bags; roof-mounted side-impact air bags; seat belts with pretensioners and load limiters, Active Head Restraints, Zone Body Construction with front and rear crumple zones, Nissan Vehicle Immobilizer System, Vehicle Security System and Tire Pressure Monitoring System (TPMS).

A Simplified Model Line-up

The new 2009 370Z's model line-up has been greatly simplified, versus the 2008 350Z, with just two models – 370Z and the 370Z Touring.

The 370Z Touring adds heated leather-appointed power seats, HomeLink® Universal Transceiver, Bluetooth® Hands-free Phone System, 8-speaker Bose® audio system, XM® Satellite Radio (XM® subscription, sold separately) cargo cover and aluminum pedals to the long list of standard Z® features and equipment.

Two option packages are offered: the Sport Package, with 19-inch RAYS forged wheels and Bridgestone Potenza tires, aerodynamic front and rear spoiler, larger Nissan Sport Brakes, SynchroRev Match (6-speed manual transmission only) and Viscous Limited Slip Differential; and the Navigation Package, with Hard Drive-based Nissan Navigation System, 9.3GB Music Box Hard Drive and Interface System for iPod®.

"This exciting new Z[®] represents the essence of the Nissan brand, just as the original 240Z did nearly 40 years before," said Castignetti. "It provides passionate performance at an excellent value – just what was needed then and just what sports car enthusiasts are looking for today."

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