



## 2010 RAV4 Expands Availability of Sport Appearance Package, Key Safety and Convenience Features

For 2010, the popular Toyota RAV4 compact sport utility vehicle expands the availability of some key, high-value features first offered on select grades for 2009. The base model now offers the backup monitor system with rear-view camera and monitor integrated into the electrochromic mirror. This feature was introduced for the Sport and Limited grades for 2009.

The RAV4 had gained a new four-cylinder engine, revised styling and interior upgrades for 2009. For 2010, the comprehensive Sport Appearance package, introduced for 2009 4x4 V6 models, will also be available on the Sport grade 4x2 and 4x4 models equipped with the 2.5-liter four-cylinder engine in early 2010. The Sport grade models offer a new optional JBL audio system with steering wheel audio controls and hands-free Bluetooth® connectivity.

The Sport Appearance Package gives the RAV4 Sport grade a sleeker look, with an exclusive rear door design featuring chrome accents and no spare tire. (The package equips the RAV4 with run-flat tires.) Other external cues include color-keyed power, heated side mirrors with integrated turn signals, a stainless steel exhaust tip and unique badging. Inside, the Sport Appearance Package adds a chrome accented shift knob with a leather insert, chrome interior door handles, parking brake and vent trim, and unique doorsills. For 2010, the Limited grade also adds a chrome parking brake and vent trim.

### Performance and Efficiency

The 2010 RAV4 is offered in three distinct grades – Base, Sport and top-of-the-line Limited – and with a choice between the 2.5-liter four-cylinder that was new for 2009 or the V6 engine. Both engines can be teamed with either front-wheel drive or electronic on-demand four-wheel-drive, giving consumers a wide array of vehicle choices.

The RAV4's standard 2.5-liter four-cylinder engine is a low-friction design optimized for performance and fuel efficiency. The 2.5-liter engine produces 179 horsepower at 6,000 RPM, along with 172 lb.-ft. of torque at 4,000 RPM, placing it at the high end of standard engines in the segment. Dual independent Variable Valve Timing with intelligence (VVT-i), controls timing on both the intake and exhaust camshafts.

Toyota engineered every aspect of the new 2.5-liter engine for low friction performance. Key low-friction technologies include an offset crankshaft, roller rockers for the valvetrain, a three-stage variable oil pump, reduced-tension piston rings and auxiliary belt drive. Even with the high compression ratio (10.4:1), the 2.5-liter engine uses regular-grade fuel, thanks to optimized cylinder head and piston cooling. Integrated twin balance shafts reduce noise and vibration.

The Acoustic Control Induction System (ACIS) switches the length of the intake tract in two stages, based on RPM and throttle angle, to ensure strong torque across the engine speed range. Tumble control valves enhance combustion when the engine is cold, helping to warm the catalytic converters quickly. The tumble control valves, along with 12-hole high-atomizing long-nozzle fuel injectors, help to maximize fuel economy and control emissions by reducing the amount of fuel that adheres to the intake ports.

The four-cylinder engine is partnered with a four-speed electronically controlled automatic transmission that was also new for 2009. This transmission is smoother, more lightweight, efficient and responsive than the previous unit, making the RAV4 more enjoyable to drive. Fuel efficiency is excellent for its class, with EPA MPG estimates of 22 city/28 highway on 4x2 models and 21 city/27 highway on 4x4 models.

An uphill/downhill shift control significantly reduces "hunting" between third and fourth gears during winding uphill

driving. Braking on the downhill automatically causes a downshift, which enhances engine braking for better control. A flex lock-up torque converter continuously controls lock-up switch slippage to enhance fuel economy. Toyota WS automatic transmission fluid operates with low viscosity across the potential operating range, reducing resistance and enhancing economy.

The available 3.5-liter V6 is the powerhouse of its segment, generating 269 horsepower at 6,200 RPM and 246 lb.-ft. of peak torque at 4,700 RPM. The V6 is also equipped with dual independent VVT-i to maximize performance and efficiency while reducing emissions. Equipped exclusively with a five-speed automatic transmission, the V6 RAV4 models offer greater fuel efficiency compared to less powerful competitors. The shift logic reduces the frequency of gear shifting during winding uphill and downhill driving. The V6 RAV4 can accelerate from zero-to-60 mph in under seven seconds, yet has estimated EPA fuel economy MPG ratings of 19 city/27 highway for 4x2 models and 19 city/26 highway for 4x4 models. All RAV4 models meet Ultra Low Emission Vehicle (ULEV II) certification.

### **Handling and Ride**

A strong, stiff structure, four-wheel independent suspension and Electronic Power Steering (EPS) give the RAV4 agile, sporty handling and a comfortable car-like ride. The compact EPS unit contributes to fuel economy by eliminating the traditional power steering pump and provide computer-controlled assist only when required.

Furthermore, EPS is interfaced with Vehicle Stability Control (VSC) system to enhance handling control under adverse road conditions. The RAV4 Base grade model rides on P215/70 R16 tires with 16-inch steel wheels or available P225/65 R17 tires with steel or five-spoke aluminum alloy wheels. The Sport grade, with its standard 18-inch alloy wheels, enhances driving performance with a sport-tuned suspension. The Limited grade rides on P215/65/R17 tires with standard six-spoke aluminum alloy wheels.

The automatic on-demand four-wheel-drive system uses an electronically controlled coupling to distribute torque between the front and rear wheels, depending on road conditions and driver input. The system can continuously and seamlessly switch from front-wheel-drive to four-wheel-drive mode, maximizing fuel efficiency. In Auto mode, torque distribution to the rear wheels is decreased during low speed cornering for better maneuverability.

A 4WD manual locking switch will disengage the Auto mode, maximizing torque distribution to the rear wheels. When vehicle speed reaches 25 mph, the system will revert back to Auto mode. Lock mode also disengages when the brakes are applied, optimizing ABS and VSC operation. RAV4 4x2 models have a traction control-based automatic limited slip differential (Auto-LSD).

When equipped with a third-row seat, all RAV4 models come standard with Hill-start Assist Control (HAC) and Downhill Assist Control (DAC). HAC provides additional control for on-road and off-road driving by helping to keep the vehicle stationary while starting on a steep incline or slippery surface; DAC is designed to enhance low-speed descending ability by helping to hold the vehicle to a target speed with minimal intervention from the driver.

### **Safety**

The RAV4 has a reinforced cabin, which includes front and rear crumple zones and energy-absorbing materials on the ceiling and doors. Active headrests on the driver and front passenger seats move up and forward almost instantly in the event of certain rear-end collisions to help reduce the distance between the occupant's head and the headrest. The front three-point seatbelts integrate pretensioners and belt-force limiters. Second- and third-row seats also provide three-point seatbelts and height-adjustable headrests in all seating positions.

The driver and passenger advanced front airbags are designed to inflate according to collision severity. A front seat passenger sensor occupant classification system is designed to determine the seat is occupied and the passenger's weight category and then determines whether the airbag should inflate.

Driver and front passenger front-seat-mounted side airbags and first and second row roll-sensing side curtain airbags are standard. Like all SUVs in the Toyota lineup, RAV4 comes standard with the STAR Safety System™ that includes Enhanced Vehicle Stability Control (VSC), Traction Control (TRAC) and Anti-Lock Brake system (ABS) with Electronic Brake-force Distribution (EBD) and Brake Assist (BA).

In the RAV4, the enhanced version of VSC interfaces with the Electronic Power Steering (EPS) system to influence steering assist for any given situation. The integration of EPS allows the enhanced VSC system to better anticipate the onset of vehicle loss of control and more effectively respond to driver operation and vehicle behavior.

### **Comfort and Convenience**

Form, fun, functionality and value are plentiful in the RAV4 with a generous array of standard convenience features across all three grades, including air-conditioning; a tilt/telescoping steering wheel; AM/FM CD stereo with six speakers,

a universal mini-jack, MP3/WMA playback capability, outside temperature gauge; remote keyless entry; ten bottle/cup holders; power windows and door locks; foldable power mirrors; illuminated entry system; and three 12-volt auxiliary power outlets.

The Limited grade brings a touch of upscale luxury, adding dual zone automatic climate control with air filter; Smart Entry system that allows the driver to open the vehicle by simply carrying the key fob and grasping the door handle; upgraded seat fabric; AM/FM six-disc in-dash CD changer with six speakers and integrated XM® satellite radio, an auxiliary audio jack and MP3/WMA playback capability; engine immobilizer system; interior footwell lighting; leather-wrapped steering wheel with audio controls; leather-wrapped shift knob with metallic insert, and a cargo area tonneau cover.

### **Options**

Some of the standard features in the Limited grade are available as standalone options on the Base grade, including rear privacy glass, roof rails with cross bars, and a rear cargo area tonneau cover. An optional tow package for V6 models increases towing capacity to a maximum of 3,500 pounds.

Available features on the Sport grade, in addition to those offered on the Base grade, include a power tilt/slide moonroof with sunshade, touch screen DVD navigation system, JBL audio system with hands-free Bluetooth connectivity, leather-trimmed seats, heated front seats, and eight-way power driver seat with adjustable lumbar support. Additionally, the Limited grade offers an available 120V power outlet; and exclusive Blizzard White Pearl exterior paint.

### **Exterior Design**

Built on a 104.7-inch wheelbase, the roomy RAV4 offers an optional third-row seating on Base and Limited grade models. The high-strength body structure and exterior details were engineered with a focus on enhancing quiet ride quality. For example, eliminating outer moldings from the windshield and door glass enhances aerodynamics and reduces wind noise. A two-ply hood insulator with a middle air layer helps to further reduce noise transmitted to the cabin.

The RAV4's contemporary design strongly conveys the Toyota identity in an aerodynamically efficient shape. The grille, headlamps and distinct, sharp character lines give RAV4 a rugged yet sporty look.

The rear view conveys a more traditional SUV look, with LED tail lamps and an externally mounted spare tire in a color-keyed shell (except Sport Appearance Package). The RAV4 Sport grade stands apart from the Base grade with P235/55 R18 tires on 18-inch aluminum alloy wheels; color-keyed door handles and fender flares; fog lights; rear privacy glass; smoked headlamp trim; sport-tuned suspension; and unique dark charcoal fabric seats.

The Limited grade is distinguished from the Sport grade by 17-inch aluminum six-spoke alloy wheels with P225/65 R17 tires and a unique front grille with chrome accents, roof rails and cross bars, and color-keyed heated and foldable outside mirrors with turn signal indicators.

### **Interior Design**

The RAV4 allows for numerous seating configurations, under-floor storage (on models without the third-row seat) and provides a generous 73-cubic foot cargo area with all rear seats folded down.

The 60/40-split second row seat features reclining seatbacks and an armrest with two cup holders. The seats slide fore and aft to maximize room for passengers or cargo. The second row seats fold flat with the convenience of tilt-down levers located on the side of the seatbacks; two-row models include an additional one-touch fold-flat lever in the cargo area. The optional 50/50 Split-and-Stow® third-row seat on Base and Limited grades accommodates two passengers and folds flat under the rear deck.

A brushed metallic silver finish on the center cluster, door trim and steering wheel spokes gives the RAV4 interior a contemporary style. Three-tiered Optitron gauges provide an upscale look. Useful touches are also evident with the addition of a large vanity mirror with "eye-friendly" ceiling lights, illumination on two extra-large front cup holders and a cell phone holder in the center console. The Limited grade offers an additional level of refinement with an air conditioning vent dial, chrome accented air conditioning vent garnish and a chrome parking brake tip.

Abundant interior storage includes a dual glovebox; front door compartments; a large center console box; front seatback pockets and a rear door storage pocket. On two-row models, two storage compartments are concealed under the rear cargo area floor by a water-repellant foldable deck board.

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