

Toyota Sienna Van and RAV4 Compact SUV: All-Wheel-Drive Cures for the Winter Blues

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TORRANCE, Calif. (March 2, 2015) – Through ice and snow, Toyota continues to go places. Long, harsh winters can be a bit more bearable when drivers of family haulers ride into spring with the added capability and peace of mind that an all-wheel-drive (AWD) vehicle provides.

Recently, the Toyota Sienna and RAV4, both with available AWD, along with some leading competitors in their respective segments, completed certified testing in snow and ice conditions by notable third-party organization AMCI. The certified tests revealed the Sienna minivan and RAV4 compact SUV performed significantly better in the areas of acceleration, traction, and handling on snowy and icy road conditions when equipped with AWD. In fact, the certified testing results showed the Sienna AWD performed substantially better than other front-wheel-drive competitors in its segment and equal cornering performance on both ice and snow as a competing popular mid-size SUV equipped with four-wheel-drive!

Similarly, the RAV4 equipped with AWD was AMCI Testing certified to deliver better active-safety acceleration, handling and cornering performance on snow than its competitors in the testing. Specific certified testing in which a Sienna XLE AWD and RAV4 XLE AWD each outperformed its competition by large margins included:

- 0-50 mph on snow
- Shorter stops on ice from 30 mph
- Cornering performance on ice (Sienna only) and snow (Sienna and RAV4)
- Evasive-action performance on snow (RAV4 only)

Toyota's AWD technology helps provide additional on-road capability. The Sienna AWD system employs a transfer case to smoothly deliver power to an electromagnetic coupler on the rear differential that divides engine power up to 50/50 front and rear. Wheel slippage at either set of wheels automatically transfers more power to the opposite wheels to help keep the Sienna moving forward. This type of system not only handles wet and slippery roads (rain, snow, ice, etc.) with confidence, but is fully up to light-duty off-highway conditions. Driver intervention is minimized, as the AWD system continuously monitors the torque transfer between the front and rear wheels. Front to rear torque distribution can vary from 100:0 to 50:50, with front-wheel drive (100:0) automatically engaged under normal driving conditions to help improve fuel consumption.

The RAV4 compact SUV offers a sophisticated Dynamic Torque Control All-Wheel Drive system. By coordinating through a high-speed interactive management system with Vehicle Stability Control (VSC) and electric power steering systems, Dynamic Torque Control All-Wheel Drive helps enhance performance, handling and safety.

This advanced AWD system continuously monitors and controls the torque transfer between the front and rear wheels via an electromagnetically controlled coupling positioned in the rear differential. Dynamic Torque Control uses input from various sensors (vehicle speed, steering speed and angle, throttle angle and yaw rate) to actively govern torque distribution to the rear wheels, as needed.

Front to rear torque distribution can vary from 100:0 to 50:50, with front-wheel drive automatically engaged under normal driving conditions to help reduce fuel consumption. The system automatically shifts to AWD when accelerating to help prevent front wheel slippage, or when sensors detect wheel slippage.

When Sport mode is selected, torque transfer to the rear wheels starts from the moment the steering wheel is turned, to reduce the load on the front tires. If understeer develops, torque transfer to the rear wheels is automatically increased by up to 50 percent, further reducing front tire loading to provide enhanced lateral grip.

When tackling off-pavement driving or very slippery conditions, pushing an AWD Lock button fixes torque distribution at 50:50 at speeds up to about 25 mph to maximize grip. Above that, the system reverts to Auto

mode.

Sienna's AWD system is available on seven-passenger LE, XLE, Limited and XLE and Limited Premium models. The RAV4 AWD system is available on LE, XLE and Limited models.

To help prepare your Sienna and RAV4 for the harsh winter elements, a Toyota Outdoor Package is offered. Available with all 2015 Sienna AWD models and select RAV4 XLE and Limited models in both FWD and AWD, the package consists of roof rack cross bars, all-weather floor mats and mud guards. The Sienna package also includes door sill protectors while the RAV4 package adds a rear bumper skid plate garnish.