CVT delivers enhanced fuel economy and seamless acceleration with a “direct” drive feel for enhanced AT driving pleasure.

The CVT (Continuously Variable Transmission) provides smooth and “stepless” ratio changes, unlike conventional transmission systems that use sets of fixed gears. With its seamless acceleration and fuel economy benefits, the CVT has long been an object of Nissan’s R&D efforts, resulting in CVTs designed for a wide range of engines, from the 1.5-liter class to the 3.5-liter class.

CVT Advantages

Exceptional transmission efficiency for enhanced fuel economy

The CVT’s outstanding environmental performance and economy make this innovative technology ideal for today’s and tomorrow’s vehicles.

Smooth ratio transitions for enhanced driving pleasure

Driving pleasure is enhanced by the linear feeling of acceleration in response to accelerator pedal inputs.

Nissan offers CVTs in an extensive range of models

Quick to appreciate the CVT’s benefits of fuel economy and seamless acceleration, Nissan offered CVTs as early as 1992 in the March and Cube, followed by the 1.8-liter Primera and other models. Through technological innovation in CVT components, including the torque converter, oil pump, belt and control system, Nissan, in 2002, overcame the technological challenges to adapting the CVT to high-torque engines. The resulting XTRONIC CVT-M6 was the world’s first CVT practicable for engine displacements as large as 3.5 liters. Today, Nissan’s CVT technology offers smooth and fuel-efficient “fun-to-drive” performance in an extensive range of Nissan models, from the compact class all the way up to high-powered luxury vehicles.

Seeking to bring the CVT’s outstanding performance to even more customers, Nissan plans to expand sales of CVT-fitted models to around 1 million units worldwide in fiscal year 2007, up from about 250,000 in fiscal year 2004.

Nissan’s 3rd generation “XTRONIC CVT” further boosts acceleration and fuel economy

Better fuel economy for everyday driving

Nissan’s basic approach to powertrains is to achieve an equally high measure of both environmental compatibility (fuel economy) and driving pleasure (acceleration performance). For the XTRONIC CVT, our efforts to improve fuel economy were not confined to catalog specifications, but encompassed the practical fuel efficiency people seek in everyday driving situations. For example, the majority of Nissan customers drive mostly in urban and suburban areas and about 60% run the air conditioner year-round. In developing the XTRONIC CVT, we enhanced real-world fuel economy based upon simulations of typical driving conditions.

Powerful and satisfying acceleration feel

CVT performance is characterized by stepless shifting and seamless acceleration. To refine these advantages, we significantly improved gear shifting response in the XTRONIC CVT to provide tighter tracking of accelerator pedal inputs, as well as quick and powerful acceleration. In line with our emphasis on everyday driving conditions, we concentrated less on full throttle performance, and more on quickly responsive acceleration and smooth passing ability in urban traffic.

contents

Seamless acceleration 4
Improved response and efficiency 5
Improved dynamic performance and powerful acceleration feel 7