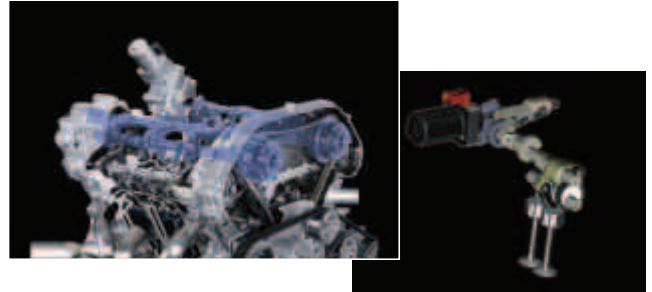


Variable Valve Event and Lift System (VVEL)

Nissan will continue to introduce more eco-friendly technologies, products and services under the objective of Nissan Green Program 2010. Combining VVEL with CVTC (continuously variable valve timing control) to continuously control the engine's intake valve and lift operation produces a high level of instantaneous response and power, as well as better fuel efficiency and cleaner emissions.



Features

Improved Fuel Efficiency

Improved Engine Torque

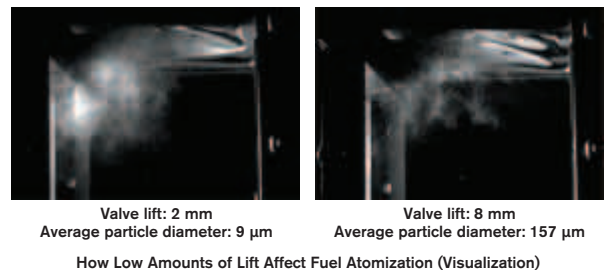
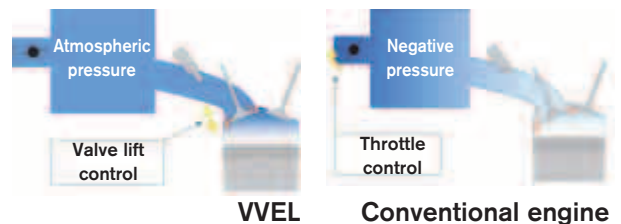
We have improved fuel efficiency and engine torque by substantially reducing the intake resistance that occurs when the engine's throttle valve opening is narrowed and output is low.

Improved Response

We increased throttle response by directly controlling the intake valve rather than using the traditional method of controlling intake with the throttle valve.

Reduced Hydrocarbon Emissions

Decreasing the amount of lift when revving with a low load makes complete combustion easier, increasing intake and atomizing the fuel. This also reduces hydrocarbon emissions, which are produced more readily during partial combustion.



System Structure

The control shaft's rocker arm and two types of rings narrow the opening of the intake valves by transferring the reevaluation operation of the drive shaft in the eccentric cam to the output cam. Rotating the control shaft, moving the fulcrum of the rocker arm and links in the DC motor and varying the movement of the output cam continuously vary the valve lift.

