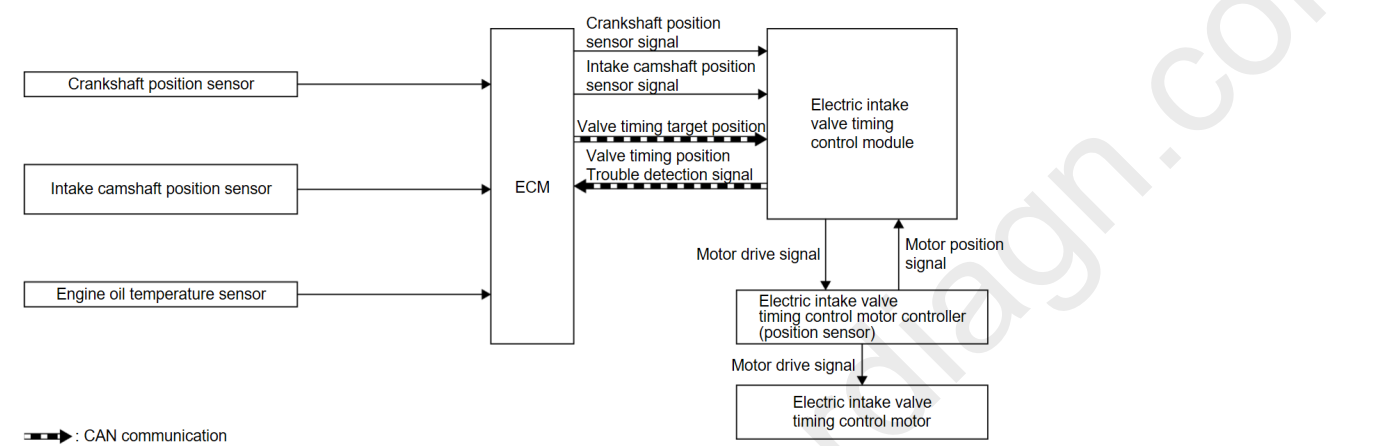



System Description

SYSTEM DIAGRAM



Component parts	Function
Crankshaft position sensor	Crankshaft Position Sensor
Intake camshaft position sensor	Intake Camshaft Position Sensor
Engine oil temperature sensor	Engine Oil Temperature Sensor
ECM	ECM
Electric intake valve timing control module	Electric Intake Valve Timing Control Module

Component parts	Function
Electric intake valve timing control actuator	Electric Intake Valve Timing Control Actuator
Electric intake valve timing control motor*	

*: Electric intake valve timing control motor is built in to the cam sprocket (INT).

SYSTEM DESCRIPTION

Electric VTC responds faster than hydraulic VTC and can extend the operation angle of the camshaft. This improves the fuel economy, engine output, and exhaust performance.

This mechanism continuously controls the phase of camshaft by the electric intake valve timing (IVT) control motor with the amount of intake valve operation held constant.

ECM transmits a target position of the electric IVT control motor to electric IVT control module via CAN communication.

The electric IVT control module controls the electric IVT control motor according to a signal from ECM and changes the opening and closing timing of intake valve.

Furthermore, the electric IVT control module has a diagnostic function and transmits a DTC detection signal to ECM via engine communication when detecting a system error.

Intake camshaft condition	Electric intake valve timing control actuator operation
Advanced angle	The electric intake valve timing control motor rotates the intake camshaft to advanced angle.
Maintained	Stop rotating the electric intake valve timing control motor to keep the intake camshaft position (cam phase).
Retard angle	The electric intake valve timing control motor rotates the intake camshaft to retard angle.