■FUNCTION OF MAIN COMPONENTS

Item		Outline
Hybrid Transaxle	MG1	MG1, which is rotated by the engine, generates high-voltage electricity in order to operate MG2 or charge the HV battery. Also, it functions as a starter to start the engine.
	MG2	• Driven by electrical power from MG1 or HV battery, and generates motive force for the vehicle. • During braking, or when the accelerator pedal is not depressed, it generates electricity to recharge the HV battery (Regenerative brake control).
	Planetary Gear Unit	Distributes the engine's drive force as appropriate to directly drive the vehicle as well as the generator.
HV Battery		Supplies electric power to the MG2 during start-off, acceleration, and uphill driving recharged during braking or when the accelerator pedal is not depressed.
Inverter Assembly		A device that converts the high-voltage DC (HV battery) into AC (MG1 and MG2) and vice versa (Converts AC into DC).
	Boost Converter	Boosts the maximum voltage of the HV battery from DC 201.6 to DC 500 V and vice versa (drops DC 500 V to DC 201.6 V).
	DC-DC Converter	Drops the maximum voltage of DC 201.6 V into DC12 V in order to supply electricity to body electrical components, as well as to recharge the auxiliary battery (DC 12 V).
	A/C Inverter	Converts the nominal voltage of DC 201.6 V of the HV battery to AC 201.6 V and supplies power to operate the electric inverter compressor of the A/C system.
HV ECU		Information from each sensor as well as from the ECU (engine ECU, battery ECU, skid control ECU, and EPS ECU) is received, and based on this the required torque and output power is calculated. The HV ECU sends the calculated result to the engine ECU, inverter assembly, battery ECU and skid control ECU.
Engine ECU		Activates the ETCS-i (Electronic Throttle Control System-intelligent) in accordance with the target engine speed and required engine motive force received from the HV ECU.
Battery ECU		Monitors the charging condition of the HV battery.
Skid Control ECU		Controls the regenerative brake that is effected by the MG2 and the hydraulic brake so that the total braking force equals that of a conventional vehicle that is equipped only with hydraulic brakes. Also, the skid control ECU performs the brake system control (ABS with EBD, Brake Assist, and VSC+*) conventionally.
Accelerator Pedal Position Sensor		Converts the accelerator angle into an electrical signal and outputs it to the HV ECU.
Shift Position Sensor		Converts the shift position into an electrical signal and outputs it to the HV ECU.
SMR (System Main Relay)		Connects and disconnects the high-voltage power circuit between battery and inverter assembly, through the use of a signal from the HV ECU.
Interlock Switch (for Inverter Cover and Service Plug)		Verifies that the cover of both the inverter and the service plug have been installed.
Circuit Breaker Sensor		The high-voltage circuit is intercepted if a vehicle collision has been detected.
Service Plug		Shuts off the high-voltage circuit of the HV battery when this plug is removed for vehicle inspection or maintenance.

* : Only on model with VSC+ System