

■ MAJOR DIFFERENCE

The major difference between the new 3MZ-FE engine on the RX400h and the 3MZ-FE engine on the RX330 are the following:

System	Features
Engine Proper	• A PVD(Physical Vapor Deposition) coating has been applied on the surface of No.1 compression ring. • An oil ring with a two-piece shape is used. • A wear resistant coating is used on the sliding surfaces of the crankshaft bearings for the No. 1 and No. 4 journals.
Valve Mechanism	The valve timing has been changed to achieve optimum hybrid control.
Cooling System	The engine radiator and condenser, inverter radiator have been integrated.
Intake and Exhaust System	• The material of and hoses has been changed to inhibit the permeation of fuel vapors. • An intake air connector made of aluminum alloy is used. • To reduce noise, resonators have been added to the following areas: inside the air cleaner, air cleaner hose, and the air inlet. • A material that provides the same level of high-temperature strength as stainless steel is used for the exhaust manifold. • A ceramic catalyst is used. • A large, 20.8-liter capacity muffler is used. • The intake air control valve and ACIS (Acoustic Control Induction System).
Charging System	The alternator has been discontinued.
Starting System	The starter motor has been discontinued. The starting system uses a motor generator (MG1).
Engine Mount	The shape of the front and rear engine mounts has been optimized and an absorber engine mount is used for the rear.
Serpentine Belt Drive System	The drive belt has been discontinued, along with the use of electric power steering and an electric inverter compressor.
Engine Control System	• Operates the engine intermittently depending on the driving conditions. • Calculates the load based on the accelerator position and the vehicle speed, in order to determine the throttle position. • The ACIS (Acoustic Control Induction System) has been discontinued. • An THS ECU is used with the hybrid system. Furthermore, the THS ECU and the engine ECU have been integrated. • The operating range of the VVT-i (Variable Valve Timing-intelligent) system has been changed.
Diagnosis	The diagnosis communication has been changed from serial communication (ISO9141) to CAN communication.