■MAJOR DIFFERENCES

The following changes have been made to the 1FZ-FE engine.

System	Features
Engine Proper	 The engine performance has been improved by changing the shape of the cylinder head's combustion chamber and enlarging the intake port diameter. Reinforcements have been added to the cylinder block ribs and skirts to reduce noise and vibration. The shape of the piston has been changed for weight reduction and improved reliability.
Valve Mechanism	• The amount of valve has been increased (both intake and exhaust from 8.3 mm to 8.7 mm) to improve engine performance.
Cooling System	 An aluminum radiator core is used for weight reduction. The shape of the portion of the cylinder block to which the water pump is mounted has been optimized to improve the water flow characteristics, thus improving the reliability of the engine. A step-up linear type temperature controlled fluid coupling has been adopted.
Intake and Exhaust System	 The shape of the intake manifold has been changed for weight reduction and the capacity of the intake air chamber has been increased to improve the engine performance. The method for joining exhaust pipes together is changed from the flange type to the clamp type. For details, see page 80. The exhaust pipe is made of stainless steel to improve its corrosion resistance.
Fuel System	 4-hole type fuel injectors have been adopted to improve the atomization of fuel. A quick connector is used to connect the fuel filter and the fuel hose together to improve serviceabaility. The sub fuel tank system has been changed.
Ignition System	• The DIS (Direct Ignition System) is used to enhance the reliability of the ignition system.
Engine Control System	 The fuel injection system is changed from sequential multiport fuel injection type to 3-group injection type. The ISC valve is changed from step moter type to rotary solenoid type. Engine immobiliser system is adopted. M-OBD (Multiplex On-Board Diagnosis) system is adopted.