

### 3. Major Differences

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

| System                    | Features   |
|---------------------------|--|
| Engine Proper             | <ul style="list-style-type: none"> <li>● An upright intake port has been adopted to improve the intake efficiency.</li> <li>● A taper squish configuration has been adopted to improve the combustion efficiency.</li> <li>● A steel laminate type cylinder head gasket has been adopted to improve its reliability.</li> <li>● The cylinder block and the crankshaft have been made more rigid to realize a quieter operation.</li> <li>● The skirt portion of the piston has been changed in shape and applied with resin coating to reduce friction.</li> </ul> |
| Valve Mechanism           | <ul style="list-style-type: none"> <li>● The VVT-i system is used to improve fuel economy, engine performance and reduce exhaust emissions.</li> <li>● The valve adjusting shim has been changed from the outer shim type to the inner shim type.</li> <li>● The valve diameter of the intake and exhaust valves has been increased to reduce intake and exhaust resistance.</li> </ul>  |
| Lubrication System        | Reinforcement ribs have been added to the No. 1 oil pan to improve the rigidity of the coupling of the engine with the transmission, and to reduce noise.  |
| Cooling System            | The opening valve diameter of the thermostat has been increased to improve the cooling performance.  |
| Intake and Exhaust System | <ul style="list-style-type: none"> <li>● A long port intake manifold is used to improve the engine's torque in the low-to mid speed range.</li> <li>● ACIS (Acoustic Control Induction System) is used to deliver high power output in all engine speed ranges.</li> <li>● A long tail muffler is used to ensure quieter operation during idling.</li> </ul>   |
| Fuel System               | <ul style="list-style-type: none"> <li>● A fuel returnless system has been adopted to reduce evaporative emissions.</li> <li>● An air assist fuel injection system is used to promote atomizing of the fuel for improved fuel economy.</li> <li>● 4-hole type fuel injectors have been adopted to improve the atomization of fuel.</li> </ul>  |
| Ignition System           | <ul style="list-style-type: none"> <li>● The DIS (Direct Ignition System) is used to enhance the reliability of the ignition system.</li> <li>● Iridium-tipped spark plugs have been adopted to improve ignition.</li> </ul>   |
| Engine Control System     | <ul style="list-style-type: none"> <li>● ETCS-i has been adopted to realize excellent controllability and comfort of the vehicle.</li> <li>● The cruise control system and the engine immobiliser system have been integrated with the ECM.</li> </ul>   |