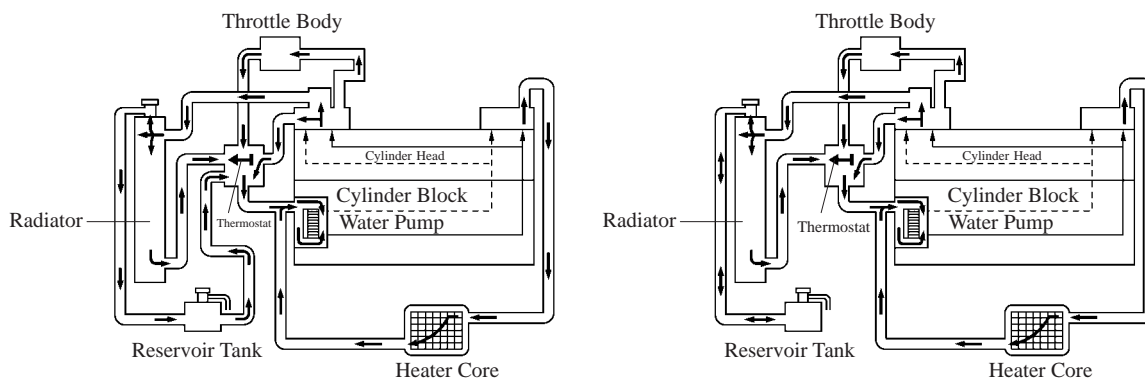
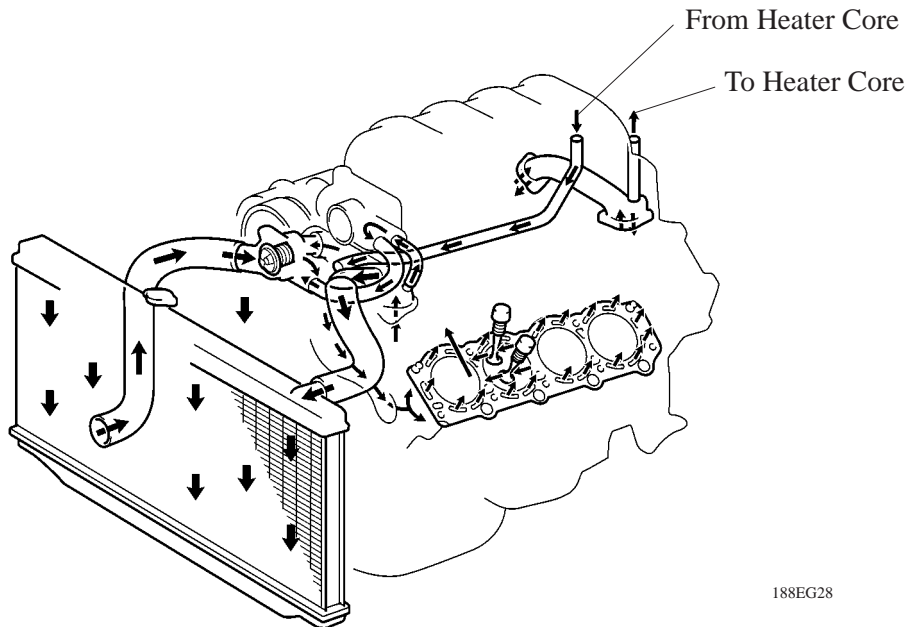


■ COOLING SYSTEM

1. General

- The cooling system is a pressurized, forced-circulation type.
- A thermostat, having a by-pass valve, is located on the water pump inlet side of the cooling circuit. As the coolant temperature rises, the thermostat opens and the by-pass valve closes, so the system maintains suitable temperature distribution in the cylinder head.
- In contrast to the previous 1UZ-FE engine, on the LS400, the shape of the water inlet housing has been optimized in the new 3UZ-FE engine on the LS430 to achieve the smooth flow of the engine coolant.
- In contrast to the 1UZ-FE engine on the previous LS400, in which a fluid coupling type cooling fan was used, the 3UZ-FE engine on the new LS430 has adopted an electric cooling fan system.
- The engine ECU is installed in the ECU box in the engine compartment. As a result, the wiring harness has been shortened, thus realizing weight reduction.
- On Europe and G.C.C. countries models, a pressurized reservoir tank has been adopted.



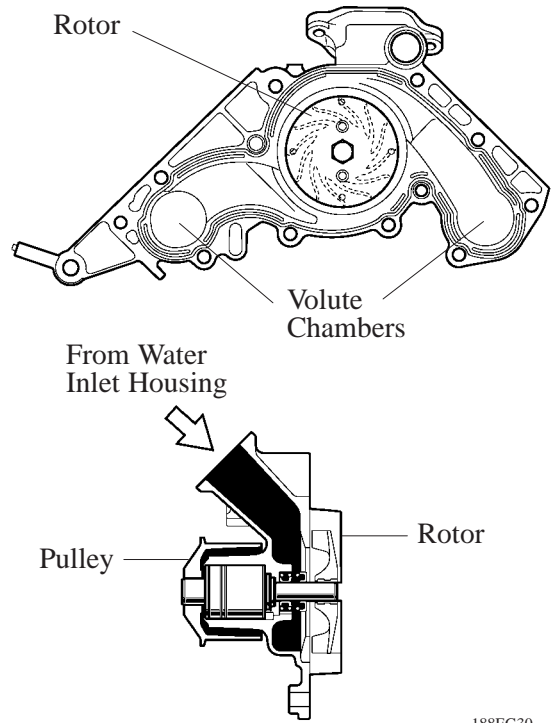
European and G.C.C. Countries Model

Australia Model

194EG03

2. Water Pump

- The water pump has two volute chambers, and circulates coolant uniformly to the left and right banks of the cylinder block.
- The water pump is driven by the back of the timing belt.
- The rotor is made of resin.

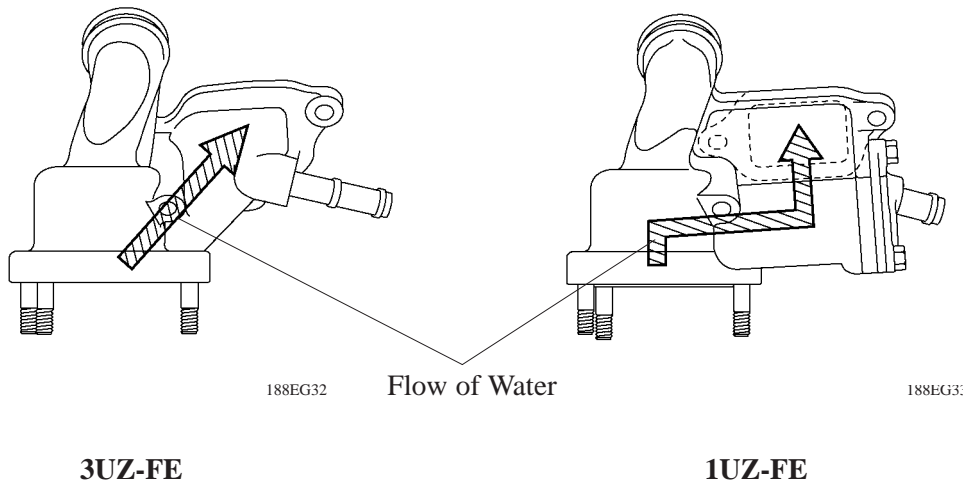


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3. Water Inlet Housing

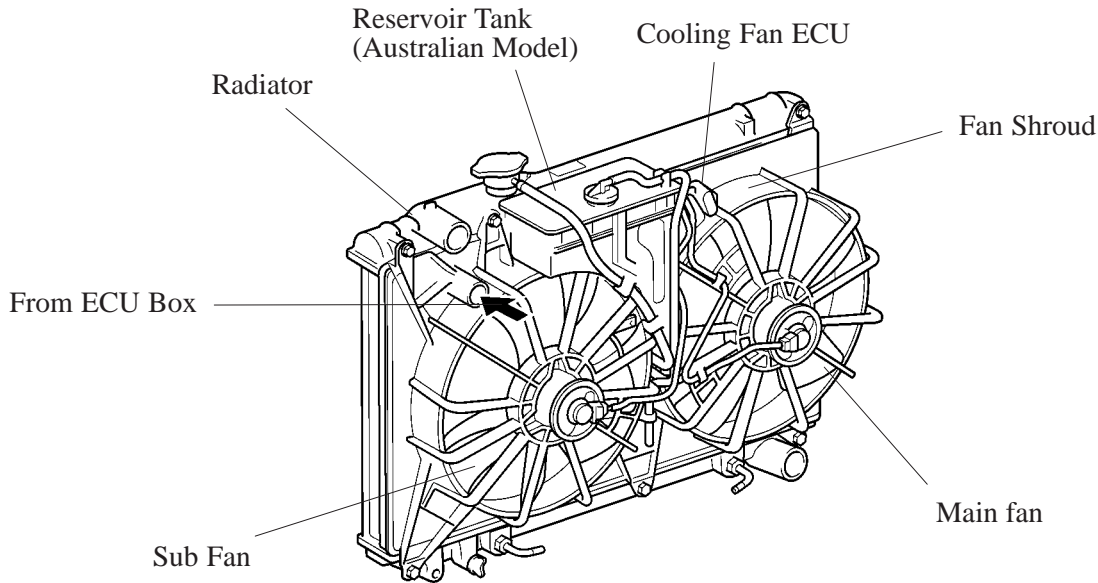
In contrast to the previous 1UZ-FE engine on the LS400, the shape of the water inlet housing has been optimized in the new 3UZ-FE engine on the LS430 to achieve the smooth flow of the engine coolant.



4. Cooling Fan System

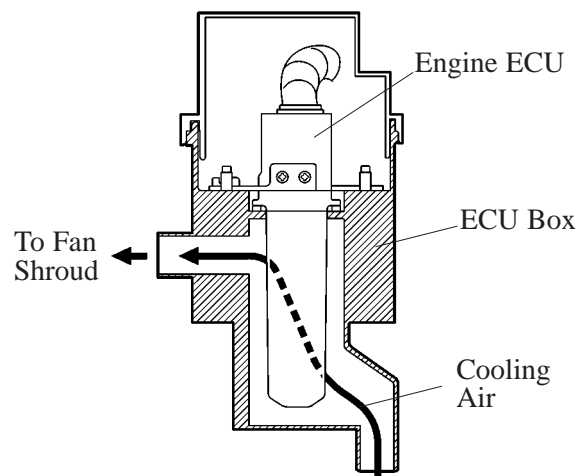
- This system consists of 2 fans with a different number of blades. The main fan contains 5 blades and the sub fan contains 7 blades. These fans are actuated by the cooling fan ECU in accordance with the signals from the engine ECU.

On Australia model, a simplified sealing type reservoir tank has been provided for the fan shroud.



189EG02

- The engine ECU is installed in the ECU box in the engine compartment. As a result, the wiring harness has been shortened, thus realizing weight reduction.



189EG03