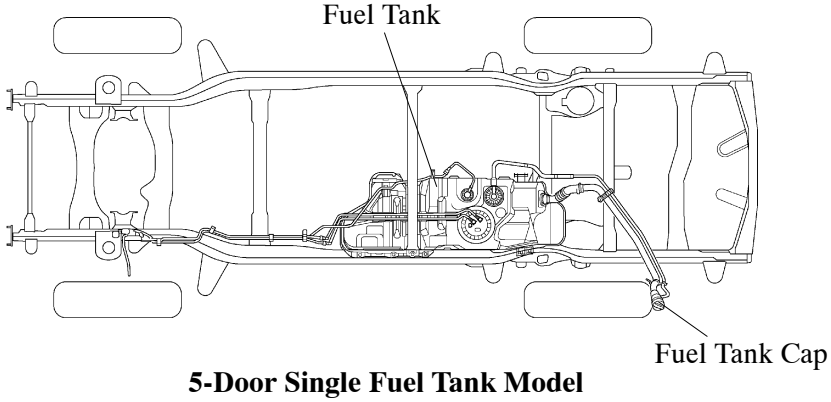
■FUEL SYSTEM

1. General

- On the 5-door model new Land Cruiser/Land Cruiser Prado with the 3RZ-FE engine, the fuel tank has been located in the center of the vehicle. On the 5-door with dual fuel tank model, the main fuel tank has been located in the center of the vehicle, and the sub tank in the rear of the vehicle.
  On the 3-door model, the fuel tank has been located in the rear of the vehicle, just as in the previous model.
- The 12-hole type fuel injectors have been adopted on models for the unleaded gasoline engine.
- To improve evaporative emission performance, the new model has adopted the following items:
  - A multiplex layer plastic fuel tank has been adopted on the 5-door with single fuel tank model, and as the main fuel tank on the 5-door with dual fuel tank model.
  - A tether has been provided on the fuel tank cap to prevent the cap from being lost, which results in preventing the leakage of fuel or the evaporative gas.
- The quick-turn type fuel tank cap has been adopted to improve usability.

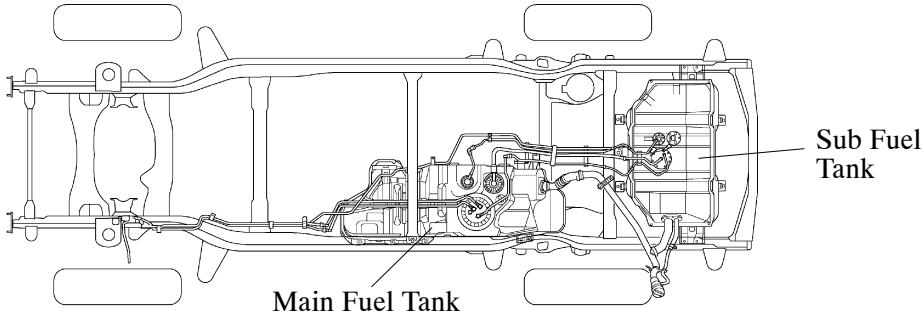
▶ Specifications ◀

Model				New	Previous
Fuel Tank Capacity liter (US qts, Imp. qts)	5-Door	Single		95 (100.4, 83.6)	87 (91.9, 76.6)
		Dual	Main	95 (100.4, 83.6)	90 (95.1, 79.2)
			Sub	85 (89.8, 74.8)	70 (74.0, 61.6)
	3-Door			87 (91.9, 76.6)	←



5-Door Single Fuel Tank Model

233EG37

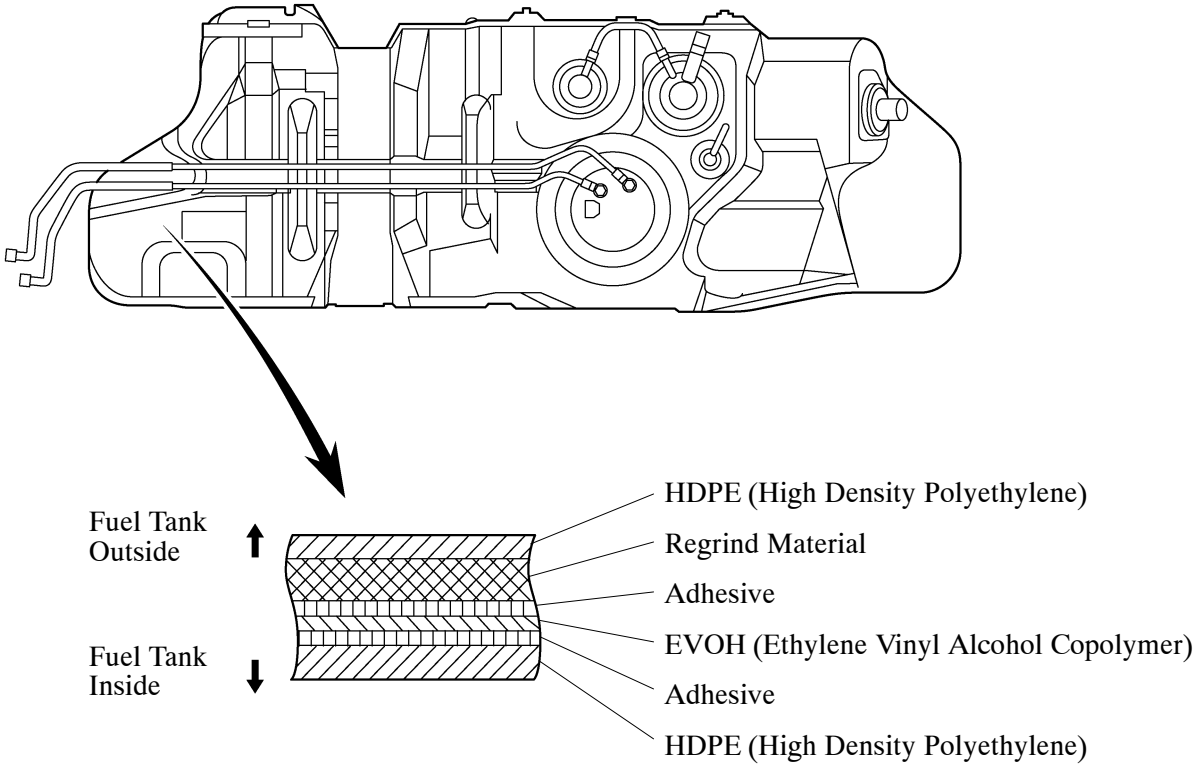


5-Door Dual Fuel Tank Model

233EG38

2. Fuel Tank

A multiplex layered plastic fuel tank consists of six layers of four types of materials.



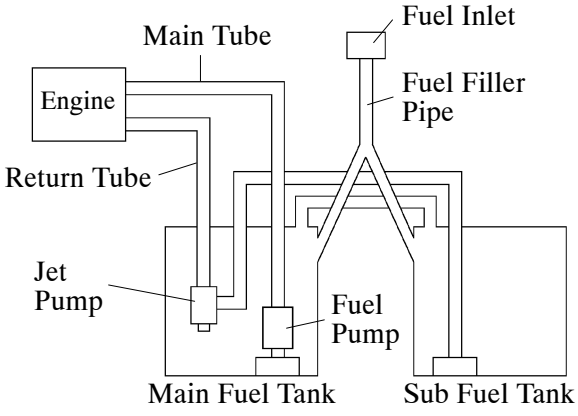
233EG72

3. Construction of Dual Fuel Tank

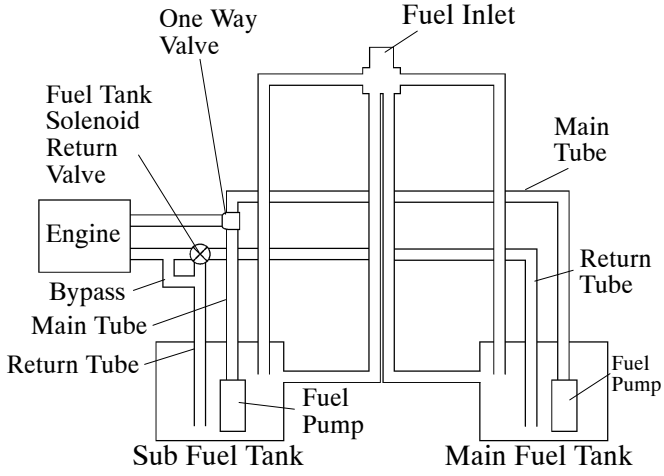
General

- On the previous model, a switch was manually operated to change the valve from the main fuel tank to the sub fuel tank. In contrast, a jet pump is provided in the main fuel tank of the new model in order to automatically transfer fuel from the sub fuel tank to the main fuel tank.
- For the fuel filler pipe, the structure that is united right under the fuel inlet and forked into two in the middle has been adopted in its configuration. Therefore, the driver can refuel without the need to distinguish the main fuel tank from the sub fuel tank.

▶ System Diagram ◀



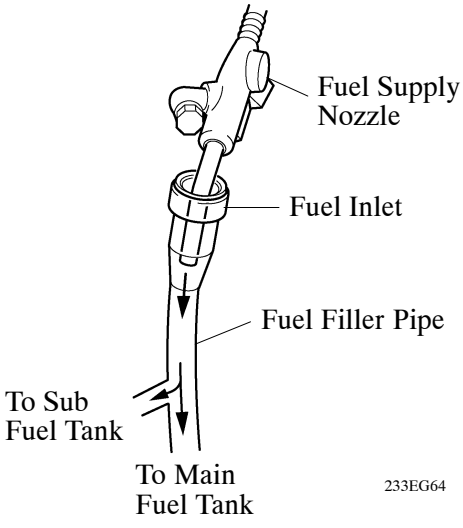
New 233EG62



Previous 233EG63

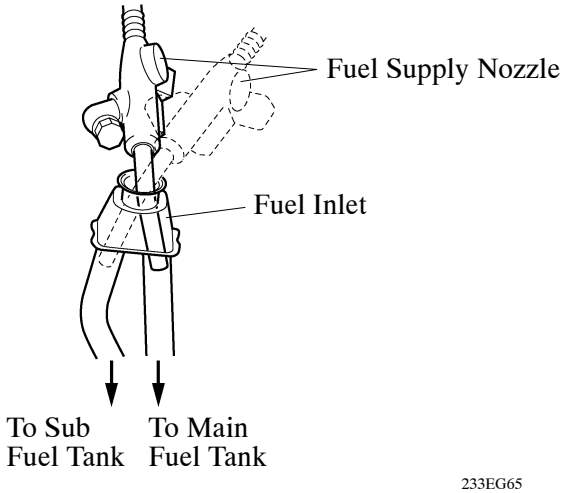
Fuel Inlet

On the previous model, the fuel filler pipe has branched into two pipes directly below the fuel inlet. Therefore, the driver had to select whether to fill the main fuel tank or the sub fuel tank during refueling. On the new model, there is only one fuel filler pipe directly below the fuel inlet, which branches into two pipes at a midway point.
The fuel that is introduced into the fuel inlet separates automatically in the following ratio: approximately 80% to the main fuel tank, and approximately 20% to the sub fuel tank.



233EG64

New

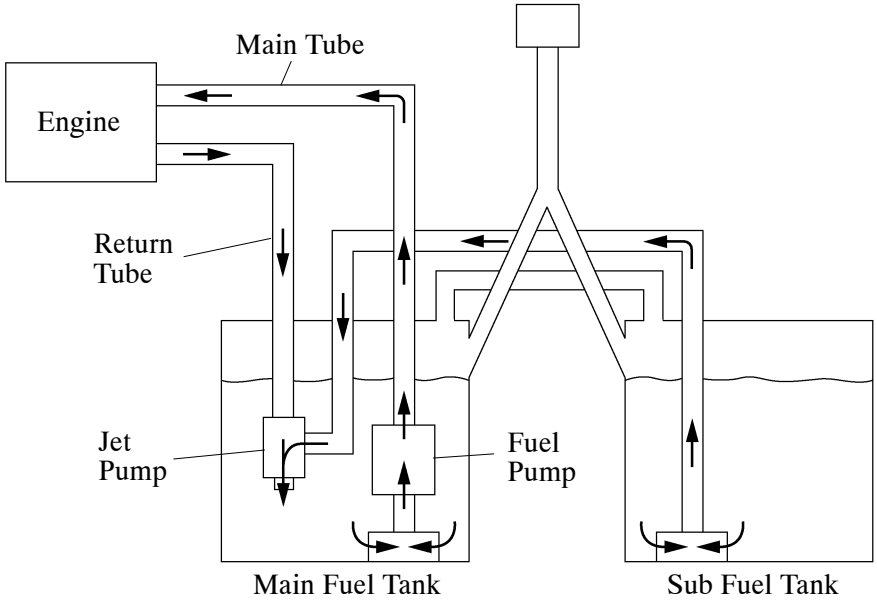


233EG65

Previous

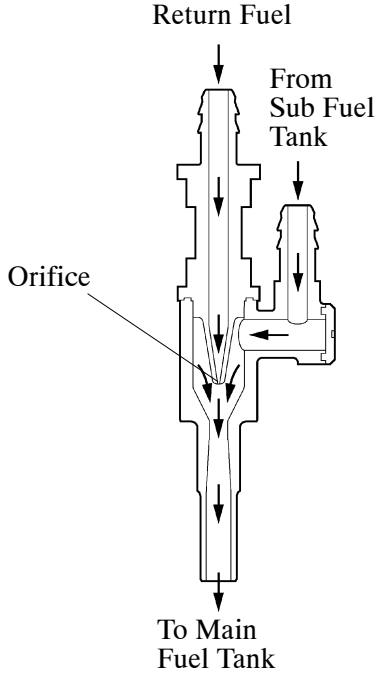
Operation

- The fuel to the engine is always supplied from the main fuel tank. The return fuel from the engine actuates the jet pump in the main fuel tank, in order to draw fuel from the sub fuel tank to the main fuel tank.
- In this system, the fuel amount fed from the jet pump is more than the fuel amount consumed by the engine, therefore, the fuel in the sub fuel tank side runs out quicker than the other.



233EG40

- The return fuel from the engine passes through the orifice in the jet pump and returns to the main fuel tank. Because the flow speed of the return fuel increases as it passes through the orifice, a vacuum is created near the exit of the orifice. This vacuum causes the fuel to be drawn from the sub fuel tank to the main fuel tank.



233EG41

Jet Pump